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**PLANNING
WITH YOU** → PAGE 63

THE ARCHITECTURAL FORUM

AUGUST 1943

Important news ABOUT THE FUTURE FOR EVERY ARCHITECT IN AMERICA!

The outstanding response to the Celotex
"Miracle Home" campaign shows that people
are planning now for post-war homes!

THE STORY goes back to 1941 when the "Miracle Home" Idea was born. The more we studied it the more we were convinced that we had a real message that was in key with sound architectural thinking, in tune with public trends.

We consulted with many of the well-known architects and decided to present this message in our national advertising.

Were we prepared for the deluge of inquiries? Frankly, no! We were never so (pleasantly) surprised in our lives!

Apparently, the decision to tell the

people about the "Miracle Home" was a good one. We certainly touched a tender spot in America's heart . . . its faith in a future of new, more livable homes that you and thousands of other architects will design. To that end, we are writing everybody who requests more detailed information, to consult his local architect.

Chances are you have a "miracle home" design of your own tucked back in your mind. The response to the Celotex "Miracle Home" message indicates that one day you'll see that plan of yours develop into an occupied home for some proud American family. Perhaps you'll specify many Celotex products in its construction. We sincerely hope so.

Another thing! Every "Miracle Home" advertisement urges readers to buy War Bonds today and earmark them as a down payment on a new-built home, tomorrow.

Imagine! Millions of Americans wanting to build new homes after the war . . . and having the down payment in hand, besides!

Yes sir! It certainly looks like there's a great day coming!

WRITE US
for a copy of the
portfolio we are sending out in
response to requests
from readers.

CELOTEX

REG. U. S. PAT. OFF.

ROOFING • INSULATING BOARD • ROCK WOOL
GYPSUM WALL BOARD • LATH • PLASTER
SOUND CONDITIONING PRODUCTS

THE CELOTEX CORPORATION • CHICAGO

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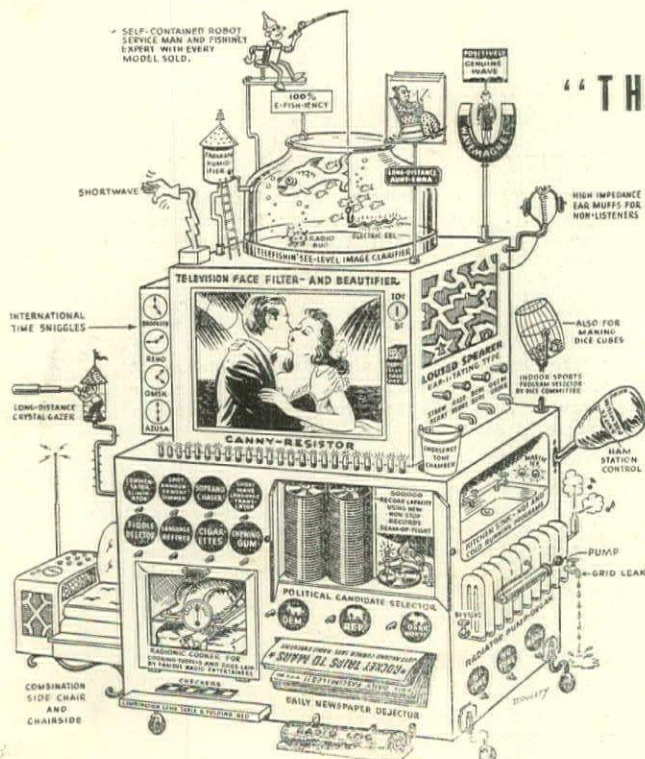
NEXT MONTH: Maritime School . . . Camp Bainbridge . . . House Portfolio . . . Prefabrication . . . a review of Frank Lloyd Wright's Autobiography . . . Does Modern Architecture Pay?

In Military Service:

Robert W. Chastenev, Jr.
William J. Conway
Robert Hanford
Joseph C. Hazen, Jr.
George B. Hotchkiss, Jr.
S. Chapin Lawson
Amnon Rubenstein
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FORUM OF EVENTS



CRYSTAL GAZER'S postwar dream, E. F. Macdonald, Jr., President of Zenith Radio Corp., calls it. Unit would sell for \$14.92 in honor of the discovery of America, 40% off for cash.

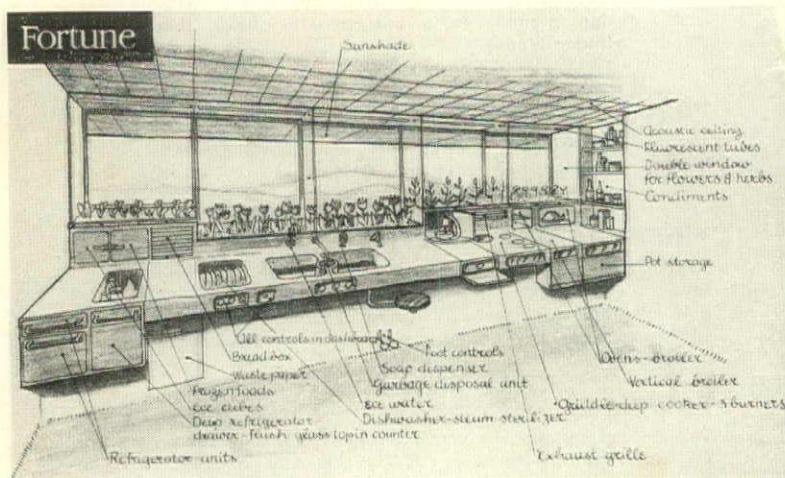
"THERE'S A GREAT DAY COMING!"

"Like most Americans today, you are probably looking forward with curiosity as to the innovations on which you can spend that extra money and time," say the editors of *Click*, in ushering in the postwar weekend to their readers. A similar future is predicted for lookers of *Look*, and to many millions more, whether they rely on Superman or *Fortune*.

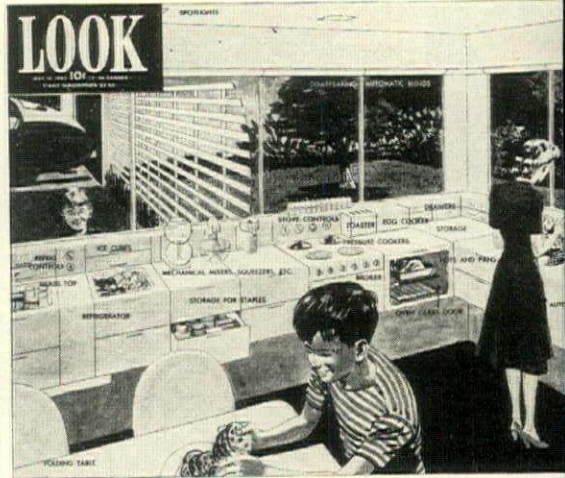
Common to most of these popular postwarriors are the notions that, first, the future will be modern; second, the sky is the limit; and third, why have any limit at all? This is consumer excitement on an enormous scale. These readers will want to buy a new kind of kitchen, a new kind of bath, and a new kind of house, complete with helicopter garage. What was good enough for Pop is definitely not going to be good enough for them.

In their first gush of enthusiasm, the popular magazines and advertisers concentrated on the spectacular. The next step may be a reasoned presentation of neighborhood planning and city reconstruction. *Fortune* (May, 1943) and THE FORUM are making a major move in that direction in the study of Syracuse, N. Y.

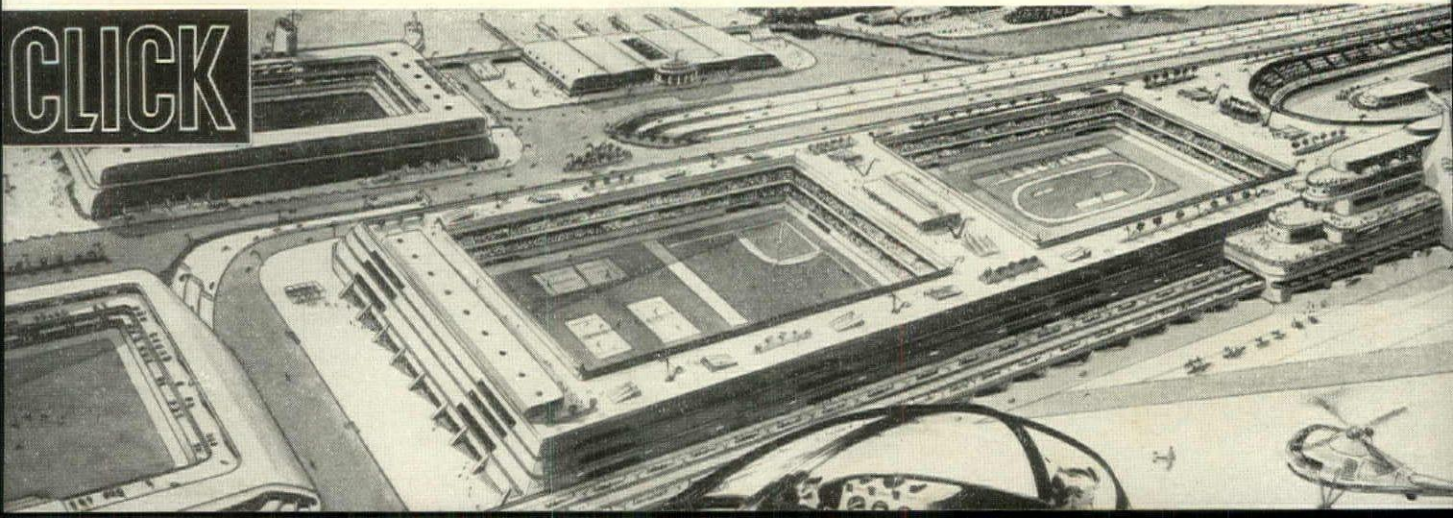
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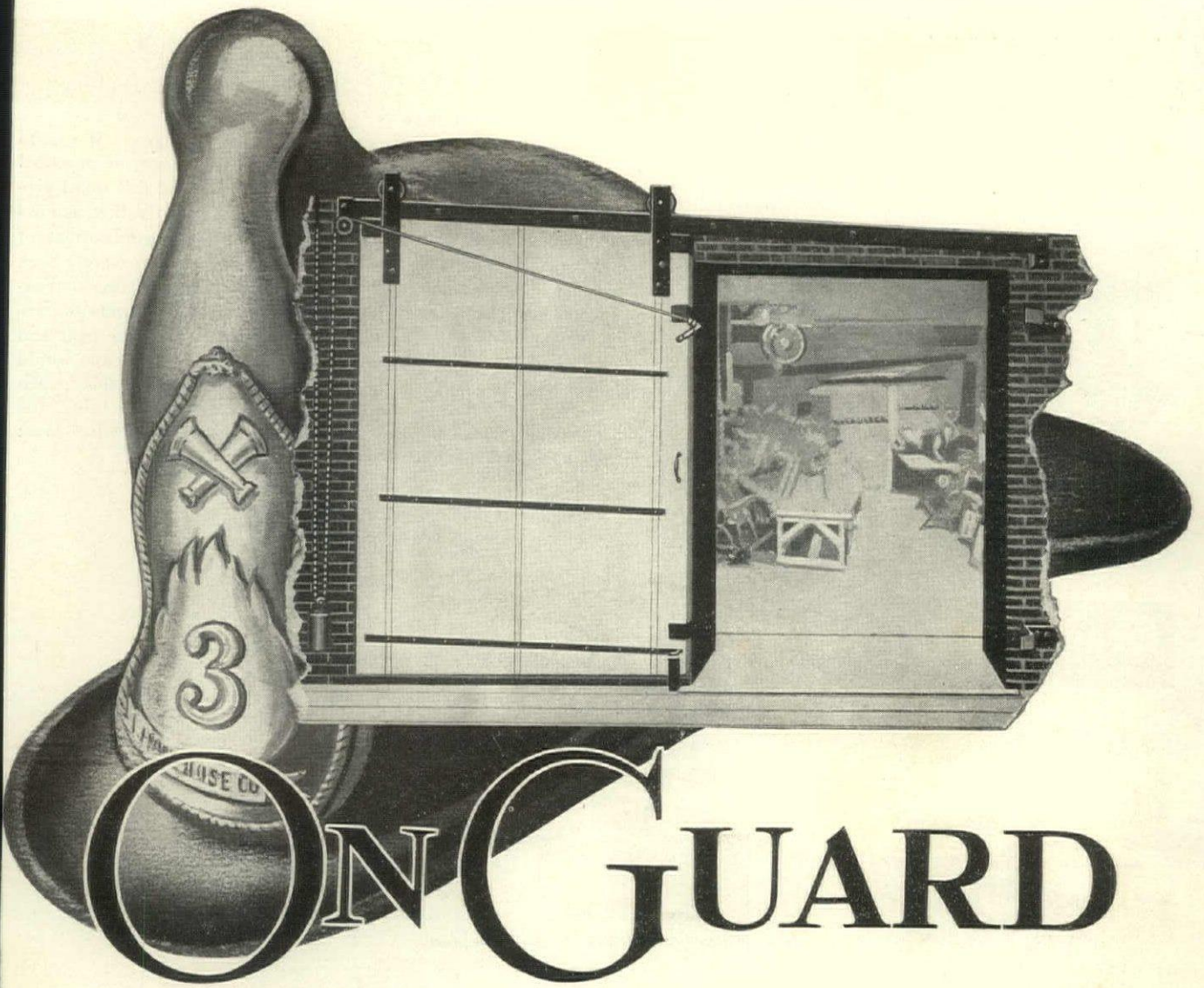


FORTUNE'S FUTURE KITCHEN DEPARTS RADICALLY, LACKS FLEXIBILITY. LATER, LOOK WAS SIMILARLY INSPIRED.



FLASHY POSTWAR AMUSEMENT PARK RECALLS THE TWENTIES, APPEARS FANTASTIC, INHUMAN, OUT OF SCALE.





24 hours a day

Protect your buildings with the NEW Richmond Fyrgard Door

Practically a whole fire department by itself! Fires simply can't run amuck through your plant with the NEW Richmond Fyrgard doors on guard. Designed to meet the strictest Underwriters and Building Code laws, they fit any specification. Available in automatic closing, single and double swing doors; inclined or level track automatic sliding. Built to the highest standards of quality and protection. #24 gauge galvanized steel with

vertical cap seams of #22 gauge steel, covers a core of three-ply white pine tongued and grooved. Flush galvanized sheets of the NEW Fyrgard Door eliminate all horizontal seams, making a better appearance. The heavier metal provides a more durable surface than the usual 30 gauge terne plate on tinclad doors.

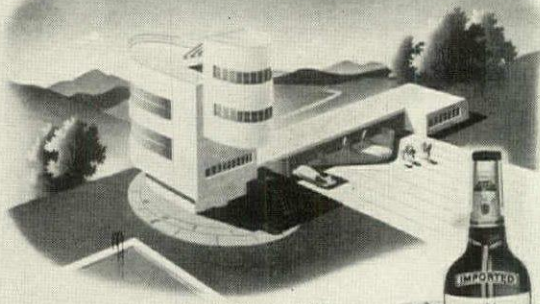
Protect your plant and your production against spreading fires with the NEW Richmond Fyrgard Door. They give you the greatest possible safety! Write for details and specifications. See our catalog in Sweets.

The Richmond FIREPROOF DOOR COMPANY

(Affiliated with the Peelle Company, Brooklyn, N. Y.)

RICHMOND, INDIANA

Men Who Plan beyond Tomorrow Like the Lightness of Seagram's V.O.



The house of the future, serving automatically to leave the man all day long, is a beautiful one that streams through space, and makes a modern construction career. The simple form can be built of stone, and the family plan is a living wing. All these are being developed now by Mac White, Plan Room, Toronto.

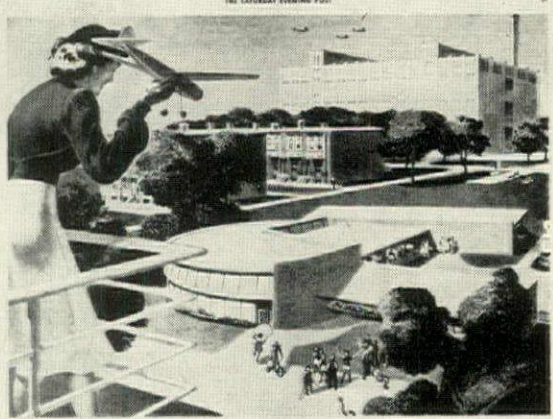
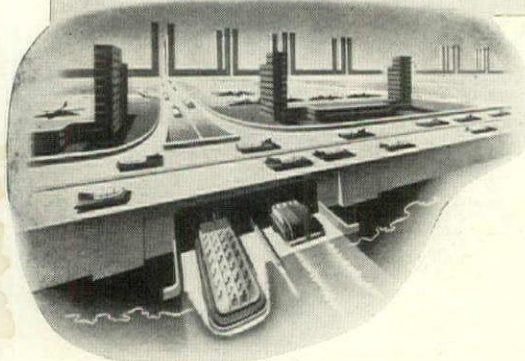
SEAGRAM always thinks of Tomorrow. Remember away back when the first Star drove through the Lincoln Tunnel, under the Hudson River? When "The Big Apple" was the drink of the year? The year the Russian atom landed from Moscow over the North Pole to California, making the longest known flight in history? That's the year the rare whiskey in Seagram's V.O. CANADIAN was blended for greater flavor and laid away to mellow. Ever since then these fine whiskeys have been reserved for Tomorrow. So the V.O. of today will always be preferred for THE WOMAN OF TOMORROW.



Seagram's V.O. CANADIAN

CANADIAN WHISKY • A BLEND OF RARE SELECTED WHISKIES

Six Years Old • 40-48 Proof • Seagram's Distillers Corporation, New York



How to IMPROVE Your Neighborhood -TODAY



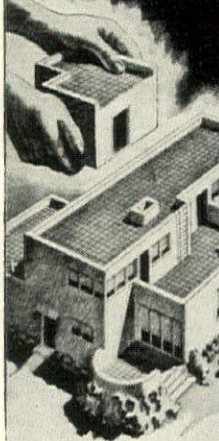
We find that postwar housing projects can't be considered merely on a basis of overnight development. Through education and new building, it is possible to improve the city and the way of life. When all these things are taken into account, it is possible to improve the city and the way of life. When all these things are taken into account, it is possible to improve the city and the way of life.

With small steps make the approach. Simple parking spaces to roads. For the neighborhood house, a small, modern shopping center is needed. Parking spaces are needed. For the neighborhood house, a small, modern shopping center is needed. Parking spaces are needed. For the neighborhood house, a small, modern shopping center is needed.

There are no, while it will be literally better, make more than ten times as many before. Better, better, better, and the method of these buildings will reduce costs of building and at the same time provide a measure of comfort and convenience to the people.

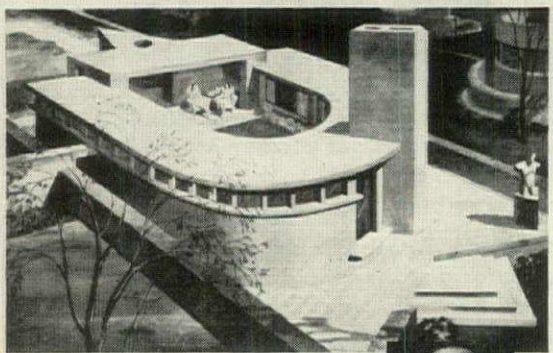
DELCO APPLIAN know no postwar box

There's a GREAT DAY COMING



Your post-war home will know no bounds. That tomorrow's home will be electrically lighted, dustless, dry and air-and-sound-conditioned.

A HOME FOR EVERY FAMILY is the aim of post-war planning



FREE! Existing new book describing the variety of post-war houses and giving floor plans and arrangement of D. Allen Wright's charming "interior" house plans. Mail coupon for your copy!

What will American homes be like after the war? How will they differ from the average home of today? You will find answers to these questions in a beautiful new book prepared by Timken. Read about the "interior" house and in many other ways developed under the pressure of war in the new standards and requirements that will be ready after Victory. New building methods and materials, "modern" mechanical systems, "black" lighting, "steel" curtains, "fancy" windows.



Timken Select Automatic
OUR NEWEST PROJECT FOR THE HOME
Division of THE TIMKEN-ARMSTRONG & COMPANY, Detroit, Mich.

ADVERTISEMENTS IN POPULAR PRESS cover the entire range from megalomania through mediocrity to patent excellence.

Thanks are due to Look Magazine, Fortune, Click, and their designers, Martial & Scull; the Zenith Radio Corp., and Seagram Distillers Corp. for their permission to reproduce these illustrations.

(Continued on page 128)

TOUGH

as they come!

WEAKE men and sleazy materials have no place in this war. To win requires the best of both.

Formica has been called to serve for the duration in planes, tanks, jeeps, and other machines of war. None of it will be available for table tops, fountain counters, wall covering until the day of victory.

But the Formica you have will see you through if you take care of it. For it is as tough as they come. It will stand up to severe wear for many years keeping its beauty and its cleanliness.

After victory it will be available again in greater variety and beauty —new colors, new finishes, new means of application. Be sure then, to get all the facts. Or if you are planning modernization now let us help you work this splendid modern material into your specifications.

THE FORMICA INSULATION CO., 4620 Spring Grove Ave., Cincinnati, O.



FORMICA

SOLAR HEATING — Survey proves large windows, properly oriented, save fuel even in rigorous climates

Although the large windows characteristic of modern architecture have been used with considerable success in California and Florida, many architects and home owners still question their practicability in northern climates. Large glass areas have a high heat transmission, which means to most people only higher fuel bills to compensate for loss of heat through the glass. Nevertheless, many large-window homes have been built in rigorous climates, much to the satisfaction of the owners, who have experienced a considerable heat gain through the windows, especially when these windows faced south, and who have found that on sunny days their heating plants shut off entirely.

Both physiologically and psychologically, the instantaneous effect of sunshine in winter is not only pleasant but eminently desirable. Theoretical investigations in the past ten years have indicated that solar radiation is an effective source of heat in northern latitudes, provided windows and houses are properly oriented to receive this sunshine in winter. The FORUM (June, 1938, p. 18) summarizing the scientific data on solar orientation, concludes that "south walls are considerably better than east or west walls . . . both for maximum insolation in winter and minimum insolation in summer," and adds, "the inescapable conclusion is that large windows and rooms in which sunshine is important should wherever possible be located on the south side of buildings."

While these facts have been known for a number of years, no practical evaluation has been made of the thermal contributions of solar heating until comparatively recently. Under the sponsorship of the Illinois Institute of Technology and with the financial support of Libbey-Owens-Ford Glass Co., Toledo, Ohio, a study has been made by Engineers Dean J. C. Peebles and William C. Knopf, Jr. of a house built in the latitude of Chicago which has large double-glazed windows on the entire south side. Their observations indicate that there may be more heat gain than loss through large windows, and that in spite of various incalculable heat losses in this specific house, the total heating cost was kept at a low figure. In addition, the report also discloses interesting information on the performance of the floor radiant heating system used in the house. Although it could not establish any quantitative evaluations of the solar heating effect.

the records and observations contribute significant data on insolation in winter and in summer, on interrelationships between natural and mechanical heating methods and on natural lighting through large glass areas.

Test house

The house chosen for this study was one designed by Architect George Fred Keck who has built a number of large-window houses in the Chicago area. During the test period the house was occupied by the owners—a young, married couple—who lived normally, entertained guests, adjusted heating facilities at will. They supplemented the engineers' observations as to the general comfort conditions within the house and became enthusiastic advocates of solar heating through large windows.

The Keck house is a one-story frame structure with single-slope, flat-pitched roofs forming wide eaves along the south side, which fully shade the windows during the summer months when the altitude of the sun is high and permit the low-hanging winter sun to penetrate deeply into the principal rooms. Four of six rooms are on the south side and have large windows. All windows are double glazed with Thermopane, a metal-sealed, compound glass having a $\frac{1}{4}$ -in. dry-air space

between the two panes. Glass area on the south elevation was approximately 50 per cent of the floor area. Only the bathroom, utility and storage room are on the north side. Frame walls and roofs have an enclosed air space faced with aluminum foil and insulated with a stitched and creped fibrous blanket.

The floor is a 4-in. concrete slab on a 10-in. bank-gravel base. Embedded in the under side of the slab are coils of $\frac{3}{4}$ -in. wrought-iron pipe on 9-in. centers, one panel in each principal room except the storage room. These pipes carry hot water generated in an automatic gas-fired hot water boiler, circulated by a $1\frac{1}{6}$ hp. electric pump. Injection of hot water from the boiler into the circulating system is controlled by a combination inside-outside temperature control system.

Test procedure

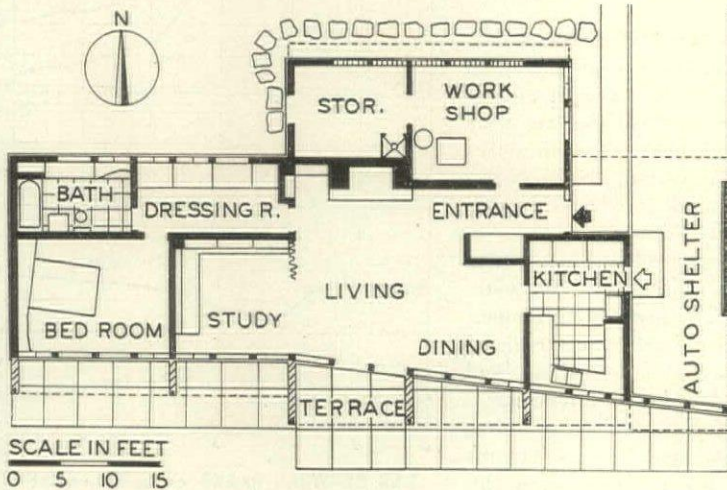
As a basis for the study, recording instruments, supplemented by periodic visits and observations, provided data for the year from October 23, 1941 to October 23, 1942. Temperatures were taken inside and out on the north and south sides of the house. Indoors, temperatures were taken 3 in. from the floor and 8 in. from the ceiling; wall temperatures were observed with contact thermometers.



PATTERN OF WINTER SUN covers living room floor, penetrating to the far corners. This solar energy contributes a considerable amount of auxiliary heat to the house.



TEST HOUSE is oriented with large windows along the entire south side. In summer, wide projecting eaves prevent the sun from entering the building.



Wind velocity and direction were recorded daily. Periodic comparative temperatures of the energy radiated from the sun were made inside and out with a sensitive thermopile and galvanometer, and readings of indoor illumination intensities and general observations of daily weather conditions (cloudiness, rain, snow) were also made. Temperatures of incoming and outgoing water to heating coils were recorded automatically, together with the time of cycles of operation of the injection of hot water to the heating

system and the time of operation of the centrifugal water pump. Quantity of gas in cubic feet used for heating (including domestic hot water) was metered.

Heat loss calculation

These records enabled the authors of the report to calculate probable heat losses and gains which would, they hoped, lead to an evaluation of solar heat gain. Heat gain from the floor radiant system was easy to measure since cost figures on actual fuel consumption were available. However, it became practically impossible to determine heat losses with complete accuracy due to the introduction of a number of incalculable variables.

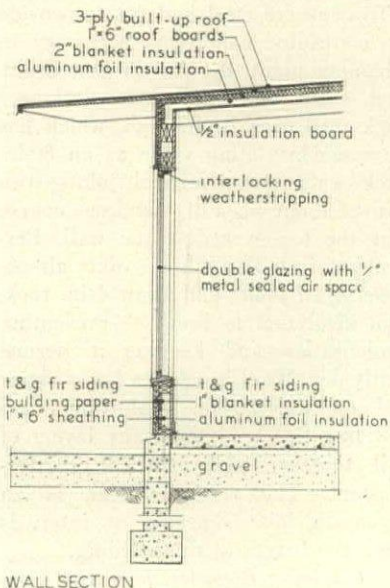
One of these variables was the amount of heat lost through infiltration. When the house was completed the architect and owner anticipated some shrinkage of lumber, and it was planned to calk the cracks around door and window frames after they had fully developed. However, this was not done before the test period was over. Excessive infiltration through these uncalked cracks (some large enough to see through) together with losses through doors and windows, which were opened in even the severest weather, made it impossible to measure the full extent of the losses. Coupled with these losses was the high wind velocity which

was found to be well above the average for the Chicago area, due to the exposed location of the house. For calculation purposes a conservative winter average of 15 mph. was used.

Floor losses were also difficult to determine, since there is no general agreement on how to calculate them. The rated coefficient for concrete floor slabs on the ground, given as .10 (Btu. per sq. ft. per hr. per degree F.) in the 1943 *Heating, Ventilating, Air Conditioning Guide*, varies greatly from the coefficient given in previous editions. The *Guide* is also indefinite as to what temperature difference between the floor and subsoil should be used with this transmittance value. In the Keck house the temperature of the under side of the concrete slab was close to 110° F. (average temperature of water returning to boiler), while the actual top surface was 88° F. and the average air temperature above the slab approximately 72° F. Similarly, although the standard method of calculating assumes a ground temperature of 45° F., the presence of frost in the adjacent ground made this seem a rather high temperature for the soil beneath the floor. The following table shows these calculations divided into accepted and debatable values. The usual calculations for hourly heat loss were based on a design temperature of -10° F. outside and 72° F. inside or a temperature difference of 82° F.

Accepted Values	Area of Crack Length	Heat Loss U	Btu./hr.
Ceilings	1562 sq. ft.	.076	9,733
Walls	1192 sq. ft.	.104	10,168
Doors	54 sq. ft.	.33	1,461
Glass	326 sq. ft.	.46	12,317
Subtotal			33,679
Debatable Values			
Floor	1562 sq. ft.	.10	6,717
Crack length, windows & doors	207 lin. ft.	.43	7,300
Crack length, other	358 lin. ft.	.71	20,843
Subtotal			34,860
TOTAL			68,539

For the debatable values, the authors followed the 1943 *Guide* for the floor coefficient and based the temperature difference on 88° F. as top surface temperature and 45° F. as ground temperature. The uncalked cracks around the frames of windows and doors were allowed for by figuring their length times the standard coefficient for unweatherstripped windows (listed as "Crack length, other" in table).



PRODUCTS AND PRACTICE

Calculations based on these figures resulted in a total seasonal loss of 1,849 therms (1 therm=100,000 Btu.). However, the actual fuel consumption showed a heat input of only 1,722 therms. This would indicate that the solar heat gain amounted to at least the difference, or about 127 therms. By varying the debatable values in the heat loss calculation, however, it is equally easy to show widely different values for the solar heat input. One such assumption would credit solar energy with 2,288 therms while another would reduce it to 38 therms.

It is interesting to compare these figures with a theoretical calculation of the solar heat input based on weather bureau data. According to a study by Henry Feigin,* the average solar heat gain through windows facing south amounts to 1.7 Therms per sq. ft. in the New York City area. U. S. Weather Bureau records indicate that Chicago receives approximately the same amount of sunshine as New York (Chicago—2,658 hrs. yearly, New York—2,791 hrs. yearly). The calculated seasonal loss through double-glazed windows of the Chicago house for the test season, equals .6 therms per sq. ft. Proceeding on the assumption of similarity, the net theoretical solar heat input is 1.1 therms per sq. ft. (1.7—.6), or 330 therms for the 300 sq. ft. of south windows in the Keck house. This is a good deal higher

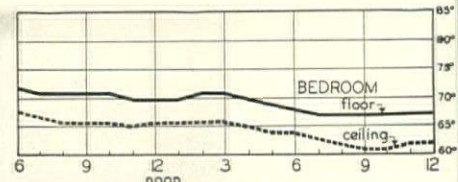
than the figure of 127 therms based on the calculated heat loss of the house, but not out of the range of probability. In fact, a 330 therm solar heat gain seems in line with the conclusions reached in the report, as the engineers granted that the excessive heat losses could not be reliably calculated and utilization of solar heat was not too efficient. At least they are prepared to state conservatively, "the preponderance of evidence indicates that the solar heat input in the test house offset most, and probably all of the heat losses through the extra window areas."

Performance of radiant heating system

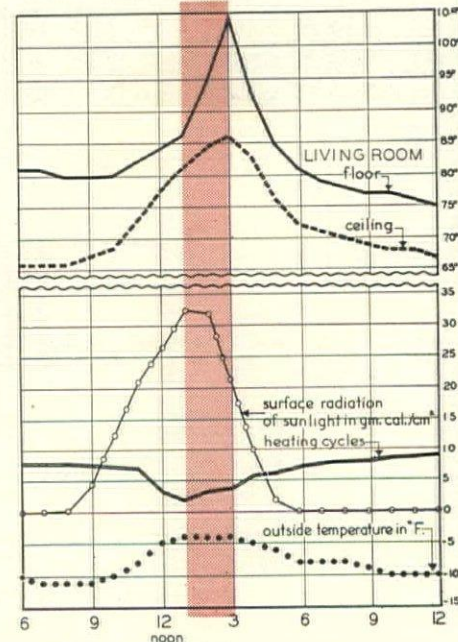
Operation of the floor heating system was very successful. The usual temperature difference between the air near the floor and air near the ceiling was inverted, with the ceiling always cooler than the floor and with considerably less temperature difference than is commonly experienced in convection-heated houses, especially those without basements. The low ceiling temperature is also indicative of reduced heat losses through the ceiling and roof and of reduced air movement.

In some ways, however, the combination of solar and panel heating in the Chicago house was not completely satisfactory. The concrete floor, in which the hot water pipes were installed, was slow to respond to sudden changes in the demand for heat, so that the instantaneous effect of the solar radiation only added to the heat in the floor. This was largely due to the weighty mass

(Continued on page 114)



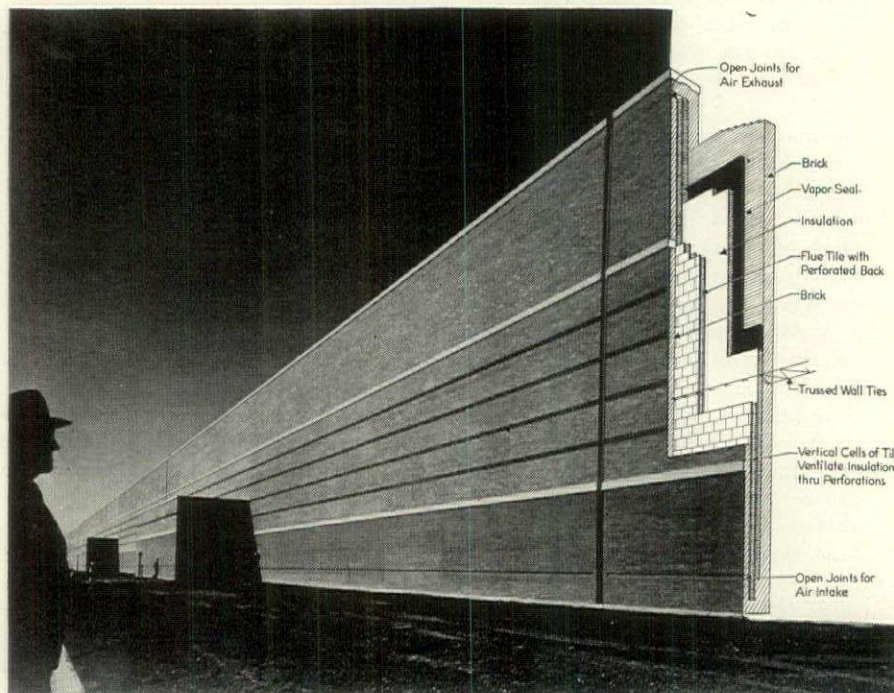
INVERTED DIFFERENCE between ceiling and floor temperatures is due to the floor radiant heating system. During periods of no sunshine, this difference was never more than 6 degrees.



LAG BETWEEN PEAKS of solar radiation and floor temperature is immediately apparent in this chart made on a sunny midwinter day. Temperature of the ceiling followed the floor as to timing but was much lower since no sun rays are directed on the ceiling. Note also that indoor-outdoor control started up the heating system right after the solar peak, although floor temperature did not reach its high point until two hours later.

*Henry Feigin. "The Effect of Insolation on the Design of Window Areas," graduate thesis in Architecture. Columbia University, New York, N. Y., 1938.

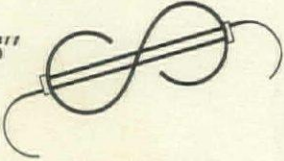
WINDOWLESS BREATHING WALLS — two miles long—enclose Douglas Aircraft's new Oklahoma City plant



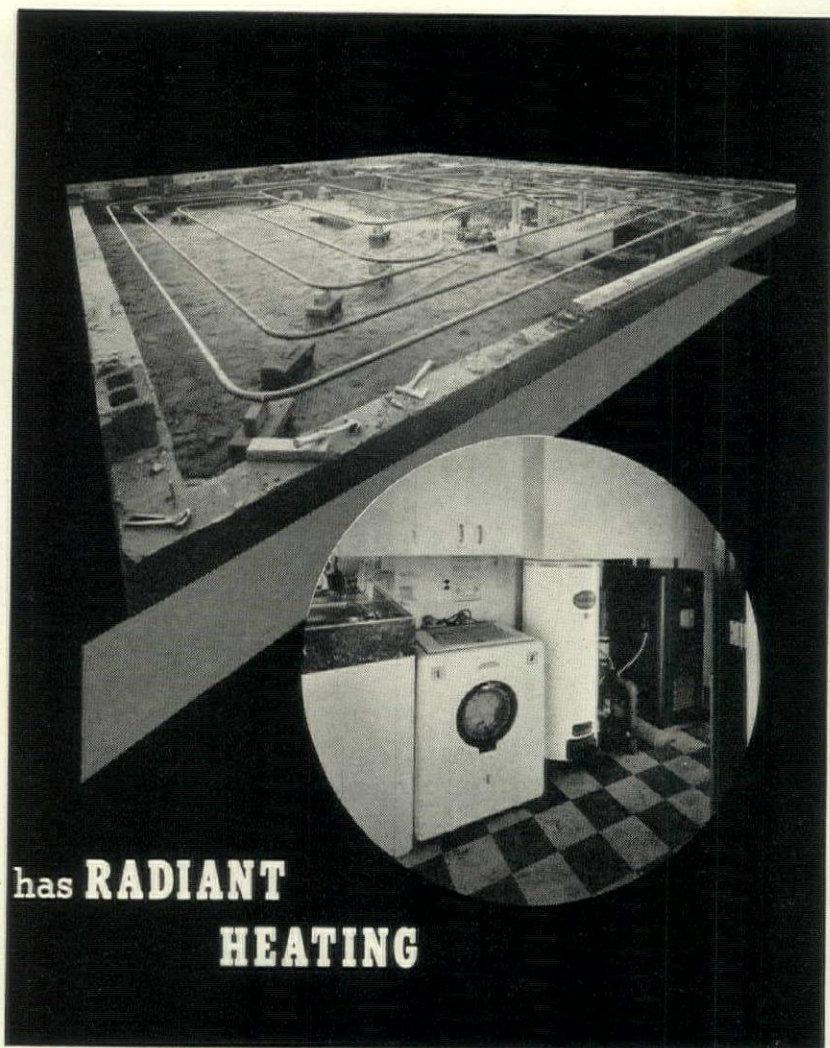
Seventeen million bricks were used for this vast masonry structure, which represents a whole new conception and design for masonry walls.

To conserve steel and yet to provide the controlled conditions necessary in a bomber plant, the Austin Co., Cleveland, Ohio, developed a revolutionary brick wall over 50 ft. high, which has the same insulating value as an 80-in. brick wall. Open vertical joints—two courses about waist high and one course near the top—ventilate the wall. Perforations in hollow tile circulate air between open joints and allow 4 in. rock-wool insulation to breathe—preventing condensation and keeping it permanently dry. Wool insulation has a vapor seal on the inside. Lightweight reinforcing ties hold the many layers of wall together and make it shatter-resistant. The vertical break is an expansion joint repeated at intervals along the length of the building.

(Building Reporter, page 116)

Are you using
 "SPECS" 
 like this
 in Post-War planning?

This "Less than \$3,000" home has **RADIANT HEATING**



With all of the rosy planning and predictions as to the housing of the future, hard-headed architects and engineers know that each new feature will have to be examined not only in the light of its *desirability*, but of its *cost*.

For the benefit of those who may have thought that Radiant Heating is a luxury reserved for high-priced housing, we present this New Jersey home, built for less than \$3000, as Exhibit A. The coils are Byers Wrought Iron. One view above shows the oil-fired boiler, compactly grouped with water heater and washer.

While this house admittedly represents an extreme case, it does demonstrate a very important fact: from a cold, hard price angle, Radiant Heating is completely practical for the most modest professionally designed residential construction.

Whether you are planning a war plant for today, or a home, church, hospital, school or commercial structure for tomorrow, you'll find it profitable to check the proven advantages of Radiant Heating against the heating needs. It is economical to install and operate. It helps overcome the radiation losses of large glass areas. It eliminates the

cold floor bugaboo that in the past handicapped no-basement construction. It permits changing of partitions in functional homes without affecting the heating. And it demands no excessive investment to obtain assured dependability and highest quality. Byers Wrought Iron combines high heat transmission, an expansion coefficient almost identical with concrete and plaster, excellent forming and welding qualities, and *proven* resistance to corrosion—all at a cost so reasonable any ordinary home can afford it.

If you do not have our technical bulletin, "Byers Wrought Iron for Radiant Heating Installations," please send for a copy. And remember that our Engineering Service Department will be glad to consult with you on any specific problem.

A. M. Byers Company. Established 1864. Offices in Pittsburgh, Boston, New York, Philadelphia, Washington, Chicago, St. Louis, Houston, Seattle, San Francisco.

BYERS WROUGHT IRON

FOR EXTRA SERVICE
 IN CORROSIVE APPLICATIONS
 CORROSION COST YOU MORE THAN WROUGHT IRON



Nonsense! Among consulting engineers and architects, I'm known as a top-ranking ...

But whoa! I see what you're driving at. You mean, am I really "up" on *all* the newest developments? Have I been following precedent too long ... relying on the old long-established methods? Are there better ways, *newer* ways, of doing some things which I haven't yet investigated?

Ventilation, for example. Is there a way to provide *more effective* ventilation—a modern, economical way—that I'm not familiar with?

Why don't I send for that free booklet of ILG's?—the one incorporating the newest developments in ventilating theory and practice!

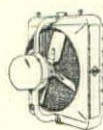
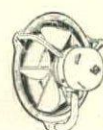
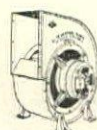
ILG ELECTRIC VENTILATING CO.
2899 N. Crawford Avenue, Chicago, Ill.
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YOU'LL NEED TO KNOW up-to-date methods of ventilation as your clients change with the *changing times*. This big, free 88-page book—condensed and indexed for quick reference—belongs on the desk of every consulting engineer and architect! It's the culmination of 37 years of experience with all kinds of ventilation—in homes, stores, plants, skyscrapers, structures of all kinds—with graphic examples of every type of ILG installation. Regularly priced at one dollar

a copy—but sent *free* to architects and engineers. Write—on your letterhead—today.



Quality costs less ... in the long run! That's why so many leading architects and engineers specify ILG Direct-Connected Universal Blowers, Self-Cooled Motor Propeller Fans and "VitalZone" Unit Heaters. Get latest catalogs now!





VITALIZED VENTILATION

AND AIR CONDITIONING

AIR CHANGE...NOT JUST AIR MOVEMENT!



DELANY FLUSH VALVE equipped with NO. 50 VACUUM BREAKER, a device that prevents water contamination, telltales back syphonage. DELANY VALVES are noted for their simplicity and freedom from breakdown.

TOMORROW'S PLANNING

There is a bright future coming for community life in America. The pattern is in the weaving, the plans are on the boards, the funds in committees' hands awaiting the return of peace.

The acceptance of the FLUSH VALVE in private homes is but one of the foreshadowing changes now accepted as fact. War building has proved this. The water economy, efficiency of purpose, and freedom from fault and common maintenance of the DELANY FLUSH VALVES, over past accepted methods of domestic sanitation, earns them a place in your plans for modern community improvement.

SINCE 1879
Coyne & Delany Co.
 BROOKLYN N.Y.

*For the thousands
of homes that need*
NEW LAUNDRY TRAYS



*H*ere is a real opportunity for wide-awake contractors.

With laundry service greatly curtailed, thousands of housewives are facing washing problems with obsolete laundry trays, or worse still, with no trays at all.

These problems can be eased by installing permanent Perma-Gloss laundry trays which are once again available to fill this need.

They have been installed in tens of thousands of pre-war homes and today are a salvation for their users.

There is nothing more sanitary than a Perma-Gloss laundry tray. Its gleaming white surface is easy to clean. There is no paint or enamel to peel, no iron to rust and stain clothing. The tray is acid-proof, not merely acid resistant, and will withstand thermal shock.

We will gladly send you full details on sizes, prices and delivery.



B-582 — "Perma-Gloss" Two Compartment Flat Rim Laundry Tray.



B-570 — "Perma-Gloss" Flat Rim Tray.



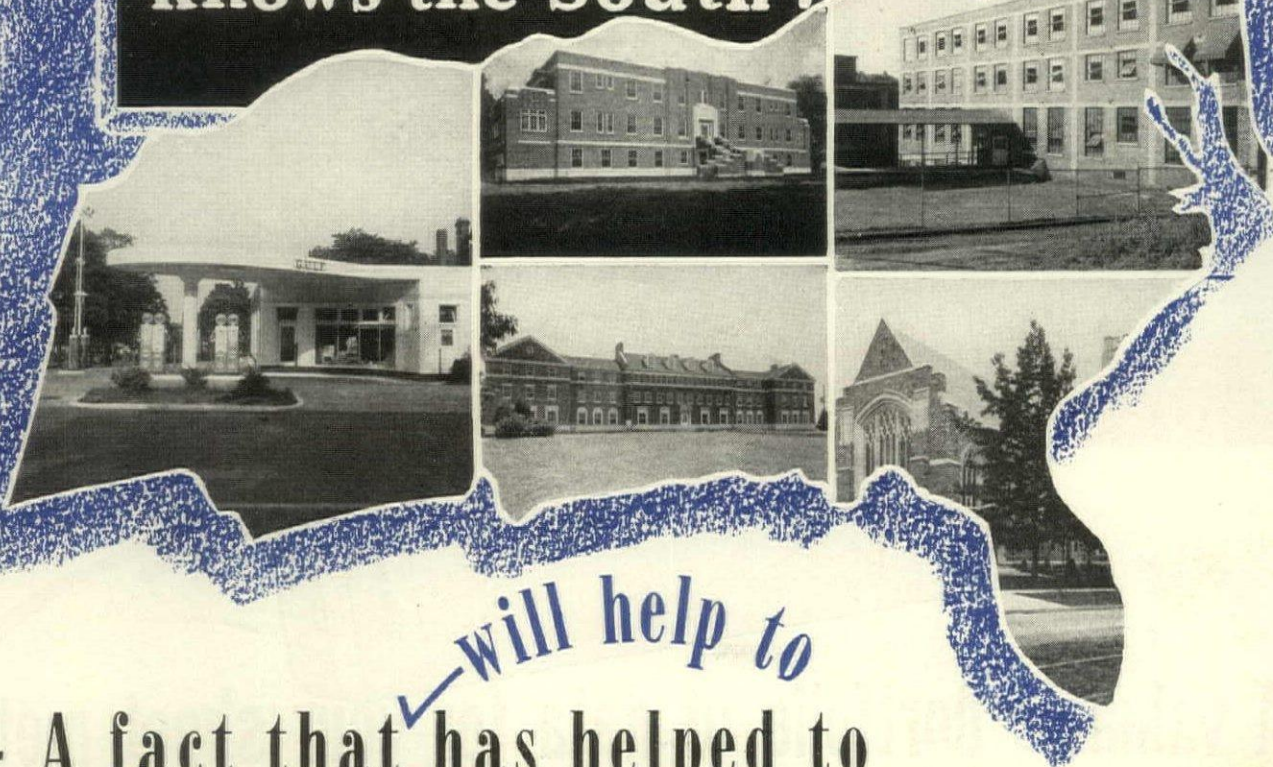
B-574 — "Perma-Gloss" Flat Rim Sink & Tray in Combination.

General Ceramics Co.



**SANITARY WARE DIVISION
METUCHEN • NEW JERSEY**

Southeastern knows the South!



— A fact that *will help to* expedite construction in Dixie

Many signs indicate that your client, or somebody you know, will probably be building in the Postwar South. Then, we believe that you can well afford to use or to recommend SOUTHEASTERN'S construction ability—a 22 year old general construction service based on intimate knowledge of the indelibly stamped South; its general and special labor resources; its building materials and sub-contractor set-up; its transporting and coordinating facilities and the temperament of its people.

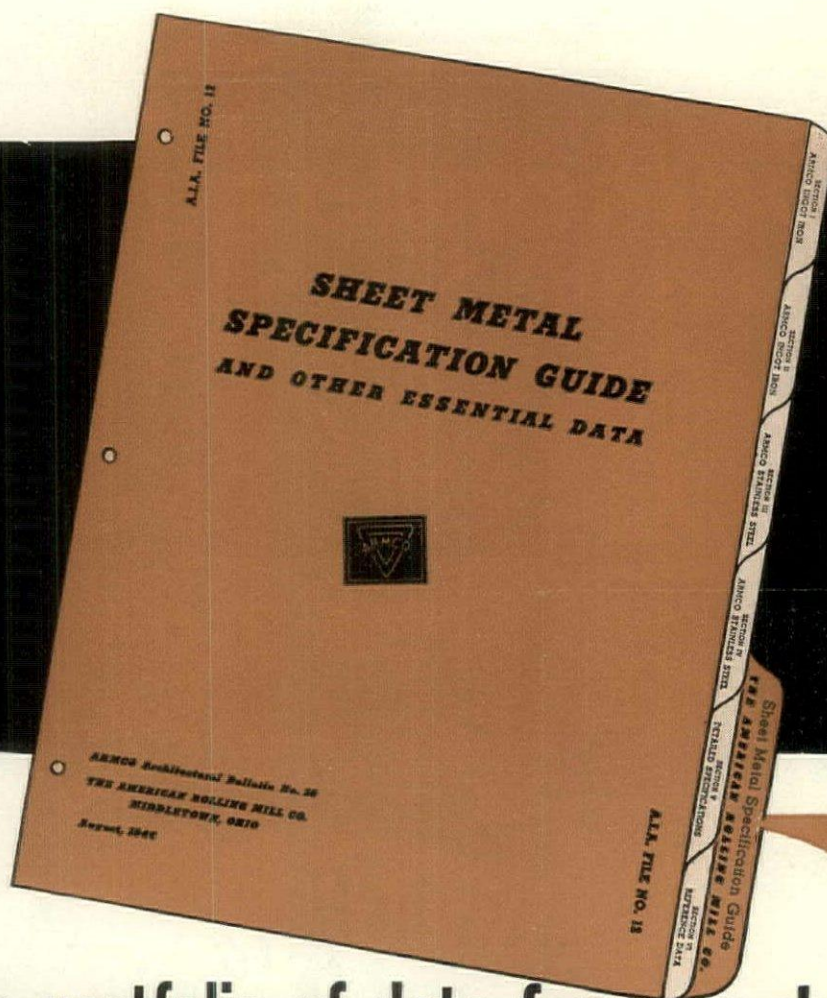
This special knowledge has helped SOUTHEASTERN to serve its clients with greater skill, speed and economy, in a vast number of pre-war and war projects—ranging from all types of institutional, commercial and industrial structures, to multi-million dollar Armed Forces housing, bases, etc. And, because of this knowledge, SOUTHEASTERN'S Postwar clients can expect smoother and more trouble-free building operations (without lost motion or extra details for Owner-Architects) in changing today's construction dreams and blueprints into the South's vast realities of tomorrow.

... to shorten the Conversion Period -

The program of the Construction and allied industries calls for absorbing tremendous quantities of Postwar manpower—if construction plans for business, civic and institutional improvements can be gotten beyond the "dream" stage, waiting only for the GO signal. Let SOUTHEASTERN, in the South, further your expected building plans, now, with any industry or Southern data, or preliminary estimates. SOUTHEASTERN'S experience embraces the construction of approximately 100 churches, 30 hospitals, 70 schools and hundreds of industrial and commercial plants.

Southeastern Construction Co.

CHARLOTTE  NORTH CAROLINA



A valuable portfolio of data for your sheet metal specifications WRITE FOR YOUR COPY

THIS handy reference portfolio provides quick information for architects and contractors on how to specify ARMCO *special-purpose sheet metals*. Here are some of the subjects it covers:

- General specifications, cost comparisons and advantages of ARMCO Galvanized Ingot Iron, Galvanized PAINTGRIP and ARMCO Stainless Steels.
- The specification and use of ARMCO Stainless Steels for roof drainage and other architectural applications.
- Methods of installing both galvanized metals and stainless steel

in roof drainage systems, shown by many detailed sketches.

- Convenient reference data, which includes tables on standard gage weights, thermal expansion coefficients, weights of roofing materials and many other helpful facts.

We believe you will find this 42-page Guide a valuable addition to your working files. If you are an architect or contractor, write us on your firm letterhead and we'll send you a copy without charge. The American Rolling Mill Company, 1781 Curtis St., Middletown, Ohio.



**THE AMERICAN
ROLLING MILL
COMPANY**



PRECISION

machined into the product

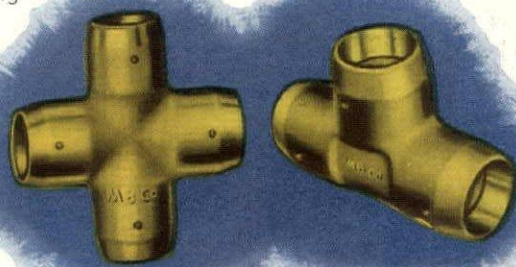
Precision is the keynote in the manufacture of STREAMLINE fittings beginning with the core, from furnace to mold and on through the machining operations.

Men of many years experience and "KNOW HOW" plus laboratory control through every phase of the work are a few of the many reasons for the consistently high quality and uniformity of STREAMLINE fittings.

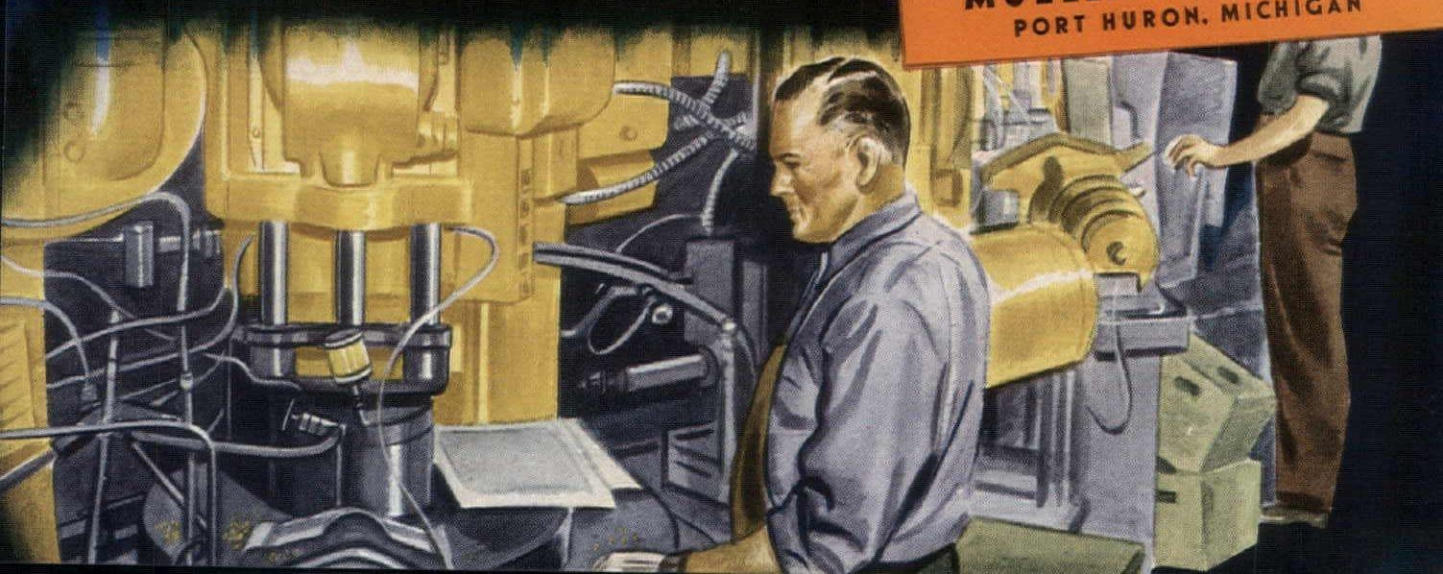
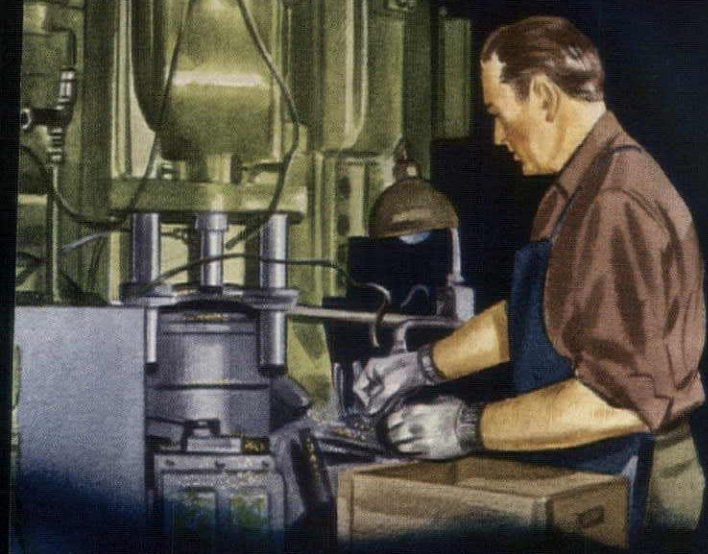
Twenty-five years ago this factory was working entirely for Uncle Sam—in fact, our country's needs in the first World War was the very reason for our birth and existence. Today we are again working 100% to supply war materials for our armed forces—and during all the years between the first and second world war in which we were building a large domestic business, we also continued to supply ordnance material for Uncle Sam's Navy.

STREAMLINE fittings are now installed in victory ships, sub-chasers, submarines, mine sweepers . . . and the material used in their manufacture in peace time is also being utilized for a multitude of munitions parts. When peace is restored, all this expended brass and copper will be garnished for peace time use in those businesses of which we are now temporarily deprived.

When copper and brass return from the war in countless millions of fragments to the scrap piles of the nation, you'll not find one rusted piece. Truly, these are the kings of metals, and—best of all, for plumbing the homes of America.



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



U. S. BULLETIN ★ AUGUST

AVAILABLE HEATING EQUIPMENT

for essential boiler replacements
conversion and repair parts

U. S. BOILERS ARE AVAILABLE for essential civilian replacements, and for the military, hospitals and war housing projects.

CONVERSION AND REPAIR PARTS on both steel and cast iron boilers can be supplied at this time. Now is the time to urge owners to purchase such parts and installation of them while we are in a position to supply them promptly.

PACIFIC STEEL BOILERS are obtainable and can be delivered on certain priorities. We suggest you communicate with Pacific Steel Boiler Division of U. S. Radiator in connection with your requirements.



U. S. RADIATOR IN THE WAR

Tank Treads are being machined in United States Radiator Corporation plants. U. S. Radiator is casting magnesium for war production.

Caisson Gates for warship dry docks are being pre-fabricated by Pacific Steel Boiler Division.

In These and other ways United States Radiator Corporation is in the war ... and learning new and better methods which can be applied to post-war production.



UNITED STATES RADIATOR CORPORATION

AND



PACIFIC STEEL BOILER DIVISION

Detroit, Michigan • Branches and Sales Offices in Principal Cities

Manufacturing Plants At:

Bristol, Pa. • Detroit, Mich. • Dunkirk, N. Y. • Edwardsville, Ill. • Geneva, N. Y. • Waukegan, Ill. • W. Newton, Pa.

WHEN WAR'S NEEDS WOULDN'T WAIT...

America Built This
Building of Tomorrow...Today!



Combination of INSULUX No-Glare and Light Directional block result in even distribution of daylight inside plant. INSULUX clear block in center of panels permit some vision.



Plans for postwar architecture aren't all on blueprints and drafting boards.

Here, for example, is a new midwestern war plant built of brick, concrete, and INSULUX Glass Block. From it, architects get a preview of what will be done tomorrow in controlling conditions within industrial plants:

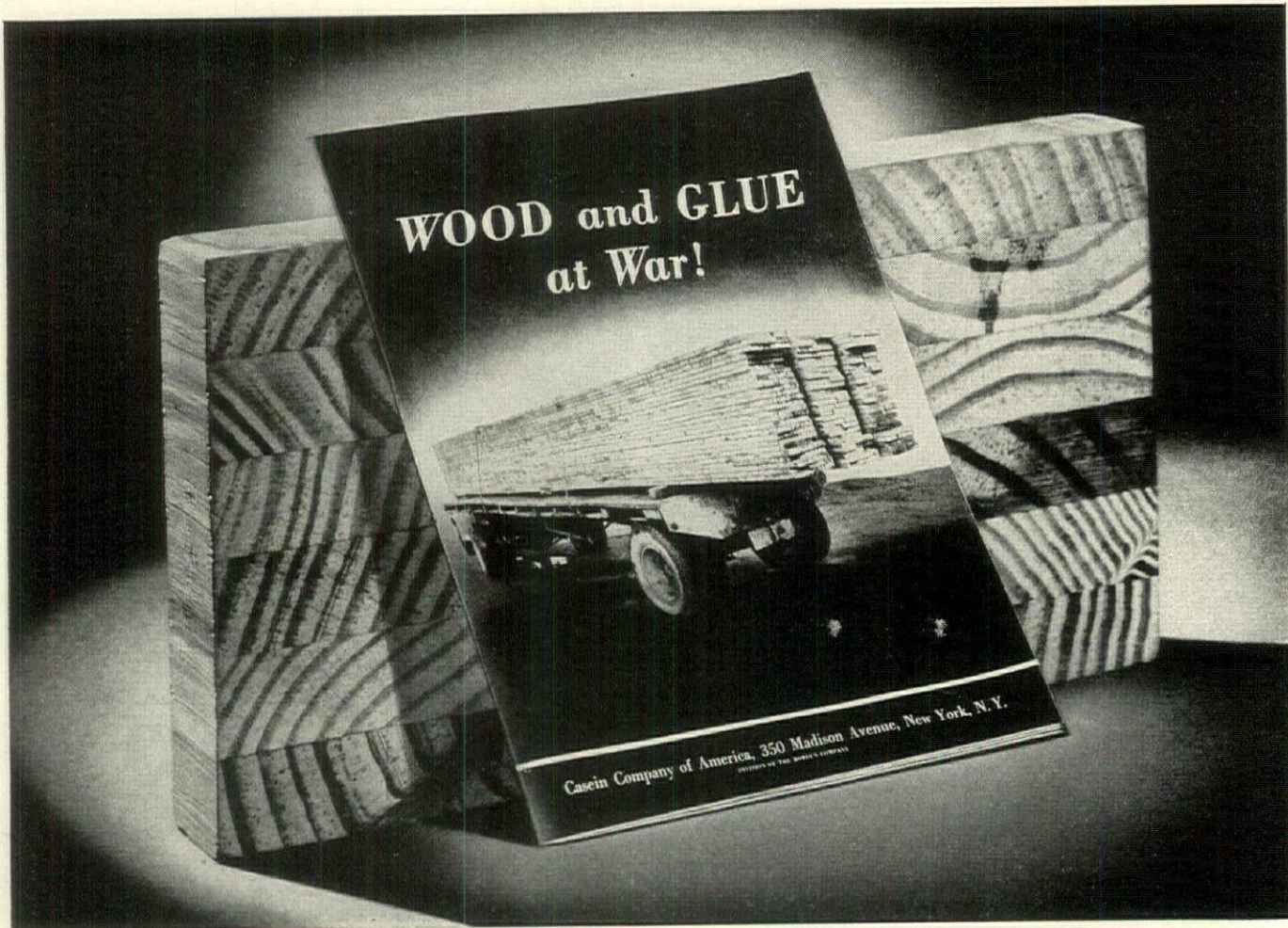
Interiors will be light-conditioned. INSULUX Light Directional block diffuse, direct, and distribute daylight throughout interiors.

INSULUX Glass Block are four inches thick, and hollow. Their high insulating value helps regulate temperature and humidity; air conditioning and heating costs are lower; precision machines are guarded from dust, dirt, moisture infiltration.

Today's growing use of INSULUX Glass Block in new and rehabilitated industrial plants is indicative of the future. Make sure your files have our up-to-date information on light transmission and insulation.

Write: INSULUX Products Division, Dept. 91,
Owens-Illinois Glass Company, Toledo, Ohio

OWENS-ILLINOIS
INSULUX
GLASS BLOCK



"BUSINESS OPPORTUNITY"

*Do it with
"imagination"
wood and glue!*

Write for this free book! Outlines new wood and glue developments. Lists Technical Service Bulletins available to designers and engineers. Stimulating. Worth reading.



We believe the story told in this book to be of great import to architects, engineers, and designers who have never used wood as a basic building material.

This belief is based upon the recent development of plastic resin glues, the full commercial value of which is still to be realized.

These glues have changed wood so that, today, it presents more features and advantages, simultaneously, than many structural materials have to offer. Yet, despite the amazing physical changes in wood,

it retains all of its inherent properties including "warmth" to the touch and inborn richness of appearance.

We ask you to consider your problem in terms of plain wood, which now can be impregnated, compregnated, laminated, stabilized, molded or bent—completely proofed against water, heat, vibration, and mold—made so strong and durable that its applications are almost endless.

Regardless of what you build or plan to build, find out what industry's "newest" raw material can do for you.

GLUES FOR INDUSTRY

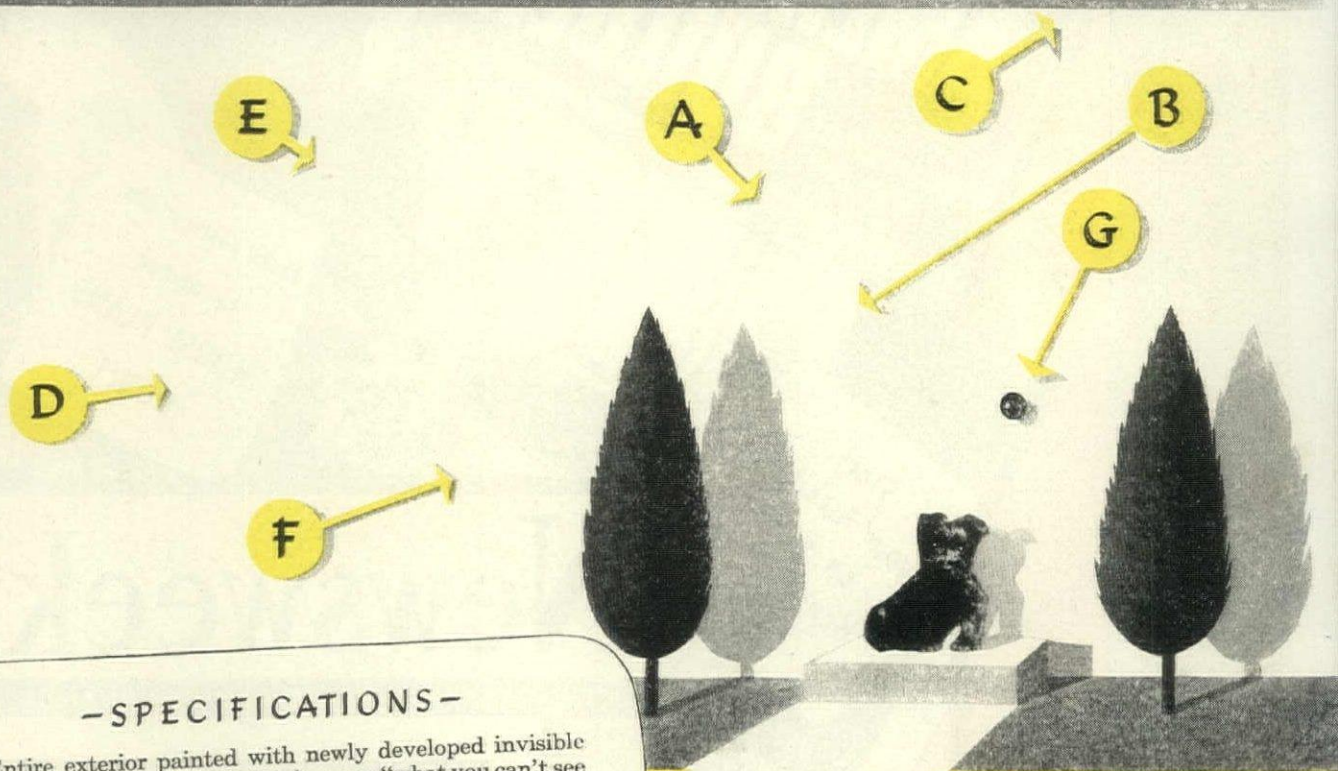
UREA-RESIN (Cascamite) PHENOL-RESIN (Cascophen) CASEIN (Casco)

Casein Company of America

Division of The Borden Company • 350 Madison Ave., New York 17, N. Y.

HERE IS A PICTURE OF TOMORROW'S HOME

(IF WE BELIEVE ALL THE PREDICTIONS WE READ)



-SPECIFICATIONS-

A Entire exterior painted with newly developed invisible paint. Eliminates maintenance because "what you can't see won't hurt you." Also reduces hazard of unexpected guests.

B Newly developed and super-automatic mail box. Opens and sorts mail, files bills alphabetically in special "future business" compartment, types answers to important correspondence and deposits completed letters on desk in den, ready for signature.

C Newly developed roofing with impregnated vitamin concentrates—eliminates all vitamin deficiencies. Can also be furnished with mosquito repellent, hay fever reducing hormones, and anti-asthma atomizer attachments. (Slight additional cost.)

D Newly developed, radio-activated, hydro-pneumatic gadget control. Can be adjusted, by simple dial setting, to do the following in sequence: (1) Ring alarm clock; (2) mix baby's formula; (3) prepare breakfast; (4) put the cat out; (5) wash dishes; (6) make the beds; (7) let the cat in; (8) change the linens, and (9) the baby.

E Newly developed heating, ventilating and refrigeration system—completely automatic. Provides temperature range from -30° to $+120^{\circ}$ F. Converts swimming pool to skating rink in 45 seconds.

F Newly developed multiple-rotating partitioning—converts living room to library to kitchen to bathroom by simple electronic control. Ideal for invalids and inebriates.

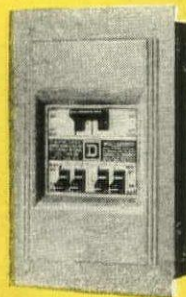
G Newly developed visible doorknob. Serves as landmark in locating entrance to home. Turn of knob automatically cleans and polishes shoes, ejects dog from favorite chair, and tunes in news program.

ACTUALLY, we don't know what tomorrow's home is going to look like. We don't know where reality ends and fancy begins in projecting its future conveniences and innovations. But we do know that folks who build or buy homes in the future will want the convenience and protection of the Square D Multi-breaker. They won't want to be bothered with fuses—it simply isn't in keeping with the modern way of doing things.

Talk to a Square D Field Engineer—let him work with you in making the electrical specifications of tomorrow's homes as sound and efficient as they should be. There is a Field Engineer in each of nearly 50 Square D branch offices in principal U. S. and Canadian cities.

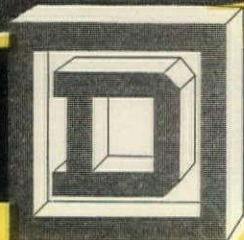
Currently, every Multi-breaker we produce is assigned to wartime service. But the same features which make it so valuable to the war effort, earn it a place in the homes which will be built in the future.

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 shockproof lever restores current. There are no delays—nothing to replace. Yet the Multi-breaker costs little, if any, more than fusible equipment—often actually less.



ELECTRICAL EQUIPMENT

KOLLSMAN AIRCRAFT INSTRUMENTS

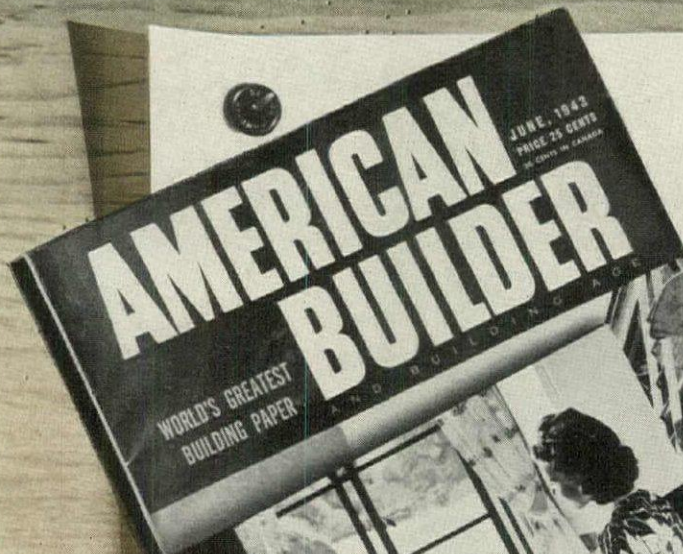


SQUARE D COMPANY

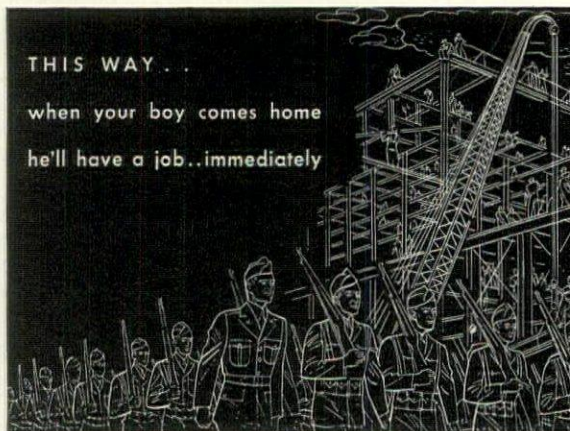
DETROIT

MILWAUKEE

LOS ANGELES



THIS WAY . . .
when your boy comes home
he'll have a job...immediately



Your son's future after V-day, and his father's future also, depend so much on full peacetime employment.

There must be many jobs for many returned soldiers; and America naturally looks for them first to her number one employer of the past, the huge Building Construction Industry (comprised of hundreds of relatively small firms). This industry will provide almost countless postwar jobs quickly, if . . .

If you, an American businessman, do your bit now.

If you will use your personal influence to see that plans for many kinds of postwar buildings are started soon, and are completed and ready before the war ends, so construction can begin quickly: plans for your new, better, more eco-

nomical home; for your new factory or factory-addition; for your local schools and hospitals; for apartments and hotels; for commercial buildings and stores; for farm buildings, etc. Good planning often takes lots of time.

Fortunately, numerous talented architects and engineers, most of them outside the area of military service, are available to start plans right now. Please call in your architect; ask your school and hospital boards to act; urge your authorities (municipal, state, federal) to begin forward planning now . . . for full postwar employment quickly.

DETROIT STEEL PRODUCTS COMPANY
Now Exclusively Engaged in War Goods Manufacture
Dept. NW-7 • 3174 East Grand Blvd. • Detroit, Mich.
Pacific Coast Plant at Oakland, California

Fenestra SUGGESTS

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



Buying Habits

do NOT change overnight!



IN RECOGNITION
OF QUALITY
PRODUCTION



YPS kitchens will be
worth waiting for!



A TYPICAL DEALER INSTALLATION

In planning for post-war products, we will not forget that when women buy for their homes they are slow to accept anything faddish. This is particularly true of labor-saving devices which they expect to last a long time. Neither are they likely to accept anything old-fashioned.

In pre-war days, Youngstown Pressed Steel developed its line in basic units, in a range of sizes and prices, so that architects and builders could have the right Youngstown Pressed Steel equipment for each installation, and offer innovations as the public was ready for them.

But new days bring new ideas, and as war work permits us to test them, prove their efficiency, and tool up for them, they will be introduced into our post-war kitchens. Dealers will have fresh, new Youngstown Pressed Steel merchandise to sell after the war.

This idea about Youngstown Pressed Steel kitchens is being constantly kept before the consumer by means of full color advertisements in leading National magazines.

Youngstown Pressed Steel kitchens will be worth waiting for, and you won't wait long after we get the raw material.

Youngstown
PRESSED STEEL DIVISION

OF MULLINS MANUFACTURING CORP.
WARREN, OHIO

IT'S OUR WAR • LET'S FIGHT IT NOW

BUY WAR BONDS and STAMPS TODAY



THAT'S A PREFAB'D
SHOWER STALL
MADE OF ALUMINUM

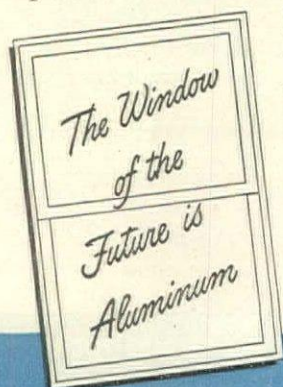
Prefabrication has many champions. Certainly, something fine will result from the wealth of Imagineering that is being aimed at the housing problem. One thing we know, for a fact. Manufacturers are thinking seriously of standard, prefabricated utility units around which to design nonstandardized exteriors. And the material they're counting on using a lot of is aluminum.

It's no exaggeration to show two men carrying a unit this size so easily. It is a picture we see daily in dozens of plants, except that the parts are for airplanes. The men and women building those assemblies have developed skills which won't be forgotten when peace comes. They'll be

put to work, for example, on architectural products.

You'll gain, with aluminum widely used in home building. Its lighter weight will simplify your design and construction problems. Its long life will permit you to guarantee lower upkeep costs. The many attractive surface finishes possible with aluminum will give you a new tool for creating unusual and interesting effects.

Plan on lower costs for postwar aluminum products. The ingot price is 25% lower than in 1939. New manufacturing techniques and large quantity production will let you discard all your old estimates, when you begin figuring on using aluminum. ALUMINUM COMPANY OF AMERICA, 2166 Gulf Building, Pittsburgh, Pennsylvania.



ALCOA ALUMINUM



Reg. U. S. Pat. Off.

TREES PROTECT MANKIND IN WAR AND PEACE

● Today, in the vast Northwoods, crops of trees are being cut whose fibres will eventually find themselves building a bomber factory in Kansas . . . a hutment in Iceland . . . an air base shelter in Alaska . . . better living quarters for war workers . . . in the form of Insulite.

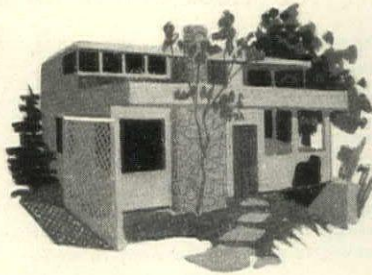
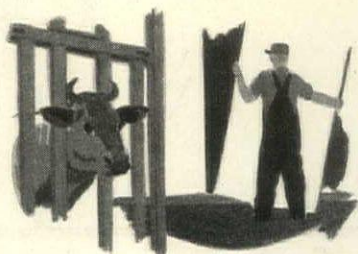
● Years ago, scientists discovered a process of reducing trees to fibres—the structural strength of wood—and then processing these fibres into boards with wider adaptability than wood as nature made it.

● The logs are placed into giant machines that tear them to pieces—leaving the sturdy fibres. Processed into Insulite the result is a structural insulation board which, when used in home construction, has a bracing strength four times that of ordinary wood sheathing, horizontally applied.

● Insulite provides these advantages: 1. Insulates as it builds. 2. Builds windproofed, weathertight walls. 3. The large panels are quickly, easily applied, reducing man hours in building. For these, and other reasons, Insulite has been used in the construction of many army camps during the first world war and the present one.

● Insulite's advantages and uses are myriad. In farm building construction Insulite has proved a big factor by providing insulation, making healthful quarters for livestock and poultry. In dairy barns, for instance, Insulite, plus proper ventilation and vapor sealing, insures effective insulation, reduces feeding costs, increases dairy production.

● When victory is ours, America will need thousands of new homes. In home construction Insulite finds its widest use. Homes constructed with the Insulite Wall of Protection have walls that are stronger, more durable, windproofed, weatherproofed, moisture-proofed—a double barrier of insulation against extremes of temperature.



INSULITE

STRUCTURAL INSULATION

THE ORIGINAL WOOD FIBRE STRUCTURAL
INSULATING BOARD



INSULITE

Division of Minnesota and
Ontario Paper Company,
Minneapolis, Minnesota



Harris Armstrong, A.I.A., has studied at Washington University and Ohio State, worked under the late Raymond Hood. From his St. Louis office during the past ten years have come many notable residences and doctors' buildings. For many of these he has also designed furniture.

FROM THE ARMY'S NEW RAINCOAT . . . A HIGH SPEED RESTING MACHINE!

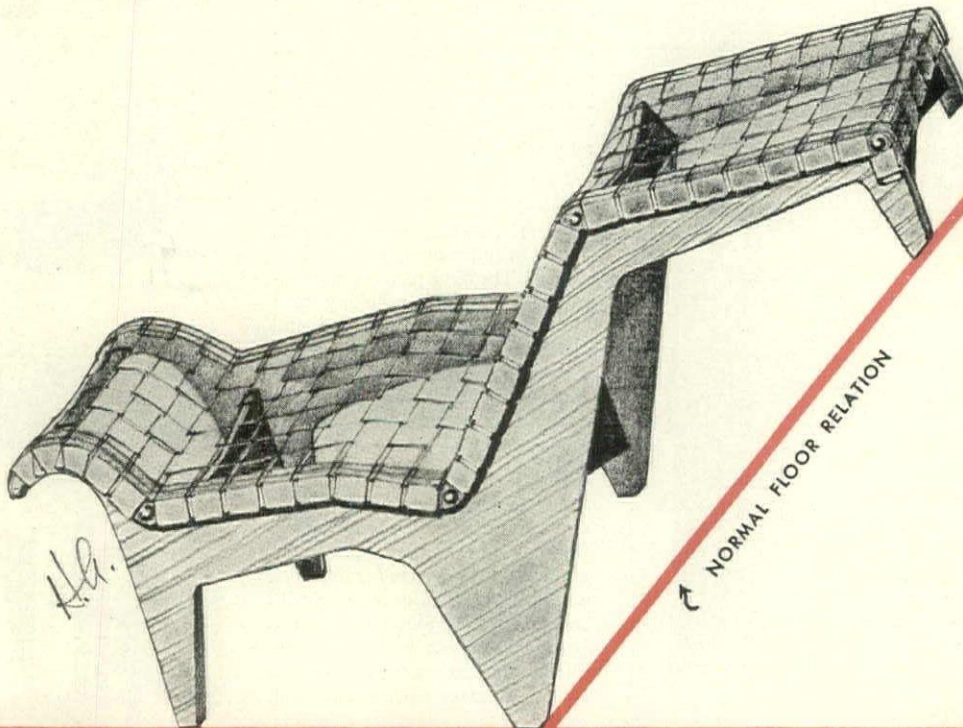
St. Louis Architect Harris Armstrong may have had his tongue in his cheek when he named the chair he has sketched below—but he was on sound ground when he designed it to take advantage of a physiological fact long recognized by athletes and ballet dancers: *i.e.*, the human machine relaxes more easily and completely with feet perched higher than the head.

One of the most interesting features of Mr. Armstrong's design is its effective use of Saflex, a material which epitomizes the great versatility of modern plastics and the great strides they have made in answer to wartime needs.

For example, in the Army raincoat Mr. Armstrong is examining in the photograph, Saflex

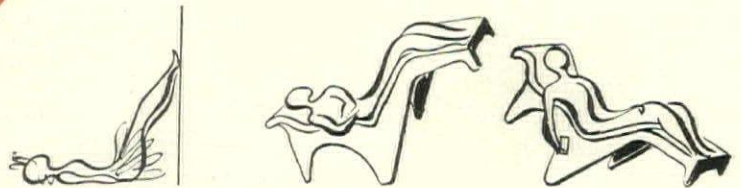
now replaces rubber with marked success, yet the first Saflex compounds were developed to serve as thermoplastic binders for high test safety glass. To fit Saflex for its new job, it was transformed almost overnight from a thermoplastic into a thermosetting material that qualifies as the most rubber-like of all plastics.

In its new formulations, Saflex can be vulcanized and otherwise handled almost exactly like rubber. It can be given a variety of interesting textures and any color, even clear transparent. Particularly it is resilient without actually being elastic—a quality which led Mr. Armstrong to specify webbing woven from board strips of Saflex for his ultra-comfortable chair.



↑ FLOOR RELATION FOR HIGH SPEED RESTING

Chair's frame would be strong, lightweight, weather and water-resistant, plastics-bonded plywood. Brightly colored, interestingly textured Saflex webbing would also be waterproof so that the chair could serve equally well in or outdoors and would be simple and easy to clean. In addition to the sheet-form specified here, Saflex is also supplied as molding compounds and in formulations for coating fabric as in the Army raincoat.



The Broad and Versatile Family of Monsanto Plastics

(Trade names designate Monsanto's exclusive formulations of these basic plastic materials)

LUSTRON (polystyrene) • SAFLEX (vinyl acetal) • NITRON (cellulose nitrate) • FIBESTOS (cellulose acetate) • OPALON (cast phenolic resin) • RESINOX (phenolic compounds)

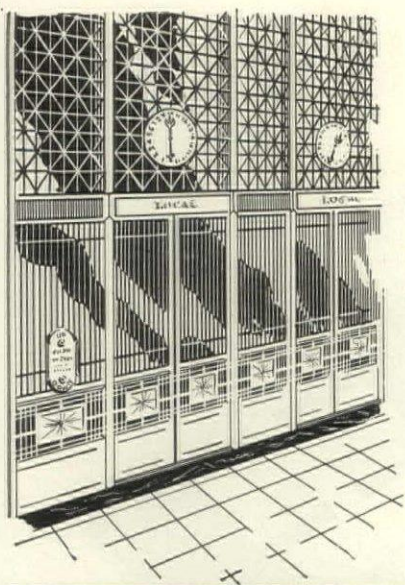
Sheets • Rods • Tubes • Molding Compounds • Castings • Vupak Rigid Transparent Packaging Materials



FACTS FOR POSTWAR PLANNERS

Saflex and the Resinox or melamine bonding resins which might be used in the plywood frame of Mr. Armstrong's chair are just part of the large Family of Monsanto Plastics, probably the broadest and most versatile group of modern plastics offered by any one manufacturer.

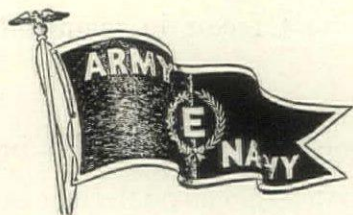
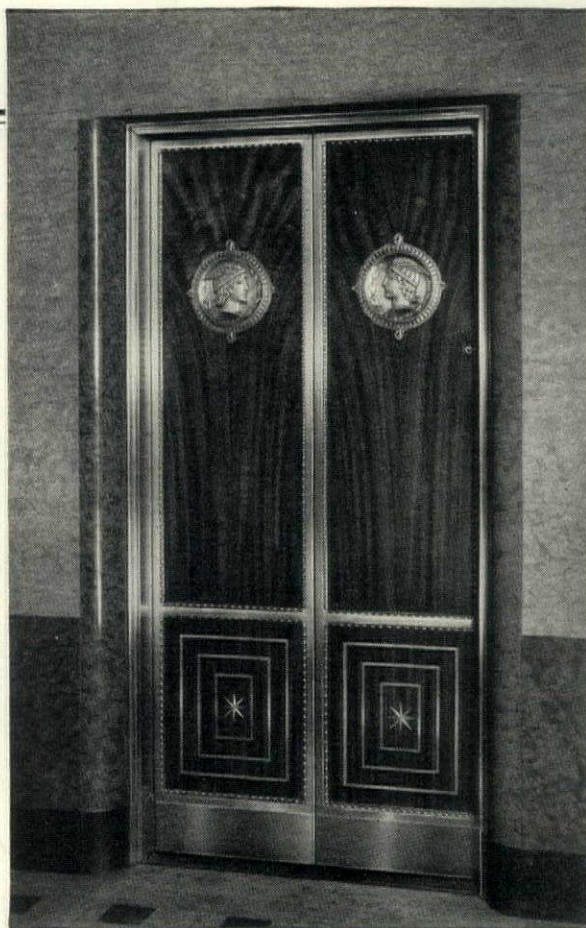
For facts on the entire family—and an overall picture of what plastics are, how they are fabricated and what they promise in the future—see the 24-page guide to Monsanto Plastics recently prepared for product designers. Simply write: MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield, Massachusetts.



Yesterday . . . Today and TOMORROW

They were really something in their time — those elaborate, open work masterpieces of ornamental iron that yesterday were the last word in elevator entrance doors. Now, they are both mile posts of the past and opportunity signs of the future. Today, they say: "Here is a building that must be modernized if it is to survive the post-war competition of more modern structures."

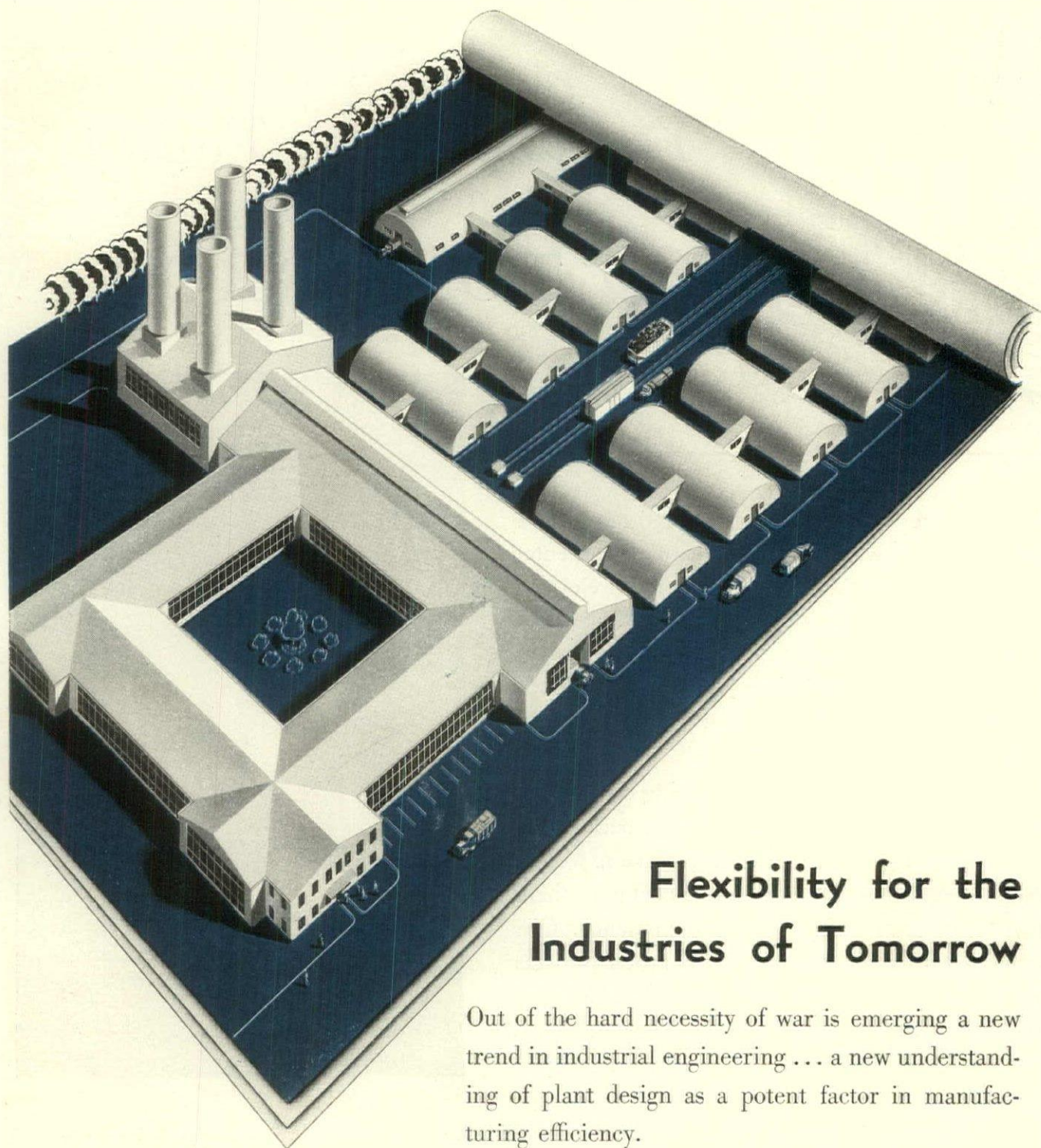
This type of post-war planning is going on today in many architectural offices. We know, because we are cooperating with technical assistance as well as design suggestions. In every city and town, these opportunities are waiting for your guidance. Can we work with you now, in order that these projects may be speeded the minute the last shot has been fired, and we quit forging the tools of war?



The illustration above offers an excellent example of modern face lifting as applied to the main floor elevator entrances of the Ford Building, Detroit, Mich. "Before" is shown in the thumbnail sketch above. The main floor as well as the others were modernized with Dahlstrom Elevator Entrances. Walker & Weeks, Architects.

DAHLSTROM

METALLIC DOOR COMPANY, JAMESTOWN, N. Y.
BRANCHES IN NEW YORK, CHICAGO, PHILADELPHIA, BOSTON AND SAN FRANCISCO
Representatives in Principal Cities



Flexibility for the Industries of Tomorrow

Out of the hard necessity of war is emerging a new trend in industrial engineering ... a new understanding of plant design as a potent factor in manufacturing efficiency.

It is a concept that demands exceptional flexibility in design and construction—an inherent characteristic of Stran-Steel building systems. Present wartime assignments are bringing about important developments in the application of Stran-Steel systems to industry's widely varied requirements. When peace returns, Stran-Steel will apply this experience to serving the peacetime needs of progressive industrial designers.

STRAN STEEL

DIVISION OF GREAT LAKES STEEL CORPORATION
1130 PENOBSCOT BUILDING, DETROIT, MICHIGAN

UNIT OF NATIONAL STEEL CORPORATION

Is His "Case of Sniffles" A Clue to Better Post-War Windows?

Anyone who has ever caught cold from sitting too near a drafty, heat-leaking window, will answer "yes!" The No. 1 requirement in post-war window design is *weather-tightness*—ability to reduce wind infiltration and heat loss.

Designing that kind of window isn't simple. It takes elaborate testing equipment, extensive laboratory facilities. It takes years of research and field experience.

Curtis has made this investment in time and research.

Consider, for example, the Curtis Silentite window. It represents the first basic window improvement in 300 years. It is a complete pre-assembled unit—factory-fit for extreme accuracy. It is made of wood—a non-conductor of heat and cold. It operates without weights or pulleys—and hence with no cuts in the jamb to allow heat leakage. Its efficient weatherstripping is built-in, an integral part of the unit.

But what about the window of tomorrow? We can say only this: Curtis research is still going on . . . still centered on making even further improvements in window weather-tightness.

Whatever tomorrow may bring, Curtis will continue a leader in better window design . . . with *weather-tightness* a primary Curtis advantage. Curtis Companies Service Bureau, Dept. AF8S, Clinton, Iowa.



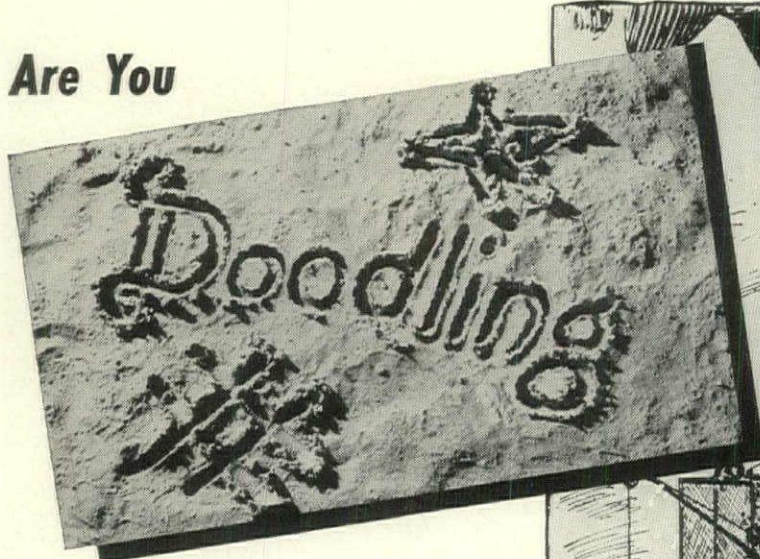
Here is one of the famous Curtis Silentite window designs. It's an insulated, pre-fit, pre-weatherstripped window . . . free of weights and pulleys, free of sticking or rattling. It's a typical Curtis achievement in designing windows that keep heat inside—and bar out cold.



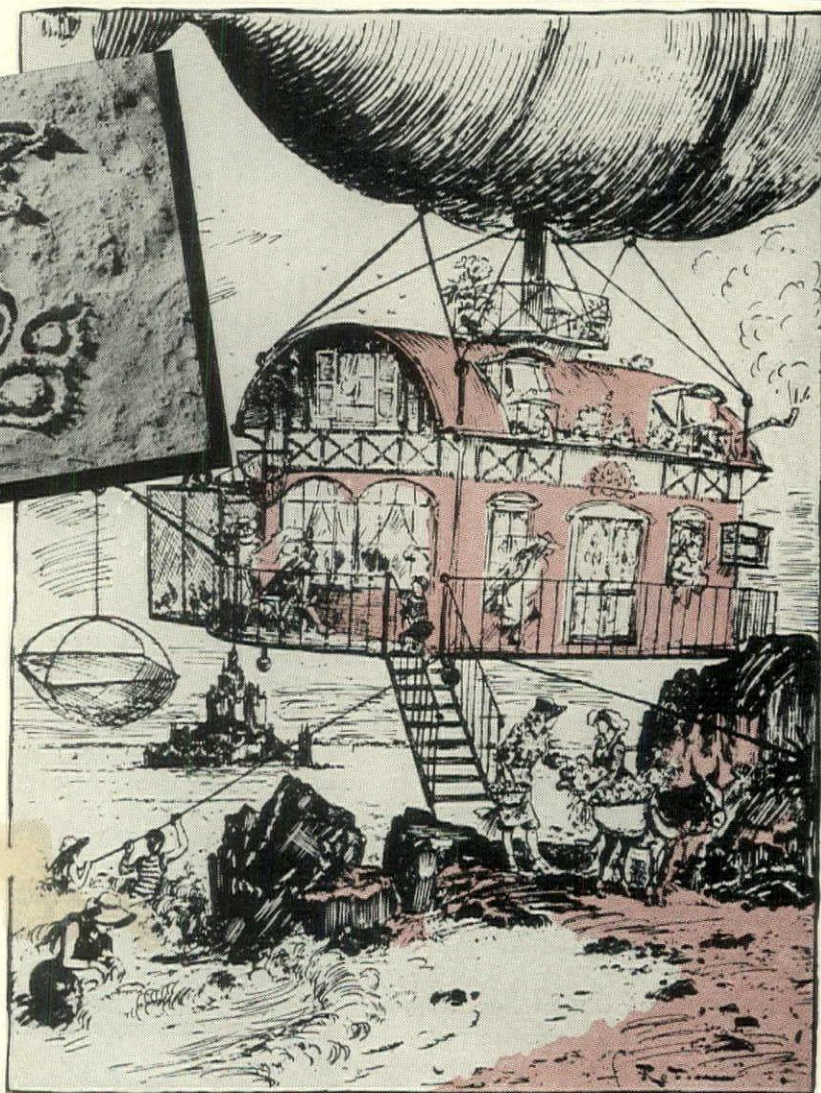
TOMORROW'S WINDOWS WILL HAVE GREATER WEATHER-TIGHTNESS

DOODLED IN 1889. This heavenly-haven-for-wandering-week-enders wowed 'em when it appeared in a Parisian magazine 54 years ago. Fortunately, nobody ever risked his money and his neck trying to build one. Even in the old days, as you see, people dreamed and planned new kinds of buildings—most of which never got built.

Are You



or Planning for that
Building Boom?



BETTMANN ARCHIVES

NO DOUBT ABOUT IT. America's bursting out of its over-age seams—we need lots and lots of new housing.

But you're building your hopes on the sands of wishful-thinking if you expect a building boom to follow the war just because America *needs* one!

Remember—there's no law that says "need equals demand." Remember—there was a great need for new housing *before* the war. And *what* happened? No boom.

So, to help *create* demand as quickly as possible after Victory comes, **TIME** offers the following practical five-point plan:

PLAN FOR BUILDING POSTWAR BUILDING MARKETS

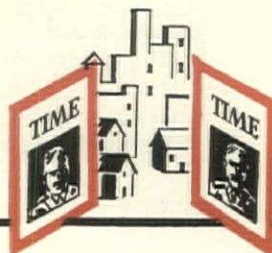
First big point is... **(1) Prepare to stimulate confidence in new techniques, materials, designs.** To do this job, tell your story to America's leaders—the people* who, once they *know* about building's new techniques and materials, can break the log-jam of public apathy and release a flood of acceptance. And the best way to reach these leaders is through **TIME**. For they say they prefer **TIME** by a wide margin of 7 to 1 over any other magazine they read that carries advertising.

And **TIME** can help you on all the other four points of this plan as well: **(2) Prime the building market that will start buying first after the war;** **(3) Interest both men and women who jointly decide when and how to build a house;** **(4) Stir up prospects for non-residential building;** **(5) Get the middlemen on your side.**


*These people include executives and editors, congressmen and college presidents, government officials, mayors, radio commentators and 21 other groups of leaders—all of whom recently voted "**TIME** is America's most important magazine."

TIME

THE GATEWAY



TO THE BUILDING MARKET



**Get There "Fustest"
with the Mostest"...**

When
**FIRE THREATENS
WAR PRODUCTION**

Winning the "Battle of Production" involves a lot more than a supremacy of materials, machinery and manpower. One major fire . . . or a small fire that results in crippling damage by the extinguishing medium . . . can halt or slow down war production in a dozen vital plants.

Cardox Fire Extinguishing Systems are guarding against these crippling fires in plants producing a wide variety of critical war products. For example, individually engineered applications are on duty in important plants producing such military necessities as:

Airplanes, Aviation Engines, Aviation Carburetors, Airplane Parts, Engine Parts, Plastics, Rubber Products, Processed Fabric, Tanks, Tank Engines, Cold Strip Steel, Armor Plate, Forgings, Solvents, Motor Fuel, Electric Power.

By instant smothering of fire and cooling of combustibles through the mass discharge . . . at high rate of flow . . . of low pressure, low temperature CO₂, Cardox Systems provide the all-important advantage of fast, complete extinguishment of large or small fires—without damage by the extinguishing medium.

Today, Cardox is concentrating its engineering and manufacturing facilities on two basic activities: (1) Designing and manufacturing of Cardox Fire Extinguishing Systems needed to make it possible for the Armed Forces of America to have more planes, guns, tanks and ammunition; (2) working with industry on plans to increase the efficiency of fire protection both today and after the war.

If you would like more information, write on company letterhead for Bulletin 683

CARDOX CORPORATION

BELL BUILDING • CHICAGO, ILLINOIS

District Offices in New York • Washington
Detroit • Cleveland • Atlanta • Pittsburgh
San Francisco • Los Angeles • Seattle

★ **BUY WAR BONDS** ★

**How Cardox Systems
Protect War Industries**

- Timed discharges, as needed, through built-in piping systems . . . supplied instantly from a single storage unit holding tons (if required) of liquid Cardox CO₂.
- Mass discharge of Cardox CO₂ "knocks out" fire, by . . .
- Reducing oxygen content of the atmosphere below the concentration necessary for combustion, and . . .
- Cooling combustibles and fire zone below ignition temperature . . .
- Extinguishing fire quickly and completely without damage from extinguishing medium.

**CARDOX—CO₂ Systems with
Enhanced Fire Extinguishing
Performance**

- A. Uniformity of CO₂ characteristics.
- B. Extinguishing medium with uniformly greater cooling effect.
- C. Accurate projection of CO₂ through greater distances.
- D. Timed discharges, as needed, through built-in piping systems . . . supplied quickly from a single tank holding tons of liquid Cardox CO₂.

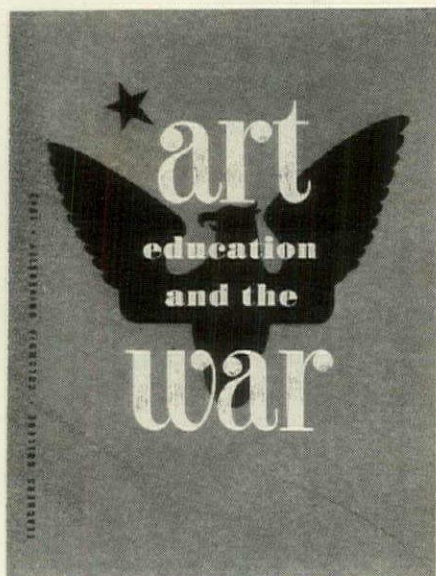


MASS DISCHARGE OF CO₂
ENHANCED COOLING EFFECT
CENTRAL STORAGE UNIT
AMPLE CO₂ RESERVE
ENGINEERED SYSTEMS
MANUAL OR AUTOMATIC CONTROL

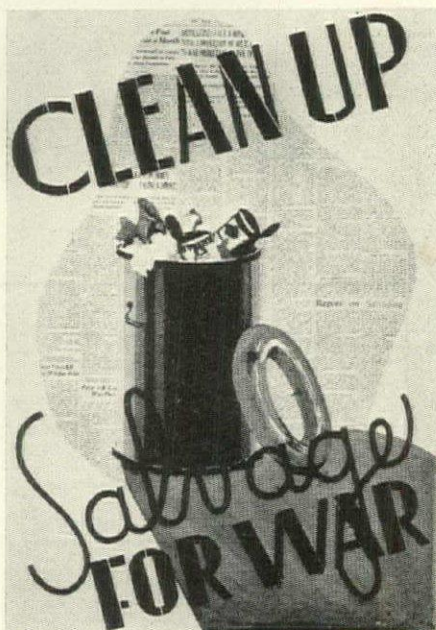
CARDOX

NON-DAMAGING FIRE EXTINGUISHING SYSTEMS

BOOKS



JACKET IS RED, WHITE AND BLUE



SCHOOL ART HELPS SALVAGE DRIVE

ART EDUCATION AND THE WAR, sponsored by members of the Fine Arts Staff of Teachers College, Columbia University. Bureau of Publications, Teachers College. 72 pp., 7½ x 10. \$1.25.

Art Education and the War is exactly what its title says: *Art Education* with *the War* tagged on at the end. This is no defect. It only means that a serious crisis was required to emphasize the importance of the subject. This quality of urgency has given many of the suggestions contained in ten separate articles a flavor of expediency that may detract from their value as a general directive on art education.

The most important articles cover the following subjects: "The Present Crisis and the Museum," "The Child Artist," "Housing, The People, and Progress," and "Soviet Painting."

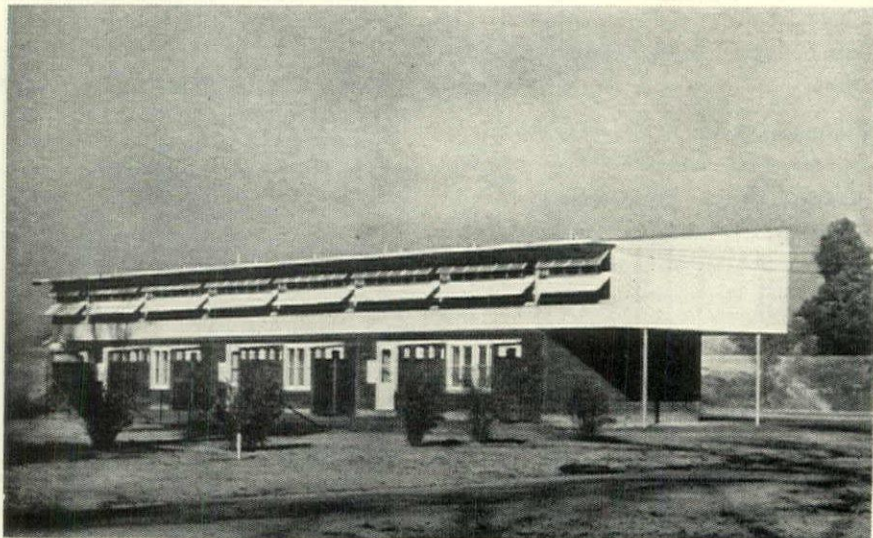
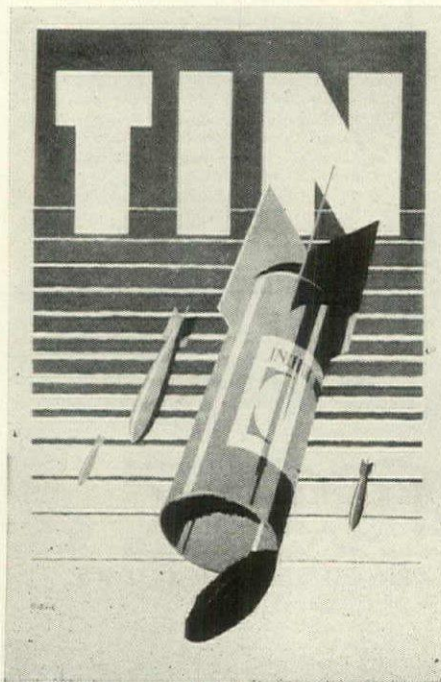
Mr. Fox, in the first contribution, seems resigned to the fact that art education to date has been so unsatisfactory that all immediate contributions must be in the nature of palliatives. He outlines a very sound program, consisting of travelling shows to army camps, guide books to art treasures in countries occupied by our troops, and art shows of a popular character in war centers. All of this is fine, but isn't it the sledge-hammer approach? The soldier today is for the first time in close contact with some of the new forms and shapes characteristic of the machine. Though they are not the most pleasant products of our civilization, tanks, fighter planes, bombs or gun butts are matters of daily military use. Subconsciously he is discovering the qualities inherent in these new forms. Art education should make this a *conscious* discovery.

Miss Griffin in her essay on art education for children supports this general approach. "Each new creative or aesthetic situation requires . . . fresh examination, a new procedure rising from the new problem. . . The habit of keeping the vision sharp and clear, the intellect and intuition *en rapport* with the creative will. . . Such habits do not come into existence spontaneously. . . ." This is where art education must step in, and there is no valid objection to applying the same principles to adults. It is illogical to present the work of mature artists and expect the untrained onlooker to fathom the whole complicated background to such work.

Walter Bogner, of Harvard, in his article on housing, demonstrates that similar principles can be applied to art education on the home front. The architectural environment of many people has undergone a profound change. Through new housing, in many instances, a new aesthetic and social concept has for the first time been introduced into community life. The inhabitants of Yuba City, Calif., for instance, may discover some strange connection between their new homes and the space designs of Alexander Calder's, just as the soldier, in daily contact with machines acquires a new plastic sense.

Most controversial of all the articles is Vernon Clark's defense of Soviet art. It does not matter whether you call this kind of academic mediocrity "Socialist Realism" or whether you call it the style of the English Royal Academy—it's still the same story. The Soviets rejected the new art forms, and

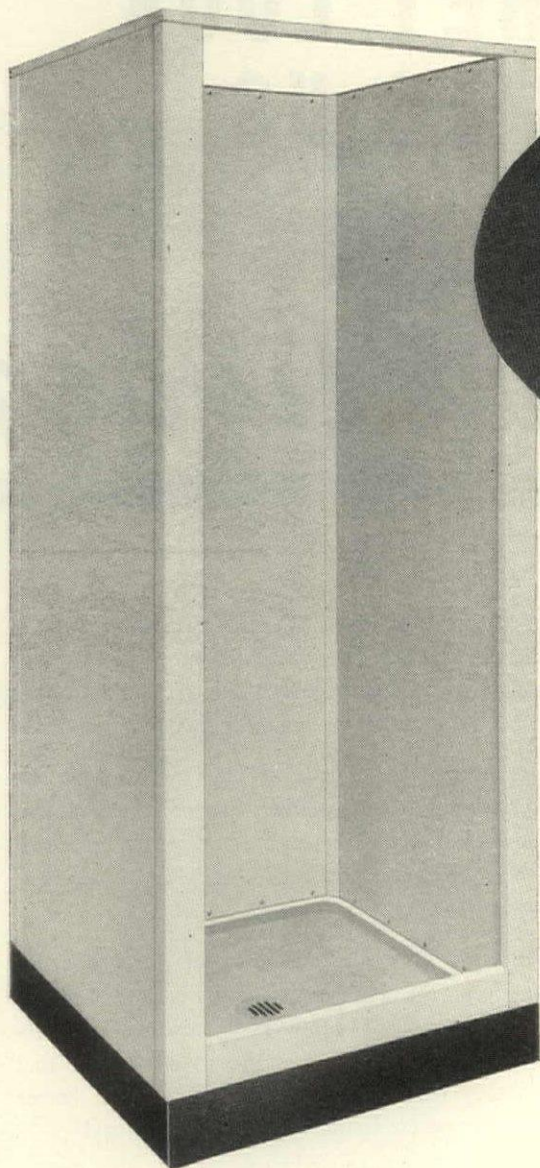
(Continued on page 106)



A NEW SPIRIT IN DESIGN—COOPERATIVE HOUSING IN YUBA CITY, CALIF.

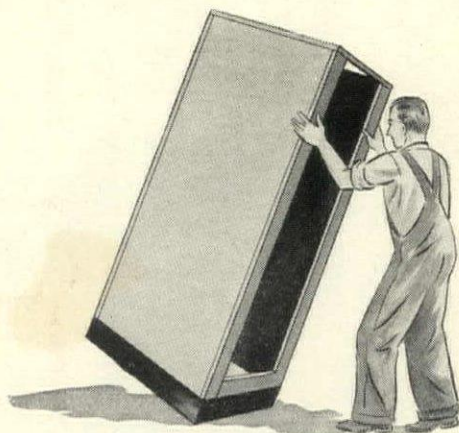
STRENGTH

— more than
required
for ordinary use



FIAT'S
Volunteer

is designed and built
for war service



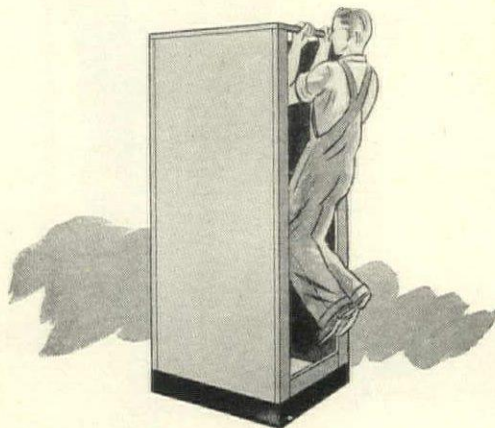
Twist it, move it to any required location in the building; the rigid strength of the Volunteer will stand up.

SPECIFICATIONS

WALLS: Tempered, hard pressed treated fibre-board, conforming to Federal Specification LLL-F-311, Class B, coated inside and out with water proof baked-on enamel, grey or white. All assembly pieces, including tension corner joints, front stiles (pilasters) threshold and headrail, rustproofed steel—use allowed by government. All parts formed to eliminate raw edges within the interior of the compartment.

RECEPTOR: Pre-cast reinforced concrete. Non-slip, leak-proof, non-absorbent and sanitary. Drain cast integral with receptor.

SIZE: Overall dimensions, thirty-two by thirty-two by seventy-five inches high (32" x 32" x 75"). On special request 30" x 30" x 75" can be furnished.



The Volunteer has structural strength
to withstand unusual abuse.

FIAT METAL MANUFACTURING COMPANY

1205 Roscoe St., Chicago. • 21-45 Borden Ave., Long Island City, N. Y. • 32 S. San Gabriel Blvd., Pasadena, Cal.



THEY LOOK TO US

for

Better Living

What of these millions of Americans who look to us for better living? They are too young to fight . . . too young to man the machines of industry . . . too young to either condemn or praise our individual wartime roles.

Stakes are high in this global War! Our enemies lust for Power. And Power is neither territory nor raw materials. Power is people! Power is absolute life and death control over the minds and bodies and futures of those who now are free.

That's why this War demands unity of purpose, unity of action from the Fighting, Producing and Civilian fronts. That's why Oil-O-Matic skill, facilities and productive capacity now work for Victory—to speed that day when they will again build the products of better living. Because better living *begins* with Victory!

Take your first step toward tomorrow's better living *now*. Buy War Bonds! Because your *fighting* dollars of today will be your *better living* dollars of tomorrow.

This advertisement also appears in *Colliers*, *Better Homes & Gardens* and *American Home*.



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

WILLIAMS
OIL-O-MATIC
HEATING

**WILLIAMS OIL-O-MATIC
HEATING CORPORATION**
BLOOMINGTON, ILLINOIS

MANY STRUCTURES OF THE 194X PERIOD NOW DOT THE AMERICAN SCENE

BAR-GRILL



Flander's Bar-Grill, Philadelphia, Pa., Tilden, Register & Pepper, Architects; Virginia Black Serpentine Facing and Bulkheads.

LIBRARY



Central Public Library, Brooklyn, N. Y., Githens & Keally, Architects; Alberene Black Serpentine Spandrels.

LABORATORY



U. S. Dept. of Agriculture, Regional Research Laboratory Building, Wyndmoor, Pa., Alberene Tremolite Mullions.

RETAIL STORE



Cord Building, Beverly Hills, Calif., Burton L. Schutt, Architect; Alberene Black Serpentine Facing and Bulkheads.

OFFICE-STORE



Branch Building, Queensborough Gas & Electric Co., Valley Stream, N. Y., Voorhees, Walker, Foley & Smith, Architects; Alberene Black Serpentine Facing and Bulkheads.

HOSPITAL



U. S. Naval Hospital, Bethesda, Maryland; Navy Dept., Architects; P. P. Cret, Consulting Architect; Alberene Black Serpentine Panels.

SCHOOL



Public School No. 114, Bronx, N. Y., Eric Kebbon, Architect; Alberene Black Serpentine Paneling.

This advertisement, published as a tribute to the far-sighted designers of pre-Pearl Harbor days, was prompted by Architectural Forum's impressive May issue which featured "New Buildings for 194X" by prominent architects. In the main the facades call for panels or slab treatment in contrasting tones. Alberene *Dark Stones* meet the demand for permanent exterior

stones...economical because they can be supplied as thin as 7/8". Alberene Stone Corporation of Virginia, 419-4th Ave., New York 16, N. Y., Quarries and Mills, Schuyler, Va.

"Start an architect
on a plan now" . . . —

Alberene
BLACK SERPENTINE
PERMANENT, NON-REFLECTIVE, ECONOMICAL

A plea for more conservative houses . . . Arthur C. Holden dissents on Stuyvesant Town . . . "The New Frontier Is Right Where You Live!"

UNFUNCTIONAL MONUMENTS ?

Forum:

I am interested in sound, functional, economic building with, of course, as much effort to please the eye as possible.

Your constant effort to sell the public with artfully taken photographs of "fadistic," already outdated, and highly unfunctional monuments of some of our impractical "international" enthusiasts, is a distinct disservice to the profession and may well bring it ridicule.

Why devote pages and pages to some nice, snappy country house which is so well protected by acres and in such a warm climate that it can be of glass, and imply that it is a nice functional pattern for the U.S.A.?

What are we going to do about rebuilding our cities and suburbs where the climate is cold and land costs dictate small lots? I don't see many practical solutions offered for this immense part of the postwar work.

LATHROP S. DOUGLAS, *Architect*
New York, N. Y.

Architect Douglas' attention is called to the George Fred Keck "solar house" on page 6, which was built for sale on an ordinary suburban lot in blustery Chicago, has extremely large windows that save fuel rather than waste it.—Ed.

"EARNEST, INDIGNANT, VAGUE"

Forum:

I can't see that any good purpose is served by the "smart-aleck" version which THE FORUM gives of the hearings on Stuyvesant Town before the City Planning Commission. The three unflattering photographs of Buttenheim, Breines and myself are bad enough without the caption underneath. The three words chosen for the caption—"earnest," "indignant," "vague"—are calculated to give the impression of something that transpired of which the reporter either knew little or aimed to mislead. . . .

For myself, there was nothing vague in what I said. At the first meeting, May 5, it was all presented in writing. A copy is enclosed for your use. At the second meeting, my personal testimony was delivered orally, and I commenced by asking a question of the chairman as to whether or not the Commission had authorized to be prepared any report by the technical

staff of the Commission. I then based my objections on the procedure and pointed out that the Commission was throwing away the opportunity of establishing confidence in its own technical capacity. The Commission, by taking precipitant action, merely "rubber-stamping" its okay upon a proposal presented, failed to act as coordinator of other agencies whose attitudes should be weighed before the making of any decision in city planning. The testimony at the same hearing brought out that there had been no coordination with the Borough President's office, or with the administration offices having jurisdiction over other important city functions. . . .

ARTHUR C. HOLDEN, *Architect*
New York, N. Y.

Despite a strong personal bias in favor of Editor Buttenheim and Architects Holden and Breines, and some agreement with their point of view, THE FORUM as an objective reporter had no choice but to characterize their protest at the May 5 hearing as ineffectual and disorganized. As THE FORUM's continued coverage of the Stuyvesant project has shown, there was no intention to treat it lightly or to be "smart aleck."—Ed.

ELIEL REVIEWS ELIEL

Forum:

You editors of THE ARCHITECTURAL FORUM have the wrong ideas about reviewing books. Don't you realize that to throw an architect's book to a reviewer is just to allow some office boy, some upstart, to draw attention to himself by howling down a person of culture and national reputation?

The Octagon which is the journal of the American Institute of Architects has the right ideas. Its issue for June contains a review of Eliel Saarinen's book *The City*. Who wrote the review? Mr. Eliel Saarinen. We architects must stick together and boost each other's work. Too few, all too few of us in the profession realize what is owing to us as gentlemen.

Since architecture is the gentlemanly profession *par excellence* (fr.), I think that its practitioners should, in all decency, be protected against slurs, innuendoes, rudenesses of these reviewer persons. To use Lincoln's words, let us have more reviews of architects, by architects, for architects.

ALAN MATHER, *Architect*
Birmingham, Mich.

THE NEW FRONTIER

A copy of the newspaper advertisement referred to in the following letters appears as an insert in this issue.—Ed.

Forum:

. . . The full-page pronouncement on the subject of Planning by THE ARCHITECTURAL FORUM in the *Times* yesterday attracted my attention because it was a realistic and capable effort to talk planning in terms that would be intelligible to the public. It would appeal to that public as good American sense. Heretofore, the planners have talked only to each other, consequently for the average citizen planning of any kind was just another thing to leave to the dreamers as a subject of conversation.

I hope your effort will have started a nationwide movement to make our people realize that local, regional and national planning alone can provide the setting for economic welfare and thereby for the health and security of our fellow citizens and ourselves.

ROBERT D. KOHN, *Architect*
New York, N. Y.

Forum:

. . . This advertisement has definitely served a distinct purpose in bringing planning right into the people's homes. In general, they feel that planning is something more or less outside the sphere of their immediate interest.

I liked particularly your comment "Planners are not crackpots." In many people's minds they have been thought to be something akin to the parlor pinks of a decade ago, who were mostly long-haired men and short-haired women. Planning is perfectly respectable and I believe that we must bring the public to believe that the planning of cities and of housing is no different from the planning which industry must do every time it decides to change the model of a car.

I also liked your emphasis on the fact that planning needs more than experts. Perhaps in our over-all planning, we can get the American to finally overcome his particular pet prejudice and think in terms of his community, his state and his country, rather than in terms of small propaganda and pressure groups.

Altogether, I think your advertisement has helped the cause of plan-

(Continued on page 40)

What 877 contractors have to say about dry-built full-wall construction

Do they like it? *They do!*

A large independent research organization recently conducted an impartial and thorough fact-finding survey. Building contractors, chosen at random in cities, towns and

villages from coast to coast, voted overwhelming approval of this new building development for small homes.

Why do contractors approve single-panel walls? Here are the leading reasons in the order contractors rated them...



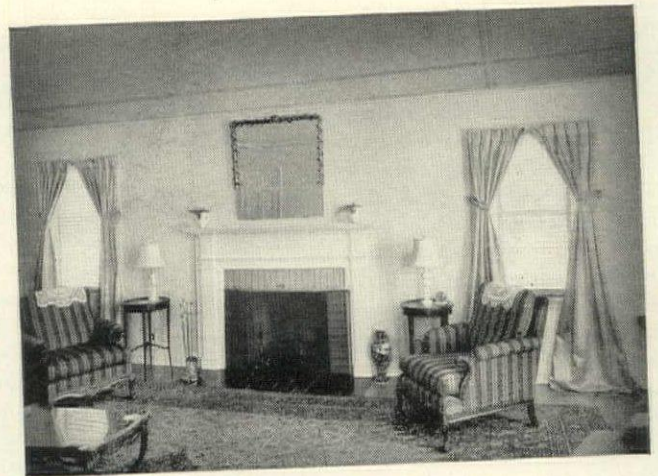
1 SAVES BUILDING TIME. Contractors voted the time-saving advantages of dry-built full-wall construction into the Number One position. (FACT: Users of Strong-Bilt Panels report shortened construction time on both conventionally built and prefabricated homes.)



2 SAVES LABOR COST. One panel covers an entire wall of the average home. Floating Fasteners anchor panel securely from rear. No face nailing. No nail holes to fill. No joints to tape or hide. (FACT: The application of Strong-Bilt Panels involves fewer operations than most other types of interior wall.)



3 NO PLASTER TO CRACK. Eliminates a costly source of trouble and complaints for the builder. Reduces maintenance expense for the owner. (FACT: Walls and ceilings of Strong-Bilt Panels remain forever crackproof.)



4 NO MOISTURE TROUBLE. Trim and flooring are not exposed to the 1000 pounds of water which may be used in plastering an average small home. (FACT: Strong-Bilt Panels introduce no water or excess moisture into a home.)

OTHER REASONS receiving important mention: (5) beauty of the unbroken surface of a full wall (6) cleaner—no mess to clean up after installation. For booklets picturing the advantages of dry-built full-wall construction, both in conventional and prefabricated homes, write The Upson Company, Lockport, New York.

Upson Quality Products Are Easily Identified By the Famous Blue-Center


UPSON
STRONG-BILT
PANELS

THE CRACKPROOF BEAUTY SURFACE FOR WALLS AND CEILINGS

LETTERS

(Continued from page 38)

ning inestimably and that you ought to be congratulated for the bold approach that you have made on this subject.

ROBERT H. ARMSTRONG
Armstrong & Armstrong, Real Estate
New York, N. Y.

Forum:

You are calling attention none too soon to the needed and job-giving possibilities of the postwar planning and rebuilding of our cities.

The years of the depression, and now of the war, have let many of our towns get down at the heel. When this affair is over there will be unlimited opportunities to make twentieth century living what it should be. We should never go back to leaf-raking to provide employment but should spend local money locally, where it will provide more wealth.

I have been particularly impressed by the article in *Fortune* telling about the progressive steps that the city of Syracuse is taking along this line. That town will be ready, when firing ceases, to move ahead to the better days that should be before us. I hope the plan will be carried out without resort to federal subsidies from federal deficits.

Any publicity given on this subject will have the support of industry.

LEWIS H. BROWN, *President*
Johns-Manville Corporation
New York, N. Y.

Forum:

I have read the advertisement of THE ARCHITECTURAL FORUM published in today's issue of the *New York Times*. This is a splendid piece of advertising and should do much good because it is directed towards stimulating planning in every village and hamlet, as well as in the big cities. There is too much talk of planning—by others—and very little planning—by ourselves. This advertisement should start everyone thinking—and doing.

J. ARCHER TURNER, *President*
Turner Construction Company
New York, N. Y.

BRAZILIAN BLINDS

Forum:

I see in the April issue of FORUM a review of the book *Brazil Builds* by Mr. Philip Goodwin, whom I had the real pleasure of meeting in New York two years ago . . . "Her great contribution to modern architecture," Mr. Goodwin says, "is the control of heat and glare by means of external blinds . . . As early as 1933 Le Cor-

busier had used movable outside sunshades . . . but it was the Brazilian architects who first put theory into practice . . . As developed by modern architects of Brazil, these external blinds are sometimes horizontal, sometimes vertical. . . ."

Well, the fact is quite another: I made experiments and used such movable vertical blinds as early as 1932—one year before Le Corbusier's unconstructed project for Barcelona—and discussed the theory after putting it in practice, in August, 1933 in the *Revista de Arquitectura* of Buenos Aires. In that article I discussed the theoretical difference between horizontal and vertical sunshades; Le Corbusier had never discussed before this

subject. In addition I put in execution many applications of my theory, including the Hospital Militar Central, the Escuela Superior de Guerra and Escuela Superior de aplicacion Militar . . .

. . . Anyway I feel very proud Mr. Goodwin qualifies my work as a "great contribution to modern architecture," even if by oversight—I am sure—he distributes the honor among Le Corbusier and Brazilian architects.

JULIO VILLALOBOS, *Architect*

Forum:

. . . It is entirely clear in my mind that Mr. Villalobos has no understanding of what I was talking about in *Brazil Builds*. The invention of
(Continued on page 104)

A LETTER FROM THE PUBLISHER

Dear Reader:

There is so much pious talk these days about postwar planning that THE FORUM decided to do something about it. Flaming pencil in hand, the editors whipped out a full-page newspaper ad and twenty-four hours later it confronted the readers of the *New York Times*. Week after, 531 Senators and Representatives rubbed their eyes over their breakfast orange juice and, for all we know, the President himself read every word of it in his *Washington Post*. From there, the ad moved to the *Cincinnati Enquirer*, producing among other things a formal resolution from the Producers' Council. (Thank you gentlemen!)

We got so many thoughtful wires and letters that for a few days our gratitude got out of breath trying to keep up with our ego. The heads of great companies like International Nickel, Johns-Manville, Revere Copper, Ruberoid and many another took the trouble to applaud. Every housing and planning administrator in Washington cheered. The Chamber of Commerce, the National Association of Real Estate Boards, the Twentieth Century Fund, the Associated General Contractors and many more swelled the chorus.

But more important than these signatures and the sentiments above them was the unity of approval from every branch of Building. Apparently, "*The New Frontier is Right Where You Live*" hit a note which everyone from architects to zoning experts was ready to back. Building had found a theme for united postwar action.

Now, no one on THE FORUM

fondles the illusion that running one page in 3 fine newspapers is likely to enthuse 130 million Americans and keep them enthused. But we do believe that if this advertisement and the pamphlet it features, "Planning With You," could be read by people counted in hundreds of thousands, it would start in motion community postwar planning programs all over the U. S.

That is why this issue of THE FORUM carries the complete copy of "Planning With You" (pages 65 to 80) and a reproduction of the newspaper page.

An amusing sidelight to this adventure is the fact that when the newspaper ad first appeared, the pamphlet it offered was little than a glint in the editors' eyes. If you have ever tried to write about city and town planning in language which would be as understandable to a truck driver as to a university professor you will have some notion of the anguished days and nights which attended its birth. We are happy to report that it is now a lusty sixteen-page affair, in not one but two colors.

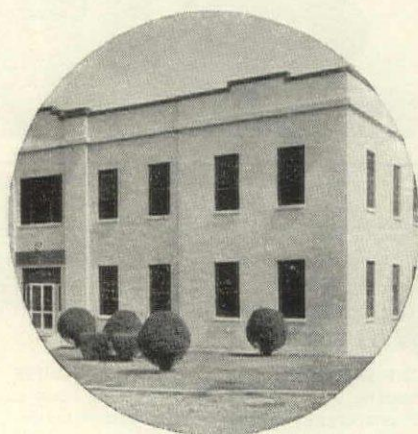
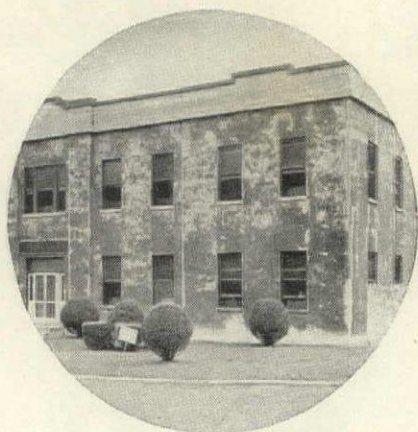
After you have read it, THE FORUM hopes that you will be sufficiently impressed to want to do something about getting it into the hands of your non-professional neighbors. They, not we, are the ones who will decide what kind of postwar planning is going to be done right now, and what kind of communities we are going to build after the war.

What THE FORUM has done is merely the beginning of the beginning. Now things move pretty much from our hands into yours. H. M.

how to save your structures . . .

an announcement

ten years in the making



Four years of research in the Horn Laboratories with irreversible inorganic gels . . . six years of field proof on hundreds of structures . . . ten long years in all. Now the A. C. Horn Company, with 47 years of Building Material experience, announces WATERFOIL — the protective and decorative treatment for masonry surfaces.

“Waterfoiling” concrete, stucco or brick surfaces lengthens the life and beautifies structures. WATERFOIL impedes the penetration of water which causes reinforcing bars and mesh to rust and concrete to spall.

WATERFOIL is a unique development. It is manufactured of non-critical materials. It contains no Linseed Oil — Casein — Resin Emulsion — Volatile Thinners or Cement.

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BUILDING MATERIALS DIVISION
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THE UNIQUE TREATMENT FOR EXTERIOR MASONRY SURFACES



GREAT OK'S from 100,000 little ok's grow

Flight test OK—the final of 100,000 ok's required on every B-24 Consolidated Liberator bomber built at the great Ford Willow Run plant. Precision parts in these bombers must be held to tolerances as close as one twenty-thousandth of an inch. Gages for inspecting these parts are checked against master gages in air-conditioned rooms to prevent variations due to temperature changes and corrosion from excess humidity. This is just one of the 17 applications of Westinghouse Air Conditioning and Industrial Refrigeration in six Ford plants.

After Victory, Westinghouse "Conditioning" will bring a "thousand" new-day benefits. Better products at lower cost, greater year 'round comfort—better living for all.

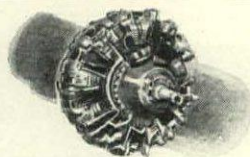
In meeting varied "conditioning" problems, Westinghouse draws upon years of experience. The exclusive hermetically-sealed compressor assures economy, dependability, long life. Inquiries are invited from producers of war materials and from postwar planners. Westinghouse Electric & Manufacturing Company, 705 Page Blvd., Springfield, Mass.



BULL'S-EYE IN THE SKY. Anti-aircraft gunfire directors are gaged and assembled at temperature and humidity held constant by air conditioning for perfect fit of parts.



WORLD'S TOUGHEST "FLIVVERS". In annealing body steel for Ford-built "blitz-buggies", process air must be dehumidified. This is done with air conditioning.



MORE POWER PER POUND. Magnesium, used for lightness and strength in Ford-built aircraft engines, is laboratory tested under controlled air conditions for accuracy of testing instruments.

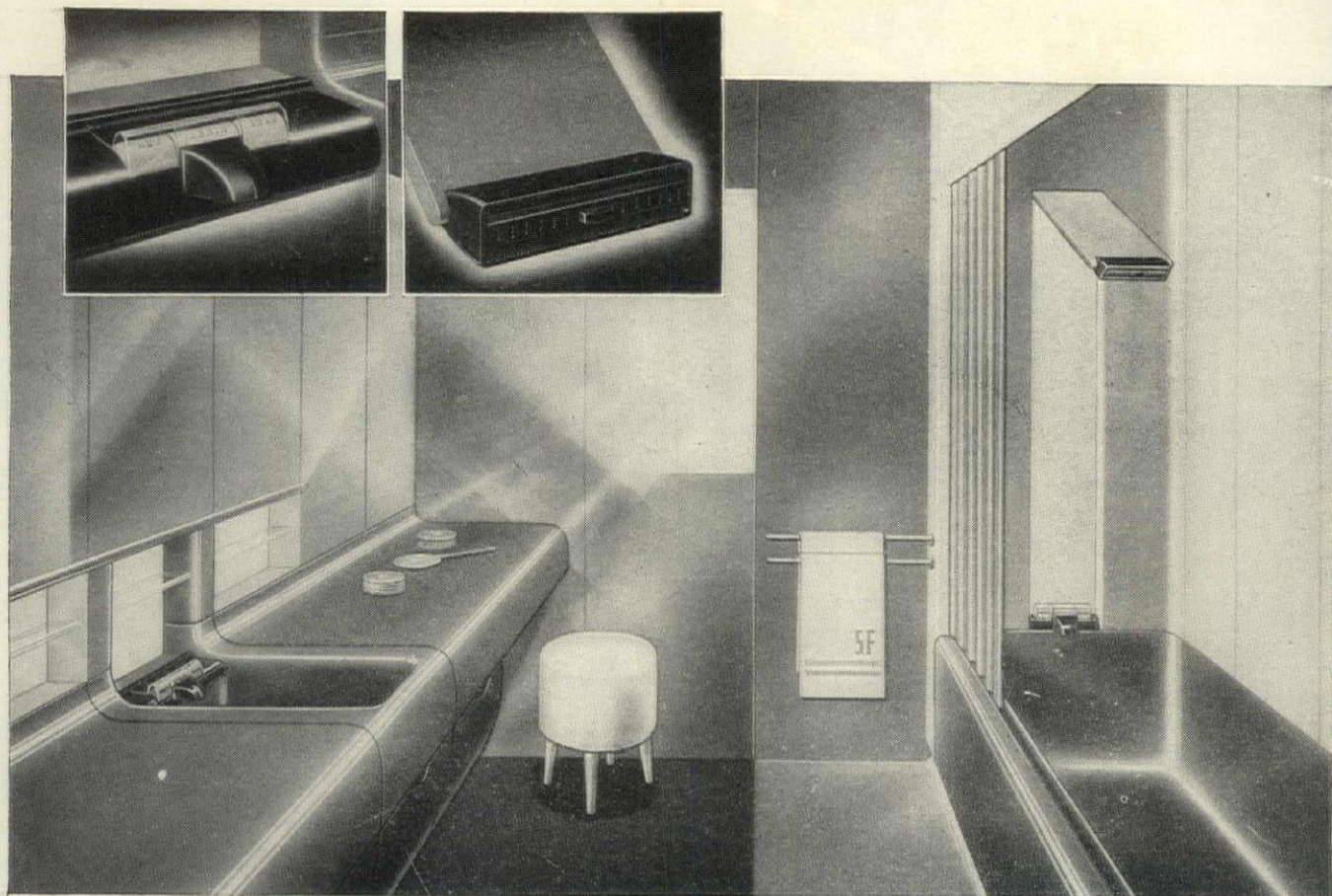


AILERON AND RUDDER FABRIC is sprayed with a "dope" compound for strength. Correct temperature and humidity, provided by air conditioning, assure proper drying and protect against explosions.

Tune in John Charles Thomas, Westinghouse Program, NBC, Sunday, at 2:30 P.M., E.W.T.

Westinghouse Air Conditioning

GEARED TO A THOUSAND WARTIME NEEDS



Not since Nero...

LIKE THE MAGNIFICENT BATHS erected by the Roman emperors . . . the mere term, "American plumbing," has become a legend, evoking admiration and awe in all languages. Yet impressive as our creature comforts may be today they are soon to be superseded!

Superseded and forgotten because of the progress afforded by relatively new structural materials . . . Durez phenolic plastics and resins. These have directly inspired the future bathroom visualized for you here by Sundberg & Ferar. As Mr. Sundberg says . . .

"Structurally, Durez phenolic molding compounds are ideal. To begin with, they are unaffected by heat, moisture or the mild alkalis and acids common to bathroom essentials—soaps, lotions, disinfectants, etc. Aesthetically, plastics provide a lustrous, satin-smooth finish. As for costs, they permit economical mass-production of whole units since complicated moldings can often be achieved in one simple operation.

"Thus we arrived at the combination of wash basin

with really ample laundry and supply cabinets on the left. At right, you have a plastic shower which folds into the wall when not in use. In addition, this shower is adjustable in height, eliminating the need for shower caps.

In detail, look what happens to the familiar faucet and shower-head when re-housed in gleaming Durez. Even the walls may take on a new face . . . utilizing Durez resin-bonded or impregnated materials, molded under low pressure and prefabricated into standard units."

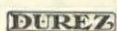
Here is another field in which plastics can help America's post-war planning to prosper. But first . . . the victory! Have you a war-production problem that may find a fresh solution in plastics' versatility? Durez engineers and chemists will be glad to serve you. Further, if you wish to learn more about phenolic plastics and resins . . . a request on your business letterhead will bring Durez Plastics News to your desk.



CARL SUNDBERG
Industrial Designer,
of the firm of
Sundberg & Ferar

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COMPLETE *WOOD* WINDOW UNITS

Designed to catch the sun . . . to bring life to wall areas . . . to add warmth and livability—that will be part of the function of Andersen Complete Wood Window Units in the 194X home.

But, equally important will be Andersen Complete Window Units designed as a functional part of the entire structure. For as window areas increase, so it becomes increasingly important to fill those areas with window units of sound design and wide adaptability. To the architect or builder who

is today engaged in war work, but who is looking forward to the time when normal practice is resumed, Andersen makes this assurance: though designs may change and innovations develop, Andersen Complete Wood Window Units will, as always, be designed to meet the exacting requirements of the building profession.


Sold, as always, through regular millwork channels. See Sweet's Architectural Catalog or write to address below for details.

Architect, JOSEPH DOUGLAS WEISS

Andersen Corporation

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Sunshine

For the 194X HOME

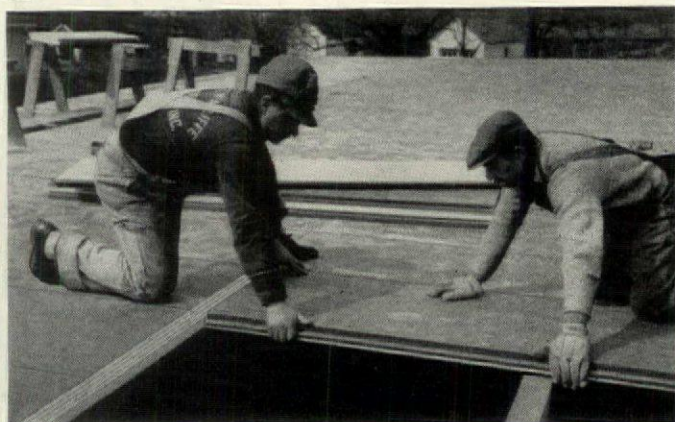
ONLY THE RICH CAN AFFORD POOR WINDOWS



ANOTHER EMERGENCY JOB LICKED BY GOLD BOND GYPSUM ROOF PLANK



Speed counts these days. Emergency buildings take form almost overnight—and Gold Bond Gypsum Roof Plank is one of the big time-savers!



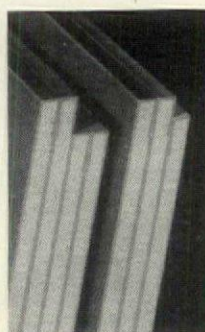
These fireproof gypsum planks, 2' wide and up to 10' long, fairly eat up large areas. Offset edges on long sides for snug-fitting joints.



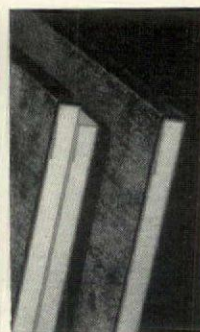
For flat or pitched roof decks. The moment the sturdy gypsum planks are nailed in place, the roofers move in. No waiting for materials to dry!

THE Gold Bond Gypsum Building Boards pictured above—Roof Plank, Exterior Boards and Solid Partition Panels—really broke the lumber bottleneck in emergency construction. Millions of feet of these products developed by National Gypsum Research have been used in the construction of army camps, naval stations and industrial buildings.

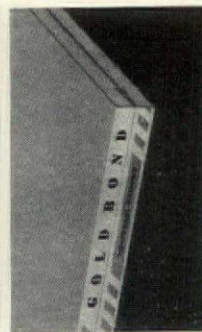
Now they are doing an equally good job for private industry in providing materials for essential wartime construction and repairs. These boards require no special skills. They handle like lumber. They are sawed and nailed in exactly the same way. And plenty of all three are available. Write today for details.



ROOF PLANK



EXTERIOR BOARDS



SOLID PARTITION PANELS



BUILD BETTER WITH
Gold Bond
Everything - for walls & ceilings

More than 150 different products for
MODERN CONSTRUCTION
AND WAR PRODUCTION
WALLBOARD...LATH...PLASTER...LIME
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NATIONAL GYPSUM COMPANY . . EXECUTIVE OFFICES, BUFFALO, N. Y.

21 Plants from Canada to the Gulf . . . Sales offices in principal cities

THE MONTH IN BUILDING... NEWS

Building goes down, almost out (this page) . . . Prefabricators still hoping (page 48) . . . Trailer industry folds (page 48) . . . Lumber is Building's No. 1 shortage (page 48) . . . New York, Chicago plan postwar airports (page 50) . . . County Council Architects offer a community pattern to rebuild London (page 51) . . . Rent control sticks (page 140).

DROUGHT

Gus Swenson, Minnesota builder, shaded his eyes with a calloused hand and looked out over the horizon. What he and what almost every other builder saw was a grim, discouraging prospect. The building drought had come, and there was no rain-maker in sight. Construction would amount to not more than \$2.5 billion for the rest of the year, a \$5 billion shrinkage from the same period a year ago, the Department of Labor said. The U. S. itself doled out \$3.6 billion in government building dollars during the first half of this year, undoubtedly would cut that figure by 50 per cent for the second half. Private building headed for a drop below \$700 million.

Among Building's thinning ranks competition was knife-edged. Big plant contractors invaded the war housing field; small contractors, through their American Contractors War Advisory Committee, charged that "job after job in the reduced program is awarded to large firms which already have numerous war contracts," that the construction division of the Smaller War Plants Corporation "has not yet helped one distressed builder to obtain a construction contract." The trailer industry threw in the sponge, confined its protests to what-might-have-been; prefabricators mobilized Congressional support for an all-out offensive to swing federal housing policy in their direction. Before home builders a shortage of FHA insuring facilities and the newest lumber crisis stretched an obstacle course tough enough to trip the hardest veteran.

Through the present heavy gloom, the promise of tomorrow gleamed bright. The F. W. Dodge Corporation trained its sights on the postwar decade, said that, in spite of tremendous war construction, plant building would increase by 30 per cent over the 10-year period before the war. Dubious

was Dodge of any large-scale conversion of war plants to meet postwar needs of civilian industries, thought many of these needs would be so specialized in character and in location as to demand new buildings. The Department of Commerce boldly said Americans would need more than four million homes when the war is over; the national Chamber of Commerce found at least one million families now planning to buy a home within six months of war's end. From London came a proposal for big-scale city surgery that looked workable enough to point the way for many an overgrown American metropolis. Postwar oratory was rising to a boil in many a U. S. city and town but little reached the stage of paper planning. Lacking were funds to hire technicians, and clear-cut ideas of how projects, large and small, were to be financed by communities whose credit was already stretched to the limit. Homeward bound, a weary Congress left on its fall debate docket two bills (Wagner and Thomas) to provide federal aid for urban rebuilding, as well as the Lynch-Thomas bill calling for advance planning of public works.

HOUSING PROGRAM: WELL-KNOTTED

When Congress gave NHA only a \$100 million first payment on the \$300 million it had authorized for public war housing, it tied the federal program in legalistic knots tight enough to appall even a housing Houdini. While NHA has every reason to believe it will eventually get the rest of the authorization for FPHA use, FPHA cannot, under the law, base its programming on this common-sense assumption, may blueprint and make commitments only for those projects covered by cash on hand. It takes five months for a project to move from planning to construction, will be at least three months before Congress releases any more money. To anyone

NEWS

who could add, it was plain that for two-thirds of the public war housing job deemed urgent by NHA, no shovel would turn before spring of '44.

While the money it didn't get was FPHA's major worry, plenty of other people were worried about how it would spend the \$100 million it got. Loudest yowl came from the recently formed Prefabricated Home Manufacturers' Association, grimly eying a larger slice of the new program. Manpower shortages in war production areas are one of the PHMA's main reasons why prefabrication should get more emphasis in the federal program; if parts are fabricated off the job site it takes less men to put the houses up. Backing prefabrication are real estate interests in local communities, who think that of all "temporary" construction, prefabricated units are most likely to come down when war need is over. Backing prefabrication for the same reason are Congressmen who shudder at any prospect of permanence for war-built communities under government ownership. Government budgeters like the high salvage potential. Backers had hoped to reach a firm agreement with FPHA on earmarking a good-sized piece of federal money for prefabrication; all they actually got was an FPHA directive which gave regional offices unlimited authority to determine how far prefabrication could meet housing need in their areas.

Contractors Argue

Even this limited go-ahead for prefabrication was a door too open to please many of the large contractors who, with war plant construction over, see big federal housing jobs as the only hope in a large vista of hard times. B. L. Knowles, spokesman for the building contractors division of Associated General Contractors of America, quickly marshalled these arguments:

►Cost: Contractors are as anxious to save money on a lump-sum contract as anybody else, but it is cheaper to fabricate units on the job site than to ship them prefabricated from a factory.

►Box car shortages: Calculating from a typical prefabricated plan, it takes 28 box cars to ship materials for 100 houses to the factory, three times as many to ship the units out.

►Lumber squeeze: Factory prefabrication would entirely eliminate use of masonry materials, economical in some sections for even temporary construction.

Above the hubbub these facts were clear: Prefabrication has proved it-

self in many a ticklish war area, notably at Willow Run. War-needed and substantial product standardization has been achieved within the industry, and basic plans and specifications have FPHA approval. Wherever regional FPHA managers are convinced that prefabrication is an efficient, economical answer to fast production of temporary housing, prefabricators will expect to get the job.

No More Trailers

Almost too feeble to muster a collective yell, the trailer industry, which built 50,000 units last year, now can count only 50 of its prewar 105 manufacturers, said it was about ready to shut up shop. NHA thinks war workers need homes more comfortable than trailers, has so far bought only 35,000, plans to buy no more, even closed the door to private sales under Order L-205. Injured in more ways than one, trailer manufacturers pointed out that they were the first to substitute for critical materials, that they can produce a trailer in 112 man hours as against the 1,000 man hours required to build a house. Claimed the industry in a last, bleak stand: War workers would buy 12,000 trailers in the next three months if private sales could get NHA authorization; such purchases would shave the cost of public war housing by \$100,000,000; in-migrants who find themselves jobless in a strange city at war's end can get in their trailers and promptly move away.

NO GRAB BAG

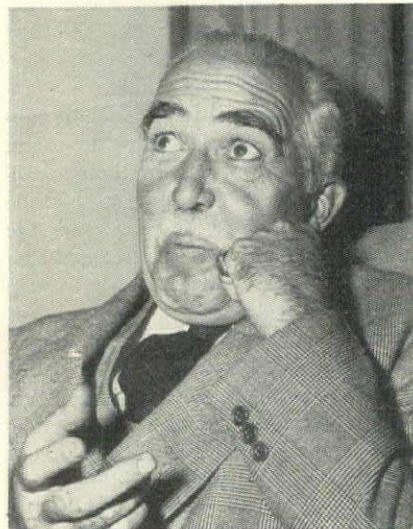
FWAdministrator Philip B. Fleming has the job of keeping federal provision of community facilities in step with federal supply of war housing. Major General Fleming, who learned

something about rough riding in the Army, has not found it easy to keep his part of the war housing team from throwing the whole NHA cart off the road. That the going would not be smoother in the months ahead was clear when Congress appropriated for immediate use only one-fourth of the \$200,000,000 authorized increase in Lanham Act funds for public works and services. Already piled up in FWA Washington and regional offices are enough applications from war-swollen communities, urgently in need of water and sewage system extensions, schools and hospitals, to require more than twice the money now available. FWA only talks about those applications it thinks represent acute need, actually since word first went out about the newest federal public works grab bag, applications totaling more than \$2 billion have rolled in. Out of the deluge, FWA has selected a total of 3,596 projects, spent less than \$300,000,000, furnished assistance ranging from 100 per cent loans to 100 per cent grants. From the new money, water works, sewers and hospitals will have to come first. Needed schools will be trimmed down to bare essentials, will likely be temporary. At session's end Congress looked ready to transfer from FWA to Paul McNutt's Federal Security Agency responsibility for the rapid-growing program for day-care of children whose mothers are war workers. Few new nurseries are likely to be built, whatever the name of the agency that heads the program; FWA has already found it could do little more than rent and repair any kind of facilities locally available.

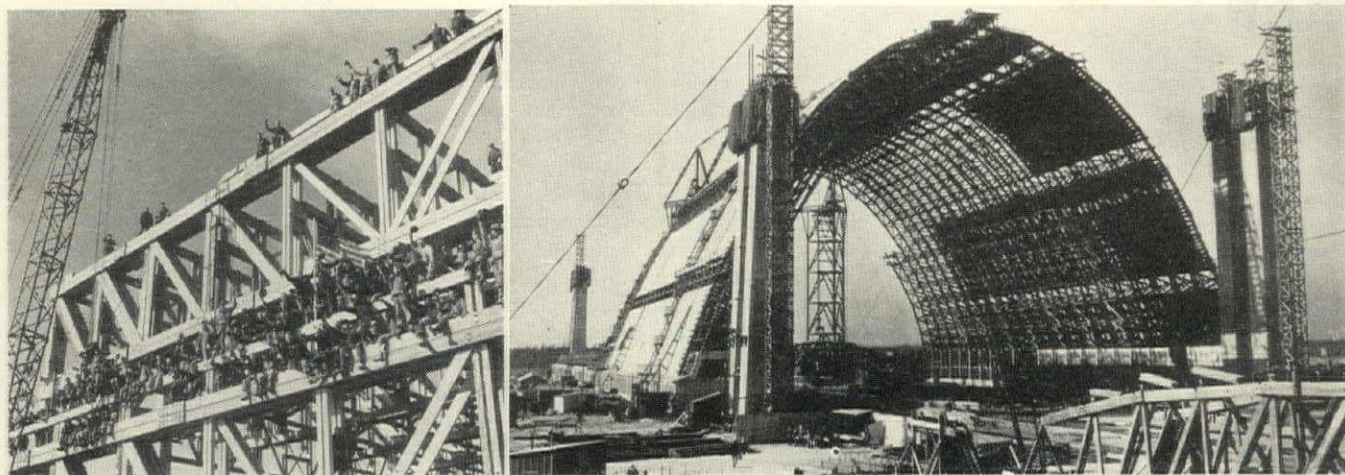
NEEDED: LOG-ROLLING

Green hemlock lumber ties itself into bowknots when it dries. What it might do to FHA houses was one of the small tag-ends of worry carried home last month by Congressmen anxious about the government's \$7 billions of mortgage insurance. WPB was the villain, complained earnest builders who fear they will have a rap to take if today's neat little FHA houses turn up their toes by 1950. Under fire was WPB's order (part of the recently issued emergency housing standards) that no longer may lumber for any housing project be rejected because of excessive moisture content. No one objected to this directive as it applied to temporary construction, but, even though FHA said green lumber must be dried on the job site, many builders thought there was a risky leeway when unseasoned lumber is bought for houses insured by the government for twenty

International News



FWA's FLEMING: a rough rider.



RING CONNECTORS make these lumber giants possible.

years. Why can't the Army use inferior lumber for crating, some wondered, leave better grades for permanent construction? The Army had a quick answer: Bombs in the hold of a ship need the best crating we can get. On this no one wished to argue, but many felt there was still plenty of room for reduction in Army and lend-lease specifications for crating non-ordnance material.

Six Billion Feet Short

Poking into the lumber mess, a section of the House Committee on Small Business held lengthy hearings, emerged to report these facts: Almost half the national lumber output is now earmarked for packing and crating; 27 per cent of U. S. sawmills are shut down; by the end of 1943 the nation will be six billion board feet short of its minimum essential requirements; heart of the lumber problem is in logging camps where operators under price ceilings can't pay wages that will keep manpower. Agreed the House subcommittee, the lumber industry, the

A. F. of L. Lumber and Sawmill Workers Union: Needed is centralized control over all phases of the lumber problem, needed is a new federal policy broad enough to smooth into sense the tangle that price controls, federal procurement techniques, manpower shortages have made in the industry.

By mid-month WPB moved, set up an inter-agency Log and Lumber Policy Committee, announced the inevitable re-shuffling of its own Lumber and Lumber Products Division. Word went out that some relief for small wholesalers and small mill operators was in the offing. While Building hoped for speedy action from the new Committee to meet what now looks like the nation's No. 1 problem in raw materials, federal procurement men realistically went on changing specifications for a variety of essential items from lumber back to steel.

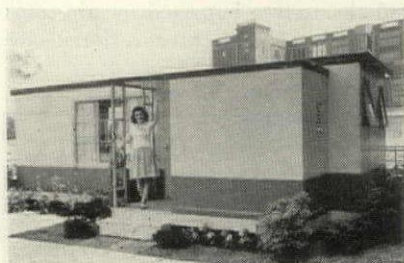
Size of construction demand on lumber when steel was shortage No. 1 is dramatically measured by the Army's just-built cargo-plane assembly plant. Chicago's Austin Company thinks it set

an all-time quantity record for timber construction when it put into the plant 27,000,000 board feet, enough to build 2,250 six-room houses, equal to a saw-timber harvest from 900 forest acres. Another timber giant is the Navy's new blimp hangar, believed to have the largest clear-span timber arches ever erected. (See cuts.)

CONVERSION SAG

While many an owner of a too-large house has felt it would be both patriotic and profitable to cut the dwelling into small units for housing war workers, few have managed to make their way through the five forms which WPB asked them to fill out for priority clearance. Majority decided it was simpler to turn the house over to FPHA for conversion, get a net rent, the improved property back after the war. Encouraged by FHA's Title I, privately financed conversions mounted last fall to 8,000 a month. When WPB ruled that all jobs costing more than \$200 must get priority ratings, such con-

(Continued on next page)



PACK-UP HOUSE

Mobile-minded Goodyear Tire and Rubber took a look at tomorrow, had a hunch Americans will want to tie their houses to transportation and not to land. Out of the hunch and out of Goodyear's new \$1,350,000 research laboratory last month came an accordion house which in a few hours can be folded, loaded on truck or box-cars, put on the road. Priced at under \$2,000, this two-ton house would be produced by assembly-line methods, equipped with fittings and furniture to accommodate a family of four. Side bays hold windows and bunk-equipped bed rooms—on location slide out to a width of 14 feet—in transport shove in to reduce the overall width to 8 feet. Length is constant at 27 feet. Exterior is plywood

surfaced with Monel metal. Mobility of the house rests mainly on a weight reduction achieved by use of "plastic foam," a brilliant white solid that looks like dry ice, is the lightest insulating material known. Made by foaming a batch of nearly set resinous plastic with millions of tiny air bubbles, this Goodyear discovery weighs one-tenth as much as rock wool, finds its major present use in insulating U. S. warplanes.

Workers at the Goodyear Aircraft factory, in Litchfield Park, Ariz., are already housed in accordion homes. Goodyear foresees a vast postwar market when Americans, who like to wander, find out how easy it can be to take their houses along.



versions took a nose-dive, are now hitting bottom at 2,000 a month. Meanwhile, FPHA signed leases that would yield 16,604 family units, reported on July 1 that 6,500 more units would shortly be cleared, expected to go on turning them out at the rate of 5,000 a month. Average job cost: \$1,500. Although NHA programming for the next fiscal year calls upon private conversion for 40,000 units, it is increasingly doubtful that private jobs will rise from their present low to meet this total. Probable result: new construction will get a bigger quota in some areas. Playing no favorites in the over-all homes-use program, NHA expects to get a big advertising drive underway by mid-August, whoop it up impartially for privately and publicly financed conversions, sell a war guest to anybody with an extra bedroom. Foote, Cone & Belding, in charge of drum beating, think contractors, home financing institutions, building supply dealers, maybe even banks and department stores will sponsor ad messages. Drive will climax in a national War Housing Week about October 1.

SKY HARBORS

New York's mammoth answer to what kind of airport facilities will be needed in the world beyond the war is 3,000-acre Idlewild, scheduled to rise from the sand flats of Jamaica Bay whenever war's end releases building priorities. Big, even for the city where bigness has approached infinity, are the probable figures: Idlewild is likely to be the world's largest (six times the size of LaGuardia field), to cost as much as \$100,000,000, to employ a permanent personnel of 30,000-40,000, to accommodate 900 planes in a 15-hour operational day. Down three 10,000-foot runways built of 12 inches of concrete, 100-passenger planes will

roar, taking off in an hourly air service to Europe. Five other main runways, ranging from 8,500 to 7,000 feet in length, are planned. There will be six miles of hangars for land-planes, a mile of seaplane hangars, space for parking helicopter taxis. There may also be a subway. Idlewild would get all traffic from points beyond Chicago. LaGuardia field would serve as port for Chicago and nearer flights.

Among the heady figures, one blank was last month noticeable: Nothing like \$100,000,000 has as yet been appropriated for the airport. To underwrite the project "dearest of all to his heart," Mayor LaGuardia might tote up only the \$9,250,000 paid by the Navy for Floyd Bennett field, an \$875,000 CAA allotment, a \$750,000 city appropriation for land purchases. If the Mayor had a plan for making up the near-\$90,000,000 difference, it was the only secret he was keeping.

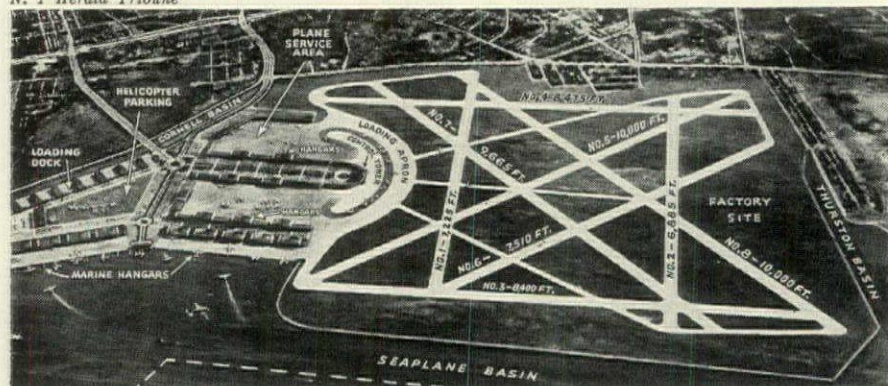
In Chicago, the answer is to divide scheduled air traffic among a group of publicly owned major terminals, none of a size to challenge Idlewild, but all able to handle the largest planes and equipped for instrument approach. Assuming that by 1950 there will be no less than 667 scheduled plane movements daily, the Regional Planning Association, the Plan Commission, and the Association of Commerce got together before Pearl Harbor on a program calling for three near-in airports (the present Municipal Airport would count as one). With the near-in airports as nucleus, the regional plan stretched to Indiana and Wisconsin, involved four major terminals strung on an inner belt within forty miles of Chicago's Loop, five large outer-belt terminals within a sixty-mile radius. Help toward realization of the program came when the

Army Air Forces bought 1,500 acres, established Douglas field and the Douglas Aircraft plant ten miles northwest of the city. With only one more near-in airport to be located—this to be as close to the central business district as possible—the planners are presently preoccupied with the old Chicago dream of filling in submerged land for an island-site in Lake Michigan, paralleling the heart of the Loop. Possible alternatives: Roof Chicago's vast railroad yards with over-head runways; build a lake-front airport below lake level and behind water-tight dikes; tear down the slums of the near West side; use the blighted area of the near South Side. Last month Chicagoans were on the last lap of a 1,020-acre land assembly job to provide the first inner-belt site. While all major terminals will be publicly owned, privately financed airports to take care of commercial and private non-scheduled flights will be encouraged.

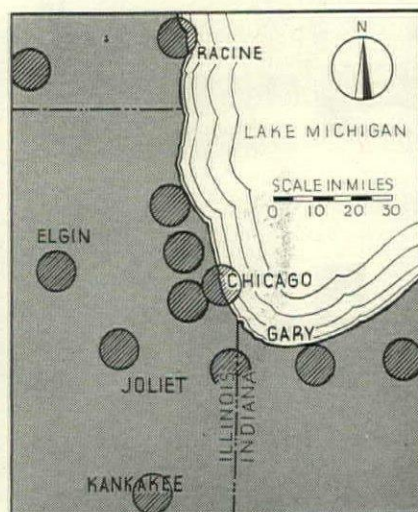
Better Answers?

Back of today's planning for tomorrow's airports are many unanswered questions: How much will passenger use of commercial transport planes increase by 1950? How many Americans will want helicopters? Will air freight play a substantial or only a minor role, and can cargo planes be expected to use the same landing facilities as transport planes. How much have war developments stepped up possible landing frequency? Convinced that an intelligent guess is better than no action at all, Chicago and New York are going ahead, consider their present plans flexible enough to be modified when better answers come. One thing they know: cities born of railheads and dock space may find themselves bypassed by air transport if they do not prepare for it now.

N. Y. Herald Tribune



NEW YORK HOPES its mammoth bayside airport will eventually have two major runways in each wind direction, one each for outgoing and incoming planes. Grading and filling of land is now finished; hope is that paving of one major runway can begin within a year. Chicago will break up its air traffic among three near-in terminals (two already established). Regional plans call for four inner-belt sites (land acquired for one), five outer-belt airports,



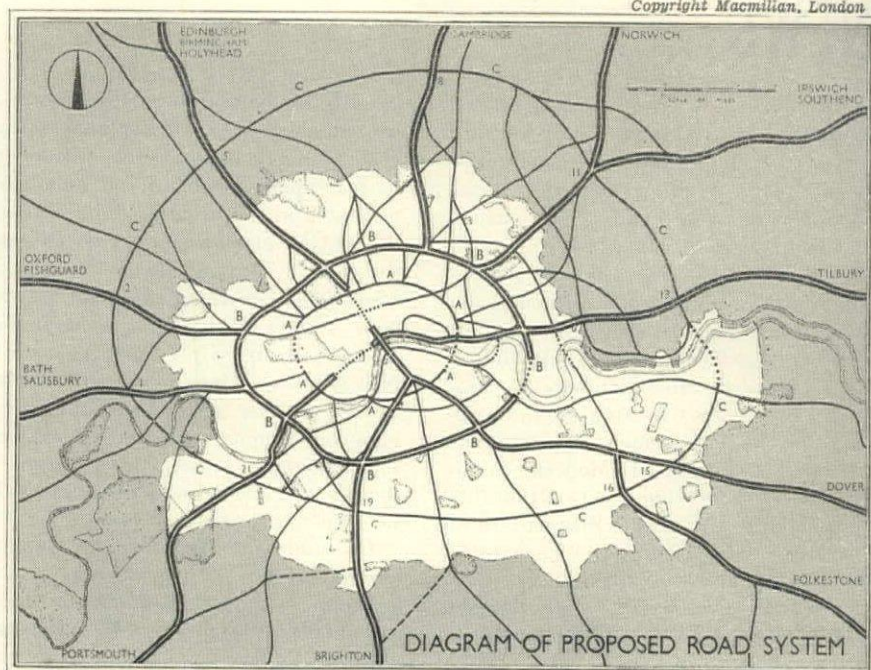


END OF THE GREAT WEN?

In huge red-roofed London County Hall, heavy monument to the once-proud notion that urban architecture's prime concern must be impressive public buildings, reporters gathered, heard the first details of an architectural plan for London that was short on pompous schemes for surface beautification, long on interest in the social necessities of urban life. Two years ago the London County Council* asked its architect, J. H. Forshaw, and Leslie Patrick Abercrombie, town planning professor at London's University College, to work out a plan for the County area. In mid-July Forshaw and Abercrombie handed the Council a reconstruction plan (just published by Macmillan) that would retain London's old structure, make it, without loss of character, a healthier place in which to live and work. They thought the program might be realized in 50 years; what it might cost they were not ready to estimate.

Defects of present London, the planners said, are four: traffic congestion, housing inadequacy, maldistribution of open space, indiscriminate jumble of housing and industry. Basic planning remedy is a series of ring roads, cut by nine radial roads running out to all parts of England, which would pull through-traffic out of the city's living and working space. Basic planning principle is to redefine the old villages from which London was born, give them new identity as close-knit communities. Neither remedy nor principle is new. In Vienna, concentric boulevards followed the pattern of medieval ring fortifications, turned out to be one of the best solutions for modern traffic yet reached. Moscow, whose rebuilding got under way in 1935, used a combination of ring and radial roads, called its reintegrated communities "superblocks." Realists Forshaw and Abercrombie did not claim to have enunciated new principles, limited themselves to a workmanlike demonstration of how already tried techniques might be used to remold and revitalize

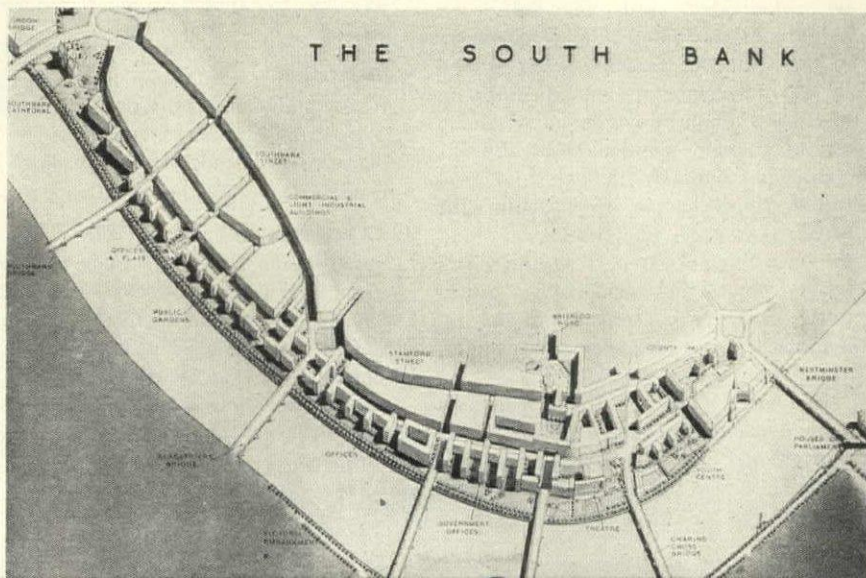
*The London County Council is governing body for the 117 square mile London county area, all of metropolitan London except for a central square mile under the City of London Corporation.



END TO TRAFFIC MIX-UP, ring road A would bound London's cultural and commercial core, connect main railway termini. Ring road B would circulate dock traffic around central London, C would rim the city. Nine arterial roads would join rings by traffic roundabouts; local cross roads would tunnel under the fast traffic rings.



RIVER FRONT SPACE for public use will be enlarged from 9 to 30 per cent; the south bank of the Thames will become a wide esplanade, bordering theater, concert hall, swimming pool (plan below). The south embankment (above) is now a land-use jumble. Westminster Bridge is in foreground, County Hall at left of it.



a living city. Their proposals, full of concern for the living and working needs of London's bombed-out millions, made better reading than the Royal Academy's pomp - and - circumstance scheme (Forum, Dec., 1942, p. 35) which hoped to solve the city's problems with a high-speed elevated roadway, a new road for Royal processions, further dignification of public buildings. More breath-taking was the proposal of MARS (a young group carrying the English banner of the International Congress of Modern Architecture) to swell London to 5 times its present size, introduce a new pattern of parallel residential strips separated by 300,000 acres of green space. Laymen and professionals alike thought the modern architects' reintegration of communities might have made better use of planning nuclei already existing, liked better the Council planners' reluctance to scrap London's old communities in favor of a new and theoretical subdivision.

Lebensraum for Londoners, as planners Forshaw and Abercrombie see it, means 4 acres of park space for every 1,000 population. This estimate does not include the partly realized green belt at the city's edge and involves a redistribution of open space on a neighborhood basis. High ratio of park space to population means little unless space is properly distributed. New York has 4 park acres for every 1,340 city dwellers (22,470 acres in all), but too much of this is clustered in outlying districts. The London plan would require 13,316 acres of open space, 7,888 of which already exist.

Community boundaries, already partly defined by such existing barriers as canals, railways, parks, would be further emphasized by proper planning of local and radial roads, new green space. The residential community would have its own main shopping, entertainment, and civic centers, would be subdivided into a half-dozen neighborhoods (defined by open space) of 6,000-10,000 persons, each served by its own elementary school, shopping district, community center, none cut by any main road. London's central areas would be similarly defined and protected; thus Victoria street would split at Christ Church, fold two arms around the Westminster area, free the city's heart from all but local traffic. Downtown shopping centers would be re-planned to front on pedestrian avenues, given rear service roads.

Not neglected is the Britisher's ancient preference for a house of his own; 55 per cent will have houses built

in rows for land-use economy, the rest, well-planned flats. The planners suggest a mid-density of 136 Londoners to a residential acre, say it may have to be 200 in central areas. Higher than the MARS plan, which set an average density of 75, the London figure is lower than anything reached by the New York City Planning Commission in its estimates for rebuilding. While New York now has an over-all density of 190 persons to the residential acre, crowded Manhattan neighborhoods go much higher; present laws permit a density of 1,200 persons per acre would be permitted in some sections.

On industrial relocation, the London prospectus is less cogent, runs into a familiar dilemma: how make physical plans without over-all economic planning? Hurdling many uncertainties, the planners call for a rationalization of industry into clearly defined reserves outside residential sections. These reserves would be scattered over the city, following existing patterns when possible, would be adjacent to main traffic roads with direct access from parallel service roads.

Although many thoughtful Londoners knew that the way to a rebuilt London lay through popular action to increase financial and legislative powers, a glimpse at the Council's realistic recipe for what to do when such powers are achieved was cheering; most were ready to agree, with new conviction, that, while there will always be a London, there may someday be a substantially better one.

NEWS NOTES

Quiet Death. The Work Projects Administration, born of the Emergency Relief Appropriation Act of 1934, quietly went out of business on June 30, handed \$130,000,000 back to the U. S. Treasury. In its lifetime, WPA spent about \$10,500,000,000, employed 8,500,000 persons, provided a sure-fire gag line for almost as many American jokes.

New Tenant. Henry J. Kaiser, West Coast plane and ship titan, said New York would be the nation's pulse for many years ahead, planned to move his headquarters to Rockefeller Center.

FHA Checks Up. During the first six months of 1943, the Federal Housing Administration says it insured \$309,660,694 worth of loans to finance 77,000 new war housing units. A slender 15 per cent of all privately financed war housing is now going on without benefit of FHA's Title VI insurance.

Shift. Mortgage-keen Raymond T. Cahill, for a long time a top-hand at FHA, is now Savings Bank Adviser to Leo T. Crowley, chairman, Federal Deposit Insurance Corporation, will help to shake loose piled-up savings bank funds, divert them to larger mortgage investments.

Chuck. Charles F. (Chuck) Palmer, onetime Coordinator of Defense Housing, earlier chairman of the Atlanta Housing Authority and an Atlanta real estate man, said he wanted to get back to his own business, resigned as consultant to the President on postwar housing and rebuilding.

Indictments. George Dewey Conner and Oscar Vatet, Federal Public Housing Authority architects, were arraigned in a D.C. court on charges of accepting an illegal fee from the Aladdin Co., Bay City, Mich., which submitted prefabricated housing plans for FPHA approval.

Used Home Demand. In May, loans made by savings and loan associations to finance used-home purchases totaled \$68,000,000, reported the Federal Home Loan Bank Administration, which has not had a figure so big to write in its monthly books since it first began totting up this kind of financing in 1936. Volume of loans is up 22 per cent this year over the first months of 1942.

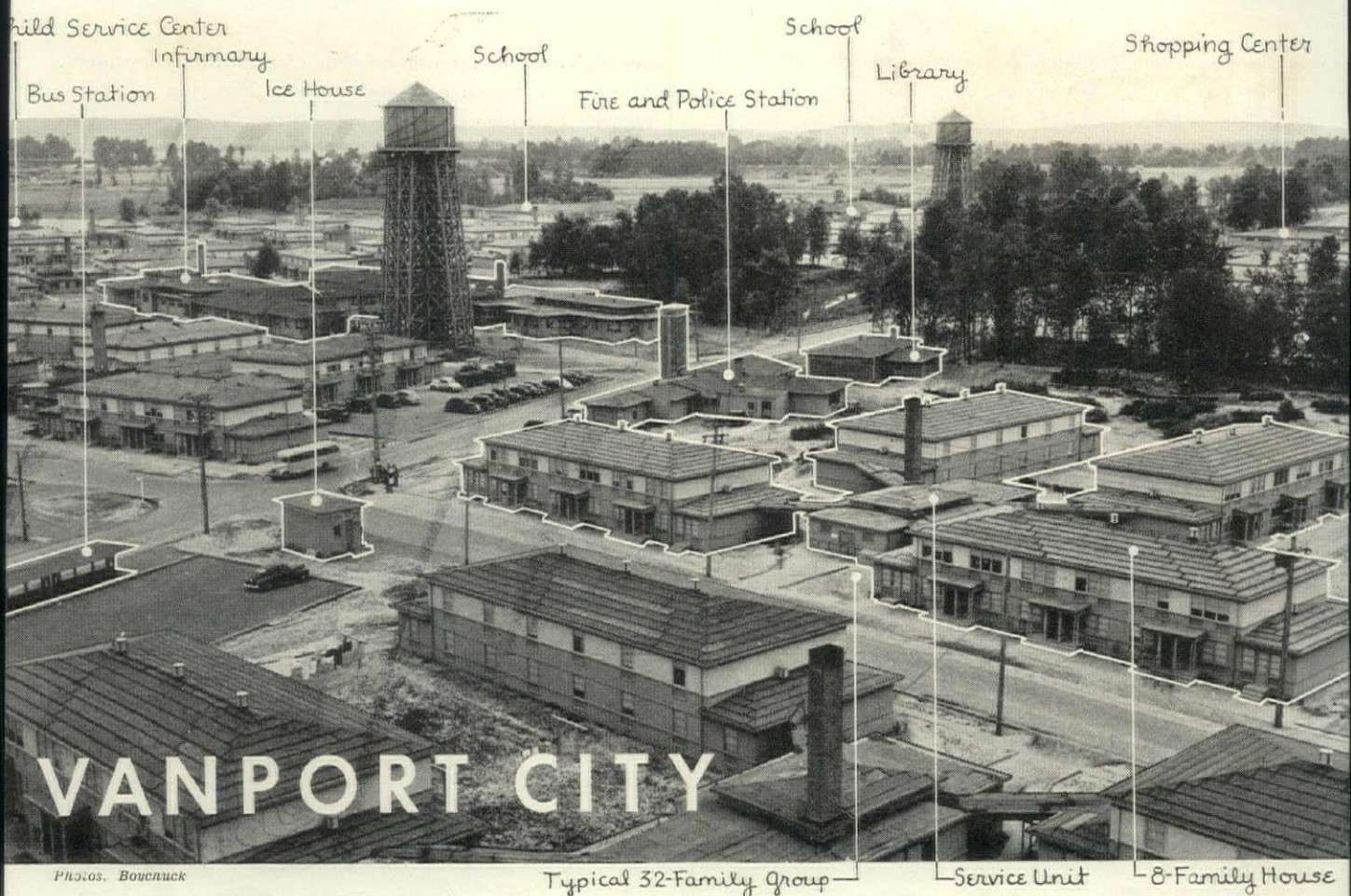
State Planner. Michigan's Governor Harry F. Kelly, impressed with an administrative outline for a state planning program submitted by Architect R. V. Gay, named him director of the State Planning Commission.

WHAT THE PEOPLE WANT

"Ask the people what they want" has recently emerged clearly as a safe and popular leitmotif for those who wished to join the swelling postwar planning chorus in England. Many of the People, whose substantial wants are presumed to be as yet undefined, had been to the National Gallery to see for themselves what the Royal Institute of British Architects proposed as a preliminary definition of a rebuilt England. Many had wistfully thumbed the RIBA's two-shilling booklet which talked straight to the People, told them that both plans and central government policy to implement the planning must grow from an energetic public will. (FORUM, May, 1943 pp. 12, 166-68)

Nicely timing his moment, William Shepherd Morrison, Great Britain's first Minister of Town and Country

(Continued on page 136)



“Kaiserville,” our first war city, is complete today because a pioneering industrialist insisted that war housing—complete with all necessary public services—is an integral part of war production.

Portland, Oregon was one of the first cities in the U. S. to pass an enabling act for a housing authority, one of the last (Dec. 11, 1941) to get one set up. Some years back, when approached with an offer of federal funds for a housing survey, the city turned it down. One result of this sublimely ill-considered decision was that Portland plunged into the war years with one of the worst housing headaches in the country. Not that Portland was unique in its lack of foresight: if misery loves company, Portland had only to look at Norfolk, Detroit, San Diego, Seattle and other towns to see the same picture. The background is well described by William A. Bowes, President of the City Council and Commissioner of Public Works:

“When the war broke out, Kaiser first thought he wanted one shipyard, employing 8,000 to 10,000. With the immediate success of the Oregon yard, he expanded it to 35,000 and started a second. Six months later there was a third. In less than a year the Portland area, a light-industry region with about 340,000 population, had added 160,000 workers.

“With the shipyards came the problem of the subcontractors. Iron Fireman jumped from 300 employees to 2,500. Commercial Iron & Steel went from 100 to 8,000. You just can’t provide housing fast enough for that many people.

“Nobody had any concept of how big this thing was—it was new to everyone, including Kaiser. But back in Washington they were turning on the heat for more production, so Kaiser started bringing in 20,000 people from New York. People started rolling in by train, on foot, in jalopies. They lived in automobiles, trucks, trailers, crates.

“The Housing Authority had by this time instituted the University Homes project (2,000 units) and in two years it had 18,554 units completed or under way. This wasn’t nearly enough.

“Kaiser went to Blandford. But they had no more Lanham Act funds—and Portland wasn’t the only housing bottleneck in the country.

“He then went to the Maritime Commission. They told him to get land and go ahead. They would advance the money and eventually get it back out of Lanham Act funds.

“Kaiser signed a contract guaranteeing him a \$2 net profit on a \$26,000,000 operation, and went ahead.”

Thirty-five days later the construction of Vanport City began.

If the story of Vanport seems heavily loaded with the name of Kaiser, there is reason for it. Kaiser conceived the project and got it built. Kaiser fought for the nurseries in the project and in his three shipyards. It was Kaiser who demanded adequate landscaping and put it in over the protests of the Portland Housing Authority. The “miracle man” of World War II production became the most effective crusader for housing the U. S. has ever seen. But not for philanthropic reasons.

The reason appears in a *Washington Post* story of March 28. The statement is by Michael Miller, manager of the Vancouver shipyard: “From the outset,” said Miller, “we recognized the relationship of proper housing and adequate community facilities to production, because we have had much experience on engineering jobs in remote places.

"The way people live and the way their families are cared for is bound to be reflected in production. If members of his family are sick, the worker worries on the job or stays home to take care of them. If single men have no recreation they get morose. You have to treat workers like human beings, not like machines.

"These problems—housing, transportation, health, schools and recreation programs—have taken more of Mr. Edgar Kaiser's time and that of his executive staff for the past six months than shipbuilding, because the management realizes that such problems are at the root of absenteeism and turnover."

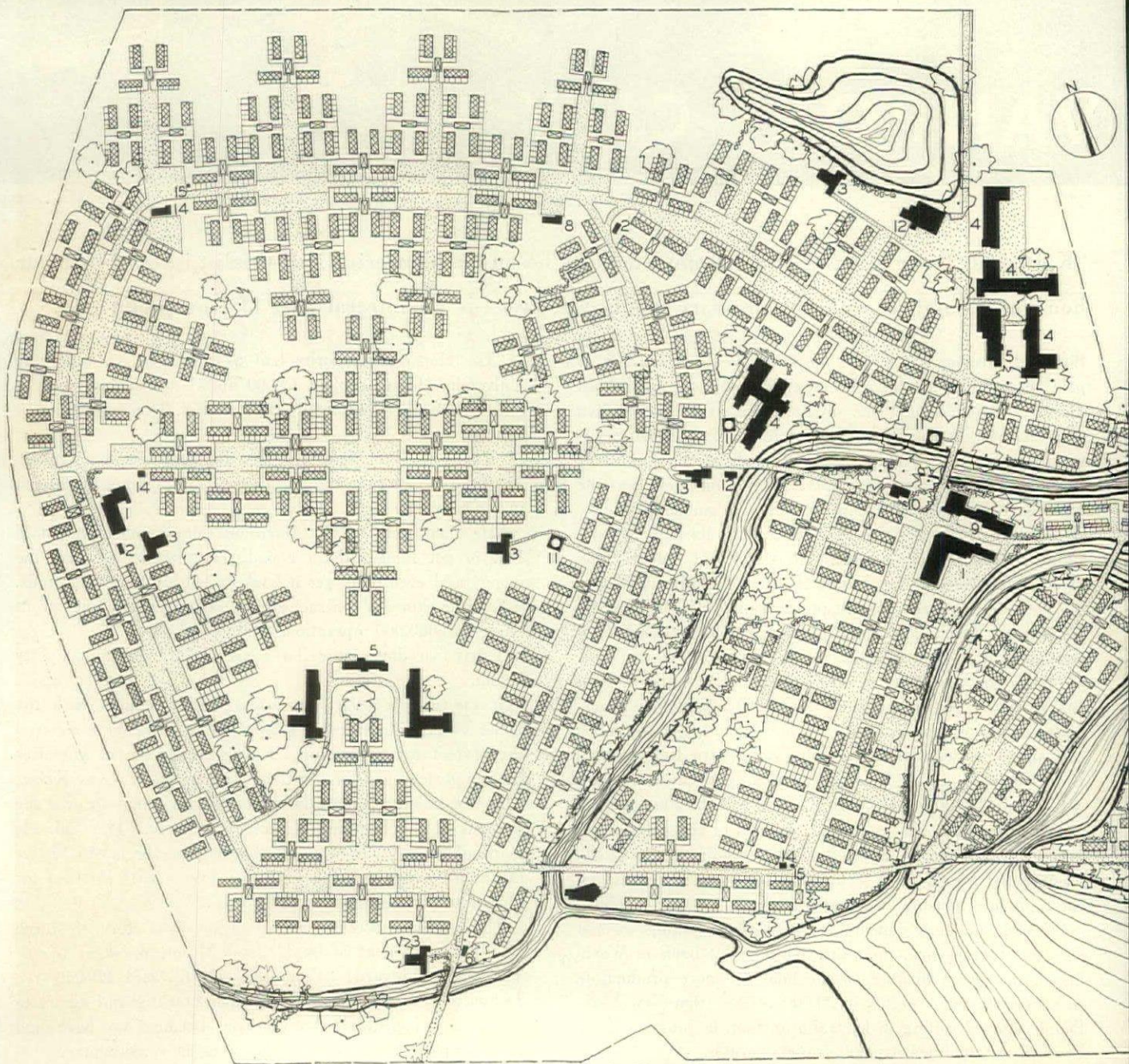
The Kaiser housing story, therefore, is a large part of the Kaiser production story. That many old-line industrialists and public officials refused to recognize this vital relationship is a large and tragic part of the time and production losses that have occurred since Pearl Harbor.

Vanport City (or Kaiserville if you prefer) is not a city. It is a vast dormitory town, equipped with all of the necessi-

ties and some of the conveniences of a modern community. It was laid out on a 640-acre site of low-lying farmland, selected because of its proximity to the three Kaiser shipyards. It shows no variation in dwelling types worth mentioning, and has no center comparable to that of an ordinary city. Its facilities are scattered in an almost casual manner through the development. There are no plans for its future. As a matter of fact, nobody cares particularly — a viewpoint expressed by Commissioner Bowes: "Vanport was built to serve a war need. Who's going to say when the war will be over? When the war is over it will have served its purpose by housing the people for Kaiser's and the other essential industries." In other words, the \$26,000,000 for Vanport could be washed out as a legitimate war expense.

This is probably what is going to happen. It would not make a good permanent city. Its density is too high, accommodations are not sufficiently varied or attractive, there are no well-defined centers for business and recreation, and there is little in the way of physical inducement for the growth of

WOLFF & PHILLIPS, ARCHITECTS; DE YOUNG & MOSCOWITZ, SITE PLAN CONSULTANTS



neighborhood and community spirit. Moreover, the buildings were not put up to last more than ten or fifteen years. Vanport could be criticized from a number of angles, perhaps, but not on the basis of its inadequacy as a permanent, peacetime city. It wasn't designed as one. Actually, considering the urgency of the assignment, its size, and the time from start to completion (around ten months), the architects and builders did a miraculous job. It is complete. People are living in it. And these people are building ships faster than ships have ever been built before.

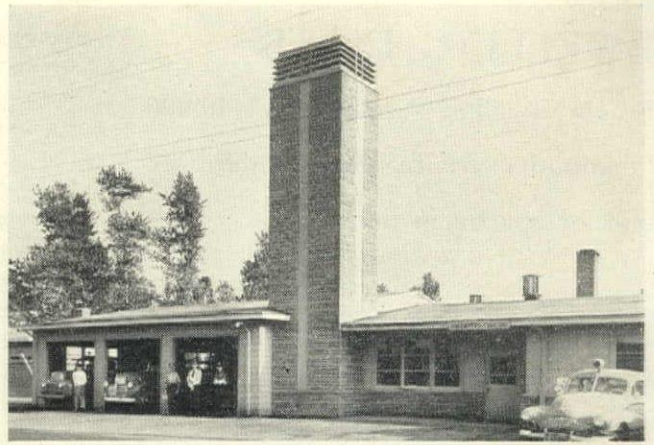
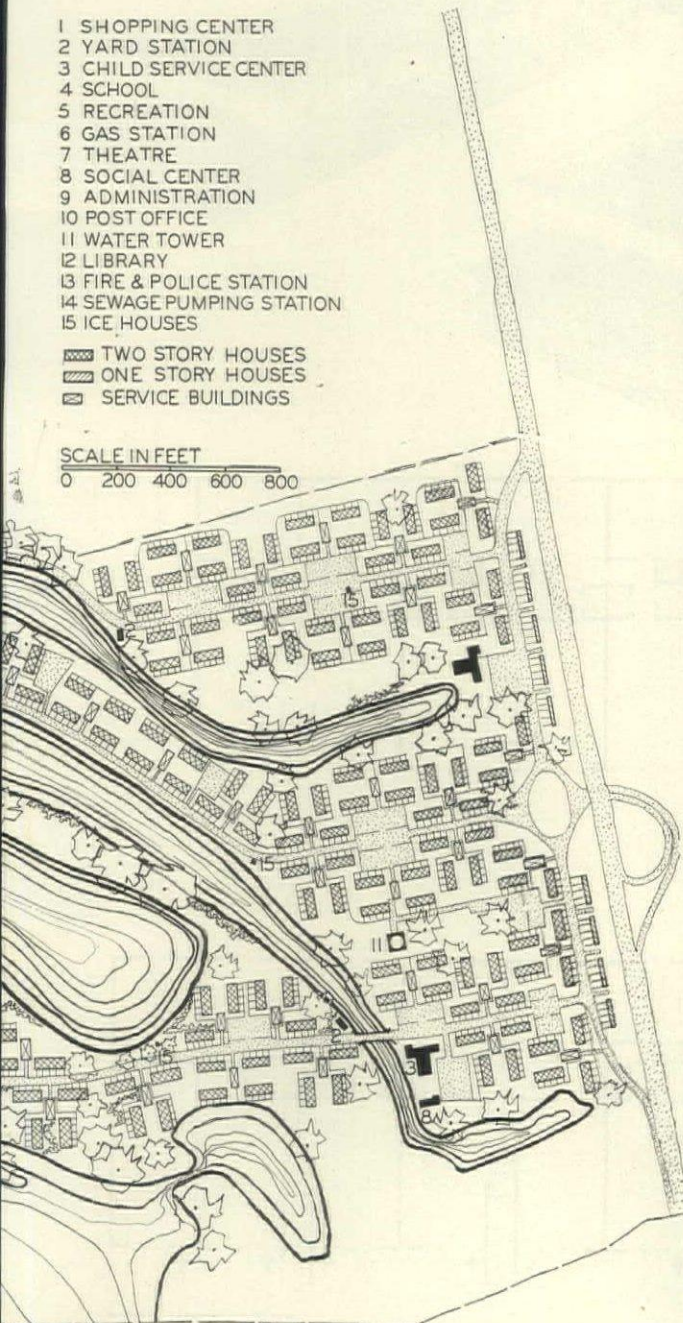
In its War Housing issue of May, 1942, THE ARCHITECTURAL FORUM laid down five criteria for war housing: 1. It must stretch the available materials and manpower to cover as many units as possible. 2. It must be designed for rapid construction. 3. It must be within walking distance of plants, stores and other essential facilities. 4. It must satisfy minimum requirements for health and safety. 5. It must be designed to put women into war industry. On all of these counts Vanport City rates as high as anything yet produced.

- 1 SHOPPING CENTER
- 2 YARD STATION
- 3 CHILD SERVICE CENTER
- 4 SCHOOL
- 5 RECREATION
- 6 GAS STATION
- 7 THEATRE
- 8 SOCIAL CENTER
- 9 ADMINISTRATION
- 10 POST OFFICE
- 11 WATER TOWER
- 12 LIBRARY
- 13 FIRE & POLICE STATION
- 14 SEWAGE PUMPING STATION
- 15 ICE HOUSES

- ▨ TWO STORY HOUSES
- ▨ ONE STORY HOUSES
- ▨ SERVICE BUILDINGS

SCALE IN FEET

0 200 400 600 800



VANPORT CITY KEEPS ITS THREE FIRE STATIONS BUSY



WATER TOWERS GIVE THE TOWN A TEMPORARY LOOK



TWO CAFETERIAS HELP SOLVE THE COOKING PROBLEM



LIBRARY'S HIGH WINDOWS PROVIDE BOOK SPACE

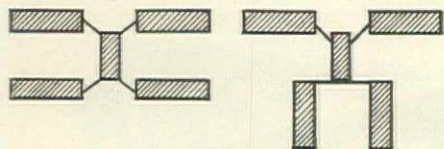
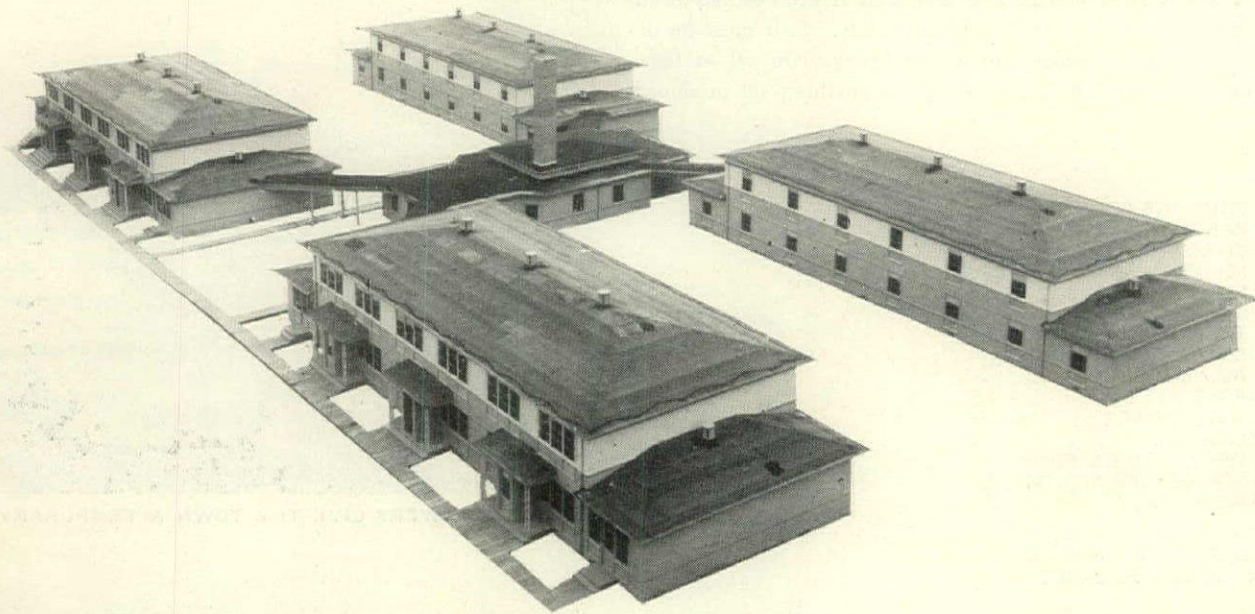
DWELLING UNITS

Practically all of Vanport City's 40,000 inhabitants live in this standardized type of apartment house.

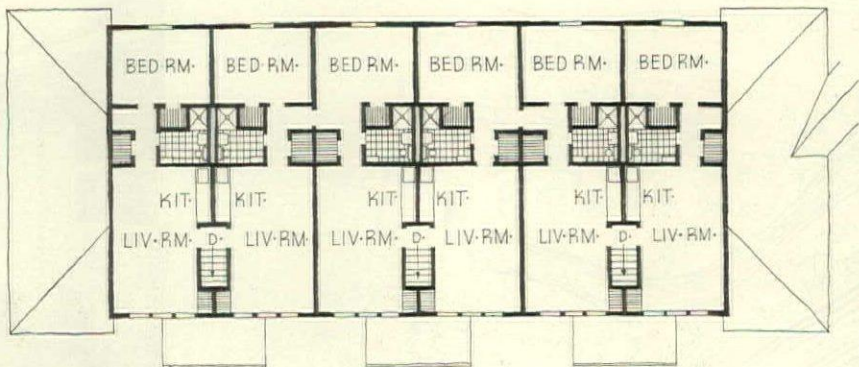
Vanport City's basic housing unit is a chunky rectangular box two stories in height, flanked by one-story wings. It isn't the most beautiful shape in the world, but its fourteen apartments satisfy common family requirements. For example, any apartment running straight through from front to back has a living room (with kitchen counter), bath and bedroom. On closing the bedroom door the living room becomes a one-room apartment, while the adjoining apartment acquires an extra bedroom. Bathrooms are inside and are ventilated through shafts.

For each group of four buildings there is a service annex (accessible through passageways) which contains coal-burning furnaces with automatic hoppers, tanks for domestic hot water, laundry rooms and, for those who dislike the apartments' showers, rooms with bathtubs.

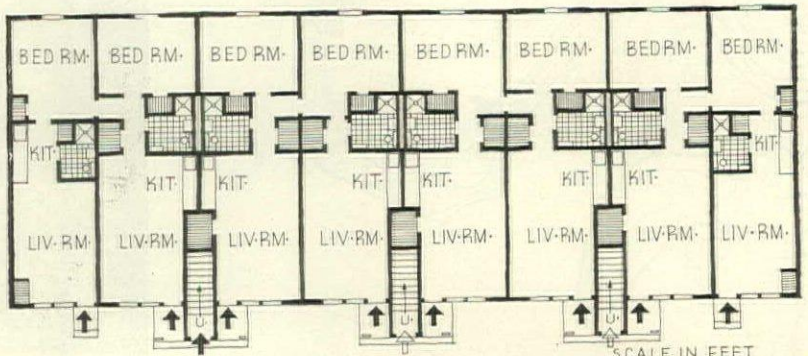
The use of a single building type for dwelling accommodations (there are a few one-story houses, but they are of no consequence in the scheme as a whole) brings up the question of monotony. The service annex also



BASIC APARTMENT UNITS

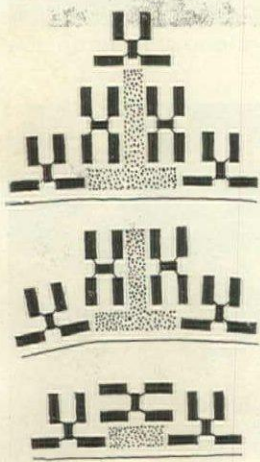


SECOND FLOOR



FIRST FLOOR

SCALE IN FEET
0 5 10 15 20 25



TYPICAL SITE PATTERNS

limited the attempts of the planners to create an impression of variety, because it permits only two possible arrangements for each apartment house group. Despite these handicaps—if they are handicaps—the general consensus of visitors is that Vanport City is far less monotonous in appearance than a great many other war housing projects.

There is one feature of the apartment structures sure to cause comment outside the Pacific Northwest area; the use of fixed sash with louvers below. Many architects in the region have played with the idea of separating the lighting and ventilating functions of the window in some such fashion. Chief advantage is the saving of hardware. Main disadvantage; the panic a sealed window occasionally produces. During a recent fire one of the tenants dove through the window in his haste to get out, with no damage, fortunately, to anything but the window. The project management feels that as tenants become more familiar with the houses, such misuse of the fenestration will stop.

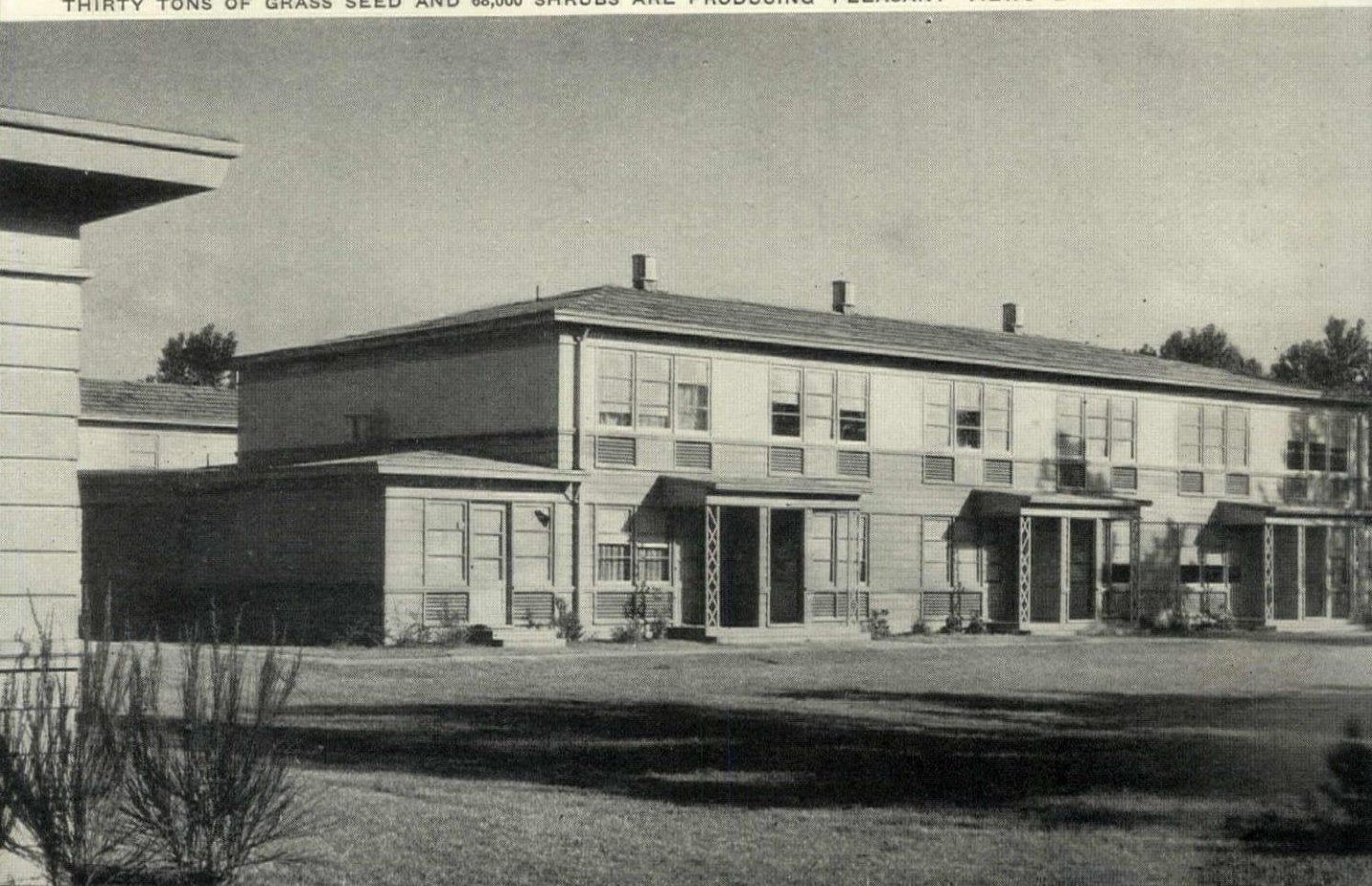


ARCHITECTS DESCRIBE VANPORT'S BUILDINGS AS "BASTARD MODERN"

THIRTY TONS OF GRASS SEED AND 68,000 SHRUBS ARE PRODUCING PLEASANT VIEWS LIKE THE ONE BELOW



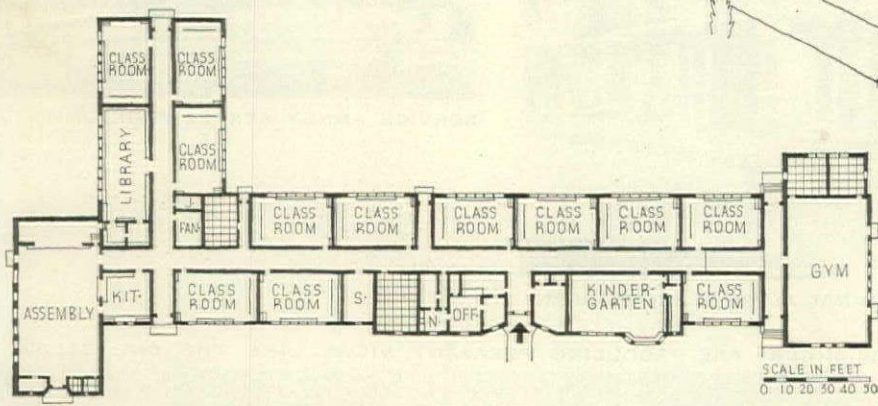
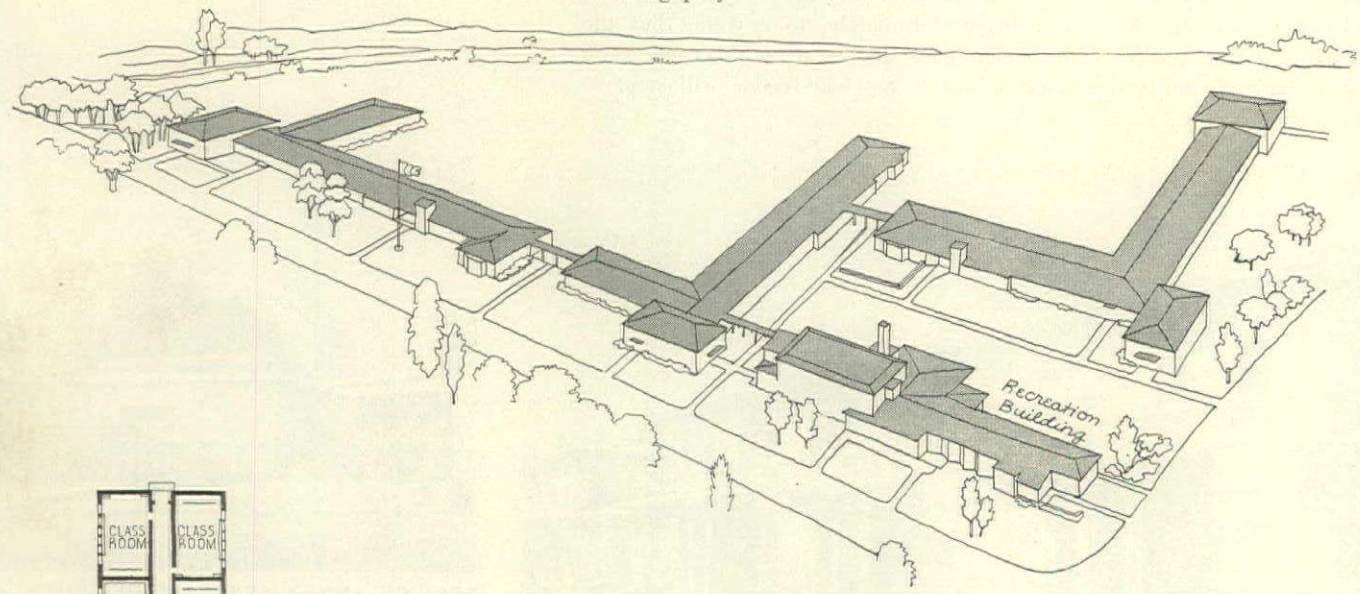
SERVICE ANNEX SERVES FOUR UNITS



SCHOOLS

A variety of school buildings, staffed by 200 teachers, provide Vanport City's most important public service

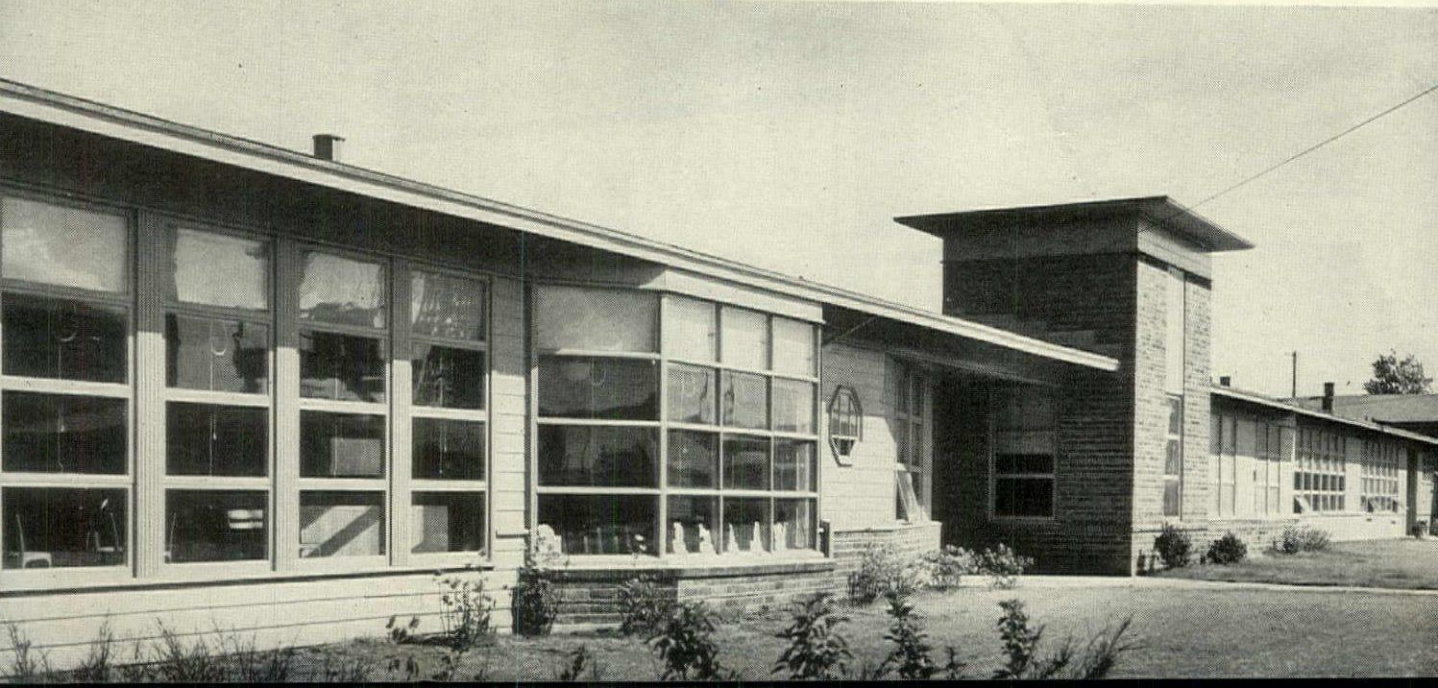
One by-product of creating a community of 40,000 inhabitants was the problem of taking care of approximately 9,000 children, most of whose parents work in the shipyards. It was necessary to provide supervision for them, not only during the school period, but for a full shift of eight hours. Present requirements call for six nursery schools with a capacity of around 1,000, kindergartens, five grade schools and seventeen playgrounds. Like the houses themselves, the educational buildings are well planned, simple, and generously provided with large windows. One story in height, permitting fast, safe exit, they conform with advanced practice. Each is set on an adequate site. The group shown in the bird's-eye perspective is claimed to be the largest school within a public housing project.

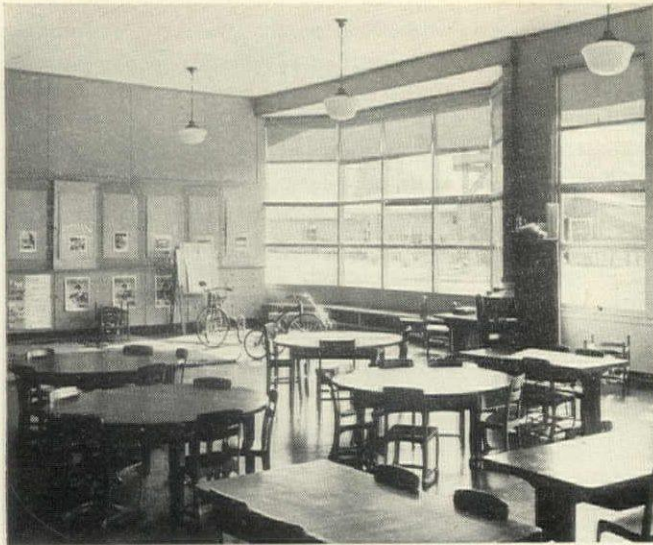


TYPICAL ELEMENTARY SCHOOL

The typical grade school is a thirteen-room building (twelve classrooms plus kindergarten). Each school has its own library, office, gymnasium and assembly hall. The standard plan was developed to make possible a variety of convenient groupings. That shown in the perspective sketch consists of three buildings, some of which have been slightly modified, plus a standard recreation building.

DESIGN STANDARDS ATTAINED IN THE SCHOOLS ARE WELL ABOVE THOSE OF THE AVERAGE HOUSING PROJECT

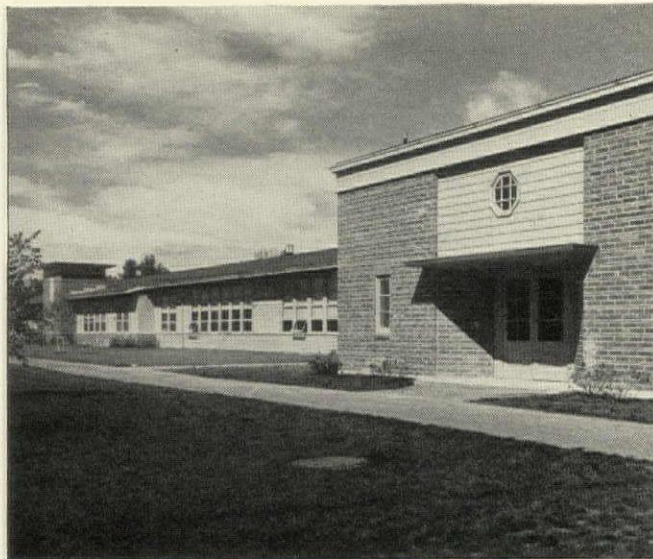




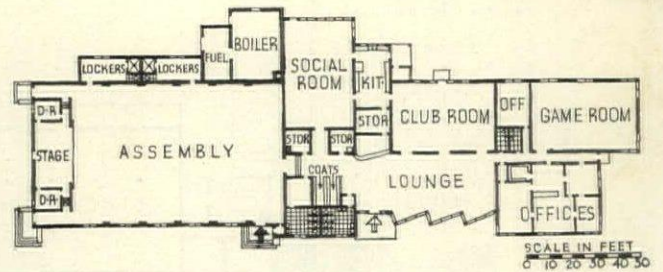
KINDERGARTENS ARE LARGE, AIRY AND WELL LIGHTED



EACH GRADE SCHOOL BUILDING HAS ITS OWN LIBRARY

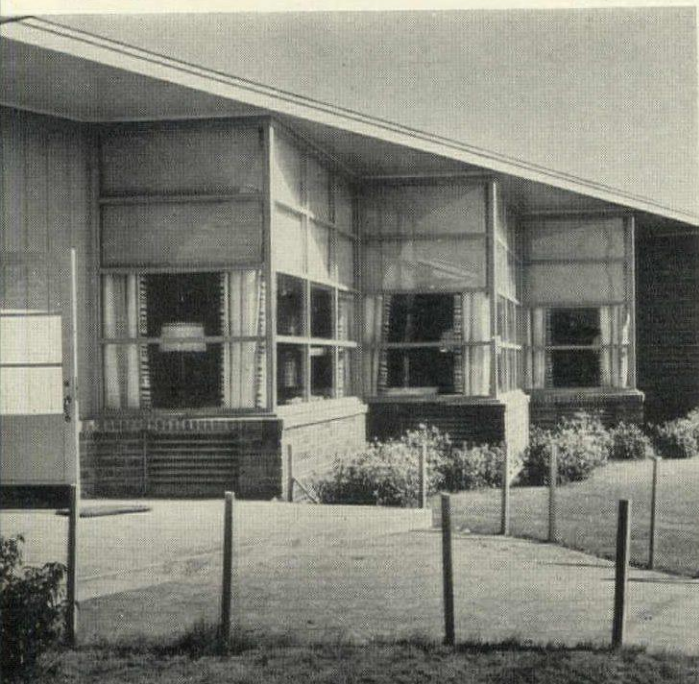


THE EXTERIOR MATERIALS ARE WOOD, STONE, GLASS



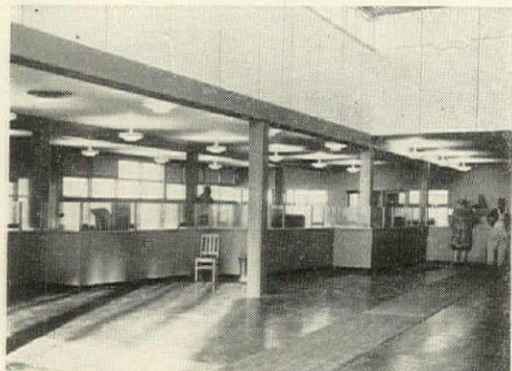
The community recreation buildings were built in conjunction with the grade schools, an intelligent procedure for getting full value out of each structure. During the day they provide extra gymnasium and auditorium facilities, in addition to serving the adult population. The standard building is illustrated in the plan, and in the photographs below. Equipped with club and social rooms, lounge and assembly hall, they can take care of a variety of indoor activities.

THE HANDSOME RECREATION BUILDINGS ARE USED BY THE SCHOOL CHILDREN AS WELL AS BY GROWN-UPS

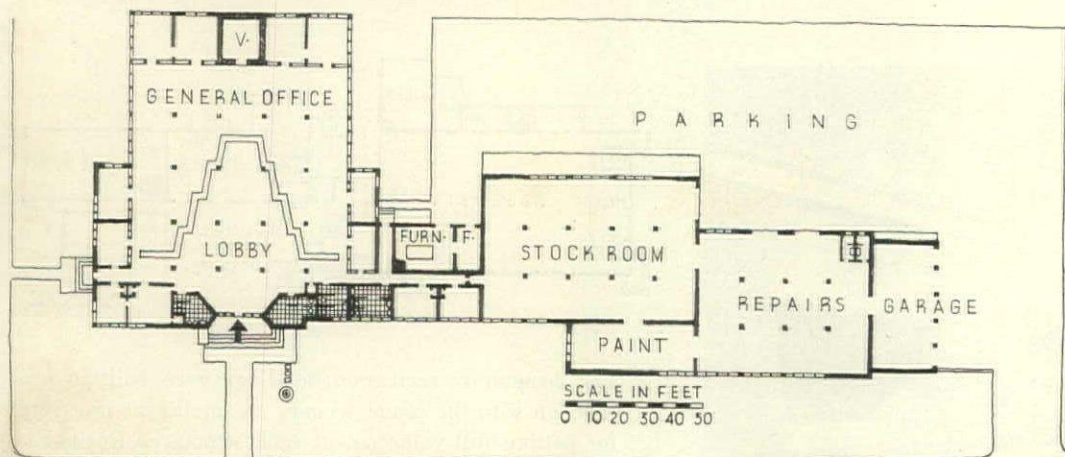


ADMINISTRATION

Vanport City has almost every kind of public and service building required by a modern community.



CLERESTORY WINDOWS LIGHT THE LOBBY



ADMINISTRATION BUILDING IS LOCATED NEAR THE POST OFFICE, LIBRARY AND ONE OF THE SHOPPING CENTERS

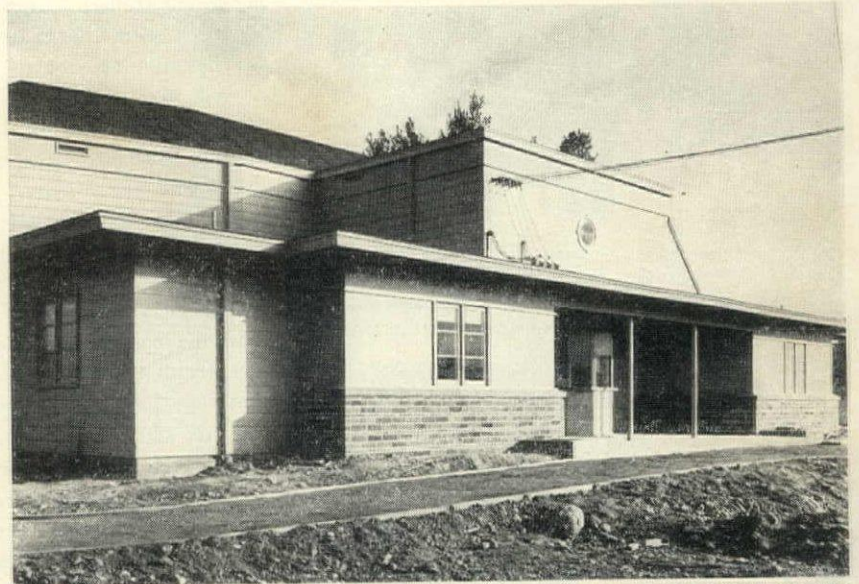
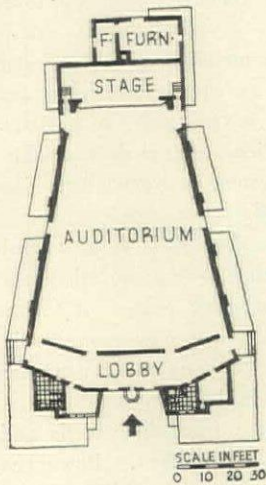
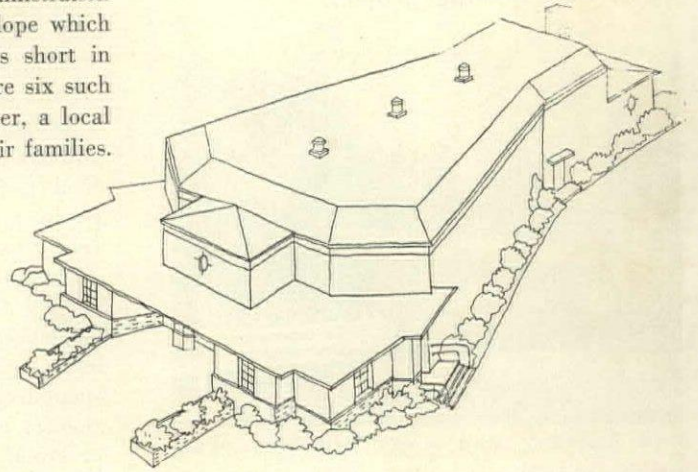


Vanport city has about forty-five special public and service buildings. These include the schools, social halls, library, infirmary, police stations, fire houses, cafeteria, administration unit, commercial centers, a warehouse, and a theater. It would be easy to criticize these structures on the basis of the plans and photographs, which show, in some instances, that the detailing is clumsy and in others, exceedingly good. The significant fact is not a point of design quality. The important and remarkable thing is that they exist at all.

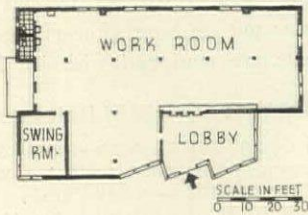
The history of our war projects is largely a dreary repetition of the theme "too little and too late." Most monumental failure was the never-built town of Willow Run, which might have done for heavy-bomber production what Portland's housing did for ships. In Vanport City,

on the other hand, we have a *complete* community—of a very special kind, to be sure—brought into existence because of the Kaiser Company's prompt demand that housing be considered an integral part of the production plan. Their concept of housing included landscaping and services of the type shown here.

Most of the buildings are frankly temporary in appearance, although a certain amount of masonry is used, notably in the administration center and the post office. The theater sketch shows an envelope which was logically conceived, although the finished building falls short in the handling of materials and the details. At present there are six such theaters in the Portland area being used by the Civic Theater, a local amateur group, giving performances for war workers and their families.



THEATER CAN SHOW MOVIES OR PLAYS, IT HAS A CAPACITY OF 750



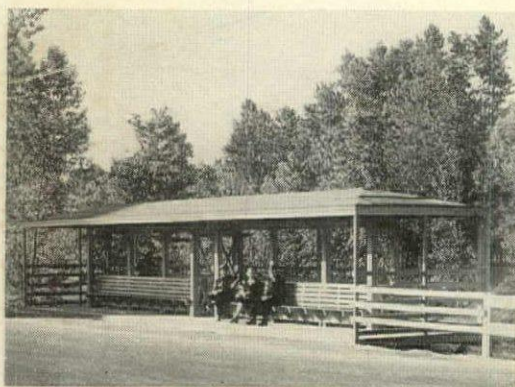
The post office is one of the few community buildings which looks as if it were built to last. Its functions have been housed in a few simple elements: work room, swing room, truck platform and lobby. In the last-named are found the same sawtooth windows used for the lounges of the recreation buildings. The sash is of wood, as in all other buildings.



POST OFFICE IS ONE OF THE BEST DESIGNED PUBLIC BUILDINGS

SERVICE UNITS

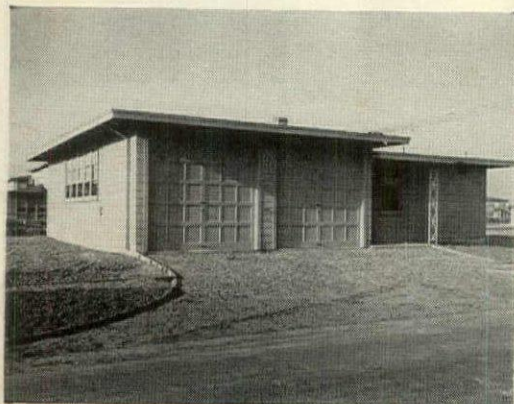
Community services at Vanport City are the best and most complete of any U. S. war housing project.



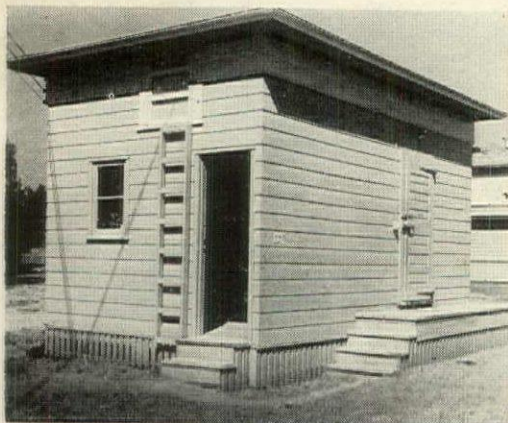
THE PROJECT HAS MANY BUS SHELTERS



THERE ARE 12 MAINTENANCE BUILDINGS



FIRE SUBSTATION HAS DOMESTIC SCALE



ICE HOUSES SERVICE ALL APARTMENTS

The services at Vanport City show the complexity that might well be expected in any community of 40,000 population. A major problem, since the town was built as a dormitory for workers in three large shipyards, was the matter of transportation to and from work.

Distances from Vanport City to the yards vary from two to four miles. At present, slightly more than half of the workers travel by car, the remainder by bus. Shifts at the yards have been staggered so that the peak loads have been flattened out. Typical of the attention given workers by the Kaiser Company are the useful and attractive little bus shelters on the project, one of which is shown at the left.

As the apartments are rented with fairly complete furnishings, and since no tenant maintenance is expected, Vanport City has a substantial number of employees whose job it is to keep the place in good condition. Twelve maintenance buildings, such as the one illustrated, provide storage for tools and materials and a certain amount of shop space.

Fires have been rather common in the new housing projects, and Vanport City has had as many as five in a single day. Some are undoubtedly due to the normal hazards of light wood construction; others, according to local rumor, were set deliberately. One of the numerous squabbles between the Kaiser Company and the FPHA hinged on the problem of fire control, the company demanding that the community be given its own fire-fighting equipment, while the public housing officials insisted that equipment at the yards (three miles away, through congested traffic) was adequate. Kaiser won out, and in view of the record it seems fortunate.

Original plans for the community included one police station. This proved inadequate, and a second has recently been approved. The increase does not indicate that Vanport City's inhabitants are less law-abiding than citizens elsewhere. The tremendous growth of population throughout the Portland area has put an unprecedented strain on all community services. For instance, there is the matter of garbage collection. The small incinerators in the service annexes do not take care of wet garbage. Portland's own garbage system is overloaded. New plants have been approved, but not yet started.

In the case of some of the services, they have been completed so recently that it is hard to tell whether they will prove adequate or not. Red tape has also helped to slow down some phases of the program. The six child-care centers, for example, are now completed, but to date the Housing Authority has not put anyone in to run them. The seventeen playgrounds are also still incomplete.

Utilities seem adequate. Water is taken from deep wells and stored in wood tanks with a capacity of 150,000 gallons. Power comes in over twelve miles of line, purchased from the Bonneville administration through a local company. Sewage is pumped into the Columbia River. Streets are paved, and there are a number of bridges to separate automobile from pedestrian traffic.

The town has a complete network of sidewalks, parking areas for 61 per cent of the estimated 10,000 families, and concessions are being let for service stations. Telephones have been restricted by WPB to public buildings. Since the housing was put up long after refrigerator manufacture had ceased, all apartments are equipped with ice boxes.

GEORGE H. BUCKLER CO. AND WEGMAN & SON, BUILDERS

CONSTRUCTION OUTLINE:

FOUNDATIONS—cedar posts and pads. **STRUCTURE:** Exterior walls—cedar siding, 1 layer 30 lb. felt; inside—2 x 4 in. studs and U. S. Gypsum Co. woodgrain plaster board. **Ceilings**—Fir-Tex, Fir-Tex Insulating Board Co. **ROOFING**—Paraffine Co.'s, Inc. **SHEET METAL WORK:** Flashing—galvanized iron. Gutters—wood. Ducts—asbestos Careyduct, The Philip Carey Mfg. Co. **WINDOWS:** Sash—stationary, wood. Glass—single strength, quality B.

FLOOR COVERINGS—Pabco Mastipave, The Paraffine Co.'s, Inc. **WALL COVERINGS**—Wood grain wall-board, U. S. Gypsum Co. **HARDWARE**—Russell & Erwin Mfg. Co. **PAINTS**—I. F. Laucks, Inc. **ELECTRICAL INSTALLATION:** Wiring system—armored cable. Switches—toggle. **PLUMBING**—American Radiator-Standard Sanitary Corp. **HEATING**—coal fired, forced warm air, filtering and humidifying. Furnace—Montag Stove & Furnace Works. Coal stoker—Switzer-Cummins. Regulators—Minneapolis-Honeywell Regulator Co.

A PERSONAL INVITATION TO EVERY READER OF THE ARCHITECTURAL FORUM

Sitting wistfully on the sidelines is as discouraging to an industry as to an individual. No industry has learned that lesson more painfully than Building. For years it has watched a parade of public relations programs launched by nearly every other industry known to modern times while it, Building, has had to suffer in silence because, by its complex nature, there seemed to be no one to initiate and finance such a campaign.

The invitation now extended to you as an individual and through you to any organizations, professional, commercial or civic, with which you are identified, is an attempt to start something. Whether it does, and whether it swells into a truly national movement, depends on what you and some 35,000 other FORUM subscribers do about it now.

Most public relations programs are both involved and expensive. This one is neither. There are but two simple steps: 1) publication in your local newspapers of a single full-page advertisement: 2) distribution of a modest sixteen-page pamphlet to as many citizens of your community as your local plan and funds provide.

Because cost is so important, let us see how this plan works in a small city and in a large city. Amarillo, Texas (48,251 population) has a morning and an evening newspaper. The full-page advertisement can run once in *The News* and once in *The Globe* for a total cost of \$304.30 (THE FORUM will furnish a printing mat to each paper free of charge). Progressive Amarillo has, among others, the following representative organizations: Parent-Teacher Association (3,000 members), Chamber of Commerce (786 members), Rotary (142 members), Lions (100 members), Kiwanis (297 members), American Legion (702 members), Church Clubs (5,750 members). Allowing for duplication in membership in these organizations, the cost of providing all of these good citizens with

a copy of the pamphlet would be \$375. Total cost of Amarillo program, \$554.30.

If a few public-spirited organizations and individuals with a legitimate interest in seeing this plan followed would underwrite the cost, it should be comparatively easy to expose Amarillo to its first public relations program sponsored by the local Building interests.

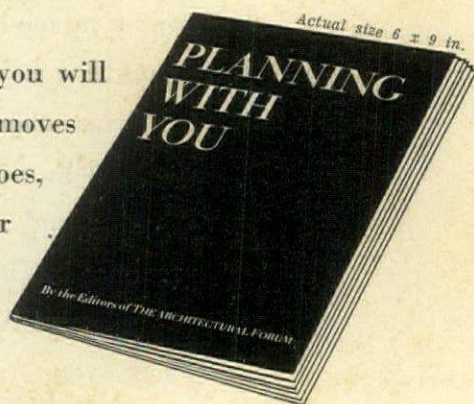
The same plan—applied to a larger city, say Pittsburgh, with its two million people—would cost around \$7,500, no great sum for a key community humming with war industry.

Publication of the newspaper advertisement and distribution of the pamphlet are, of course, simply the first step in what should be a continuing local program. The follow-up may include a great variety of activities, all of which are usually available at little or no cost to groups or individuals who will use their energy to bring them about. For example, meetings of interested citizens to be addressed by experts; city planning talks on local radio stations; feature stories in local newspapers; exhibits of models and plans. These suggestions by no means exhaust the possibilities. A combination of leadership and imagination can work miracles.

This issue of THE FORUM carries with it a reproduction of the suggested newspaper advertisement. On the following sixteen pages the pamphlet, "PLANNING WITH YOU" is printed.

These two exhibits tell their own story. We hope you will read both, then decide whether THE FORUM's proposal moves you to become an active participant in this plan. If it does, simply write the editors your requirements. Orders for the pamphlet (at five cents per copy) should be accompanied by a check. If you have any questions, your inquiry will have prompt attention.

—The Editors



THE ARCHITECTURAL FORUM, 19 WEST 44TH STREET, NEW YORK 18, N. Y.

PLANNING WITH YOU Copyright, 1943, TIME Inc.

PLANNING WITH YOU

WHY PLAN?

MOST AMERICAN COMMUNITIES, large and small, have grown without any plan. That was not so bad until they got too crowded. To make matters worse, along came the automobile. Now it is so difficult to get around that you have to park your car half a mile from the store where you want to shop.

Another thing which this crowding has done is so to inflate the cost of desirable land, both commercial and residential, that it too must be overcrowded. Look at the tangle Main Street is always in. No matter where you live, the chances are you have not enough ground to really enjoy your house, have a nice garden and a place to sit out with a little decent privacy. If you live in a large city, probably you have no place to sit out at all except in a distant, public park. And it's much worse, of course, for your children. Where do they play—in the street? And how many streets must they cross to get to and from school? Bad business, isn't it?

It is really bad business in another way. More and more families are finding living under such conditions too much to put up with. So they move out of town into the country. Here they find life more as they like it and sometimes less costly, but they give up many conveniences and social opportunities. Every family that moves out of town takes its taxes with it, so the town not only loses the people but their needed financial support. And that is definitely bad business.

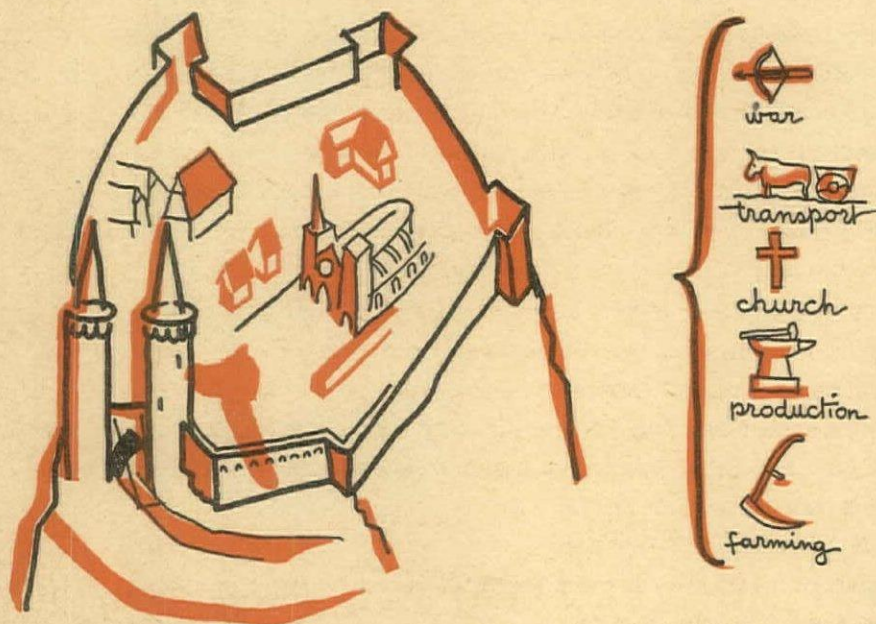
Most, and probably all of these troubles could have been avoided had we been smart enough years ago to plan properly for our needs when the big shift to city and town came. Because we were not, we are paying heavily now for our lack of foresight. Must we go on this way forever, or is there still time to do something about it?

The time has come for us to get smart about our cities and towns.

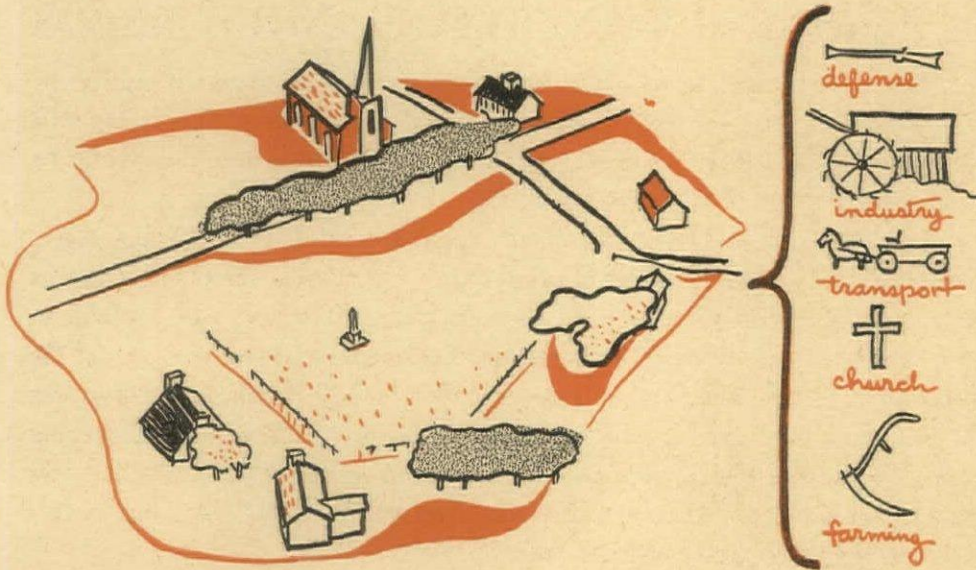
REPLANNING TO SERVE CHANGED NEEDS

City planning is nothing new. Centuries ago, cities were planned and built. Their remains can be found in Egypt, France, Iran, China. Specialists still study these ancient communities, not to copy them, but because their patterns so faithfully reflected the life of the time.

Take one example—the picturesque fortress towns of the Middle Ages. Everyone who has read about King Arthur's Court remembers the pictures of towers and battlements perched on rocky crags. But those who built them were not interested in being picturesque. The medieval town was one of the finest schemes for living and defense ever developed. Its hilltop location was inconvenient, but safer. Its walls were armor against catapults and battering rams. The houses inside were put close together because this meant that less wall had to be built. When artillery was invented the walls lost their usefulness and the cities grew beyond them.

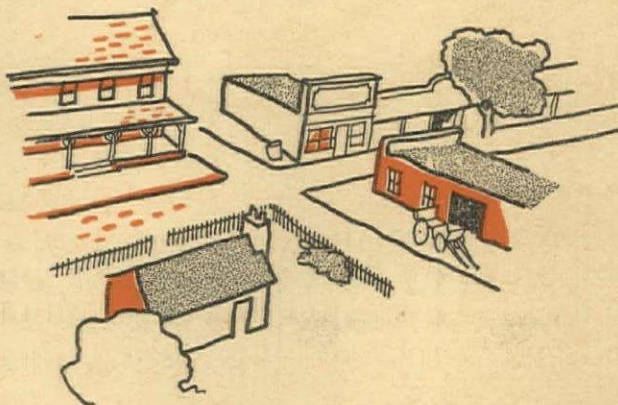


Now let's skip a few centuries and look at our own country. Our colonial villages were not arranged like medieval towns, yet they too suited the needs of the people who lived and worked in them. Because many of the early settlers were refugees from religious persecution, the church was their first thought. Life was hard and building was a slow process, and so the church



quickly became more than a religious edifice—it also housed the town meetings, the nucleus of our democratic form of government. Near the church the houses were clustered, partly for protection, but chiefly because people in a new and empty land wanted to live close to each other. It made trading, handicraft manufacture and social intercourse easier. The Common around which the shops, houses, church and school were grouped was a social center, a parade ground, a grazing field, and it gave light and air—breathing space—to the community.

You can still see another early form of the American city in small mid-western communities where the highway runs right through the center of town and is flanked for a few blocks by stores, a public building or two, and houses. This practice of building on the highway was all right when travel was by coach. As cities grew and automobiles began to appear, it became a source of great congestion. The up-to-date city builds by-pass roads so that through-traffic goes around the town and does not add further tangles to already crowded local streets. This is just one way in which the 19th century pattern of the American town is gradually changing to conform to new ways of living.



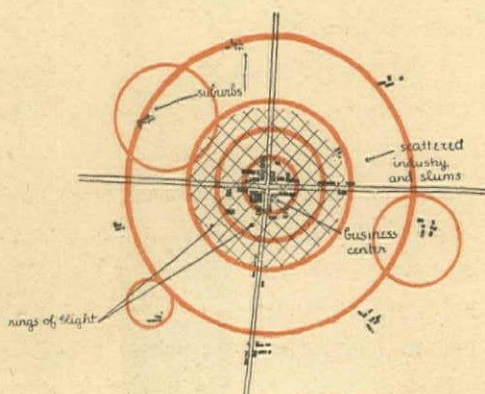
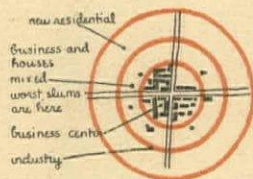
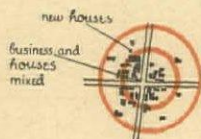
WE NEED A "BACK TO TOWN" MOVEMENT

The diagrams you see here show what happened to the American City as it grew from a tiny settlement on two sides of a dirt road to a community of 10,000, 100,000 and 1,000,000. It grew by adding rings, just as a tree does.

At first, shops and houses were so few they formed one solid little core. Then, as the business district grew, houses were forced farther out. As the business and then industrial centers expanded, the old residential neighborhoods began to decay, often becoming slums, and those who could afford to, again moved—still farther from the center. When rapid transit came in, this movement became a stampede and the ring of worn out buildings around the solid core of valuable business property grew larger and more and more decrepit.

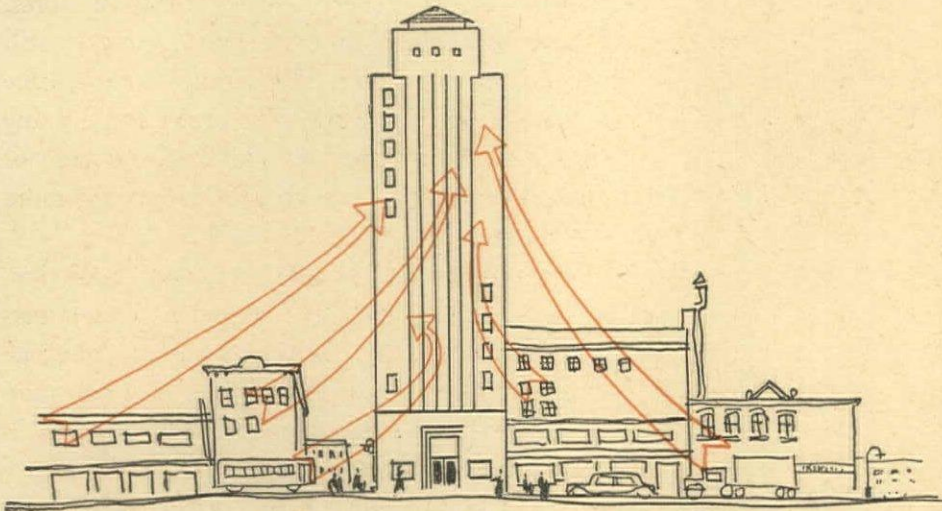
It would be hard to find any town whose plan looks exactly like these diagrams. Sometimes there would be a body of water to close one side. Sometimes it would be a hill. But whatever shape the town took as it grew, it showed the same characteristics.

Today, except for war centers, most cities have practically stopped growing. Existing streets and sewers often are more than adequate to serve present and future needs. Most of our towns must turn in toward the center again. There is room, if the blighted sections can be torn down and rebuilt, for all the things a modern city needs—decent housing, parks, schools with land around them, and other amenities. Rebuilding *inside* our towns can give them new life. Dropping property values can be stabilized. Slums can be eliminated. City costs can be reduced.



WHY CITIES DECAY

One reason our cities and towns decay is because people build the wrong thing in the wrong place. Most of these people are just as good citizens as the rest of us. They are simply trying to make money by building something on a piece of ground which they own. Unfortunately, one mistake can start a neighborhood downhill. For example, as new residential districts developed in towns, shops and filling stations grew up with them. People nearest the shops moved away.



Other things cause decay too. Someone puts up a new, large office building where it is not needed. Tenants move out of older but still good buildings, leaving them vacant. A few people profit temporarily through these expansions, but in the end everybody loses. Our cities and towns have decayed so badly that many of them are bankrupt or soon may be.

This process is terribly wasteful. It destroys property values. It breeds slums. Blight had gotten in its deadly work on sections of London long before the blitz came.

These conditions have long been recognized and some effort has been made to control them. Many communities have long had Planning Boards and almost all have zoning regulations and other legal restrictions. All of these efforts have been right in principle and have prevented a bad situation from getting worse. They have fallen short because they have told people what they cannot build, but have done little to encourage the right kind of development.

HOW CAN WE FIX DECAY?

The way a dentist does—by cleaning out the infected area and guarding it against further trouble. Our cities show many examples: Chicago has filled in its lakefront and created a handsome, accessible residential neighborhood and splendid waterfront parks. New York has taken many tax-delinquent properties and turned them into playgrounds. San Francisco has turned an old exposition grounds into a fine park. Hartford, Connecticut, has rejuvenated decayed residential districts with insurance company office buildings set in their own beautifully landscaped parks.

Many attempts have been made by our cities to eliminate blight, but they are small and scattered.

A planless program is no solution; it merely creates a new set of problems. Where do we tear down and where do we build? Where do we put the parks and schools and new residential areas? Tearing down and building up, in other words, must be part of an overall plan. And that plan must not only correct past mistakes, but prevent future ones.

WHAT IS WRONG WITH PLANNING?

1. Does it mean regimentation?

No. It means coordination, which is quite different—for this means co-operation in a completely democratic manner to serve the best interests of all the citizens. Planning provides a framework, not a set of immutable decrees. Democratic planning gives plenty of room to the individual.

2. Is it expensive?

Compare its cost with the cost of not planning. Billions of dollars worth of real values have been destroyed by the process of decay which, as we have seen, occurs in all of our cities, large and small. The choice is clear. Without planning, any community is bound to lose out. With sound planning, any community can better itself.

3. Is it visionary and impractical?

No. Every successful business man plans. When businesses expand to become great corporations, they have entire departments devoted to nothing but planning. The larger the business, the greater the necessity for planning. And planning even a small community is big and important business. All planning means, after all, is figuring out the best way to get the best results with the smallest expenditure of effort and money.

WHAT THE MODERN CITY NEEDS

A great many things our parents never dreamed of. It needs roads—not the tangle of traffic jams and stop lights it has now, but a network designed for free, fast-moving traffic. It will need proper provision for air transport—private and commercial planes and helicopters.

It needs protected neighborhoods where people can buy and build with an assurance that their investments will not go sour. It needs neighborhoods which are more nearly self-contained, where the shops and other sub-centers of the community can be grouped in a convenient and attractive manner.

The city needs a stable and convenient business center with plenty of parking space. It needs good schools full of light and air with adequate playgrounds around them.

The modern city must have breathing spaces, just as the colonial village did. These are parks, playgrounds, open squares, plazas—again free from the hazards and noise of automobile traffic.

It needs light and air for every dwelling, every office building. This does not mean more space—it means using the space we have more intelligently.

Above all, it needs order and beauty—for this is something all people react to, and their lives and thinking are better for it.

These are some of the things the planners say the city needs. Most citizens would agree. Many say that these are fine objectives for any community but impossible of realization.

As it happens, they are being realized. Many cities already have the beginnings of a network of express highways. Separation of pedestrian and automobile traffic is something that has been used in parts of many American cities. Some have at least a start on airports. There are restricted neighborhoods where the types of houses and sizes of lots protect the inhabitants. There are good schools, beautifully designed, amply provided with the necessary ground space around them. There are splendid parks and recreation areas in the towns from one end of the country to the other.

Certain sections of certain towns are handsome to look at and agreeable to live in. There are cities with fine community centers, superb municipal swimming pools, golf courses, tennis courts and other facilities for the health, instruction or relaxation of adults as well as children. But they are never all in one city. If one American city had all of these elements, it would look to any of us like a dream of the world in the future. But it would not be a dream, for it is already here piecemeal.

CLOSE-UPS

Let's look at some of these details more closely.

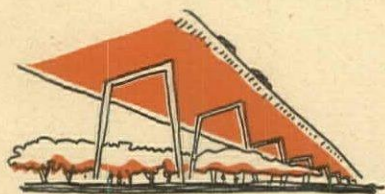
1. Slums

The slum is the breeding place of crime, disease and death. It has no more place in an American community than a ghetto or a vice district.

Blight is malignant and unless stopped moves on to make slums of once good neighborhoods. Slums are not limited to our large cities. Slums are everywhere. Their removal and replacement with proper housing must be the No. 1 move in any plan to rehabilitate our cities and towns.

2. Traffic

We must set up brand new traffic standards in completely up-to-date terms. For example, the standard might be that in a town of 50,000, no part of the town should be more than five minutes from any other part by automobile. Think what this would mean to factory workers and business people. Of course, this means non-stop roads through the town.



But we know how to build non-stop roads. The initial cost on such a network might be fairly high, but it does not have to be built all at once. If a plan exists, the work can proceed gradually, but according to an orderly plan.

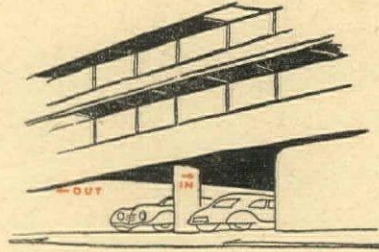
3. Shopping

Downtown merchants are complaining because their patrons are leaving them for the new neighborhood centers. Some shrewd storekeepers have capitalized on the virtual impossibility of downtown parking by building modern stores on the outskirts with ample parking space for all patrons. Unless the downtown stores cooperate on a plan for convenient shopping, they are certain to see their business decline.

4. Parking

Sooner or later, it should be required that any individual putting up a building to which people come in cars must provide the space for parking these cars—off the street. Loading by truck must be off the street. In large buildings such as department stores, theaters, hotels, etc., patrons should arrive and get out of their cars—off the streets. The new Statler Hotel in Washington, for example, does exactly this. So does the Waldorf-Astoria

in New York, which was built on some of the most expensive land in the world. And also in New York, in the Starrett-Lehigh Warehouse, trucks and even trains are brought inside for loading and unloading.



5. Recreation

Facilities for recreation must include not only one big park—generally hard to reach from many neighborhoods—but facilities easily available to all the dwellings of the city. These include playgrounds for children and recreation areas for adults.

6. Appearance

America, the richest country in the world, has some of the ugliest cities. Our best looking communities are those in which each building considers its neighbors. Planning will give our skilled architects the chance to create fine looking buildings, fine looking streets and fine looking towns.

7. Health

The health of a city is intimately tied to its plan.

Slums are the most serious menace to community health. But any kind of overcrowding is bad, whether people live or work under congested conditions. Few communities, especially the larger ones, have enough light and air. This involves not only the space between buildings, but the design of the buildings themselves. Noise is another threat against health. Experts know how to reduce it. Smoke is unhealthy, and can be eliminated.

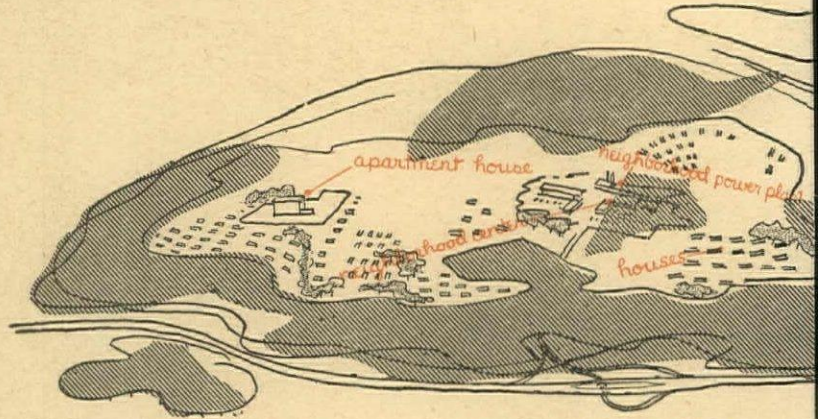
An unbelievable number of places lack decent water and decent sewage disposal. Does it surprise and shock you to know that 49.2 per cent of all the houses in the U. S. are badly in need of repair and that an even higher percentage have no inside toilet?

Scarcely any community has enough hospitals and clinics for properly caring for its sick and injured.

But the real answer to community health lies not in curing sickness but in preventing it. Make it easy for people to live healthier lives—open up the city to sun and good air, provide recreational facilities for adults as well as children, make streets and roads safe against accidents and outlaw overcrowding.

CITIES FOR CIVILIZED AMERICANS

You do not have to be an expert to know the difference between a beautiful city and an ugly one. Americans have gone abroad by the millions and have marveled at the boulevards of Paris and the splendid parks inside the city, at the wonderful squares of Rome with their fountains and surrounding fine buildings. Here tourists make pilgrimages every year to rebuilt Williamsburg and the villages of New England. Of course, these towns are not planned for today, but their beauty and quiet order pleases everyone.



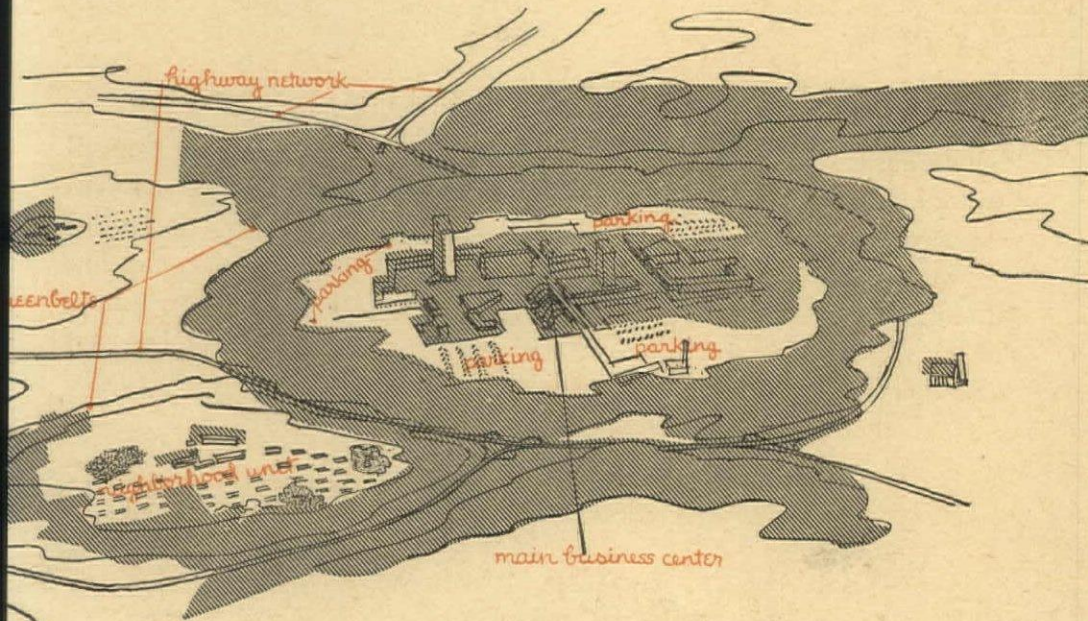
When any city has done particularly fine civic planning, all of the inhabitants are quite aware of it and proud of the results. People know good things when they see them. But no one has seen a city really designed for living properly in the 20th century.

What would such a town be like?

This town, let us say, is a community of 75,000 people, located anywhere. Approaching our imaginary city on an express parkway, we notice that the highway no longer goes through the town but skirts by it. It is banked by trees instead of billboards, dilapidated hot dog stands and the usual junk that clutters up most of our roads.

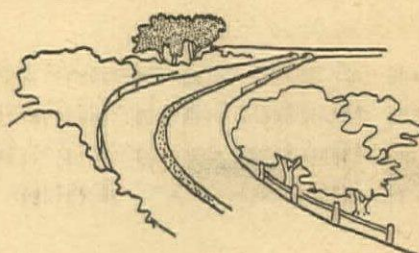
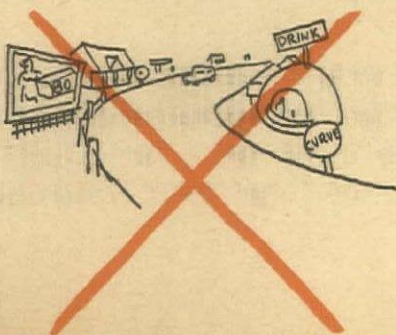
From the parkway there is a turnoff which leads directly, without the interruption of cross traffic, into landscaped parking spaces which surround the business center.

Leaving our car, we proceed to a covered sidewalk which leads directly into Main Street. Unlike other Main Streets, there are no cars on it. In place of the old pavement and trolley tracks there are long stretches of lawn, paved walks, benches, fountains, flowerbeds and trees. Our new Main Street is for pedestrians only.

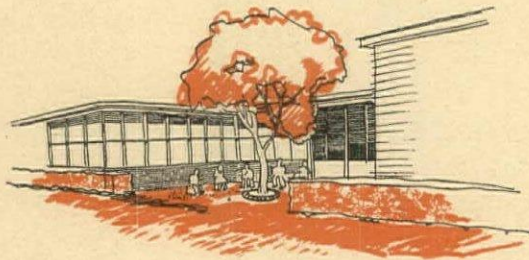


This kind of a Main Street could be created right in your own town. To get it, it would not be necessary to tear down all of the existing buildings, or even many of them. By eliminating dilapidated structures that have outlived their usefulness, clearing out the ring of commercial blight which surrounds the business district of most towns and taking advantage of existing open spaces, plenty of land can be found for the parks and parking spaces needed. And all this could be done gradually, as conditions permit.

None of the buildings is particularly large or high, nor are they all alike. But the riot of signs is gone, and the individually designed shops are planned so that each harmonizes with the other. All Main Street shops are double-faced, one side facing the street itself, the other facing the parking areas. Along each row of shops are arcades which keep the sun off the show windows and provide shelter for shoppers and office workers. Here and there is an outdoor cafe and restaurant. What were once side streets have become small squares where people can move about quietly and with complete comfort.



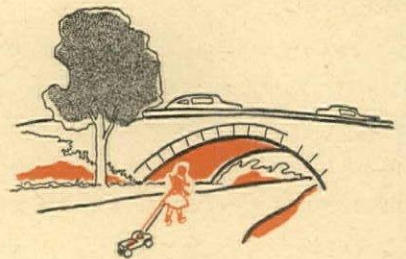
The best place to see the business section of our imaginary town would be from the top of its tallest office building, which has perhaps 10 or 12 stories. From the roof terrace we can see down to Main Street and side streets, where pedestrians stroll unworried by automobiles. We can see that no building shuts out the light or air of its neighbors, and we can see the large parking areas, from which it is easy to get to the shops, theaters and offices. Around the parking areas is a belt of lawn and trees and beyond this is the road which circles the entire center. This small greenbelt is a recreation area. Here businessmen and workers can meet their families and friends, relax, chat and dine.



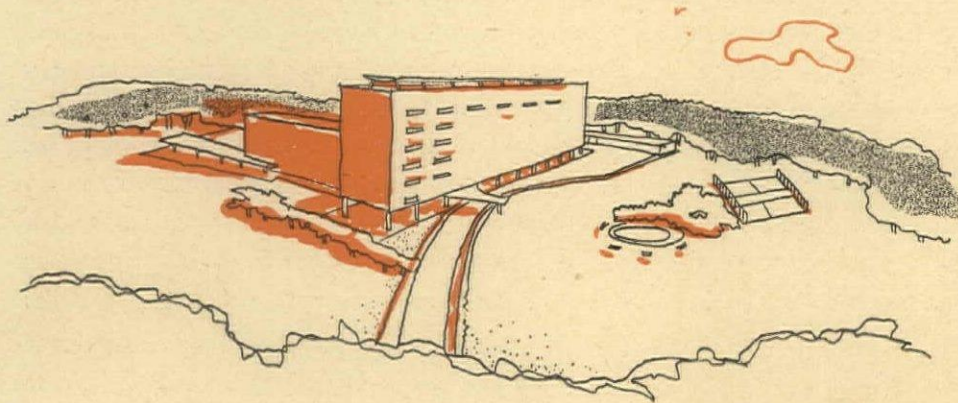
Outside the ring of commercial and recreational activity are the homes, which again are surrounded by their own little greenbelts with the playgrounds, schools, and other community facilities. Streets within these residential areas are for local traffic only, and they are supplemented by pedestrian walkways.

Where these walks meet one of the streets they either go over or under. There are no crossings at grade level. A child could safely be left to play as he pleases within one of these neighborhoods.

The neighborhood shopping center is a miniature of Main Street. It too has its surrounding parking space. The shops cluster around a small plaza. Here we might also find the church, the fire station, high school, community building and other services.



In these neighborhoods we find both apartment houses and single family houses, but they do not clash with each other for the town building regulations require that there must be a minimum amount of ground space for each family. Consequently, if someone wishes to put up an apartment house for 50 families, he must provide equivalent space for these 50 families, which means that all apartments are set in miniature parks which enhance rather than detract from the fine character of the neighborhood.



Such a park apartment has ground space for outdoor activities, and all tenants are assured permanent protection against encroachment on their view and sunlight. The owner of such a building is not penalized by the tax board for providing these amenities, for the community understands their desirability. Obviously both apartments and individual houses are excellent investments, for as the years go by, values remain stable. And occupancy of such neighborhoods remain relatively stable; there is no decay to drive people out. The variety of dwelling accommodations provide for the requirements of families young and old, large or small.

Each neighborhood has a certain number of people in it. There might be 2,000, or perhaps as many as 5,000. But once a neighborhood is filled to the edges of its own small park belt, no more building can be done until houses or shops within it are torn down to be replaced. If the population expands, the neighborhoods do not expand, but their number increases.

Our imaginary city is no fancy residential suburb, but a complete community in which the people work as well as live. The factories are located away from the houses, but not very far away. Many of them can be reached on foot and others by bus. Because the factories have installed smoke-eliminating devices (which have been on the market for years) their surroundings are clean. They too have trees and lawns around them.

This is a pretty picture, isn't it? But it is not a visionary one. All of these elements already exist in fragmentary form. They need only be assembled to form complete, modern, gracious and beautiful communities if there is a plan. Because only the plan can tell the wisest way to spend the money which has to be spent anyway.

WHAT TO DO

Look

Look at your own town. Look at it with open eyes. Stop taking the noise, congestion, dirt and ugliness for granted. Compare it with the city just described, which could be started the day war ends without waiting for a single new material or any new inventions.

Find Out

Many places have Planning Boards. If your town has one, get to know its members. Find out what their ideas are and what they are trying to do so you can support their program. You may be surprised to learn they have studied such matters as your community's health, traffic problems, schools, slums, parks, housing, etc. With your support and that of other enterprising citizens, this work can be given the attention it deserves. It would be no trouble at all to have the Board's reports explained in clear, everyday language to interested groups. Learn what these ideas mean to you as a parent, worker and, most important of all, as a good citizen and neighbor.

Read and Listen

Many popular magazines publish articles on planning. Watch for them. Watch for lectures on this subject. Watch for radio programs. And talk to your fellow townsmen who have to know about such things—architects, engineers, builders, real estate men, bankers and public officials. Many of them have the answers to your questions. Listen to the pessimists too—the more you listen to them, the more you will want your community to be forward-looking.

Join

There are many groups in every community which could become potent forces for community betterment through replanning and rebuilding. One is the local Parent-Teachers Association, which is vitally interested for many reasons. Others are the Chamber of Commerce, Rotary, Kiwanis, Lions. Perhaps your town has a Citizens Housing Council or a Citizens Planning Association. If not, start one. Other public-spirited citizens would be glad to help. Ask the architects and other experts to guide your activities. Through such groups you could both learn and instruct.

Support

Once you know your town, you are in a position to support those things which you know would make for better living and a more beautiful community. Here the aid of the local newspapers and radio must be enlisted, and of the legislative bodies. The pressure of public opinion and recognition of it are what make America a democracy. Through demanding better towns we can maintain and improve the democracy we are now fighting for.

Promote

We have already mentioned the groups which can promote ideas for better town planning. But this can go much further. Children, through their civics classes in school, can also learn what the towns they are growing up in are like and could be like. Exhibitions can be prepared which will popularize your program for your own town. Downtown merchants who are threatened with loss of business, property and mortgage holders who are interested in commercial and residential properties, can be induced to cooperate in such activities and to give their invaluable support.

Vote

In the end, many elements of your program will become political issues. For many of the changes will require legislative action. Exercise your full rights as an American citizen. For it will be your choice whether candidates supporting progressive city planning measures or those opposing them will be elected.

We repeat what we said at the beginning, “. . . the right kind of planning will result if an informed group of active citizens in every community arouses public opinion and guides the planners in gradually making over each community into a better place for your wife, your children, your neighbors and you.”

For more than 50 years the pages of THE ARCHITECTURAL FORUM have been studied by architects, builders, real estate men, bankers, public officials and other building professionals. In this pamphlet the editors for the first time address a larger public. Since this is both an adventure and an experiment, they cordially invite a letter from you giving your reactions to this message.

—The Editors

P.S. Copies of this booklet are available in quantity at cost.

THE ARCHITECTURAL FORUM

division of TIME, Inc.

19 West 44 Street, New York 18, N. Y.

THE NEW FRONTIER IS RIGHT WHERE YOU LIVE

When people talk about rebuilding America they do not mean some other town.

They mean your town, whether you live in Manhattan or Manitowoc.

Nor do they mean some other "third" of the nation than the third you happen to be in. Rebuilding America means rebuilding it for three-thirds of the nation—for each town and for everyone in it.

The important thing about postwar planning is not the jargon the planners talk but what the planners do. Without your help there is precious little they can do but talk.

Planning, like Democracy, needs more than the experts

There are two kinds of postwar planning. One kind could only result if the citizenry shrugs its shoulders and leaves the job to the experts. Not many people, certainly not the planners, want that. The other kind of planning will result if an informed group of active citizens in every community arouses public opinion and guides the planners in gradually making over each community into a better place for your wife, your children, your neighbors and you.

Planners are not crackpots

These technicians are not screwballs or dwellers in ivory towers. They are hard-working, trained, skillful people. They are planners. They are Architects. They are Engineers. And they are Builders, Real Estate Men and Bankers. A few of them are Government officials, but most of them are private "professionals," expert in giving your community what it needs.

Maybe your town does not need changing — maybe?

Maybe your town has no traffic problem?

Maybe it has no slums and no blighted areas soon to become slums?

Maybe most of the houses are not over 50 years old?

Maybe there are enough safe places for your children to play in? And enough modern schools for them?

Maybe your hospitals are model 20th Century medical plants?

Maybe there is a fine municipal swimming pool for all the kids?

Maybe your water supply and sewerage system are up to date?

Maybe these questions are not for you?

Maybe you live in the town nobody knows?

Slow planning is better than fast planning

It takes time to replan even a small town. First you have to assemble all the facts about the kind of town it is. Next the town has to decide what kind of place it wants to be in the future. Then you have to figure out the steps to get there. And only after that can you even begin to plan on paper.

If the war lasts two more years, your planners would have to hurry to have any decent plans ready. And if the war ends sooner, you are likely to be behind the job, even if you start tomorrow.

Replanning and rebuilding your town is a good business proposition

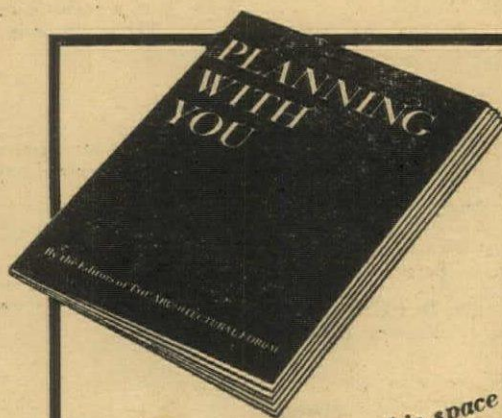
A badly planned town—and almost every town was built before autos and planes were thought of—if allowed to shift for itself will not be able to compete with progressive postwar communities.

Trade will fall off. Sooner or later, people will move to more attractive places. And as

your town goes downhill, the cost of community services will go up and taxes will follow, without any compensating features. In other words, you pay no more to rebuild your town than if you do nothing. Of course, planning and rebuilding cost money. But you get something that the town next door cannot take away from you, something your neighbor next door deserves to share with you.

The essentials of a planning program are simple

Planners, like doctors, like to use big words, but they both get results. And since you are the patient in both cases, you might as well be a smart one and learn how to help the planners. To help many people make replanning the U. S. and your particular piece of it, a truly democratic and successful enterprise, the Editors of THE ARCHITECTURAL FORUM have prepared an illustrated 16-page booklet. This booklet "Planning With You," is almost a primer, but not quite. It counts on your civic spirit and sees you as a responsible adult anxious to play an active part in postwar planning. The booklet is free. Send for it. Read it. It is the first step you personally can take in doing something for the future of your town now.



This message by the editors of
THE ARCHITECTURAL FORUM
is sponsored by

(In this space list the local organizations and
individuals sponsoring this advertisement.)

... your advertisement by reducing postwar planning to simply stated, workable concepts is decidedly helpful.

RALPH BRADFORD
Secretary, U. S. Chamber of Commerce

... You are calling attention none too soon to the needed and job-giving possibilities of the postwar planning and rebuilding of our cities.

LEWIS BROWN
Pres., Johns-Manville Corp.

... courageous and forward-looking act.

G. EDWARD PENDRAY
Asst. to Pres., Westinghouse Electric & Mfg. Co.

... it is splendid.

ROBERT C. STANLEY
Pres., International Nickel Co.

... living in a city which has expanded in population by almost seventy per cent has brought about problems now and, more especially, in the postwar world, which will eventually resolve themselves into a question of the labor market. Certainly, the attractiveness, the economy, the advantages and the spirit of going ahead will have a great deal to do with this company's and the other manufacturers' in Hagerstown ability to hold the more desirable type worker here in order to compete with other manufacturers throughout the country and the world.

JAMES GOULD, JR.
Fairchild Aircraft Corp.

... I sincerely hope the movement you have started will be taken up widely throughout the country.

C. DONALD DALLAS
Pres., Revere Copper & Brass, Inc.

... we agree that the best results will be obtained through the coordinate activity of qualified professional technicians and an informed citizenry.

W. D. LANDES
Vice Pres., Celanese Corp. of America

... a notably constructive approach to the problem of rebuilding America.

HERBERT ABRAHAM
Pres., The Ruberoid Co.

... we would like to send a reprint of the advertisement to all of our Real Estate Boards.

HERBERT NELSON
Exec. Vice Pres., Natl. Assn. Real Estate Boards

... there is too much talk of planning — by others, and very little planning — by ourselves. This advertisement should start everyone thinking — and doing.

J. ARCHER TURNER
Pres., Turner Construction Co.

... I liked especially the homely, direct writing, and the effect which the advertisement gave of bringing 'planning' down to the earth of everybody's back lot and town. THE FORUM has performed a real public service.

EVANS CLARK
Director, The Twentieth Century Fund

... Believe work you are doing with ARCHITECTURAL FORUM will aid greatly in making economical housing possible during the postwar period.

LOU R. CRANDALL
Pres., George A. Fuller Construction Company

... may we reproduce your ad for distribution to all municipal officials and service organizations in Bergen County?

S. D. CURRIER
Staff Supervisor, Bergen County Planning Board

... it is vital that such leadership be shown to spur the American public to immediate sound postwar planning.

GARDNER W. TAYLOR
Pres., First Federal Savings & Loan Assn. of New York

... timely, accurate and commandingly presented.

HUGH FERRISS
Pres., Architectural League of N. Y.

... it should do much toward creating in the mind of the public the necessity for postwar planning.

CLAUDE PEPPER
United States Senate

... timely and of unquestioned value.

JOHN B. BLANDFORD, JR.
Administrator, NHA

... because I feel so firmly that a democracy is a place in which people can look forward to better living and better communities as opposed to Dictatorships which are static and hopeless, and because I believe so firmly that the planning policy in a democracy should come from the grass roots of the localities, I read with great satisfaction the advertisement of THE ARCHITECTURAL FORUM.

HERBERT EMMERICH
Commissioner, FPHA

... heartily concur.

JOSEPH CLARK BALDWIN
House of Representatives

... I have argued for some time that most of the schemes for rebuilding our cities lack one very important factor and that is an informed and vocal body of public opinion within the community which understands the problem and is willing to do something about it. Your advertisement is aimed directly at that problem.

S. MORRIS LIVINGSTON
Department of Commerce

... interesting and valuable.

ALVIN HANSEN
Federal Reserve System

... Your headline "THE NEW FRONTIER IS RIGHT WHERE YOU LIVE" carries a potent thought and your line of questions on the need for changes in "your town" are thought provoking.

F. J. LAWTON
Exec. Office of the President

... every newspaper in the U. S. should carry this.

FRANK W. CORTWRIGHT
Exec. Vice Pres., Natl. Assn. Home Builders

... very real contribution.

FREDERICK CLARK
Exec. Director, Regional Plan Assn. Inc.

... you strike the nail on the head.

H. E. FOREMAN
*Managing Director,
The Associated General Contractors of America, Inc.*

... the committee voted unanimously to thank you.

CLAUDE W. OWEN
*Chairman, Post-War Planning Committee
Washington Building Congress*

... a realistic and capable effort to talk Planning in terms that would be intelligible to the public.

ROBERT D. KOHN
Past Pres. A.I.A.

... your advertisement has helped the cause of planning inestimably. Congratulations on the bold approach.

ROBERT H. ARMSTRONG
Armstrong & Armstrong

... a simple, direct and clarifying statement about planning, and the welcome which the average man should give it.

E. S. DRAPER
Deputy Commissioner, FHA

... excellently presented and brings postwar planning out of the stratosphere of social reform and Buck Rogers' dream of cities down to the solid ground of good business and the correction of community conditions which are obvious to the average thinking citizen.

SEWARD H. MOTT
Director, Land Planning Div., FHA

HOUSES

HOUSE IN COS COB, CONN. POMERANCE AND BREINES, ARCHITECTS

All photos by Ezra Stoller





SOUTH SIDE HAS LARGE WINDOWS, OUTDOOR SITTING SPACES AT BOTH FIRST AND SECOND FLOOR LEVELS

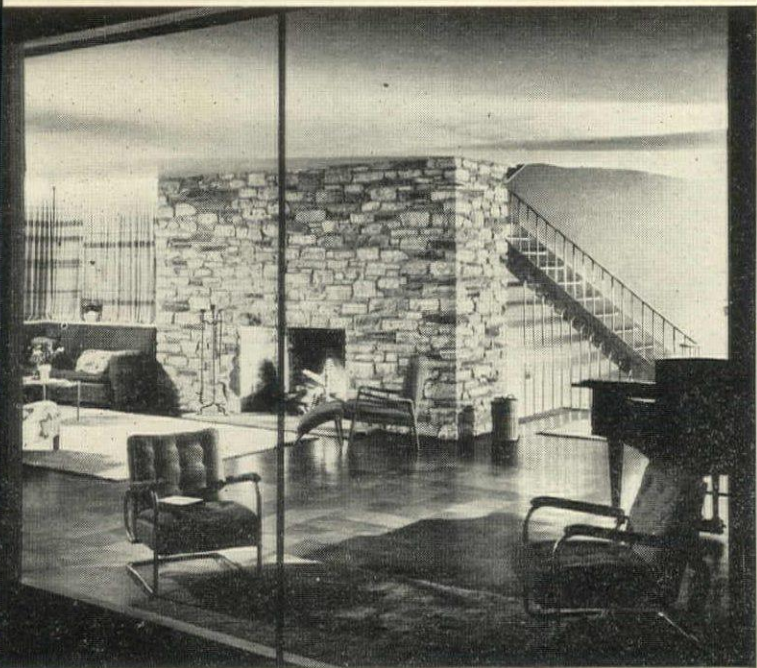
Old-fashioned materials and advanced techniques are combined in this country house

The pattern of this substantial country house is one that was already familiar when the war broke out. The use of natural wood and rough stone in combination, the overhanging second floor and room-height sheets of plate glass had become as common in combination as picket fences and Cape Cod exteriors. Needless to say, the acceptance of such a formula in contemporary design was not an indication of its weakness, but a sign of the emergence of a new style.

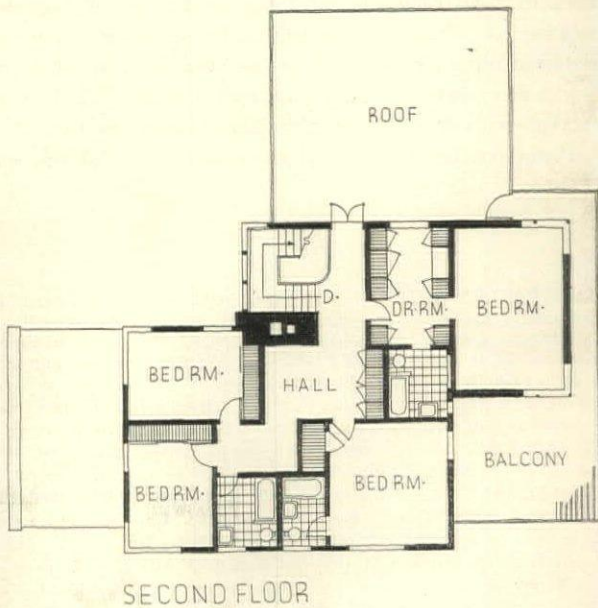
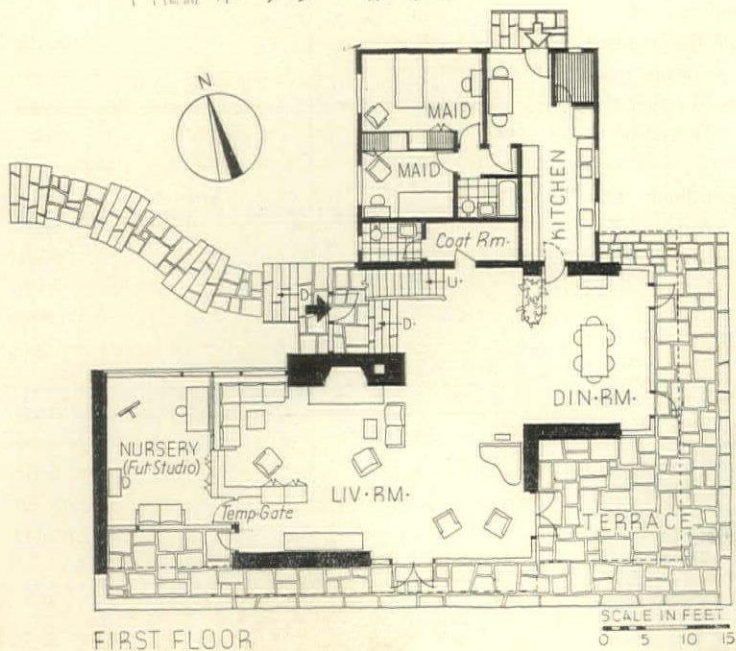
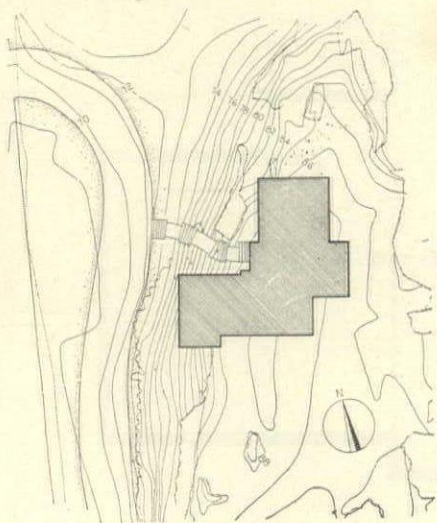
For a house of its type and size, this example shows no evidence of especially difficult problems. Family requirements included four bedrooms and two maids' rooms. The site, while irregular, permitted the development of a plan which would work almost as well on a level plot of ground. The only evidence of the effect of changing grades is seen at the entrance, where a between-floors doorway has been used.

Orientation placed three bedrooms, the living room and nursery facing almost directly south, while the dining room has both east and south exposures and the kitchen gets the morning sun. Some shade is provided by the second floor overhang and balcony. The balcony, incidentally (see preceding page) has an open slat floor which eliminates the need for waterproofing the deck, and creates an attractive shadow pattern on the walls below.

The nursery, part of an exceedingly open ground floor, will be converted into a studio when the children have outgrown it.



FIREPLACE REPEATS STONE TEXTURE OF EXTERIOR WALLS TWO ADJACENT DOORS TO TERRACE SEEM EXCESSIVE





DINING ROOM FACES ITS OWN TERRACE AND THE MORNING SUN

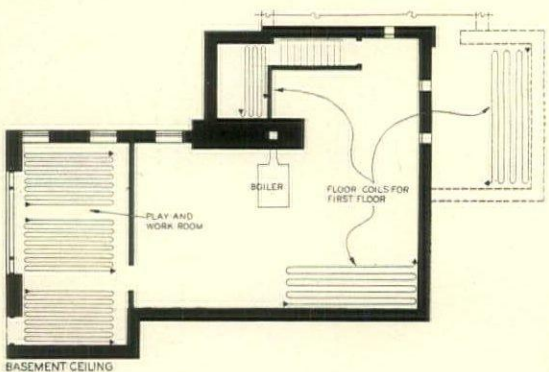
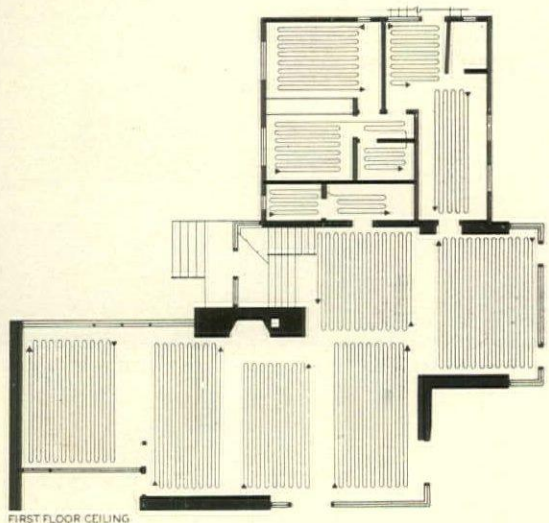
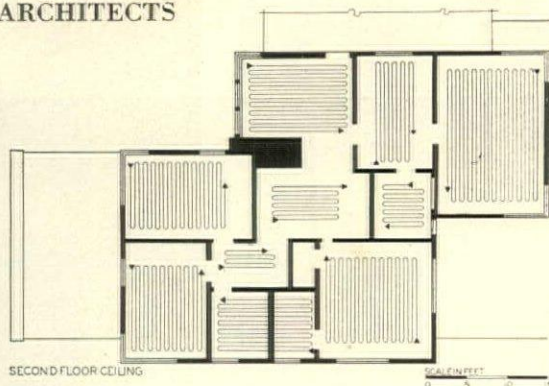
Complete radiant panel heating installations are still uncommon enough to arouse immediate and special interest. The theory of such systems is that large, warm, radiating surfaces provide optimum comfort at minimum air temperatures. Radiant heating has a number of special advantages when applied to a building of modern design, for the large glass surfaces create special problems.

The installation here is the Crittal type, a method which makes use of steel pipes imbedded in the plaster ceiling (and in some cases in the floor as well), using warm water as the heating medium. It was designed and installed by Wolff & Munier. The water is heated in a furnace of conventional design, supplied to the welded pipe coils at temperatures varying from 85 to 110 degrees. Room temperatures are controlled by an outside thermostat.

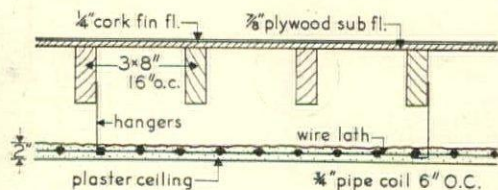
"This heating system," say the engineers, "has permitted use of the most exposed rooms at air temperatures of 70 degrees in the coldest weather. . . Similar rooms heated by warm-air convection systems have required room air temperatures as high as 77 or 79 degrees to offset the low temperature of glass and wall surfaces. This not only tends to increase comfort, but permits fuel economy as well."

Panel heating has special advantages for children—warm floors and absence of drafts.

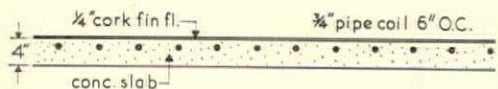
CONSTRUCTION OUTLINE: FOUNDATION—stone. STRUCTURE—stone and redwood exterior; inside—plaster, U. S. Gypsum Co. ROOF—built-up, Barrett Co., INSULATION—Rockwool, Eagle-Picher Sales Co. FIREPLACE DAMPER—H. W. Covert Co. SHEET METAL WORK—Revere copper, Revere Copper & Brass Co. WINDOWS: Sash and screens—Croft Steel Windows, Inc. Glass—Pittsburgh Plate Glass Co. FLOOR COVERINGS: Main rooms—cork, Cork Insulation Co. Kitchen and bathrooms—linoleum, Armstrong Cork Co. WALL COVERINGS: Living room and halls—grass cloth, W. H. S. Lloyd Co. PAINTS—Pratt & Lambert. HARDWARE—Yale & Towne Mfg. Co. ELECTRICAL WIRING—BX and conduit. KITCHEN EQUIPMENT: Refrigerator—Frigidaire Sales Corp. Sink—Tracy Mfg. Co. Cabinets—steel, Elgin Stove & Oven Co. BATHROOM EQUIPMENT—Crane Co. HEATING—radiant heat, Wolff & Munier, Boiler—H. B. Smith Mfg. Co. Burner—Petroleum Heat & Power Co.



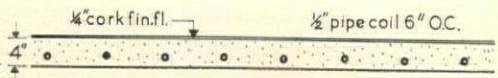
COIL IN 1st and 2nd FLOOR CEILING

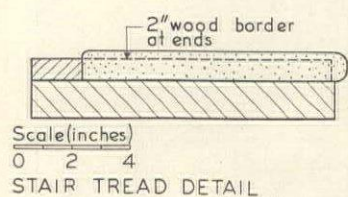
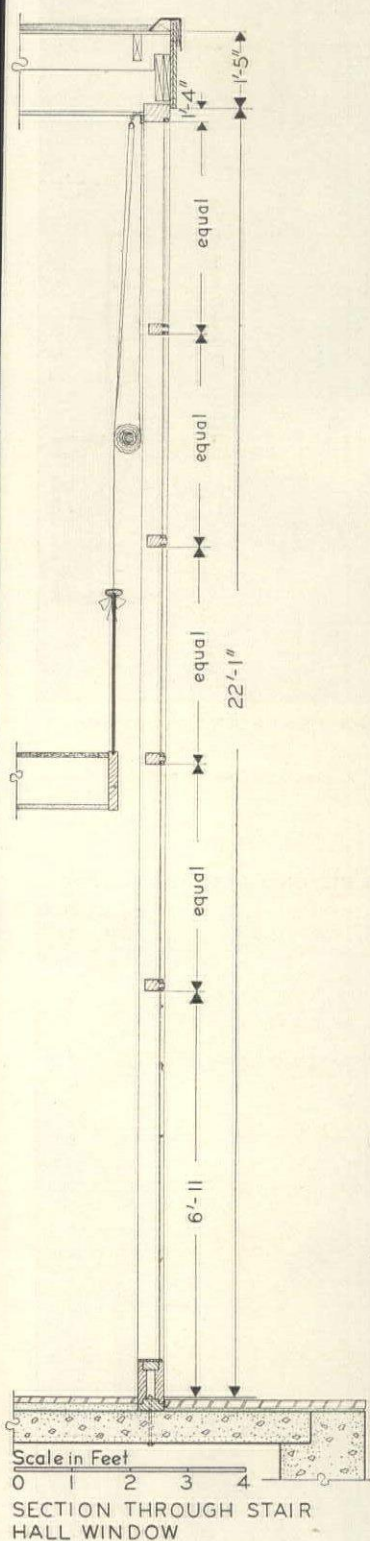


COIL IN 1st FLOOR SLAB



COIL IN BASEMENT CEILING



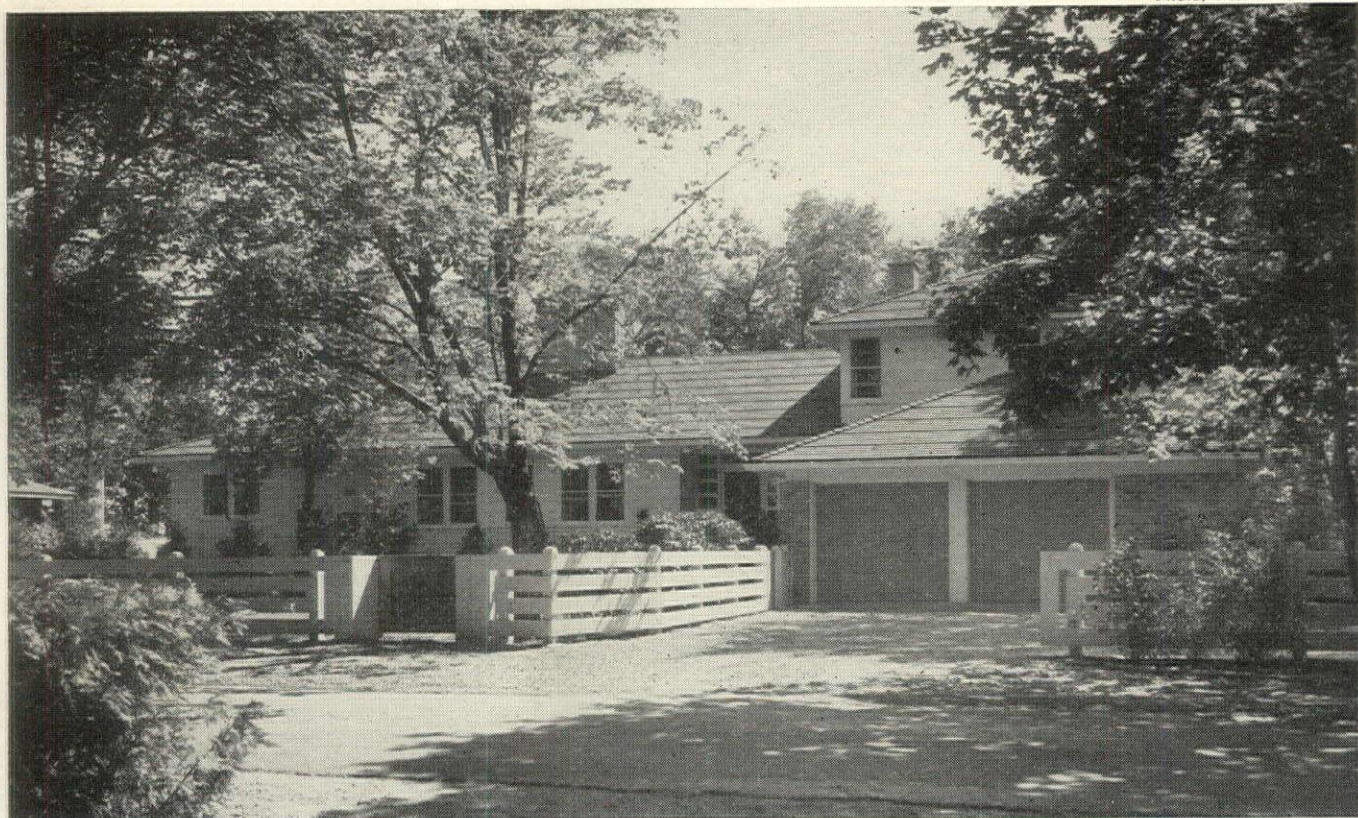


LARGE STAIR HALL IS THE MAJOR INTERIOR AND EXTERIOR DESIGN FEATURE
ROUGH STONEWORK CARRIES THROUGH TO THE HALL, PAST WOOD WINDOW FRAME



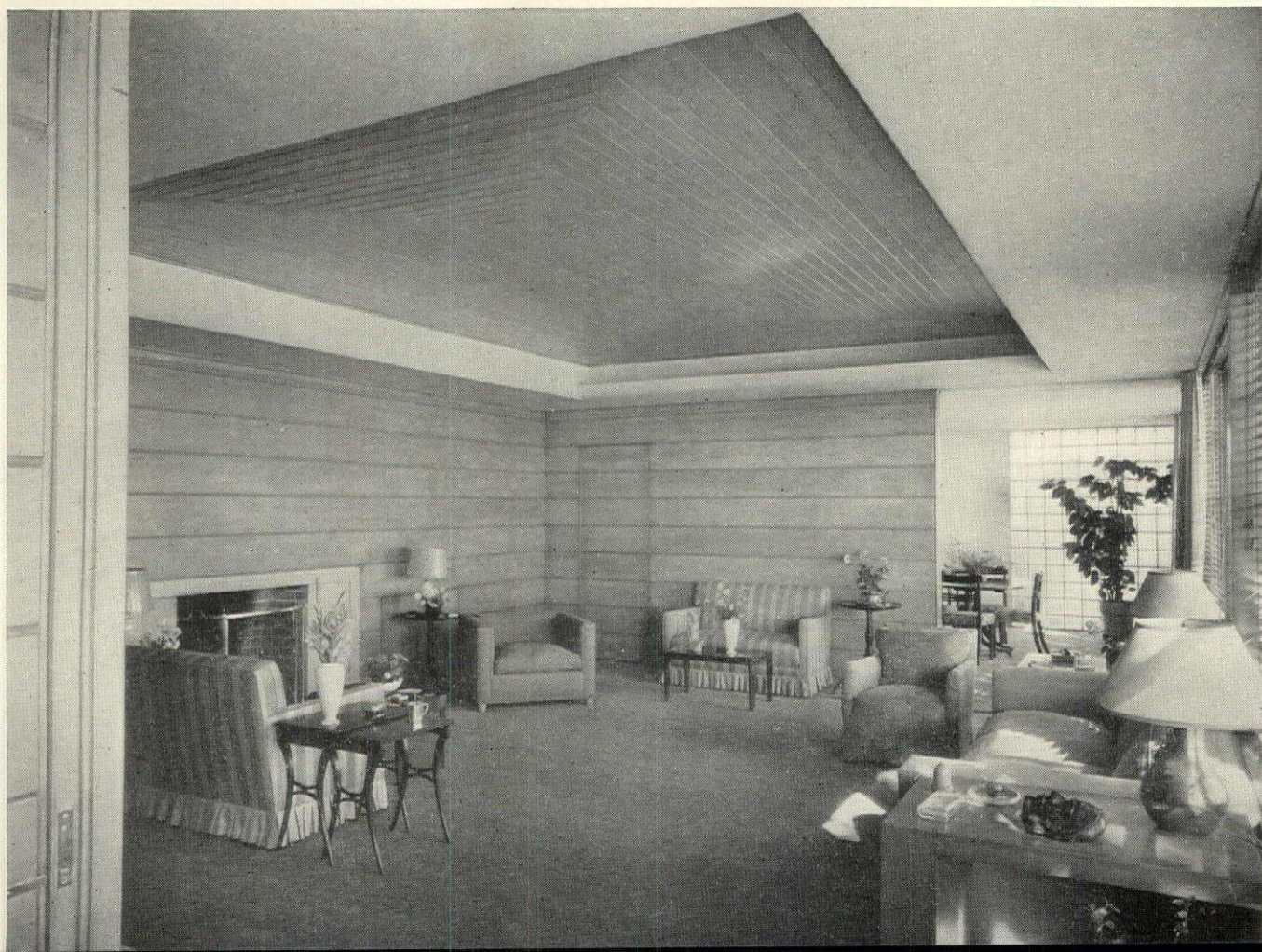
HOUSE IN WAYZATA, MINN. McEnary & Kraft, Architects and Karl E. Humphrey

Photo, Nestler & Grover

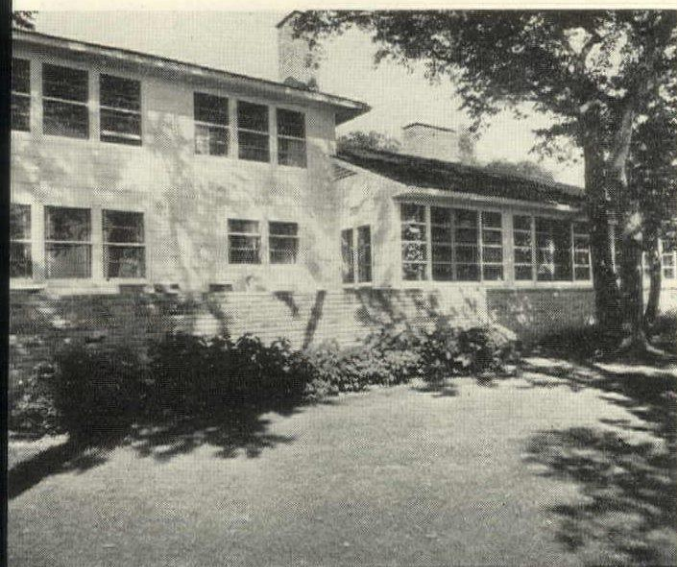


PUBLIC ROAD BORDERS PROPERTY ON THE NORTH. LARGE GARAGE HAS ROOM FOR TWO CARS AND WORKSPACE

NOTE INTERIOR USE OF WOOD SIDING IN LIVING ROOM. GLASS BLOCK IN DINING ROOM BEYOND ASSURES PRIVACY



ociate, develop a plan which solves complex requirements in an orderly fashion

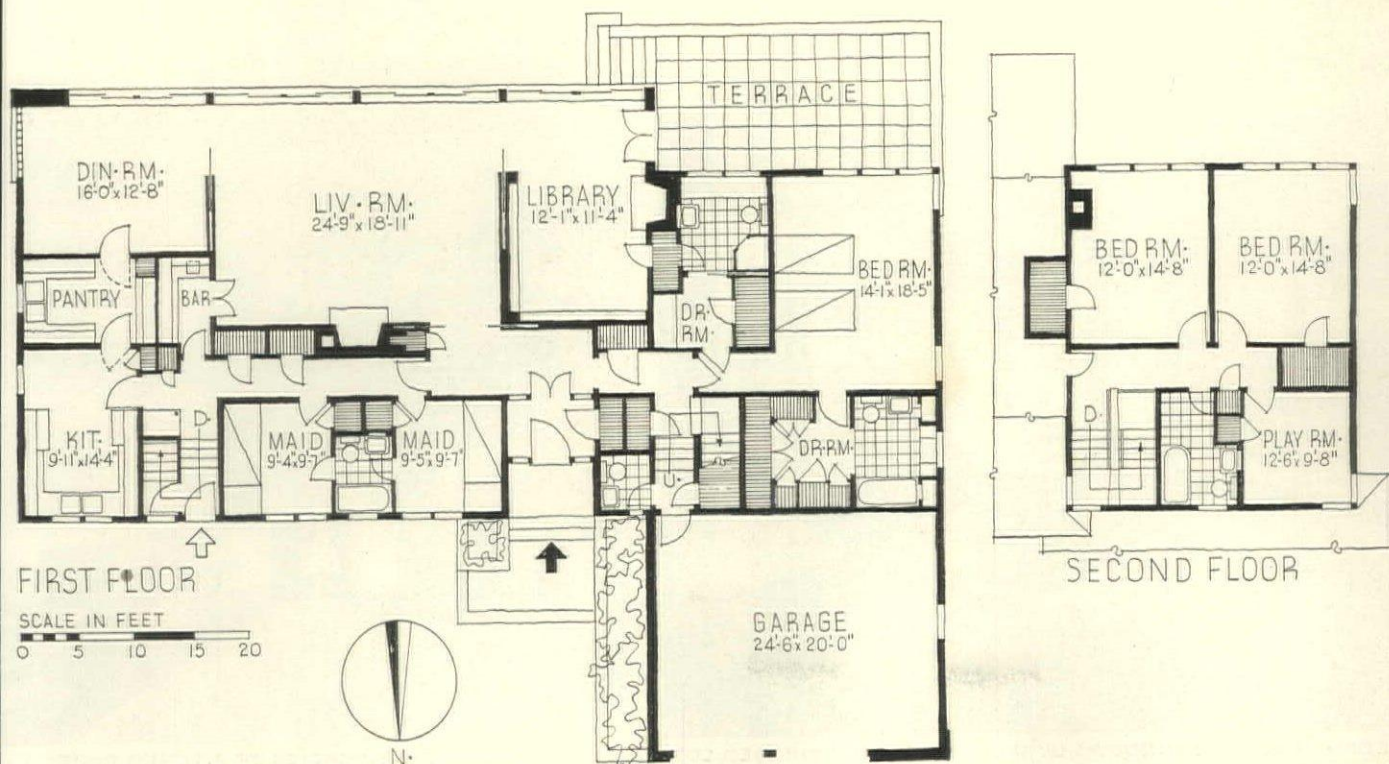


HIGH FIRST-FLOOR LEVEL IS EVIDENT ON GARDEN SIDE

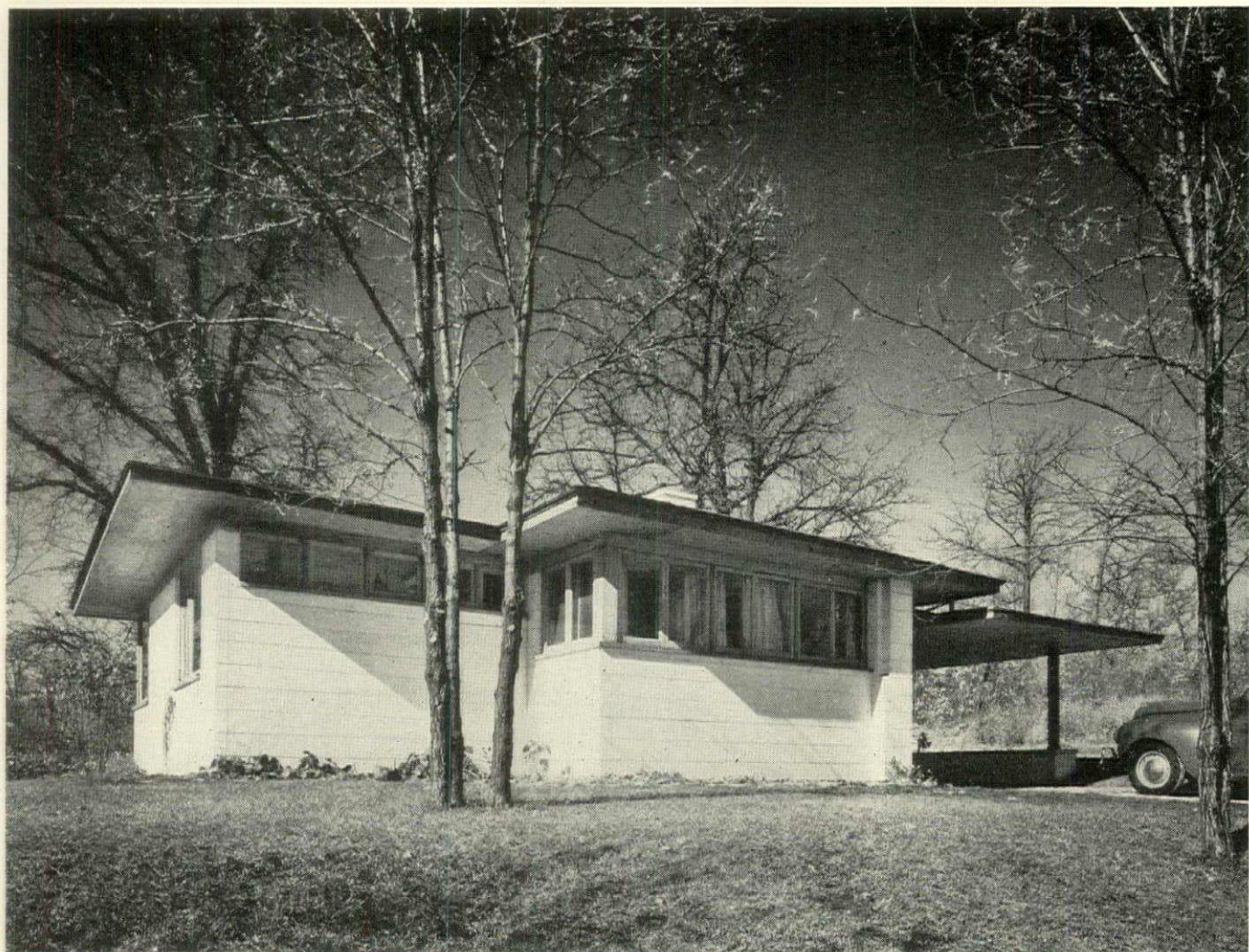
This large house occupies a site adjoining Lake Minnetonka to the south. Along the north side, which faces the street, all services and subsidiary rooms have been strung on a corridor that forms the spine of the structure. To the south are the living areas and the owners' sleeping quarters over which the nurse and the children have their bed and play rooms. While the south side of the building opens out to the garden and the lake, the east and west sides face neighboring properties and contain a minimum of openings.

The large living area can be subdivided into special purpose rooms by sliding doors. When these are open, they allow an uninterrupted view of almost 60 ft. The library, which presumably should have had the greatest privacy, forms the link between living room and terrace. The location of the latter therefore seems unreasonable, since none of the major rooms can benefit from the terrace directly. The library was designed to do double duty as a guest room—hence the door through the closet into the adjoining bath. The bar is also used as a flower room with close access to the outside through secondary entrance. The entire first floor is 3 ft. above grade, because the level of the lake is only just below that of the property.

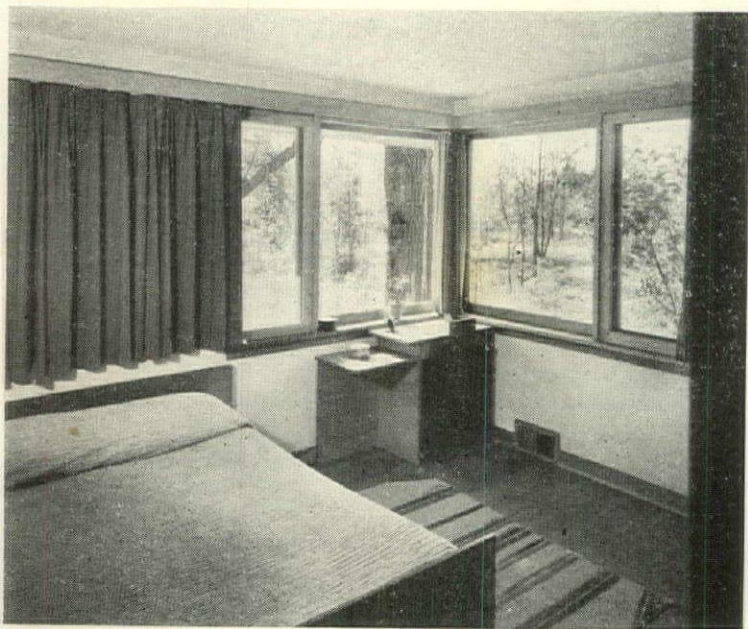
CONSTRUCTION OUTLINE: FOUNDATION WALLS—concrete block and poured concrete. STRUCTURE: Exterior walls—cedar boards, asphalt felt, shiplap sheathing; inside—studs, Rocklath, U. S. Gypsum Co., and plaster. Floors—red oak. ROOF—red cedar shingles, Weyerhaeuser Co. SHEET METAL WORK: Flashing—iron clad tin. Gutters and leaders—galvanized iron. INSULATION—Balsam Wool, Wood Conversion Co. WINDOWS: Sash—pine, double hung and sliding. Glass—A quality, Pennvernion, Pittsburgh Plate Glass Co. HARDWARE—Russell & Erwin Mfg. Co. PAINTS—Pratt & Lambert. ELECTRICAL WIRING—flexible conduit. Switches—Hart & Hegeman. BATHROOM EQUIPMENT—American Radiator-Standard Sanitary Corp. PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—copper. HEATING: Filtering and humidifying, The Herman Nelson Corp. Thermostats—Minneapolis-Honeywell Regulator Co.



HOUSE IN DOWNERS GROVE, ILL. A compact, economical plan that manages to cor



VIEW FROM EAST SHOWS CHARACTERISTIC DEEP OVERHANGS, DRAMATIC ENTRANCE CANOPY. ROOF IS PITCHED



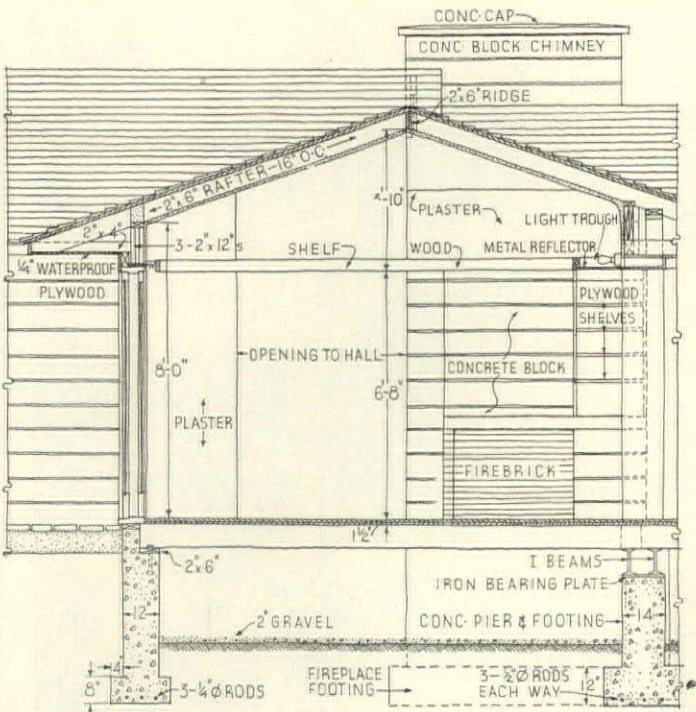
BEDROOM CORNER WINDOWS OVERLOOK DENSELY WOODED LOT



CEILING FOLLOWS INTRICACIES OF PITCHED ROOF



NOTE HATCH (LEFT) LEADING INTO THE KITCHEN



SECTION THROUGH LIVING ROOM

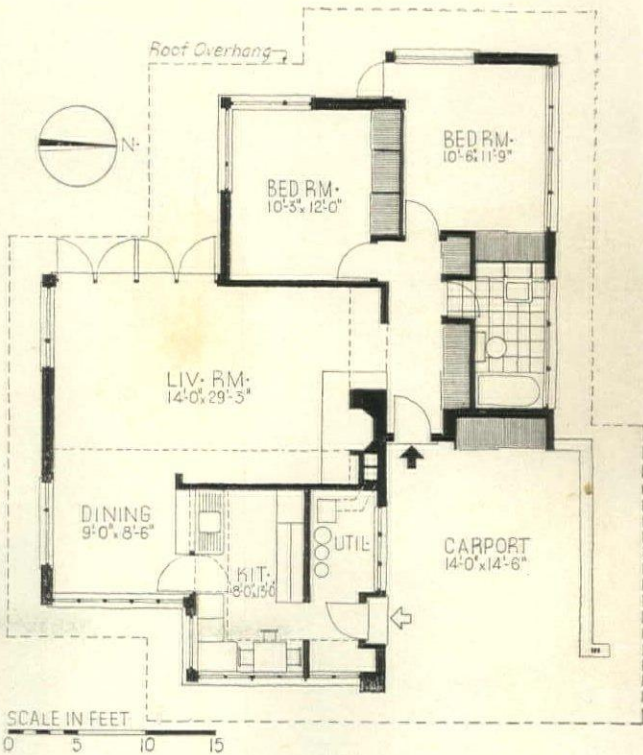
The designer, a disciple of Frank Lloyd Wright, created this fine little house for himself as one of his first jobs. Certain requirements conditioned the plan: the house was not to violate the natural charm of a wooded lot, and it was to be as cheap as possible without failing to satisfy its designer-owner.

The scheme developed from these conditions is compact and at the same time open and spacious in character. Orientation was carefully considered, with the dining room getting the morning sun and the living area catching it all day. What little circulation space there is appears as part of the living area.

The detailing follows closely the now familiar design-grammer established at Taliesin. Particularly successful are the overhangs and the dramatic canopy over the carport and entrance. The dining chairs suggest those first used by Wright in the Larkin Building (1904).

The house was financed by an FHA loan, and cost 38 cents per cu. ft.

CONSTRUCTION OUTLINE: FOUNDATION—poured concrete. STRUCTURE: Exterior walls—Waylite block, Chicago Waylite Co., furring strips and plaster. Floors—oak. ROOF—shingles. INSULATION: Roof—4 in. mineral wool. SHEET METAL WORK: Flashing—Toncan iron, Republic Steel Corp. Ducts—galvanized iron. WINDOWS: Sash—wood casements. Glass—polished plate and double strength, quality A. HARDWARE—P. & F. Corbin. ELECTRICAL INSTALLATION: Switches—toggle and mercury. KITCHEN EQUIPMENT: Range—Universal, Landers, Frary & Clark. Refrigerator—General Electric Co. Cabinets—Dietrich Steel Cabinet Co. BATHROOM EQUIPMENT—Crane Co. HEATING: Warm air, filtering and humidifying, Security gas furnace, Security Stove & Mfg. Co. Thermostats—Minneapolis-Honeywell Regulator Co.



HOUSE IN SANTA MONICA CANYON, CALIF. A compact and attractive addition

Photos. Maynard Parker



STREET VIEW SHOWS TWO-CAR GARAGE AT NORTH END, ILLUSTRATES BEAUTIFUL SETTING AMONG LARGE TREES

DINING AREA OVERLOOKS THE GARDEN TO THE EAST. WINDOWS ARE FLOOR-TO-CEILING DOUBLEHUNG SASH





LIVING ROOM HAS FIREPLACE OF PAINTED BRICK



DINING ROOM ALSO SERVES FOR PLAY



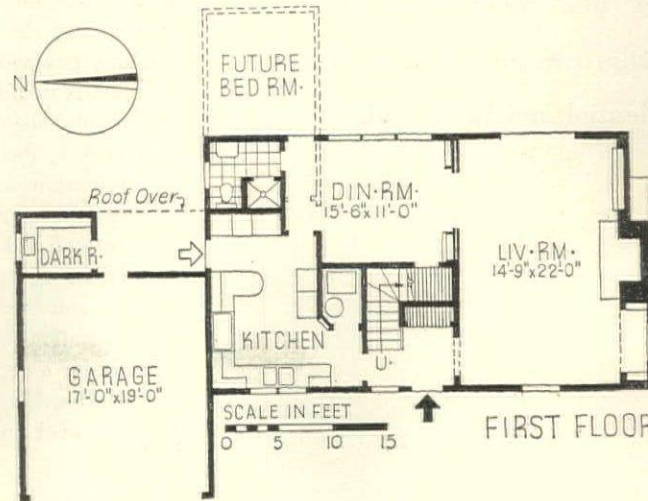
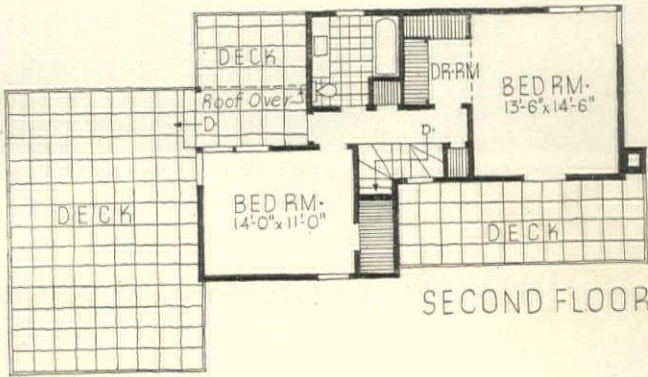
COVERED PASSAGE TO DARK ROOM

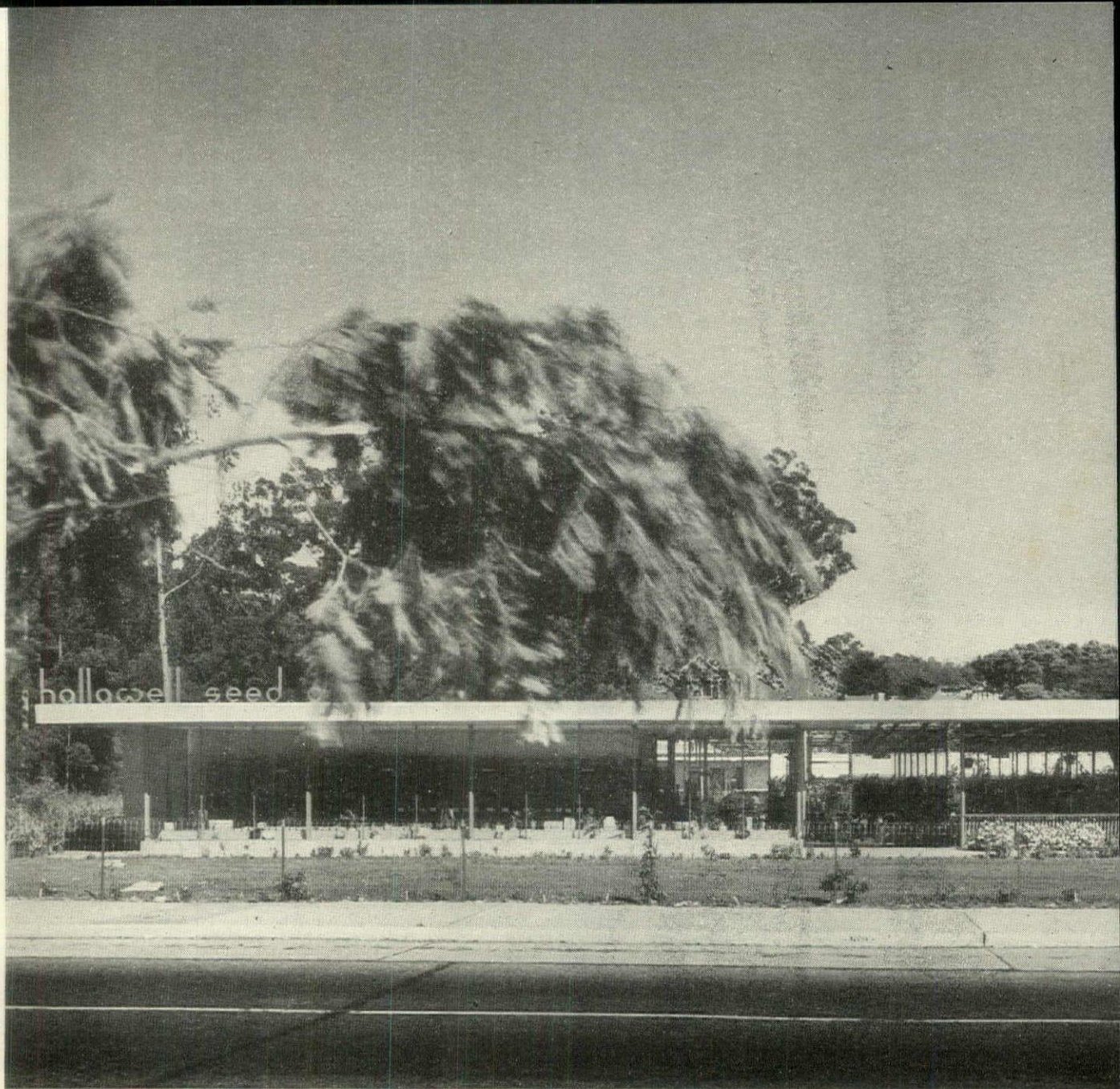
The owners of this pleasant little house demanded a compact two-story structure, since they had found their previous rambling house too difficult to manage. The plan of the building answers this requirement in an imaginative manner, despite the strict limit on cost. While some of the lobby and corridor areas could have been more generous under a larger budget, there seems no reason for such an unusually cramped stair in so simple a house. Moving the utility closet on the second floor might have eliminated one set of winders.

The large kitchen controls all entrances, and the dining-play room gets the morning sun. The living room has excellent cross-ventilation, and catches the sun all day. A small darkroom, well out of everyone's way, is another attractive feature. A maid's room, envisaged as a future addition, will utilize the existing first-floor bath.

On the second floor the architect has achieved an usually pleasant layout for the sleeping quarters. Through excellent planning, she not only assured morning sun for both bedrooms, but also provided each with a private outdoor deck for sleeping in summer. The incorporation of a small dressing niche and generous storage closets is commendable.

CONSTRUCTION OUTLINE: FOUNDATION—concrete. STRUCTURE: Exterior walls—studs, redwood outside; inside—plaster. Floors—oak. ROOF—Pioneer composition, Flintkote Co. INSULATION: Roof—Celotex Corp. SHEET METAL WORK: Flashing—Toncan iron, Republic Steel Co. Leaders—Leadclad, Wheeling Metal & Mfg. Co. WINDOWS: Glass—single strength, quality A, Libbey-Owens-Ford Glass Co. Screens—Pasadena Screen Co. FLOOR COVERINGS: Kitchen and bathrooms—linoleum, Armstrong Cork Co. WALL COVERINGS: Living room—grass cloth. Bedrooms and bathrooms—wallpaper. ELECTRICAL SWITCHES—Pass & Seymour. LAUNDRY EQUIPMENT: Washing machine—Bendix Home Appliance, Inc. HEATING—warm air system. Regulators—Minneapolis-Honeywell Regulator Co.





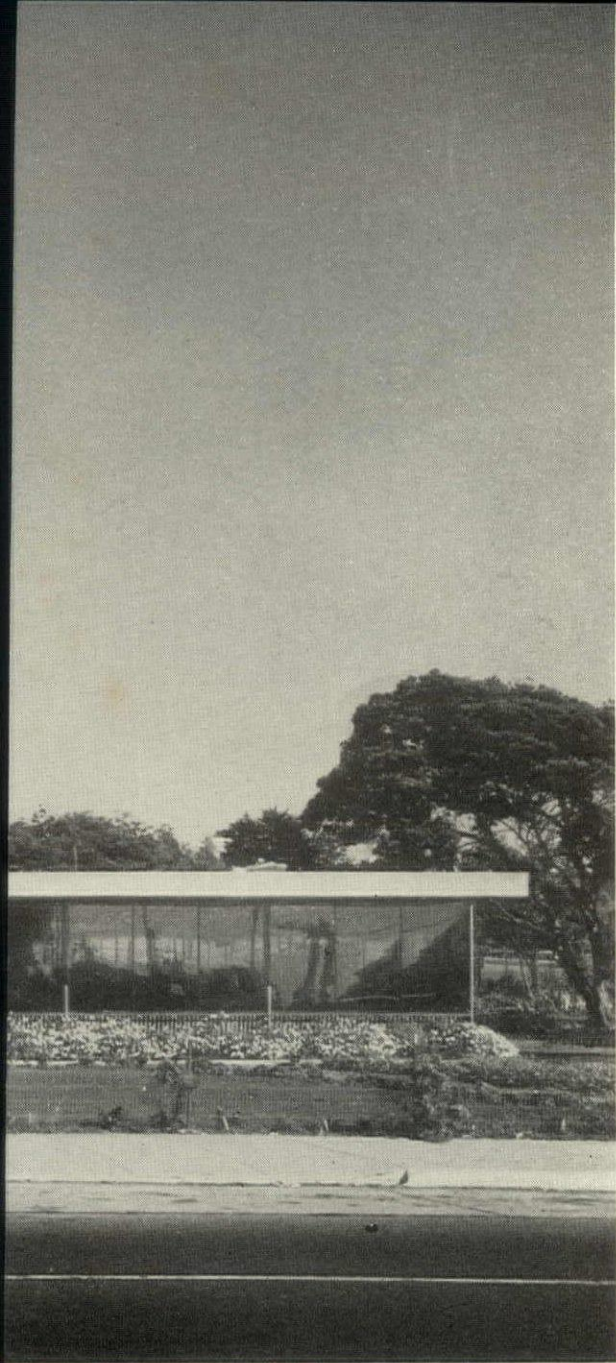
MORE THAN ONE HUNDRED FEET OF LOW FACADE PARALLEL TO THE HIGHWAY MAKES AN EXCITING SHOW. THE MAGNIFICENT

GARDEN CENTER SAN FRANCISCO, CALIF., RAPHAEL S. SORIANO, DESIGNER

A fine commercial building improves an established residential neighborhood.

It is significant that the latest contribution to first-rate modern architecture in this country should be a commercial rather than a residential building. Raphael Soriano, retained by the Hallawell Seed Company because they wanted a garden center that would look like no other nursery before it, created this design through the rational use of standard materials, and with an unprejudiced approach to the problems of this type of business. Important were certain aspects arising out of the location and public attitude toward this structure.

"We lost a year," say designer Soriano and Hallawell's President McNabb, "in battling with the planning commission and neighbors. The property is in a residential district, and it had to be rezoned. . . Home Owners Organization's protests and the City Planning Commission's rejections of numerous applications for gas stations and other commercial structures built up a stiff resistance to our petition for a permit. It took a good deal of persuasion to convince these groups that Hallawell's would beautify the corner. . . ." Today the garden center is the pride of the neighborhood, and, needless to add, is doing a flourishing business.



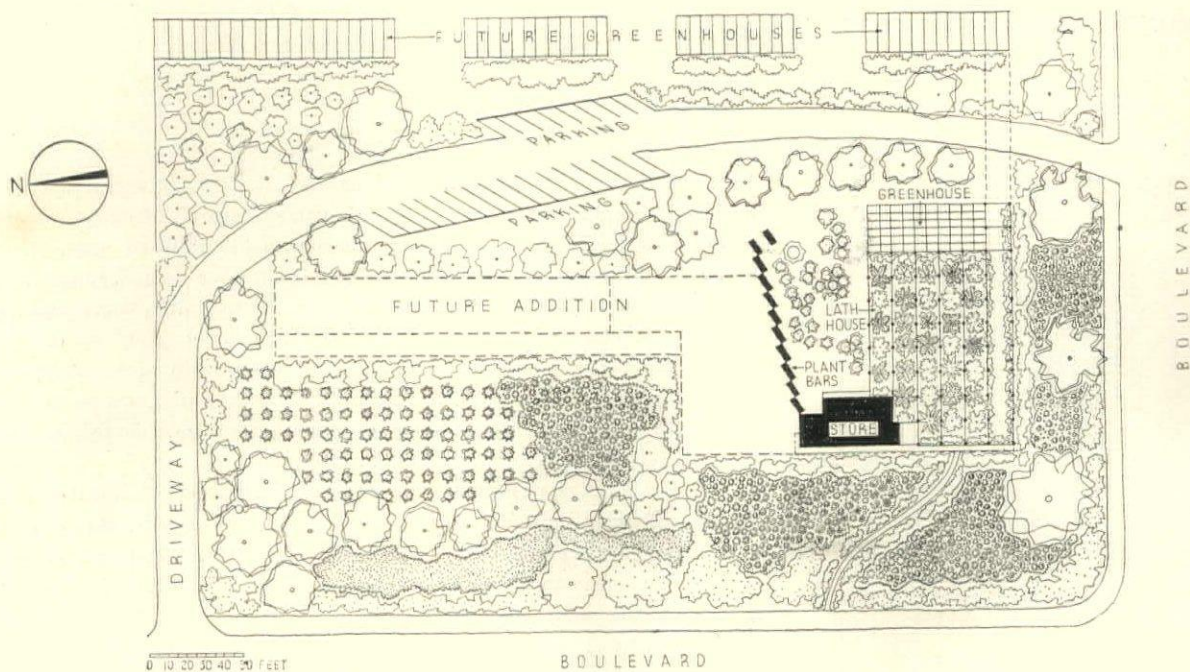
ALYPTUS TREES FORM A HANDSOME BACKGROUND



PLANT BARS ARE STAGGERED, BUILT OF WOOD



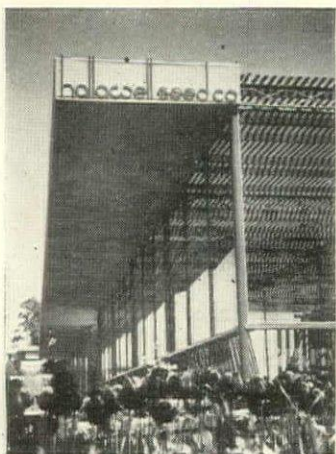
VIEW OF STORE SHOWS BUILDING'S INFORMALITY





ORDERLY DISPLAY AND STORAGE FACILITIES PLANNED FOR A VAST VARIETY OF STOCK. ALL LIGHTING IS INDIRECT

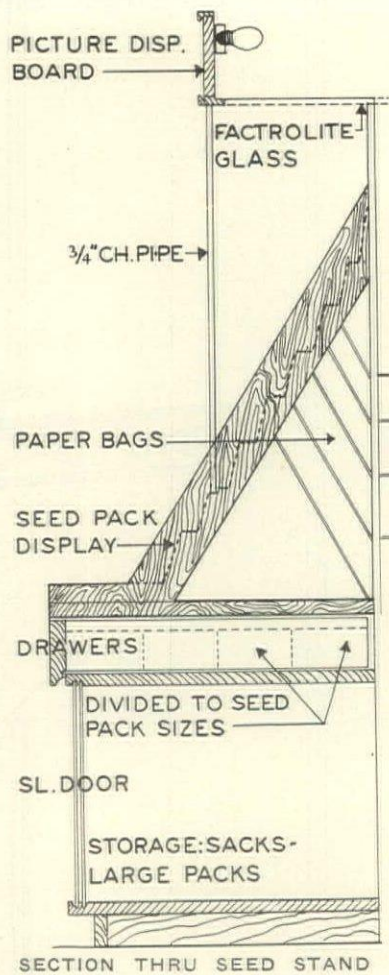
GARDEN CENTER, RAPHAEL S. SORIANO



Architect Soriano examined the old fixtures and the different types of stock in Hallawell's main store. From this objective research came a set of fixtures designed to function rather than conform with "established practice." Says Mr. Soriano: "Different compartments varied from some large enough to take hoes to others for seed packages ($2\frac{1}{2} \times 3\frac{1}{2}$ in.), to gallon cans and bottles for insecticides, etc. Some fixtures can accommodate baskets of tulip buds one season and potted plants in another. The relationship of merchandise dictated its place. It was not enough to introduce architectural neatness and orderliness—it was essential to introduce these qualities into merchandising. So I had to show the clerks how to display their wares.

"All lights were designed with different intensities of indirect illumination. This added restfulness amid the combined shouts of labels, shapes and colors.

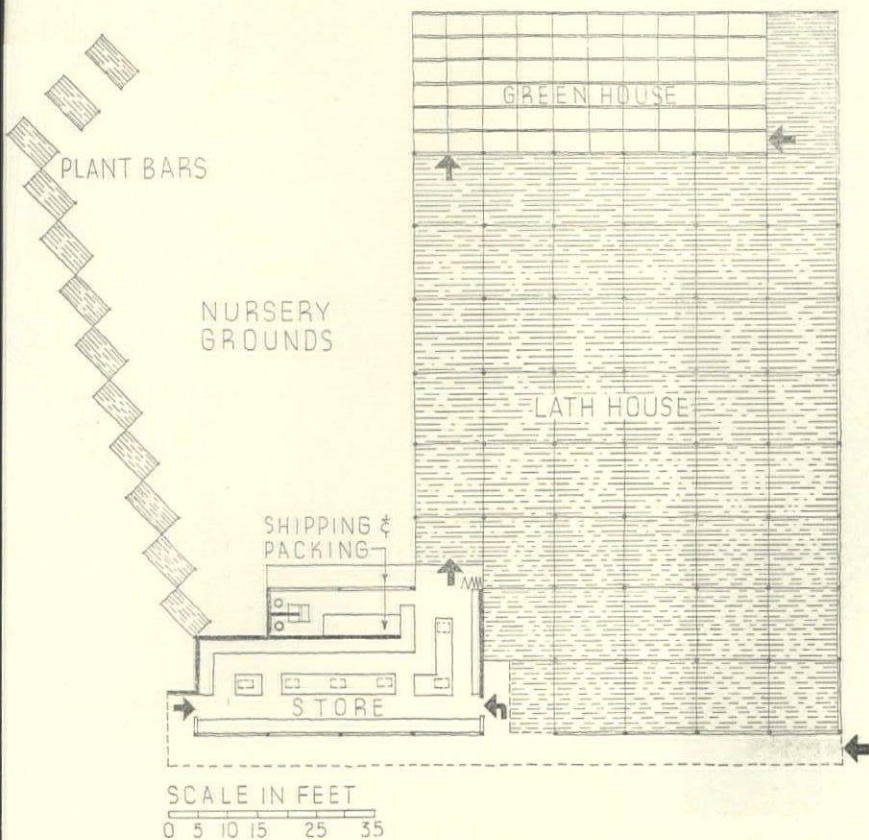
"The Hallawell's business is world wide. A several thousand dollar order for watermelon seeds came recently from Egypt. In handling its local trade, the building works like a drive-in."



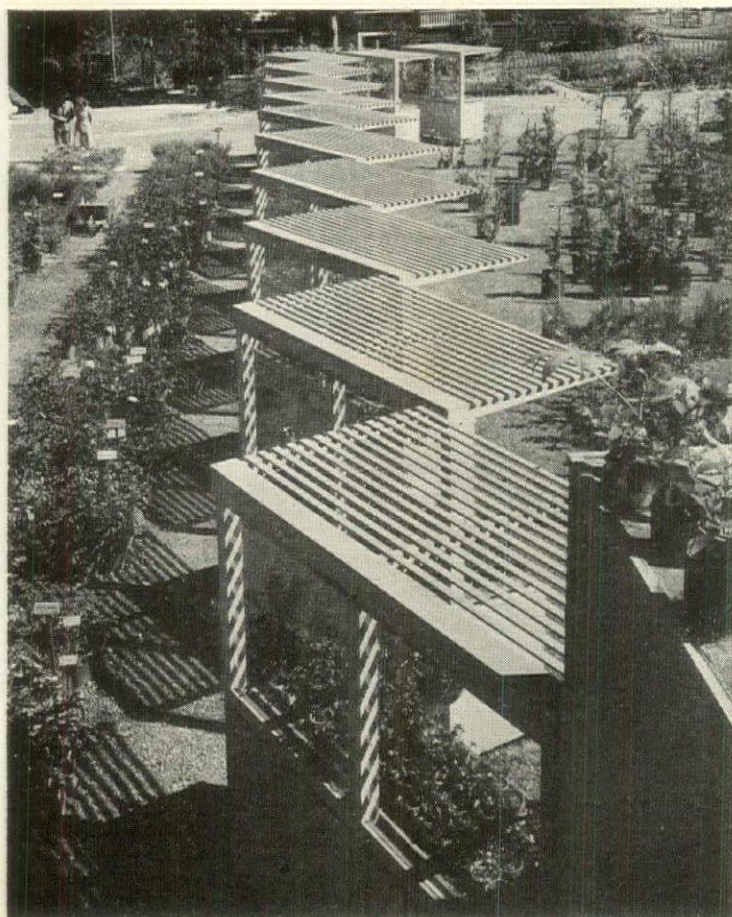
ROOF FRAMING BEYOND STORE IS EXPOSED, COVERED WITH WOOD LATH



SEED DISPLAYS TOTAL 50 FT. IN LENGTH

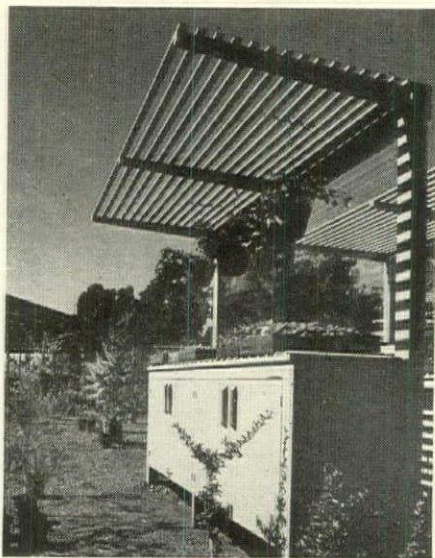


REGULAR MULLIONS SHOW USE OF MODULE

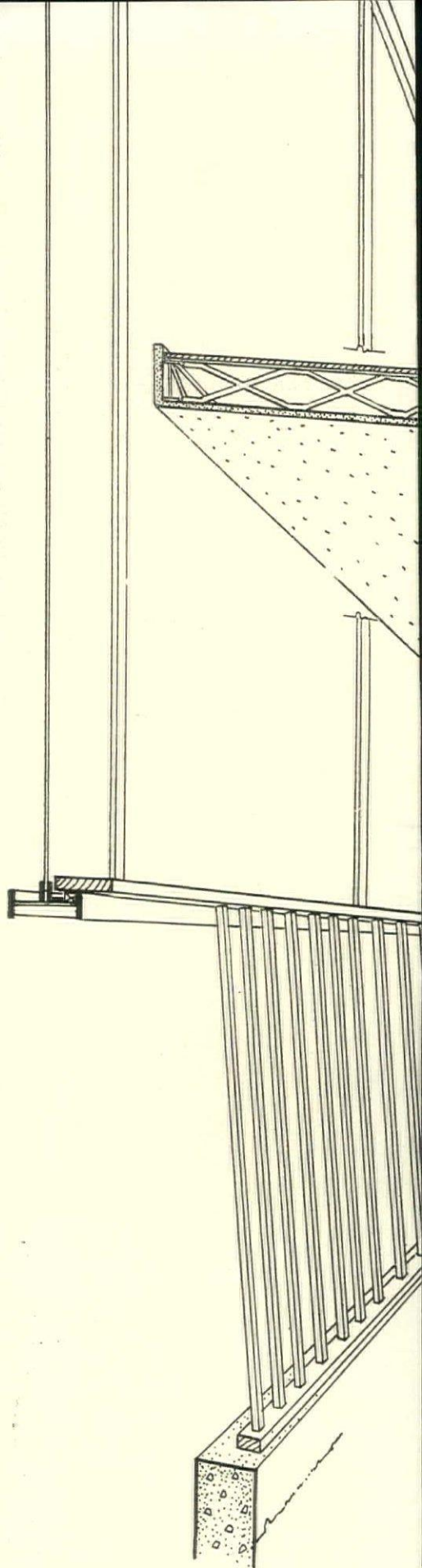


IN A STAGGERED LAYOUT PLANT BARS GET SUN ALL DAY

"Plant bars," says Mr. Soriano, "were specially designed, 8 ft. long by 30 in. wide, topped by lath to protect young plant crates. Clear glass facing north acts as a windbreak. Each bar has generous storage space, eliminating the need of storage shacks throughout the garden. The lath house construction of light steel, allows for 12 ft. spans and can take the wind load on the 250 ft. glass windbreaks. These glass walls rest on floating concrete foundations, since the entire area is filled earth. The walls, prefabricated in Los Angeles, were shipped to the San Francisco site. The steel skeleton was erected in less than a week, employing one welder. All steel is painted Chinese red. The 2 in. cement on the building is treated with waterproof luminal, light gray. The south elevation and a part of the west side consist of blue glass."



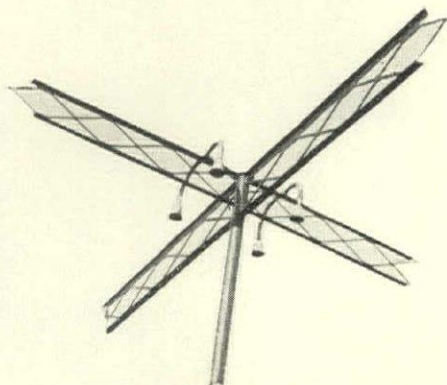
STORAGE BINS HOLD FIFTY CU. FT.



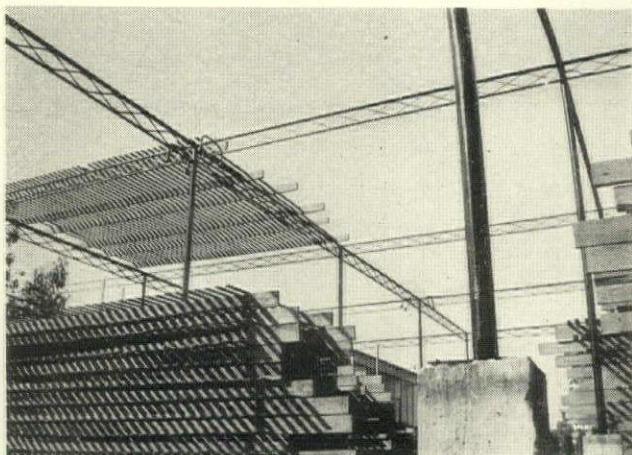


LATH ROOF IS REFLECTED IN THE BLUE PLATE GLASS (LEFT). DRAWING INDICATES SOLID ROOF BEYOND THE GLASS

LATISTEEL CORP. OF CALIFORNIA, STEEL FABRICATORS



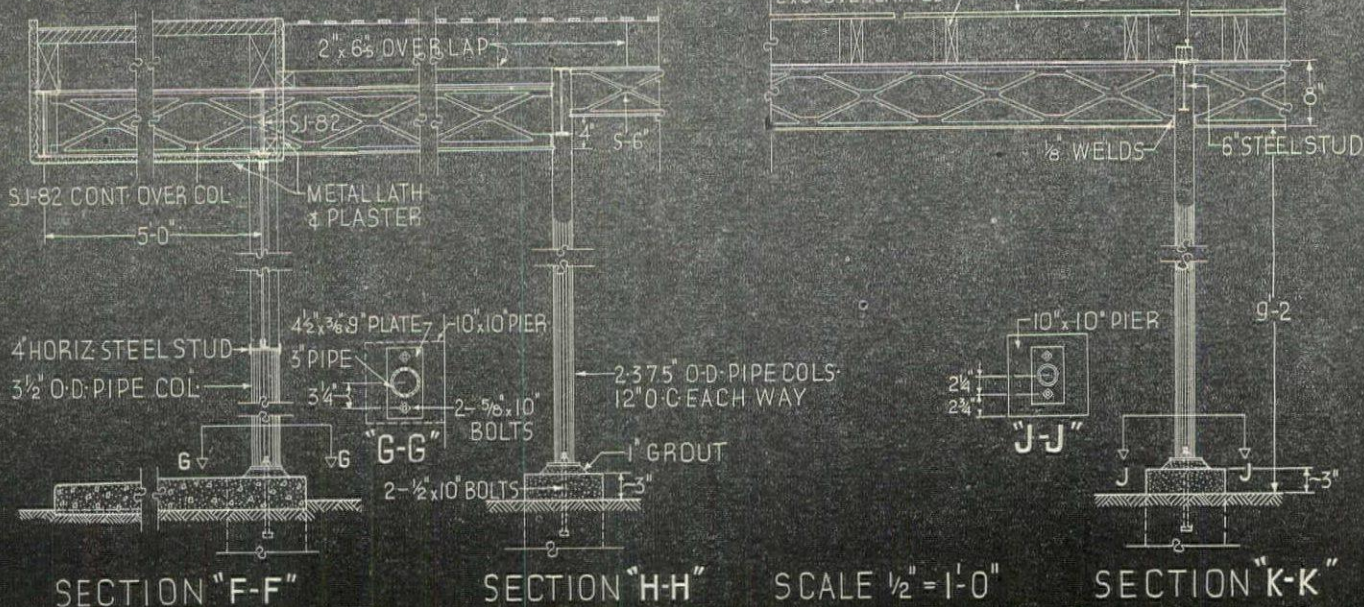
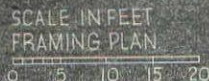
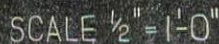
LIGHT SOCKETS AT TYPICAL SUPPORT



THE WELDED LIGHT STEEL FRAME DURING ERECTION

RAPHAEL S. SORIANO, DESIGNER

THE ARCHITECTURAL FORUM



SCALE $\frac{1}{2}" = 1'-0"$

SECTION "K-K"

PREFABRICATION



IMPROVED COOKING UNIT IS A FEATURE OF THE LIBBEY-OWENS-FORD "KITCHEN OF TOMORROW"

UNIT KITCHENS — the Libbey-Owens-Ford Glass Co.'s design department and a Long Island realtor project two radical new designs for the postwar kitchen, with suggestions for basic improvements in equipment.

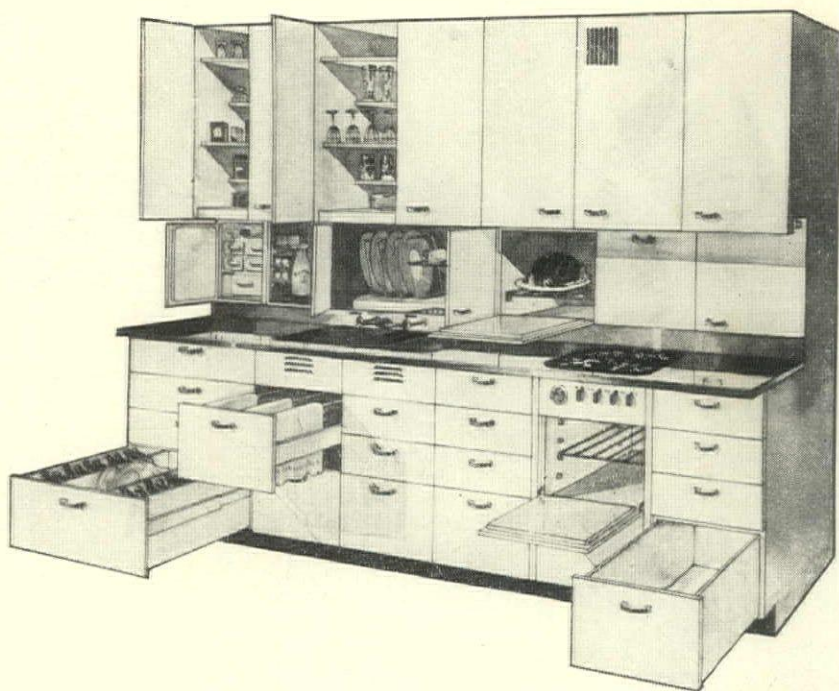
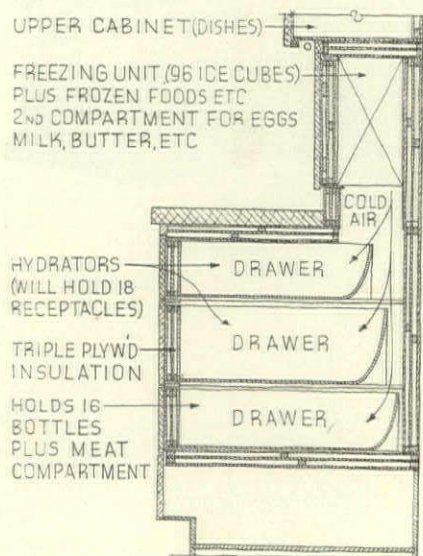
Prefabrication has always implied more than factory assembly of purely structural units. Its foremost proponents have also included prefabricated equipment in their concept of the manufactured house, using the argument that the unit-type "mechanical core" is necessary in prefabricated construction to eliminate the complex piping and wiring required by scattered equipment, and desirable in order to achieve economical assembly and space-saving, integrated design.

Following a somewhat different path, the designers who are leading the search for better and more attractive equipment for the postwar house, have arrived at

practically the same conclusion. Their best designs embody the unit-equipment idea, whether intended for prefabricated or conventional houses, or both. They are of potential importance to prefabricator and builder alike, if only because their application in either type of construction would result in great competitive advantage.

A number of excellent schemes of this kind have already appeared in drawing form in *THE FORUM*. This month, we present two of the first to be worked out in physical form—one as a full-sized model, the other already in working form and actual use.

EARLE UNIT KITCHEN — featuring the first practical, under-counter drawer refrigerator for domestic use. Waste heat from the compressor is used to dry towels and dishes in special compartments.



Unlike the Kitchen of Tomorrow, which so far exists only as a wooden model, the Earle Unit Kitchen is already in daily use. Its designer, Guyon L. C. Earle, a Forest Hills, L. I. realtor who became dissatisfied with conventional kitchenette equipment for small apartments, had a number of the units made up for an apartment project of his own just before the war. When materials are again available, Earle intends to manufacture the unit for general use.

Earle's unique contribution to kitchen design is not so much the unit kitchen idea, which has been employed before for the same purpose, as it is the redesign of kitchen equipment to fit this idea. Finding the standard refrigerator too bulky for his purpose,

and the usual under-counter models cramped and hard to use, he hit upon the idea of a new type of unit employing refrigerated drawers—a full two years before the current crop of post-war designs, many of which have proposed this improvement.

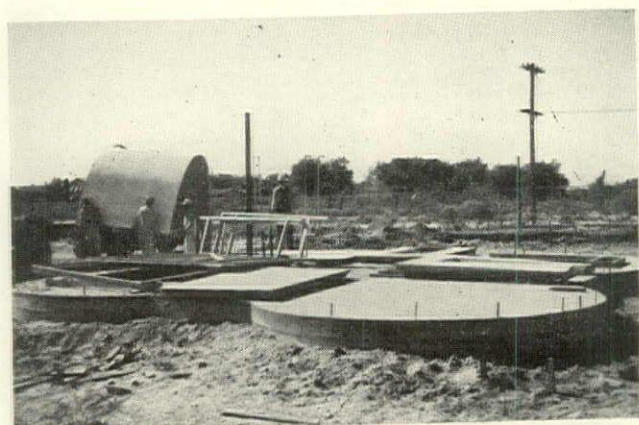
As developed in the Earle kitchen, the drawer refrigerator has an L-shaped section (detail above), with the portion containing the drawers forming a counter-height section corresponding to an ordinary base cupboard. The freezing unit and milk compartment project above this section at the back, occupying the usual space between it and the hanging cupboards above. The refrigerator compressor is placed in a cupboard alongside the unit proper, below the towel dryer.

COMPLETE UNIT contains drawer refrigerator (detail section, left), towel and dish dryers, sink, electric "fireless cooker," range and abundant storage space. Base cabinets are set away from wall to accommodate refrigerator, creating extra cabinets between upper and lower units.



SMALLER VERSION fits a space 8 ft. wide, less than 3 ft. deep. Eighty units of this type have been manufactured and tested under actual service conditions. Detailed photos (left) show range and drawer refrigerator. Continuous countertop is satin-finish stainless steel, cabinets are metal.

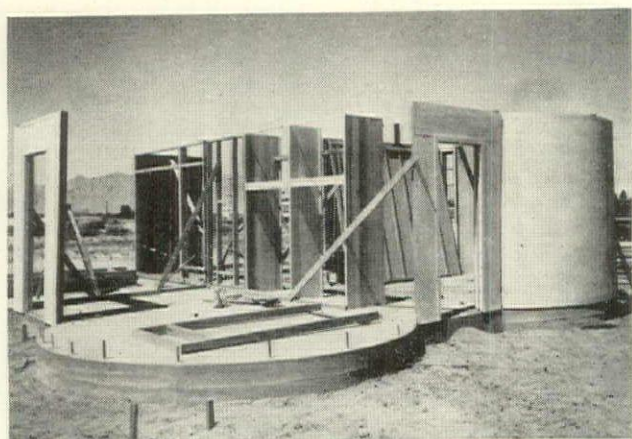
FOUR-CYLINDER HOUSE — Tucson, Arizona Architect Arthur T. Brown designs and builds an unusual, small house with self-stiffening walls of curved fiberboard.



FLOOR AND FOUNDATION WERE POURED IN ONE PIECE

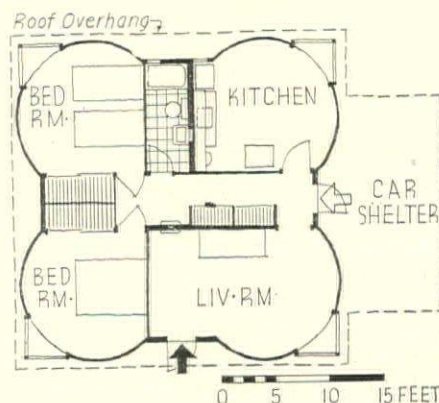
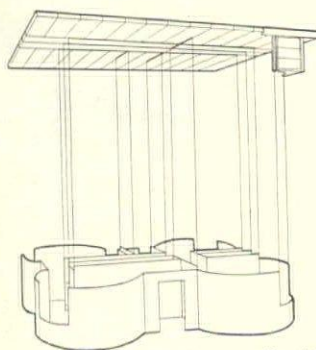
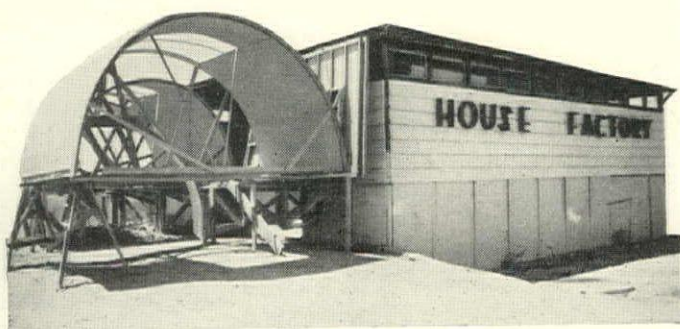


PANELS PARTLY UP. ERECTION TOOK THIRTY HOURS



CURVED PANELS IN FIRST HOUSE WERE FACTORY MADE

IN SECOND HOUSE, THE SHEETS WERE BENT IN PLACE



A potentially important aspect of prefabrication—which lies behind the various attempts at “grain bin” houses, igloo and arch structures, and other unusual house shapes proposed in recent years—is the possible simplification of construction through a radical redesign of the house itself. Present day rectangular rooms and flat walls are the result of certain methods of building, and presumably are subject to change as building materials and methods develop. If, as seems to be the case, sheet materials can be employed with maximum economy in curved, rather than flat sections, there is reason to believe that really substantial savings can be effected if some revival of the age-old principle of the arch can be worked out which suits the requirements of modern living.

In this latest attempt to develop such a structure, the curve has been used horizontally—as in the grain bin house—rather than vertically—as in the arch. Instead of a completely circular plan, however, it employs an ingenious four-room arrangement in which the curved walls are broken up by short sections of flat walls forming closets, the bath-kitchen unit and interior partitions. Result is a house that is at once unusually compact and surprisingly roomy, and which requires only a fraction of the usual framing to stiffen the walls and support the roof. According to their sponsor, test models have been popular among people of all types who have seen the completed houses.

This Emergency is

PERMANENT

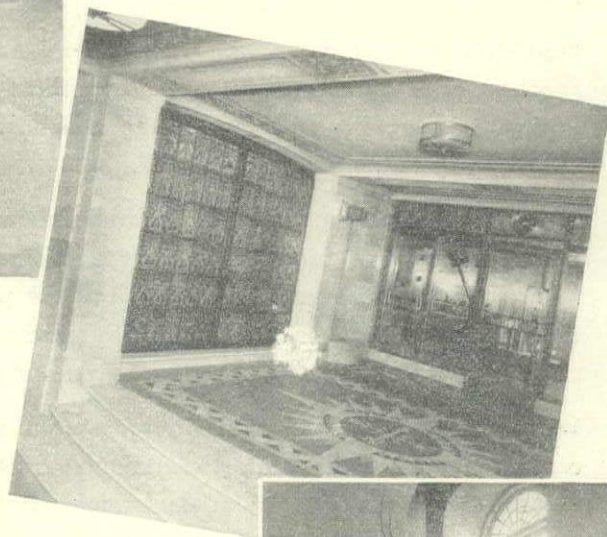


Ornamental Bronze Work by Michaels

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Bulletin Boards
Stamped and Cast Radiator
Grilles

Grilles and Wickets
Kick and Push Plates
Push Bars
Wrought Iron and Bronze
Lighting Fixtures
Wire Work
Cast Thresholds
Extruded Thresholds
Extruded Casements and Store
Front Sash
Exhibit Cases
Parking Meters
Bronze and Iron Store Fronts
Bronze Double Hung Windows
Bronze Casement Windows
Bronze Markers and Plaques



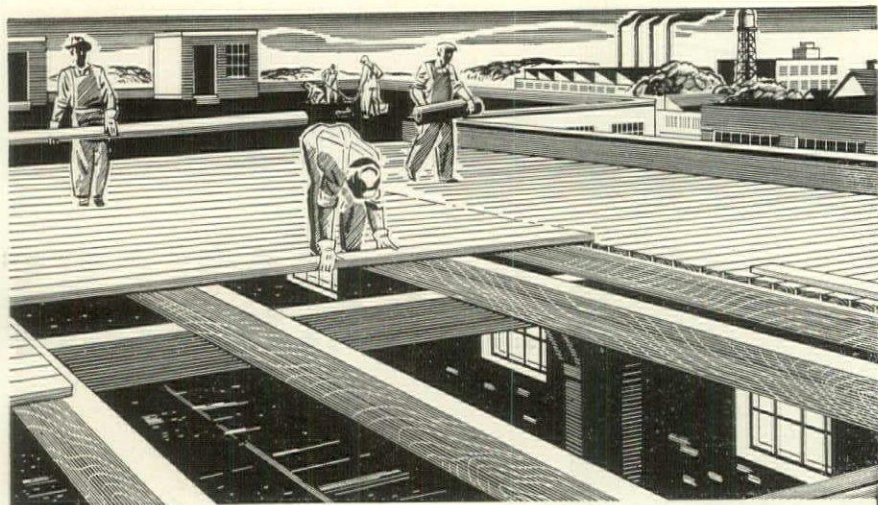
*Ornamental
Bronze Grilles*

*Ornamental
Stair Railings*



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RESILIENCE of this wood construction—its ability to absorb shock—makes it extremely valuable in these mill buildings. Wolmanized Lumber adds long life by making the wood highly resistant to decay and termite attack.

VACUUM-PRESSURE impregnation of ordinary wood with Wolman Salts* preservative produces long-lived Wolmanized Lumber. "Fibre fixation" prevents leaching-out of the preservative. All of the usual advantages of working with wood are retained; low cost, ease of handling and erection, light weight, paintability.

WOLMANIZED LUMBER is used for lightweight or heavy timber construction. It has the high strength needed for long spans. Its use is releasing scarce materials for manufacturing materials of war. Consider how it can serve in your postwar construction. American Lumber & Treating Company, 1647 McCormick Building, Chicago, Illinois.

*Registered Trade Mark

"Alloyed" FOR ENDURANCE
WOLMANIZED LUMBER



LETTERS

(Continued from page 40)

Venetian blinds, or "persiennes," goes back some hundreds of years. There have been innumerable variations of them, from the horizontal to the vertical and from wood and cloth to aluminum, and other variations of control.

It is my opinion that Mr. Villalobos has never done more than play with the old Venetian blind idea, which is not used architecturally in any of his buildings.

The use of sun blinds in the principal buildings which I discussed, is always architectural, not as a fitting of the windows only. There is, therefore, no basis whatever for bringing the matter up in the way he did, because he is not the inventor of the architectural use of sun blinds. It is unfortunate that architects should mix themselves up with the literary side of things of this kind, or even claim invention of what is only an adaptation of an ancient idea. . . .

PHILIP L. GOODWIN, *Architect*
New York, N. Y.

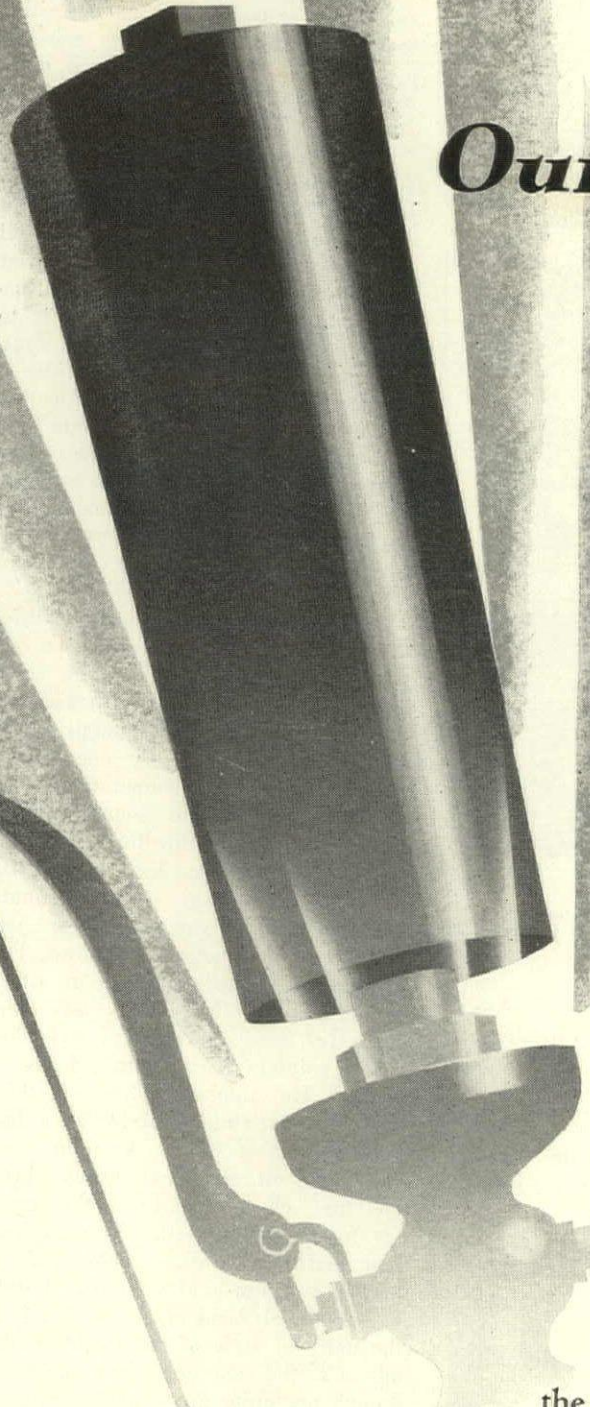
POSTWAR PROPHECY

Forum:

. . . Following the war I believe that decentralization of planning is going to be the most significant change in building design. My reasons boiled down are:

1. Rapid transportation, decentralization of cities, city planning and county planning will make for large, adequate building sites.
2. The psychological demand for more space and more air and a developed appreciation of landscape and gardens.
3. The failure of the average compact plan to provide, adequate, privacy and adequate separation of alien elements.
4. A realization that efficient planning depends on us—the distance from the kitchen stove to the kitchen sink is of vital importance because of repetitious steps: The distance from bedroom to kitchen of less importance and the distance from guest house to main house a different problem altogether.
5. Modern prefabrication and standardization should make a tremendous difference in the size of homes that people can afford to own.

SHELDON BRUMBAUGH
Architect
Klamath Falls, Oregon.



Our Factory Whistle Will Answer the Final Bugle

★ America must win the peace... must win it by switching over with the same speed and dynamic energy with which



we turned full-out for war. The final bugle must find us with a full head of steam. ☆ Then jobs and products, products and jobs will be America's urgent need. Then industry, ready to go with new goods, new ideas, new services, must fill the gap *quickly*... and in so doing make wasteful "make work" projects unnecessary.

☆ That's the job LCN is preparing for today.

In the midst of pouring out a tremendous stream of vital war parts, we *make* time to forge the plans for the critical first days of peace. ☆ Expect us then to switch over men and machines with utmost speed . . . to unleash a steady flow of new and better products. The factory whistle, calling men to productive peace time jobs, will be America's answer to the final bugle.



DOOR CLOSERS

NORTON LASIER COMPANY, 466 WEST SUPERIOR STREET • CHICAGO

THERE WERE THREE *Musts* FOR THIS SERVICE CENTER FLOOR

This tile pattern in the Women's Powder Room of the Pepsi-Cola Service Center, San Francisco, is Mahogany with diagonal Coral Strips. Architects: Harrison-Foulhouz & Abramovitz; Morris Ketchum, Jr.; Jedd Reisner, Asst.; Gardner A. Dailey, Assoc.



... and Armstrong's Asphalt Tile Satisfied All Three

ARMSTRONG'S Asphalt Tile was used in the Pepsi-Cola Service Center for Men and Women in San Francisco because it satisfied the architects' three main requirements—

Beauty—It is supplied in 39 harmonizing plain and marble colors which permit a wide range of original and beautiful designs. Its colors won't wear off because they go all the way through every tile.

Durability—Asphalt tile is tough, moistureproof, wear-resistant, and easy to maintain. It can take the heavy traffic of a service center, and, with only an occasional washing and waxing, still stay sparkling.

Availability—Armstrong's Asphalt Tile is available for immediate delivery with or without priorities—a prime consideration today.

These advantages, combined with low cost, make Armstrong's Asphalt Tile ideal for today's jobs.

See Sweet's, Section 11/69, and write for the illustrated booklet, "Low-Cost Floors with a Luxury Look." Address Armstrong Cork Co., Resilient Tile Floors Department, 2308 Duke St., Lancaster, Pa.



The Army-Navy "E" flies over our Lancaster factories. It was awarded for excellence in the production of shells, bombs, aircraft parts, and other vital war materials.

ARMSTRONG'S ASPHALT TILE

The low-cost floor with the luxury look

MADE BY THE MAKERS OF ARMSTRONG'S LINOLEUM

BOOKS

(Continued from page 34)

substituted pompous monstrosities in art and architecture. They rejected a new vision of our time, much more in keeping with the philosophy of the revolution. Though Lenin said that "... a proletarian culture would not spring from nowhere, but would rather be based on the creative assimilation of all the historic forms that mankind had worked out, ..." the new Soviet art has no relationship to native Russian art. The intention, clearly, is to give to the people what they want. Since this is a very comfortable idea—eliminating the need for art education in a new spirit—it may continue to hold its own. Vernon Clark should be recommended for his enthusiasm for an ally. It is absurd, however, to demand that we admire our allies' homework—just as we must hope that they will not judge us by ours.

An interesting phenomenon in Soviet art is the cooperation of artists on one painting or sculpture. This is, in a sense, an imitation of the Renaissance painters' workshops, although these were always directed by one "great man." On an equal, cooperative basis, a great many arts may flourish—architecture certainly would. But it is doubtful whether you can have a still life by majority rule unless you eliminate all traces of individualism. Our preferences in this matter are known. The suppression of individualism in art is euphemized by Mr. Clark when he speaks of the "... unity of style that these painters have attained as a group." He thinks highly of this: "... in striving to arrive at a fair evaluation it is well to keep in mind that unity of style has always been the first characteristic of the great art forms of the past." The implication that the corollary holds true is nonsense. There is also a unity of style in any Royal Academy show, but it is the unity of style of the Lucky Strike ad and the chewing gum poster—though not quite up to their standard.

Wherever Soviet art may stand, we cannot believe that a country which produced films like Eisenstein's *Alexander Nevsky* will be satisfied with an emasculated, photographic art form, when even its photographers have discovered the unreality of realism.

This book should be in the hands of art teachers all over the country. It is unlikely that a child made sensitive to shapes and forms, conscious of the warmth and emotional qualities of materials, and capable of being in love with a piece of wood, will ever find anything but revulsion for fascism.

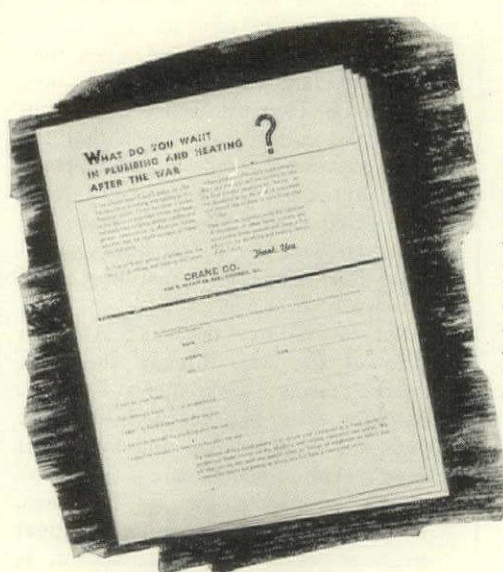
(Continued on page 108)



What Will Home Owners Want *When the War is Won?*



This colorful book, packed with stimulating ideas on bathtubs, kitchens and heating in tomorrow's homes, is being sent to thousands of home owners and prospective home owners the country over.



This questionnaire is being sent with the booklet shown above. Filled in by tomorrow's home owners, it will give an excellent cross section of what they want in plumbing and heating after the war.

WHAT are home owners and prospective home owners expecting in plumbing and heating in their new homes after "V" Day? The answer to this question so vitally affects the design of homes of the future that we are seeking the answer.

A nation-wide investigation is being conducted covering the men and women who will be your market for homes after the war. This investigation is designed to learn what the preference of tomorrow's buyers will be for plumbing and heating. A colorful book, filled with interesting suggestions on bathrooms, kitchens and heating systems, is being furnished with a questionnaire to stimulate interest in new homes after the war. This book and questionnaire are being featured in national advertising reaching millions of prospects, and already thousands of inquiries testify to the interest of Mr. and Mrs. America in owning a home after the war.

The Crane line of the future will be built on the basis of the preference expressed in this investigation.

Architects have expressed a vital interest in this program, and we believe you will find the booklet and questionnaire which Crane is distributing to home owners and prospective home owners of value. If you would like to receive a copy, mail the coupon below.

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Monel production today goes to equip our fighting forces. After the war, Monel will again be available to provide RUST-FREE hot water in millions of homes.



THE INTERNATIONAL NICKEL COMPANY, INC.

67 Wall Street, New York 5, N. Y.



BOOKS

(Continued from page 106)

THE FOUNTAINHEAD, by Ayn Rand. The Bobbs-Merrill Co., New York. 754 pp., 6 x 9. \$3.

The architectural profession, may the Lord protect it, has at last been made the background for a novel. According to its publishers, *The Fountainhead* will do for architects what *Arrowsmith* did for doctors. Though we do not recall precisely what *Arrowsmith* did for the doctors, it seems likely that *The Fountainhead* may do a lot less for the architects. The covers of this book are too far apart.

Ostensibly, the story is concerned with the work and vicissitudes of one Howard Roark, a rather unbelievable citizen in whom are combined the best qualities of St. Francis, Frank Lloyd Wright and Mandrake the Magician. Roark is fired out of architectural school for making designs the faculty can't understand, goes to work for Henry Cameron, an architect modeled rather closely after Louis Sullivan, and subsequently opens his own office. While Roark struggles to keep alive, undergoing more of a bludgeoning from fate than any Horatio Alger hero, his former schoolmate, Peter Keating, becomes a brilliantly successful architect through lying, cheating, graft, blackmail, attempted seduction and murder. Roark and Keating are typical of all the major characters in the book in that, like the little girl in the rhyme, they are very good when they are good, but when they're bad they are horrid. They also reflect very accurately the author's conviction that the most successful men in architecture are, without exception, stupid, corrupt and vicious. This shouldn't make the architects feel too badly, however, because Miss Rand feels that way about practically everybody.

But to continue the tale: About a third of the way through the book Roark meets Dominique Francon, daughter of a big-shot architect who owns a granite quarry, and by one of those peculiar coincidences, is always specifying granite for his buildings. Miss Francon, a ravishing, virginal creature designed by Mainbocher, is raped (page 230) in a most unarchitectural manner by Roark and seems to like it. A most complicated series of situations develops, but the beautiful Dominique after marrying Peter Keating and a billionaire newspaper publisher, finally gets her man.

An entire section of the book, incidentally, is devoted to the newspaper publisher and his operations, and for

(Continued on page 110)

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IN V-DAY JOBS . . .**

Are yours on your Boards?

F. W. Dodge Corp. statistics show 15,000* actual building projects now being planned for immediate action on the day of Victory . . . not "dream" work, but practical down-to-earth building projects, using tried and true material.

More than 9,000 of these projects are in the designing stage *right now* — indicative of American architectural vision, and the ability to look forward realistically.

On many of these jobs, Lockwood Builders' Hardware has been selected and specified, the result of team-work planning between architects and Lockwood engineers. The production orders are on the Lockwood V-Day schedule.

Architects know that Lockwood engineering developments were outstanding before the war . . . that they are now being applied effectively in war construction . . . that our engineers, our machines, and our workmen are ready to produce builders' hardware to meet every requirement . . . and that they can look to Lockwood, now, for practical V-Day planning.

To bring your V-Day projects nearer to the ready-to-go stage, call in a Lockwood representative. He and we are equipped and ready to serve you.

*On the basis of a partial round-up of projects planned for V-day construction.

LOOK TO LOCKWOOD

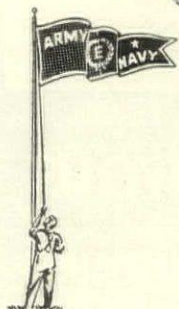
for practical realizations of progressive ideas in Builders' Hardware. Old enough to respect tradition — but not old enough to be steeped in it! — Lockwood is always willing to try new things. For instance: Holabird & Root felt that screw heads would mar the effect of the hardware they were designing for Washington's Hotel Statler. So we worked out a new way to fasten the escutcheons — *without visible screws*.



Lockwood Hardware Mfg. Co.

Division of Independent Lock Co.

Fitchburg, Massachusetts



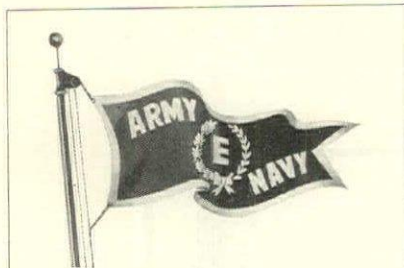
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For 194X you can count on lighting fixtures by Wakefield . . . confident that they will incorporate all the latest developments of lighting research and engineering.



BOOKS

(Continued from page 108)

a while the reader wonders whether the author is more captivated by architecture or the press. As it turns out she is interested in both because they present so many opportunities to document her philosophy; that the world is composed largely of "second-handers"—timid, brutish imitators whose chief function is to obstruct progress.

The peculiarly wooden and lifeless characters who flit through the 754 pages are largely the result of this philosophy. To Miss Rand, human history is the story of the conflict between the individual and the collective, between the "egoist and the altruist." Her contempt for people—the plain, ordinary average people—is appalling in its fanatical intensity and to match it one has to turn to *Mein Kampf*. It was to express this viewpoint and this philosophy that *The Fountainhead* was written. Since the characters in it exist only as symbols, it is no wonder that they are completely lacking in reality.

The negative quality is carried to some fine heights of absurdity. Howard Roark, for instance, is constantly shown in east or west elevation, silhouetted, like the Statue of Liberty, against the sky, water, skyscrapers, rocks and any other available background. Readers of the comic strips will recognize the technique. Even his coloring (hair "the color of ripe orange rind") bears out the comparison (Sunday section only). The tumbling succession of improbable plots, the extravagant over-writing—and the characteristic readability of most escapist literature—are all in the great tradition of *Superman* and *Terry and the Pirates*. Millions live for the comics, and perhaps an appreciable percentage will go for *The Fountainhead*.

POSTWAR PLANNING IN THE UNITED STATES. An Organization Directory. The Twentieth Century Fund, 101 pp., 6¼ x 9¼. \$1.

The second volume in a series published by The Twentieth Century Fund, and a complete revision of the original edition published last year. It lists 137 different organizations, their postwar activities, their publications and their personnel. Though one of the most useful directories to be at the service of postwarriors, it is, at the same time, one of the most depressing. Here they are, 137 strong, pegging away at the same problems, without coordination, without correlation, and, inevitably, with a great deal of duplication of effort. One of the most

(Continued on page 112)

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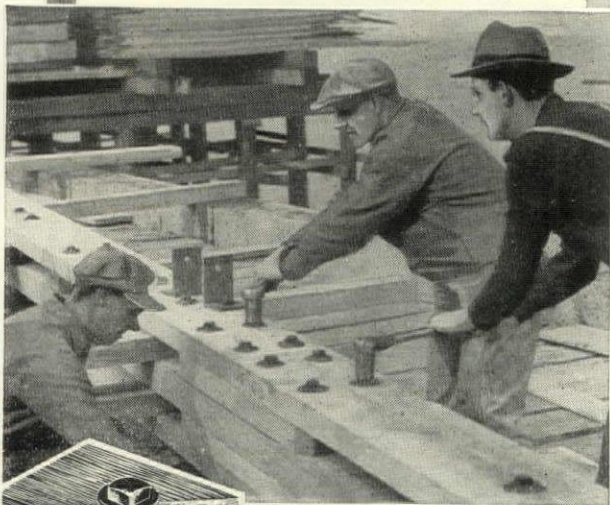
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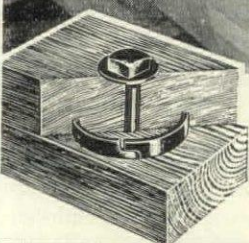
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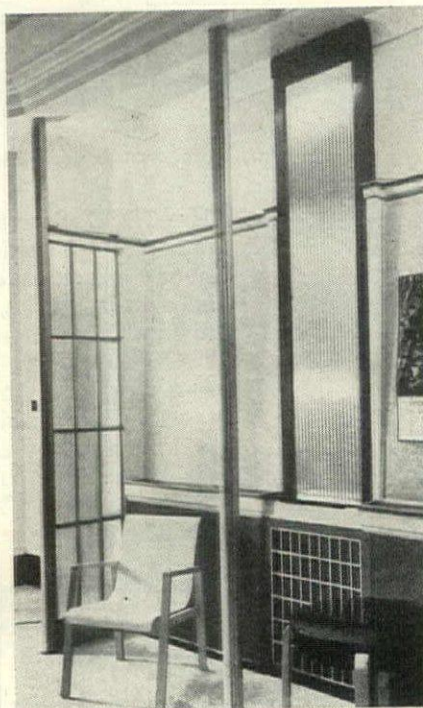
(Continued from page 110)

useful jobs this booklet can do is to acquaint these organizations with each other.

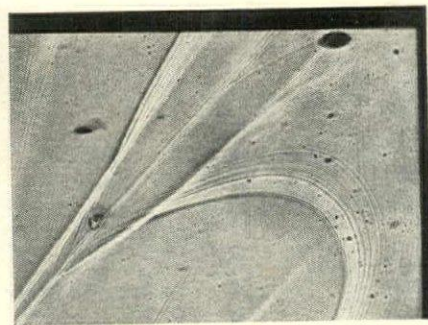
An interesting point is the breakdown of this mass into certain groups. Thus there are 27 governmental agencies represented, as opposed to 110 private ones. Of the latter, 52 are of a research and educational character, 30 are commercial, industrial and financial organizations, 10 are religious and welfare groups, 8 are professional societies—architects represented by 1 (one) organization—7 are women's groups, and 2 represent labor unions. This is the record for whatever it may be worth, which could be a great deal.

THE PLACE OF GLASS IN BUILDING, edited by John Gloag. George Allen & Unwin, Ltd., London, W.C.1. illustrated with photographs, 90 pp., 5 x 7 1/2. 7/6.

John Gloag, a well-known English architect, together with architects Budden and Jellicoe, has set out to do an important job concisely and with discrimination. Far from being a mere technical index to the properties of different types of glass, this booklet goes beyond that to explain the correct uses in design to which such glass products should be put. While the types of glass shown are being produced in England, their counterparts can be found in the U. S., and the booklet should be useful to architects in this country. It falls into three major sections. First, a series of articles on the use of glass; second, a well-organized survey of existing glasses with specifications; and third, an indication of



DISPLAY, HOUSING CENTER, LONDON



A PIECE OF ANTIQUE REAMY GLASS

the decorative possibilities of glass. This is a handy and complete index on the possibilities of a material which is rapidly coming into its own.

YOUR HOUSE Its Upkeep & Rejuvenation, by J. Harold Hawkins, M. Barrows & Co., Inc., 443 Fourth Avenue, New York City, 224 pp., illustrated with drawings, 5 1/2 x 8 1/2, \$2.50.

This timely book covers not only the majority of common repairs necessary during the life of any house, but also the planning and arrangement of certain rooms, particularly the kitchen. In the face of all the wartime restrictions on alterations, the advice given by the author should prove invaluable. The book is illustrated with some very simple drawings, which are not too technical to frighten the average housewife, and not too elementary to be spurned by builders. Starting literally from the foundations up, the author takes for his examples typical construction methods used in countless houses all over the country and tells how to deal with problems of defective structure as well as defective plumbing, painting, insulation and electrical work, among others. Home owners will find this book a sympathetic and useful companion.

WARTIME MANUAL for the Home, by the Editors of House & Garden. Simon & Schuster—The Condé Nast Publications, Inc., New York City. Illustrated with drawings. 8 3/4 x 11 1/2. \$1.

This book follows the familiar House & Garden style of simplifying repair and upkeep problems. While these take up most of the space in the book, other chapters deal with child care, food, relaxation and sewing. The tone of the articles is intelligent, and the emphasis throughout is on the word *Wartime*. There is a valuable chapter on fuel conservation and conversion of heating systems. The manpower shortage is reflected in that the book explains repairs that would normally be left to a skilled carpenter or mechanic. Whenever such repairs involve critical materials, alternative, non-critical substitutes are suggested. All these operations are profusely illustrated in many simple drawings. Notably absent are tips on the construction of bombshelters. The editors of House & Garden are clearly an optimistic lot.



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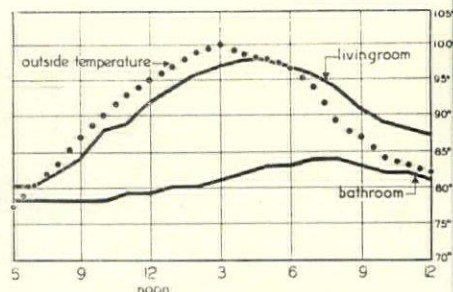
PRODUCTS AND PRACTICE

(Continued from page 8)

of the 600 cu. ft. concrete floor which had to be brought up to temperature before heat could be supplied in adequate quantity within the house, and correspondingly, continued to give off heat for some time after input of hot water ceased. Due to this continued radiation of heat from the floor panels after the sun came out, the house became overheated. This was offset by opening windows, so that much of the solar heat was wasted.

In addition to the time lag of the

floor, the outdoor control did not immediately stop the supply of hot water to the floor panels. Although placed in the sun, the control was also exposed to cold air which had a greater effect on the bulb than solar heat and caused the system to continue to function during periods when solar radiation was capable of maintaining comfort in the house. After the test had been going on for some time, Keck visited the house and suggested placing a milk bottle over the control, which resulted in a better response to solar radiation since this arrangement more nearly simulated the effect of solar heat inside the house.



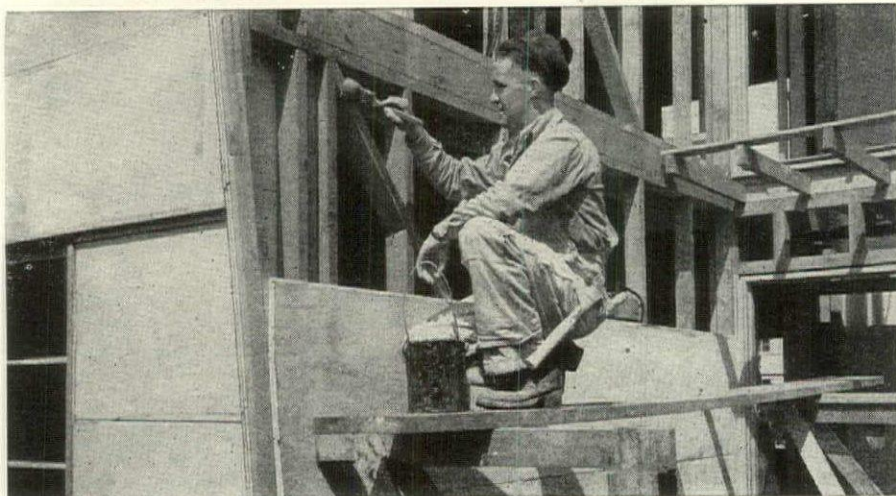
Summer Observations

Observations were also made in summer to estimate the effect of large windows on summer comfort. The results are shown in the above chart made on a typical hot day in July. A time lag is again apparent though due to different causes than the winter lag. The outdoor peak of 100° F. occurred at 3 p.m. and the inside high of 98° F. came two hours later, due to the heat capacity of walls, roof and floor.

A more significant observation lies in the difference in temperatures between the living room, which has large windows across the entire south side, and the bathroom which has only very small windows near the ceiling on the north side of the house. This difference might be attributed to the fact that the heat transmission of glass is higher than that of walls. It may well have been largely due to the presence of so much concrete pavement directly in front of the glazed area. While the glass in the windows would be opaque to heat reradiated by this pavement, it is transparent to that portion of solar energy—almost 50 per cent—which occurs in the form of visible light and would be reflected by the pavement. Assuming a 25 per cent reflection, and allowing for some reflection from the glass surface, about a tenth of the solar energy striking the pavement would thus be reflected directly into the room through the windows. Rough calculations indicate this might amount to a heat gain of about 6,000 Btu. per hr. This is the equivalent of almost 2,000 watts of electrical energy—certainly enough to suggest that if the area in front of the windows had not been paved, temperature rise might have been much less.

Natural Illumination

While natural illumination was not recorded in detail, periodic observations showed that high levels of illumination prevailed throughout the house in daytime. The owners found this illumination from large windows very enjoyable, and felt that it contributed a sense of spaciousness to the house. At no time during daylight hours did they require artificial light. However, when snow was on the ground on sunny days, draperies had to be installed to control glare.



INSIDE STORY of OUTSIDE JOB WITH PLASTERBOARD AND LAUCKS GLUE

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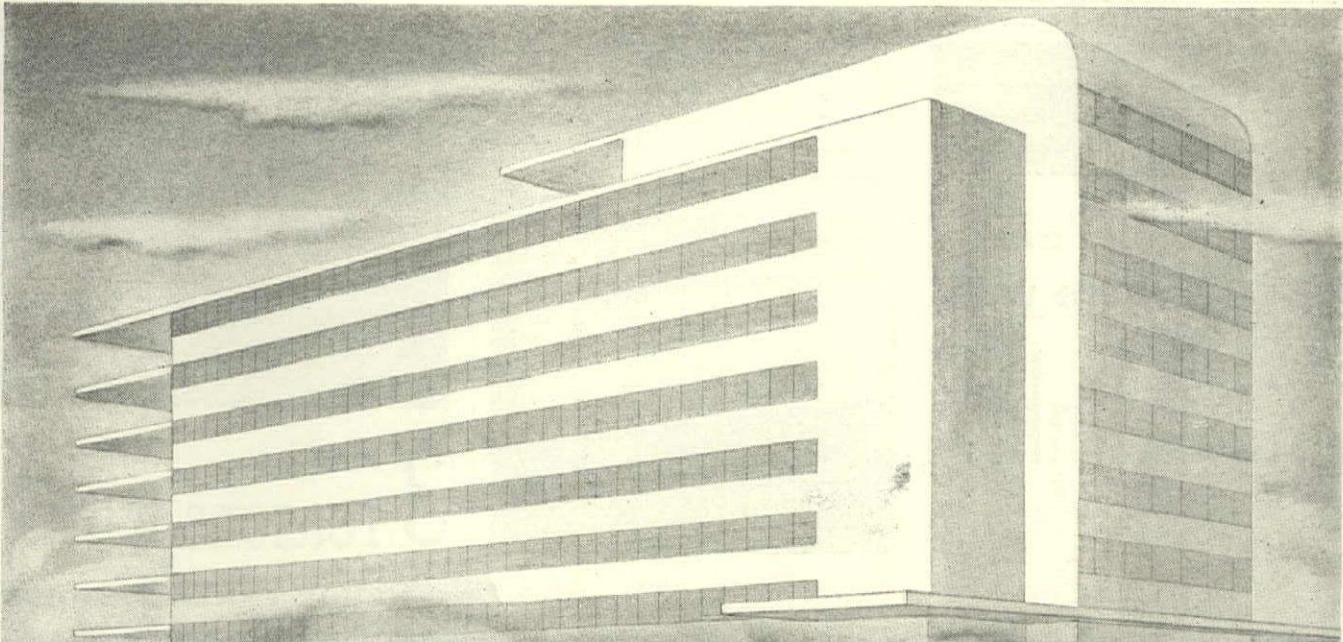
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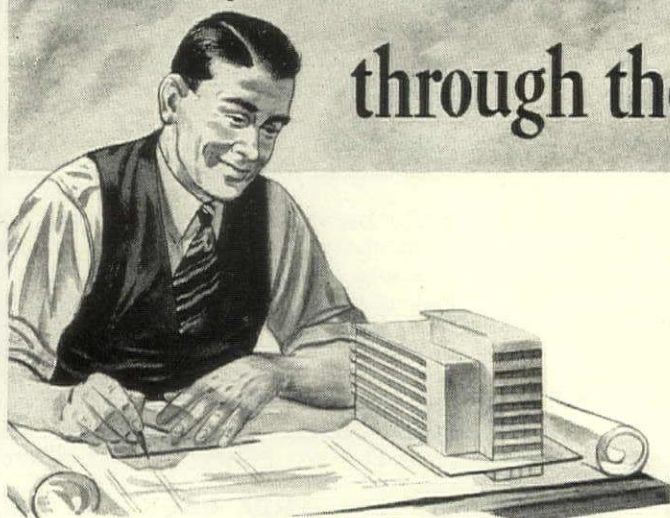
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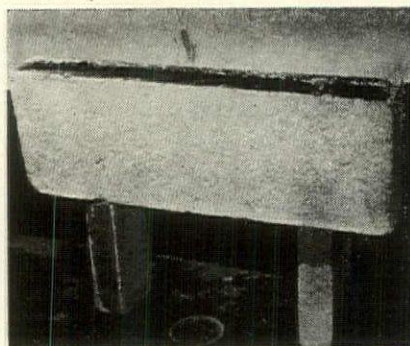
STEELS AND STEEL PRODUCTS

BUILDING REPORTER

(Continued from page 8)

MINERAL PAINT even waterproofs cinder block.

Name: Aquella.



Features: This mineral compound, composed of minutely dispersed aggregates, closes the smallest micropores of brick, cement, concrete and cinder block walls. Severe tests by official agencies indicate that Aquella is extremely effective in controlling seepage of moisture. Photograph shows hollow cinder block completely filled with water, and yet there is no seepage at all. Two coats of this paint are sufficient to render a wall impermeable. Aquella has been successfully applied to interior walls of basements, in tunnels, cisterns, subterranean rooms, mines hangars and other places subject to steam, fumes or high-humidity conditions.

Manufacturer: Modern Waterproofing Paint Co., 1270 Sixth Ave., New York, N. Y.

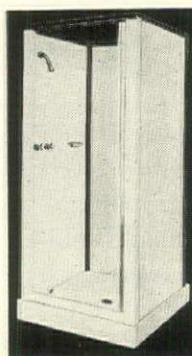
CABINET SHOWER uses less than one pound of metal.

Name: Weisway V Deluxe Cabinet Shower.

Features: Distinctive feature of new Weisway shower is the Plastex receptor, whose compression and bending strength is said to be greater than precast concrete. Its characteristics are even density, durability and light weight. Standard color is pastel green, although buff and coral are available on special order. Walls of cabinets are 1/8-in. fiberboard, finished with two coats of white, baked enamel. Joining members are treated wood. Standard equipment includes a zinc-coated iron two-valve unit with shower head, cast drain with wrought-iron strainer, soap dish, curtain and rod. Sizes: 32x75 in., 30x75 in.

Manufacturer: Henry Weis Mfg. Co., Inc., Elkhart, Ind.

(Continued on page 120)



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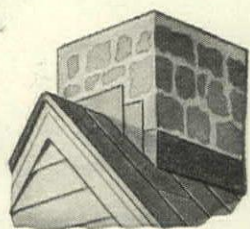
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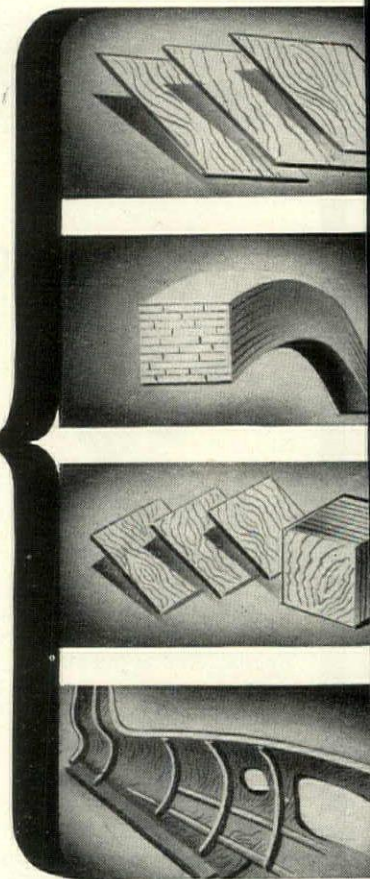
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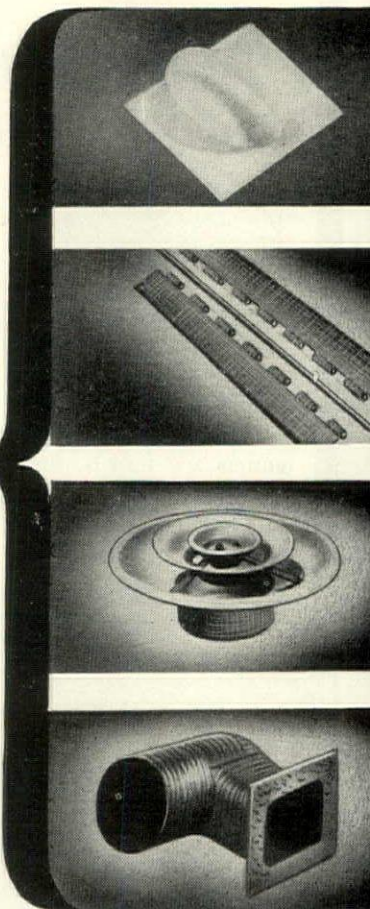
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Exterior plywood panels bonded with BAKELITE Phenolic Resin Glues withstand weathering—even boiling in water and long burial in the ground, without deterioration of the glue line. Fire will not cause separation of the plies. BAKELITE Urea Resin Glues afford an excellent, low-cost bond for indoor applications because they may be extended with suitable fillers.

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Lumber, when glued and laminated with BAKELITE Phenolic Resins, becomes considerably stronger, and can be formed into large shapes which would be impossible with lumber alone. Lightweight beam arches for roof spans up to 200 feet or more are now being produced successfully from laminated lumber. Bowstring trusses, arch rafters, and structural framing members represent other uses for laminated lumber.

TOUGH, WATER- AND FIRE-RESISTANT SHEETS OF DENSIFIED WOOD ARE MADE FROM VENEERS IMPREGNATED AND STABILIZED WITH "BAKELITE" PHENOLIC RESINS.

Compressed veneer sheets which have been first impregnated with BAKELITE Phenolic Resins form a new material commonly known as compreg. This densified wood has a specific gravity up to 1.40. Tensile strength ranges from 14,000 (cross grain) to 45,000 (parallel grain) pounds per square inch. Modulus of elasticity (without grain) is 3,000,000 pounds per square inch. Densified woods have exceptional aging characteristics, and are highly resistant to fire, water, and strong acid solutions.

WOOD FORMED INTO COMPOUND CURVES NOW POSSIBLE WITH VENEERS THAT HAVE BEEN IMPREGNATED AND STABILIZED WITH "BAKELITE" PHENOLIC RESINS.

Three-dimensional units, of which aircraft engine cowlings and fuselages are typical, can now be molded from wood veneers that have been stabilized with BAKELITE Phenolic Resins. These treated wood veneers are commonly known as impreg. They are extremely light in weight and, like compreg, described above, have high strength characteristics and excellent resistance properties that are not found in wood alone. The molding of the impregnated veneers is done in hardened-steel dies under hydraulic pressure.

LOW-PRESSURE LAMINATES BASED ON PAPER, IMPREGNATED WITH "BAKELITE" PHENOLIC RESIN, ARE OUTSTANDING IN TENSILE AND FLEXURAL STRENGTH.

Low-pressure laminates of paper base processed with BAKELITE Phenolic Resins provide unusually high tensile strength—(with grain) 37,000 pounds per square inch, (cross grain) 19,000 pounds per square inch. Flexural strength is also high—(with grain) 33,000 pounds per square inch, (cross grain) 26,000 pounds per square inch. However, the impact strength is lower than the fabric-base, low-pressure laminates.

LOW-PRESSURE LAMINATES BASED ON CANVAS, MUSLIN, AND OTHER FABRICS, IMPREGNATED WITH "BAKELITE" PHENOLIC RESINS, HAVE OUTSTANDING MECHANICAL STRENGTH CHARACTERISTICS.

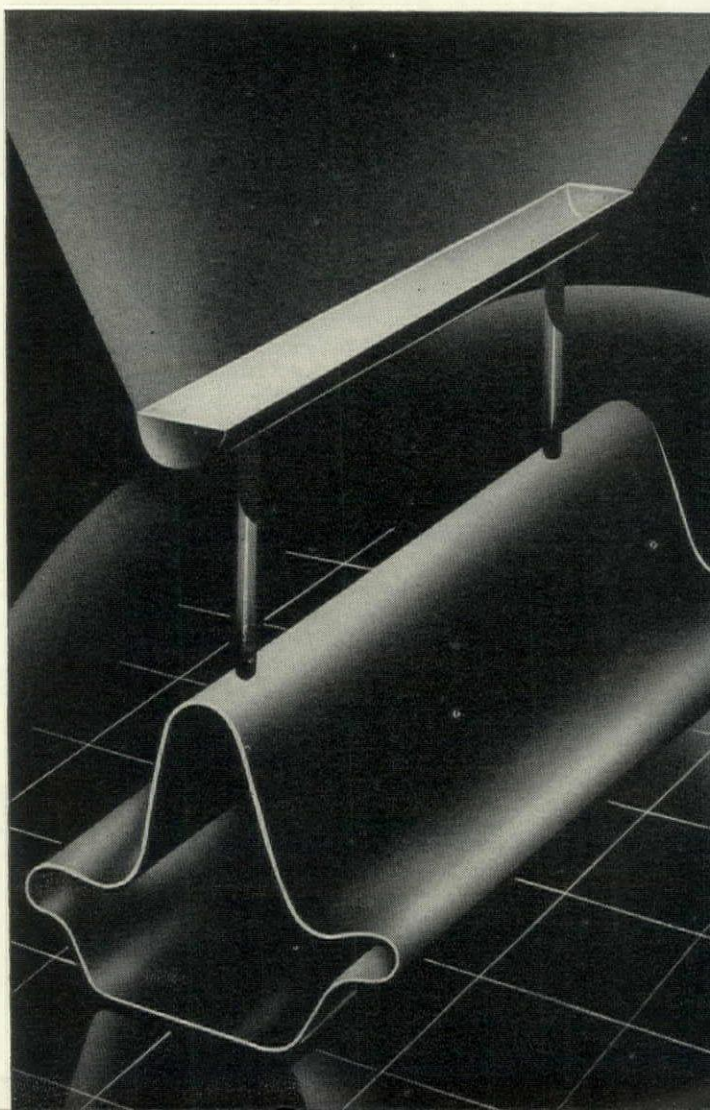
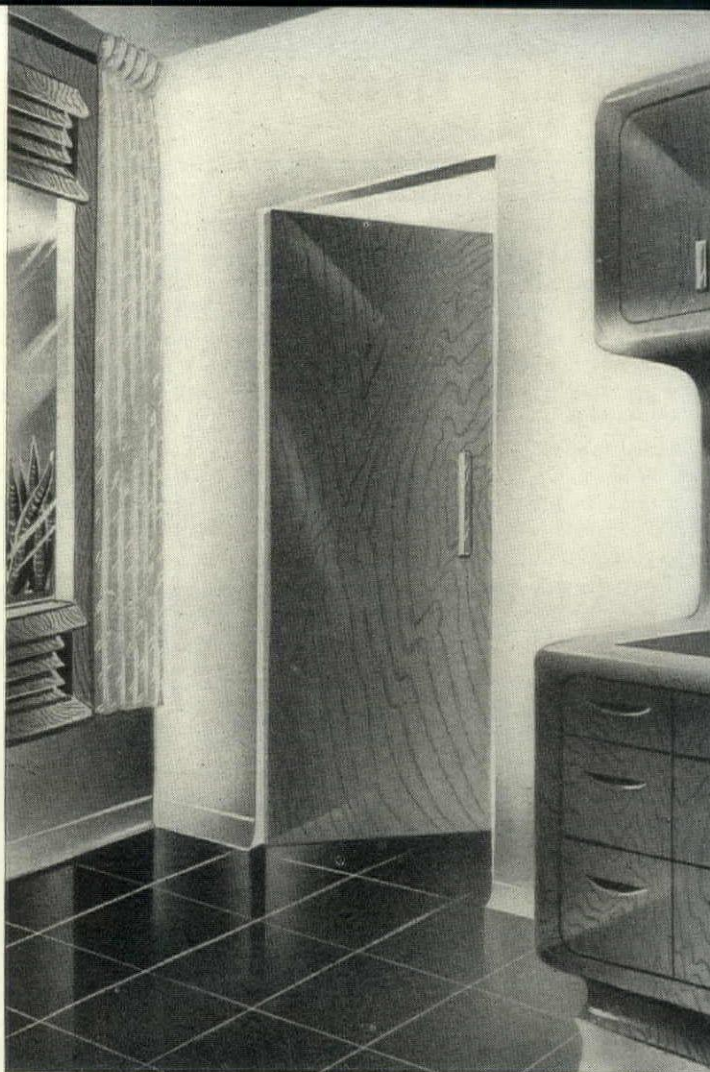
Fabric-base, low-pressure laminates, prepared with BAKELITE Phenolic Resins, have exceptional mechanical strength values. Impact strength (with grain) is 24.6 foot-pounds per inch square and (cross grain) 17.3 foot-pounds per inch square. Tensile strength (with grain) is 13,392 pounds per square inch and (cross grain) 8,505 pounds per square inch. Flexural strength (with grain) is 23,600 pounds per square inch and (cross grain) 16,976 pounds per square inch.

LOW-PRESSURE LAMINATES OF CLOTH AND PAPER IN COMBINATION, IMPREGNATED WITH "BAKELITE" PHENOLIC RESINS, COMBINE OUTSTANDING PROPERTIES OF BOTH BASE MATERIALS.

Cloth and paper in alternating layers are frequently used for low-pressure laminates. Cloth gives maximum impact strength, and paper affords highest tensile strength, flexural strength, and modulus of elasticity. Cloth as the outer layer improves abrasion resistance, while exterior layers of paper give a plain, grainless finish.

COMPOUND CURVE STRUCTURES OF LOW-PRESSURE LAMINATED PAPER OR CLOTH, OR COMBINATION OF BOTH, OFFER MARKED ECONOMIES AND WIDE LATITUDE IN SHAPE AND SIZE.

Because the pressures required to form these laminated products are extremely low, molds may be constructed of wood, sheet metal, and many other inexpensive and easily fabricated materials. As a result, shapes and sizes that heretofore have been impossible or impractical with molded woods or with high-pressure laminating techniques, are readily and economically molded.



BUILDING REPORTER

(Continued from page 116)

PLASTICIZER improves flexibility of synthetic rubber.

Name: Thiokol TP-90.

Features: TP-90 is a high-boiling, low-freezing organic liquid which is compatible with Thiokol and the butadiene synthetics. Compounds containing this plasticizer retain their flexibility at low temperatures and show resistance to shattering on firing tests.

Manufacturer: Thiokol Corp., Trenton, N. J.

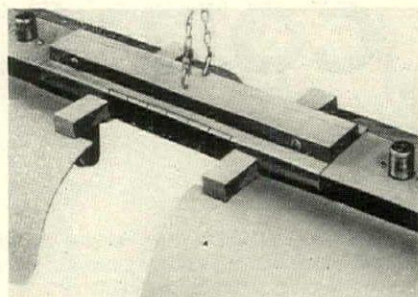
INDUSTRIAL FLOOR MIX makes concrete resistant to acids, oil and grease.

Name: AWOG Floors.

Features: This new floor product is available for mixing with cement or as a surface application to completed floors. It is recommended for new floors, for overlays on concrete, brick, stone or wood, for repairing and resurfacing areas of any size. Characteristic of these floors is their high density composition, making them especially suitable to many industrial applications.

Manufacturer: Flexrock Co., 2300 Manning St., Philadelphia, Pa.

FIXTURES for continuous-run lighting.



Name: 5000 Line.

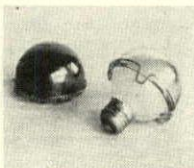
Features: Because these new industrial fluorescent lighting fixtures may be spaced as far as 6 in. apart, fewer lamps are needed for a continuous run installation, thereby conserving current and cost. This is made possible by a new coupling device—the Flexi-Coupler. Lightweight channels and nonmetallic reflectors are other features of these non-critical fixtures, which are available in 40- and 100-watt sizes.

Manufacturer: Martin-Gibson Co., 999 Harper Ave., Detroit, Mich.

DAYLIGHT HOODS fit standard bulbs.

Name: Reco Daylite Color Hood.

Features: These hoods are supplied in either blue or green colors which filter out red and yellow rays in the ordinary light bulb. Strong shell, which is held in place by a wire spring, is easily removable for cleaning and bulb replacements. Hoods are claimed to reduce eye fatigue which is valuable in reducing industrial errors and accidents.



Manufacturer: Reynolds Electric Co., 2650 West Congress St., Chicago, Ill.

PRESSURE-SENSITIVE TAPE manufactured without rubber.

Name: Mystik Self-Stik Cloth Tape.

Features: This new rubberless tape has been developed since the rubber shortage to replace former adhesives and self-adhering tapes. Since the tape is both waterproof and nontoxic, it is being widely used for sealing packages of food, medicine and surgical dressings. Also used for sealing ordnance equipment, where it has been effective in withstanding salt spray, dust and gas contamination. Tape may be stripped off and reused. It has a high tensile strength and cloth is so woven that it tears evenly at right angles. Packed in 60-yd. rolls in widths up to 36 in., available only for war purposes.

Manufacturer: Mystik Tape Division, Chicago Show Printing Co., 2635 Kildare Ave., Chicago, Ill.

(Technical Literature, page 124)



Navy Auditorium being speeded to completion on \$50,000,000 Sampson Naval Training Station

... On through the night

THE JOHN A. JOHNSON CONTRACTING CORP. RUSHES HIGH-SPEED CONSTRUCTION

When the U. S. Government has a war construction job to be done no time can be lost. That is why the John A. Johnson Contracting Corporation has already completed approximately 130 million dollars' worth of U. S. Army and Navy war-construction contracts.

The Johnson Corporation has been recognized by the Government as an organization capable of competently handling large-scale, high-speed war-construction contracts and satisfactorily finishing them within time limits agreed upon.

\$86,000,000.00 in Two War Projects

The Sampson Naval Training Station at Sampson, New York, costing \$50,000,000.00 and Camp Kilmer in New Jersey, costing \$36,000,000.00 are but two examples of war contracts that the John A. Johnson Corporation completed well

within the specified time allotment.

Many other projects such as army hospitals, civilian war-housing, farm security housing, barracks, dormitories, temporary dwelling units and industrial construction keep a large staff actively engaged.

Mustering 10,000 to 20,000 Men

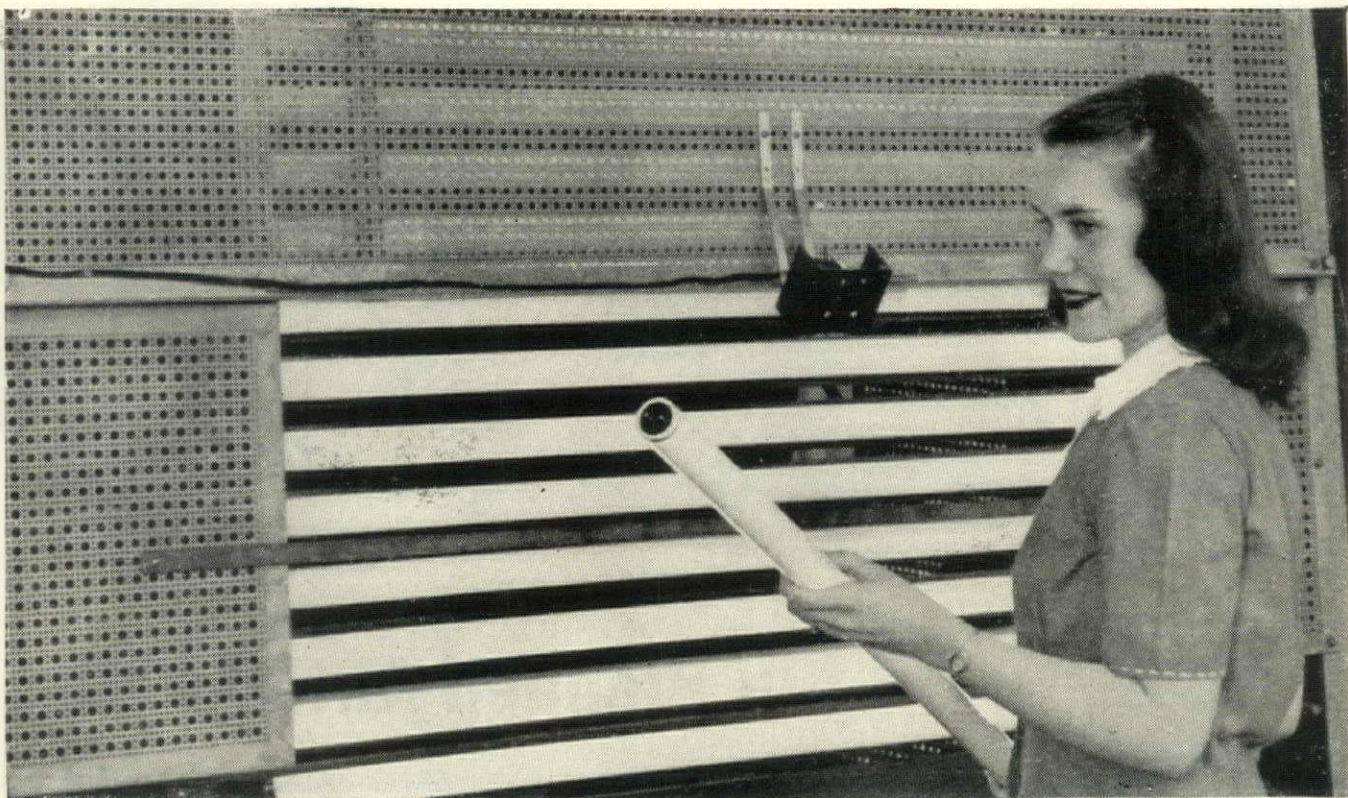
The Johnson Organization at the present time is equipped to handle the largest construction jobs, to muster 10,000 or 20,000 men, to set up field offices and start operations practically over night.

Send for descriptive brochure No. 24.

**JOHN A. JOHNSON
CONTRACTING
CORP.**

A FIRM FOUNDATION SINCE 1896

270 41st STREET, BROOKLYN, N. Y. • Tel. SOuth 8-3200
BROOKLYN • PHILADELPHIA • WASHINGTON • ATLANTA



AGE BEFORE DUTY..

● When properly "aged" or seasoned, fluorescent lamps remain more constant than daylight throughout their entire life. This is important in lamps that illuminate precision work in war plants.

At Sylvania there is a special "age before duty" machine that lights and re-lights fluorescent lamps for carefully regulated time intervals. This mellowing process prepares all the elements that make up a lamp for a life of uni-

form light output. It is also a final precaution taken to weed out an occasional substandard lamp which may have filtered through dozens of painstaking inspections.

That is why a Sylvania Fluorescent Lamp can be counted on for consistent light output every minute of its life.

"Aging" is one of many Sylvania methods of safeguarding fluorescent quality. Lamp efficiency is perfected and main-

tained at its highest peak through continual research by Sylvania engineers who have years of specialized experience with incandescent lamps, radio tubes, ultra-violet lamps and other electronic devices.

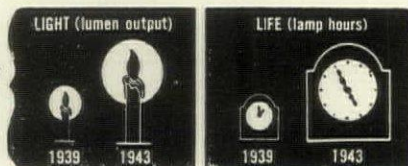
Today Sylvania's research is providing the best and most economical lighting known for war industry. When victory is won, the same independent research will bring the advantages of fluorescent lighting to postwar homes.

For more light output, longer life and uniform color, specify Sylvania Fluorescent Lamps in new installations and replacements.

FAR MORE LIGHT AND LIFE FOR YOUR MONEY

Compared with 1939, a dollar invested today in Sylvania Fluorescent Lamps buys more than four times the lumen output and approximately five times the lamp life.

SYLVANIA
FLUORESCENT
DOLLAR
BUYS:



(Based on decreasing price and increasing efficiency and durability of Sylvania 40-Watt White Fluorescent Lamp)

Even on existing circuits, a change-over to fluorescent—Sylvania Lamps, Fixtures and Accessories—will probably more than double the light you get for the same wattage.



SYLVANIA

ELECTRIC PRODUCTS INC.

Formerly Hygrade Sylvania Corporation
Salem, Mass.

INCANDESCENT LAMPS, FLUORESCENT
LAMPS, FIXTURES AND ACCESSORIES,
RADIO TUBES, CATHODE RAY TUBES,
ELECTRONIC DEVICES



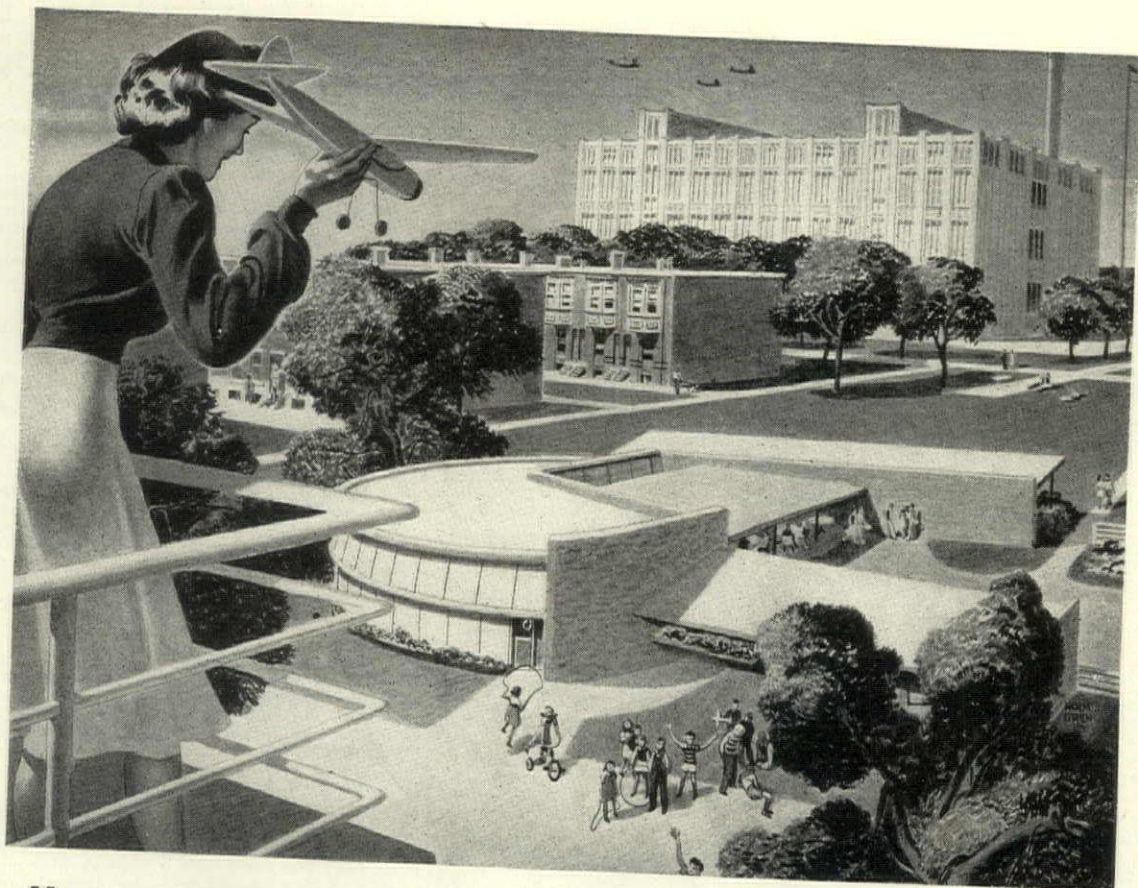
In Planned Anticipation

ALTHOUGH Revere's production is now entirely devoted to war demands, it has not forgotten post-war necessities. Even as Messrs. Stonorov and Kahn urge that today we begin planned action for neighborhood rehabilitation, so, too, Revere looks ahead. Already its technologists are preparing to meet the future demands of the building industry for better roofing, flashing, pipe, tube and architectural shapes in copper and its various alloys.

Beyond that, however, Revere is currently fostering the growing interest of the public in various phases of post-war housing and community improvement. In its national advertising, Revere features the ideas of some leading American architects and designers on this subject. Booklet requests for detailed information concerning the various projects have been most widespread and many.

Revere is certain that such a concerted effort to encourage an increased appreciation of what may be the building trends of after-Victory inevitably benefits everybody concerned with the industry: architect, builder, contractor, realtor, manufacturer and financier. Naturally, Revere is convinced that the use of copper and its versatile alloys will make any building more durable, better to look at, better to live in, better to own, rent or sell.

In the meanwhile, Revere continues to provide, without obligation, expert technical advice to those with particular problems in employing its products.



How to IMPROVE Your Neighborhood —TODAY



We feel that post-war housing projects can't be considered merely as a question of *overnight* development through elimination and new building. It would be impossible to find all the money and manpower to do such a job everywhere at once. After all, many urban sections need only minor adjustments to stop disintegration. Instead of waiting for the post-victory "boom", wouldn't it be more practical to develop TODAY a technique of neighborhood "face lifting"?

So we picked a declining, congested neighborhood in a big Eastern city. A modern schoolhouse provides a ready-to-use nucleus for future community effort. . . . As our sketch shows, we feature a Children's Playground, with pool. Comfort, safety and supervision are all provided. Our complete plans also envisage a Playclub for teen-age children. Provided, too, is an adult Recreation Building. It is adjacent to a modern apartment house,

with retail shops under the same roof. Ample parking space is nearby.

For the single-family house dwellers, a consolidated shopping center is provided. Backyards disappear—have become, in fact, miniature parks. Vanished, too, is through traffic—the abandoned streets have been converted to parks and recreation.

Admittedly our job can't be done in a day. It takes time to get organized. But the initiative in this—or any similar neighborhood improvement—rests with the families that live therein. Get started. Contact existent housing groups in your community and try to get their backing. It is possible to revitalize your neighborhood without destroying it!

Naturally, in any such rehabilitation, copper and its versatile alloys will play a big part in filling the builder's various requirements.

Revere offers a free booklet giving more detailed information on this neighborhood project. Write for it today.

OSCAR STONOROV
LOUIS I. KAHN

After the war, whole cities will be literally reborn, made more truly functional than ever before. Revolutionary materials and the method of their fabrication will reduce costs of building and at the same time provide a measure of comfort and convenience unheard of today.

Revere does not build houses or expect to in the future. But Revere knows that in the Buildings of Tomorrow, copper and its alloys will play a role greater than ever. Today in existing houses, Revere copper gives lasting weather protection, helps decrease heating costs. It insures rust-free water and baffles invading termites. But in post-war days ahead, there awaits a startling array of new devices and contrivances that will make our homes better to own, or rent, or sell.

Today we're working 100% for Uncle Sam. No copper is available except for war. But Revere technicians are preparing for that era of happier living that will be the award of VICTORY.

Naturally, in this limited space, Messrs. Stonorov and Kahn could describe only the high lights of their neighborhood rehabilitation project. For more information, write to Revere for free illustrated booklet.



REVERE
COPPER AND BRASS INCORPORATED
Founded by Paul Revere in 1801
Executive Offices: 230 Park Avenue, New York

This advertisement appears in Saturday Evening Post, July 3, 1943

PLASTICS. *The Family of Monsanto Plastics*, 24 pp., 8½x11. Description of six basic types of Monsanto plastics which are either cellulose derivatives or synthetic resins. Booklet is attractively illustrated in color and includes information on how plastics are molded, comparative properties of the different groups and typical applications. Plastics Division, Monsanto Chemical Co., Springfield, Mass.

AIR CONDITIONING. *Chrysler Airtemp Goes to War*, 26 pp., 11x8½. Attractively illustrated booklet on the place of air conditioning and refrigeration in the war and essential industry. Airtemp Div., Chrysler Corp., Dayton, Ohio.

FLUORESCENT LIGHTING. *For Industry the Fluorescent Fixture of the Future Here Today!* 12 pp., 8½x11. Standardized line of industrial fluorescent fixtures and parts not only meets WPB requirements but includes many new features. Lighting Div., Sylvania Electric Products, Inc., Ipswich, Mass.

HARDWARE. *Hardware Designs for the Future*, 10 leaflets, 10¼x12. Provocative sketches, which have appeared as advertisements, are here presented in a series. These hypothetical designs by leading architects have been sponsored as a stimulus to better hardware design in postwar building. Reading Hardware Corp., Reading, Pa.

STEEL AND ALLOYS. *Applications of Structural Steels and Light-Weight Alloys for Bridges, Buildings and Similar Structures*, 27 pp., 8½x10½. A re-evaluation of these structures which the changing economics of design, fabrication and construction have made necessary. Developments in structural engineering have introduced less expensive and new types of steel and nonferrous alloys. This generalized study states what has been and can be done with the newer forms of structural metals. Prepared by F. H. Frankland, Director of Engineering, American Institute of Steel Construction, 101 Park Ave., New York, N. Y.

CODE. *Uniform Building Code*, 1943 ed., 322 pp., 5½x8. Book contains all approved changes made at the 1940, 1941 and 1942 annual conventions of the Pacific Coast Building Officials Conference. "The purpose of this Code is to provide certain minimum standards, provisions and requirements for safe and stable design, methods of construction and uses of materials in buildings and structures hereafter erected, constructed, enlarged, altered, repaired, moved, converted to other uses or demolished, and to regulate the equipment, maintenance, use and occupancy of all buildings and structures. The provisions of this Code shall be deemed to supplement any and all state laws of the State relating to buildings." Pacific Coast Building Officials Conference, 124 West Fourth St., Los Angeles, Calif. Price \$2.

CONSTRUCTION MAINTENANCE. *Conservation of Construction Equipment and Facilities*, 75 pp., 5x7½. A wartime manual of pointers and recommendations for maintenance, conservation and salvage of building materials and equipment. The active cooperation of many manufacturers and other organizations aided in the development of this informative, though elementary booklet. Prepared by The Associated General Contractors of America, Inc., Munsey Building, Washington, D. C. Price 50 cents.

MOVING. *Moved by Eichleay*, 12 pp., 8½x11. Description and photographs of the actual moving of buildings and structures, of installing heavy equipment, relocating machinery, shoring, rigging, foundation work, etc. Skill developed over 60 years by this organization has made size of structure and distance to be moved relatively minor considerations. Eichleay Engineering Corp., Pittsburgh, Pa.

WOOD UTILIZATION. *Heavy Timber Construction Details*, 16 pp., 8½x10½. Up-to-date information on heavy timber framing, beam and column connecting details and roof truss details are clearly illustrated in this booklet. Building code requirements of the National Board of Fire Underwriters are also included. National Lumber Manufacturers Assn., 1319 18th St., N. W., Washington 6, D. C.

HEMLOCK. *West Coast Hemlock*, 20 pp., 8x10½. Booklet describes mechanical properties, growth, production and applications of West Coast hemlock, an important softwood species. Although not a well-known wood, it is equivalent to Douglas fir and Southern pine in all items except structural timbers. West Coast Lumbermen's Assn., 364 Stuart Bldg., Seattle, Wash.

WOOD PRESERVATION. *Laucks Wood Preservatives*, 8 pp., 8½x11. Booklet describes methods of treatment for protecting wood from moisture and fungi decay, with a chart showing methods of application and needs for different types of preservatives, including water-repellent, toxic and toxic water-repellent solutions. Booklet has been prepared for constructors of heavy laminated beams and arches, as well as manufacturers of sash, doors, plywood and other wood products. I. F. Laucks, Inc., 911 Western Ave., Seattle, Wash.

ELECTRONICS. *Electronics at Work, A Practical Introduction to a Practical Science*, 44 pp., 10½x8½. Hundreds of applications of electronics are described and illustrated. Increasing use in industry to amplify, generate, control, transform or convert electrical energy foreruns its widespread application in other fields. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

TRANSFORMERS. *Power Where You Need It*, 6 pp., 8½x11. Outline and examples of air-cooled transformer applications in war industries, where their use is often more desirable and economical of critical materials than rewiring or adding new power lines. Acme Electric & Mfg. Co., Cuba, N. Y.

CONCRETE. *Manual for Concrete and Mortar Computations*, 16 pp., 9x9½. Booklet provides concrete proportioning data on a volumetric basis as well as on a basis of weights of materials. Also data from which engineers, architects, contractors and others may quickly determine the quantities of materials required for variously designed concrete and mortar mixtures. North American Cement Corp., 41 East 42 St., New York, N. Y.

RUBBER. *Crisis in Rubber*, 14 pp., 8½x10½. This booklet reviews the status of natural and synthetic rubber and what has been accomplished to meet the present crucial situation. A brief history of the development of both types of rubber is illustrated with excellent photographs. The B. F. Goodrich Co., Akron, Ohio.

REQUEST FOR LITERATURE

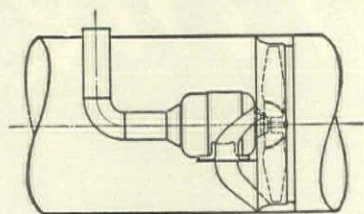
Estates Realty Co., 186-30 Union Turnpike, Flushing, N. Y., requests information on items in postwar small residential construction.

**LAY THE AXIS LOW
WITH WAR BONDS**

... THEN YOU CAN LAY STREAMLINE
FLOORING IN THOUSANDS
OF NEW HOMES!

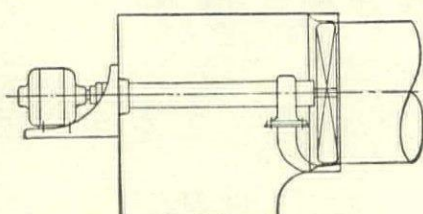
BRUCE *Factory-Finished* **STREAMLINE** HARDWOOD FLOORING
A PRODUCT OF E. L. BRUCE CO., MEMPHIS, TENN.

HERE'S WHY PROPELLAIR Fans can help you solve any problem involving heat and fumes!



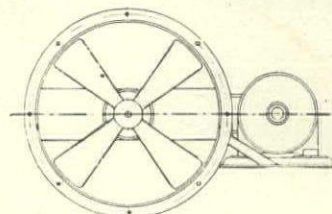
DIRECT-CONNECTED TYPE

For temperatures up to 120° F.



EXTENDED-SHAFT TYPE

For temperatures up to 450° F.



BELT-DRIVE TYPE

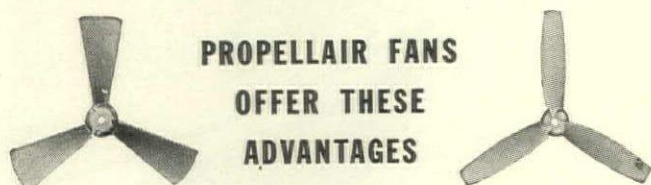
For temperatures up to 450° F.

These three illustrations show how fumes or air—at practically any temperatures experienced in industrial plants—are successfully handled by Propellair Fans. Because hundreds of installations of each type are setting performance records for their particular applications, leading architects everywhere are specifying them for war-production ventilating jobs.

The direct-connected, or "CD," type is most frequently used for handling fumes and air at temperatures up to 120° F. It is shown here installed in a straight pipe. Because the motor is located within the air stream, the totally enclosed ball-bearing type is recommended. If the motor is equipped with a small auxiliary duct, temperatures up to 160° F. may be handled. This small duct should lead to the outside of the main duct so that it can pull cool air over the motor. Where heated *clear* air is involved, the open-type motor may be used, in which case cool air should pass *through* the motor from the auxiliary duct.

The extended-shaft, or "CE," type—shown here installed in an abrupt right-angle turn of a duct system—is recommended for handling fumes and air at temperatures up to 450° F., because under such conditions a motor should not be operated directly within the air stream. The open-type, ventilated motor is usually used, mounted rigidly to a cast steel base. The drive shaft is housed and sealed in steel tubing.

The belt-drive, or "CSV," type is a heavy-duty unit built to operate under temperature conditions up to 450° F. (With a stainless steel fan, not now available, it can handle temperatures considerably higher.) As in the "CE" type, the motor is placed outside the duct. The belt drive is used because it eliminates metal-to-metal transmission of heat to the motor. Fan bearings are of special air-cooled design and are protected, as is the belt, by welded steel tubes in which they operate.



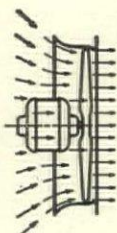
PROPELLAIR FANS OFFER THESE ADVANTAGES

AXIAL-FLOW, AIRFOIL PROPELLERS,

especially designed by Propellair engineers, deliver maximum air with minimum horsepower. Air flow is even over all parts of the blades—the *whole* fan works, not just the tips! These unique propellers are also non-overloading—from free air to complete block-off, horsepower remains virtually constant as long as motor speed is constant. The number of blades, and their angle and shape, depend on the job to be done.

CURVED ENTRANCE RING,

in addition to serving as a sturdy support assembly, reduces tip loss and enables Propellair Fans to deliver *maximum air per horsepower*. Introduced in 1930, as a result of exhaustive experiments and tests by Propellair engineers, this design makes possible the utilization of the "Airfoil" air-movement principle in the *entrance ring* as well as in the *propeller*.



A PROPELLAIR FAN FOR EVERY APPLICATION



CD—Direct connected to electric motors. For ducts, hoods, roof ventilators or panels.



CE—Extended shaft fans for ducts, dryers, etc., where motor must be outside the air stream.



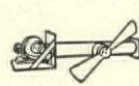
CF—For belt drive from separate motors, engines or line shafts. Also with extended shaft assembly.



CS—Heavy-duty complete belt-driven unit in duct section. For severe dust, corrosive or explosive vapors.



CSV—Heavy-duty complete belt-driven unit for high temperatures in ducts, pipes, and as stack boosters.



CSB—Heavy-duty complete belt-driven unit for ducts or stacks to handle explosive vapors, dust, or high temperatures.



CU—Low-stand, tiltable, portable cradle fan for hardening-room service, product drying or cooling.



CM—Heavy-duty pedestal blast fan for cooling men and products in heavy industries.



C—Industrial circulator fan for general air-circulating service of all types.



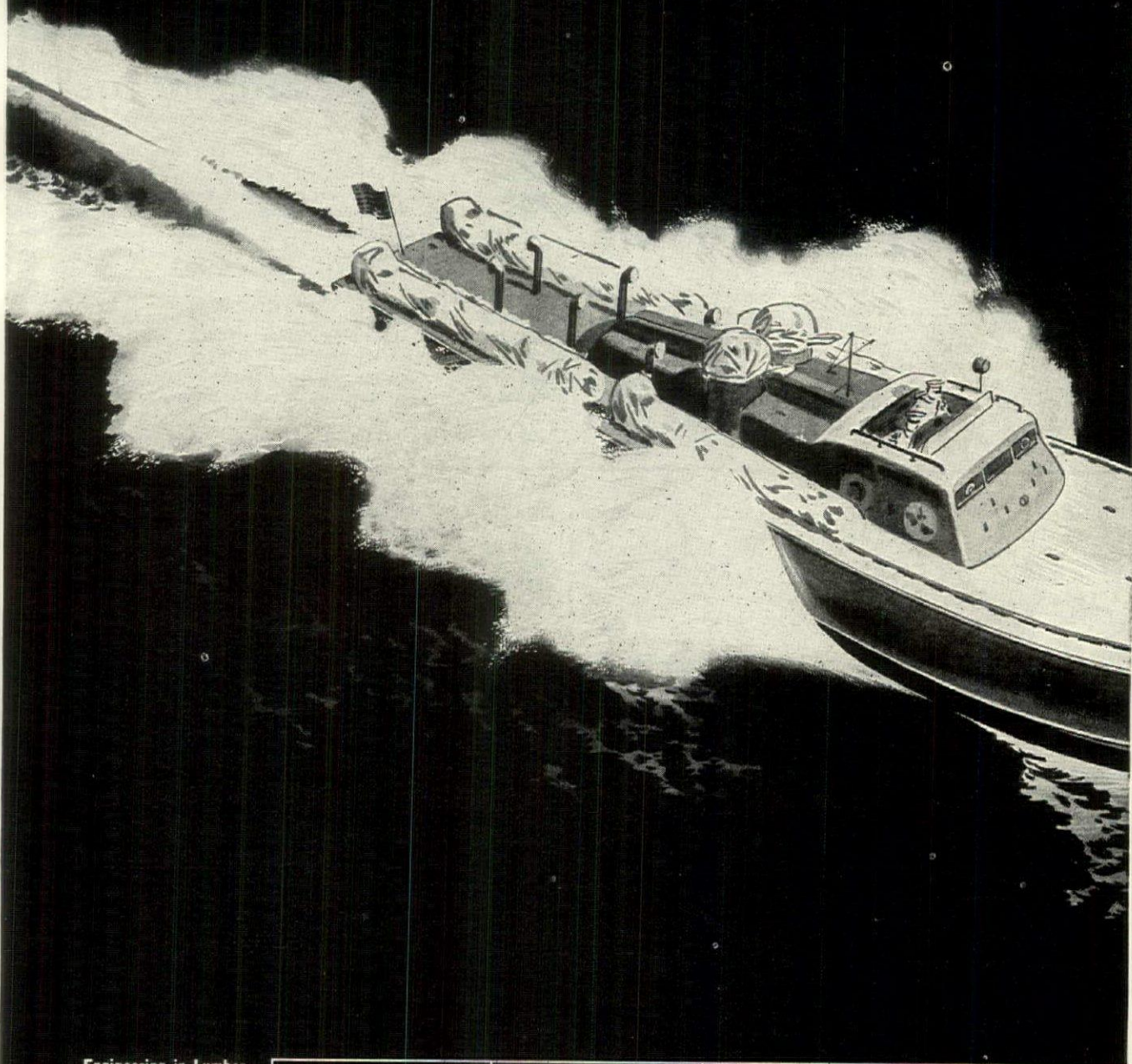
CB—Slow-speed, ultra-quiet complete belt-driven fan. For office or room ventilation.

If you have a pressing industrial ventilating problem, write us! We'll either mail you our complete Propellair catalog No. 10-E—or have the nearest Propellair ventilating specialist get in touch with you—whichever you prefer.

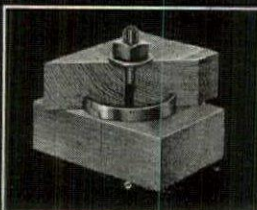
On the other hand, if you'd like more information for future reference, and not in connection with a specific war-production job, see our 20-page insert in Sweet's Catalog for 1942.

PROPELLAIR
INC.
"Moving Air Is Our Business"
SPRINGFIELD • OHIO

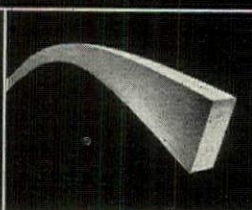
Engineering



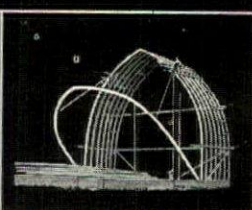
Engineering in Lumber is progressively increasing the efficiency of wood as a structural material... Modern wood products are making important contributions to better, more economical construction.



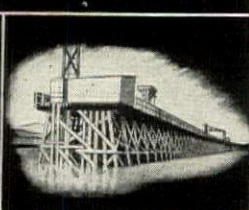
Teco Metal Timber connectors make it possible to join wood members; utilize 80% or more of the working strength of wood.



Modern structural glues make possible Glued Laminated Wood roof trusses, arches, plybeams and other structural members.



Glued wood laminated framing members combine roof and side-wall in a unit, giving stronger, more wind-resistant buildings.



New processes for the treatment of wood extend its service life, broaden its uses, and increase its value in many fields.

in Lumber

broadens the use of wood

THE SPEEDY FIGHTER of the sea lanes, the versatile P.T. boat of light wood construction has proved to be one of the sensational weapons of the war. The success of the P.T. boat has given America another concept of the value of wood and its ever widening range of utility.

A further development of lumber that is going to help your practice is the wood laminated arch, arch rafter and other structural members. These arches are engineered to meet the requirements of the job.

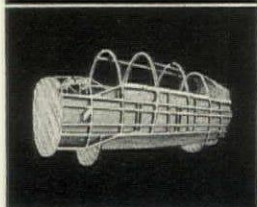
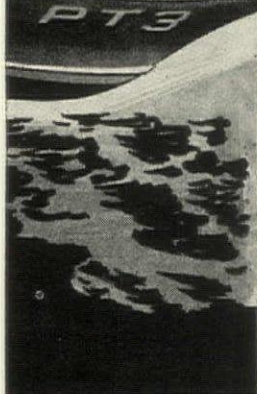
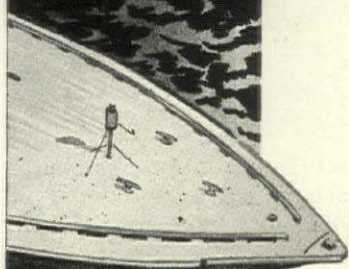
They have been serving the war effort from the very beginning, in the fast and economical construction of large, post-free structures—huge air plane hangars, drill halls, recreation centers, chapels. On the farm smaller wood laminated arches are used in the building of nearly every type of farm building.

The Teco engineered connector system of construction has opened the way to a wide and more economical application of timbers in construction. The Teco metal connector made it possible to utilize 80% or more of the working strength of wood as compared to 40% to 60% under old methods of joining timbers.

As a result of the marked advances in Lumber Engineering, architects designing the future homes, service and commercial buildings, will find in wood a new, improved, more economical medium through which to express greater beauty and to assure more practical building functions.

WEYERHAEUSER SALES COMPANY

FIRST NATIONAL BANK BUILDING • SAINT PAUL, MINNESOTA



Plywood is proving its versatility in countless applications. Shapes and strengths can be pre-determined for specific uses.

4-SQUARE LUMBER

FORUM OF EVENTS

(Continued from page 4)

CABLEGRAM

NIKOLAI KOLLI, member of the Academy of Architecture of the U.S.S.R. sent a cable to the *English Architects' Journal*, excerpts from which we reprint below:

"In ten years (in Moscow before the war) it was proposed to build about 2,500 new large apartment houses, 530 schools, 50 big motion picture houses, 9 huge department stores. Part of general plan . . . completed before

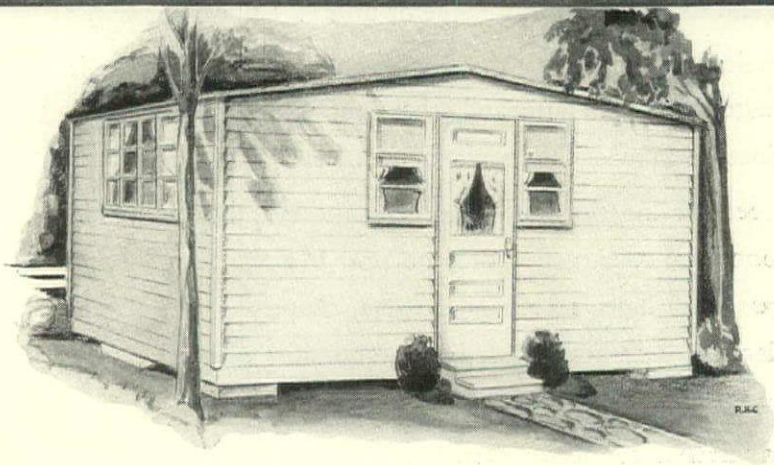
outbreak of war included building Moscow "Metro" and Moscow Volga canal, 9 magnificent new bridges . . . On January 1, 1943, Moscow received new "Metro" line which connects centre of city and some of its industrial districts. . . When war is over work of reconstruction will be resumed in its full scope . . . New construction must be in style that will not clash with traditional Moscow ensembles but on contrary represent harmonious complement and further development of earlier architecture . . . Section's activity extends also to Moscow region. Thus it has taken part in elaborating

plans for rehabilitation number of towns smaller settlements in Moscow region wrecked by Germans. . ."

AWARDS

THE NATIONAL SOAP SCULPTURE COMMITTEE, a worthy organization dedicated to the popularization of sculpture as well as Proctor & Gamble soap, has awarded the prizes for the 19th National competition for small sculptures in ivory soap. Jury of award included sculptors Archipenko, Manship, Zorach; architects Harvey Corbett, Ely Jacques Kahn. First prize: Mabel V. Mustonen, Detroit, for "The Toy." Second: Carmen Desportes, Richmond, for her "Bather" (below).

Portable WAR HOUSE



This Portable War House, born of war-time emergency, but adequate for peace-time needs, is Houston Ready-Cut in tempo with the American sense of project.

At only \$300, this house "points the way" in meeting the present urgent demand for low-cost housing for farm, industrial and military personnel. Completely prefabricated, easy to erect—takes four men three hours. Very fine construction at the price.

You owe it to yourself to ask us for folder giving full details on this great value.

\$300

F. O. B. HOUSTON
PLAN 43-1

Buy a Home in the Peace to Follow with the Bonds You Buy Today

HOUSTON Ready-Cut HOUSE CO.
Prefabricators Since 1917
POLK AVENUE HOUSTON, TEXAS

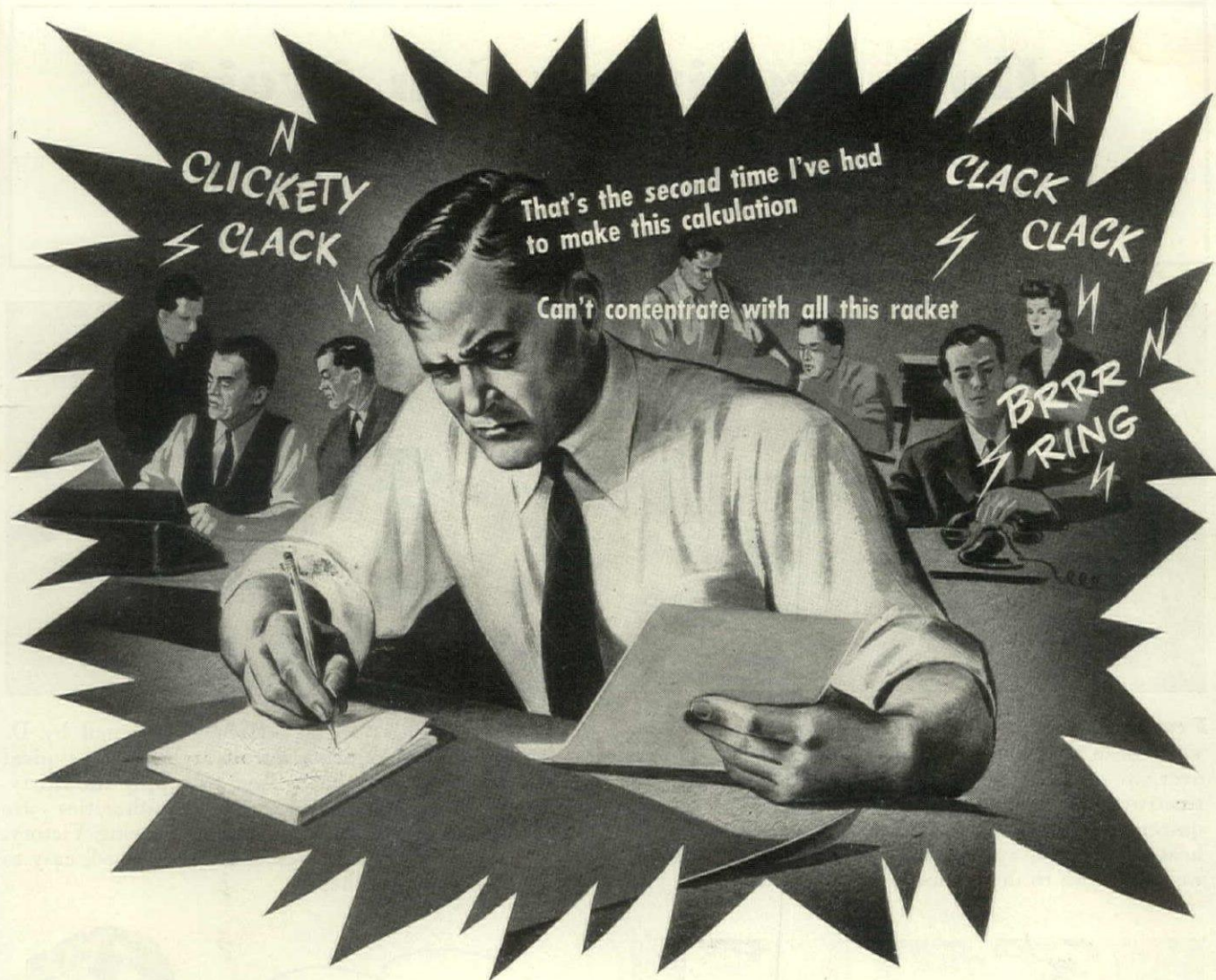


ARCHITECT EDWARD PAUL SIMON had the honorary degree of DOCTOR of SCIENCE in COMMERCE conferred upon him last month by the Drexel Institute of Technology in Philadelphia. Others who received honorary degrees were Major General Edward Martin, Governor of Pennsylvania, and the Honorable Francis Biddle, Attorney General.

EXHIBITS

THE MUSEUM OF MODERN ART has commissioned architect Rudolf Mock and planner Clarence Stein to design a twelve-panel Neighborhood Planning Exhibition, each panel to be 30 x 40 in. in size. This exhibit, instead of being rented to interested groups, will be produced in quantities of several hundred copies, and sold at \$15 or less. Non-technical in character, it should be very useful to schools, colleges, museums and other educational institutions, as well as civic organizations. The price of the entire exhibit is approximately the same as a rental fee would be. For further information consult the Department of Architecture, Museum of Modern Art, 11 West 53rd Street, New York City.

(Continued on page 132)



Don't let **NEEDLESS NOISE** slow up the production of your clients

IN DEPARTMENTS where engineering specifications are written, shipping orders are typed, and accounts recorded, distracting noise can cause costly errors . . . can even hamper the war effort. Guard your client's business against the noise menace by specifying Johns-Manville Acoustical Materials for these and other vital spots.

J-M Acoustical Materials are economical in cost, attractive in appearance. They keep noise below the disturbing level by scientific control. The result is increased efficiency, continuous higher-quality work, satisfied clients.

For free copy of our Sound Control Brochure, write: Johns-Manville, 22 E. 40th St., New York 16, N. Y.

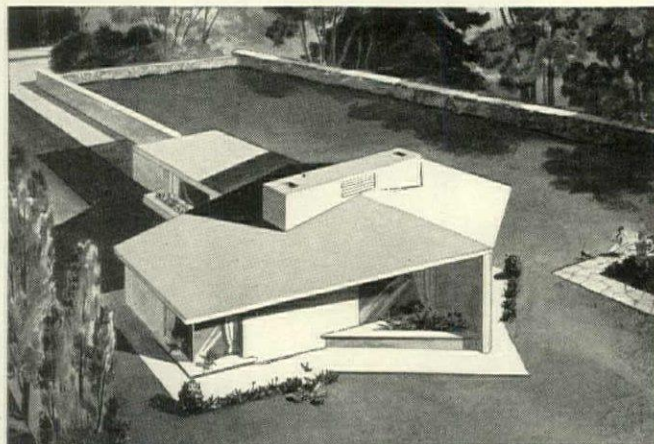


Johns-Manville *Acoustical Materials*

How Architects Can Avoid Post-War Heating Headaches



Prospective Home Builder: "For several years we've been planning a new home. As soon as the war is over, we're going to build. We want a small but distinctive looking home, one that meets all of our requirements and has clean, convenient, automatic oil heat. Here's the approximate type and size of home we'd like you to design for us. How about it?"



The Home: This "Victory Home," designed by D. Allen Wright, prominent Detroit architect, is typical of the type of homes that will go to supply the thirty-billion-dollar market government authorities are predicting for the era immediately following Victory. It is thoroughly insulated, efficiently arranged, easy to keep up and easy to heat.

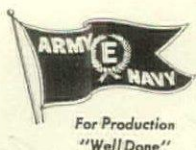


Architect: "I understand your requirements and am sure I can give you a house you'll really like. As for the oil heating, that's easy with a Timken Oil Burner, for the Timken Wall-Flame Oil Burner is the only type of power burner especially designed to operate efficiently, dependably and quietly at firing rates as low as 1/3 of a gallon of oil per hour. You are assured of heating costs in proportion to the size and quality construction of your small home."

I Recommend Timken With Confidence

I know from past experience that the home owner will save money in the long run and get greater satisfaction with a Timken Oil Burner. The Wall-Flame principle of Timken also assures quieter operation, lower service and upkeep costs and longer life.

NOTE to Architects for heating small homes: The Timken Wall-Flame Oil Burner is the only type of power burner capable of operating efficiently, dependably and quietly at firing rates as low as 1/3 of a gallon of oil per hour.



TIMKEN

Silent Automatic

OIL HEATING PRODUCTS FOR THE HOME

Division of THE TIMKEN-DETROIT AXLE COMPANY, Detroit, Michigan



Industrial Housing Service!

*Factory-built Homes
to Meet Emergency Housing Needs!*

IT is no longer necessary to wait an interminable period when plant expansion causes a need for additional dwellings to house a sudden influx of workers. Palace Industrial Housing Service quickly solves the problem!

In hardly more time than it ordinarily takes to lay out the necessary building sites, Palace Expansible Homes and Utility Units can be on their way by motor truck to fill the emergency. Being not only completely factory-built, but also fully assembled and fully equipped when they leave the factory, nothing remains to be done except to place them upon foundations.

If new war plants are being built in your locality, or if old plants are undergoing expansion, write for details of our Complete War-Time Housing Service — also, literature picturing and describing the various types of Palace expansible dwelling and unity units.

PALACE CORPORATION

Flint, Michigan



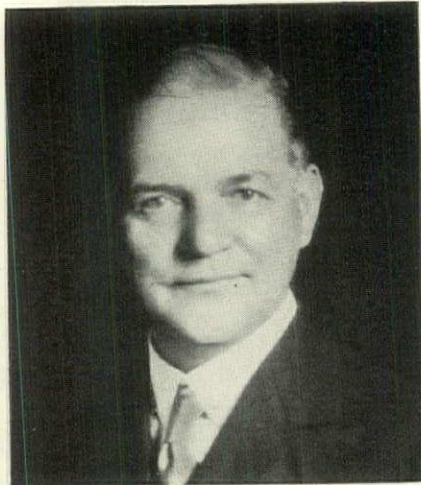
FORUM OF EVENTS

(Continued from page 128)

DIED

FRANCIS HENRY LENYGON, 66, in New York City. Mr. Lenygon, a former president of the American Institute of Decorators, was best known for his work in decorating Buckingham Palace and Windsor Castle in England, and the Whitelaw Reid mansion in New York City. An internationally famous authority on English period furniture, his three books on the subject have been widely used for reference.

Born in Lincoln, England, Mr. Leny-



gon was trained in architecture and woodworking crafts. After establishing his own business in 1904, he absorbed the 200-year-old upholstery and fabric firm of Morant & Co. The merged companies, known as Lenygon & Morant, Ltd., held royal warrants under Edward VII, George V, Edward VIII, and George VI. After his first visit to America in 1910 Mr. Lenygon established a branch in New York City.

REGINALD BATHURST BIRCH, 87, in New York City. Famed for his illustrations of *Little Lord Fauntleroy*, artist Birch lived to regret he ever did them. People thought he had never done anything else. Out of it he got \$400, two theater tickets. Said he: "What's the good of putting money in the bank? I don't feel any older than I did forty years ago. One can keep well filled with alcohol. . . ."

Pictures Inc.



ARTIST BIRCH

Born in London, he studied art in Europe, illustrated *Harper's*, *St. Nicholas* and scores of other magazines. In recent years he had worked on WPA art projects, which carried him through some lean years. He became a stranger at The Players, his only club.

Philosophized he on his eightieth birthday: "It seems there were two fleas and they were enamored of each other. So they decided to get married. They worked and worked until they had earned \$5. Then they worked some more until they had made another \$5. And then they went out and bought a dog.

"Silly, isn't it?"

CORRECTIONS

THE DIARY OF A HOUSING MANAGER, a book reviewed in the June issue, can be obtained for \$1, rather than \$2 as stated in the review.

MAJOR KATZMAN, one of those responsible for the Army's excellent job at MacDill Field, Fla. (see June issue) is head of Buildings Equipment & Planning Section, Army Exchange Service, and *not* head of the Army Exchange Service, as stated.

HUGH POTTER is the president of the Urban Land Institute, Charles Stewart its executive secretary.

They train for the Air... on



Tile-Tex Floors

They are setting a terrific training pace at Army and Navy Air Bases these days. That's why Administration Buildings, Classrooms, Dining Halls, Dispensaries, Locker Rooms and Recreational Areas are using Tile-Tex floors. Such areas demand a floor that will withstand severe usage and at the same time look attractive with only minimum maintenance.

Tile-Tex, made from long-wearing asphalt and asbestos, qualifies as such a flooring. It can be installed at or below grade level—replacements can be made without interfering with adjoining areas. Tile-Tex is still available with reasonable promptness in a wide range of colors, shapes and sizes—and at a reasonable low first cost.

We'd like to give you more specific information on the use of Tile-Tex in Military Air Bases. Write us for further data and the name of your nearest Tile-Tex contractor.

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101 Park Avenue, New York City • Chicago Heights, Illinois

Prefabrication Explained



THE HOUSE OF HOUSES

**Send for your free copy of this new booklet.
American Houses, Inc., 570 Lexington Ave., New York 22, N.Y.**

TO HIT 'EM H-A-R-D-E-R



THE year 1943 promises to be the grimmest, hardest year this country has ever faced. Every effort, and every dollar of national income not absolutely needed for existence, should go into war work and War Bonds.

In the Pay Roll Savings Plan, America finds a potent weapon for the winning of the war—and one of the soundest guarantees of the preservation of the American way of life!

Today about 30,000,000 wage earners, in 175,000 plants, are buying War Bonds at the rate of nearly half a billion dollars a month. *Great as this sum is, it is not enough!* For the more dollars made available now, the fewer the lives laid down on the bloody roads to Berlin and Tokio!

You've undoubtedly got a Pay Roll Savings Plan in your own plant. But how long is it since you last checked up on its progress? *If it now shows only about 10% of the gross payroll going into War Bonds, it needs jacking up!*

This is a *continuing* effort—and it needs *continual* at-

tention and *continual* stimulation to get fullest results.

You can well afford to give this matter your close personal attention! The actual case histories of thousands of plants prove that the successful working out of a Pay Roll Savings Plan gives labor and management a common interest that almost inevitably results in better mutual understanding and better labor relations.

Minor misunderstandings and wage disputes become fewer. Production usually increases, and company spirit soars. And it goes without saying that workers with substantial savings are usually far more satisfied and more dependable.

And one thing more, these War Bonds are not only going to help win the war, they are also going to do much to close the dangerous inflationary gap, and help prevent post-war depression. The time and effort *you* now put in in selling War Bonds and teaching your workers to save, rather than to spend, will be richly repaid many times over—now and when the war is won.

You've done your bit



Now do your best!



How dried potatoes may double our Merchant Marine

DEHYDRATION—the process of extracting water from foods of all descriptions by heating and drying—is waving a magic wand. Where once a bushel of potatoes occupied cubic feet of valuable shipping space, the dehydrated product occupies cubic *inches*. Those precious savings when pyramided mean ships and more ships. Now when a 10,000 ton ship comes sliding down the ways, the equivalent of two and even three ships is really being launched.

In many dehydration systems, Trane equipment is used to provide the heat which, in turn, liberates the

unwanted water from vegetables, fruit, eggs, meat and other edibles.

This is another way in which Trane Air Engineers on every industrial front are sending Trane equipment to war against the Axis. They are enlisting heat, cold, air movement, in fact the very weather itself to assist the men of our fighting forces and our allies.

And when Trane Air Engineers are mustered out of service the developments they are making to-day will mean the improvement of health, comfort, and better living in a better tomorrow.



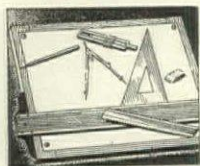
TRANE

AIR⁷

THE TRANE COMPANY LA CROSSE, WISCONSIN

TRANE COMPANY OF CANADA, LTD., TORONTO

AIR CONDITIONING • HEAT TRANSFER • AIR HANDLING EQUIPMENT



Engineered
in design



Engineered
in manufacture



Engineering
Service

for installation in
mass production of
double hung windows
and in prefabricated
housing projects



In thousands of instances the manufacturing lessons learned in the emergency of war become standard engineering practice in the production for peace.

And so it will be with the Grand Rapids Invincible Sash Balance now being used by the thousands in war housing projects, for in post-war building this dependable device will play a major part in the speedy installation of sash hardware and window assemblies in the prefabricated homes that will be constructed all over the country.

To assist you in line installation of window sash hardware Grand Rapids Hardware Company has available, and subject to your call for as long a time as necessary, a competent engineering service — men especially trained in this work. You will find that the systems we have developed and which can be adjusted to fit your particular requirements will save you many hours of time and many dollars of profit.

*Get in touch with us now
and speed up your line.*

**GRAND RAPIDS
HARDWARE CO.**
GRAND RAPIDS, MICHIGAN



"OUR CAMOUFLAGE DEPARTMENT"

Camouflage is confusing—particularly when the 2H mark on a drawing pencil camouflages a 3H lead.... Draftsmen, architects and engineers want a drawing pencil they can rely on. That means that the pencil in any given degree always has exactly the same feel and produces exactly the same line. It also means that the lead holds the point you give it—and is uniformly smooth, from first sharpening to final stub.

More draftsmen, architects and engineers use the Venus Drawing Pencil than any other make. They can depend on Venus Drawing—whenever and wherever they buy.

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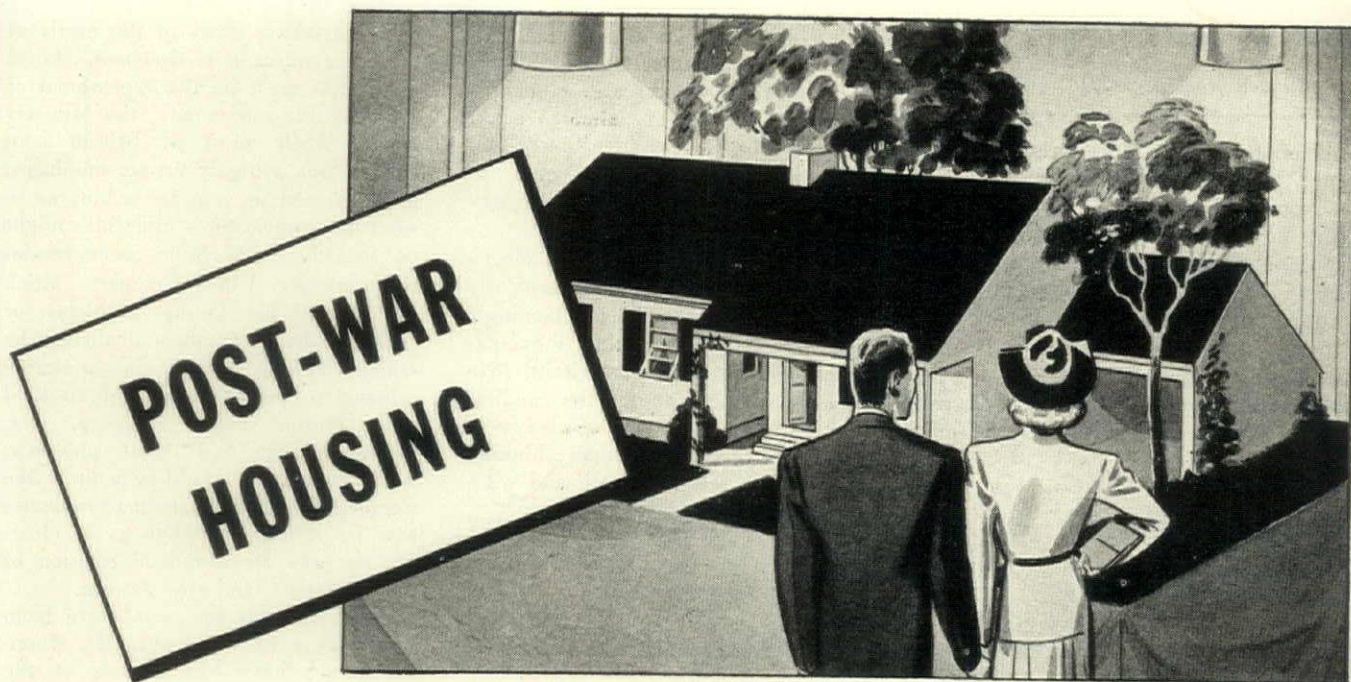
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A new voice for the building industry

Home-builders have a powerful new selling voice—reaching a tremendous and consistent market of home-minded buyers.

Department stores, selling everything going into the home, are now preparing to sell the house itself. More than 50 leading department and furniture stores throughout the nation are currently exhibiting models of Homasote Precision-Built Homes.

Buyer response in potential post-Victory sales is very large—and mounting steadily. Approximately 70% of the people visiting the exhibits in the first four stores have expressed a desire to join Homasote's Own-Your-Own Home Club, starting *now* to save their down payments.

Engineered housing

For seven years and at a research outlay to date of more than \$300,000, Homasote Company has been applying sound engineering principles to the problem of building a home. Homasote's purpose: to help the architect who specifies Homasote Building and Insulating Board sell more and better houses, with *assured* profits.

Result of this thorough study is Homasote Precision-Built Construction—a system which:

- (1) enables the architect to incorporate all the engineering economies of prefabrication into the homes he designs;
- (2) insures the architect's reputation

against identification with jerry-building;

(3) is based on the use of Homasote Board—oldest and strongest building and insulating board on the market—and other *standard* materials readily available in the local area;

(4) saves the architect's detailing time—thereby increasing his productivity—by providing complete charts and reference tables;

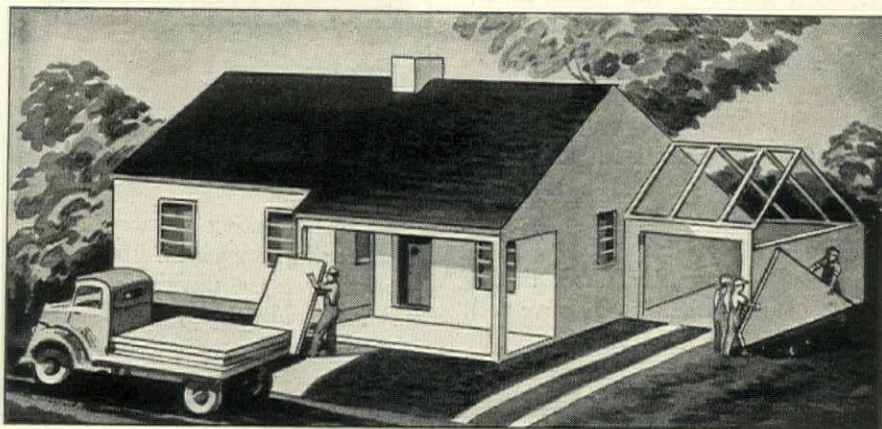
(5) is adaptable to any architect's design, with no change in a single overall dimension greater than two inches.

\$36,000,000 experience

The soundness of Homasote Precision-Built Construction has been proved in \$6,000,000 worth of architect-designed, pre-war, private homes all over the country—and in \$30,000,000 worth of government war housing.

To the foresighted architect, Homasote Precision-Built Construction is the key to new post-emergency markets: low-cost housing projects constructed at a profit, large realty developments, machine-perfect homes in all price classes.

For more details, write HOMASOTE COMPANY, Trenton, New Jersey



HOMASOTE
Precision-Built
HOMES

MONTH IN BUILDING

(Continued from page 52)

planning, held his first press conference.

Appointed to his job last February 7, Mr. Morrison is far from being a professional planner. Chiefly distinguished as an administrator who remains unrattled under heavy fire from the opposition, Morrison has plodded steadily through a succession of political graveyards (Ministry of Agriculture, Ministry of Food, Postmaster Generalship), never entirely lost the favor of potent Conservatives. De-

scribed by Harold Laski as a man with whom the vested interests will always be safe, Morrison possesses other political equipment of almost equal value to the Conservative party, including a knack, notable even in Britain, for clothing the simplest platitude in convincing eloquence.

To the press, affable William Morrison said that the people, too frequently "more planned against than planning," must help in blue-printing the land-use design for postwar Britain. "No plan," he said, "even for the smallest village, can be successful which is conceived airily by technicians thinking only of what will look well, and with-

out painstaking study of the needs of those for whom it is designed." Local authorities must be the "spearhead of the planning movement," the Minister urged. While most of Britain considered this a highly proper emphasis, most listened in vain for a hint as to what the government's intentions might be regarding the basic recommendations of the Uthwatt report, which dealt with the knotty problems of compensation for values disturbed by land planning, sought a workable scheme for public control of all land use (Forum, Nov., 1942, p. 49). Many thought that local planning, while imperative, would be a little like sleepwalking until Parliament indicates how far it is prepared to go in clearing the way for a radical revision of the national land-use pattern.

As to how far the people are from what they want in housing, Mr. Morrison might have had a look at the

Pictures, Inc.



Atlas WHITE News



Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Bldg., N. Y.

DECORATIVE, DURABLE FINISH FOR MASONRY SURFACES WITH PORTLAND-CEMENT PAINT

*Made with Atlas White
cement, this paint uses no
critical war material*

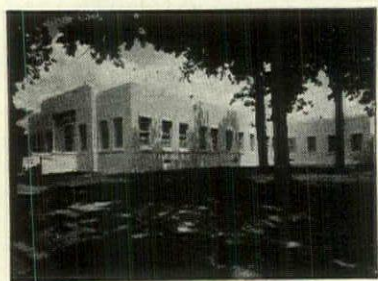
Portland-cement paint effectively seals masonry surfaces against extremes of weather and moisture. It forms a durable bond—with stone, brick, hollow tile, concrete, architectural concrete, or concrete masonry.

Portland-cement paint, made with Atlas White cement by various manufacturers, is available in handy containers—in white and a range of attractive colors. When used according to manufacturer's directions, it provides a decorative finish that is uniform in color and inexpensive both to apply and to maintain.

WATERPROOFED WHITE CEMENT

—uniform and nonstaining

Atlas Waterproofed White portland cement is used in various types of white cement work, including stucco exteriors, monolithic wall facings, swimming and wading pools, and as mortar for water-repellent joints.



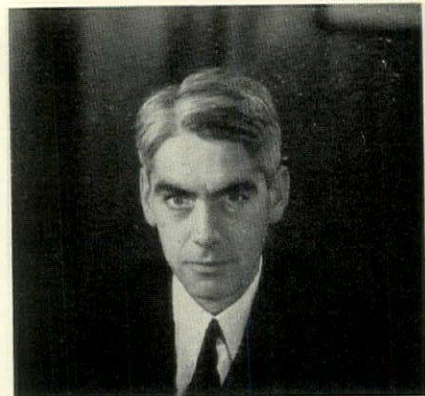
Portland-cement paint made with Atlas White cement is used to produce any colors or pure white as in this Educational Building, First Baptist Church, Cameron, Texas.

By incorporating a water-proofing agent during its manufacture, you are assured of even, unvarying content that means uniformity on the job.

* * *

Send for more helpful information about these and other uses of Atlas White cement—Stucco, Fine Terrazzo, precast Architectural Concrete Slabs, Light-Reflecting Floors, Tile Grout, and Face Brick Mortar. Write to Atlas White Bureau, Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York 17, New York.

A-F-C-7



W. S. MORRISON: affable, eloquent . . .

testimony gathered by Mass-Observation (England's Gallup poll counterpart) which, run by anthropologist Tom Harrisson and poet-newspaper-reporter Charles Madge, undertakes ambitious studies of social habit and change, public and private opinion. Mass-Observation asked 1,200 working people what they liked about their homes, what they didn't. With central heating still almost exclusively limited to the higher- and middle-income groups in Britain, the lack of any hope for central heating among workers was striking—only one person suggested that central heating would be a desirable improvement. Many thought they would like to have a washbowl with running water in the bathroom, so that the family would not have to wash in the scullery sink, thought it would be practical to have the toilet separated from the bathroom. Another hope: enough bedrooms to have one for husband and wife, one for the girls, one for the boys, maybe even one for visitors. Strongest vote was for the detached house, only 5 per cent thought a flat would do.

(Continued on page 140)

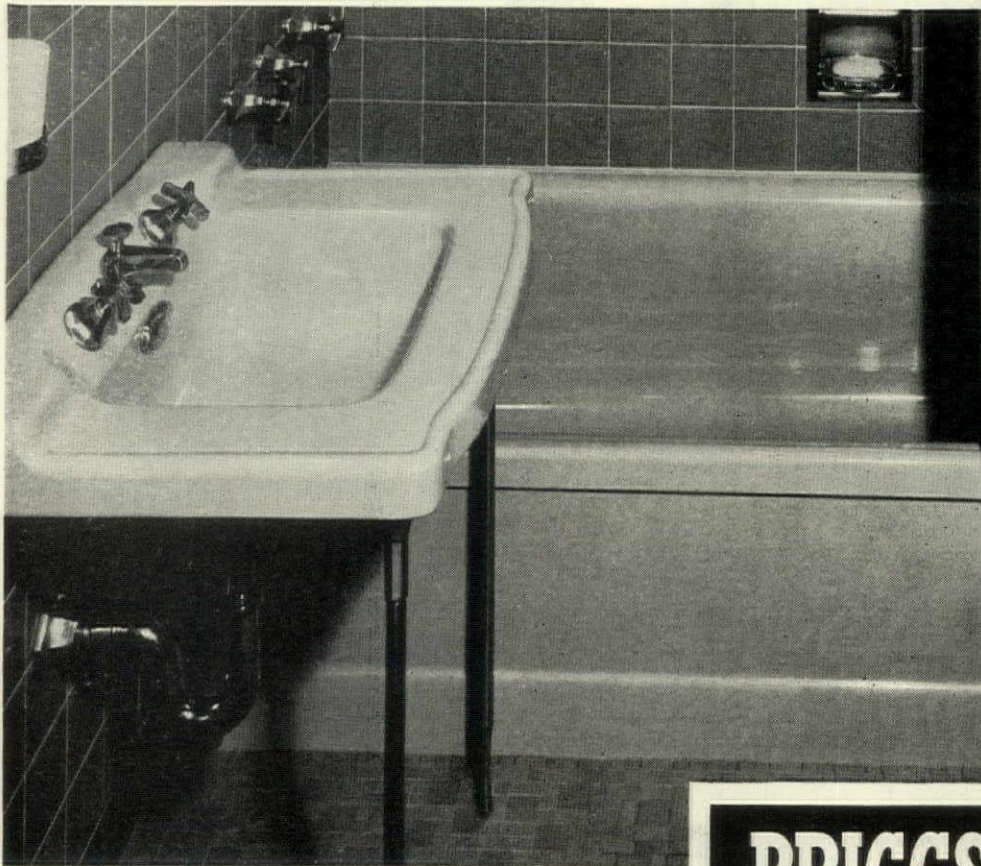
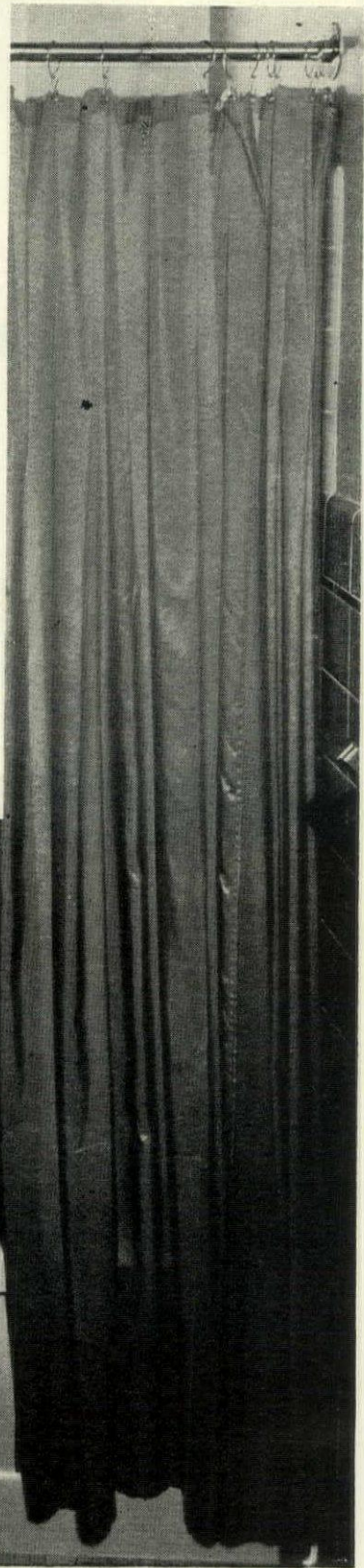
HITLER MUST HATE BATHTUBS



WHY? Because the men who made Briggs Beautyware have transferred all their skills to war products, including control surfaces and fire power turrets for Flying Fortresses and hulls (bodies) for General Sherman tanks.

Today our production is wholly for war.

But as the Yanks march down Unter den Linden, we'll be all set to reconvert. And when we do, the Briggs Beautyware we make will have been worth waiting for!



BRIGGS MANUFACTURING CO., DETROIT

BRIGGS *Beautyware*
PLUMBING FIXTURES

MODEL 700

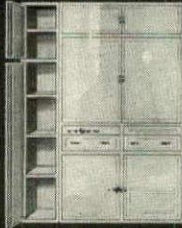
46 Inches Wide

Standard gas and electric kitchen complete. Or all-gas or all-electric.

**MODEL 700-1081**

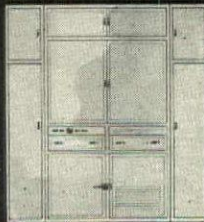
60 Inches Wide

Standard Kitchen plus one all-steel side cabinet cupboard.

**MODEL 700-1081-2**

74 Inches Wide

Standard Kitchen plus two all-steel side cabinet cupboards.



A Complete Line OF POST-WAR KITCHENS

In your plans for post-war small-home building, single or multiple, just eliminate the old, obsolete separate kitchen and draw in Pureaire. What an inspiration to better space arrangement and all-around comfort!

Pureaire alone contains generous storage space. With matching steel cupboards on one side, or both, it adds a complete closet.

Set your plans to the width you want. Prompt delivery after Victory.

Thousands in successful use. Investigate!

TRAVERSE BAY MFG. CO.

(Affiliated with The Parsons Co.)

15000 Oakland • • Detroit, Mich.

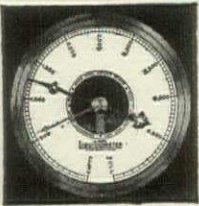
P A R S O N S

Pureaire

K I T C H E N

*My Business Maintains
High Accuracy Standards,
That's Why In Measuring
Valuable Stored Liquids,
We Rely On...*

LIQUIDOMETER Tank Gauges
"THEY'RE ALWAYS DEPENDABLE"



100% automatic—these tank gauges insure accurate, trouble-free readings whenever required. No pumps, valves, or auxiliary units required to read them. Models available so that readings can be taken remotely from or directly at the tank. Remote reading types utilize balanced hydraulic transmission system which completely compensates for temperature variations on communicating tubing. Accuracy unaffected by specific gravity of tank liquid.

Approved for gauging hazardous liquids by Underwriters' Laboratories and other similar groups. Models available to automatically control pumps, motors, signals or other devices for maintaining minimum or maximum liquid levels.

Write for complete details.

THE LIQUIDOMETER CORP.

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For Victory today . . . and prosperity tomorrow, keep the War Bond Pay-roll Savings Plan rolling in *your* firm. Get that flag flying now! Your State War Savings Staff Administrator will gladly explain how you may do so.

If your firm has not already installed the Pay-roll Savings Plan, *now is the time to do so*. For full details, plus samples of result-getting literature and promotional helps, write or wire: War Savings Staff, Section F, Treasury Department, 709 Twelfth Street NW., Washington, D. C.

Against Wear and Weather

HYDROCID COLORLESS

Protects brick, concrete, masonry and stucco walls against the cumulative effects of rain, snow and sleet, without changing the texture and beauty of the surface to which it is applied. HYDROCID COLORLESS is free from wax and oil, therefore it is unaffected by extreme heat or cold. Hundreds of applications to masonry of all types demonstrate its efficiency in all kinds of weather.

CAULKING COMPOUNDS

Sonneborn has been identified with the manufacture of airproof, waterproof, and elastic caulking compounds for many years. Sonneborn's Caulking Compounds are used extensively on Federal projects and meet U. S. Bureau of Standards tests. They function efficiently under a wide range of climatic conditions. Shipped in gun or knife grade, or in cartridges.

SANTORIZED TRIMIX INTEGRAL LIQUID

Nine major advantages at a surprisingly low cost are secured through the use of SantORIZED Trimix Integral Liquid, among which are the shortening of average initial setting time; reduction of water ratio; greater workability and ease of manipulation; high early strength; greater water impermeability and resistance to erosion; faster placing and more rapid removal of forms.

SANTOREX MORTAR ADMIXTURE

A powder designed specifically for use in mortar, to produce improved workability; more efficient bonding (strength) and reduced shrinking. It is composed of natural pozzuolana having superior lime-reactive capacity, and metallic soaps. Tests by the New York Testing Laboratories show that Santorex increases compressive strength 25%, bonding strength 30%, and reduces shrinkage 30%.

LAPIDOLITH LIQUID

A patented colorless liquid which hardens, dustproofs and protects concrete floors for many years, by chemical action. The application of LAPIDOLITH LIQUID will not interfere with working schedules since floors can be kept in use during and directly after application, if necessary. LAPIDOLITH LIQUID also hardens and wearproofs terrazzo floors.

Write for specific Sonneborn data on your particular problems of weatherproofing and dampproofing to Dept. F-4.

Where Results Count — Count on Sonneborn

L. SONNEBORN SONS, Inc.

88 Lexington Avenue

New York, N. Y.



SECTIONS 5 - 17
21 18



FOR AN OUTLOOK ON TOMORROW ...WATCH WOOD

WHAT WILL YOUR CLIENTS WANT IN THEIR POSTWAR HOMES? Actual surveys now indicate two definite desires — better use of windows and better use of space. Both these needs can be well met, economically, satisfactorily... with wood — doors, windows, frames and other woodwork of Ponderosa Pine. Here's why —

Windows will make tomorrow's small homes seem more spacious — and windows of wood will keep them warmer! Wood is a *natural* insulating medium. Pre-assembled windows of Ponderosa Pine can be provided for a better fit — are easily weather-stripped — effectively reduce heat loss.

Woodwork is today a better building material than ever — thanks to availability of toxic treatment! Windows and doors of Ponderosa Pine are easily painted — and *hold paint well*.

Stock windows and doors of Ponderosa Pine are offered in a great variety of styles and sizes. Wood lends distinction to all kinds of architecture. Remember, wood has an appearance that has never been successfully imitated.

Wood frames are constructed to accommodate storm sash and screens without additional framing expense. Wood sash are quickly and easily installed.

WEATHER-TIGHTNESS

DURABILITY

CHARM AND VARIETY

ECONOMY

**Ponderosa Pine
WOODWORK**

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Chicago 2, Illinois

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

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

THE BEST IS YOURS... WITH PINE



FREE TO ARCHITECTS

The "New Open House" — 32-page idea book published by Ponderosa Pine Woodwork — is full of practical ideas you can use in planning postwar housing. You'll want this book for your file — mail the coupon today for your free copy.

CRITICISM: CARPING

Among embattled property owners and the nation's tenants there is one firm agreement: OPA's rent control program has held down rents. Late last month the Smith Committee wound up its much-touted investigation of OPA's rent division, said solemnly that "rents on the whole have been successfully stabilized and inflationary increases prevented as to this element of living costs." With scarcely a pause for breath, the Committee

rushed on to charge that, in the only sector of its price control program universally called effective, OPA has exceeded powers granted by Congress, discriminated against owners of rental property.

If landlords and their fluent Washington spokesmen, whose tale of tribulations makes good listening to bureaucrat-hunting Congressmen, hoped for specific recommendations for action to ease rent ceilings, they were disappointed. Only positive proposal was that the rent division reduce its national force to a skeleton staff. Reason: Major work of fixing maximum rents has been done; duly constituted courts

can settle landlord and tenant disputes. Most of the criticisms were on the carping side. Agreed the Committee: There is a deplorable tendency within OPA to depict landlords as a greedy and grasping class, make them sit up all night filling out windy questionnaires, poke into their private affairs. Authored in large part by New-Dealer Jerry Voorhis (Calif.), the ten-page report charged that: The Price Control Act granted too broad discretionary powers to the Administrator, failed to define this power; OPA regulations have conflicted with national and local laws; the Rent Division has slapped on tight national control, made little effort to encourage local initiative; red tape has tied up appeal machinery; rent ceilings are set too low in some areas.

BUILDING BRIEFS

Test Case. The Federal Public Housing Authority need not comply with local building codes in constructing either permanent or temporary housing, according to the recent ruling of a U. S. District Court in Philadelphia, first decision of its kind to be made in the country. When FPHA leased land in Chester, Pa., started to build 150 temporary units for Negro war workers, the local building inspector got a warrant for the arrest of the construction superintendent, charged that he had failed to obtain a building permit, that several sections of Chester's building code had been violated. FPHA asked the Department of Justice to institute injunctive proceedings to prevent blocking of the project, got a favorable ruling expected to have an effect on procedure in many other war centers. Suspicion in Washington was that the controversy over compliance with the local building code masked Chester's real objective: to stop building of Negro units on the location selected.

Materials Leak. On paper all builders comply circumspectly with NHA-WPB regulation of critical materials use, but NHA has had an uneasy feeling that somewhere between paper and job site there are a few leaks. Last month NHA tightened its checkup, asked FPHA field offices to inspect all privately built war housing.

Building Baedekers. WPB issued two new guide books to help steer architects, engineers, builders, around the shoals of material shortages. To get priority approval, specifications must comply with "Critical Construction Materials Design Guide" and with "Design Guide for Interior Electric Lighting and Wiring for Wartime Construction." Copies may be obtained from regional WPB offices.

V

A Prophecy On Heating

AFTER THE WAR WE PREDICT:—

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3. Stoves
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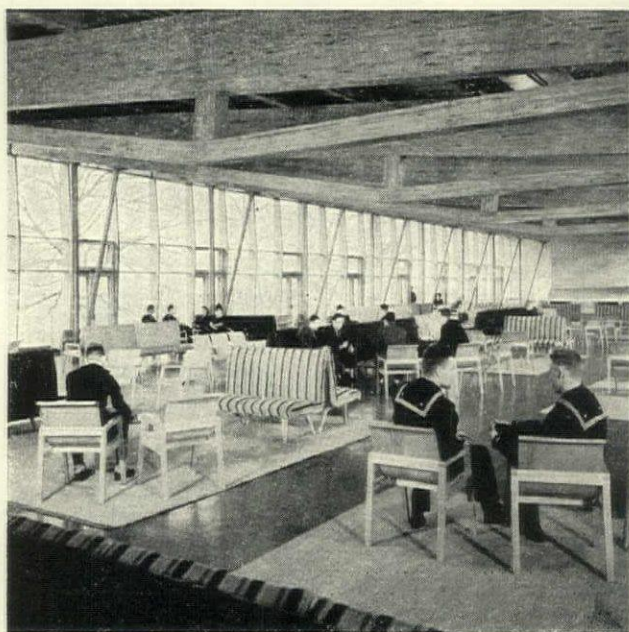
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Unusual structural features provide the main decoration of Great Lakes Naval Training Station's new Welfare Building. And their distinctive appearance has been further enhanced by Sherwin-Williams Paints.

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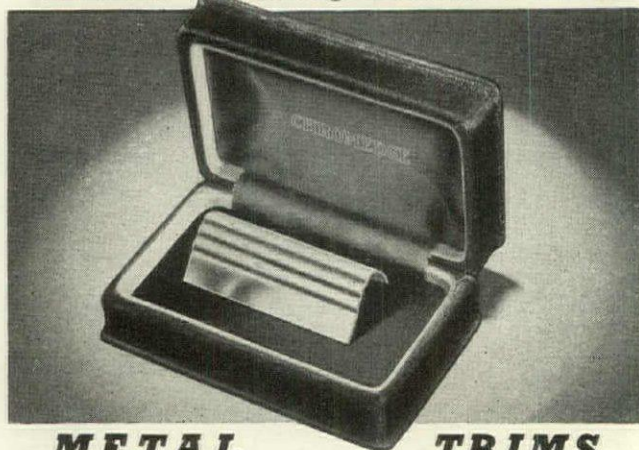
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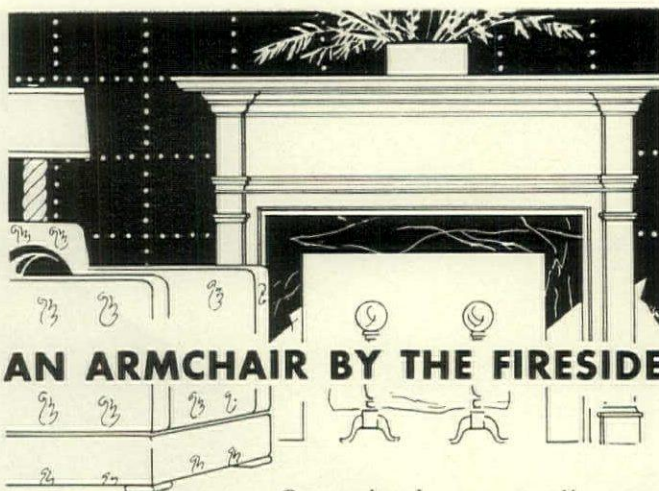
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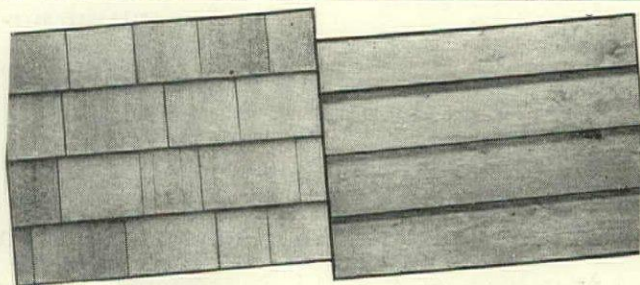
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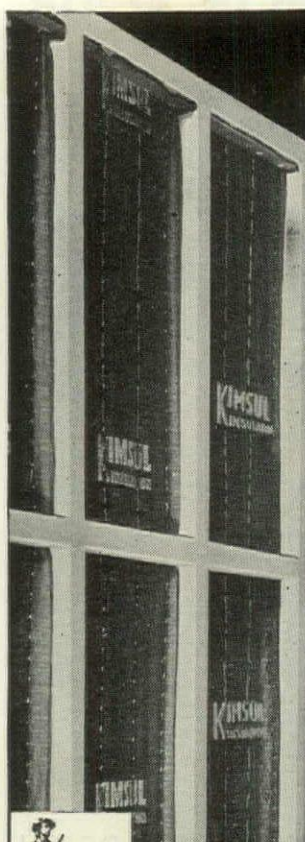
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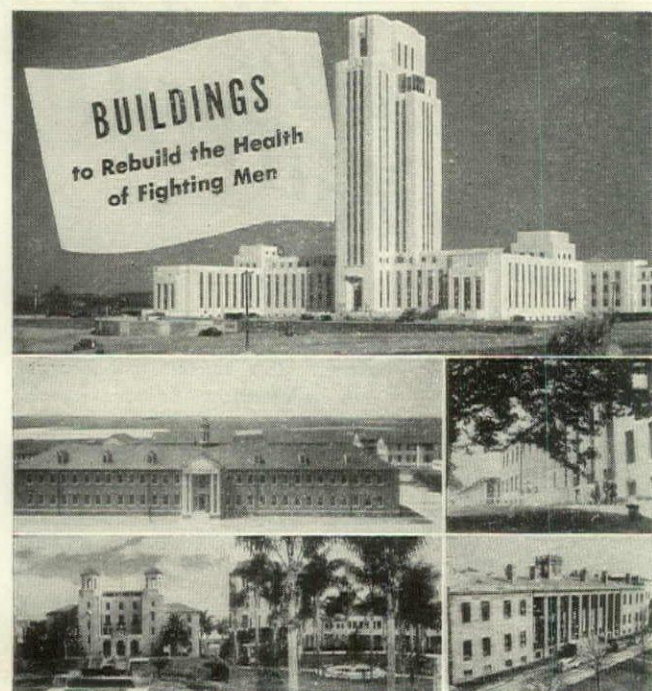

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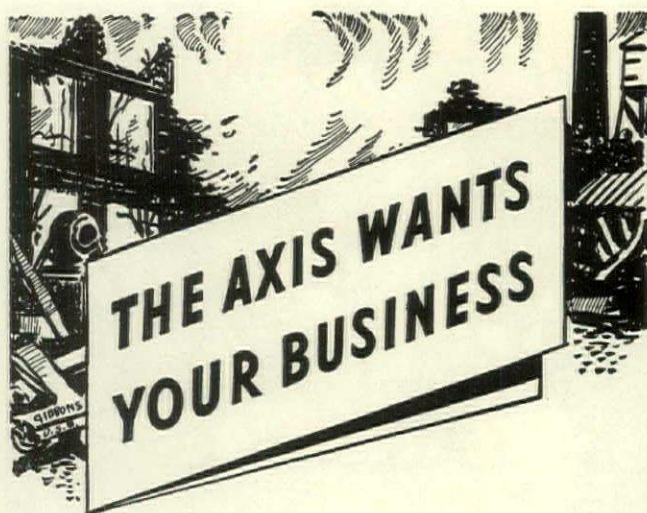
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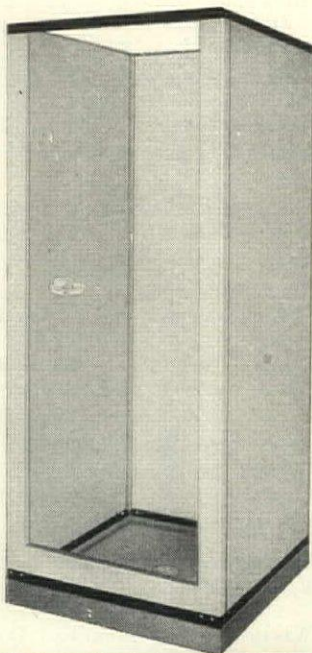
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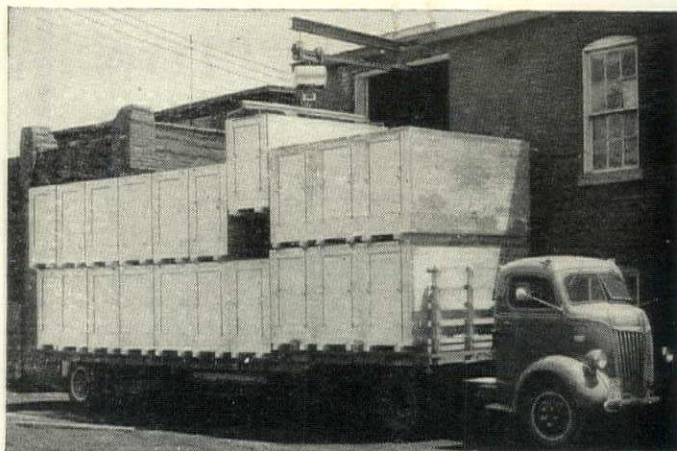


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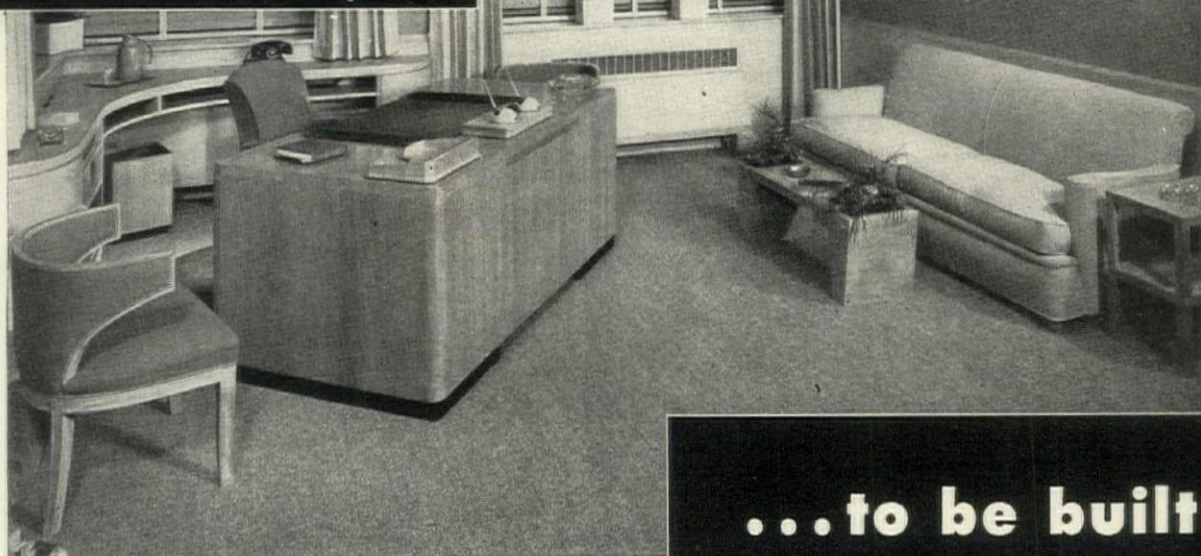
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**MADE LARGER, LIGHTER
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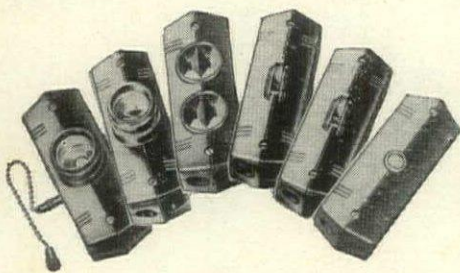
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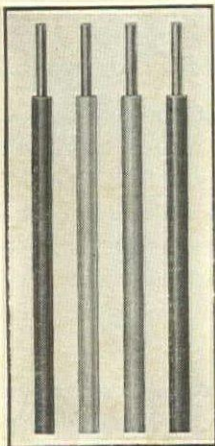
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Appliance and Merchandise Dept.
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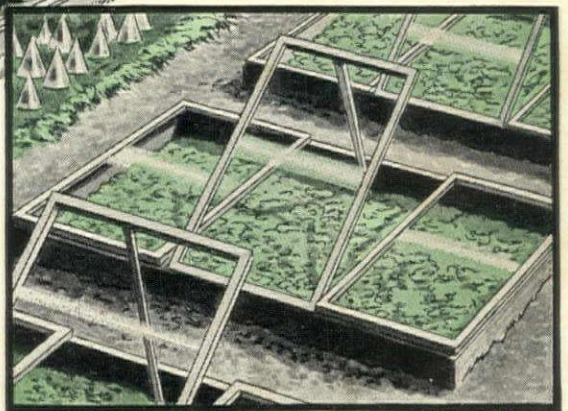
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GENERAL ELECTRIC

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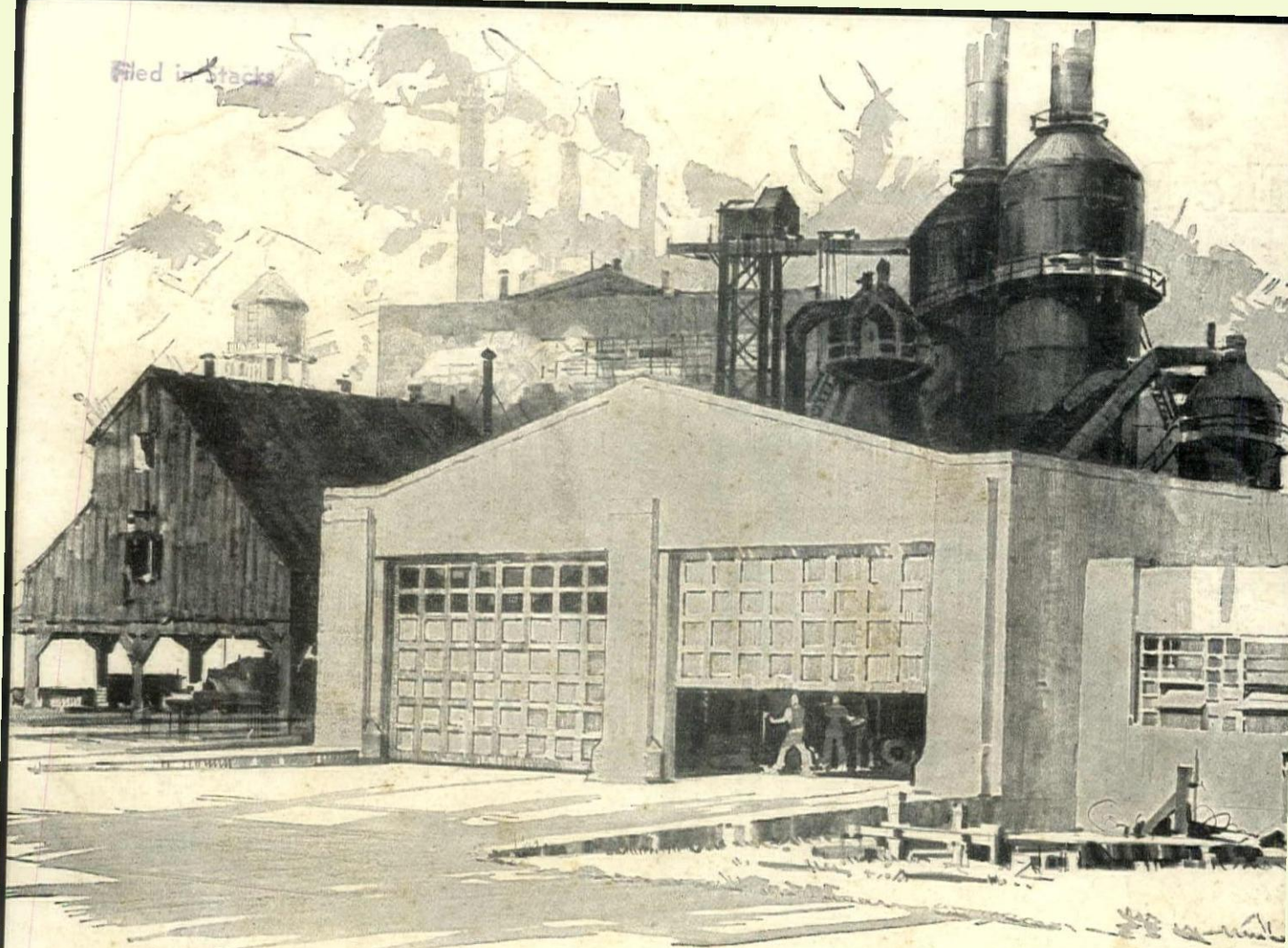
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