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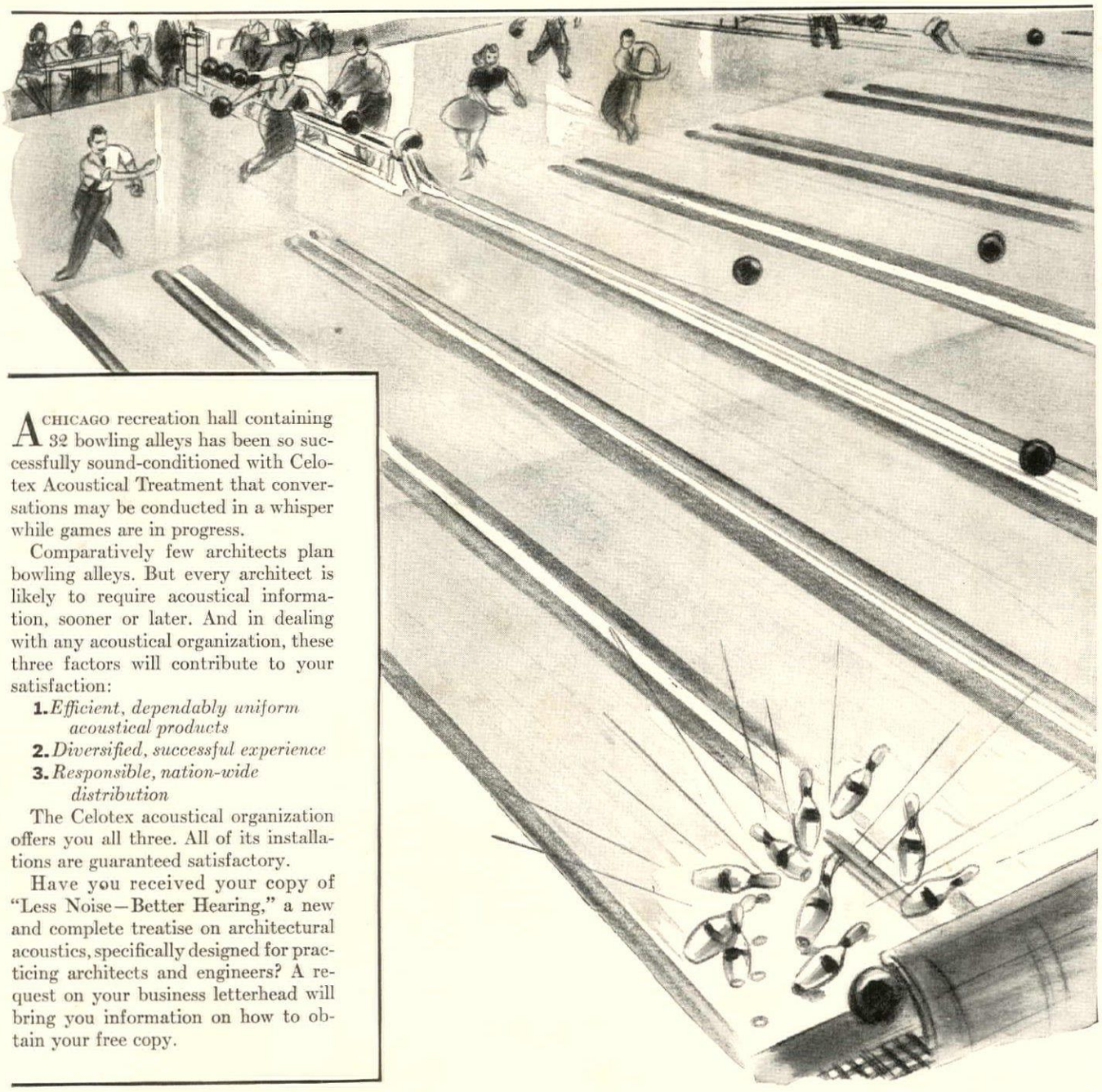

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FEBRUARY 1942

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VOLUME 76—NUMBER TWO

THE MONTH IN BUILDING

HEADLINE HIGHLIGHTS

►*1942 finds U. S. Building with its sleeves rolled up and, a scant month after Pearl Harbor, charging into the biggest task in the industry's history—an all-out war construction program of $11 billions plus (p. 44).*

►*Baird Snyder III is drafted out of Wages and Hours into Federal Works as assistant administrator. When his boss, General Philip B. Fleming, becomes hospitalized by sickness, he immediately begins pinch-hitting (next page).*

►*Snyder's first official act as Acting FWAdministrator (January 8) is to wipe out FWA's Division of Defense Housing. To Clark Foreman, who formerly headed this division, goes a "special assignment." And, to hard-hitting Engineer Rufe B. Newman, Jr., (next page), the new job of constructing by July 1 some 42,000 prefab-demountable houses in 50 localities involving $153 millions.*

►*FWA's prefab-demountable housing program sprints forward. Announcing a seven-day two-shift work for his staff, Newman at once starts negotiating contracts with prefabricators and selecting sites. Plot plans are to be prepared by local architects, dwellings assembled by local contractors. Goal: 70,000 units occupied before year's end (pp. 81-90).*

►*To get private builders moving faster on war rental housing, Coordinator Palmer hands program to trouble-shooting Houser-Banker-Builder Frank A. Vanderlip, Jr. (next page).*

►*Permanent housing program also moves ahead as the controversial Lanham Act finally clears Congress and is signed by the President (January 22). Most serious restrictive amendments are much softened (this page).*

►*USHAdministrator Straus' resignation clears political atmosphere but leaves Washington gossips guessing on his successor (next page).*

►*Senate's scorching Truman Committee report (January 15) condemns defense housing efforts (p. 79).*

►*Philadelphia's progressive architect George Howe is slated to become Washington's top design chief (p. 44).*

LANHAM ACT

Small crumb of good news for architects and builders can be found in the Lanham Act extension, finally cleared by Congress after long delays and signed by President Roosevelt last week. Although not fully satisfactory, it does aid Government agencies in getting to work on war housing by authorizing an extra $300 millions for permanent housing, $150 millions for community facilities.

Weeks ago the measure passed the Senate without a ripple. In the House, however, Congressman Fritz Lanham unleashed his full Texas fury with a series of restrictive amendments (economic rents, no housing to USHA, all to be handled by PBA, all to be sold immediately after the emergency), which would have hamstrung the program. Reasons for this onslaught: 1) a long-held and mounting animosity to subsidized housing in general and to its top administrator Nathan Straus in particular; 2) a conviction that social reforms would mar the whole war housing program; 3) a publicly displayed feud between various key men in the numerous Government housing agencies.

To help clear the impasse created when the measure's two versions became stalled in committee, Straus handed his resignation to the President. Shifting John Carmody to the Maritime Commission had already cleared the way for the Congressionally acceptable General Fleming's appointment as administrator of Federal Works. This left only Clark Foreman among the criticized top housing figures. With the killing of FWA's Defense Housing Division (never authorized by Congress) and Foreman's transfer to other duties, the last barrier to the measure's emergence in compromise form was removed. Thus Carmody, Straus and Foreman, despite their solid accomplishments, have joined the horde of Washington bigwigs who tempt Congressional displeasure too often and too hard.

AP

Architect George Howe (p. 44)
Fewer starling-roost pediments?

That these political sacrifices have not been in vain is evident in the measure as finally adopted and signed by the President. Other agencies besides PBA (particularly USHA) can now participate in the program. The flat restriction against subsidized rents has also been softened: FWA is now permitted "in exceptional cases" to adjust rents to the incomes of war workers. Since presumably FWA's Administrator can define as many cases to be "exceptional" as he deems necessary, he now has enough latitude to match rents to needs—even though Congress still frowns on any wholesale use of subsidies.

Similarly softened are the House amendments insisting on speedy post-war liquidation of housing facilities and prohibiting their post-war use for low cost housing. These dubious proposals produced the unique circumstance of real estate men and public housers fighting side by side. By making the liquidation optional, not mandatory, the sting has been removed. Instead of dumping the houses on the market when peace is declared, the Administrator can hold them for a rational liquidation period, but unless a new Congress changes its mind, he still cannot pass them on to USHA.

The House version's higher construction cost limits are retained. Average cost per permanent family dwelling unit increases from $3500 (in the present law) to $3750, with $3950 as the overall limit for any single unit.

Entirely erased from the bill is the amendment permitting housing to be built in Washington for Government workers, a provision long sought by Co-ordinator Palmer. As it has stood and still stands, the Lanham Act limits tenancy to persons working for the Army or Navy or essential defense industries. However, this does not mean that Washington's housing headache is being deliberately ignored: the House conferees have promised a separate bill for this purpose. Rumor has it that the inspiration comes from PBA officials who want their agency to be given full charge of the Washington program.

Instead of being handed broadly to the various agencies, Lanham Act money is expected to be given to one top official in each agency—PBA's Neal A. Melick, USHA's William Seaver, FWA's Rufe New-

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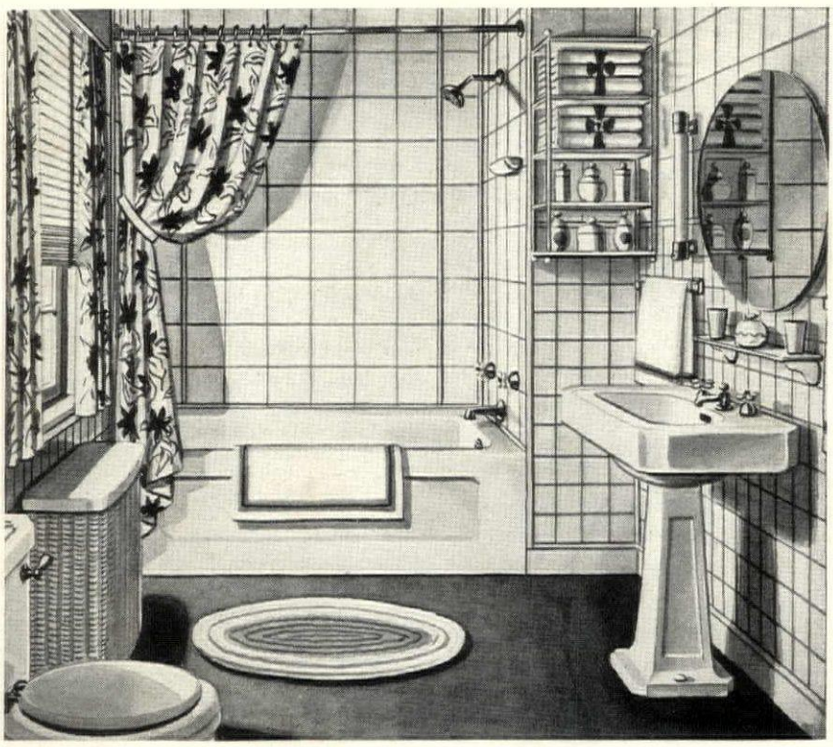

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VOLUME 76
Number 2

man—who will be held responsible for getting work out of his bailiwick on the double quick. Already assigned to Engineer P. L. Hein, heading PBA's new Emergency Operations Division, is task of building schools, other community facilities. This division will let contracts, but call on local architects okayed by local school boards or other officials to do the designs.

PINCH-HITTER

Carmody's successor as FWAdministrator is General Philip B. Fleming, who scarcely had taken office before sickness hospitalized him. In the pinch he drafted Baird Snyder III from Wages and Hours, where Snyder had been his alter ego.

Red-haired, broad-shouldered, topping the 6-ft. mark, Snyder is a quiet, forceful administrator who delights in cutting red tape. Like his indisposed chief, he gets results by delegating authority, then holding his aides responsible.

Story is told that in Snyder's first staff meeting, someone ventured the hope FWA wouldn't have anything to do with prefab-demountables since he for one didn't like the damn things. Came the quick reply:

"We are probably going to build some demountables, but your agency probably will not do the job. However, if we do build demountables, and it is decided to have your agency do them, you will build them."

Born in Lansford, Pa., Snyder got his education through a series of public schools, Taft, Cornell, Yale, winding up with a degree from M.I.T. After early engineering work in Pennsylvania, the western U. S. and South America, he headed a private engineering construction company. In 1936 he became an associate engineer in the Resettlement Administration, later chief engineer of the Farms Security Administration. In these jobs he was in charge of the construction of suburban and rural housing projects, plus many another conservation undertaking.

While in RA, Snyder was associated with General Fleming. Later, when the General took over administration of the Wages and Hours Division, Snyder became its deputy administrator. Here he also showed his ability to get things done, built up an enviable reputation as an executive who picks the right personnel and stands behind them as long as they deliver. Under his direction the field force grew from 109 to 1,800.

Once the Wages and Hours office staff presented him with a blow torch as a token of its esteem. This implement he promptly mounted on top of his bookcase with the legend, "For field use only." Implication was that he had no need to burn any tails in his immediate office.

Like many a man of action, Snyder's favorite recreation is sitting on tree-shaded lawns or in easy chairs, a hobby that he now has no time to indulge.

PRIME-MOVER

Responsibility for making FWA's program of speedy decentralized construction of demountable houses actually work now rests squarely on the shoulders—and outstretched neck—of Tennessee-born Rufe B. Newman, Jr. Fortunately, like his superiors in FWA, Newman also is known as an executive who gets things done. More of a listener than a talker, he approaches housing in terms of production, has scant use for "art." Newman and many another Washington administrator have yet to discover that good design is more likely to save than to lose both money and time.

TROUBLE-SHOOTER

Admittedly slow to get under steam is the program of rental housing by private builders, which Defense Housing Coordinator Palmer now entrusts to 34-year-old Frank A. Vanderlip, Jr., for prodding. Despite their notable achievement in producing 400,000 defense dwellings for sale last year, the private builders are reluctant to tackle rental housing. Inexperienced in this field, they are suspicious. They anticipate priority difficulties. Costs are up, but FHA standards have not been modified. Furthermore, institutional lenders who logically belong in the rental field are giving it the brush-off.

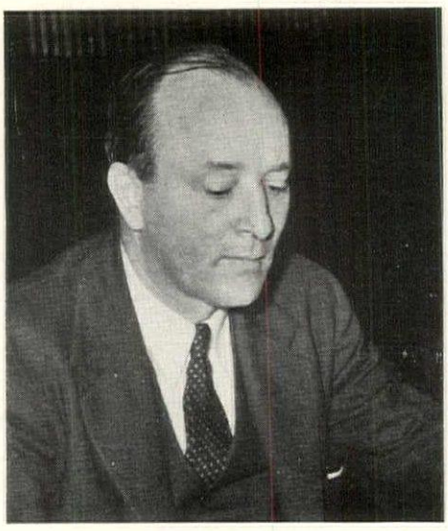
With Vanderlip at the controls, an educational campaign is expected to ease the builders' fears, to set this market in motion. Prime arguments to be used on large home developers: 1) higher priorities are available for rental housing than for housing for sale; 2) long-term investments result in delayed profits and therefore delayed taxes, important to any builder in the surtax brackets. Liberalization of FHA planning requirements seems assured. And, to complete the pincers on this sector of Building's front, the Home Builders Institute, NAREB affiliate, is pressing for a new FHA title which will permit insurance of the equity instead of the mortgage (see page 80).

Back of Vanderlip's new appointment lies a record of accomplishment in private and public undertakings. Socialite son of the one-time president of Manhattan's big National City Bank, he went to Phillips Exeter and Harvard (B. S. in architecture and economics), thence into business and the Guaranty Trust Co. School of Banking. As head of New York's Scarborough Properties Corp., he built a model housing development overlooking the Hudson. Besides being treasurer of the National Public Housing Conference, his name appears on a long string of business directorships.

RESIGNATION

With the normal USHA program undoubtedly suspended for the duration, excepting those projects directly usable for war housing, there is no reason for the Presi-

(Continued on page 44)



Baird Snyder III
A blow torch as a token

Rufe B. Newman, Jr.
Demountable houses on his neck

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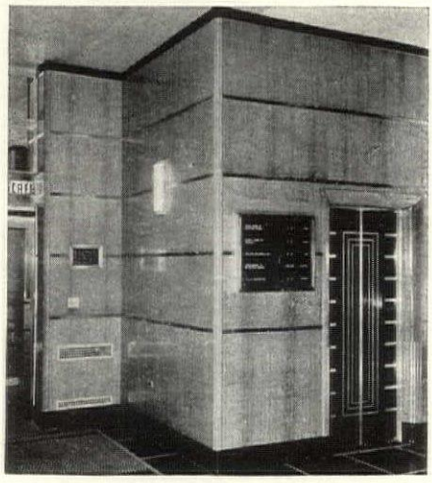

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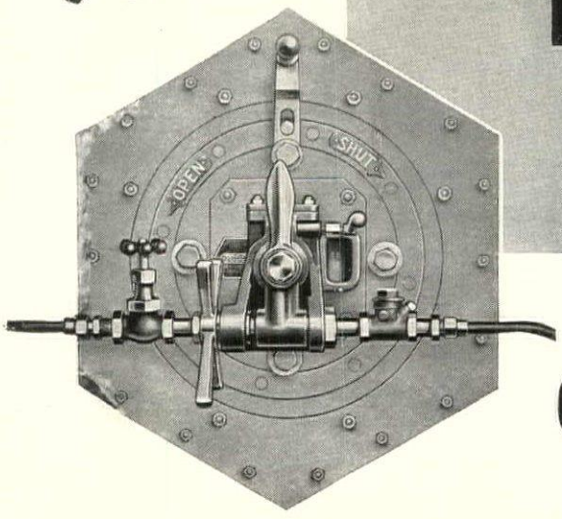

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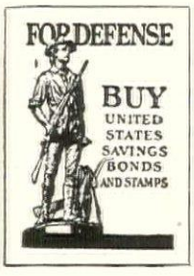

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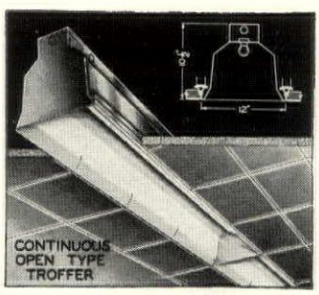

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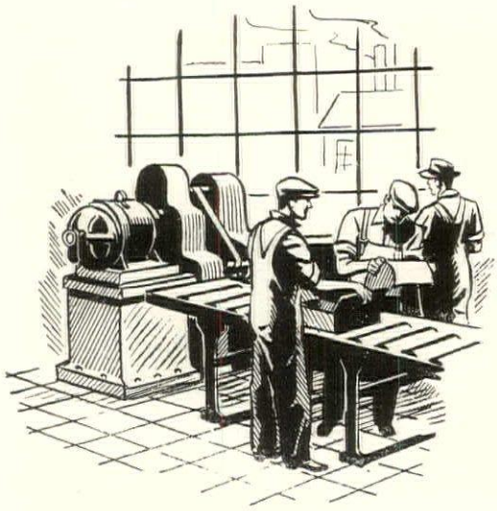

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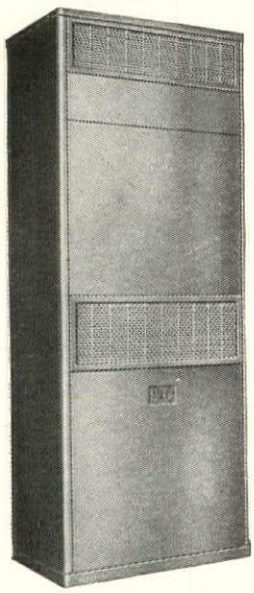

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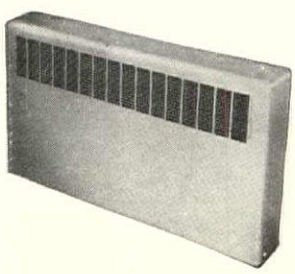

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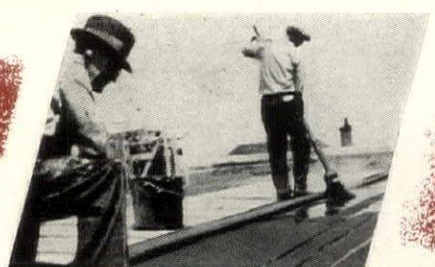

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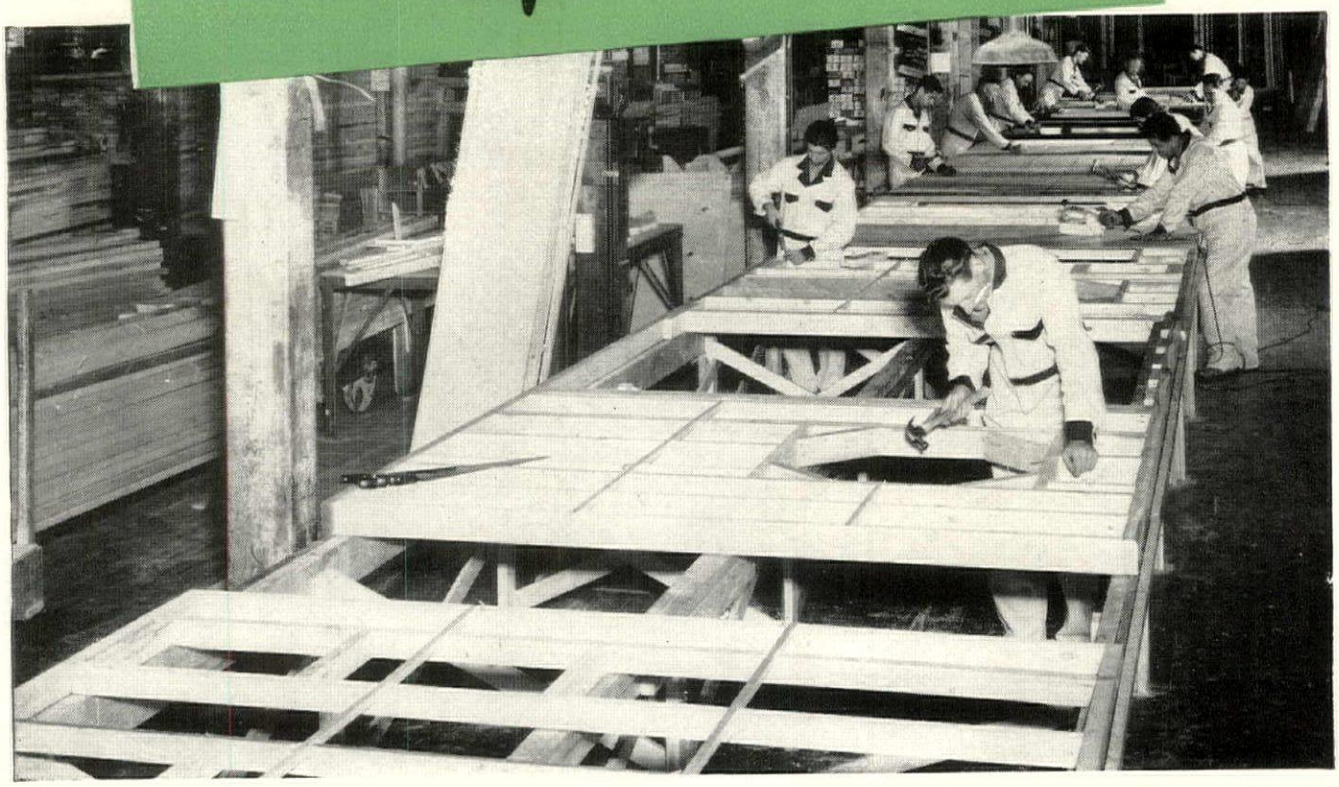

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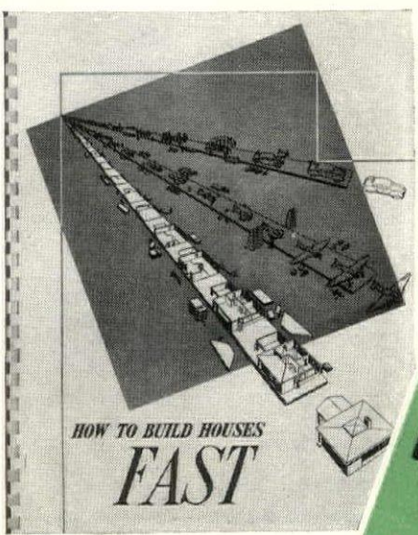

1000 Buildings a Month

in which Douglas Fir Plywood serves as a basic structural material are now being produced by prefabricators from coast to coast. The above photograph, showing a production line in Green's Ready-Built Homes Factory at Rockford, Ill., is typical of most prefabricating plants. Read *"How to Build Houses Fast"* and learn why Douglas Fir Plywood is the prefabricator's favorite material. Read also the Douglas Fir Plywood section in Sweet's Catalog and see how this "modern miracle in wood" can help you in every structure you design and build.

DOUGLAS FIR PLYWOOD
Real Lumber
MADE LARGER, LIGHTER
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STRONGER

GENUINE DOUGLAS FIR PLYFORM Concrete Form Panel D.F.P.A. INSPECTED

GENUINE PLYWALL Douglas Fir Plywood WALLBOARD D.F.P.A. INSPECTED

SPECIFY DOUGLAS FIR PLYWOOD BY THESE "GRADE TRADE-MARKS"

PLYPANEL D.F.P.A.

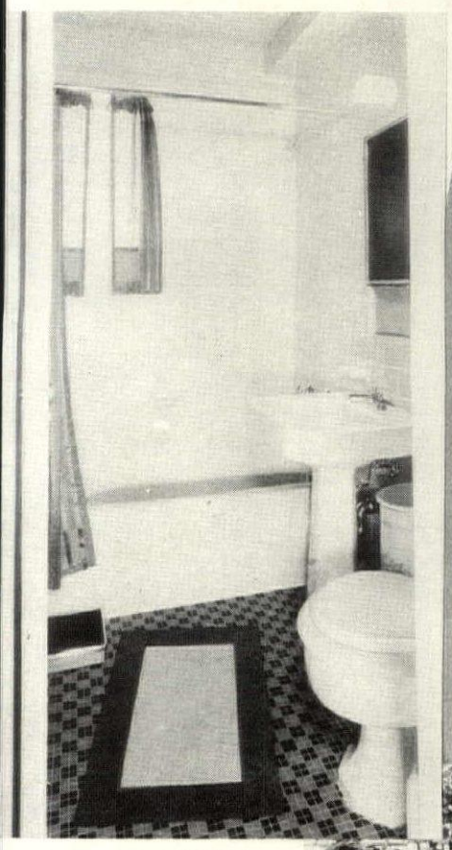
EXT.-D.F.P.A.

GENUINE PLYSCORD SHEATHING D.F.P.A. INSPECTED

Parkchester WORLD'S LARGEST APARTMENT DEVELOPMENT INSTALLED 17 CARLOADS OF MIAMI BATHROOM CABINETS

THIS

PLUMBING CONTRACTORS' LETTER TELLS STORY OF UNUSUAL SERVICE AND SATISFACTION



Above — Typical PARKCHESTER bathroom. Cabinet is Metropolitan Special by MIAMI. Equipment by Kohler.

Right — Metropolitan Life Insurance Co. housing project, PARKCHESTER, New York City. General Contractor, Starrett Bros. & Eken, Inc.

MURRAY HILL 4-3190-1-2-3-4

PLUMBING
STEAM
AUTO SPRINKLERS
VENTILATING
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AIR CONDITIONING

J. L. MURPHY, INC.
J. L. MURPHY, PRESIDENT
GENERAL PIPING CONTRACTORS
340 EAST 44TH STREET

Certified Heating Assures Comfort
H&PCNA

NEW YORK, July 1, 1941

Mr. P. J. O'Brien, District Manager
Miami Cabinet Division, Philip Carey Co.
60 East 42nd Street, New York City

Dear Mr. O'Brien:

We have just completed the installation of the last of the 12,262 Miami cabinets purchased from your company for the bathrooms of Parkchester, the Metropolitan Life Insurance Company housing development in New York City.

The construction of such a tremendous development as Parkchester presents many problems, one of the principle ones being the on-time delivery of all materials used. Seventeen carloads of Miami cabinets were used in this project. We would like you to know, and we appreciate the fact, that each and every carload of your cabinets arrived on time in accordance with our delivery schedule. We think it remarkable that of the thousands of cabinets delivered, only five were damaged in transit.

The Miami cabinets you furnished us for the Parkchester Project were satisfactory in every respect; likewise, other cabinets furnished by your Company for the Hillside Housing Project and the Williamsburg Housing Project, both in New York City, were also satisfactory and are serving the tenants in these projects well.

Very truly yours,

J. L. MURPHY, INC.

JLM:HJM

By: J. L. Murphy
J. L. MURPHY
President

There is little that need be added to Mr. Murphy's letter. The Parkchester order for MIAMI Cabinets was, by far, the largest ever placed in the United States. Notwithstanding its magnitude — over 12,000 cabinets — MIAMI delivered every carload on time, demonstrating its capacity for service as well as for quality of product.

MIAMI leads the world in the production of bathroom cabinets, from the luxurious creations for the finest residences and institutions to cabinets of superior quality and beauty for low-cost and multiple housing projects.

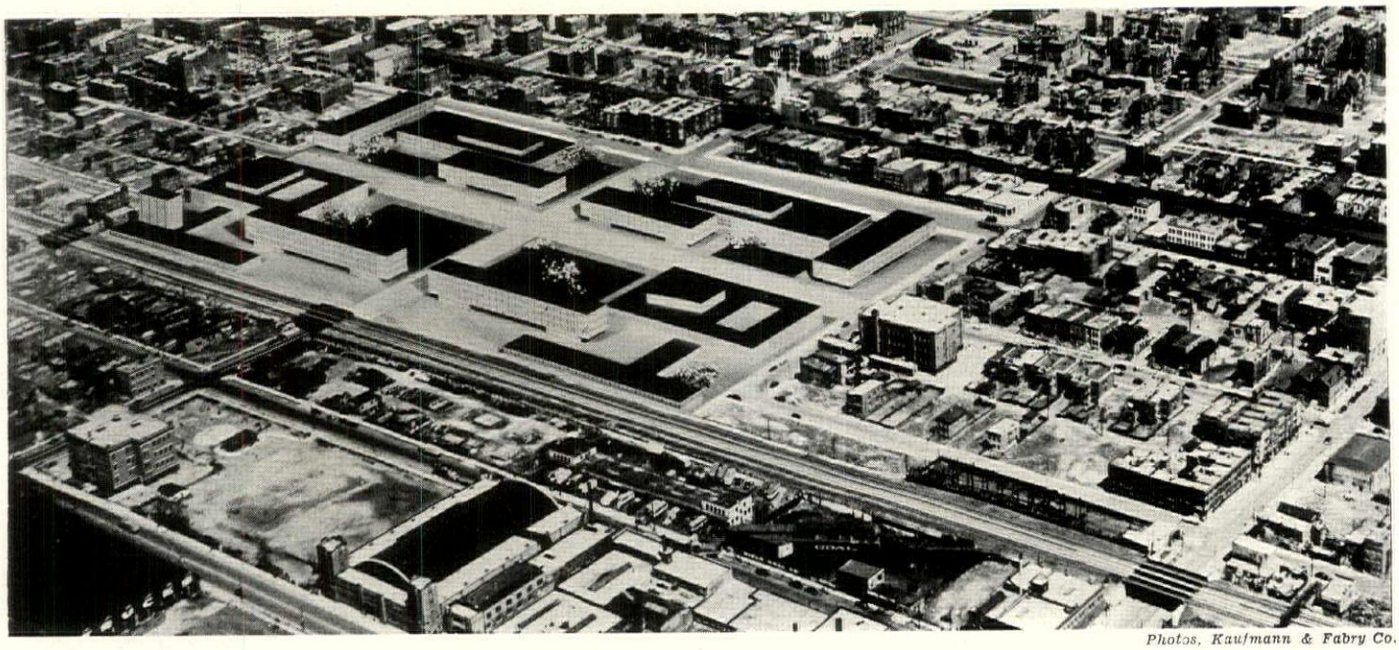
Whatever your problem in bathroom cabinets, you'll find the correct solution in MIAMI'S 140 distinctive models. See Catalog in Sweet's, or write for copy of new 1942 issue. Address Dept. AF.

WRITE FOR CATALOG
Address Dept. AF for 1942 Catalog, or see it in Sweet's.

MIAMI CABINET DIVISION

The PHILIP CAREY *Manufacturing Company*

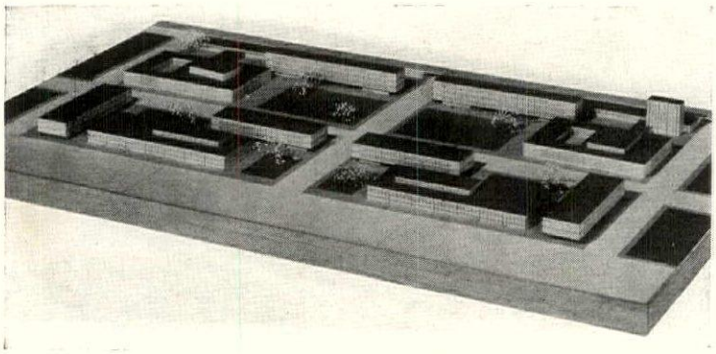
MIDDLETOWN, OHIO

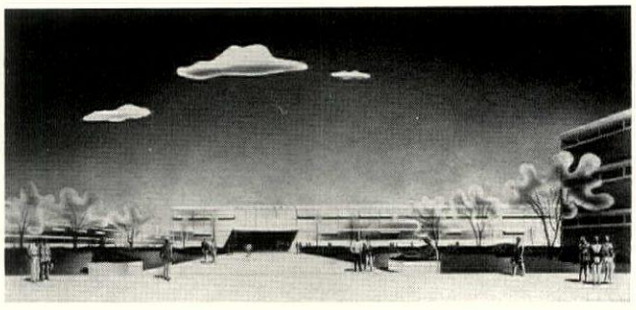


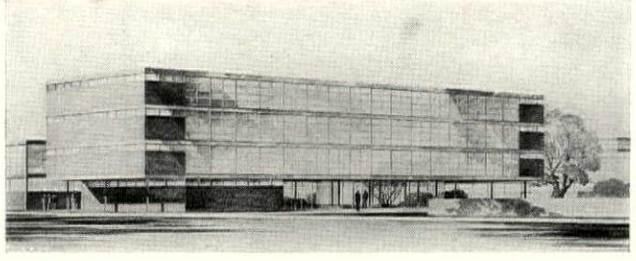
Photos, Kaufmann & Fabry Co.

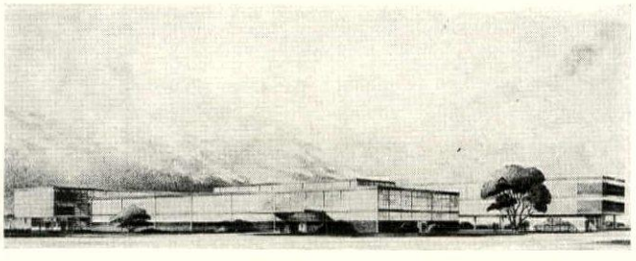
BUILDINGS TO COME

About a year and a half ago two of Chicago's oldest educational institutions, Armour Institute of Technology and Lewis Institute, were merged to form the Illinois Institute of Technology. With Armour came Mies van der Rohe, noted German modernist who has been in this country since 1938; with the merger came plans for a bigger and better group of buildings. The illustrations on this page show the results of merging Mies with a merger. The campus-to-be will cover six city blocks, and will, when built, be the first important group of U. S. educational buildings of modern design. The various units are to be of steel frame, walled largely with glass, and will be open in plan. The last applies to the group as well as to individual structures, for six of the twelve buildings will have open first stories. Flexibility is the keynote of the interiors: in the Architecture building, for example, there is a single large hall, subdivided by movable wood partitions. Because of this freedom in interior arrangement, Architect Mies found no need for great variations in buildings; most of the structures are a standard 330 feet by 90 feet wide by 30 feet high. Illinois Tech's immediate program calls for construction of six buildings. Because of the war importance of technical schools, priorities may be less of a problem than getting the rest of the money needed.

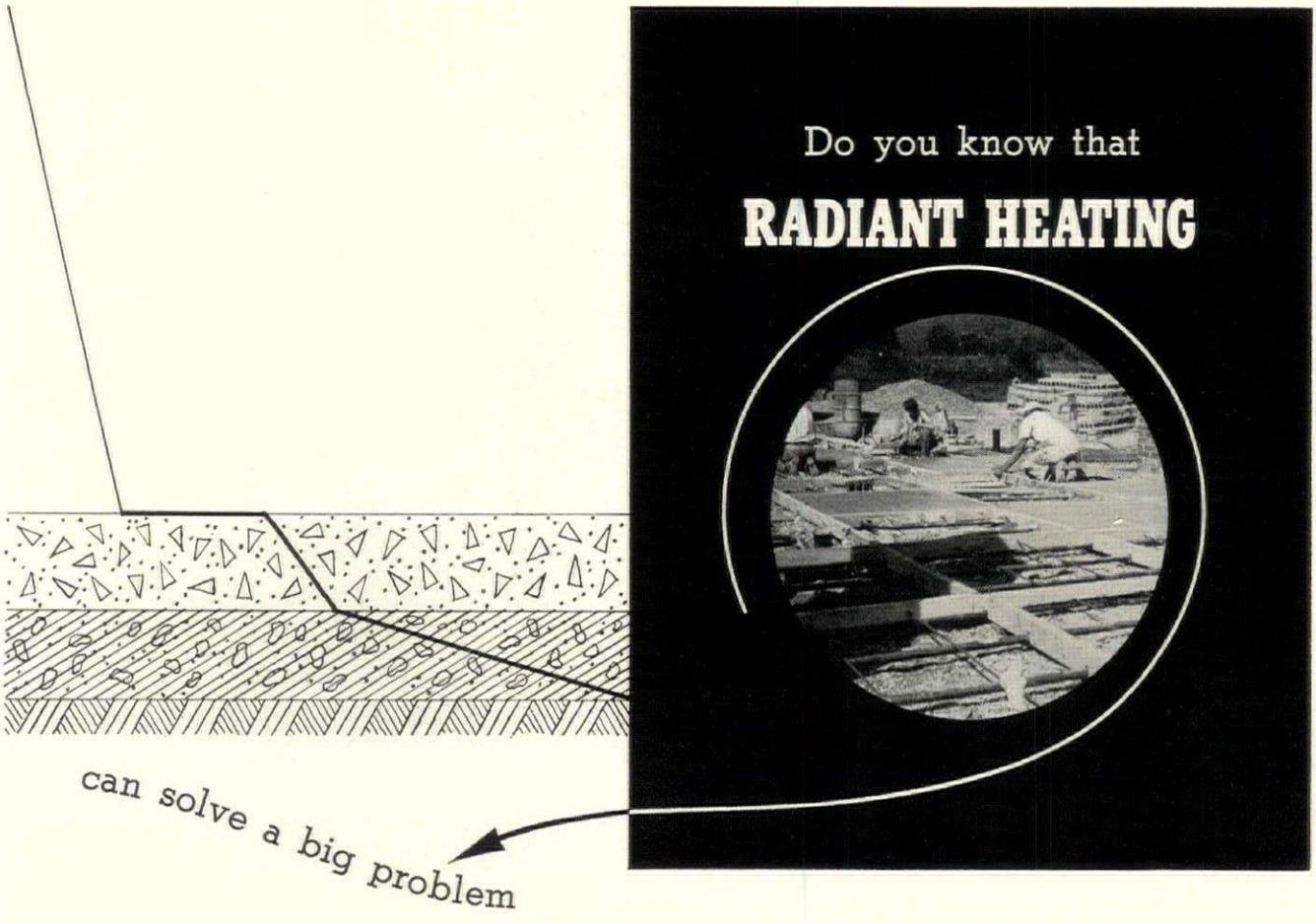








Top: composite photograph showing the campus and its future surroundings. Bottom, left: a closer view of the model. The three illustrations directly above show the Metallurgy Building (top), the Humanities Building, and the Mechanical, Chemical and Electrical Engineering Buildings.



in Defense Housing?

No acceptable answer to the defense housing problem can be written in terms of structural design alone. It must include a sound and considered solution of the *heating* problem as well. This is especially true in the case of the basementless house which so many architects favor as offering the most livability per dollar.

WHAT IS THE HEATING PROBLEM? To provide maximum comfort in the living zone—which very definitely includes keeping the *floor* warm.

CAN CONVENTIONAL SYSTEMS DO THIS? The mechanics of heat transfer make it exceptionally difficult. In any system where heat is distributed largely by convection, the temperature of the floor will always be lower than that of the air directly above it, due to "film effect." For example: with a 3" concrete floor on 3" of gravel, air temperature at the floor of 70°, and a ground temperature of 45°, the temperature drop between the concrete surface and the adjacent air is over 7°. While insulation and floor coverings decrease the amount of drop, they add expense and cannot completely cure the condition. Further, the air near the floor is the coldest in the room, and maintaining it at 70° would frequently mean excessive heat at the higher levels.

WHAT IS THE ANSWER? From every angle, Radiant Heating provides a simple and practical solution. From the standpoint of comfort, because the floor itself provides the heat. From the standpoint of speed and simplicity, because the pouring of the slab and the setting of the boiler completes the heating installation. And from the standpoint of cost, because Radiant Heating fits under the price ceiling set for defense housing. A number of privately built homes with Radiant Heating, served by automatically fired boilers, have already been constructed complete for $4800 and less.

WHAT ABOUT PIPING? Byers Wrought Iron combines to an unusual degree the high corrosion resistance, desirable thermal properties, and ease of fabrication that are essential to present and future dependability and satisfaction. Its use is strongly recommended, both to protect the investment, and to eliminate excessive maintenance. Ask for our bulletin, "Byers Wrought Iron for Radiant Heating Installations."

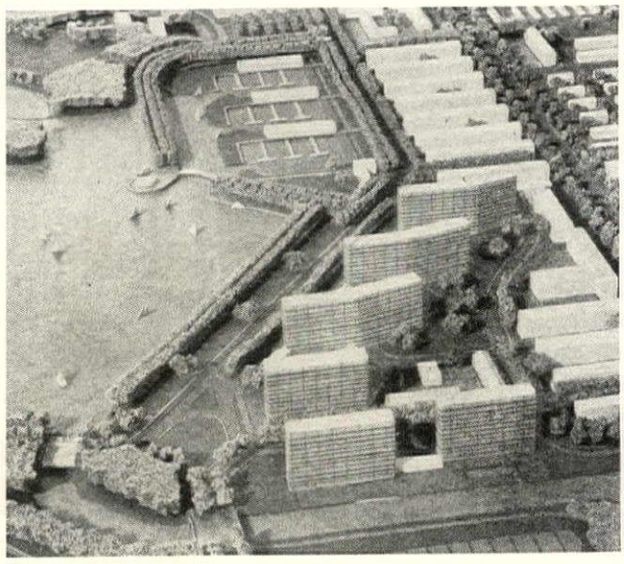
A. M. Byers Company, Pittsburgh, Pa. Established 1864. Boston, New York, Philadelphia, Washington, Chicago, St. Louis, Houston, Seattle, San Francisco.

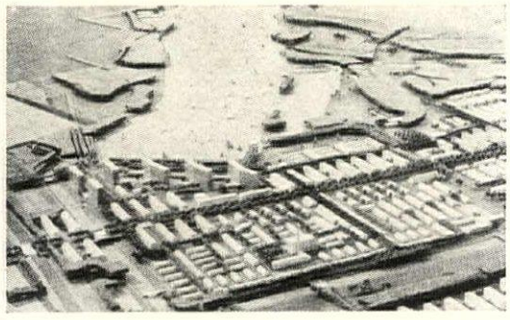
BYERS WROUGHT IRON

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

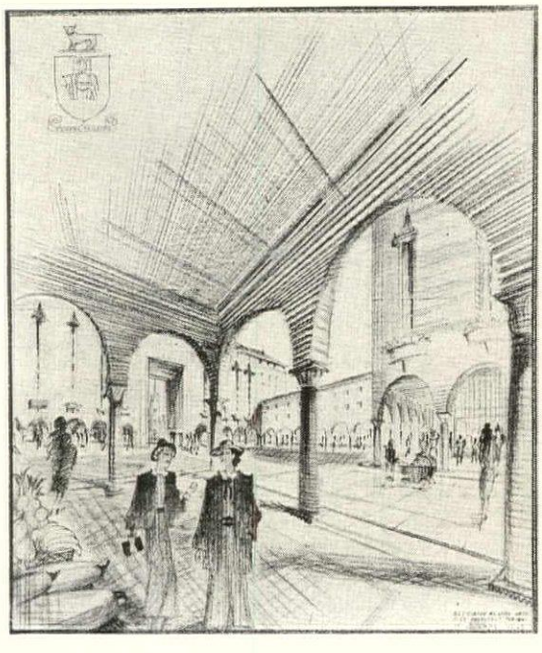
BUILDINGS TO COME, *continued*

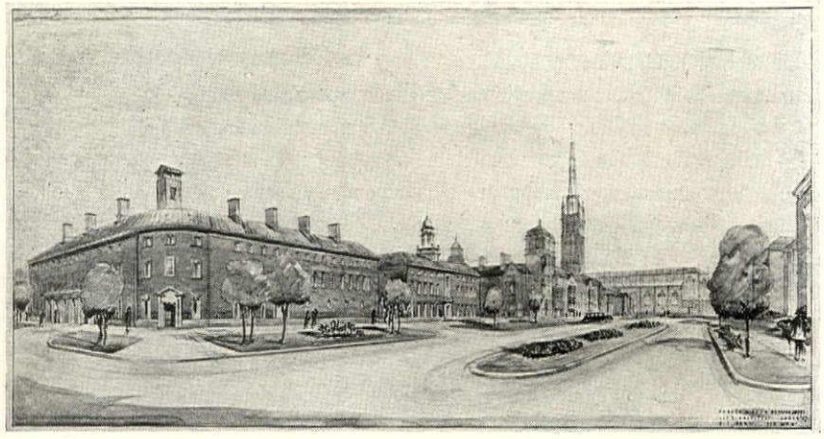
On February 14, 1940, almost three months to the day before Holland was overrun, the Dutch Government voted to put into execution one of the great city plans, a series of garden cities for Amsterdam that would have revolutionized a whole section of the physical environment of that city's 1.000,000 inhabitants. The model photographs here were taken from the latest, and perhaps last, bulletin of the International Federation for Housing and Town planning, which just arrived in this country, more than a year overdue. Citizens of Holland, today under the Nazi heel, have other things to think about, other things to do besides building. But there must be few who are not as convinced right now, as they were convinced in February of two years ago, that their Amsterdam plan is still definitely under the heading of "buildings to come."





The scheme shown in the model has provisions for 11,000 dwellings, disposed in units from one to twelve stories in height, which leaves generous spaces for traffic, child and adult recreation. The "lake" is entirely man-made, and has provisions for bathing and all kinds of water sports, will someday form the nucleus of a great civic recreation center.





Inspired by Lord Reith's statements on post-war reconstruction and by its own urgent needs, Coventry has already made its plans, suggested in these two sketches. Designed in the officially emasculated version of Georgian, with Italo-Swedish arcades, the scheme indicates that there is still a segment of Britain that has learned nothing and forgotten nothing, that "reconstruction" will have to be applied as much to the architects as to the cities.

PENBERTHY INJECTOR COMPANY

Manufacturers of QUALITY PRODUCTS *Since 1886*
DETROIT, MICHIGAN • *Canadian Plant,* Windsor, Ont.

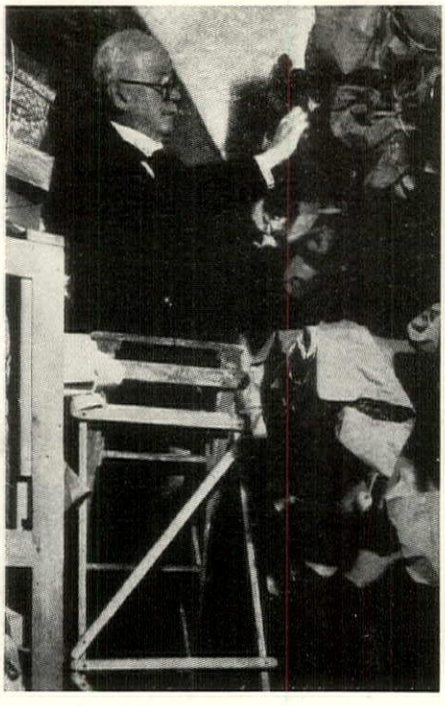
FORUM OF EVENTS

Latest Good Neighbors are the New York stores of Lord & Taylor and Macy's, each of which opened shows last month with their versions of the South American Way. The two interiors are by Lord & Taylor's crack Decorator Pahlmann, who recently went to Peru in search of inspiration. The nostalgic drawing room at the right suggests how Lima's other half lives; the living room below takes its colors from a Peruvian poncho, has neon cove lighting, modern furniture, and a 19th Century portrait of Simon Bolivar. These and the other rooms are as much Pahlmann as Peruvian, are full of his favorite bright colors, antiques remodeled in an unexpected manner, and such gags as bulletin boards over beds. Below, right, one of the gaudy entrances to Macy's Latin American Fair, taken from a ranch in San Jose, Mexico. Other eye-openers include a one-third-scale replica of the Temple of Warriors at Chichen Itza, a Modern Shop, designed to look like the airport at Rio, and a Colonnade of Shops complete to the last red tile roof.

Hans Van Nes

Hans Van Nes

J. Allan Mitchell



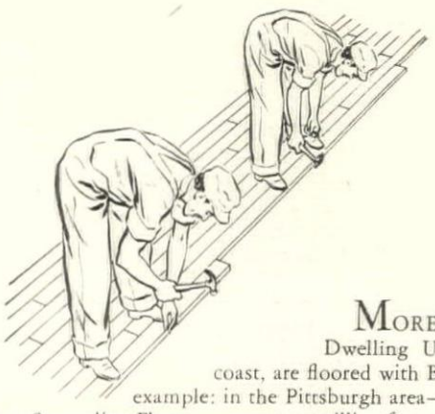
A Paper Saver is Sir Edwin Lutyens, dean of English architects and President of Britain's Royal Academy. The photographs, taken from THE ARCHITECT'S JOURNAL, show Sir Edwin rummaging through working drawings of early masterpieces, musing over old problems, and finally making his contribution towards meeting the quota of 100,000 tons of paper urgently required for munitions.

(Continued on page 54)

★ ★ ★ 74 ★ ★ ★

BIG DEFENSE HOUSING PROJECTS ARE USING BRUCE STREAMLINE FLOORING

To Save Time . . . Save Money . . . Get Better Floors!



MORE than 20,000 Defense Dwelling Units, from coast to coast, are floored with Bruce Streamline. For example: in the Pittsburgh area—8 out of 13 Projects have Streamline Floors . . . over one million feet used in Corpus Christi and Orange, Texas . . . in the Washington area, more than 4,000 units floored with Streamline. Low cost, dependable source of supply, saving of precious days—these are the features that have made Streamline Flooring the first choice of Defense Housing Contractors. The proof: See the partial list below of Defense Projects (with names of contractors) in which Bruce Streamline Flooring has been used.

★ ★ ★

Sheffield, Ala. (TVA)
Florence, Ala. (TVA)
Mare Island, Cal. (NAVY)
Little Rock, Ark. (USHA)
Harmon Const. Co.
Panama City, Fla. (PBA)
J. L. Ewell
Charlestown, Ind. (PBA)
Marion Development Co.
Grinslade Co., Inc.
Grinslade Const. Co., Inc.
Connersville, Ind. (PBA)
J. I. Barnes
Knox, Ind. (OADH)
National Homes Corp.
Jeffersonville, Ind. (PBA)
Dunlap & Co., Inc.
Walkerton, Ind. (OADH)
National Homes Corp.
Kuhne Simmons Const. Assn.
New Albany, Ind. (PBA)
Leslie Colvin
Versailles, Ind. (PBA)
Dunlap & Co., Inc.
South Bend, Ind. (PBA)
Thos. L. Hickey, Inc.
Des Moines, Ia. (FHA)
Kucharo Const. Co.
Louisville, Ky. (PBA)
Whittenberg Const. Co.
Louisville, Ky. (PBA)
Samuel Plato
Alexandria, La. (FHA)
Crawford, Inc.
Bath, Me. (PBA)
Stewart & Williams, Inc.
Aberdeen, Md. (PBA)
Monahan-McCann Corp.
Forest Glen, Md. (PBA)
Harwood-Nebel Const. Co.
Greenbelt, Md. (FSA)
J. A. Johnson Const. Co.
Indianhead, Md. (PBA)
Lockwall Houses, Inc.
Indianhead, Md. (PBA)
National Homes Corp.
Pope's Creek, Md. (NAVY)
Wm. P. Lipscomb Co., Inc.
Riverdale, Md. (FHA)
Ring Const. Co.
Biloxi, Miss. (FHA)
Ft. Leonard Wood, Mo. (PBA)
Swenson Const. Co.
Clark Twp., N. J. (OAMO)
Clifford F. McEvoy
Pine Camp, N. Y. (PBA)
Deline Const. Co.
Geo. H. Hyde, Inc.
Port Clinton, O. (OADH)
National Homes Corp.
Kuhne Simmons Const. Assn.
Barberton, O. (USHA)
Weinstein Const. Co.
Canton, O. (PBA)
Geo. H. Whike Const. Co.
Gibbons-Grable Const. Co.
Dayton, O. (USHA)
Sheets Const. Co.
Massillon, O. (PBA)
Henry Dattner
Massillon, O. (DHC)
Robert H. Evans & Co.
Columbus, O. (FHA)
Clairton, Pa. (OADH)
James McHugh

Dravosburg, Pa. (OADH)
Sherry-Richards Co.
Etna, Pa. (OADH)
Madsen Const. Co.
Morris Shumacher
Mifflin Twp., Pa. (OADH)
Lloyds Builders, Inc.
Philadelphia, Pa. (FHA)
Nelson-Pedley Co.
Pittsburgh, Pa. (OADH)
Michael Pontarelli & Sons
Starrett Bros., Inc.
Rankin, Pa. (USHA)
Henry Busse
Scott Twp., Pa. (OADH)
Geo. Dreyman, Inc.
Stowe Twp., Pa. (OADH)
Mellon-Stuart Co.
Titusville, Pa. (PBA)
David T. Riffle
Charleston, S. C. (DHC)
Dawson Eng. Co.
Alcoa, Tenn. (OAMO)
A. H. Whisman Co.
Jackson, Tenn. (OADH)
Algernon Blair
Milan-Humboldt, Tenn. (OADH)
Algernon Blair
Corpus Christi, Tex. (USHA)
Thos. Bate & Sons
Corpus Christi, Tex. (USHA)
C. L. Browning, Jr.
Corpus Christi, Tex. (USHA)
Hinchberger Const. Co.
Dallas, Tex. (OAMO)
Central Const. Co.
Orange, Tex. (USHA) (NAVY)
H. E. White
Orange, Tex. (NAVY)
Brown-Lane Co. and Central Const. Co.
Newport News, Va. (FHA)
Geo. F. Christen
Norfolk, Va. (NAVY)
Byrn Const. Co.
Arlington, Va. (FHA)
Geran Const. Co.
Wheeling, W. Va. (USHA)
Don Byrum, Inc.
Star City, W. Va. (DHC)
Don Byrum, Inc.
Anacostia, D. C. (ADA)
Victor R. Beauchamp
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LETTERS

FOR A MERGER

Forum:

We hear much of the difficulties faced by architects due to conditions brought about by the war. Priorities and taxes have taken their toll and many architects have closed their offices for the duration while others are marking time. There may never be a better period for the architects wherever they happen to practice to take stock of themselves and set their own house in order. The problem is nation wide but for emphasis the complicated situation in New York City is discussed.

In a community such as the New York Metropolitan area it is necessary, if the profession is to progress, to have the architects organized along the following lines, instead of in the existing heterogeneous and overlapping combination of A. I. A. Chapters, Architectural Societies, and other groups with over half of the registered architects unaffiliated with any of them.

A full time salaried executive director who, under the general direction of the Executive Committee, will supervise the details in connection with:

A well directed public relations program, which includes selling the profession to the public by a publicity campaign.

Active interest in local, State and National legislation as it affects architecture;

Active campaign to put the planning of public buildings in the hands of private architects;

Periodic bulletins on matters of vital interest to the profession;

Return to private architects the practice of architecture;

Liaison with the New York State Association of Architects and A. I. A. in Washington.

In order to carry out the above work, a considerable fund is required which cannot be assembled with the various architectural groups working as separate units. This has been proven from past experience, because no single organization has sufficient funds available to carry out a program as above mentioned.

It is therefore suggested that a single organization of architects be established in the Metropolitan area, which will eventually include in its membership *all registered architects;* which will have as group members such organizations as the Beaux-Arts Institute of Design, which will collaborate with other allied professional groups in important matters, and which will be a group member of the American Institute of Architects, and the New York State Association of Architects.

This master group might be made up of the present architectural groups known as the New York, Brooklyn and Westchester Chapters, A.I.A., and the New York, Brooklyn, Bronx, Queens, Staten Island, Long Island and Westchester Architectural Societies, the individual members of which immediately become members of the new organization and associate members of the A. I. A. These individual members have the right to corporate membership in the Institute upon application and the payment of the required dues. It is felt that this method will enable the local group to function on all local matters while permitting the master group to function on matters of general interest and undertake the program mentioned near the beginning of this letter.

As an alternative, the master metropolitan group might be a single chapter of the Institute with branches or sections corresponding to the present chapters and societies.

As there are approximately 2,500 registered architects in the New York Metropolitan area, and about fourteen allied professional organizations, it can readily be seen that if they were organized in a single workable group the individual dues could be kept low and yet provide a treasury to carry out a badly needed constructive program. The wishes of such a group could not be ignored by our elected legislators or representatives.

Committee on Unification,
New York Chapter, A.I.A.
Lewis G. Adams, Chairman
William L. Bottomley
Matthew De Gaudio

New York, N. Y.

NON-WAR HOUSING

Forum:

We are one of your recent subscribers to THE ARCHITECTURAL FORUM, and you furnished us with a copy of your bulletin of December 16, 1941, titled "Washington Building Letter." Your bulletin outlines Washington's war policy as related to building, and we quote from the second paragraph of the bulletin, "War Policy completely bars non-essential civilian construction."

We have a number of customers contemplating building residences in the price range of $5,000 to $7,000 which could not possibly be classed as essential civilian construction. We would like to know whether or not these people should attempt to build residences even though they have been assured by local dealers in building materials that such materials for the completion of the residences could be delivered from supplies on hand.

An expression from you in this connection will be very helpful to us in dealing with our customers who come to us for advice before commencing construction on a new residence.

B. F. BARR

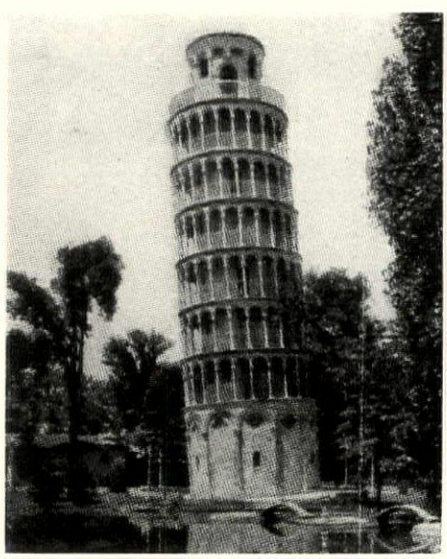
First National Bank of Danville
Danville, Va.

As we go to press there is no current prohibition against building where material and equipment are available but Government attitude is clearly defined by priority regulations. Government has already taken every step short of prohibiting non-war building. Usually reliable sources indicate licenses soon may be necessary to build new structures.

NO COMPETITION

Forum:

Just to provoke discussion, especially after your very generous treatment of the ventilating tower competition *(Arch. Forum, Nov. '41, p. 10)*, herewith a replica of the leaning tower of Pisa.



The 110-ft tower is in Ilgair Park, Chicago. It is built of precast reenforced concrete and houses the park's high pressure water tank. A circular staircase is for the convenience of romantic view lovers. The original plans provided for a tea room in the lantern at the top.

ALBERT HILL

San Francisco, Calif.

START PLANNING *NOW*

FOR SLOAN-EQUIPPED HOMES

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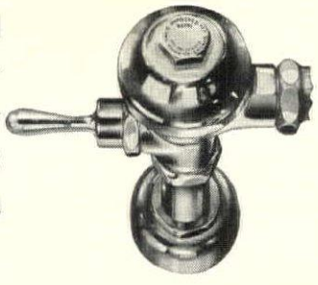
Everyone knows flush valves to be the ideal method of flushing toilets. Sloan Flush Valves are installed in luxury homes, apartments, clubs, hotels, and all types of large buildings everywhere because they give enduring satisfaction with astonishingly low maintenance cost—they protect health by preventing back-syphonage—they save water—they are quiet—they are the accepted standard of excellence yet cost no more than others.

Heretofore the use of flush valves has largely been restricted to commercial-type buildings—few being found in small homes. But here is our promise to you: there will be Sloan Flush Valves for residences after the present war is over.

So start planning now for Sloan-equipped homes. With Sloan Flush Valves you provide home owners with the ultimate in convenience, health and economy. Remember: there are more Sloan Flush Valves sold than all other makes combined.



SLOAN VALVE COMPANY

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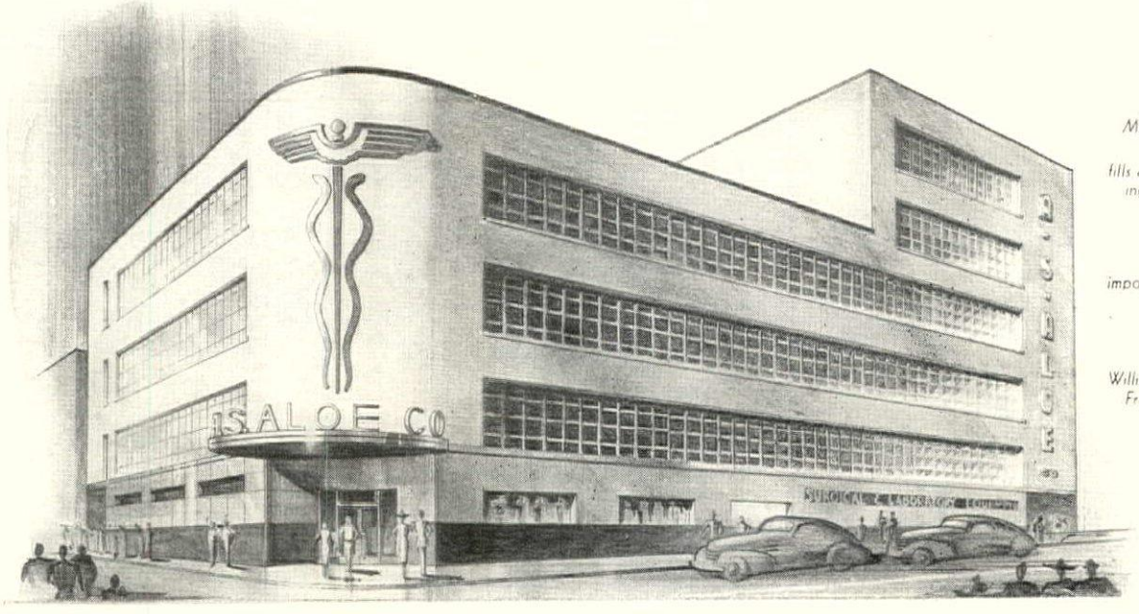
☆ WORTH REMEMBERING . . . THE STEEL SASH MERIT-METER PROVES MESKER GIVES YOU AT LEAST 35% MORE QUALITY FOR YOUR MONEY! ☆



MESKER STEEL WINDOW ENGINEERING
fills a war-time need by providing ample natural light and ventilation for the
A. S. ALOE CO
ST. LOUIS, MO
important surgical supplier to the
UNITED STATES ARMED FORCES

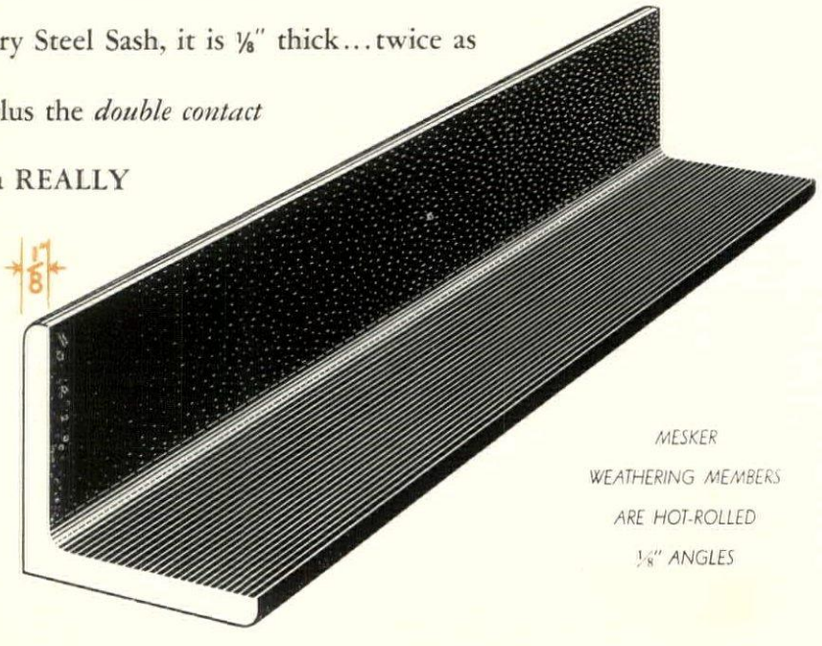
☆

William P. Wachsman, Architect
Fruin-Colnon, Contractors

PERMANENCE...
that is more than a claim

No matter what you pay, nor which window you buy, you expect it to be *permanently weather-tight.*

Yet, the Weathering Bar is the potential "weak link" in every Steel Window. Mesker eliminates this "weak link" by using a Weathering Bar the same thickness as other sections of the Sash. Compared with ordinary Steel Sash, it is ⅛" thick...twice as thick...TWICE AS STRONG. This, plus the *double contact* Mesker's Weathering Bar provides, assures a REALLY weather-tight window. More than a mere advertising claim, the Double-Thick Weathering Bar is visual proof of Mesker superiority. A good reason why, *today especially,* you should *specify Mesker.*



MESKER WEATHERING MEMBERS ARE HOT-ROLLED ⅛" ANGLES

THE DOUBLE THICK WEATHERING BAR

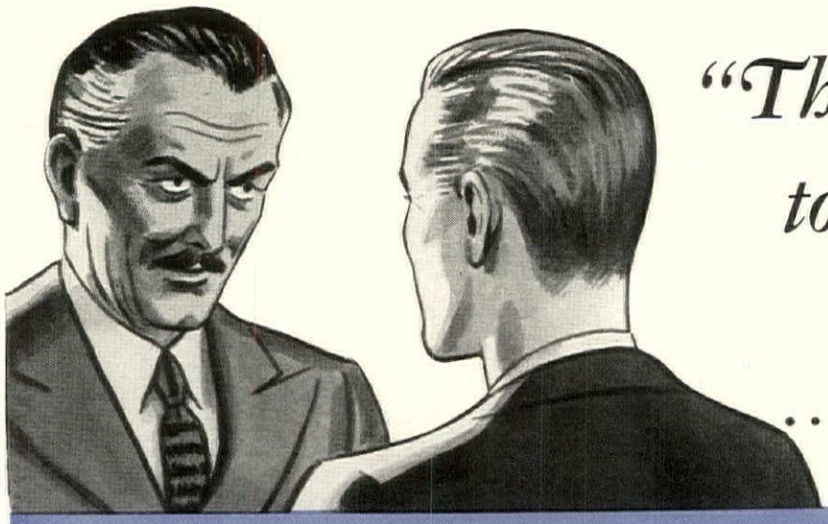
. . . used on Mesker Industrial Pivoted Sash is ⅛" thick...twice that used by others in Industrial Steel Sash. This exclusive feature, so dramatically illustrated by the Visual Test Kit (free upon request), is indicative of the quality built into ALL Mesker products.

Mesker Brothers

STEEL SASH

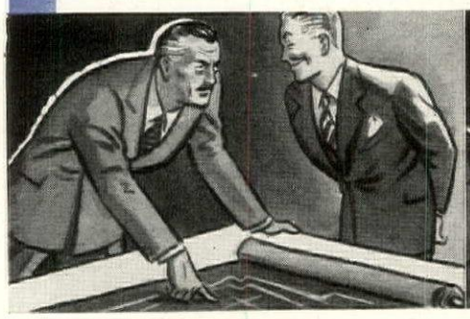
424 SOUTH SEVENTH ST., ST. LOUIS, MO.

CASEMENT WINDOWS • MONUMENTAL WINDOWS • INDUSTRIAL WINDOWS
INDUSTRIAL DOORS • METAL SCREENS • DETENTION WINDOWS



"This job has to be different!" he told me

. . . AND I HELPED HIM MAKE IT SO!



"I've got to have floors that fairly sparkle with life," said Bill Wallace. "This will be a mighty important building in the community —thousands will pass through it every day."

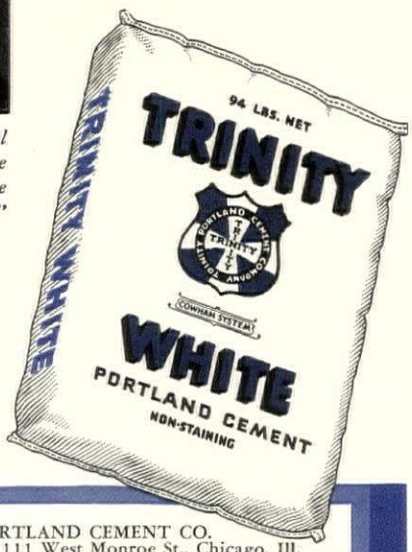
"That's just where Trinity White can help you," I said. "Trinity White is the whitest *of white portland cements. Put Trinity in your terrazzo specifications for personality in that floor."*

"Trinity White will produce a terrazzo in which the natural beauty of the colorful marble granules is given full play," I said. "Sounds good to me," he replied—"in it goes."

On my invitation to the grand opening, Bill wrote this note—"It was a lucky day for me when you told me about Trinity White—those floors are nothing short of being a sensation!"

A FREE SAMPLE FOR YOU

For a free sample of Trinity White, simply clip the coupon below to your letterhead, and forward it to Trinity Portland Cement Co., Republic Bank Bldg., Dallas, Texas, or 111 West Monroe St., Chicago, Illinois.



TRINITY WHITE, "the whitest white" portland cement, will produce the whitest concrete or mortar—or the clearest, sharpest colors, whether it be used for stucco, cast stone, terrazzo, architectural concrete or any of the many uses of white cement.

TRINITY WHITE
PORTLAND CEMENT
PLAIN OR WATERPROOFED

TRINITY PORTLAND CEMENT CO.
Dept. AF-242 111 West Monroe St., Chicago, Ill.

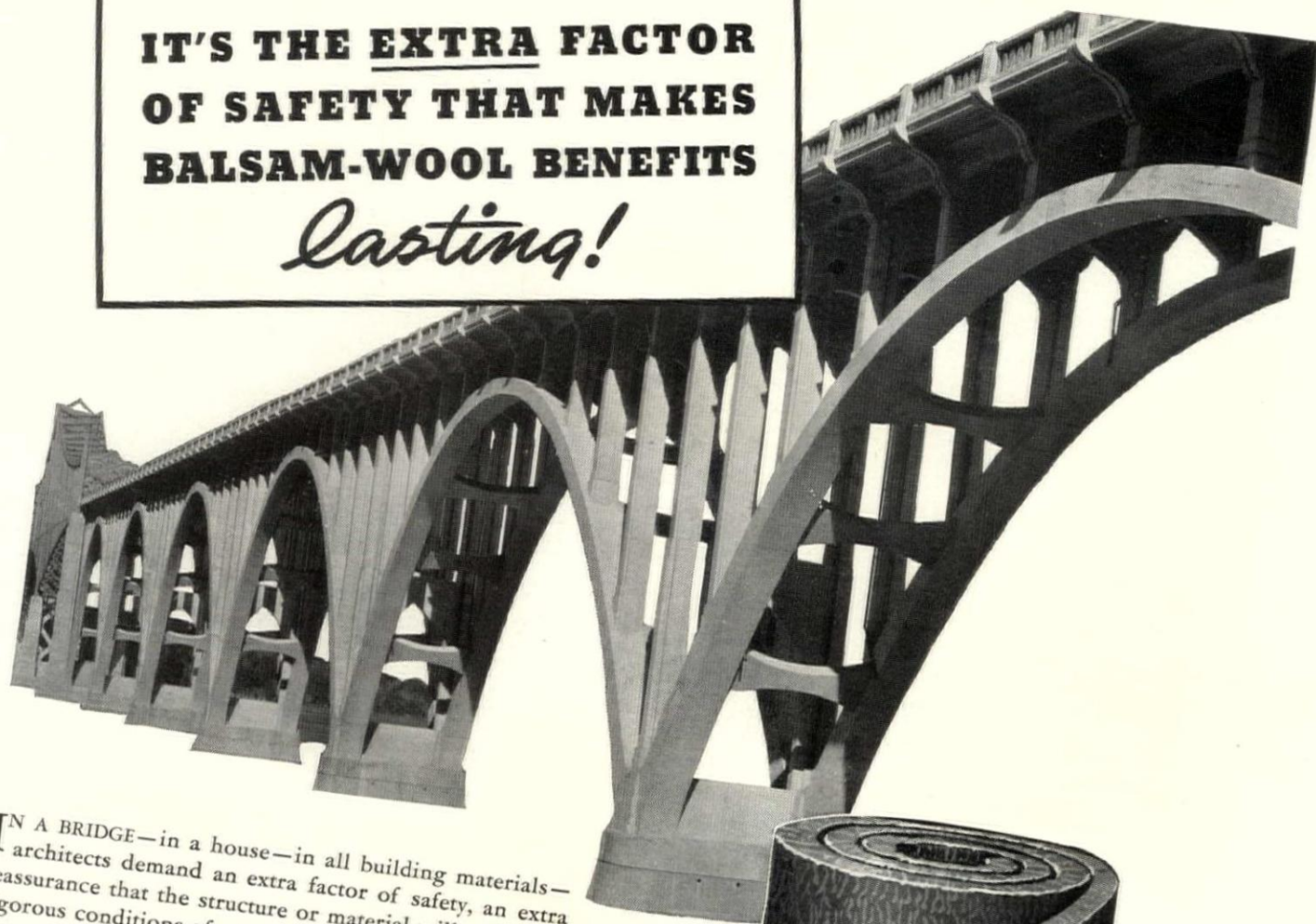
Send me, free of charge, a sample of Trinity White Portland Cement, so I can prove to myself it is "the whitest white."

Name.....

Address.....

City.....*State*.....

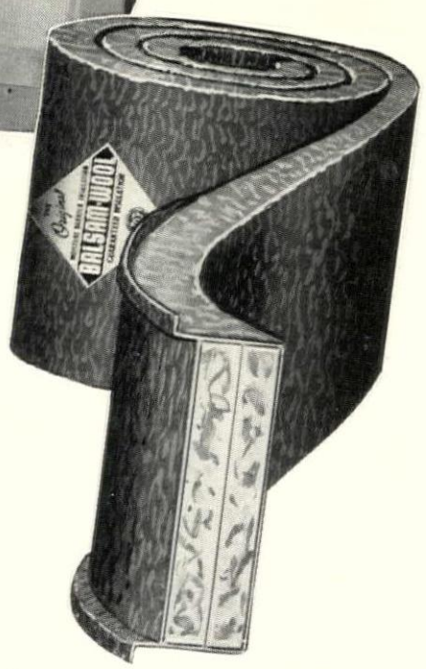
IT'S THE EXTRA FACTOR OF SAFETY THAT MAKES BALSAM-WOOL BENEFITS *lasting!*



IN A BRIDGE—in a house—in all building materials—architects demand an extra factor of safety, an extra reassurance that the structure or material will withstand the most rigorous conditions of use.

Balsam-Wool Double Value insulation contains this extra factor of safety. That is why Balsam-Wool is able to produce—*permanently*—the comfort and fuel-savings expected. That is why Balsam-Wool has, for more than 20 years, retained its place as the aristocrat of insulations—while hundreds of different types and brands of insulation have come and gone.

To make insulation benefits SURE, get complete information about Balsam-Wool. Just mail the coupon!



EXTRA SAFETY—two or more Moisture Barriers, each one more than sufficient to withstand the load imposed on it.

EXTRA SAFETY—two or more Wind Barriers . . . reinforced and stiffened flange to give extra support and to assure tight application.

EXTRA SAFETY—the highly efficient insulation mat is Double Sealed against those elements which might reduce its effectiveness.

EXTRA SAFETY—the fire and termite resistant mat is cemented to both Liners, front and back—resulting in toughness which withstands rough handling on the job.

EXTRA SAFETY—Balsam-Wool is fastened in place with nails or staples driven into framing members at Both Sides and at Top and Bottom. Even constant vibration cannot shake the mat loose.

BALSAM-WOOL

BALSAM-WOOL • NU-WOOD

Products of Weyerhaeuser

WOOD CONVERSION COMPANY
Dept. 147-2, First National Bank Bldg., St. Paul, Minnesota
Gentlemen: Please send me complete information about Balsam-Wool DOUBLE VALUE Insulation.

Name.....

Address.....

City.....*State*.....

BOOKS

Early buildings of North Carolina . . .

A complete manual on civil defence . . . Traffic engineering . . . American Landscape painting.

THE EARLY ARCHITECTURE OF NORTH CAROLINA, by Frances Benjamin Johnston. The University of North Carolina Press. 290 pp., illustrated. 10½ x 13. $10.

The remarkable spread of interest, during the past decade or so, in our own architectural backgrounds, has been very fully indicated by the flood of books on every conceivable phase of early American building. The larger part of these efforts has been mediocre or worse, partly because competent architectural historians are few and far between, but chiefly because such books can be turned out with comparative ease by any moderately literate individual who has the time and patience to collect the required number of photographs and facts. By and large the effect of these books, even the bad ones, has been healthy, for they have tended to increase confidence and independence by the revelation of an extensive and rich native heritage of good building. If one were to discount entirely their value as historical documents, they would still be important for the part they have had in breaking the strong hold of European precedent on the thinking of the architectural profession.

This new book deals with a part of American building that has been conspicuously ignored. Throughout the early years of the republic, North Carolina showed substantial differences from the adjoining states. An inhospitable coast tended to retard development in comparison with the more fortunately situated communities of Virginia and South Carolina, while the geography of the inland part of the state was such that exports found their way more easily to the north and south than to North Carolina's own seaboard. Architectural influences therefore came as much from neighboring states and the West Indies as from England. Even Connecticut and the Moravian settlements of Pennsylvania, as Dr. Holland points out in the foreword, have left their mark on building in the state.

In presenting the story of these complicated influences, the author and her collaborators have done an excellent job. The information is neatly and concisely assembled in a series of brief chapters, and the illustrations, normally slighted in books of this sort, are models of their kind. The photographic reproductions are both well-selected and technically excellent, and they are shown, moreover, at a scale which makes possible a detailed study of the examples.

CIVIL DEFENCE, A Practical Manual Presenting With Working Drawings The Methods Required For Adequate Protection Against Aerial Attack, by C. W. Glover. Chemical Publishing Company, Inc., Brooklyn, N. Y. 794 pp., illustrated. 6¼ x 8¾. $16.50.

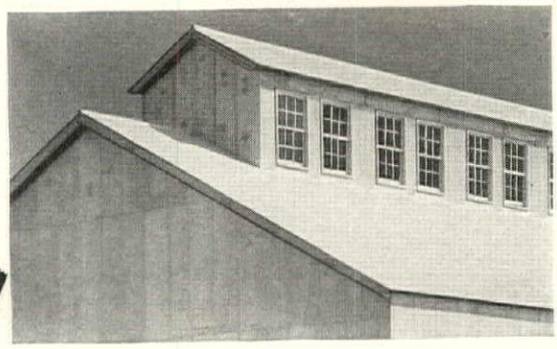
Captain Glover brought out his massive work, dedicated to "the defenceless citizens." in the middle of 1938. Its apologetic preface, addressed to British readers, might with equal appropriateness have been designed for an American audience in the days before December 7, 1941. In this introductory note the author states that "it is hoped that the book's appearance will not be taken as an acceptance of the inevitability of war," that he "is not an alarmist nor an ultra-pacifist," and that "he has considerable sympathy with the sentiments of the idealist but is forced by the facts of the present position to abandon utopian ideas." The preface to the present edition, written almost three years later, merely remarks that the cost figures given in the book must now be revised upwards by a third. Perhaps the most important single statement in the entire 794 pages is the comment on civilian defense as insurance: "The civilian population trained to protect itself will be largely insured against injury and panic and thus the great cities of this country (the reference here is to England)—at present almost an invitation to the air raider—*will not present tactical advantages worth the military effort and risk in securing them.*" It would be difficult to overstress the significance of this statement. Protection of the home front not only saves lives and property, but has an actual military function in discouraging attack. It has been said that a major reason for the absence of gas attacks on England was the high degree of preparedness of the population; even if this is only partly true, then the cost of masks and decontamination apparatus has more than balanced the loss of working time such attacks would have caused.

In this encyclopedic study, the entire field of protection for civilians is presented. The author discusses the forms of aerial attack, the types of weapons used and the various kinds of defensive measures called for. All of this material is presented in great detail, with photographs, engineering formulae, drawings of a great variety of structural methods of building reenforcement, etc., and data sheets on products available on the British market. The section on gas-proofing, to take but one of many examples, presents not only those protective measures at the disposal of the average citizen, but goes on to illustrate a number of elaborate ventilating and filtering

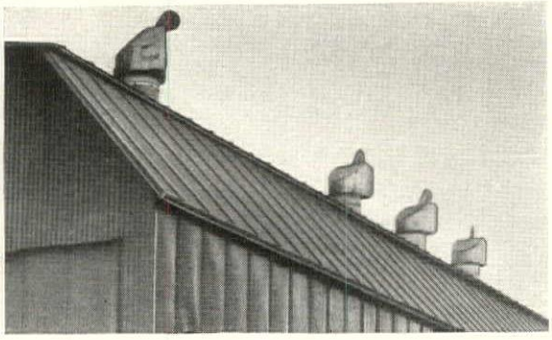
(Continued on page 48)

Consider these building uses of ARMCO Ingot Iron

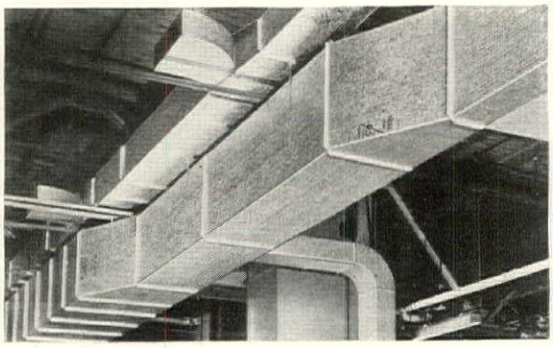
ROOF-DRAINAGE SYSTEMS



ROOFING AND SIDING



VENTILATORS



DUCTWORK

—for war needs today for peace time tomorrow

Today many private architects are using their creative ability in designing some of the Government's best housing projects as well as many important Victory plants.

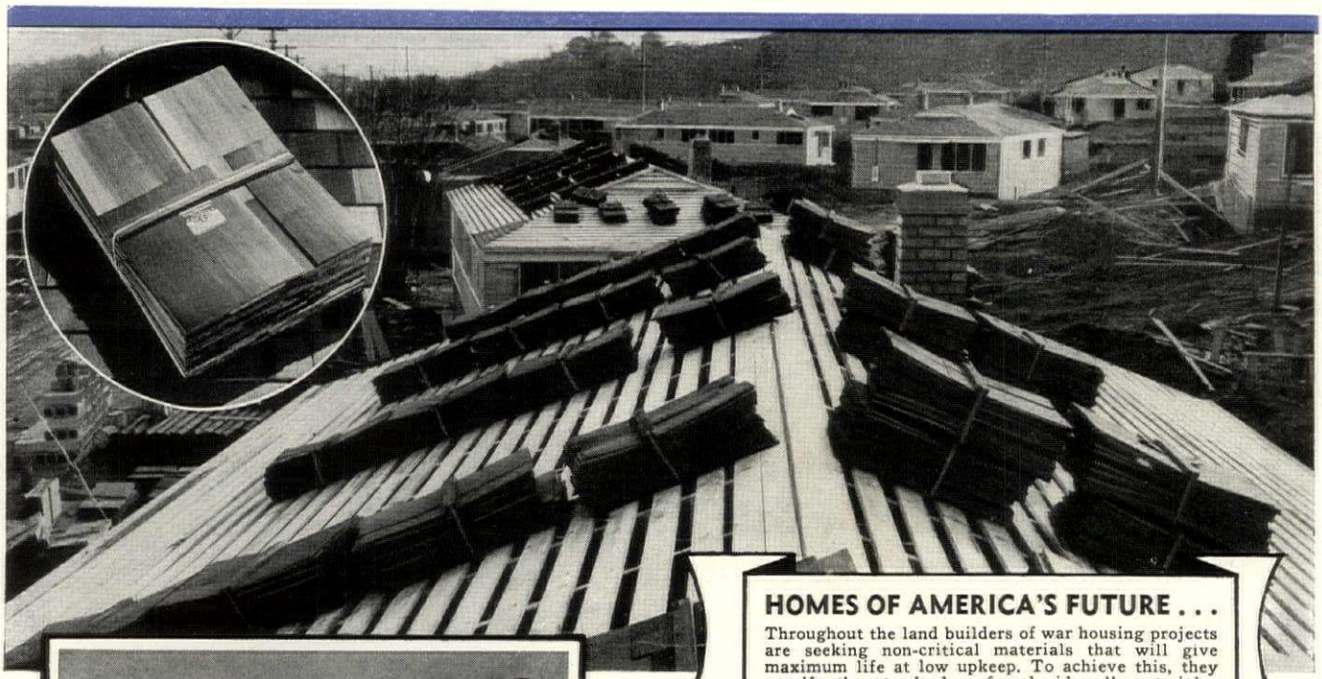
If you are in this work, consider ARMCO Ingot Iron for roof-drainage systems, for roofing and siding, ventilators and air-conditioning ductwork for industrial structures and homes.

This durable metal has the longest service record of any low-cost iron or steel sheets. Installations that go back to 1909 are in good condition today. On a cost-per-year basis it lowers maintenance expenses.

When today's tremendously expanded iron and steel production has met our vital war needs there will be a plentiful supply of ARMCO Ingot Iron for private construction. Meanwhile, to be ready for your long-range planning, your files should be up to date. Shall we send you useful data on this and other ARMCO building metals? The American Rolling Mill Company, 81 Curtis Street, Middletown, Ohio.

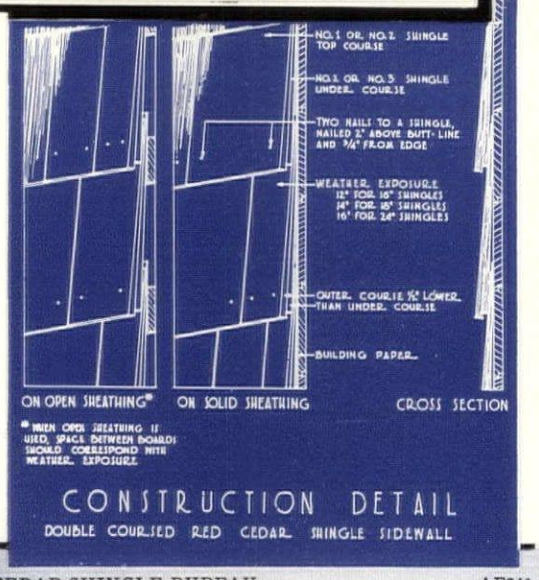
The ARMCO triangle trademark is branded three times on every sheet of galvanized ARMCO Ingot Iron—for your protection. Your clients have learned from experience, and from ARMCO'S 28 years of national advertising, that this symbol stands for the utmost durability and long-term economy.

WAR DEFENSE HOUSING



HOMES OF AMERICA'S FUTURE . . .

Throughout the land builders of war housing projects are seeking non-critical materials that will give maximum life at low upkeep. To achieve this, they specify the standard roof and sidewall material—RED CEDAR SHINGLES. . . . . .



CONSTRUCTION DETAIL

DOUBLE COURSED RED CEDAR SHINGLE SIDEWALL

RED CEDAR SHINGLES

GIVE SUPERIOR SERVICE ON ROOFS AND SIDEWALLS OF WAR HOUSING!

ECONOMY No other roof or sidewall material has the economic advantages of Red Cedar Shingles. Figured by their many years of service, they cost less per square than any other material.

COMFORT A greatly magnified cross-section of a Red Cedar Shingle shows millions of insulating cells in every cubic inch. This insulating quality wards off the sun's heat in summer . . . keeps the home warm in winter.

LONG LIFE The natural preservative oils in Shingles of Red Cedar are highly toxic to wood-attacking fungi. This accounts for great durability under all sorts of exposure.

PROTECTION The best defense against weather for houses, for barns and for storage sheds is provided by Red Cedar Shingles. No less than three layers of shingles exist throughout a roof applied according to the established method. This triple-ply covering creates a "bridging" effect which resists hail, wind, earthquake and hurricane.

NON-CRITICAL Not classified as hard-to-get "critical" defense materials, Red Cedar Shingles are readily available.

RED CEDAR SHINGLE BUREAU

5508 WHITE BLDG., SEATTLE, U. S. A. . VANCOUVER, B. C., CANADA

RED CEDAR SHINGLE BUREAU AF241
White Building
Seattle, Washington, U. S. A.
Gentlemen:

Please send me, free, a copy of the Certigrade Handbook and a set of Architectural Blueprints of various Shingle Applications.

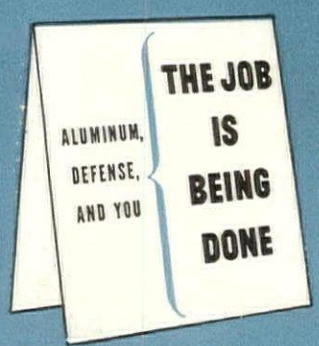
Name.....

Address.....

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

Red Cedar **SHINGLES**

THERE IS NO PRIORITY ON IMAGINEERING



EVERY INDUSTRY, every responsible man in industry has the present duty of answering two questions.

FIRST ONE IS: Are we, am I personally, doing everything within my power for the war? Our answer here at Alcoa is a plain, unqualified, yes.

NEXT QUESTION IS: What are we doing about the day when we will all need business, which is the polite way of saying, when millions of jobs will be needed for the boys who come back, and for the boys who stayed back to make the weapons.

IMAGINEERING, you know, is the word we have coined to define what we business people have all got to do about the future; about the products we are going to make and the services we are going to be able to offer when this war is over. Imagineering is imagination plus engineering.

HOW DO YOU DO IT? One way would be to figure out, now, how to take advantage of all the aluminum that is going to be available.

QUICKEST WAY TO GET AT IT is to take one of your products or a piece of equipment that "just couldn't" be made of aluminum, and ask yourself, Why not?

MEANING, OF COURSE, why not light; why not stronger for the same weight; why not resistant to corrosion, and so on, ad infinitum. The first man in any line of business who calls tradition a liar, and things-as-they-are a millstone, is the man who is going places; the man who is going to make peacetime pay rolls.

THAT'S IMAGINEERING AT WORK. We've got some ideas here at Alcoa. We're trying to pass them out. We are looking for men who have made themselves receptive by doing some solid Imagineering on their own hook, in their own fields.

Aluminum Company of America, 2166 Gulf Building, Pittsburgh, Pennsylvania.

ALCOA ALUMINUM

SPECIFY "PENNVERNON"

. . . NOT JUST "WINDOW GLASS"

• What makes good window glass? Primarily, two qualities: good vision and surface beauty. Pennvernon Window Glass provides these two advantages in high degree. For a sheet glass, it is remarkably free from the defects which frequently tend to distort vision. And it has a brilliant, reflective surface finish on both sides of the sheet. Look *through* Pennvernon Window Glass . . . or look *at* it . . . and in either case, you know immediately that it is a glass thoroughly worthy of quality windows.

PENNVERNON WINDOW GLASS

PITTSBURGH PLATE GLASS COMPANY

"PITTSBURGH" stands for Quality Glass and Paint

LINDENWOLD

OLIVE GREEN

DELL GREEN

OXFORD BLACK

RUST

ROYAL RED

SUNSET RED

HEATHER

LEAF TAN

The Lindenwold Shingle (above) was reproduced directly from a full-size shingle reduced 6 times in size. The swatches show the eight other colors in the same reduction. Notice the beautiful graining.

Color-Toning

MAKES THE ROOF YOU CREATE ON PAPER COME TRUE ON THE FINISHED HOUSE

K&M "Century" Color-Toning virtually revolutionizes the handling of residential roofs. Built around Keasbey & Mattison "Century" asbestos-cement roofing shingles in the specially developed range of tones shown here . . . Color-Toning brings you the means of creating exactly the blend you want on paper, and insures the faithful reproduction of your conception by the roofer.

With the K&M Architects' Color-Tone Work Kit, you can blend or combine the nine soft mellow tones of these shingles in exactly the proportions you desire. Small colored replicas of the shingles on gummed paper enable you to design a roof in miniature . . . show the client how it will look . . . and give the roofer specifications that can't go wrong. Color-Toning alone offers all these advantages.

In addition to the satisfaction you derive from the entirely new palette which Color-Toning places in your hands, your clients enjoy a wholly new type of beauty and individuality in their homes. They are sure, also, of maintenance-free, fire-resisting, weather-resisting roofs, with the life-time economy of asbestos-cement. Builders find Color-Toning an inexpensive new way to obtain further architectural variety in residential operations.

Color-Toning is exclusive with K&M "Century" No. 92 roofing shingles. Other K&M "Century" asbestos-cement shingles, both roofing and siding, insure enduring beauty, and protection against fire and the elements, at even lower cost.

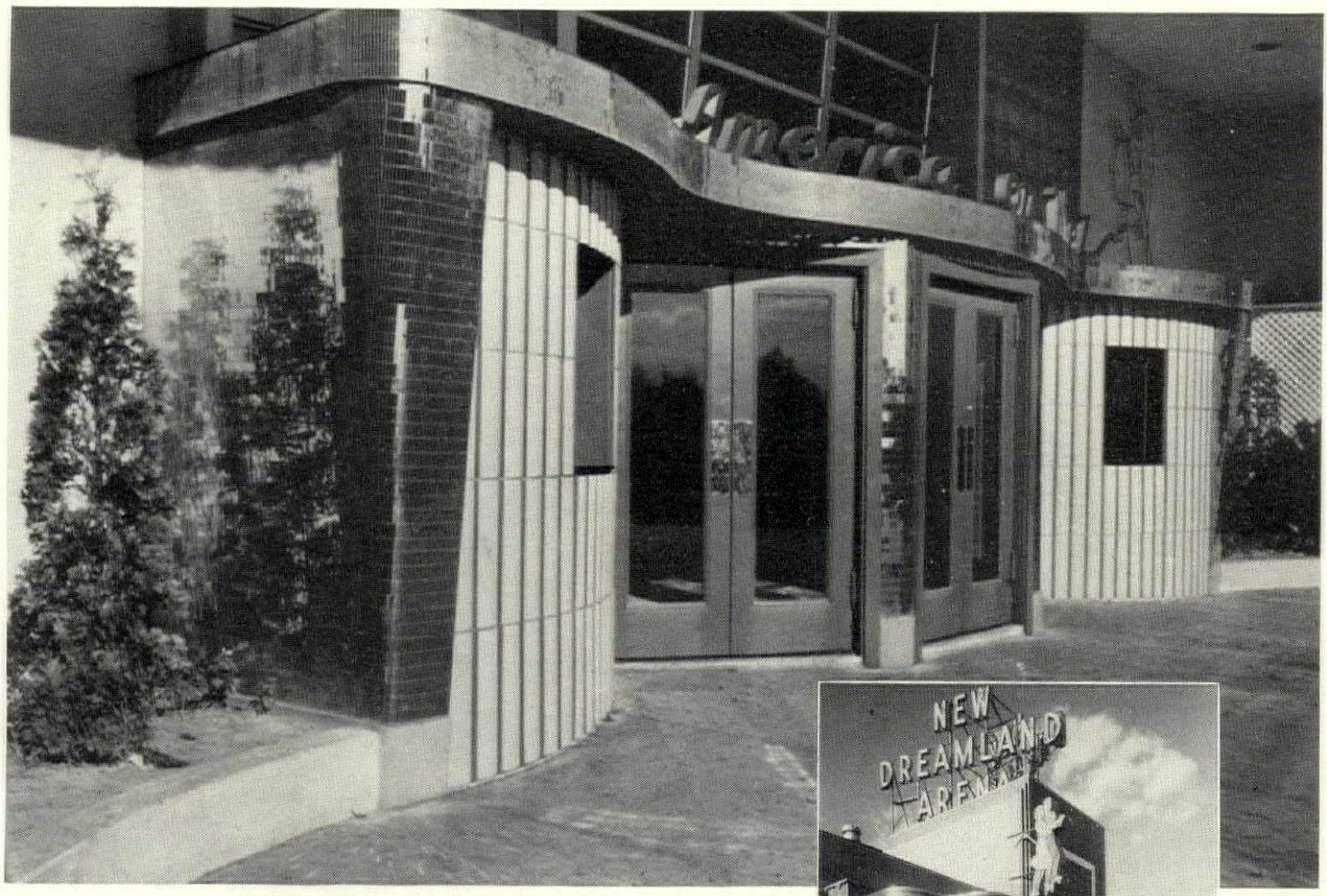
Nature made asbestos; Keasbey & Mattison has made it serve mankind—since 187

K & M "Century" Roofing Shingles are still available without delay. Since we are cooperating fully with the National Defense program, we cannot tell how much longer this favorable situation will continue.

FREE — Architects' Work Kit for the visualization of Col Tone Roofs. Write Keasbey & Mattison Co. . . . Address Dept. C

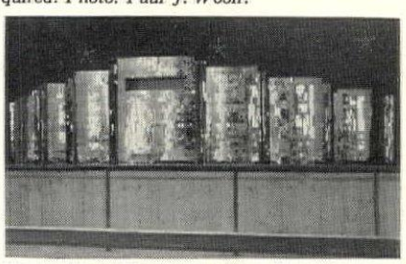
KEASBEY & MATTISON

COMPANY, AMBLER, PENNSYLVANI



Blue Mirror Flexglass exterior trim, Capital Rink, America on Wheels, Trenton, N. J., Barnet Singer, Arch.
Photo: Alfred Losch.

A. J. Silberstein, Arch., used Gold Mirror Flexglass to highlight the windows, doors and tall decorative panel on the exterior of "Dreamland" at Newark, N. J. Blue Mirror Flexglass was used on the interior; total of 630 sq. ft. being required. Photo: Paul J. Woolf.



White Mirror Flexglass organ in Twin City Rink, America on Wheels, Elizabeth, N. J. 700 sq. ft. of Blue Mirror Flexglass was used on the exterior of this arena which was also designed by Architect Singer. Photo: Paul J. Woolf.

THE POPULARITY OF FLEXGLASS SPIRALS AS ROLLER SKATING COMES OF AGE

Recreation is particularly important under the stress of our all-out effort and it is typically American that the sports calling for active participation have overtaxed peace-time facilities. Notable among them is roller skating. As the photographs on this page indicate, architects and designers are using Flexglass to express the color, the flowing lines and the rhythm of the sport, in the substantial arenas that are being built on every hand. Flexglass is new and exciting . . . real glass in 30 colors and patterns, easily and speedily applied to any smooth, hard surface, flat or curved. It is the modern beauty treatment for facades and exterior trim, columns, panels, ceilings, walls and store fronts. Samples and color card free; distributors in principal cities.

UNITED STATES PLYWOOD CORPORATION
103 PARK AVENUE, NEW YORK
Manufacturers of Flexwood

Flexwood and Flexglass are manufactured and marketed jointly by The Mengel Co., Louisville, Ky., and the United States Plywood Corp., New York

Flexglass

THE GLASS THAT BENDS

THIRTY COLORS

K&M Sprayed "Limpet" acoustical treatment selected at Williamsburg

Unobtrusive, efficient "Limpet" is the ideal soundproofing for this dining room in the Williamsburg Inn, Williamsburg, Virginia.

The re-creation of Virginia's colonial capital at Williamsburg is acclaimed as one of the most brilliant accomplishments of the architectural profession.

Everything is in keeping, fits into the pattern of the past. Yet, with the faithful colonial detail, the architects have blended modern ideas.

For the dining room ceiling at the Williamsburg Inn—a new building in the old manner and close to the restoration area—the architect chose K&M Sprayed "Limpet" Asbestos as the acoustical treatment because it adapts itself to any architectural period. Even though the "Limpet" was painted a neutral tone to harmonize with the over-all decorative scheme, its soundproofing qualities were not noticeably affected. Its use allows the Inn to offer its patrons a quiet, hospitable atmosphere for dining, undisturbed by the hundreds of reflected sounds that often disturb enjoyment of a meal.

Compare "Limpet" with any other acoustical material . . . not one can offer all its advantages. It is sprayed like paint, a unique method of application that makes it fit anywhere, frees you from all geometric limitations. It sticks tightly to any clean surface, without anchors or gadgets.

"Limpet" resists fire . . . its thermal conductivity of only .31 at 75°F. makes it an excellent insulator, helping with heating and air conditioning problems. It has the remarkable noise reduction coefficient of .70 for a ¾ inch thickness . . . any practical degree of sound absorption can be obtained by spraying it on to the proper thickness.

Free AIA catalog tells much more about "Limpet." Write Dept. 23.

* * *

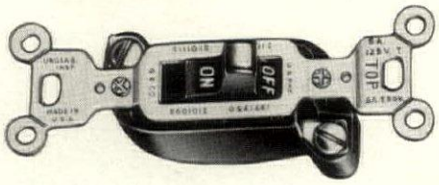
Nature made asbestos; Keasbey & Mattison has made it serve mankind . . . since 1873.

Sprayed "Limpet" Asbestos is still available without delay. Co-operating fully with the National Defense Program, we cannot tell how much longer this favorable situation will continue.

KEASBEY & MATTISON COMPANY, AMBLER, PENNSYLVANIA

G-E Wiring Material News

SPECIFY G-E SILENT SWITCHES

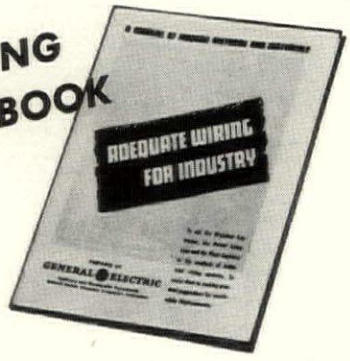


These switches are ideal for Victory workers' houses or apartments. They make no annoying click when used. Moreover G-E silent Sphinx mercury switches are long lasting. Choose them for new housing and for remodelling. Available with brown- or ivory-colored handles in single-pole, double-pole, 3-way and 4-way types.

FOR ELECTRICAL DISTRIBUTION

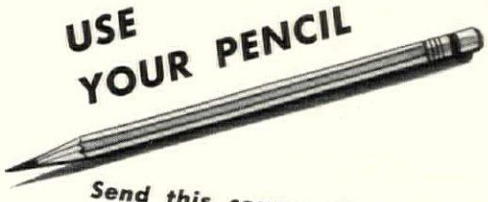
G-E underfloor Fiberduct and rubber-insulated building wire enable power to be carried conveniently to all floor areas in factories and offices. Outlets can easily be installed in the duct at any time either before the duct is put in or afterwards. G-E building wires include types R, RP, RH and RW. Fiberduct systems are flexible, efficient and durable.

WIRING HANDBOOK



No matter how much modern equipment a factory has it can't operate satisfactorily if it isn't properly wired. This handbook outlines modern factory wiring practices which can be adapted for all factories. It can be used as a guide in planning efficient wiring. A listing of G-E materials is included in this handbook too and a series of handy tables.

USE YOUR PENCIL



Send this coupon for a free copy of the handbook and for information on G-E products described on this page:

General Electric Co., Section CDW-2262,
Appliance and Merchandise Dept.
Bridgeport, Conn.

Sirs: Please send me ( ) the Industrial Wiring Handbook; or information on ( ) Fiberduct; ( ) G-E Building Wire; ( ) G-E Sphinx Silent Switches.

Name .....

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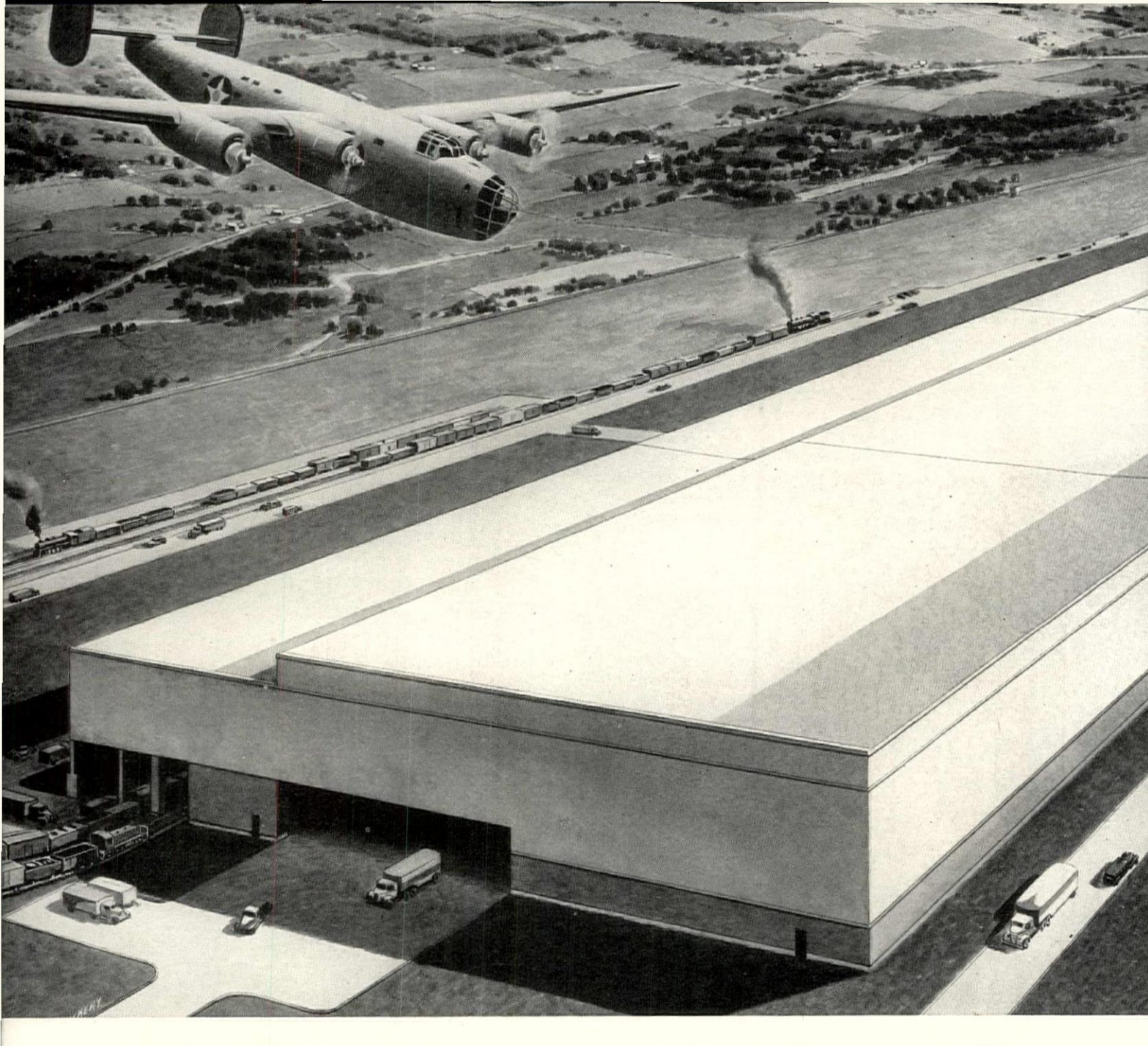
City ..... State .....

GENERAL ELECTRIC



Not "how big?"... but "how

... That's the big news about the Army's huge bomber plants which combine steel and Fiberglas* in a new-type construction and set new performance standards ...

On January 1st, this year, two new bomber plants were nearly completed. One at Tulsa, Oklahoma. The other at Fort Worth, Texas.

They are two of the largest bomber plants in the world . . . housing two of the largest unobstructed floor areas ever built.

But the almost unbelievable hugeness of these two plants, each nearly a mile long, is only part of this unusual story.

For these bomber plants, specifications never before required were set up. Specifications drawn to quiet the shut-in noise for men busy with hundreds of riveters, rumbling cranes, stamping and drill presses. Specifications to muffle the din of metal on metal, *and* to provide the mammoth snugness of a controlled climate and uniform lighting. The problem *had* to be solved. But previously known types of construction could not meet the specifications. And yet they were met! With engineering imagination . . . and the use of two important basic materials of known performance—steel and Fiberglas.

The marriage of these two basic materials produces a *roof* construction and a *wall* construction, each of which combines noise reduction, light reflection, and thermal insulation *in one unit*. Simple as this may appear, this combination of steel and Fiberglas opens up a whole new field of building practice.

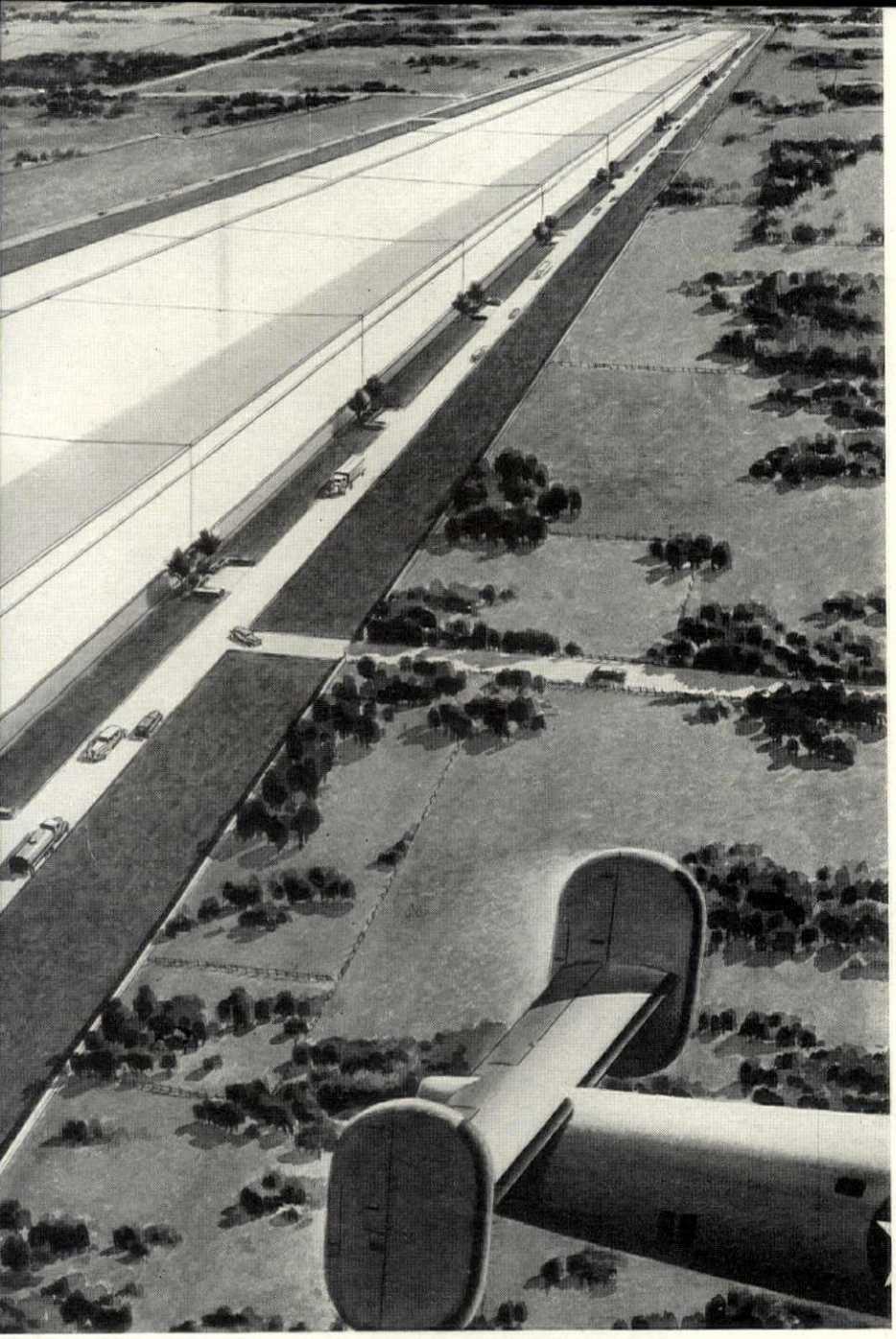
Besides reducing pent-up reverberations, this new-type construction provides side walls and roofs that are shatter-resistant, non-combustible, and enduring. In addition, it gives a highly efficient insulation that will keep heating expense in winter and cooling expense in summer at a minimum. Otherwise the cost of operating the air-conditioning systems in these huge plants would be out of sight.

This construction gives the complete controlled conditions inside these plants . . . even temperature and humidity . . . high light-reflecting interior surfaces . . . to provide ideal working surroundings for high-speed production and precision manufacture.

Controlled conditions are also necessary to protect costly materials and sensitive instruments in storage and assembly.

Fiberglas and steel lick these tough requirements . . . they do *more!* They give the "plusses" of unusually light weight . . . ease of handling on the premises . . . and very long life.

You may not be interested in bombe



was it built?"...

plants nearly a mile long, but your defense contracts may call for smaller plant units . . . where complete or semi-controlled conditions will aid in making every man-hour count. Perhaps this new-type construction can give these plant units to you cheaper . . . quicker. For it requires a minimum of materials, using each at its maximum efficiency.

Or, you may be interested in remodeling or expanding old plants for increased production.

In this case, this new-type construction may be able to help you. You can increase the size of these plants . . . quickly, cheaply.

Or, if sound-deadening or semi-controlled conditions are called for in an old plant, these same materials are available in ideal forms for these purposes.

Fiberglas itself is made from materials which are available in unlimited quantities right here in continental United States.

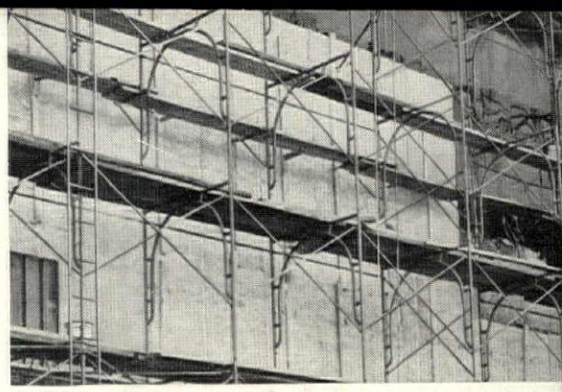
Let us give you and your engineering staff the benefits of our basic experience with Fiberglas and its properties.

Remember: Fiberglas is *pure* glass in fiber form . . . springy . . . processed into blankets, thread, yarn, bonded sheets, semirigid boards. As a proved basic material Fiberglas is now playing a vitally important part in the production, maintenance, and operation of planes, tanks, warships, and armored cars out on the firing line. For further information write: *Owens-Corning Fiberglas Corporation, Toledo, Ohio. In Canada, Fiberglas Canada, Ltd., Oshawa, Ontario.*

OWENS-CORNING

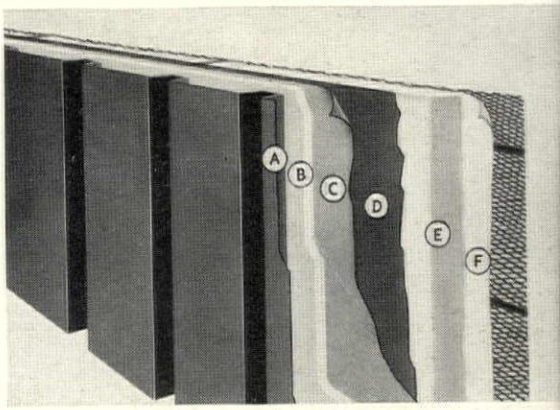
FIBERGLAS

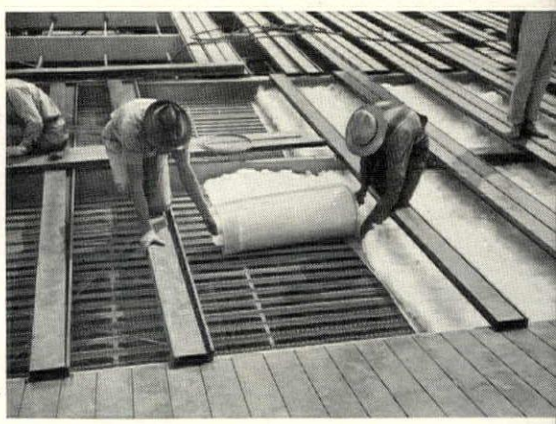
®T. M. Reg. U. S. Pat. Off.



WALL OF STEEL AND FIBERGLAS designed and built by The Austin Company. View shows Truscon steel channel sections and interior Fiberglas insulation already in place in upper sections and at right. In center, semirigid Fiberglas insulating board in place!

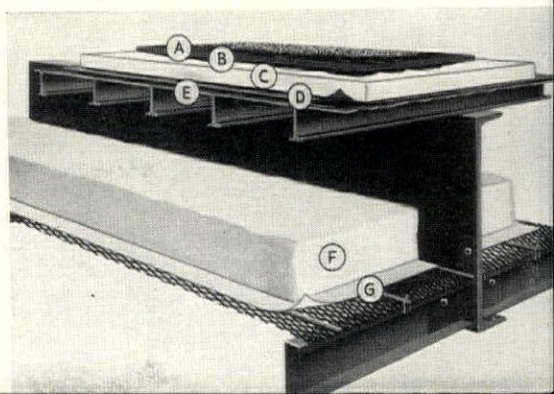
DETAIL OF WALL SECTION. "A"—Exterior steel facing. "B"—1-inch-thick semirigid Fiberglas for thermal insulation. "C"—Vapor barrier paper. "D"—Special sheet steel channel section. "E"—4-inch Fiberglas wool compressed to 3-inch thickness for thermal insulation and noise reduction. "F"—Thin, Fiberglas Retainer Mat provides light-reflecting, repaintable surface.





ROOF CONSTRUCTION. Above you see roof nearing completion. Workmen are unrolling Fiberglas blankets. These in turn are covered by Truscon Ferrobord Steeldeck, Fiberglas roof-deck insulation, and finally by waterproof roof material.

DETAIL OF ABOVE. "A"—Tar and gravel roof weathering surface. "B"—Heavy, lapped tar paper. "C"—13/16-inch-thick, semirigid Fiberglas roof-deck insulation. "D"—Vapor barrier paper. "E"—Ferrobord Steeldeck. "F"—3-inch thickness of Fiberglas wool with dead air space above for thermal insulation and noise reduction. "G"—Thin, Fiberglas Retainer Mat for light reflection, held in place by metal lath. Provides a repaintable surface.



Gold Bond BUILDS PRIVACY WITHOUT PARTITIONS

IN many progressive business offices workers are enjoying a new quiet and seclusion—without being cramped into stuffy little cubicles. The new Chicago office of the Charles Bruning Company is an example. This well-known manufacturer of reproduction papers and equipment wanted his office employees to have the privacy that makes work more pleasant and more efficient, yet hesitated to cut spacious rooms into a maze of small cubby-holes. Gold Bond Sound Control experts helped solve this "quiet-without-partitions" problem with Acoustimetal ceilings.

All over America, Gold Bond acoustical research and service is solving new sound control problems in every field from army arsenals to hospital corridors. The Gold Bond Acoustical Distributor in your community has all this experience at his disposal to help you find the right answer on your next job . . . to help select the best materials . . . to supervise the installation . . . and to guarantee results.

Extra Protection

You build better with Gold Bond, because National Gypsum's laboratories have developed more than 150 finer wall and ceiling products—including plaster, lime, wallboard, lath, wall paint, insulation and sound control materials. 300 representatives—every one a trained building specialist—and 10,000 Gold Bond dealers are ready to supply you with materials from 21 strategically-located plants. And when you specify Gold Bond exclusively, you get the added protection of having *one* dependable manufacturer responsible for *all* wall and ceiling materials. Refer to Sweet's, and write for specifications on all Gold Bond sound control products. National Gypsum Company, Buffalo, New York.

Architect, Victor L. Charn, *Installation by Fisher-Busse Co., Chicago*

GOLD BOND ACOUSTIMETAL in the ceilings of the general offices of the Charles Bruning Company, Chicago, Illinois. Acoustimetal has an AMA coefficient of .99 at 512 cycles, meets engineers specifications for indirect lighting, is fireproof, durable, verminproof, replaceable, easily cleaned—the finest sound control material on the market today.

BUILD BETTER WITH

Gold Bond

Everything-for walls & ceilings

Producing Units at:

NEW YORK, N. Y. . . . CLARENCE CENTER, N. Y. . . . AKRON, N. Y. . . . PORTSMOUTH, N. H. . . . NATIONAL CITY, MICH. . . . FORT DODGE, IA. MEDICINE LODGE, KAN. . . ROTAN, TEX. . . . SAVANNAH, GA. . . . LUCKEY, O. . . . BELLEFONTE, PA. . . . YORK, PA. . . . ORANDA, VA. SALTVILLE, VA. . . . NILES, O. . . . MOBILE, ALA. . . . NEWBURGH, N. Y. . . . ALEXANDRIA, IND. . . . DUBUQUE, IA. . . . DOVER, N. J.

RECREATION CAMPS

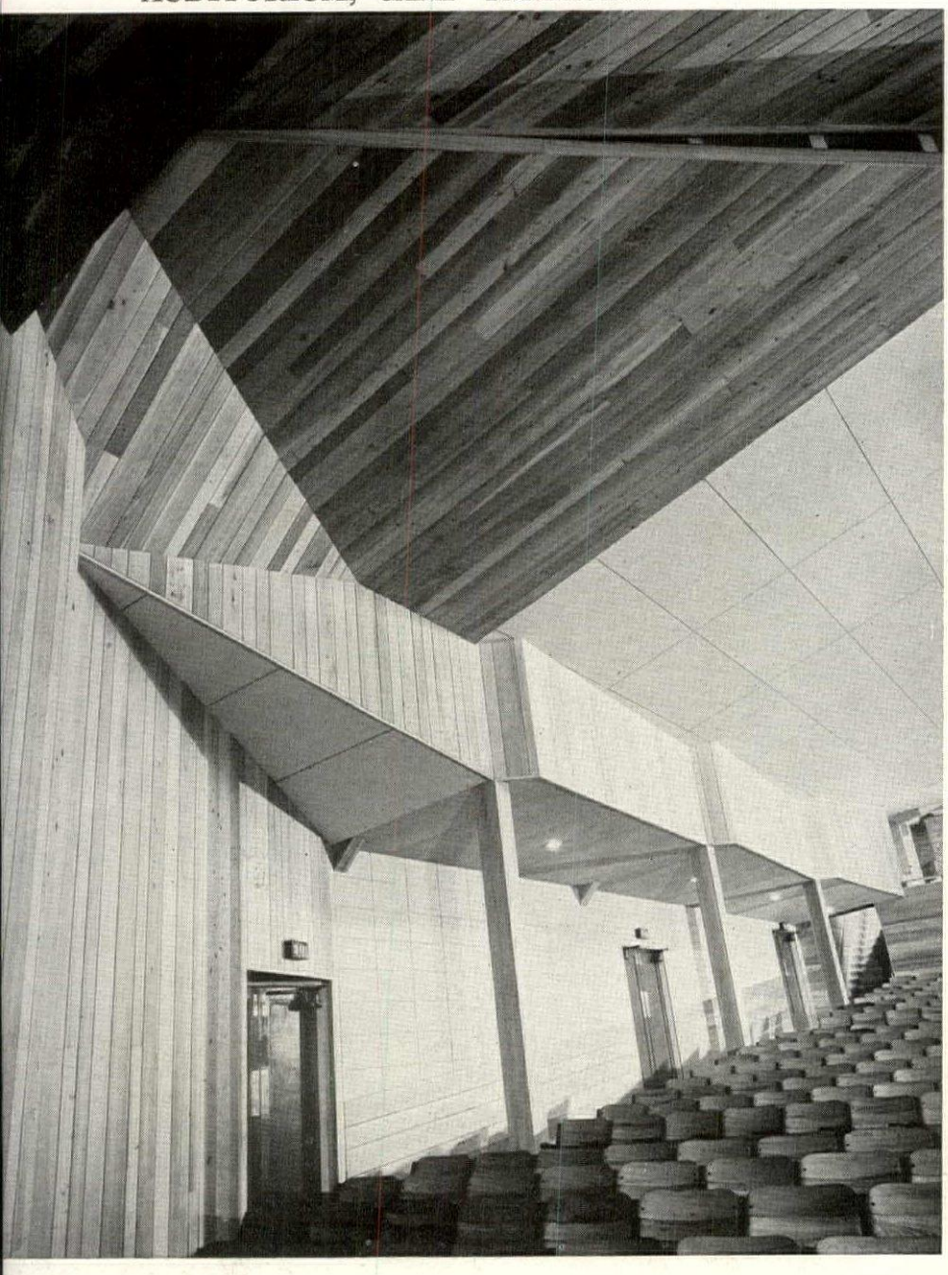
NEW YORK AND PENNSYLVANIA

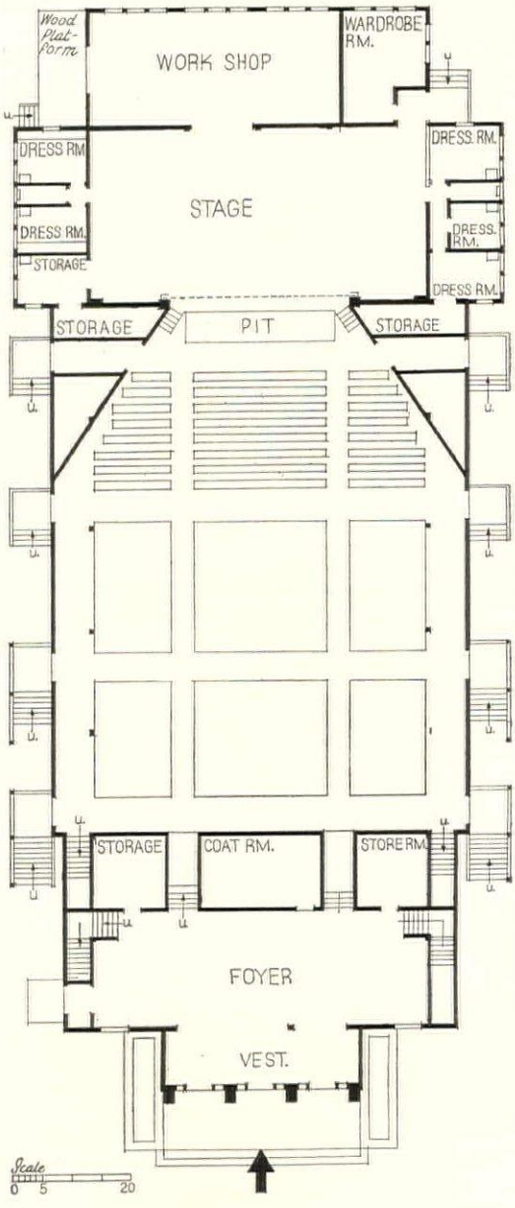
EDWIN J. ROBIN, ARCHITECT

AUDITORIUM, CAMP TAMIMENT

Photos, Ezra Stoller

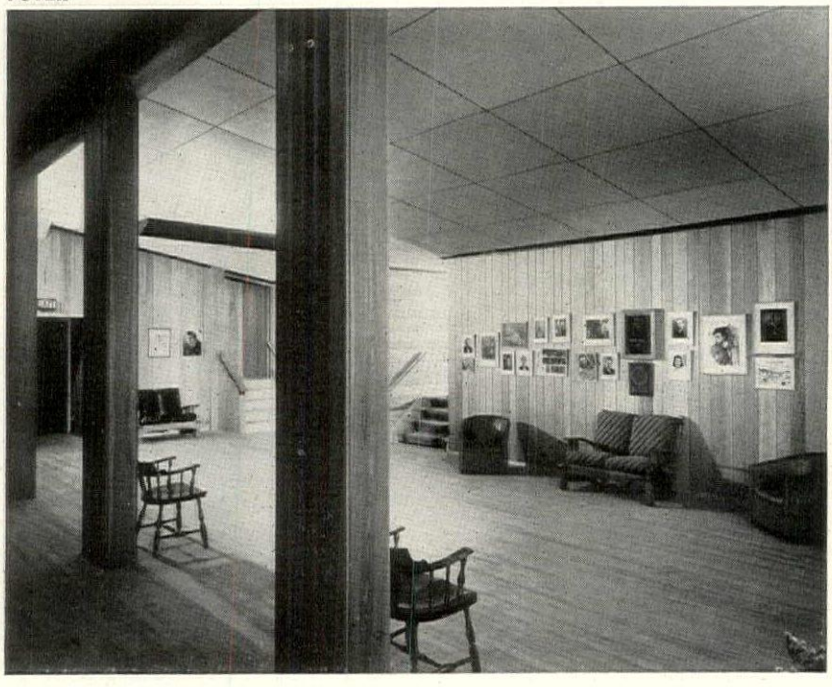
AUDITORIUM, CAMP TAMIMENT



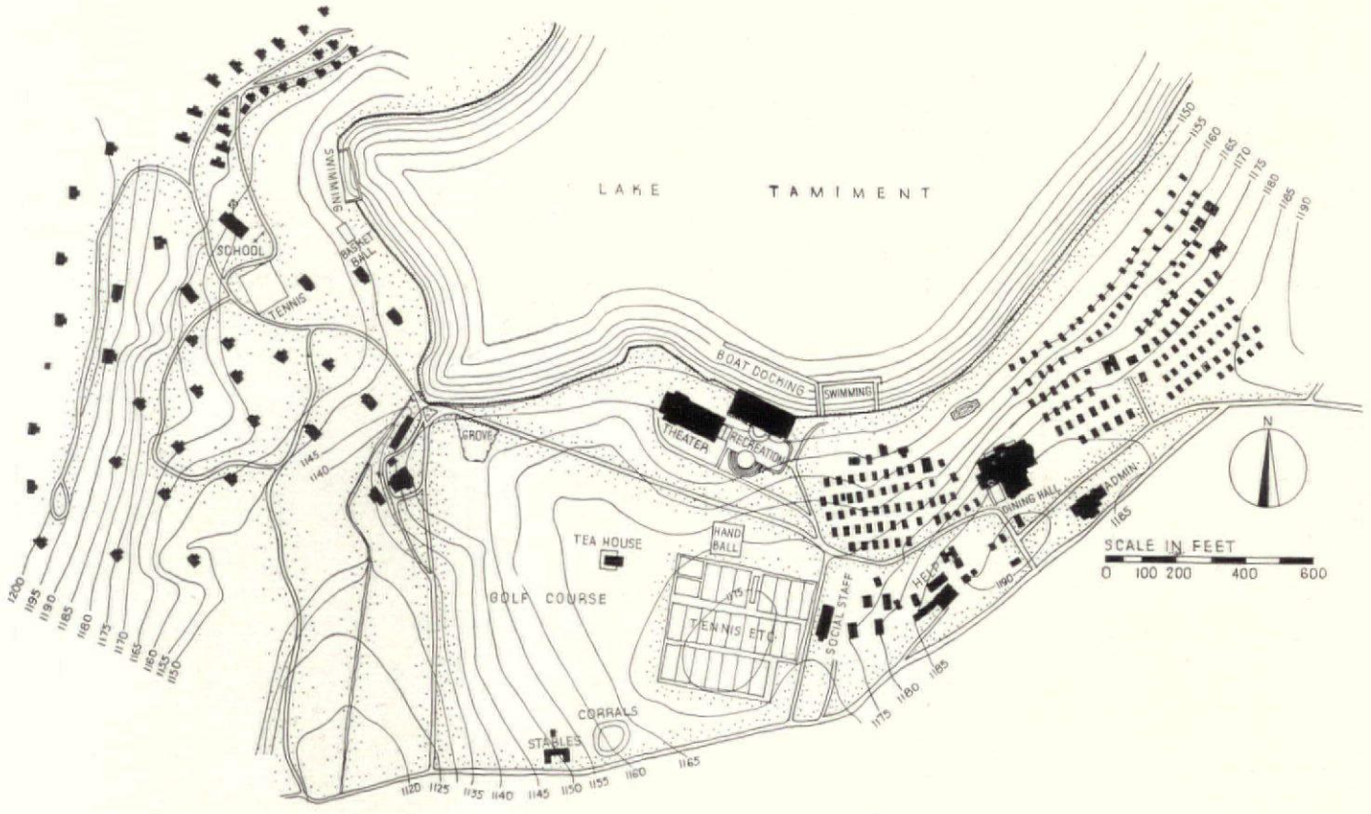


Camp Tamiment was founded in 1920 as a non-profit organization devoted to recreation and social studies and has grown gradually from a few, scattered buildings to its present size. Guest accommodations are of the cottage type. Various auxiliary buildings, built largely from local materials by local craftsmen, have been added from time to time as they have been found necessary, and as funds have become available. The theater shown on this page is the latest and most ambitious of these additions. Seating about 1,000 persons, it is constructed almost entirely from wood cut at local sawmills, with some fieldstone on the exterior, but has been designed to provide acoustical conditions and stage facilities matching those in the most up-to-date city theaters. Acoustical materials have been used where necessary for sound absorption, but sound control is achieved principally by expertly-angled wall and ceiling surfaces worked out in consultation with a leading acoustical engineer, the late C. C. Potwin. Lighting equipment is built-in, and mostly indirect. In addition to the foyer, auditorium, stage and dressing rooms, a workshop is provided at the rear of the building for the construction of scenery.

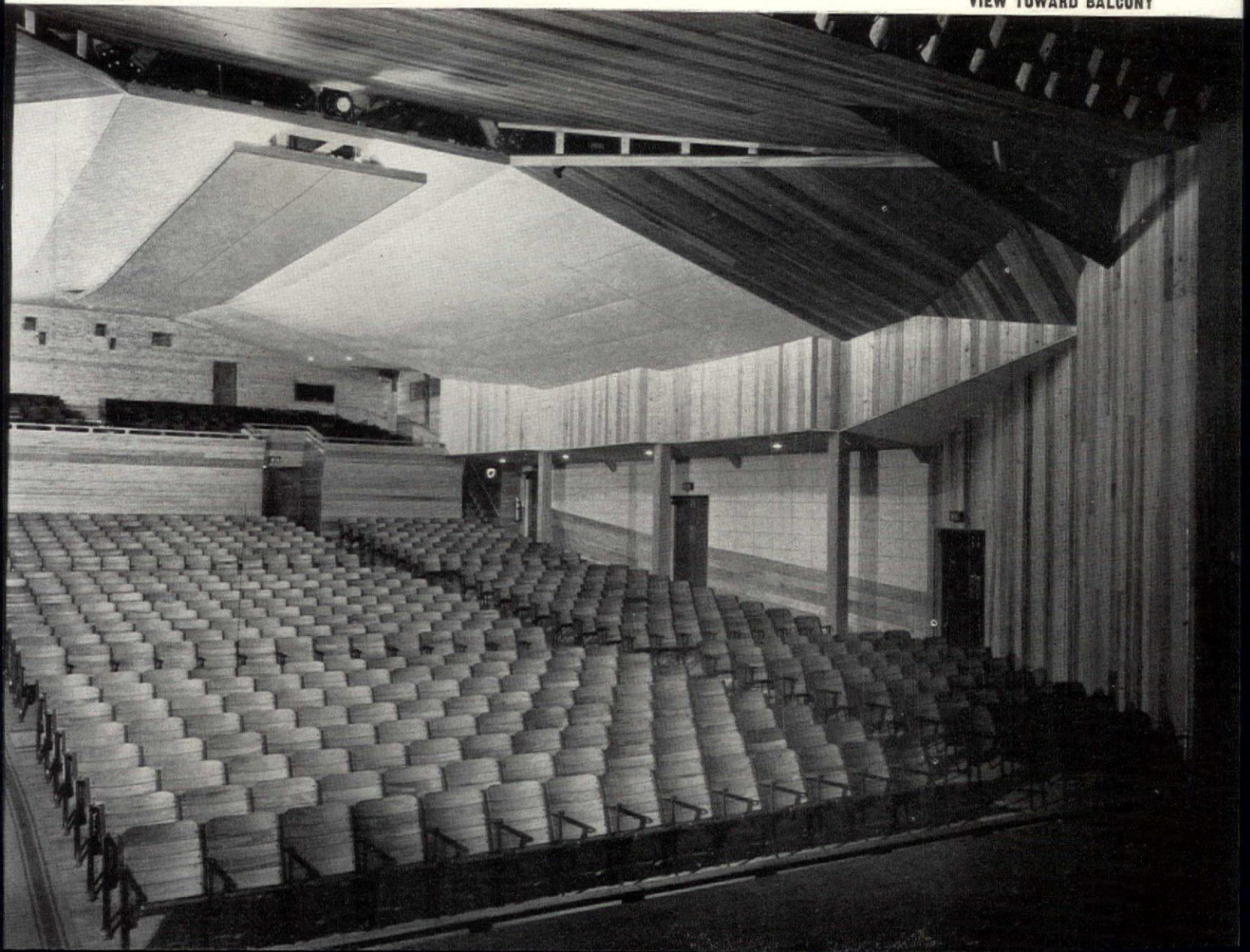
FOYER



TAMIMENT, PENNSYLVANIA **EDWIN J. ROBIN, ARCHITECT**

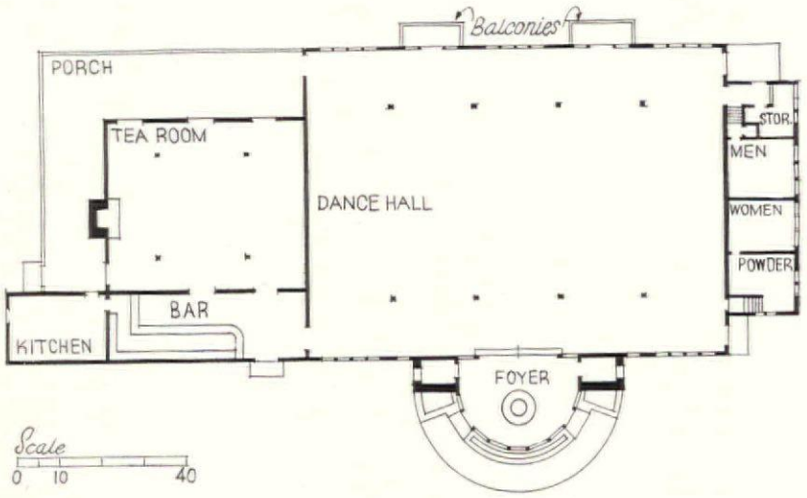


VIEW TOWARD BALCONY



SOCIAL HALL, CAMP TAMIMENT

Originally used as an auditorium as well as a dance hall and refreshment room, the Tamiment social hall was relieved of a portion of its duties by the construction of the theater shown on the preceding pages. Simultaneously, it was decided to improve the social hall by reconstructing all but the tea room, bar and kitchen above the existing floor line. A longer and higher dance hall was provided with wider truss-spans and fewer posts, and generous foyer, toilet and powder room facilities added. The porch and balconies at the rear of the building overlook the lake.

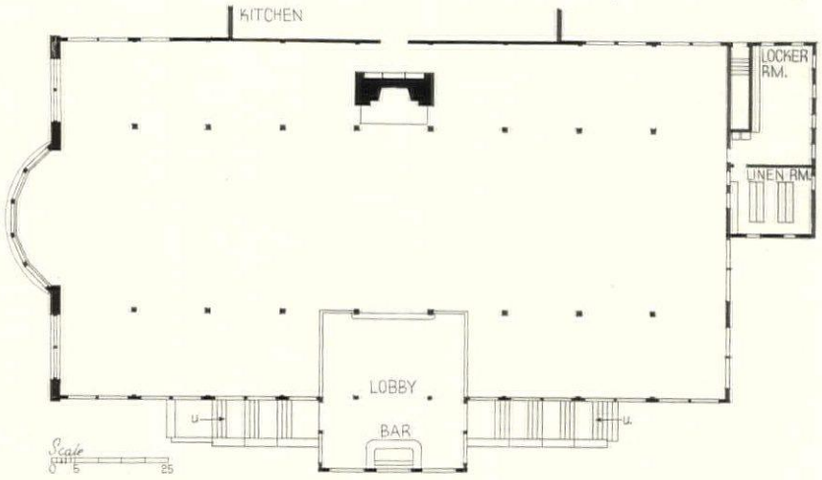


ENTRANCE

TAMIMENT, PENNSYLVANIA

EDWIN J. ROBIN, ARCHITECT

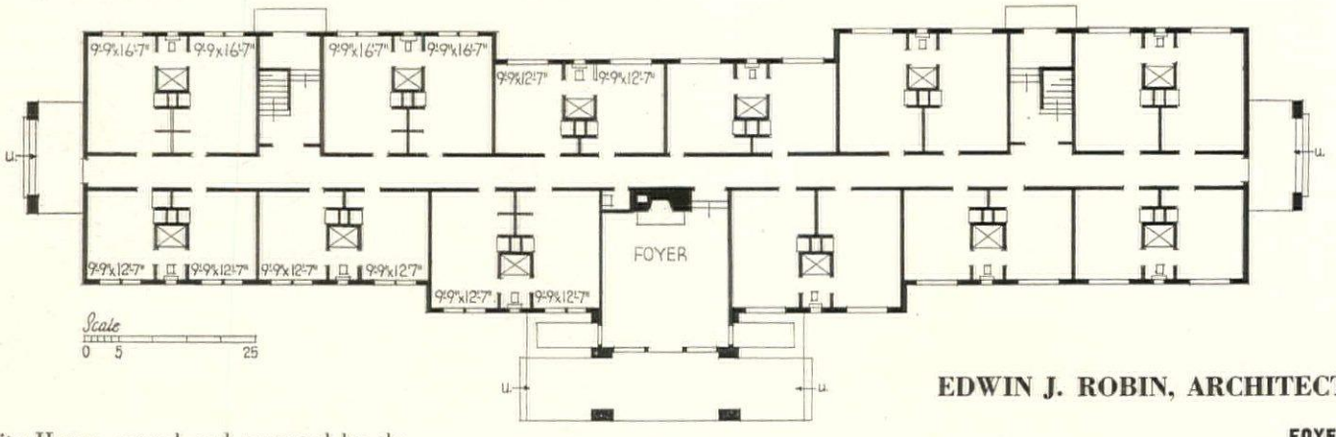
A central entrance lobby projecting into one side of the room and a huge, decorative chimney-breast set out from the opposite wall, screening the service entrance, divides the dining hall into two parts. Since the function of the building requires no unobstructed floor space, the span of the roof trusses has been kept small by the use of two rows of columns placed fairly close together. The approach side of the building, which faces the lake, has plenty of glass area and a large bay window at the east end provides a view of the lake shore to diners in the rear of that end of the room. Mural decoration by Paul Simone.



DINING HALL

DORMITORY BUILDING

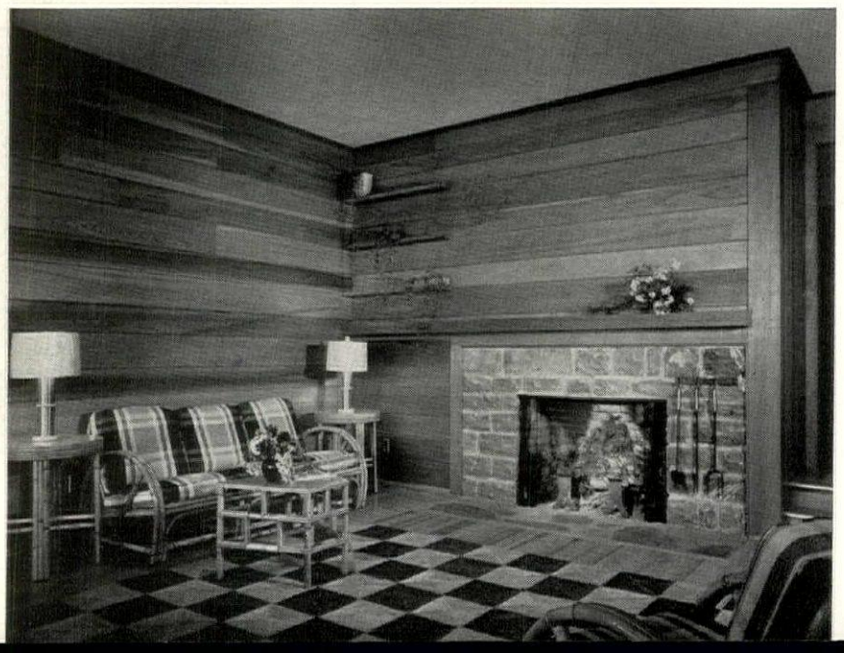
UNITY HOUSE, FOREST PARK, PENNSYLVANIA



EDWIN J. ROBIN, ARCHITECT

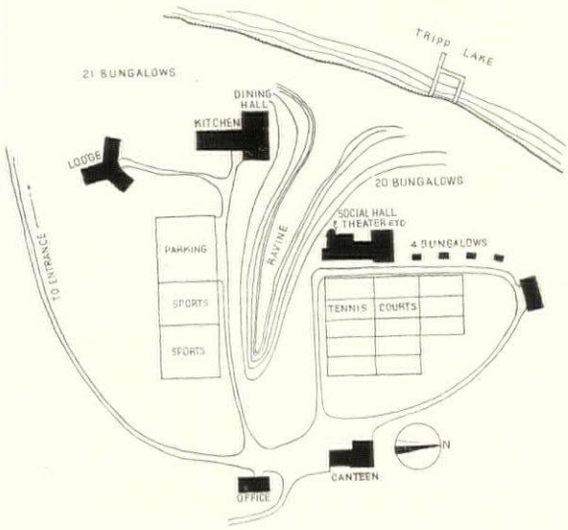
Unity House, owned and operated by the International Ladies Garment Workers Union, accommodates about 1,100 guests in both bungalows and dormitories. Older structures at the camp are gradually being replaced by new ones, of which the dormitory shown on this page, built on the site of an older, similar building, is more or less typical. Rooms are arranged in pairs, with joint toilet and shower facilities, and generous stairways with direct outside exits are provided for safety in case of fire. The central foyer, shown at the right, is an excellent example of the architect's simple and pleasing use of native materials to produce a homelike effect.

FOYER



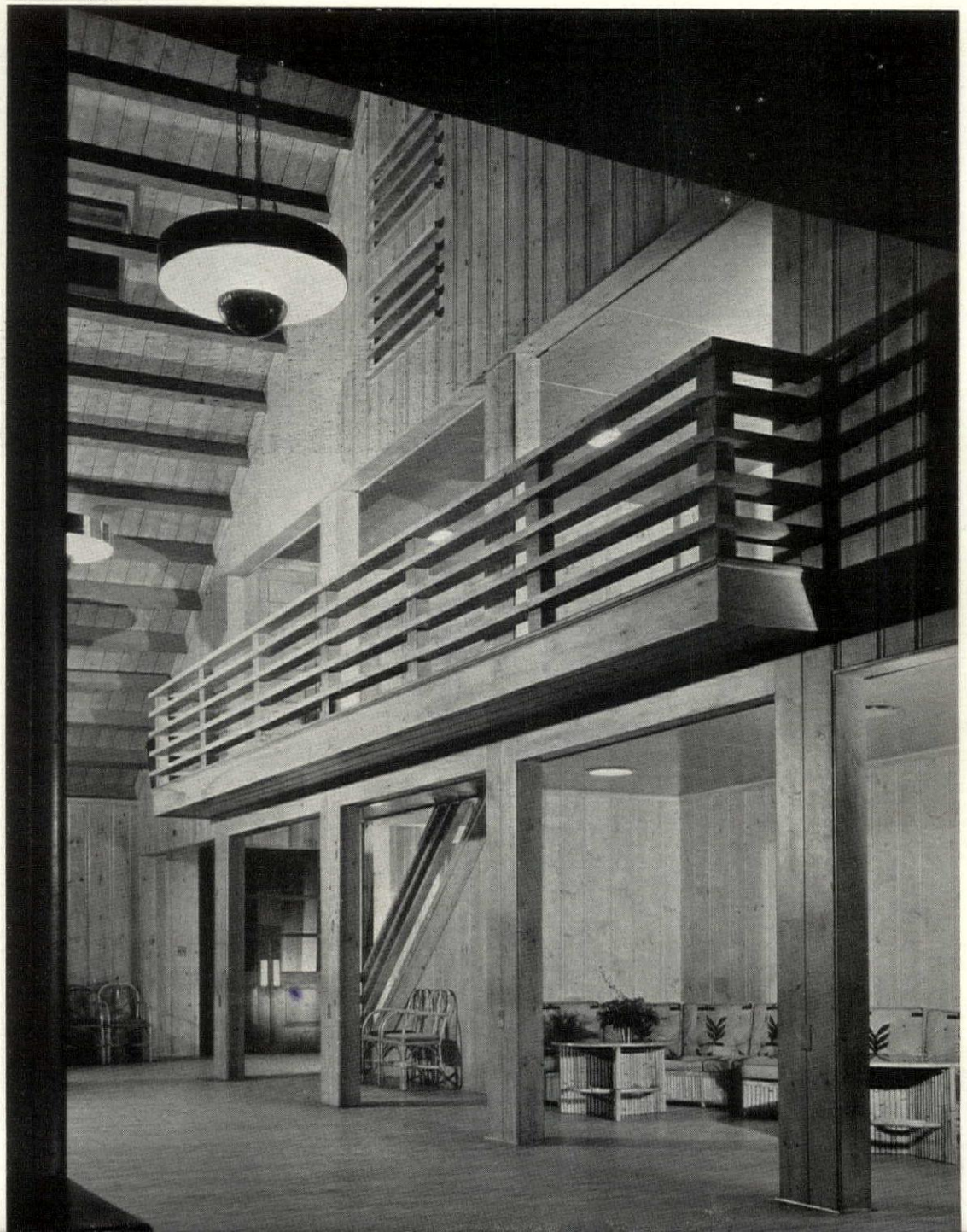
SOCIAL HALL AND AUDITORIUM

GREEN MANSIONS, WARRENSBURG, N. Y.



EDWIN J. ROBIN, ARCHITECT

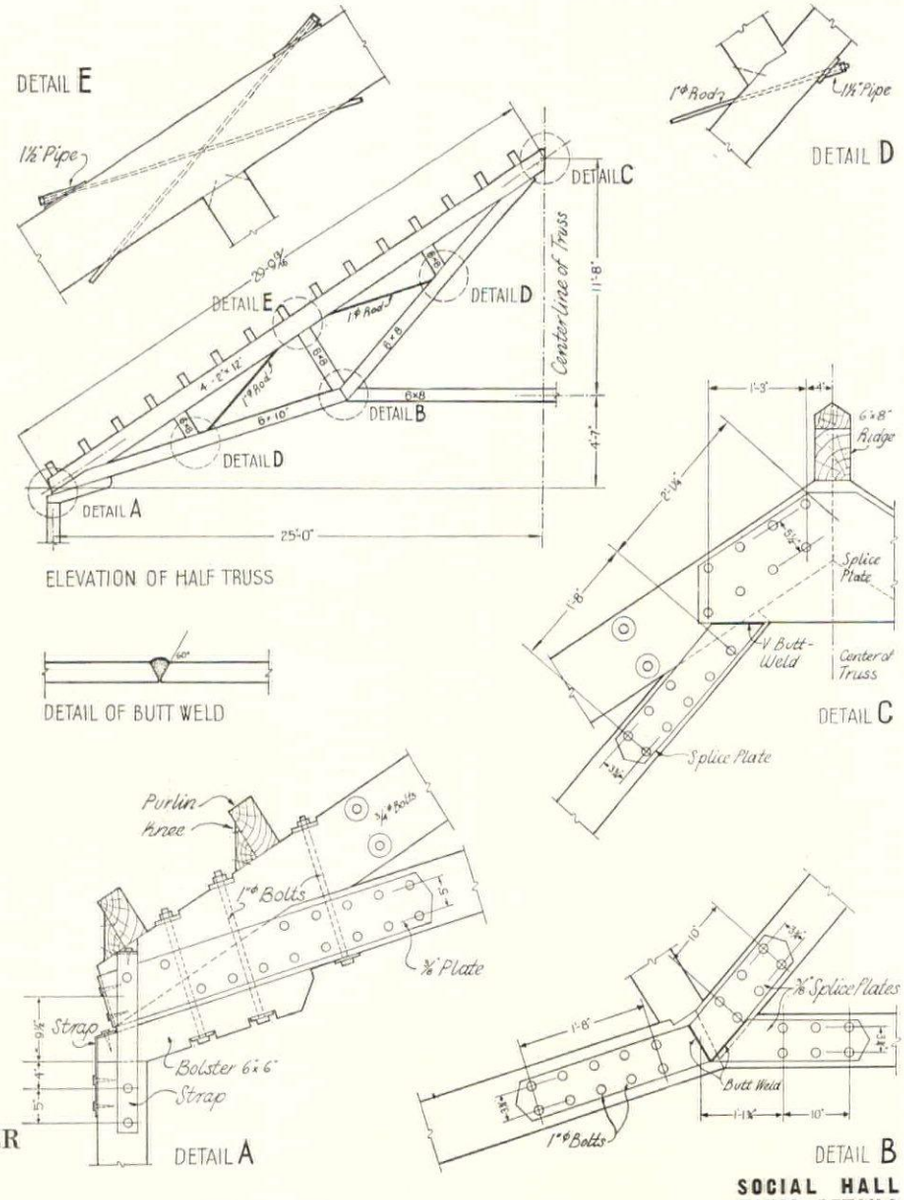
SOCIAL HALL



SOCIAL HALL AND AUDITORIUM, GREEN MANSIONS

This combined lounge, social hall and auditorium is at Green Mansions, a privately-owned camp in the Adirondacks. While not so large and elaborately equipped as the corresponding buildings at Tamiment, it shows the same expert use of local materials and thoughtful attention to detail. The design provides the convenience of a separate theater with fixed seating, fly loft and dressing rooms, while preserving some of the economy of combining these facilities under one roof.

Wood trusses, with bolted metal splice plates, are used in each of the rooms, similar designs being employed for the various spans. For this type of work, local lumber is not used, since unless the timber is properly seasoned, shrinkage problems might develop, but the trusses are fabricated entirely by local carpenters and blacksmiths. Details at right show the principal truss used in the social hall; auditorium trusses span the same width but use wood diagonal members in place of the steel tension rods. An exterior view of the building is shown on the second page following.

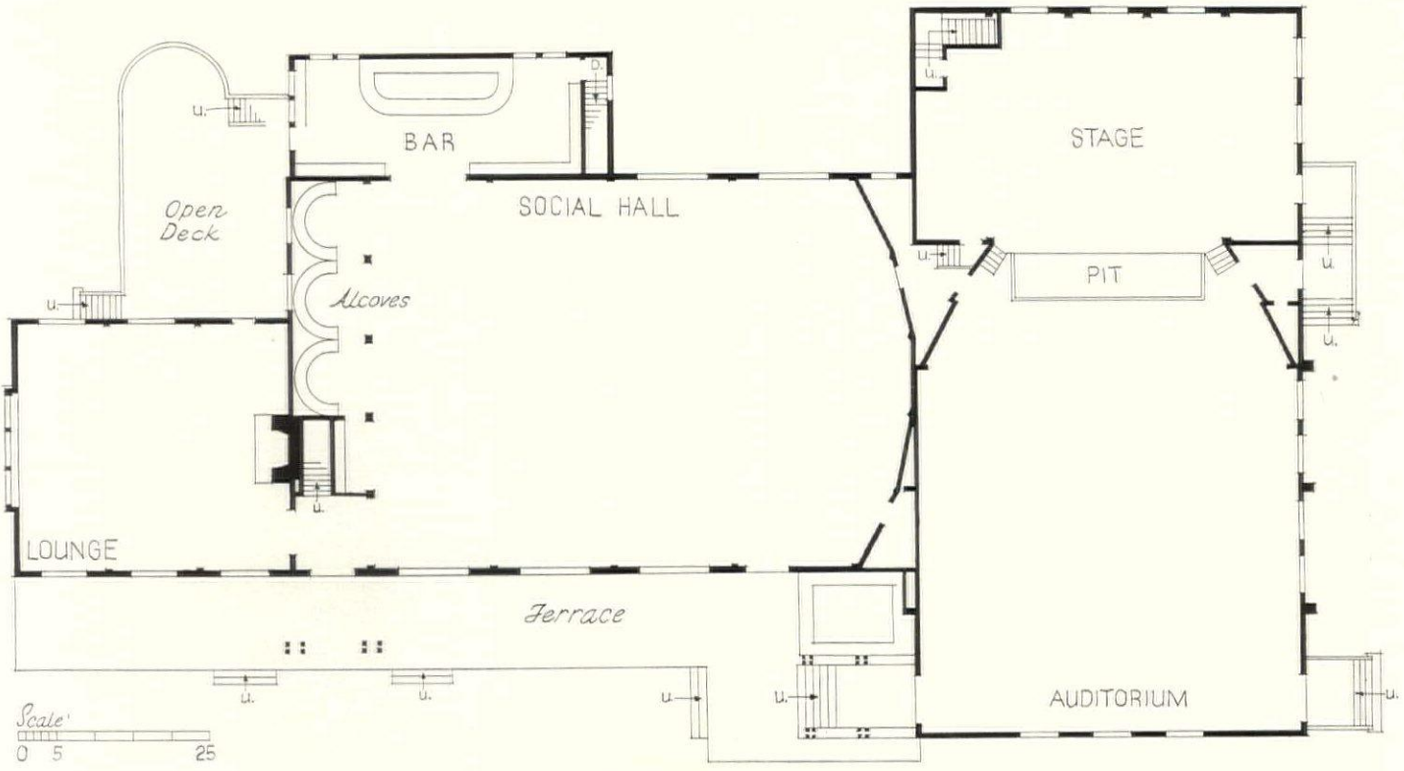


SOCIAL HALL TRUSS DETAILS

J. ARONOW, STRUCTURAL ENGINEER

SOCIAL HALL

LOUNGE


BAR
SOCIAL HALL
STAGE
PIT
Open Deck
Alcoves
LOUNGE
Terrace
AUDITORIUM
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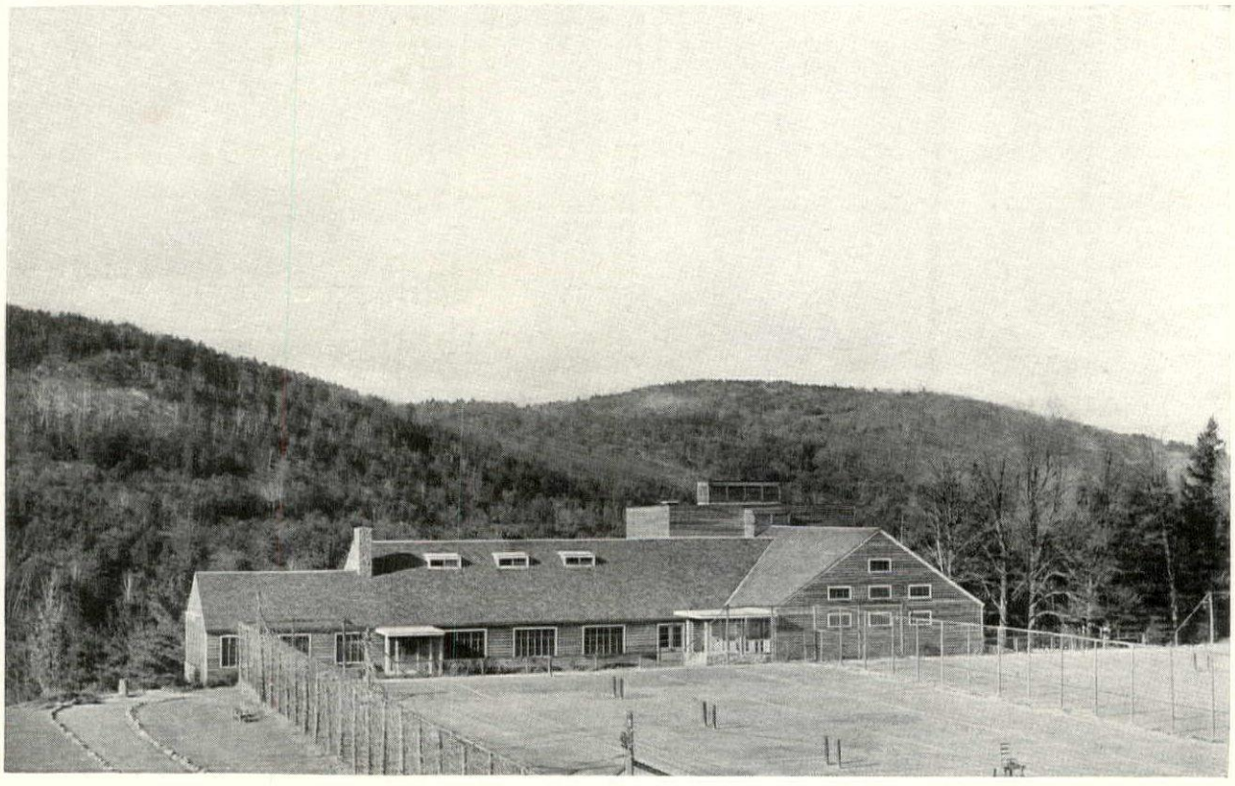
AUDITORIUM

GREEN MANSIONS, WARRENSBURG, NEW YORK



EDWIN J. ROBIN, ARCHITECT

CONSTRUCTION OUTLINES

CAMP TAMIMENT

STRUCTURE: Exterior walls—(dining hall) redwood siding; remainder—vertical fir and battens: (all) building paper, sheathing and studs; inside—cypress, some Acoustic-Celotex in auditorium, Celotex Corp. Columns—(dining hall) steel; remainder—wood. Ceilings—(auditorium) Celotex Corp., tile; remainder—wood.
ROOF: Built-up or asphalt shingles, Ruberoid Co.
SHEET METAL WORK: All galvanized iron, except wood gutters for auditorium.
WINDOWS: Sash—(dining hall) steel, J. S. Thorn Co.; remainder—wood. Glass—double strength, quality B, Pittsburgh Plate Glass Co. Screens—steel, J. S. Thorn Co.
FLOOR COVERINGS: Lobby (dining hall) and powder room (social hall)—linoleum, Armstrong Cork Co.
FURNISHINGS: Auditorium seats—Heywood-Wakefield Co., Upholstered seats—Feldman Bros.
DOORS: Kalamein doors—Acme Steel Partition Co. Wood doors—East Stroudsburg Lumber Co.
HARDWARE: By P. & F. Corbin Co.
PAINTS: Pratt & Lambert, Inc. and Creo-Dipt Co.
ELECTRICAL INSTALLATION: Wire—Anaconda, American Brass Co. Switches and panels—Trumbull Electric Co. and Bulldog Co. Fixtures—Condilite Co. and Egli Co., Inc.
PLUMBING: Fixtures—American Radiator-Standard Sanitary Corp. Soil pipes—cast iron. Vent and water pipes—galvanized iron. Connections—lead. Septic tanks—Stroudsburg Septic Tank Co.
SPECIAL EQUIPMENT: Electric roof ventilation (auditorium)—W. F. Hirshman Co. Stage rigging, draperies and asbestos curtain—Artcraft Theater Equipment Co.

UNITY HOUSE DORMITORY

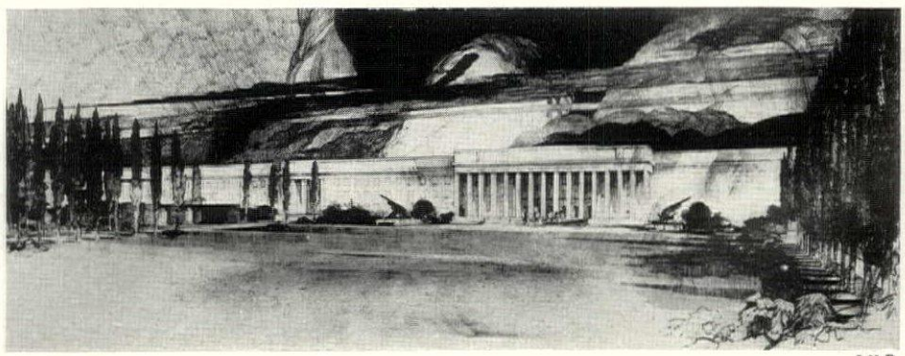
STRUCTURE: Exterior walls—beveled cedar siding, building paper, diagonal sheathing, studs; inside—cypress, metal lath and plaster, U. S. Gypsum Co.
ROOF: Asphalt shingles, Johns-Manville.
SHEET METAL WORK: Flashing—copper. Ducts—galvanized iron.
INSULATION: Roofs—rockwool, Johns-Manville.
WINDOWS: Sash—steel casement, Lux Window Patents Co. Glass—double strength, quality A and sheet, Libbey-Owens-Ford Glass Co.
STAIRS: Steel, Shawana Steel Construction Co.
FLOOR COVERINGS: Toilets and baths—linoleum, Armstrong Cork Co. Corridors and stairhalls—rubber tile, Paul Coste, Inc.
FURNISHINGS: By Grand Central Wicker Co.
WOODWORK: Trim—cypress, Kramer Lumber Co. Doors (fire)—Triangle Steel Products Co.
HARDWARE: By P. & F. Corbin Co.
PAINTS: By Keystone Varnish Co., Pratt & Lambert, Inc. and Monad Paint & Varnish Co.
ELECTRICAL FIXTURES: Metropolitan Light Fixtures Co., Egli Co., Inc. and Condilite Co.
PLUMBING: Fixtures—American Radiator-Standard Sanitary Corp. Vent pipes—galvanized iron. Connections—lead. Water pipes—Anaconda brass, American Brass Co.
VENTILATION: Exhaust system, Sturtevant Co.

GREEN MANSIONS AUDITORIUM

STRUCTURE: Exterior walls—beveled cedar siding, building paper, sheathing, studs; inside—cypress, pine, fir plywood. Floors—concrete. Ceilings—exposed boards.
ROOF: Vermont black slate, McDonald Bros. or built-up.
SHEET METAL WORK: Flashing—copper.
INSULATION: Walls between theater and social hall—Balsam wool, Wood Conversion Co.
WINDOWS: Sash and screen frames—steel, J. S. Thorn Co. Glass—double strength, quality B, Libbey-Owens-Ford Glass Co.
FURNISHINGS: By Grand Central Wicker Co. and Heywood-Wakefield Co.
WOODWORK: By Kendrick & Brown.
HARDWARE: By P. & F. Corbin.
PAINTS: By Pratt & Lambert, Inc., L. Sonneborn Sons, Inc. and Samuel Cabot, Inc.
ELECTRICAL INSTALLATION: Panels—Frank Adams Co. Fixtures—Kent Metal Mfg. Co. Floor pockets—Kliegl Bros. Stage Lighting—Century Lighting Co.
PLUMBING: American Radiator-Standard Sanitary Corp.

HEADWAY AND HEADACHES

Army becomes world's biggest builder . . . Brickbats from Truman Committee . . . FHA doctoring . . . Savings banks to set up building companies . . . Insured equities proposed for housing.



I.N.P.

By simple substitution of the American for the Nazi Eagle, "Wilhelmstrasse Modern" has been brought to Arlington County, Va., for the new War Department Building. "Largest office building in the world", it has 4 million square feet of space in its pentagonal plan. For $31 millions, its three floors above ground will house 20,000 workers, its basement 8,000 cars. A colonnaded facade helps bring this colossus into the Washington tradition. Designer, George Edwin Bergstrom.

BIGGEST BUILDER

Two months ago, when the President signed a bill passed by Congress merging the Army's Quartermaster Construction Corps with the Corps of Engineers, one of the largest consolidations in Government history was effected. More significantly, the law put under the direction of Major Gen. Eugene Reybold, chief of engineers, the unified control of building operations employing some 600,000 individuals, including architects, engineers, contractors and their crews. As the general proudly proclaimed: "If we were organized as a corporation, we should be the world's largest."

Last month this construction behemoth (equivalent to U. S. Steel plus Bell Telephone) waddled forth to meet a challenge befitting its size — the building in record time of nine more large cantonments, each housing 30,000 men, and five additional temporary encampments required by the nation's rapidly expanding fighting forces. But, belying its size, results began to come with surprising speed and agility.

First feat was the purchase of more than 700 million board feet of lumber by the Construction Division's Materials and Equipment Section, believed to be the largest single transaction of its kind ever achieved by any buying agency, public or private. To go along with this stockpile, 240,000 kegs of nails were also bought.

Secret of the Construction Division's burst of accomplishment is increased decentralization of responsibility in the field to match the increased concentration of authority at the top. In merging the Quartermaster Construction Corps into the Corps of Engineers, the latter's nationwide decentralized organization of eleven divisional and 51 district offices became the nucleus for expansion. Early in January six new district engineers offices were established (Arlington, Va., Atlanta, Columbus, Salt Lake City, San Antonio, Tex., and Panama, Canal Zone). All these divisional district offices deal directly with local architects, engineers and contractors. Each advertises for bids, lets contracts, supervises construction.

With decentralization as the War Department's new watchword, procedures have been greatly simplified. Instead of handling everything across the desks of Washington brass-hats, the Army now gives construction men in the field greater responsibility in getting work under way. Project engineers are authorized to let contracts up to $1 million, district engineers up to $2 millions, division engineers up to $5 millions. By extending to the Army some of his new war powers, the President has also cleared the road for advance payments running up to 50 per cent on contracts under $5 millions. Net result: weeks knocked off the old construction schedule used by the Quartermaster Corps.

BRICKBATS

In a bulging, blistering report, the Senate's Truman Committee investigating the Government's defense program delivers many a side-swipe at defense building. Along with OPM and the $1-a-year officials, Defense Housing Coordinator Palmer and former FWAdministrator Carmody are singled out for a blanket charge of "many mistakes, gross waste, extravagance, inefficiency and petty jealousies."

Some of the Committee's findings are post-mortem. In light of last month's reorganization of FWA's housing set-up, the cracks about diffusion of authority and duplication of effort no longer carry so much weight. Recommendations for corrective legislation have also largely been anticipated in the Lanham Act extension, now cleared through Congress and soon to be operating under full power.

Other findings:

► Only 30,718 out of 41,006 dwelling units available had been occupied by defense workers on January 2. In fact, last September, three months after completion of a 748-unit project at San Diego (built over Carmody's protest on Palmer's demand), only 45 families had moved in. This, the Committee feels, is a sign of something gone haywire. The mark admittedly has been overshot in some places, but much excess housing can also be ascribed to defense employment expanding less rapidly than expected and unoccupied units are therefore, *ipso facto*, no fault of the defense housing officials. Nevertheless, the Senatorial sharp-shooters refuse to condone a vacancy ratio as large as their investigations disclose: "For this reason the Coordinator must be censured for his failure to exercise the highest degree of care in making his findings of need. In addition, the Government has suffered considerable loss because of the failure to rent so many defense housing units, and presumably may lose a substantial part of its capital investment."

► Public Buildings Administration has been erecting barrack-like structures "inconsistent with the general architectural standards of the localities." Despite this shellacking, it is recommended together with USHA as one of the two agencies that should handle future housing programs in collaboration with local housing authorities. On the other hand, the Navy, now busy with other duties, gets a pat for its accomplishments in defense housing.

► Excessive prices have been paid by Government constructing agencies for land in many instances. Cited as a glaring example is FWA's expenditure of $87,050, or $2,200 an acre, for a housing site at Clairton, Pa., adjoining a site which was purchased in 1938 for $400 an acre. To make this tract workable, an additional $3,600 an acre must be spent for grading and excavating.

► In defense plant construction Tennessee's Wolf Creek and Milan ordnance plants form Exhibit A in waste. Because of inadequate Army planning, their cost rose from an original estimate of $35,741,000 to nearly $50 millions.

► Government constructing agencies have been too fond of lump sum negotiated

contracts. The Committee believes these are too costly, require as much time as competitive bids. Furthermore, cannily note the Senators, many contractors with big fixed fees for supervising construction have been subcontracting much of the work without revising their fees downward, thus in effect netting a double fee.

►Priorities for defense housing have been badly fumbled. Although Coordinator Palmer recommended priorities in November, 1940, the OPM did little more than twiddle its thumbs for almost a year. As finally concocted, the priorities plan is more cumbersome than necessary in the Committee's opinion. Because of OPM's procrastination, says the report, contractors became uncertain as to the availability of materials and consequently the Government was forced to pay higher prices for defense housing.

PRIORITIES

Despite general belief that existing priority regulations and publicity have killed civilian building, at least psychologically, top priority officials have been discussing a complete stop order. In the offing is a licensing program to permit only building clearly in the public interest, but meanwhile, pending its development, dealers' and builders' stocks would be frozen so they could be recaptured for war construction.

FHA DOCTORING

To give private enterprise a bigger slice of war housing, new FHA legislation is being noodled by administration strategists. Bill has still to win Budget Bureau's approval before it can be submitted to Congress, however.

Principal revampings:

►Under Title VI, a new section authorizing 90 per cent loans to limited dividend companies for large scale housing projects in amounts up to $5 millions. Advances during construction included. Reason for adding new section instead of altering existing provisions: FHA wants to segregate all risks handled during the war, thus not affect regular reserves.

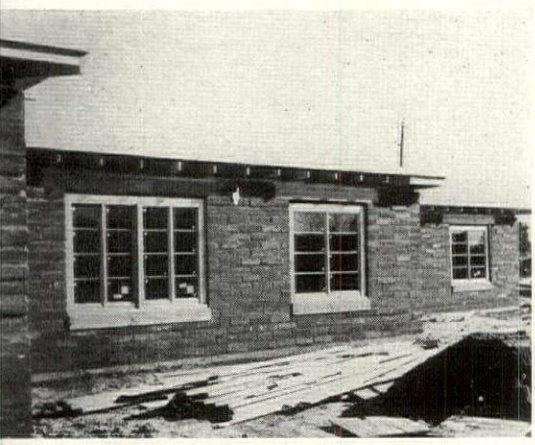
►Mortgage limit on single-family houses to be hoisted from $4,000 to $5,400, thereby qualifying $6,000 houses for 90 per cent loans.

►Maximum lending period to be stretched from present 20 years to 25.

►Total amount of permissible FHA business to be increased from present $300 millions to a round billion.

►Title VI to get another year's life after scheduled expiration on July 1.

►Perhaps most significant, present language requiring economically sound projects to be scrapped in favor of new requirement that FHA administrator must find risks acceptable as determined by war emergency. This will pave way for more liberal appraisals and standards, it is felt.



RAMMED EARTH construction — venerable method of packing a dryish mud into molds or wood forms, hardening it, then turning it out as solid building blocks or monolithic walls — gets a new lease on life because of priorities. Architect Tom Hibben, famed as an advocate of houses dug out of the ground, has been commissioned by FWA to try this method in an experimental project at Alexandria, Va. Eleven $3,500 three-room dwellings, boasting gliding sash and smacking faintly of the International Style, have sprouted. To make their walls weatherproof, cement or asphalt is added to the basic earth mix.

SAVINGS INTO HOUSING

Step of large significance for Building was taken last month by New York savings banks when their Assn.'s subsidiary, the Institutional Securities Corp., decided to finance one or more companies to build, rent and sell houses near war industries. For hesitant savings banks in other States, this step may also be doubly significant as a trail-breaker.

With a working capital of $500,000 on tap, the corporation's stockholders feel they are well able to handle, if necessary, all housing needs in New York's defense areas which should be provided for by private capital on long range. Consensus is that these needs total, at the outside, about $150 millions. However, the corporation does not intend to compete with other buildings or agencies. It will operate only in places where local resources are inadequate to the need. Even then, the services of local architects, local contractors and local dealers will be utilized as much as possible.

Papers are now being drawn for formation of the corporation's building companies. The first is scheduled to be set up and moving under full steam in short order. But where it will start work is still an open question, since the answer hinges on Coordinator Palmer's findings.

Greater activity by U. S. savings banks on the housing front has long been demanded by Building, and it is to be hoped that the New York program will soon be duplicated elsewhere. According to the New York banks' Defense Housing Committee Chairman, Earl B. Schwulst (also vice-president of Manhattan's big Bowery Savings Bank), it represents a definite crystallization of investment attitude.

LEVITT TO NORFOLK

First big name home developers to swing into defense rental housing are the aggressive Levitt Brothers—William and Alfred—whose normal stamping ground is Long Island. They have now swung south to Virginia, acquired property in Norfolk, plan to start with 800 rental units (later to be expanded to several thousand).

Levitts expect to hold rents well below the $50-a-month top permitted by Title VI. Houses will be wood frame, warmed by oil-burning space heaters. To give time for intensive planning studies, project may not be started for two months, but once under way will proceed at five to ten houses a day. Credit for this move, sure to influence other private builders, goes to Coordinator Palmer and FHA officials, who can now ring up their first substantial victory in moving the private rental market.

RENT OPTIONS

Many a housing developer has been baffled—even to the verge of having the screaming willies—by customers who want to buy, are good credit risks, but lack the necessary down payment. With war workers this is almost invariably the case. Although getting good wages, they lack enough backlog of savings to be able to plank down the initial cash which would entitle them to become home-owners.

To builders who have been fretting over this predicament there now comes solace and renewed hope via a neat FHA financing plan currently being tried out in The Compagna Construction Co.'s Milbrook Park housing project in Hartford, Conn. Dubbed the Rent Option Plan, it permits the customary 10 per cent down payment to be financed on a five-year instalment basis.

Mechanics of the plan: the builder takes a note from the war worker for a major share of the required down payment, and the worker then amortizes this note in small monthly payments which are added to the regular charges under FHA's system of insured mortgage financing.

Effect for the home-owning war worker is like paying rent, hence the plan's name. But, as its advocates point out, he is better off than any ordinary rent payer. The extra monthly charges come during a period when wages are fat and his equity can be built up without increasing the proportion of the family budget normally devoted to rent. Then, after the equity note is paid back, he will enjoy a substantial saving over rent each month for the remaining 15 years of the mortgage.

INSURED EQUITIES

Most ardently rooted for by most private builders as a means of spurring sales to war workers who hesitate to buy houses, not knowing when the war may end and their jobs blow up, is FHA insurance of the home owner's equity rather than the present FHA practice of insuring the mortgage. As Herbert U. Nelson, secretary of Home Builders Institute of America, NAREB affiliate, points out, it is the equity

(Continued on page 66)

PREFABRICATION GETS ITS CHANCE as FWA allocates $153 million for demountable houses, offers to buy them F. O. B. for assembly by others. A 42,000-house program that may make an infant industry a lusty rival of conventional construction.

The magic in the word Prefabrication—the magic that has survived nearly a decade of disappointments, false starts and downright fiascos, that has entranced a public which can scarcely distinguish between a stud and a joist, that has kept a tiny army of experimenters everlastingly at work despite almost universal failure to achieve commercial success, the magic that glittered so enticingly at the Chicago Fair in '33 and in its cellophane wrapping at Wanamaker's store in '35, and turned the prosaic sectional house into something ardently to be desired—is at last beginning to work. The prefabricated house is in the news again and has a good chance to remain there. After 5 years of comparative obscurity, the prefab industry has become a War Baby.

THE FORUM swore off the overworked comparison of house building and automobile manufacture some time ago, but the parallel between what is happening to the infant prefab industry in 1942 and what happened to the infant automobile industry in 1916, '17 and '18 is inescapable. World War I created a mass demand for cars and trucks which made possible the economies of mass production that in turn created a mass market for post-war sales. World War II is repeating the first part of this process with houses, may bring the second as surely as the chicken follows the egg. To win the war, the U. S. must have new workers' houses in unprecedented numbers. To supply those most urgently needed in the shortest possible time, at reasonable cost, and with the greatest degree of post-war demountability, defense officials are turning to prefabrication: mass production of floor, wall and roof panels at the site or in the factory in quantities sufficient to complete 42,000 demountable houses by July 1.

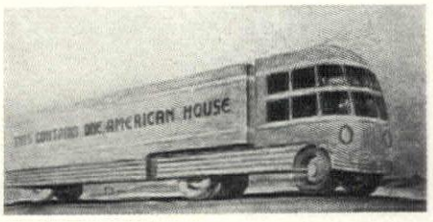
While not large compared with the total U. S. house production, which topped 600,000 last year, this figure is enormous when applied to present prefabricating facilities, and is bound to have enormous effects. For more than a decade, prefabricators have talked big but built little. Their total production in the period 1931-40, while impossible to determine with any accuracy, certainly did not exceed 10,000 units, or about ½ of 1 per cent of the million or more houses built during these 10 years. Last year, a bonanza for prefab due to defense orders, saw some 20,000 completed, or 3¼ per cent of the total. Thus the construction of 42,000 demountables in six months, many if not most of which will be factory fabricated, is significant not merely because it constitutes a substantial proportion of the total number of houses likely to be built in the period (say one-fifth), but also because it is sure to tax productive facilities to the utmost and provide for the first time the "mass market" which prefab's proponents have always argued is a sure path to substantial savings.

For this reason, the new program is an assurance to everyone now engaged in prefabrication—and anyone else who can get a plant and a workable system into operation within the time specified—of continuous, volume production at a reasonable profit provided only that he can deliver the kind of house FWA wants at the proper price. And, since the Government will purchase house "shells" at the plant door as they come off the production line, the prefabricator is relieved of the problems of collecting suitable equipment manufactured by others, storing completed houses, and site assembly, is free to concentrate his skill and capital on plant operation to the exclusion of everything else.

WHY

Naturally, FWA's objective in assigning the bulk of its first and most crucial post-Pearl-Harbor orders to the prefab industry is not to put house manufacture on the map as a potential rival of conventional house-building technique, although it may have that effect. First and foremost, it is to achieve "demountability" — assurance that defense houses now needed in great quantities in communities where their post-war value is problematical can, if necessary, be moved elsewhere at low cost and with minimum waste. PBA's Indian Head, Md. experiment, although widely criticised for its badly-bungled set-up, did establish beyond any doubt that this method of avoiding "ghost towns" was entirely feasible. While not exclusively an attribute of prefabrication, real demountability is hard to obtain by conventional construction methods, but follows almost automatically from most kinds of prefabrication, thus assuring prefab a head start in supplying this part of the defense house need.

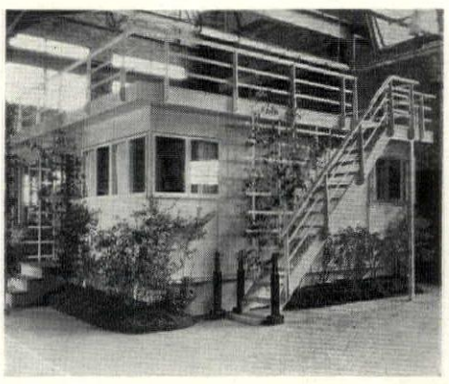
Secondly, defense housing officials are anxious to utilize to the utmost all available house-production facilities, especially those which are set up to provide houses in quantity on short order. A recent survey by a Government committee of building experts, which made a plant-by-plant inspection of 35 of the country's 75 to 100



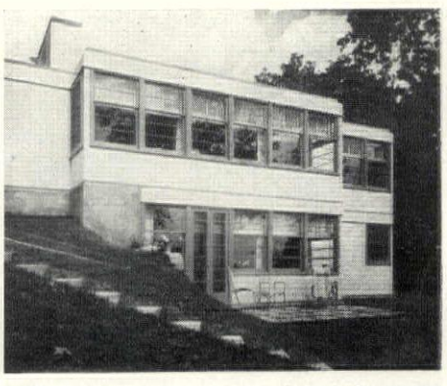
1935. American Houses, Inc. got nation-wide publicity with its proposed "Moto-home," to be delivered by streamlined trailer-truck and erected in one day. (AF May 1935, p. 508).

S. H. Gottscho

1935. American's first Motohome, cellophane wrapped, was undraped by the late Mrs. James Roosevelt in Wanamaker's New York store. (AF May 1935, p. 508).

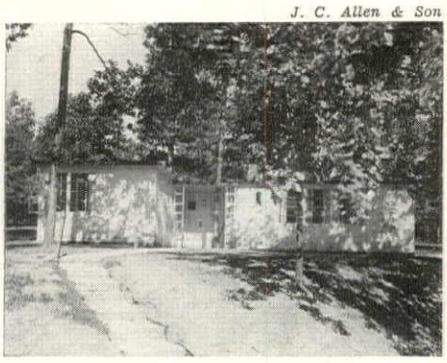


1935. U. S. Forest Products Laboratory gave prefab a real push with its experimental "stressed covering" panels, basis of much of the later developments in prefabrication. (AF July 1935, p. 15).

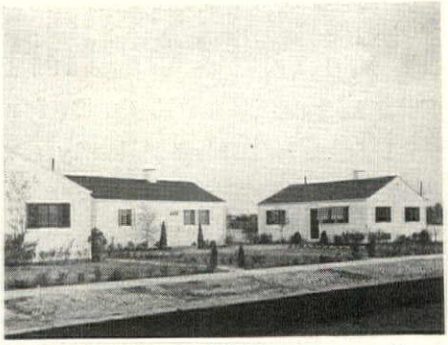


1935. General Houses, Inc. built this $12,000 house at Lake Delavan, Wisc. Design is typical of the early prefab's self-consciously Functional approach. (AF Feb. 1936, p. 101-7).

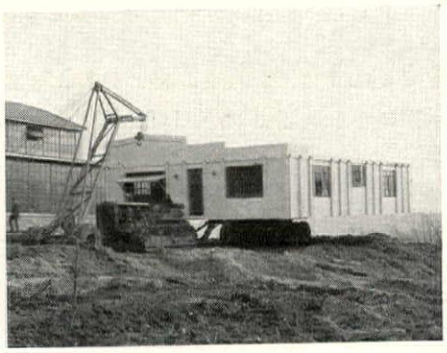
J. C. Allen & Son



1936. Purdue University studied several methods of prefabrication in a project designed to gather data on the $5,000 house. (AF Feb. 1937, p 56).



1936. Gunnison MagicHomes, Inc. (later Gunnison Housing Corp.) completed a half-dozen prefabs in Louisville, Ky. in ten days. (AF Sept. 1936, p 248).



1937. R. G. LeTourneau, Inc., built several all-steel, one-piece houses, floated them across the Illinois river on their own bottoms. (AF July 1937, p 53-6).

active prefabricators, concluded that there was a "reasonable certainty" of obtaining 27,450 prefab units from the plants visited, in quantities of 100 to 2000 each, within 90 days from the time the orders were placed. Considering the urgency of the Victory program, and the performance of prefabricators who have successfully filled huge defense orders already, this potential capacity could hardly be passed up regardless of what construction methods were to be used to provide the balance of the houses needed. The decision to utilize prefab facilities to the utmost is indicative not so much of a preference for prefab as of a desire to get things done and a willingness to employ any means that has shown promise. FWA, through Rufe Newman's newly-created "Demountables" division will welcome site as well as factory fabrication for this part of its program, provided only that units are demountable; and other divisions will continue permanent construction by conventional methods in appropriate localities.

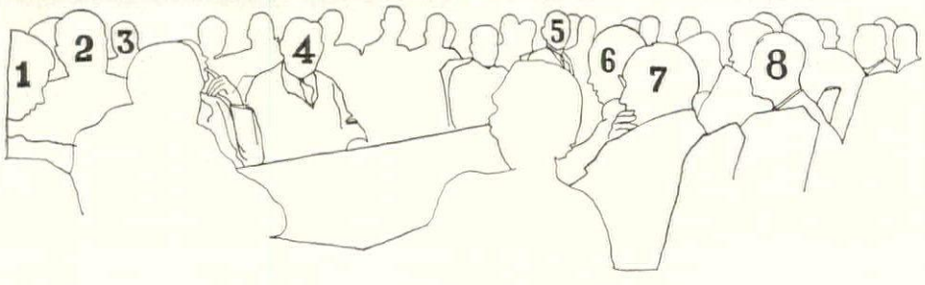
HOW

Demountable houses, whether site or factory fabricated, will be erected by general contractors under normal Government procedure, on a project-by-project basis. Wherever possible, existing streets and utilities will be utilized; in most instances, however, it seems likely that projects will take the form of developments of 100 to 1000 houses, with site planning and site engineering in the hands of local architects and engineers, who will have considerable supervisory responsibility. Streets and sewers, where needed, and plumbing, heating and electrical work within the houses will be installed by subcontractors in the conventional way, except that fixtures and equipment will be purchased by the Procurement Division of the Treasury on a mass basis. Site acquisition and management of completed houses will probably be handled by local housing authorities where these are functioning. Since houses are to be demountable, land may in some cases be leased rather than purchased.

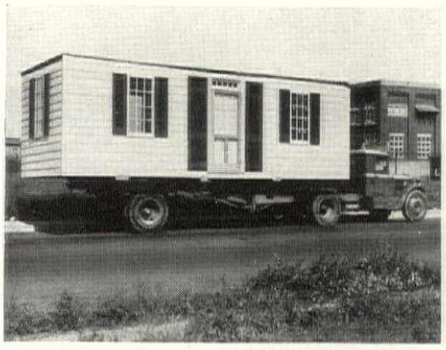
WHAT

Houses will be one-story, basementless units with one, two and three bedrooms each. To facilitate resale after the war, they will be manufactured as free-standing units, and, if connected in pairs or rows, will have double party walls with windows temporarily blocked-up. Foundations will be masonry piers with a skirting down to about 6 in. from grade. Floor, wall, and ceiling panels will be provided with insulation in varying thicknesses according to project location. While Newman's new division has prepared three basic floor plans for prefabricators' guidance, it is likely that the manufacturer's plans, if they meet the minimum standards already established will be used for the present to speed up letting of contracts. An important factor in all cases will be FHA approval, both of the plan and the structural system employed, since this is essential to the resale of the houses to private customers. Principal variations in plan will depend upon the type of heating equipment, which in some instances will require a separate heater room, located according to the type of fuel used. One of the first steps in planning each project will be the determination of the method of heating, cooking and refrigeration to be employed, in order that floor plans may be adjusted accordingly. In all of the houses, lack of basement storage space will be compensated for by the provision of storage rooms.

Photos, FWA

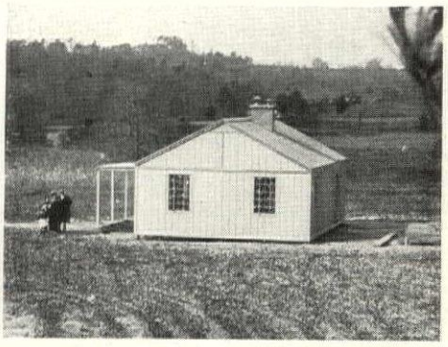


PREFABRICATORS CONFER. On November 10, FWA called the prefab industry together in Washington, got a clear picture of its problems which probably contributed to the decision to switch to plant-gate procurement. Left-hand picture shows among others, 1. W. R. Grimshaw, Grimshaw Co., 2. Robert W. McLaughlin, American Houses, 3. Rufe Newman, new FWA prefab head, 4. D. C. Slipher, National Homes, 5. W. E. Wilson, Plywood Structures, 6. F. Vaux Wilson, Homasote, 7. Gardner S. Marion, Prebilt, 8. Martin S. Wing, Homasote. Picture above shows Foster Gunnison (left) McLaughlin of American Houses, and Slipher of Nat'l Homes.



1937. Architect John Whelan, in Washington, D. C., developed an experimental mobile, 2-part house, sheathed in copper crimped to resemble siding. (AF July 1937, p. 53-5).

1938. Hobart Brothers Co., makers of arc-welding equipment, built a number of all steel mobile houses for sale in Illinois. (AF Feb. 1938, p 166).



1939. Tennessee Coal, Iron & Railroad Co. built 60 sets of all-steel houses and farm buildings for FSA, planned more for the rural market. (AF Jan. 1939, p. 68-9).

As for architectural style, Newman seems inclined to follow the line of least local resistance, will not push flat roofs or modern design where these are not generally accepted. Gable roofs, while somewhat harder to fabricate, will therefore be used in most cases. Non-functional shutters and other meaningless decorations, however, are out, and the division will do everything possible to encourage the prefabricator to improve the appearance of his product with better-proportioned cornices, proper window spacing, and well-designed entrances and other features.

At least during the first phase of the program, it seems unlikely that architects in charge of site planning will have much to do with house plans or exteriors, since houses will in many cases be contracted for before a site has been selected. An effort will be made, however, to get the architect and house manufacturer together to consult on house design in order to achieve more attractive combinations.

Construction, while dependent upon the particular system of prefabrication in each case, will be mostly wood frame, usually with some form of sheet material glued or nailed to the inside and outside of the frame (systems which employ steel for frame or sheathing material must be revised to meet priorities regulations.) The majority of the houses will probably employ a single thickness of resin-bonded plywood for exteriors and plywood wallboard, or other sheet finishes for interiors, but this is by no means mandatory. In order to assure maximum demountability, floors will be assembled as panels in the factory (contrary to much present prefab practice) with finished flooring factory-applied. Roofing materials may be applied at the site. Wall and partition panels will include doors and windows, glazed and fitted with hardware, will vary from 4 ft. to room width according to the system of prefabrication used.

HEADACHES

From the prefabricator's standpoint, the big thing wrong with defense housing to date has been irregular demand; after building up capacity to fill an order for 1000 units he was likely to be faced with a complete shutdown while awaiting other work. The new program of direct procurement solves this problem from the prefabricator's point of view but transfers it squarely to Government shoulders. Biggest headache in putting it into effect will be to mesh production and assembly, a difficult job rendered even harder by the fact that prefabs cannot be stored in any quantity without a vast amount of covered space.

While many experienced building men will probably be skeptical of the prefab industry's ability to produce even 10,000 units in a few months, the bottleneck in the program is much more likely to be in field assembly — which must proceed exactly on schedule in some 50 localities in order to absorb the total production of the various prefabricators granted contracts. In any event, Newman will be in a difficult spot between fabricators grinding out (or failing to grind out) houses at a fixed rate and the project contractors, many of whom will be inexperienced in assembling prefabs and whose schedules will sometimes be upset by factors beyond their control. The new division of responsibility between the prefabricator and the contractor is bound to result in buckpassing and recrimination, while piling-up of unassembled houses will inevitably be seized upon to "prove" prefab a failure.

Production difficulties, however, are not the only ones the program will face. The

(Continued on page 78)

1939. Hayes Econocrete Forms, Inc., in California, developed steel forms for a cast-in-place concrete house with double, insulated walls. (AF Mar. 1939, p 219-20).

1939. Seattle Architect George W. Stoddard built a number of wood frame and plywood houses indoors in 2 to 3 parts, moved them to the site on trailers. (AF Apr. 1939, p. 286).

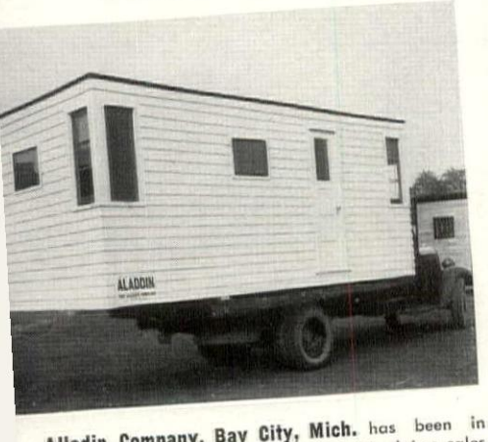
E. J. Baker

1940. John B. Pierce Foundation, of N. Y., climaxed a long series of prefab experiments with this development of "horizontal" construction, later used by The Glenn L. Martin Co. (AF Nov. 1941, p 321-5) Cost, $2,629.

"SNAPSHOT OF AN INFANT INDUSTRY"

On the following five pages, THE FORUM presents an alphabeticized description of some 101 of the U. S. companies who were engaged in prefabrication last year or who now plan to produce houses for the Government, together with photographs of typical houses or production operations where these were available. This listing, while it does not purport to be all-inclusive, does contain all of the firms who prefabricated houses for various Federal agencies last year and most of the others who were at all active. According to Federal sources, these companies furnished 18,048 prefabs for public defense projects in 1941, and according to their own estimates, several thousand more for private consumers. 1942 should see this total at least doubled.

SNAPSHOT OF AN INFANT INDUSTRY . . .



Alladin Company, Bay City, Mich. has been in the ready-cut house business since 1906, claims sales totalling 100,000. In 1937, they developed a mobile, "Pullman" house (above) that was moved to the site in one piece on an ordinary truck (AF, Feb. '38, p 70). Alladin now plans to convert its plants for the fabrication of panel houses, expects to produce more than 1,000 prefab units a month. Factories are located in Michigan, Oregon, Georgia, and Illinois, serving the entire U. S. If Alladin meets its production plan of 3,000 houses in 90 days, it may earn the title of largest prefabricator in the country.

Hightcon-FWA

Allied Housing Associates, Inc., Langhorne, Pa. began manufacturing prefabricated and partially-prefabricated houses in 1936, claims sales of about 200 houses a year. System employs a wood-frame panel, any standard fiberboard, plywood, or plaster board as a surfacing material. Factories in Langhorne and Bristol, Pa., Baltimore, Md., and Portsmouth, Va. have a capacity of 1,000 houses in 90 days, could produce 500 houses a month thereafter. Houses are shipped by truck. In 1941, Allied furnished 631 defense dwelling-units and 5 dormitories for the Government (AF, Apr. '41, p 76, Sept. '41, pp 188-210). It has a 1942 contract for 600 houses for Glenn Martin.

American Houses, 570 Lexington Ave., N. Y., N. Y. is an old-timer in the prefab field organized in 1932 by Architect Robert W. McLaughlin. It produced the first prefabricated steel houses actually sold: 20 units for coal miners in Hazelton, Pa. (AF, Apr. '33, p 327), merged for a time with Houses Inc., and reappeared in 1935 in substantially its present form (AF, May '35, p. 508-12), discarding its original steel-frame, asbestos-panel system and modern design in favor of pre-cut and partially pre-assembled wood panel construction and conventional exteriors (AF, July '40, pp 69-72). Factories are at South Kearny, N. J., Irvington, N. Y., - (more on next page).

Bennett Lumber Corp., N. Tonawanda, N. Y. has manufactured ready-cut and sectional houses for 20 years. Factory at North Tonawanda has a production capacity of 100 houses per month on a one-shift basis, could triple this figure by continuous production.

W. P. Bridges (Colonial Courts, Inc.), Jackson, Miss. has a factory at Jackson with a capacity of 50 houses per month after 30 days.

Brown & Johnson, Inc., Los Angeles, Calif. have a Los Angeles factory capable of turning out 240 houses a month after 30 days.

Brown Lane Co., Beaumont, Texas claims a monthly capacity of 250 units after 30 days.

Butler Manufacturing Co., 13th and Eastern Ave., Kansas City, Mo., manufacturers of steel farm buildings, branched out into house prefabrication in 1941 with the Buckminster Fuller "Dymaxion Deployment Unit" (AF, June '41, p 425), has since built several experimental houses.

Burmester Housing Corp., Middleton, Wis. began prefabricating in 1938 and now has a capacity of 30 houses a month in its Wisconsin factory. Prefabrication is according to the Douglas Fir Plywood Association's stressed-covering construction, with all structural parts factory assembled. Burmester has also produced a semi-prefabricated house, erects its own houses locally and distributes to outside markets through lumber yards and other sales agencies, has done no Government work to date.

Acme

Central Contracting Co., 409 Construction Bldg., Dallas, Texas got nation-wide publicity for its tent-fabricated houses last year by a race between two erection crews in which the "teams" wore numbers like football players (AF, July, 41, p 5). Estimated capacity of 1,000 houses within 90 days is backed up by 300 defense units for FWA's Division of Mutual Ownership at Grand Prairie, Texas, and 300 at Dallas, Texas.

Central Housing Corp., Union Commerce Bldg., Cleveland, Ohio is a licensee for the Pierce Foundation House, capacity 60 houses a month.

Joseph P. Day, 405 Lexington Ave., N. Y. C., famed New York real estate operator and auctioneer, has factories and plans for producing demountables for the FWA program. In 1941 his Day Housing Corp. produced 499 semi-prefabricated units using conventional materials for an FWA project at Camden, N. J. (AF, May '41, pp 341-44). Day's 1942 fabrication will be carried on under a new company name and will involve complete panel construction.

Deegan Construction Co., N. Y., N. Y. estimates its production capacity at 125 demountables within 90 days, and 100 houses monthly after 6 months.

Fabricated Houses, Inc., 940 S. Figueroa St., Los Angeles, Calif. organized in 1935 by Architect W. F. Ruck and the late Civil Engineer Zara Witkin, built 14 plywood panel houses at that time in Palm Springs, Calif. While it has built nothing further since it is still in existence and will probably be revived for defense work.

Fabcrete Corp., Shoreham Bldg., Washington, D. C. has just completed a plant at Alexandria, Va. to produce prefabricated reenforced concrete units. One demonstration house was erected in 1941.

Emberton Lumber & Mill Corp., Emberton, N. J. began manufacture of plywood panel houses in December, 1941 and is now producing at the rate of 7 per day for FSA projects at Massena, N. Y., New Hartford, Conn., and Stilton, N. J. Emberton uses 4 ft. stress covered panels, ships by rail and truck. Capacity 175 houses a month.

Gold Seal Homes (Anderson-Nichols Co.) 3500 Huntoon St., Topeka, Kan. began production in 1941 and now have a capacity of 5 houses a month. Gold Seal prefabricates room-sized panels, using the Douglas Fir Plywood Assn.'s construction system. Roofs and floors are built at the site by conventional method. Gold Seal does its own erection locally, markets through builders within trucking radius of their Topeka plant.

Gorden-Van Tine Co., Davenport, Iowa have been producing ready-cut buildings since 1910 and claim 25,000 units to date. They now plan to manufacture panel houses in their four factories at Davenport, Iowa, St. Louis, Mo., Chehalis, Wash., and Hattiesburg, Miss. to serve the entire U. S. Present production is 100 ready-cut houses a month, which could be doubled by adding shifts. Gorden-Van Tine has recently supplied a number of ready-cut buildings to the Army.

Gorman Lumber Sales Co., 4621 Tidewater Ave., Oakland, Calif. started prefabricating in June, 1941 under license from Plywood Structures. They have revamped and re-equipped their Oakland factory and are now prepared to manufacture all types of pressure-glued panels at the rate of 200 to 500 houses a month. In 1941, Gorman supplied 200 houses for Engineers, Ltd., contractors on the PBA project at Vallejo, Calif.

Foltz

Green Lumber Co., Laurel, Miss. makes prefabricated wall, ceiling, roof, and floor panels using plywood sheathing and conventional weather-boarding on wood frame, ships nationally by rail and erects its own houses in Mississippi. Green is also prepared to make panels surfaced with exterior plywood, has a production capacity of 1,000 houses within 90 days and 500 houses monthly thereafter. Their 1941 production includes 775 defense units for 3 FWA projects: Hinesville, Ga., La Porte, Ind. and Wilmington, N. C. (AF, Aug. '41, p 107), mostly double units like the one in the picture above.

Green's Ready Built Homes, 1221 18th Ave., Rockford, Ill. was organized last year as an outgrowth of the housing division of the Goodwillie-Green Box Co., who developed the glued-plywood, wall-sized panels used in the system. Since 1936, when Goodwillie-Green started house production, over 200 of these houses have been built. Green's present rate of production is said to be 30 houses a month, capacity within 90 days, 150 units, and after six months, 240 houses monthly.

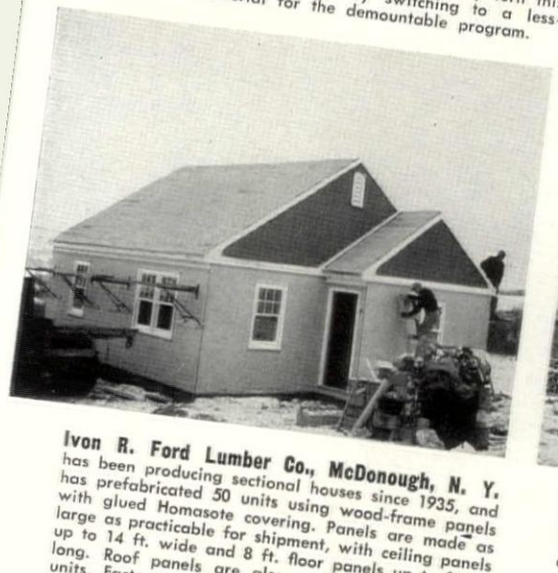
GBH-Way Homes, Inc., Walnut, Ill., started production of plywood panel houses in 1939, using the Douglas Fir Plywood system, but in 1941 switched to the Willis-Way method, which provides joint-free interior walls by joining interior plywood with a glued, scarf joint and covering inside surfaces of room-sized panels with fabric. The 108 GBH-Way houses sold to date have conventional floor and roof construction, but the plant is of course capable of producing a completely demountable house to meet defense demands. Present production, for private sale, is about 12 houses a month of varying size; maximum capacity, 30 houses a month after 30 days. In 1941 GBH-Way supplied the Army Ordnance Depot at Burlington, Iowa with 9 prefabricated units.

Gunnison Housing Corp., New Albany, Ind. (picture on next page) pioneered in the production of stress-covered panels surfaced with exterior plywood, for a time manufacturing its own hot-pressed plywood because this material was not generally available (AF, Sept. '36, pp 248, 50, and 52). Panels are assembled in hot presses using waterproof plastic adhesive, hardwood plywood is used on living room walls for decorative effect (more on next page, opposite.)

Petersburg, Va., and Jacksonville, Fla., and serve the territory within trucking radius of each plant. Present production capacity is 600 houses per month. In 1941 American supplied a total of 1,537 houses for 8 public defense housing projects from Maine to Florida, 3 marine barracks for the Navy, and 4 dormitories for FSA, in addition to supplying houses for 5 private defense housing projects under FHA Title VI.

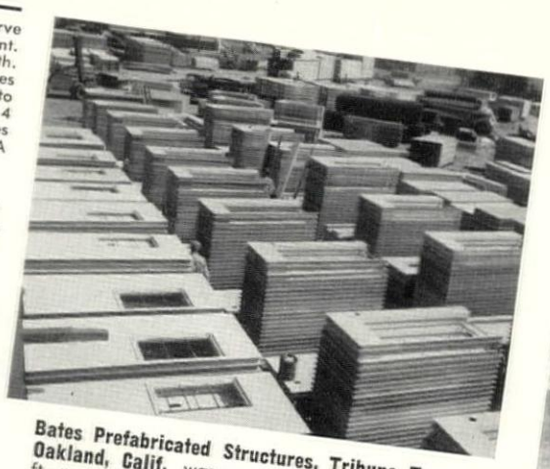
Allspline Corporation, McGaheysville, Va. fabricated frames and parts for the 600 defense houses designed by the John B. Pierce Foundation which Stansbury Manor Corp. built for Glenn Martin in 1941 (AF, Nov. '41, pp 321-26). Since then, Allspline has built 13 dormitory buildings employing the Pierce system on contract for FSA, and a number of barracks for the Army. Their total house production to date is about 1,000 units, all of which were fabricated on Government order, and their present rate of production about 50 houses per month. Licensed under Pierce patents, they have an estimated production capacity of 5,000 houses a month. Whether or not this capacity will be harnessed to the new FWA program is at present doubtful, since the Pierce house was not designed as a demountable; in any event, the success of the system's application to dormitories and barracks should keep Allspline busy until this has been worked out.

Arundel Corp. & Consolidated Engineering Co., Mercantile Trust Bldg., Baltimore, Md. has built several hundred houses under Government contracts using the Stran-Steel framing system, may turn this experience to advantage by switching to a less-strategic material for the demountable program.



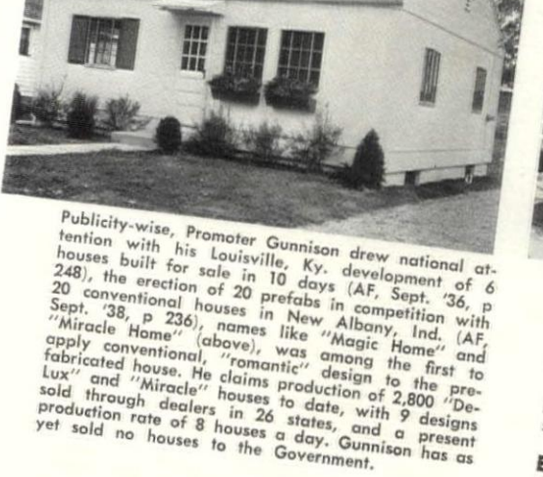
Ivon R. Ford Lumber Co., McDonough, N. Y. has been producing sectional houses since 1935, and has prefabricated 50 units using wood-frame panels with glued Homasote covering. Panels are made as large as practicable for shipment, with ceiling panels up to 14 ft. wide and 8 ft. floor panels up to 24 ft. long. Roof panels are also prefabricated, in 4 ft. units. Factory at McDonough, N. Y. ships by truck throughout New York and adjoining states. Production in fall of 1940 was about 6 houses a month, with an estimated capacity of 30 houses a month. Houses are FHA approved, have so far been manufactured only for private sale.

Bates Prefabricated Structures, Tribune Tower, Oakland, Calif. was organized in 1939, uses a 4 ft. panel system employing stressed plywood on a wood frame with patented metal connectors. Factory at Oakland has supplied panel houses for erection by general contractors, carries on part of its work in the open air (see stockpiles, above) taking advantage of the California climate. Capacity: 800 houses within 90 days, 400 houses per month thereafter. In 1941, Bates supplied 175 units for FWA projects at Benicia and Torrey Plains, Calif. Their system was also used, under a licensing arrangement, by Better Built Homes for 542 PBA houses.

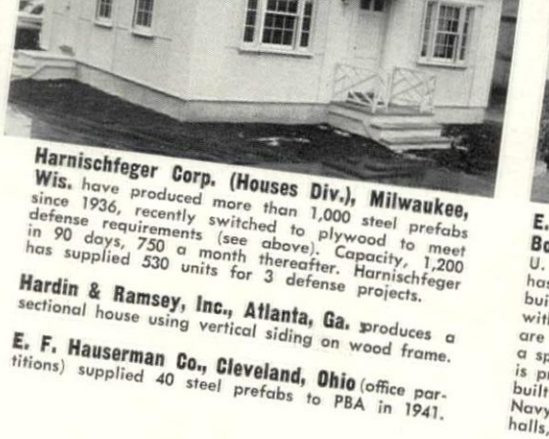


FWA

General Fabricators Inc., Colorado Bldg., Washington, D. C. began production for sale in 1940 with a system of floor, wall, ceiling and roof panels of wood frame and Masonite Presdwood shop fabricated and bolted together at the field. General produced 2 houses in 1940, 61 for PBA's famed Indian Head experiment in 1941 (AF, Sept. '41, p 188), and shipped another 600 units to Australia the same year. It now has factories at Attica, Ind. and Arlington, Va. with an estimated capacity of 425 houses within 90 days and 200 houses per month thereafter. Plans to add factories at Fulton, Ind., Sioux City, Iowa, and Lincoln, Neb.



Publicity-wise, Promoter Gunnison drew national attention with his Louisville, Ky. development of 6 houses built for sale in 10 days (AF, Sept. '36, p 248), the erection of 20 prefabs in competition with 20 conventional houses in New Albany, Ind. (AF, Sept. '38, p 236), names like "Magic Home" and "Miracle Home" (above), was among the first to apply conventional, "romantic" design to the prefabricated house. He claims production of 2,800 "De-Lux" and "Miracle" houses to date, with 9 designs sold through dealers in 26 states, and a present production rate of 8 houses a day. Gunnison has as yet sold no houses to the Government.



Harnischfeger Corp. (Houses Div.), Milwaukee, Wis. have produced more than 1,000 steel prefabs since 1936, recently switched to plywood to meet defense requirements (see above). Capacity, 1,200 in 90 days, 750 a month thereafter. Harnischfeger has supplied 530 units for 3 defense projects.

Hardin & Ramsey, Inc., Atlanta, Ga. produces a sectional house using vertical siding on wood frame.

E. F. Hauserman Co., Cleveland, Ohio (office partitions) supplied 40 steel prefabs to PBA in 1941.

Better Built Homes, 14901 Magno Los Angeles, Calif. has factories at She and San Francisco, Calif. equipped to p by any standard wood panel system, has Bates system for 542 PBA units at Vall (picture above). Estimated capacity: 250 h month after 30 days.

Algernon Blair, Montgomery, Ala. man the TVA demountable house (AF, Aug. '41 and has built 100 units for USHA at Chil Ala., 200 units for FWA at Jackson, Tenn., other 100 for the same agency at Milan, Te

General Houses, Inc., 3031 Pine Grove Chicago, Ill. was organized by Architect H Fisher in 1932, exhibited a model house Chicago Fair. General's first houses were built steel panels, but this system was superseded 1935 by plywood on a steel frame. For ab year, the product was merchandised by Sears buck (AF, June '36, pp 524-26). In 1941 Ge built 65 units for PBA's Indian Head project. Pr capacity is about 500 units a month, could be panded considerably. (See also AF, Feb. '37, pp 58).

General Housing Co., 129 E. Market Blo Indianapolis, Ind. produced its first prefab in F ruary, 1941, and has since completed 15. Th factory at Indianapolis has a capacity of 220 hou within 90 days, and could produce 120 houses month thereafter. Shipments have so far been ma by truck but a railroad siding is available. Pane are plywood sheathing on wood frame, with re wood weatherboarding applied at site. Alternat system for a fully-demountable unit has also bee developed.

General Playground Equipment, Inc., Kokomo, Ind. developed and built in 1941 a demonstration demountable house for FSA. Floor, wall, and roof panels are bolted together, exterior of vertical tongue-and-groove boards conceals joints. While General Playground has no contracts as yet, and has built only one house, it has facilities for immediate production of this house or other standard panel systems using plywood, fibre board, plaster board or other sheet materials.

E. F. Hodgson Co., 1110 Commonwealth Ave., Boston, Mass. is the oldest prefabricator in the U. S. It began selling sectional houses in 1892, and has produced well over 100,000 to date. Sections are built in 5 and 10 ft. units of conventional materials with red cedar siding, interior finish and partitions are fibre board. All sections are bolted together with a special "key wedge" bolt. Factory at Dover, Mass. is presently producing 200 houses a month. Hodgson built over 100 hospital and dwelling units for the Navy in 1941, during the last war supplied mess halls, barracks, and dwelling units to the Army.

SNAPSHOT OF AN INFANT INDUSTRY . . .

Moulin Studio

Homasote Co., Trenton, N. J., manufacturers of fibre insulation boards, pioneered in the development of a system of prefabrication suitable for use by building materials dealers, completed their first "Precision Built" house in 1936. By 1940, Homasote had 56 dealer-prefabricators in operation who had built more than 3000 houses, and had developed a "junior" system of construction especially for defense housing (AF, Dec. '40, pp. 531-34). In 1941 Barrett & Hilp, San Francisco builders, used the system in the construction of the 992 units for FWA at Vallejo, Calif. shown above (AF, Oct. '41, pp. 226-28), and for 500 more at Ft. Leonard Wood, Mo.

Other Homasote defense houses have been prefabricated by the City Lumber Co., of Bridgeport, Conn., who supplied 100 units like that shown above for the Navy's submarine base near New London, Conn. (AF, Mar. '41, p. 175), and by other plants for outlying Naval bases and for export. Between now and June 1, Homasote expects to complete 5400 houses for the FWA, using 10 of its larger prefabricators, including Barrett & Hilp and City Lumber, with plants in various parts of the country. Several of Homasote's smaller prefabricators are also manufacturing houses for private construction under FHA Title VI.

FWA

Home Building Corp., 6642 Main St., Kansas City, Kan., fabricates a plywood panel system, with a prefabricated "moto-unit." Using their standard design, the company put up 50 units for PBA at Indian Head, Md. (AF Apr. '41, p. 76) and 100 duplex units for FSA at Middle River, Md. (AF Dec. '41, p. 44). Their estimated capacity is 160 houses per month after 30 days, 500 houses per month after 40 days. Maximum monthly output on present production basis, 500 houses in 90 days.

Klinger Dri-Bilt Construction Co., 122 Courtview, San Antonio, Tex., started production in 1940 with room-length plywood panels, marketing their houses throughout Texas. Present production of four houses a week can be stepped up in 90 days to three houses a day.

M. B. Kolb Co., Inc., 250 West 57th St., N. Y., N. Y., has produced sectional structures since 1910. Production of 20,000 buildings to date include garages, farm buildings, industrial buildings, and more recently, dwellings. Present construction is wood panel, with siding outside and plywood or composition board inside. Their factories have a production capacity of 90 houses within 90 days and 250 houses monthly thereafter. During 1941 Kolb supplied demountable school units for eight projects in defense areas. Also private contracts, FHA financed.

R. E. Kramer & Co., Davenport, Iowa, has an estimated capacity of 180 houses within 90 days.

Leird Lumber Co., Little Rock, Ark., has built 350 prefabricated CCC buildings since beginning production in 1938, but no houses so far. Of sectional construction, these buildings were bolted together at the site. Leird estimates a maximum capacity of 100 houses within 90 days.

Lewis Manufacturing Co., 23rd and Michigan Aves., Bay City, Mich., has produced ready-cut houses since 1911, demountables and partial prefabs during past few years for the Government. 14,000 units produced to date. Factory is now geared for panels or ready-cuts, but Lewis believes the latter to be a superior product. Present production 10 to 20 ready-cuts a day.

Hughton—FWA

Lockwall Houses, Inc., 83 Beaver St., N. Y. C., N. Y., began production of their patented panel prefab in January 1941. Factories at Odenton, Md. and Akron, Ohio, have produced 465 units to date.

Metropolitan Greenhouse Mfg. Co., 1851 Flushing Ave., Brooklyn, N. Y., has facilities for producing from 6 to 10 houses per day, with a maximum capacity estimated at 500 houses in 90 days.

Minter Homes Corp., Huntington, W. Va., uses a wood frame and panel construction.

Strasser

Pease Woodwork Co., Inc., Turrill St., Cincinnati, Ohio, prefabricated its first Peaseway House in April 1940 based upon previous experience in selling building materials by mail. Construction system uses wall-length exterior panels, room-length floor panels. Factory in Hamilton, Ohio, equipped with moving assembly lines, has produced 500 houses to date. Capacity of 1200 within 90 days.

Perma-bilt Homes, Inc., 6 East 45th St., N. Y., N. Y., is licensed to build the John B. Pierce Foundation house. Has 1600 privately financed homes on order. Estimated capacity 35 houses per day.

Oswald Wild

PHC Housing Corp., 300 Fourth Ave., N. Y., N. Y., has been experimenting with prefabrication since 1934 (AF Sept. '40, p. 2). The first houses were produced in 1939, and in 1941 the company received a Government contract for three barracks for the Army, to be erected at Bolling Field and Fort Belvoir. Other work includes 22 hospital units shipped to England for the Red Cross (AF Jan. '42, p. 64). They estimate a production capacity of 9000 houses annually by next June through the facilities of another firm using their system. Their own factory at Jackson, Miss., is geared to the production of one 100-ft. barrack daily.

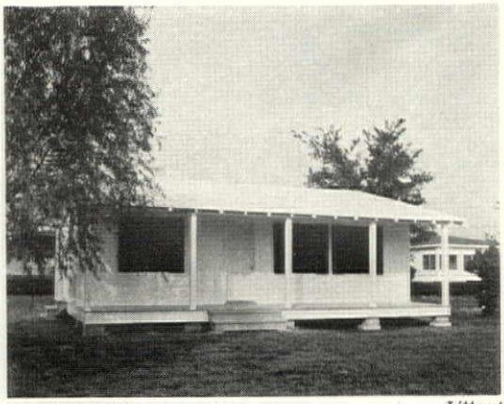
Porete Mfg. Co., North Arlington, N. J., organized in 1920, last year began production of the "Plastikrete" house, prefabricated of precast reenforced concrete units, and built 10 experimental houses for the FWA at Alexandria, Va. (AF Oct. '41, p. 234-5).

Plywood Products Co., Overland, Kan., has been producing a stress-covered house since 1940. Present capacity is six houses a month.

Plywood Structures, 6307 Wilshire Blvd., Los Angeles, Calif., licenses fabricators to produce their stress-covered panels and special connecting spline.

Homes, Inc., 208 S. W. Broadway, Portland, Ore., builds the "Haul-a-Way Home" illustrated above. It is 100 per cent factory assembled and was designed by Allison H. Dean, realtor-subdivider and president of the firm since its formation in February of last year. Construction is patented, based on the principle of a bridge girder. Transported on trucks or flat cars, the house is sold as a furnished three-room unit for $1,800 f.o.b. (AF Apr. '41, p. 20).

Homes, Inc., 13th Place & Lewis Ave., Tulsa, Okla., organized in 1941, uses plywood panels. Capacity of 15 houses monthly is being doubled.



Litterst

Houston Ready-cut House Co., 3601 Polk Ave., Houston, Tex., was organized in 1917 to supply sectional houses for the oil industry, and has produced over 10,000 sectional and ready-cut houses since then. All structural parts are prefabricated, bolted together at the site. Two factories serve the Gulf area and the Southwest. Exports to Carribean area. Maximum capacity of 800 houses in 90 days. Company has supplied houses for FWA (Division of Defense Housing), Dept. of Agriculture, Farm Security Administration, CCC. Also built 4,573 plywood tent frames and a complete flying school for the Army. (AF Jan. '41, p. 4).

Houston Sash & Door Co., Houston, Tex., has an estimated capacity of 1000 houses within 90 days.

Humphrey-Horsley Co., Inc., 10 Rockefeller Plaza., N. Y., N. Y., has built three experimental stressed plywood panel houses. Production capacity 625 houses monthly after 60 days.

Illinois Lumber Mfg. Co., Cairo, Ill., estimates its capacity at 100 houses monthly after 30 days.

Jaeger Homes Mfg. Co., 14300 Promenade, Detroit, Mich., has built several houses of sectional frame construction for private sale.

C. D. Johnson Lumber Corp., American Bank Bldg., Portland, Ore., started production in the summer of 1940, with a capacity of 15 houses monthly, served Oregon only. Plywood construction.

Johnson Co., 235 South Dock St., Sharon, Pa., began production in 1939. Estimated capacity, 60 houses monthly after 30 days. Construction of plywood panels.

Juul Steel Houses, Sheboygan, Wisc., has been fabricating steel panel houses since 1934. Capacity 250 steel houses within 90 days.

T. C. King Co., Anniston, Ala., has capacity of 500 houses monthly after 30 days. King has built portable, demountable buildings since 1936, has furnished thousands of structures to CCC, Army and other Government agencies; also farm buildings and houses.

Modern Builders, Inc., 1107 E. Iowa St., Evansville, Ind., started production of plywood panel houses in 1940. Capacity is 200 units monthly.

Modern-Way Homes Co., Chester Pa., uses the Willis-Way system, capacity 30 houses a month.

Moore & Moore Lumber Co., 100 East Florida Ave., Youngstown, Ohio, began production in 1939, using DFPA system. Capacity of 12 houses a month.

Morton Construction Co., 1 East 42d Street, N. Y., N. Y., can turn out 30 houses a month.

National Homes Corp., Lafayette, Ind., has produced 956 homes since it began in 1940, and now has 1200 on contract for FWA (story p. 89).

Niagara Realty Corp., 105 Court St., Brooklyn, N. Y., was organized last year, and has an estimated capacity of 140 houses within 90 days.

Page & Hill Co., 1017 Plymouth Building, Minneapolis, Minn., has a capacity of 500 houses in 90 days. The company's main business has been log houses, but it also makes a panel type.

Paine Lumber Company, Ltd., Oshkosh, Wis., prefabricators of CCC camp buildings (above), have a maximum capacity of 1000 houses in 90 days.

Pacific System Homes, Inc., 5800 South Boyle Ave., Los Angeles, Calif., began the production of portable and sectional buildings in 1908, and has produced 38,000 to date. Plant has facilities for complete fabrication using plywood panels. Capacity 100 houses per month after 30 days.

Earl M. Peak, Marshalltown, Iowa, is a licensee for the John B. Pierce Foundation house.

Haskell

The Prebilt Co., Revere, Mass., are successors to the Prebilt Department of Pope & Cottle Co., producers of sectional houses since 1921. The "Add-Easy" house, shown above, was designed by Architect Royal Barry Wills. Production is 200 monthly.

Prefabricated Products, Inc., 507 Lloyd Bldg., Seattle, Wash., was organized in 1929, and has since supplied sectional and ready-cut buildings for CCC camps, U. S. Engineers, U. S. Forest Service, Bureau of Mines, CAA, and for the Army and Navy in Alaska. Present production is about 8 houses a day, capacity 2000 houses in 90 days.

Quality Homes, Los Angeles, Calif., estimated a production capacity of about 550 houses in 90 days and 300 a month thereafter.

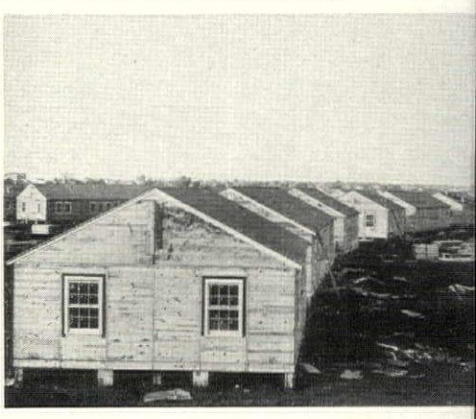
W. W. Rausch (Holt-Fairchild Co.), 7 Court St., Arlington, Mass., began producing his system of ready-cut construction in 1938 when he joined Holt-Fairchild after two years' research in low cost housing. To date, 660 of these units have been produced, 624 of them for the Navy at Newport, R. I. Present plans are for production of a sectional house at 20 a day.

Real Estate, Inc., Lynchburg, Va., produced 10 portable houses in 1941, completely shop-built but of conventional construction; is now working on a larger house composed of two portable sections to meet FHA requirements. (AF Sept. '41, p. 208).

Schirmer-Peterson Co., 6830 Beaver Ave., Cleveland, Ohio, produces a sectional wood house using siding for exteriors and plywood for interiors.

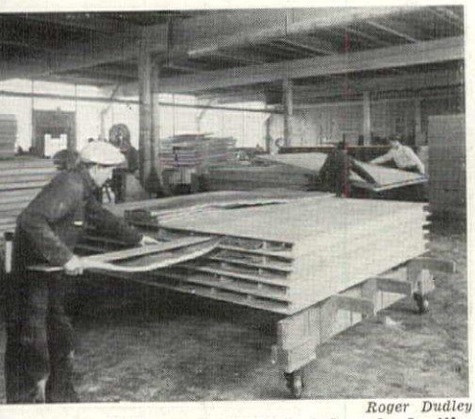
Sears Roebuck & Co., Box 30, Newark, N. J., has produced over 115,000 ready-cut and sectional houses in its 40 years of prefabrication. It supplied hospital and cantonment building to the Government during the last war; and for the present program has furnished 25 ready-cut buildings to Navy; 150 sectional buildings to Army for a base in Bermuda; 2 sectional barracks to RAF ferry bomber base; and supplied materials for General Houses' 65 units at Indian Head, Md. Factories at Port Newark, N. J., and Norwood, Cincinnati, O., have a capacity of 2,000 sectional houses in 90 days.

S. Slotnick Co., 333 Washington St., Boston, Mass., supplied 600 Navy units at Portsmouth, N. H.



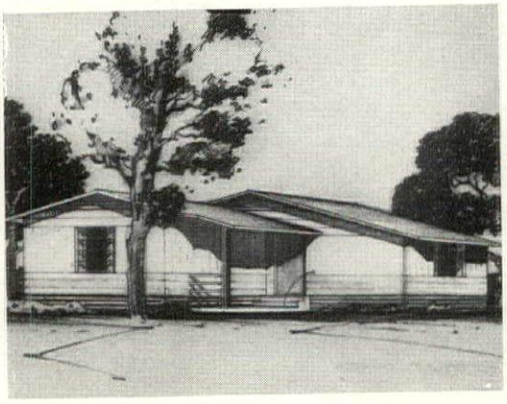
Southern Mill & Manufacturing Co., 525 S. Troost St., Tulsa, Okla., has been manufacturing "Sturdybilt" sectional houses since 1919, selling principally to oil companies and industrial firms, but also supplying several for the CAA. In 1941 Southern manufactured 600 houses for a FWA defense housing project at Wichita, Kansas (above). Factories at Tulsa, Oklahoma, and Longview, Texas, have a capacity of 1500 houses within 90 days. Wall sections are prefabricated with lumber or plywood sheathing, and shingles, flooring and roofing are applied conventionally at the site.

SNAPSHOT OF AN INFANT INDUSTRY . . .



Roger Dudley

Speedwall Company, 5035 First Ave. S., Seattle, Wash., is one of the pioneers in the manufacture of the DFPA stress-covered panel type house, has been producing them since 1936 (AF Apr. '39, p. 304). Factory at Seattle ships to surrounding territory by truck, has an estimated capacity of 500 houses within 90 days, and 250 houses a month thereafter. In 1941, Speedwall supplied 300 units for the USHA at Bremerton, Wash.; built a demonstration "cotton-wall" house in Washington (AF Apr. '41, p. 70; May '41, p. 22); supplied dwellings and construction camps to the Navy, dormitories for FSA.



Standard Demountable Homes, 3839 Wilshire Blvd., Los Angeles, Calif. was organized at the end of 1941 to produce the above house, designed by Architect Paul R. Williams, with sectional construction using a combination of plywood and siding. The following three California firms plan to fabricate the houses: F. B. Layne & Co., Burbank; Arch-Rib Roof Truss Co., Los Angeles; and Valley Planing Mill, Van Nuys. Their combined production capacity is estimated at 3000 houses within 90 days, and a rate of over 1000 houses per month thereafter.

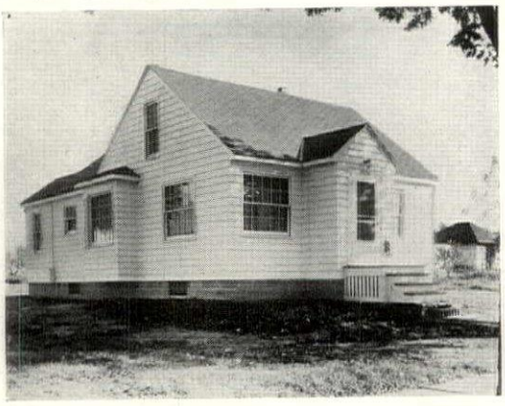
Highton-FWA

Standard Houses Corporation, 820 N. Michigan Ave., Chicago, Ill. was organized in 1936 by Architect Bertrand Goldberg. After three years' research with the Douglas Fir Plywood stressed-covered panel house, and the construction of 2 experimental houses (AF Apr. '39, p. 287), he teamed up with three other Chicagoans and marketed the houses complete with lot in suburban Melrose Park (AF Jan. '40, p. 66-7). Standard estimates its production capacity at 2500 houses within 90 days, and 1000 houses a month thereafter. In 1941 they supplied PBA with 57 units at Indian Head, Md.

J. C. Allen & Son

Stansbury Manor Corp., Middle River, Md., was organized in 1941 to produce the John B. Pierce Foundation prefabricated house for the Glenn L. Martin Co. (AF Nov. '41, p. 322). Its facilities consist of mills at McGaheysville, Va., and Metuchen, N. J. During 1941 Stansbury produced 640 units; it is currently supplying 400 more for FSA in Middle River.

St. Elmo Housing Co., St. Elmo, Ill. has been producing octagonal, sectional, farm, camp and tourist buildings since 1928, but is now bringing out a rectangular sectional house. They estimate their capacity as 20 houses per month.



St. Johns Portable Building Co., St. Johns, Mich., began producing sectional buildings in 1907. Their factory can produce at a rate of 100 a month.

Strand Building Products, Birmingham, Ala., has a capacity of 500 houses in 90 days.

Structures, Inc., 646 N. Michigan Ave., Chicago, Ill. began production in 1934, built 48 units in 1935 at Decatur, Ind.

Tak-a-part Products Co., 28 Brooklyn Ave., Freeport., N. Y., uses a metal-edged plywood panel construction.

George Strock

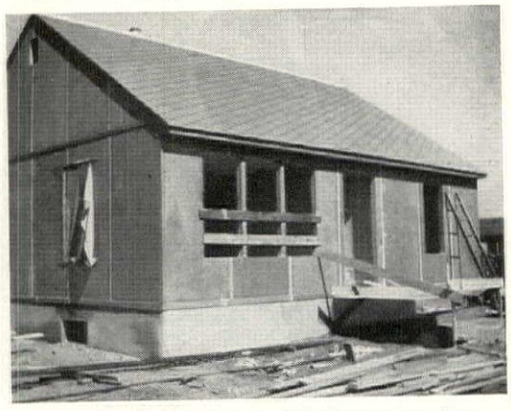
Tennessee Coal, Iron & Railroad Co., Brown-Marx Bldg., Birmingham, Ala., began prefabrication in 1936 with their "Tenesteel" homestead buildings (AF Jan. '39, p. 68-9). By the middle of 1940, they had supplied over 530 steel frame and steel panel buildings, mainly for FSA. In 1940 they also built 350 units for the Navy (AF Feb. '41, p. 84), and in 1941 supplied 58 houses to PBA.

Walter Dorwin Teague, 444 Madison Ave., N. Y., N. Y., has developed a stressed-covered plywood panel construction with metal connectors. Arrangements for production in the East are pending.

Tennessee Valley Authority, Knoxville, Tenn., has developed the system of cellular construction above. Six houses were built in 1941 (AF May '41, p. 22), and since then 550 houses and several dormitories have been completed: 250 at Muscle Shoals and 300 at Jackson, Tennessee, fabricated for FWA by Algernon Blair.

Tyler Fixture Corp., Niles, Mich., has built 25 houses and estimates that it can produce 500 in 90 days.

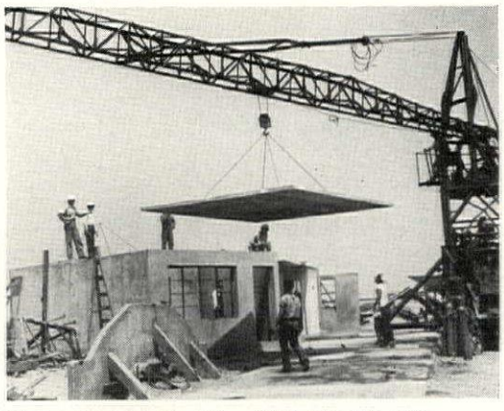
Udell Works, 1202 W. 28th St., Indianapolis, Ind., began production in 1939 of an octagonal, sectional house, producing over 400 to date. Capacity is 50 monthly.



C. S. Van Gorden & Son, 218 Tenth Ave., Eau Claire, Wis., began fabricating in 1940. They have built 16 FHA-approved houses and have facilities for turning out one house a day on a one-shift basis.

Welcome Homes, Inc., Whitefish Bay, Wis., has an estimated capacity of 50 houses a month after 90 days.

Well Built Mfg. Co., Somerville, N. J., started production of sectional garages about 5 years ago and soon expanded to manufacture of houses and other building types. Over 200 houses have been produced to date. Capacity: 600 houses within 90 days; 300 monthly thereafter.



Whaley Construction Co., 5484 Atlantic Ave., Long Beach, Calif., is now the U. S. licensee of Hayes Econocrete system shown above (AF Mar. '39, p. 219-20).

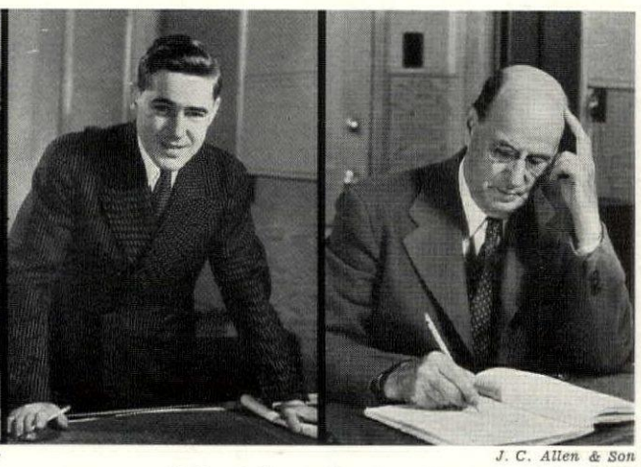
W. H. Whyte Construction Co., 382 Railroad Ave., Hackensack, N. J. began production in 1939, using plywood panels 4 and 8 ft. wide. Capacity: 50 houses monthly.

Willis-Way Construction Co., 9 S. Clinton St., Chicago, Ill. has produced 1000 sectional houses, consisting of four one-piece wall sections, floor and ceiling panels (AF Mar. '41, p. 176). Twelve plants in four states can produce 1200 houses in 90 days.

. . . AND A REPRESENTATIVE PREFABRICATOR

with a record of 848 houses last year, a proven capacity of 12 houses a day, and a down-to-earth merchandising formula for private sales that worked before Government orders began.

Irving Miller



J. C. Allen & Son

National Homes Corp.'s officers average 30 years young but are old-timers in the prefab game. Left to right: James R. Price, National's Lafayette dealer and a director; David C. Slipher, Vice-President and Sales Manager; Donald W. Lowman, President; and John T. King, Production Manager. L. E. Scheeber, right, recently joined the firm as a "balance wheel."

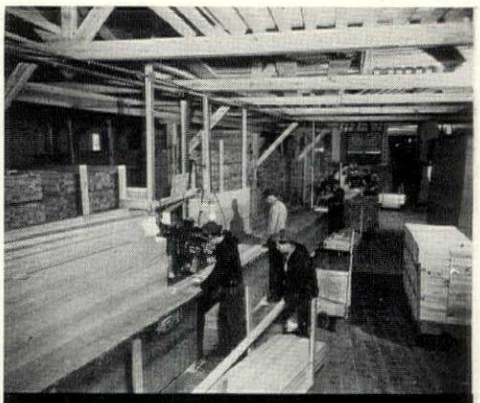
While there is no such thing as a typical prefabricator—unless it is the man with a plan but no plant—National Homes Corp. of Lafayette, Ind. is a good example of the kind of company which leads FWA to believe that the prefab industry can furnish 7,000 houses a month in the first half of 1942. National is also an amazing success story, a striking demonstration of the value of good planning and good luck, and probably the only company in existence that has made money on its prefab operations, both private and public, from the day production began.

Eighteen months young, National has had as much experience in the actual fabrication of panel houses as many an older prefabricator has had in 10 years. With 956 houses under its belt, 393 of which were sold through dealers to private customers, National closed the year with a production rate of 10 houses a day on a 3-shift basis, is currently increasing this figure to 12, or 360 per month, by adding a fourth swing shift for continuous production. Under the new program it has already contracted to deliver 1200 defense units for occupancy July 1, allowing 30 days for clean-up and Government acceptance, and probably will do it.

Ironically, the Government orders which have spelled success with a capital "S" for National also mark the demise of an earlier achievement which might have had even larger significance. For National Homes started with the idea of supplying a low-priced house for sale through small-town, realtor-dealers within trucking distance (300 miles) of the manufacturing plant, and—unlike so many others with much the same objective—was doing nicely on private business before public defense-housing came along. Six months of all-out production for defense will kill this private business and leave little outwardly to distinguish National from the scores of other plants which will probably spring up to supply the Government market, but the real story of the company to date is not the way it has flourished on the fat of defense orders but the bone and muscle it has built on the lean of private sales.

Production line (below) at the National plant is capable of producing 12 houses a day in continuous operation, has produced 10. Picture 1 shows pre-cutting of framing members, 2 assembly jigs for 12 ft. wall and ceiling panels, 3 assembly of floor panels. More on next page.

1.



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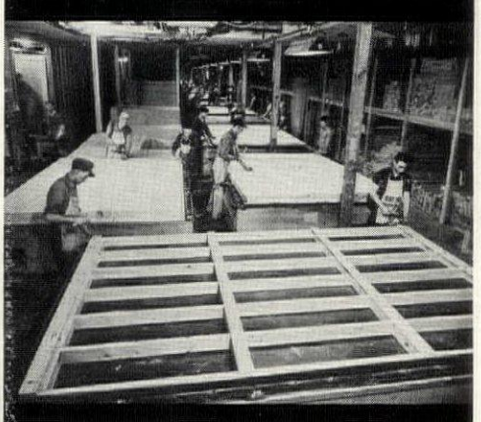

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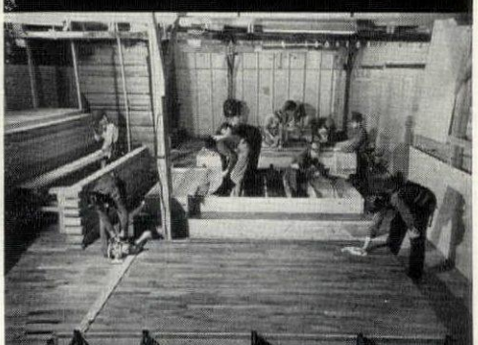
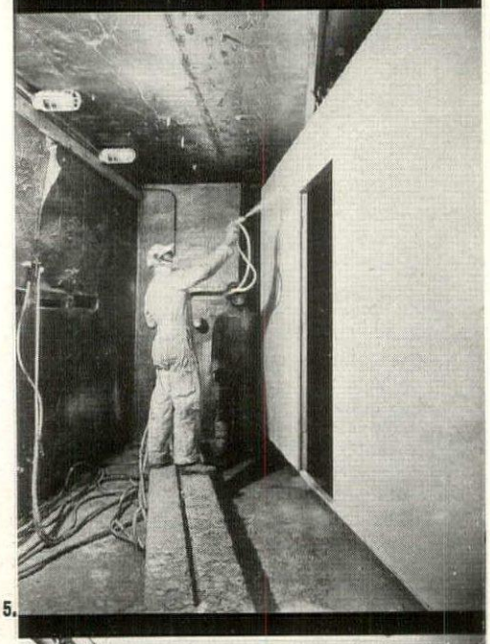


14,500 sq. ft. plant (below) in which National Homes are produced. Building was doubled in size to accommodate defense orders, fleet of trucks has increased from 3 to 31.

J. C. Allen & Son

4.



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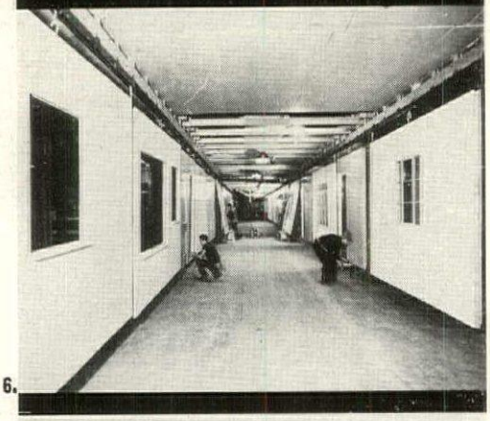

6.

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8.

Started July 1, 1940, National completed and sold through dealers 108 houses in its first 6 months operation, and 285 more in 1941, building up to a volume of almost 30 a month at the end of last year. It accounted for nearly half of the houses built in Lafayette during this period, and extended its dealer organization throughout the northern part of Indiana. Its four standard models, ranging in size from 4 to 5½ rooms and in price (complete except for land) from $3,200 to $4,600, were competing successfully with conventional construction and creating a new market for homes in the lower income brackets that substantially increased the volume of house construction of all types in the Lafayette area. In brief, it was doing exactly what prefabricators had always said they would do but had almost universally failed to accomplish.

Naturally, all this did not just happen. While National Homes was a brand-new company, with a brand-new plant and brand-new (if somewhat limited) capital, its principals were old in the prefabrication game the day it was started, although this was their first venture as entrepreneurs.

D. W. Lowman and D. C. Slipher, who founded the new firm, had been in prefabrication since it first assumed that name, at the time of the Chicago Fair. Both were employed by the Rostone Co., pioneers in the development of precast masonry panel construction, upon graduating from Purdue University as mechanical engineers in 1932. Both worked successively for Houses, Inc., Gunnison Magic Homes, and the Gunnison Housing Corp., ending up as General Manager and Sales Manager, respectively, of the latter corporation. (Slipher also had a year as Assistant Chief Engineer, Technical Division, FHA, examining and rating systems of prefabrication for mortgage insurance.) Price, who joined them in starting the company, was a Lafayette realtor who, as a partner in the firm of Tedford and Price, had been one of the Gunnison Housing Corp.'s most successful dealers; John T. King, Production Manager of the new firm, formerly held the same job with Gunnison.

National's founders thus had a good chance to learn prefabrication from the bottom up before starting on their own, an opportunity to learn from the mistakes of others, and time to decide what was right and what was wrong with the way prefab was going. It was their theory that the principal thing holding prefab back was that most existing organizations had set their sights too high and were trying to shoot too far: that while aiming at a nation-wide market they were ignoring a target in their own back yard. Specifically, they believed that the best market for the prefabricated house—at least at the beginning—was the small town, where it would not have to compete with the large-scale developer-builder and could offer big-city standards of construction and design that would be definitely superior to the product of the carpenter-contractor. Since the greatest advantage of prefab was low-cost, quantity production, they felt it could be applied with most effect in competition with the small-scale, conventional building operation and where cost was a paramount factor: to the thousands of low-cost houses needed in communities too small to support an efficient, full-time builder.

Lowman and Slipher did not believe, however, that it was sufficient to direct prefab's sales effort at the small town market; it was necessary, they felt, to understand this market and to design a product to meet its needs, and this had not been done. In one important respect the small town market was exactly like the market for houses everywhere: it wanted a really low-cost house. Tedford and Price, who had sold 27 of the Gunnison Housing Corp.'s "De Luxe" models in the Lafayette area in 1938-39, had found that the demand for these $4,500 to $6,500 houses was soon satisfied, while the number of prospects who said they would buy a simpler, cheaper house at $3,200 to $3,300 was almost unlimited. Their insistance upon this fact, echoed by Lowman and Slipher within the Gunnison organization, resulted in the Gunnison "Miracle" home—the De Luxe model stripped of its hardwood interior wall finish, with ¼ in. fir plywood on both sides of wall and partition panels, and job-fabricated floors in place of floor panels—selling for $3,200.

When the Miracle Home came off the drafting boards in the spring of 1940, Tedford and Price promptly proved the soundness of their theory by selling 26 houses of

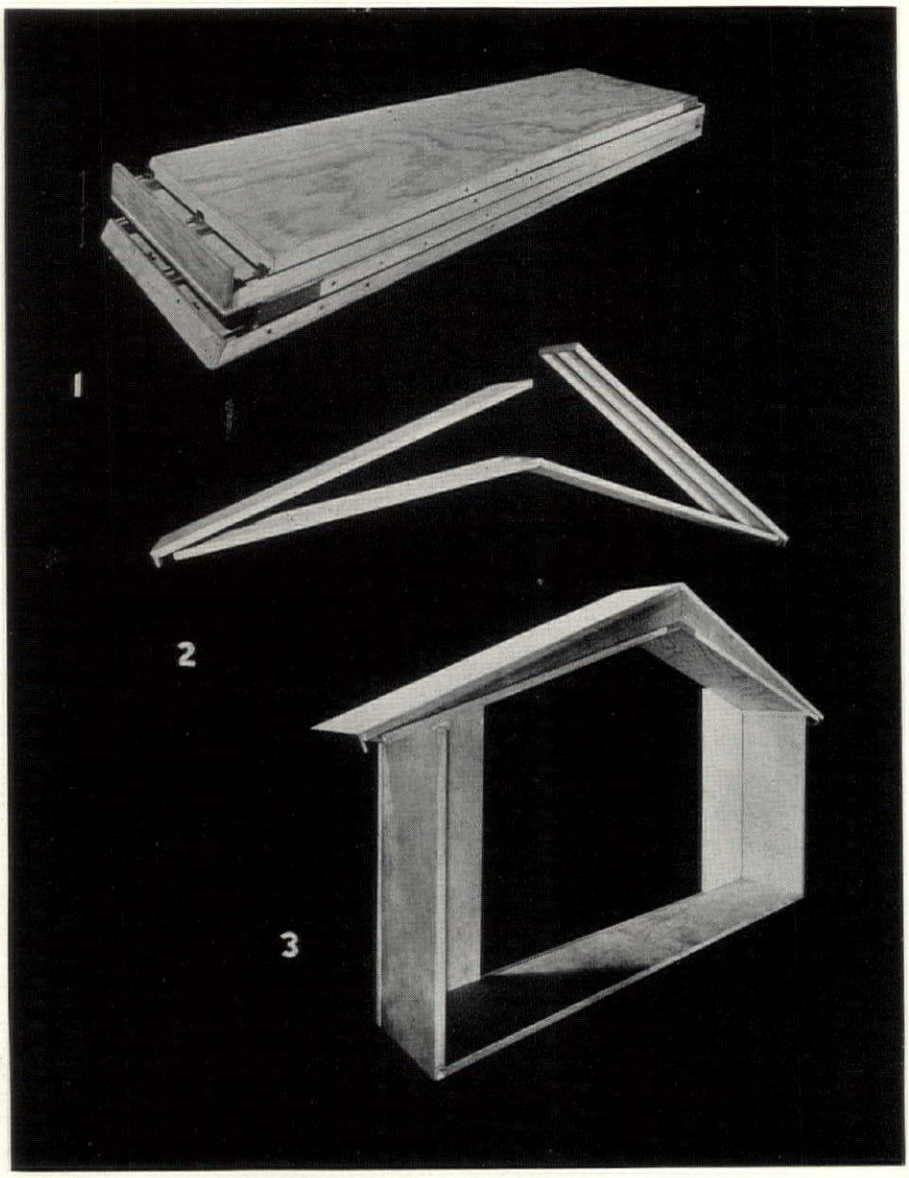
(Continued on page 82)

Production line (cont'd). Picture 4 shows wall panels on mono-rail for sanding of joints, etc., picture 5 spray booth. In 6, doors and windows have been installed and panels are receiving finishing touches. Picture 7 shows trucks pulling out of the plant, each carrying one house less floor panels, which require half of another truck. 8 shows assembled floor at site, 9 delivery and assembly of wall panels, and 10, partially completed houses.

9.

10.

BARRACKS FOR SHIPMENT

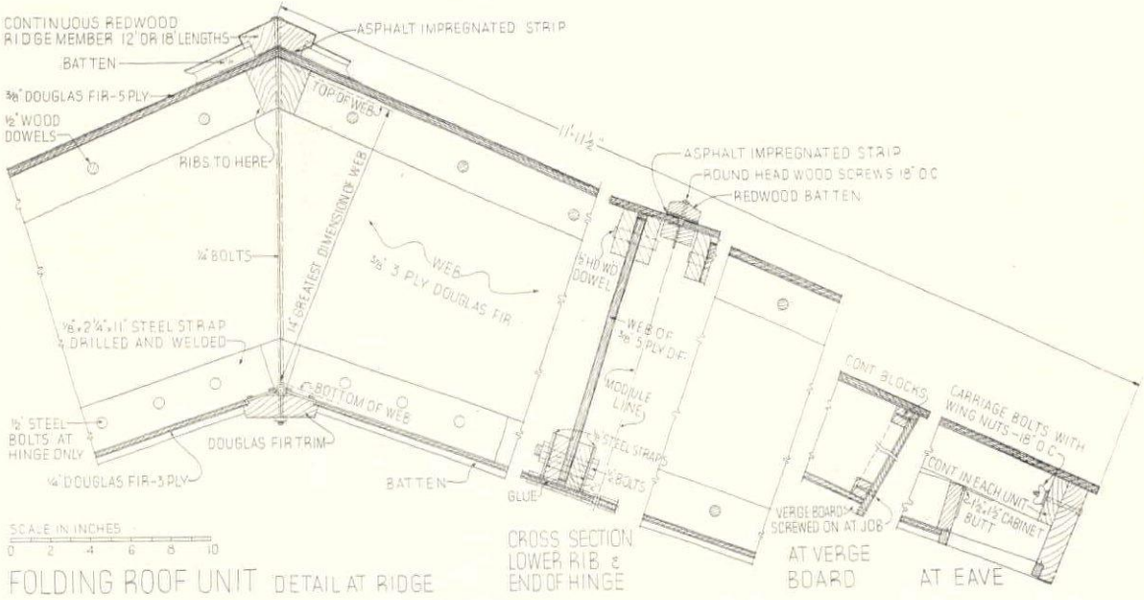


1. Each roof segment is three feet wide, as are all other sections. It contains four panels, two of which are hinged. The design (patent pending) is based on the stressed covering principle used in airplane wing construction.

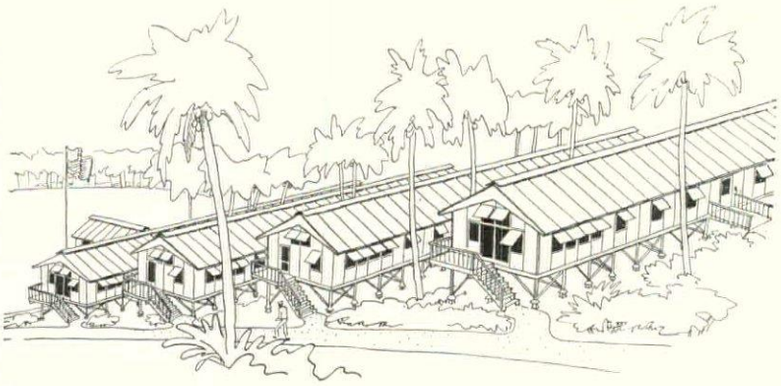
2. A view showing the roof unfolded, prior to the installation of the filler pieces. In this photograph the stiffening ribs glued to each plywood sheet can be seen. These ribs, of 1" by 2" fir, also serve as guides for the stiffening webs.

3. A three-foot section, showing the completed roof in position. Internally braced, the roof requires no tie rods or other supports, and when a number of sections have been joined together it develops great lateral and longitudinal strength. All sections interlock, making the roof weatherproof without the use of additional roofing materials.

The folding roof, in strength tests, carried in excess of seventy pounds per square foot using 5/16" plywood for covering and web members. Heavier material would permit loads in excess of 100 lbs. in an 18 ft. span.



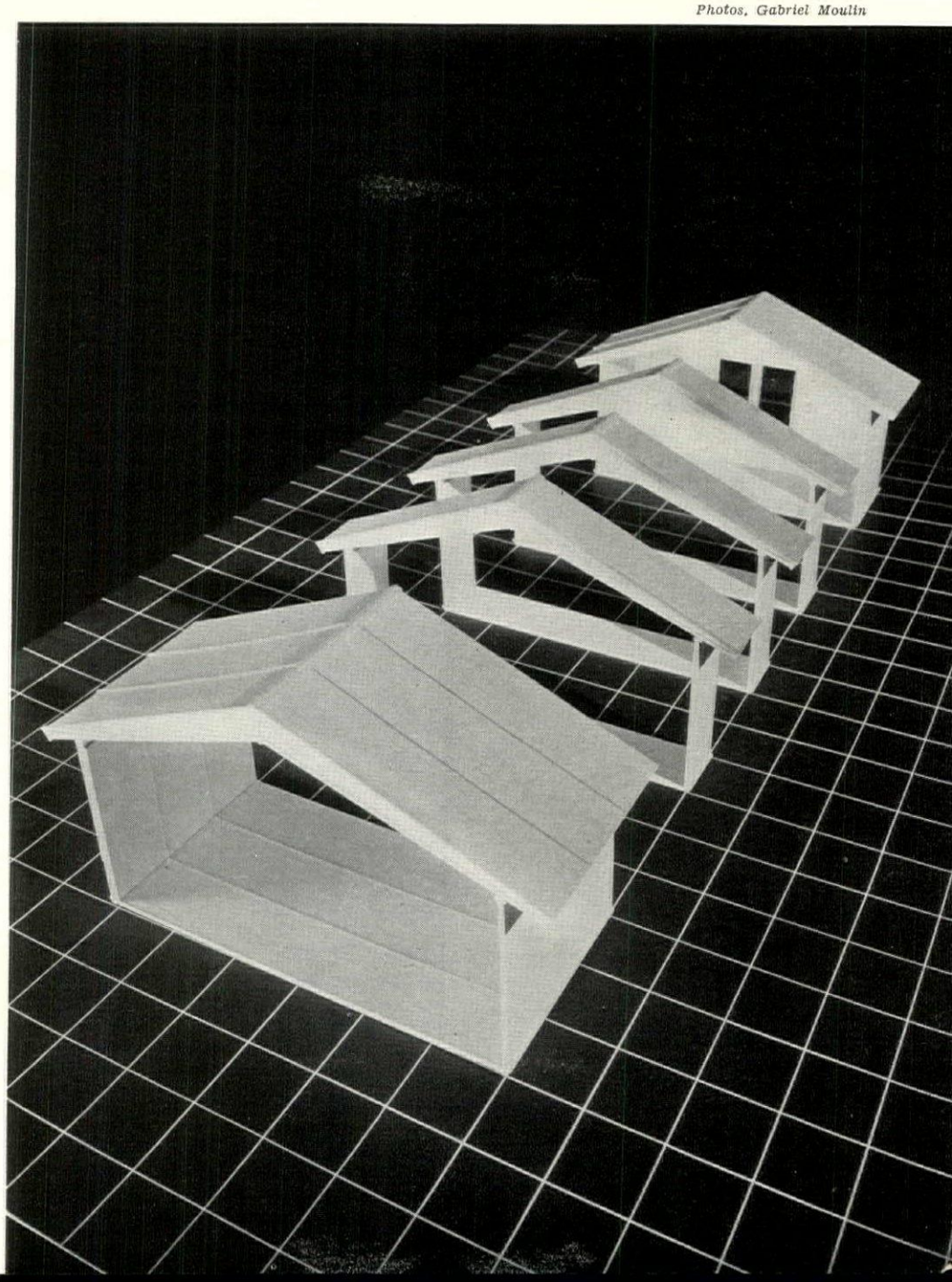
BARRACKS FOR SHIPMENT

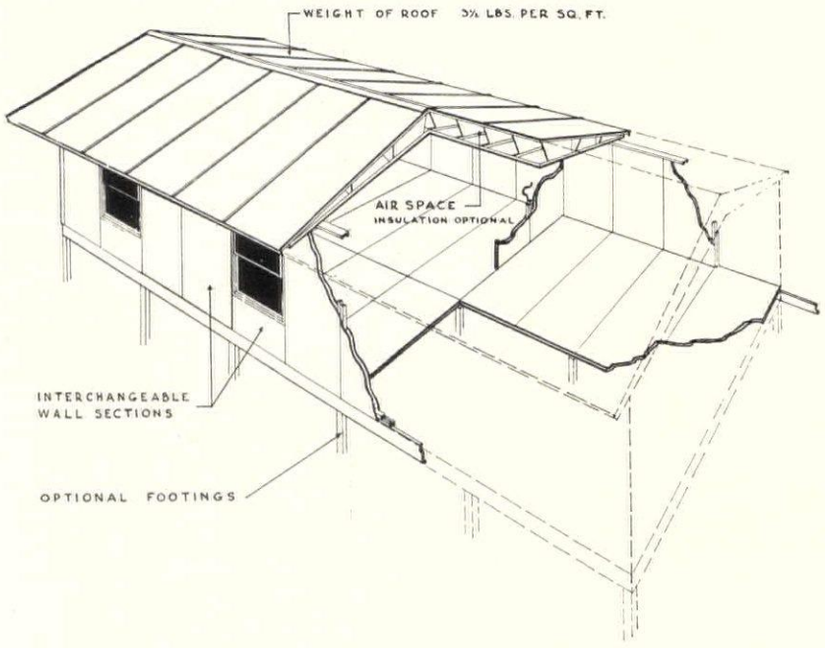


"Barracks for Shipment" is one of the simplest, most intelligent and constructive suggestions for furthering the war effort made to date by an architect. It offers a method of erecting with unskilled labor, barracks, base hospitals, etc., with the use of a half-dozen standard units. Most remarkable feature of Mr. Dailey's design is the "folding roof," which simultaneously solves the problems of compactness for shipping and of providing clear interior spans of 18 to 20 feet.

DESIGNED BY GARDNER A. DAILEY, A.I.A.

Photos, Gabriel Moulin





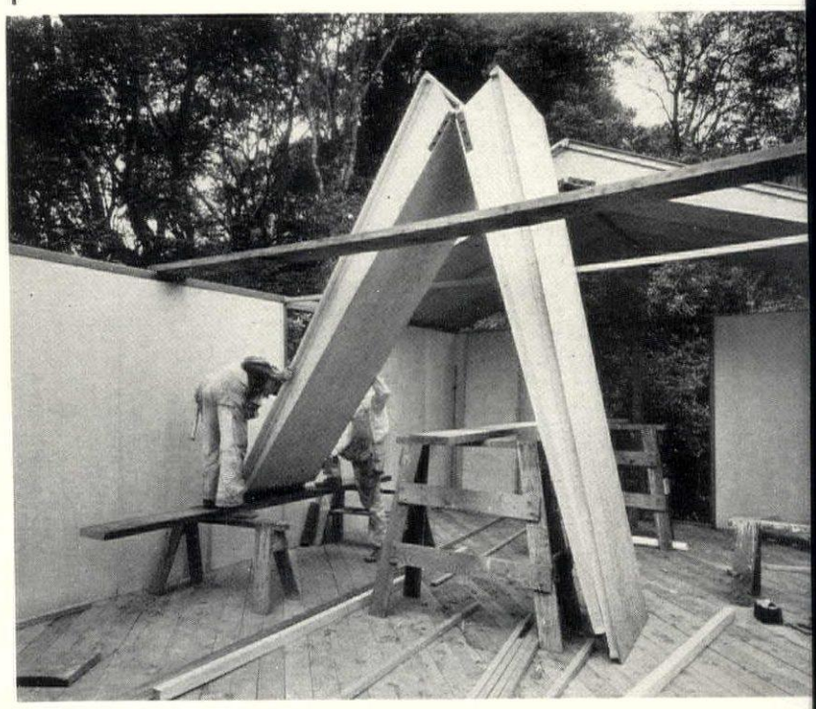
DESIGNED BY GARDNER A. DAILEY, A. I. A.

The accompanying drawing shows a complete assembly. Note the web members, three of which are used in each half of the roof. There is a continuous wall plate which ties the vertical sections together to provide support for the roof. When interior partitions are eliminated, single panels are attached at right angles to the wall sections at intervals of six to twelve feet to provide lateral stiffness.

ERECTION OF ROOF.

1. A roof section just assembled is ready to lift into place. The hollow units are light in weight (three and a half pounds per square foot) and can be put up easily by two men. **2.** Here one side of the roof has been put on the plate in a balanced position, allowing the workmen to lift the other side. **3.** After both sections are resting on the wall plate, they are slid into a centered position. By means of special watertight battens each roof segment is fastened to the adjoining unit. Bolts are used to connect walls and roof.

1



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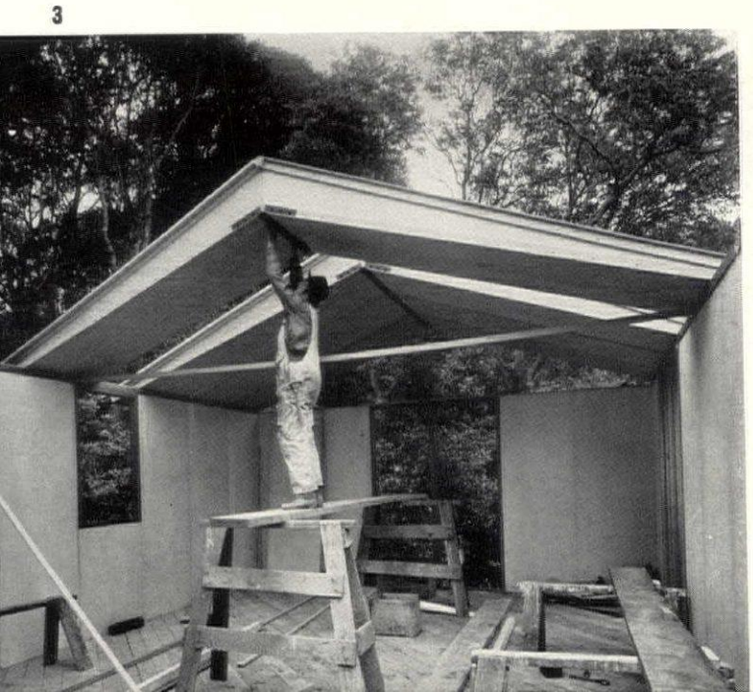
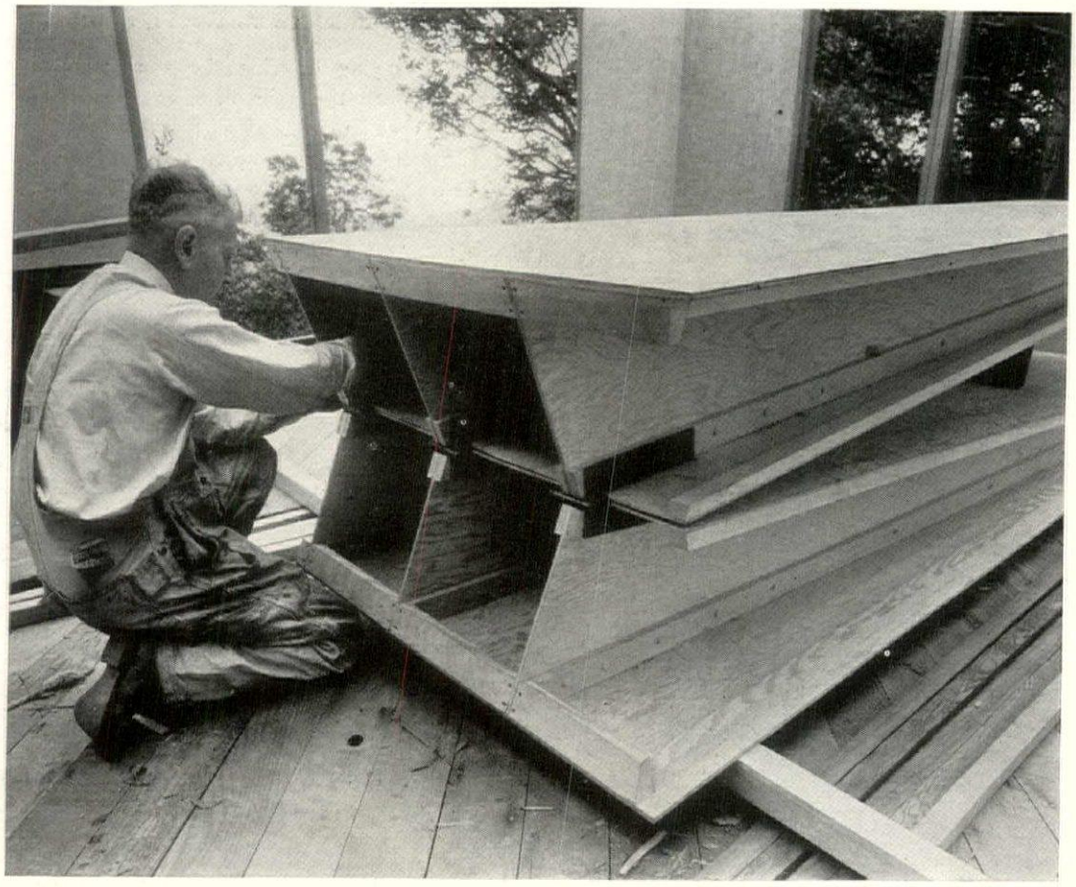
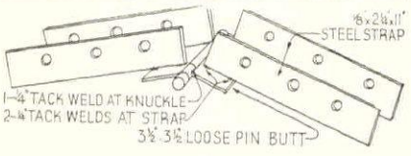


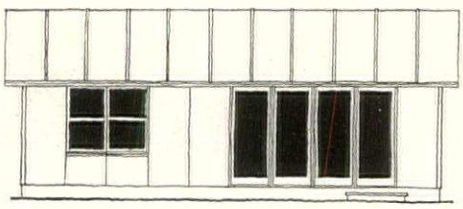
2

BARRACKS FOR SHIPMENT

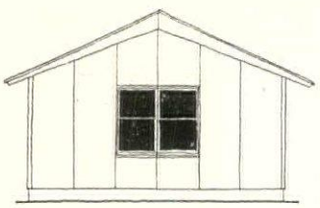


In the photograph above the simple and ingenious design of the folding roof can be studied. The entire tensile stress developed when the roof is loaded is taken by the hinges, which are simple loose pin butts with four steel straps welded on.

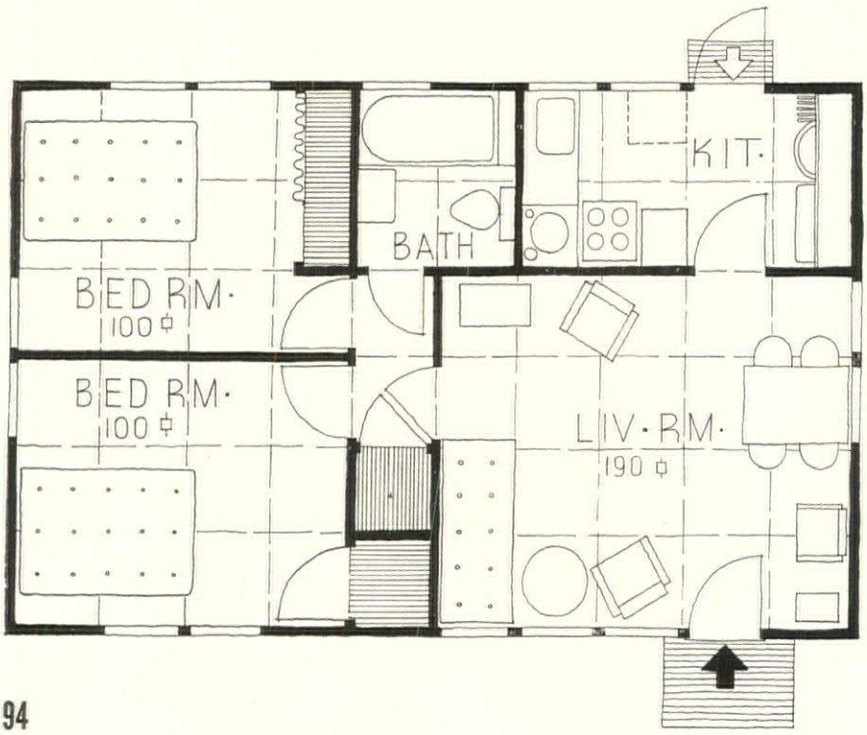




FRONT ELEVATION

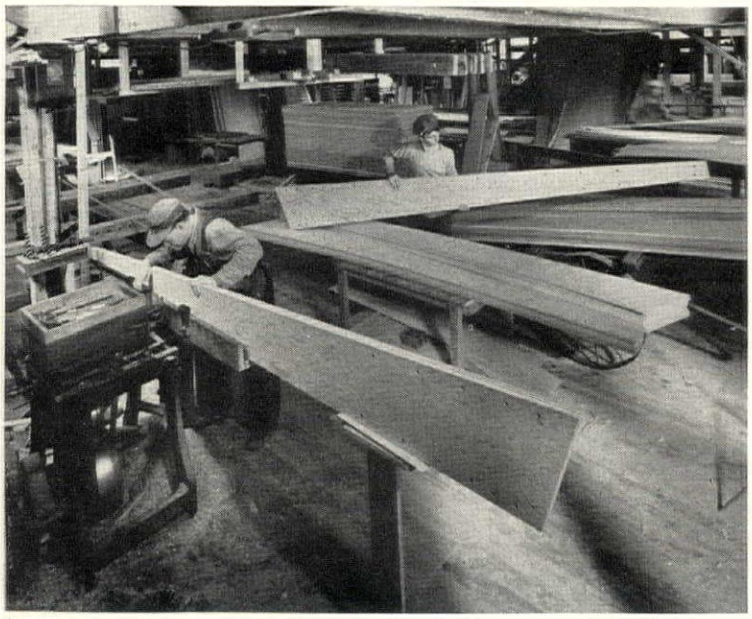


SIDE ELEVATION



The system may be applied to houses as well as larger structures. At the left is a two-bedroom scheme, well planned for privacy and convenience. The sketch of the snow-covered buildings was included to suggest the strength of the roof, which, by increasing the thickness of the plywood sections, will carry loads in excess of 100 pounds per square foot. Also to be noted is the manner in which the buildings may be adapted to irregular sites.

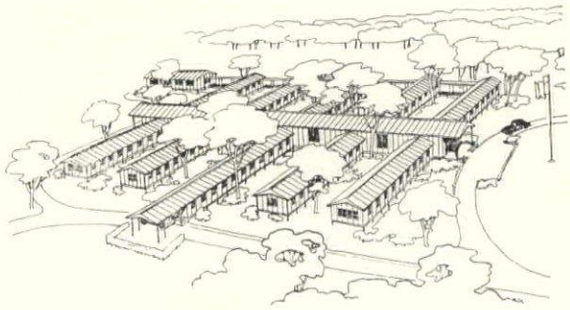
1

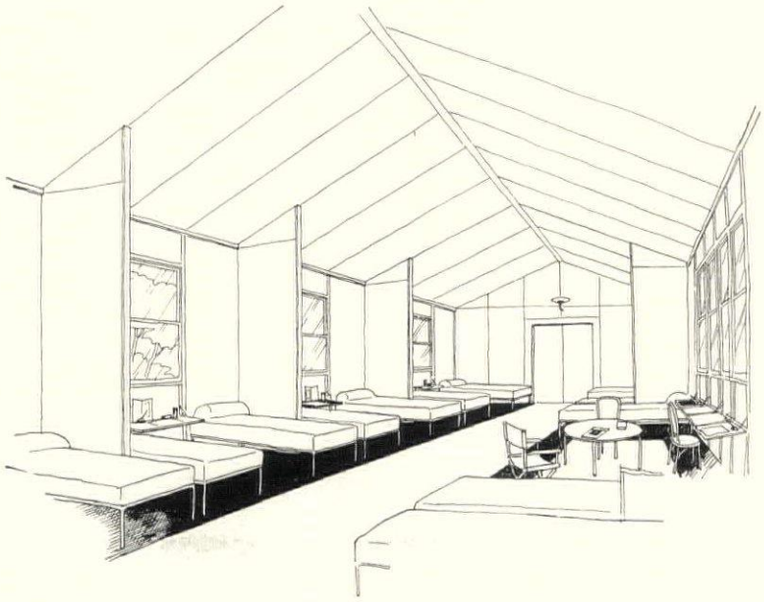


2

3

1. A roof jig with cover sheet being applied. There is a pile of finished roof sections at the left. A roof section can be manufactured in five minutes. **2.** Tapered webs being gang drilled. The webs can be made in several pieces if desired. **3.** Typical wall panels. The panel design is one used by many manufacturers of plywood houses. The architect points out that a substantial stock of units can be made prior to order because they may be used in any type of building, whether house or barracks. On demounting they may also be returned to stock and re-used several times.





Above, A possible assembly of units and buildings. No particular type of use is indicated, as such a group could serve as a temporary school, hospital, administration unit, etc. The sketch at the right illustrates the spacious interiors made possible with the construction. In the suggested hospital set-up the stiffening fins are useful in separating the beds. In barracks the beds would be double-decked.

WAR-TIME FACTORIES IN BRITAIN . . . . .

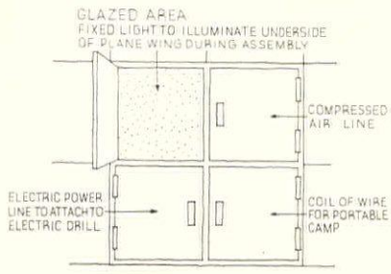
C. HOWARD CRANE reports

on British Building practice as affected by the blitz.

GENERAL VIEW

CRANE BAY

The photographs shown here arrived recently from England, and illustrate a new airplane plant whose location, size and capacity, naturally, are not revealed. Despite the lack of data, several interesting facts are revealed. Most striking is the tremendous glass area in a building where nightly blackouts are an invariable routine. Obscuration is provided to some extent by paint on the glass, but chiefly by curtains. Also notable is the very light roof construction, with no suggestion of an attempt at bombproofing. An unusually interesting technical development, shown in the accompanying drawings, is the use of floor lights and service boxes. Mr. Crane, formerly of Detroit and now practicing in England, came back on a short visit recently and described some of the major lessons learned from the bombardments. "Experience has taught us not to attempt to design so-called bombproof roofs except for vital sections such as boiler rooms, compressor houses, and

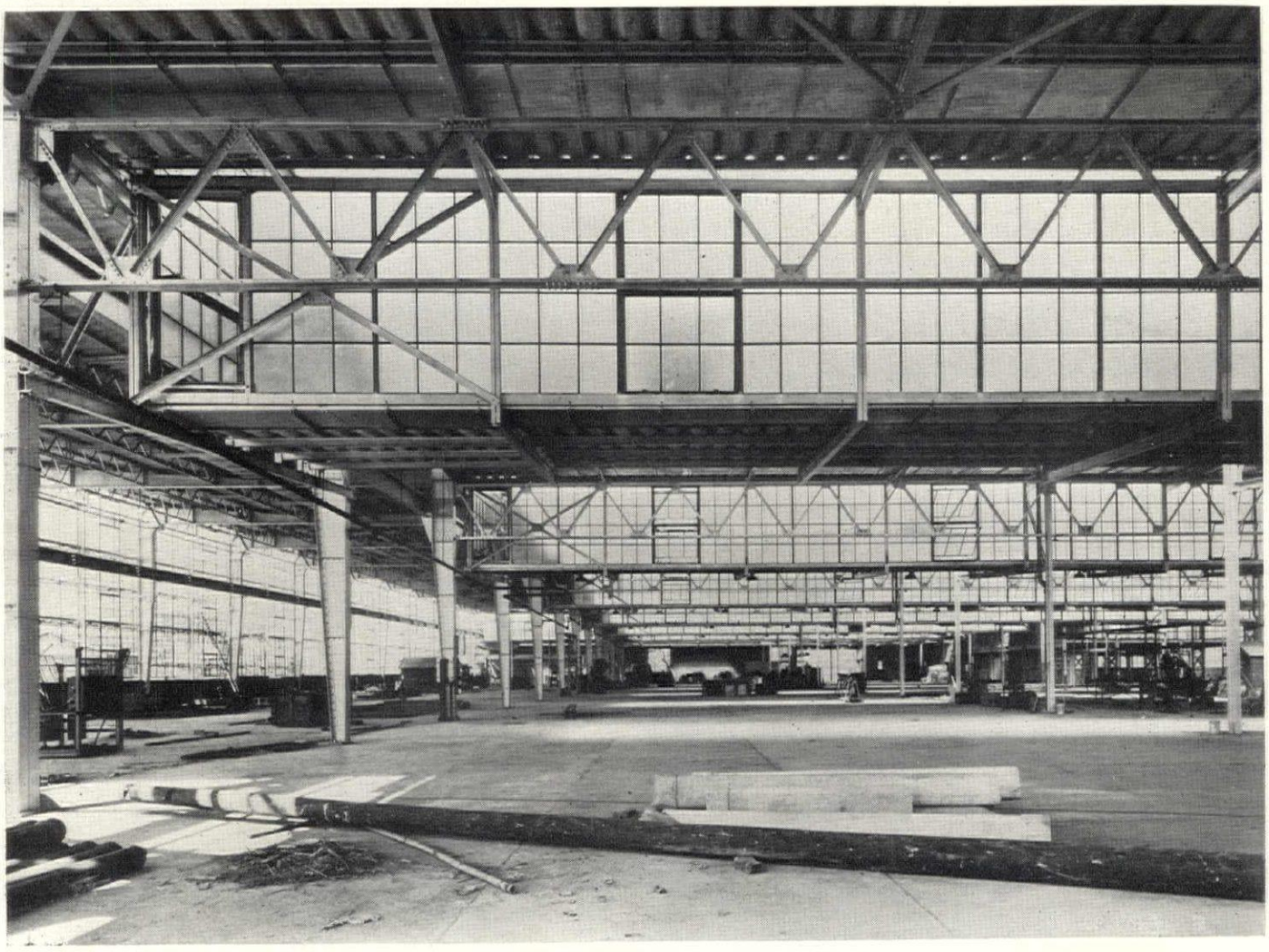


The service box is usually two feet square, although it may be larger, and contains four sections, each with a manually operated door. When closed it is flush with the floor. The four sections contain a fixed light for illuminating the underside of a wing, a coil of power line for electric tools, a compressed air attachment, and a portable light. These service boxes, located every 10 feet along the production line, have speeded up work considerably.

rooms for transformers, switch gear and other key equipment. For example, we are using a thin asbestos roofing material. This is laid upon a steel framework and clipped to it. When a bomb hits such a roof the resultant explosion rips away the asbestos but usually leaves the steel framework practically intact. Less damage, actually, is caused than results from a hit on solid roof construction. . . Blackout, of course, is a big problem, and a great deal of study has been given it. Very few windowless buildings are being constructed. We have found them too expensive to build and operate. Solid walls are particularly dangerous under bombing conditions. We use solid walls for eight feet only (reenforced brick 14 inches thick) with regular steel sash above. About one-third of the sash are glazed, and the rest are temporarily filled with asbestos. Curtains, in addition to the blacked-out sash, provide the necessary obscuration. In the case of bombing, these light walls are repaired quickly and cheaply."

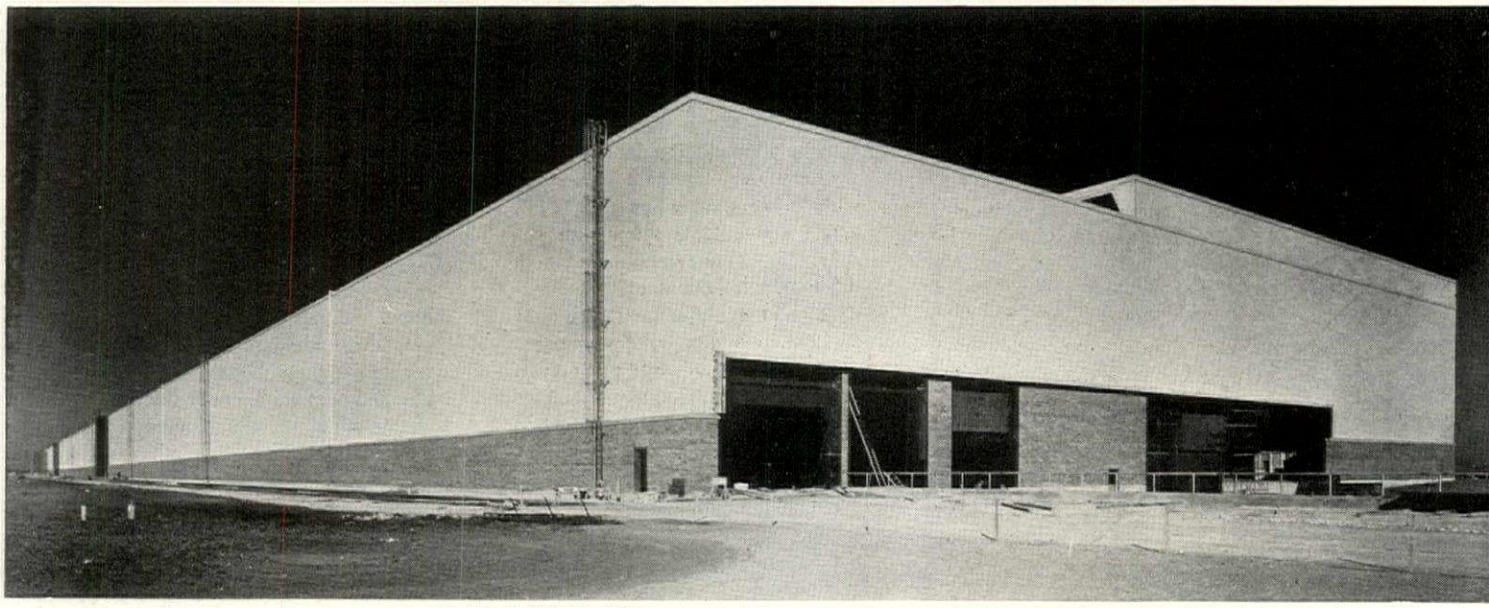
C. HOWARD CRANE, ARCHITECT

ASSEMBLY AREA



ASSEMBLY PLANT

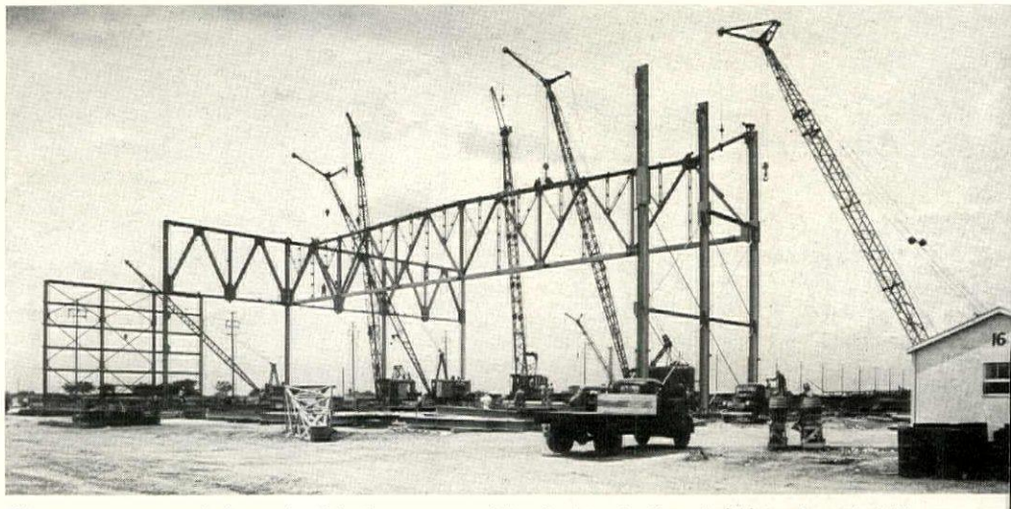
for four-motor bombers. One of a pair of industrial giants, designed and built by Austin Company.



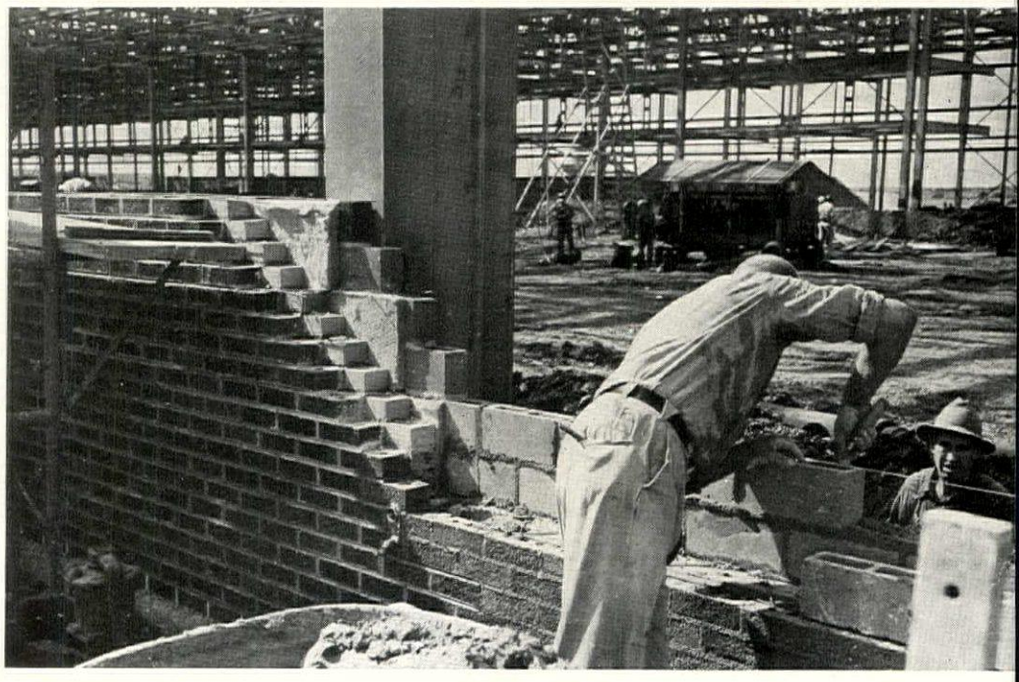
Big figures hold little power to impress Americans. Our common idiom is made up of superlatives. Nevertheless, in this new bomber plant in the Southwest, as in so many of the war industries mushrooming between the Appalachians and the Rockies, the common superlatives become a little inadequate.

It is a very big building. If, in the time honored manner of statisticians, you took the Queen Elizabeth, and the Queen Mary, and the Normandie, and set them end to end alongside this building, there would still be room enough for a very respectable plane manufacturing operation. When the insulation was delivered, it came in 203 freight cars. And even with all this insulation, the cooling plant installed would take care of more than a quarter of a million household refrigerators. If this still fails to suggest anything remarkable in the way of big building, it might help to add that a twin of this plant is going up in another State.

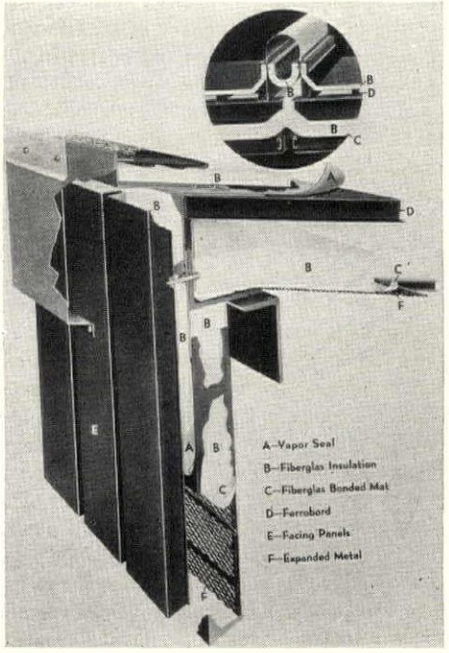
These plants are remarkable for more than size and speed of erection. They were designed to meet requirements so stringent that in many instances new types of construction had to be developed. Most interesting of these is the wall section, which is steel inside and out, combined with layers of fiberglas and special vapor seal paper, to give maximum strength and light weight, with the highest obtainable acoustical, insulating and light-reflecting qualities. The outer shell of steel is a special rolled section; inside, the metal is



Above, a progress photograph of last summer, showing the erection of one of the large trusses. Below, the reenforced shatter-proof wall which surrounds the assembly plant and other buildings to a height of twelve feet. Note the one-inch layer of insulating board between the hollow block and the brick.



Above, view of the side walls under construction. The photograph below illustrates the manner in which the insulating blanket of glass wool is rolled on to the expanded metal lath. This is covered by a metal deck, which is later covered by vapor seal paper, asphalt, insulating board and roofing material.



An isometric drawing showing the special type of construction developed for the side walls and roof of the plant. The system, known as "ferroglas," provides temperature, moisture and acoustical control with light-reflecting interior surfaces.

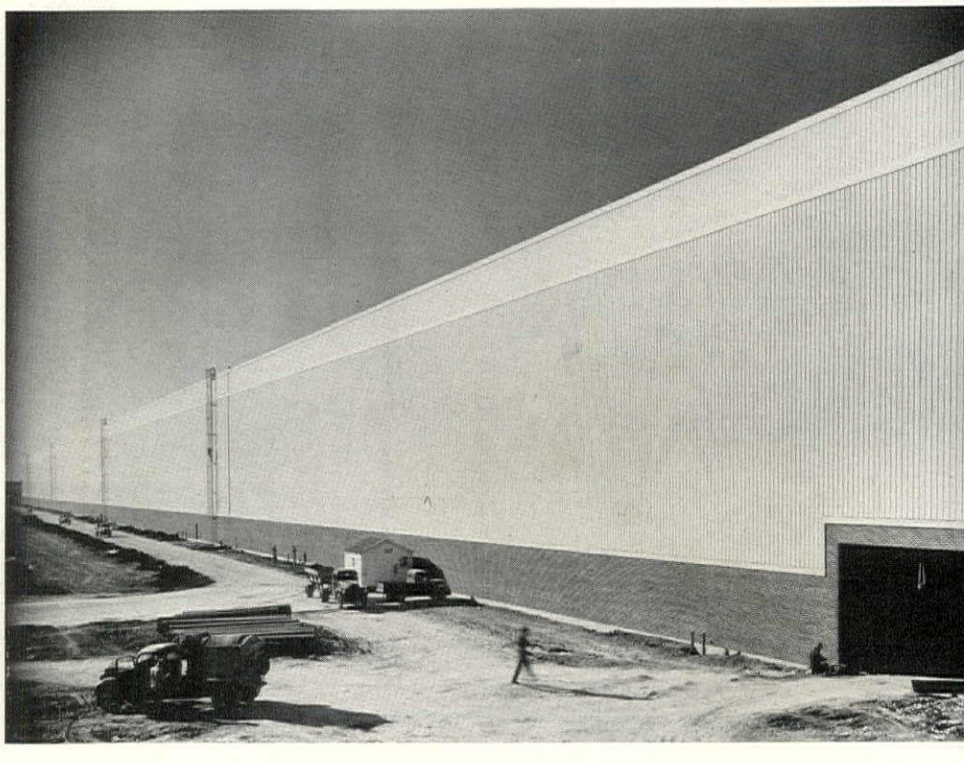
expanded lath which holds the white insulating material in place, a combination providing excellent light reflection and sound insulation. Since there are no windows in the plant, year-round air conditioning was installed. The problem of cooling this immense space, together with the accompanying problems of preventing condensation, etc., was without precedent in U. S. building history. Air conditioning for a large auditorium, such as the Radio City Music Hall, for instance, would be child's play in comparison, for several dozen of such theaters would fit quite comfortably into one of these plants. In a permanently blacked-out structure of this sort, artificial lighting also demanded fixture installations on an immense scale. To provide the 35 foot-candle intensity at working level which was required, some 17,000 two-tube 200-watt rectified fluorescent units were installed in each assembly building. A white cement floor was used as an aid in reflecting light up on the undersides of parts and planes on the assembly lines.

The plant has two main bays. Mezzanines for storage of parts and subassemblies are arranged along the main assembly lines, with both monorails and hydraulic elevators to keep the parts moving. With food wagons, first aid stations, tool cribs, washrooms and toilets all located directly below the mezzanines or on them, there is no obstruction to the free operation of the interconnecting monorail systems which serve the entire area. These monorails are capable of carrying a complete four-engine bomber from one end of the line to the other, or of transferring any other overhead loads anywhere in the building. To bring power outlets to the various work points about ten miles of underfloor service ducts were installed.

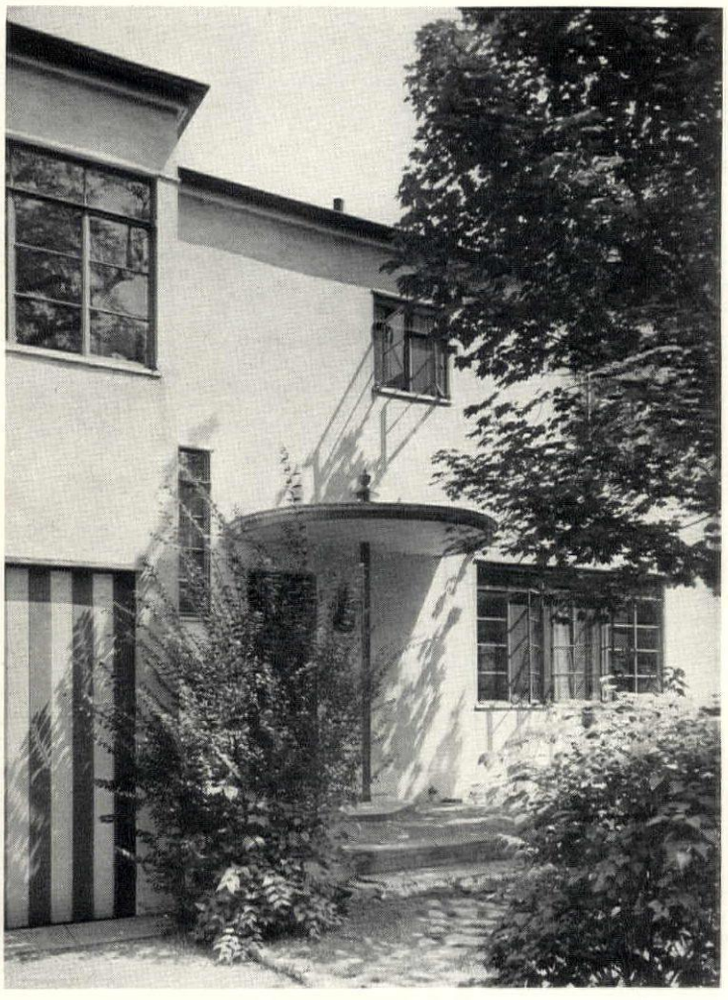
In addition to the main assembly building, the plant includes several other buildings: an office building, maintenance shop and boiler house, a paint shop, hangar and cafeteria. In the boiler house there are three combination gas and oil-fired boilers furnishing a total of 300,000 pounds of steam per hour at 225 pounds; three air compressors with a capacity of 1500 cubic feet per minute for each; and three fire pumps which take care of the sprinkler systems and fire stations. There is also a 625 KVA steam turbine generator, installed to meet emergency light and power requirements.

Data on structural precautions against the effects of bombing, naturally, have not been released. It might be noted, however, that the main assembly building and all auxiliary structures have 12-foot walls of reenforced masonry, 13 inches in thickness, which extend around their perimeter. Such walls have been found to provide very substantial protection against bomb splinters from hits outside the plant, and their height of 12 feet is ample to protect both men and machines.

The illustration above shows the interior finish which is standard throughout the plant: a layer of expanded metal lath, through which is seen the core of highly reflective white fibreglas. Below, a view of one of the walls of the assembly building, shatter-proof masonry for twelve feet, 18 gauge metal for another fifty above.



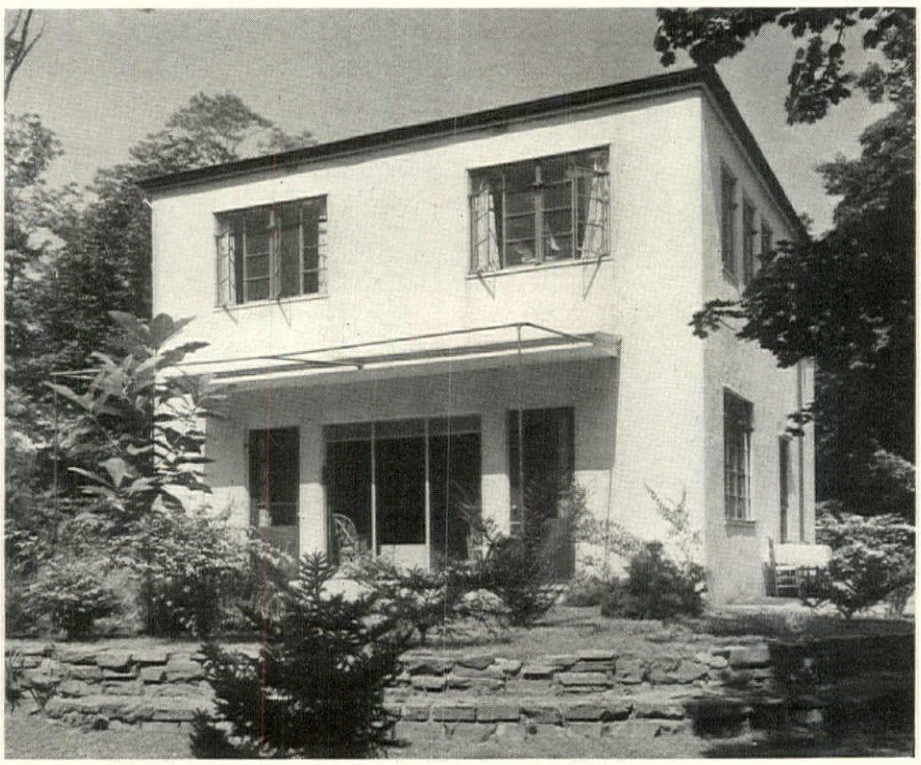
HOUSES



HOUSE IN WHITESTONE, N. Y.

J. DAVIDSON STEPHEN, ARCHITECT

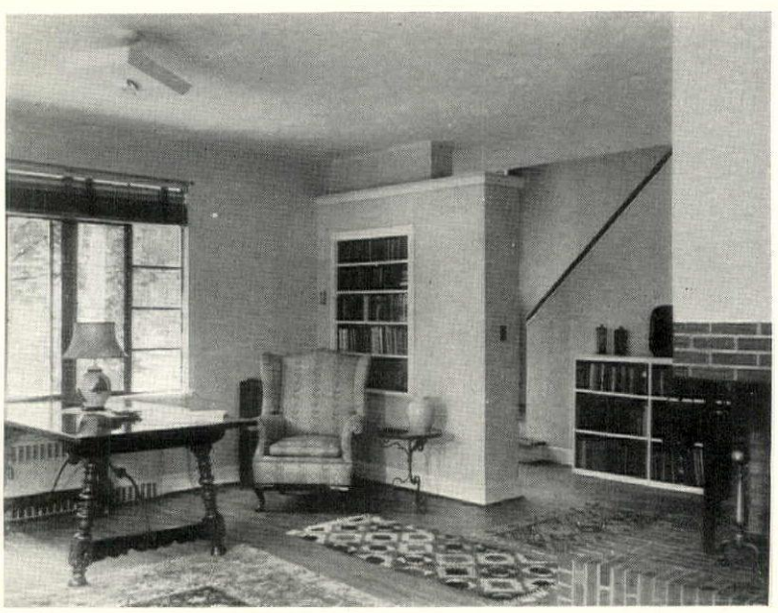
Photos, G. H. Van Anda



CONSTRUCTION OUTLINE

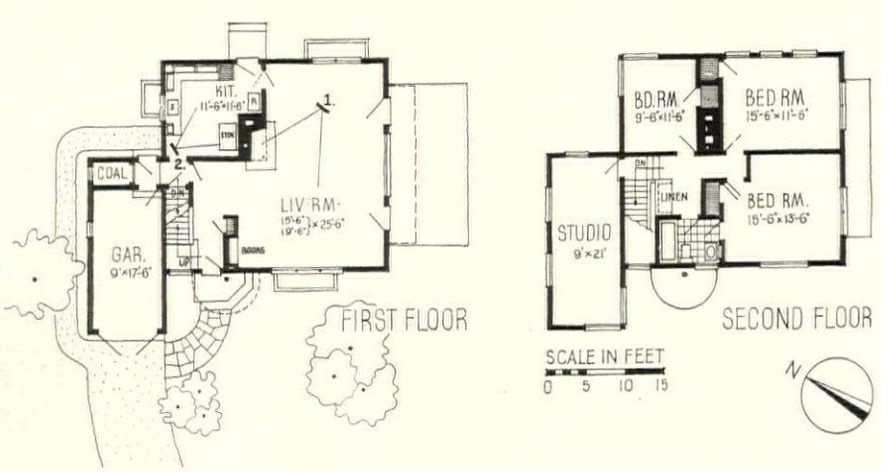
STRUCTURE: Exterior walls—cement plaster on metal lath on wood strips, sheathing, 1 in. dampproofed Celotex, Celotex Corp., building paper; inside—wood lath and plaster.
ROOF: 4-ply composition on board sheathing, felt and one layer of Ruberoid, The Ruberoid Co.
INSULATION: Outside walls—Celotex, Celotex Co. Attic floor—rockwool.
FIREPLACE: Damper—Colonial Fireplace Co.
SHEET METAL WORK: Cold rolled copper, 16 oz., throughout.
WINDOWS: Sash—steel casement, Hope's Windows, Inc. Glass—single strength, quality B and plate.
FLOOR COVERINGS: Main rooms—red oak. Kitchen—pine, linoleum covered. Bathrooms—brick veneer.
HARDWARE: By P. & F. Corbin.
KITCHEN EQUIPMENT: Range—Aga, coal-fired, American Gas Accumulator Co. Refrigerator—Norge Div., Borg-Warner Corp. Sink and cabinets—Cox & Co.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp.
PLUMBING: Water pipes—copper.
HEATING: Steam system, including domestic hot water, American Radiator-Standard Sanitary Corp. Thermostat—Minneapolis-Honeywell Regulator Co.

This house is located in a wooded section of Long Island, within a 25-minute drive of the center of New York over the new bridges and express highways. The primary objective of owner and architect was to design a modern house economically, using structural methods familiar to local builders. Living requirements included two bedrooms for the family, a guest room, a studio for the owner, who is a commercial artist, and a one-car garage. These elements and the living-dining room and kitchen have been arranged compactly in a plan nearly square, and are very simply expressed on the exterior. The terrace, as shown above and on the preceding page, is partly covered and provides for a roll-down awning. Cost: $8.940. Cubage: 28.605.



VIEW 1

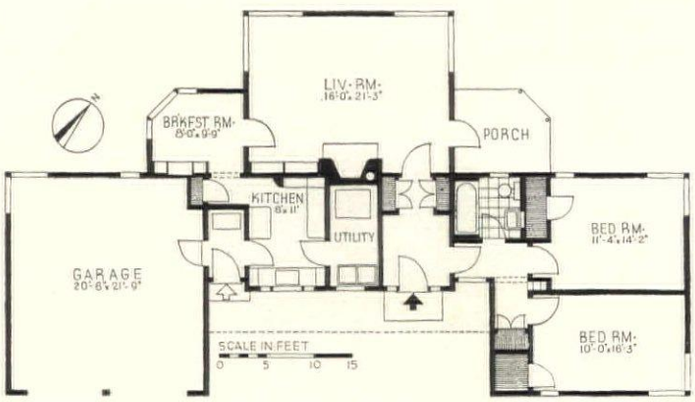
VIEW 2



TWO BEDROOMS, BREAKFAST ROOM, UTILITY ROOM, BATH

HOUSE AT OSWEGO LAKE, OREGON

WADE PIPES, ARCHITECT



An attractive and informal design for a lakeside dwelling. The drawing at the left shows the kitchen and utility room as the core of the plan, with bedrooms and garage disposed symmetrically on either side. The living room is free of the main mass of the house on three sides, and has large floor-to-ceiling corner windows which include both fixed and movable sash. The balanced arrangement, it will be noted, has been carried out on the lake side as well. Cost: 22 cents per cubic foot.

Erven Jourdan

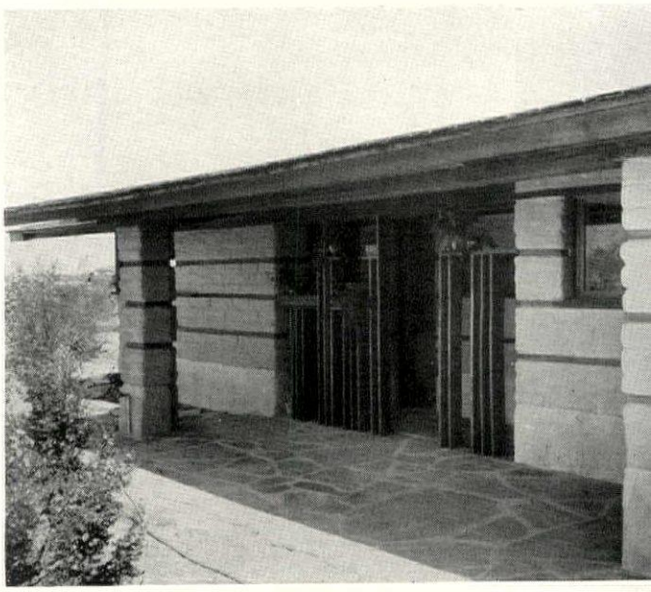
FRONT VIEW

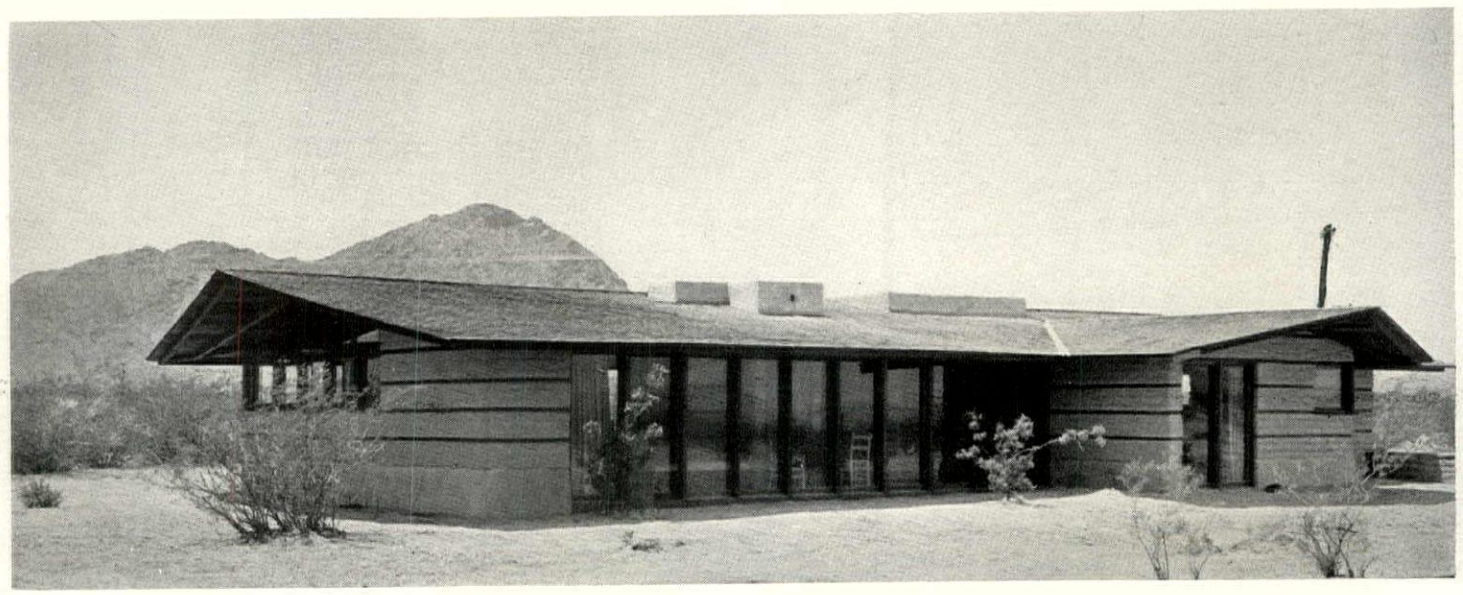
CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—sheathing, solid shiplap, fir siding. Floors—asphalt tile over concrete slab.
ROOF AND DECK: Composition roofing.
SHEET METAL WORK: Flashing, leaders and ducts—galvanized iron.
WINDOWS: Sash — fir. Glass — single strength, quality B, Libbey-Owens-Ford Glass Co.
WOODWORK: Vertical grain fir.
HARDWARE: By Russell & Erwin Mfg. Co.
ELECTRICAL INSTALLATION: Switches—Bryant Electric Co.
BATHROOM EQUIPMENT: By Crane Co. Cabinets—Hall-Mack, Hallenscheid & McDonald.
HEATING: Warm air system.

BEDROOM, STUDY, LIVING-DINING ROOM

This desert house, located a few miles outside of Phoenix, was designed for a musician who rents it when he is not in residence. Because of these separate requirements, it was necessary to create a flexible scheme. The interior, with the exception of kitchen and bath, is a single open space. It may be subdivided by means of folding redwood screens to gain an extra bedroom. The central chimney is interesting; it contains a large fireplace, an air conditioning unit, and it serves as a screen for the dining area. Walls are of the adobe so commonly used in the region; the use of horizontal redwood strips at every third course is described by the designer as a device "to bring the house even closer to the earth of which it was built, by emphasizing the horizontal lines, and at the some time to make the adobe brick more architectural." Cost: about $5,000.



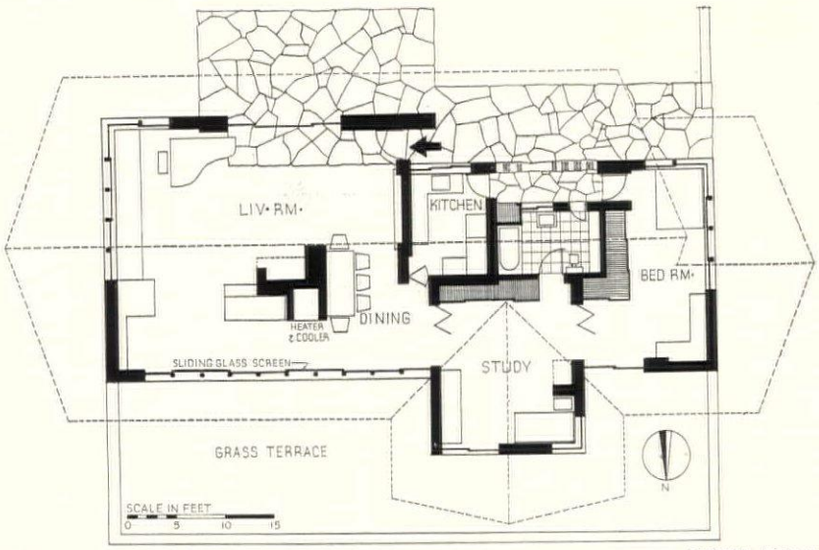


DESERT COTTAGE IN SCOTTSDALE, ARIZONA — GEORGE L. ELLIS, DESIGNER

LIVING ROOM

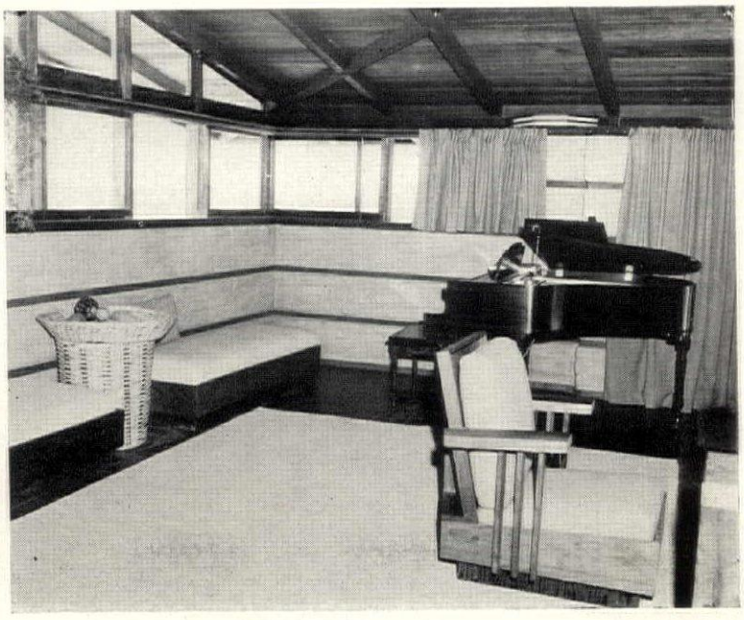
CONSTRUCTION OUTLINE

STRUCTURE: Walls—12 in. adobe. Between every third course a 2 in./2 in. wood strip is laid. Adobe washed and brushed inside and out. Sprayed with skimmed milk inside. Bathroom and kitchen—plaster. Floors—concrete. Ceilings—redwood.
ROOF: Redwood shingles.
WINDOWS: Sash—sliding redwood. Glass—Libbey-Owens-Ford Glass Co.
WOODWORK AND FURNITURE: Redwood.
HARDWARE: By Schlage Lock Co.
PAINTS: By W. P. Fuller Co.
ELECTRICAL INSTALLATION: Wiring—conduit, Westinghouse Electric & Mfg. Co.
KITCHEN EQUIPMENT: Range, refrigerator and water heater—Westinghouse Electric & Mfg. Co.
BATHROOM EQUIPMENT: Crane Co.
AIR CONDITIONING: By Frank Harmonson & Co.

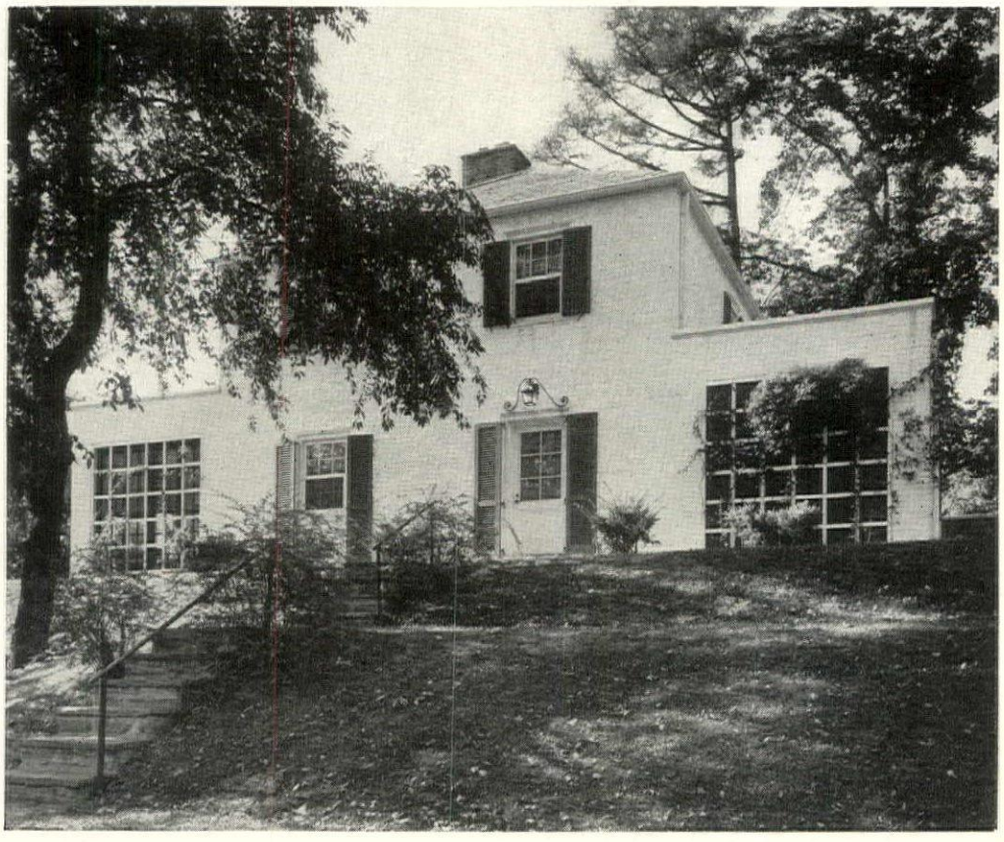


STUDY

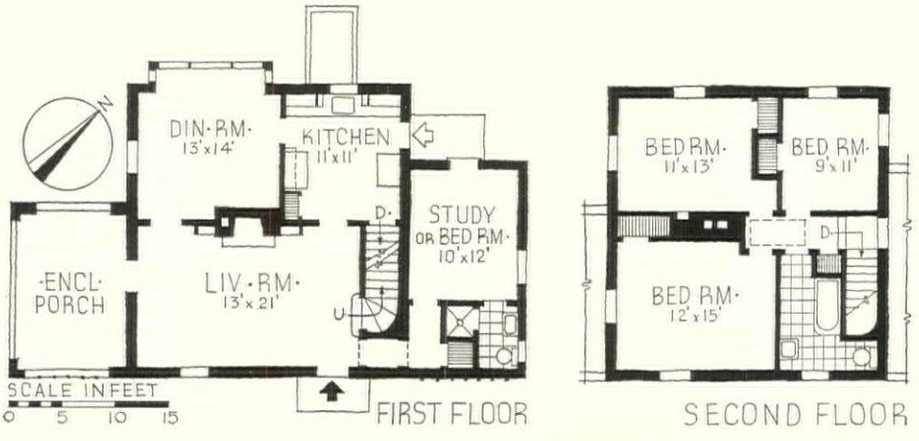
LIVING ROOM



THREE BEDROOMS, TWO BATHS, STUDY, ENCLOSED PORCH



HOUSE IN CHESTNUT HILL, PHILADELPHIA, PA., J. LINERD CONARROE, ARCHITECT

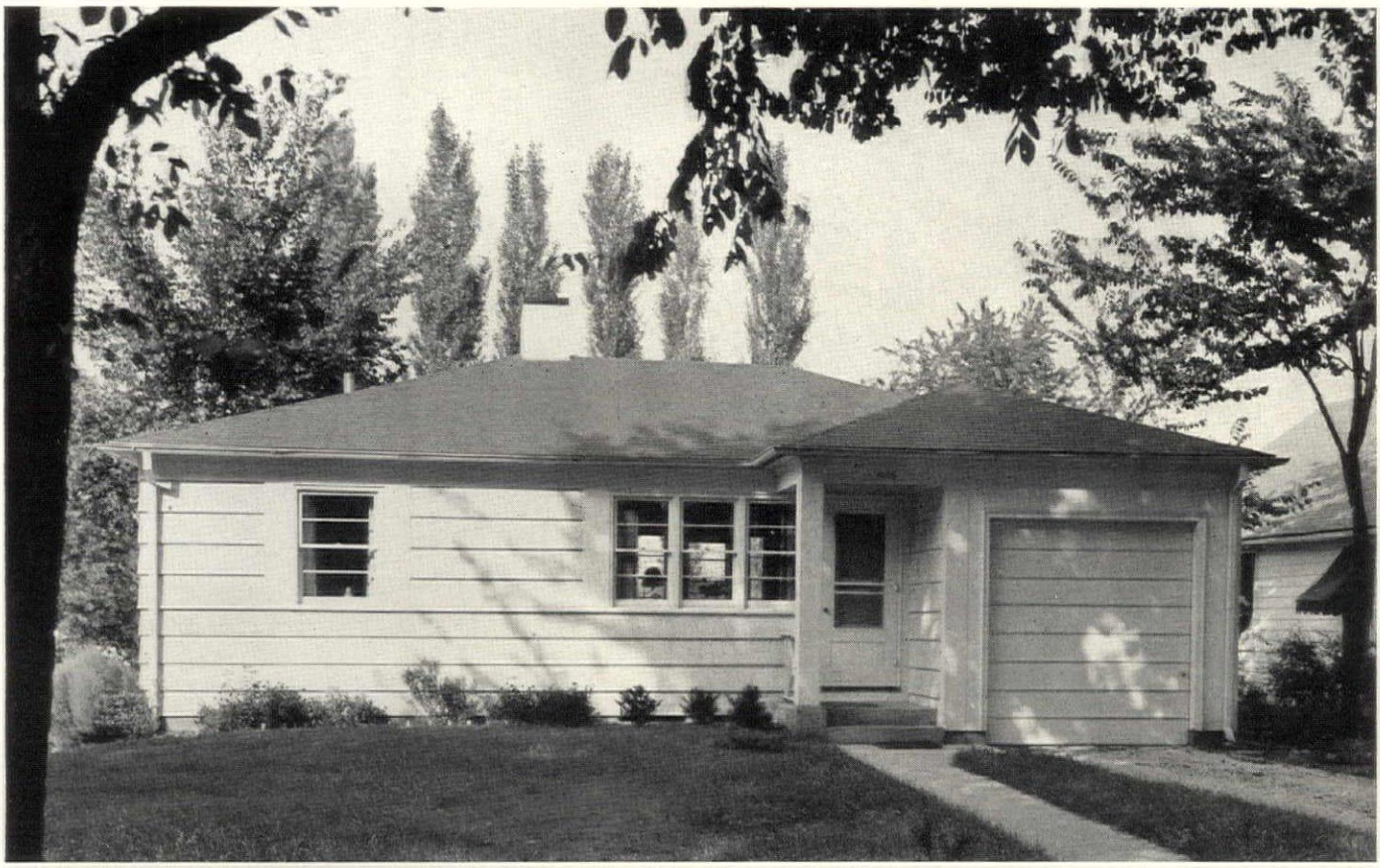


Photos, Ph. B. Wallace

A conventional solution for a flat site, applied here to a lot with a steep slope. The house is symmetrical in elevation, unsymmetrical in plan, and shows a very compact arrangement of four sleeping rooms, living room, dining room, kitchen and two baths. Cost (in 1939): $8,604.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—brick; inside—studs, U. S. Gypsum Co. Sheetrock lath and plaster.
ROOF: Slate. Deck—5-ply slag.
FIREPLACE: Damper—The Majestic Co.
SHEET METAL WORK: Lead Clad steel, Wheeling Metal & Mfg. Co.
INSULATION: Outside walls—Arborite insulation board, U. S. Gypsum Co. Attic floor—rockwool.
WINDOWS: Glass—double strength, quality A, Pittsburgh Plate Glass Co.
FLOOR COVERINGS: Main rooms—oak, carpet covered. Kitchen—linoleum, Armstrong Cork Co. Bathroom—tile, American-Franklin-Olean Tile Co.
WOODWORK: Poplar. Doors — 2-panel, Morgan Co.
HARDWARE: By Russell & Erwin Mfg. Co.
PAINTS: By Samuel Cabot, Inc. and The Reardon Co.
ELECTRICAL INSTALLATION: Wiring system and switches—General Electric Co.
KITCHEN EQUIPMENT: Range—Quality, Roberts & Mander Stove Co. Refrigerator—General Electric Co.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp. Shower—Hajoca Corp. Cabinets—Steel & Wike Mfg. Co.
PLUMBING: Hot and cold water pipes—copper, Chase Brass & Copper Co.
HEATING: Vapor system, Vapor Engineering Co. Oil burner—The Heil Co. Thermostat — Minneapolis-Honeywell Regulator Co. Grilles and convectors—Rome Wire & Cable Co.



HOUSE IN CHAMPAIGN, ILLINOIS

WILLIAM H. SCHEICK, ARCHITECT

The plan shows a common solution for the one-story house: bedrooms on one side, services on the other, with the living room serving as both link and buffer. There is no entrance vestibule, nor is there any attempt to separate living and dining areas. The basement contains facilities for a game room. Cost: $6,500. Cubage: 18,000.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls — red cedar shingles, wood sheathing; U. S. Gypsum Co. Rocklath and plaster.
ROOF: Asphalt shingles. Johns-Manville.
FIREPLACE: Damper—Donley Bros. Co.
SHEET METAL WORK: Flashing—40 lb. coated tin. Gutters and leaders — Armco, American Rolling Mill Co.
INSULATION: Outside walls and attic floor —glass wool, paper backed.
WINDOWS: Sash—double hung & casement, Andersen Corp. Glass—single strength, quality A. Glass blocks—Owens-Illinois Glass Co.
FLOORS: Red oak finish. Kitchen and bathrooms—linoleum, Armstrong Cork Co.
WOODWORK: White pine throughout, Morgan Sash & Door Co.
HARDWARE: By Russell & Erwin Mfg. Co. and Frantz Mfg.
PAINTS: By Pratt & Lambert, Inc.
ELECTRICAL INSTALLATION: Wiring system — knob and tube. Fixtures — Gross Chandelier Co.
KITCHEN EQUIPMENT: Range—Odin Stove Mfg. Co. Refrigerator—Frigidaire Div., General Motors Corp.
BATHROOM EQUIPMENT: Montgomery Ward & Co.
PLUMBING: Water pipes—galvanized steel.
HEATING: Forced warm air, gas fired, filtering, Bryant Heater Co. Grilles—Hart & Cooley Mfg. Co. Thermostat—Minneapolis-Honeywell Regulating Co. Water heater—Montgomery-Ward & Co.

TWO BEDROOMS, LIVING-DINING ROOM, DEN, LAUNDRY

FRONT

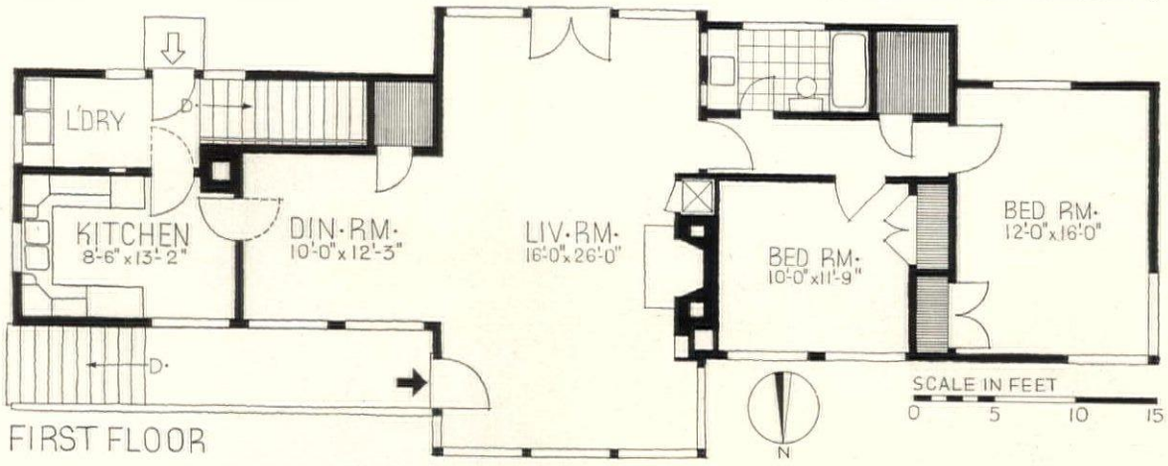
Photos, Erven Jourdan

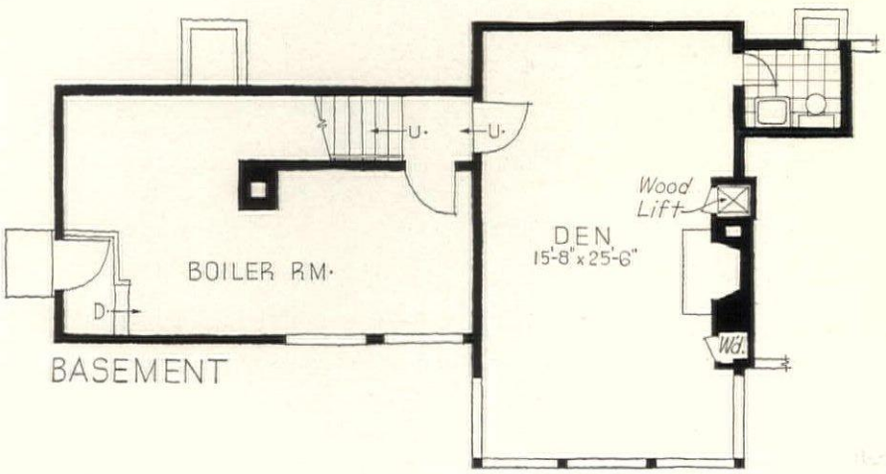
REAR

KITCHEN

HOUSE IN KLAMATH FALLS, OREGON

HOWARD R. PERRIN, ARCHITECT





An interesting example of the regional type of house developed in the Pacific Northwest. The building is set on a sloping lot, with a basement above ground on one side. Great emphasis has been placed on orientation of rooms for view; it will be noted from the first floor plan that the laundry and bath are the only rooms which face to the rear. Glass areas on the two-story side of the house are large, but in sizes which did not strain the possibilities of conventional construction. The effectiveness of these windows is very well shown by the photograph of the living room. Cost: $11,000.

LIVING ROOM

CONSTRUCTION OUTLINE

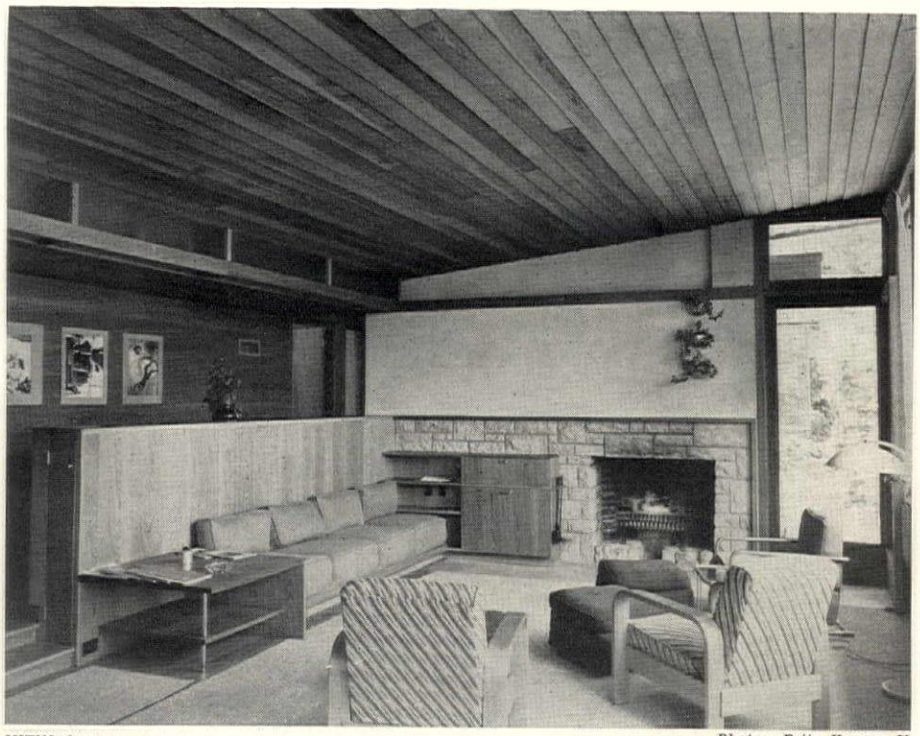
STRUCTURE: Exterior walls—studs, shiplap, V-siding; inside—wood lath and plaster.
ROOF: Cedar shingles.
SHEET METAL WORK: Flashing—galvanized iron.
INSULATION: Outside walls and attic floor—rockwool.
WINDOWS: Sash — fir casement. Glass — plate. Screens—Rolscreen Co.
FLOORS: Main rooms—oak. Kitchen and bathrooms—fir, linoleum covered.
WOODWORK: Vertical fir. Garage doors — Overhead Door Co.
HARDWARE: By Dexter Hardware Mfg. Co.
PAINTS: By Sherwin Williams Co.
KITCHEN EQUIPMENT: Range and refrigerator—General Electric Co,
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp.
HEATING: Warm air system, filtering and humidifying, Holland Furnace Co.

TWO BEDROOMS, LIVING-DINING ROOM, MAID'S ROOM & BATH

While this house is very clearly indebted to the work of Frank Lloyd Wright, it exhibits a number of individual characteristics which are far removed from mere imitation. Most admirable of its features is the realistic and imaginative plan. The use of a corridor to add space to the living room seems excellent. The areas for service, general living and sleeping are well related. The future addition involves a minimum of disturbance to the existing structure. The closets offer an ideal solution: they are shallow and can be opened for their full width. Views of the living room show a very comfortable interior, with good fenestration and an interestingly textured ceiling. Cost: $8,425. Cubage: 19,000.

Fritz Kaeser, Ir

HOUSE IN MADISON, WISCONSIN WILLIAM KAESER, ARCHITECT



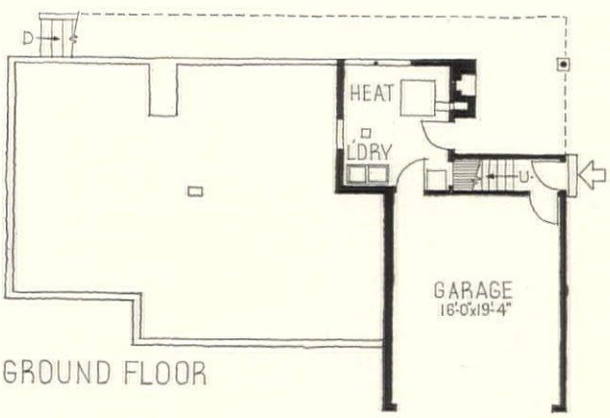
VIEW 1

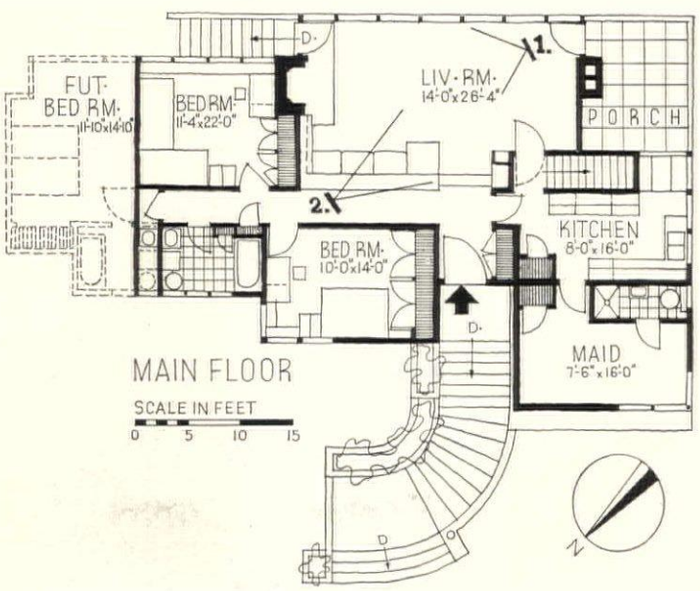
Photos, Fritz Kaeser, II

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—stucco, wire mesh, Insulite Co. sheathing board; inside—insulating lath, studs and plaster. Ceilings—plaster, cypress in living room.
ROOF: 3-ply build-up asphalt.
FIREPLACE: Damper—Donley Bros.
SHEET METAL WORK: Flashing — Anaconda copper, American Brass Co. Ducts—Armco iron, American Rolling Mill Co.
INSULATION: Outside walls—Insulite Co. Roof—Red Top rockwool, U. S. Gypsum Co.
WINDOWS: Sash — steel casement. Glass — double strength, quality B and crystal sheet, Libbey-Owens-Ford Glass Co.
FLOORS: Main rooms—red oak. Kitchen and bathrooms—linoleum, Armstrong Cork Co.
WALL COVERINGS: Halls and kitchen — cypress siding. Bathrooms — plaster and Marsh Board. Marsh Wall Products Co.
HARDWARE: By Schlage Lock Co. and Rowe Mfg. Co.
ELECTRICAL INSTALLATION: Wiring system and switches—General Electric Co. Fixtures—Art Metal Works, Inc.
KITCHEN EQUIPMENT: Range—Geo. D. Roper Corp. Refrigerator—Frigidaire Div., General Motors Corp. Cabinets — cypress, Lentz Millwork Co.
BATHROOM EQUIPMENT: By Kohler Co.
PLUMBING: Hot and cold water pipes—galvanized steel.
HEATING: Oil burning warm air circulating system, Mueller Co. Grilles—Hart & Cooley Mfg. Co. Thermostat—Minneapolis-Honeywell Regulator Co. Water heater—Welsback & Co.

VIEW 2



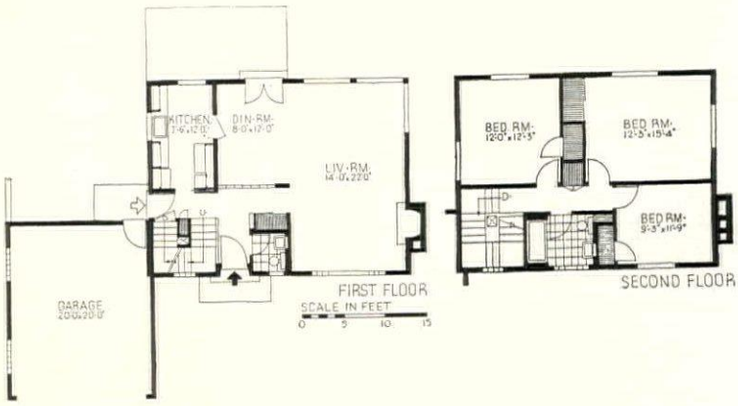


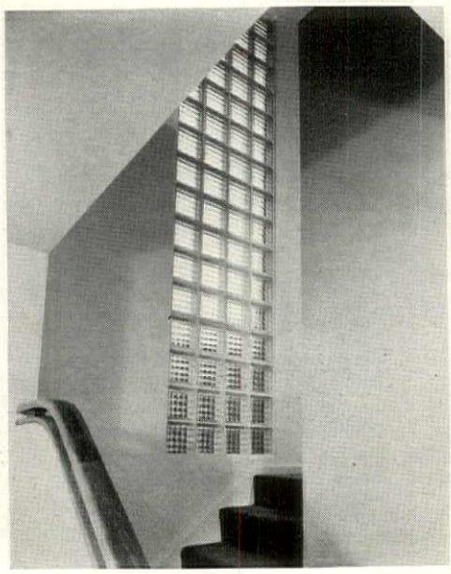
THREE BEDROOMS, BATHROOM, LAVATORY, TWO-CAR GARAGE

HOUSE IN OTTAWA HILLS, OHIO

E. P. LOCKART, DESIGNER

A very orderly design, notable for its efficient allocation of space. The kitchen has good access to both service and front entrances; there is a compact lavatory and a spacious coat closet. Glass block has been used extensively inside and out, the most prominent feature being a two-story panel in the stair hall. The exterior is plain but satisfying, a slight variation in texture being obtained by a change in the treatment of the redwood siding.





CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—redwood siding, sheathing, studs, and Celotex Corp. lath.
ROOF: Armco, American Rolling Mill Co.
FIREPLACE: Damper—Donley Bros. Co.
INSULATION: Sidewalls and ceiling—Red Top Fiberglas, U. S. Gypsum Co. and Owens-Corning Fiberglas Corp.
WINDOWS: Sash—horizontal gliding wood, Andersen Corp. Glass blocks — Insulux, Owens-Illinois Glass Co.
FLOOR COVERINGS: Kitchen, bath and lavatory—linoleum, Armstrong Cork Co.
WOODWORK: Garage door—Overhead Door Corp.
HARDWARE: By P. & F. Corbin.
PAINTS: By Sherwin-Williams Co.
KITCHEN EQUIPMENT: Range—Magic Chef, American Stove Co. Refrigerator—Gibson Electric Refrigerator Corp.
PLUMBING FIXTURES: By Crane Co.
HEATING: Janitrol forced warm air system, Surface Combustion Co. Water heater — American Radiator-Standard Sanitary Corp.

93 DEFENSE HOUSES IN RADFORD, VIRGINIA

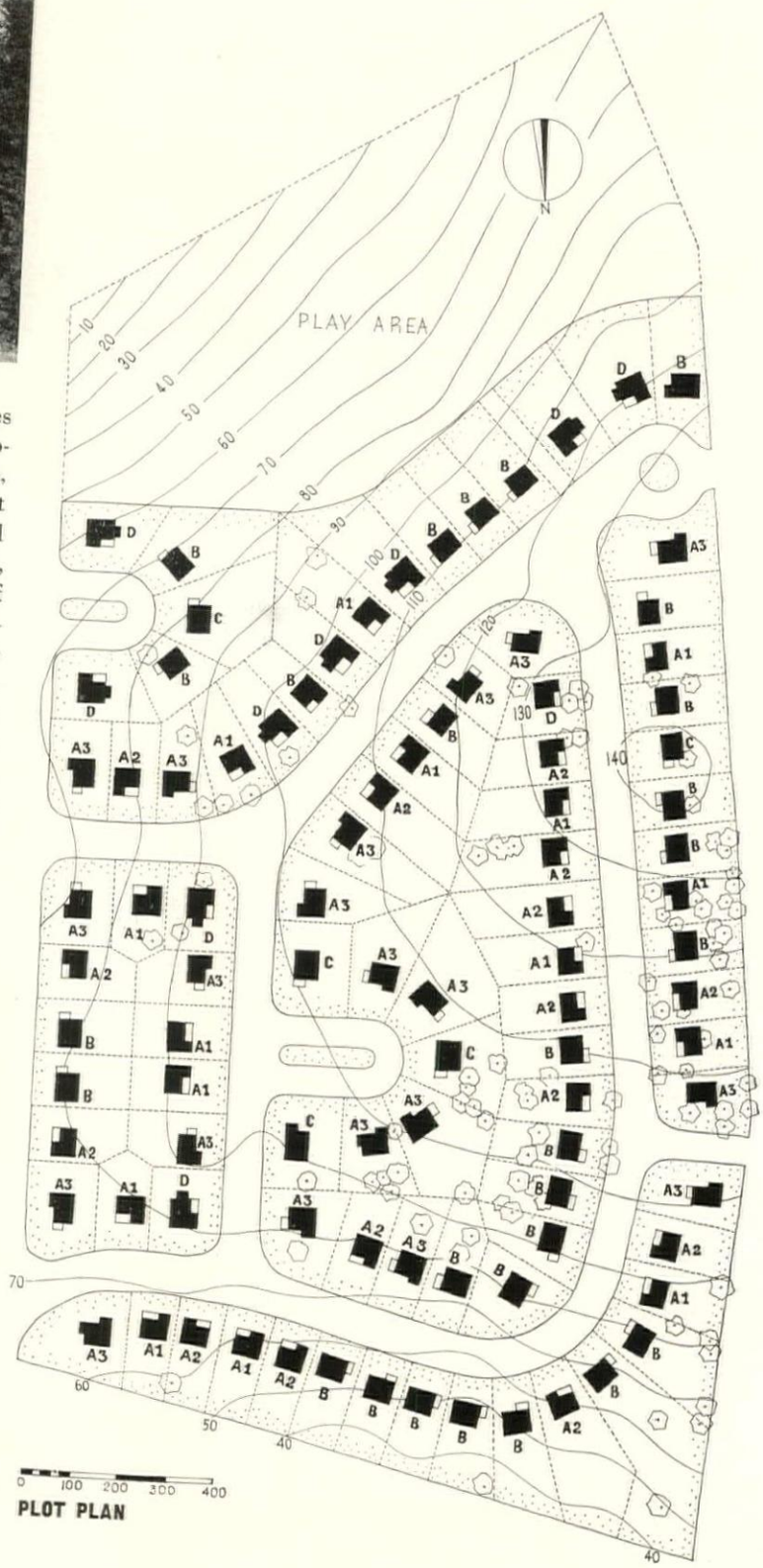
Photos, H. Bagby

PENDLETON S. CLARK, ARCHITECT

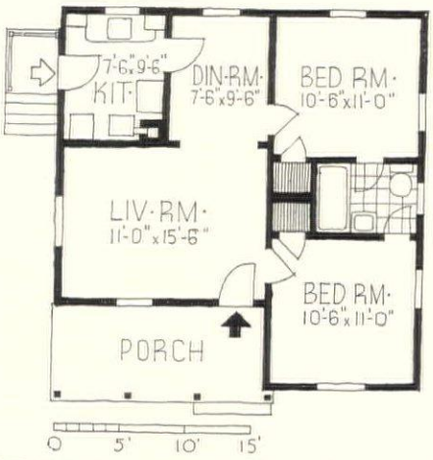
C. W. HANCOCK & SONS
CONTRACTORS

93 DEFENSE HOUSES, RADFORD, VIRGINIA

Radford is one of a number of small Virginia communities whose activities have been vastly increased by the war program. In the general area there are several plants which, by the middle of next summer, will have brought in about 8,600 additional workers. These men and women will have to be taken care of almost entirely by new housing, either temporary or permanent. This small unit is one of the permanent projects. It consists of five basic types, modified in exterior treatment and varied in color. The site plan was developed with an eye to making the most economical use of existing grades, saving trees and shrubs on the property and giving each family as good a view and as much privacy as possible under the circumstances. Three of the typical units are shown on the facing page, two more on the page beyond. The porch was a "must" in all five cases, being dictated by both climate and established living habits of the region. By frequently changing its location considerable variety in appearance was achieved. House costs ran from $2,900 to $4,200, averaging $3,483 each for the entire group. These figures do not include landscaping, streets or sewers. The dwellings are 100 per cent rented, at monthly rates from $35 to $50.

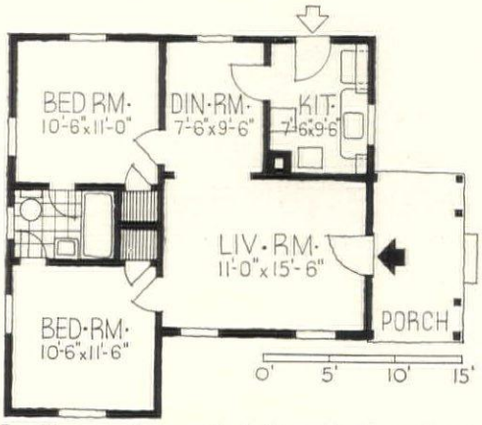


PLOT PLAN



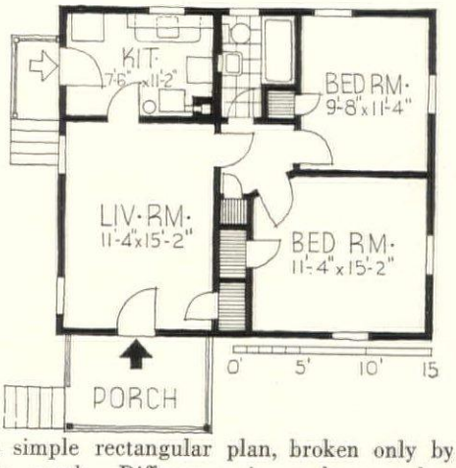
There are no garages in the project, merely driveways which lead to the porch and service entrance. In the plan above, one bedroom opens on the living room, but has direct access to the bath.

TYPE A-2, TYPE A-1 has gable over bedroom



In all cases the porch shelters the front door. Except for the placing of the porch and the arrangement of fixtures in the kitchen, the plan is quite similar to the one above.

TYPE A-3



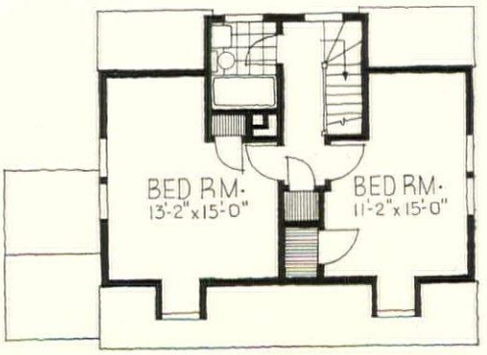
A simple rectangular plan, broken only by the porch. Differences in grade are taken care of by changing pier heights. The placing of bedrooms and bath is better than in the above schemes, but provision of space for dining is inadequate.

TYPE B

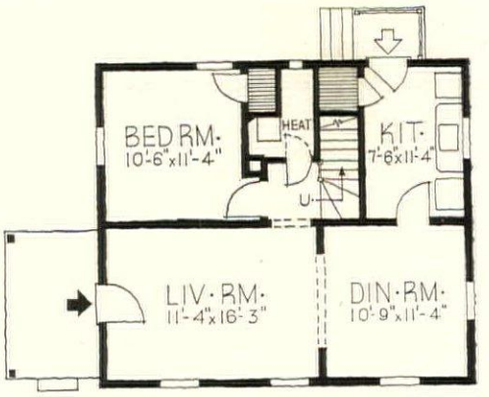
PENDLETON S. CLARK, ARCHITECT

TYPE C

A two-story scheme, with a shed dormer to take care of the stairs and bath on the second floor. The ground floor has a small storage room with space for the heater. All heaters are coal-fired. Additional features in this type are the downstairs bedroom and separate dining room.



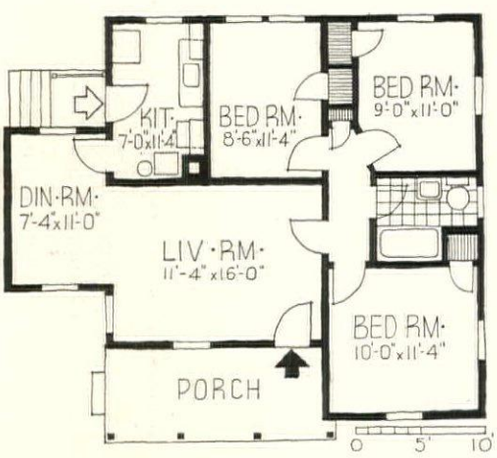
SECOND FLOOR



FIRST FLOOR 0 5 10 15

TYPE D

The most elaborate of the one-story plans, with three bedrooms, all opening off an inside corridor, and a very well placed dining alcove. All houses in the project were built of stock materials in stock sizes; there is no special millwork whatever. Construction, as indicated in the outline, is conventional, but a fair degree of rationalization, such as pre-cutting of framing members, use of mechanical equipment for hanging doors, etc., reduced both building time and costs.



CONSTRUCTION OUTLINE

FOUNDATION: Cinder block, American Cinder Block Co.

STRUCTURE: Exterior walls — asbestos shingles, Johns-Manville, pine sheathing, Williams-McKeithan Lumber Co.; inside—studs, plaster. Ceilings—U. S. Gypsum Co. Rocklath and plaster.

ROOFS: Certain-teed shingles, Certain-teed Products Corp.

INSULATION: Ground floor—15 lb. asphalt felt building paper, Certain-teed Products Corp. Roofs—(C houses) 2 in. flameproof cotton wool blanket, Johns-Manville.

SHEET METAL WORK: Flashing—26 gauge copper and 40 lb. iron clad tin. Gutters, leaders and ducts—26 gauge galvanized iron.

WINDOWS: Sash — pine. Glass — single strength, quality A, Libbey-Owens-Ford Glass Co.

FLOOR COVERINGS: Main rooms — oak. Kitchen and bathrooms — linoleum, Armstrong Cork Co.

PAINTS: By E. I. du Pont De Nemours & Co., Inc.

WOODWORK: Trim and doors — pine and fir.

HARDWARE: By Sargent & Co. and Earle Hardware Mfg. Co.

ELECTRICAL INSTALLATION: Switches —Bryant Electric Co.

KITCHEN EQUIPMENT: Ranges and refrigerators — Westinghouse Electric & Mfg. Co. Sink—Maryland Sanitary Co.

BATHROOM EQUIPMENT: By Maryland Sanitary Co. Cabinets and accessories—Miami Cabinet Div., Philip Carey Co. and Hallenscheid & McDonald.

PLUMBING: Water pipes—galvanized steel. Vent pipes—cast iron and lead.

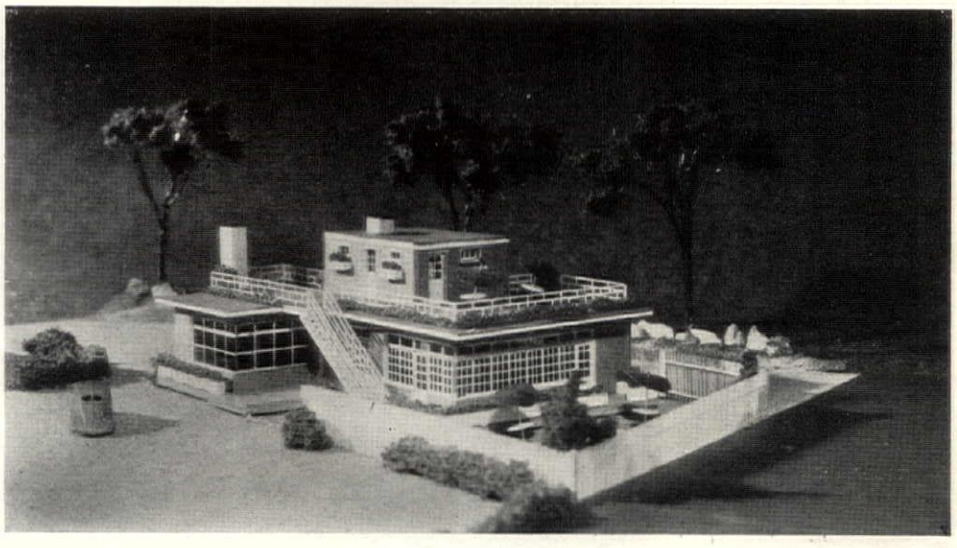
HEATING: All houses except C and D heated with gravity furnaces, Coleman Lamp & Stove Co. C and D winter air conditioning unit, Anchor Post & Fence Co. Grilles—Anchor Post & Fence Co. Thermostats—Perfex Corp. Water heaters—Westinghouse Electric & Mfg. Co. and W. J. Loth Stove Co. Bathroom heaters—Sheplar Mfg. Co.

SHOP & TEA ROOM LAKE MAHOPAC, NEW YORK

Photos, Richard Garrison

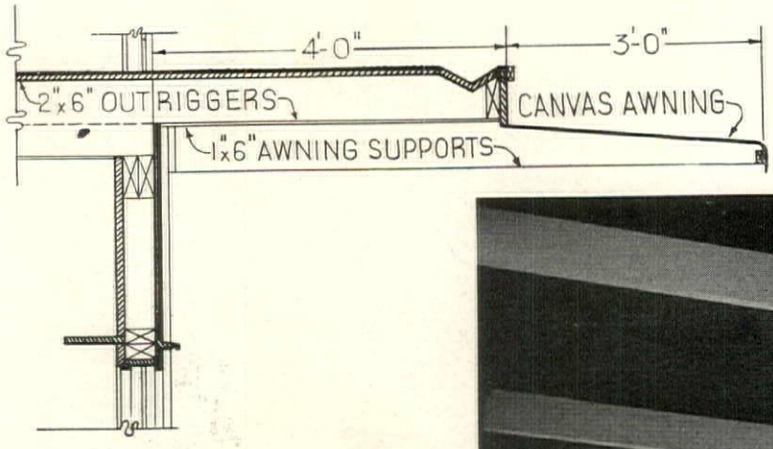
Richard D. de Rham, Designer

van der GRACHT & KILHAM, ARCHITECTS



FRANK GRASSL
GENERAL CONTRACTOR

SHOP & TEA ROOM, LAKE MAHOPAC, N. Y.



PORCH

CONSTRUCTION OUTLINE

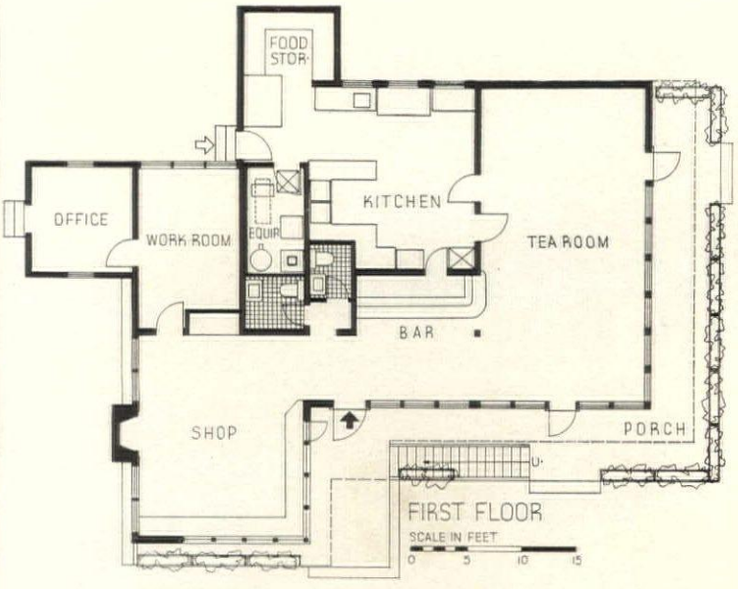
STRUCTURE: Exterior walls—vertical fir, building paper, Celotex Corp. Vaporseal sheathing or studs; inside—Sheetrock, U. S. Gypsum Co. or pine sheathing.
ROOF: Built-up asphalt and felt and gravel.
SHEET METAL WORK: Galvanized iron.
INSULATION: Roofs—rockwool.
WINDOWS: Sash—double hung, and transom wood. Glass—single strength, quality B.
FLOOR COVERINGS: Tea room, entry, shop and lavatories—linoleum; remainder—pine.
WALL COVERINGS: Common pine or Sheetrock, U. S. Gypsum Co.
HARDWARE: By P. & F. Corbin.
ELECTRICAL INSTALLATION: Wiring system—BX cable. Switches—toggle.
PLUMBING: Hot and cold water pipes—copper tubing.

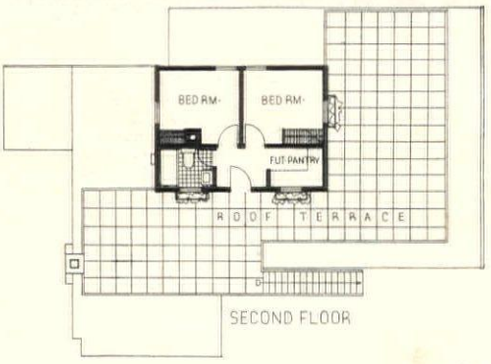
The main element in this building is the shop, in which local handicraft products are sold. The tea room is an additional revenue producer, but, since the building is located on a busy highway, it was installed primarily as a device for inducing motorists to stop and visit the shop. An extremely low budget limited the design to the most inexpensive finishing materials and fenestration; the restriction was not without its advantages, however, for the direct and modest solution is a refreshing note in a field where tasteless sentimentality is usually considered an indispensable aid to merchandising. The building had to be set back some distance on the lot to avoid blocking off an adjoining real estate office; this circumstance led to the projection of the shop unit from the main mass to gain added display value. The plan shows an entry strategically placed between the tea room and shop, a central unit with all plumbing and heating equipment, and a small office and work room. Provision has been made for enlarging the tea room, kitchen and shop.

RICHARD D. de RHAM, DESIGNER

van der GRACHT & KILHAM, ARCHITECTS

SHOP





TEA ROOM

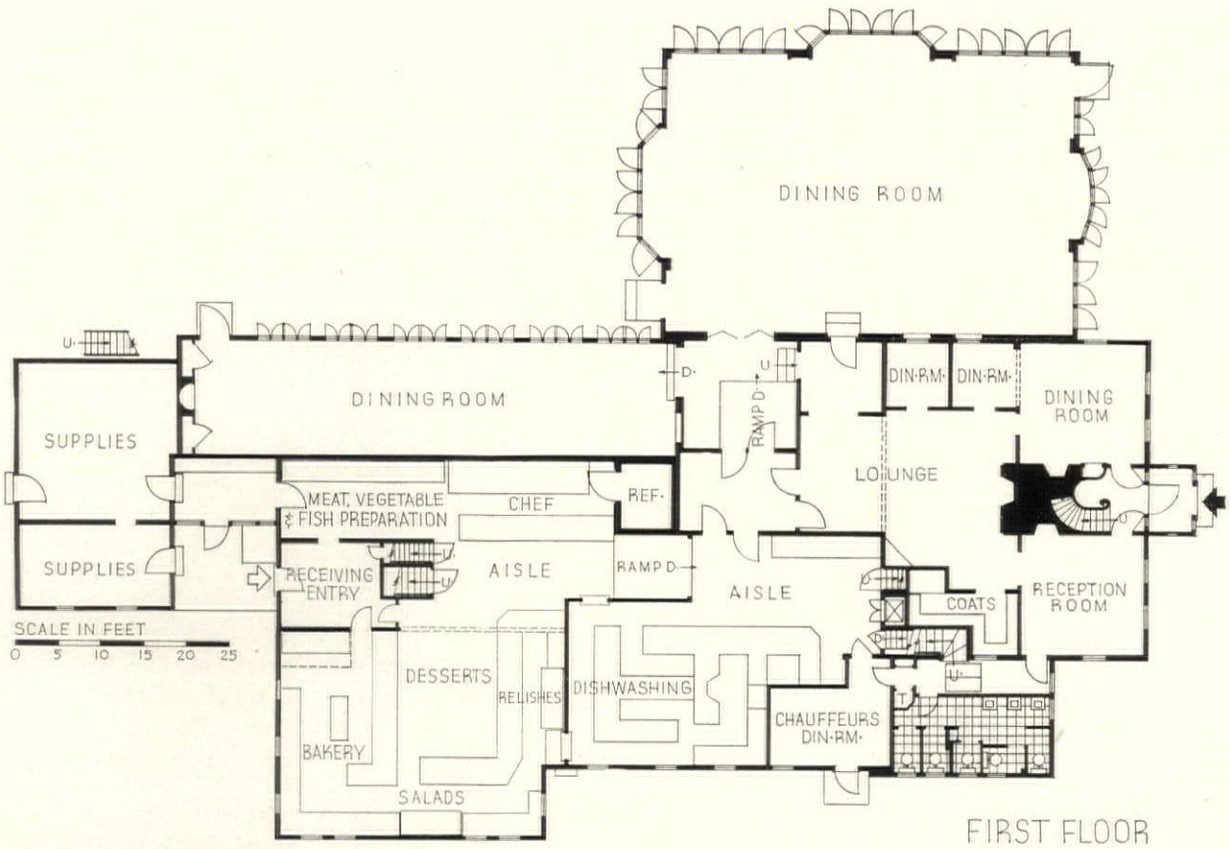
TOLL HOUSE, WHITMAN, MASS.

Photos, George H. Davis Studio

L. K. Henderson

BEFORE VIEWS

DAVID J. ABRAHAMS, ARCHITECT

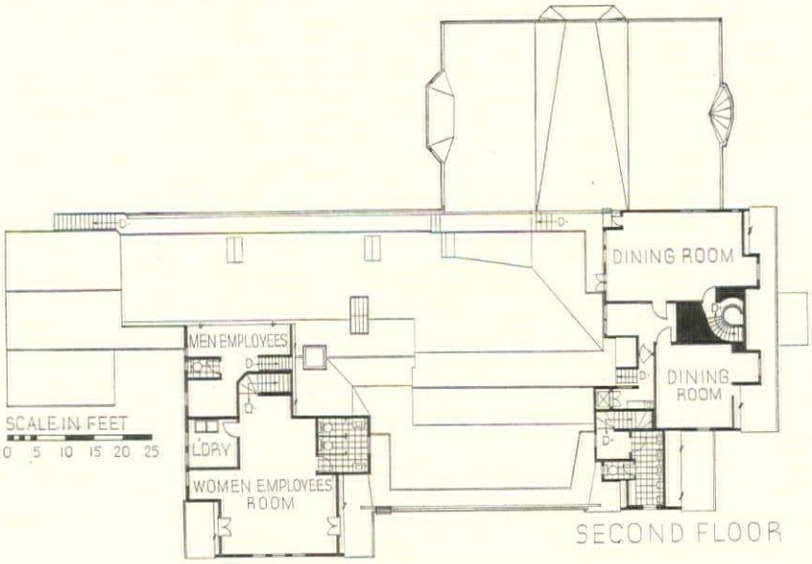


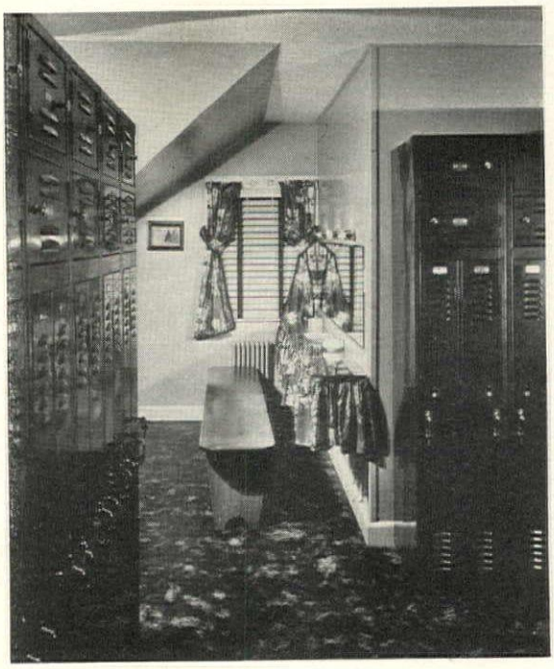
The Toll House, built in 1709, was purchased by its present owners in 1930 and within a decade has become one of the best-known eating places in the East. Since 1935 the building has undergone five alterations, involving the installation of new plumbing, a large modern kitchen, building of additional dining space and re-decoration of the interiors. The restaurant has a capacity of 350 diners in summer and 300 in winter, and the kitchen may be required to serve as many as 2200 meals a day in addition to doing all the baking. Despite these drastic modifications of the original house, the building retains its Colonial character. In many of the interiors, such as the dining room shown at the right, the architect was able to use a somewhat freer approach. The plan above shows little to suggest a building of the 18th century, with the exception of the enormous chimney at the entrance. The kitchen, photographs of which are shown on the following page, occupies about half of the entire first floor. The employees' rooms and some private dining rooms are located on the floor above.

DINING ROOM

TOLL HOUSE, WHITMAN, MASS.

DAVID J. ABRAHAMS, ARCHITECT





WOMEN EMPLOYEES' ROOM

KITCHENS

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—studs, wood sheathing, cedar shingles or clapboards, mineral wool batts; inside — sheathing and Gold Bond Wallboard, National Gypsum Co. Floors—oak, magnesite, quarry tile, brick and slate flagging, ceilings . . . tile, Celotex Corp.

ROOF: Asphalt shingles, Bird & Son, Inc.

SHEET METAL WORK: Flashing—copper and zinc. Gutters — fir. Ducts — galvanized iron.

INSULATION: Walls and roofs — mineral wool and metal foil. Sound insulation—Celotex Corp. and California Stucco Products Co.

WINDOWS: Sash — double hung and casement, wood. Glass — quality A, double strength. Screens—Rollscreen Co.

WALL COVERINGS: Dining rooms — wood paneling. Waiting rooms—wallpaper. Kitchen and toilet walls—tile. Part of kitchen—Gold Bond Wallboard, National Gypsum Co.

PAINTS: By Sherwin-Williams Co. and E. I. duPont de Nemours & Co., Inc.

ELECTRICAL INSTALLATION: Wiring system — BX and conduit. Panels — Square D. Co.

PLUMBING: Toilet fixtures—American Radiator-Standard Sanitary Corp. Kitchen equipment: Counters — stainless steel, Allegheny-Ludlum Steel Co. Ranges—Standard Gas Equipment Co. Gas hotplate—Glenwood Range Co. Gas oven—G. S. Blodgett Co. Dishwasher — Champion Dishwashing Machine Co. Refrigerator units—Brunner Mfg. Co. Ice boxes—Frigidaire Sales Corp., McCray Refrigerator Sales Corp., Seeger Refrigerator Co. Fans—Ilg Electric Ventilating Co., Lav Blower Co. and Clarage Fan Co.

TODAY THEATER

CHICAGO, ILLINOIS

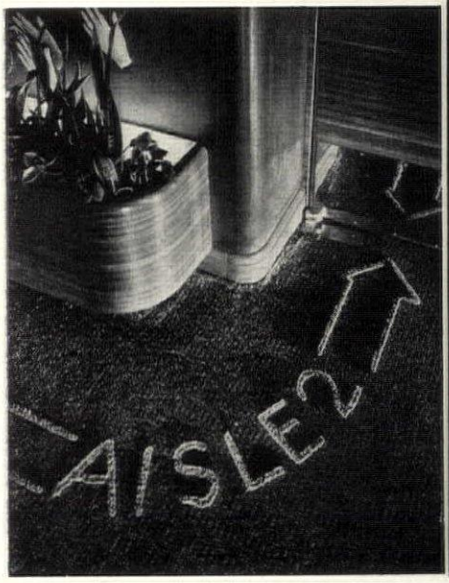
DAVID CHAPMAN, DESIGNER

LOEWENBERG AND LOEWENBERG, ARCHITECTS

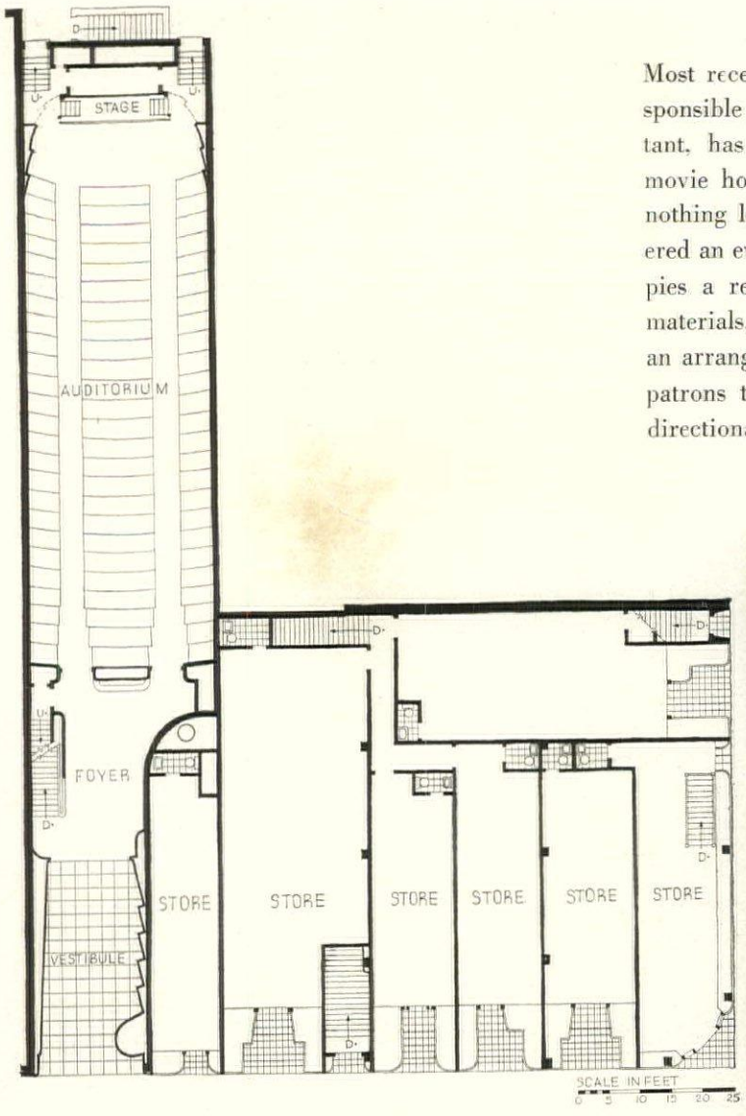
VESTIBULE

Photos, Hedrich-Blessing

FOYER

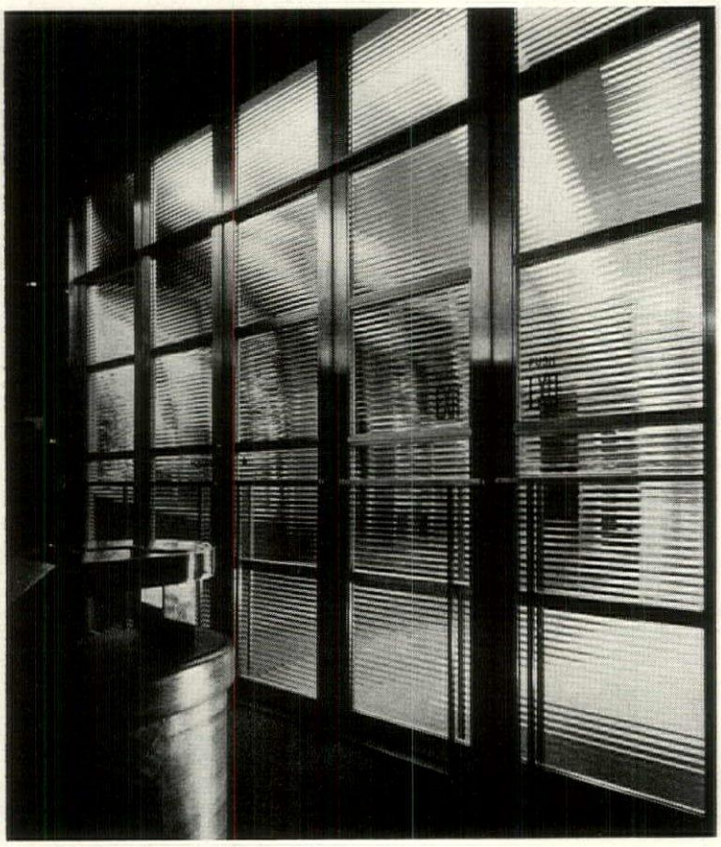


TODAY THEATER, CHICAGO, ILLINOIS



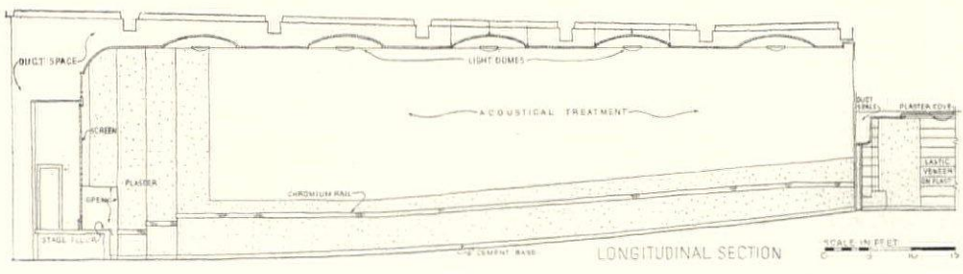
Most recent of all theater types, the newsreel theater has been responsible for a number of technical innovations, and more important, has helped materially to popularize the small, comfortable movie house as a welcome alternative to the cinema palace where nothing less than two features, bingo and a stage show is considered an evening's entertainment. This example characteristically occupies a restricted space and makes the most of it by good use of materials, lighting and displays. The auditorium is long and narrow, an arrangement made necessary by the comparative nearness of the patrons to the screen. Most interesting of the decorations are the directional strips woven into the lobby carpet.

LOBBY



LADIES' LOUNGE

KRAHL CONSTRUCTION CO., GENERAL CONTRACTOR

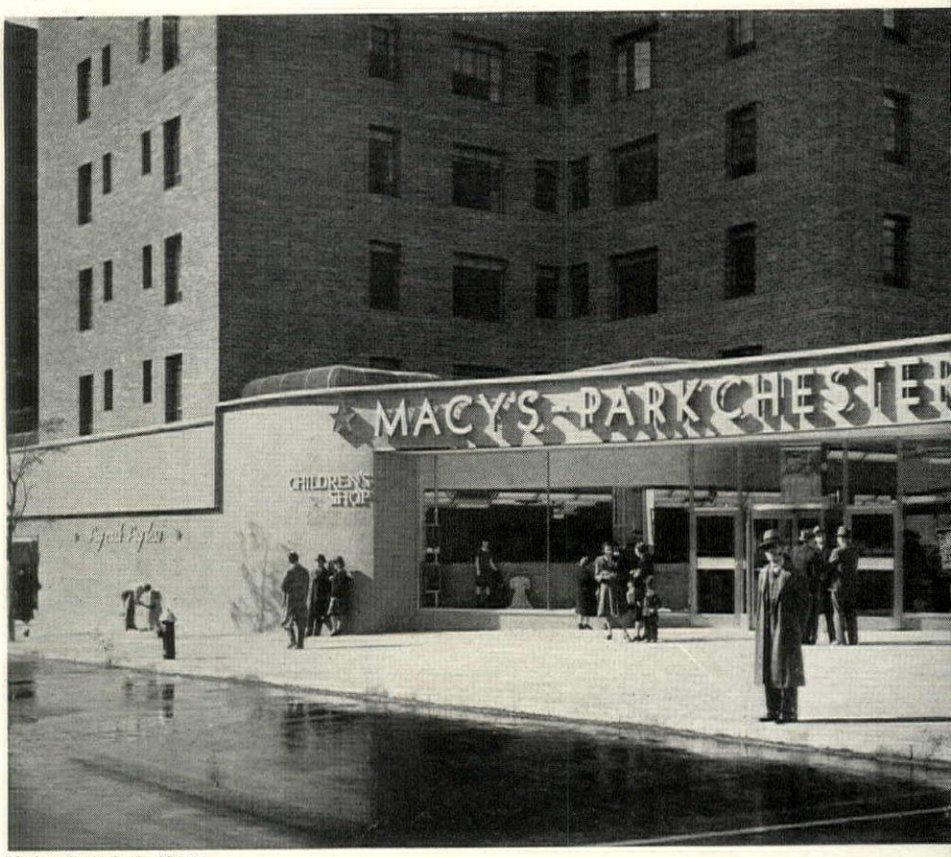


CONSTRUCTION OUTLINE

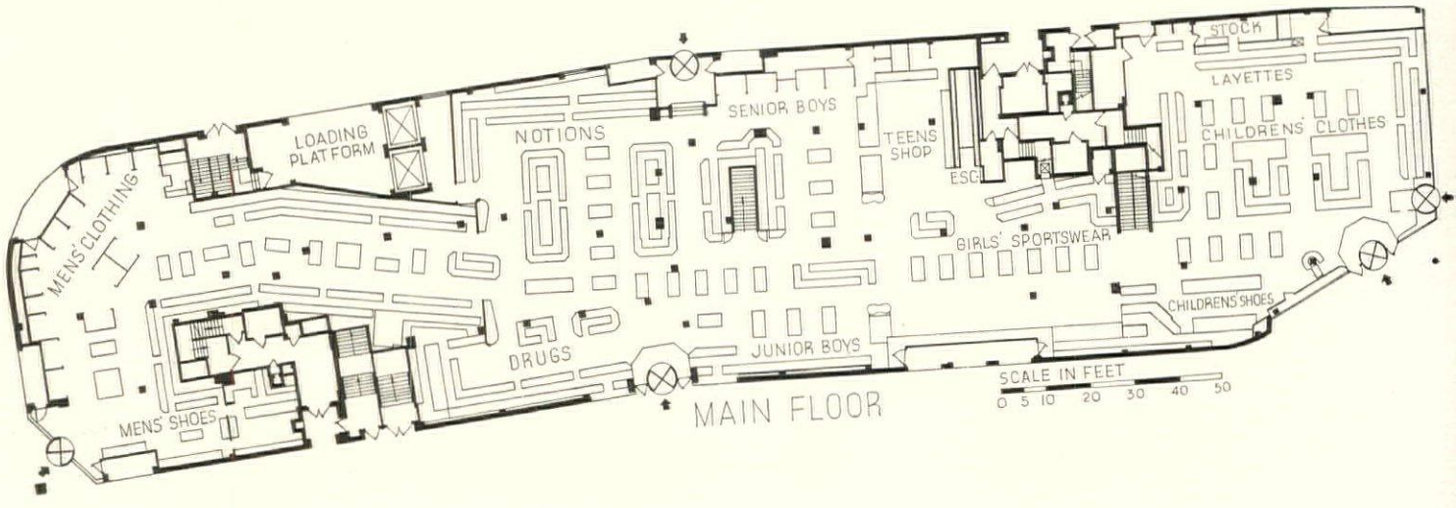
STRUCTURE: Exterior walls—red granite, Rockville Granite Corp.; inside—clay tile. Columns and floors—reenforced concrete.
ROOF: Barrett Co. 15-yr. bonded over Celotex Corp. insulation.
INSULATION: Walls, roof and sound insulation—1 in. spray acoustic, Insulation Engineering Service Co.
STAIRS: Steel.
WALL COVERINGS: Flexwood, U. S. Plywood Co.
WOOD AND METAL TRIM: Trim—wood and bronze. Interior doors—hollow metal. Exterior doors — bronze, Illinois Bronze Co.
ELECTRICAL INSTALLATION: Wiring system — 4-wire. Fixtures—Belson Mfg. Co. Panel board—Major Equipment Co.
PLUMBING: Fixtures—American Radiator-Standard Sanitary Corp. Pumps—Chicago Pump Co.
HEATING: Oil burner—Petroleum Heat & Power Co. Boiler—Fitzgibbons Boiler Co., Inc. Thermostats—Johnson Service Co. Pump (vacuum)—C. A. Dunham Co.

MACY'S PARKCHESTER, NEW YORK CITY

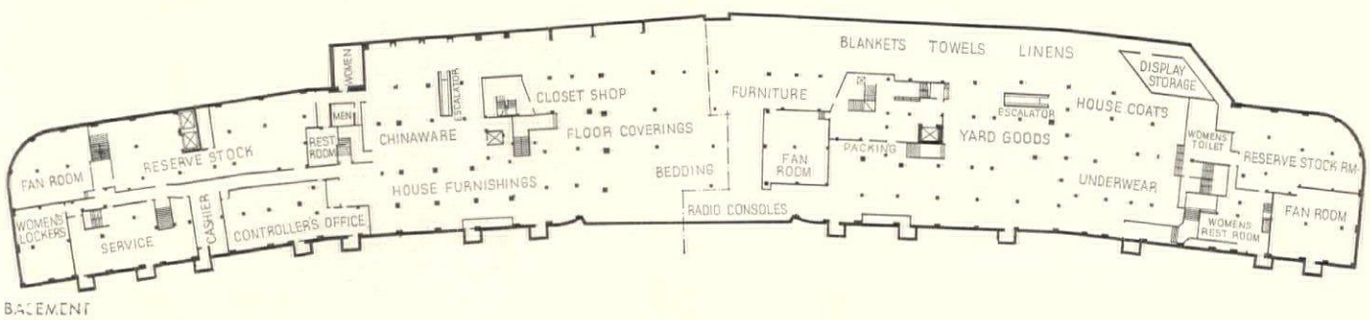
With a population in excess of 40,000, Metropolitan Life's enormous New York City housing development (see Dec. 1939, pp. 412-426) is the size of a small city and has shopping requirements far beyond the scope of those normally met by the neighborhood grocer and druggist. Among the big stores which have established branches in Parkchester is Macy's, whose new shop spreads through the lower stories of two buildings and spans the gaps between them. In exterior treatment the store is conservative, even inconspicuous; the same is true of all other commercial establishments in the development, as strict control over signs, materials and other display features is maintained by the owner. The extremely long and narrow space occupied by the store is not badly suited to the requirements of a modern department store: almost any of its various sections can be reached fairly directly from an outside entrance. The main selling space is concentrated on the ground floor, as shown by the plan extending across these two pages. House furnishings, linens, furniture and stock rooms are located in the basement.



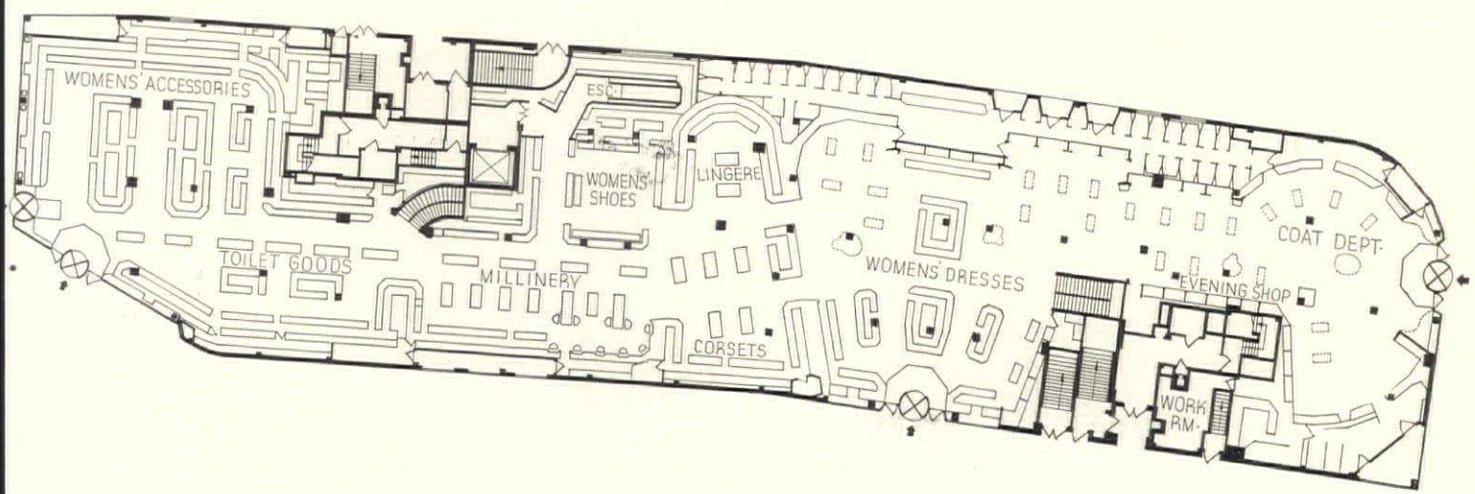
Photos, Francis G. Mayer



METROPOLITAN LIFE INSURANCE CO. BOARD OF DESIGN, R. H. SHREVE, CHAIRMAN
STARRETT BROS. & EKEN, GENERAL CONTRACTOR



BASEMENT



MACY'S PARKCHESTER

RAYMOND LOEWY
DESIGNER

A major problem for the designer was created by the numerous heavy columns which extend through the shop space. As indicated by the illustrations, they have been treated in a variety of ways, often as display backgrounds, sometimes hidden in dressing rooms and show cases, occasionally covered with mirrors. The display units are inconspicuous, emphasis being placed entirely on the merchandise. The store is brilliantly lighted throughout by closely spaced ceiling fixtures.

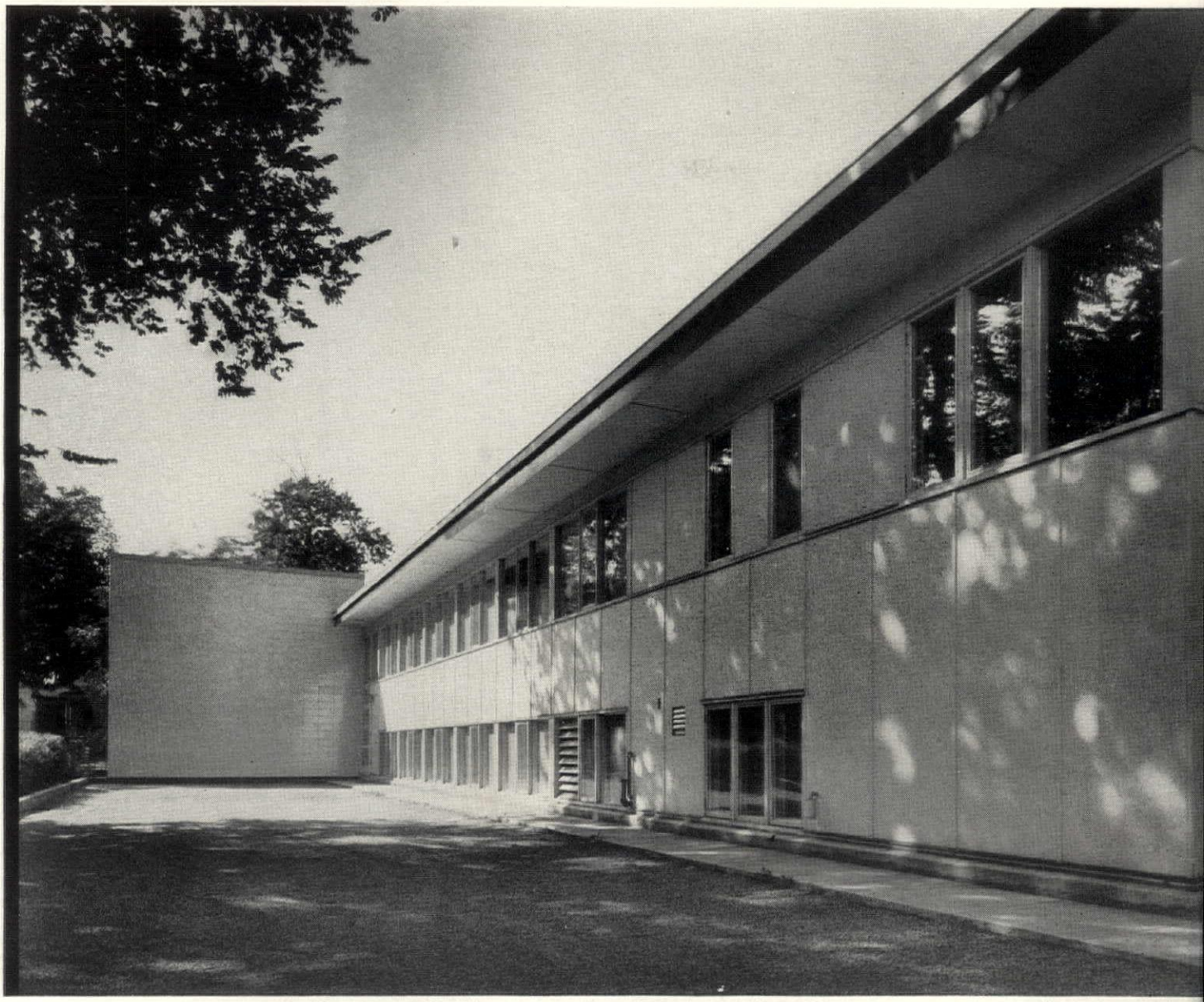
CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls — terra cotta facing backed with brick; inside — plaster. Columns — steel, terra cotta fireproofing. Structural steel — Bethlehem Steel Co., American Bridge Co. Floors—terrazzo over cinder concrete fill.
SHEET METAL WORK: Ducts—galvanized steel.
INSULATION: Basement walls — blanket, Johns-Manville. Sound insulation—cork.
WINDOWS: Glass—plate, Pittsburgh Plate Glass Co.
STAIRS AND ELEVATORS: Treads — terrazzo, Vincent Fostato & Son. Escalators—Otis Elevator Co. Service elevator — Otis Elevator Co.
FLOOR COVERINGS: Asphalt tile — Johns-Manville. Carpet—Charles P. Cochrane Co.
WALL COVERINGS: By Bassett & Vollum, Katzenbach & Warren and Gilford Leather Co.
FURNISHINGS: Showcases and cabinet work—McCloskey Grant Corp., S. S. Silver, Jaff Bros., Jacob Froehlich, Chase Bros., Cabinet Makers, Inc., American Showcase Co. Furniture—Palmer & Embury-Orssingo, Inc., Mallin Furniture Co., J. G. Furniture Co., R. H. Macy's main store.
DOORS: International Revolving Door Div., International Steel Co., C. E. Halback & Son, J. G. Wilson Corp.
HARDWARE: Garden City Plating & Mfg. Co.
ELECTRICAL INSTALLATION: Fixtures—E. F. Caldwell and Gotham Lighting Corp.
PLUMBING: Toilet fixtures—Kohler Co.
HEATING AND AIR CONDITIONING: Steam system, from central plant. Air conditioning—complete system, Carrier Corp. Thermostats—Minneapolis-Honeywell Regulator Co. Precipitron—Westinghouse Electric & Mfg. Co.

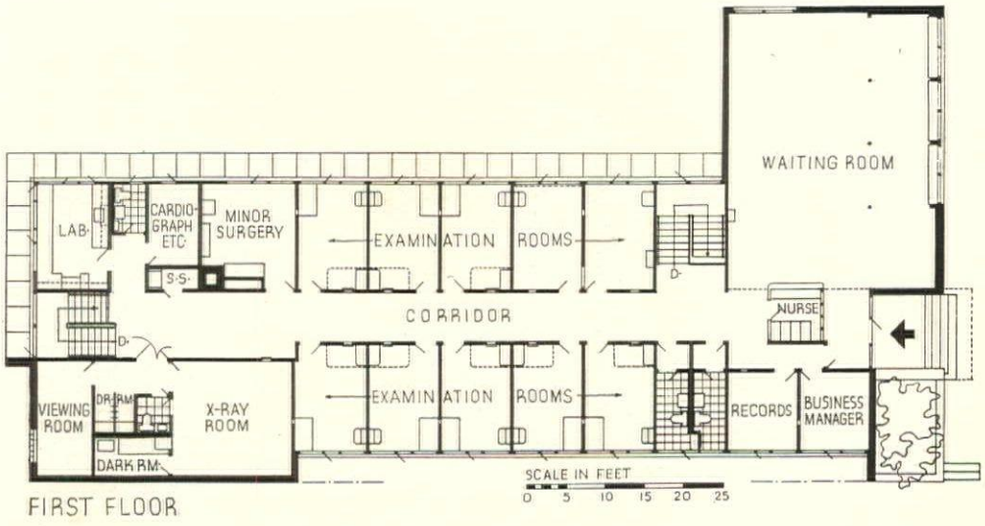
INTERSTATE CLINIC, RED WING, MINNESOTA

Photos, Hedrich-Blessing

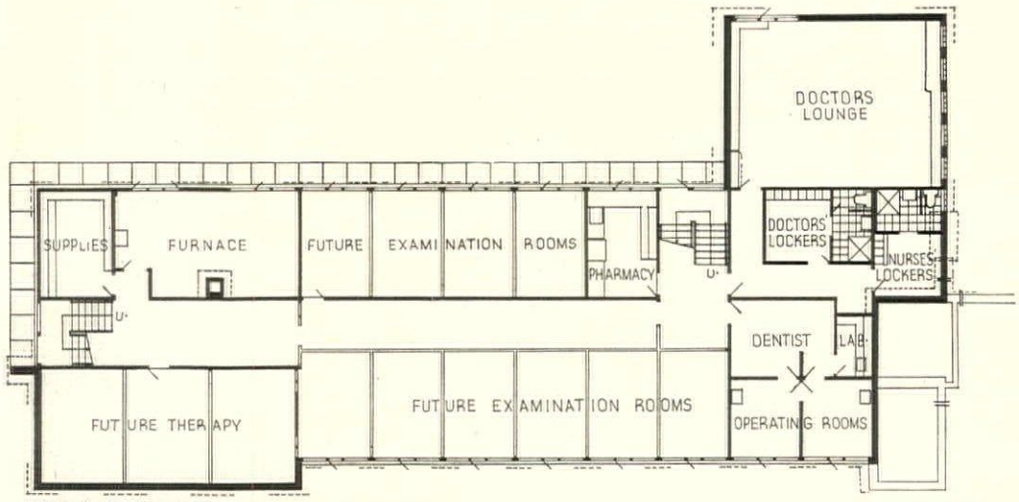
CLOSE AND SCHEU, ARCHITECTS
H. H. SWANSON, ASSOCIATE
J. V. HOLMQUIST, CONTRACTOR



INTERSTATE CLINIC, RED WING, MINNESOTA



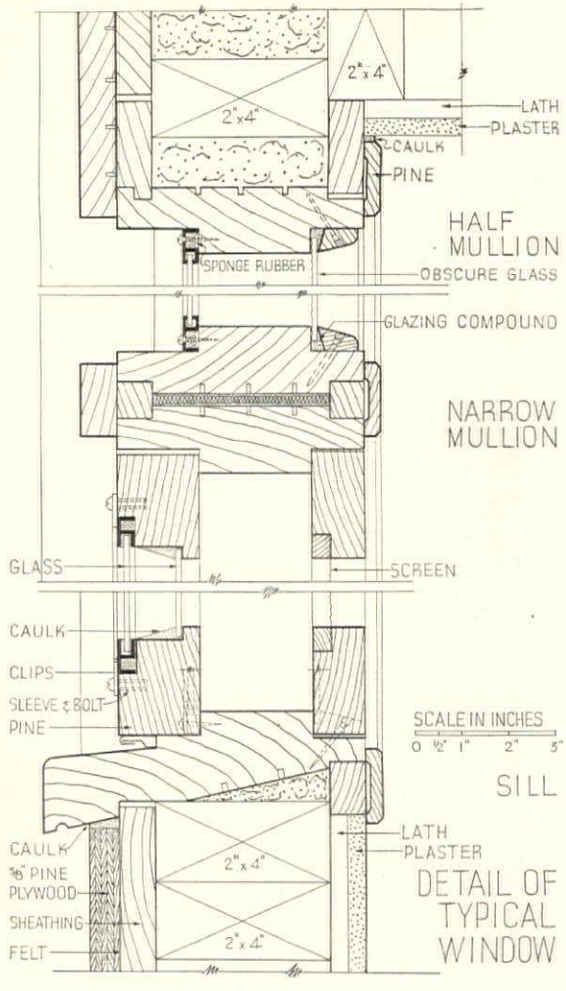
FIRST FLOOR



GROUND FLOOR

The clinic is one answer to increasing specialization in the medical profession. In the smaller community especially, where there can be no possibility of drawing on the elaborate facilities of a large medical center, the clinic offers a workable approach to complete and competent medical services. In its organization such a unit involves the cooperative work of a number of specialists. Here, for instance, provision was made for the offices of two surgeons, an obstetrician, a doctor of internal medicine, an eye, ear, nose and throat specialist, and eventually a pediatrician, X-ray specialist and dentist. Other spaces needed were a waiting room, laboratory, pharmacy, dressing rooms and a lounge.

The main control point in the building is the nurse's reception desk (opposite page). From here not only the patients can be seen, but the coming and going of the doctors as well; immediate access to the business office is also provided. Secondary control is exercised by the laboratory technician at the end of the corridor where patients wait in an auxiliary space for laboratory tests and X-ray treatments. Each doctor is provided with two examining rooms so that work is not interrupted by patients' dressing and undressing. As all examining rooms are identical, they may be used interchangeably by any of the staff.



CLOSE AND SCHEU, ARCHITECTS, H. H. SWANSON, ASSOCIATE

WAITING ROOM

RECEPTION DESK

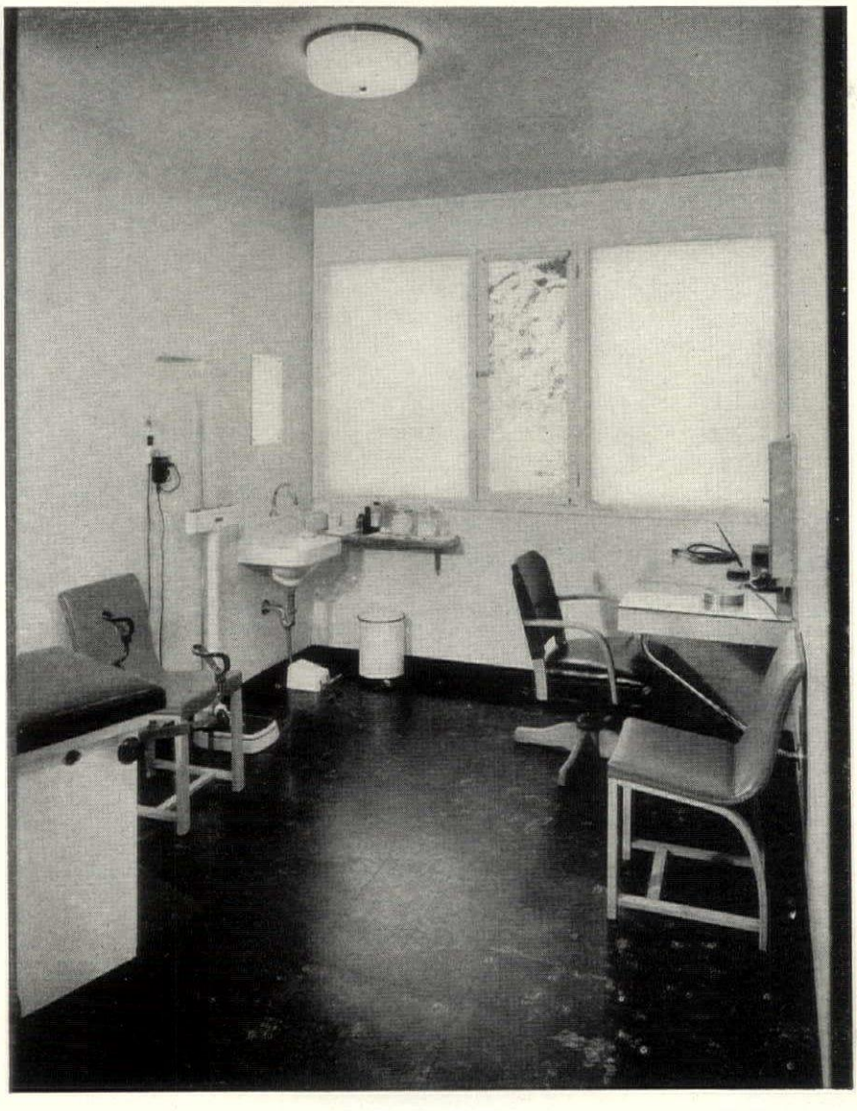
INTERSTATE CLINIC

The building is of frame construction, with joists parallel to the long outside wall; support is provided by the partitions between examining rooms. The unusual framing facilitates piping and wiring. Interiors are finished partly in white birch, partly in plaster painted light gray, blue or yellow. The white panel in the doctors' lounge on the opposite page is used as a chalkboard and projection screen.

MINOR SURGERY

DOCTORS' LOUNGE

EXAMINATION ROOM



CONSTRUCTION OUTLINE

FOUNDATION: Waterproofing—Barrett Co.

STRUCTURE: Exterior walls—Natco glazed tile, National Fireproofing Co. or Calif. pine plywood, felt, wood sheathing; inside—insulation, Celotex Corp. Vaporseal and U. S. Gypsum Co. Rocklath and plaster. Structural steel—Carnegie Steel Co. Floor construction — plywood sub-floor, tile finish, Armstrong Cork Co.

ROOF: 5-ply pitch and gravel, American Tar & Chemical Co.

SHEET METAL WORK: Flashing — 16 oz. copper. Ducts—26 gauge galvanized iron.

INSULATION: Walls and roofs — mineral wool. Sound insulation—Celotex Corp. lath and Acousti-Celotex tile.

WINDOWS: Sash—wood casement. Glass—double strength, quality A, Satinol Louvrex and chalkboard, Pittsburgh Plate Glass Co. Glass blocks—Pittsburgh-Corning Corp.

WALL COVERINGS: Plaster, birch or pine plywood.

WOODWORK: Trim—birch. Doors—American Plywood Corp.

HARDWARE: By Schlage Lock Co.

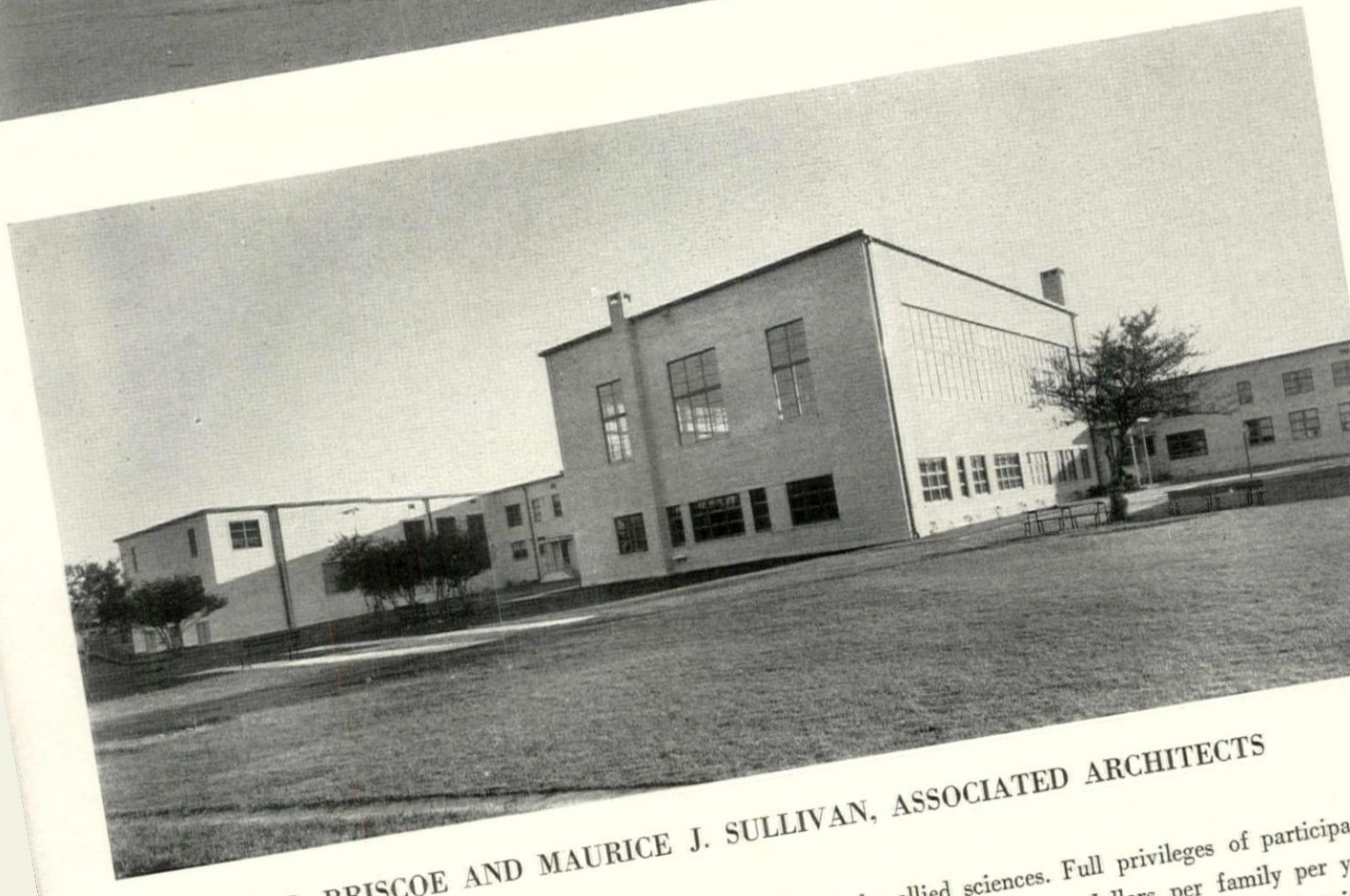
ELECTRICAL INSTALLATION: Wiring system—steel conduit. Fixtures—Branham, Marek & Duepner. X-ray equipment — Kelly-Koett Co.

PLUMBING: Fixtures—American Radiator-Standard Sanitary Corp. Hot and cold water pipes—copper.

HEATING: Indirect, all air, using built-up air conditioner and boiler, filtering, humidifying and cooling. Grilles—Hart & Cooley. Thermostats—Minneapolis-Honeywell Regulator Co.

HEALTH AND RECREATIONAL CENTER, HOUSTON, TEXAS

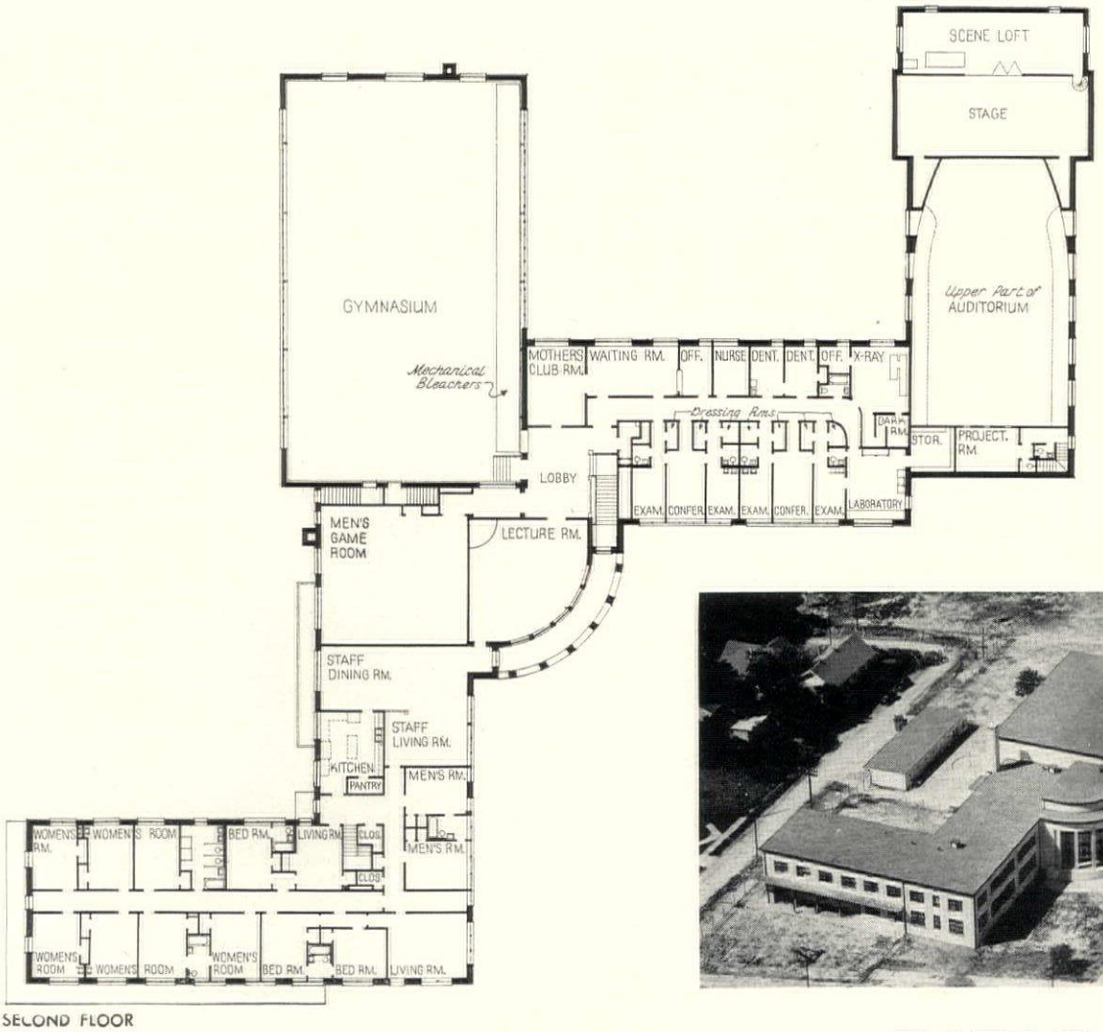
Photos, Elwood M. Payne



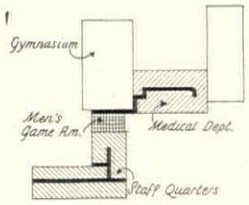
BIRDSALL P. BRISCOE AND MAURICE J. SULLIVAN, ASSOCIATED ARCHITECTS

The combination of health and recreational activities in one center is not common in this country, although there are many good reasons to justify such a relationship. In this building, constructed with funds from the Daniel and Edith Ripley Foundation, facilities are provided for physical examinations, medical consultation, indoor and outdoor recreation and fundamental instruction in various branches of the allied sciences. Full privileges of participa given for a fee of two dollars per family per y medical services do not include treatment or hospi The building is set on a flat tract of land, about in extent, situated midway between the busine dustrial areas of Houston.

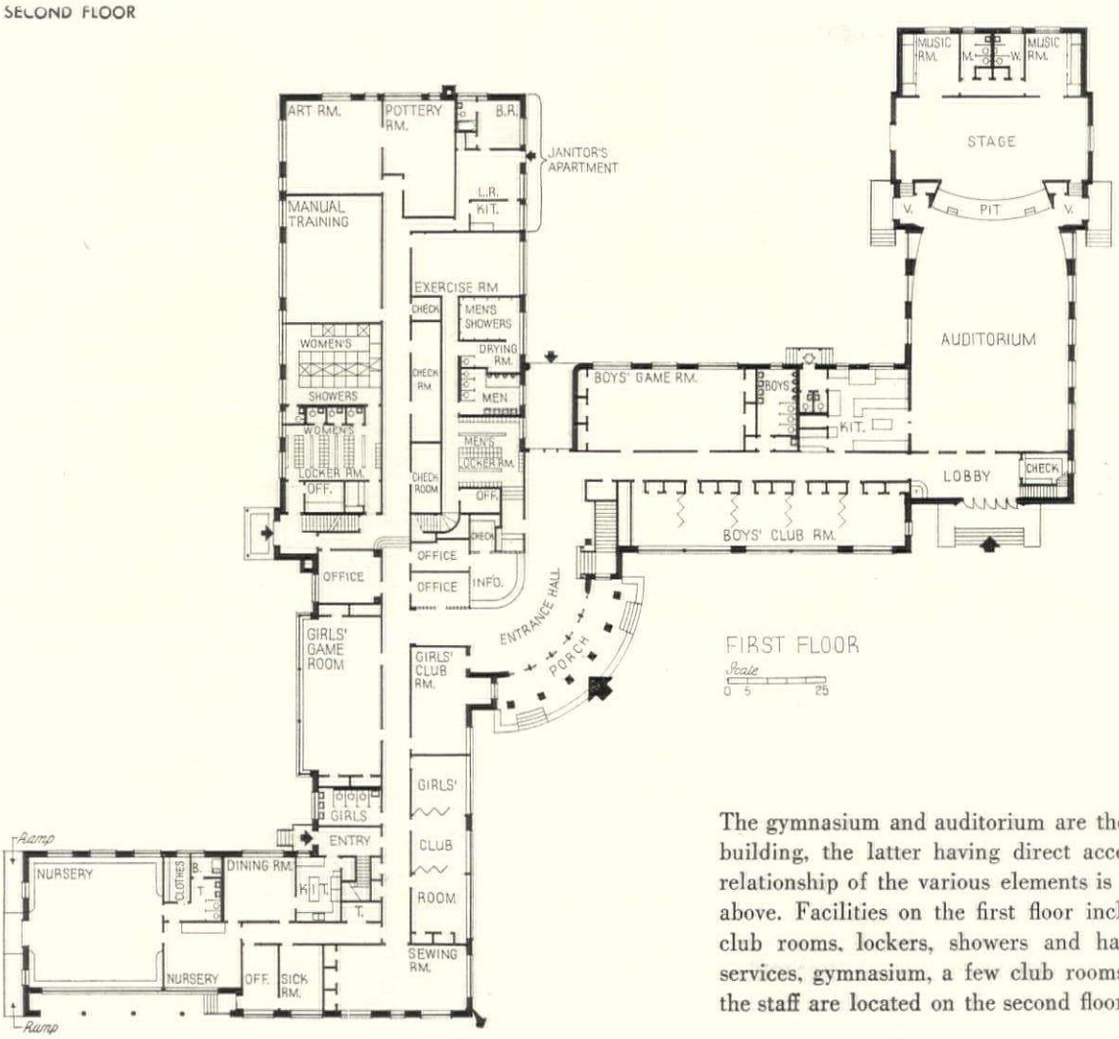
BIRDSALL P. BRISCOE AND MAURICE J. SULLIVAN, ASSOCIATED ARCHITECTS



SECOND FLOOR



SPACE ALLOCATION



FIRST FLOOR

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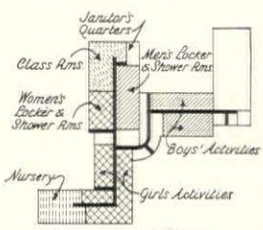
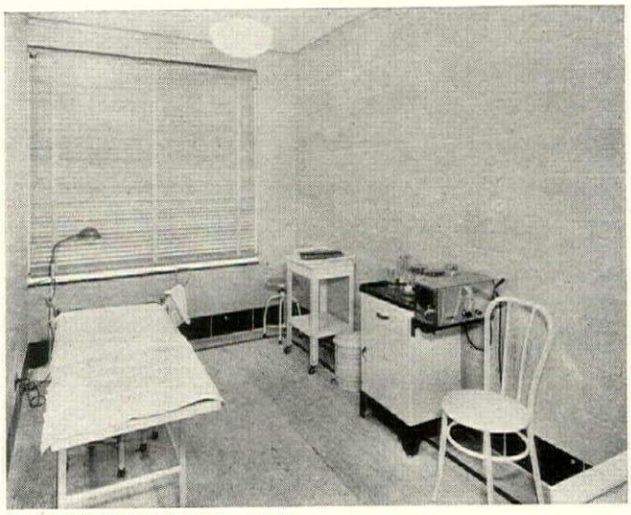


SPACE ALLOCATION

The gymnasium and auditorium are the two largest units of the building, the latter having direct access from the street. The relationship of the various elements is indicated by the air view above. Facilities on the first floor include the boys' and girls' club rooms, lockers, showers and handicraft rooms. Medical services, gymnasium, a few club rooms and living quarters for the staff are located on the second floor.

HEALTH AND RECREATIONAL CENTER BRISCOE AND SULLIVAN, ASSOCIATED ARCHITECTS

LOBBY



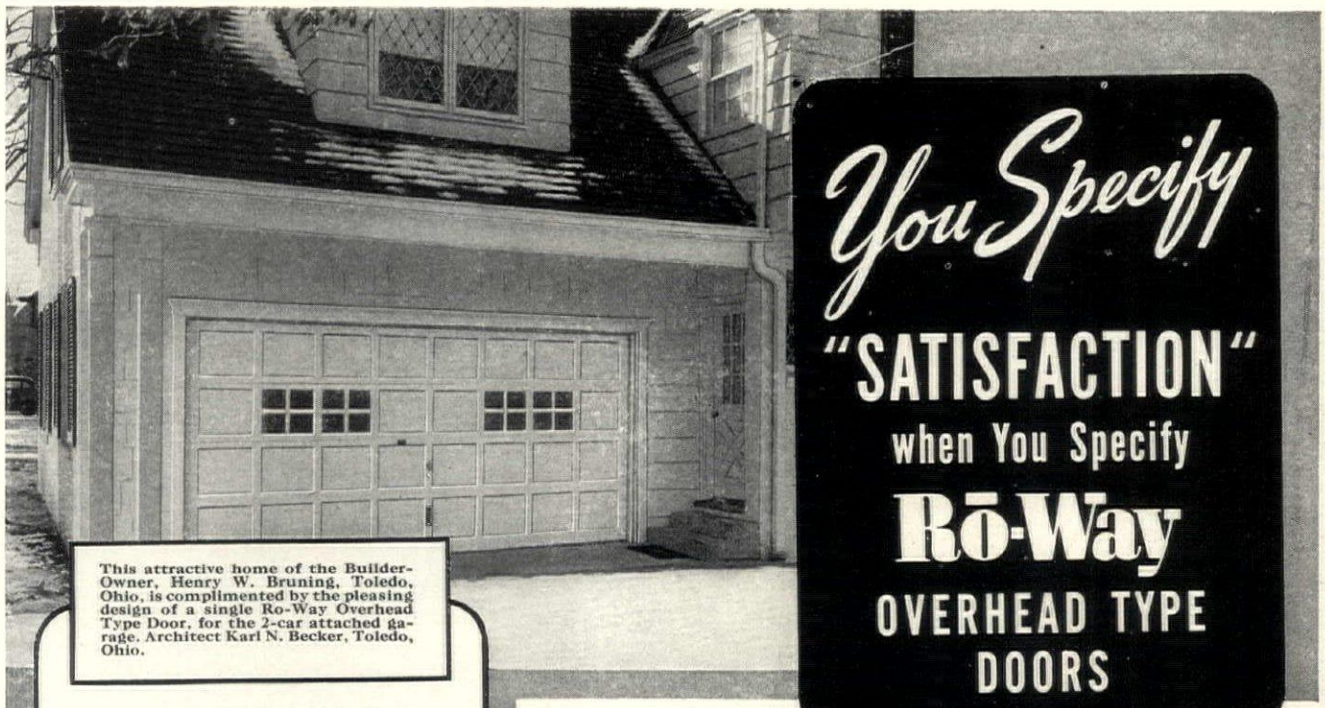
EXAMINATION ROOM

FRETZ CONSTRUCTION CO., CONTRACTORS

AUDITORIUM

CONSTRUCTION OUTLINE

FOUNDATION: Waterproofing — Ironite, Western Waterproofing Co.
STRUCTURE: Exterior walls — brick, clay tile back; inside—clay and salt glazed tile. Structural steel—Mosher Steel Co. Floors—concrete, asphalt tile finish, Armstrong Cork Co. Ceilings—acoustic, Armstrong Cork Co.
ROOFS: U. S. Gypsum Co.'s poured gypsum and Certain-teed Products Corp. tar and gravel.
SHEET METAL WORK: Copper.
INSULATION: Rockwool, Johns-Manville.
WINDOWS: Sash—Donovan type and commercial projected, Truscon Steel Co. Glass—Pittsburgh Plate Glass Co. Glass block—Pittsburgh-Corning Corp.
HARDWARE: By Sargent & Co. and Vonnegut Hardware Co.
PAINTS: By O'Brien Varnish Co., Pittsburgh Plate Glass Co. and Pratt & Lambert.
WOOD AND METAL TRIM: Doors—aluminum, John Harsch Bronze & Foundry Co.; wood, Payne Lumber Co. Trim—Niedringhaus Co.
PLUMBING: Fixtures — Kohler Co. Toilet stalls—Ferro-Metal Co. Drinking fountain—Westinghouse Electric & Mfg. Co. Hot and cold water pipes—copper, Chase Brass & Copper Co.
HEATING: Forced warm air system. Hot air units—Carrier Corp. Thermostats—Minneapolis-Honeywell Regulator Co. Blowers and fans—B. F. Sturtevant Co. Pump and traps—C. A. Dunham Co.



You Specify "SATISFACTION" when You Specify Rō-Way OVERHEAD TYPE DOORS

This attractive home of the Builder-Owner, Henry W. Bruning, Toledo, Ohio, is complimented by the pleasing design of a single Ro-Way Overhead Type Door, for the 2-car attached garage. Architect Karl N. Becker, Toledo, Ohio.

Syosset Garage, Syosset, Long Island, N. Y., equipped with 4 Model TH Ro-Way Overhead Type Doors, and 3 Sliding Posts. Krebs & Schulz, Contractors.

Eight Ro-Way Overhead Type Doors (Model G-1), serve this American Car & Foundry Plant, St. Louis, Mo. L. O. Stocker Co., Contractors.

Dependability, speed and ease of operation led to the selection of this Ro-Way Overhead Type Garage Door for Bellevue Fire Station, Memphis, Tennessee. Redlinger & Hanson, Contractors.

These quiet, trouble-free doors are really designed and built to enable a car owner to forget completely the mechanical parts, just as he is able to do in operating his fine car.

Architects are finding that it pays in the added satisfaction of their clients to add the word "Ro-Way" to the words "Doors of Overhead Type", when specifications are written for any Residential, Industrial, or Commercial job.

Contractors, too, find that by giving Ro-Way's "five extra values without extra cost", they build extra good will. To win the nationwide acceptance enjoyed today by Ro-Way Overhead Type Doors, they had to set the pace in modern engineering, design and construction. They had to make simpler the job of installation. They had to provide maximum protection with a minimum of attention.

Write for the Ro-Way folders. See how new refinements (exclusively Ro-Way) make even the rarely needed adjustment of spring tension a matter of quick convenience.

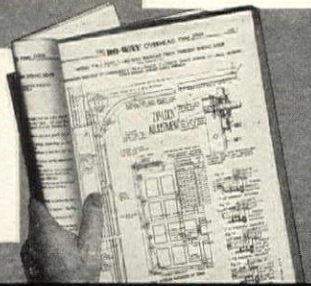
ROWE MANUFACTURING CO.

923 Holton Street, Galesburg, Ill., U. S. A.

Authorized Ro-Way Overhead Type Door Representatives are located in all principal cities. Any Architect wishing further information about these improved Overhead Type Doors for Residence, Commercial, or Industrial installations, is invited to write us. Your request will also bring to your files a copy of our 72-page "Time-saving Specification Book".

FREE to Architects

72-page "Time-saving Specification Book" contains detailed drawings of every model for residential, commercial and industrial doors. Gives Architect's specifications on back of each detailed drawing. Shows 4 pages of special architectural effects.



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923 Holton St., Galesburg, Ill.

Gentlemen: Please send me Free copy of your 72-page "Time-saving Specification Book" for Architects, as advertised in Architectural Forum.

Name.....

Address.....

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

There's a Ro-Way for every Door way!

Defense Savings Pay-Roll Allotment Plan

How company heads can help their country, their employees, and themselves

voluntary pay-roll allotment plan | helps workers provide for the future | helps build future buying power | helps defend America today

This is no charity plea. It is a sound business proposition that vitally concerns the present and future welfare of your company, your employees, and yourself.

During the post-war period of readjustment, you may be faced with the unpleasant necessity of turning employees out into a confused and cheerless world. But you, as an employer, can do something *now* to help shape the destinies of your people. Scores of business heads have adopted the Voluntary Pay-roll Allotment Plan as a simple and easy way for every worker in the land to start a *systematic* and *continuous* Defense Bond savings program.

Many benefits . . . present and future. It is more than a sensible step toward reducing the ranks of the post-war needy. It will help spread financial participation in National Defense among all of America's wage earners.

The widespread use of this plan will materially retard inflation. It will "store" part of our pyramiding national income that would otherwise be spent as fast as it's earned, increasing the demand for our diminishing supply of consumer goods.

And don't overlook the immediate benefit . . . money for defense materials, quickly, continuously, *willingly.*

Let's do it the American way! America's talent for working out emergency problems, democratically, is being tested today. As always, we will work it out, without pressure or coercion . . . in that old American way; each businessman strengthening his *own* house; not waiting for his neighbor to do it. That custom has, throughout history, enabled America to get things done *of its own free will.*

In emergencies, America doesn't do things "hit-or-miss." We would get there *eventually* if we just left it to everybody's whim to buy Defense Bonds when they thought of it. But we're a nation of businessmen who understand that the way to get a thing done is to *systematize* the operation. That is why so many employers are getting back of this Voluntary Savings Plan.

Like most efficient systems, it is amazingly simple. All you have to do is offer your employees the convenience of having a fixed sum allotted, from each pay envelope, to the purchase of Defense Bonds. The employer holds these funds in a separate bank account, and delivers a Bond to the employee each time his allotments accumulate to a sufficient amount.

Each employee who chooses to start this savings plan decides for himself the denomination of the Bonds to be purchased and the amount to be allotted from his wages each pay day.

How big does a company have to be? From three employees on up. Size has nothing to do with it. It works equally well in stores, schools, publishing houses, factories, or banks. This whole idea of pay-roll allotment has been evolved by businessmen in cooperation with the Treasury Department. Each organization adopts its own simple, efficient application of the idea in accordance with the needs of its own set-up

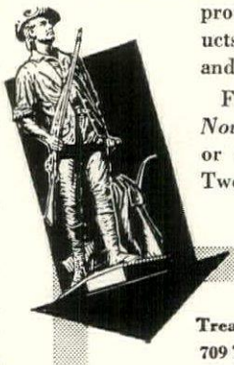
No chore at all. The system is so simple that A. T. & T. uses exactly the same easy card system that is being used by hundreds of companies having fewer than 25 employees! It is simple enough to be handled by a check-mark on a card each pay day.

Plenty of help available. Although this is *your* plan when you put it into effect, the Treasury Department is ready and willing to give you all kinds of help. Local civilian committees in 48 States are set up to have experienced men work with you just as much as you want them to, and no more.

Truly, about all *you* have to do is to indicate your willingness to get your organization started. We will supply most of the necessary material, and no end of help.

The first step is to take a closer look. Sending in the coupon in no way obligates you to install the Plan. It will simply give you a chance to scrutinize the available material and see what other companies are already doing. It will bring you samples of literature explaining the benefits to employees and describing the various denominations of Defense Savings Bonds that can be purchased through the Plan.

Sending the coupon does nothing more than signify that you are anxious to do *something* to help keep your people off relief when defense production sloughs off; *something* to enable *all* wage earners to participate in financing Defense; *something* to provide tomorrow's buying power for your products; *something* to get money *right now* for guns and tanks and planes and ships.



France left it to "hit-or-miss" . . . and *missed. Now* is the time for *you* to act! Mail the coupon or write Treasury Department, Section A, 709 Twelfth St. NW., Washington, D. C.

FREE - NO OBLIGATION

Treasury Department, Section A,
709 Twelfth St. NW., Washington, D. C.

Please send me the free kit of material being used by companies that have installed the Voluntary Defense Savings Pay-Roll Allotment Plan.

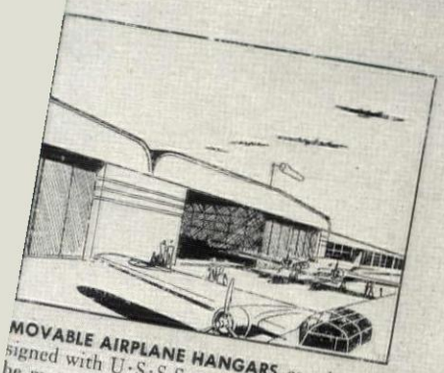
Name _____

Position _____

Company _____

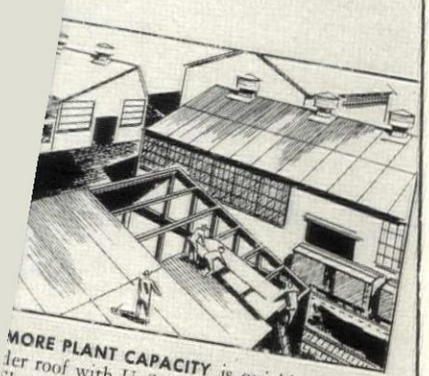
Address _____

GPO 428498

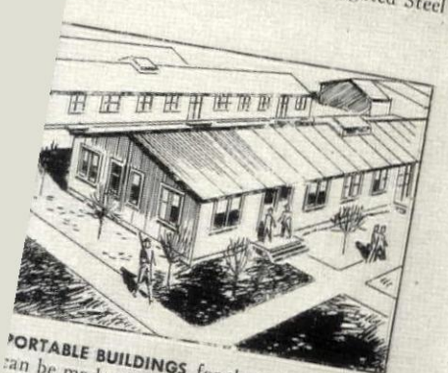


MOVABLE AIRPLANE HANGARS can be designed with U·S·S Steel Sheets so they can be moved quickly without damage.

AIR-RAID SHELTERS are being made from U·S·S Sectional Plate Arches. These are strong and can be quickly erected with ordinary labor.



MORE PLANT CAPACITY is quickly put under roof with U·S·S plain corrugated Steel Sheets.



PORTABLE BUILDINGS for the fighting forces can be made of U·S·S Steel Sheets and insulated to keep out heat and cold.

FOR SPEEDY ERECTION

...design with U·S·S Steel Sheets

STEEL BUILDINGS can be set hours rather than days when sign is right. Ask for further on this type of construction.

PLANT expansions, army camps, air-raid shelters, defense housing, are just a few of the jobs that have to be built literally overnight. But, there's no need to sacrifice durability for speed if you build with U·S·S Steel Sheets.

Look carefully at the illustration. This is a permanent building designed for fast erection by being made in sections. It will stand the ravages of lightning, fire, weather and time. Buildings like this are low in first cost, economical to build, free from expensive maintenance. They can be moved from place to place and set up without serious loss.

U·S·S Galvanized Sheets are idea for these applications. In most cases base metal of plain steel or pure iron is satisfactory, but where extra corrosion resistance is required, U·S·S Copper Steel is recommended.

Where immediate painting is important specify U·S·S Paintbond. This new sheet is Bonderized to obtain a superior surface for painting. Paint holds tighter —does not flake off—protects the surface longer.

In the South and West, the special sheet manufactured for quick painting is known as U·S·S Dul-Kote.

U·S·S ROOFING AND SIDING SHEETS

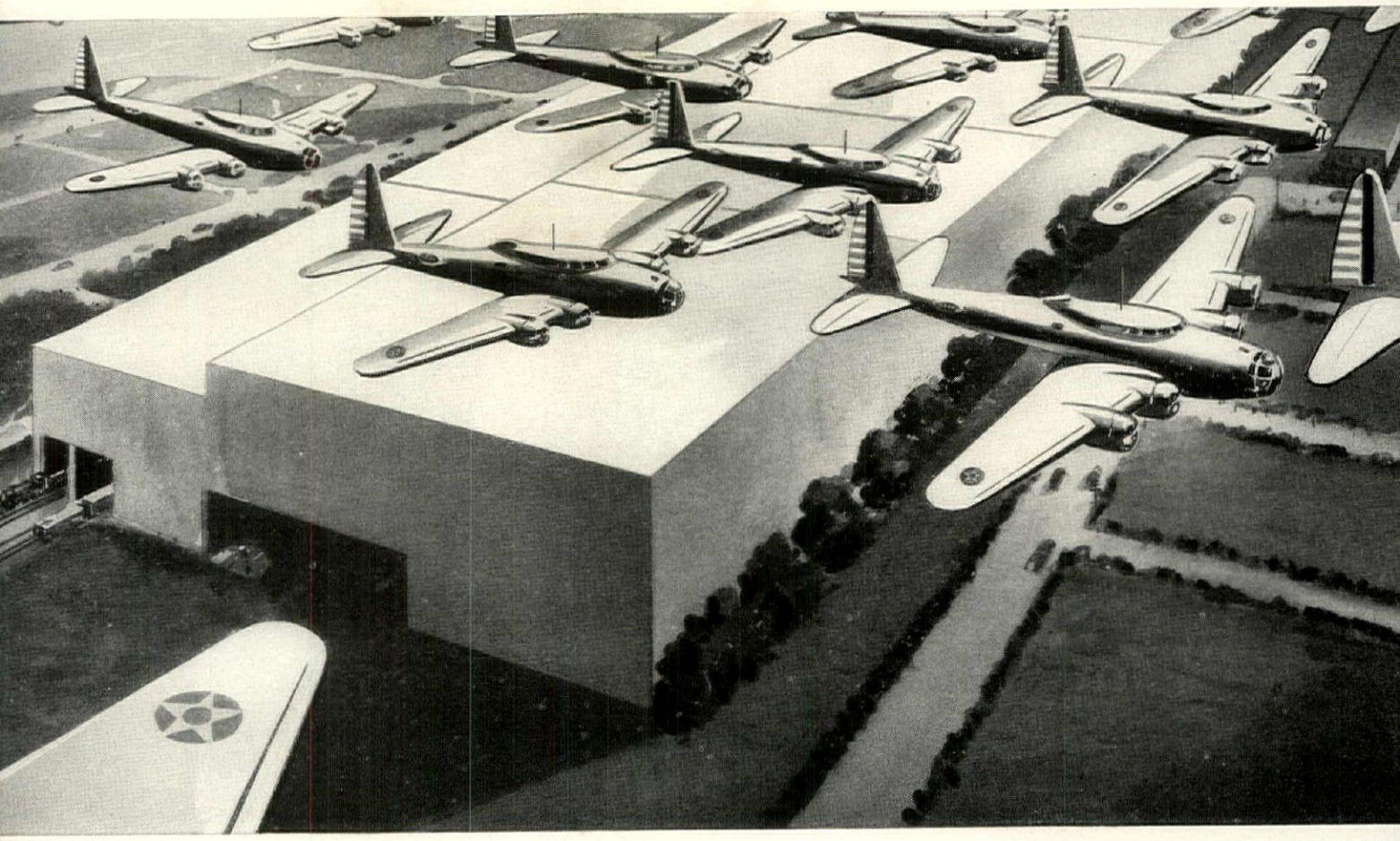
USS

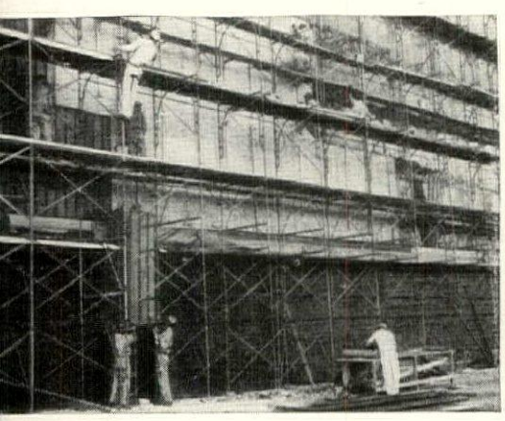
CARNEGIE-ILLINOIS STEEL CORPORATION, *Pittsburgh and Chicago*
COLUMBIA STEEL COMPANY, *San Francisco*
TENNESSEE COAL, IRON & RAILROAD COMPANY, *Birmingham*
Scully Steel Products Company, Chicago, *Warehouse Distributors*
United States Steel Export Company, New York

UNITED ST

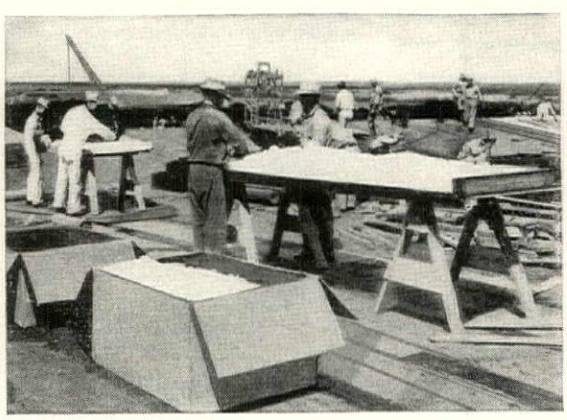
WORLD'S LARGEST INSULATION ORDER

FOR HUGE BOMBER PLANTS

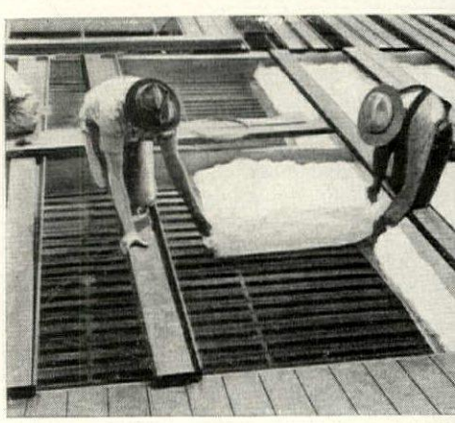




Walls, as well as roof, are thoroughly insulated



Special bats of Red Top Wool were prepared on the roof

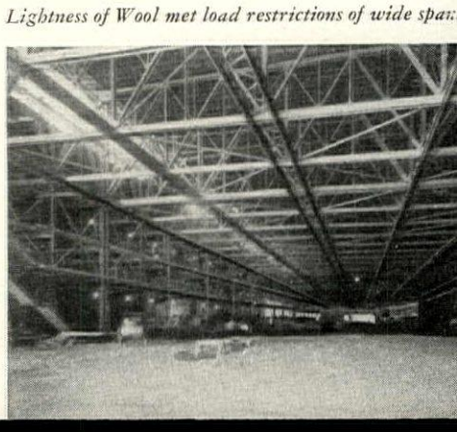


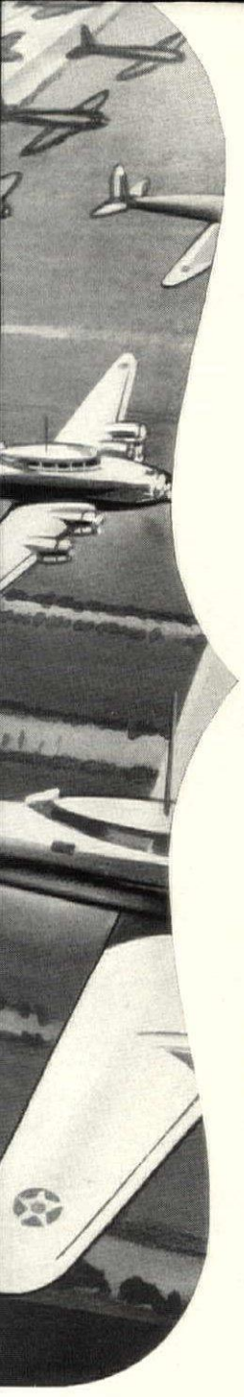
Red Top Wool was placed under the steel roof deck

The steel roof deck was erected immediately after

The record speed of construction was noteworthy

Lightness of Wool met load restrictions of wide span





One of two "twin" bomber plants for Consolidated Aircraft and Douglas Aircraft. Engineers—The Austin Co., and Army Engineering Corps

RED TOP
INSULATING WOOL

used on these two huge bomber plant projects would completely insulate walls and ceilings of 10,062 six-room homes —with insulation of medium thickness

The problem—Insulation for two windowless, air conditioned plants, each longer than the world's 4 largest ocean liners, each demanding uniform temperatures in every square foot, plus high light reflectivity and sound insulation.

The solution—U. S. Gypsum provided an insulation that helps maintain constant temperatures throughout the huge plants, and meets the unusual structural requirements as well.

In addition, this light colored insulation, blanketing interior walls and ceilings, provides a surface which maintains a high level of light reflectivity, plus sound absorption of between 60% and 70% of factory and office noise.

In one application, Red Top Wool insulates, reduces sound, reflects light, saves cooling and heating expense, saves lighting cost, reduces dead load—*some job for one material!*

The same features that make Red Top worth while on huge projects like these, apply proportionately and personally to the American Home Owner and his fuel supply.

Made of Fiberglas, in 3 thicknesses—in Rolls, Bats, and Junior Bats—Red Top fills varying job conditions and cost requirements. Red Top figured in cents per square foot, combined with money-saving speed in application, makes it the "Best Buy for Quality."

Get the complete Red Top story.

USG UNITED STATES GYPSUM

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

PLASTER • LATH • WALLBOARD • INSULATION • ROOFING • PAINT

MONTH IN BUILDING

(Continued from page 4)

dent to hurry his choice of a successor to Nathan Straus. As a straight war housing agency, its activities will now be almost exclusively concerned with rapid production of buildings less permanent than its peacetime 60-year housing.

Who will be next in the succession of administrators to roost in public housing's top post (Robert Kohn, the late Col. Hackett, Angelo Clas, Nathan Straus) is therefore still a question mark. Any further work can continue to be handled by USHA's Seaver and Shire. Gossip, however, points to Bryn Hovde, Pittsburgh's Allegheny County Authority ace, and to Boston Housing Authority's John Breen as the most likely contenders for Straus' vacated seat.

U. S. ARCHITECT NO. 1

Slated soon to be inducted as Supervising Architect of the Public Buildings Administration, George Howe of Philadelphia will become the seventeenth in a distinguished line to hold down this office since its establishment in 1836. First incumbent was Robert Mills, designer of the Washington Monument. Most recent is classicist Louis A. Simon, who held it for a solid 45 years until his retirement a month ago.

One of the profession's most advanced thinkers, Howe will undoubtedly bring a forward-looking attitude to this assignment. Because he is respected by traditionalists who will remember his superb Pennsylvania houses, and by modernists who will acclaim his Philadelphia Savings Fund Building, designed with Lescaze (see ARCH. FORUM, Dec., 1932, p. 483), and his Wasserman and Thomas houses (Mar. 1935, p. 193; Dec., 1939, p. 449), Howe's choice could not be better. Progressives have burned as official Washington fiddled with Roman architecture. They should not assume Howe will change that over-night, however. He is too wise in the ways of the Capital to try. Nevertheless, his appointment will bring encouragement to the modern group, over the years fewer columns and starling-roost pediments to the Mall.

1942 PREVIEW

As the old year drew to a close, forecasters were still hedging on Building's future. Most saw private residential construction dropping to the vanishing point for lack of materials. After making due allowances for expansion in war plants and war housing, best that could be anticipated was a total construction volume slightly under 1941's record-breaking output of $10.4 billions.

But, the new year had scarcely made its debut when war estimates began to be revised sharply upward. Latest official figure: $11¼ billions. This too is expected to go higher soon. Even discounting a virtual stoppage of all non-war civilian building, it should surprise no one if this year's construction volume passes last year's total by a full billion, thereby setting an all-time high.

Non-Residential. With Building strictly a war business from now on, the bulk of construction (roughly 80 per cent) will be in the industrial and military categories, financed directly or indirectly by the Government. Since new industrial plants galore are needed to match the scheduled expansion in production of tanks, planes and shells, last year's total of $1.6 billions for factories (including $1.3 billions spent by the Government) is certain to be vastly exceeded. Good index of how industrial construction will shape up can be found in the scheduled program of federally financed industrial facilities. Currently estimated at around $3¾ billions, these expenditures are expected to reach $4 billions by July, $5 billions a year hence.

In addition to this work, new cantonments and air bases must be constructed to meet the Army's expansion from its present 1,700,000 men into a fighting force of more than 4,000,000. New shipyards are also needed. Such military and naval construction will easily double last year's total of $1.7 billions.

Heavy construction, in contrast, is fast rolling to a standstill. Highways will continue to be built for military reasons, but last year's total of $1 billion is scheduled to shrink to $750 millions. Other public works will drop from $700 millions to $550 millions. Non-war pork-barrel favorites, like postoffices and courthouses, are definitely out for the duration; likewise, most civilian structures, such as stores and office buildings, except where required as community facilities for war workers. Buildings deemed essential to public health and morale, like hospitals and schools, stand a better chance, but even these types will be severely restricted.

Residential. In this category construction also has become completely dominated by the war: no houses will go up except in designated areas and all will be under a $4,750 price ceiling. Last year, despite the uncertainties which beset them, private builders succeeded in producing 400,000 dwelling units which met defense limitations of cost and location. Another 96,000 units were erected by Government agencies. Altogether, about 615,000 residential units of all types, involving an estimated $3.1 billions in both public and private funds, were produced in 1941.

This year the private builders are expected to better their score on war housing. However, since Washington policy now places increased emphasis on housing for rent instead of housing for sale, current reports indicate a reluctance by

(Continued on page 46)

Upper Walls and Ceiling—*White Wallhide Flat, 25-22.* Dado, Trim and Cornice—*Raleigh Tavern Green Wallhide Flat, 25-37,* and coat of *Pittsburgh Satin Finish Varnish.*

COURTESY OF KITTINGER FURNITURE COMPANY

Now Endorsed by Many Leading Architects . . .

WALLHIDE IN AUTHENTIC COLORS

Approved by Williamsburg Restoration

THE subtle off-tones revived by the Williamsburg Restoration have been the most significant recent development in contemporary interior decoration. And now these authentic period colors are available in ready-mixed, inexpensive Wallhide Paint. For the Pittsburgh Plate Glass Company has been granted the sole right to reproduce these soft, unusual shades.

Today, in the homes of your clients, you can recapture the quaint charm of old Williamsburg, which was founded by some of the first settlers of Virginia. In every room, regardless of its decorative theme, you can bestow much of the colorful distinction characteristic of this cultured colonial city. For these 14 exclusive Wallhide shades, approved by Williamsburg Restoration, have a complementary tonal quality that blends with every type of decoration. There are delicate colors that enhance the finest 18th Century furniture . . . others to set off the most modern interior.

Because of the tremendous part played by architects in extending the influence of the Williamsburg Restoration, we want to provide you with materials that will help in making your paint specifications. Just write for our Wallhide Color Card Book in colors approved by the Williamsburg Restoration. It will be sent you without obligation of course. Pittsburgh Plate Glass Company, Paint Division, Pittsburgh, Pa.

PITTSBURGH PAINTS

WALLHIDE • FLORHIDE • WATERSPAR • SUN-PROOF

Smooth as Glass

Pittsburgh Plate Glass Company
Paint Division, Dept. AF-2-42, Pittsburgh, Pa.
Please send me Color Card Book descriptive of Wallhide in colors approved by Williamsburg Restoration.

Name_____

Address_____

City_____ State_____

MONTH IN BUILDING

(Continued from page 44)

home developers to work in this field even under the liberalized terms of FHA's Title VI (90 per cent insured mortgages). Offsetting any such hesitation by private builders is the determination of Government agencies to move speedily ahead on the housing front. Current congressional appropriations for this purpose already add up to an impressive $750 millions, compared with a total of $500 millions last year. If plans to push rental housing by private builders flop, Congress will doubtless boost appropriations pronto.

Problems. Its seams already bursting, Building's best apparently is not good enough for the staggering new demands of a nation going all out to war. Not only is the 1942 construction program the largest ever, but speed in accomplishment has never been more urgent nor the difficulties —an immediate shortage of materials, a growing scarcity of skilled labor—more perilously acute.

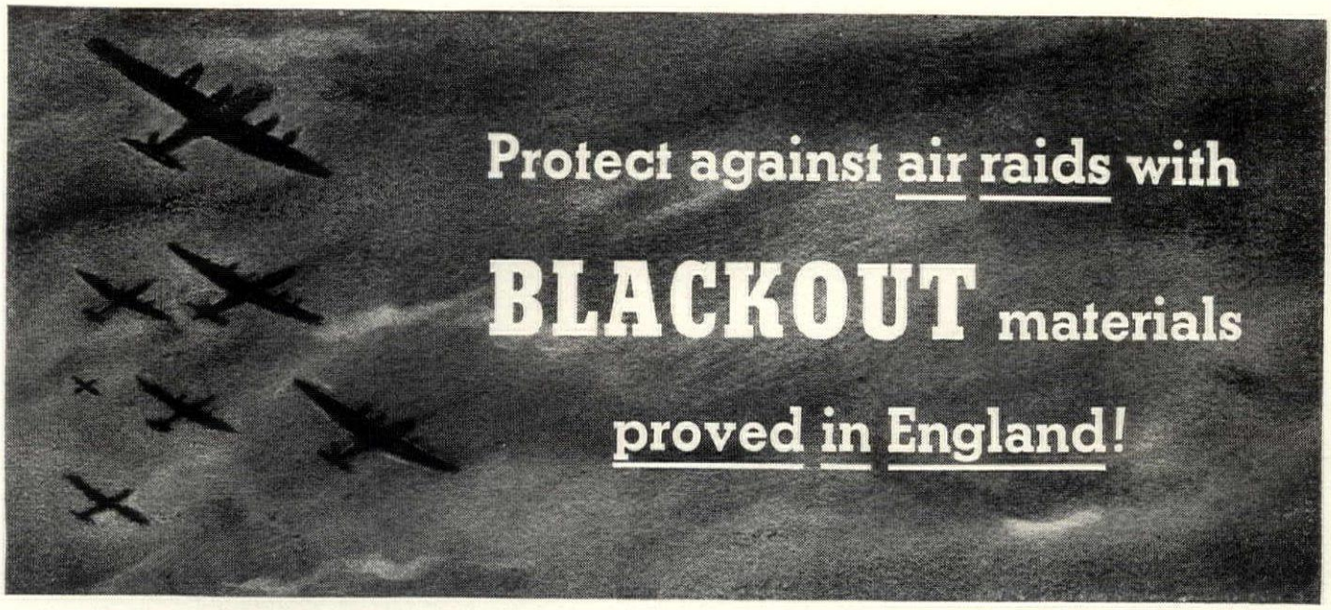
And, to top off matters, never has the geographical distribution of work been more spotty. While some parts of the country are in a lather of war construction, other parts remain untouched and inactive. Correspondingly, while some parts of the industry are being taxed far beyond their normal capacities, other parts are almost unemployed. For the small practitioners, builders, dealers and contractors in many areas the economic outlook is bleak. Inevitably many of them will be forced out of business—sacrifices to the whiplash of priorities.

If Building is to tackle its war-time assignments successfully in face of such obstacles, numerous changes will have to be wrought—organizationally and technologically. Watch prefabrication come up, frills go out. Watch the growth of large-scale organizations in the field, the introduction of mass-production techniques, the elimination of obsolete codes, the rationalization of wasteful practices. When the war ends, Building will be a vastly different industry—better integrated, more efficient, well able to proceed post haste with its post-war task of rebuilding America, and perhaps other parts of the world.

CHEAPER HOUSES

Although Americans are now going to have houses costing no more than $3,750 on the average ($3,950 as the overall limit on any single dwelling, according to Lanham Act requirements), over the past half year they have been rapidly settling down to the lower cost brackets of home building. Statistical confirmation of this fact comes to light in NAREB's recently completed semi-annual survey of 248 typical cities:

(Continued on page 48)



Special products, developed through Flintkote's British subsidiary, enable you to blackout buildings effectively and economically

As an architect, you know certain protective measures must be taken to conceal light and to dull dangerous reflection from glass, metal and stone.

Few Americans have had experience with blackout and camouflage. But there has been much practical and professional experience in England. There a most effective blackout system was the proper use of special Flintkote materials.

A complete line of Flintkote Blackout Products... in liquid, roll and sheet forms... is available for public buildings, commercial structures, factories and private homes. These materials, included in those listed below, proved their effectiveness during Britain's heaviest air raids. Most Flintkote dealers can deliver these action-tested products immediately.

For complete information about these Flintkote Blackout Protective Systems, phone or write the nearest branch office or use the convenient coupon. Detailed specifications are available. Get the facts . . . protect your clients *before* the first air raid.

FLINTKOTE PRODUCTS . . . *Proved and Ready*

BLACKOUT STATIC COATING covers windows and skylights with dull, non-reflective black applied quickly by brush or spray and easily removed. Adhesive qualities help protect workers from the danger of flying glass.

BLACKOUT MEMBRANE TREATMENT—a tough membrane embedded in Blackout Static Coating—provides additional shatterproof protection. Especially useful for skylights. Complete light obscuration.

FIRE RETARDENT MASTIC scientifically designed to prevent spread of roof fires caused by incendiary bombs.

BLACKOUT PANELS — easy to remove during daylight. Light-weight, strong and weatherproof. Installed indoors or out. Particularly useful for home protection.

BLACKOUT PAPER — waterproof felt or paper for temporary protection during emergencies.

CAMOUFLAGE PAINTS AND ADHESIVES conforming with Defense agency requirements are available. We are prepared to cooperate on individual concealment problems.

THE **FLINTKOTE** COMPANY

New York... Atlanta... Boston... Chicago Heights
Detroit... Los Angeles... New Orleans... Waco... London

THE FLINTKOTE COMPANY, *Building Products Division*
30 Rockefeller Plaza, New York, N. Y.

Please send full particulars regarding Flintkote BLACKOUT Materials and Protective Systems.

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Firm Name .....
Street .....
City ..... *State* .....

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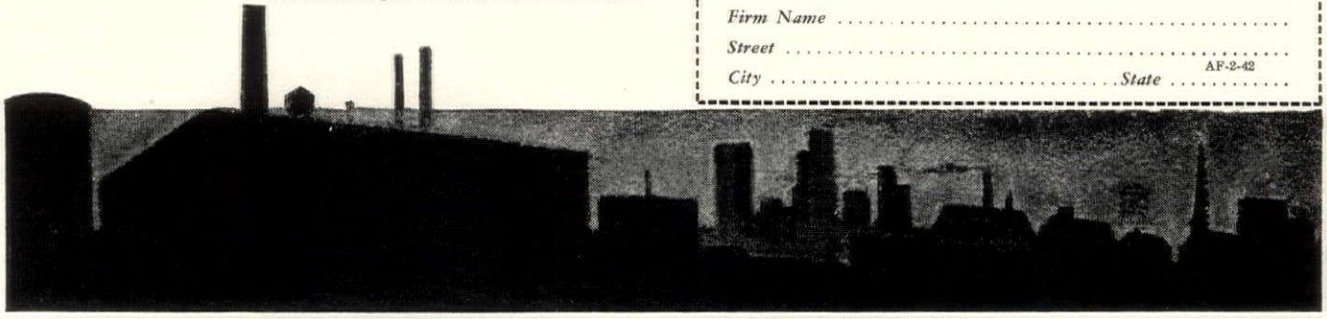


MONTH IN BUILDING

(Continued from page 46)

► In one out of every twelve cities, the under-$3,000 house was the commonest type built, being eight times more popular in defense areas than in non-defense areas.

► In all cities investigated, houses selling for less than $6,000 constituted 80 per cent of all home construction.

► In 62 per cent of all cities and in 74 per cent of defense area cities, new house building for civilians was found urgently needed.

TRAILERS

Last month, while Defense Housing Coordinator Palmer was handing Farm Security Administration, by Presidential order, another appropriation of $13 millions for 5,667 trailers and 5,200 dormitory units to go up in 22 different localities, complaints were still being heard from city fathers who want trailer projects to become less promiscuous.

Baltimore's City Plan Commission is seriously opposed to FSA plans for trailer communities in the Middle River section and at Annapolis. Foreseeing encroachment on existing residential areas, with a resulting depreciation in property values, the commission has sought to restrict the mobile towns to sites near or within industrial areas.

Streets already have been laid out and utilities installed for a 250-trailer site near the Glenn L. Martin Co. plant. Close by is an earlier settlement of 285 trailers. With 750 trailers out of the original FSA allocation still to be provided for, and unable to find a sufficiently large single tract, FSA agents are reported to be scouring the district for a series of smaller scattered sites.

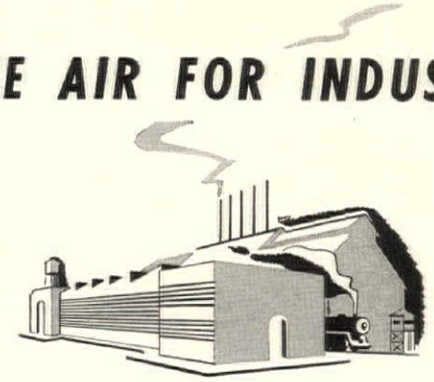
WAR RISKS

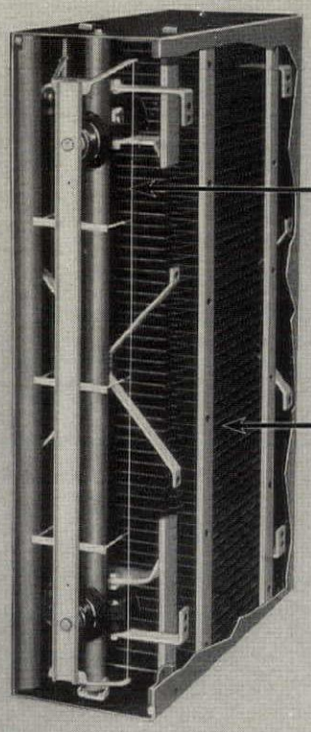
Mindful of the shape of things that might come, Federal Loan Administrator Jesse Jones has set up a War Insurance Corp. With $100 millions in RFC money in its exchequer, it is intended to provide "reasonable protection" against damage to private property resulting from enemy attacks on continental U. S. as well as on Alaska, Hawaii, the Philippines, Puerto Rico and the Virgin Islands.

An inkling of how the WIC will possibly function may be found in its British parallel, the War Damage Commission, set up to administer the compulsory insurance of all "land" (defined as excluding crops and trees but including buildings and fixed plant or machinery) against war damage in accord with the provisions of England's 1941 War Damage Act. Under this legislation the total contribution payable on any property during the risk period is 50 per cent of its annual

(Continued on page 50)

PRECIPITRON* CLEARS THE AIR FOR INDUSTRY

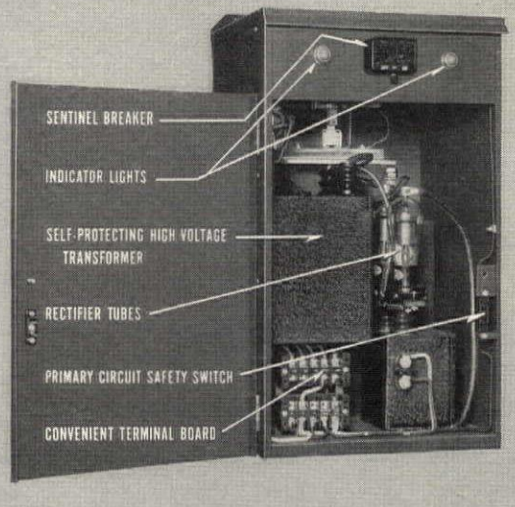




An electrostatic field at the front of the PRECIPITRON cell charges all dust and dirt particles as they enter.

Charged dirt and dust particles are drawn to and precipitated on the collector plates.

One or more PRECIPITRON cells, depending on the volume of air, are sealed in the ventilating duct so all air passes through them. From 85 to 90% of the particles in the air, even as small as 1/250,000 of an inch, are removed.



The PRECIPITRON power pack provides d-c voltage to set up an electrostatic field at the leading edge of the cell and also to energize the collector plates. It is listed by the Underwriters' Laboratories and has special built-in safety devices as protection against electrical shock.

Releasing war industry production from the damaging effect of air-borne dirt, dust, industrial haze and smoke is now the all-out job for PRECIPITRON, the Westinghouse electric air cleaner. It is used simply as a cleaner or as the cleaning component of an air conditioning system.

The principle of PRECIPITRON is entirely different from that of an ordinary air filter. It operates by electricity. Dust and dirt particles in the air stream are given an electric charge and then drawn off to oppositely charged plates.

PRECIPITRON has no moving parts. Its operation is silent and simple. Resistance to air flow is negligible and for all practical purposes remains constant in operation. It has been tested against fire hazards and is listed by the Underwriters' Laboratories.

Today electric air cleaning is effectively at work where cleaning efficiency counts—where it is essential to remove tiny, unseen particles that are harmful to precision industrial operations and large rotating electrical machinery.

Your nearest Westinghouse Sales Office has full information on the application of PRECIPITRON. Or, you may write Westinghouse Electric & Manufacturing Company, Edgewater Park, Cleveland, Ohio, for Booklet 2187.

*Trade-mark registered in U. S. A.

Westinghouse Precipitron

MONTH IN BUILDING

(Continued from page 48)

yield based on an assessed or ratable value or, looking at it another way, an annual premium of 1¼ per cent of the capital value insured. If the insured property is damaged so badly as to be a "total loss" (i.e., costing more to repair than its pre-war value), a *value payment* is made; otherwise, a *cost of works payment.*

Value payments are normally not to be advanced on damaged English property until the war is over. During the interim interest accrues at 2½ per cent. However, the Commission may advance sums ranging up to £800 for rebuilding houses, or enabling businesses to continue, where this is deemed necessary.

Cost of works payments, on the other hand, are made as soon as the damaged property has been put back into its original form, or in instalments while reconstruction is going on. Temporary works to safeguard property are also defrayed by the Commission, but such first aid is limited to the minimum repairs needed to make a building structurally safe and to protect it against the weather.

The Commission decides whether the compensation is to be value payment or a cost of works payment. If the first, it goes to all the property owners, including the mortgagee, to be apportioned according to proprietary interests. If the second, it goes to the person who incurred the cost.

Claims for payments under £5 are not handled by the War Damage Commission. Where damage to houses is not great, home-owners may be able to induce their local authority to pay the cost of repairs and then to collect from the central government, which it is authorized to do under the 1939 Housing (Emergency Powers) Act.

SIMPLIFIED PLUMBING

First of a series intended to disbar former wasteful practices, *Emergency Plumbing Standards for Defense Housing,* a trim mimeographed manual (19 pages, 8 plates), has just been issued by the Division of Defense Housing Coordination. Soon to follow is a similar manual on heating standards.

Although developed primarily to conserve strategic materials, the plumbing standards will provide installations that are sanitary in every respect and boast approval by public health officials. Collaborators include the National Association of Master Plumbers of the U. S., the United Association of Journeymen Plumbers and Steam Fitters of the U. S. and Canada and others.

Strong pressure will be used to force adoption of these standards. Powers shortly expected to be vested in State Governors will eliminate legal difficulties imposed by local building codes.

Who Has a Better Right to this Security?

Today The American Workman Has The Greatest Need For Home Equipment That Will Serve Him Well And Long AT LOW OPERATING COST!

When a wage earner buys a a house, financial consideration goes beyond a choice of land and structure. For it's the monthly cost *to live* which determines whether he can continue to afford the security of a home of his own.

Give him home operating equipment that will keep on giving good service at low cost. Give him an efficient and adequate heating plant and wiring system, and money-saving kitchen appliances. These can contribute more in operating economies than any slight increase they may cause in monthly payments under a long term mortgage.

And at the same time *you* can profit by specifying General Electric home equipment, because *the homes you design and build today are the homes that will build your reputation for tomorrow.*

★ ★ ★ ★

Write us for the complete story . . . how G-E Equipment can lower living costs for your customers!

QUALITY MANUFACTURERS OF BUILDING PRODUCTS — THE PRODUCERS' COUNCIL

WIRING • REFRIGERATOR • RANGE • FURNACE • WASHER • IRONER • CABINETS • DISPOSALL and DISHWASHER • WATER HEATER

GENERAL ELECTRIC

HOME BUREAU, BRIDGEPORT, CONN.

BOOKS

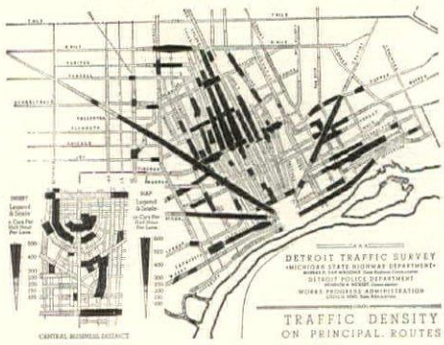
(Continued from page 28)

units suitable for large shelters, and gives tables on the capacity and cost of such installations as well. Other sections are equally comprehensive in treatment, equally well written to take care of the needs of the individual and the large defence organizations.

A work of this scope inevitably shows weaknesses. The section on camouflage is typical in this regard. About fifty pages are devoted to camouflage and blackout, far too few, of course, for a thorough presentation of the subject. Nevertheless, the basic data are given. If the reader of this section does not automatically become an expert on camouflage, he is nevertheless adequately equipped to cooperate intelligently with the authorities who may be in charge of such work. This type of treatment is particularly valuable for the architect, whose background of technical training enables him to grasp very quickly the underlying principles and essential techniques of civil defence. Another inevitable shortcoming in a book of this type is that some of its material very quickly becomes obsolete. This is very clearly shown in those sections which deal with shelters. The familiar Anderson shelter, for instance, which is a half round section of corrugated iron, half buried and then covered with earth or sandbags, undoubtedly saved the lives of many families in England, but it suffered from a great lack of conveniences, and was damp and cold in bad weather. As the raids over England continued it was realized that indoor shelters, providing all the protection of the Anderson, could be erected at no greater expense and with far more comfort for the occupants. This book shows both indoor and outdoor types, but only a complete revision every few months could provide the necessary changes in emphasis based on new experience.

With all these weaknesses, none of which can be properly attributed to the author, "Civil Defence" remains one of the most valuable books on the subject, and certainly the most complete, and its value as a one-volume reference library could hardly be over-emphasized. Covering the field from theory to technique to organization, there will be few questions that come up before the civil defence worker that are not answered in it, fully and authoritatively.

TRAFFIC ENGINEERING HANDBOOK, Edited by H. F. Hammond and L. J. Sorenson. A joint publication of Institute of Traffic Engineers and National Conservation Bureau. 320 pp., illustrated with diagrams and some photographs. 6 x 9. The first handbook of its kind to be published, it is presented, not as a textbook, but as a guide to the best practice established up to the present time. Written for engineers, it contains articles by fourteen outstanding specialists in the field and a great deal of other information in the form of charts, graphs and diagrams. The various sections deal



with the motor vehicle, pedestrian and driver, describe the keeping of accident records and of making traffic surveys. There are also chapters on pavement markings, traffic signs and signals, roadways, traffic islands and highway lighting.

HOUSES OF OLD RICHMOND, by Mary Wingfield Scott. The Valentine Museum, Richmond. 332 pp., illustrated. 8½ x 11. $5.00.

A chronological presentation of Richmond houses, covering the period 1737-1860. Material included falls into five sections, of which the period from 1790 to the depression of 1819 are the most interesting architecturally. Each house is presented

JOHN MARSHALL HOUSE

as a unit, with a photograph and a comprehensive description of its history, its various owners and occupants, and a bibliography. The author has done an excellent research job, having evidently gone to great pains to collect her facts. The very nature of the material, however, is unlikely to arouse more than local or very specialized interest.

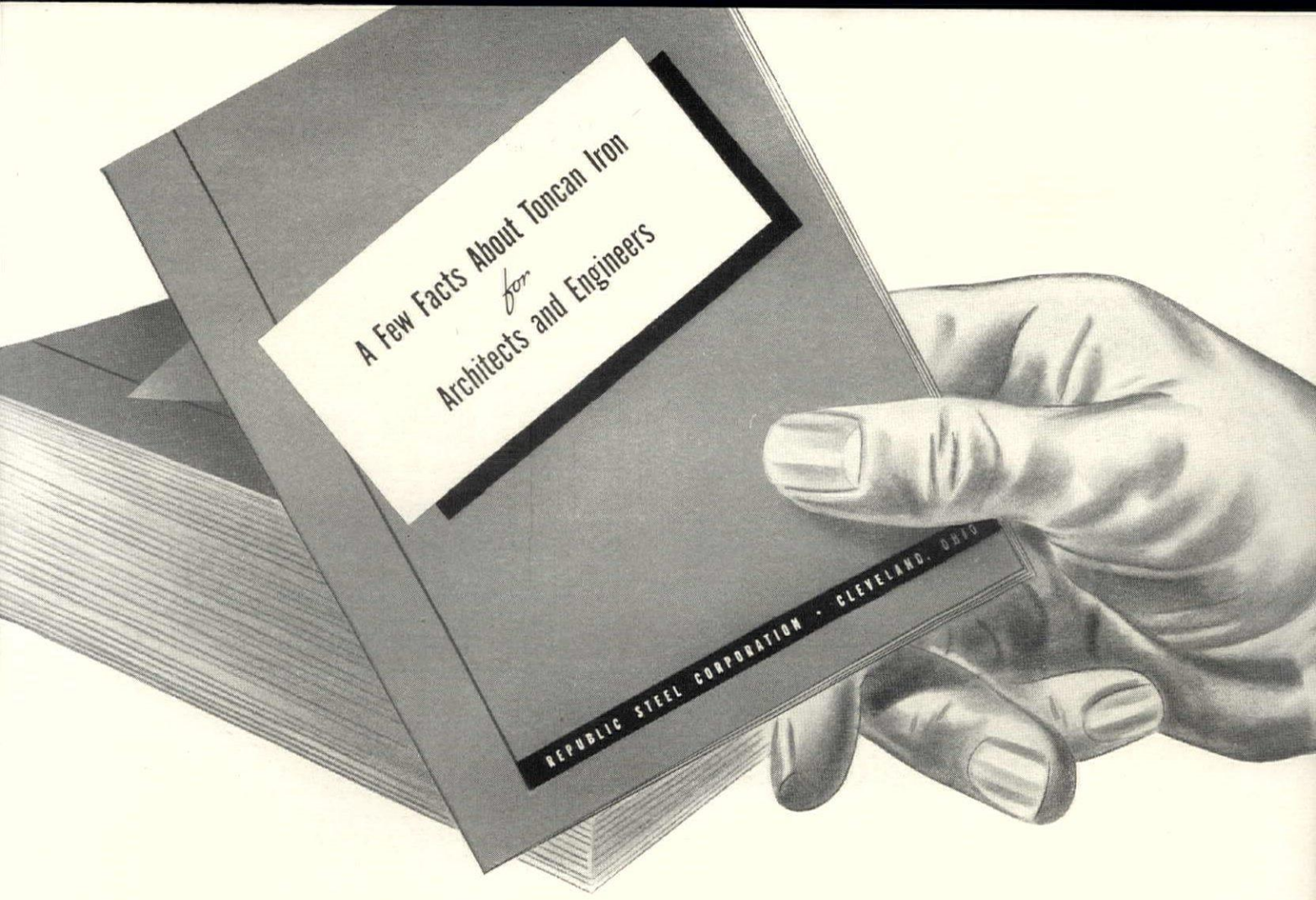
PLASTIC MOLDING, by D. A. Dearle. Chemical Publishing Co., Inc., Brooklyn, N. Y. 131 pp., illustrated. 8¾ x 5¾. $4.00.

A brief but comprehensive survey of a practically new industry, covering the materials used, technique of molding, finishing, equipment, costs, design and production. There is also a short introductory chapter on the history of plastics.

STUDIES IN THE ARTS AND ARCHITECTURE. University of Pennsylvania Press, Philadelphia. 113 pp. 6 x 9¼. $1.25.

A series of papers delivered at the Bicentennial Conference at the University of Pennsylvania, covering a broad range from

(Continued on page 54)



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Speed Construction for Victory

Here's the latest news about the advantages of Toncan Iron Sheets over other ferrous sheet materials—contained in a new 16-page edition published especially for architects and engineers.

"A Few Facts about Toncan Iron" presents valuable information to help you serve clients better, save them money, and increase your prestige. It will help you get the facts *straight* about Toncan Iron and how it differs from other ferrous metals—facts written by a producer of both iron and steel sheets.

Toncan Iron is *not* a copper-bearing steel. *We* make copper-bearing steel sheets—but we *also* make Toncan Iron Sheets. Toncan Iron is made from *open-hearth iron* —a highly-refined, exceptionally pure iron which is more resistant to the attack of rust and corrosion, more ductile than open-hearth steel.

With this finer base metal is alloyed the *exact proportion* of copper *and molybdenum* to produce a metal with greater rust-resistance than any ferrous material in its price class—a metal having *twice as much copper* as the best copper-bearing iron or steel.

Toncan Iron Sheets are easier to work, speed construction, reduce waste, stand up longer without repairs—all important in *Construction for Victory.*

Get a copy of "A Few Facts about Toncan Iron" and see why it pays to specify Toncan Iron for sheet metal work. There's much of interest, too, in Sweet's—27/3 and 13/6 on pipe and sheets—23/5 on Steel and Tubes—9/1 and 21/2 on Berger—15/18 on Truscon.

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Toncan Iron SHEETS

Reg. U. S. Pat. Off.

An alloy of refined open-hearth iron, copper and molybdenum—*that grows old slowly*

BOOKS

(Continued from page 52)

discussion of Preclassical Greece to skyscrapers and automobiles. Some of the papers are extremely stimulating, notably John Burchard's discussion of the effect of economics on the arts, and Frederick Frankland's "Engineering Aspects of Steel in Structures." There is an excellent piece on the history of iron and steel construction in architecture by Dean Hudnut of Harvard, and a companion piece by George Howe. Other contributors in the building field are Leopold Arnaud and Harvey Wiley Corbett.

HEART OF SPAIN, by Georgiana Goddard King. Edited by Agnes Mongan. Harvard University Press. 179 pp., illustrated. 7 x 10. $3.00.

Georgiana King taught at Bryn Mawr for more than a generation, and was one of the country's leading authorities on Spain. This book, published posthumously, indicates something of the reason for her reputation. It consists of about a dozen related essays, a charming and rambling series of observations on towns, churches, landscape, literature and people, which display a really extraordinary knowledge of the country and its history and an acutely sensitive perception. The picture created is that of a country vastly

VIEW OF DAROCA

different from the shattered and starving Spain of today, but the book is perhaps all the more timely for that reason, for traditions and national characteristics have a habit of surviving the worst political vicissitudes.

HOUSE CONSTRUCTION DETAILS, by Nelson L. Burbank. Second Edition. Simons-Boardman Publishing Corporation, New York. 313 pp., illustrated. 9 x 11¼. $3.00.

This is an extensively revised addition of a book which appeared about three years ago, and was reviewed in these pages at that time with considerable enthusiasm. The features which gave the book its usefulness have been extended and improved. In general treatment, there is a certain similarity between his publication and the well-known "Architectural Graphic Standards," by Ramsey and Sleeper. All the elements of house construction are considered in an orderly manner and are illustrated with great clarity. While the Ramsey and Sleeper book covers a much greater variety of building types, and presents more detailed information for the architectural draftsman, this example is perhaps better suited for the apprentice and layman because it shows photographs as well as detail drawings. The viewpoint maintained throughout is that of the builder rather than the designer, and if any criticism might be made, the most serious one is that the quality of the work shown reflects the standards of the average house builder, whose standards of design and taste leave a tremendous amount to be desired. By and large the book deals with very hardboiled matters of construction and equipment; in this respect it forms an excellent manual for architect, builder and home owner.

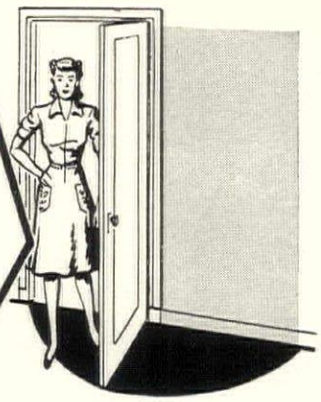
THROUGH THE AMERICAN LANDSCAPE, by Kaj Klitgaard. The University of North Carolina Press. 323 pp., illustrated. 6¾ x 9¼. $3.50.

Kaj Klitgaard is a Danish-born writer, artist and former sailor who now lives in Woodstock. Filled with an understandable curiosity about the U. S. landscape, and about the contemporary painters who were trying to interpret it, he set out on an automobile tour which took him to the West Coast and back. He looked at landscape and landscape paintings, talked to

(Continued on page 56)

THIS MUCH FLOOR SPACE COSTS $40
to build in the average U. S. 1-story residence
YET IS WASTE SPACE WHEN YOU INSTALL HINGED DOORS!

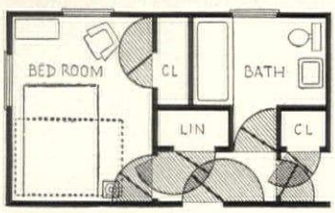
A standard-size hinged door wastes at least 8 square feet of floor area and 21 square feet of wall area. When you use a Sav-A-Space Sliding Door Unit, much of this valuable space is made usable for furniture, pictures and other decoration.

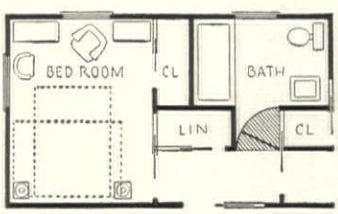


Your clients get full use of the floor space they pay for when you wisely install...

SAV-A-SPACE SLIDING DOOR UNITS

WRONG Look at the space wasted by hinged doors. The small but typical hallway is obstructed when doors are open. The bedroom furniture cannot be arranged differently without doors striking it.





RIGHT $200 worth of floor space has been made usable by Sav-A-Space Sliding Door Units. The hallway is never blocked by doors. Not only can the bedroom furniture be rearranged, but additional furniture can be added without crowding.

These new door units are entirely different from old-fashioned sliding doors!

● Don't confuse the new Sav-A-Space Sliding Door Units with any others you have ever known. Sav-A-Space Units have no noisy metal track, no clanking wheels. They permit the doors to glide out or in quietly, without strenuous pulling and tugging.

The track consists of a cylindrical channel in a durable fir header. In it travel 2 rust-proof ball-type rollers. Hangers descend directly from these rollers to brackets on the top of a stock 1⅜" door, keeping the door always plumb. So smoothly do the rollers operate that even after 100,000 movements of the door—*far more than it would have in a normal lifetime*—there is no perceptible wear on either rollers or track.

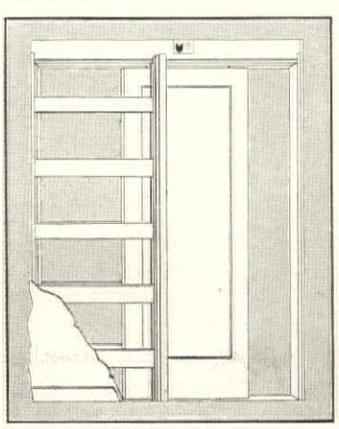
Now used in thousands of structures!

The Sav-A-Space Unit is just now being distributed nationally. But in the few sections of the country where it has been on the market for several years, it has achieved tremendous popularity. It is the perfect sliding door unit to use in small homes, prefabricated structures, apartments, offices, stores . . . everywhere space is at a premium or full use of available floor area is desired.

A Sav-A-Space Unit consists of frame and hanger hardware. It does NOT include door, finish hardware or finish trim. Any stock door may be used in a Sav-A-Space Unit, but a stock door of Douglas fir—*the wood made durable by nature*—gives the best service. Special Sav-A-Space locks and pulls are available in a variety of finishes.

SEE YOUR LUMBER DEALER TODAY! If he can't get Sav-A-Space Units for you, write Fir Door Institute, Tacoma Building, Tacoma, Washington, for nearest source of supply or free catalog.

EASY TO INSTALL! The frames of Sav-A-Space Units are delivered to your job assembled, ready to install in standard 2" x 4" studding. No extra thick walls are required. No special tools or equipment are needed for the installation. The placing of electric wiring, plumbing and heating ducts is no problem when the use of Sav-A-Space Units is planned in advance. Installation details show how easily dry-wall finish or plaster is placed over frame.



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STANDARD SIZES!

Sav-A-Space Units are furnished only for doors 1⅜" thick and 6'8" high, but these five different widths are manufactured: 2'0", 2'4", 2'6", 2'8" and 3'0".

●

LOW PRICED!

Because Sav-A-Space Units are produced in quantity, the price is extremely low. Considering the value of the space they save, they are far more economical than hinged doors. Use them in every structure you build and give your clients full use of the floor space they're paying for.

BOOKS

(Continued from page 54)

some of their painters, slept in tourist camps, had the normal quota of amusing little adventures, and came back and wrote a book. Mr. Klitgaard's preoccupation with the painted landscape, and consequently with the existence or lack of regionalism in U. S. art, seems to stem

WATERCOLOR BY STANDISH BACKUS, JR.

largely from his inability to see the world around him except through the eyes of others. "I have learned," he says, "that if I am in a setting, be it city or country, that hasn't been pointed out to me by art, I see it only as my own native inability to see it otherwise than a gray, everyday stage allows me to see it." He sees Paris as Utrillo painted it, Holland through the paintings of Van Gogh, and Venice as Guardi and Canaletto saw it. This habit is not by any means uncommon: more interesting is the suggestion that eclecticism, the bane of painting as well as architecture during the past hundred years, may in large part be due to this weakness of the observer who also happens to be an artist. The book which resulted from the author's journey is a pleasant travelogue, with a good bit of expansive philosophising, and very generous appraisals of various painters working in different parts of the country.

A MANUAL OF AIRBRUSH TECHNIQUE, by J. Carroll Tobias. American Photographic Publishing Co., Boston. 164 pp., illustrated. 7¼ x 10¼. $3.00.

The airbrush brings to the field of art potentialities no less than those once introduced by the bristle brush. Although, as the author remarks, it has been looked upon with disfavor by the "fine" artists, it is just one more tool like the pen, pencil or brush. This book covers all the technical rudiments of the craft very well, describing the types of instruments, proper manner of their use, methods of laying tints, etc. Except for a few retouched photographs of machinery, however, the illustrations are horrible beyond description, and the wise reader will not let his eyes stray from the very helpful text.

SALVADOR DALI, by James Thrall Soby. The Museum of Modern Art, New York. 87 pp., illustrated in black and white and color. 7½ x 10¼. $2.00.

This is the catalog for a Dali show held recently at the Museum of Modern Art. Like most Museum catalogs, this is a good book in its own right, adequately illustrated and documented. Dali is probably as well known as any painter now working in the U. S., not because he may or may not know how to paint, but because he has a genius for getting into the papers. His activities in this respect have involved lecturing in a diver's suit, breaking department store windows, and producing pictures which never fail to shock and fascinate the critics. Even so shining a symbol of the neurotic personality of our time, however, has a personal and social background, ideas, and a technique in process of development. All of these things are discussed with admirable objectivity by James Soby in his introductory essay, which comes as close to making sense out of Dali as anything that has appeared to date. The illustrations are comprehensive, and include a number of excellent color reproductions.

A round house has more space in it with less wall area than any other shape. You can double the floor space at only half again the cost for wall materials.

Home is where the new world waits . . .

"As I conceive it, a house today should be an entrance to the new world of modern living, and architecture can unlock the door.

"Such a house would sweep drudgery out the door along with dust and drafts, and eyestrain from poor lighting. It would be free from the ordinary family hazards to health, such as stairs, top-heavy lamps, sharp projecting corners, and gadgets that pass germs along.

"This new house of today which I have designed is not only storm-proof, vermin-proof and much more germ-proof, but it is also 'don't-proof' — which means that children can live and play in it without hurting themselves or breaking things. Good engineering has conserved materials, and has made this house comparable to an automobile in weight and cost alike—though not in size, for it is surprisingly spacious. And it can be erected or taken down in a few hours, so it isn't rooted forever to one spot.

"This is a house designed for *now*, for the urgent housing needs of the emergency, using a minimum of materials. Its cost is only $1500. Tomorrow, when emergency restrictions are lifted and copper is once more available, its use will open the way to new departures in comfort, convenience, beauty and durability which can make this minimum-cost home a more deeply satisfying place to live than the multi-thousand dollar house of yesterday."

BUCKMINSTER FULLER

In response to the needs of today's housing emergency, new departures are taking place in the design and construction of homes which, for all time to come, can bring a far better standard of living to the great majority.

Americans want living, not housing. So architects and engineers are planning homes for tomorrow through which real comfort, beauty, convenience and variety in living can become available to millions more than ever before. In all of them copper plays an essential part. For the more copper there is in a house the better it is to own, or rent, or sell.

A century of partnership in building America's homes has given Revere a deep faith in the future. Copper has brought us crystal-clear running water, instant light and automatic heat, lifelong protection against rain and storm, and countless other things for better living.

Today the copper industry is working for Uncle Sam, and copper is restricted for general use. But in Revere's laboratories, research is going forward in preparation for the better homes that tomorrow can bring us all.

Here, for example, is a house designed by the famous architect and inventor, Buckminster Fuller. It shows how much more true living comfort these new techniques can bring within reach of even the lowest income.

* * *

Naturally, in this limited space, Mr. Fuller could describe only a few of the features of his house. Revere has no plans or blueprints, so has prepared instead a complete illustrated booklet which we will gladly send to you, free. Write us.

The kitchen, with its modern range, refrigerator, sink and cabinet units, and the midget heating plant.

Prefabrication without standardization. Additional units of various sizes can be added to provide extra rooms.

REVERE

COPPER AND BRASS INCORPORATED

Executive Offices: 230 Park Ave., N. Y.

FORUM OF EVENTS

(Continued from page 18)

AWARDS

PRINCETON UNIVERSITY has been awarded the 1941 gold medal of the American Group of the Societe des Architectes Diplomes par le Gouvernment. The medal goes annually to the "architectural department having the best record of accomplishment in the teaching of architecture on the general principles of the Ecole des Beaux Arts in Paris."

A gold medal and a prize of $50, bestowed every year upon the student obtaining the greatest number of values in the competitions of the Beaux Arts Institute of Design, was won by GLEN PAULSEN of the University of Illinois. J. C. TIGHE of the University of Pennsylvania received the Silver Student's Medal for the next greatest number of values.

EDUCATIONAL

EDWARD LANGLEY Scholarships will be awarded by the American Institute of Architects in 1942 for advanced study, research and travel. The awards are limited to ten and $1,500 is the maximum stipend. Eligible groups include architects, architectural draftsmen, teachers of architecture, students about to graduate from schools of architecture and graduate students. Proposals of candidates will be received at the national headquarters of the institute, 1741 New York Avenue, Washington, D. C., from January 1 to March 1, 1942. All proposals must be made in duplicate on printed forms obtainable from the headquarters. Awards will be announced in June, 1942.

The Federation Technical School in New York City, sponsored by the Federation of Architects, Engineers, Chemists and Technicians, announces a new series of courses for 1942. The courses this year will include the usual review courses in preparation for the state professional license examinations as well as several courses designed for retraining technical men for fields which are specially active during the war emergency.

ANNOUNCEMENTS

Dean WALTER R. MACCORNACK of the Massachusetts Institute of Technology has been named chairman of the committee on urban and rural land use of the American Institute of Architects, succeeding Frederick Bigger of Pittsburgh, it was recently announced. J. Frazer Smith of Memphis has been named vice chairman. Other members of the committee are Raymond J. Ashton of Salt Lake City, John E. Burchard of Princeton, N. J., Miles E. Colean of Washington, D. C., Jean Hebrard of Ann Arbor, Mich., Arthur C. Holden, Frederick Mathesius and Clarence S. Stein of New York, James Lawrence, Jr., of Brookline, Mass., Charles Dana Loomis of Baltimore Md., C. Julian Oberwarth of Frankfort, Ky., and William Wilson Wurster of San Francisco, Calif.

The Illuminating Engineering Society announces the publication of Series IX of its Lighting Data Sheets, giving complete descriptive data on actual lighting installations illustrative of good engineering practice. Subscriptions for the current series of 24 sheets to be published during the year 1942 may be entered at the Society's Headquarters, 51 Madison Avenue, New York City. Rates are $1 per series to members and $2 to nonmembers.

STEPHEN F. VOORHEES, of Voorhees, Walker, Foley and Smith, Architects, has been appointed to the national committee for civilian protection of the American Institute of Architects, it has been announced. Mr. Voorhees will be regional representative for New York, New Jersey, and Delaware.

PERSONALS

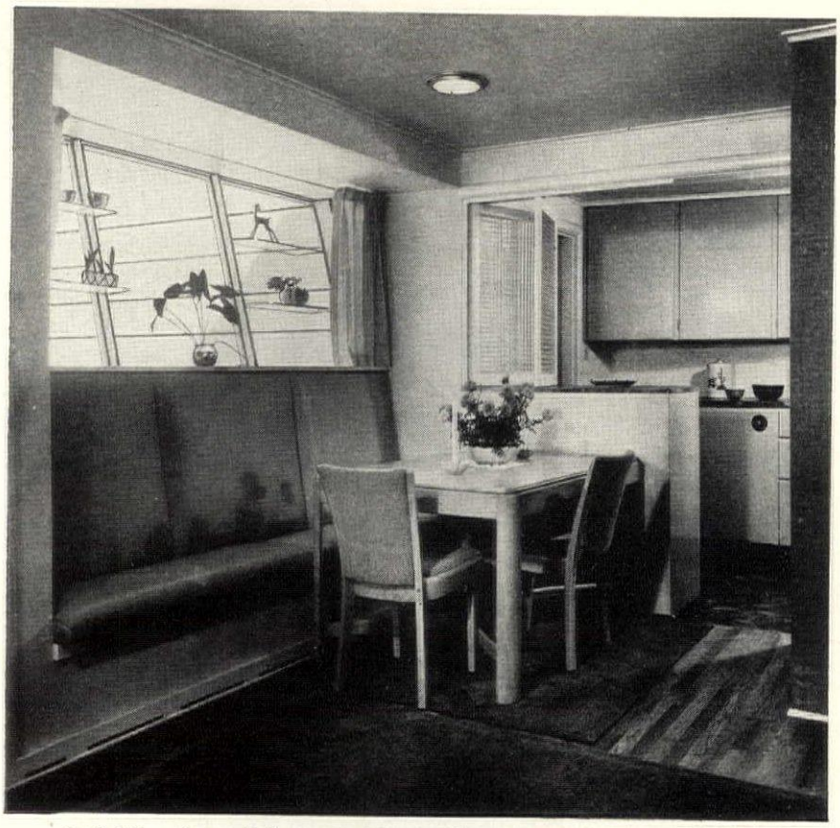
The new address of Mr. FRED J. WONDERS is 4500 Euclid Avenue, Cleveland, Ohio.

LOUIS H. FRIEDHEIM, Architect, announces the removal of his office from 132 Mon-

(Continued on page 62)

● *Generous window areas are a pleasing feature of this $4,200 home designed by Architect D. Kenneth Sargent for Milo D. Folley, Syracuse, N. Y. Note the slanting window treatment.*

9 WAYS *to brighten* A $4,200 HOME!



● *Folding doors of decorative Flutex Glass are used over service counter between dining wing and kitchen. Plate glass shelves break up the window area without obstructing light.*

HOW ARCHITECT SARGENT DID IT WITH L O F *Glass*

1. Used large window areas for abundant natural light.
2. Placed a plate glass mirror over mantle.
3. Framed the fireplace with mirror panels.
4. Used Flutex decorative glass folding doors between dining wing and kitchen.
5. Placed plate glass shelves in windows.
6. Used Vitrolite on walls over bathtub.
7. Used fixed lights of Flutex above bathtub.
8. Placed generous size mirror over wash bowl.
9. Put full-length mirror on bedroom closet door.

When designing small homes or defense housing projects, remember that flat glass products can brighten them in many ways . . . add to comfort and convenience . . . actually help build morale.

The fact that glass is thoroughly in keeping with modern architecture is another point to keep in mind.

An important consideration these days is the ready availability of practically all types of Libbey·Owens·Ford flat glass. No priority headaches.

See Sweet's for full information or write for architect's catalog. Libbey·Owens·Ford Glass Company, 1218 ·Nicholas Building, Toledo, Ohio.

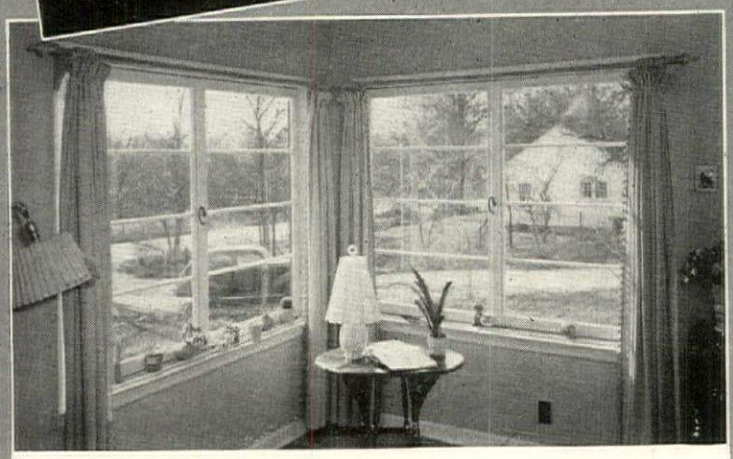
You can GET Glass! Design for it!

L O F **LIBBEY·OWENS·FORD GLASS COMPANY**

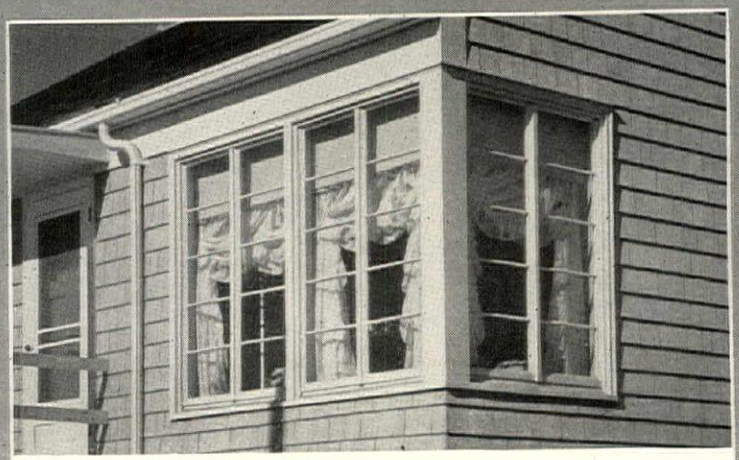
Glass **Designed for Happiness**

EYE-CATCHING ANDERSEN CORNER WINDOWS

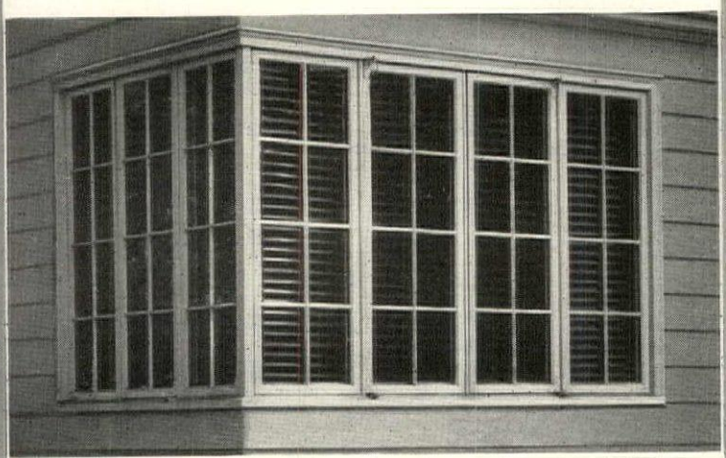
SALES FOR DEFENSE



Extra wall space and a window feature in a small defense home, achieved by using Andersen Horizontal Gliding Windows at the corner. Horizontal muntin bars.

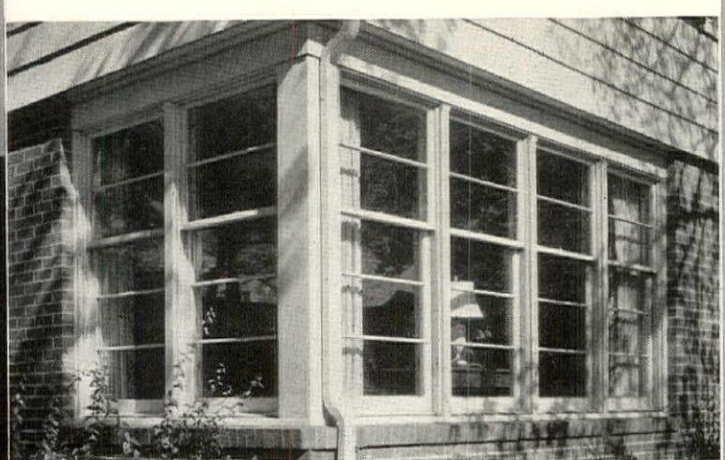


In a $3,000 home, these Andersen Horizontal Gliding Windows add sunshine and cheer. These are maximum stock size. This home has sales-appeal—and sold quickly.

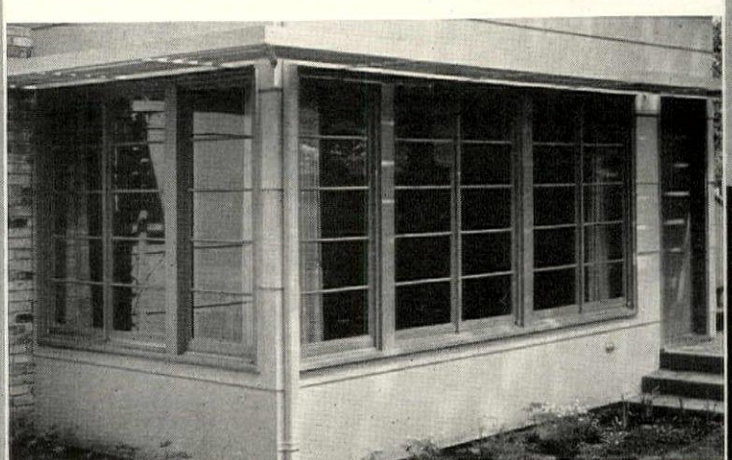


Andersen Casements grouped at a corner, make a window feature with lots of eye appeal. Note the minimum size corner post. Divided lights for traditional design.

No prospective home owner is likely to be able to resist a breath-taking window arrangement like this. And it's in a low-cost home. Double-glazed for year-around insulation!



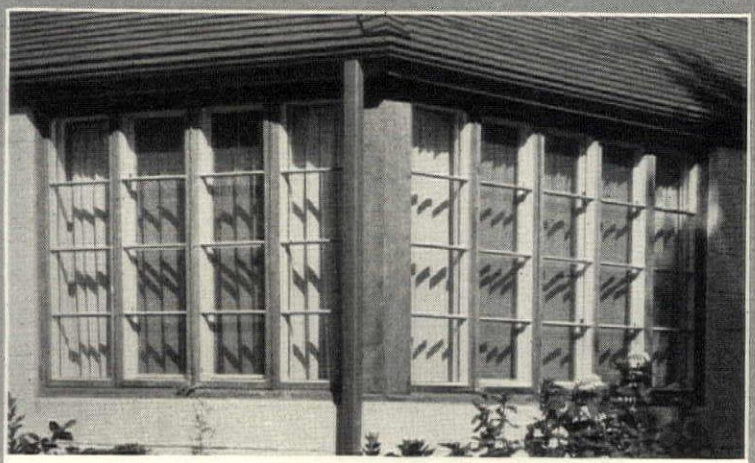
Sales punch? No better way to get it than Andersen Narroline Windows in a corner installation. That's the way to sell 'em, and fast! Note narrow mullions in this installation.



Larger window areas attract buyers and these Andersen Horizontal Gliding Windows did their part! This is the appealing exterior view of corner window illustrated above.

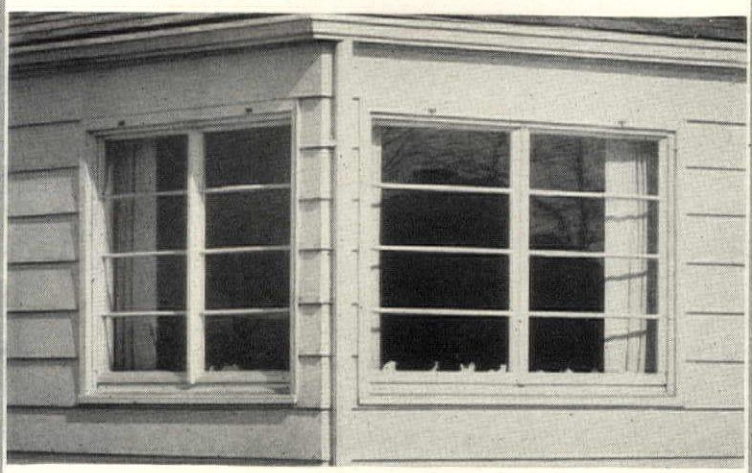
Andersen Corporation · BAYPORT, MINNESOTA

AMMUNITION
HOMES and REMODELING JOBS



Banks of Andersen Casements arranged in a corner installation flood the living room with light. Only five swinging sash here. No sash locks or operators needed for fixed sash.

A kitchen and breakfast nook brighten up because of five Andersen Narroline Windows in a corner grouping. These windows operate easily — a point Mrs. Prospect will like!



This is sales appeal spelled with capital letters! In a small home, Andersen Horizontal Gliding Windows in a corner. The modern way to place windows in inexpensive homes.

A breath-taking, sales-making corner installation of Andersen Narroline Windows makes a cheerful, charming living room. Horizontal muntin bars accent horizontal lines of the home.

Prospects "oh" and "ah" and sign on the dotted line when your homes have corner windows like this one. Andersen Horizontal Gliding Windows, with removable sash.

NARROLINE DOUBLE HUNG WINDOW UNITS
HORIZONTAL GLIDING WINDOW UNITS
CASEMENT WINDOW UNITS
BASEMENT WINDOW UNITS

FORUM OF EVENTS

(Continued from page 58)

tague Street, Brooklyn, N. Y., to 201 West 77th Street, New York. The firm of Baskervill and Son, Architects, announces that JOHN K. PEEBLES, Jr. has been admitted to partnership.

DIED

EDWARD PROBST, 71 in River Forest, Ill. Born in Chicago, Mr. Probst began his career as an architect in 1893. Eight years later he joined D. H. Burnham & Co., which subsequently became known as Graham, Anderson, Probst & White. Among the buildings designed by the firm were the Merchandise Mart, the Field Building, the Union Station, the Post-office Building, the Pittsfield Building and the State Street Marshall Field & Co. buildings. At Mr. Probst's death the firm was engaged on the four and three-quarter million dollar Borinquen Army Air Base in Puerto Rico.

ALBERT WEBER, architect, at the age of 70 in Daytona Beach, Fla. Born in Portage, Ohio, he moved to Linden, N. J. in 1896. His work in that vicinity included the New Jersey State Reformatory in Woodbridge.

WILLIAM SPENCER MURRAY, 68, consulting engineer, in New York City. Mr. Murray attended Lehigh University, where he received his electrical engineering degree in 1895. Shortly after establishing his own Boston office in 1902 as a consulting engineer, he was engaged by the New York, New Haven & Hartford Railroad to take charge of electrifying that road from New York to New Haven, remaining in charge of electrification until the entire system was completed in 1917. In 1913 Mr. Murray, after electrifying the Hoosac Tunnel and the New York, Westchester & Boston Railway, returned to private practice as a partner in the firm of McHenry & Murray. The firm was dissolved in 1917 and in 1921 Mr. Murray and Henry Flood, Jr. formed the firm of Murray & Flood. Their work included electrification of railroads in Chile and the hydro-electric development of the Saluda River in North Carolina. Mr. Murray was the author of "Superpower— Its Genesis and Future" and many papers for the American Institute of Electrical Engineers. He was a fellow of that organization and its vice president in 1913-14.

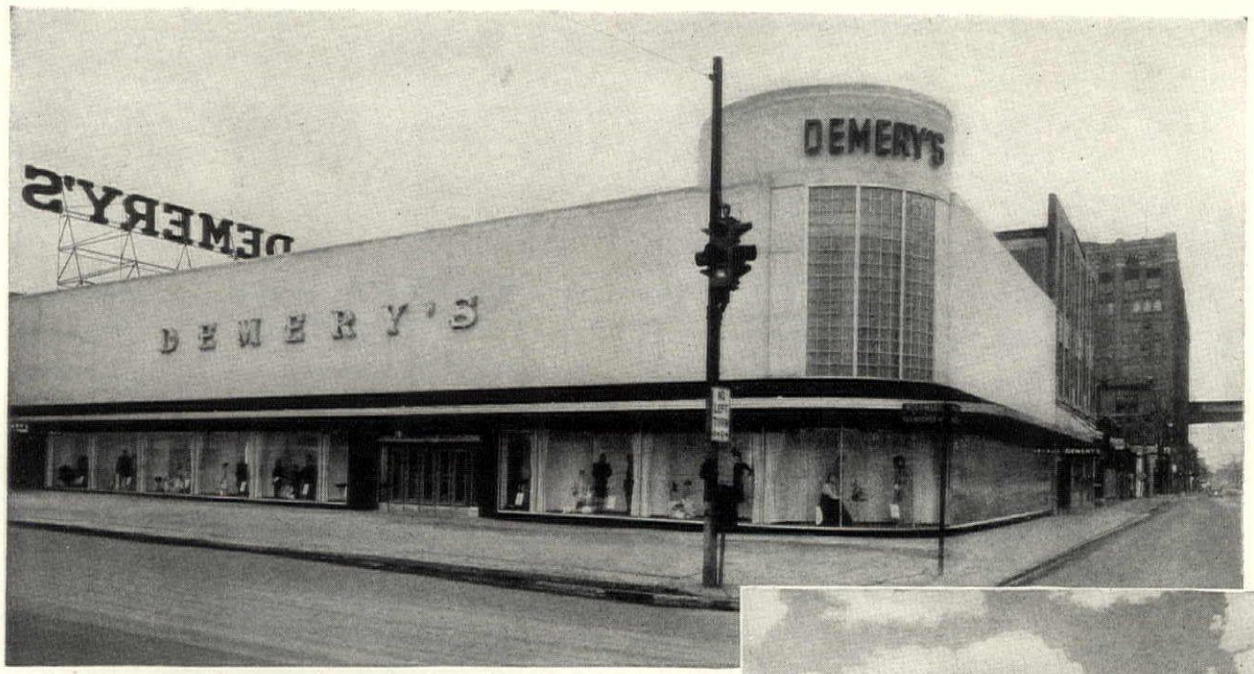
Lieut. Col. LLOYD COLLIS, 71, civil engineer, city planning expert and construction chief of the Quartermaster Corps for the Eastern District of the United States during the World War. Colonel Collis was educated at St. Paul's School, Concord, N. H. and at Columbia University, where he was graduated as a civil engineer in 1892. He was chief engineer of the company which laid the pneumatic postal tubes south of the Grand Central Terminal and across the Brooklyn Bridge, between the Manhattan and Brooklyn General Postoffices. He formed his own engineering company in 1903 and among other projects completed the Sanderson Avenue Bridge in Scranton, Pa., then the longest single-span concrete arch in the country. He also constructed the water supply system of the Military Academy at West Point.

MOSES GREENWOOD, 79, retired New York real estate operator and builder, in Maplewood, N. J. Mr. Greenwood was born in New Orleans and was graduated from Roanoke College in 1881. He was in the real estate business in St. Louis, Mo., and continued his profession after coming to New York in 1910.

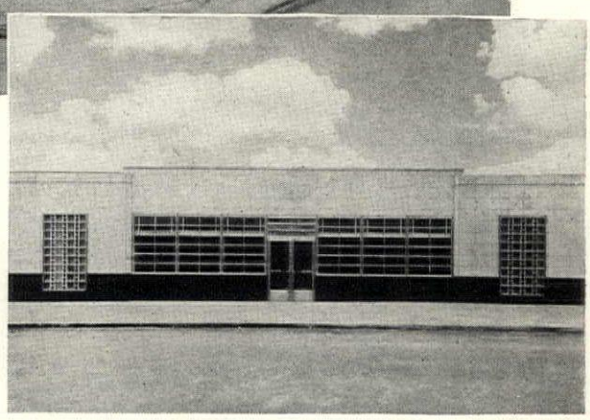
JOHN A. GOTCH, 90, British architect and author. One-time associate of Sir Edwin Lutyens, his work included residential houses, banks, schools and war memorials. He served on the council of the Royal Institute of British Architects for more than forty years and was president of the institute, 1923-25. His writings include "The Growth of the English House," "The English Home from Charles I to George IV," and "Inigo Jones."

ERRATUM

In the December 1941 issue credit was not given the National Gypsum Company for materials used in the Cardinal Hayes High School. National Gypsum furnished all metal lath, and iron, the neat plaster, gauging plaster and the acoustical tile.



Black Serpentine bulkheads, pilasters and facie; Demery's Department Store, Detroit, Mich.



Black Serpentine base and wainscoting; Terre Haute Mutual Savings & Loan Assn., Terre Haute, Ind.; Miller & Yeager, Architects.

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OF

This Popular, Economical Black Stone

New construction as well as re-modeling activity, particularly in Defense areas, calls for prompt delivery of materials . . . speedy service by suppliers . . . if schedules are to be maintained. Our ability to meet today's exacting production requirements is undoubtedly a factor in the steadily increasing use of Black Serpentine for panels, bulkheads, facing and other exterior and interior trim. Used in thin sections it makes for real economy. Designers are keen for this stone where masses or accents of black are wanted, because it retains its color and maintains its polish, and is neither reflective nor mirror-like. A request on your business letterhead will bring you samples, conveniently boxed, showing the range of stone, including black and mottled dark blues and greens. Please address Alberene Stone Corporation of Virginia, 419 4th Avenue, New York. Sales Offices in Principal Cities. Quarries and Mills at Schuyler, Virginia.

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BLACK SERPENTINE

Moderate in cost . . . Negligible in upkeep

HEADWAY & HEADACHES

(Continued from page 80)

owner who takes the greatest risk in creating any type of housing and to insure him against loss is no whit different or less fair than insuring the factory owner who puts up a new plant for war production.

First proposed by a former FHA legal counsel, this plan would protect against financial loss, in event of the war's sudden termination, any war worker buying a home or any investor building houses for rent to war workers. To be insurable, the equity would have to be reasonably strong. One suggestion: the equity owner should be insured against any loss of capital except normal depreciation for a 10-year period, should also be assured a minimum return of 2 per cent on rental housing. There is no thought, however, that such insurance would be anything more than a war measure; in normal times the equity owner would take his gain or loss as the gods of business chance decree.

Chief arguments in favor of the plan's feasibility:

► Insurance of risk capital would free private builders of all inhibitions in doing their utmost on the war effort.

► Since FHA-insured equities would be bankable, the builders could secure ample credits.

► Equity insurance for war housing has the approval of most lending institutions. Obviously, if the equity owner is protected, the mortgagee can hardly lose, even if there is no FHA insurance on the mortgage.

► Granting the Government's risk might seem to be larger than in the case of mortgage insurance, proponents of the plan believe it would not. Reason: always the security of the mortgage depends on the equity owner's strength.

► Finally, and most clinching, the cost to the Government would not be as great as the price to be paid if the needed war housing had to be built outright with federal funds.

HOUSE CONVERSION

As a short cut to the provision of needed space for war production and war housing, the National Assn. of Real Estate Boards urges large-scale rehabilitation and conversion of existing properties. Main arguments in favor: 1) conservation of critical materials, 2) conservation of real estate values.

HOLC's Deputy Gen. Mgr. Donald H. McNeal, who has been in charge of reconditioning operations involving the expenditure of some $175 millions on more than a half-million homes, also rallies to the support of this idea. To show what can be done in large cities pinched by acute war housing shortages, he cites a recent HOLC survey in the nation's capital, where the influx of Government workers has resulted in a housing problem of unparalleled severity:

"There are some 85 blocks in the southwest section of Washington—part negro, part white—all rapidly deteriorating and a considerable part already disreputable and a breeding place for disease and crime. Yet this area is one of the best located in Washington and can be seen from the Capitol. In a nine-block area, we found that many existing buildings could be modernized and made into acceptable defense housing at 50 to 60 per cent of the cost of new construction. We found that 60 per cent more housing units could be created quickly within this nine-block area and provide adequate park and recreational facilities as well.

"We found also that we could demolish 121 buildings and provide 1,000 new dwelling units. Of these, 400 would be reconditioned houses which are structurally sound and 600 would be new. Every unit created or recreated in the area would be additional defense housing, because none of the units there now are suitable to defense workers who are not utterly desperate."

Big catch to any conversion scheme like this is the difficulty in obtaining private financing on a large scale. To rehabilitate one or two structures in a generally sub-

(Continued on page 70)

PRODUCTS

helping -BUILD A STRONGER DEFENSE
A BETTER-HOUSED AMERICA

Day and night Carey plants hum with activity, speeding production of materials needed in America's all-out war effort.

Carey Heat Insulation for power plants and aviation gasoline refineries . . . Carey Shingles and Roll Roofing for housing from barracks to defense workers' homes . . . Carey Built-Up Roofs for machine tool and aeroplane engine plants . . . Careystone Corrugated Siding and Roofing for munition plants, boiler houses, etc. . . . Elastite Expansion Joint for roads and runways . . . Carey-Miami Bathroom Cabinets and Accessories for public and private housing projects . . . these but highlight the unending stream of Carey Products going into America's vital construction program.

While Carey has thus been doing its utmost to help meet America's war needs, civilian requirements have not been forgotten. There are legitimate demands for repairs, remodeling and new construction in every community — needs that can and will be met by the building industry.

Meanwhile Carey research continues unceasingly to seek improvement — to check and recheck raw materials and formulas — to subject every product to gruelling tests . . . all to the end that the architect may specify CAREY Products with the sure confidence that they will render outstanding service. For catalog and details, address Dept. 20.

Illustrations above represent the following: Underground steam lines at airport insulated with Carey Pipe Covering; Power Plant operating with boiler and turbine pressure of 2500 lbs. at 940°F. Carey Heat Insulation used; Careyduct used in air conditioning system of engineering laboratory at air field; Carey Sub-grade Felt used in construction of runways at airport; Careystone Siding and Carey Asfaltslate Roofing Shingles used on F.W.A. housing project; Corrugated Careystone Siding and Roofing used on boiler house of oil refinery; Carey Elastite Industrial Flooring in plant of aluminum producer; Carey Built-Up Roof on large aeroplane engine plant.

THE PHILIP CAREY MFG. CO.
Dependable Products Since 1873
LOCKLAND . . . CINCINNATI, OHIO
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★★★ *CHANUTE FIELD, the nation's foremost air training center. ZONOLITE CONCRETE used for insulating roof fill over almost four acres of concrete roof deck—and for all saddles and cant strips. Photo courtesy of U. S. Army Air Corps.* ★★★

When Defense Construction Calls For *SPEEDY* Insulation *Then* Knowing Designers Call For ZONOLITE

★ *SPEED . . . speed . . .* and more speed—plus permanency! Those demands distinguish the nation's vast construction program. And on insulation specifications, ZONOLITE is the ready-made answer to both requirements.

ZONOLITE, as a granular fill, or as an aggregate in concrete or plaster, means a lasting job. It delivers an extremely high thermal efficiency. It saves tons of dead load weight. It is quick and easy to work with and to install; and best of all, it is proof against fire, rot, vermin and moisture.

22 conveniently located factories assure an endless inventory to ZONOLITE Dealers. We'll gladly send full technical data on all three forms of ZONOLITE: *Zonolite Granular Fill Insulation—Zonolite Insulating Plaster—Zonolite Insulating Concrete.*

No "Priorities" on ZONOLITE.

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TRADE MARK REG U S PAT OFF
PERMANENT AS THE EARTH ITSELF

UNIVERSAL ZONOLITE INSULATION COMPANY
Plants In Principal Cities
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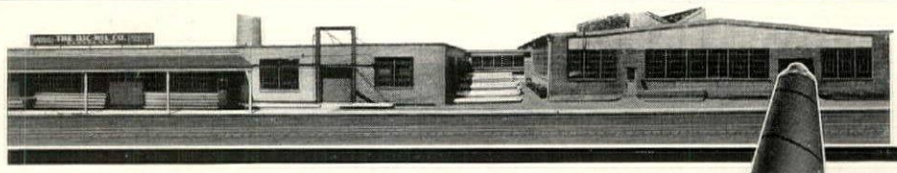
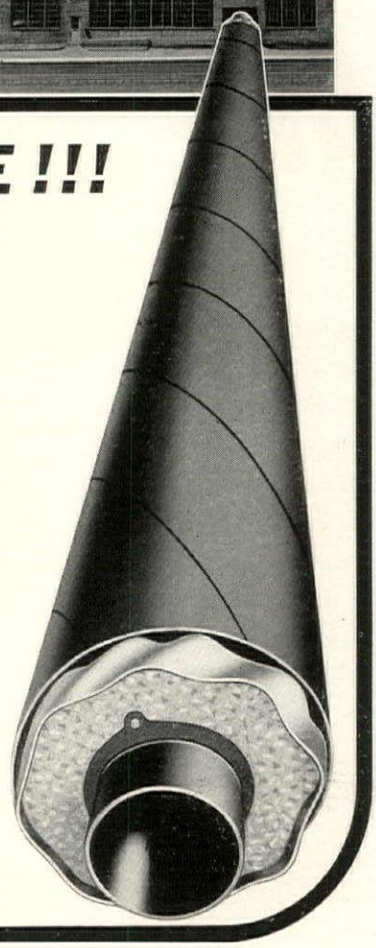
NOW... TIME *IS THE ESSENCE!!!*



USE PRE-FABRICATED INSULATED PIPE UNITS

● Ric-wiL has applied production-line manufacturing methods to turning out correctly designed, factory pre-fabricated underground steam conduit systems ready for installation. These units save most of the field assembly time required by other types of conduit, and they assure minimum and predetermined costs on the job. They eliminate construction bottlenecks, turmoil, and headaches.

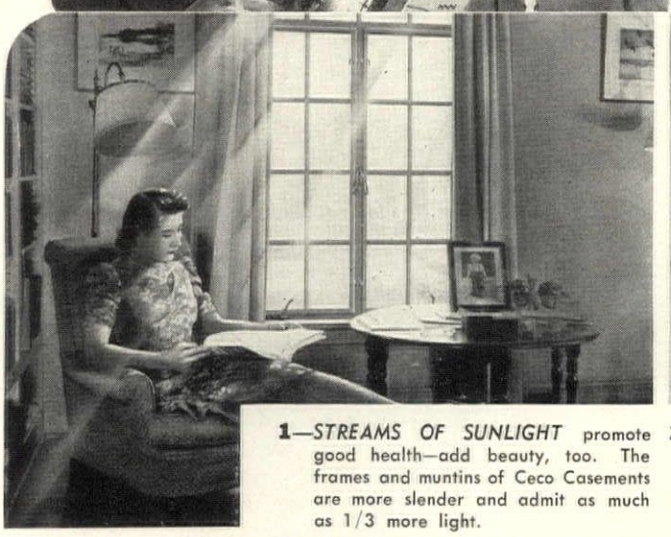
Over half a million feet sold for government defense work alone. All parts are standardized and precision-made in the factory, including expansion fittings and all necessary accessories. Units are completely finished in the shop—nothing else to buy! Any type insulation. For ACTION—get in touch with your nearest Ric-wiL representative. Write for latest bulletins.

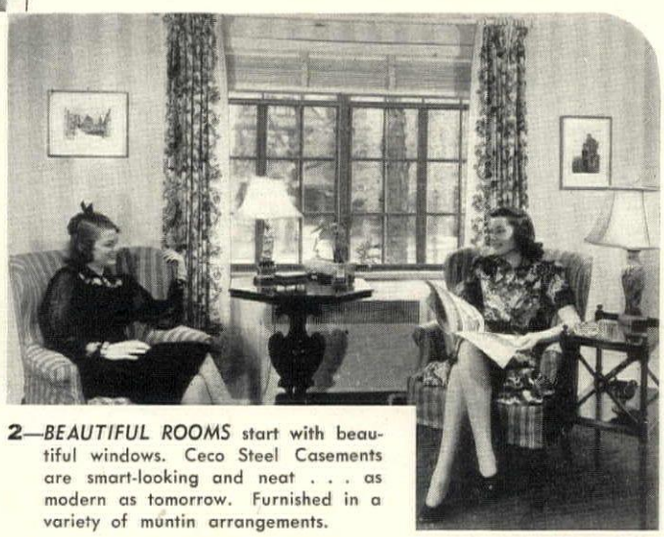


THE RIC-WIL CO. CLEVELAND, OHIO
AGENTS IN PRINCIPAL CITIES

Here's What Makes a Home MORE LIVABLE

TENTH of a series of advertisements on How to Design and Build Homes That Sell!



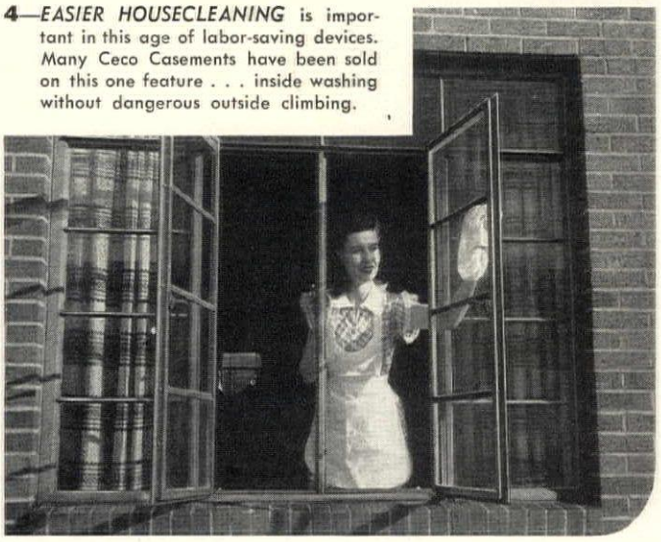


1—*STREAMS OF SUNLIGHT* promote good health—add beauty, too. The frames and muntins of Ceco Casements are more slender and admit as much as 1/3 more light.

2—*BEAUTIFUL ROOMS* start with beautiful windows. Ceco Steel Casements are smart-looking and neat . . . as modern as tomorrow. Furnished in a variety of muntin arrangements.

3—*MODERN COMFORT* is a big reason for Ceco Casements. They admit fresh air in summer . . . close tightly against winter weather. All meeting points are "double-weathered!"

4—*EASIER HOUSECLEANING* is important in this age of labor-saving devices. Many Ceco Casements have been sold on this one feature . . . inside washing without dangerous outside climbing.



GET THIS BOOKLET ON BEAUTIFUL, LIVABLE HOMES!

In this "BEAUTIFUL WINDOWS" booklet you will find page after page of smart, new window ideas. It has been designed as a sales aid for you. Send for your copy. Show it to your prospective home-owners!

● Designers and builders of truly modern homes all over America are swinging to Ceco Steel Casements. Modern homes must be livable, and Ceco Casements add substantially to that livability! They combine beauty and good taste with usefulness. Sticking, warping and rotting are impossible . . . BONDERIZING does away with rust destruction. Build for livability . . . build for permanence . . . try Ceco Casements on your next job!

CECO STEEL PRODUCTS CORPORATION

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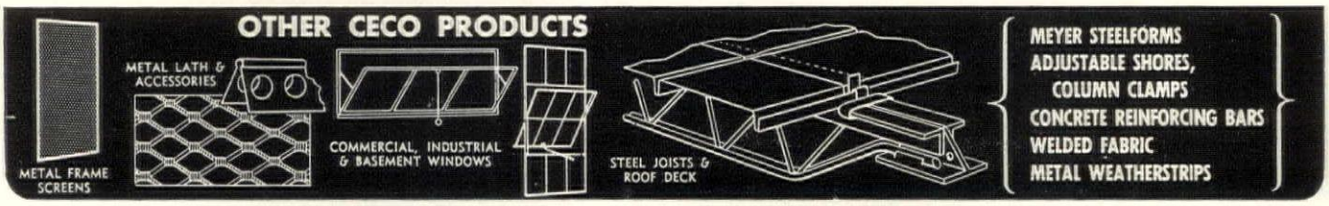
Ceco Steel Windows

OTHER CECO PRODUCTS



HEADWAY & HEADACHES

(Continued from page 66)

standard neighborhood is futile; the program must be broad and inclusive if it is to be effective. Furthermore, in the interest of speed, right of eminent domain would have to be exercised. All of which leads McNeal to the conclusion that his proposed project in Washington should be federally financed: "The Government can get its money back, however, for it could rebuild the existing structures to rent for $6.50 to $7.50 a room and amortize its investment over a period of 40 years."

Similarly, NAREB's offspring, the Home Builders Emergency Committee, in plumping for the twofold objective of eliminating community blight elsewhere while speeding up private builders' production of rental units through conversion of old houses, comes out strong for Government assistance on the financing end. In a proposal submitted to Defense Housing Coordinator Palmer, the Committee recommends that the RFC, acting possibly through the Defense Homes Corporation, purchase common stock in companies which the Committee will seek to set up in all defense areas for the purpose of rehabilitating existing dwelling units by conversion. Such companies, it adds, can have their mortgages or mortgage bond insured by FHA.

Sidelight: In October, first month after priorities were applied, home buying loans hit a total of almost $60 millions, an increase of approximately 47 per cent over the same month a year before and the largest volume savings and loan associations have been called on to handle in any one month since the booming Twenties, reports the U. S. Building & Loan League. Major part of these loans were in defense areas. As the league's president, Fermor S. Cannon, of Indianapolis, observes: "Faced with the possibility that they might not be able to get a new house built, families flocked to the market for the existing ones."

REVERSE CONVERSION

A boom now in the making for post-war America is pictured in a report just issued by the National Resources Planning Board. The war should end with the nation's resources greater than ever and with more people trained in skilled and semi-skilled jobs, say the planners. Task is then to keep these resources at work, producing peace-time goods to the tune of $100 billions a year.

First essential for such a post-war objective, states the report, is for Americans to get it through their heads that "when we organize for maximum production on the basis of full employment, without being stopped by the costs, we discover, as have other nations, that increased production pays the real costs involved. Doing the job pays the bill. In other words, the central problem is not money; it is man power, resources and organization. At last we are beginning to see that finance was made for man and not man for finance."

Matching its brave words with action, the NRPB has already propelled 52 cities and 19 States into a long-range planning of their public improvements as part of a program to build a reserve of public works for post-war use. This Public Work Reserve is being sponsored in cooperation with FWA.

NRPB also announces appointment of a special committee, chairmanned by Dr. Leonard Carmichael, to deal with special problems arising from the war-time drain on specialized personnel. Serious shortages of skilled specialists are being reported by private industry as well as Government.

From Gerard Swope, New York City Housing Authority's recently resigned chairman, comes an outline of a post-war rehabilitation program for seven large districts. Preliminary work, argues Swope, should be carried forward now so that the reconstruction plan will be ready to take up the slack promptly when the war ends. (Last year the Authority completed four new housing projects, provided 2943 new homes for low income families at an average unit cost of $3422.) Additional support for slum clearance as a post-war economic buffer can also be found in the

(Continued on page 74)

Join the Swing to Homes "Comfort-Conditioned" with...

New, Improved KIMSUL

REG. U. S. & CAN. PAT. OFF.

INSULATION

■ All over America, the trend is toward homes "Comfort-Conditioned" with KIMSUL*—for economical comfort both winter and summer. Here's why:

Architects and builders recommend KIMSUL blanket because it is one of the most effective insulations known: conductivity is .27 Btu/hr./sq. ft./deg.F./inch (Peebles). Flexible as a blanket, KIMSUL is chosen because it's one of the easiest and most time-saving of all insulations to install. Spaces behind pipes, electrical wiring, other obstructions are easily insulated with KIMSUL. "Tight spots" don't stop KIMSUL! And, vitally important these days, KIMSUL cuts down man-hours per job. Usually, one man can install it.

Light in weight, KIMSUL adds practically nothing to structural loads. Once installed, KIMSUL assures lasting protection to the home owner. KIMSUL blanket won't sag, sift or "pack down" in walls, because it is made of numerous separate and self-supporting continuous sheets which are bound together with rows of strong stitching.

Delivered compressed, KIMSUL saves on freight and storage charges, doesn't "hog" space on the job. Comes in three thicknesses and in widths to meet every need. And a recently introduced tough waterproof covering makes KIMSUL blanket resist rough handling; makes finished job of outstanding neatness. Facts you'll want are given in FREE book "A NEW IMPROVED KIMSUL INSULATION". Send for it now!

*KIMSUL (*trade-mark*) *means Kimberly-Clark Insulation*

KIMBERLY-CLARK CORPORATION
(Building Insulation Division)
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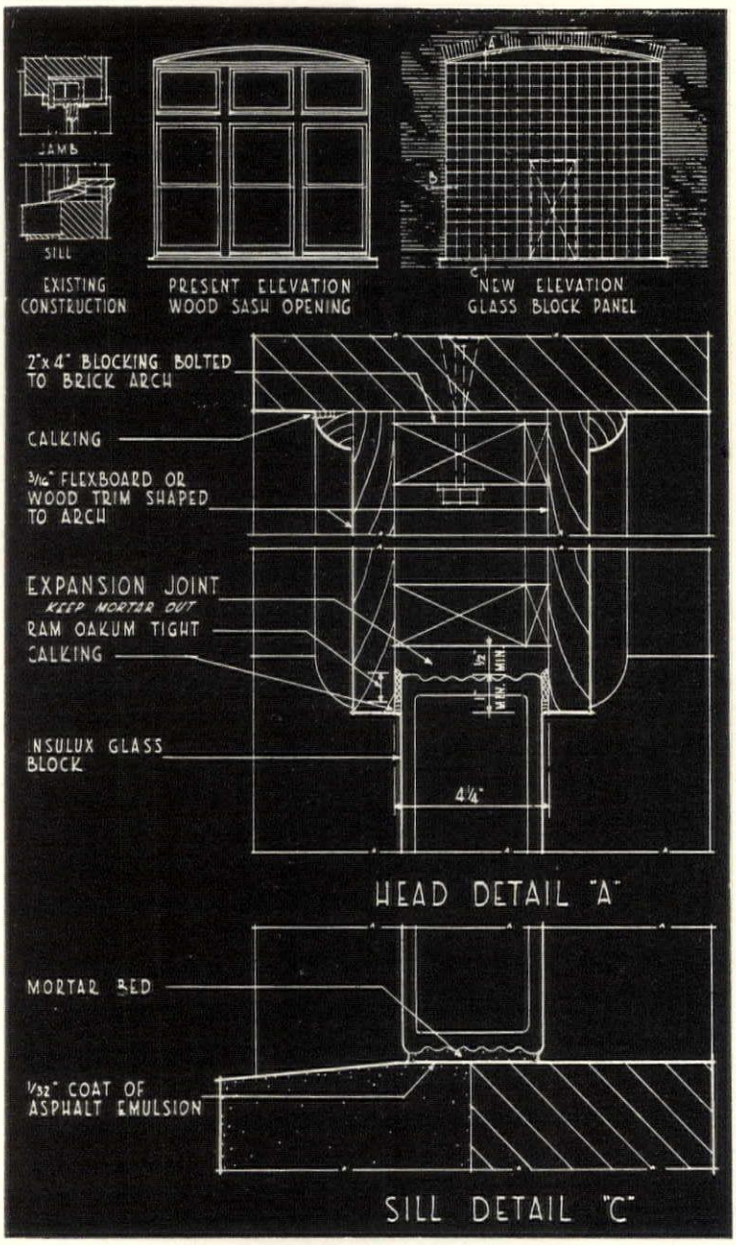
A *New* Technique for Sash Replacement — INSULUX Panels That Require *No Metal*

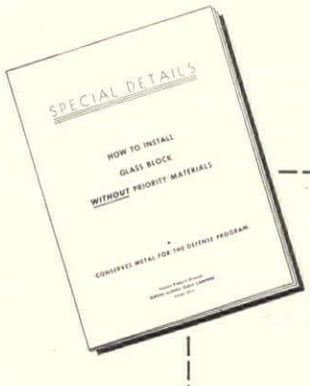
HOW TO REPLACE
WOOD WINDOWS IN 12" BRICK WALLS



Arched head wood windows may be replaced with glass block by removing the sash and altering the opening:

1. Coat sill with asphalt emulsion;
2. Bolt wood stops on interior to form a chase with existing exterior brick;
3. Bolt wood blocking to arched masonry head to take exterior and interior wood trim or Flexboard.

Free This new 16-page book of special details shows how to install glass block panels without metal. It covers sash replacement and new construction. Write for your copy today.



Send for *FREE* detail book

This new technique—planned by Owens-Illinois engineers and proved by severe tests—permits you to frame glass block panels with alternate materials, thus saving critical defense materials.

It works for almost any size opening—demands no steel or priority materials of any kind although it provides for conversion in the future to standard construction if desired—can be combined with sash where you wish vision or ventilation.

When you specify INSULUX Glass Block for sash replacement, priority rulings need not delay improvements or repairs to light-transmitting areas.

And you are assured of quick construction for INSULUX is available for prompt delivery.

For sash replacement, INSULUX Glass Block insures generous light transmission, quick construction and low maintenance cost—and releases needed priority metals for national defense.

The new INSULUX book—with a wide variety of details—covers almost every type of installation. It will prove a valuable addition to your reference library. Write for your copy today.

PROMPT DELIVERY ON INSULUX GLASS BLOCK —SAVE PRIORITY METALS BY USING INSULUX

OWENS-ILLINOIS
INSULUX *Glass Block*

OWENS-ILLINOIS GLASS COMPANY, INSULUX Products Division Dept. 31, Ohio Building, Toledo, Ohio.
Gentlemen: Please send me, without obligation, your free book on "How to Install Glass Block *Without* Priority Materials."

Name.....

Address.....

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

HEADWAY & HEADACHES

(Continued from page 70)

Boston Housing Authority's impressively presented review of its accomplishments since 1936.

DECENTRALIZATION

For almost a decade, hard-pressed Washington builders have managed to supply incoming swarms of Government workers with adequate office and living space. But, caught between the pincers of priorities and an accelerated expansion of Government bureaus, they have recently been waging a losing struggle. Finally, month ago, the shortage of space became so acute President Roosevelt decided that the city's facilities could not be swelled as fast as the influx of personnel needed by war agencies, ordered a round dozen federal agencies whose activities are primarily peacetime to be moved to other cities.

Squawks came immediately. AFL President William Green and other critics contended that the proposed transfer was unnecessary; it would entail unwarranted expenditures, be destructive of morale. Besides, they argued, there is ample Government-owned land in the District of Columbia where temporary office buildings and housing could be thrown up in 90 to 120 days at no excessive cost.

Rebuttal to this argument was fact that temporary wood structures are now springing up wherever there is a patch of vacant Government-owned land that can be spared. (Construction of one immediately back of the White House itself was averted by horrified planning officials only in the nick of time.) And, when the Budget Bureau estimated that an additional 250,000 persons—including Government workers and their families, plus the extra trades and service workers needed for their maintenance—would be flocking into the city before the year's end, it became obvious that no amount of money poured into temporary buildings could provide sufficient space soon enough to do much good. Reluctantly, fortnight ago, Congress conceded it could no longer hold self-sufficient bureaus to its apron-strings and officially sanctioned the President's order.

Denied further reprieve, the agencies slated to be pushed out of Washington—Patent Office, Social Security Boards, Old Age Survivors Insurance Bureau, Rural Electrification Administration, Farm Security Administration, Fish and Wildlife Service, National Park Service, Office of Indian Affairs, Naturalization Service's Alien Registration Division, Wage and Hour Division, Labor Department's Solicitor's Office, Employees' Compensation Commission, Railroad Retirement Board, Securities and Exchange Commission—are now packing up.

To assist them and their personnel, the Public Buildings Administration has organized an Office of Decentralization. Staffed by eight experienced real estate men and headed by Fred E. Taylor, a realtor from Portland, Ore., this office is intended to serve as liaison in informing the departing bureaus about office and residential space available in other cities.

Destinations of Washington's evacuees are not definite. Each agency has some latitude in its choice of a new home, since all that matters is its immediate departure from the country's biggest boomtown. For example, the Patent Office, first scheduled to go to New York, is now remodeling a former tobacco warehouse in Richmond, Va., as its new quarters, having found this unconventional structure ideal insofar as it provides all the necessary room under a single roof.

To make Government agencies more attractive to landlords, some of the rather arbitrary laws governing official leases have been set aside or toned down. Scrapped altogether is the old dictate prohibiting annual rent payments greater than 15 per cent of the building's appraised value. Softened is the length limit heretofore held to one year periods; leases may now run longer if they stipulate rentals beyond the first year are conditional on future Congressional appropriations. Despite such legalistic fuss and feathers, the Government is reputedly a good tenant—an agency seldom moves out once it takes over some space.

★ ★

SPEED UP DEFENSE CONSTRUCTION WITH ATLAS HIGH-EARLY CEMENT!

When time must be saved on any construction project, specify Atlas High-Early cement. It's made to order for speeding up construction in winter or summer . . .

★ ★ ★

SPEED in building cantonments, defense housing, naval bases, roads, runways. Speed in building, converting and repairing defense factories. That's today's "must." And SPEED's the reason builders are specifying Atlas High-Early cement.

Specify it for any type of new concreting work, for conversion of existing plants, or for quick, lasting repairs. In actual application Atlas High-Early cement is similar to normal portland cement . . . easy to work with, requires no special equipment.

● Atlas High-Early cement saved three to four weeks' time in construction of this Appleton Electric Company building in Chicago. *Architect:* Robert C. Ostergren; *Engineers:* Smith & Brown; *Contractor:* Carl E. Erickson Co.

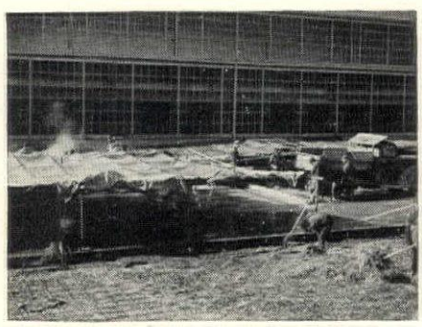
SAVES TIME: *Look what Atlas High-Early cement has done on these typical jobs:*

Saved 72 days on new factory.
Saved 13 days on machine tool plant addition.
Saved 12 days on foundations.
Saved 24 days in winter construction.
Saved 25 days concreting at freezing temperature.
Saved one week in finishing factory floor.
Cut one month off three-month building schedule.
After 70 hours made concrete strong enough to hold 560 tons of steel.

SAVES MONEY: *On many jobs Atlas High-Early saves money, too. For example:*

Saved $1000 in tarpaulin costs.
Saved $288 in fuel costs.
Saved two sets of forms.
Saved 20,000 ft. of lumber and 20,000 ft. of plywood.

Specify Atlas High-Early cement to speed up defense housing; to speed up new cantonments; to speed up defense industry construction; to speed up construction of administrative buildings, hospitals, warehouses, roads, runways . . . anv kind of concrete work.



● Defense expansion was pushed ahead 13 days with Atlas High-Early cement at the Monarch Machine Tool Company, Sidney, Ohio. *Architect:* Schenk & Williams; *Contractor:* M. C. Ferguson.

NOW IS THE TIME to speed up rush jobs with Atlas High-Early cement. Specify it for your next job. Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York City.

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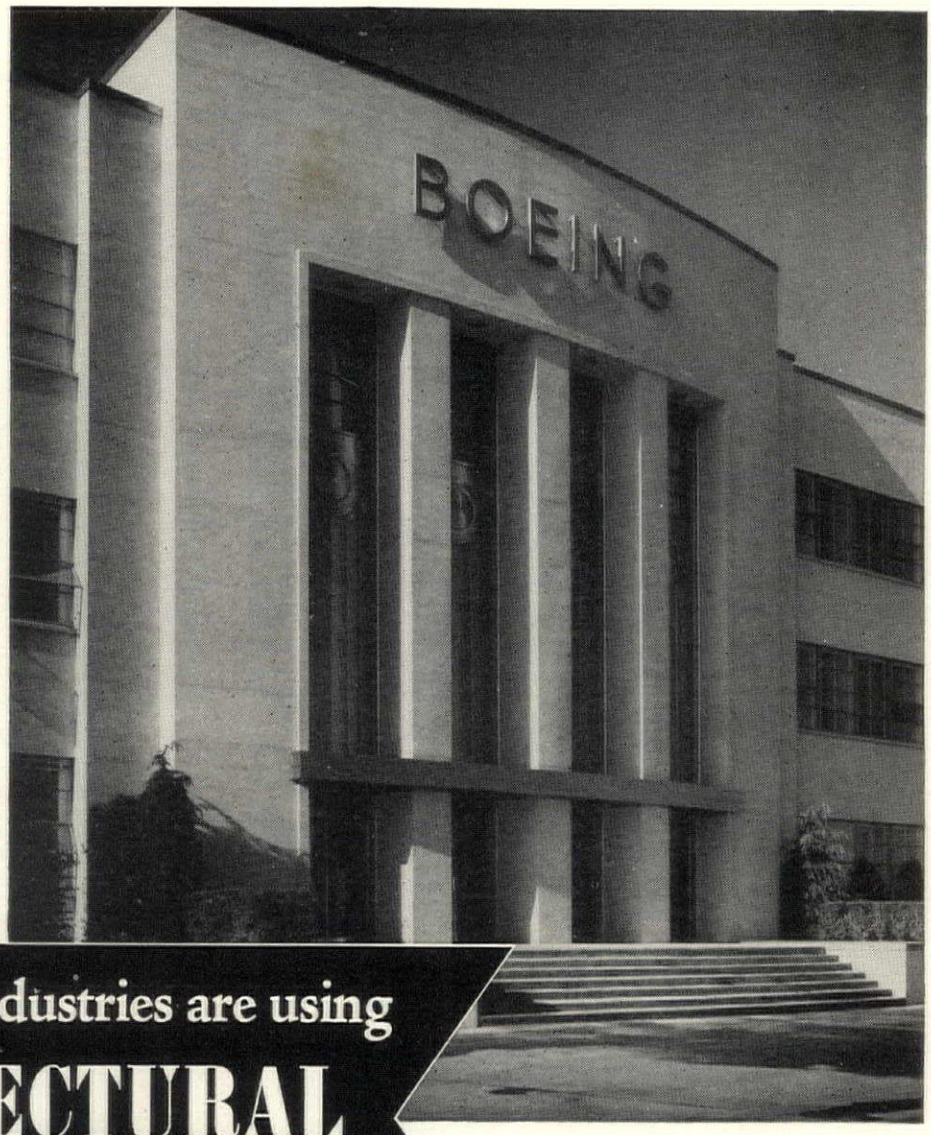
OFFICES: *New York, Chicago, Philadelphia, Boston, Albany, Pittsburgh, Cleveland, Minneapolis, Duluth, Kansas City, St. Louis, Des Moines, Birmingham, Waco.*

AF-H-42

ATLAS HIGH-EARLY CEMENT

A UNIVERSAL ATLAS PRODUCT

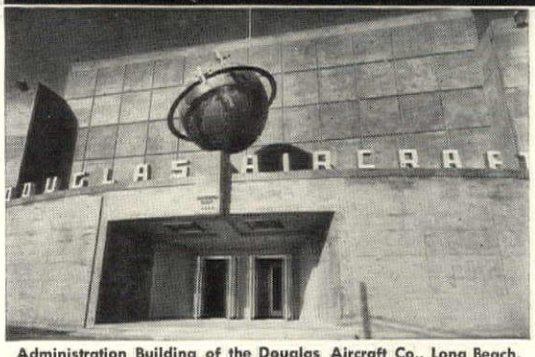


★

Executive Office Building, Boeing Airplane Co., Seattle. The Austin Co. of Seattle, designer and builder.

★

"*Front line*" industries are using ARCHITECTURAL CONCRETE



Administration Building of the Douglas Aircraft Co., Long Beach, Calif. Edward Gray Taylor and Ellis Wing Taylor, architects and engineers; built by P. J. Walker Co. (all of Los Angeles).

Office Building of the Vega Airplane Co., Burbank, Calif. Designed by John and Donald B. Parkinson, architects; William Simpson Construction Co., contractors (all of Los Angeles).

ARCHITECTURAL CONCRETE'S unique adaptability is nowhere better shown than in its current use in new aircraft factories, army depots, hangars, warehouses, defense plants and other industrial buildings. Availability and speed of construction are factors in the choice, but another big reason is this—*concrete helps to create staunch, firesafe, low-maintenance structures of good appearance at low first cost.*

Concrete can be molded into any shape or form, given many textures, formed to any structural or architectural need.

Ask your architect or engineer about Architectural Concrete, or see Sweet's Catalog, 4/45. Booklet *"Concrete for Industrial Buildings and Garages"* will be sent on request, free in the United States or Canada.

PORTLAND CEMENT ASSOCIATION

Dept. 2-7, 33 W. Grand Ave., Chicago, Ill.

A national organization to improve and extend the uses of concrete . . . through scientific research and engineering field work

PREFABRICATION GETS ITS CHANCE

(Continued from page 83)

most important of the others are summed up in the full meaning of the term Design (which includes livability as well as appearance) and stem from the fact that prefabrication, at least in its present form, is not too well suited to the large-scale, rental project. Houses designed as individual, free standing units are necessarily monotonous when combined in communities of several hundred built as one operation, whether or not efforts at variation are made, and the $3,000 house is not usually a thing of beauty under the best conditions. Single story houses waste land even when combined in rows, and require abnormally high utility costs per family. Constant pressure to reduce cost (the average income of the families to be accommodated is $1800) is bound to result in corner cutting at the expense of livability and comfort, and tenants in rental projects are in a position to register their complaints more effectively than scattered, individual owners.

Add to this that Government construction is considered fair game by critics of all types, is none too perfect at best, and it is easy to see that if the program is rated even moderately successful at its conclusion it will be as much a matter of good luck as good planning.

EFFECTS

From Building's standpoint, the principal effect of the program, assuming that it is relatively successful and continues, will be the creation of a highly-efficient, well-equipped, and well-heeled agency for post-war home building. This may mean stiff competition for conventional construction, or it may mean the opening-up of a hitherto untapped market which will bring building activity of other types in its train; at any rate, it is sure to result in changes — big changes — all along the line, over and above those wrought by the war itself. And, since these must be in the direction of greater economy and efficiency they are bound to help Building in the end — and to help it perform the tasks in a post-war world which it failed to perform in the pre-war period.

PROJECTS

Allotments totaling 23,933 units in 34 different localities in the new program had been reported by Acting FWAdministrator Baird Snyder III on January 26. Locations of the remainder of the scheduled 42,000 units will be announced shortly.

Allotments	Units
Alton-E. Alton, Ill.	200
Bremerton, Wash.	1,000
Buffalo (Cheektowaga), N. Y.	1,050
Buffalo (Lackawanna), N. Y.	400
Burlington, Iowa	400
Campo, Calif.	30
Crab Orchard, Ill.	400
Dayton, Ohio	750
Elkton, Md.	350
Elkton, Md.	200
Greenport, L. I.	50
Jackson-Flora, Miss.	350
Jackson-Milan-Hamboldt, Tenn.	200
Joliet. Ill.	500
Keyport, Wash.	125
Mineral Wells, Tex.	100
Mobile, Ala.	1,060
Morgantown, W. Va.	150
Muscle Shoals, Ala.	100
Norfolk, Va. (including Portsmouth)	11,500
Ogden, Utah	2,000
Orange-Banbont-Port Arthur, Tex.	300
Philadelphia, Pa.	200
Quantico, Va.	250
Radford-Pulaski, Va.	500
Rockford, Ill.	200
Sacramento, Calif.	125
Sandusky, Ohio	200
Seattle, Wash.	100
Sebring, Fla.	193
Shreveport-Minden, La.	200
Springfield, Ohio	250
Sturgeon Bay, Wis.	100
Weldon Springs, Mo.	300
Whidbey Island, Wash.	100

4-Point Protection ON WALL FIXTURE JOBS PROVIDED BY ZURN ENGINEERED CARRIERS

One: No Damaging Strain on the Wall

Damaging strain on the wall *can't* happen on wall fixture installations if you specify Zurn Engineered Carriers. Their tested mechanical features—based on accepted engineering principles—are the logical result of several years of intensive research in the support of wall type fixtures . . . research that covered every phase of hundreds of actual installations. Thus, Zurn's vast fund of know how puts an end to risks and grief due to improper installation of wall fixtures. Before each Zurn Carrier leaves the factory every necessary adjustment is made for the type, model and make of fixture it is to support. Installation *can't* go wrong.

The 4-Point Protection provided by Zurn Engineered Carriers enables you to utilize in full the greater sanitation and beauty of wall fixtures, and to take advantage of the long-term insurance they provide against premature obsolescence of toilet and washrooms.

Specifying Zurn Engineered Carriers removes the risks usually incurred when "half-way" specifications leave the method of support to the discretion of the plumbing contractor.

This 4-Point Protection:

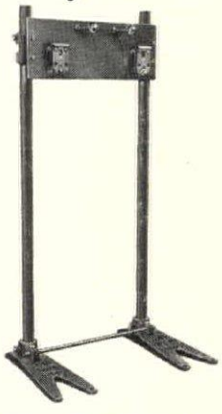
1. **No damaging strain on the wall**
2. **Positive, horizontal and vertical adjustment**
3. **Proper, grief-free installation**
4. **Perfect, permanent fixture alignment**

. . . makes Zurn Carriers every bit as essential to the enduring satisfaction of wall fixture installations as the fixtures themselves—and *fully as worthy of specification.*

The Zurn Carrier Catalog contains complete information on all 25 styles of Zurn Engineered Carriers. Get your copy today.

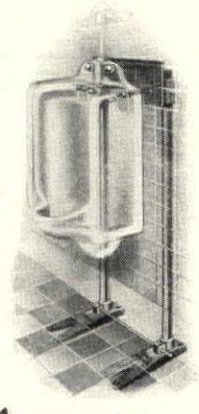
J. A. ZURN MFG. CO. • *Sales Office and Factory:* **ERIE, Pa. U.S.A.**

WHEN YOU SPECIFY WALL FIXTURES SPECIFY ZURN *Engineered* CARRIERS TO SUPPORT THEM



◀ Zurn Engineered Carrier for supporting wash-out type urinals.

This phantom view shows how Zurn Engineered Carriers provide the proper support for urinal fixtures without damaging strain on the wall. ▶



THERE IS A ZURN *Engineered* CARRIER FOR SUPPORTING EVERY TYPE OF WALL FIXTURE

ZURN

BUILDING • PLUMBING DRAINAGE PRODUCTS

Roof to Basement

J. A. ZURN MFG. CO., Erie, Pa. • U.S.A.

Please send me a copy of the Zurn Carrier Catalog.

Name _____

Address _____

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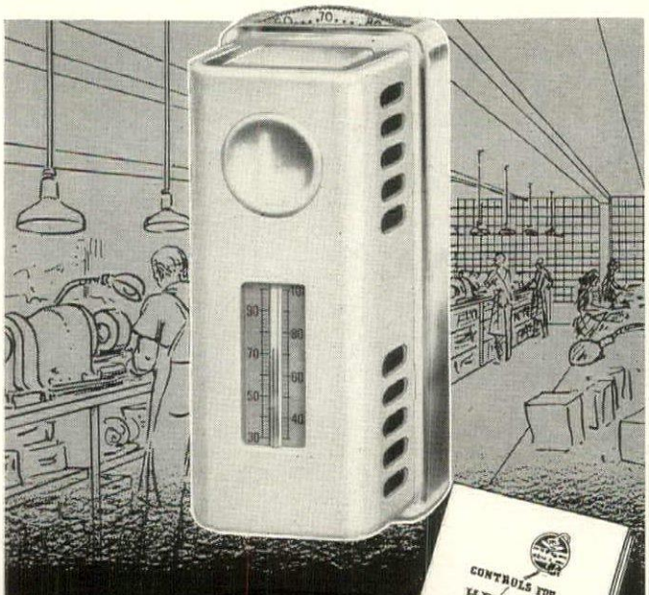
No. 421

P. S. Please attach to your business letterhead



. . . send today for catalog of controls that combine accuracy with structural features particularly designed for heavy-duty applications.

WHITE-RODGERS ELECTRIC CO.

12926 Cass Avenue, Saint Louis, Mo.

"Automatic" CONCRETE CURING

"On jobs like this — or a small basement floor!"

On ANY job, thorough curing under waterproof SISALKRAFT assures maximum hardness, density and strength. This method is simple, positive and economical. Once the paper is laid over a freshly finished slab, no further attention is required. No sand, burlap or sprinkling. No human element. SISALKRAFT for concrete curing is becoming the standard specification.

Write for complete data file.

The SISALKRAFT Co.

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Competition for Airport Building

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The Fitchburg Municipal Airport Commission

GEORGE R. WALLACE, Chairman

Announces an Architectural Competition For the Design of

An Administration Building at the Municipal Airport

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Copies of the Program May be Obtained From

JOSEPH HUDNUT,

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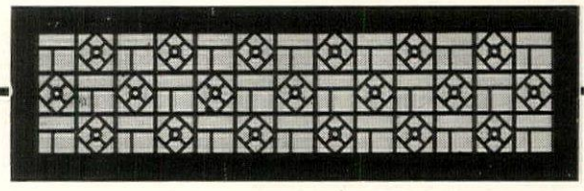
IN ANY MULTIPLE OF 2-7/16"



Here is a most practical grille—Arglin. It can be used in any multiple of 2-7/16". Simple in design, it is applicable for a wide range of installations. The open area is 63%.

Arglin and other Hendrick Grilles are available in aluminum, bronze, monel, stainless steel, steel and other commercially rolled metals.

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Offices and Representatives in principal cities. See 'phone book. Mfrs. of Mitco Open Steel Flooring, Mitco Shur-Site Treads and Mitco Armorgrids, Hendrick Perforated Metals and Screens.

Prevent

"Building Bulge" *with* Laux REZ

TRADE MARK REG. U. S. PAT. OFF.

AVOID destructive moisture absorption, costly vexatious swelling, binding, shrinking, grain raising, loss of dimension in sash, doors, mill work, plywood, etc. . . . by first applying Laux REZ, the scientific sealer and preservative.

This unique synthetic resin penetrates into wood fibre, leaves a tough water-repellent barrier on cell walls . . . locks in natural moisture, locks out external moisture.

Dry rot, fungus, decay, stain are also controlled because Laux REZ contains a potent, approved toxic.

Applied by brush, spray, in dip tank at the plant, or on the job, Laux REZ gives positive low-cost protection to any wood product, anywhere. Millions of gallons of REZ and other Laucks wood preservatives have given years of lasting protection to construction. Paint, hardware or lumber dealers can supply REZ, or write your nearest Laucks office for complete information.

LAUCKS WOOD PRESERVATIVES

Dry rot, moisture, stain, decay and other types of wood destruction are controlled by a series of Laucks preservatives for use in large-scale industrial application. Each formulation is designed to do a particular toxic or water-repellent job on siding, plywood, etc. Many meet N.D.M.A. or Western Pine Association requirements. Write today for FREE descriptive brochure.

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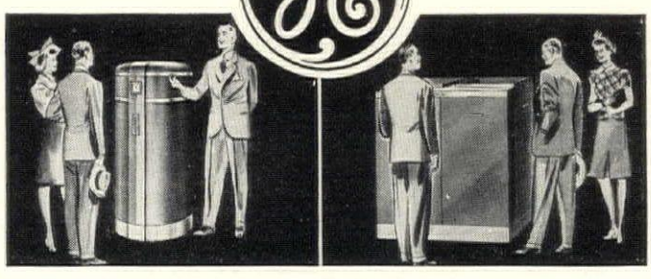
NEW LOW-COST G-E GAS FURNACES FOR DEFENSE HOUSING

LOOK AT THESE FEATURES

- One compact unit. Smallest size occupies only 3½ square feet floor space.
- Corrosion - resistant cast iron heat transfer surface assures high transfer efficiency.
- Comes to you in one "package," factory wired and assembled for installation by any sheet metal contractor.
- Underwriters' Laboratories, Inc., approved for installation with only 2 inch wall clearance.

For defense housing and remodeling requirements, consider the General Electric series of new gas furnaces ranging from 48,000 to 96,000 Btu per hour output. These units will meet any of the heating requirements that may be encountered in defense housing projects utilizing forced warm air heating. For further data write to General Electric, Division 2132, Bloomfield, N. J.

TURN TO GE



For radiator or warm air heat, using oil or gas

G-E Oil Furnaces in 7 different sizes for various heating capacities. Year 'round domestic hot water coil. Also G-E Gas Furnaces.

G-E Winter Air Conditioners (Oil or Gas Fired) circulate *conditioned* warm air heat—filtered and humidified.

GENERAL ELECTRIC

A REPRESENTATIVE PREFABRICATOR

(Continued from page 90)

the new type in the Lafayette area in two months. For Lowman and Slipher, this clinched the argument. Since the Gunnison Housing Corp. had been reluctant to develop a lower-priced model and seemed even more reluctant to exploit it (the corporation was not supplying the Miracle-type to its other dealers), they decided to pull out of the parent organization and go in business in the Lafayette area on their own. They were joined in their new venture by John King, who relinquished his job as Gunnison production manager to take the same job with National, by Tedford and Price as dealers and directors, and by some ten local doctors and lawyers as stockholders.

National Homes Corp. started in business with an idea and the assurance of 17 sales before production began. Work was begun on a 7,500 sq. ft. plant on July 1, 1940 which by July 31 had shipped its first house. On August 3 the construction method and the 4 standardized house types had received FHA approval, and business was beginning to boom. By September 15 there were 5 active National dealers within a 100-mile radius of the plant and in October shipments reached the house-a-day rate which, in July had been set as the goal that would represent success.

Prime reason for this success was a house aimed at the needs and purchasing power of a previously unsatisfied market, plus a localization of operations which made the target highly discernible. National's four models, sold complete for $3,200 to $4,600 plus land, were designed to give the small-town, mid-West family what it wanted at a price it could afford to pay. The typical, $1800-a-year purchaser wanted a basement; therefore, all of the house types included a basement with an inside stair. Housewives demanded a window over the kitchen sink; therefore, all of the houses had their sinks beneath windows, regardless of the additional plumbing required. Since most customers wanted a separate dining space, the largest-selling model, at $3,600, included an 8 by 12 ft. dining alcove. In other words, National succeeded by applying merchandising horse-sense to a field more noted for abstruse theory.

Soundly rooted in private sales, National's business has grown big on defense orders. Original productive capacity of 2 houses a day has been increased to 10 and now 12 by doubling the size of the plant and adding extra shifts. The fleet of trailer trucks which is an integral part of the house assembly line has expanded from 3 to 31, the number of plant employees from 45 to 485. As for materials, National now buys a carload of plywood (56,000 sq. ft.) every day, uses 280 gallons of paint, a ton of nails, 5,000 lbs. of steel windows, 3,000 lbs. of glass, 28,000 sq. ft. of insulation, 70,000 bd. ft. of framing lumber and 12,600 bd. ft. of prefinished flooring every 24 hours.

National got in on the ground floor for defense work with 63 houses for the Indian Head (Md.) project and prefab-proving ground. Following Indian Head, it finished off the year, and its first 18 months' existence, with 200 units for Ft. Knox, Ky., 200 for Walkerton, Ind., and 100 for Port Clinton, Ohio.

National enters the new year and the new program with a proven capacity of 12 houses a day and a product pre-tested by public acceptance. With an eye to the post-war future and the underlying theory of localized operation on which it was founded, it plans no further expansion of the Lafayette plant but will operate this plant at utmost capacity as long as defense houses are needed. It may also establish similar plants in other areas, or license other manufacturers with plant facilities to use the National system. It will do what it can to protect its dealer organization by recommending experienced dealers as erection contractors or contractors' superintendents, must otherwise relinquish its private business completely. Devoting itself entirely to production, if Government orders continue, it should produce over 3,000 prefabricated houses in 1942.

● New paint, new paper, *new Mengel Flush Doors*—that's a prescription for complete rejuvenation at *very low cost!* For, believe it or not, you can now buy Mengel Flush Doors for *approximately the same price as panel doors!*

How can Mengel do it, you ask? First, Mengel is America's largest producer of hardwood products. From forest to final shipping room, Mengel Flush Doors are made in our own plants, from our own virgin timber, our own lumber, our own veneers. . . . That is one reason. The other is that Mengel *knows how* to produce top-quality merchandise on a real mass-production basis. That's the *only* way we could have built our present $20,000,000 annual business!

Mengel Doors are *better* flush doors. Ask your dealer to show you these beautiful, sturdy products. *Let him quote you!* Or, if your dealer is not yet prepared to serve you, mail the coupon below!

The Mengel Company, *Incorporated*
1126 Dumesnil Street, Louisville, Ky.

Gentlemen: Please send me full information about Mengel Flush Doors ☐ . . . Also about Mengel Bord ☐.

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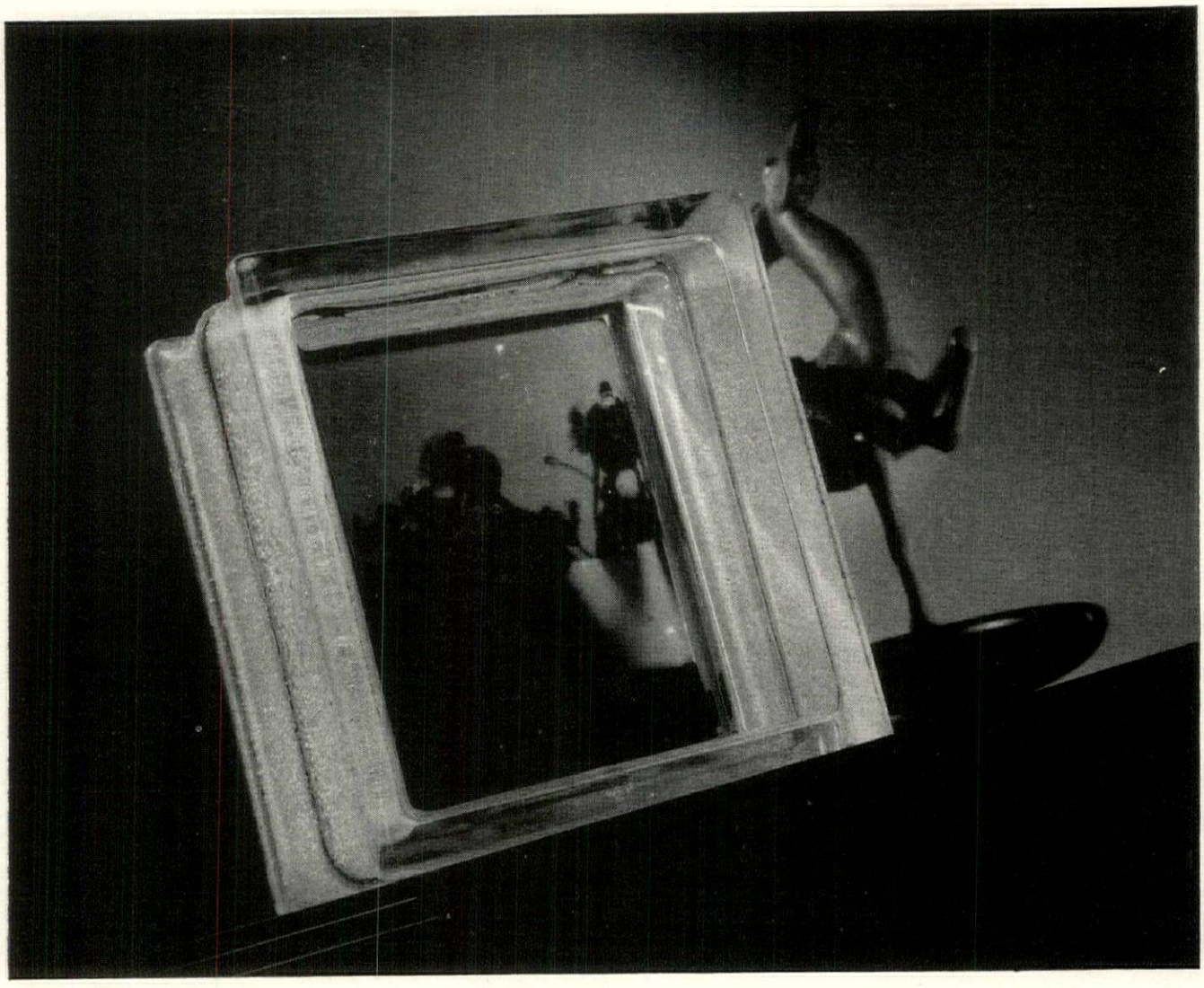
Address_____

City_____ State_____



Announcing the VUE BLOCK . . .

a transparent PC Glass Block

● This new member of the PC Glass Block line combines transparency with the insulation values characteristic of glass blocks. It is made of clear, fire-polished glass, affording good vision through it. Because it is a special-purpose block, its use in commercial, industrial and residential buildings depends entirely upon the special needs arising in connection with regular glass block construction. • The new Vue Block may be advantageously employed, for example, to avoid a "shut-in" feeling among workmen in factories entirely glazed with obscure glass. It may be used, in combination with other PC Glass Block patterns, to achieve better insulation, with visibility, of buildings where single-glazed areas of obscure flat glass were formerly used. Since it is very attractive in appearance, it makes a pleasing panel or panel insert from a decorative standpoint. And like all other PC Glass Blocks, it is immediately available. • Complete information on the Vue Block, and on other PC Blocks will be sent on request. Pittsburgh Corning Corporation, 2017-2 Grant Bldg., Pittsburgh, Pa.

PITTSBURGH PC CORNING

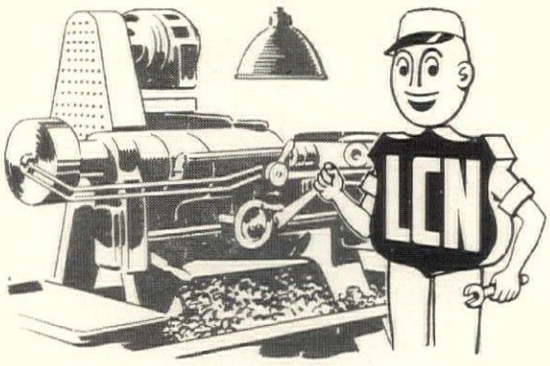
GLASS BLOCKS

Distributed by

PITTSBURGH PLATE GLASS COMPANY

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

"PITTSBURGH" stands for Quality Glass



"Enlisted . . . . for the Duration"

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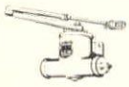

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Cabot-Stained House, Minneapolis. Architect: H. C. Larson

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SPECIFICATION AND BUYING INDEX

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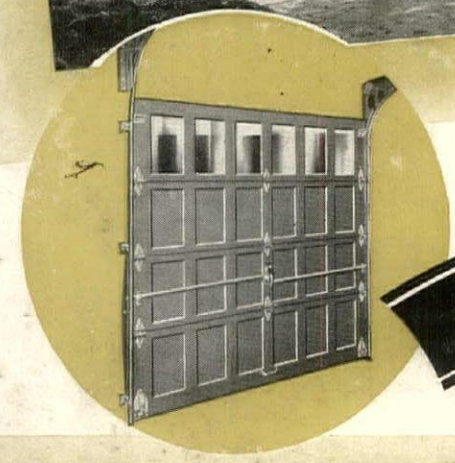

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