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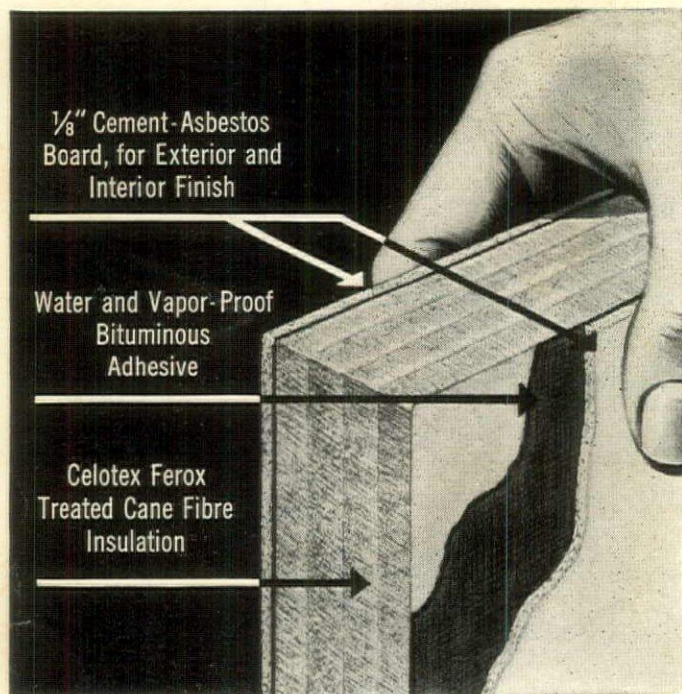
THE ARCHITECTURAL FORUM

BUY WAR BONDS



Five Tested Ways

TO MEET TODAY'S BUILDING NEEDS
WITH MINIMUM USE OF CRITICAL MATERIALS!



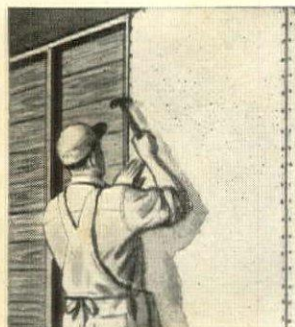
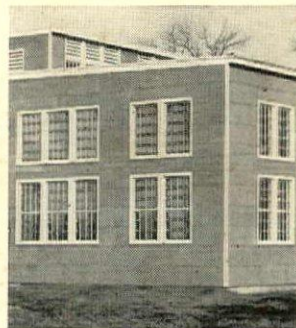
CEMESTO

**Combines Strength, Insulation,
Interior and Exterior Finish**

CEMESTO is a revolutionary building material that comes in panels from 4' x 4' to 4' x 12' to provide a complete fire-retardant wall or roof unit. Thickness ranges from 1 1/8", 1-9/16" to 2". Today, Cemesto with 12 years of research behind it is speeding construction of millions of dollars' worth of wartime homes, housing projects, factories, shops and hangars using a minimum of critical material. Can be used with either wood or steel framing. Saves time, labor, lumber and nails.

CELO-SIDING Combines Siding, Sheathing, Insulation

This new multiple-function insulating siding consists of cane fibre insulation, coated on both surfaces with moisture-proof asphalt, with a weather surface of crushed mineral granules in colors to provide a permanent exterior finish. It is applied direct to studding. Two thicknesses: 7/8" and 3/4".



CELOTEX ASBESTOS BOARD Builds Walls Fast!

This new Celotex product is a hard, durable combination of Portland cement and asbestos fibre, 3/16" or 1/4" thick, available in boards 4' x 8', for fast erection of interior walls and ceilings. Can also be used for exterior finish on temporary or permanent structures.



CELOTEX GYPSUM INTERIOR WALL UNITS Save Studding, Save Time!

These extra-thick gypsum wall boards are either 1" or 1 1/2" thick, and build strong, sturdy, good-looking interior partitions in the shortest possible time, with only a simple wood framework. Known as "single wall construction," this method saves much critical lumber.

CELOTEX GYPSUM ROOF SLABS Replace Wood Roof Decks

These new laminated gypsum roof deck slabs are offered in 1", 1 1/2", or 2" thicknesses, 2' wide, 8', 9', or 10' long, rigid, strong, light in weight and easy to handle. The big units cover roof areas quickly, saving important time. Roof covering can be applied immediately.



CELOTEX

REG. U. S. PAT. OFF.

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

THE CELOTEX CORPORATION
CHICAGO

Get Complete Information on these and other new Celotex wartime developments as fast as it is released! A note on your letterhead will put your name on our mailing list of aggressive architects who want to keep up to date on modern building materials! Write today!

585624A

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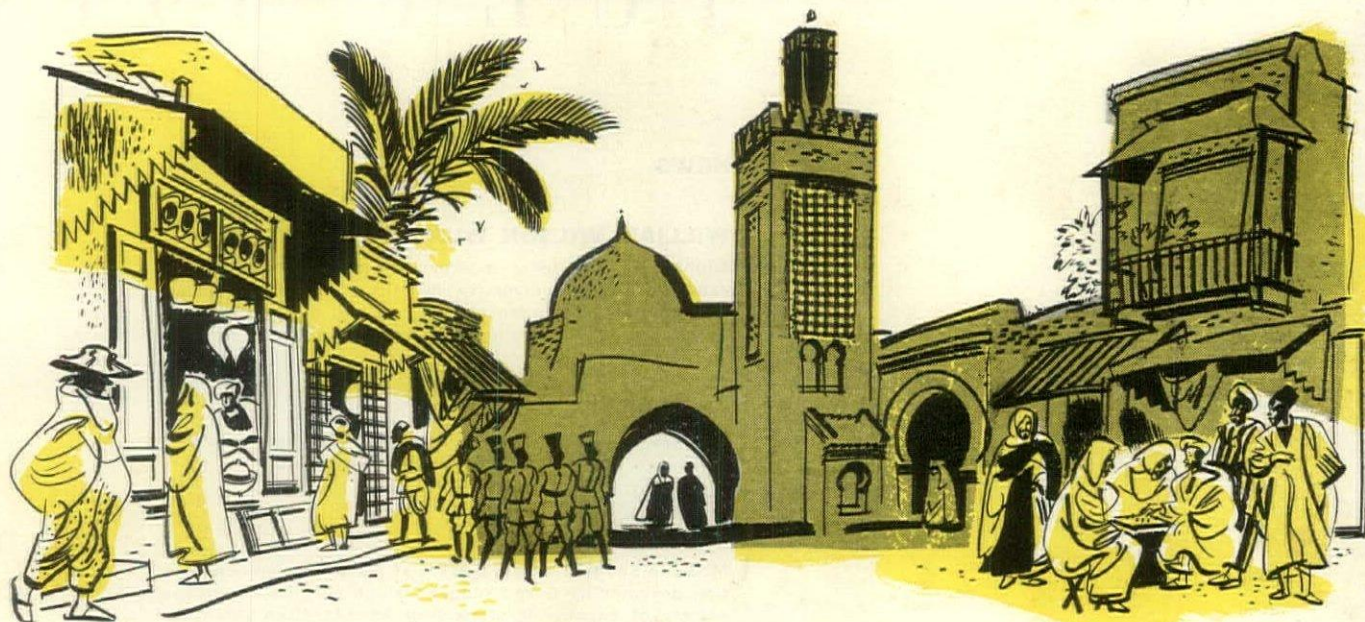
NEXT MONTH: A home gardeners' center by Raphael Soriano . . . Vanport City . . . Planning With You . . . House portfolio . . . Prefabrication . . .

With this issue, THE ARCHITECTURAL FORUM appears in a reduced format. An order of the WPB, curtailing the amount of paper available to magazines, presented a choice between reducing the total number of pages or their size. The latter option was taken. Readers of THE FORUM in its wartime size will find the same amount of editorial material, the same completeness of editorial treatment.

In Military Service:

Robert W. Chasteney, Jr.
William J. Conway
Robert Hanford
Joseph C. Hazen, Jr.
George B. Hotchkiss, Jr.
S. Chapin Lawson
Amnon Rubenstein
A. Banks Wanamaker

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LIMITED TO TWO COLORS, WILLARD PASTED BENDAY SCREENS AND FABRICS ON DRAWINGS, GOT BETTER TEXTURES

BAEDECKERS TO BATTLE

"I was thinking of the soldier who will want to visit some important old places. That's the way I used to spend all my leaves in France in the last war," says Howard Willard, the artist retained by the Special Service Division of the U.S. Army to illustrate guide-books for soldiers in North Africa, India and New Caledonia. A definite improvement on some earlier booklets, these new ones are full of delightful two-color sketches, designed to acquaint the soldier with the background—which means, mostly, the architecture—of the area to which he has been assigned. Artist Willard's architectural activity dates from a drawing he made of a First National Bank front for an announcement, complete with palm. "As

long as I lived in that town," he says "all I got to do was drawings of banks. Eventually I had to leave the county."

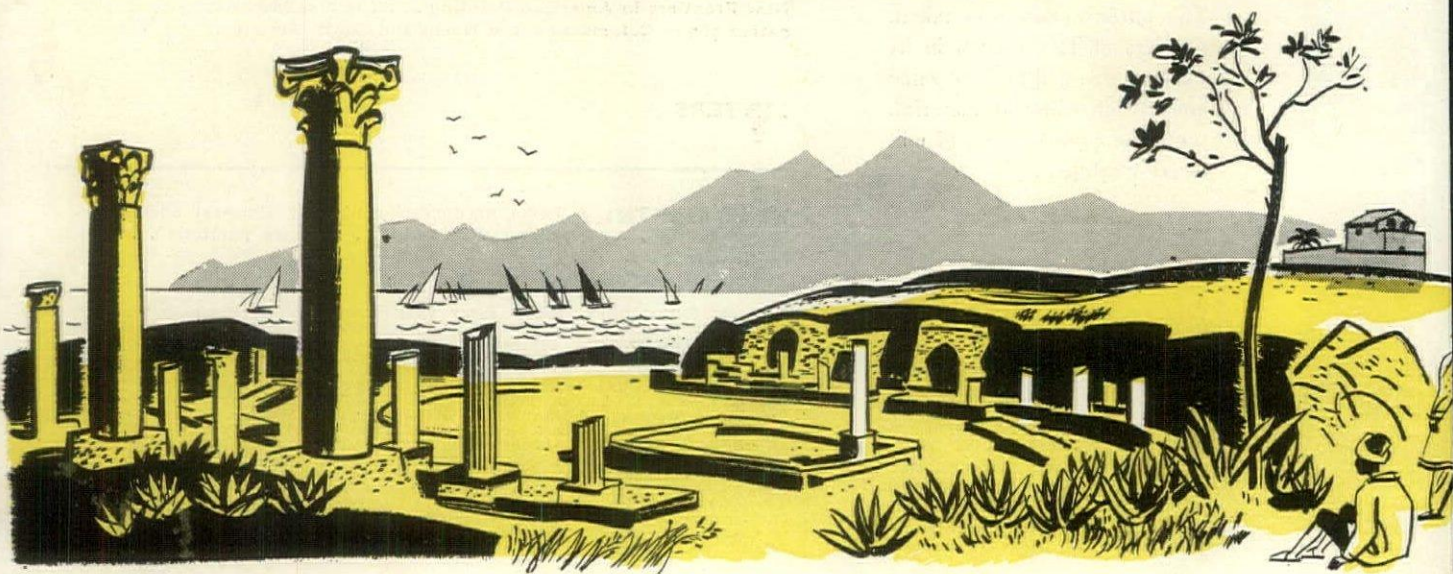
Willard's sketches are supplemented by shrewd and concise information on the customs of the country. North African samples: "When you are about to enter a house or a yard, call out to the women to cover their faces or get out of the way . . . Smoke or spit somewhere else—never in front of a mosque . . . Be kind and considerate to servants. The Moslems are very democratic . . . Avoid any expression of race prejudice. The Moslems draw no color line . . . Use common sense on all occasions. These people are basically no different from anyone else."

Excellent as the booklet on North

(Continued on page 4)



RUINS OF CARTHAGE, A MERE BUS RIDE EAST OF TUNIS, DRAWN FROM SKETCHES MADE DURING PERSONAL VISIT





You supply
the doorway

PEELLE HAS THE DOOR

.. Plus Immediate Deliveries

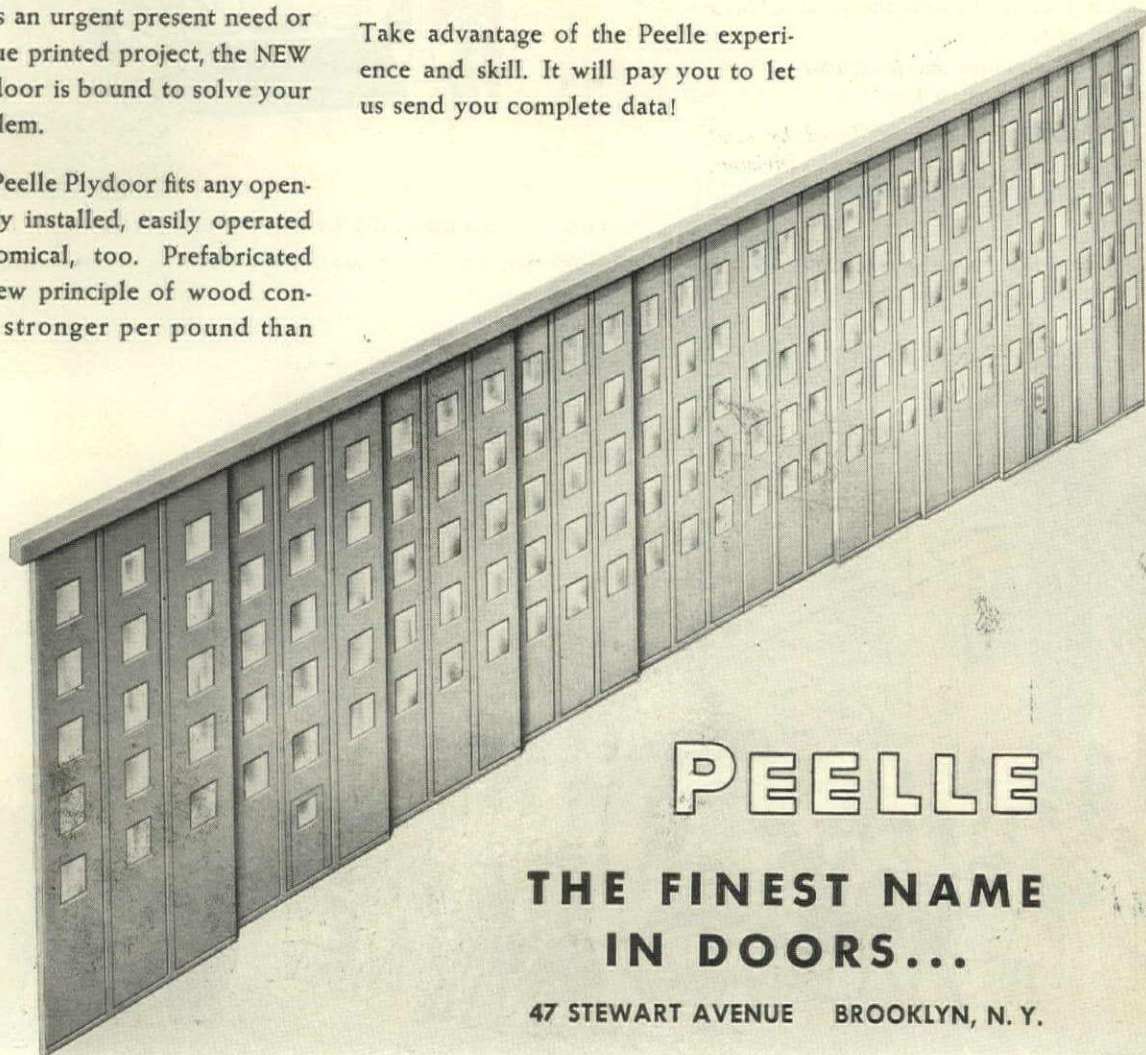
**Thanks to Large-scale Prefabrications
with few critical materials!**

Built to meet today's exacting conditions. Backed by some fifty years of door-construction experience. Thus, whether it's an urgent present need or as yet a blue printed project, the NEW Peelle Plydoor is bound to solve your door problem.

The NEW Peelle Plydoor fits any opening, quickly installed, easily operated and economical, too. Prefabricated under a new principle of wood construction, stronger per pound than

steel. So light it can be manually operated—glides up out of the way—or rolls back like a telescope into a self-contained unit. Can be added easily to buildings already constructed. And, best of all, you can get your NEW Peelle Plydoor now!

Take advantage of the Peelle experience and skill. It will pay you to let us send you complete data!



PEELLE

**THE FINEST NAME
IN DOORS...**

47 STEWART AVENUE BROOKLYN, N. Y.

FORUM OF EVENTS

(Continued from page 2)

Africa is, the one on India has if anything, even more color. Diplomatically avoiding all possible toes that our soldiers might step on, the guidebook includes a State Department announcement governing activities of American soldiers in India. The highly involved system of castes, religions and languages is explained with gratifying clarity and sanity. As for the question of cows: "There are nearly 200,000,000 cows in India—one for every two persons—... They are no respecters of motor traffic... We Americans use the term 'sacred cow' in a joking way. In India there isn't anything funny about it... no Hindu would dream of killing a cow." And as for human beings: "... they feel it is only polite to tell you what you want to hear... If you ask: 'Is this the right road to ———?', the Indian probably will say 'Yes', even if it isn't...." And: "When you come into contact with Britishers in India remember they are naturally reserved. They respect each other's privacy... They don't speak to you because they don't want to appear intrusive or rude. The Britishers dislike bragging and showing off...."

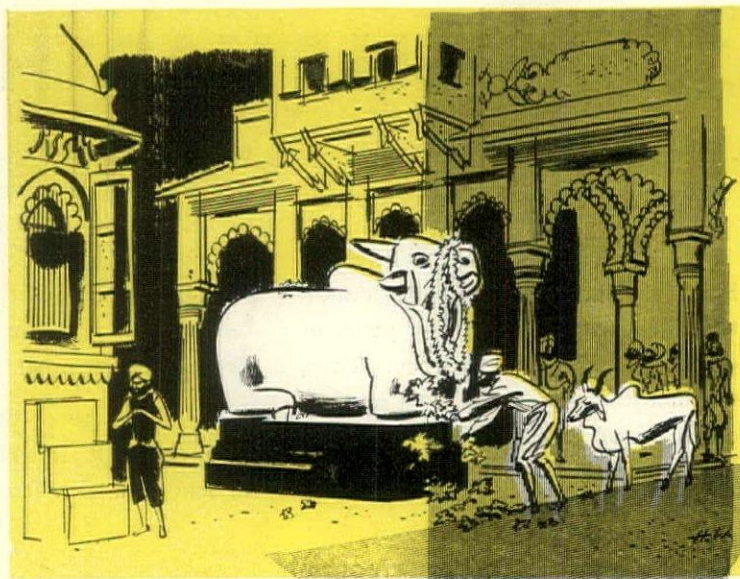
Better than any Baedekers devised to date, and perhaps the first guidebook to make interesting reading, these U.S. Army products are doing more to create an understanding of our Allies than any official statements of policy. Moreover, they are turning every soldier into an ambassador of good will—a fact that will have a great deal to do with the creation of a better world after this war.

(Continued on page 100)

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THIS MIGHT BE A SCENE IN THE TOWN OF BENARES



THE SACRED COW: AN EVER-PRESENT SYMBOL OF HINDU FAITH

THE PRINCES, OR MAHARAJAS, GOVERN TWO-FIFTHS OF THE COUNTRY, MAINTAIN COURTS WITH FABULOUS POMP





Jewel-Like, Maintenance-Free SURFACE TREATMENTS!



AFTER the war, hard, non-porous, durable Formica surfaces will again be available for construction of all kinds that must keep up appearances and still stand severe wear.

There will be new colors, patterns and methods of application which will adapt the material to more uses than the many for which it has already been used, in commercial establishments, public buildings, trains, ships, and apartments.

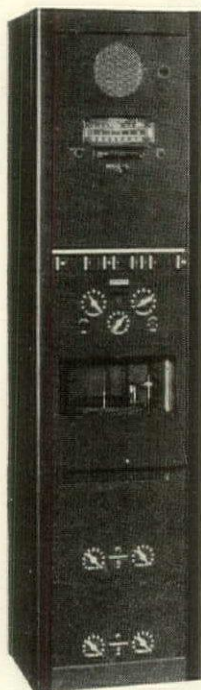
Many designers working now on new construction and new products for after the war are preparing for wider use of plastics. If you are doing similar work, at this time, we want you to know all about Formica. Get in touch with our offices.



THE FORMICA INSULATION COMPANY
4620 Spring Grove Avenue Cincinnati, Ohio

PRODUCTS AND PRACTICE

SOUND SYSTEMS—used more than ever before—will require consideration in the design of modern buildings.



SMALL MASTER CONTROL CABINET contains all Stromberg-Carlson originating equipment such as radio, phonograph, amplifiers and controls.

POWERFUL LOUD SPEAKER (below) permits music to be heard and appreciated despite noise level of 102 db. in Botany Mills Weave Shed. Installation was engineered by RCA Victor.

Like the telephone and the radio, elaborate sound-distribution systems are rapidly becoming an integral part of modern buildings. With this extended use must come a realization that acoustical and mechanical provisions for the installation of sound equipment are necessary. Design features of the auditorium and the radio station must be transplanted to the factory, office, restaurant, hospital, hotel, apartment house and transportation terminal.

Paging is no longer the only function of systems of sound distribution. Such systems are being used more and more for the dissemination of news, music and radio programs. Restaurants provide soft music for their patrons. Hotels distribute radio programs to individual rooms. Planned music programs in offices and factories relieve monotony and fatigue and improve morale of workers. In New York City one company (Muzak) sends out planned music programs 24 hours a day and 7 days a week over privately leased wires. These go to hundreds of subscribers in the vicinity. Some programs also include news and radio broadcasts.

Installation of equipment

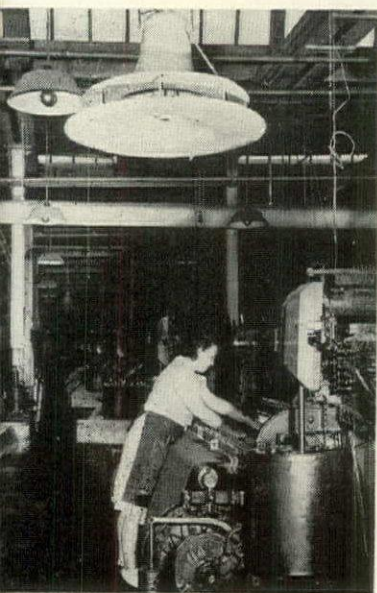
With the expanded use of sound systems has developed a parallel improvement in the design and quality of the equipment, and also in fitting the equipment to a building. Essentially, such systems consist of a microphone and phonograph pick-up, radio receiving set, together with amplifiers and loud speakers connected by direct wires. Any number or combination of these elements may be made to suit individual requirements. For quality reproduction

the various parts of the system should be matched in electrical output and input characteristics and in frequency range, and in turn the equipment should be designed to match the size of the building and the sizes and shapes of the different rooms.

Control may be centered at the source or at the loud speaker. Where control is at the sending point, a separate room is desirable to house the equipment and to permit monitoring.

Internal wiring and outlets for a sound-distribution system may be included in the plans of a new building, just as plumbing, heating and electrical facilities are included. Concealed wiring may often be run in the same conduits with telephone or intercommunication lines. Since several communication systems are often used in combination with each other, this method of wiring is undoubtedly the simplest and most efficient. High-voltage transmission is not required in acoustic wiring, but it should have low resistance to transmission of electrical currents. Hence, not too small a gage should be used. A low voltage pair of wires (No. 14 to 18 gage) is fairly standard for sound systems. The pairs are often twisted or provided with a shield that can be grounded to reduce transmission of extraneous noise currents along with the desired sound effects.

Outlets for plugging in loud speakers are three-pole polarized, partly for safety reasons and partly because the third or ground wire eliminates noise in the system. Spacing of outlets depends, of course, on the type and placement of the speakers. For most residential and



MUSIC FOR A RESTAURANT is projected through wide-range loud speakers on columns. These Western Electric speakers are actually two units—one transmitting high frequencies and the other low frequencies. This installation was planned by the Langevin Co.



CENTRAL STUDIO of the Muzak Corp. in New York City. Dual turntable permits continuity of music programs. Operator follows program sheet on control panel and monitors with volume control indicators.

commercial installations, a wall speaker is feasible and often preferable. The wall provides an excellent baffle for the sound and gives a higher quality of sound reproduction than if the speaker is confined in a cabinet. For the same reason an opening through the wall for the speaker is preferable to confining it at the rear. In both cabinet and wall, the speaker must be so placed that the least distortion will result. The most natural position for a speaker is at ear height. If this is impossible, the speaker should be tilted and focused to best advantage. Speakers vary in their degree of coverage, depending on the area to be covered and range of nearby speakers. For industrial buildings, wall speakers are not generally practicable since they must combat machinery noise arising from the central area. For effective distribution of sound in such cases, baffles are suspended from the beams or ceilings at short distances from one another.

Hotels, apartments and restaurants

Hotels and apartment houses have long made use of intercommunicating telephones and paging systems. More recently they have distributed radio programs and recorded music to individual rooms or apartments. "Music by Muzak" is distributed from central studios in several cities of the United States to private homes, apartment houses and restaurants. Monitoring is done at the central studio, so volume changes are unnecessary at the receiving end, except in the case of restaurants, where the general noise level varies during the day and evening.

Sound in commercial buildings

Terminals and offices, hospitals and amusement centers need loud speaker facilities for instant communication, for reenforcement and distribution of sound. While paging has been the primary use, music is also distributed at certain hours.

Sound in industry

As a result of sound being widely used in industrial buildings for speeding communication, locating key personnel and giving emergency warnings, the addition of planned music programs has been fairly simple. First used in England, where sound systems are required for air raid protection, recorded and radio music is rapidly becoming an important aspect of the working day. Actual experiments made by Stevens Institute of Technology have demonstrated that planned music has stepped up production efficiency as much as 5 to 10 per cent or even more. Further research on the effective use of music in industry is now being continued under the auspices of the Office of

Production Research and Development, of the War Production Board.

Acoustics and sound systems

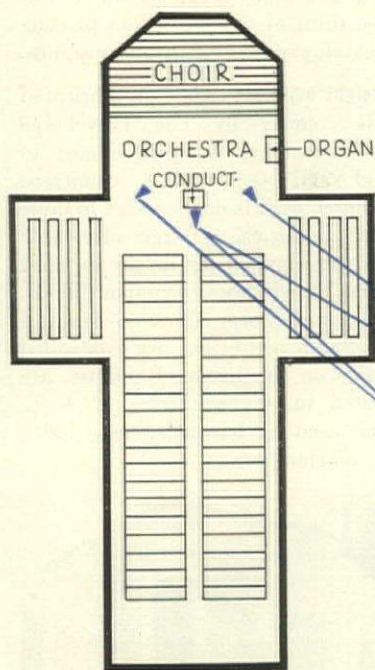
Theatrical and radio use of acoustical materials may well be extended to the factory or commercial building, as well as non-parallel walls, broken surfaces, etc. Absorptive materials may be placed with a view to reducing the background noise level without diminishing the effective distribution of sound. Reducing production noises will not only improve the quality of a sound system, but will also reduce the cost of installation and maintenance. Present noise levels range from about 40 decibels in a quiet office to more than 100 db. in a boiler factory.

For this reason a sound-distribution system must be chosen that either amplifies above the noise level or which cuts through it at a different frequency. Since background noise is usually concentrated in a relatively narrow frequency width, it is possible to install a

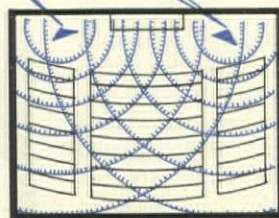
sound system which allows voices and music to be heard without increasing the general sound intensity.

Sound-distribution systems vary in the frequency ranges they reproduce. Early public-address systems had a range from about 300 to 2,500 cycles per second. The voice is intelligible within this range, although lacking somewhat in quality. Today 10,000, 12,000 cycles and even higher may be reproduced. For paging, however, a range up to 5,000 is adequate.

Where music is transmitted over a sound system, the range should be extended to 8,000 or 10,000 cycles for good reproduction. By definition, music is composed of fundamental tones and a combination of harmonics ranging in audible frequencies from about 20 to over 16,000 cycles. If the harmonics are audible in the upper frequencies, even though industrial noise covers up the fundamental tones, the quality of the music will be established.



CONTROL PANELS include the amplifiers and regulatory equipment for the two channel system.



STEREOPHONIC SOUND GIVES REMOTE AUDIENCE LEFT AND RIGHT "EARS"

Experiments have indicated that stereophonic sound, or auditory perspective, represents the closest approach yet made to perfect fidelity in the instrumental recreation of speech and music. Stereophonic transmission is accomplished through a dual or multi-channel reproducing system developed by Bell Telephone Laboratories, Inc. It can encompass the full auditory and an enhanced volume range of orchestral and vocal music, and even create effects previously unobtainable on a single channel system.

A permanent stereophonic transmission system has been installed for the Bach Choral Festival in Bethlehem, Pa. to transmit the program from the chapel to a nearby auditorium. Two electrically independent loud speakers flanking the stage in the auditorium simultaneously reproduce music picked up by two independent amplifiers in the chapel. Loud speakers, approximately the same distance apart as left and right microphones in the chapel, create the stereophonic illusion of an invisible choir across the stage.

PRODUCTS AND PRACTICE

TECHNICAL NEWS

Space heating with infra-red lamps: Because infra-red lamps radiate 90 per cent of their input wattage as heat, they make excellent sources of additional warmth in the home. Research by General Electric's Lamp Dept. indicates that they can be used to warm up the kitchen or bathroom on a chilly day or for heating infrequently used areas such as the basement and the attic.



R-40 Heat or Drying Lamps, or S-1 Sunlamps may be used as portable units, or they may be attached to the wall or ceiling. Such lamps may be turned on only when needed, and even though the air temperature is low, the direct and reflected radiation of infra-red waves will immediately cause bodily comfort. A person loses heat through radiation to cold walls, ceilings and floors even if the air temperature is comfortable. If some of these room surfaces are heated, air temperature may be kept at a lower level which would result in a lower consumption of fuel. Unlike other space heaters, an infra-red lamp's heating elements are not exposed to the air where there is a loss of heat through convection and conduction. Also, the short infra-red waves, reflected by light-colored surroundings, will heat up an area quickly at reasonable cost. Infra-red lamps could not only be put to good use in the present fuel shortage but might prove an effective and economical way to heat houses after the war—the regular heating system keeping the air at a certain minimum temperature and lamps switching on like lights in rooms whenever they were needed.

Wood and war: Five million tons of metal will be replaced by wood in 1943, releasing this metal to essential war service. Statisticians of the National Lumber Manufacturers Assn., Washington, D. C. find that, on the average, one thousand board feet of lumber save one ton of steel. Large-scale wooden structures would have

been impossible without the use of ring connectors which spread the load on a timber joint over practically the entire cross section of the wood, bringing full structural strength of the timber into play.

Savings of structural steel in roof trusses alone through the use of timber connector construction has been estimated by the Timber Engineering Co., Washington, D. C., at 400,000 tons. Since most necessary construction for the war effort was completed by the end of 1942, this year wood is being diverted to other essential war uses and also to some civilian products. Furniture, springs, farm equipment, gutters and downspouts, bottle caps and bathtubs are being made of wood in whole or in part instead of metal. The largest single consumer of lumber this year is the box and crate industry, which will use one third of the total 1943 production for shipment of military supplies.

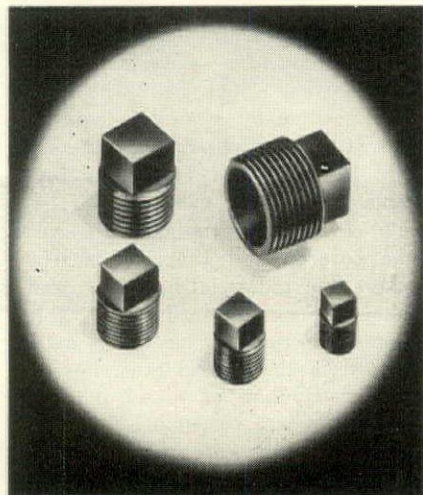
Lightweight buildings are prefabricated in this country by The Travelodge Corp., Lynchburg, Va. for export to tropical and semitropical countries. Since glazed sash is unnecessary in these climates, shutters, or large adjustable louvers, screened on the inside are used in place of windows, venetian blinds, awnings and storm shutters. Natural lighting and ventilation are controlled by levers on the inside. Buildings are fabricated in any multiples of 4 ft., may be used as barracks, mess halls, living quarters, etc.



Research laboratory: Designed to be vibration- and soundproof, a new building for the Ilg Ventilating Co., Chicago, Ill. will house research activities on wartime and postwar problems. Equipment will include latest scientific instruments for measuring air, electricity, sound, light and vibration. Since the building will be vibration-proof, extremely sensitive apparatus will be installed for sound analysis. Stroboscopic equipment will check deflections while equipment is in operation. A separate heating plant will provide steam and hot water for testing unit heaters.

NEW PRODUCTS

PLASTIC PLUGS protect threads of pipes in storage or transit.



Name: Plastic Pipe Seal Plugs.

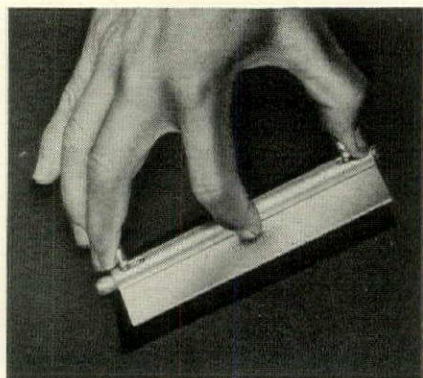
Features: Because these lightweight seals are precision-molded of plastic, both machine hours and critical materials are saved in their manufacture. Plastic seals are claimed to be tough, durable and noncorrosive and to effectively protect threads against all damage. Seals come in five sizes: $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$ and 1 in., and other sizes can be readily supplied on application.

Manufacturer: American Molded Products Co., 1644 North Honore St., Chicago, Ill.

QUICK RELEASE HINGE has many applications.

Name: Burklyn Quick Release Hinge. *Features:* Originally developed to release ammunition chutes on aircraft machine guns, this hinge may be used on screen or storm doors and windows, etc. A bracket houses spring-loaded attaching pins which can be retracted by means of finger pads. Present models are made of noncritical low carbon sheet steel, come in lengths from 2 to 6 in.

Manufacturer: Burklyn Co., 3429 Glendale Blvd., Los Angeles, Calif.



(Continued on page 126)

THE ALL-OUT WAR PRODUCTION OF TODAY—

★ MEANS BETTER

★ STORE FRONTS

★ OF TOMORROW

MONTHS before Pearl Harbor, Kawneer geared up its production to meet the tremendous demands of national defense. The pace has never slackened. Kawneer, in these recent years, has added immeasurably to its store of "know-how" on fabrication of rustless metals.

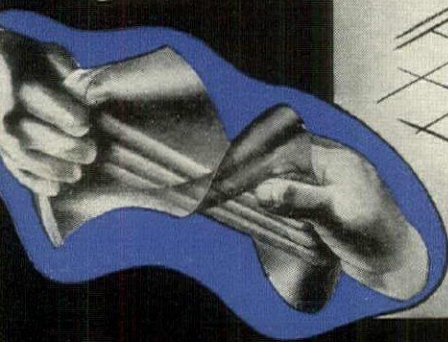
Stimulated also by the impact of new ideas, revealed in the recent Architectural Competition, Kawneer is now developing the new and better KAWNEER STORE FRONTS OF TOMORROW. Announcements will necessarily await the winning of the war, but when that time comes, you can depend on Kawneer to maintain its leadership in store front construction, established in 1905. The Kawneer Company, Niles, Michigan

Kawneer

ORIGINATORS OF THE
RUSTLESS METAL STORE FRONT
AND ALL-ALUMINUM
RESIDENTIAL WINDOW

You can take

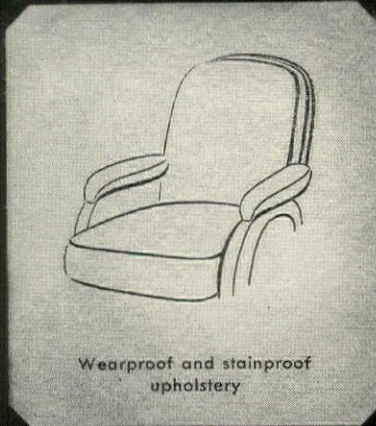
VINYLTE™ ELASTIC SHEETING



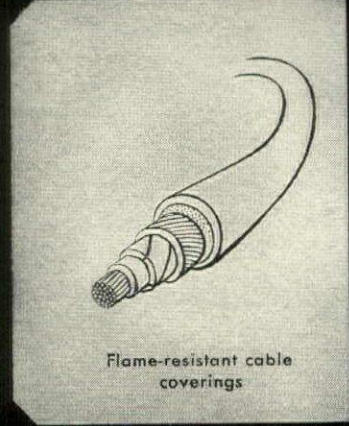
...TODAY, A SUPERIOR REPLACEMENT FOR RUBBER



Abrasion-resistant
floor tile



Wearproof and stainproof
upholstery

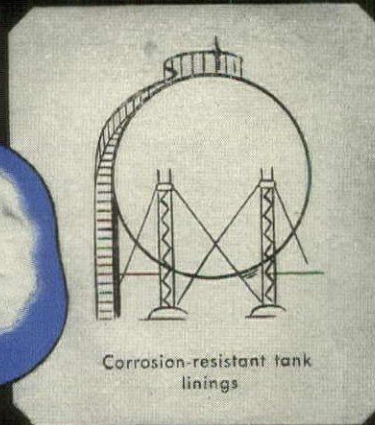


Flame-resistant cable
coverings

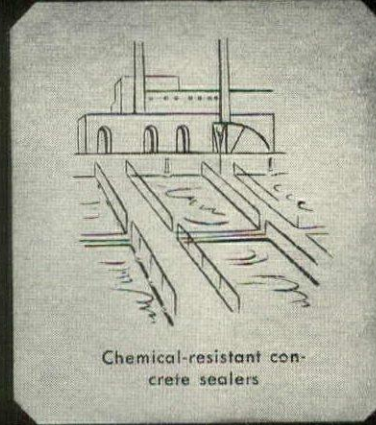
VINYLTE™ RESIN COATINGS



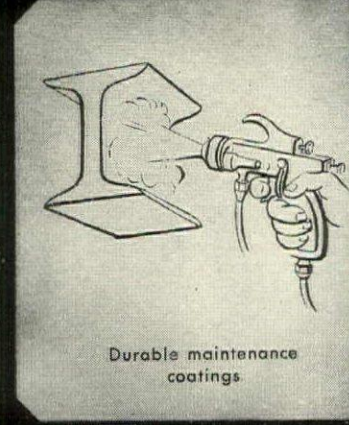
...TODAY, MAXIMUM PROTECTION FOR VITAL EQUIPMENT



Corrosion-resistant tank
linings



Chemical-resistant con-
crete sealers



Durable maintenance
coatings

Unique Properties of "Vinylite" Plastics present many unusual opportunities to future-minded architects and engineers

It is easy to foresee, even with a passing knowledge of VINYLITE Plastics, the important advances in architecture and interior decoration offered by these versatile products. Consider just two of the several types of VINYLITE Plastics—elastic sheeting, and resins for surface coatings. The remarkable properties and the wide breadth of application for these products today suggest ways of solving many an architectural and building problem tomorrow.

Floor and counter coverings of elastic sheeting that will withstand many times the wear and abrasion of rubber and leather... awnings and awnings that remain flexible and attractive despite rain, sun, and aging... furniture coverings that are virtually wearproof and cannot be stained... conveyor and power belting that will not deteriorate from oil... pliable weather stripping that will neither dry out with heat nor rot with moisture... these are but a few of the possibilities of VINYLITE Elastic Sheetting based on comparable developments today.

VINYLTE Resin Surface Coatings offer equal inspiration to

the architect and engineer... as non-yellowing, non-fading finishes for refrigerators and other household metal cabinets... as corrosion-resistant linings for storage tanks... chemical-resistant coatings for sewage disposal plants... and oil-resistant finishes for garage floors. Baking-type coatings, used today for protecting the interiors of metal food containers, offer many unusual opportunities as colorful, abrasion- and moisture-resistant lacquers for decorative metal trim.

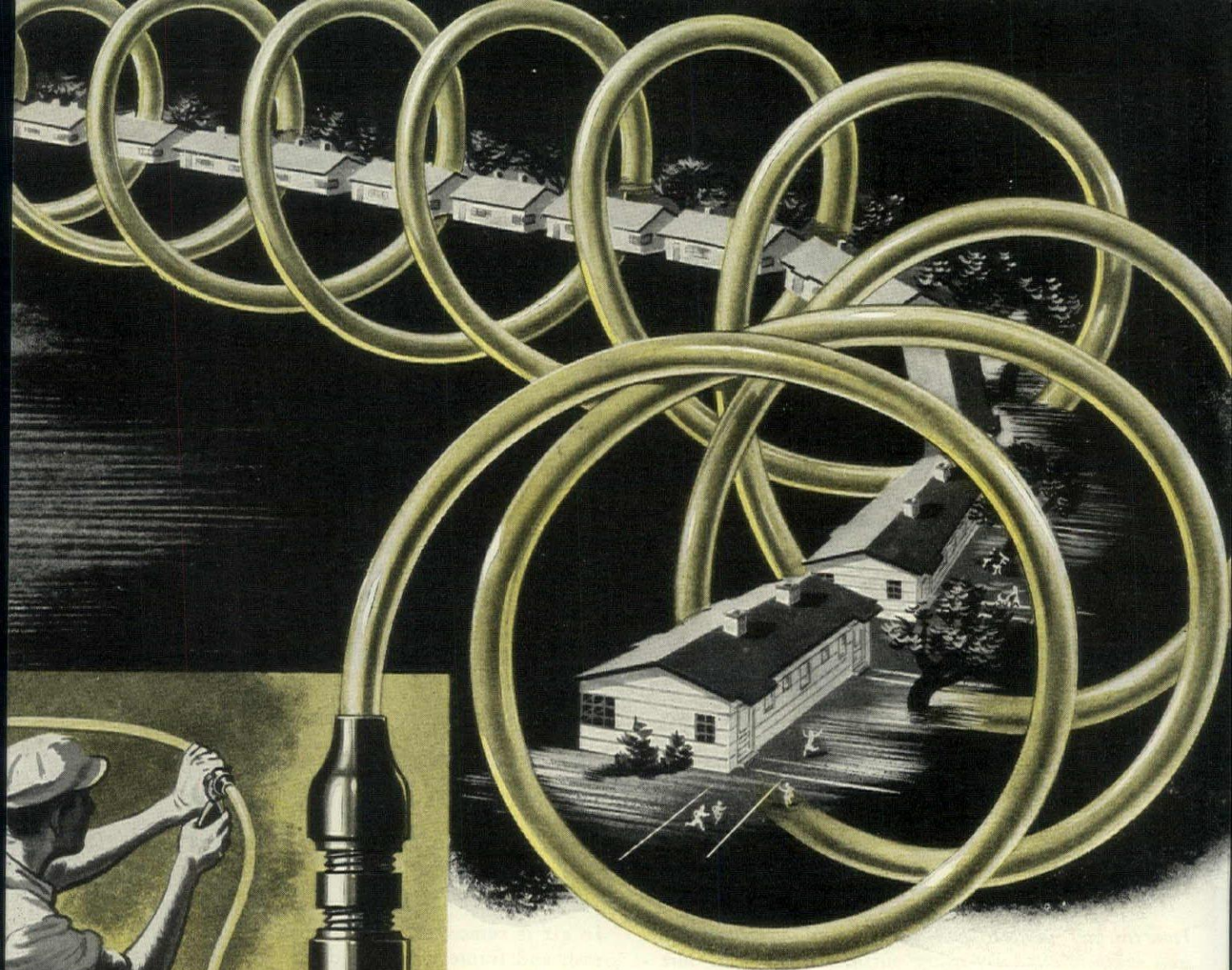
You can obtain a picture of the possibilities of *all* the various VINYLITE Plastics and their unique properties by writing for illustrated booklet 19, "Vinylite Resins—Their Forms, Properties and Uses."

Plastics Division

CARBIDE AND CARBON CHEMICALS CORPORATION
Unit of Union Carbide and Carbon Corporation



30 EAST 42ND STREET, NEW YORK, N. Y.



Saran Tubing

INSTALLED IN

15,000 WAR HOUSING UNITS!

**SARAN TUBING AND FITTINGS
EASILY AND QUICKLY INSTALLED**

Installation of saran tubing and fittings is easily accomplished with standard plumbing equipment. Exceptional flexibility of the durable tubing simplifies operations in many situations normally requiring the use of extra joints and elbows. Flaring, bending and forming saran tubing are quickly mastered by workmen. Saran fittings are available for all tubing sizes—ranging from $\frac{3}{8}$ " to $\frac{3}{4}$ " O.D.

Saran tubing and fittings make their bow in the domestic plumbing industry this month. These revolutionary plastic products are being installed in 15,000 war housing units. Extensive development tests show that saran is most satisfactory on cold water lines and thermostatically controlled hot water lines. This initial installation alone saves 1,000 tons of steel and 120,000 metal fittings.

Saran, a Dow development, possesses chemical resistance, flexibility and toughness to a degree found in few comparable materials. Tubing and fittings are now being produced by fabricators who have worked closely with Dow in developing these products.

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

New York • St. Louis • Chicago • Houston • San Francisco • Los Angeles • Seattle

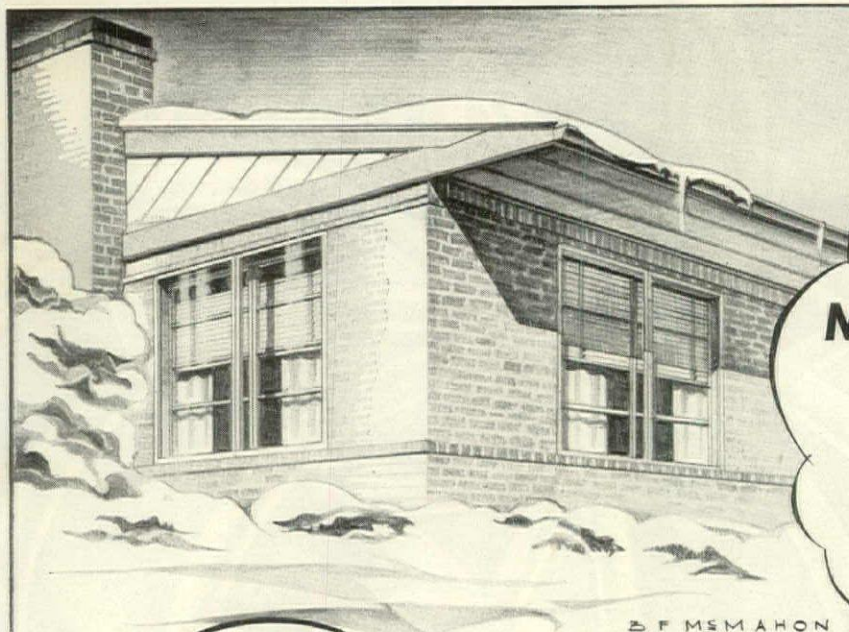
SARAN

DOW PLASTICS

STYRON • ETHOCEL



**CHEMICALS INDISPENSABLE
TO INDUSTRY AND VICTORY**



Plan on
METAL CASEMENTS
*with Outside
Storm Sash*



90% of the area of *any* window is glass; and single glass dissipates indoor warmth, wastes fuel, sacrifices comfort. That's why even the smallest POST-WAR house will be insulated ... and equipped with *insulated metal casement windows*.

How can you "insulate" post-war casement windows easily and inexpensively? By using outside storm sash, thus reducing heat losses up to 60%, eliminating "cold feeling" windows.

How do outside storm sash eliminate condensation? By providing a dead-air space between the two panes of glass, which "warms" the inside pane to where the room air isn't "chilled" rapidly.

What's wrong with INSIDE storm sash? The greater the distance between the two panes of glass, the more the insulation. Inside storm sash usually don't afford the desirable 2" to 3" of dead-air insulating space.

Why not "double glaze" casement windows? So far double glazing is too expensive; tends to "sweat" between the glass unless all moisture from the sealed-

in air is removed; doesn't cover the joint between sash and frame where cold air may leak in, even in weather-stripped sash.

Are outside storm sash expensive? No, they're probably least expensive, since they more than just "insulate." They reduce air infiltration, drafts... hence, save fuel; they make weather-stripping unnecessary... another saving; they protect the *whole* window from bad weather... saving maintenance costs. Added up, these savings more than cover the small initial cost of outside storm sash.

How can you get an inexpensive metal casement and outside storm sash built together, for the small post-war house? Easy... file this page in your post-war follow-up. Then, after, the war, consult your Mesker Window Engineer.

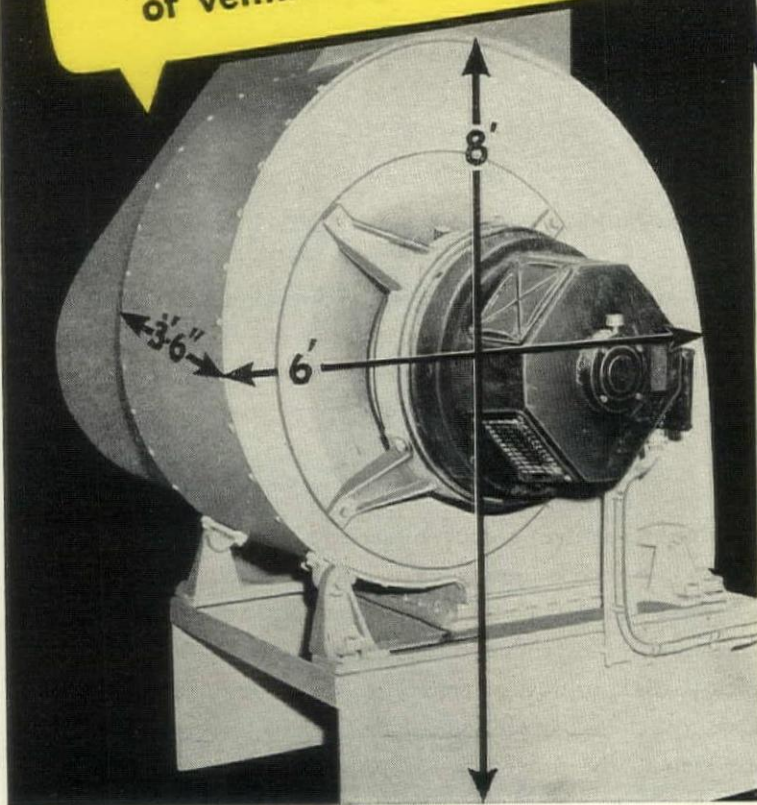
Mesker Brothers

424 SOUTH SEVENTH STREET • ST. LOUIS, MO., U. S. A.

ESTABLISHED IN 1879 • OVER **64** YEARS OF METAL WINDOW RESEARCH

CASEMENT WINDOWS • MONUMENTAL WINDOWS • INDUSTRIAL WINDOWS • SCREENS • INDUSTRIAL DOORS • DETENTION WINDOWS • REINFORCING MESH GRATING

210 cubic feet of valuable space required by this cumbersome type of ventilating equipment



NO SPACE WASTED by the La-Del Axial Flow Air Fan—Everything inside the duct



LA-DEL Axial-Flow Fans Save Space!

THIS IS AN AGE OF STREAMLINING and space-saving, both in the design of structures and the equipment they must contain.

La-Del Axial Flow Fans are designed for the ultimate in space utilization and efficiency of operation.

The above illustration is a typical example of how La-Del installations save valuable space. The ventilating system at the left is a big, bulky unit installed *outside* of the air duct itself. Note the large cubic feet space it requires — space which otherwise could be used to more profitable advantage.

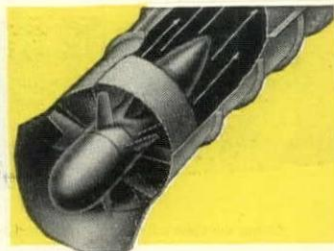
Now note the La-Del Axial Flow Fan unit at the right. It is *entirely contained within the duct itself!* Absolutely no extra outside space is required. And it serves the air movement needs of this job with much greater efficiency.

The entire La-Del Axial Flow Fan system is as compact as a kernel in a shell. Note the diagrammatic drawing. The adjustable pitch propeller blades are designed for peak efficiency with balanced characteristics throughout adjustment and fan operating range. This blade design actually broadens the useful operating range of a fan of

any given size by fully 75%. Straightening vanes, having specific relations to propeller design, correct to a true axial flow the helical air motion caused by propeller blades. The streamlined tail maintains a uniform axial flow without turbulence.

Only the La-Del Axial Flow Fan system can give you so much ventilating efficiency, in such compact space, and at such low cost.

Because our entire facilities are devoted to war work, La-Del Axial Flow Fans are not now available to industry. However, in preparation for intensive post-war activity it will pay you to have additional facts about this new idea in ventilation. Write for Bulletin No. 116.



All units within the duct, a La-Del feature



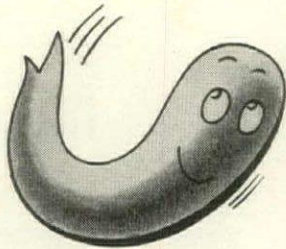
LA-DEL CONVEYOR & MFG. CO.

New Philadelphia, Ohio

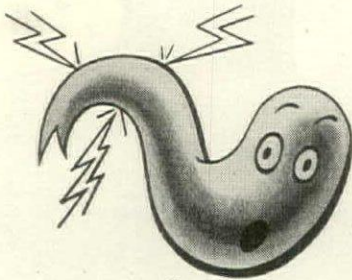
PIONEERS IN THE DESIGN OF AXIAL-FLOW FANS FOR EFFICIENT AIR CIRCULATION

HOW **PRECIPITRON**[★] WORKS

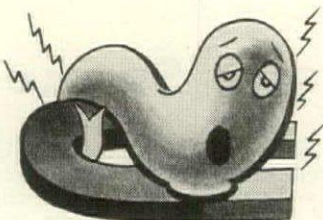
Here's the inside story of Electric Air Cleaning



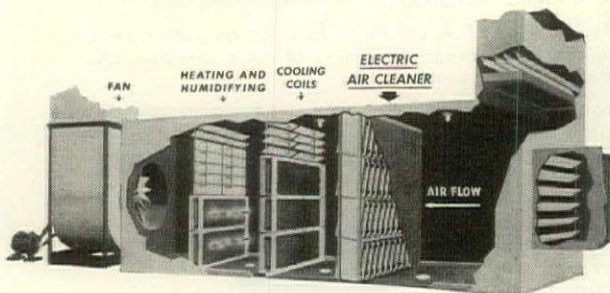
There is really nothing mysterious about Precipitron—the new Westinghouse air cleaner that operates by electricity. Yet it whisks smoke, haze, dust and dirt out of the circulating air as if by magic. In fact, it removes 90% of all particles down to 1/250,000 of an inch in diameter. Even *tobacco smoke*, smallest and most elusive of all airborne invaders, is quickly “grounded” upon contact with the Precipitron.



Sealed within the ventilating duct so that all air must pass through it, the Precipitron operates silently, efficiently, with no more moving parts than a storage battery. At the front of the unit (or cell), two fine tungsten wires and three grounded rods create a strong electrostatic field. As each particle of dust or smoke passes through this field, it receives a positive charge of electricity, making it a “willing victim” for the next step in the process.



A series of collector plates are located back of the electrostatic field and as the charged particles pass through, they are drawn to the oppositely charged plates where they are deposited and adhere. At regular intervals these plates are cleaned with water and the deposit flushed harmlessly down the drain.



Cross section of typical air conditioning duct.

Today, Precipitron Electric Air Cleaning protects precision parts from air-borne grit and dirt . . . cleans ventilating air for large rotating machinery in steel mills and power stations . . . removes oil mist and welding fumes . . . performs many other important jobs for America's War Industries. For full information on Precipitron and its applications, write Westinghouse Electric & Mfg. Co., Edgewater Park, Cleveland, Ohio

[★]Trade-mark registered in U. S. A.

Westinghouse Precipitron

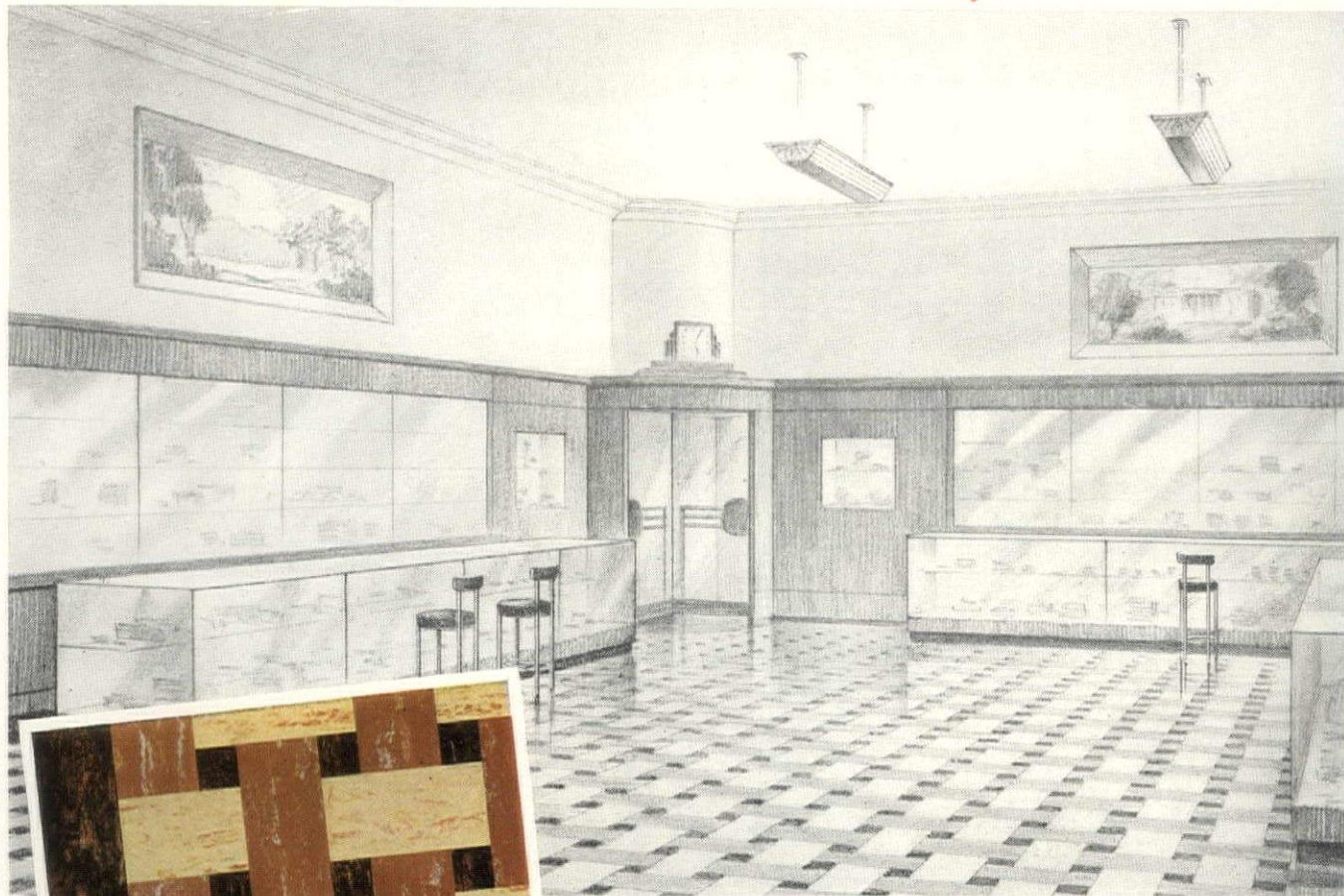
PLANTS IN 25 CITIES OFFICES EVERYWHERE

Tune in on John Charles Thomas, Sundays, 2:30 p.m., E.W.T.



Electronics at Work

Almost any pattern and color you want!



**These rugged floors of
ASBESTOS and ASPHALT
effectively meet today's
requirements**

If you have a floor covering problem, investigate the advantages of Johns-Manville Asphalt Tile. This colorful, resilient flooring is readily available either for essential new construction or for necessary replacements of worn-out floors.

LONG SERVICE. J-M floors have a tough composition of asbestos fiber and asphalt and will withstand unusually hard wear. This ability to last longer is a primary requirement of every purchase in a war economy.

EASY TO MAINTAIN. The shortage of labor in most buildings is a serious problem today. J-M Asphalt Tile Floors help meet this problem because they require little care. Pre-waxed, they are ready for use as soon as installed and are easily kept clean.

LOW COST. J-M floors are made to pre-war standards of quality . . . are available at pre-war prices too! They cost less than any other type of resilient floor covering on the market.

An interesting full-color brochure entitled "Ideas for Decorative Floors" contains the full story of J-M Asphalt Tile Flooring. For free copy address Johns-Manville, 22 E. 40th St., New York.

A wide variety of plain and marbled colors meets any decorative scheme. Note particularly the interesting character of the J-M marbleizing which avoids all feeling of mechanical regularity.



JOHNS-MANVILLE

Asphalt Tile Flooring

A 100% RECORD

Awards on May 8th, 1943 to two plants in Kenosha, Wisc., completed this 100% record for The American Brass Company.



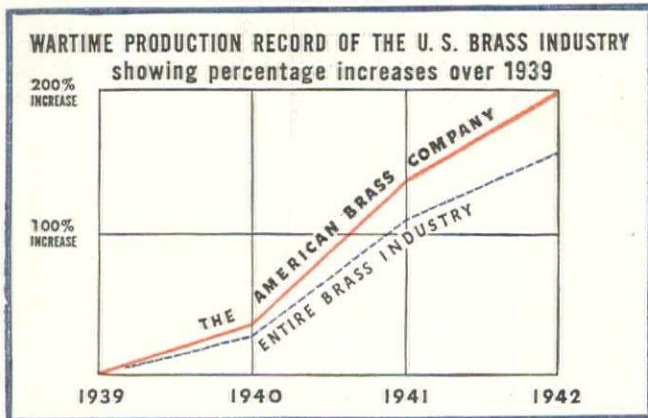
ALL TEN AMERICAN BRASS CO. PLANTS IN U. S. A. HAVE EARNED RIGHT TO FLY ARMY-NAVY "E" FLAGS

This is the story in terms of war production

Our Connecticut plants were among the first in the brass industry to receive the coveted "E" Award for outstanding production of war materials. Since then *all* our plants, including those in the States of Michigan, Wisconsin and New York, have been similarly honored.

As the largest fabricator in the copper and brass field, The American Brass Company is keenly aware of its responsibility and its opportunity to serve the cause of the United Nations.

Since 1939, production has been tripled, with virtually every pound today going for war purposes.



This chart*, based on 1939 peacetime production, shows the rapid swing into all-out war production, both by the copper and brass fabricating industry and The American Brass Company (not including Government-owned plants). All-time production records have been continually broken ever since the National Defense Program was initiated in 1940.

*Based on compilations of The American Bureau of Metal Statistics

This record was accomplished by close cooperation between management and labor . . . careful planning

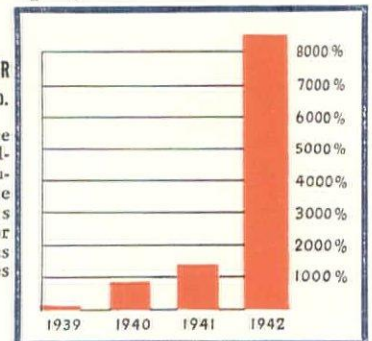
for rapid conversion to wartime operations . . . intensive training of new personnel . . . plus efficient utilization of existing and new plant equipment.

Detailed figures, of course, cannot be revealed, but The American Brass Company is consistently breaking all previous volume records. In addition to its U. S. plants and that of a Canadian subsidiary, Anaconda American Brass Ltd., the company's production also embraces three plants operated for the United States and Canadian Governments.

Shipments this past January were the largest in the company's history. March exceeded January. The first quarter of '43 was by far the greatest tonnage quarter in the records of the company.

PRODUCTION OF COPPER ALLOYS FOR AMMUNITION by The American Brass Co.

This chart shows the vast increase in production of copper-base alloys directly earmarked for ammunition in plants operated by The American Brass Company. This is one of the most vital needs for copper and brass. Tremendous quantities are required for all types of ammunition.



The American Brass Company is proud indeed that all the plants it operates in the U. S. A. have won the honor of flying the Army-Navy "E" for excellence in production. But it is even prouder of the organization and the will-to-produce that have made this record possible . . . and will keep it going.

43184C

THE AMERICAN BRASS COMPANY

Subsidiary of

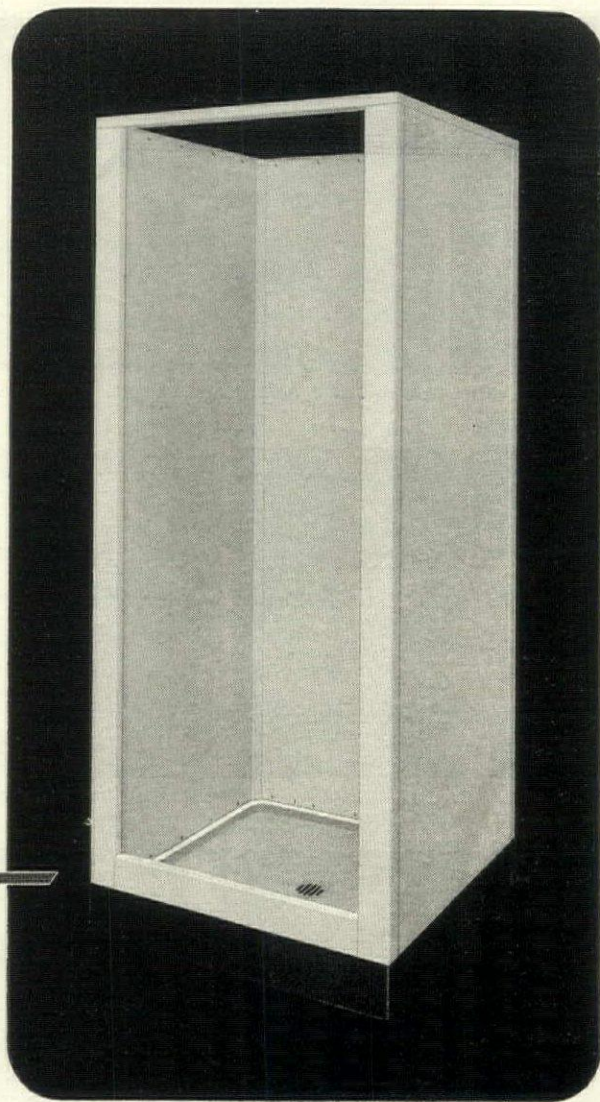
Anaconda Copper Mining Company



BUY ALL THE BONDS YOU CAN AFFORD . . . TURN IN ALL THE SCRAP YOU CAN FIND

7 FIAT'S *Volunteer*

Ready, on a production basis, when the call came for a war shower



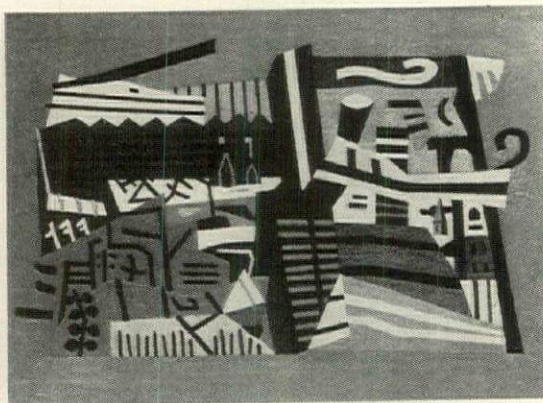
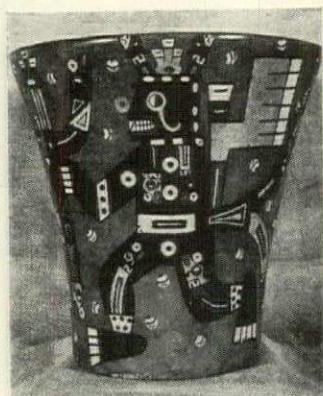
When the government called for a shower cabinet, designed to use a minimum of critical materials, Fiat was ready on a production basis with the Volunteer. The Design Division, Office of the Chief of Engineers, U. S. Government approved the Volunteer to meet the needs of the Nation for war housing and military cantonments. In addition to filling government requirements, Fiat is supplying the Volunteer for civilian needs through our regular jobbers when adequate priorities are available. The Volunteer is priced at \$37.50, F.O.B. Chicago, Ill., Long Island City, N. Y., New York City or Pasadena, California.

● The Volunteer Model contains only 25 lbs. of steel—has patented construction of corner joints. A truly prefabricated product that can be set up in 18 minutes with a screwdriver the only tool required.

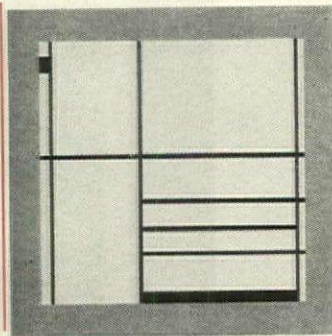
FIAT METAL MANUFACTURING COMPANY

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

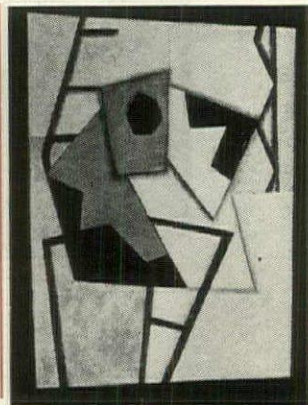
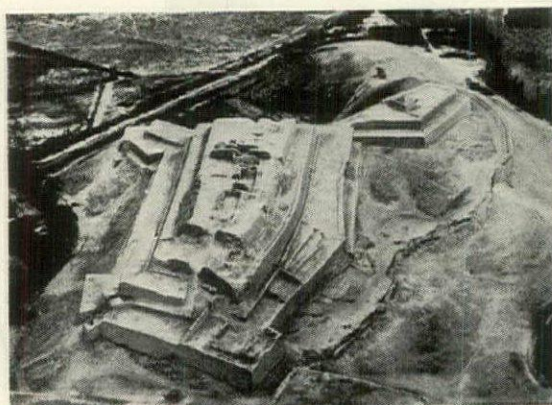
BOOKS



URN, COAST TIAHUANACO STYLE—CAPE ANN LANDSCAPE BY STUART DAVIS



UAXACTUN TEMPLE-BASE, GUATEMALA—COMPOSITION BY PIET MONDRIAN



LA FORTALEZA, PARAMONGA, PERU—COMPOSITION BY GEORGE L. K. MORRIS



HUMAN HAND OF MICA, OHIO—SPRINGTIME SHOWERS BY ABRAHAM RATTNER

NEW FRONTIERS IN AMERICAN PAINTING, by Samuel M. Kootz. Hastings House, New York. 65 pp. 9 x 11. \$5.

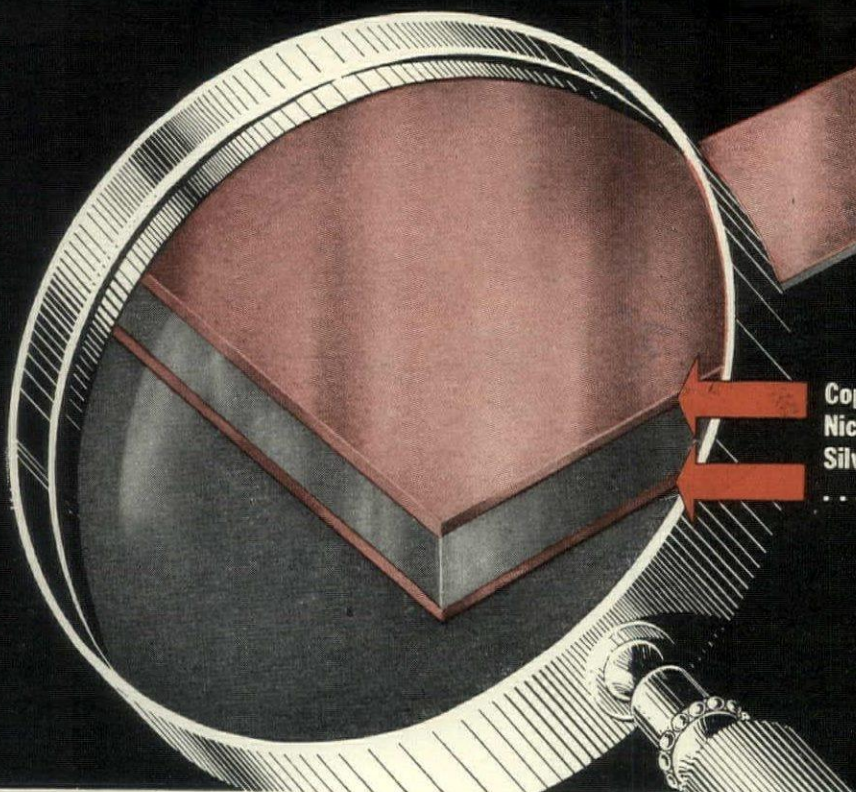
MEDIEVAL AMERICAN ART. A Survey in Two Volumes, by Pál Kelemen. The Macmillan Co., New York. 414 pp. 306 plates. 9 x 11¼. \$22.50.

To art in America the war has meant a degree of isolation not known since the discovery of this continent. After the arrival of the last refugees from France, the ties to European art became temporarily severed, and the obvious reaction was to turn to our native efforts, both past and present. It may, therefore, be no coincidence that a major work on pre-Columbian art in America and an important book on the new painting in this country were published within a few days of each other.

Mr. Kelemen's book on American medieval art is a magnificent job of research, uncovering undreamt-of cultural development in North and South America. The book consists of a volume of detailed, scholarly writing and a second volume of illustrations, some of which the author had to travel far to obtain. There is an extraordinarily mature knowledge of materials and structure in the architecture and sculpture shown. The pre-Columbians' understanding of balance and pattern is something not *consciously* rediscovered until the present time, in the abstract painting of Mondrian or the patterns of Stuart Davis and George L. K. Morris. There are similarities between these early art forms and certain developments in Africa and Europe, which it will be the anthropologist's job to explain—though Mr. Kelemen claims that these are merely "optical illusions." He *does* concede that there were direct influences from Mongol cultures across the Bering straits. However that may be, it is clear from this excellent book, that the worst thing that ever happened to indigenous American art was the discovery of this continent.

Mr. Kootz, on the other hand, is the biographer of the rebirth of American art. His book is like a breath of fresh air: no punches are pulled, no bushes beaten about. Sample bushes: The "Nationalist" painters, the Benthons and Grant Woods, who have been surrounded with phony halos far too long. To them, and the "class struggle boys," the author says: "The plain fact of the matter is that the radical pattern of this school is as dull esthetically as the reactionary pattern of the Nationalist school. Both schools trade in local

(Continued on page 110)



Copper ... or Stainless ...
Nickel ... Brass, Bronze
Silver ... one side or both sides
... any thickness desired.

SuVeneer[®]

*Trademark Reg. U. S. Pat. Off.

THE INSEPARABLY BONDED CLAD METAL

Roll it—spin it—draw it—stamp it! This uniquely-produced composite metal, an exclusive development of Superior Steel Corporation, opens new horizons to designers now occupied in product development for post-war sales.

In SuVeneer Clad Metal, other ferrous or non-ferrous alloys are joined with plain steel,

covering one or both sides in equal or different thicknesses. The ratio of clad to base metals remains constant through reducing and forming operations, providing high flexibility in product design and manufacture.

Mark "SuVeneer" well for the future ... get the facts today!

"SuVeneer" in War

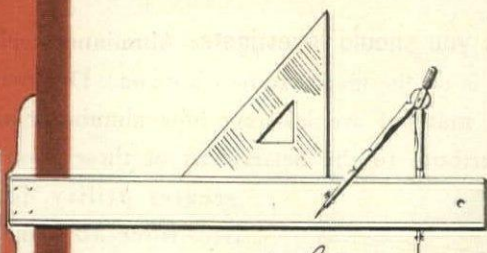
Steel, clad with gilding metal by the Superior process, forms the jackets of x-millions of United Nations' bullets each year—replacing the solid gilding metal jackets formerly used, and saving thousands of tons of copper monthly for other war needs.

Use of this Superior process for such war purposes has been granted without charge to a score of other steel companies, through the Duration.



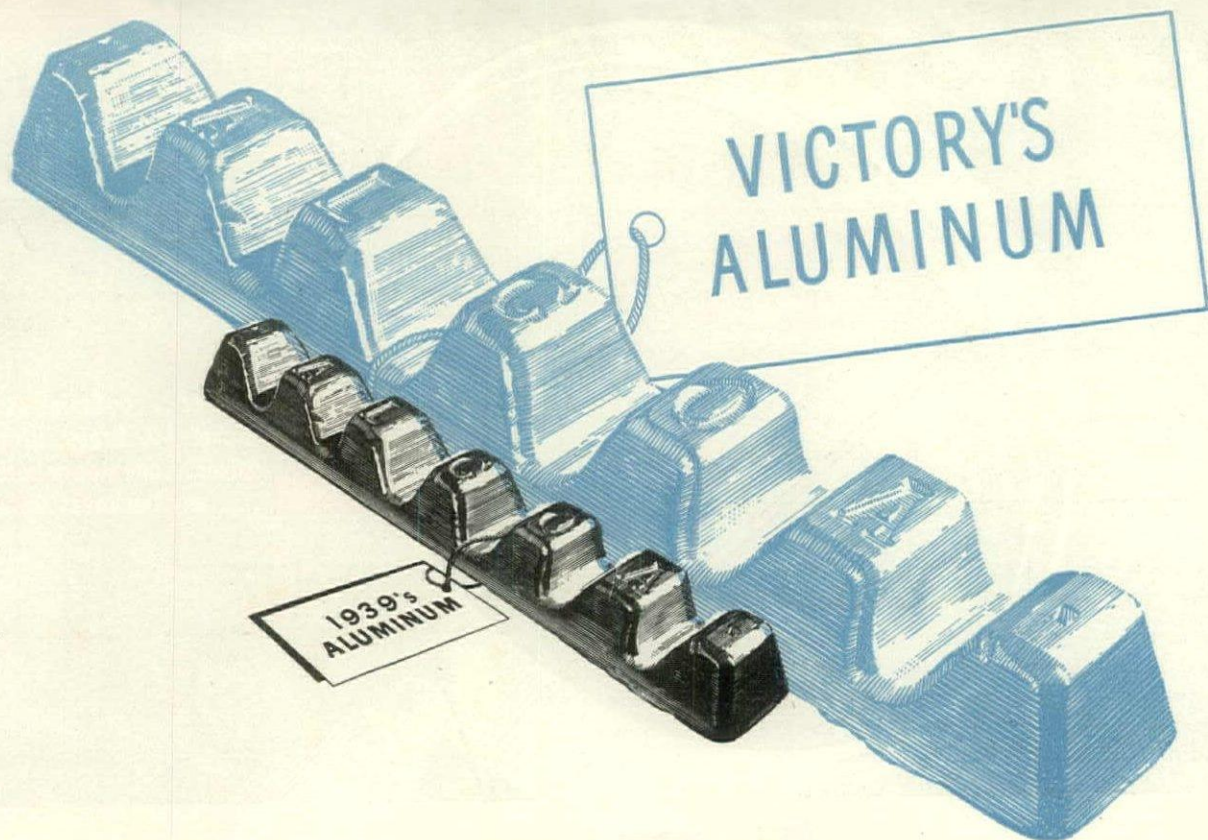
... from the SuVeneer gilding metal clad strip, to cups, to finished bullet jackets.

"SuVeneer" in Peace



*Reserved for
tomorrow's designers*

Superior Steel CORPORATION



How much will *You* want for postwar building?

This you know: When the shooting is over, there will be more aluminum... probably six times more... than there was before it started in 1939.

This you should ponder: The price of aluminum is lower today than it has ever been... 25 per cent lower, on ingots, than in 1939. You can toss out all the cost figures you ever used on aluminum. After the war, you will have a fresh new set to stir your interest.

This you should investigate: Aluminum technology is on the march to new horizons. Designers of war materiel are learning how aluminum alloys contribute to the betterment of those products; greater utility, longer life, finer appearance. Manufacturers and their workmen now accept the

fabrication of aluminum as a matter of course.

This you remember: Before the war channeled all aluminum into fighting equipment, aluminum was being widely used by architects and builders. Doors, windows and sills, skylights, coping, spandrels and decorative devices; all are now giving a good account of themselves on homes and buildings all over the country. Postwar construction is certain to employ aluminum in a big way.

All of which calls for Imagineering. Let your imagination play with these facts: more aluminum, cheap aluminum, new aluminum technology. Engineer them into your designs *now*, on the drawing board, and be ready when wartime shooting stops and it's time to get going on peacetime construction. ALUMINUM COMPANY OF AMERICA, 2166 Gulf Building, Pittsburgh, Pennsylvania.

*The Window
of the
Future is
Aluminum*

ALCOA ALUMINUM

Reg. U. S.



HERE'S ONE WAY PROPELLAIR Fans

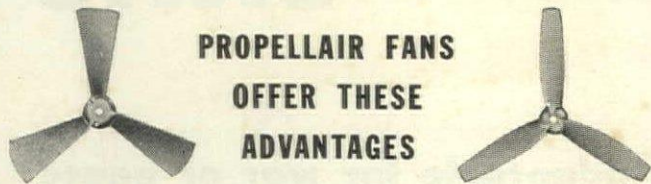
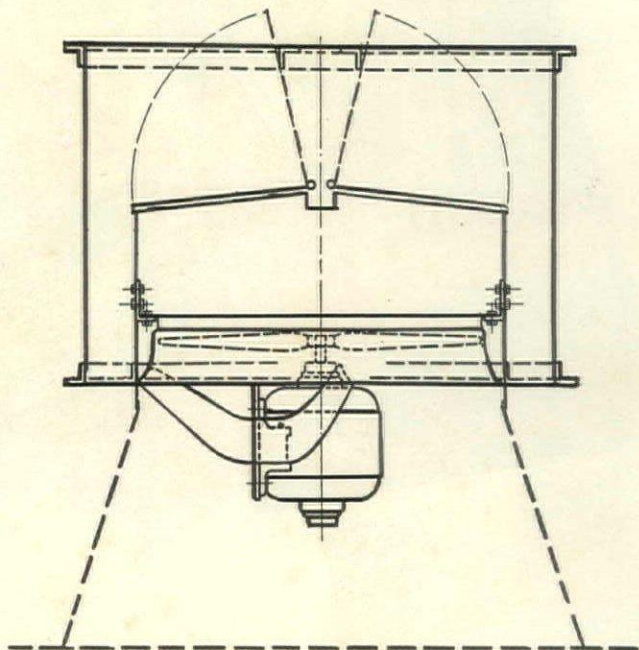
can help you solve problems involving heat!

The diagram at the right illustrates the design and operating principle of the Propellair Verti-Vent stack as an extremely efficient roof ventilator. It incorporates advanced features for solving ventilating problems where heat collecting at the roof must be drawn off in volume.

Butterfly dampers, operating within a wind guard, offer virtually zero resistance. The full displacement of the fan is discharged vertically, sending heat (plus smoke and dust, if any) high above the roof to reduce the possibility of return to the ventilated area. When not in operation this unit is efficient in retaining heat within the building until it is desirable to discharge it, as in foundries before pouring starts.

High-velocity discharge prevents rain from entering when the fan is running, and the dampers close gently and positively as the propeller coasts to a stop. A channel is provided for water to run off to the side of the stack and then onto the roof.

The Propellair Verti-Vent stack is a fool-proof, fully automatic ventilator, readily installed at the topmost points where heat and fumes collect. Available in sizes from 12" to 60" diameter, 2100 to 68,000 c.f.m.



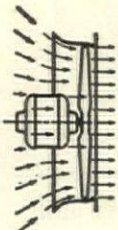
PROPELLAIR FANS OFFER THESE ADVANTAGES

AXIAL-FLOW, AIRFOIL PROPELLERS,

especially designed by Propellair engineers, deliver maximum air with minimum horsepower. Air flow is even over all parts of the blades—the whole fan works, not just the tips! These unique propellers are also non-overloading—from free air to complete block-off, horsepower remains virtually constant as long as motor speed is constant. The number of blades, and their angle and shape, depend on the job to be done.

CURVED ENTRANCE RING,

in addition to serving as a sturdy support assembly, reduces tip loss and enables Propellair Fans to deliver maximum air per horsepower. Introduced in 1930, as a result of exhaustive experiments and tests by Propellair engineers, this design makes possible the utilization of the "Airfoil" air-movement principle in the entrance ring as well as in the propeller.



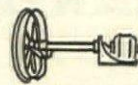
A PROPELLAIR FAN FOR EVERY APPLICATION



CD—Direct connected to electric motors. For ducts, hoods, roof ventilators or panels.



CSB—Heavy-duty complete belt-driven unit for ducts or stacks to handle explosive vapors, dust, or high temperatures.



CE—Extended shaft fans for ducts, dryers, etc., where motor must be outside the air stream.



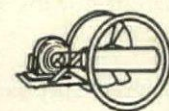
CU—Low-stand, tiltable, portable cradle fan for hardening-room service, product drying or cooling.



CF—For belt drive from separate motors, engines or line shafts. Also with extended shaft assembly.



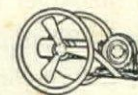
CM—Heavy-duty pedestal blast fan for cooling men and products in heavy industries.



CS—Heavy-duty complete belt-driven unit in duct section. For severe dust, corrosive or explosive vapors.



C—Industrial circulator fan for general air-circulating service of all types.



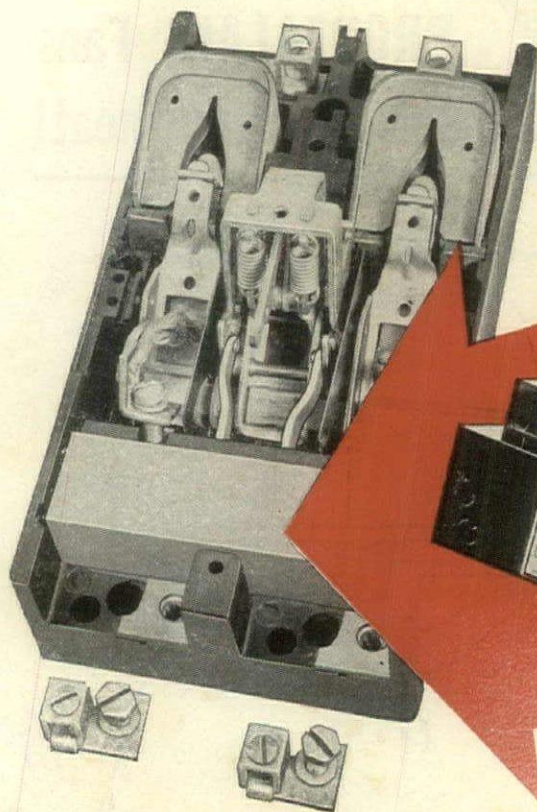
CSV—Heavy-duty complete belt-driven unit for high temperatures in ducts, pipes, and as stack boosters.



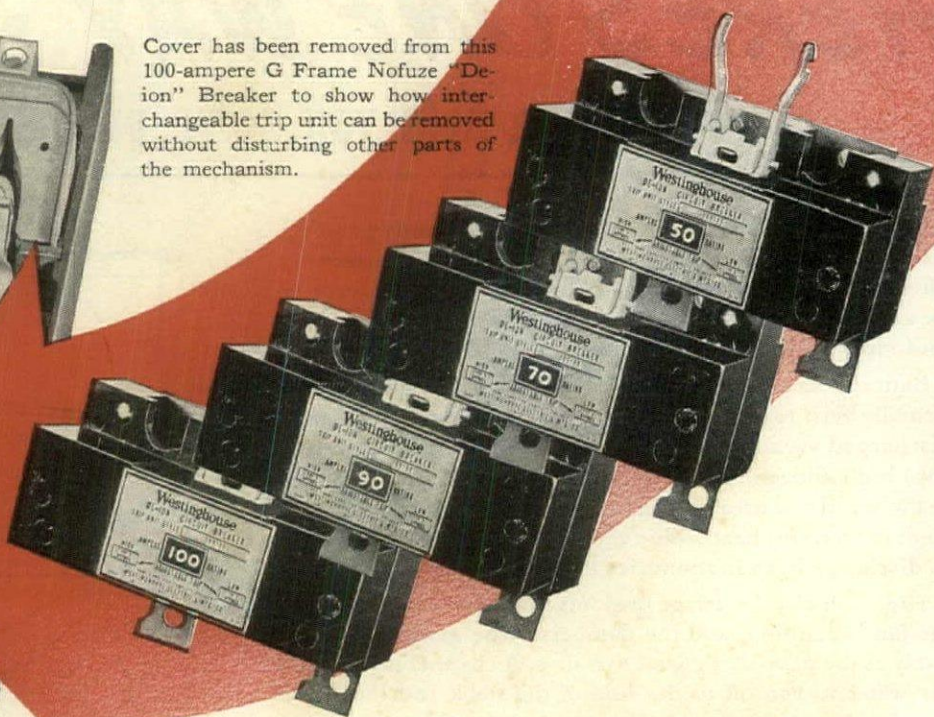
CB—Slow-speed, ultra-quiet complete belt-driven fan. For office or room ventilation.

If you have a pressing industrial ventilating problem, you should have our Propellair catalog No. 10-0. It contains many pages of technical tables, charts, diagrams and other valuable information for architects, engineers and plant men—and of course describes and illustrates the complete Propellair line. We will mail the catalog on request or, if you prefer, we will ask the nearest Propellair ventilating specialist to deliver your copy personally and at the same time discuss your specific problems. Write!





Cover has been removed from this 100-ampere G Frame Nofuze "De-ion" Breaker to show how interchangeable trip unit can be removed without disturbing other parts of the mechanism.



Interchangeable

TRIP UNITS

make **NOFUZE BREAKERS** adaptable for war or peace



Whether in khaki or "civvies", Nofuze Breakers provide circuit protection that can be accurately fitted to job conditions.

Today, when most Westinghouse Breakers are "mobilized" to protect war circuits, they are keeping current flowing *safely*, with minimum interruptions in war production.

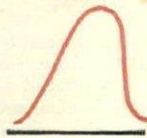
When peace comes, with its equally great problems of conversion to civilian goods, Nofuze Breakers will permit economical and speedy change-overs. For example: In the larger frame sizes, trip units are removable and interchangeable. Thus if your conversion results in heavier or lighter loads, the present trip unit can be quickly replaced with one of the required trip rating. It's as easy as that.

Ask your Westinghouse representatives for help on *your* war circuit problems. Or write direct to: Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa., Dept. 7-N. J-60539

NOFUZE "DE-ION" BREAKERS



Prevent harmless overloads from interrupting war production.



Protect circuits from dangerous overloads and "shorts".



Restore service instantly with just a flip of the switch.



Westinghouse

PLANTS IN 25 CITIES... OFFICES EVERYWHERE

NOFUZE CIRCUIT PROTECTION



Again, We Turn the Clock Ahead

☆ You watched us plunge all-out into war work when the shooting started. We knew what was coming. We knew the shortest road to peace. We were ready! ☆ Today with each passing hour more and more war material streams from our machines—but, with all this...we at LCN *make* time to plan the improved products, the new ideas, the increase in productive jobs that must be ready and waiting for those critical first days of peace. ☆ We must do this—all business must...if we are to forestall “make work” projects—if we are to win the peace as well as the war. So again we are turning the clock ahead...to be ready when war’s final bugle sounds. ☆ Expect us, at that hour, to switch over men and machines with utmost speed to bring our plans to life.

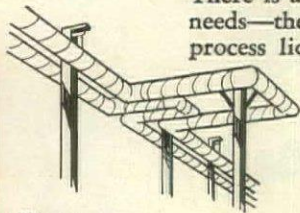
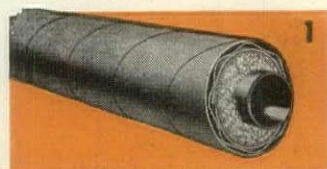


DOOR CLOSERS

NORTON LASIER COMPANY, 466 WEST SUPERIOR STREET • CHICAGO

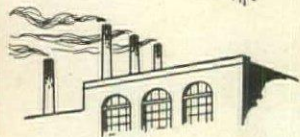
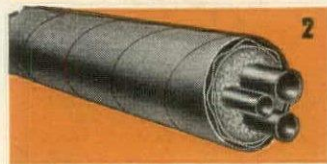
Ric-wil offers conduit for every need—the most complete line, meeting all conditions of service and cost

There is a Ric-wil insulated conduit system engineered to your specific needs—the transmission of steam, hot water, oil, hot or refrigerated process liquids—providing heat transfer with the lowest possible loss.



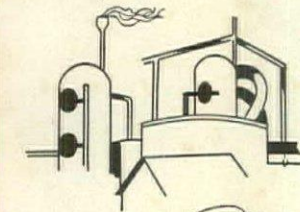
1. RIC-WIL INSULATED PIPE UNIT—SINGLE PIPE SYSTEM

Prefabricated complete units—pipe as specified, thoroughly insulated, in helical corrugated conduit, coated and wrapped with asphalt saturated asbestos felt. 21-ft. lengths for speedy installation. For underground or overhead systems.



2. RIC-WIL INSULATED PIPE UNIT—MULTIPLE PIPE SYSTEM

Any specified combination of pipes in prefabricated conduit—insulated and protected the same as the single pipe system. Any or all of the pipe lines may be specially insulated to meet job requirements.



3. RIC-WIL INSULATED PIPE UNIT—FOR PROCESS LIQUIDS

An adaptation of the multiple system used where a steam or hot water line heats fluids in other lines. Pipes are insulated from the exterior but not from each other. Sizes and specifications as required—conduit same as for other insulated pipe units.



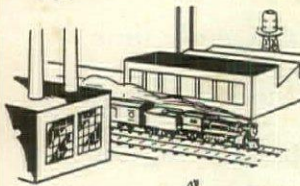
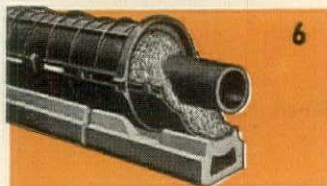
4. RIC-WIL STANDARD TILE CONDUIT—TYPE F

Vitrified glazed A. S. T. M. Standard Tile Housing—acid and waterproof—with foundation type base drain supporting weight of piping through correctly engineered pipe supports. Positive locked-in-place cement seals on sides and ends. For single or multiple pipes.



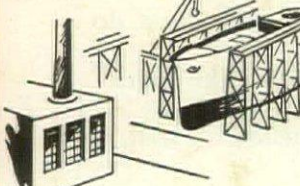
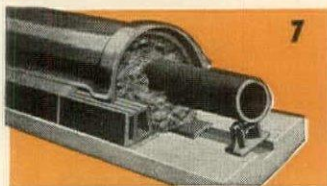
5. RIC-WIL SUPER TILE CONDUIT—TYPE F

Same advantages as Standard Tile but with walls approximately double thick for strength under heavy traffic or where overhead load is above normal. Will support concentrated static load of 6 tons per wheel under actual installation conditions. Base drain of extra-heavy tile.



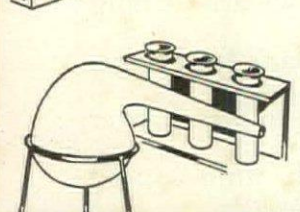
6. RIC-WIL CAST IRON CONDUIT—TYPE F

Heavy reinforced cast iron conduit for use where underground pipe lines run close to or under railroad tracks. Durable, water-tight and vibration-proof. Positive locked-in-place cement seals on sides and ends with metal clamps for extra tightness.



7. RIC-WIL TILE CONDUIT—UNIVERSAL TYPE

Where installation conditions dictate the use of a concrete pad Ric-Wil Universal Tile is recommended. Side walls are double-cell vitrified trapezoidal block design. Arch may be Standard Tile, Super-Tile, or Cast Iron.



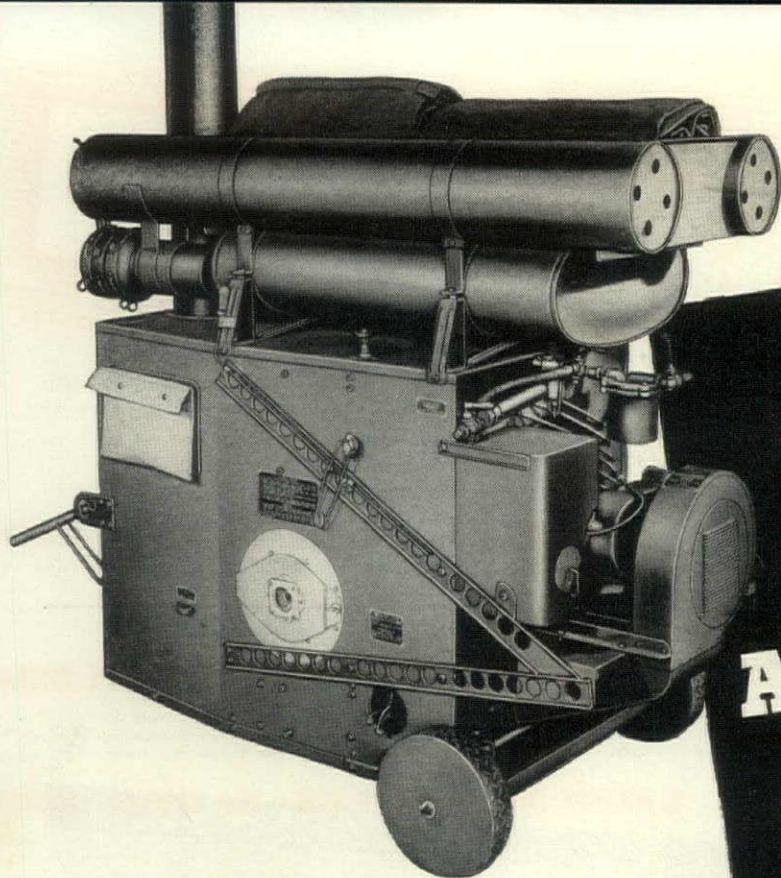
8. RIC-WIL TILE CONDUIT—TYPE DA

For oil or process liquids where conduit must be insulated but individual lines are not insulated from one another. Insulation is a diatomaceous earth lining, moulded and keyed to inside of tile. May also be used (Type DF) with fibre insulation for steam heat, power and superheated steam. Applicable to Standard, Super-Tile and Cast Iron.

Ric-wil accessories are available in all type systems; standard and special fittings, factory fabricated or field fabricated expansion devices, alignment guides, and anchors. Descriptive bulletins on request.

GET THE ORIGINAL—SPECIFY RIC-WIL

RIC-WIL INSULATED CONDUIT SYSTEMS
THE RIC-WIL COMPANY • CLEVELAND, OHIO
AGENTS IN PRINCIPAL CITIES



**Designed
for our
Armed Forces
everywhere**

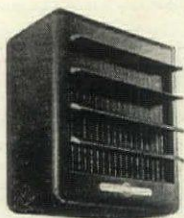


SINCE the advent of the National emergency over three years ago, The Herman Nelson Corporation has been developing special equipment for our war effort. The Herman Nelson Self-Powered Portable Heaters were designed particularly for our armed forces, and were successfully used as early as last winter at Army and Navy Bases everywhere.

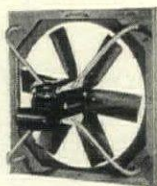
These portable, light-weight, sturdy, self-powered ground heaters are mainly used for preheating aircraft engines in severe, cold weather. They have successfully produced a steady flow of heated air in temperatures as low as 65° below zero.

In addition, these units have served the armed forces well by supplying heat for small buildings, tents, freight car interiors, repair shops and many other applications where portable, self-powered heat is required.

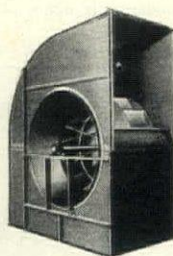
At the same time The Herman Nelson Corporation has been furnishing its standard peace-time products, such as hiJet Unit Heaters and Autovent Fans and Blowers, for use in Army-Navy Projects and War Plants throughout the country.



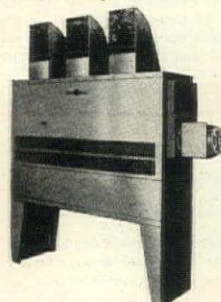
Herman Nelson Horizontal
Shaft Propeller Fan Type
hiJet Heaters



Autovent Direct Drive
Propeller Fans



Autovent
Type HB Blowers



Herman Nelson Blower Fan
Type hiJet Heaters



THE HERMAN NELSON CORPORATION MOLINE, ILLINOIS
Autovent Fan & Blower Division, Chicago, Illinois
Manufacturers of Quality Heating, Ventilating and Air Conditioning Products



Above: Morris Ketchum, Jr., and Lustron battery case for walkie-talkie radio. Recognized as an expert in the design of modern commercial buildings, Mr. Ketchum is associated with the New York architectural and engineering firm, Harrison, Foulhoux and Abramovitz and is an instructor of Architectural Design, New York University.

FROM A WALKIE-TALKIE BATTERY ... A CAMERA STORE FOR 194X!

STORIES of a number of wartime plastics uses contributed to this conception of a camera store for 194X by New York Architect Morris Ketchum, Jr. One which particularly fired his imagination, however, was a battery case for compact walkie-talkie radios molded from Lustron, Monsanto's lightweight, water and weather resistant polystyrene.

Starting with a ceiling of translucent Lustron panels which make use of those

same qualities, Mr. Ketchum has gone on to visualize a complete store based on the logical development of wartime advances in several other Monsanto plastics as well.

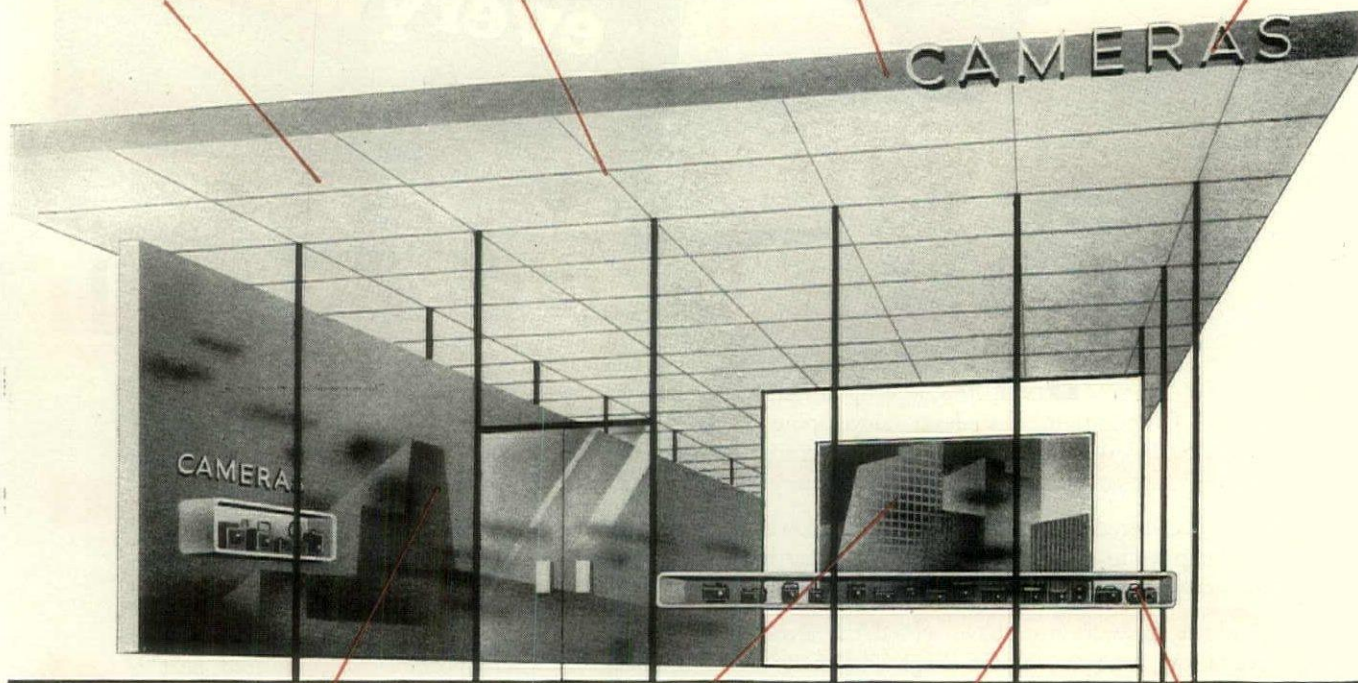
Mr. Ketchum's store, however, is by no means an all-plastics creation. Where other materials promise to serve better than the plastics we may expect to have available in the near future, those other materials have been specified.

Ceiling: Standard size, clip-on panels of translucent Lustron — chosen for its lightweight, dimensional stability and acid resistance — carry over both the outside lobby and the interior. Above panels is overall lighting system including both incandescent and fluorescent illumination.

Ceiling moldings support panels, also serve as continuous wireways or plug-in strips for down-light fixtures. They might be formed from any one of three Monsanto plastics, Lustron, Resinox or the newest of the family, melamine. As panels are removable, lighting system is easily rebuilt.

Canopy fascia: plastics-bonded plywood which could be surfaced in any desired color with new types of recently developed weather, water and age resistant melamine resins.

Canopy letters: molded from translucent, colored Lustron. Thanks to Lustron's ability to "pipe" light, they could be edge-lighted from a concealed source in the canopy fascia.



Photomural wall, eight feet high and the length of the store, is mounted on continuous length of Resinox or melamine-bonded plywood. A film of transparent plastic protects it from wear and careless hands. As a result, it can be cleaned with soap, water and scrubbing brush.

Projection screen: Rear wall of sales area is a large, recessed screen on which could be shown still or motion pictures. Screen, perhaps of a plastics composition, is recessed to increase its luminosity and might also be mounted on light, dimensionally stable, plastics-bonded plywood.

Supporting columns: thin, strong columns of steel or one of the new, light metal alloys. Where maximum strength per unit of area is desired, metals are still superior to plastics.

Door, glazing, and showcases: might some day be formed from non-shatterable, flexible or semi-flexible sheets of transparent plastic but in predictable future should be glass.

The Broad and Versatile Family of Monsanto Plastics

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

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

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



WHAT EVERY PROPHET SHOULD KNOW

Frankly, much development work has yet to be done in laboratories of established building materials suppliers and plastics manufacturers alike, before the store Mr. Ketchum has sketched opens for business. As one of the nation's largest producers of plastics, however, Monsanto is interested in encouraging intelligent, creative prophecies like Mr. Ketchum's. For only when the logical possibilities and limitations of plastics are fully understood can they contribute to the fullest to a better postwar world. MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield, Massachusetts.



They've learned a lot about fuel saving!

Adversity is a great teacher. Thousands of dwellers in homes large and small have found out things they never knew about heating economy. Some of them learned the hard way—discovering for the first time that their heating equipment is wasteful of fuel, and that restricted rations mean discomfort. Now they're watching the fuel situation with hawk-like intensity, and praying for a mild winter.

Others, however, have a self-satisfied look when the subject is broached. These are likely to be the people who have Fitzgibbons Steel Boilers or Air Conditioners. They will perhaps shut off a spare room or so, use care in other ways, and without sacrifice of comfort will keep within their budgeted fuel ration. These people are feeling pretty thankful today, for the excellent judgment of their architects in specifying "Fitzgibbons."

Among the less fortunate, more and more often you hear the plaint—"Wish I had a Fitzgibbons—I'll never build another house without one!"

BUY U. S. WAR BONDS
and STAMPS



Fitzgibbons Boiler Company, Inc.

101 PARK AVENUE, NEW YORK 17, N. Y.

WORKS: OSWEGO, N. Y.

Branches and Representatives in Principal Cities

FITZGIBBONS

Steel Boilers and Air Conditioners that make fuel go farther

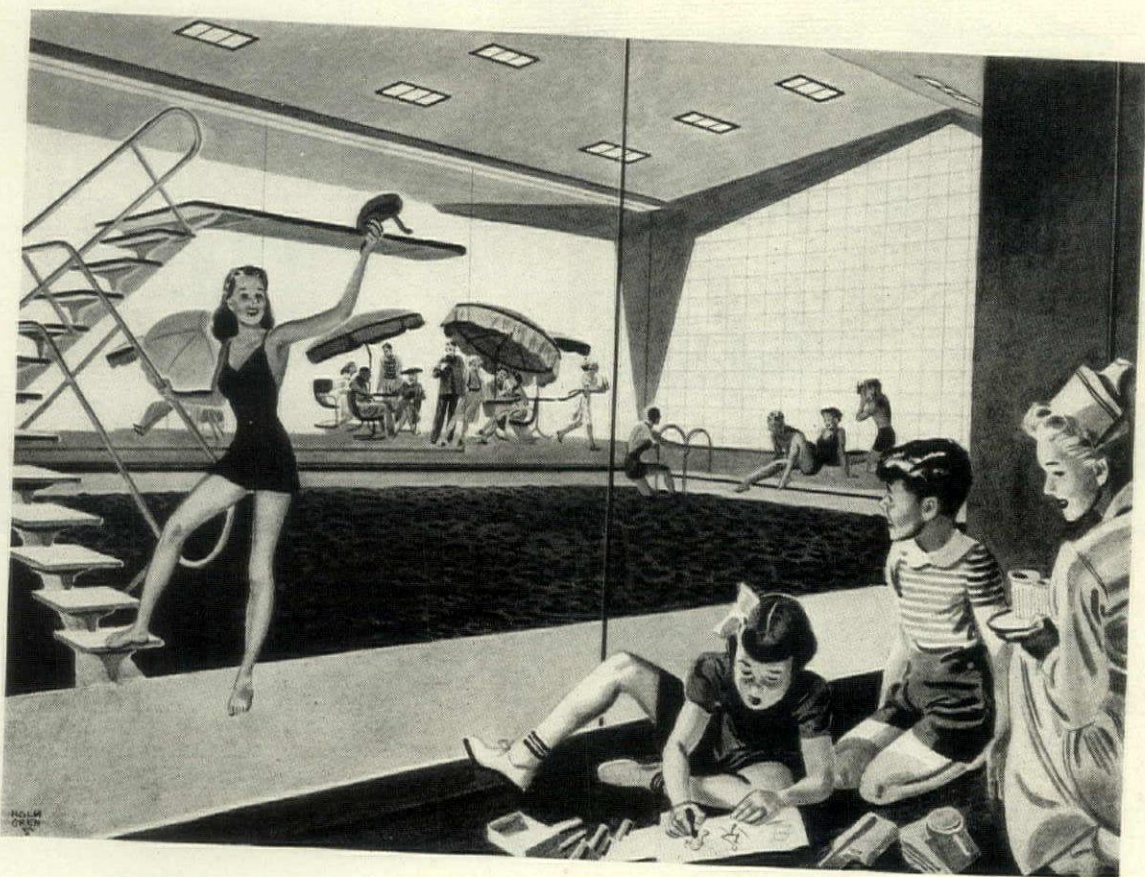


Helping Post-War Building

TODAY Revere is 100% committed to war work. But looking to the day of after-Victory, it is even now preparing to supply the demands of the building industry for roofing, flashing, pipe, tube and architectural shapes in copper and its numerous alloys. And, as ever, Revere will continue to provide expert technical advice to those with special problems in employing its products.

In still another way Revere looks to the future. It believes that the current lively public interest in planning post-war housing—community or otherwise—should be definitely encouraged. Hence, in its current national advertising, it is presenting the ideas of some leading architects and designers. Most of their thinking is concerned with how to make possible “the more ample life” and is well exemplified by Mr. Lescaze’s suggestion for a Town Leisure Center. Public reaction—in the way of booklet requests for detailed information of the individual projects—has been excellent.

Revere believes that its effort to encourage post-war planning—in the concrete fashion which it is now doing—is bound to benefit every one concerned with the industry: architect, builder, contractor, dealer, realtor, manufacturer and financier. Revere is certain, too, that the extended use of copper and its various alloys will make any building more durable, better to look at, better to live in, better to own, rent or sell.



Admission Free!



"Some time after victory, you and your neighbors may attend the opening of your town's new leisure center—a city building almost like a country club, where swimming, hand ball, table tennis and other games would be free to members of the community. A place where, after work or in the evenings, you could limber up your muscles or play pinochle with your friends.

"Your entire family would have free use of this club. A special play area would be designed for children, and a modern nursery would safely care for babies while mothers are swimming, playing games, shopping or at work.

"For any town of 25,000 people or more, this could easily be possible. Tomorrow's low-cost homes, by bringing better living to millions, will re-create our towns and communities. Leisure centers such as I have described could be built and supported by public funds in the same way as public libraries and schools.

"I am working on the basic design for such a building, using the latest construction techniques and materials. In a project of this kind, naturally the use of copper should be considerable in view of its wide adaptability to the builder's needs. I know that the cost would easily come within reach of hundreds of towns throughout America. Why not start now to plan for this in your community? Revere has prepared a free booklet giving more information about it. Write to Revere."

WILLIAM LESCAGE

For Americans, especially, important things are at stake in this war. After victory all of us can look forward to happier, richer ways of living than ever before. Not only are new, low-cost homes already taking shape in the minds of architects and engineers, but out of these plans can arise new communities, reborn cities and towns, new types of buildings to make better living available to millions.

Revere does not produce buildings or expect to in the future, but we know that in tomorrow's homes copper and its alloys will play a newly important

part. In thousands of homes today Revere copper now gives lasting protection against the weather, delivers rust-free water, helps reduce heating costs. In days ahead it can bring us new comforts and conveniences, can make our homes better to own, or rent, or sell.

All of us are now working for Uncle Sam. No copper is available except for war. But the research going forward in Revere's laboratories TODAY can help make better living available to all TOMORROW.

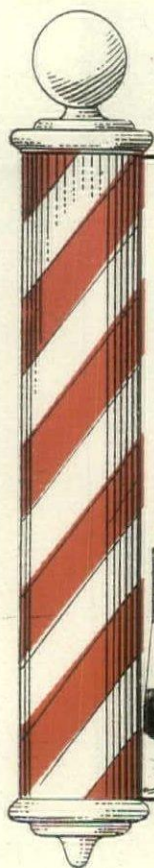
Naturally, in this limited space, Mr. Lescage could describe only a few details of his conception for a leisure center. For more information about it, write to Revere for free illustrated booklet.



REVERE
COPPER AND BRASS INCORPORATED

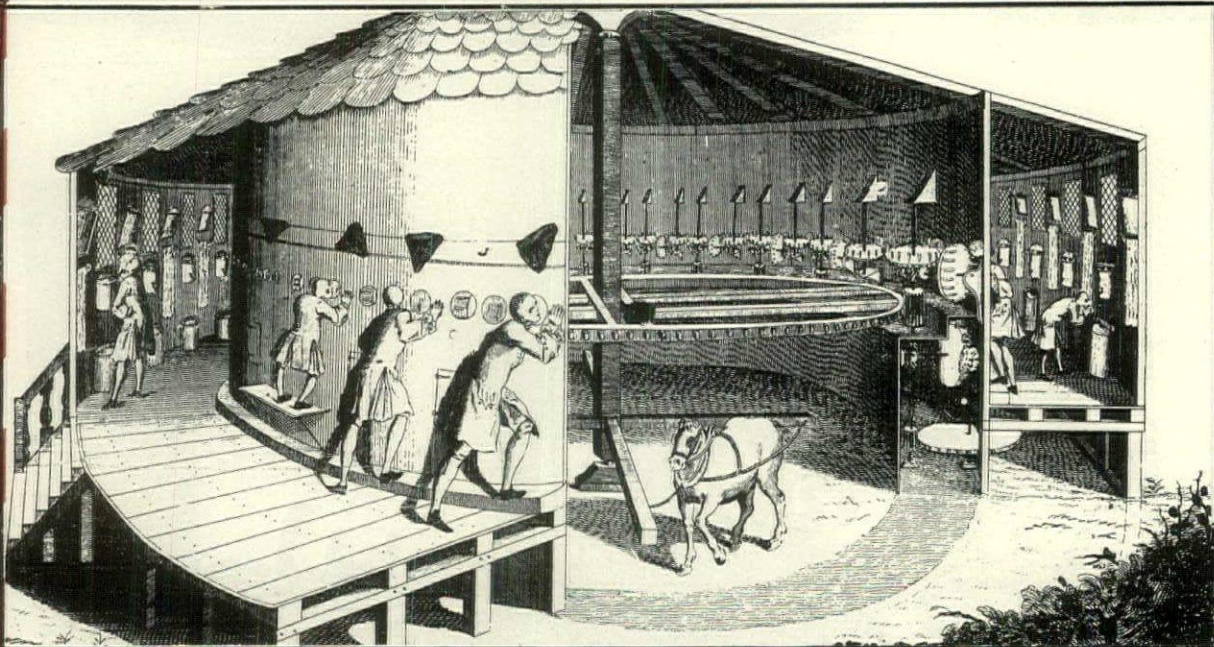
Founded by Paul Revere in 1801
Executive Offices: 230 Park Avenue, New York

This advertisement appears in Saturday Evening Post, June 19, 1943



DOODLED IN 1745. Here is an architect's idea of how to shave 60 men a minute—oil, comb, powder their wigs all at the same time. Fortunately, this dream-barbershop-for-

busy-Beau-Brummels never became a reality. Even 200 years ago, as you see, artists dreamed and architects planned new kinds of housing—most of which never got built.



THE BETTMANN ARCHIVE

Are you *Doodling* or Planning for that Building Boom?

Sure—there's a terrific need for new housing.

But if that's why you're dreaming of a postwar building boom—just remember what a need there was *before* the war.

And what happened? No boom.

No—need alone does not necessarily mean demand. So, to help *create* demand as quickly as possible after Victory comes, TIME offers a practical five-point

PLAN FOR BUILDING POSTWAR BUILDING MARKETS

First point is . . . **1.** Get ready to make sales the minute peace comes. To do this job, you can tap the dammed-up postwar buying power of over a million TIME-reading families. These men and women* prefer TIME 7 to 1 over

*TIME's readers include such influential people as executives and editors, congressmen and college presidents, government officials, mayors, radio commentators, and 34 other groups of leaders—every one of which has recently voted "TIME is America's most important magazine."

all the other magazines they read that carry advertising. They have the "habit of progress"—the money to buy what they want (their incomes are 2½ times the average U. S. family's).

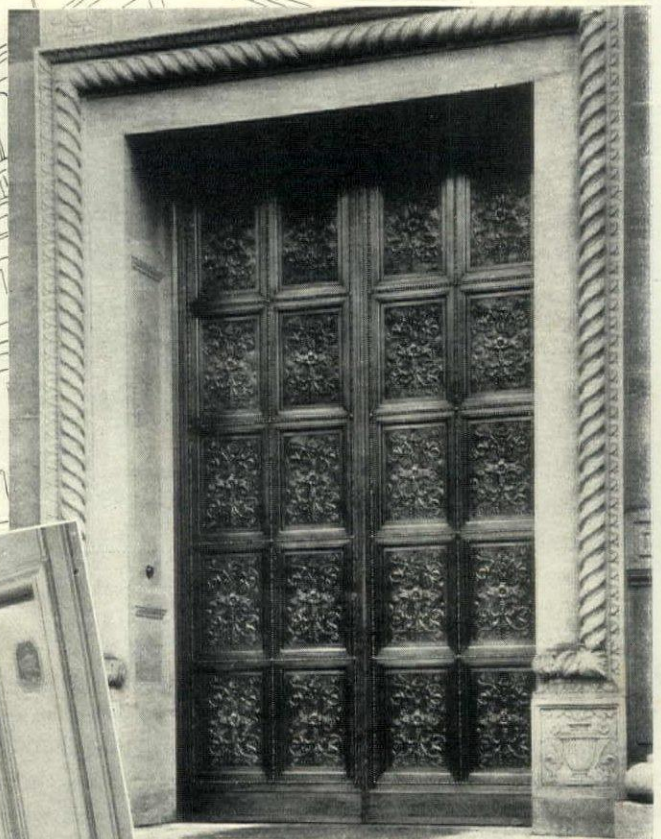
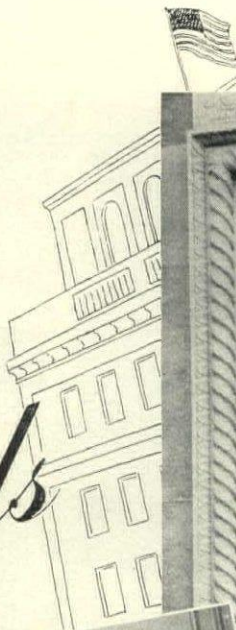
And TIME can help you put all the other four points of this plan to work for you—can help you **2.** Stimulate confidence in new techniques, materials, designs; **3.** Interest both men and women, because they jointly decide when and how to build a house; **4.** Stir up prospects for non-residential buying; **5.** Get the middlemen on your side.

Ask your advertising agency to tell you how—or watch these ads.



GATEWAY TO THE BUILDING MARKET

Crafted by Michaels



Cast Bronze Building Entrances



Bronze Elevator Doors



Cast Bronze Railing Grilles



Many of the world's most famous architects and builders have found in Michaels craftsmanship the full expression of their artistic ideals, faithfully repro-

duced in everlasting metals. For three-quarters of a century it has been our privilege to cooperate closely with architects and builders in the development and production of products which add so much to the character and beauty of their creations.

After the war and peace have been won, we look forward to resuming our interpretation of the genius of architect and builder.

MICHAELS PRODUCTS . . .

Fixtures for Banks and Offices
Welded Bronze Doors
Elevator Doors
Elevator Enclosures
Check Desks (standing and wall)
Lamp Standards
Marquise
Tablets and Signs

Name Plates
Railings (cast and wrought)
Building Directories
Bulletin Boards
Stamped and Cast Radiator Grilles
Grilles and Wickets
Kick and Push Plates
Push Bars

Wrought Iron and Bronze Lighting Fixtures
Wire Work
Cast Thresholds
Extruded Thresholds
Extruded Casements and Store Front Sash
Bronze and Iron Store Fronts
Bronze Double Hung Windows
Bronze Casement Windows

THE MICHAELS ART BRONZE CO., Inc.

COVINGTON, KENTUCKY

Manufacturers of many products in Bronze, Aluminum and other Metals

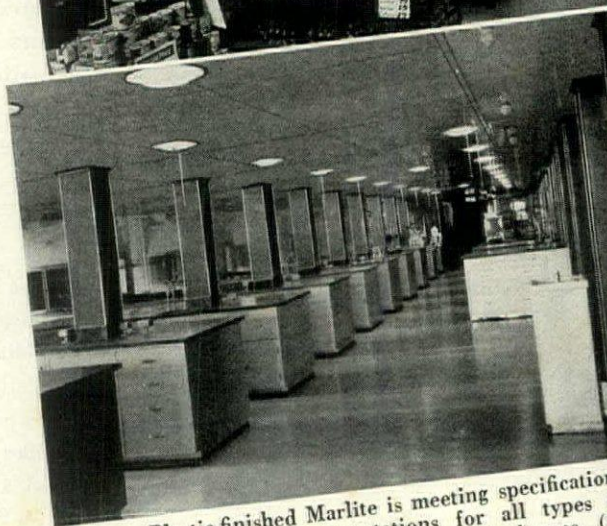
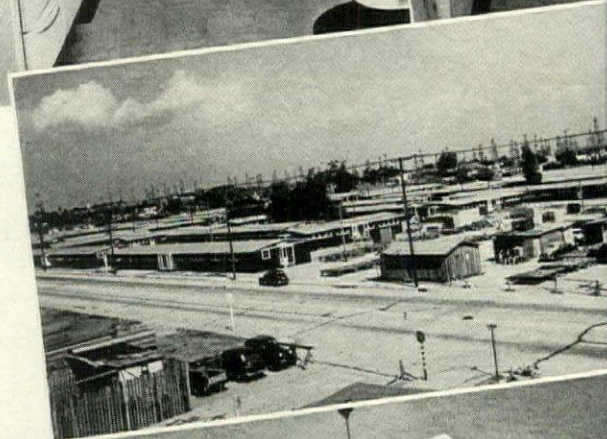


Marlite

REG. U. S. PAT. OFF.

Highlights Duty Today ... Beauty Tomorrow

Out of the wide variety of war duties Marlite is now performing—out of thousands of pre-war installations come promise of the beauty and utility Marlite offers for post-war building. Plastic-finished Marlite walls in thousands of war plant wash rooms are furnishing new proof of the ability of its high-heat-bake finish to withstand wear and tear—resist stains. From hospital operating rooms comes daily proof of the ease with which Marlite may be kept clean and sanitary. It is “selling itself” to tens of thousands of women who see it in factory rest rooms and first aid stations.



ON DUTY TODAY IN

- Industrial washrooms, showers and first aid stations.
- War housing showers.
- Industrial Offices.
- Home remodeling for worker housing.
- Home and commercial building repair.
- Industrial cafeterias.
- Hospitals.
- And a great many others.

FOR BEAUTY TOMORROW IN

- Homes—from basement to attic.
- Hotel lobbies, dining rooms, halls and bathrooms.
- Cocktail bars.
- Super-Markets.
- Smart retail shops.
- Funeral parlors.
- Theater lobbies.
- Bowling alleys.
- Restaurants.
- Professional offices.
- And a great many others.

ADVANTAGES THAT COUNT!

When you specify Marlite, you're offering your client (home, commercial or industrial) the advantages of lustrous beauty and practical cost with a choice of plain-colors, tile-pattern, horizontal-line, genuine wood-veneers and marble-patterns—all, over 100 colors and patterns. You're making long life a part of the room. Marlite surfaces never need repainting. Marlite reduces cleaning labor and time. Specifying large, wall-size panels of plastic-finished Marlite also makes possible quick, easy installation even by a novice carpenter with ordinary tools.

.ARCHITECTS! Send for Descriptive Catalog

Get better acquainted with this ultra-modern material for fast, practical, essential building now . . . to help you plan for the expanded building program that's reliably recast after Victory. Send for your copy of the complete, full color catalog, today, no obligation.

Plastic-finished Marlite is meeting specification and exceeding expectations for all types of interior wall construction—(1) in homes, (2) for war housing, (3) for business places and (4) in industrial plants from coast to coast.

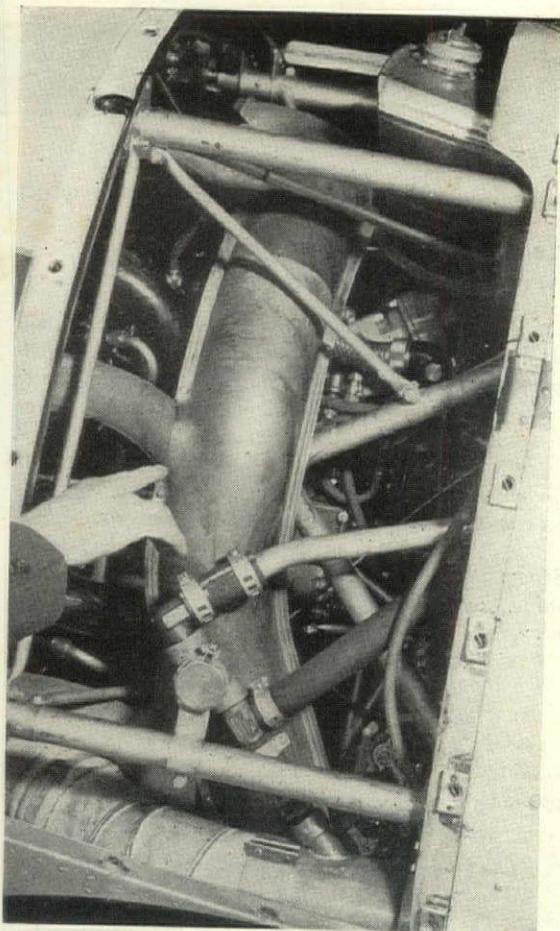
MARSH WALL

PRODUCTS, INC.

71 MAIN STREET

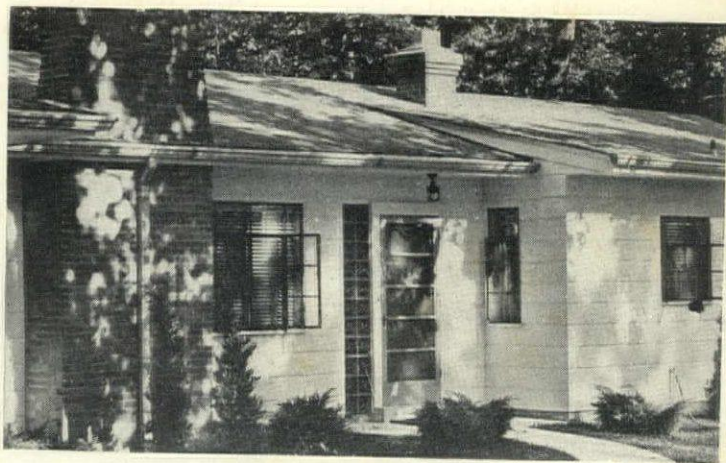
DOVER, OHIO





↑ The hand is pointing to a spot too hot for most metals, but ARMCO Stainless Steel can take it! It's an aircraft exhaust collector ring.

What's an AIRPLANE EXHAUST SYSTEM got to do with ROOF DRAINAGE?



The same tough, long-wearing ARMCO Stainless Steel that architects once specified for gutters and downspouts in better homes is now serving in exhaust systems of warplanes.

Here, temperatures run as high as 1700°F. Only a most heat-resistant metal such as ARMCO Stainless can take this punishment. Other advantages are its strength/weight ratio and its excellent resistance to corrosion and abrasion.

Modern war machines are putting ARMCO Stainless Steel, like other ARMCO *special-purpose* sheet metals, to terrific new tests. And it's measuring up, as you might expect.

War is teaching us many new facts about sheet metals — information that will be useful to you in your post-war designing. The American Rolling Mill Company, 961 Curtis Street, Middletown, Ohio.



THE AMERICAN ROLLING MILL COMPANY



LETTERS

A specialist criticizes two May projects . . . Travelodge meets a competitor . . . A lawyer asks what prefabrication will do to mortgages . . . The anti-Allen movement gets under way.

MAY'S AUDITORIUMS

Forum:

The May number with its proposed additions to communities of the future is a most interesting and challenging number. I would, however, like to make some criticism, both destructive and constructive, on the proposed high school and trade school auditoriums. The program is sensible, but the solution you present doesn't seem to be as well planned.

First the high school: The auditorium seems to be planned with great care for the least possible use. The stage, as pictured in the little sketch on p. 64, has tremendous horizontal width and practically no usable depth, and would obviously isolate a speaker. The sight lines for the auditorium are quite successful, but an auditorium with a capacity of 2,400 needs some means of cutting down the proscenium for the type of stage production requiring intimacy. There is no place for storage, costumes or construction of settings. The stage itself needs complete re-planning.

The trade-school auditorium is more adequate, but it too is hampered by inflexibility in the stage and adjacent areas. Placing of the stage-craft shop directly behind the playing space with the large, folding doors for access, deprives the stage of any possibility of using a cyclorama and makes it almost impossible to utilize the stage shop while rehearsals are going on. The playing space is cramped, and it seems unwise in these days of flexible equipment to provide the stage with only the traditional picture-frame proscenium. At the basement level the dressing rooms should be separated so that the boys and girls can have access to their respective toilet rooms without entering the general assembly or green room. The toilet rooms should also provide shower facilities. The general room, indicated by No. 1 on the plan, provides good entrances and could be used for makeup and final costume checking, but the boys' and girls' dressing rooms should have their own entrances.

I would be most grateful if some of these suggestions could be passed on to the architects of the schools proposed in your May number. The design of a community center or an educational theater is a highly specialized matter

and one on which it is difficult to find adequate data. Having worked in enough theaters with varied degrees of impossible designing, I have strong convictions on the subject, as you may see. If, in a newly proposed project some of these mistakes can be eliminated, the users of these schools will have occasion to rejoice.

JANET K. SMITH

*Professor and Department Head
Iowa State College, Ames, Iowa.*

PREFABRICATION

Forum:

While riding down the road outside of Lynchburg, Va., we discovered serious competition in the prefabri-



cated building, shown in the picture which is enclosed.

ALSEN D. THOMAS

*The Travelodge Corp.
Lynchburg, Va.*

Forum:

I am Chairman of the Real Property Financing Committee of the Real Property, Probate and Trust Law Division of the American Bar Association. At the forthcoming convention of the Association in August I will discuss prefabricated housing and real property financing. This discussion will consider this subject from the legal viewpoint; that is, what new legal concepts will result from a widespread use of prefabricated housing, and I am therefore anxious to secure material with respect to the following phases:

What effect will the prefabricated houses have on taxation, foreclosures, deficiency judgments, redemptions, zoning laws, building ordinances, and the substantive law of real property generally? Since these houses are de-

mountable and therefore mobile, will they be financed as real estate mortgages or chattels? What effect will the factor of mobility have on interest rates and mortgage terms?

I am mindful of the many arguments for and against prefabricated homes and the problems which have confronted this market in the past. It is difficult, of course, to predict the future, but it seems almost certain that some of the business institutions now operating in this field are going to continue their operations after the war and endeavor to market their products as a desirable and more economical home in lieu of the present construction at the site.

BETTIN STALLING

Chicago, Ill.

It has occurred to a number of people that widespread use of prefabrication might have a very marked effect on real estate financing and land tenure. Obviously, if houses are manufactured in such a form that they can readily be shipped from one site to another, they will take on more the character of chattels than real property improvements, as at the present time. An excellent example of the effect of this type of construction on financing and sales methods is the "dining car" type of restaurant. Diners are sold on a time-payment basis and are frequently traded in and resold used, like automobiles.

For anything like this to happen in the house field, however, prefabricated houses would have to be more highly developed than most are at the present time. Also, it is obviously of great importance that a considerable part of the cost of the housing unit lies underground, in the form of utilities, and on the ground surface, in the form of streets, sidewalks, and so forth.

Probably the major shifts in financing methods would occur in the case of the so-called "mobile" type of house.—Ed.

NO FOURTH TERM FOR ALLEN?

Forum:

Since you have been kind enough to ask for suggestions by which THE ARCHITECTURAL FORUM might be improved, I have one which I believe to be pertinent: I wish you could find some legal, equitable, effective and permanent means of keeping Mr. Roger Allen's letters out of the pages of your magazine.

HARLEY J. MCKEE, Teacher
University of Cincinnati

(Continued on page 92)

Why dry-built full-wall construction?

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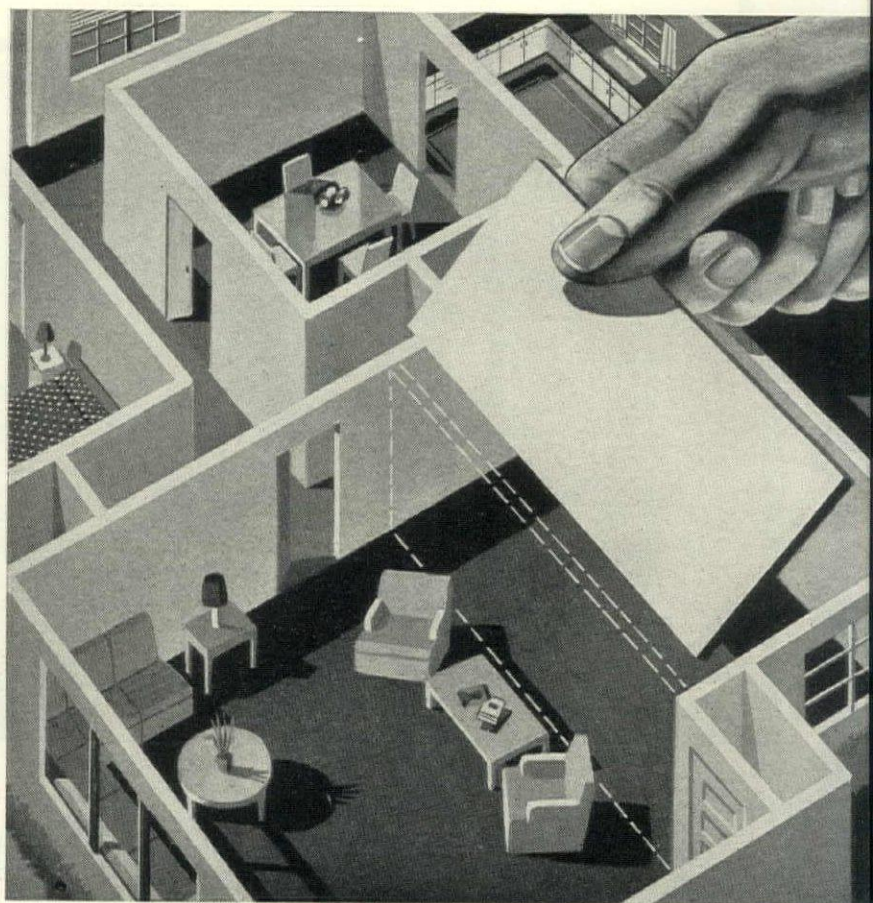
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Reasons such as these are influencing the type of improved interior wall linings being planned for many postwar homes. For free descriptive booklets covering both prefabricated and conventional construction, write The Upson Co., Lockport, N. Y.

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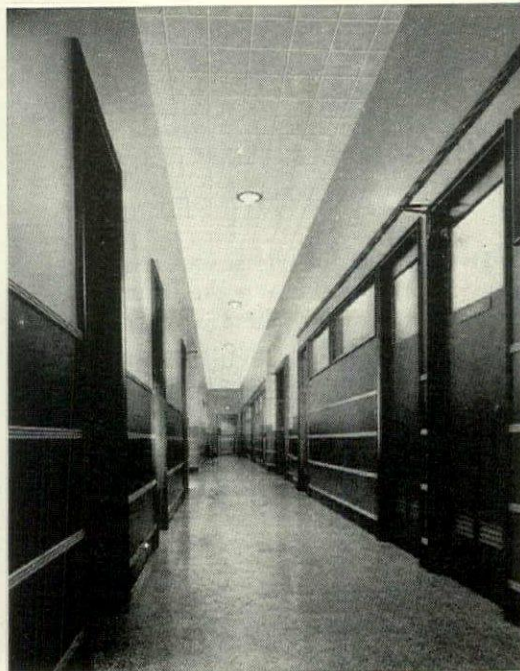
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CONFERENCE ROOM

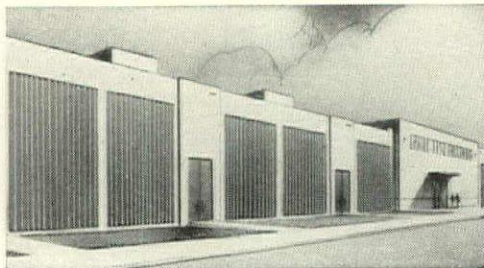


TYPICAL CORRIDOR

AT the Curtiss-Wright Airplane Division in Buffalo, they've just completed one of the most modern aeronautical research laboratories in the world. It's a marvel of design for its purpose, and National Gypsum is proud that Gold Bond Acoustical materials were chosen to sound condition offices, workrooms and corridors.

Gold Bond Econacoustic, which was used on this job, is available now for all types of military and essential civilian buildings where noise reduction is desirable.

ANOTHER WAR USE OF GOLD BOND ACOUSTICAL MATERIALS. The roar of airplane engines being tested would disturb work and rest of people for miles around if test stacks were not sound conditioned. Many of these interesting new engine test buildings are sound-insulated with Gold Bond Acoustimetal-B.



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THE MONTH IN BUILDING... NEWS

Building retreats (this page) . . . Wagner Urban Redevelopment Bill (this page) . . . Congress cuts Lanham funds to \$300 millions (page 39) . . . Architectural League debates 194X (page 39) . . . Rent controllers hold the line (page 40) . . . Moses wins Stuyvesant Town's steeplechase (page 41) . . . U. S. Chamber for Building unity (page 42) . . . A.I.A.—Producers' Council meet (page 98).

STRICTLY FROM WASHINGTON

Last month, as in every recent month, Building fought back and forth across its now familiar, bomb-pocked battleground—Washington, D. C. Only the shadow of the victorious war battalion remained to fight a rearguard action. Building was getting mighty close to quitting the scene for the duration.

Last month Senator Wagner introduced, with reserved comment, a land use act squired by the Urban Land Institute (this page). Last month the Lanham Committee held hearings on the need for more war housing, seemed likely to lop one quarter off NHAdministrator Blandford's request for \$400 millions. Last month, too, the House, in a splurge of fund- and face-saving, killed the National Resources Planning Board, left it only the rope to hang itself (see page 42). Last month, finally, the WPB went on a reorganization spree, abolished its Construction Bureau, created new Committees in its stead (page 42). In other words, it was a Washington month.

Within the industry, Eric Johnston's announcement of the Chamber of Commerce's interest in unification of the construction industry made important news (page 42). Albert Greenfield, Philadelphia real estate tycoon, talked turkey to residents of his city in terms of blight and decay within its walls (pages 43-44), while real estate and hotel men throughout the country watched with a disconsolate eye a ruthless War Department canceling recently made hotel leases right and left. Rumor meanwhile reported that the Army expects to cancel leases on 206 of its 434 hotels. Reason: trainees are swapping hotel rooms for fox holes.

In the summer of its discontent, it was clear to everyone in the construction industry generally that a hard, hard winter was in store. By October 1 whatever construction is still proceeding on the industrial front will be little and

far between, and the chances of any fresh starts highly unlikely.

Straight across the U. S., in speeches, articles, advertisements and fancy talk, postwar planning crowded the war for attention. But to only a few of the most astute did it seem clear that the end of war and the start of peace would not be a black and white situation. Only occasionally could be heard a cautious note that the transition period would bring momentous problems all its own, problems to be shared by Building and every other kind of work and worker.

SENATOR WAGNER ON LAND

A BILL

To encourage the development of good neighborhood conditions in towns and cities by private enterprise with the collaboration of public enterprise; to provide credit for the assembly of land in deteriorated urban areas for subsequent reconveyance by sale or by lease for development and redevelopment by private enterprise and by public improvement; to encourage the widest possible extent of home ownership; to provide financial assistance to towns and cities or appropriate instrumentalities thereof, for the purchase, assembly, and clearance of land in the interest of public safety, health, comfort, and the development of good neighborhood conditions; to stimulate a great and continuing volume of economic activity and employment in the postwar period; to provide grants for the metropolitan development plans.

To the Senate last month Senator Robert F. Wagner (Dem. N. Y.) introduced the first comprehensive "neighborhood development act," at the same time introduced to the field of national politics the six-year-old Urban Land Institute. Instigator of the bill, and one of the most vocal leaders in the U. S. of the movement for reclamation

(Continued on next page)

NEWS

of blighted urban areas, the Urban Land Institute (its President: Charles Stewart) is an offshoot of the National Association of Real Estate Boards headed by Herbert U. Nelson. Nelson (*see cut*), foresighted, informed protagonist of private enterprise's cause, had long been troubled by the problem of the decay of cities. For years a student of patterns of city growth both in America and abroad, he prodded the ULI (composed of both real-estate and nonreal-estate professionals) to think and write on the subject. Result of these deliberations was a resolve to devise some way whereby public processes of acquiring land through acquisition can be combined with redevelopment by private initiative.

It was clear to these early planners that two things were essential to the plan's success: public condemnation of the land, use of Federal funds for financing the land buying. The new bill, which the Institute through Senator Wagner has offered to the Senate's Committee on Banking and Currency, contains these essentials, together with details about the procedures, who is to be in charge, what national agencies will be involved.

Always a New Dealer, and always considered more interested in public

Myron H. Davis



SENATOR ROBERT WAGNER: godfather . . .

than private enterprises, Senator Wagner's sponsorship of this bill puts him in the front ranks of those who would solve postwar problems with a primary reliance on *private* capital and initiative, only incidental aid from Government agencies.

Under the terms of the bill, the Administrator of the NHA would be authorized to make loans to cities or other appropriate local agencies for the purchase of land in deteriorated areas for redevelopment. Having purchased and cleared the land, the cities would

sell it or lease it to private builders for modern neighborhood development or appropriate municipal agencies would use it for public improvements. Loans would be repaid to the Federal Government over a long period of time—not exceeding ninety-nine years.

To be eligible for such a loan, the city "must have a city plan sufficiently complete to indicate definite local improvements in traffic, public transportation and other public facilities, improved patterns of land use and building requirements, etc." The bill further authorizes the NHA Administrator to make direct grants to municipalities for the preparation of these development plans.

Total of loans authorized by the bill in the first year: \$1 billion dollars. But action is not entirely limited to postwar. ULI leaders point out that many of the steps could be taken now, especially land purchasing and general planning. The program should draw, they anticipate, about five dollars of private money and credit into rebuilding for every dollar of Federal credit extended. Thus, on the basis of a ten-year program, this would mean construction totalling \$50 billions in private funds for the \$10 billion extension of Federal credit.

For the moment buried under the



HERBERT U. NELSON: father . . .

debris of the multitudinous tax measures being mulled over by the Committee, it is expected that the Bill will get serious consideration in the fall, may well lead to an urban redevelopment measure sound enough to win Congressional action.

NHA: A TIGHT SQUEEZE

Hopefully went NHA Administrator Blandford to Congress last month, asked for a modest \$400 million to clean up most of the remaining war housing job. Blandford backed his re-

quest with the careful charts and flawless figures which have endeared him to the venerable Lanham Committee as a man who gives housing facts more weight than housing theories. This year he found the Committee in a less genial mood, found that the House as a whole thought he could get along with \$300,000,000. A threatening minority thought even that diminished figure too much; by only three votes the House refrained from paring the authorization down to a slender \$2,000,000. While the Senate had earlier authorized the full appropriation, fear of holding the legislation over the summer recess brought hasty concurrence from the Senate, a signature from the President. Many a forward looking person cheered to find that an amendment providing for demolition of all temporary public war housing within two years of war's end was safely written in the Act.

It was a tight squeeze from the first. Nine days of carping criticism and questioning did not help the Blandford cause any, for the Lanham Committee, (Fritz Lanham, Calvin Johnson, Carter Manasco, Earl Wilson, Thomas Abernathy, Wat Arnold, Pehr G. Holmes, George Outland—four Democrats, four Republicans) this time seemed more determined that private builders be used whenever possible, and that public building only fill in the remaining gaps.

Over the summer Mr. Blandford will have more to think about than how to regear to a whittled-down budget. Pulling the reins in tight, Congress decided to give NHA its authorization on the installment plan, shoved through an amendment to the current deficiency appropriation bill calling for a one-third down payment on the year's public housing program. With the omnibus appropriation bill to be speeded on its way by vacation-minded Congress, Mr. Blandford faced the none too pleasant prospect of a fall trip to Capitol Hill to ask for his next installment.

FHA: A LEAN SUMMER

Not eager to try his luck at getting any more money from a restive Congress, Mr. Blandford took another look at his FHA pocketbook, decided Title VI money would last until mid-October. While Blandford made it clear in his testimony before the Lanham Committee that Title VI insuring facilities will have to be expanded to take care of the portion of the war housing program assigned to private building, FHA thought it could stretch funds over the summer, ready machinery for maneuvering twin authorization bills through Congress when it reconvenes in mid-September.

AUGUST FREEZE?

New York City landlords, whose past virtuous deference to Federal rent stabilization policies has won for them exemption from an actual OPA rent freeze, early this month felt an icy wind out of Washington. With an ear tuned to the mounting volume of complaints from renters now negotiating for fall leases, OPA said sharply that Manhattan's "informal" rent ceiling might become suddenly formal. As real estate agents moved briskly to fill apartment buildings for the coming year, tenants swelled OPA's mailbag with news of fall rent increases over a wide price range. There were also plenty of complaints from tenants renting small furnished apartments or hotel suites on a monthly basis who felt a gradual stiffening of rates. OPA let it be known that the mechanics were ready for prompt action to bring New York rents under rigid Federal control at March 1, 1942 levels. While some wondered if OPA's lean purse and personnel could extend to the Manhattan-sized job of policing 650,000 rents, most landlords shivered presciently, felt their city's enviable position as the only metropolitan area free from Federal control in real jeopardy.

NAREB—OPA SLUGFEST

Ever since OPA instituted rent control in critical war areas throughout the country, the National Association of Real Estate Boards has been itching to get into the ring and battle it out. OPA laid down the rules, NAREB fought each one successively and vigorously but with no effect on legislation.

Last month Congress took a hand in the dispute, appointed a special House committee to investigate the rising tide of landlord-real estate board protests that administration of the law has been too rigid, that OPA has exceeded its powers. To head the committee Rep. Howard W. Smith (Dem., Va.) was appointed.

NAREB has two major complaints:

1) A down payment of one-third the purchase price is required before a rented house in a rent-controlled area can be sold.

2) OPA rules do not provide relief for individual landlords who are operating under losses because of rent control.

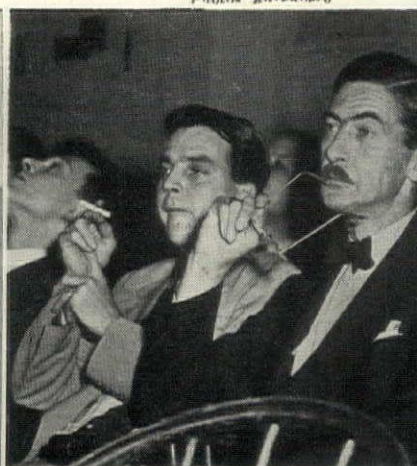
The first, designed to protect tenants from eviction through phony sales, has the effect, NAREB claims, of seriously restricting legitimate sales. As to the second, it stated bitterly last month that OPA's report of a general rise in net income from rental properties was "attempted deception," claiming that "if conditions in the real estate industry are any better off anywhere than

before the war, they have improved in spite of OPA, not because of it."

On the eve of the first meeting of Smith's committee (he is one of the authors of the Smith-Connally bill),

the House Naval Affairs Subcommittee headed by Rep. Ed. V. Izac (Dem., Calif.) blasted OPA rent control mismanagement, thus steering the Smith

(Continued on next page)



Photos Ehrenberg

CHERMAYEFF, GEIFFERT talk, BLACH, WHITTLESEY, PAYER ponder.



GIEDION: pro-monumentality



RAYMOND: anti-monumentality



WILLIAMS: "genial fogey"

194X BUILDING DESIGNS

It was a hot night for serious discussion last month when 150 architects, planners, other interested spectators gathered at the Architectural League in New York City to see the original drawings of the projects published in the May issue of ARCHITECTURAL FORUM. Despite the heat, the talk was spirited, the criticism of some of the work—or all of it, according to the speaker—strong, mordant, the results of much of the discussion and tangents to it, highly satisfying.

FORUM Managing Editor George Nelson chairmanned the evening, led off with a speech about the projects. Said he: They had three things in common, none was revolutionary, all of them could have been built prewar, none aimed at monumentality.

The word "monumentality" aroused violent discussion. Sigfried Giedion, famed Swiss secretary of the International Congress of Modern Architecture, upheld the concept of monumentality, said it was a basic need of human beings. Antonin Raymond objected; Cabel Hornbostel wanted to know who gave a damn about it; Serge Chermayeff remarked bitterly that there was nothing on the League's walls that evening that was not fifth hand. "Those are paltry little tinklings . . . we are utterly ineffectual," blasted Chermayeff.

From here on everybody had their say on any subject that appealed to them. Richard Stein (*Task*) wanted to know why architects weren't worrying about the Metropolitan "scandal" rather than some vague postwar plans. Edgar Williams expressed general approval of the exhibition, genially describing himself as "an old fogey." Young bloods Peter Blach, Harold Sandbank were impatient, found most of the projects old hat.

In an atmosphere of happy garrulity, general self-satisfaction, some bitterness, the meeting was adjourned.

Committee in a definite direction. Declared the subcommittee: "The program has kept off the market many properties which otherwise would have been rented and which could thus have helped to hold down the need for more public housing construction."

Thomas D. MacRae



PAUL A. PORTER: ruled the rents

Despite this strong barrage of criticism, OPA seems set on its customary paths, with only the possibility of slight easing on some points.

It looked as if the rent division would



SEN. HOWARD SMITH: checked the rules

yield on the down payment, reduce amount required to 20%, increase relief for individual hardship cases.

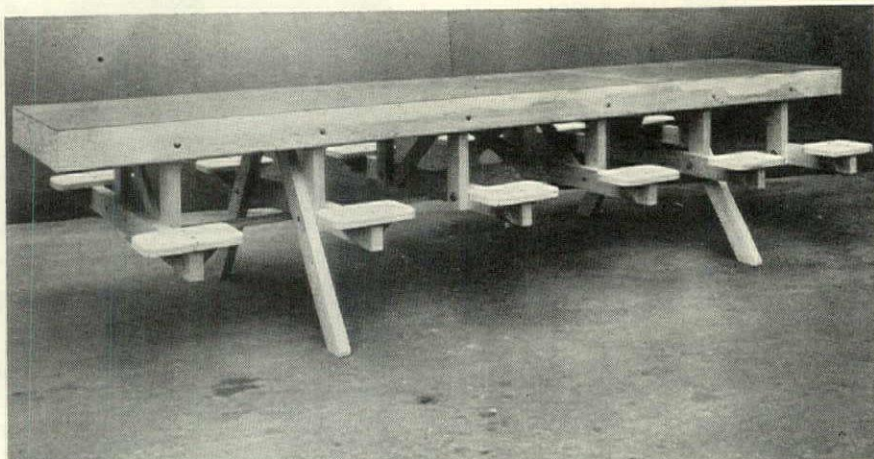
With Paul A. Porter stepping out as rent administrator to become Associate War Food Administrator, real estate interests looked anxiously to see which way policy would veer under Ivan Carson, upped from director of operations to the rent division's top job and a one-time Chicago real estate man himself.

STUYVESANT SAGA

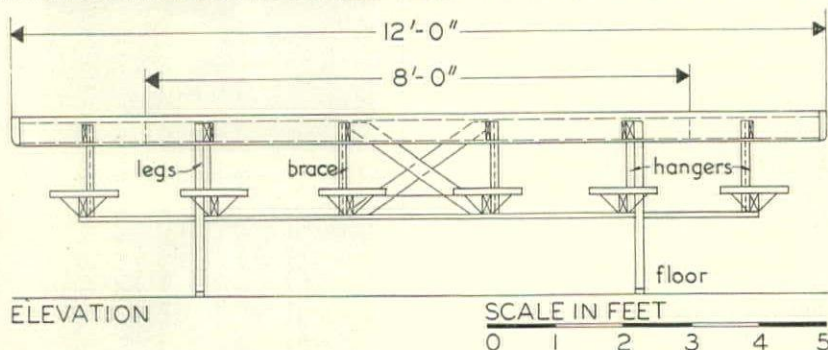
The trials and tribulations of Stuyvesant Town, Metropolitan Life's first postwar housing colossus to shelter 25,000 New Yorkers, continued last month but seemingly ended with a Supreme Court decision against property owners and other protestants.

For ninety hot and vocal days since the project was announced in April, the Met and its official backers, Mayor La Guardia and Commissioner Robert

Moses, have taken on a procession of objectors, singly and in groups knocked them down. First came the hearings before the City Planning Commission on which the Commissioner sits. To complaints that Stuyvesant Town density (about 391 people to the acre) was outrageous, that no school was provided, that it was a "walled city" and so designed against intrusion of the public, that no provision was made to rehouse 11,000 displaced slum dwellers,



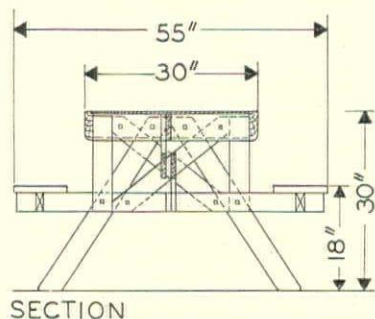
STRADDLE-TYPE BARRACKS MESS TABLE IS LIGHT, RIGID, DEMOUNTABLE



NAVY BARRACKS TABLE

When Coast Guardsmen, sailors, soldiers mill into a 3,000-capacity mess hall for chow and then give way to the 2nd shift, the subway at rush hour is a comparative pink tea. To solve this problem, Architects Mario Corbett and J. Albert Paquette designed a table (see above) which meets the needs for rapidity of movement (seating and spacing become automatic), ease for cleaning (table has but four points of contact with the floor), complete stability and rigidity even if number seated is uneven. Further advantage of the table is that it can be stacked easily, demounted with little effort.

As the section and elevation show, the seats are literally supported from the apron pieces forming part of the table top, which in turn is carried



on the legs. The table is 12 feet long, 30" high, seats 12, uses split rings (borrowed from wooden truss design), economic sizes of members of Oregon pine, and light hardware.

Four hundred and fifty of these tables, after rigid tests, have been ordered by the Navy.

the Commission turned a deaf ear, with but one dissenting vote (Orton). Moses smiled, but grimly.

Ten days later, the debate moved across the street to the Board of Estimate for its needed approval of the contract between the city and the

Ehrenberg



ROBERT MOSES: Stuyvesant saga hero

company. Here again, and exposed to much the same arguments, the Board sweltered for three and a half hours before giving its okay. This time two voters, Manhattan Borough President Nathan and City Council President Morris, made up a futile minority. This time the Moses smile was broad.

But still another hurdle remained. Week later came the suit of the property owners from the project area. Their contention: the city was acting "capriciously, unconstitutionally." Fifteen other organizations petitioned to delay the Board of Estimate from approving the contract, among them the American Labor Party.

The case was dismissed for lack of evidence. Then and only then could the Met and Robert Moses really relax and grin.

Moses Motives

During the course of these long and seriously debated weeks came one statement from Commissioner Moses illuminating his position. In a letter to the *New York Times* he wrote:

1) On density: "The population density within the project will be lower than in most of the blocks in this neighborhood, lower than in some public housing projects, and lower also than in many new low apartment neighborhoods."

2) On selection of tenants: "This objection (that there will be no public control over selection) has no constitutional, legal or equitable basis. Neither Constitution nor law contains any provision with respect to the control of the selection of tenants in an insurance rehabilitation project."

3) On the nature of the project: "The claim is made that an insurance company project is a public project because the city closes streets, extends the power of eminent domain, etc.

These are not benefits handed to the company without full compensation and consideration.

"These trustees must look ahead over a period of many years. They cannot be expected to turn over to all sorts of future public officials control over the daily management of housing facilities into which they have put funds of millions of policy holders. Those who insist upon making projects of this kind a battleground for the vindication of social objectives, however desirable, and who persist in claiming that a private project is in fact a public project, obviously are looking for a political issue and not for results in the form of actual slum clearance."

Aftermath

At the moment the Stuyvesant Town project stands as unaltered as the convictions of those who opposed it. Obviously, Stuyvesant Town cannot be built until after the war. Obviously, there is time to restudy its plans, to eliminate or reduce at least some of the features which many public-spirited and qualified people believe could be improved. Still unresolved is the prime question: is it more important to encourage large private-capital housing including slum clearance or more important to demand perfection in pioneer projects? To Robert Moses, who labored skillfully and long to get the legislation that would bring life insurance millions out of hiding and into the slums, that question has been answered.

OBITUARY

The date of execution was never set but the prisoner, the National Resources Planning Board, had an inkling it was not far off. Last month, the date was formally announced by the House Appropriations Committee. NRPB, for all practical purposes will no longer exist after this summer.

Short reprieve for the New Deal's most active and forward-looking planning agency came late in May, when the Senate restored \$200,000 of its requested \$1,400,000 to it, directed that it pare itself down to a skeleton staff with functions limited to assisting State and local agencies in their war and postwar planning.

The House refused to compromise, vetoed the suggestion, said flatly that only \$50,000 would be allowed NRPB, that sum to be used only for self-liquidation before August 31, 1943.

Weary of lopping off hydra-like federal agencies only to see their heads poke out of some other Washington door, Congress made this killing as final as it could, decreed that NRPB's job may not be transferred to any other agency, and that none of its functions

may be performed after Aug. 31 without Congress' permission.

Thus ended NRPB's four years of stormy existence, a strange melange of sense and science with always a sufficient admixture of starry-eyed plans to invite political scuttling. The worst that can be said against it was that it went too far. A disillusioned postwar public may accuse Congress of the same sin.

UNITED FRONT FOR CONSTRUCTION

To the growing mountain of postwar plans last month Eric A. Johnston, forthright youthful president of the Chamber of Commerce added his plan for integration of the construction industry, announced that the C. of C., Committee on Construction and Civic Development, was planning "prompt

A.P.



ERIC JOHNSTON: Construction chamber music

action . . . along practical lines to meet the necessities of the postwar period." Closely allied with the decision of the Producers' Council meeting in Cincinnati last month, to ask the Chamber to coordinate all postwar planning in construction, Johnston's declaration was the first major step in this direction.

Declared he:

"It is hoped that the initiative taken by the construction industry in developing an industry program to supplement and implement the postwar planning of individual companies will be followed by similar forward-looking action by other major business groupings in heavy and light manufacturing, in retailing and wholesaling, in transportation and in the service trades.

"Industry planning is highly important to the accomplishment of the postwar objective set up by business leadership. That objective is to bring about a sound general postwar economy and to provide maximum employment and purchasing power. It can be achieved only by the creation and

maintenance of maximum levels of production and consumption.

"Postwar studies by over all business and industry organizations provide necessary background for industry planning. But industry planning is an indispensable supplement to general planning. Both must be properly and efficiently coordinated so that the information which is provided the individual business man, the only one who 'plans' in the sense of making commitments—will be well considered and in effective form for his use."

A ROSE BY ANY OTHER NAME

The War Production Board, like any other Washington agency you could name, gets a sense of progress from shuffling its personnel around, creating new bureaus, destroying old ones. Such progress was made last month when three new moves were announced:

►The Construction Division of WPB is being moved to Washington from New York (its last move: from Washington to New York, last fall), will then be abolished. Its functions will be taken over by a Projects Division, which will be one of three units under the new Facilities Bureau. This bureau, in turn will be the mechanism through which a tough, new Industrial Facilities Committee will function in trimming down construction to essentials.

►Another brand new committee has been formed: the Non-Industrial Facilities Committee. Its first official act came last month when it announced that it had halted miscellaneous construction projects having a total estimated cost of \$4,160,085 during the last weeks in May. During the same period the resumption of work on projects costing \$983,638 was authorized, these being highway jobs.

►Facilities Bureau head will be Charles E. Volkhardt, vice-chairman, Ralph J. Cordiner. Directors of the other divisions include F. J. C. Dresser (Projects Division), J. B. Campbell (Production Resources Division) and W. E. Mullestein (Process and Scheduling Division). These are not new faces, but old ones carried over from the soon defunct Bureau.

Cardinal point of policy for the new Facilities Bureau will be to stop the construction of all plants producing war goods unless the projects are so far along that they can be finished by the strict deadline date, October 1. This includes all heavy construction as well—dams, bridges, highways. All will be frozen in their tracks unless they can meet the deadline.

LYNCH LEGISLATION

To the Vice President and the Speaker of the House last month the President sent a message stressing the need for advance planning of public works, suggesting specified legislation, mentioned the Lynch Bill (H.R. 2783) which provides funds for postwar planning.

Objected the President: Title I of the Lynch Bill (introduced by Rep. Walter A. Lynch, Dem., Indiana) which provides for "advanced planning of Federal public works" is unnecessary as he (the President) has already asked all Federal departments to submit estimates of the amounts it will take to bring their plans up to date.

A revised Lynch bill, called the Federal Aid Planning Act of 1943, therefore was introduced to the House last month, has been referred to the Committee on Ways and Means, stands a good chance of running the Congressional gamut sometime before the session is over.

Its provisions (with the offending Title I removed):

►To encourage the States to prepare comprehensive plans for their development, Congress shall authorize for the fiscal year ending June, 1944 a sum of



REP. WALTER LYNCH: Roosevelt said no

\$10 millions to be paid to the States in proportion to their areas and population.

►To be eligible for such aid the State must establish a planning agency, enact legislation to allow cities, townships, etc., to establish such agencies.

►Apportionment of the money is defined so that only 5 per cent can be used for publication purposes, 10 per cent for rent or office equipment, etc. It will be noted that this sum is entirely for administrative purposes, not

at all for the actual works.

Another \$75 million is authorized to be advanced through existing Federal agencies to State or local planning agencies, to make investigations, surveys, architectural and engineering plans for needed public works. This sum will need to be repaid to the U. S. "if and when funds become available by reason of appropriation, grant, gift or loan."

Representative Lynch's bill reads suspiciously like a good many others that have reached printing stages in the last month. Now that Congress has slapped down independent planning agencies like the National Resources Planning Board (see p. 41), it is clear that it intends to do a great deal of the planning and direction of planning itself. The Lynch bill, typical of a few others like it, is one step in the direction of Congress-led planning, may well prove to be an important one.

POOR RICHARD AND BLIGHT

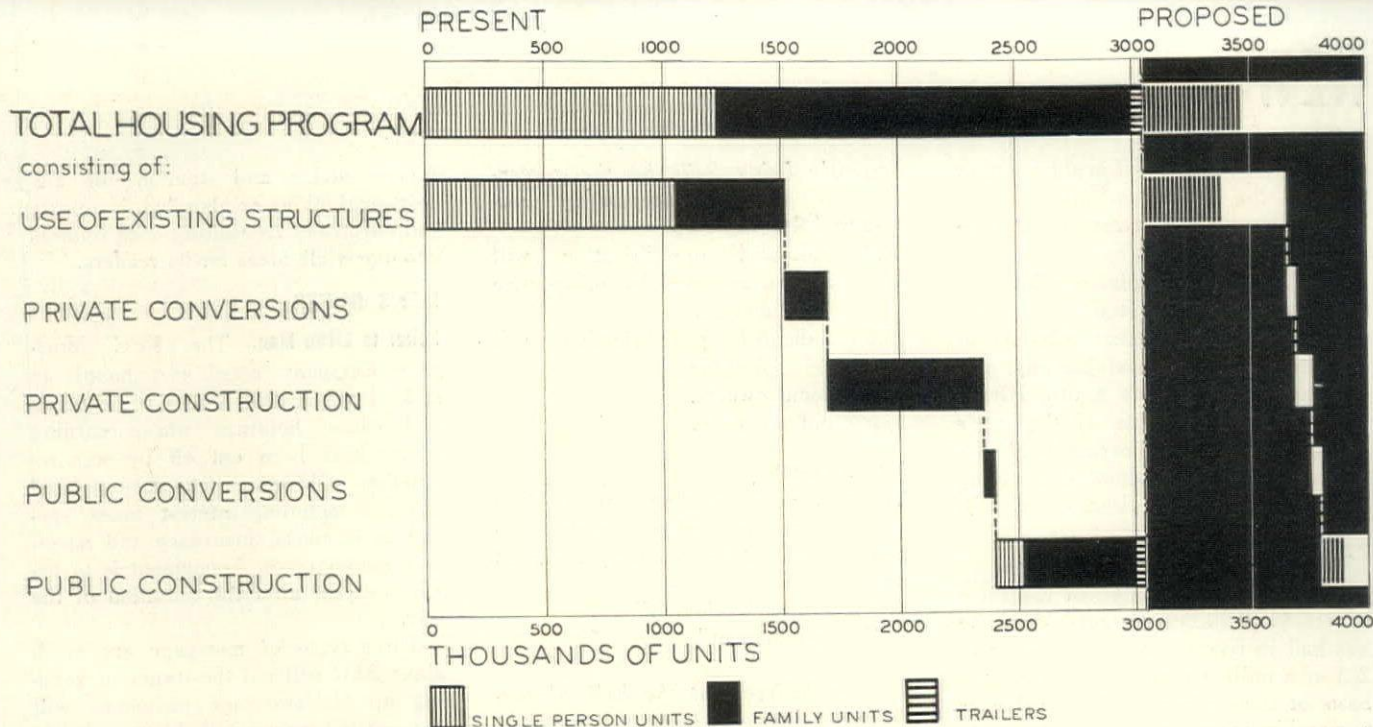
In 1723 one bright October morning Benjamin Franklin was walking along Walnut Street, Philadelphia, observing the numerous "To Let" signs that were tacked to houses. Disturbed, he later wrote, "These signs made me think that the inhabitants of the city were one after the other deserting it."

Albert M. Greenfield, a modern observer of the same phenomenon in the same city, addressed the Poor Richard Club last month, voiced his uneasiness at the moribund state of American cities, especially his native Philadelphia. Greenfield, chairman of the Executive Committee of the Urban Land Institute and Philadelphia banker and realtor, (see cut), made his case so well that he stirred the *Philadelphia Record* to a lead editorial on the subject, awakened lunching business men, realtors and civic leaders to the dangers of civic decay.

Said realtor Greenfield:

"I believe it is within our power to act intelligently and keep modern Philadelphia intact as a cohesive, livable, urban society. Let us, as loyal citizens of Philadelphia, be realists. Blight and civic decay have been creeping through our city. Its disintegration is no remote threat. You know as I know that it is a reality. Let me review briefly the dominant trends in development which have presented us with problems of the deepest possible concern. . . .

"The problem of clearing away the dinginess of old city areas and substituting good neighborhood environment in its stead is our civic problem. It is staggering, but not insurmountable.



NEW CONSTRUCTION of 250,000 units of war housing over the next year is what NHA Administrator Blandford last month told the Lanham Committee would be needed, using an NHA chart similar to the one above. Temporary and demountable construction would account for 64% of the proposed new building,

only 36% would be permanent. Already provided for the nation's war workers are some 3 million housing units. NHA's proposal would up the total war housing figure to almost 4 million units, with new construction accounting for 1½ million, use of existing structures for more than 2 million.

"It is the kind of challenge that Ben Franklin's City can meet. Good neighborhood environment is not created by accident in this age. When it is present, it is the result of planning. All of the excellence in construction, in architecture, and in landscaping that we can lavish on a single city lot, or even on

AP



A. GREENFIELD: Franklin had words for it

a single city block, can not create the livability that is now competing with the districts we must save. This illusive quality of livability is a neighborhood product. If we want to produce it in the old areas, we must rebuild them completely by neighborhoods. The neighborhood has become the real unit in city planning.

"Consider the vastness of the task of rebuilding the deteriorated parts of our cities. It is not a task for govern-

ment. It is the monumental kind of undertaking that the imagination, inventiveness, and daring of American business is especially equipped to do and can do with certain specific co-operation on the part of government. And by "government," I do not mean just the Federal Government. . .

"But at last a program for city planning has come before us that is a practical, self-supporting, tangible program. It does not attempt to convert our cities into Gardens of Eden, with every imperfection erased. It concentrates on one obvious and grievous ailment that has attacked every big city in America and proposes a remedy that is practical, specific and attainable. . .

Enough Government

"That remedy is not mere Government expenditures. It is the investment of private capital under conditions that will earn a profit and a return. It is the highest demonstration of the virtue of our capitalistic system that money can be shown how to render an urgent and necessary public service and at the same time earn for itself the reward of profit. . .

"The rebuilding of cities is not being thought of by our businessmen nor by our municipal authorities as a patchwork undertaking. It is looked to as a vital means of making major worthwhile transformations in urban structure. The rebuilding of an old neighborhood must of necessity change the character of urban land use, and in doing so it must change the value of

urban land in conformity. Our normal channels of private credit are well adapted to the financing of the actual construction in rebuilding cities. They cannot, however, be expected to finance the acquisition of land for rebuilding. The Institute proposes that the Federal Government extend its credit to the cities for this type of land acquisition. It suggests the use of Federal credit over a long period of time with low interest rates so that this combination of factors—long time use of credit and low rate of interest—may be employed to absorb any discrepancy between the actual acquisition cost of land and the new value put upon it to encourage the type of rebuilding that is actually needed by the community."

BRAZILIAN ARCHITECT TO DETROIT

Awarded a two-year Inter-American Trade Scholarship in the office of Smith, Hinchman & Grylls last month



Brazil's Pivatelli, Detroit's Leone . . .

was Ibsen Pivatelli, Brazilian architect, one of 85 Latin-American technical
(Continued on next page)

specialists being trained in this country through the agency of the Nelson Rockefeller Inter-American Affairs Committee.

First to win a scholarship in engineering-architectural studies, Mr. Pivatelli intends to specialize in industrial architecture and postwar housing, was sent to Detroit, and to Smith, Hinchman & Grylls, because of the city's standing in the engineering field, the firm's position in industrial building in the U. S. (FORUM, Dec. 42, p. 61).

PARENTS MAG SURVEY

Most surprising to hardened magazine experts is the success *Parents' Magazine* has had in recent years. Appealing to 2/3 of a million readers purely on the basis of their parenthood, its value as a monthly magazine lies partly in its ability to transform technically accurate information on the vagaries of children and parents into readable, enlightening prose.

Most interesting of its experiments was its foray last month into the highly conjectural field of postwar housing. To 5,000 selected architects, builders, contractors and building material dealers its Family Home editor, sprightly, enthusiastic Maxine Livingston, sent a carefully worded questionnaire to determine what the experts expected the shape of the postwar house to be.

Sample questions and answers (a 6% return):

Will there be more individual architect-designed houses after the war? Or will the prospective home owner select his plans from a group of stock designs? Or make his selection after looking at model houses?

- 53.6% stated the prospective home owner would make his selection after looking at model houses.
- 45.6% indicated that plans will be selected from a group of stock designs.
- 33.6% said there would be more individual architect designed houses.
- 2.4% did not state.

Will the operative builder become more important after the war? Will there be fewer speculatively built houses?

- 59.2% stated operative builder will become more important.
- 24.8% stated fewer speculatively built houses.
- 0.4% state it will remain the same.
- 12.0% did not state.

Will prefabrication, as a result of the large number of prefabricated houses

presently being built by the government, be generally accepted by prospective home builders?

- 68.8% indicated prefabrication will not be accepted by prospective home owners.
- 25.6% indicated prefabrication will be accepted by prospective home owners.
- 5.6% did not state.

Not Permanent

The two predominating replies given as the reasons why prefabricated houses will not be generally accepted are:

- "Lack of individuality"
- "Not permanent"

Do you believe that the bulk of prefabricated houses of the future will be built primarily of standardized units assembled to suit the individual's need? Why?

- 53.6% indicated prefabricated houses will be built of standardized units assembled to suit the individual's needs.
- 28.8% indicated they did not believe this would be the case.
- 2.4% indicated a possibility.
- 15.2% did not state.

The replies to this question indicate that builders, architects and contractors feel that houses will be an assembly of often repeated parts. Reasons were:

- "Will satisfy individual taste"
- "Lower cost"

Or do you believe that prefabrication will succeed only in mass housing efforts? Why?

- 52.8% indicated that prefabrication will succeed only in mass housing efforts.
- 28.0% do not believe that prefabrication will succeed only in mass housing efforts.
- .8% indicated there is a possibility that prefabrication will succeed only in mass housing efforts.
- 18.4% did not state.

The two predominating reasons stated for the success of prefabricated mass housing efforts were:

- "Economy"
- "Speed in construction"

The magazine's purpose in the survey was partially for the use of its advertising department but primarily as an editorial guide. Its June issue begins with a story, "Will there be a dining room in the postwar house?" which utilizes answers to the questionnaire. Typical, to a certain extent, of other purely consumer publications, *Parents' Magazine* early saw the necessity of

expert advice and opinion for any postwar thinking or planning, is quickly and effectively translating such opinion into digestible ideas for its readers.

NEWS NOTES

Relief to Little Man. The RFC Mortgage Company acted last month to make loans available at 4 per cent on real estate holdings whose earning power have been cut off by war restrictions. Object: to take care of fixed charges, including interest, taxes, special assessments, insurance and necessary maintenance. Repayment is to begin one year after the cessation of the war.

Three types of mortgage are available: RFC will aid the owner in keeping up his mortgage payments, will buy out the mortgage holders and thus become mortgagee, will issue care and preservation loans.

Beneficiaries: filling stations, resort hotels, wayside inns, etc.

Hotels Back. Back into the reluctant laps of owners last month the Army dumped recently-acquired, 1,000-room Congress Hotel (Chicago). On its own lap, it found now empty 3,000-room Stevens Hotel, recently purchased. Because the Air Force Command found that the need for the type of technician housed in these hotels has decreased, the hotels have been abandoned. The Army offered the Stevens for sale to the Statler people (it had been purchased for \$6 millions), was coldly rebuffed.

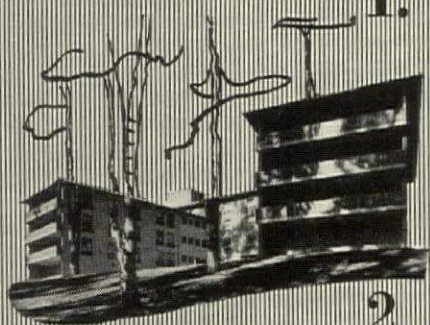
Major tragedy of the situation lies in the fact that the Army disposed of all furnishings, kitchen utensils, etc., at public auction three months ago. Cost of restitution would be \$2 millions, probability of replacement almost zero.

Furniture Mart Okay. The Office of Civilian Requirements of the WPB gave its approval to the Chicago Furniture Mart "because of its important place in furniture distribution." Nonessential attendance, it added, must be kept to a minimum, only actual buyers and sellers will be admitted.

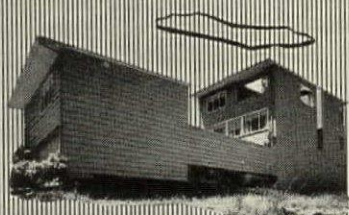
NAM Against Installment Selling Postwar. For four directly patriotic and commercial reasons—it is in direct competition with the sale of war bonds, it will not result in postwar sales, it will stifle development and sales of new products after the war, it would require double selling and double expense—The National Association of Manufacturers last month "revealed" its opposition to various proposals of
(Continued on page 94)



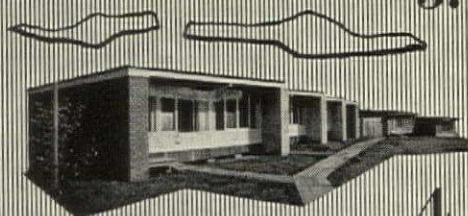
1.



2.



3.



4.



5.



6.



7.



8.

WILLIAM WILSON WURSTER

William Wilson Wurster was first introduced to FORUM readers with a portfolio which appeared in the May, 1936 issue. By that time he had already built up a successful practice consisting mainly of residences. Since then his crisp, bold, but always unaffected buildings have become internationally known, and Wurster himself has been generally recognized as the founder of a school of regional architecture which is easily the best the contemporary movement in this country has produced to date.

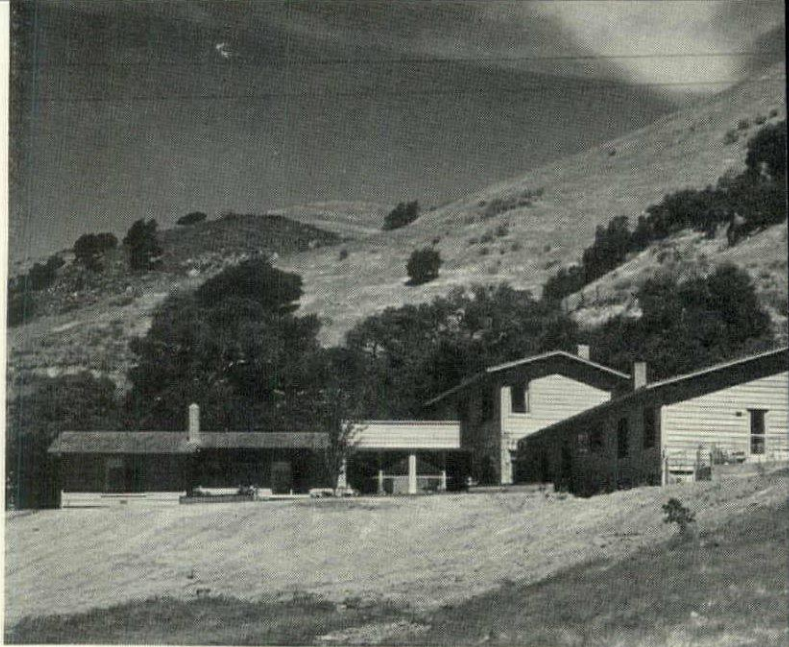
The background of Wurster's career is plain, solid, unglamorous. After his technical studies at the University of California, he worked in offices in San Francisco and New York, traveled in Europe and the Philippines and finally, in 1926, hung out his shingle in San Francisco. There was no big commission to encourage this step, and for years he turned out small houses—a few at first and then floods of 50 to 80 in a single year. From the beginning these houses bore that unmistakable and peculiarly personal look which has persisted even through such mass-production jobs as the big war housing project at Vallejo.

Last year Wurster made a move which was as unconventional as it was characteristic: he went back to school. He had had his share of the big war projects; he had completed over 200 houses and other types of buildings in 16 years of practice. It was time, he felt, to take time out and a look around. The office was turned

1. RANCH HOUSE

A "natural" house of wood, set casually into a valley, surrounded by green oaks and the sparse California hills.

All photos (except on page 58) by Roger Sturtevant



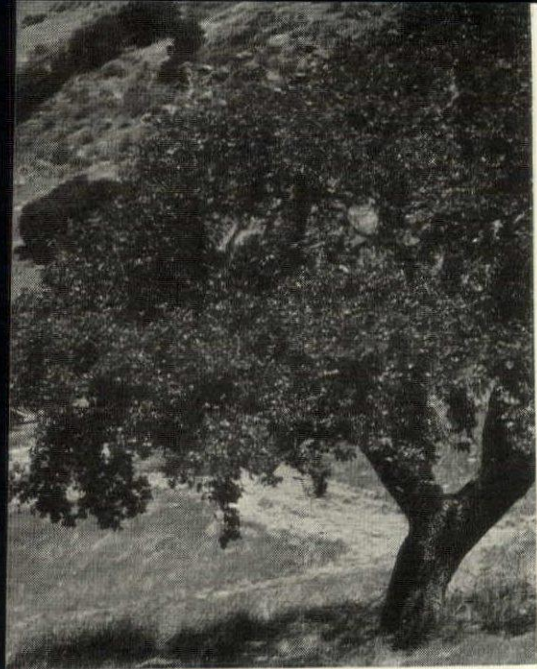
WURSTER OFFICE STAFF SINCE 1938

LOUIS BALDINI
FRED B. BARSS
THEODORE C. BERNARDI
IRVING F. BROWN
FLOYD B. COMSTOCK
JOHN C. CUTLER
*ALFRED W. DAY
ROBERT A. DESHON
*DONN EMMONS
*FREDERICK E. EMMONS
JOHN C. FUNK
H. HAWES
E. M. HICKS
ARTHUR V. JORY
*JOSEPH L. JOHNSON
ROBERT KAESTNER
ARNE KARTWOLD
JOHN G. KELLEY
FREDERICK L. LANGHORST
*GEORGE LIVERMORE
FRANCIS JOSEPH MCCARTHY
ADRIAN MALONE
FRANK O. MERWIN
DAVID R. MYERS
VLADIMIR OGLOU
J. PAUL OPPENHEIM
HAROLD ONSTAD
*GRYFFYD PARTRIDGE
E. D. M. REMINGTON
JAN REINER
WILLIAM M. RICE
*ARTHUR L. SCHMIDT
CARLTON A. STEINER
HAROLD STUMP
*FRANK TRESEDER
*JOHN E. WAGSTAFF
*JAMES M. WEBB
JAMES D. WICKENDEN
ROBERT C. WILLIAMS
HACHITO YUASA
*—In the service.

over to his oldest associates and Wurster enrolled in Harvard to study city planning and to catch up on his reading. This modest program was soon disturbed, however, for he found some summer courses at M.I.T. to fill in the lull at Harvard, and shortly afterwards accepted a position as design critic at Yale. The habit of keeping busy is apparently hard to shake off.

It is curious that the kind of office Wurster ran—and believed in—should have produced work so consistently and intensely personal in its expression. For the office was anything but a one-man design show. The list of names at the left was put in at Wurster's request, not as a patronizing gesture to former employees, but in response to a very genuine conviction that all of these men had contributed freely and substantially to the body of work with which he is credited. The Wurster office ran as a group of teams: "For a time," he remarks, "the office was like a series of small offices, each composed of a junior and senior draftsman. Each team had several jobs. On one job the senior would do the drafting and the junior would write the specifications—then they would reverse. The same was true of supervision. Except for the very first meeting I have always tried to have one of this team, or both, present at every conference with the client. This, I found, saved time and gave a sense of reality to the team. As I have always thought of the office as a training ground, it gave a fine experience to the men when the time came for them to go on their own."

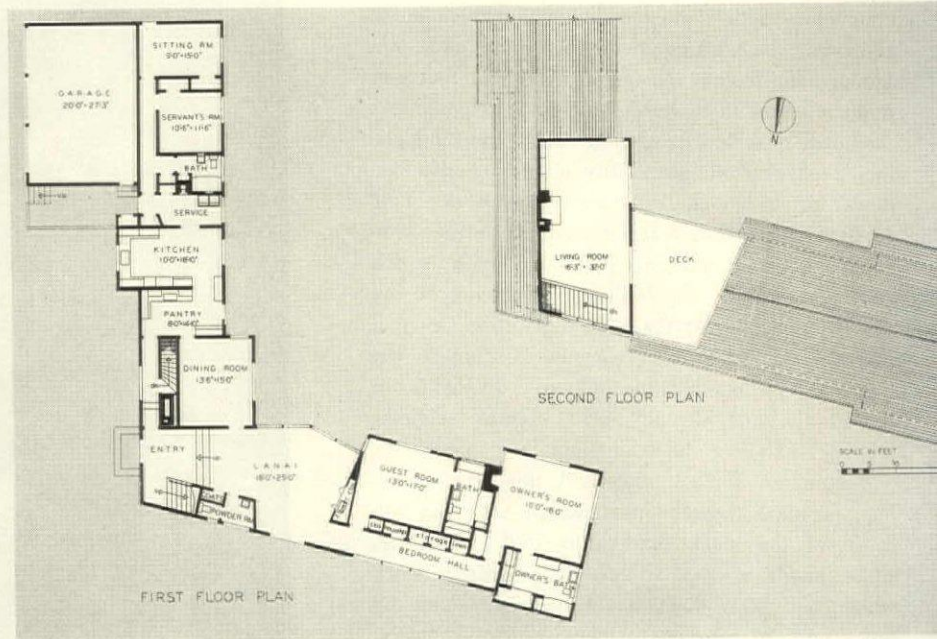
From another statement by Wurster comes further light on the development of his architecture—and, incidentally, that of the California school as a whole: "I have always realized how fortunate we were in having the push of many jobs so that no single job had to carry the burden of experimental ideas. It meant that there could be an interlacing on progressive jobs of experimental and previously tested ideas. . . . Two strong forces account for much. The first is the great group of American and European architects who opened up the field and showed the unreality of the so-called "period" work. The other is the liberal attitude towards architecture which is so strong in the San Francisco region."



"This house," says the architect, "is located on an old road over the mountain from Salinas to the Carmel Valley. At the foot of the valley is the Carmel mission and the town. It is magnificent and rugged country and we felt that a flowing and easy house should settle against the oak trees. The owner wanted it to seem like part of the land, so the pine boards are bleached so that they are now about the color of the soil—say a warm gray. We wished to give the owner a rough room where there was a feeling of the out of doors on the first floor, since a wind sweeps up the valley in the afternoon. We didn't want this room (the Lanai) to face west, for the low sun is too glaring. The living room is on the second floor so that it won't serve as a passageway and, too, the owner had some formal furniture brought from the East, and this seemed too refined to have its feet touch the dirt. The house is entirely of wood—inside and out—not a raw, varnished yellow, however. Ceilings are painted a very light green. The bathroom, too, is of wood, and is certainly what I should like to do in my own house. The great trick on these hillside houses is to get them low enough so they seem at ease and not just toppling."



BATH HAS AN ALL-WOOD FINISH



THE LANAI, FACING SOUTH, IS THE INFORMAL DOWNSTAIRS LIVING ROOM



EXTERIOR VIEW OF THE LANAI



2. DORMITORY

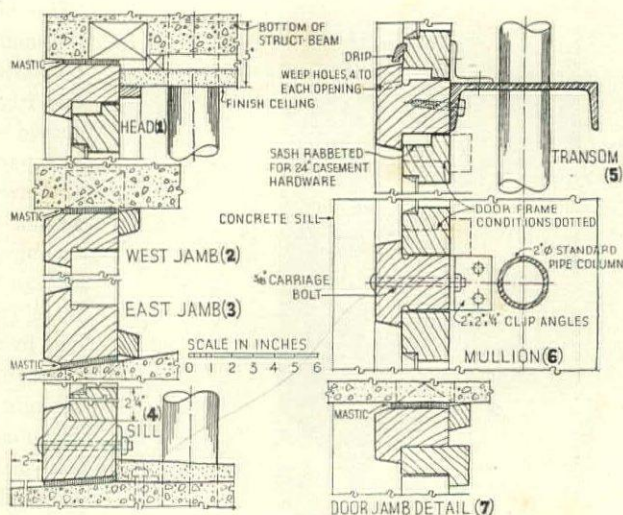
An effective, economical design vocabulary developed in residential practice proves its worth in a larger structure

During the boom following the last war, eclecticism reached its lowest point in the design of university buildings. In the name of the Gothic Style—which somehow acquired an almost mystic connection with higher education—lecture halls, libraries, auditoriums, swimming pools and even indoor tennis courts were poured into a stereotyped mold intended to resemble as closely as possible a medieval church. Because of some slight misgivings regarding the suitability of narrow slit windows for bedrooms in a new dormitory, Yale University asked a learned medical authority to submit a report proving that the health of the students living in the building would not be adversely affected. At the same institution, when it was decided to switch from the Gothic to the Colonial style, one building was even divided down the middle, into “Gothic” and “Colonial” sections, in order to effect the transition.

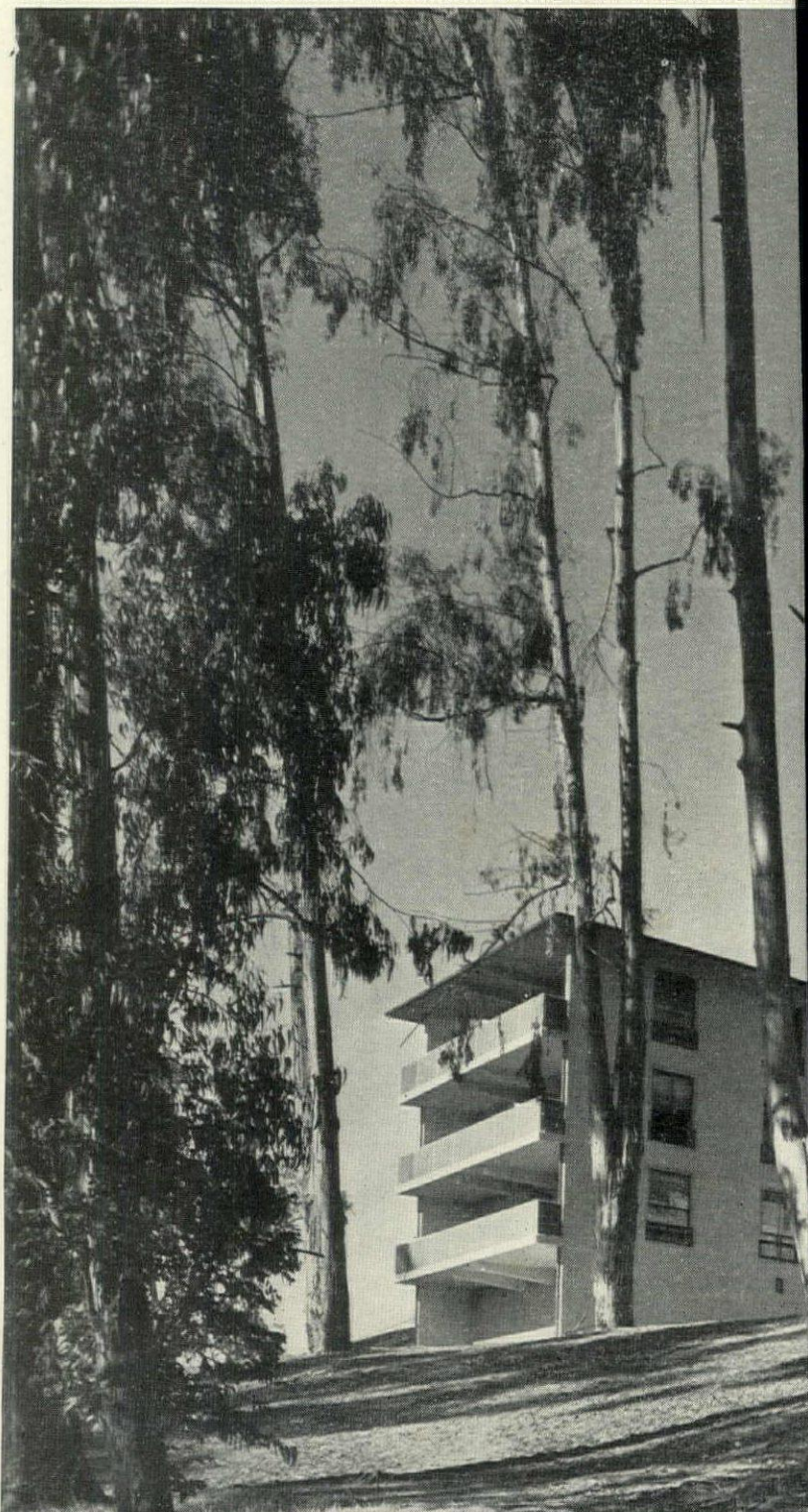
Fortunately for all concerned, this type of college building came to a standstill with the collapse of the stock market in 1929. Recently, while much of the dribble of university work which has been done has remained bound by the grandiose campus schemes of the Twenties, a substantial proportion has evidenced a clean break with the past.

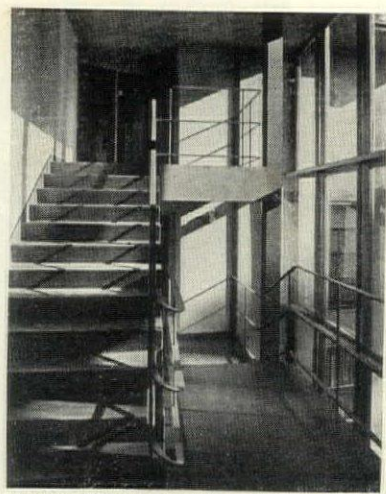
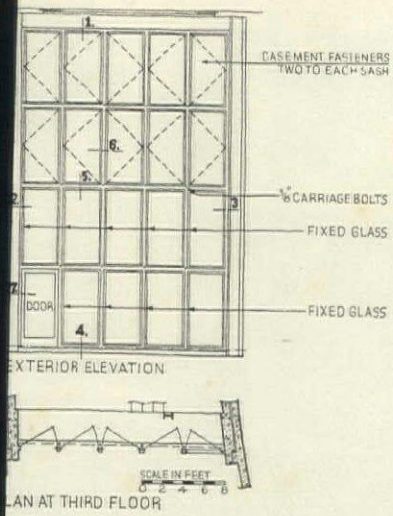
A particularly commendable example of the latter trend, this girls' dormitory for the University of California eschews all stylistic approaches, including the International. Instead, it is predicated on a frank recognition of its residential function, and looks most of all like what it is: a residence and social hall for 90 university students, built in reinforced concrete in a grove of eucalyptus trees. Aside from the cantilevered balconies at the ends of the projecting wings, its principal design feature is the open-sided stair tower shown in drawings and photographs at the top of the page, a detail which Wurster has used on a smaller scale in many of his houses.

Miss Isabella Worn and John Gregg, Landscape Architects, Frances Elkins, Interior Decorator, A. V. Saph, Jr., Structural Engineer, G. M. Simonson, Heating Engineer, K. E. Parker Co., General Contractors.

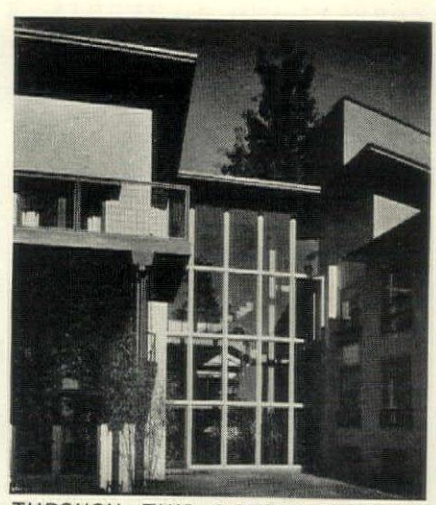


BALCONIES PROVIDE STRONG TERMINAL UNITS FOR THE WINGS OF





MAIN STAIR OPENS ON ONE SIDE



THROUGH THIS 2-STORY WINDOW

THE U-SHAPED BEDROOM SECTION. THEY ARE ACCESSIBLE TO ROOMS THROUGH CENTRAL CORRIDORS ON EACH FLOOR



2. DORMITORY

Divided into distinct public and private sections by a stair-hall link, the plan benefits functionally and structurally

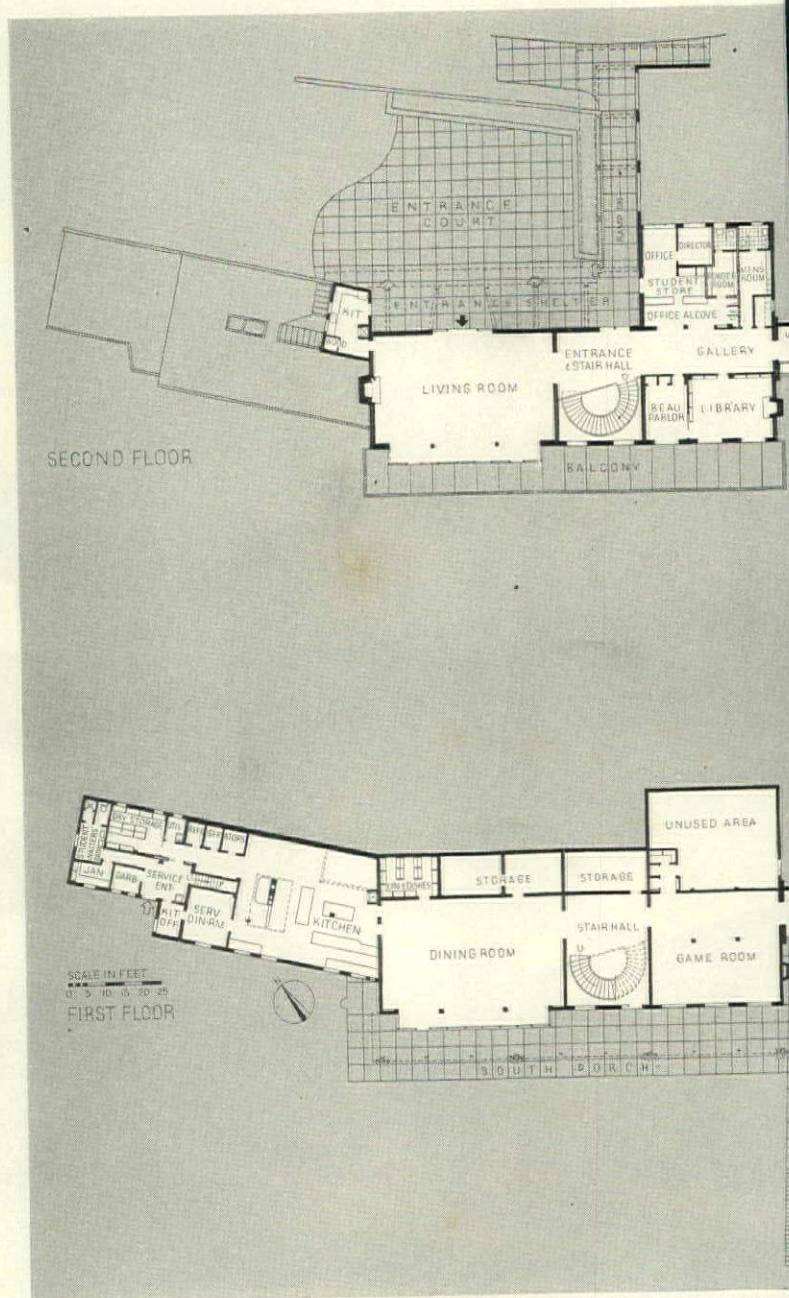
With an abundance of land available, the designer chose to develop the plan in two virtually separate buildings: a social hall and bedroom unit. This not only results in increased privacy, it has the further advantage that column spacing and building depth have been adapted to the requirements of both functions. The social hall section contains living and dining rooms, extensive kitchen facilities, a game room and administrative offices. Built against a steep slope, it is entered on the second floor from the uphill side. Main rooms are on this level and the floor below, and are connected by a curving stairway. The bedroom section, which is U-shaped, is comprised almost entirely of single and double bed-sitting rooms, the usual baths, toilets and a laundry.

The building was a gift to the University from Mrs. Sigmund Stern of San Francisco.

CONSTRUCTION OUTLINE: STRUCTURE—reinforced concrete, furring, plaster on gypsum lath; inside—studs, plaster and Douglas fir plywood. Columns—reinforced concrete. Channels and pipe columns at glass walled stairs. ROOFS—tar and gravel. INSULATION—1 in. rockwool, Plant Rubber & Asbestos Co. FLASHING—soft copper and lead. GUTTERS—hard copper. WINDOWS—double strength, quality B, crystal, wire and plate glass, obscure Factrolite, Mississippi Glass Co. FLOOR COVERINGS—linoleum, tile and carpets. WALL COVERINGS (bedrooms, halls, etc.)—stucco, California Stucco Co. Remainder plaster, concrete and Douglas fir plywood. PAINTS—W. P. Fuller & Co., A. C. Horn Co., Nason Bros. Paint Co. and California Stucco Co. ELECTRICAL WIRING—Steel tube, Steel tube Co. Fittings—Steel City Electric Co. Switches—General Electric Co. and Hart & Hegeman. Annunciator boards—Edwards & Co. Switchboard—Trumbull Electric Co. BATHROOM EQUIPMENT—Crane Co. Soil pipes—cast iron, Rich Mfg. Co. Water pipes—copper tubing, American Brass & Copper Co. Pipe covering—Plant Rubber & Asbestos Co. KITCHEN EQUIPMENT: Range—Wedgewood, James Graham Mfg. Co. Dishwasher—Hobart Mfg. Co. Refrigerator—Kelvinator Div., Nash-Kelvinator Corp. HEATING—2-pipe low pressure vacuum steam system. Unit heaters—American Blower Corp. Air filters—American Air Filter Co. Convectors—American Radiator-Standard Sanitary Corp.

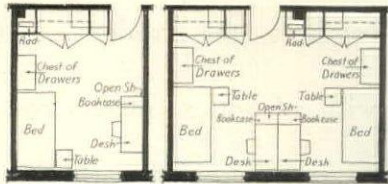
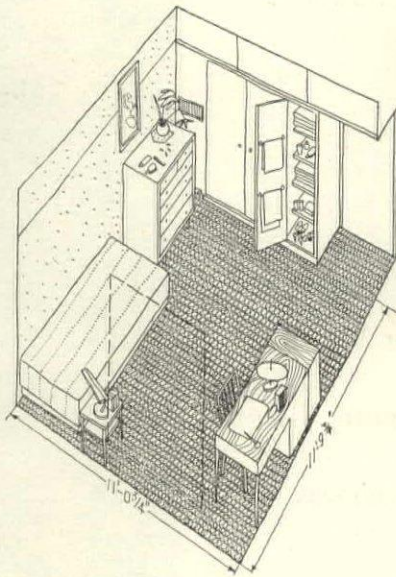


BACK OF BEDROOM SECTION IS FOUR STORIES HIGH. GRADE RISE

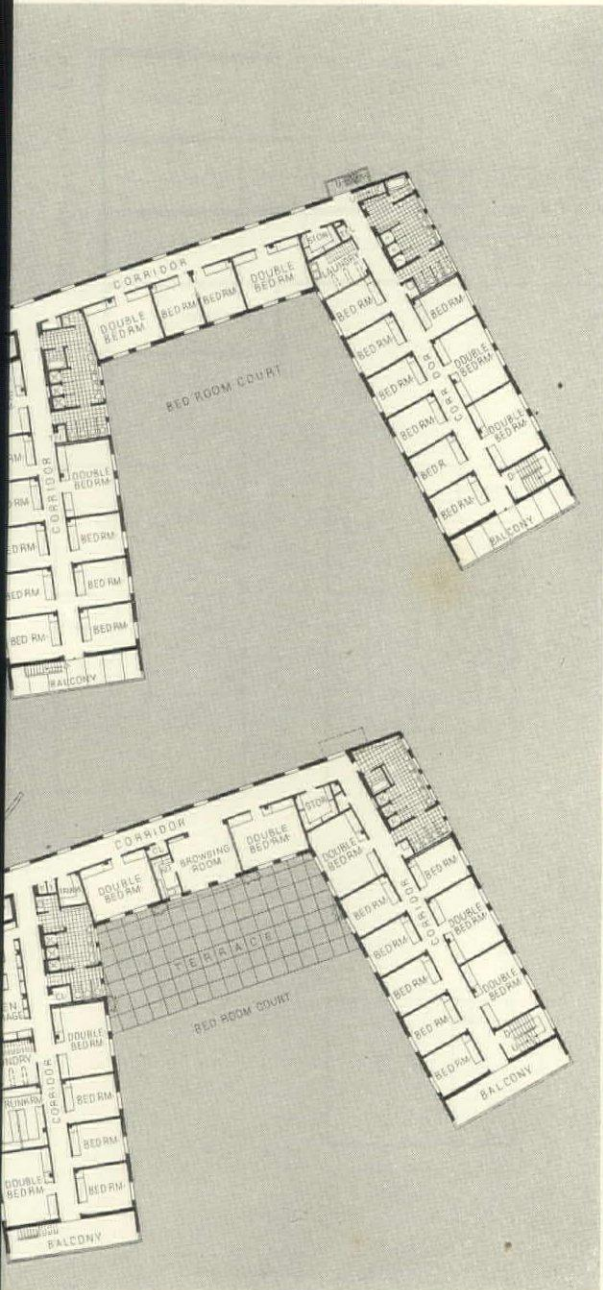




THREE FLOORS ABOVE LEVEL AT FRONT OF WINGS



TYPICAL BEDROOMS FEATURE LARGE, LOW-SILLED WINDOWS



LIVING ROOM OPENS ON GRADE AT BACK, ON BALCONY AT FRONT

DINING ROOM, BELOW LIVING ROOM, FACES PORCH TO THE SOUTH



3. TOWN HOUSE

On a small San Francisco lot Wurster combines the freedom of country life with advantages of city convenience.

Based on a principle similar to that of the Fairchild House (ARCH. FORUM, April '43) this town dwelling was cut in two to expose a greater window area and to create a private, country-like outdoor space in the middle. The arrangement of the indoor space resulted from needs peculiar to the San Francisco area. Cross ventilation is never desirable—in fact it would be a defect in a San Francisco house. Even the garden is sheltered from the prevailing west wind.

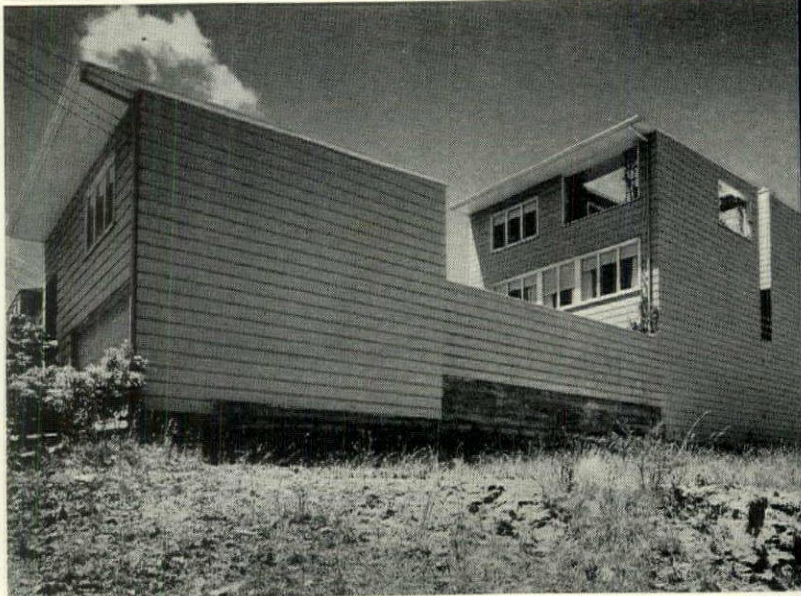
The best view is toward the north over a permanent easement upon which nothing can be built. Thus, while the living room overlooks the view, a solarium and open deck to the south take advantage of the sun.

Control is obviously an important problem in a plan of this type. There is a telephone at the street entrance which can be answered on any of the three floors of the house, and the front door, in turn, can be released at any one of those points. Once admitted, guests can circulate freely, and reach the living floor without encountering further obstacles.

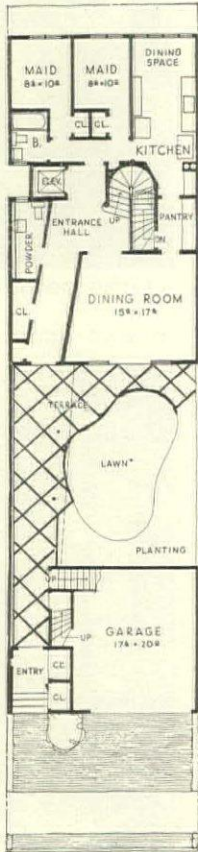
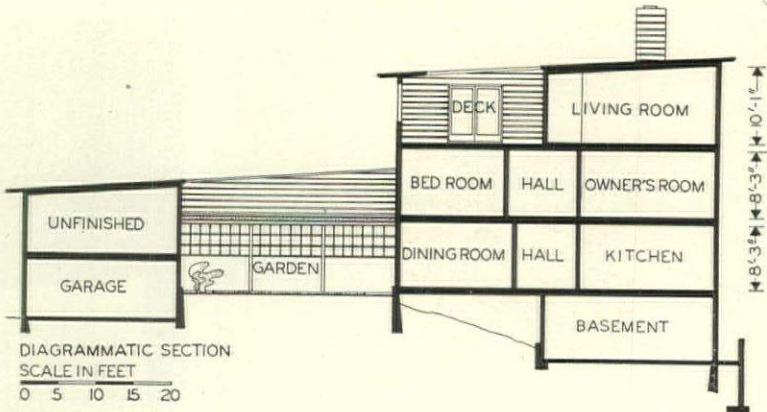
The space over the garage is used, at present, as a playroom by the owners' children. It will finally be converted into a guest apartment.

Thomas D. Church, Landscape Archt., A. V. Saph, Jr., Structural Engineer, F. S. Marshall, Contractor.

CONSTRUCTION OUTLINE: STRUCTURE—redwood siding, 30 lb. building paper, wood sheathing, studs and lath; inside—plaster. Ceilings—stucco on plaster, California Stucco Co. ROOF—tar and gravel; deck—canvas. FIREPLACE DAMPER—Superior Fireplace Co. WINDOWS—crystal sheet and double strength, quality B glass. FLOOR COVERINGS—carpet, linoleum and Douglas fir. WALL COVERINGS—stucco, California Stucco Co.; solarium—redwood. PAINTS—Samuel Cabot, Inc. HARDWARE—Sargent & Co. ELECTRICAL WIRING—knob and tube. Switches—General Electric Co. BATHROOM EQUIPMENT—American Radiator-Standard Sanitary Corp. HEATING—Forced warm air, gas fired, filtering, Aladdin Heating Corp. Water heater—American Radiator-Standard Sanitary Corp.



EAST VIEW SHOWS DIVISION OF HOUSE INTO TWO ENTITIES



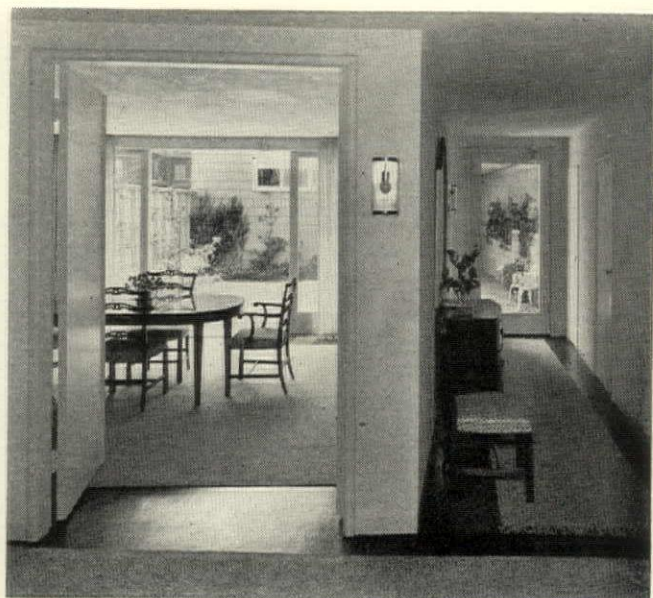
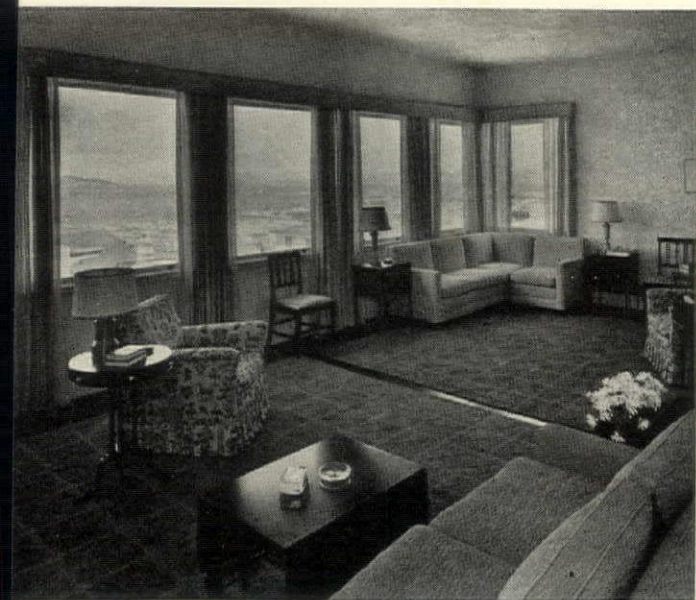
FIRST FLOOR & PLOT PLAN



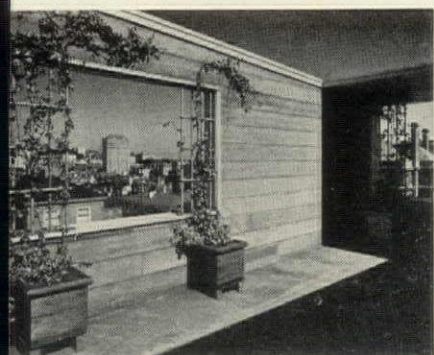
SECOND FLOOR PLAN



THIRD FLOOR PLAN



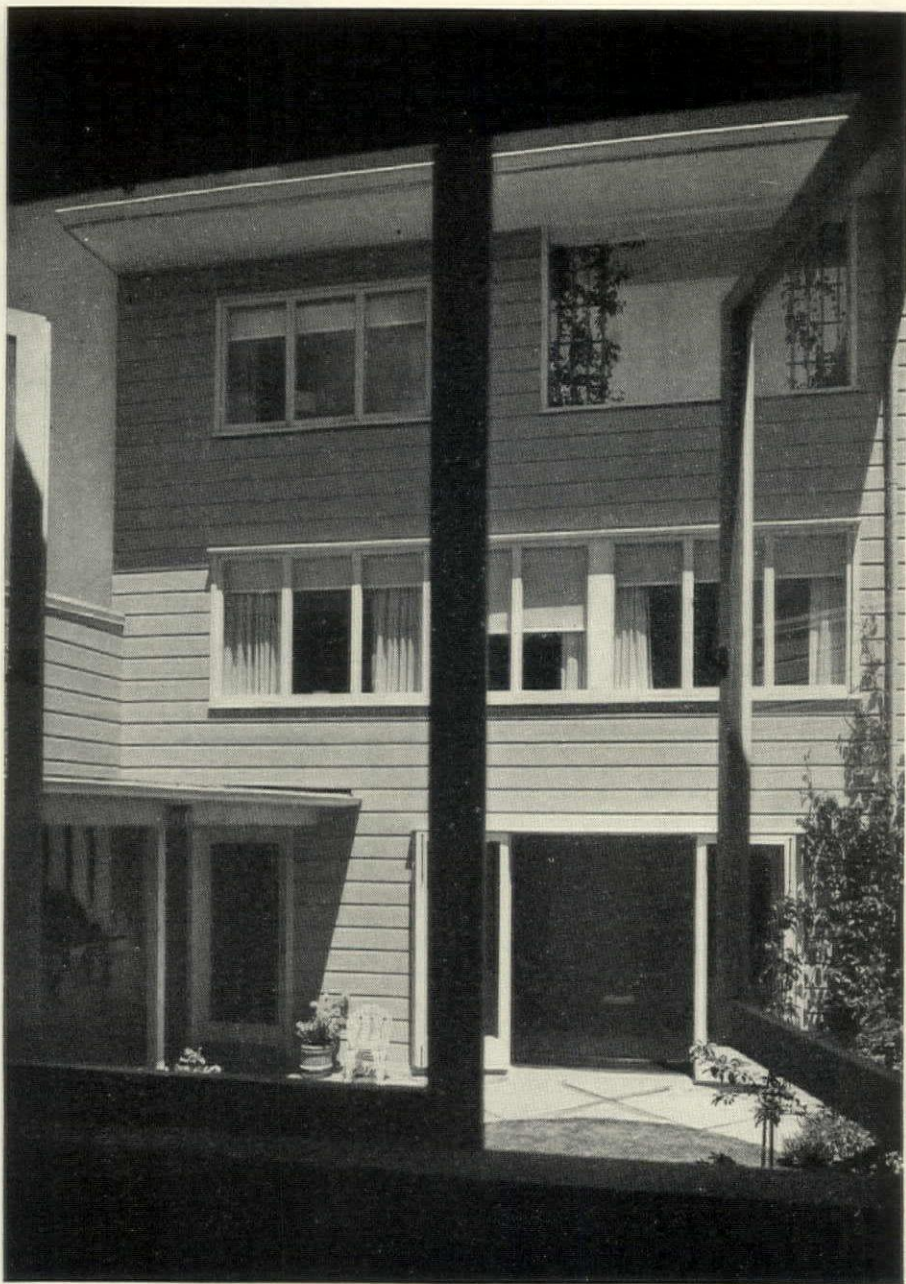
TOP FLOOR LIVING AREA LOOKS OVER HILL TO BEST VIEW DINING ROOM AS SEEN FROM BOTTOM OF MAIN STAIR



OPEN DECK EXTENDS LIVING AREA



FOOTH: A BLAND FUNCTIONAL FRONT VIEW OF GARDEN WITH DINING ROOM BEYOND, OPEN DECK ON TOP FLOOR



4. WAR HOUSING

The application of simple domestic building technique has produced some of the best U. S. war housing to date.

When, in 1941, the FWA assigned Wurster a project of 1,692 dwellings at Vallejo, Calif., he was permitted to construct 25 experimental units as part of the whole group. Sole restrictions: unit cost not to exceed \$2,845 and adherence to Government "Standards for Defense Housing."

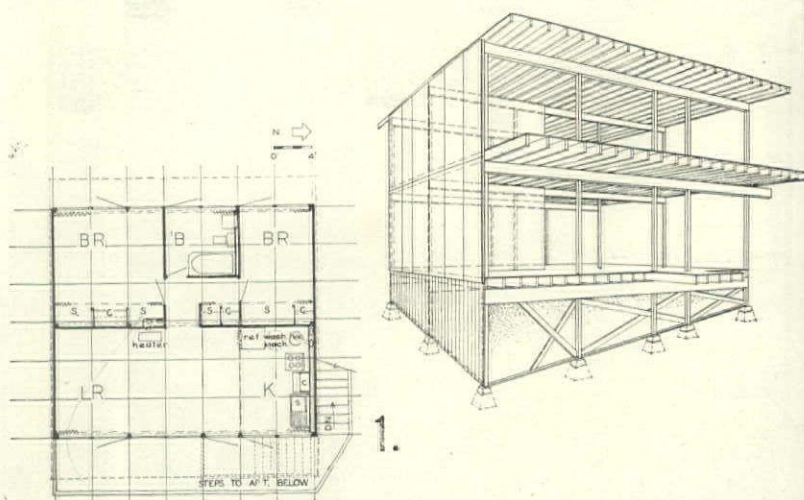
The problem was made more difficult by the fact that the economy resulting from mass production would not make itself felt in a group of 25 units, particularly since the architect decided to design *three* distinct types. They were called (1) "Skeleton Frame" units, (2) "Masonry Wall" units, and (3) "Frame Bent" units.

Architect Wurster intended to prove that, at similar cost, a type of dwelling unit highly superior to the run-of-the-mill design could be created. This contention was completely vindicated. The experimental units averaged \$2,845, included underpinning, stops, railings, more glass, curtains throughout, and fenced-in drying yards; so that, actually, they proved to be considerably cheaper than the standard houses. This although they were constructed six months later and lacked advantages of mass production.

Roofs can be put up in prefabricated sections *before* walls have been erected, since they are supported in each case by structural posts and beams, rather than weight-bearing wall sections. This means protection for the interior against weather, which has frequently played havoc with prefabricated structures during erection. The peculiarities of each dwelling type are explained in the diagrams.

Thomas D. Church, Landscape Archt., A. V. Saph, Jr., Engineer, Charles Stockholm & Sons, Leibert & Trobock, Robertson & Mullen, Contractors.

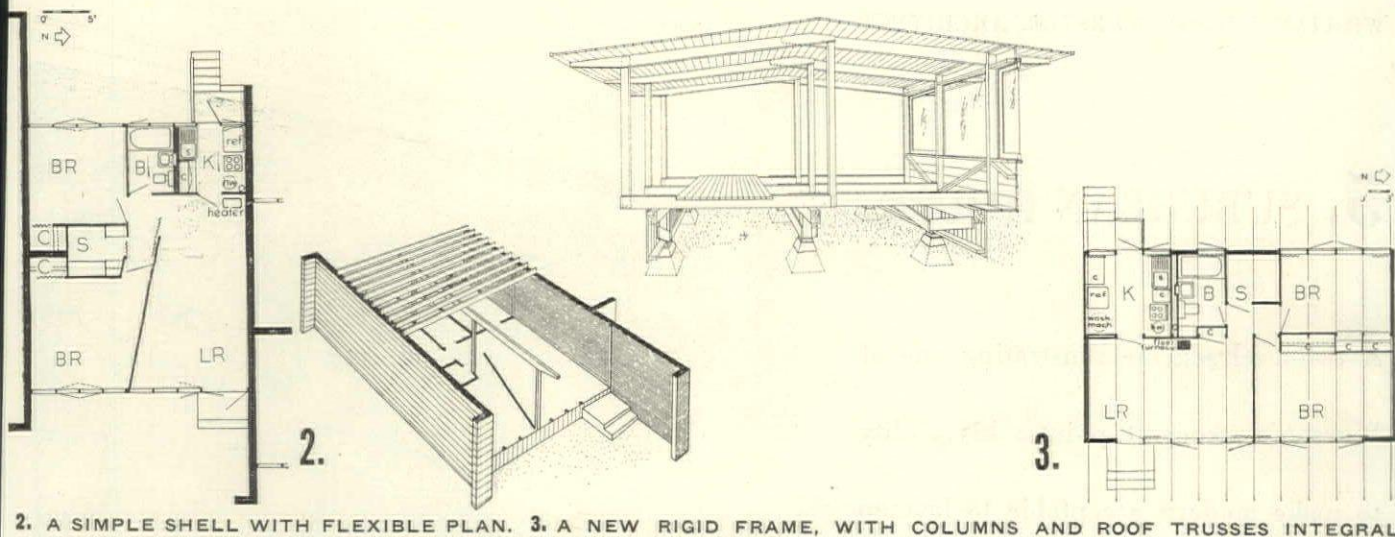
CONSTRUCTION OUTLINE: STRUCTURE — Douglas fir plywood, brick, Haydite Co. blocks, Basalite wall units, Basel Rock Co. or Homasote, Homasote Co.; inside—plywood. ROOFS—Flintkote felt and capsheet, Flintkote Co. WINDOWS—double strength, quality B and obscure glass. FLOOR COVERINGS—linoleum. PAINTS—W. P. Fuller & Co. and A. C. Horn Co. ELECTRICAL WIRING—knob and tube. BATHROOM EQUIPMENT — American Radiator-Standard Sanitary Corp. HEATING—floor furnaces in frame houses, console heaters in others.



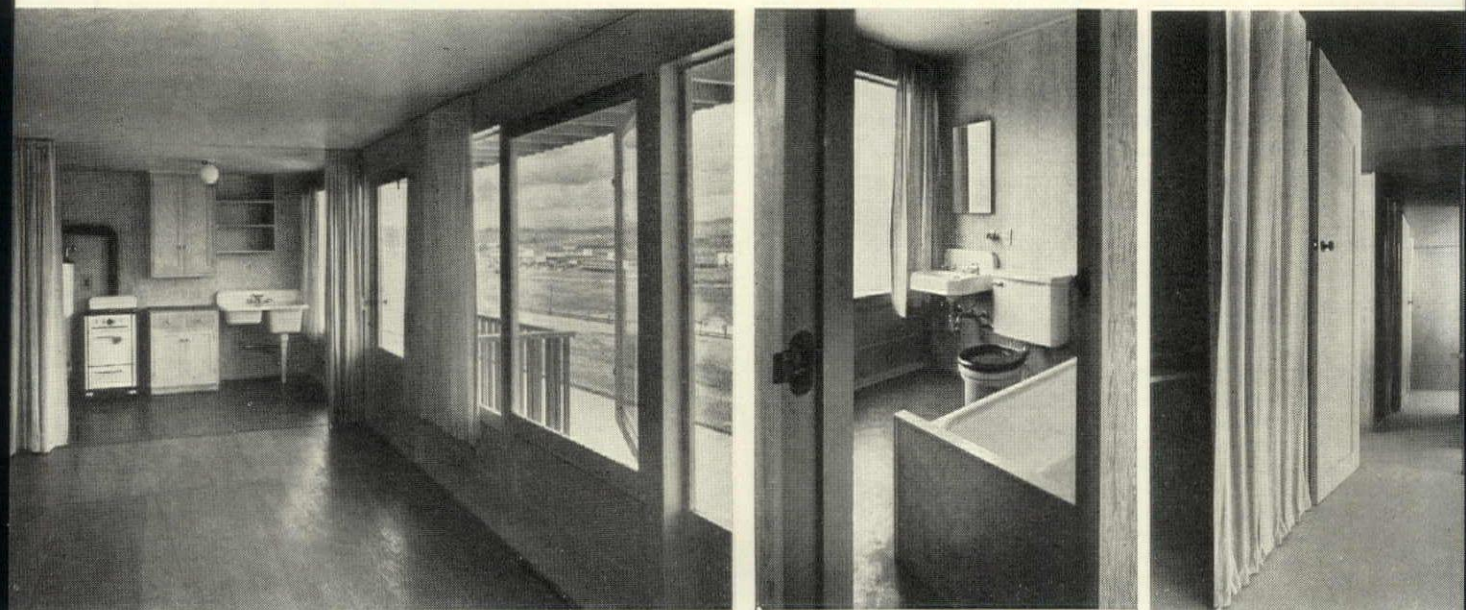
1. INTEGRATION OF PLAN, STRUCTURE PRODUCED CLEAN DESIGN



2-STORY SKELETON FRAME UNITS ARE DETACHED, STAGGERED



AT EQUAL COST WURSTER USED MORE GLASS, CURTAINS THROUGHOUT. NOTE MASONRY UNITS IN THE DISTANCE



LIVING ROOMS IN 2-STORY DWELLINGS INCLUDE KITCHENS WALLS OF PLYWOOD. DOORS FROM FLOOR TO CEILING

5. SUBURBAN HOUSE

A two-level scheme illustrating one of Wurster's strongest points: his ability to make modern acceptable to laymen

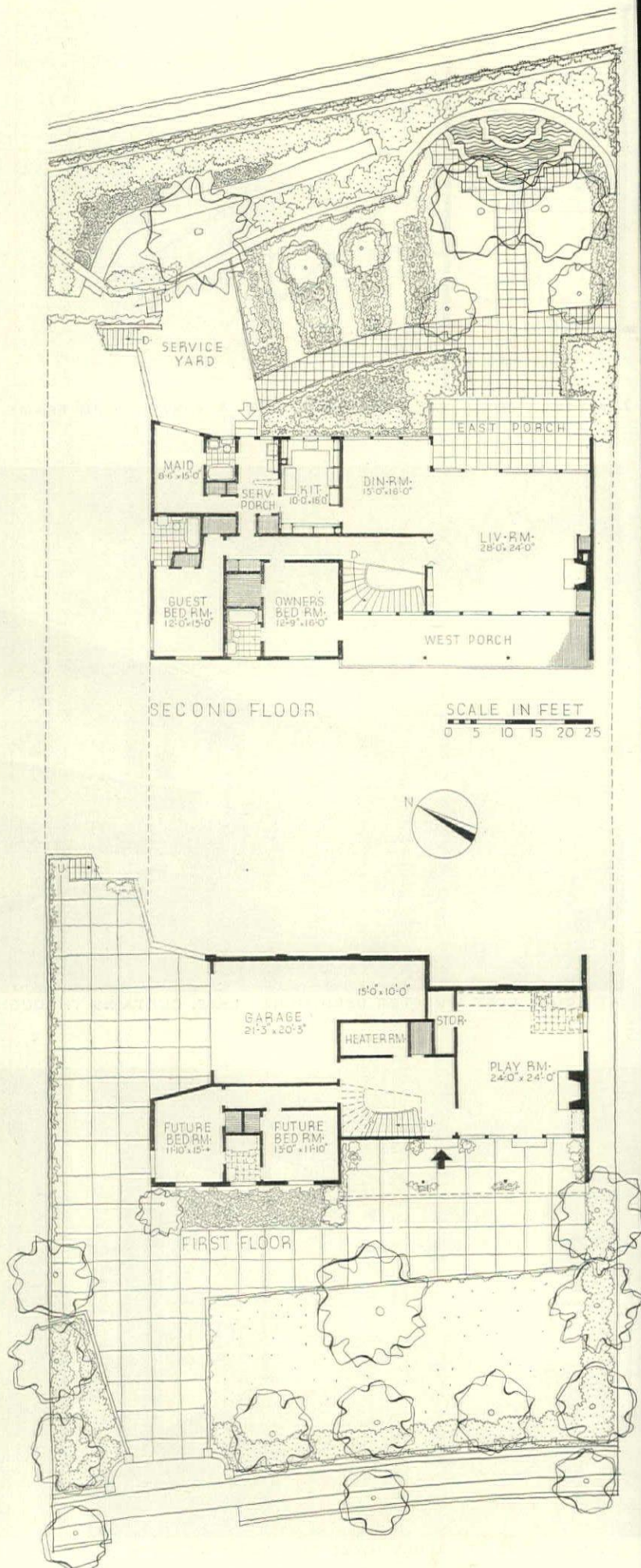
A notable feature of the first Wurster portfolio, published in May, 1936, was the way this designer manages to apply a contemporary approach to seemingly conventional houses. As he said at that time, "I have never believed in proselyting, so feel that I have no mission to put over any given expression on any client. I like to work on direct, honest solutions, avoiding exotic materials, using indigenous things so that there is no affectation and the best is obtained for the money. . ."

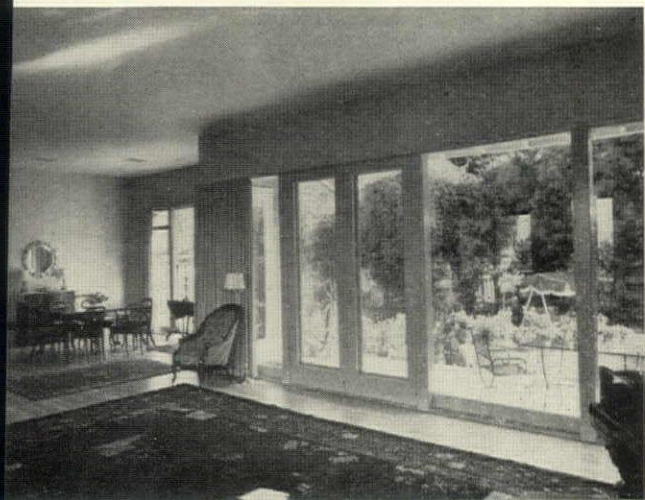
In the seven years since this statement was made, more and more clients have come to accept radical design, a fact which is accurately mirrored in Wurster's work, and therefore in this portfolio. A goodly number, however, still prefer houses whose modernity is played down, rather than up. And, as this house demonstrates, the Wurster office is still able to satisfy both types, and do so without sacrificing good design. The plan is open, and exceedingly well lit. Both sides of the living area are almost all glass. The building is boldly adapted to its site. Materials and construction are straightforward and adroitly handled. And yet, despite all these things, the total effect is one of quiet, almost "conventional" restraint.

Designed for a family with two grown daughters, the plan provides future bedrooms for their use when home on visits. An unusual feature is the use of panel heating coils in the outside terrace, to warm this space in the late afternoon when the house shades it from the sun.

Dimitri Schoch, Interior Decorator, Ned S. Rucker, Landscape Architect, C. M. Teigland, Contractor.

CONSTRUCTION OUTLINE: STRUCTURE—stucco, redwood siding, metal and Douglas fir lath, plaster. ROOF—cedar shingles. INSULATION—rock-wool, Plant Rubber & Asbestos Co. WINDOWS—crystal, plate, obscure, single and double strength, quality B glass. FLOOR COVERINGS—linoleum. PAINTS—Samuel Cabot, Inc. ELECTRICAL WIRING—knob and tube. SWITCHES—toggle. BATHROOM EQUIPMENT—American Radiator-Standard Sanitary Corp. CABINETS—Hallenscheid & McDonald. HEATING—gas furnace, Aladdin Heating Corp.





AND DINING ROOMS, ON SECOND FLOOR OVERLOOK THE HIGH-LEVEL FLOWER GARDEN AT THE REAR OF THE PLOT
BALCONY, AT OPPOSITE SIDE OF LIVING ROOM, FACES STREET. TERRACE SERVES PLAY ROOM



6. SKI LODGE

Designed for serious sportsmen rather than the tourist trade: Wurster calls it a “frame for the life of skiing.”

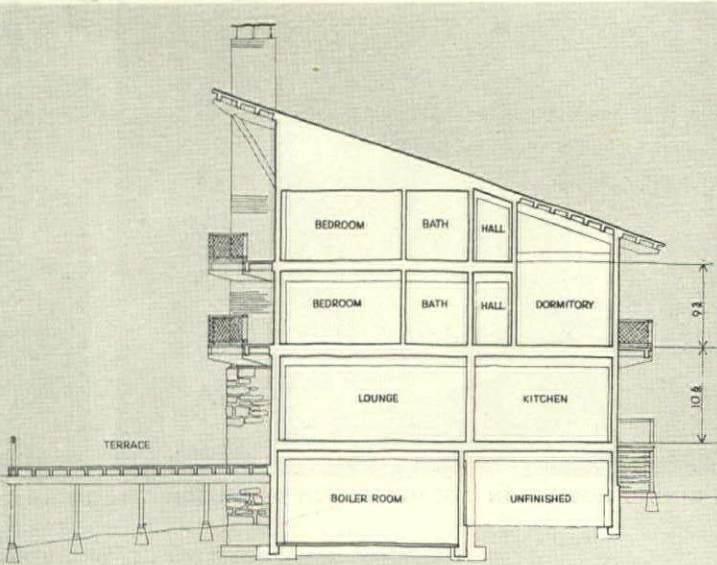
The finest thing about this ski lodge is its site, the way the building has been fitted to it, and the kind of life expressed in the plan. Located at the bottom of the slope, this lodge was conditioned almost entirely by very practical requirements. Snowfall at times reaches 30 ft. in depth, so that the structure was bound to be heavy and sturdy. By the same token the first floor is well above the grade, and the sloping roof is steep enough to allow snow loads to slide off—past balconies, which are protected by a deep roof overhang. On the other side the roof opens up the building toward the view and the sun, and all the private rooms are located along that side. The terrace on the front has been dropped below the lounge level to allow people inside to look out over the heads of those outside.

Additions in a lateral direction were provided for (not shown in the plans) and executed later

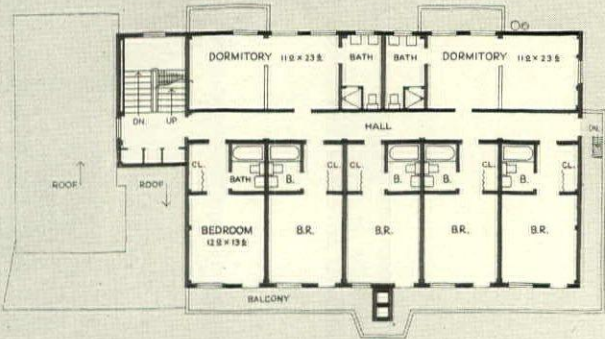


(see cut above). The dormitories in the rear of the building (see section) take up a greater height to comply with the State housing laws. Despite the rugged appearance of the building, extensive service facilities, bathrooms, etc., tone down the somewhat Spartan concept implied in the exterior. The latter is left in natural wood bleached by the sun and snow.

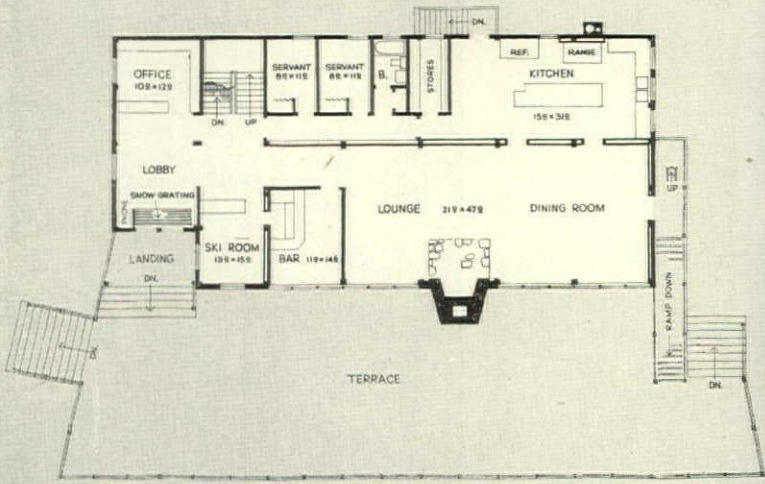
Maurice Sands, Interior Decorator, A. V. Saph, Jr. Structural Engineer, P. J. Walker Co. and Charles Stockholm & Sons, Contractors.



DIAGRAMMATIC SECTION



SECOND FLOOR PLAN



FIRST FLOOR PLAN

SCALE 0 5 10 15 20 FEET



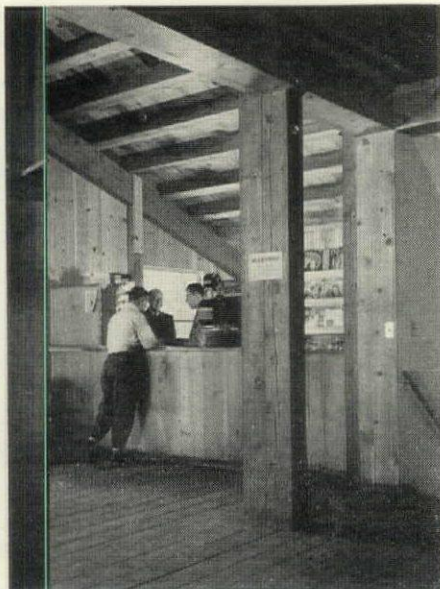
IN ITS ORIGINAL FORM THE MAIN BLOCK OF THE SKI LODGE WAS SYMMETRICAL ABOUT THE BRICK CHIMNEY STACK

STRUCTURE WAS MADE RUGGED ENOUGH TO WITHSTAND SEVERE WEATHER

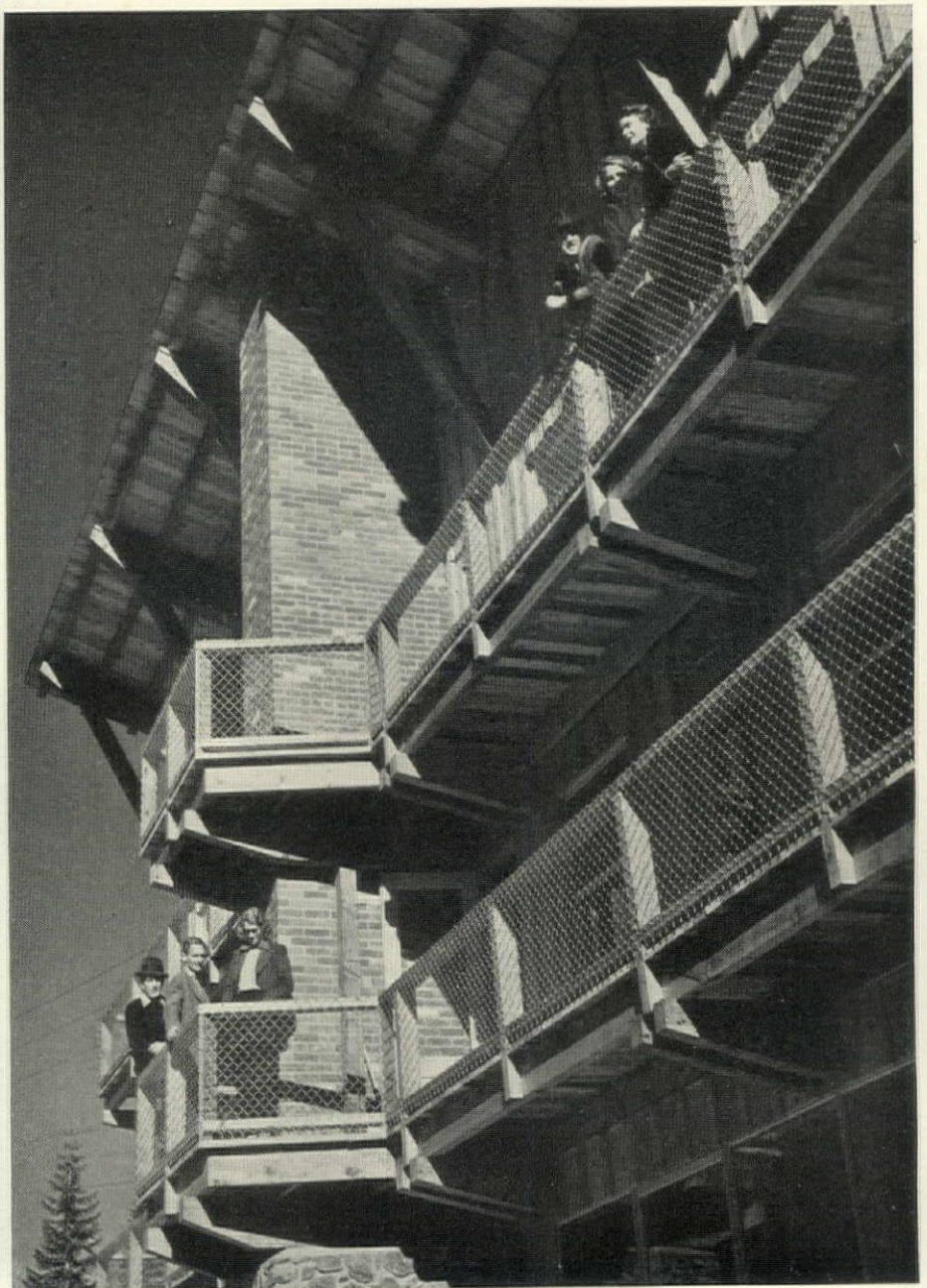


SNOW PILES UP TO TERRACE LEVEL

ALL INTERIORS ARE UNPRETENTIOUS



Photos: Rondal Partridge



7. OFFICE BUILDING

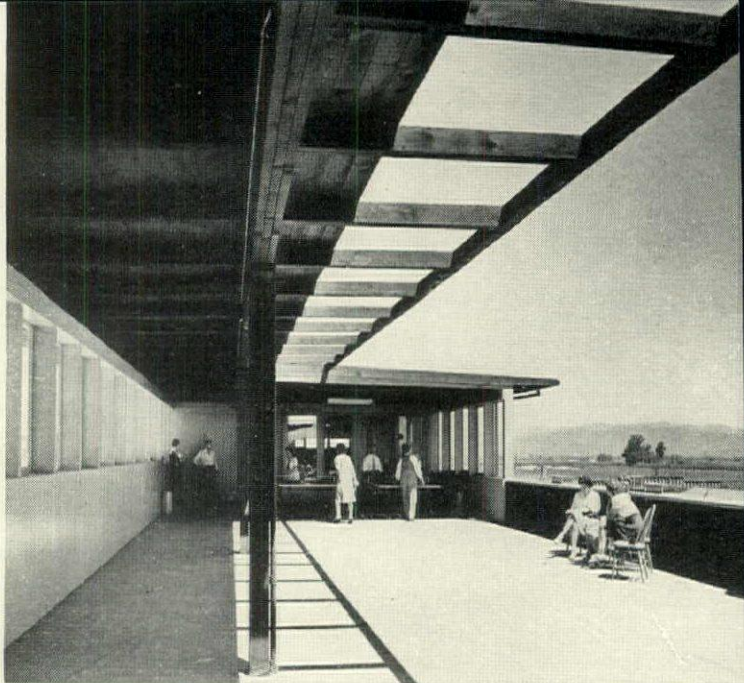
This country office building contains implications of planning, amenities and of scale that are truly contemporary

The Schuckl Canning Company of San Francisco had had their plant at Sunnyvale in the Santa Clara Valley for some time, when they decided to build an office building close to the cannery. It was in the early days of priorities when wood was not a strategic material, and Wurster decided to use it for the new structure. Since, however, low insurance rates for fire damage demanded a degree of safety comparable to that which concrete affords, all floors were built of a type of mill construction with solid joists. The building expresses this beautifully: Wall sections or glazed units are hung on the structural frame of floors and columns to form little more than a screen. The floors are furred below for heating ducts and above for electric conduits. This has resulted in a building as soundproof as any concrete structure.

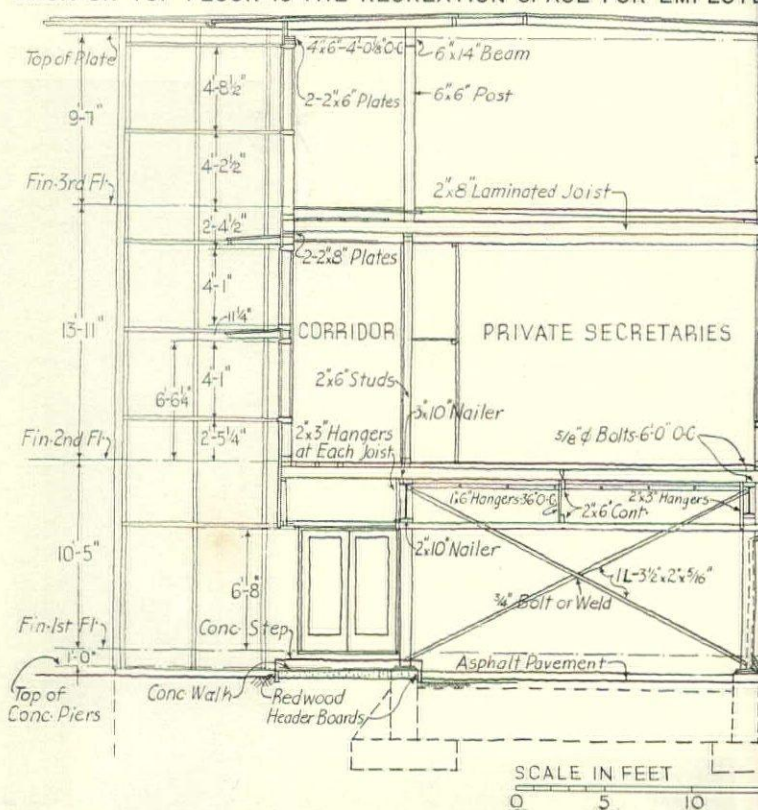
The space was organized in close collaboration with the company's executives. This assured a truly functional plan. All of the local operation was placed on the first floor, and all the executive work, shifted from San Francisco, was placed on the second floor. On the third floor is the cafeteria, kitchen and women's rest room. There is also an outdoor deck for the use of the employees. The eating facilities were needed since the building is out of reach of a normal community. In the future it is hoped to design a cafeteria for the cannery workers and a nursery school for their children just across the street. Problems of this nature are often overlooked in such a move, and in providing an answer the architect proved to be equal to the planning and decentralization implied even in the relocation of this relatively small unit.

These same implications became apparent in the organization of the street level. Half the building is completely open at that level, thus furnishing parking space for the executives under the building proper. This way they go dry-shod directly to their offices on the second floor.

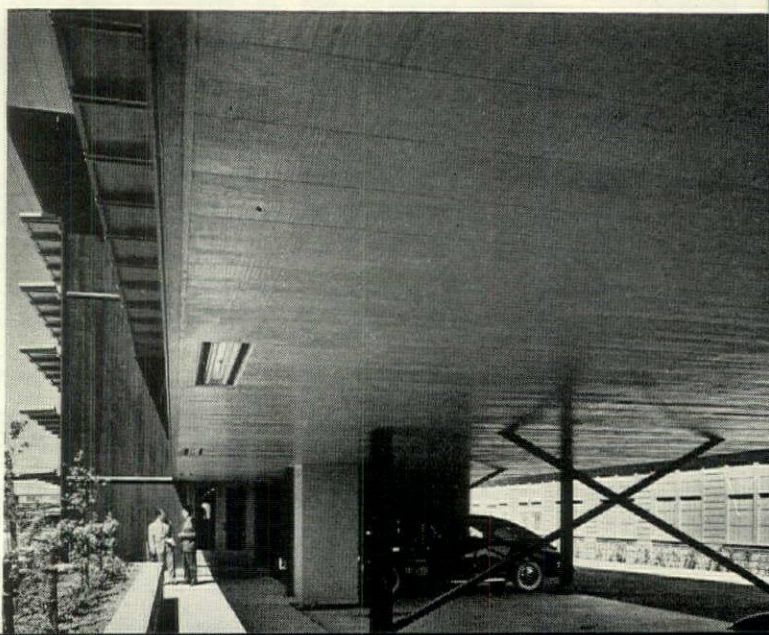
The exterior of the building was stained a dark brown, and the wood awnings, which protect the



DECK ON TOP FLOOR IS THE RECREATION SPACE FOR EMPLOYEES

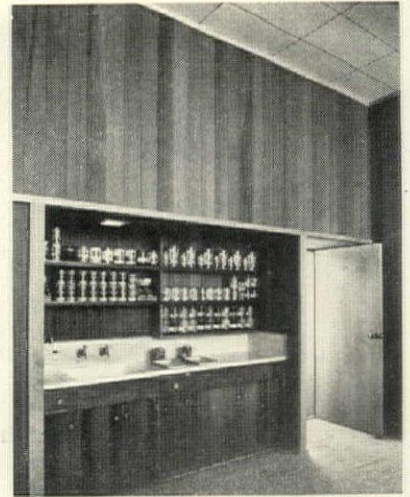


PARKING FACILITIES UTILIZE AN AREA BELOW BUILDING PROPER

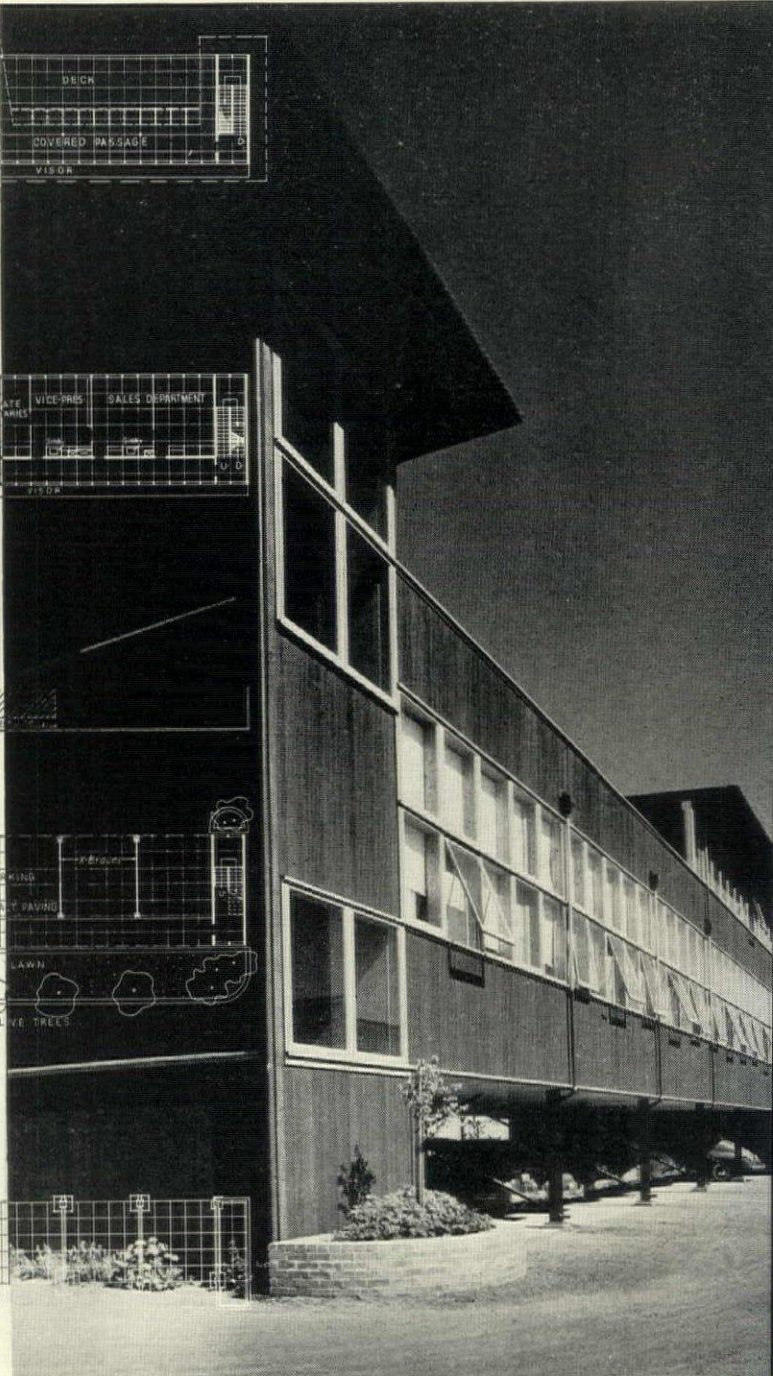
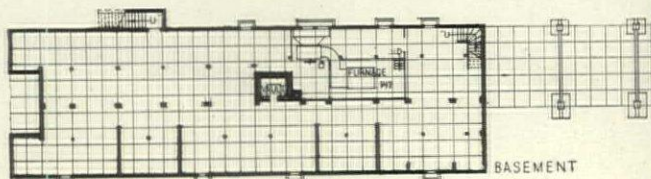
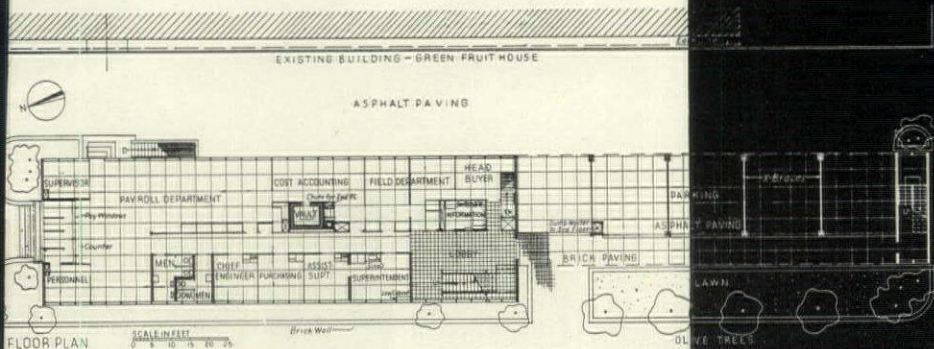
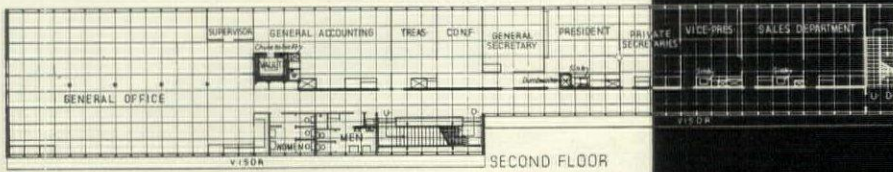




THE GENERAL OFFICE IS AN ORDERLY, WELL-LIT AREA



SET-UP FOR TESTING PRODUCTS



SOUTHERN END CONTAINS STAIR AND INDIVIDUAL OFFICES

7. OFFICE BUILDING

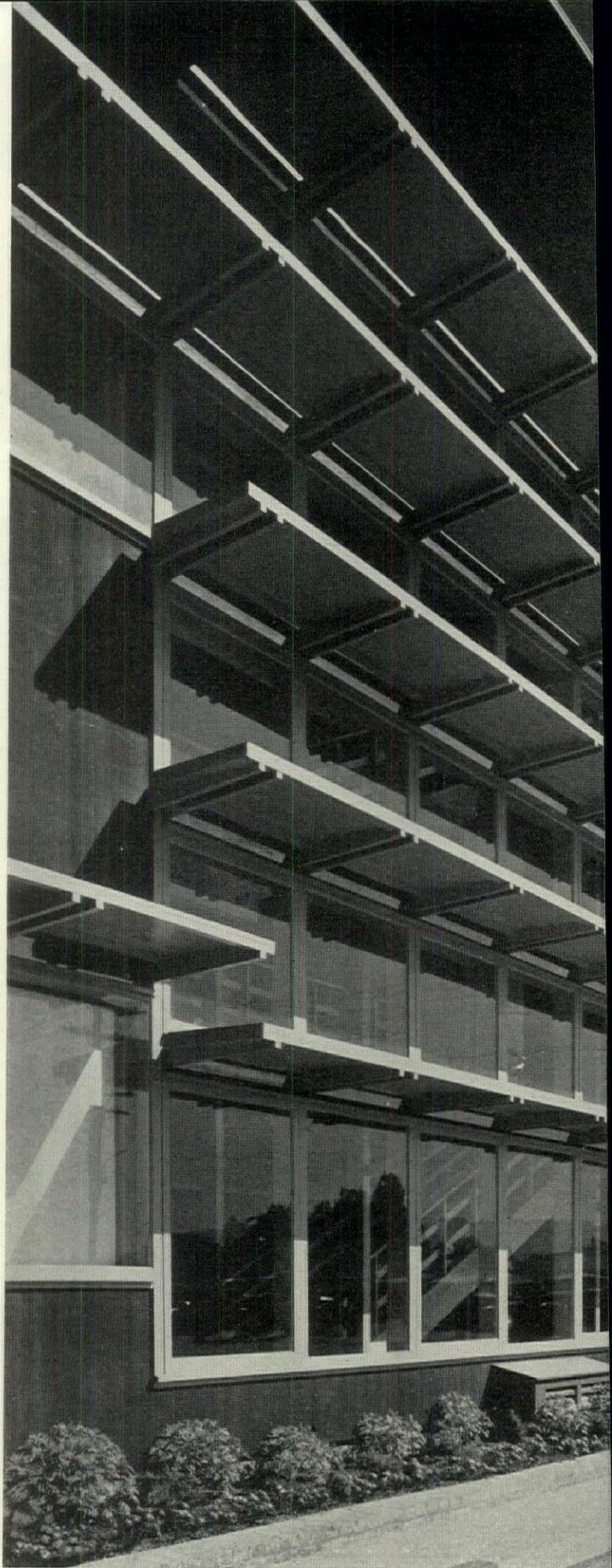
The design displays a great measure of unity obtained only through close integration of plan and structure.

working space from the sun in summer, were painted a coral color. The interior boarding is all of redwood treated with a lacquer finish so that the wood will retain its natural color. The ceilings are covered with acoustic tile, which provides insulation against noise, and maintains the generally restful atmosphere created by the building's rural location. The main stairway, shown in the photograph to the right, has oak treads and Douglas fir stringers. It constitutes the only decorative feature of the interior. Outside, it is the vigorous projecting sunshades of wood which provide richness of texture and give the structure its characteristic appearance.

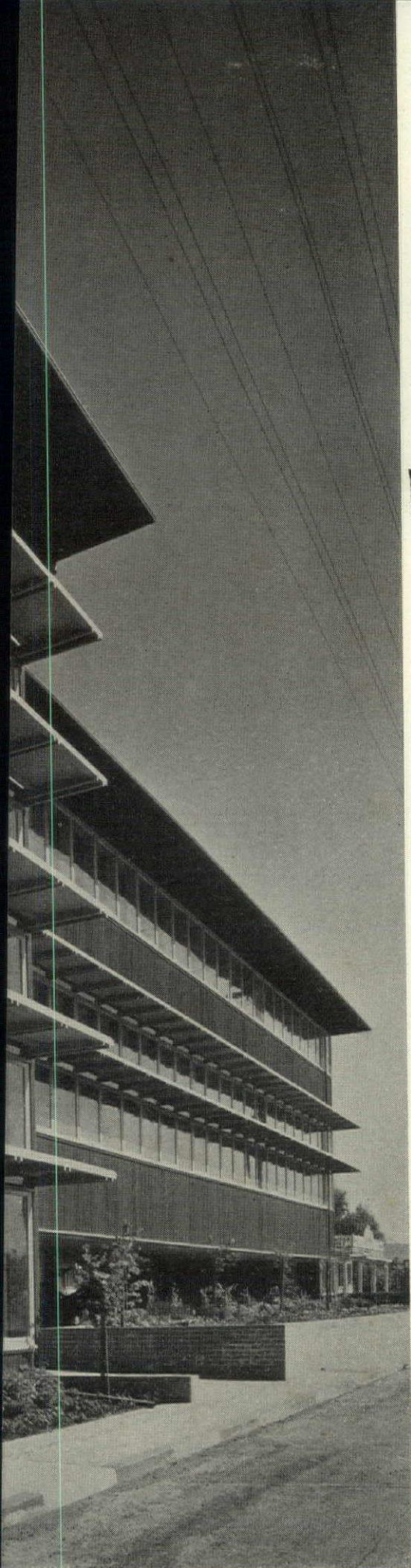
One of the most interesting points in the design of this building was the relationship between architect and client. The entire operation was conducted on a basis of architect's costs plus a profit, rather than a percentage. This was particularly appropriate since the company did their own contracting for the job, and so the fee, very properly, had no relationship to what it cost them to put up the building. Wurster calls this one of his happiest experiences in cooperating with an industrial concern.

Thomas D. Church, Landscape Architect, A. V. Saph, Jr., Structural Engineer, Aladdin Heating Corp., Heating Engineers.

CONSTRUCTION OUTLINE: STRUCTURE—redwood, building paper, fir sheathing and posts; inside—redwood. Steel columns and beams for parking area. Floors—Douglas fir. Ceilings—acoustic and insulating tile, Fir-Tex Insulating Board Co. ROOF—tar and crushed granite; decks — Calrock asphalt block, Calrock Asphalt Co. WINDOWS — double strength, quality A and B and Factrolite plate, Mississippi Glass Co. FLOOR COVERINGS—linoleum. PAINTS—W. P. Fuller & Co. HARDWARE—Schlage Lock Co., Stanley Works and Vincent Whitney Co. ELECTRICAL WIRING—rigid conduit and Wiremold, The Wiremold Co. BATHROOM EQUIPMENT—American Radiator-Standard Sanitary Corp. and Kohler Co. HEATING—warm air furnace, filtering, American Foundry & Furnace Co. WATER HEATER—General Water Heater Co.



WEST SIDE OF BUILDING HAS LONG, CORAL COLORED AWNINGS, S



AND EMPLOYEES' ENTRANCE IN FOREGROUND



ALMOST 250 FT. OF HORIZONTALITY PRODUCED DRAMATIC DESIGN



THE MAIN STAIR: A FINE DETAILING JOB USING STOCK MATERIALS

8. BEACH HOUSE

A frame structure designed to fit a dramatic location, satisfies unusual climatic conditions and special needs



THOUGH THE HOUSE TURNS AWAY FROM THE ROAD, SECOND FLO

The climate in Carmel, where this beach house was built, is conditioned by a prevailing cool wind off the ocean, which tends to make outdoor living and eating impracticable. The entire concept of this structure was based on that fact. Mr. Wurster planned the house to serve as a windshield for the "sun-trap" courtyard on the land side. Other considerations were the special needs of the owner, which are reflected in the plan. This is essentially a house designed for hospitality.

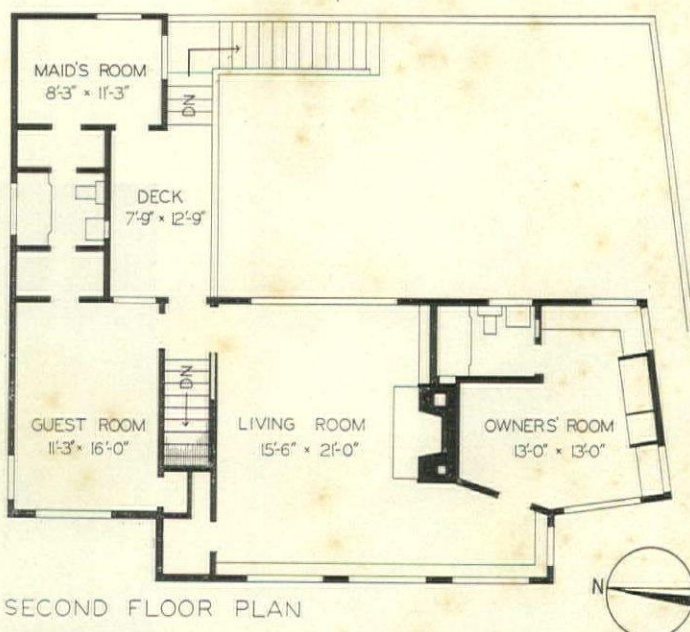
The living area was placed on the second floor to give it privacy from the road along the beach to the west. Existing grade conditions were skillfully used to achieve these ends.

The color scheme of the building was carefully considered. The vertical wood siding of the second floor, reminiscent of Pennsylvania buildings, was stained a rich red. The first floor walls are the green of ice plant, which grows around the house.

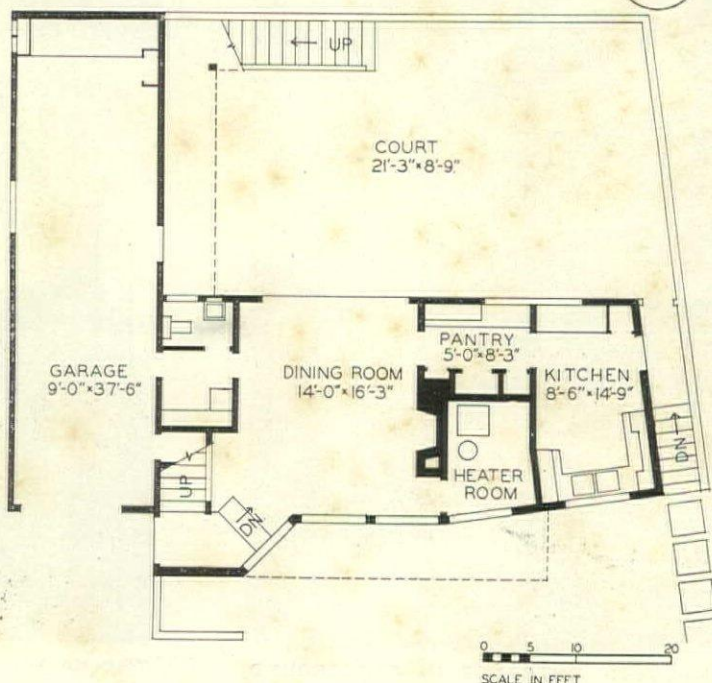
A noteworthy feature is the incorporation of a two-car garage, elongated rather than square in shape. This cut down unnecessary frontage and eliminated a second door, which usually produces an element out of scale with a small structure. The cars can not be left out of doors in this climate, since the salt spray from the water would affect the metal. By this token all the flashing on the house is of copper.

Miles Bain, Contractor.

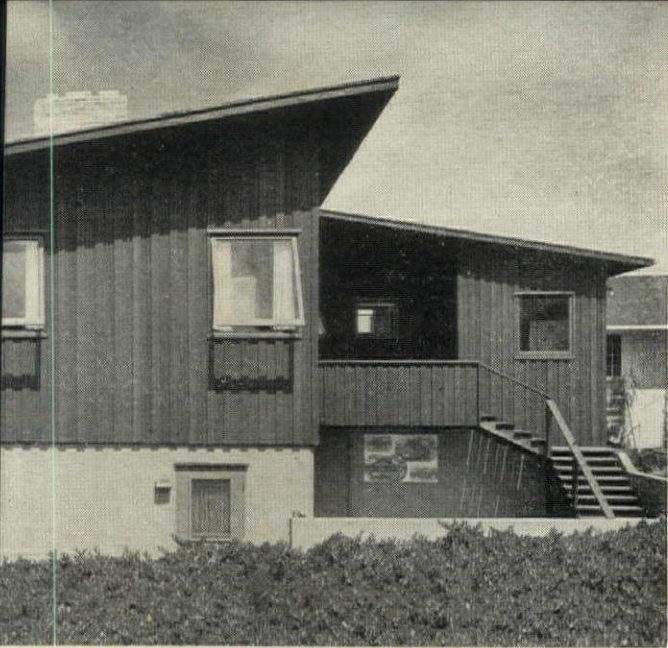
CONSTRUCTION OUTLINE: STRUCTURE—plaster, building paper, wire mesh, cement plaster, studs, California Stucco Co. stucco and concrete; inside—Douglas fir and plaster on wood lath. ROOF—tar and gravel; decks—Malthoid and Pabco roofing, Paraffine Co.'s, Inc. FLASHING—copper. DUCTS—galvanized iron. WINDOWS—wood sash; double strength, quality A and B, and crystal sheet glass. FLOOR COVERINGS—carpet and linoleum. WALL COVERINGS (main rooms)—mahogany plywood. PAINTS—Samuel Cabot, Inc. ELECTRICAL FIXTURES—Gill Glass Co. Flood lights—Benjamin Electric Mfg. Co. BATHROOM EQUIPMENT—American Radiator-Standard Sanitary Corp. HEATING—forced warm air, gas fired, filtering, Aladdin Heating Corp. Water heater—Ruud Mfg. Co.



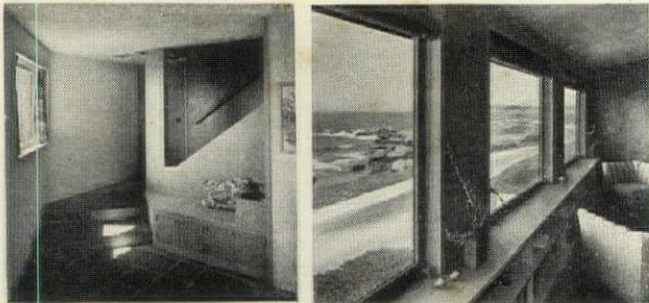
SECOND FLOOR PLAN



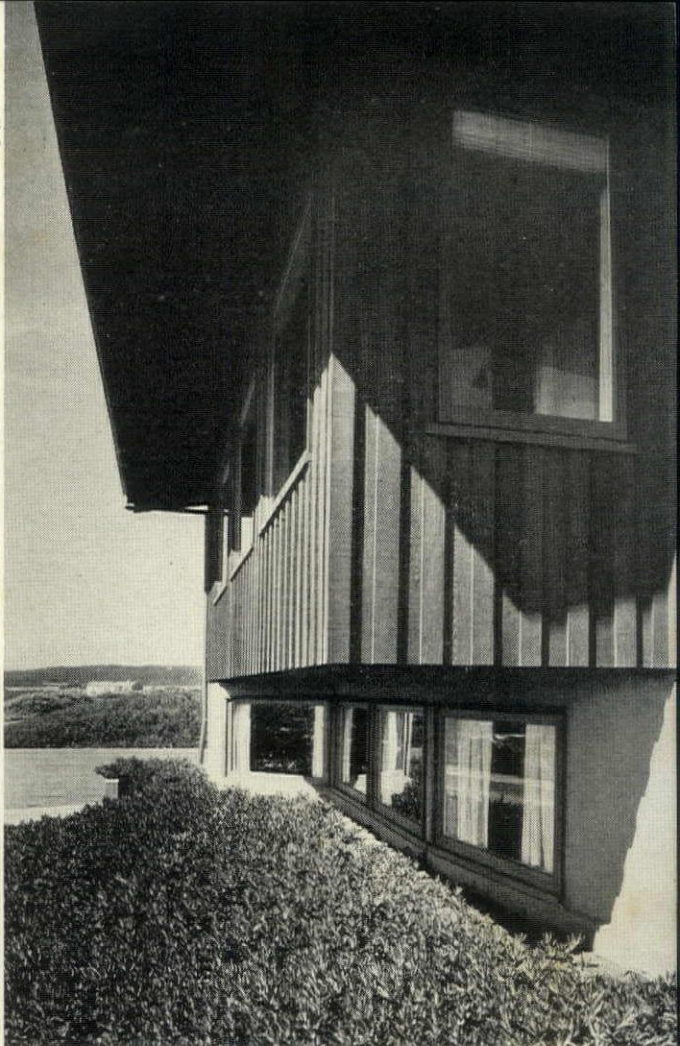
SCALE IN FEET



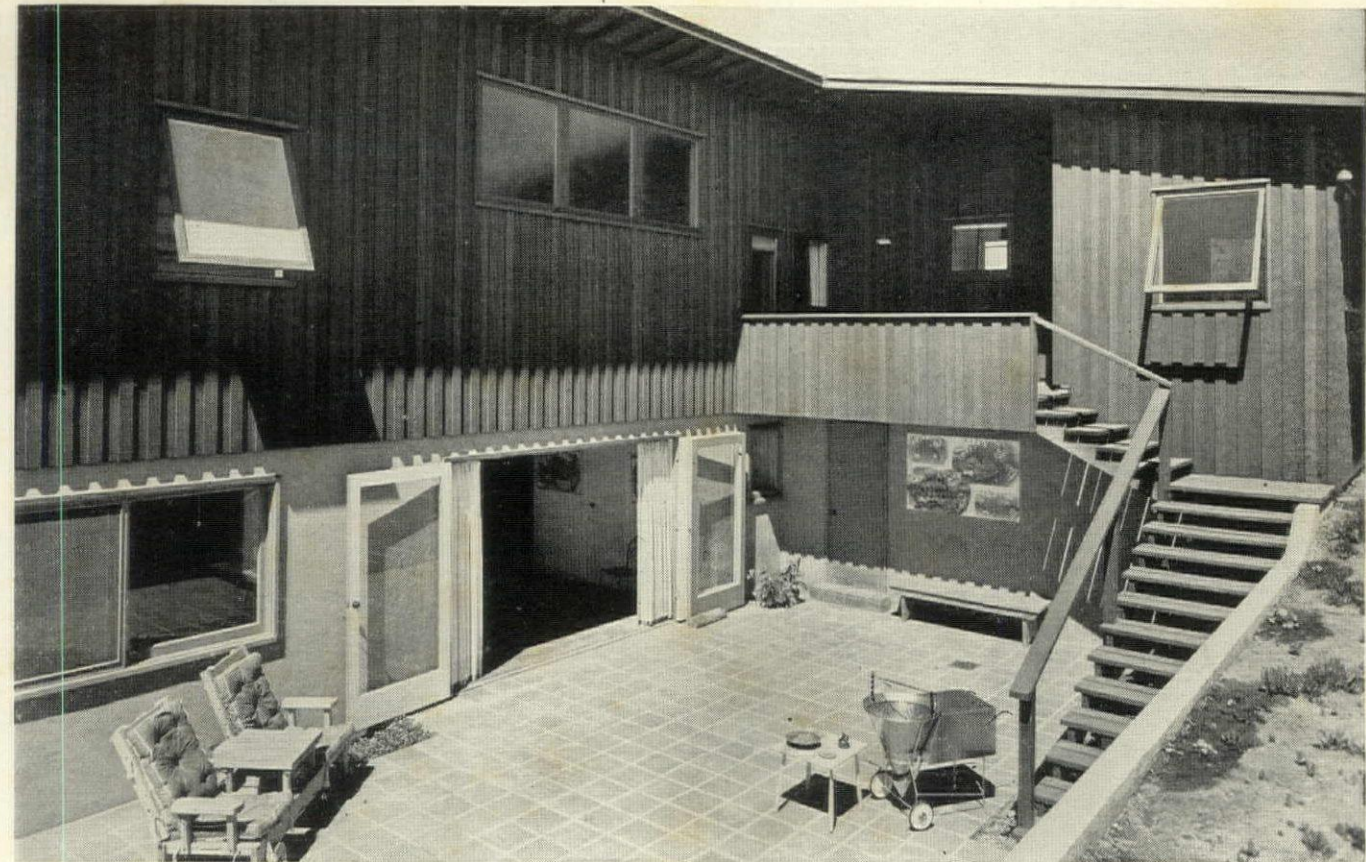
NG ROOM OVERLOOKS OCEAN WITHOUT LOSS OF PRIVACY



SIMPLE DETAILING PRODUCED FINE INTERIOR SPACES



EYE-LEVEL WINDOWS BELOW GIVE VIEW OF OCEAN



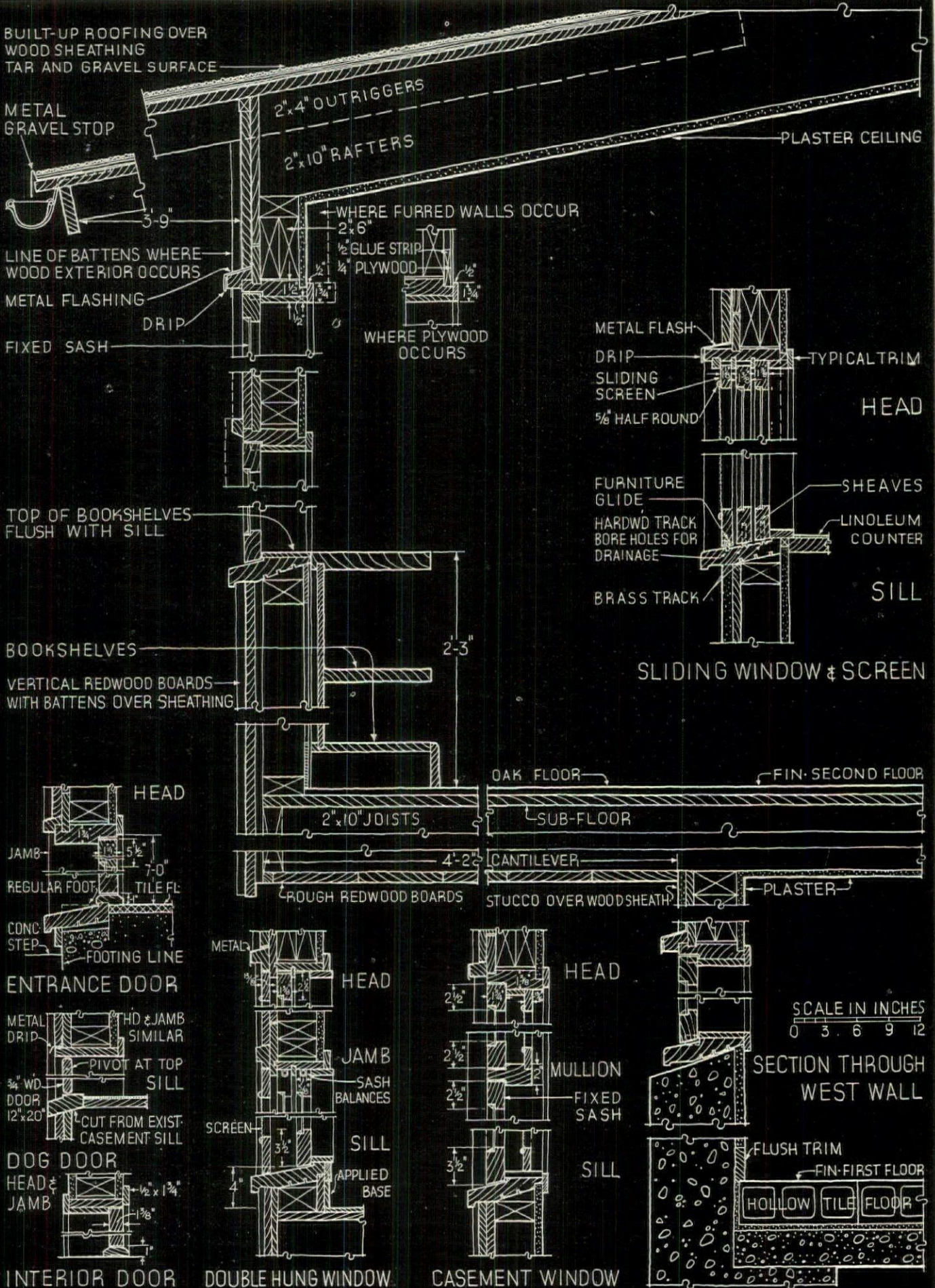
THE "SUN-TRAP" COURTYARD CAN BE USED FOR OUTDOOR EATING, SHELTERED FROM PUBLIC ROAD AND WIND

WINDOW AND DOOR DETAILS

WILLIAM WILSON WURSTER, ARCHITECT

DESIGN DATA 2.

THE ARCHITECTURAL FORUM



SPOTLIGHT ON FHA

Only 22 out of 600 leaders polled by THE ARCHITECTURAL FORUM seek elimination of FHA. But many want it revitalized, ridden of politics, staffed with more efficient and better paid personnel, and streamlined to speed up sluggish service.

Under the impact of war and the shifting economic tides, prized institutions get knocked about, come through the wringer of time, if at all, somewhat changed in form. Periodically THE ARCHITECTURAL FORUM has paused to take soundings, reappraise the institutions that have vitally affected Building.

In line with this policy, its editors turned the spotlight on FHA in a survey of Building leaders. By no stretch of the imagination can the bankers, dealers, manufacturers, life insurance executives and building and loan officials who were surveyed be considered pro-Administration. Nevertheless, only a handful of the 600 wanted to see FHA, "the brightest jewel in F.D.R.'s crown," disbanded. The general feeling was that it had done a good job in stimulating home construction. The vast majority endorsed its continuance. However, FHA did not come through unscathed.

FHA's record

FHA was nine years old on June 27. To gain a better understanding of what its future is likely to be, examine the times in which it was born and its record to date.

The building industry looks back at 1933 without nostalgia. It was a year of unending hangovers following the inflationary binge of the '20s. Home building was at a standstill. Capital, in panic, had withdrawn from the mortgage market. Then in 1934 the Government bolstered a collapsing economy with a series of acts providing for the sharing of the risks of credit with private capital through loans, guarantees and insurance but with regulations to protect the public interest.

One of these acts created the Federal Housing Administration which proved of great aid in restoring the confidence of private capital in the housing market. Since its formation, more than five million four hundred thousand Americans built, bought or improved their homes through FHA.

To carry out this program, over \$6,800,000,000 was advanced by private lending institutions. Here is the best proof of the benefits of this legislation to home buyers, home builders and home financiers.

Through it, persons of small means were able to acquire reasonable, fairly well-built homes, many in planned sub-

divisions, without the expense and risk of a second mortgage. By making available a steady flow of building funds, it revitalized a badly crippled industry. Higher minimum building standards were established which afforded a measure of protection to the honest builder against the unfair practices of the jerry-builder. Its contributions to mortgage banking were scientific appraisals, the invaluable long-term amortized loans and improved construction and inspection standards.

Through the war housing insurance amendments of the National Housing Act which permitted 90% loans direct to builders and relaxed the 10% owner-equity requirement, FHA has greatly aided the war effort and at the same time permitted some private builders to keep going. In the three years since the start of the European war to the end of 1942, FHA has issued commitments to private builders to insure over two billion dollars' worth of mortgages on new homes in war areas and over \$650,000,000 worth of repairs.

Its insurance record is impressive. As of April 30, over a million loans insured under Title 203, designed for peacetime operations, were on FHA's books. Three thousand seven hundred and seventy-six properties taken over have been sold. Only 167 properties (Title 203) transferred to FHA are still owned by it.

Its Title 6 insurance record is still untested. Commissioner Ferguson recently declared that the deposits in the war housing insurance funds (almost 5 million at the year's end) plus the anticipated renewal premiums and interest on investments will be sufficient to cover all future expenses and losses should 17.2% of the insured cases be foreclosed. How well these insurance funds will hold up under a severe depression is anybody's guess.

FHA in partial eclipse

Naturally, during wartime, as more of the war housing turned from private channels to temporary, publicly financed structures, FHA has fallen into partial eclipse. In the WPB-NHA-FHA priority battle, FHA caught most of the invective thrown by builders, got through to the last round somewhat battered, but on its feet. As a result some of the goodwill built up over the last nine years has been dissipated. It

has got into a hopeless muddle innumerable times trying to enforce rules that changed daily. Key officials have been removed from its ranks. Rumor persists that disunity exists within its own organization, with rival factions jockeying for control.

The fate of FHA is a matter of concern to the building industry. All the predictions of a million houses a year following victory, all the estimates of vast impounded demand and accumulated savings, and all the prophecies of the important role of the industry in sustaining full employment will be just tall talk if a steady flow of mortgage funds is not kept up in the post-war period.

The survey

The questionnaire sought the views of a cross-section of Building on possible changes in the working policies that would make FHA a more effective instrument. A by-product of the poll, the many thoughtful reforms suggested, proved of greater interest than the yes-and-no responses.

The questionnaire was sent to members of the National Association of Home Builders, members of The Mortgage Bankers Association of America, presidents and mortgage loan managers of leading life insurance companies and to selected lists of bankers, realtors, saving and loan executives, lumber dealers and building material and equipment manufacturers.

While the poll revealed that FHA is widely regarded as the best of the New Deal agencies, the expressions of praise were tempered with sharp and widespread criticism. Many were careful to state that their critical comments applied to the prewar period as well as to the period after NHA came into power. The most often repeated charges: too much politics, too much red tape, and too little authority in the local offices. A major gripe was the delay in processing applications even before WPB and NHA helped to jam the works. Thirty to sixty days processing time, especially in areas without local FHA offices, has not been unusual. The classic case is that of a hapless eastern builder who applied for loans in March 1942 and was finally permitted to start construction a year and three months later.

Other criticisms: evaluations always

lag behind building costs; quality construction is not sufficiently encouraged; new subdivision development has been discouraged because the elaborate requirements of the land-planning division have not been taken into account in final land valuations; local officials adhere too rigidly to regulations issued by national officers unfamiliar with local conditions. Repeated many times: the charge that FHA officials have been permitted to maintain outside business connections. Equally common was the complaint that many of the inspectors are inexperienced amateurs intoxicated with their sense of power over builders.

The responses to specific questions on policy naturally reflected economic interests and political philosophies. The builders, realtors, dealers and manufacturers are in favor of measures that would stimulate new home construction, such as a continuance of an accumulative 10 per cent down payment, low interest rates, 25-year mortgages, insurance of commercial buildings and farms. The lending institutions are concerned chiefly with setting up brakes that would prevent repetition of the depression that followed the unbridled building in the '20s. They favor 15- to 20-year loans, larger down payments, higher interest rates and reserves for maintenance. They oppose the insurance of community and commercial structures and farms on the grounds that these building types are adequately taken care of with private funds.

Views on government control

A cross-cutting factor in the responses of each group was the individual's attitude toward the control Government should exercise over the industry. One group, small in number, sees in FHA "another instrument of an Administration intent on forcing the people into a static collectivism." It views FHA along with other Government agencies as dispensers of harmful pap: "Like Faust, once you partake of FHA insurance, you are no longer in control of your own business. Government becomes a crutch you will be unable to throw away. You will not bank on your own judgment to take loan risks. The Government saps your independence. You will be no better than one of Hitler's *Herrenvolk*." Another group, also small in number, is convinced that strong police methods are necessary. Its viewpoint is expressed by a builder who, back in the Coolidge era, sold lots at free barbecues. He is convinced that FHA should employ a "straitjacket set of rules to keep the rugged individuals from subdividing all the farms in the country, fouling the landscape with 'nests in the West' and

safeguarding the public from exploitation. . . ."

The largest group is of the opinion that "FHA has made Christians out of many builders." Its members want FHA retained postwar as a standard-maker and as a carefully restricted police force in the home financing and home building fields, its use however, always to be voluntary. They feel that "as long as FHA is in existence, private lending interests will not depart from the standards established." However, they are anxious to see private lending institutions strong and active, so that FHA will not get too powerful and dictatorial.

While this group realizes that "the best governed is the least governed" it feels that the building industry has become endowed with a social trust and must be regulated in the interests of society. However, very few are convinced that the alternative to an all-powerful State, policing and underwriting the industry, is necessarily anarchy. They feel that they can regulate their own show with a minimum of Governmental control, give the public a break and still maintain a large and continuous construction market.

Many felt that Government competition through subsidized housing has to stop.

Mortgage raiding

The survey revealed widespread raiding of FHA mortgage portfolios by rival lending institutions. In many instances the originating mortgagee had gone to considerable expense and time developing loans. Often loans had been purchased from originating mortgagees at substantial premiums. The protesting lending institutions feel that they are helpless to stop this parasitic practice. They are of the opinion that FHA could stop the raiding by a stricter interpretation of the refinancing certificate.

The unofficial FHA view is that there is nothing they can do to stop this practice. They do not feel it would be proper for them to insist on the previous lender's consent. They contend that it would be unfair to the borrower who has an opportunity to improve his position and would also come close to being an agreement in restraint of trade, an evasion of the Sherman Act. FHA is of the opinion that it is up to the mortgage bankers to do a job of self-policing. The lending institutions on the other hand are afraid of joint action for the same reason; fear of violating the Sherman Act. Unless raiding is stopped, the building money group insists that the effect will be to drive lending institutions out of the home mortgage market. If rates are forced any lower,

they contend they would be better off buying U. S. Government bonds.

Lending institutions also protest the prevailing practice of paying premiums and rebates to contractors, subdividers and material dealers. In their opinion FHA should limit by regulation or legislation payment of premiums for new mortgage business to approved mortgagees actually negotiating mortgages for sale to permanent investors. Semiofficial FHA view is about the same in respect to premiums and rebates. It feels that such practices are unsound but takes the position that it is a matter for the lenders to settle.

Many builders and lenders are worried about FHA's recent attempts to control inflation by reducing valuations in the face of rising material and labor costs. Builders contend that, unless these costs are also pared, they will have to fold up. Mortgage bankers say that because of these arbitrary valuation cuts, local savings and loan associations have been able to make higher loans than FHA will insure.

Private mutual insurance?

Mentioned repeatedly in the survey is the hope that lending institutions will form a federation to administer privately a mutual mortgage fund. Concern is expressed that unless a competitive system is established, FHA, subject as it is to political influence, may prove a tyrannical force in the future. According to one builder, "some underwriter may decide he does not like the color of a builder's hair or his political philosophy. By cutting down loan commitments, he can force the builder out of business. Theoretically the builder can get funds from savings and loan associations or insurance companies, but unfortunately FHA has oversold the public on the ten per cent downpayment and on building and loan standards that are high only in print. It is actually the price arbiter." Some of the lenders feel that FHA is also in a position to arbitrarily force interest rates down. Its chief concern, they believe, is to be politically successful and to demonstrate its concern for the "masses."

Many of those in favor of a private insurance fund express doubt that such a plan can be successfully worked out. Two problems present themselves. With mortgage competition keen as it is, the task of enlisting the support not only of rival insurance companies, but of banks, saving and loan associations and other important mortgage loan factors would be very difficult. The other is that such an association might be accused of being a monopoly in restraint of trade by an unfriendly Administration intent on conducting a witch hunt.

1. Do you feel that the present accumulative 10 per cent down payment provision should be continued after the war?

	Yes	No
Builders and realtors	135	23
Building money groups	146	73
Dealers and manufacturers..	132	95
	413	191

COMMENTS:

Builders and Realtors

"Low down payments have never been an important contributory factor of default in any price class. There is a tremendous volume of unclassified data on homes purchased by contract of deed with reasonable success. Usually down payments were nominal. The practice has been widespread in the country long before FHA came into existence."

"I am in favor of a schedule of down payments graduated according to valuation and income."

"Only for World War II veterans."

Building Money Groups

"On a rising market 10 per cent or even 5 per cent is adequate and as long as the market rises the purchase contract will always be safe. However, on a falling market, it is conceivable that a 50 per cent down payment may not be a sufficient margin of security."

"In defense areas the short down payment places a tremendous burden on local financial institutions. Some houses have changed hands as much as three times in six months."

"The smaller the down payment the more foreclosures occur, the worse the market becomes. Why should the U. S. Government, which is of course you and I and all the rest of us, bolster up the lazy and incompetent. There are very few men who, if they are determined enough to own their own homes, can't accumulate enough for a safe and reasonable down payment."

Dealers and Manufacturers

"In the TNEC report on housing Mr. Peter Stone had this to say: 'A 90 per cent loan may be just as safe from an insurance point of view as a 75 per cent loan carrying a higher interest rate.'"

"Why not sell houses under a no-down-payment plan with a non-interest bearing mortgage running for 60 years. Furniture and groceries should be included. Also an autogyro and a Javanese houseboy. This would not only take up our own slack but also steady the Javanese economy. Of course new models would be exchanged for the nasty old houses showing signs of tattle-tale gray."

"The sooner the hidebound forces of the industry realize we are living in a new world and that private enterprise has to think in terms of providing good houses at increasingly low prices so that new markets will be opened up, the sooner will we stop the public housers dead in their tracks."

"There are two modifications that are worth exploring:

"a. The possibility of requiring higher monthly payments during the first three to five years than in subsequent years. Many young couples who have not accumulated sizeable amounts of cash would be glad to make temporary sacrifices in order to own their own home and know that they are nearing the goal when their monthly payments will become less, thus making these sacrifices lighter."

"b. Strict insistence on prompt payment or dispossession during the earlier years so that the obligation is not assumed lightly or thoughtlessly; but a relaxation in requiring payments to be made after a substantial equity has been built up in cases of acute economic distress. No one should bind himself otherwise to an obligation of twenty to twenty-five years duration. The feeling that one will not lose one's life savings because of conditions over which one has no control would reduce the reluctance to purchase and would far offset the few cases in which dishonest advantage may be taken of the greater liberality of such a policy."

2. Do you favor 5 per cent down payment for homes under \$3,000 on the basis that the lower the cost of the house the broader the market and the greater the margin of safety?

	Yes	No
Builders and realtors	81	71
Building money groups	51	185
Dealers and manufacturers..	35	112
	167	368

Builders and Realtors

"With no relief from heavy income taxes in sight, a 5 per cent down payment and the balance spread over three years would be a boon to builders."

"If we are to do our share in maintaining reasonably full employment, we must encourage building by every means. The more we build, the more people will be employed. The more people working, the more homes bought. The larger the assured volume of orders, the lower the production costs. The lower the costs, the wider the field of purchasers."

Building Money Groups

"This is feasible if the property can be reclaimed in 90 days."

"Economically unsound. First, because of the feeling on the part of the so-called owner that it is only a fairweather obliga-

tion which he can dump in the event real estate values decline; secondly, because of the entire lack of pride of ownership in such transactions."

"Yes, if combined with one per cent per annum property maintenance reserve."

"Rather than make loans that exceed reproduction cost we might just as well go into low-cost rental housing ourselves."

"The cost of foreclosing in Illinois is about \$350, and it takes about two years to complete a foreclosure. A broker is paid 5 per cent for reselling a house that has been acquired, and it is necessary to spend some money for redecorating and repairing a house that has been acquired. A margin of \$150 is therefore ridiculously inadequate in this state. Even in states with quicker and cheaper foreclosures, it is not sufficient to protect the lender."

"A 5 per cent down payment will stop secondary financing completely."

3. Should the interest rate be lowered? Remain the same? Be increased?

	Low- ered	Same	In- creased
Builders and realtors	62	95	3
Building money groups	7	84	24
Dealers and manufac- turers	29	170	36
	98	349	63

Builders and Realtors

"The rates should be sufficiently flexible to follow the investment curve for high-grade securities."

"Should remain the same if 20 per cent is paid down. If 10 per cent is paid down the interest rate should be higher."

"Lowered. With strict community controls, the risk is considerably lowered."

"I don't think it can go any lower. If it does, financial institutions will get out of the FHA field entirely. There are too many headaches attached to FHA paper work."

Building Money Groups

"Money is a commodity like wheat and for the use of that money, interest is paid. Therefore, this rate is determined by the law of supply and demand. At the present time money is plentiful, hence the rate is low. I am not a New Dealer enough to believe that the laws of nature can be adjusted by legislation or decree without having some ill effects later on."

"There must be compensating differentials in communities that are subject to peaks and valleys such as one-industry towns."

4. Should the maximum period of insurance remain at 25 years—20 years—15 years?

	25 yrs.	20 yrs.	15 yrs.
Builders and realtors	128	25	6
Building money groups	96	107	32
Dealers and manufacturers	53	47	40
	277	179	78

5. Should an additional reserve be required for exterior maintenance of homes and for subdivision upkeep?

	Yes	No
Builders and realtors	77	75
Building money groups	160	88
Dealers and manufacturers	82	44
	319	207

6. Should there be included under government mutual mortgage insurance a setup to apply to farm mortgages, and should this be included under FHA?

	Yes	No
Builders and realtors	92	46
Building money groups	121	188
Dealers and manufacturers	65	62
	278	296
Under FHA	70	

COMMENTS:

Builders and Realtors

"Twenty years on new. Fifteen years on old."

"If reserve for maintenance were to be included, maximum period could be increased to 33 years."

"In Sweden the loans run for 60 years."

"Mortgages have been too rigid in length of time and terms. Provision must be made to prevent the loss of a home during illnesses or depression. Also the mortgage must be flexible enough to accommodate changes in housing needs during the lifetime of the average family."

Building Money Groups

"It will probably not matter whether a loan provides for maturity in 20 to 25 years because it will most likely be refinanced before that time anyway. However it is well to consider whether the preference now given to new construction by insuring 90 per cent loans running for 25 years as against 80 per cent loans running for twenty years on existing construction, does not tend to accelerate the blight of our cities. Whatever the length of time decided on, there ought not to be any discrimination against existing construction."

Builders and Realtors

"Especially if only small equity exists."

"Yes, particularly for paint. If you have ever traveled through towns largely made up of frame houses, the wisdom of such provision is self-evident."

"Yes, if mortgage insurance is lowered. This wise reserve would reduce the risk considerably."

"Yes, unless people are forced to save for such items they will never have enough to take care of exterior repairs or subdivision maintenance. In my opinion the failure of mortgagees to provide for such a reserve in the past has accelerated blight in areas that should have remained healthy. People who would ordinarily have bought homes in these areas have been frightened away by the dingy appearance of houses that needed only a coat of paint and uniformly trimmed lawns."

"For subdivision upkeep only. Keeping up with the Joneses will take care of the exteriors."

"This might be desirable in outlying communities—isolated communities that normally present greater risks."

"Yes, I would go a step further and set up a periodic interior maintenance fund including replacement of heating plants, cooking ranges, etc."

Building Money Groups

"No, unless mortgage holders can also be authorized to scrub, sweep and clean in-

"FHA reviews its neighborhood ratings now and frequently refuses to insure loans in declining districts. There is no reason why insurance cannot be rerated at various times for the consideration of maximum insurance terms as well as the present methods of declining to issue insurance at all in some neighborhoods."

"New frame dwellings twenty years, new brick 25 years."

"Maturity should be variable depending on moral and physical risks."

"For the past 100 years savings and loan associations have been leaders in the home lending field and in practically all cases have limited their loans to a maximum of fifteen years. It has been their contention that it is a rank injustice to saddle a home owner with a debt that lasts for twenty or twenty-five years. During this time the home is usually paid for two or three times and is obsolete long before the purchaser can call it his own."

"In view of the fact that the average home in this community (San Diego) is not owned for a period of time longer than seven years (although the national average may approximate ten years) I do not believe that the maximum period should be in excess of twenty years."

teriors of private homes on which they hold mortgages."

"Would be advisable but almost impractical to effect and maintain."

"One per cent per annum withdrawable on proof of reconduction or improvement."

"Yes, and if you will refer to Section 203 of the National Housing Act you will find that Congress deemed such a reserve as important as those now required by the omnipotent Administrator." (Section 203: An eligible mortgage shall contain such terms and provisions with respect to insurance, repairs, alterations, payment of taxes, default reserves, delinquency charges, foreclosure proceedings, anticipation of maturity, additional and secondary liens and other matters as the Administrator may at his discretion prescribe.)

Dealers and Manufacturers

"No. Don't complicate the program. Keep it simple."

"Yes, while many will feel that this is an uncalled-for intrusion on the privacy of the home owner, a glance at uncontrolled low-cost subdivisions will accent the need of this. What is the use of kidding ourselves, times have changed. We can't be the old type of rugged individualist any more. Our work must be controlled by society just as utilities and railroads are. Our tradition of freedom and enterprise must be worked out as part of a new social pattern."

Building Money Groups

"I believe the idea originated in the Farm Loan committee of the Mortgage Bankers Association of America. It is the opinion of our committee that the plan is workable under certain restrictions."

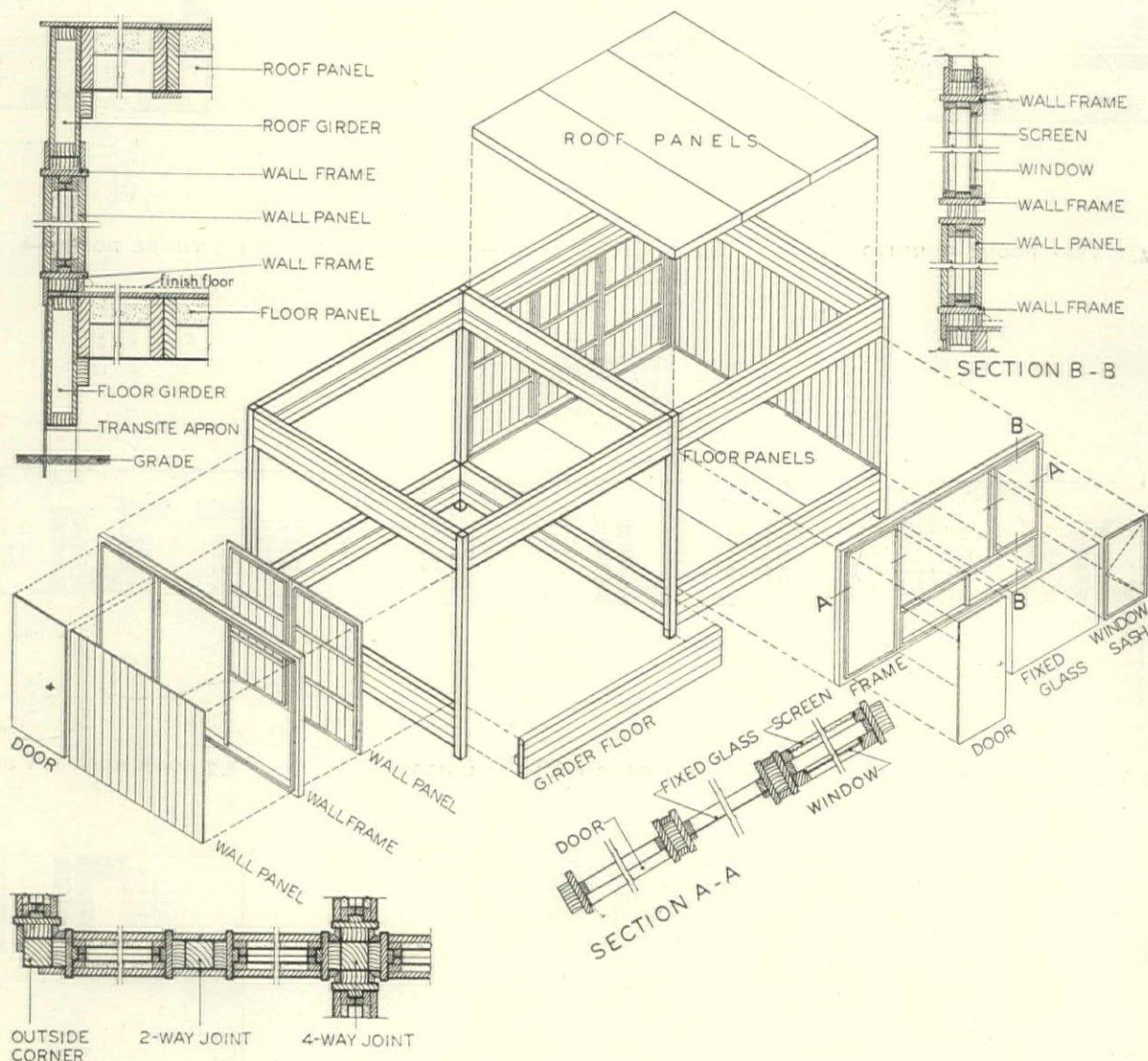
"There are certain elements of risk in a farm mortgage, which are not present in a residence or home mortgage, because a farm is a business enterprise and there is a certain risk inherent in its ownership. Therefore, the amount of insurance premium is difficult to determine and may have to be gaged by other factors than those which entered into the setting-up of FHA."

"It is evident, however, that the extent to which appraisals can be standardized under a mutual mortgage insurance program, supervised by a Government agency, will have a substantial effect on the reentry of private capital on a large scale and will open up lending areas not now available because of high loan acquisition cost. The farmer is entitled to a supplemental system of long-term mortgage credit, generally applicable, flexible in its provisions and administered through responsible originating mortgagees."

"Very questionable. Success dependent upon monthly FHA payments. Farmers would be unable to comply."

(Continued on page 112)

PREFABRICATION



MODULAR SHELTER—a proposed new system of prefabrication which permits a wide variety of expansible plans. Designed by Bernd Wagner

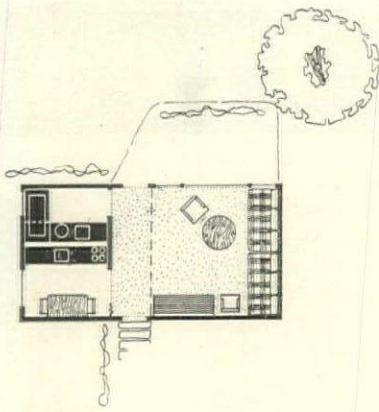
A big objection to prefabrication, voiced by professionals and laymen alike, is that it results in stereotyped houses, which cannot be varied to suit individual tastes and needs, and are likely to look monotonous if grouped together on regular suburban lots. One answer to this argument is that construction systems based on 4 by 8 ft. panel units are capable of producing an almost infinite variety of plans, and furthermore, houses which can be easily enlarged to meet changing family needs.

Despite the seeming soundness of this contention, the fact is that few, if any, prefabricated houses have ever

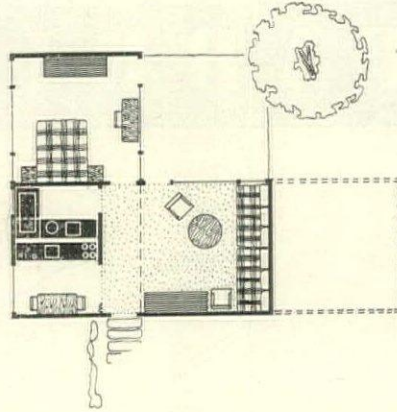
been built on such a basis. There are various reasons for this, some technical, some matters of merchandising, but one of the principal reasons is that few systems have been fully worked out to provide the needed flexibility. To this rule, the construction method shown above is one of the few, and better exceptions.

Distinguished by the unusual 12 by 12 ft. framing unit which is the basis of the structure, it is also unique in that a wide variety of excellent expansible plans, based on the structural unit, have actually been developed to show its potentialities.

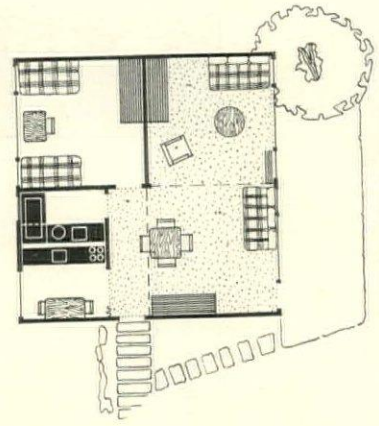
PREFABRICATION



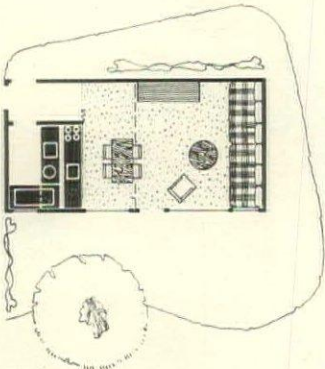
A.1 TWO ROOMS—2 UNITS



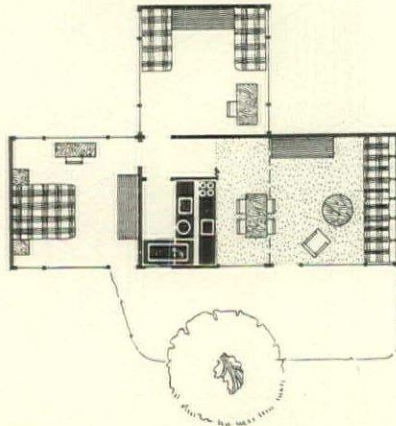
A.2 THREE ROOMS—3 UNITS



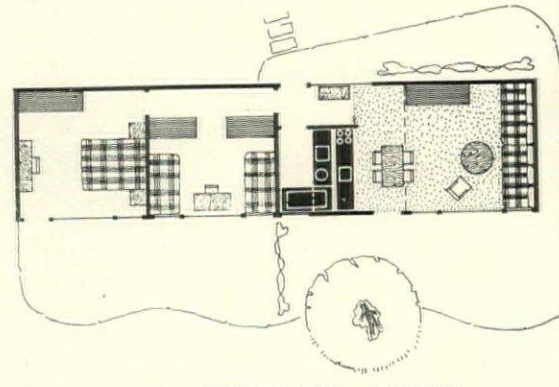
A.3 THREE ROOMS—4 UNITS



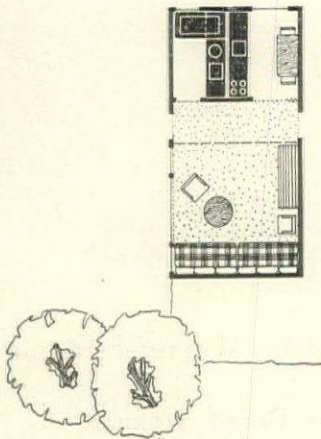
B.1 TWO ROOMS—2 UNITS



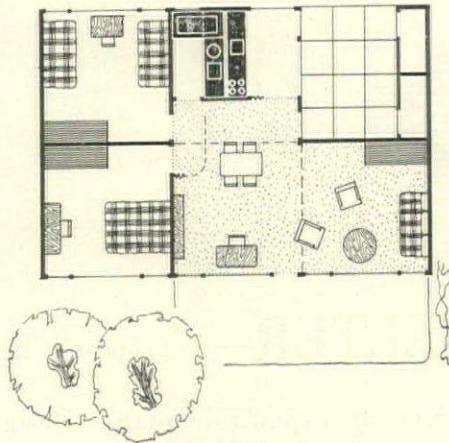
B.2 FOUR ROOMS—4 UNITS



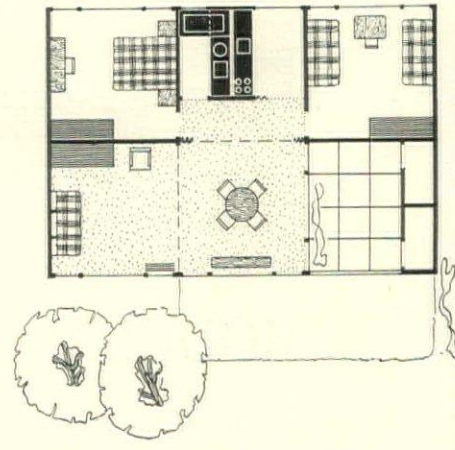
B.3 FOUR ROOMS—4 UNITS



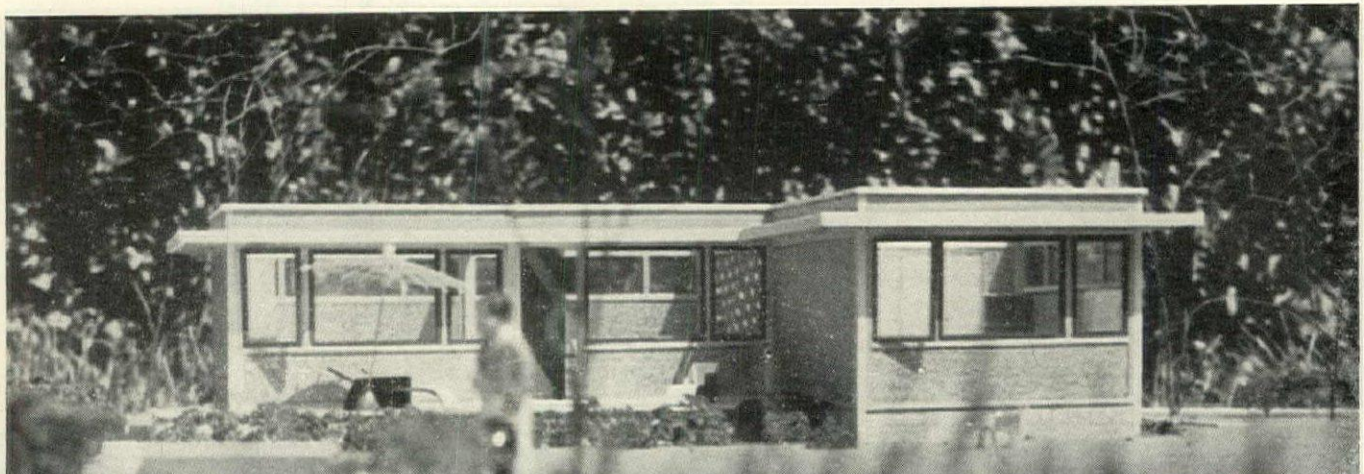
C.1 TWO ROOMS—2 UNITS

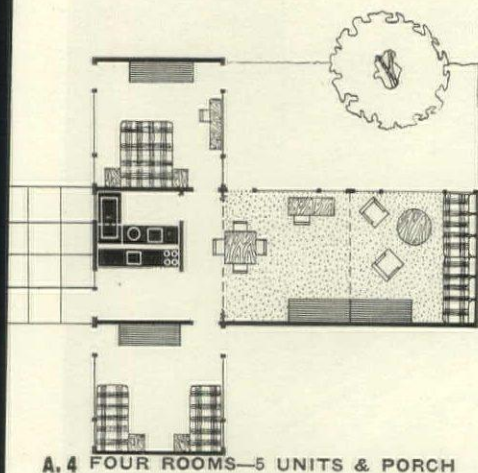


C.2 FOUR ROOMS—5 UNITS



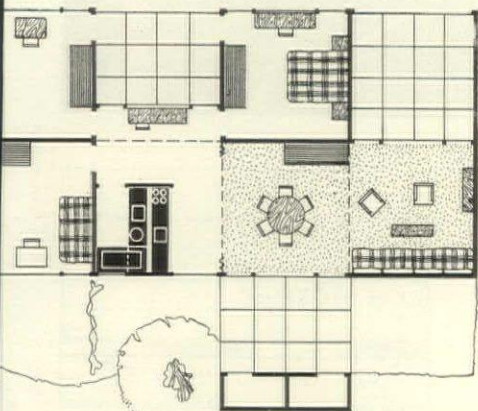
C.3 FOUR ROOMS—5 UNITS





Plans at left show how one of the four possible arrangements of a two-room minimal living unit (A. 1) can be expanded to provide an additional bedroom (A. 2), a larger living room (A. 3), and two additional bedrooms, a larger living room and a porch (A. 4). Since wall units can be removed from the frame intact, complete with windows and doors, they can be interchanged and moved about at will. Prefabricated closets are also easily shifted to meet new plan requirements.

A. 4 FOUR ROOMS—5 UNITS & PORCH



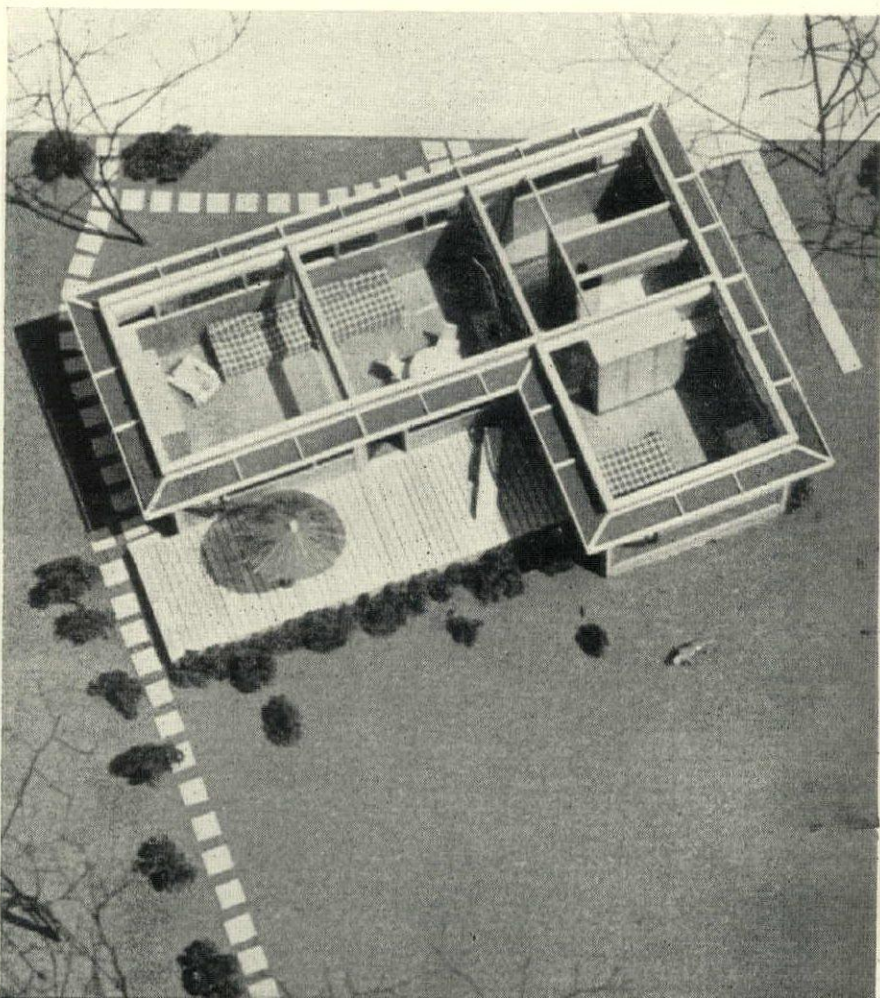
B. 4 FIVE ROOMS—6 UNITS, 3 PORCHES

Second plan series (left) shows a somewhat different arrangement (B. 1) of the basic minimal unit in which the kitchen faces the living room. With appropriate additions, this becomes a minimal two-bedroom plan, either T-shaped, as in B. 2, or in the shape of a bar, B. 3. With four room-units and three porches added, a luxurious three-bedroom house is produced, B. 4. In all cases, as indicated by the trees, position of the section containing the utility unit is unchanged.

Third series of plans (left) is based on a minimal 2-unit scheme (C. 1) exactly similar to A. 1, but reversed. With the addition of three room-units and a porch, which might be added in several stages, this becomes a compact, rectangular, two-bedroom house (C. 2), with the living room enlarged to take care of the needs of a growing family. The third scheme (B. 3) shows the same number of units arranged so that the porch opens off the living room rather than the side of the kitchen.

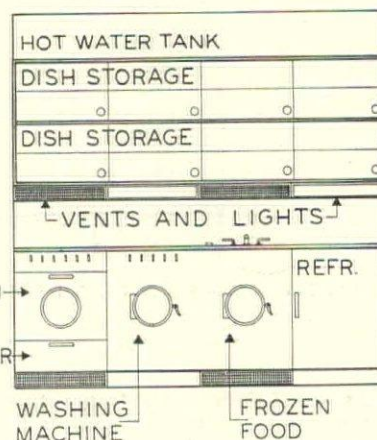
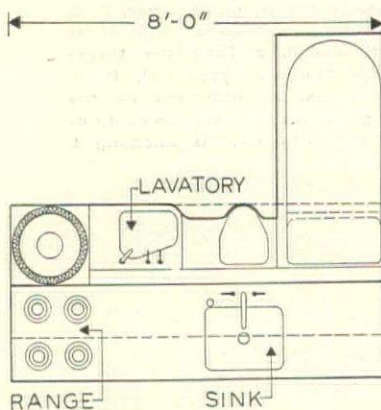
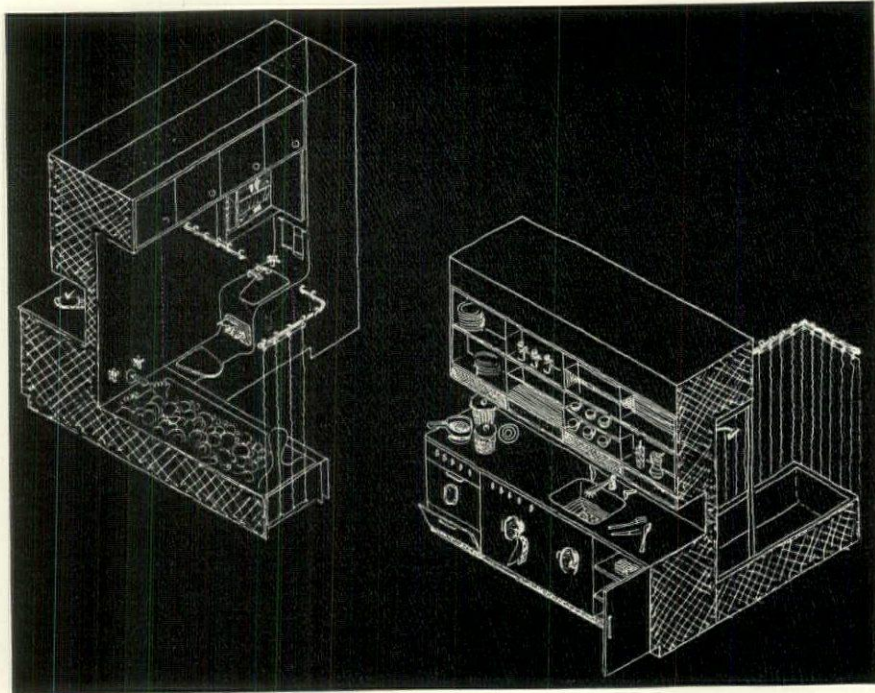
Photos of model (left and right) show still another plan variant: a three-room, 4-unit arrangement with an extra large living room. Permanent awnings over windows are standardized, prefabricated panels. Only six types are required to fit any plan condition. The house shown could be converted into any of the plan arrangements above, and a number of others, with virtually 100 per cent salvage of materials. It can be built from standard dimension lumber in a small wood-working shop, using any of the exterior and interior materials available for frame construction.

A study of the plans at the left will show that the basic 12 by 12 ft. structural unit used in the Shelter system results in considerably more freedom of design than is possible in ordinary frame construction. Loads are carried vertically on uniformly-spaced, 4 by 4 in. columns, permitting great latitude in fenestration and rooms of almost any shape. This construction, similar in principle to steel skyscraper framing, permits one or more sides of each structural unit to be left completely open, so that two or more units can be used to form large rooms. (Not shown in any of the plans, but perfectly possible, are 24 by 24 ft. rooms with a single column at the center.) Wall panel assemblies fit between the structural posts, filling the entire opening. This is accomplished with identical framing units throughout, a single, uniform floor panel always spanning the same distance, and complete interchangeability of all finish and structural parts. Porches are formed from a combination of special storage units supporting regular roof girders and panels. Standardized, factory-fabricated kitchen and bathroom units, together with uniform, factory-fitted closets are used in all of the plans, shown on the following page.

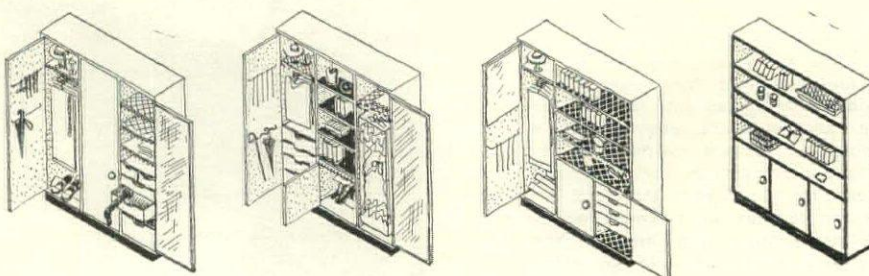
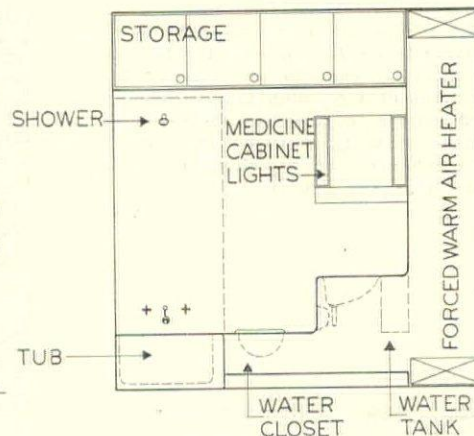
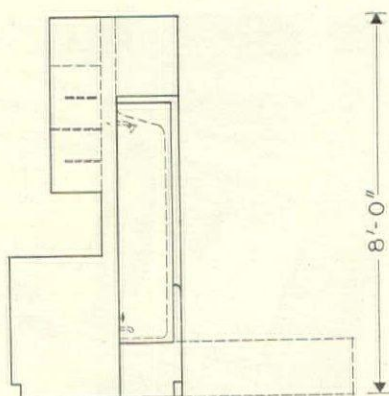


PREFABRICATION

The idea of a prefabricated mechanical core and prefabricated closets is not new, but in the Shelter system it has been developed unusually well. The plumbing unit, designed by W. Brooks Cavin, Jr., comprises all of the usual kitchen and bathroom equipment, and in addition includes the house heater, hot water storage tank and an automatic laundry machine. Installed at right angles to one of the sides of the typical 12 by 12 ft. framing units, it divides about two-thirds of the space into an ordinary sized bathroom and a fairly generous strip kitchen. By facing the kitchen side of the unit towards the living room, as in some of the plans on the preceding page, the five foot space in front of the fixtures becomes a part of the living room area. Closet units, which are fitted with shelves and cabinets, are used in the plans in the manner of free-standing wardrobes, and thus may be moved at any time without affecting the structure or necessitating rehanging of doors.



Mechanical core (right) is designed to be manufactured as a unit including all of the equipment for the house. For shipment, the bathtub folds up into a recess in the wall, reducing the size of the assembly to a compact rectangular prism 3 ft. 10 in. by 8 ft. Closet units (below) could be manufactured in quantity and shipped to the job completely setup and fitted with hardware. Four types are included for use in bedrooms, living rooms and bed-living rooms.



A PROGRAM FOR CITY RECONSTRUCTION

by WALTER GROPIUS AND MARTIN WAGNER

Suggestions for an approach towards city rehabilitation, illustrated with an example of how city reconstruction may be started from housing. The work shown was produced by advanced students in the Harvard University Departments of Architecture and Landscape Architecture.

The Graduate School of Design, Harvard University, under its dean, Joseph Hudnut, has encouraged advanced students during the last two years to cooperate in groups on actual town planning schemes combined with housing problems.* The authors of this article—one an architect, the other a city planner—wrote the program, the substance of which is here submitted to the reader. The practical planning example illustrated on the following pages was designed in all its parts by the students guided by that program. In order to give such a program the weight of reality the approach was made in a way similar to that which might have been obtained in practice.

The present plight of our cities concerns every citizen, and remedies should be discussed more and more in public. For planning is a collective task; the degree of improvement of our future cities will depend as much on the understanding of these problems by the average man who votes and participates in the activities of his community as on the experts.

THE SCOPE OF CITY RECONSTRUCTION

The rapid increase in our means of locomotion and the readjustment of the old coefficient of time as the factor of distance has begun to break down the frontiers between town and country. Modern men and women require contrast both as recreation and stimulus. The nostalgia of the town dweller for the country and of the country man for the town is the expression of a deep-rooted and growing desire that clamors for satisfaction. Technical developments are transplanting urban civilization into the countryside and reacclimatizing nature in the heart of the city. For more than a generation people have vigorously remonstrated against congestion, demanding more spacious and greener cities. Its corollary is the loosening of the city's tightly woven tissue of streets by properly coordinated transport services. We expect the city of tomorrow to stretch its borders much farther than it does today, dissolving at the same time its chaotic conglomerations of incoherent functions and piled-up building masses into smaller units. These we hope to see loosely scattered over the whole region, more in keeping with the human scale. Such spreading, spacious cities—we might call them country cities in city countries—would accomplish an historic end long due: the reconciling of town and country. These planned communities and regions presuppose, of course, the modern and ever improving transportation facilities which have already caused the "flight from the city." They will continue to relieve the old city of its dead weight until its reopened areas may be devoted to their rightful function as the organic, commercial and cultural center of the whole region.

WALTER GROPIUS and MARTIN WAGNER are both professors at Harvard, where they have been teaching since 1938. Gropius is best known for his work at the famed Bauhaus in Dessau, and has executed a considerable number of architectural commissions in the U. S. Martin Wagner was chief city planner for Berlin from 1914 to 1918, and is the author of a number of books on building and city planning. His work at Harvard has been chiefly in the field of housing.

*Housing as a Townbuilding Problem. A Post-war Housing Problem for the students of the Graduate School of Design, Harvard University, January, 1942.

SUGGESTIONS FOR A PRACTICABLE RECONSTRUCTION PROCEDURE

1. Lot and block rehabilitation has not been successful. Sweeping "square mile" rehabilitation has become a necessity since we have recognized the interrelationship of the town with its region.

The centers of our cities have already been rebuilt twice or even thrice in one century: but it was a spot- or lot-rehabilitation only, a piecemeal procedure without a master plan. As long as the population of our cities kept growing, it was relatively easy to concentrate the purchasing power of the citizens in their business center; while we could increase the coverage of the lots and the height of the buildings, repeatedly tackled lot-rehabilitations were even a lucrative business. But these favorable conditions have long since passed away. Our cities are no longer growing as fast as they did, and decentralization of our purchasing power has

set in. The old recipes no longer work. Even block-rehabilitation, recently started by our public housing authorities, has failed to bring sufficient remedy. We know now that the cuts must go deeper, down to the very arteries of the city body, that is, to its transportation system, its terminals, streets and highways, and to all other feeders which have grown obsolete technologically and financially during the past three decades. We know that a sweeping "square mile" rehabilitation of our towns is due, as recently suggested by the National Resources Planning Board in its report for 1942.

2. Former suggestions such as "The City Beautiful" and other pictorial schemes have proved to be incomplete. First, action should be started by preparing legal, financial and administrative instruments to enable the planners to conceive and work out reliable master plans.

In the past we have seen many a town pattern either emphasizing the "city beautiful" or proclaiming special systems of transportation, habitation or recreation; but almost all of these "master plans" were due to remain more or less pictorial suggestions, being "out of scale" socially, technically or aesthetically. They were conceived either by visionary Utopians or by realists, but for the future we have to hope for an integration of both vision and sober practicality.

One of the first realistic steps suggested would be the enactment of a town building law applicable to all three main levels of administration: the federal, the state and the local, which would ensure the town builder the *appropriate legal instruments* for a sweeping rehabilitation work. One section of this new law would have to set up a "Metropolitan Reconstruction Finance Corporation," which would act on a state and nationwide level of rehabilitation. This MRFC and its parent corporations should be the public planning and building authority empowered with those specific rights and powers now in the hands of countless single committees which often hamper or even sabotage judicious rehabilitation. MRFC must have special "development rights" over all undeveloped land outside and inside the city's boundaries. These "development rights" would not mean that all private property would have to be turned over to the MRFC, but it would entail the restriction of developments without its consent. It would also mean that this public authority would have the right of preemption over all property starting from the moment when plans for its development or redevelopment are set up and sanctioned by the competent authorities.*

The MRFC would have its own financial resources for carrying through its gigantic task. The main financial

source from which this capital would be derived is the amortization quota of all taxable and nontaxable city structures. In the past no one took care of the proper amortization of privately or publicly owned property, although man-made capital goods enter upon the first phase of obsolescence on the day they are completed. In order to protect the stock- and bondholders of corporations by preserving invested capital, our commercial code provides minute regulations for the setting aside of amortization and depreciation quotas; but nothing has been done in this respect for the public corporations; for town, city and nation. Their shareholders, the citizens at large, were in the hands of private property holders who could—as they pleased—preserve or consume their real estate property, though it was not built for self-consumption but for the needs of the tenants and the whole community. A nationwide building law should therefore be enacted prescribing *compulsory amortization and depreciation for all building structures*, their quotas to be administered by the MRFC. Such a regulation would not mean compulsory expropriation of private property; on the contrary it would mean its conservation. The owners would be duly credited with the annual quotas, but would only be entitled to spend them for the renewal and rebuilding of city structures.

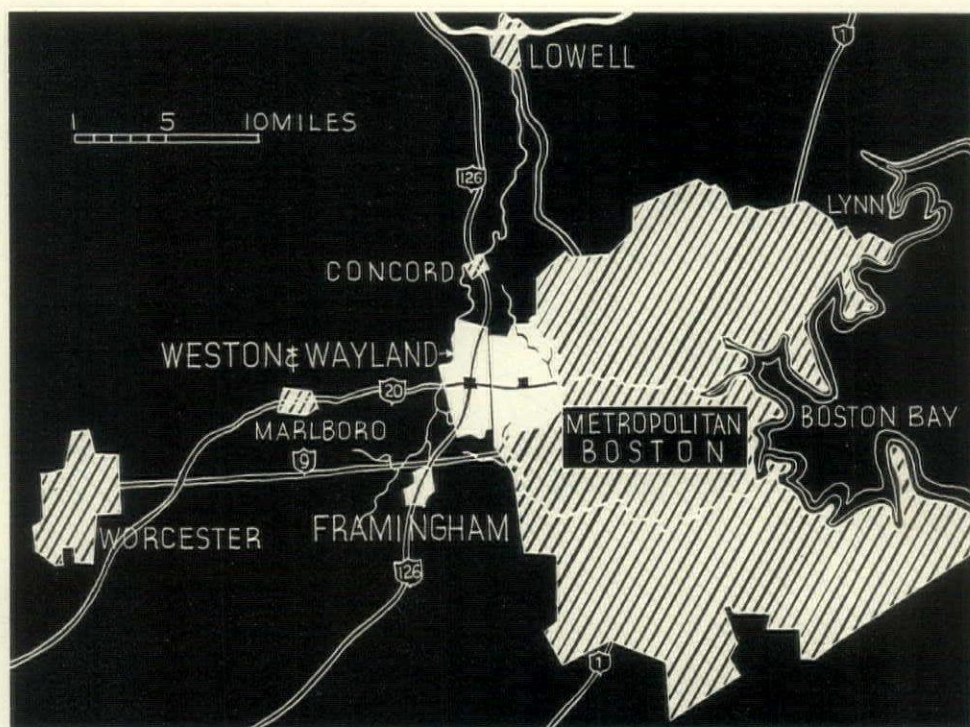
With this money the MRFC could tackle and guide the rehabilitation of our own cities along the sound way of perennial renewal according to the specific needs of the city and ever-changing technological developments. As a controlling agency a State Reconstruction Finance Corporation and its superimposed Federal corporation would have to be equipped with an adequate percentage of the incoming amortization and depreciation quotas of the local corporations for the purpose of balancing the richer against the poorer, and the flourishing against the dying communities.

*See Great Britain, Royal Commission on the Distribution of the Industrial Population Report. London, H. M. Stationery Office, 1940.

Such a revolving fund in the hands of a disinterested public authority would be a great stimulus to the renewal of our cities.

But before the Government has actually endowed suitable planning agencies with the necessary legal, financial and administrative tools the design of the first model master plans can be started. Public funds should be allocated for

competitions among the best planners and designers for the creation of examples of community planning—examples of rehabilitation of old existing towns as well as of the design of new ones. Public reaction to the results of such competitions would enable the Government to provide the legal tools so urgently needed for the creation of the actual master plans.



KEY MAP showing the district chosen for this study. It is located on the western fringe of metropolitan Boston.

3. Places of work and their relation to places of living should form the pivot of all reconstruction work

The fundamental principle that it is the place of work which produces the rent people can afford to pay for their homes was self-evident even for the townsman as long as his working and dwelling places were combined under the same roof. This changed, however, when the factory came of age.

As long as capitalistic organization opened an ever-increasing number of new working places in and around densely built areas, the problem of housing the people was mainly a problem of quantity and quality, less a matter of the right location. This determinant grew to its full significance when, during the crisis of 1921, millions of wage earners were put on the street, and when, at the same time, automobiles and trucks began to mold the new suburban town pattern which today is generally called "the decentralization disease" of our cities. The extended economic crisis depriving millions of workers of decent wages had a detrimental effect on capital values invested in the homes of the working class; the decentralization process in our town development aggravated this effect to the breaking point, turning whole districts into blighted areas and slums.

Thus masses of unemployed have constantly threatened the sound budgeting of our municipalities with unproductive relief costs. Industrial, commercial and residential slums all have an effect on the structure of our bigger cities like dry

rot on wooden buildings. The cause for their obsolescence may often be quite "natural." For instance, when immigration decreased, the garment industry of New York, which had always employed cheap labor, could not be prevented from moving into new areas where there was plenty of cheap labor available. Consequently the remaining population in the lower East Side lost its jobs. The attempt to counteract the resulting slum development, however, by building brand new dwelling quarters on the same spot and for the same stranded workers, is futile and wasteful.

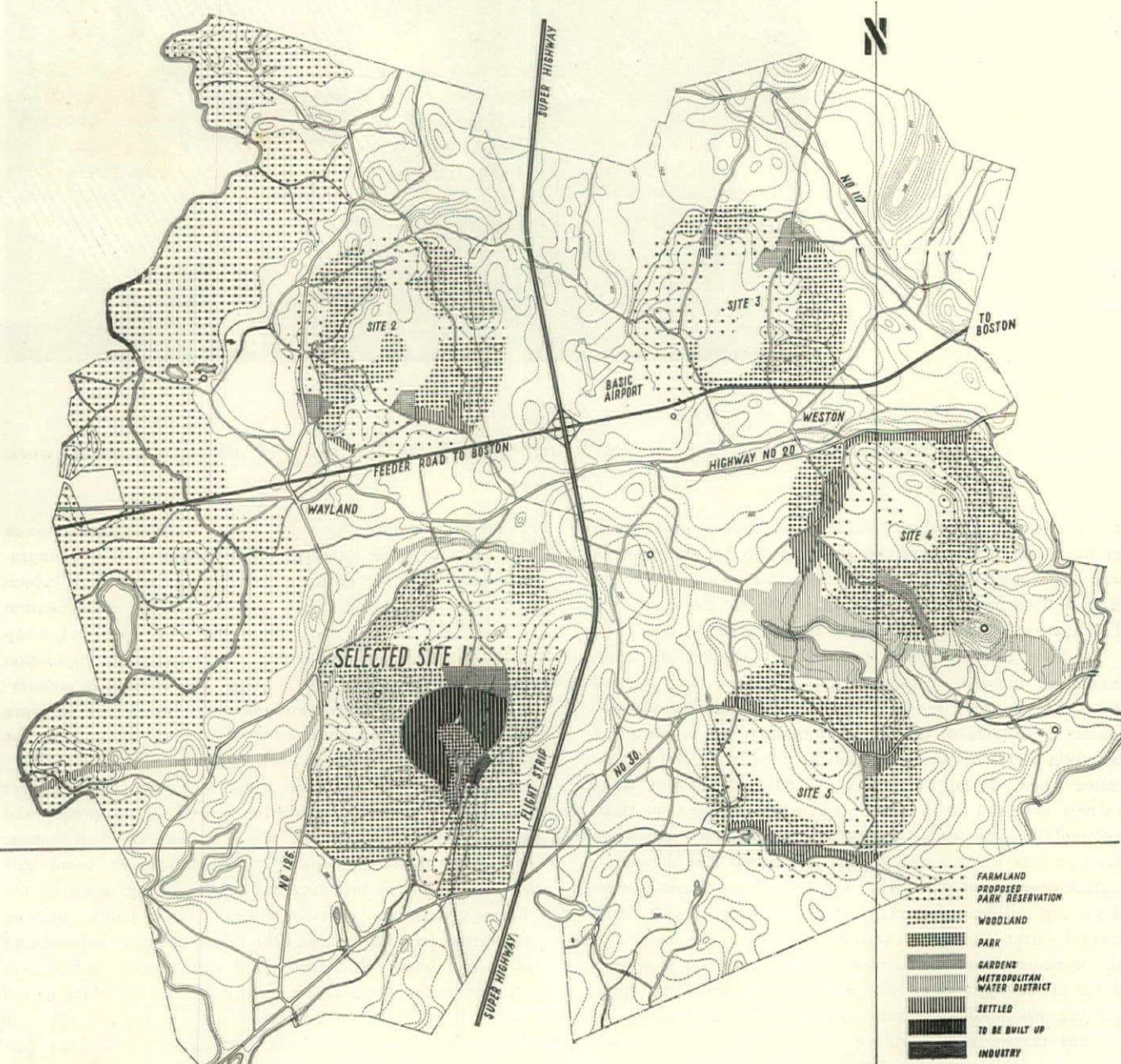
In the past we have given little thought to the fact that the working places generate the income of the people and with it the rent people can afford to pay for their homes. Privately controlled housing policy has never borne any direct relation to the opening up or closing down of the income-generating working places. Even public housing authorities have disregarded the interdependence of working place and home when they build new housing schemes in slum areas from which the factories have long since moved away. It would be fatal to repeat such a housing policy in the postwar period. Instead, housing and industrial programs must be combined. Our whole housing policy ought to pivot on the working places industry and commerce, will be able to open up to the people.

4. First of all the existing cities should be relieved of congestion and high blood pressure by removing those who cannot be permanently employed. Resettled around small industries in new "townships" these people would regain their productive capacity and purchasing power.

Such a policy calls for transferring endangered production as well as purchasing power from a sore spot in the old city area to a sound new city, resettling those inhabitants of the old city who cannot be gainfully employed and have hence become a serious cause of blight and congestion. This transfer of idle labor would relieve the sick body of the old city of its high blood pressure, would improve its circulation, and open new living space for its rejuvenation. Simultaneously the stranded workers could be reclaimed for production—at a much lower cost per capita than the old town had to pay for slum clearance on expensive land and for unproductive relief.

The cost of land, buildings, streets, public utilities and traffic facilities and so forth, constitutes an expenditure factor in the budget of workers and enterprises that, growing

steadily during the past hundred years, is probably today not very far from fifty per cent of the total income of the population. It is now up to the planner to conceive bold solutions which will serve to decrease that dangerous rise in per capita expenditures without decreasing the efficiency factor of the city. The capitalized value of buildings, traffic facilities, public utilities, and so forth, of New York, for instance, would add up today to a share of about sixteen thousand dollars per family, while a well-planned new town built on virgin ground and with better amenities than New York can offer, would probably cost less than half that amount. Would not such a reduction of public expenditures greatly influence the budget of single families, municipalities and commercial enterprise, and stabilize industries, and thus the community as a whole?



LOCATION OF PROPOSED "TOWNSHIP" IN WESTON-WAYLAND REGION ALONG NORTH-SOUTH SUPER-HIGHWAY (After detailed comparison of the five sites which were available, the one to the bottom left was found most suitable for this study)

Such carefully planned small new towns would provide us with the necessary experience to prepare the blueprints for the second and more complicated step in planning the reconstruction of the larger old cities. With a population of five to eight thousand people and with an industrial capacity for the employment of two to three thousand workers, such new towns would form the basic unit of a regional town pattern built up organically in such a way that conditions will be kept fluid and flexible in accordance with our increasing mobility. The old "town" may cease to be the local autonomous administration unit and become related to a new administration system covering the whole region in which a "township"—as we may call this new unit—would be the lowest subsection. These townships should not be put in an inimical contrast to our present-day cities. They should bridge the gap which the nineteenth century created between towns and towns on the one hand, and between towns and the open country on the other. By transplanting idle labor from cities as well as rural regions, both the townsman and the farmer would be helping to build new settlements. These "reception basins" for uprooted people could take over functions which neither our big cities nor the open country can fulfill. Thus this new type of settlement may contribute indirectly to the rebuilding and refining of the old cities as centers of commerce, culture and administration, and of the open country as promoter of agriculture, forestry and recreation.

The productive element of the new townships would be small industries attracted by favorable conditions such as

5. The new townships should settle along super-highways and be connected by fast feeder roads with the old city center.

As modern industry is highly dependent on first-class transportation facilities, the welfare of the new township will be determined by the proper choice of its location. History records no single town that does not owe its existence to some kind of through road or highway. Trade roads going over whole countries and continents made and unmade towns in the past, as did the railroads and steamships in the middle of the nineteenth century. Under its far-reaching railroad policy, our Government gave almost ten per cent of its continental area during the last century to create new settlements. No one can deny that the present time may call for a similar far-reaching policy in connection with the construction of the new carrier system of the twentieth century, the *super-highways*, as proposed by President Roosevelt in his message to Congress in April, 1939.

As was the case in the forties of the nineteenth century our Government considered the building of a new carrier system throughout the country an unprofitable undertaking. The computation was made on the basis that the project would be operated as an independent enterprise deriving its only revenues from the use of the roads by passenger cars, trucks and busses. The fact, however, that such a new feeder system must by its nature raise the land value of its surrounding zone of influence—just as the railway terminals caused a rise in ground rent when they were built a hundred years ago—was not taken into account by the Bureau of Public Roads. But why should our public authorities not



TRAFFIC DISTRIBUTION in Boston and vicinity. The gray area corresponds to the region shown on facing page.

cheap land, low taxes and first-rate transportation facilities. These industries could gainfully reemploy those thrown out of employment in the run-down city districts. As people prefer to live within reach of varied jobs, a mixture of different types of industry and of employment is necessary for a balanced community life. *One-industry towns*, being socially dangerous in periods of emergency, must be avoided.

tax rising land values and utilize them for the financing of toll roads as the railway kings did in the past?

As today's railroads lag behind trucking service with regard to speed, synchronization of their schedules with their clients' needs, and equipment, we may assume that our new super-highways would increase the lead of the truck service from three to five times in traffic speed from door to door, provided automotive traffic also gets its own right of way. If that becomes a reality—and who dares to doubt it—we may experience an increasing movement of industry and of population away from the old cities to new places along these super-highways. It seems preposterous that the railway system, with less than one tenth of the energy potential of the automotive traffic, has its own right of way, whereas the automobile is made to share the road confusedly with pedestrians and horses and must be bridled and policed on an obsolete net of streets by stop lights and speed regulations which contradict the very purpose of its invention.

As super-highways are meant for high-speed traffic and consequently have to avoid towns, suitable feeder roads must connect the townships with the old towns which are supposed to remain the cultural and commercial centers of their region. Thus the old town will gain new purchasing power from the region and people going to town from the townships will find entertainment and opportunity for shopping which their smaller home town cannot offer.

In the Graduate School of Design, Harvard University, during the first half of 1942, a group of advanced students of architecture and landscape architecture undertook to design the elementary features of a "township."

PROGRAM: Entitled "Housing as a Town Planning Problem, by Walter Gropius and Martin Wagner," the program tended to call the attention of the students to the mutual inter-relationship between dwelling, working, recreation, transportation and to the resulting dependence of any housing scheme on these relationships in a community. A new "township" along the proposed super-highway near Weston-Wayland, Mass., was to be laid out for about 5,000 people, with farms and truck gardens around it as their "space of nourishment." Uncontrolled land speculation was to be excluded; the land for the dwellings could be rented only, whereas the houses might be owned. The size of the township was to be clearly defined—allowing for a certain flexibility to accommodate future changes—and would be kept within pedestrian range—one half to one mile in diameter. A gross density of six families per acre was therefore suggested. A certain number of small industries were to be settled on suitable land and within walking distance from the dwellings. A community center was to be provided which would serve to increase community spirit and "group vision."

The second part of the program called for the design of various individual types for dwellings and their technical details; the third for a financial setup showing the initial as well as the operating cost of the enterprise when built in one stroke.

TEAMS: The first part of the program (see plans A, B and C) and the financial computation were tackled by different teams of 5 or 6 students each, whereas the second—the design of the houses—was solved by each student individually. Apart from the authors of the program, the following members of the faculty participated in the criticisms: Professor Pond, Assistant Prof. Newton, Messrs. Stubbins and Tunnard.

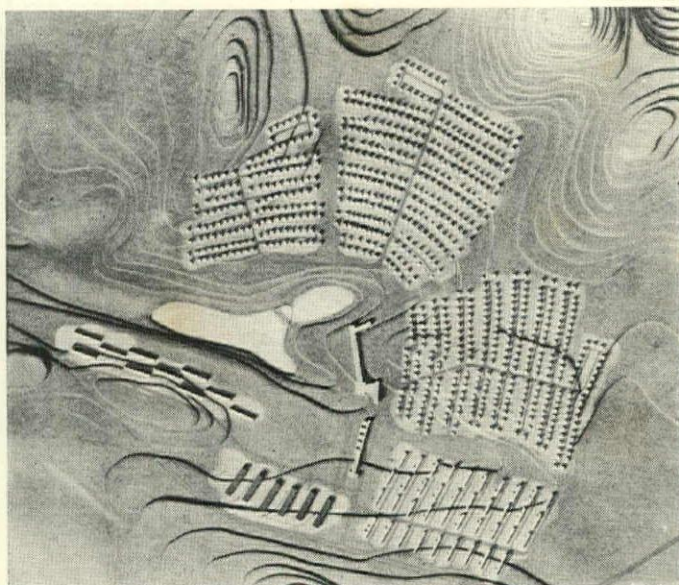
PRELIMINARY RESEARCH: The students organized the research by themselves, assigning different tasks to each group. First the proposed area was examined repeatedly by the teams, who finally suggested five sites as suitable for "townships." Figures and facts were collected from authorities in Boston, Weston and Wayland. After the first tentative layouts of a neighborhood had been sketched out, another checkup on the sites was undertaken. The next step was the evaluation of the different sites by means of an elaborate questionnaire, which led to the unanimous selection of site No. 1 (see page 78) as superior to the others. A more detailed layout for this site was then prepared by each group (plans A, B, C and others). At the same time the following research studies were worked out in graphic form:

- The existing New England airways, railroads and roads.
- Types of vegetation in the selected region.
- Assignment of land for farming, recreation, building.
- Inventory of existing public utilities, public buildings and recreation facilities.

FINAL PLAN: After the team-designed layouts were finished and the results had been judged, a group of seven students was selected to start all over again.

Student research contributed to this teamwork:

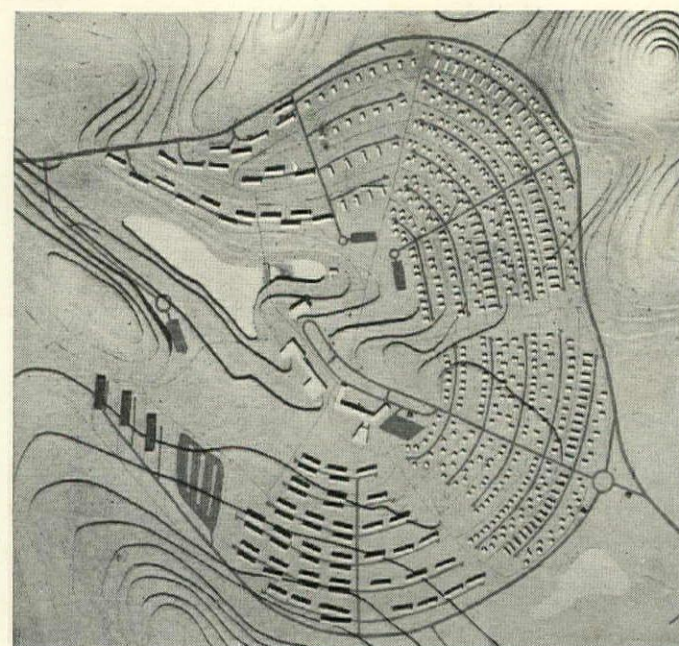
- A comparison of road systems, their lengths and shapes
- A traffic distribution chart of the selected road systems.
- A study of the best location and distribution of industry, and
- A study of the functions of community centers.



PLAN "A"



PLAN "B"

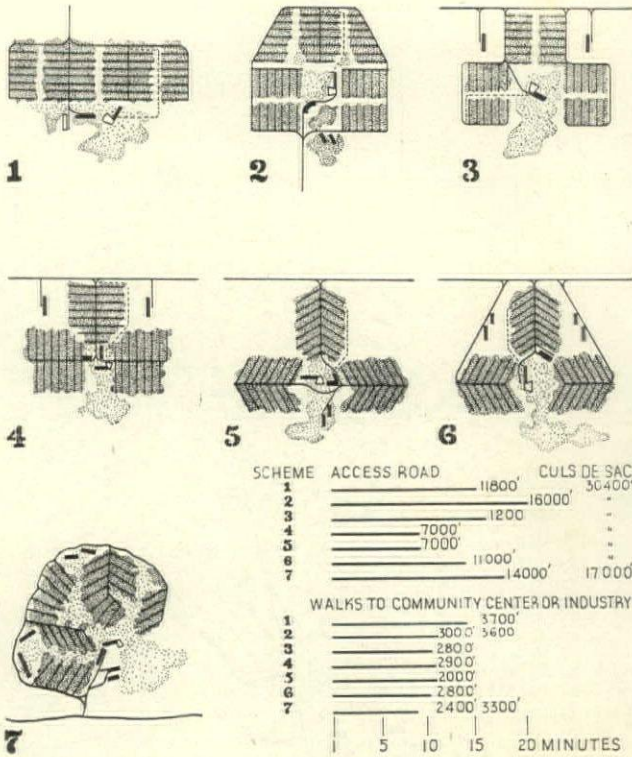


PLAN "C"

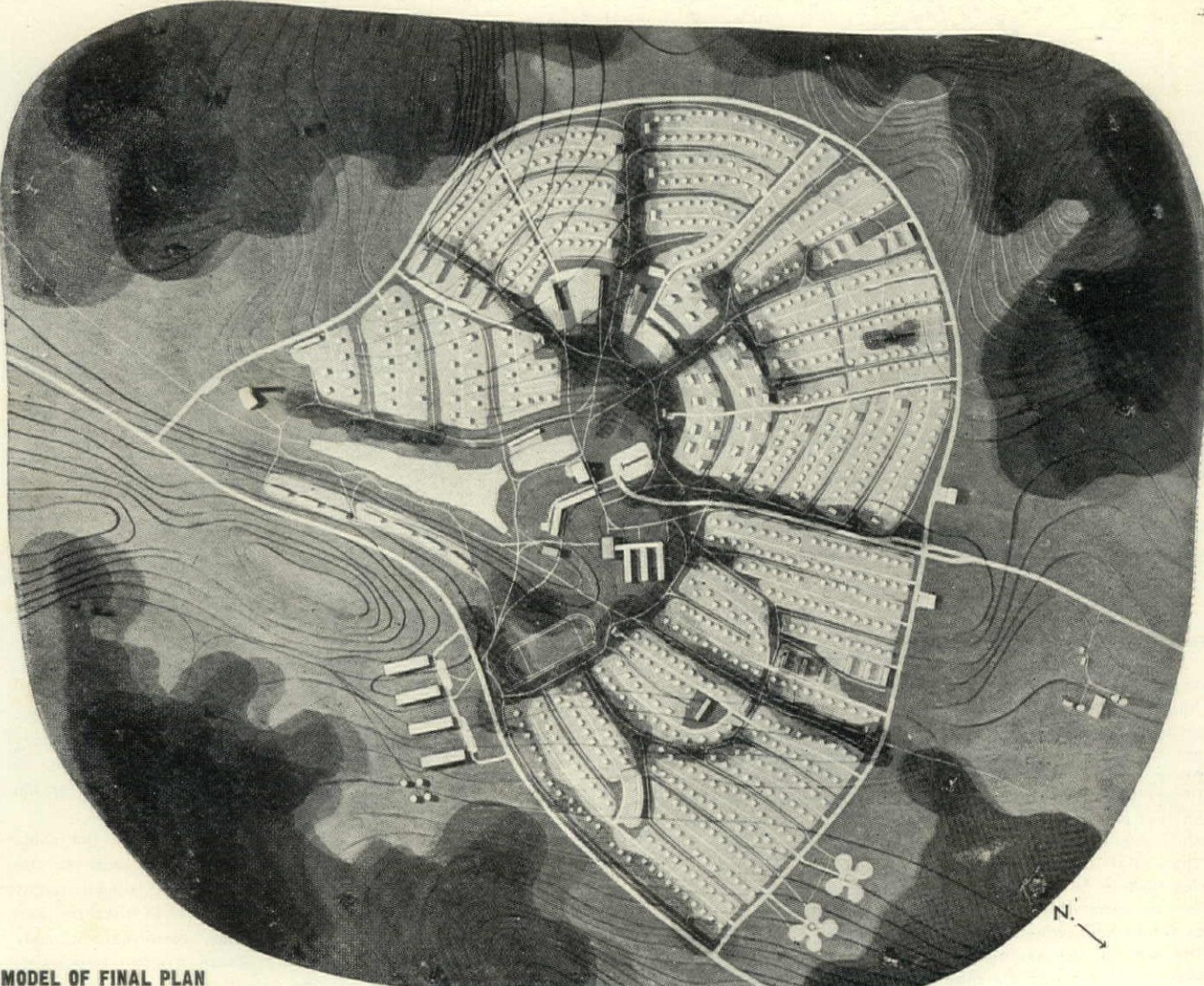
6. The size of the townships should be limited by the pedestrian range to keep them within a human scale.

The new means of transportation—the improved railways, automobiles and planes (even “sky trucks” may soon be a reality)—are only one determinant of the shape of the future town. The human being himself, so much neglected during the hasty development of the early machine age, must become the focus of all reconstruction to come. Our stride determines and measures our space- and time-conception and pegs out our local living space. Organic planning has to reckon with the human scale, the “foot,” when shaping any physical structure. Violation of the human scale will cause further degeneration of life in cities.

Our new townships should therefore be self-contained units, of say, five thousand people living within walking distance of their working places, shops, schools, churches and community buildings. That would mean that the radius of these townships should be about half a mile or even less, keeping their boundaries in reach of the pedestrian. Any public building would be easily reached from each dwelling either by foot or by car, but in such a way that the footpaths could not be endangered by automobile. Pedestrians must get their own right of way in the form of a well-laid-out net of footpaths which never cross a traffic lane.



STUDY OF THE MOST ECONOMICAL SYSTEM OF STREETS and foot-
paths for a township of 5,000 people. System No. 7 was found to
give the most advantages (Frederic Shurtleff Coolidge).



MODEL OF FINAL PLAN



PLAN OF THE FINAL LAYOUT

D. Baker, F. S. Coolidge, A. J. Donahue, R. N. Kuhlman, W. von Moltke, L. A. McMillen, F. A. Macomber.

Level crossings have been entirely avoided within the area of the "township" proper. The drives to the individual houses branch off from the peripheral feeder road. The footpaths form a net radiating from the Community Center and altogether independent from the road system. Thus children and adults can walk on footpaths to the school or Community Center—less than half a mile distant—without encountering traffic, and yet each building can be reached by car as well as by foot.

The radial walks between dead ends of drives run into park strips leading to the farm and recreation areas.

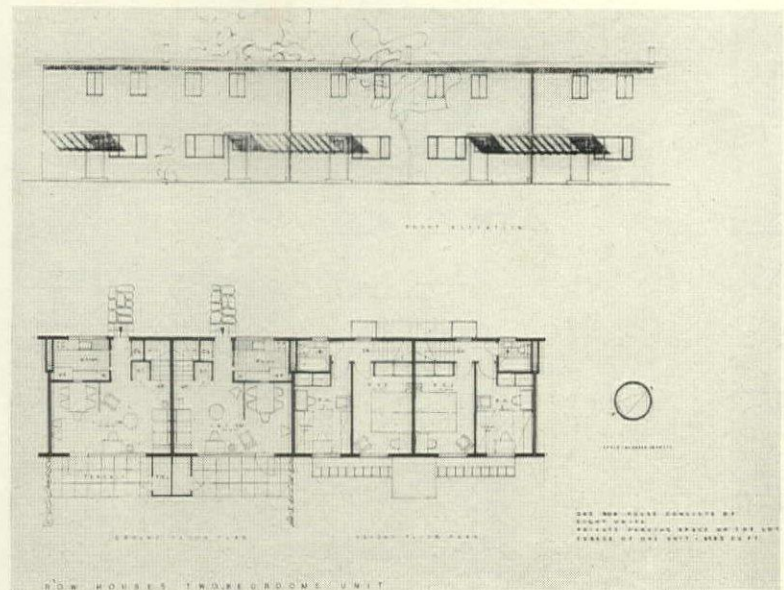
The nurseries are located at the periphery of the center area where housewives cross on their way to do their shopping.

The size of the average family lot is 5,600 sq. ft. net. A number of larger lots are laid out along the northern slope of

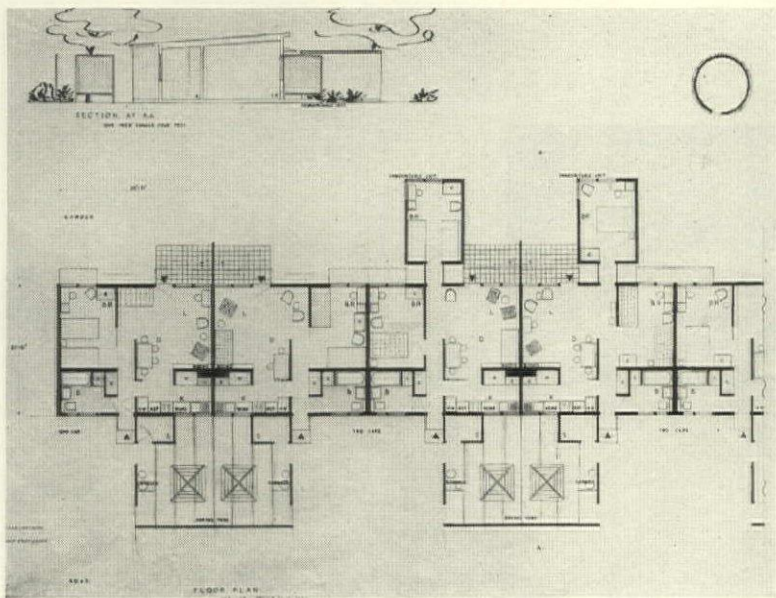
the existing pond; opposite are two-story apartment blocks.

Industry is located off the prevailing wind at the southeastern fringe of the township, and is serviced by a railroad. Its own traffic, as well as any through traffic, is tangential and can not, therefore, interfere with the traffic of the community.

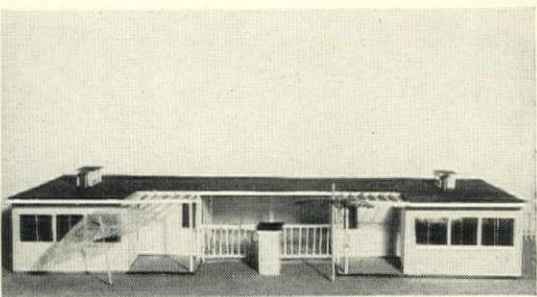
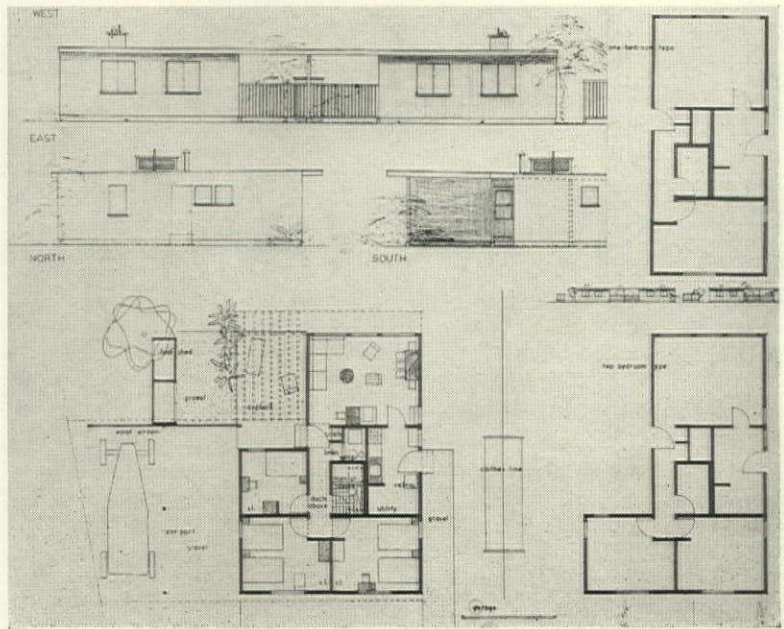
As the Community Center is to be the focus of the community life, the most attractive piece of land, close to the pond, has been assigned to it. It includes a school (eight grades) with a wing for adult activities; a gymnasium and a playfield; an auditorium for meetings, performances, concerts, etc., a town hall, a shopping center, a small hotel with restaurant, bathing and parking facilities.



TWO-STORY ROW HOUSE with two-bedroom units designed by K. H. Cheang. The model shows the entrance side of the units. The accommodations consist of living, dining, kitchen and utilities on the first floor; two bedrooms and bathroom on the second floor. Projecting storage units and trellis give privacy from the neighbors.

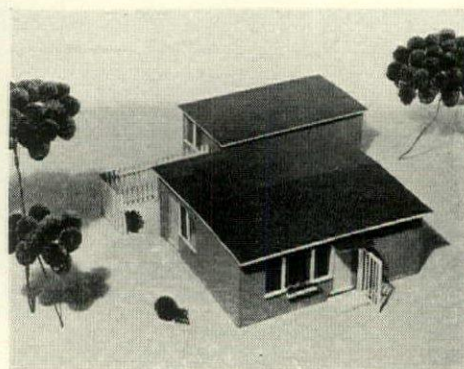
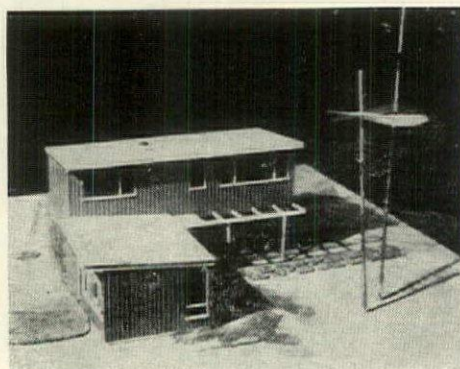
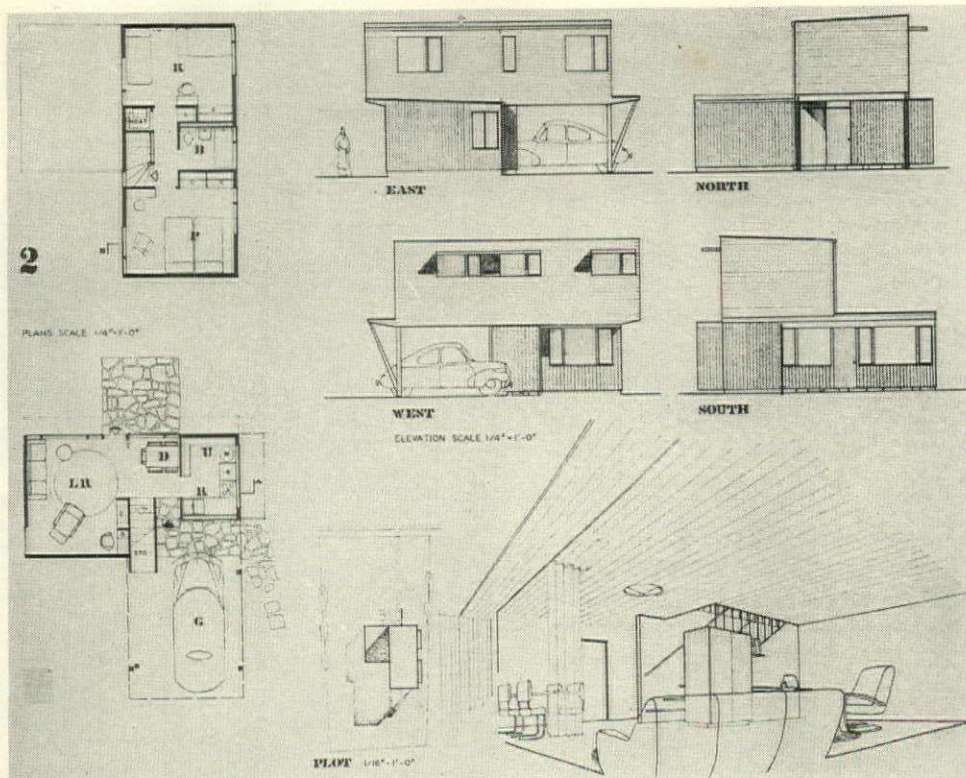


ONE-STORY ROW HOUSE designed by H. McK. Jones. The model shows the garden side, with the additional, transportable bedrooms projecting from two of the dwelling units. Accommodations consist of living, dining, kitchen, bathroom and utility space plus a permanent bedroom unit, apart from the transportable one.

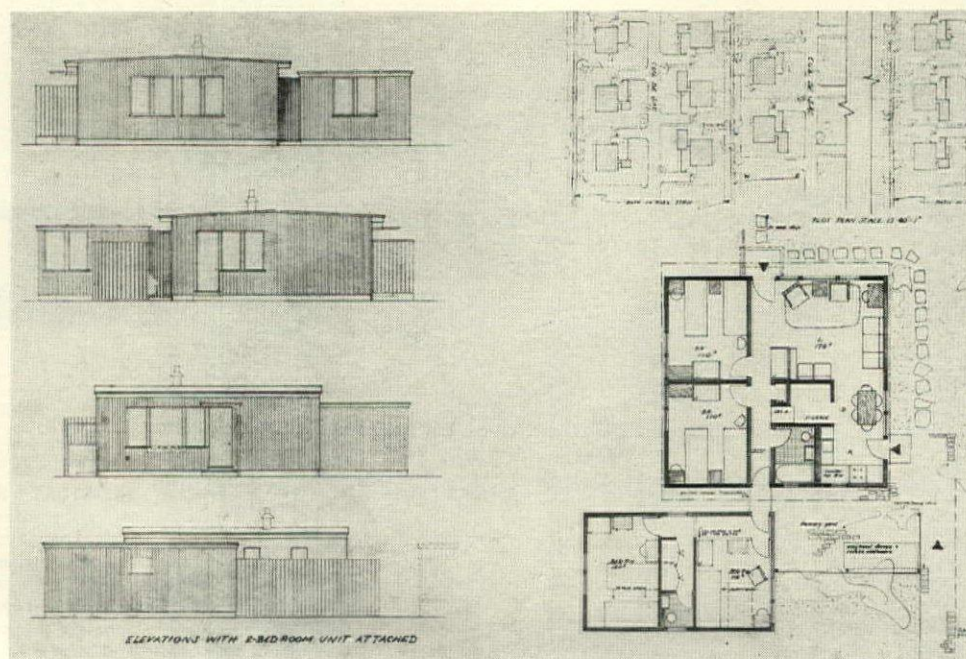


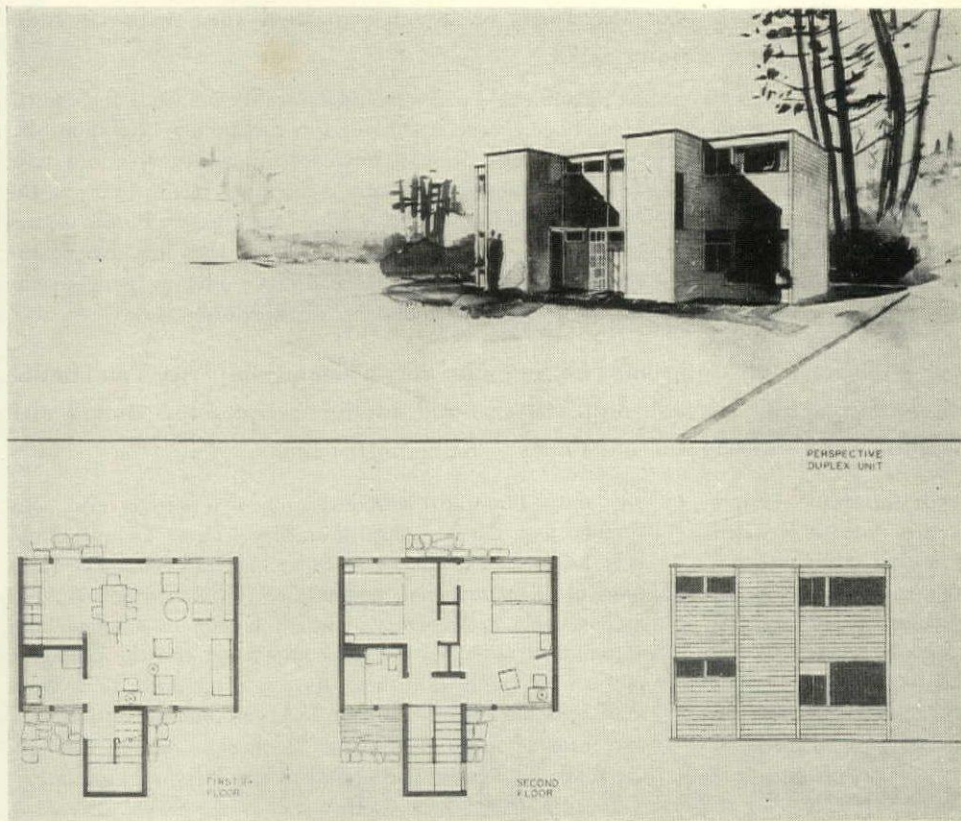
ONE-STORY SEMIDETACHED HOUSE designed by W. H. Radford. The view of the model is taken from the garden side. The maximum accommodation comprises living and dining room, kitchen, utility room and three bedrooms (alternative: one or two bedrooms only). The link between two units consists of carports on the street side, porches and a storage bin division on the garden side.

TWO-STORY DETACHED HOUSE designed by R. M. Kuhlman. The accommodations include living, dining and kitchen on the first floor, with two bedrooms and a bathroom on the second floor. Open space under second floor overhang is used for the carport.



ONE-STORY DETACHED HOUSE designed by F. A. Macomber. Model shows the street entrance side of the dwelling unit. Accommodations consist of living, dining, kitchen and utility areas, plus two permanent bedrooms. One or two demountable bedroom units can be added, together with their toilet facilities.





TWO-STORY SEMIDETACHED HOUSE
designed by D. Baker. It has living, dining, kitchen and utility areas on the first floor; two bedrooms and bathroom on the second.

7. The "townships" must be surrounded by their own farm belts.

Each township should be surrounded by a farm belt, a "space of nourishment," which could absorb at least a small part of unemployed labor in times of industrial crises; vice versa, during an industrial boom, some unemployed agricultural workers could be employed in the factories. Besides this cushioning effect, the well-zoned and permanently assured space of nourishment with farms and truck gardens has the primary purpose of speeding up and cheapening the exchange of food between farmer and townsman. The return to the farmer is often less than one-third of the consumer price. His return could be substantially increased

if the distribution cost of food were reduced. The farmers make no profit from big cities, but in the new townships they could not only get their well-deserved prices but be supplied also with all facilities which modern towns need to raise the level of civilization. Close collaboration between farmer and townsman would also cause a favorable economic utilization of the waste a town produces. The townships would bring waste water and garbage back to the adjacent fields of their surrounding farm belts and truck gardens.

8. Speculation often promotes blight and obsolescence. Therefore the community should own the land. The dwelling lots should be rented, though the houses may be owned.

A farm belt with a permanently assigned area would keep the size of the township stable by definitely blocking any uncontrolled expansion beyond its carefully confined boundaries. The town area itself when owned by the community's "Resettlement Corporation" would be kept out of reach of speculation—so often the beginning of blight and obsolescence. Lack of community interest in the control of urban land is one of the major causes which delay a sweeping rehabilitation. The land has been traded like a commodity. But land is not a commodity; it cannot be produced nor moved nor replaced. Land is of such a peculiar nature

that it should best be owned by the communities which will become an increasingly constant element of our society with its more or less fluctuating population. If the communities of the existing towns would gradually redeem land and thus avoid a speculative rise in price, they could control the entire area necessary for their development. Of course the process of land redemption will be slow when lawful rights of individuals are respected. In the townships the land should be owned by the community's Resettlement Corporation. The lots should be rented on long terms, which would allow the lessee to own the house on a rented lot.

9. The administrative setup of a township should take the form of a self-contained unit with its independent local government. This will strengthen community spirit.

The townships should be self-contained units, each with its own legal charter and its own municipal administration, rather than suburban satellites dependent upon a larger mother town, for independence creates individual initiative. The most precious imponderables of town life—the community interest and spirit lost in the chaos of the fast-growing large cities—can redevelop from such initiative. And it is particularly the small size of the township with

its human scale which would favorably influence the growth of distinct characteristics of the community. Relations between families, friends and cooperative teams would have a better chance to become a creative factor than in the old disrupted towns which isolated the citizens. Public officers would be within immediate reach of the initiative of the voters, thus securing a more direct exchange between the will of the people and their administration.

10. From five to ten—or more—neighborhood townships may be combined into a “countyship” with an administration governing activities beyond the reach of a single unit. Its size and administrative setup should also serve as a model for the basic neighborhood units of the old towns to be reconstructed.

Any combination of several of these townships—clearly defined as such by separating green belts—into larger-sized community bodies fitted for varying social, economic and technological demands would have the guarantee of being composed of basically sound group elements. The size and administrative setup of a township should also serve as model for the neighborhood unit, the corresponding element of the old existing towns to be reconstructed. Such a combination might then be either a metropolis of millions of people built up as a vast country town or a medium-sized

city of one hundred thousand people, or a “countyship” comprising five, ten or more townships. These “countyships” may be formed to take over those special community functions of an educational, hygienic or technical character—as high schools and hospitals—which belong to another level of administration beyond the competence and the economic power of a single township. As conditions have to be kept fluid and flexible, the higher levels of administration may vary ever so much if only the “biological” group element, the township, is kept as the unit of any city organization.

11. It is suggested that the size of a township remain stable. Flexibility within its boundaries must therefore be achieved by making the housing facilities elastic.

When we suggested that a township should permanently keep its original size one might have asked, would that impair the organic growth of the population? In case such a community grows fast and no longer employs the rising generation a new township should be promoted.

We should certainly provide for some inner flexibility of the township for what may be called its productive capacity. We should introduce the two-shift system to our factories—even in peacetime—a measure which would also reduce the investment cost per worker. A third shift may be held in reserve for limited expansion and for repair work.

As it may be assumed that in a township of five thousand people no more than, say five hundred additional workers would be needed, these could probably be drawn from the farm belts and neighboring townships and only partly from more distant places.

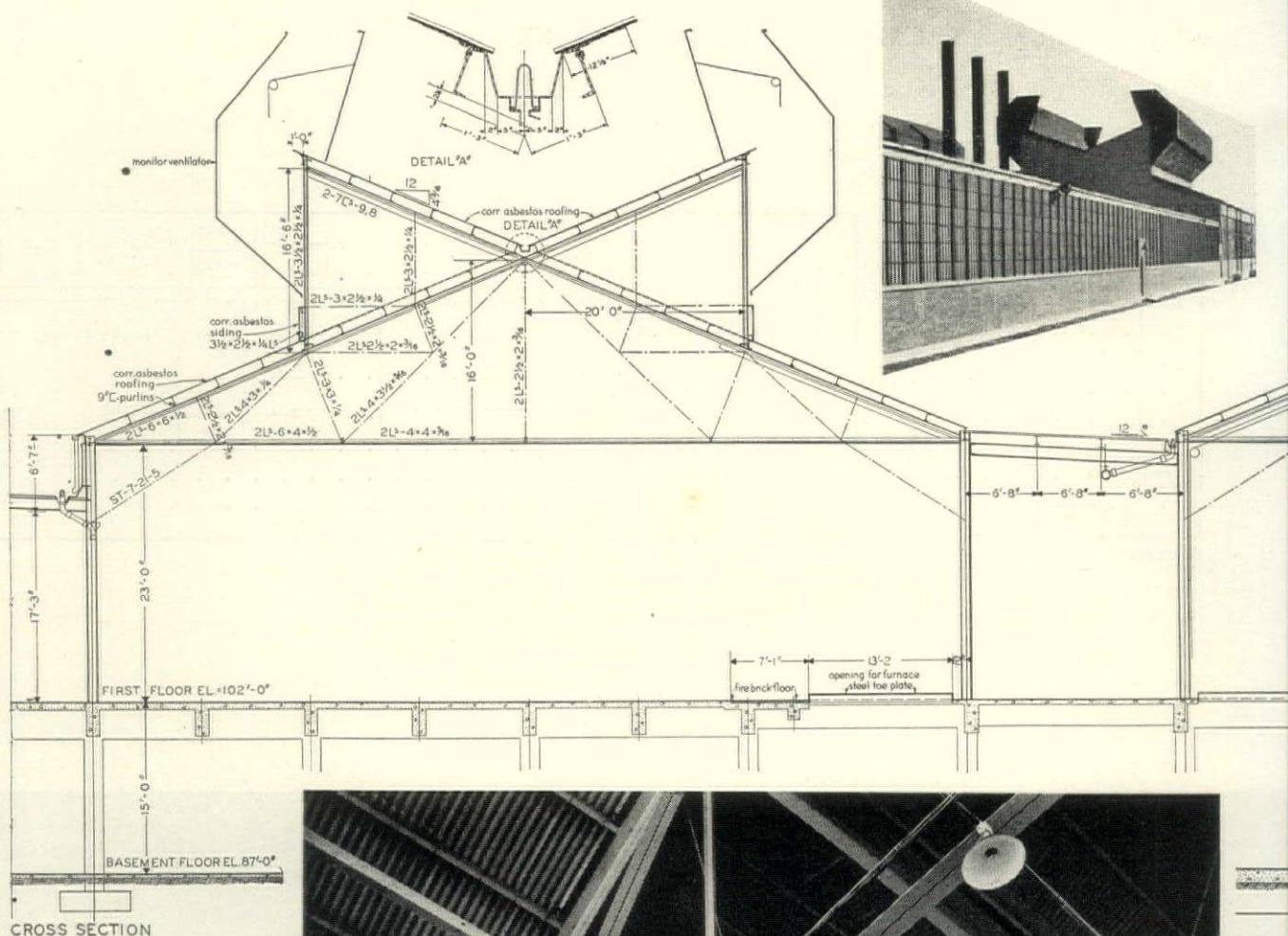
12. Parallel to the resettlement of idle labor in new townships, a second process must take place; acquisition of land by the community of the old city. For not until that process of pooling land has been completed can the next step—the redistribution of land—be taken, for the final reconstruction of the city.

Simultaneously with the resettlement and reemployment of idle labor in the new townships the systematic assembly of land should be started by the community of the old city in accordance with a new master plan. Areas of strategic importance for the reconstruction procedure should be redeemed. Within our conception of property, to achieve such a vast assemblage of land under public ownership will be a long and thorny task. But in spite of the difficulties ahead all the existing towns must tackle it if they wish to create space for living and better facilities for trade.

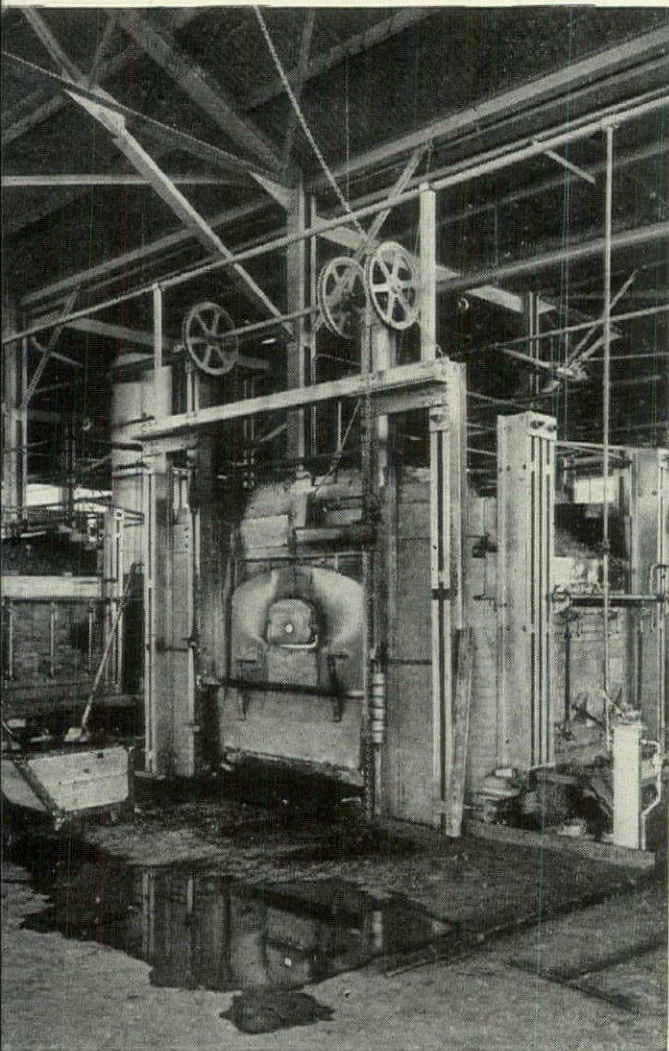
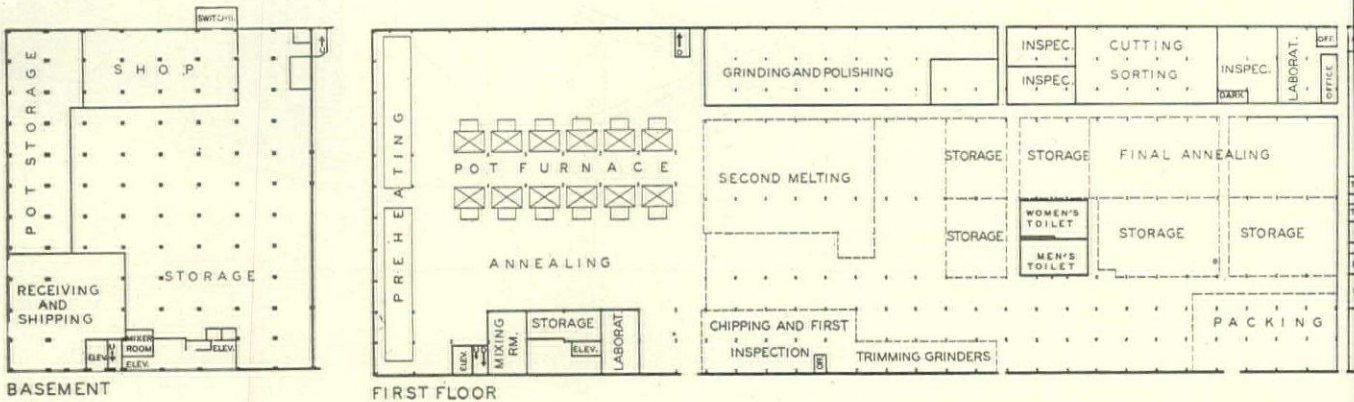
The next step in reconstruction—the redistribution of the assembled land—will certainly also be handicapped by prejudice and lack of vision before it can finally be carried

through in a broad community spirit. Only when this community spirit, brought about by better enlightenment, has developed into an influential power can the human weakness for egocentric piecemeal improvements gradually be overcome in favor of conceptions on a large scale.

When idle labor has been resettled, when ample land has been assembled by the community and when the redistribution of the land has been completed—assigning suitable areas for institutions of public welfare, for commerce and for housing—the physical rebuilding will be the last act of the long process of city reconstruction for the people and by the people. These later steps of rehabilitation represent a task we want to tackle in the near future with our students.



Samuel Gottscho photo

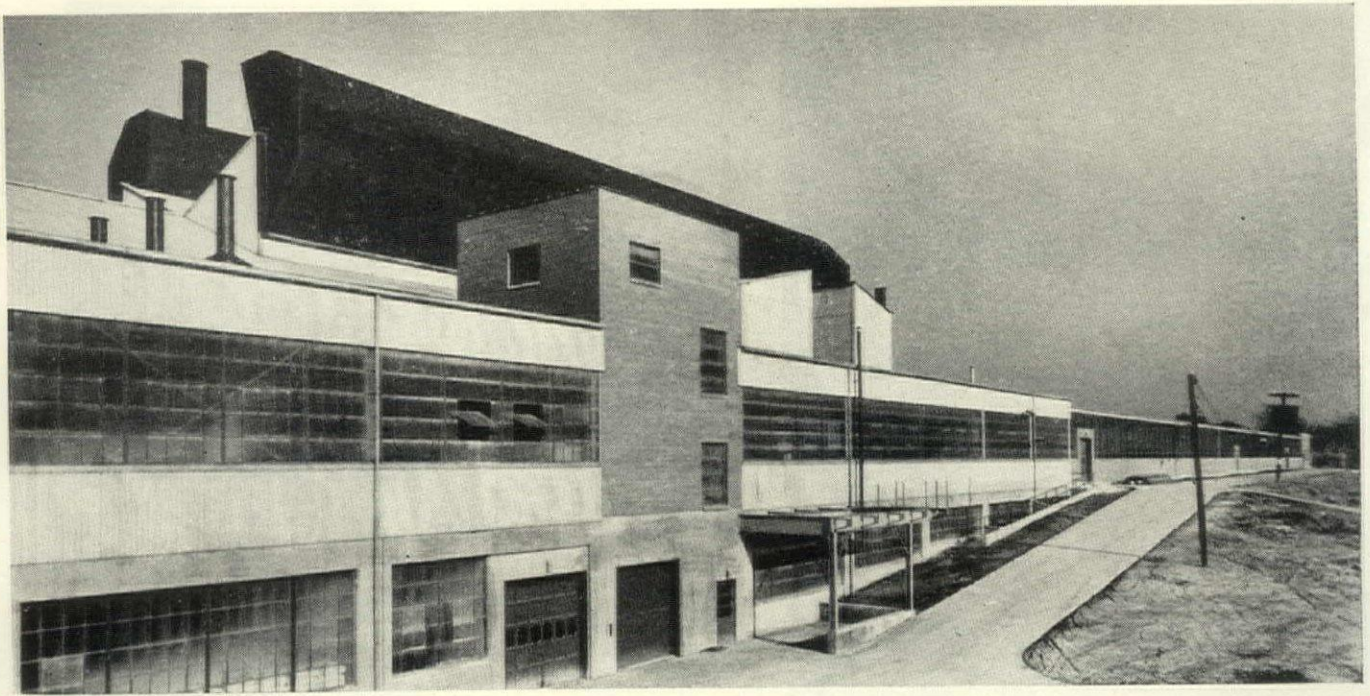


ONE OF THE MELTING FURNACES. They are almost two stories high, mounted on the floor below. Pots are placed in mechanically controlled door with specially devised trucks which eliminate the need for a costly conveyor.



INTO THESE KILNS the pots of molten glass are set for cooling after the melting operation. Because the glass will finally be used for very precise optical lenses, great care must be taken in controlling every step in the manufacture. Temperatures must be very rigidly checked.

The process of preparing optical glass consists of six major operations. Raw materials are preheated in temperatures up to 600° F with pot ashes. The ingredients are then melted down in the melting furnaces, and, after that, pass through kilns to control cooling after the first melting. After this cooling, the glass is chipped and placed in small rectangular containers to be melted down again. After passing through a second set of annealing kilns, the glass is finally ground and "roughly polished." This completes the manu-



EAST SIDE OF THE BUILDING LOOKING DOWN TOWARD THE FRONT. THE NEAREST PORTION IS TWO STORIES HIGH



A GENERAL VIEW of the plant showing furnaces used in the second melting operation. Glass is placed on trucks which roll in and out of the furnaces on rails. In foreground an inspection is under way. A feature included in the design of the building is the window sash in the monitor of the building. This sash may be opened when necessary.



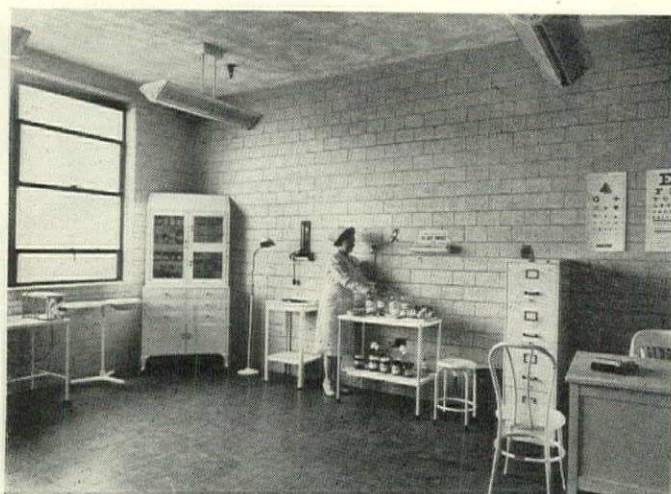
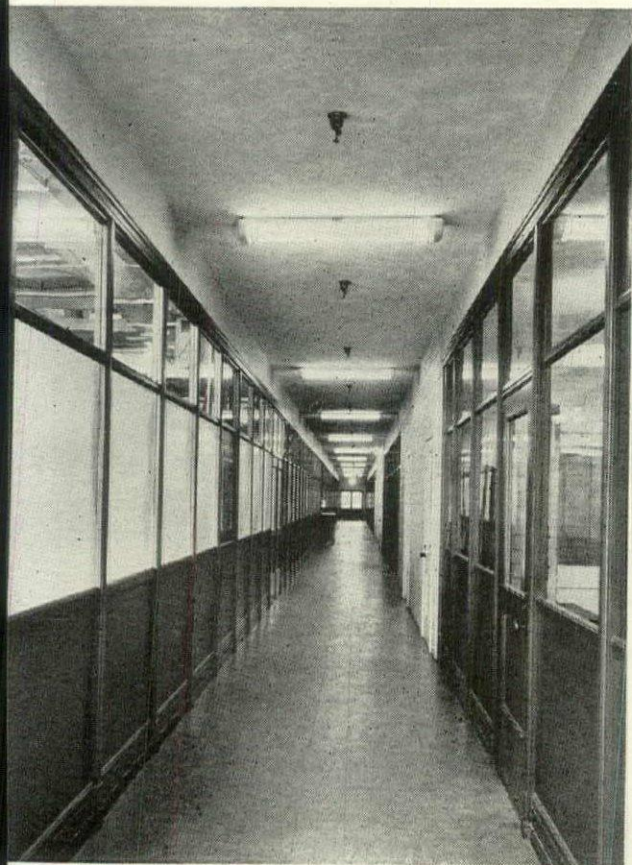
FINAL ANNEALING KILNS, used for cooling after the second melting. Tops of kilns are raised and lowered from supports on the structural steel trusses above.

facturing process, and the product is ready for shipment.

The building contains 200,000 square feet of floor space. Built on a sloping site, it includes a single-story main section, and a two-story section in the rear. Mammoth ventilators were used in the monitors over the furnaces. To protect the workmen, a duct was installed in the floor at a suitable point between them and the furnace. When they must approach the furnace, a screen of air emerges from the floor and serves as a protection from the heat. In addition to this

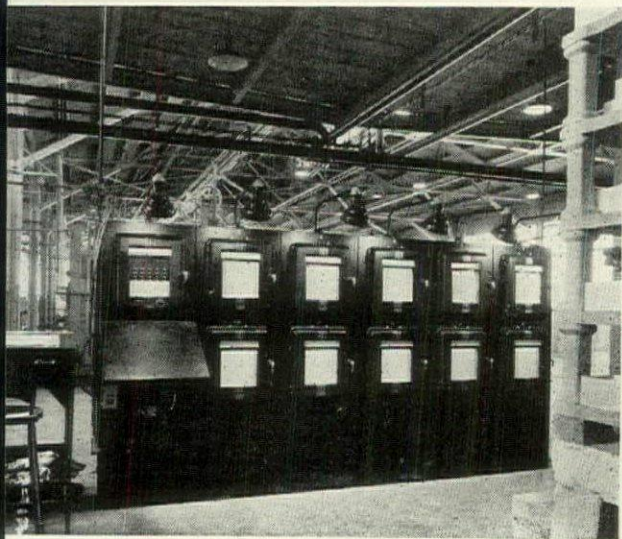
protective measure, there is a dust-control system, important in maintaining health standards in a glass plant.

The forepart of the building is devoted to office space requirements. A miniature hospital has been set up, especially equipped to handle cuts from glass and other industrial accidents. The offices are separated from the plant proper by ceiling-high metal partitions, which run the entire width of the building. They are heated by unit heaters and lit by fluorescent lamps.



THE MINIATURE "HOSPITAL" is equipped to take care of almost any industrial accident. It includes a bedroom where patients who have been seriously injured may rest until permanent assignments have been made. The walls are tile, floors are asphalt tile.

THE LONG CORRIDOR separates the executive offices from the plant. Partitions are metal and glass, with obscure glass used as a visual barrier on the plant side. Sprinkler heads were installed throughout to guard against fire from prevailing high temperatures.



PANEL BOARDS with recording instruments make it possible to control accurately all the various furnaces and kilns used in processing optical glass. Variations in temperatures are shown on the white control sheets.



ONE OF THE GRINDING ROOMS. Because of the specialized nature of this operation, the department is partitioned off from the remainder of the plant. The ceiling is plastered over, rather than left open with exposed trusses, to prevent the collection of dust.

CONSTRUCTION OUTLINE

FOUNDATION: Concrete.

STRUCTURE: Exterior walls—brick and corrugated asbestos; inside—steel partitions, E. F. Hauserman Co.; wire mesh partitions, Kentucky Products Co. Columns—steel. Floors—concrete.

ROOF: Built-up roofing, Johns-Manville.

INSULATION: Roofs — Fiber - Glas, Owens-Corning Fiber-Glas Corp.

WINDOWS: Sash—Detroit Steel Products Co. Glass—double strength, quali-

ty A, Libbey-Owens-Ford Glass Co.; hammered glass—Blue Ridge Glass Co. Glass blocks—Pittsburgh-Corning Corp.

STAIRS AND ELEVATORS: Stairs—concrete. Elevators — Westinghouse Electric & Mfg. Co.

FLOOR COVERINGS: Offices and laboratories—asphalt tile. Remainder—concrete.

FURNISHINGS: Laboratory Furniture Co.

DOORS: Overly Mfg. Co. and Over-head Door Co.

HARDWARE: Russell & Erwin Mfg. Co.

PAINTS: Pittsburgh Plate Glass Co.

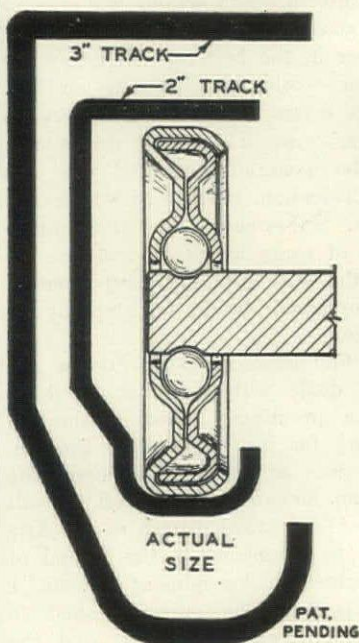
ELECTRICAL INSTALLATION: Transformers, panels, etc.—Westinghouse Electric & Mfg. Co.

PLUMBING: American Radiator-Standard Sanitary Corp.

HEATING: Low pressure steam unit heaters—Trane Co. Boilers—Farrar Trefts Co. Stokers—Detroit Stoker Co. Thermostats—Johnson Service Co. Valves and water heater—Bryant Heater Co. Pumps—Nash Engr. Corp.

Improved "FRICTION-REDUCING" Track

- Another Reason We Can Say



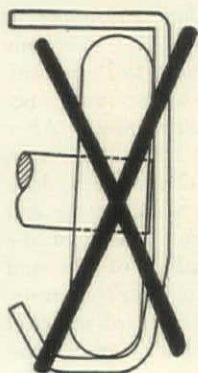
**"Day In, Day Out
Drive In, Drive Out
with Trouble-Free
Satisfaction!"**

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OVERHEAD TYPE GARAGE DOORS

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**This Type
of Track
(shown at left)
is No
Longer
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Whether you install the Ro-Way Electric-operated or the hand-operated type of Doors, you notice immediately the absence of "friction-drag" in opening and closing them. As time goes on you will also notice the extra service Ro-Way Doors give, because friction means wear — and extra wear means earlier repair.

These Ro-Way Improved "Friction-Reducing" Tracks are made in our own plant and are exclusively used on Ro-Way Overhead Type Doors. They make Ro-Way Doors operate more easily, more quietly and with noticeably greater speed and smoothness. You will value this exclusive Ro-Way feature more and more when you note how they give added years of service. You will see why we say... "Day in—Day out, Drive in—Drive out with trouble-free satisfaction." Get all the extra values that only Ro-Way gives.

Write for Ro-Way's 72-page "Time-saving Specification Book" for Architects. Please attach professional card or letterhead.

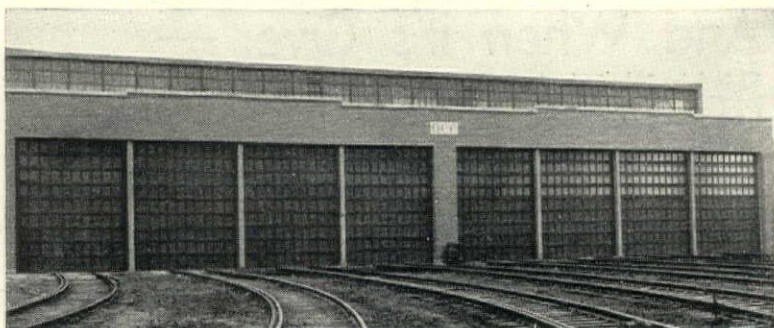
ROWE MANUFACTURING CO.

967 Holton Street

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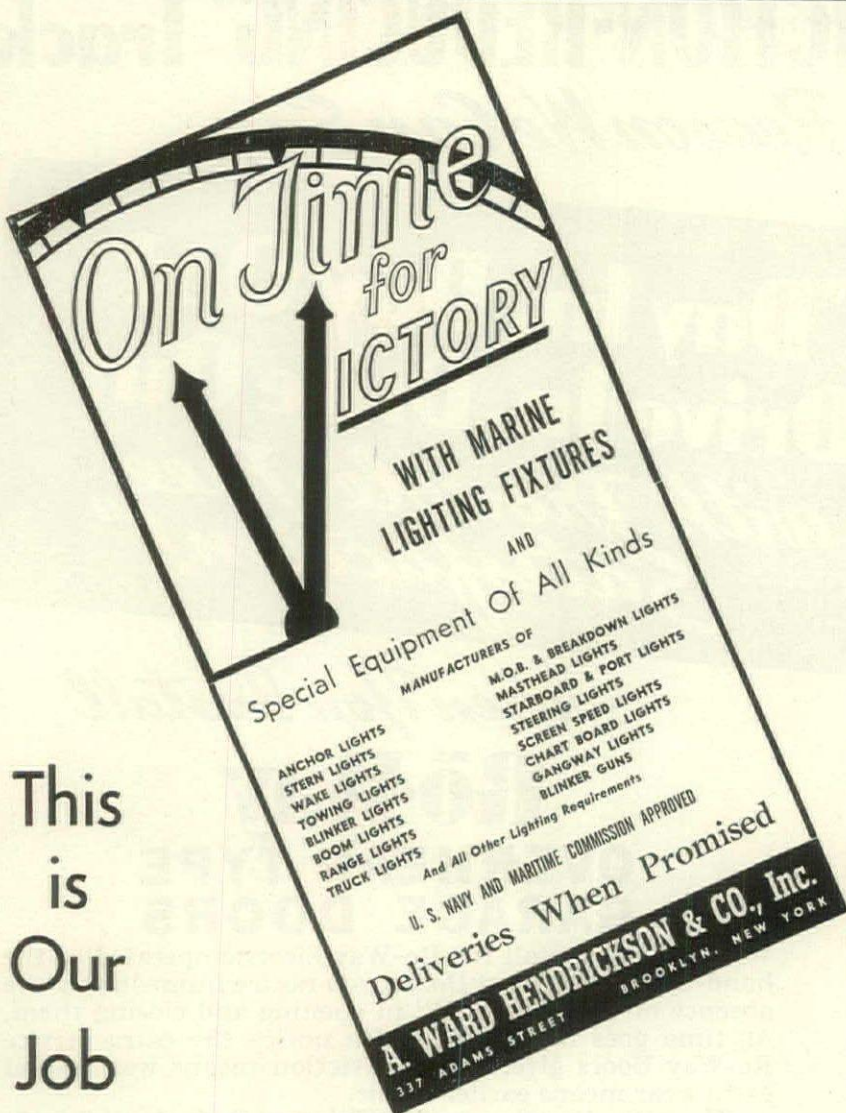
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Bases
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Eight Ro-Way Overhead Type Doors, Industrial Model G-I, serve this American Car & Foundry Plant at St. Louis, Mo.

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



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Since Pearl Harbor, A. Ward Hendrickson & Co., Inc., has been 100% on War Work, including lighting fixtures and navigational equipment for the Navy and Maritime Commission.

We look forward to the day when our expanded facilities, technical improvements and greatly enlarged experience in the applications of lighting will be unleashed for the benefit of everyday life, everywhere.

And When it's Over —

This big job is being done by the same staff of design, production and application engineers that served architects and lighting engineers for all types of buildings before the war. Barring accidents, they will be waiting to serve you when it's over — with the same management and policies but with a greatly enhanced ability to serve.

A. Ward Hendrickson & Co.,
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337 ADAMS STREET, BROOKLYN, NEW YORK

LETTERS

(Continued from page 34)

FORUM:

Architecture is a serious matter, and the sooner you and Mr. Roger Allen discover it, the better you'll enjoy the postwar world. The reason for Mr. Allen's ostracism from THE FORUM's columns was, if memory serves me, that he generally insulted the Art and Profession, neither of which can take it. Self-esteem is one of the ornaments of every architect, and woe be unto the silly ass that brays heresy, hoax or humor before the steps of the Temple.

My first lesson, Messrs. FORUM and Allen, deals with my own expulsion from a prominent school (name on request) for just this sort of braying. There was an Esquisse-Esquisse, the program for which started off like all others ("A wealthy patron of the Arts wishes to commemorate the Repeal of the Eighteenth Amendment . . . etc.") but this time the patron wished to restore a Baroque fountain, and the devil take anyone who obstructed him.

An hour of playing with a lump of charcoal revealed the possibilities of utilizing snakes to fine advantage in a Baroque composition. Overcome by my obvious superiority to Borromini, I piled snake on snake until my 20x30 page was brimming. After the jury's meeting the next day, I went to the exhibition room to look for my medal-bearing work. At the end of the dreary trip to the end of the line, down in the valley of X's and H.C.'s, I came across a juror's notation, on the one snake-less inch of my chef d'oeuvre: "If you aren't serious, we are!" followed by an unnecessarily large X. There was some very serious talk at the faculty meeting that ushered me out into a serious world.

Since that time, I have created several works that are considered funny by my neighbors ("is that funny brooder-house with the flat roof *Your* house, Mr. Lincoln? Ha, ha!") but I have never openly twitted anybody about anything faintly resembling an esthetic belief. When asked about my opinion of the Jefferson Memorial, I look very serious. Architecture is my bread and butter, or just bread, and damn any layman presumptuous enough to discuss my Art with me. I like serious architectural journals, full of serious drawings and beautiful frozen music. Other people can go right ahead thinking Architecture is the funniest profession in the world. Not me.

JOHN W. LINCOLN
Hillside Home (for Schizophrenics)
Stonington, Conn

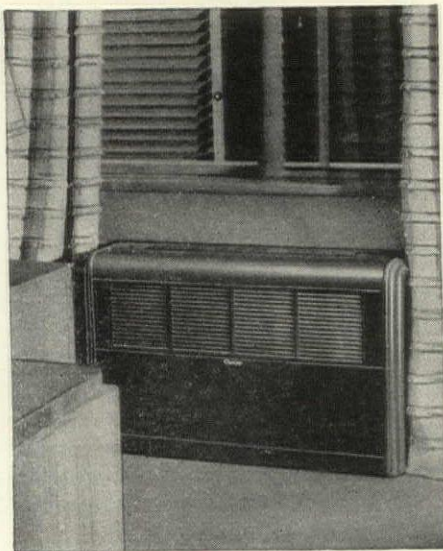
Carrier Conduit
Weathermaster System

REDUCES COST OF AIR CONDITIONING FOR MULTI-ROOM BUILDINGS

11-story Bankers' Health & Insurance Co. Building, Macon, Ga., is air conditioned year round by the Carrier Conduit Weathermaster System. Two miles of conduits bring the conditioned air to 225 offices for the better comfort, better health and better working capacity of their occupants.



WEATHERMASTER units concealed in attractive cabinets below windows. Dial attachment switches on coolness or warmth at the occupant's wish.



REPLACEMENT of the square ducts of conventional air-conditioning installations with the more compact conduits of the Carrier Conduit Weathermaster System in tall buildings conserves materials and rentable space. Effects economies in construction. And complete standardization of parts pares engineering and installation costs.

EFFICIENT, too. Conditioned air is sent from central plant in basement through small conduits to the conditioning units in the various offices or rooms. The turn of a dial supplies the desired room temperature. The humidity is also automatically controlled.

THE STARTLING ECONOMIES and flexibility of the Carrier Conduit Weathermaster System will merit first consideration for office buildings, hotels, apartment houses, hospitals and other multi-room structures . . . when peace-time building . . . new or modernization . . . can be met.

CARRIER CORPORATION, SYRACUSE, NEW YORK

Carrier

AIR CONDITIONING • REFRIGERATION



THE FLOOR THAT SAVES LABOR is the floor to specify today

ARMSTRONG'S Linoleum is the simplest of floors to keep clean. Anyone can keep it bright and new looking. And that's a mighty important thing to remember right now. For when you specify a floor that cuts maintenance, you're helping your client solve one of the biggest problems he faces today—the shortage of cleaning help.

Dust, dirt, grime, and ordinary stains wipe right off the smooth surface of an Armstrong Floor. The only attention needed is daily sweeping plus occasional washing and waxing. In return for this labor-saving care, Armstrong's Linoleum gives years of service.

IMMEDIATELY AVAILABLE

Here's another thing to remember: Armstrong Floorings are still available today both in Armstrong's Linoleum—and in Armstrong's Linoflor (with fresh-fibre felt back). This latter flooring is made to the same

high standards as Armstrong's Linoleum and differs only in that an extra-strong felt is used in place of a woven fabric backing. Fresh-fibre felt takes its name from the fact that it is made with fibres from high-quality cloth cuttings instead of old rags.

For more information on Armstrong's Linoleum and Armstrong's Linoflor, see *Sweet's* or write directly to Armstrong Cork Company, Floor Division, 2307 State Street, Lancaster, Pennsylvania.



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



ARMSTRONG'S LINOLEUM, LINOFLOR AND LINOWALL

Custom-Laid or  Standard Designs

MONTH IN BUILDING

(Continued from page 44)

installment selling (most cogent, the Rolph Nugent plan, *FORUM*, Feb., p. 35). In its release, "The Board also called attention to the question of who is going to assume the risk in case of a sharp postwar inflationary increase in the price level, increasing the cost of goods but requiring goods to be delivered at prices which did not absorb costs."

Pentagon Protagonists. The Founding Fathers of the Pentagon Building (*FORUM*, Jan., p. 39) have organized themselves into a club, "The Society of the Pentagon," which includes 129 men: officials of State, builders, George Edwin Bergstrom, architect, and seven assisting architects. According to its own booklet, the membership is limited to this group, whose "foresightedness . . . and boundless energy" were responsible for the Army's mammoth building.

More Pentagon. Starting in the huge Pentagon building is a movement to get "portal-to-portal overtime" for its workers. To some this would mean 1/2 hour of overtime a day. "After all," said one employee truculently, "It's no different from a mine."

Preference Ratings No Longer Preferred. Builders of war housing projects who by July 1 will not have obtained all controlled materials necessary for completion of construction should secure an allotment immediately under the new CMP, the NHA announced last month.

Preference rating orders are no longer valid after that date. Controlled materials include: concrete reinforcing bars, steel pipe, steel wire and wire products including nails, copper wire, cable.

NEW YORK POSTWAR HOUSING

New York City's perambulating Mayor La Guardia is a man with a talent for trouble. Last month he developed it to high degree when he prematurely announced in his weekly Sunday noon radio talk detailed plans for three state-financed postwar housing projects, thus, according to Acting State Housing Commissioner Ira Robbins, causing the city huge additional land costs.

The Mayor's advance announcement: With State funds New York City will build three large public housing projects, at a total cost of \$24 millions. Largest and most ambitious of the projects is to be named after the former Governor Smith since it is to be located on the lower east side of Manhattan, the Governor's birthplace. The second

(Continued on page 96)

NEWS ABOUT GLASS from "Pittsburgh"

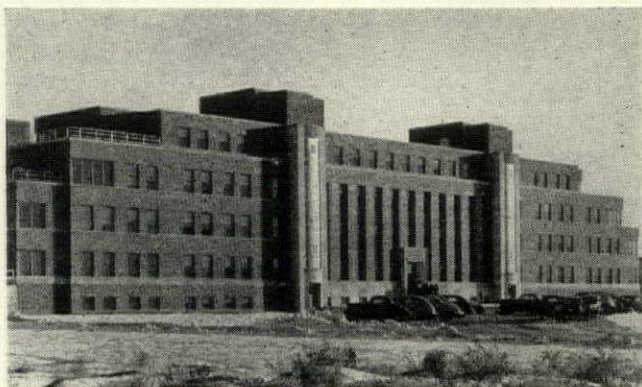


TRANSPARENT HERCULITE STAIR PANELS.

These smart panels of tempered plate glass in the Statler Hotel, Washington, D. C., indicate the new architectural possibilities of glass. Herculited glass is four times as strong, six times as resistant to mechanical shock as regular glass of equal thickness. Architects: Holabird and Root.



FOR YOUR STORE FRONT FILE. There is practically no limit to the design possibilities of Pittco Store Front Products in creating eye-catching, sales-winning store fronts. This example of the use of PC Glass Blocks with Carrara Structural Glass is worth saving for reference when building restrictions are lifted. Architect: George W. Neff.



WINDOW GLASS is an important contribution to the appearance and utility of any building with large window areas. That's why many architects are making sure of quality window glass by specifying Pennvernonglazed for important jobs. This is the Pennvernonglazed Rome and Murphy Hospital at Rome, N. Y. Architects: Bagg and Newkirk, Harold G. Rice, Associate.

PITTSBURGH PLATE GLASS COMPANY · PITTSBURGH, PA.

"PITTSBURGH" stands for Quality Glass and Paint

KINNEAR WOOD ROLLING DOORS

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MOTOR OPERATION!
When equipped for motor operation, Kinnear Wood Rolling Doors can be opened or closed quickly at the touch of a button, from any convenient location! The rugged, heavy-duty motor does the work, saves time and labor.

You can specify the efficient, space-saving coiling upward action of Kinnear Rolling Doors in spite of wartime limitations. Kinnear Wood Rolling Doors provide these functional advantages — and they are a thoroughly proved, time-tested product that cut the use of war-vital metals to a minimum!

In the Kinnear Wood Rolling Door, strong, inter-lapped wood slats are jointed with metal cables or tapes. They coil above the opening, remain out of the way and safe from damage, and require no usable floor, wall or ceiling space for either storage or operation. The rugged curtain assembly offers a high degree of protection, and blocks out wind and weather. Available in any size, with motor, manual or mechanical operation. Make sure of full door efficiency by specifying Kinnear Wood Rolling Doors for today's needs. Write for complete details.

THE KINNEAR MFG. CO., 1640-60 Fields Ave., Columbus, Ohio.

KINNEAR

ROLLING DOORS

MONTH IN BUILDING

(Continued from page 94)

project is in Queens, the third in the Bronx.

Complained the Acting Housing Commissioner:

The fact that proposed sites have been divulged will prevent the Housing Authority from obtaining options on the land before the prices are raised. Historical example: The Fort Greene project in Brooklyn, for which the little Mayor jumped the gun in his announcement, reputedly released the land cost by approximately \$1 million before the city could acquire title to it.

To the public attack in the press the Mayor had nothing to say. To date the Legislature has not approved the sites, and some chance exists that they may be turned down as "undesirable."

A.I.A.—PRODUCERS CONVENE

Cincinnati was host to two conventions last month, The American Institute of Architects (their 79th annual meeting), the Producer's Council (their 20th)....

The architects elected Raymond J. Ashton (Salt Lake City, F.A.I.A.) president for '43, heard the Army tell them the future for architects was not very bright, listened to much talk on postwar planning.

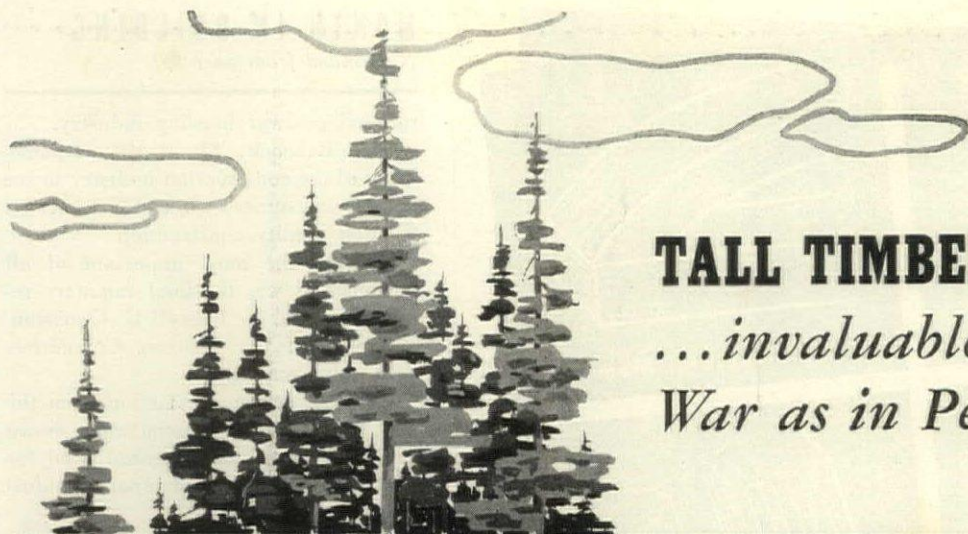


Douglas Whitlock (left), Producer's new president congratulates Raymond Ashton, A.I.A.'s new head.

In the two-day session, close heed was paid to Dean MacCormack's committee's report on Postwar Reconstruction which made multitudinous suggestions for building code, building costs, urban redevelopment reforms. Talk of unification was rife: a resolution was adopted "to bring all groups and members of the profession into one national organization."

The Producer's Council heard Russell Creviston of Postwar Committee keynote their aims with advice about the responsibility of building materials manufacturers for employment postwar, Frederick Babcock outline a

(Continued on page 98)



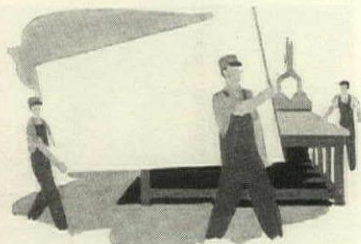
TALL TIMBER

*...invaluable in
War as in Peace*



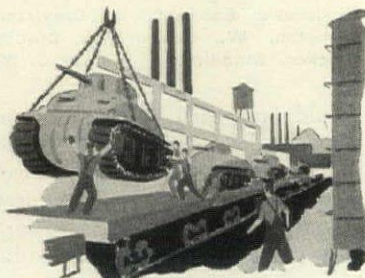
◀ A few short years ago, the use of trees was confined mainly to the manufacture of a few products—lumber, pulp and paper. Today, from the natural wood fibres of trees, modern science has developed products of wider usefulness than wood as nature made it.

One of these products is INSULITE. ➤ In the vast Insulite mills at International Falls, Minnesota, in the center of the northwoods, logs are placed into giant machines that grind them to pieces—reducing them to sturdy natural wood fibres.



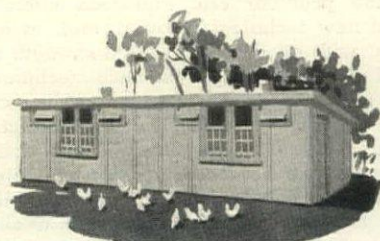
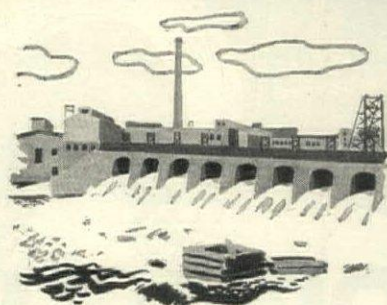
◀ These fibres, the live, sturdy sinews of the tree, are processed into panels or boards called Insulite. It has a bracing strength four times that of ordinary wood sheathing, horizontally applied. Insulite is also effective insulation—it insulates as it builds.

Insulite has many uses. For example, ➤ the lightness and rigidity of Insulite make it a very important material in the construction of certain types of oxygen tent equipment.



◀ Insulite has many structural advantages. Speed in building is important today. It has been used in the construction of many of the nation's war buildings. The large panels of Insulite are rapidly applied. The saving in time is apparent when you consider the many square feet of surface one panel of Insulite covers in one operation.

On farms, Insulite has many uses. Hog ➤ houses, brooder houses, laying houses, are quickly built with Insulite, which provides insulation and weathertight construction . . . cattle and poultry are healthier . . . require less feed . . . produce more.



INSULITE

THE ORIGINAL WOOD FIBRE STRUCTURAL INSULATING BOARD

LOOK FOR INSULITE IN
THE RED PACKAGE



INSULITE
Division of Minnesota and Ontario
Paper Company, Minneapolis, Minn.

rational postwar housing industry.

Said Babcock: "It is the responsibility of the construction industry to see that the consumer's interest is protected through quality construction."

Perhaps the most important of all the business was the final summary report prepared by Russell G. Creviston, chairman of the Postwar Committee. Said the Committee:

"We can derive satisfaction from the fact that we have convincingly shown general industry the essential need for postwar planning by all separate industries.

"That we have integrated our program with the overall postwar programs of general business and industry."

Said the Council, in deciding its program from 1943-4:

"The Council should devote time and attention to encourage the construction industry to accept the basis for coordination of dimensions of building materials and equipment, offered under the proposed American Standard. Following this acceptance, The Council

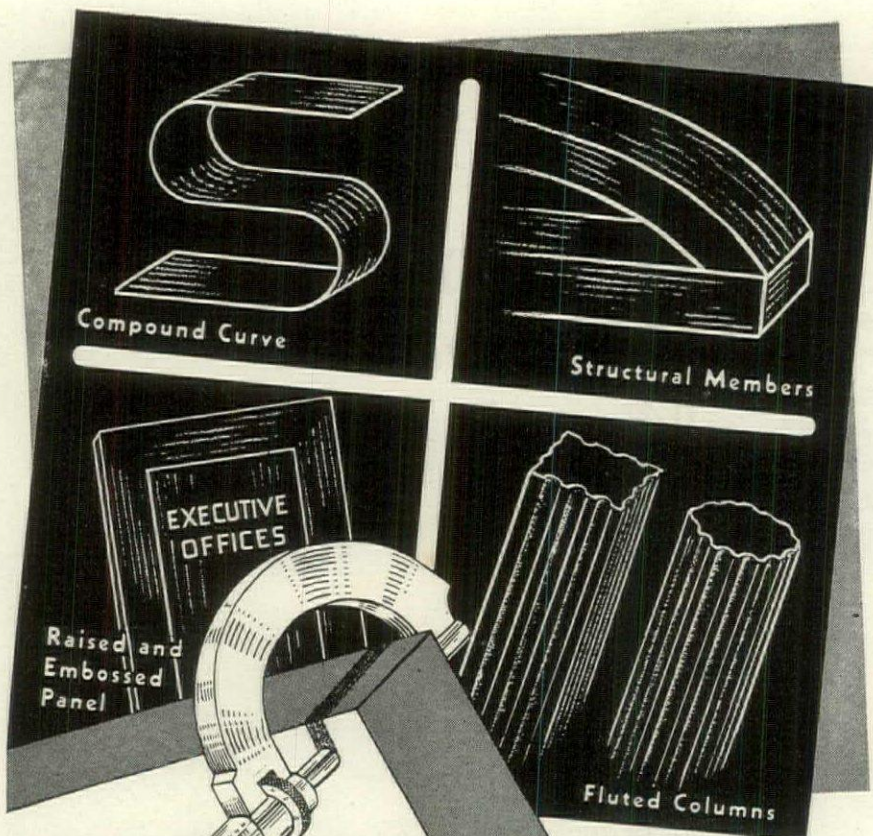


Producer's Banquet: R. Creviston, F. Plimpton, W. Benton, G. Crabbs, S. Crocker, Standing: J. Follin, C. Young.

should urge each branch of manufacturing to develop application standards which will fix the sizes and dimensions of various lines of building products in order that plants may retool for postwar production on the coordinated basis.

"Accelerate postwar studies, broaden the participation in the postwar program and so direct it that it will be prepared, whether the war ends quickly or is prolonged, to activate industry programs which will stimulate an expanding program of construction and employment so essential to the postwar economy.

Then, meeting and eating jointly at lush Hotel Netherland Plaza, both groups heard young, pugnacious William Benton, (Comm. for Economic Development) warn builders and architects that "the conspiracy against every boy and girl who falls in love and wants to build a home" by the building trades is notorious, must cease if building is to remain in private hands.



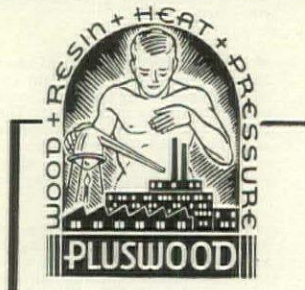
PLUSWOOD

A Wood Alloy

is a New Engineering Material that can be made to your order

For the post-war era, Pluswood offers you a brand new technical material, high in aesthetic value, with an exciting weight-strength ratio. A wood alloy, made by a chemico-mechanical process, it possesses structural strengths exceeding those of many metals. A non-conductor with amazing qualities of density and toughness, Pluswood can be made to your pre-determined engineering description. Thick or thin, pliable or rigid, this wood of new wonders is available in thickness ranging from 16 inches to 1/16 of an inch, and in any size up to 7 feet by 18 feet. Highly resistant to swelling, shrinking, corrosion, fire, and thermal shock—Pluswood will retain its dimensional stability so completely that only micrometer measurements indicate changes.

A dependable, responsible organization stands behind Pluswood from forest through saw mills, veneer mills and factory — established by the Lullabye Furniture Corporation, since 1897 America's foremost manufacturer of juvenile furniture. Pluswood maintains a laboratory service that you are urged to use without obligation. Write today for an engineering data bulletin that will give you more complete information.



WOOD Select northern birch or maple — cut from vast tracts of timber reserves in northern Wisconsin and Canada.

RESIN Impregnated into veneers by methods and techniques developed by Pluswood research.

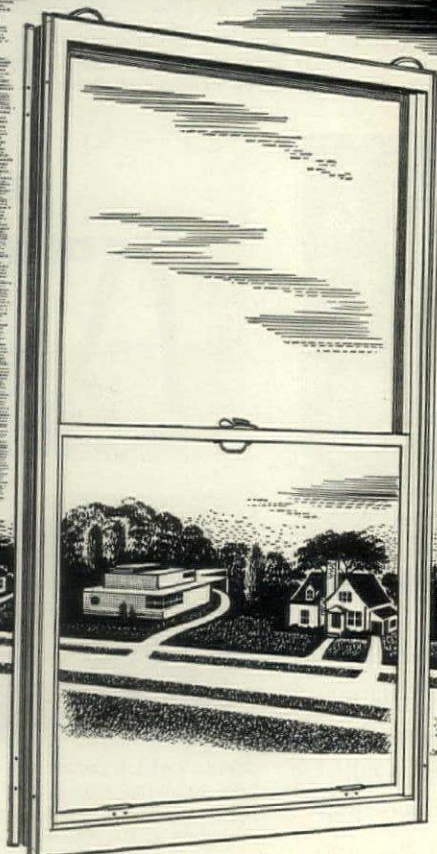
HEAT 300 K. V. A. high frequency electrostatic generating unit—largest in the country for this purpose—delivering 540,000 B.T.U.'s per hour.

PRESSURE Largest and most powerful press in the plywood industry—with total pressing capacity up to 5,000,000 pounds.

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LULLABYE FURNITURE CORPORATION, Stevens Point, Wisconsin
ALGOMA FOREST PRODUCTS, Ltd., Bruce, Ontario, Canada

this is the residential window you will use



WHEN peacetime residential building is resumed, this is the window that will be ready to help you design and build homes that are more beautiful, more durable.

It is the Truscon Residential Double-Hung Steel Window. Thousands of them have been specified and built into residential construction across the entire nation. They are the favorites of architect, builder and owner alike, because their fine design and steel construction offer features that assure long protection of building investment. Economical installation costs . . . and freedom from rot, rattle and warp . . . are advantages of major importance to everyone.

Truscon Residential Double-Hung Steel Windows will be ready for your use after the war ends. Plan to use these beautiful windows in your post-war designing. Details are available from Truscon sales offices or headquarters.



TRUSCON

Steel Company

YOUNGSTOWN • OHIO

*Subsidiary of Republic Steel
Corporation*

FORUM OF EVENTS

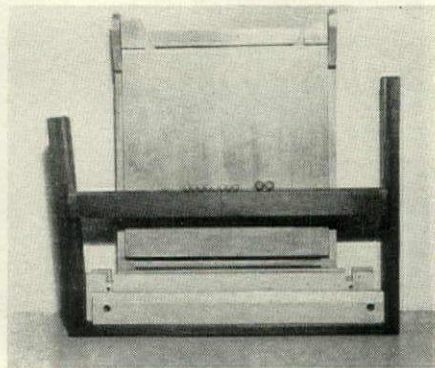
(Continued from page 4)

New demountable furniture saves shipping space, eliminates metal

The first complete line of demountable furniture to have been manufactured in large quantities in the U.S. was created by Architect Ferdinand Kramer and Designer F. V. Gerstel. Although not as smart as its predecessor "Pakto" (ARCH. FORUM, July '42), Kramer-Gerstel's furniture looks more solid, includes demountable closets and cabinets and does away with all metal.



THIS ARMCHAIR costs \$14.11 in all the largest department stores in the U. S. It is completely demountable as shown on the right. All connections are made with wood dowels. Price does not include the upholstered pad, which folds on a fabric "hinge."



**STATE
SANITARIUM**
(Norwich, Connecticut)
**INSTALLS
FIXTURES
BY ELJER**

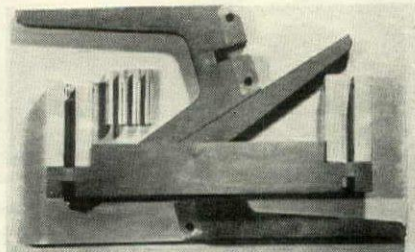
Shown above is Campbell Hall of the Connecticut State Sanitarium, Uncas on Thames, Norwich, in which Eljer fixtures are installed. The large number of Eljer-equipped hospitals indicates the ability of these fixtures to meet specialized requirements and give long, satisfactory service.

ELJER CO. • FORD CITY, PA.
Write for our Condensed Catalog

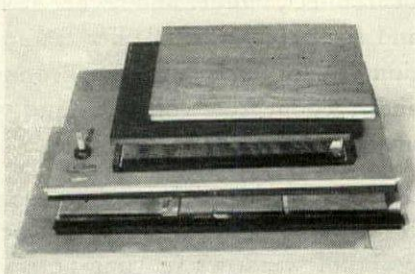
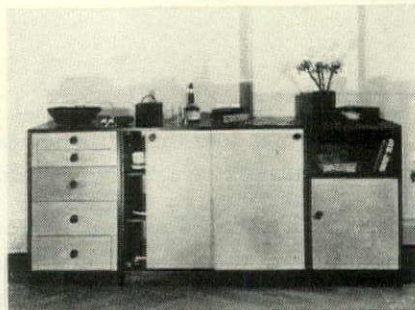


For 35 years,
Stylists
of Bathroom
Ware

THERE ARE OVER 5 MILLION ELJER FIXTURES IN USE



THE TABLE sells for \$6.24. All pieces can be made either of plywood or glued-up lumber. Note consideration given to shipping space in the disassembled table.



ALL CABINETS are completely demountable. Ingenious details of assembly and lock device (shown on following page) recall early American furniture.
(Continued on page 102)

SAVES...5½ lbs. of copper per valve!



Conserves more than
5½ pounds of copper.

●
Saves water.

●
Amazing endurance to
both use and abuse.

●
Fewer parts.

●
Shipping weight reduced
by 2½ pounds.

●
Corrosion resistant.

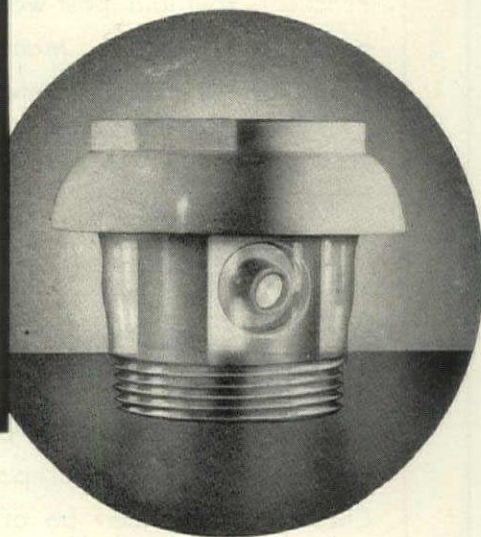
■ Sloan Victory Flush Valves save over 5½ pounds of copper per valve for war matériel. This means that Sloan alone is conserving over 2,000 tons of critical copper annually, based on 1942 production figures.

This amazing reduction was brought about through the substitution of plastics and malleable iron. All the malleable iron parts are attractively finished with a baked-on protective coating applied both inside and out. A plastic sleeve lines the iron body to provide a smooth, wear-resisting surface for moving parts.

While the Sloan Victory Vacuum Breaker is all-plastic, no change was made in the functional design of the original Sloan V-100-A which was the first vacuum breaker to be approved by the N.A.M.P. Its outer shell, now of transparent plastic, permits *visual* inspection, thus assuring the ultimate in protection against back-syphonage.

In the new Victory Valve, the Sloan Valve Company has applied its every resource to produce a high quality flush valve, and vacuum breaker which in cooperation with the War program, used the irreducible amount of precious copper.

Remember: it is *patriotic* to specify and order Sloan—the flush valve using the least amount of critical metal.



The new Victory Vacuum Breaker is all-plastic; its transparent outer-shell affording visual inspection. Instantaneous in action, it prevents back-syphonage and so protects health.

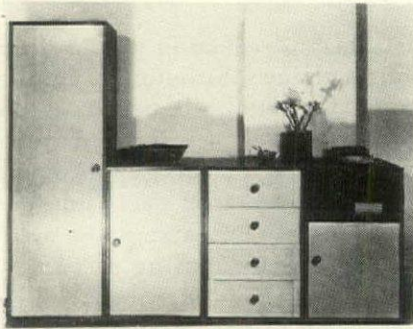
SLOAN VALVE COMPANY... 4300 West Lake St., Chicago

SLOAN *VICTORY TYPE* FLUSH VALVES

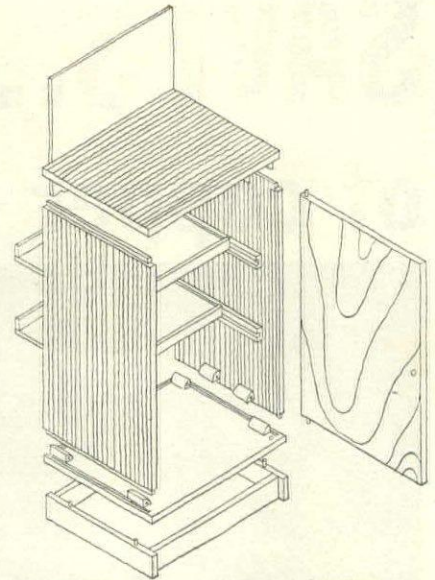
FORUM OF EVENTS

(Continued from page 100)

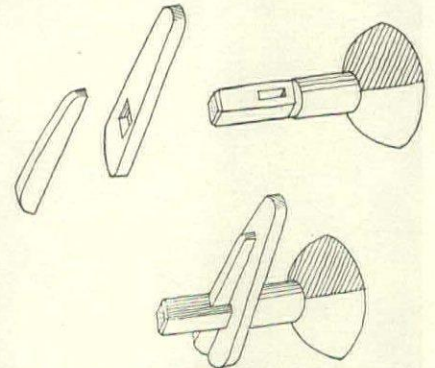
Demountable furniture



A series of storage units makes up an important part of the group. Closets, bookcases, drawer cabinets, etc., can be combined in any number of ways, both horizontally and vertically. The bases are separate units, held in place by wood dowels. Note in the assembly drawing to the right how doors are hinged, sides put together to stiffen each other. The first cutting of the group of furniture amounted to 15,000 units, all of which were sold out rapidly. 10,000 units for war workers will be cut soon. Distributed by the Allied Purchasing Corp., the line is sold by Joske Bros., San Antonio, Pomeroy's, The Fair, Chicago, Macy's, and others.



ASSEMBLY DRAWING of a typical unit with hinged door, sliding trays. Sides dovetail, are fixed by blocks and pins.



LOCKING DEVICE used in all the cabinets is the most ingenious detail. It fits through circular hole in door, is made of solid wood with plywood wedges.

(All patents applied for.)

WHAT ARE *you* DOING ABOUT POST-WAR PLANNING?

Practical, well-laid post-war plans are the immediate need of all industry. Many important new developments, applied through intelligent planning, will bring new efficiency and comfort to a world at peace.

If dependable temperature or pressure control is a factor in the successful application of your product or service, it will pay you to investigate the White-Rodgers Hydraulic-Action principle and other new developments in temperature and pressure control.

Because of the importance of post-war plans to American industry we have prepared a "Post-War Planning Checklist" which may be of assistance in setting up your own post-war program. We shall be glad to send you a copy upon request.



WHITE-RODGERS ELECTRIC CO.

1292G CASS AVENUE • SAINT LOUIS, MISSOURI

Controls for Heating • Refrigeration • Air-Conditioning

APPOINTMENTS

ANTHONY CHITTY, F.R.I.B.A., A.A.-DIPL., M.A., and also one of the most progressive young architects in England, has been appointed Senior Architect, Post War Building, Ministry of Works, London.

H. F. WARDWELL, executive vice-president of Detroit Steel Products Co., has been elected president of the company. Mr. Wardwell was graduated from Cornell University School of Architecture, was associated with Albert Kahn for a number of years and joined the estimating department of Detroit Steel Products Co. in 1910. The company, which in peacetime manufactures steel windows and automobile springs, is now wholly engaged in war production.

AWARD

THE PULITZER SCHOLARSHIP IN ART, valued at \$1,500, has been awarded for 1943 to Isidor Toberoff, a student at the National Academy of Design. This

(Continued on page 106)

TO THE 20 Million Americans Depending on Oil Heat

THE spirit in which you have met the past season's fuel shortage problems has set another example of true patriotism for the Nation. We salute you! You have carried on with available fuel allotments to aid America's war effort. You have restricted your living quarters. You have installed storm windows and doors. You have insulated your homes. You have maintained lower temperatures. Yes—where necessary, you have reverted to hand-fired heating. Many of you have suffered from this experience; all of you have been inconvenienced.

Through it all, you have displayed a fortitude worthy of our forefathers—you have revealed a capacity for endurance our enemies had thought lost to us.

Again you have proved that Americans can take it!

Your sacrifices in comfort and convenience have been well worth while. Transportation facilities that would have delivered your normal supply of fuel were freed. Freed to carry fuel for planes, ships and tanks, to far-flung battle areas. Where our fighting sons have struck heavy . . . telling blows against our enemies. Their glorious achievements are stirring pages in the history of this global war to preserve the American way of life.

Total Victory is yet to be won! Further sacrifices may be necessary. Facilities for the movement of oil have been and are being increased but Military requirements may absorb this increase and more. Because oil is the fighting fuel in this day of mechanized war. Any and all temporary sacrifices are part of the price of Victory!

Your sacrifices—all of them—do hasten that day of Total Victory. When Peace will settle over an eagerly awaiting world. When oil again resumes its familiar peacetime role. When the family car will again be packed for a week-end at your favorite recreation spot. When filling station lights will again shine on through the nite and you once more will say, "Fill 'er up!" When your home heating will again be measured by comfort instead of coupons.

On that bright tomorrow your tenacious loyalty will be rewarded. Innumerable aids to better living will come out of new war-born skills and ingenuity. Among them will be even finer, even more efficient automatic oil heating equipment. All of these achievements will be a well-earned tribute to you who are doing so much to inspire them.

All of these achievements will be available to you who buy War Bonds now. Because your fighting dollars of today will be your better living dollars of Tomorrow.

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



WILLIAMS OIL-O-MATIC HEATING CORPORATION
BLOOMINGTON, ILLINOIS

Again Oil-O-Matic takes the Lead! On Sunday, May 16—45,000,000 newspaper readers from coast to coast were given the above message of confidence in the future of Oil Heat—the *first* such message from an industry leader.

Window

... with ANDERSEN COMPLETE **WOOD** WINDOW UNITS

"Window Pictures" ... living pictures framed forever with Andersen Complete Wood Window Units. Yes, the beauty of the outdoors will be brought to the comfort of the indoors in the 194X home. Window units will be wider in 194X and wider use will be made of them. And, with this increased use of Andersen Complete Wood Window Units will come increased recognition of their importance. For here are complete wood window units that are designed as a functional part of the

entire structure, and adaptable to all types of residential design. And, though designs may change and innovations develop—of this you may be sure: the quality and precision-built excellence of Andersen Complete Wood Window Units will remain *unchanged* in order to meet the exacting requirements of the building profession.

Sold, as always, through regular millwork channels. See Sweet's Architectural file for complete details or write to . . .

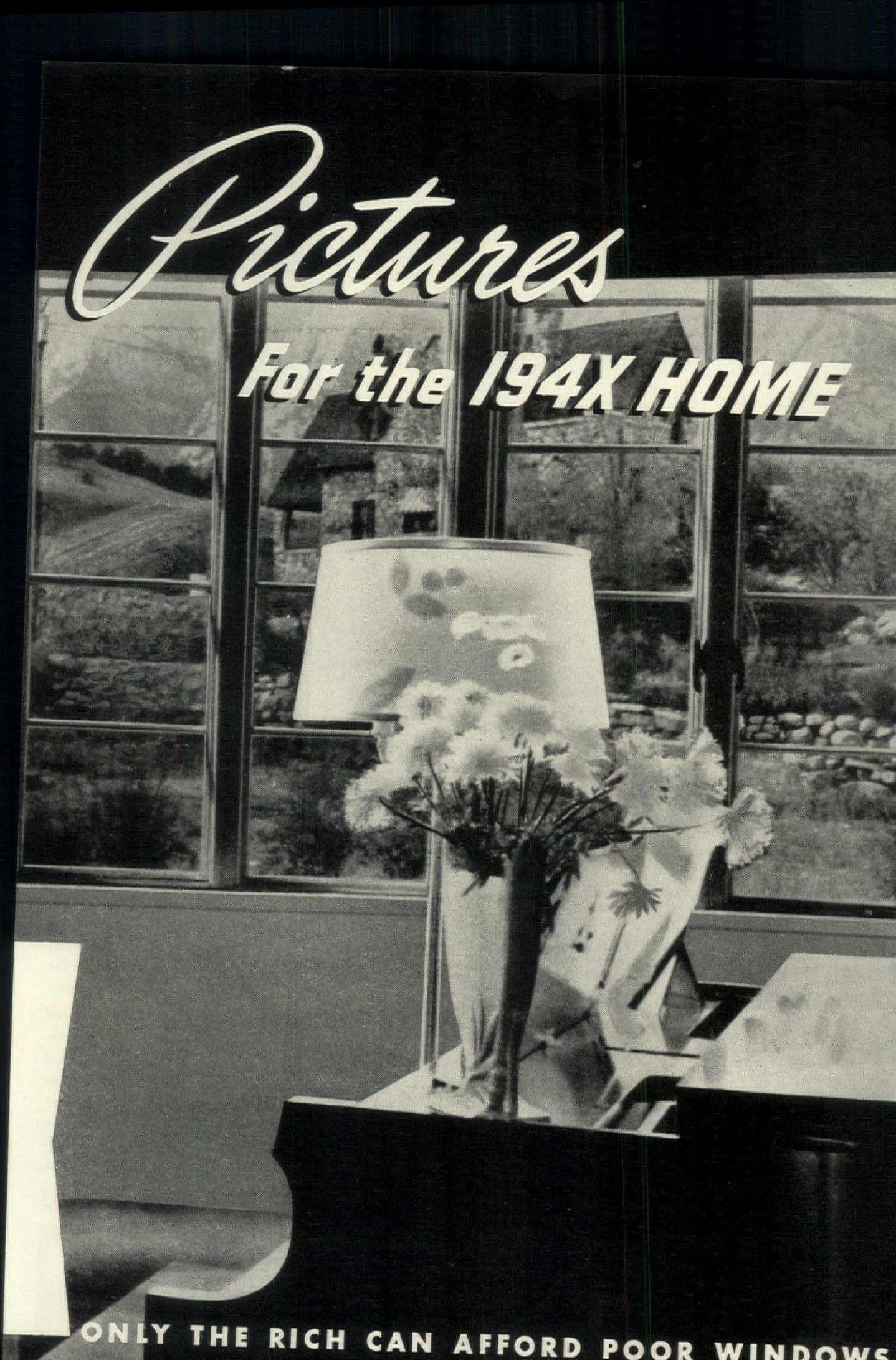


Andersen Corporation

BAYPORT • MINNESOTA

Pictures

For the 194X HOME

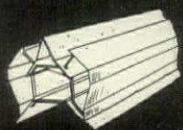


ONLY THE RICH CAN AFFORD POOR WINDOWS

Suiting your needs on
all types of construction,
you find appropriate
ventilator equipment
in the
Swartwout
Line of Quality
ROOF VENTILATORS



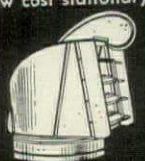
**Swartwout
MULTIPLE
HEAT VALVE**
Only 32 inches high



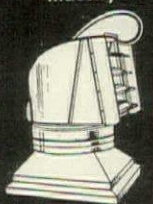
**Swartwout
-Dexter
HEAT VALVE**
The original ridge-type ventilator



**Swartwout
AIR VALVE**
Low cost stationary—unusual features



**Swartwout
ROTARY**
Industry's favorite gravity-type



**Swartwout
AIRJECTOR**
Powered Rotary

● A selective line—that meets all requirements for modern roof ventilation, **Swartwout Ventilators** have won unusual prominence in this field, on all types of industrial, army and navy buildings. A full line of steel ventilators, and the "NCM" Line, made of non-critical materials to **save** steel where its use is not vital... Write for catalogs. Describe your needs.

**The
Swartwout
Company**
VENTILATION SPECIALISTS
18617 Euclid Ave. Cleveland, Ohio

FORUM OF EVENTS

(Continued from page 102)

scholarship goes annually "to an art student in America who shall be certified as the most promising and deserving by the National Academy of Design, with which the Society of American Artists has been merged."

ANNOUNCEMENTS

THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY will hold a conference on City and Regional Planning from September 7 to 18, 1943. This conference will be sponsored jointly by the Institute and the American Society of Planning Officials. It will be open to men and women who have had practical experience in planning or in a related professional field.

The fee for the two weeks' conference is \$50. Applications should be sent to Professor Frederick J. Adams, Division of City Planning, Massachusetts Institute of Technology, Cambridge, Mass., not later than August 31, 1943.

A WASHINGTON CHAPTER of the American Society of Architectural Historians has recently been formed with the intention of bringing together architectural students throughout the region. A series of dinners with lectures will be held during the year.

All architects and architectural historians interested should communicate with Mr. Alan Burnham, 1117 East Capitol Street, Washington 3, D. C.

DIED

JOHN H. COXHEAD, 80, in Brewster, N. Y. Mr. Coxhead was the oldest member of the American Institute of Architects, which he joined in 1889. He was graduated from Cooper Union and studied architecture under Van Brunt in Boston.

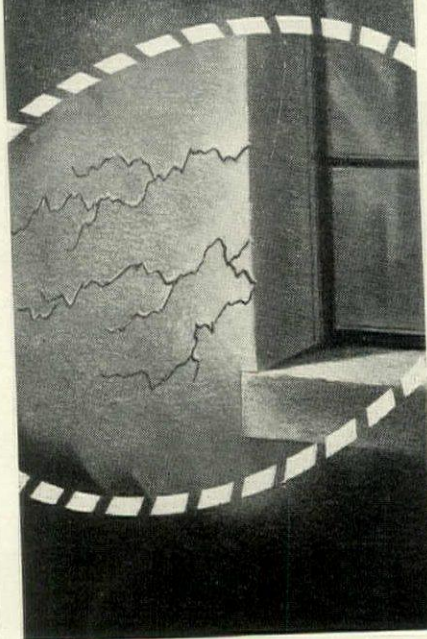
Mr. Coxhead's best known work was in the field of church architecture. His Delaware Avenue Baptist Church in Buffalo contains a marble mosaic and colonnaded baptistry and pulpit, which aroused a great deal of interest among students. More important, perhaps, was his work as architect for the U. S. Army Air Corps, for which he designed airfields and hangars all over the country. Models were shown at the Chicago World's Fair in 1933-34.

CORRECTION

TO PHOTOGRAPHERS Torkel Korling, Hedrich-Blessing and F. S. Lincoln THE FORUM's apologies for omission of credits for their work in the June issue. Mr. Korling took the picture shown on page 124; Messrs. Hedrich and Lincoln produced the handsome photographs of the Washington Statler.

SERVING BY CONSERVING... No. 6

when CONCRETE
goes
CRAZEY

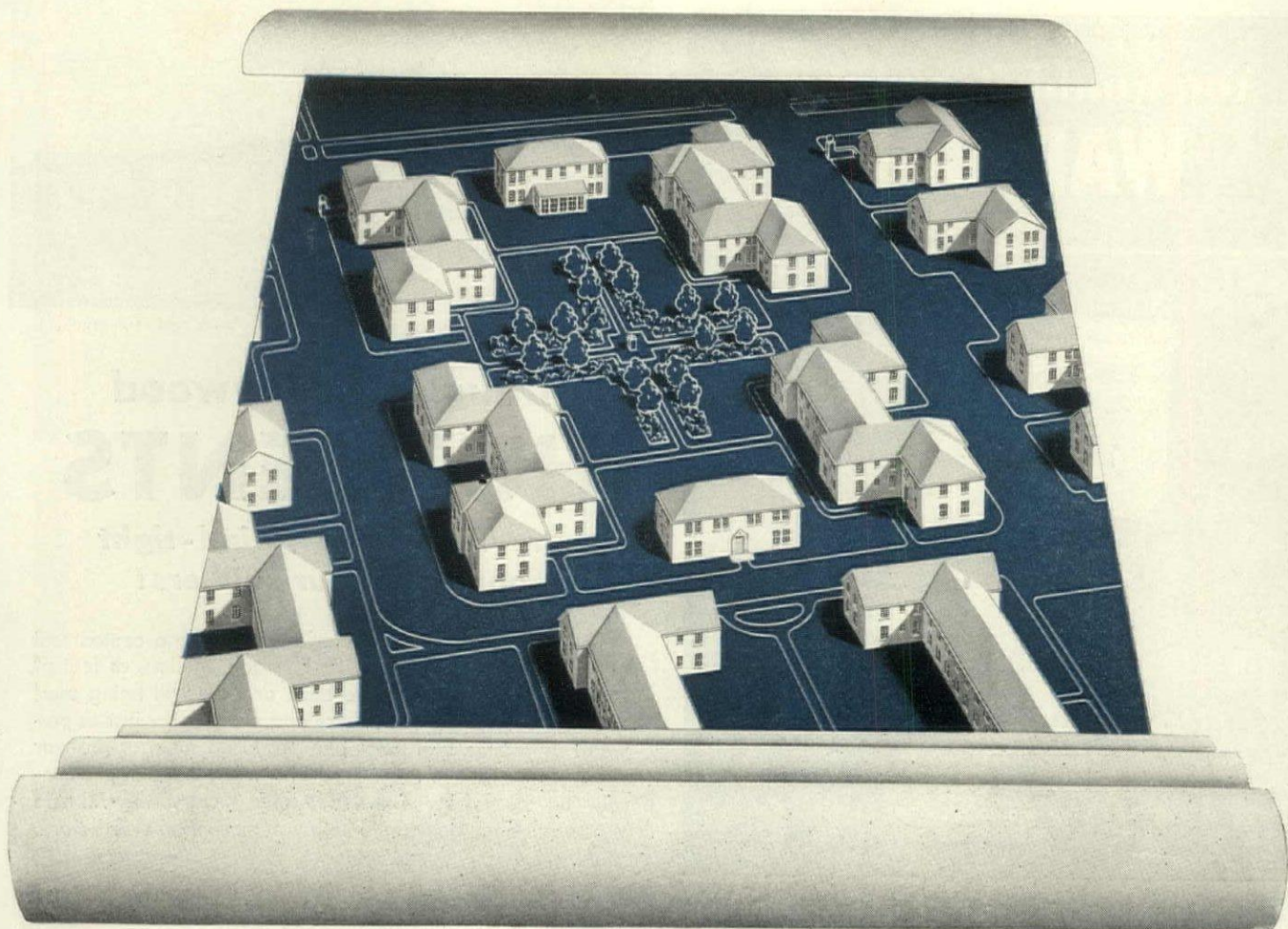


WHEN tiny cracks (known as "crazing") begin to appear on any concrete surface, it's time for DUM DUM MASONOC. For those cracks provide a toe-hold for destructive erosion. DUM DUM MASONOC, a protective, decorative coating for concrete, stucco, and masonry, bridges and fills these cracks, effectively sealing out wind, frost and weather.

DUM DUM MASONOC is another of Arco's varied line of maintenance specialties, which includes wall paints, floor treatments, mill whites... a long list of products renowned for the conservation role they've played in three generations of American industry. Write for full details.

THE ARCO COMPANY
CLEVELAND, OHIO • LOS ANGELES, CALIF.

ARCO
Paints for Industry



Progress That Is As Practical As Steel Itself

No rapturous flight of fancy is essential to the concept of tomorrow's building designs. Progress will involve the application of improved methods, materials and practices to time-honored forms, while "inspired architecture" may well be a matter of dollars-and-cents value. The prospect is no less exciting for this.

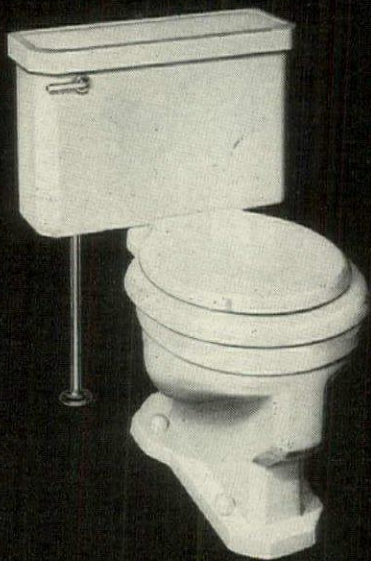
Stran-Steel engineered systems are practical, flexible, adaptable to varied requirements. They were applied successfully to housing projects of many types before the war, and are now meeting military building requirements for the armed forces. Stran-Steel is well qualified to serve the post-war building industry.

STRAN STEEL

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

UNIT OF NATIONAL STEEL CORPORATION

You wouldn't spot it as a **WAR BABY**



Even war babies inherit the good qualities of the line from which they spring. The *Benning*, appropriately named for one of America's largest war projects, is Case quality in every possible respect. One of numerous Case fixtures developed to meet the wartime need for efficient, mass-produced plumbing fixtures at minimum cost, the *Benning* has features that have won wide approval.

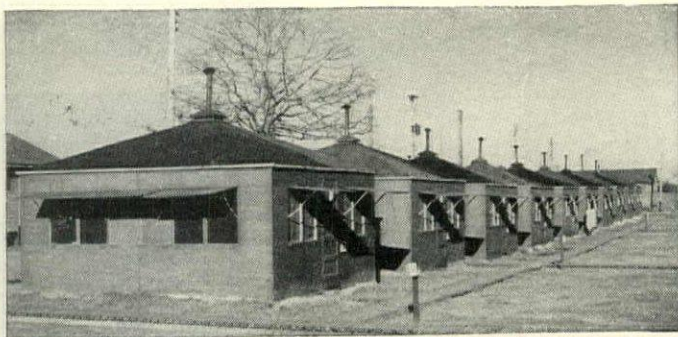
For the **DURATION** consider:

- 1 VITREOUS CHINA** tank and bowl—the finest material known.
- 2 NON-CRITICAL** material in fittings and accessories—saving brass, copper and rubber.
- 3 DEPENDABLE** action—built for long-term trouble-free efficiency.
- 4 SPACE-SAVING** design—compact and low in height. Easy to install.
- 5 NOW AVAILABLE** for Government approved projects, or for replacements.

For your Case distributor's name, see "Plumbing Supplies" in the Classified Telephone Directories of major cities, or write to W. A. Case & Son Mfg. Co., Buffalo.

CASE
Lifetime Bathrooms

90 YEARS
1853
CASE
1943
OF SERVICE

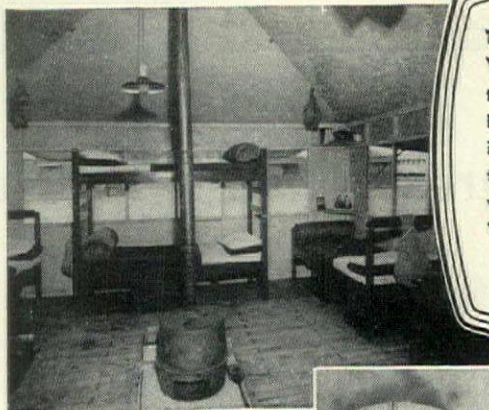


Tens of thousands of these plywood Victory huts are being used by the Army.

Douglas Fir Plywood **HUTMENTS**

**provide warmer, wind-tight
homes for our soldiers!**

● The chances are that your soldier sleeps in a cantonment or hutment built of Douglas Fir Plywood. Millions of feet of this engineered lumber have been and are still being used to house our troops—both here and abroad. For just as plywood saves time and labor and produced superior pre-war structures for you . . . so now are its many advantages contributing to the war effort. But after Victory, this Miracle Wood will be in position to help you more than ever before.



**TO HELP SPEED
VICTORY**
the Douglas Fir Plywood Industry is devoting its entire capacity to war production. We know this program has your approval.

● The interior of one of the Victory huts built by Texas Pre-fabricated House & Tent Co., Dallas. Walls, roof, awning flaps—all are Exterior-type Douglas Fir Plywood.

● (Right) Another style of hut, especially adapted for use in all climates. Each contains some 1400 sq. ft. of Douglas Fir Plywood. Plan now to make extensive use of Douglas Fir Plywood in YOUR post-war building.



**DOUGLAS FIR
PLYWOOD**

Real Lumber
**MADE LARGER, LIGHTER
SPLIT-PROOF
STRONGER**

**SEND FOR FREE WAR
USE FOLDER**

Scores of actual photographs show how Douglas Fir Plywood is serving on every battle front and on the home front. Write for your copy today. Douglas Fir Plywood Association, Tacoma, Washington.



DAYLIGHT ENGINEERING *in the Kitchen of Tomorrow*

Many remarkable new conveniences will take their place in the kitchens of tomorrow's homes. While homeowners may have to wait for several years after the war to obtain most of these conveniences, there is one that they can enjoy just as soon as postwar building begins. That is the convenience of Daylight Engineering.

Through use of large window areas and translucent decorative glass walls, even the most compact kitchen can be given an atmosphere of spaciousness . . . a light, cheerful place in which to work.

The transparent and translucent qualities of glass will also play an important part in the design of

other kitchen appointments; its range, refrigerator, cabinets, etc. The sanitary, acid-resisting surfaces of glass will make possible entirely new and different work surfaces. Vitrolite walls or wainscoting will find increased acceptance and use because of its easy-to-clean, easy-to-look-at finish.

Libbey-Owens-Ford Glass for windows, mirrors, wainscoting and work surfaces, and Blue Ridge Glass for partitions, are available in a wide variety of types and colors. Be sure your records of L · O · F Glass are complete.

Libbey · Owens · Ford Glass Company, 22-73 Nicholas Building, Toledo 3, Ohio.



LIBBEY · OWENS · FORD

QUALITY *Flat Glass* PRODUCTS

BOOKS

(Continued from page 18)

incidents, the class-struggle boys belly-aching that nothing is good enough, the Nationalists insisting that it was good enough for Pop and it is good enough for them. . . . Slice it any way you want, and it still comes out a *literary tract*." And: "The inability of the Nationalist school, for instance, to attain a greater stature may be attributed directly to their failure to arrive at an international attitude. Their mental and emotional points of

view are so hidebound by local and specific incidents that they can never rise to the majestic heights where a statement acquires universal significance. . . ." The spiritual poverty of these peddlers of isolationism becomes evident when one realizes that, as philosopher Sidney Hook has said, they are making a matter of fundamental principle depend upon the cruising radius of a modern bomber in an age of rapid technological development.

Although Mr. Kootz rejects the existence of traditional American ancestry for present day painting—though the Nationalists may have come from a

long line of American maiden aunts—Mr. Kelemen's book demonstrates that there exists such a tradition. Its influence was probably not very strong on contemporary artists, but in architecture, sculpture, weaving, painting, pottery and all kinds of utensils the early Americans developed a decorative and an organic structural sense, which is very closely akin to contemporary art forms. It may, therefore, be advisable for some of our painters to take a look at these pre-Columbian inventions: They have as much to teach us as Picasso and Rouault, and might well serve to accelerate public acceptance of contemporary work. It is quite likely that Mr. Kootz would have said something on this subject had Mr. Kelemen's original work been published before this.

Though rejecting the fashions of the moment: "Class struggle," Nationalism, Surrealism, Mr. Kootz does not retreat one inch in his support of the greatest artist of our time: Picasso. Of him he says: "It so happens that today the art of Picasso is the painting equivalent of our social thinking. He has kept pace with the advances of the new world, and our own men who share his morality and spiritual sensations are America's pioneers in participation in the conscience and consciousness of their time." And he quotes Abraham Rattner, foremost of these pioneers: "The artist seeks to feel the wave length, so to speak, of life's living forces, aspirations—the amplitude of its promise, meaning the throb of its particular joys and sorrows—its vitality, its weakness, its power, its sensitivity, its transcendent qualities, its damning handicaps—the principle of its cohesion, its form. . . . The pulse of *now, today, our time* has its very own quality as well as its own tempo. It demands its own form, its own means of plastic expression."

The book is full of fine illustrations, though the color reproduction process seems to have failed badly in one or two instances. The writing is punctuated with categorical pronouncements on the author's preferences and pet phobias—all of them well documented in only too short a text—a rare complaint about a book on art. Any criticism one might want to make of this book would concern the selection of representative American artists: there can not be any objection to including Rattner, Quirt, Morris and Davis. It does seem unpardonable, however, that Mr. Kootz in a work of such high standard included the sterile abstractions by Balcomb Greene, and omitted the exciting and imaginative painting of Hélio and Gorky. The latter, in particular, has been readier

(Continued on page 116)



'WAY OVER YONDER

Off in the haze of tomorrow lies the brighter day beyond victory, when we can again make Von Duprin devices as well as we know how, and can supply them in unlimited quantities.

In the meantime we are keeping faith with the occupants of your buildings. For today's Von Duprins are sure and fast in operation, are safe beyond any question. Plain and simple in appearance, they are made only of tough, fracture-proof malleable iron.

They are, in actual fact, sturdier and surer than many former models which gave complete satisfaction after twenty to thirty years of service on busy doors.

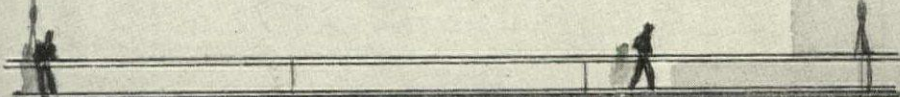


MEMO FOR POST WAR PLANNING

Household operating and upkeep expenses come out of the same pocketbook as mortgage amortization payments. High-quality equipment, as supplied by General Electric, usually reduces monthly operating bills more than it increases monthly payments on the house...so actually it costs less to live better.

Remember, General Electric high-quality equipment will best serve the interests of your after-Victory clients or customers.

GENERAL  ELECTRIC
HOME BUREAU • BRIDGEPORT, CONN.



1. LAND



2. STRUCTURE



A HOME

7. What methods can be adopted to shorten the processing time?

	Time Unsatisfactory	Time Satisfactory
Builders and realtors	85	7
Building money groups	128	27
Dealers and manufacturers..	64	6
	277	40

Builders and Realtors

"Have a credit agency approved by FHA in each city. The builder could apply there for credit information at the time the prospective purchaser made his original deposit and be in a position to file an approved report with his mortgage application."

"Give local offices more authority. They now follow too rigidly the rules made in Washington that are not applicable to local conditions."

"With relief from the present critical-material shortages, procedures can be greatly simplified."

"Establish a new position in FHA—a sort of public relations man as a go-between for the contractor and underwriter."

"I have worked as a valuator, mortgage risk and preliminary examiner in FHA. There are a number of experimental items in their reports that could be eliminated."

"Land-planning division should work more closely with local authorities."

"WPB is the cause of most delays."

"The architectural department, especially, is full of red tape."

"Continue the method of telephoning applicants instead of communicating with mortgagee by mail."

"Qualify builders and subdivisions. Then process on the basis of the builder's credit and his compliance with the subdivision restrictions."

Building Money Groups

"Have numerous one-man offices to facilitate processing."

"FHA should once and for all establish a clearcut set of rules and regulations and print them in intelligible language."

"Processing time can be greatly reduced by relieving the underwriting section of responsibility for verification of employment status, bank balances and terms of purchase. Forms should be furnished to mortgagees and responsibility should be given the mortgagee for closing the loans in accordance with FHA regulations."

"In periods of peak production, district offices are too undermanned to accomplish a prompt insurance of the bond and a transmittal of the necessary papers back to the mortgagee."

"Valuations and architectural inspections should be handled by part-time, local, fully qualified district appraisers; not by salaried employees travelling hundreds of miles to make a few inspections."

"A planning committee should be set up representing FHA, mortgagees and servicing agencies."

Dealers and Manufacturers

"Pre-appraisal is possible, particularly in the case of lower-cost homes. Pre-appraisals would be shaded up and down depending on the value of the lot and the credit rating of the owner."

"More field offices needed. We have to go two hundred and forty miles for every contact with FHA."

8. Should FHA include the insurance of commercial buildings and community structures necessary to a planned community?

	Yes	No
Builders and realtors	89	56
Building money groups	82	156
Dealers and manufacturers..	81	52
	252	264

Builders and Realtors

"Yes, but only for essential stores."

"Would assure residents a wholesome environment."

Building Money Groups

"No, a planned community should not need FHA underwriting on every flagstone, shrub and stray dog to be successful."

"Danger would be overexpansion of store buildings to create higher value for land."

"Possibly a higher premium rate than on residential property would be justified."

"I don't believe the Government should be invited into this field. After all, that is a business venture. There has always been sufficient money to finance sound business and there always will be. Too many businesses have been started on a shoestring without making it possible to start many more with 80 or 90 per cent financing of the physical structure."

"A recent survey of seven miles of a second-rate business street in our city (Chi-

cago) showed 189 vacant stores. It seems hardly necessary to provide Government insured loans to stimulate the erection of more stores. Your attitude toward a long-range program of FHA insurance depends on your political philosophy."

"Yes, when necessary to maintain values and community stability."

"No, we would have too many Arthurdales."

Dealers and Manufacturers

"It would prevent the erection of shoddy stores out of harmony with the rest of the community."

"With safeguards this would probably open up a great potential postwar business. Practically every commercial area could stand improvement."

"It would certainly help the small business man. There is plenty of money available for financing structures leased to national chains but the small business man is not able to get decent quarters. It is about time this group had a break."

9. Has your treatment by FHA officials been equitable?

	Equitable	Yes and No	No
Builders and realtors	84	11	24
Building money groups	168	10	57
Dealers and manufacturers	89	13	16
	341	34	97

Builders and Realtors

"Often find the local offices more critical than Washington. They hesitate to be frank and lay the cards on the table."

"Local offices okay. Too much red tape in Washington."

"Fine, always willing to open a case with proper foundation."

"Friendly, but they are not making 90 per cent loans. That accounts for the lack of building in Portland, Ore., as against Seattle, where they really make 90 per cent loans."

Building Money Groups

"I am surprised that it has been able to attract the caliber of men it has with the meager salaries paid."

"Nothing but praise for the way FHA operates."

"Oh, my Aunt Harriet! Have you ever done business with a bureaucrat?"

"An irritating practice is the frequent renegeing of the FHA on the findings of their inspectors. The Washington Administration should absolutely prohibit other part-time employment of either FHA officials or personnel. They should particularly not permit them to be employed in real estate offices, architectural offices or savings and loan associations. The reason is obvious."

"Any broker's office or fly-by-night builder has been able to get more cooperation than the average institutional lender."

(Continued on page 118)

start an architect on a plan now



Question—Why plan when you can't build?

Answer—We Americans have made a promise to supply jobs to our men in the armed forces when they come home. Only with definite plans started now and completed before the war ends, can the promise be fulfilled quickly. Planning takes time.

Question—Who's available to draw such plans now?

Answer—Numerous talented architects and engineers, most of them outside the area of military service.

Question—Why is full postwar employment in the Building Construction Industry of special importance to me, a business man?

Answer—The Building Industry, made up chiefly of hundreds of small firms, is America's No. 1 Industry. It must employ a large part of the postwar millions.

Question—How can we have full employment in this big industry quickly after the war ends?

Answer—By starting plans for postwar buildings, urban rehabilitation, new town sites, etc., now, so they'll be completed and ready on V-day.

Question—What can I do to get the drawing of plans under way?

Answer—Call the need for planning now, to your school and hospital boards, for example, and to your local and state planning and governing bodies. Urge them to use available facilities of architects, engineers, contractors, builders, realtors, etc., for forward planning now.

DETROIT STEEL PRODUCTS COMPANY
Now Exclusively Engaged in War Goods Manufacture
Dept. NW-7 • 2270 East Grand Blvd. • Detroit, Mich.
Pacific Coast Plant at Oakland, California

Fenestra SUGGESTS

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



BOOKS

(Continued from page 110)

to experiment than any other young American painter who comes to one's mind.

Taken together, the *New Frontiers* and *Medieval American Art* represent not only an invaluable survey of the artistic achievements on this continent; they are an indication of the end of a period of slavish imitation or reactionary self-sufficiency, and point to a future in which this hemisphere will at last make its legitimate contribution.

GOALS FOR AMERICA. A Budget of our Needs and Resources, by Stuart Chase. The Twentieth Century Fund, New York City. 134 pp. 5½ x 8. \$1.

The Twentieth Century Fund is producing a series of booklets under the general topic of "When the War Ends." The writing has been entrusted to Stuart Chase who is well qualified for the job as one of the most successful popularizers of economics. His budget of our needs and resources—which will be followed by booklets on the problems of peace, etc.,—falls into three groups: general principles, living and work. It is the second one of these,

and particularly the chapter entitled "Shelter" which will be of greatest interest to the readers of THE FORUM.

Mr. Chase is exceptionally well informed on matters pertaining to the present situation as well as the future potentialities of shelter in the U. S. Intricate problems are frequently presented in a vivid narrative of personal experiences. In addition there are several statements well worth quoting:

▶ A recent survey by the Department of Agriculture disclosed that at least 2 million farmhouses are being inhabited at present in the U. S., which are unfit for human habitation.

▶ Houses in a typical New England town (Newburyport) fell into three categories:

Only 19% were in good repair.

40% were in medium repair.

41% were in bad repair.

▶ 49.2% of all American houses are in need of major repairs, or have no bath, or both.

▶ Quoting Miss Catherine Bauer: Between 1937 and 1950, sixteen million dwelling units should be built in this country, to care for population increases and to replace the *worst* of the substandard structures. . . .

▶ Quoting Charles Palmer, one-time Federal Housing Coordinator, speaking at a FORTUNE round-table conference: 1,600,000 nonfarm dwellings must be constructed annually for the next ten years. Of these private enterprise might build 1 million, Government 600,000 each year.

Mr. Chase, in commenting on the state of our vaunted standard of living touches on the crux of the matter: "One reason why the construction industry is in such a deplorable state may be because it has been tied all along to the cart of land speculation. The men who have put up the money, by and large, have not been interested in houses for people to live in. They have been interested in developing property as an investment, or as it has been described, in 'buying by the acre and selling by the front foot.'" This is obviously very much to the point. . . .

The booklet contains an amount of factual reporting that testifies to a great deal of objective research. It should be read by all those connected with building, not merely for its pertinent remarks on housing, but primarily because it relates this problem to all the other questions of reconstruction that will face us after this war. Everyone who has ever had anything to do with housing knows that it is intimately connected with other social problems; health, employment, social security, industry, farming, etc. Mr. Chase has related all these matters within a broad, coherent program.



Giving a Lift to the War

Getting ammunition to the gun crew on an upper deck, raising and lowering large airplanes between decks on aircraft carriers, moving supplies and heavy equipment in buildings in military establishments and shipyards — Sedgwick equipment is doing all these things quickly, safely and dependably. For War's changing problems as related to load transfer between different levels are being capably met by a Sedgwick engineering staff which has a half century of specialized experience to draw upon. And Sedgwick plants, modernly toolled, are standing by to convert blue prints into finished equipment which has a performance record second to none.

When it's a lifting problem — think of Sedgwick

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ELEVATORS ★ HOISTS ★ DUMB WAITERS



ONE CORNER OF THE SECOND FRONT

In this co-ordinated action by U. S. forces, tanks advance, followed by infantry, covered by artillery and an air umbrella. Fletcher Pratt, noted military authority, helped us prepare the picture.

Large quantities of our weapons and equipment on every battle front are made by Westinghouse. On the production front Westinghouse Air Conditioning and Industrial Refrigeration provide correct conditions of temperature, humidity and air cleanliness to make possible uniform quality, high precision, fewer rejections, faster output.

After the war, a thousand new-day needs will be met with Westinghouse "Conditioning". Better products at lower cost, greater year-round comfort, better living for all.

Westinghouse success with widely varied "Conditioning" problems is based on years of experience. The exclusive hermetically-sealed compressor assures economy, dependability, long life. Inquiries are invited from producers of war equipment and from postwar planners. Westinghouse Electric & Manufacturing Co., 685 Page Boulevard, Springfield, Mass.



PRAISE THE AMMUNITION— that does its job because the shot has been tested by plunging alternately in boiling and refrigerated liquid baths. If defects exist, this shock test makes them visible.



ACK-ACK MADE ACCURATE. For perfect fit, intricate matching parts of antiaircraft gunfire directors are gaged and assembled at constant temperature and humidity maintained by air conditioning.



VICTORY WALLOP. Garand rifle parts fit perfectly because they are inspected with precision gages, which are kept accurate by regular checking against master gages, in rooms held at specified temperature by air conditioning.



"SHIFT FIRE TO RIGHT." In the manufacture of vital radio and telephone parts, such as electronic tubes, relays and delicate instruments, air conditioning speeds production by controlling temperature, dust and humidity.

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

Westinghouse Air Conditioning

GEARED TO A THOUSAND WARTIME NEEDS

SPOTLIGHT ON FHA

(Continued from page 112)

"My firm has built more than 600 houses per year for the last five years. Practically all with FHA-insured mortgages. Delays, delays, delays! Outrageous system of controls. No private builder can exist under such a system."

"Their inspectors are arrogant amateurs."

Dealers and Manufacturers

"No. They have failed in their advisory capacity to manufacturers. There are too many politicians."

"FHA should not permit its officials to be entertained lavishly by builders, dealers or mortgage bankers. Nor should they be permitted to accept expensive presents at Christmas time. Pay them enough to buy their own drinks."

10. Any other suggestion for reforms?

368 suggestions for reform

22 "Get rid of FHA"

9 "It's OK as is"

Builders and Realtors

"With all the fine show of super-scientific appraisals by FHA, they automatically cut down any contract by ten per cent, basing their reasoning on divine inspiration or the degree of biliousness they are experiencing at the moment. Bureaucracy can breed its peanut crop of Neros. Despite FHA's fine work, an institution with so much power can be a dangerous force in the wrong hands. Someday it may decide it does not like the color of a builder's skin or his political ideology and cut down his loans twenty-five per cent, which would be

tantamount to ruin. While the same danger may be present in dealing with private institutions, at least there is the economic motive that acts as a great force against discrimination. I think the answer lies in an insurance system administered by a combine of large insurance companies and other lending institutions."

"FHA should insist on the adoption of a uniform mortgage law in all states that would permit the recovery of defaulted security within a reasonable time."

"There is need in the housing field of an organized appraisal agency."

"Inspector clinics should be conducted every four months. Owners attach great weight to the opinion of the inspectors. Many of them are badly informed and inexperienced."

"Discontinue the complaint department. Some of the people who buy homes for a nickel down use this as a means of high-jacking builders into giving them a lot of extras."

"Loan companies and builders should be advised of rejections in one or two days. Also be advised if there is a reasonable chance of the loan's going through."

"Builders should be kept informed of changes in regulations."

Building Money Groups

"Elimination by FHA, either through legislation or regulation, of the payment of premiums and rebates to contractors, subdividers and material men by financial institutions. Continuance of this practice, which is universal in the U. S., is harmful to the whole FHA program."

"To discourage switching of loans, the holder of FHA mortgages should be permitted to collect one per cent premium on unpaid balances in addition to FHA premium."

"Use FHA to control the overproduction of any one type and price of house. It would be a stabilizing force."

"FHA locally is holding down its appraisals in order to fight inflation, but there is no pressure on the savings and loan companies to do likewise."

"Limit loans to not over \$10,000 as most of the losses occur in the larger, more expensive homes."

"FHA prides itself on encouraging new subdivisions, but it does not give adequate credit in land valuations. Builders have found it more profitable to buy distressed lots in poorer sections. This is especially true in the Northwest."

"I hope they will retain the provision insuring loans direct to builders. In my opinion this was the greatest single help to us. Before that, mortgagees charged outrageous prices for temporary financing."

"We have put into effect a system of life insurance, in conjunction with our FHA loans. This is very popular, especially with our mortgagors in the service."

"I think the proposed ninety-per cent plan of the Federal Savings and Loan Associations will have a salutary effect on FHA. Competition will keep them on their toes and result in better service."

"FHA premiums should be increased on a actuarial basis to insure payment of interest and taxes during periods of unemployment, of physical disability and to provide full satisfaction of the mortgage balance in the event of the death of the principal financial support of the family."

"Adequate consideration has not been given to the fact that many FHA loans running twenty-five years will produce in

(Continued on page 122)



Atlas WHITE News



Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Bldg., N. Y.

YOUR COLORS AND DESIGNS LIVE LONGER IN FINE TERRAZZO



Terrazzo floor, made with Atlas White cement, Sebastian County Court House, Fort Smith, Arkansas. Architects: Bassham & Wheeler, and E. Chester Nelson, Fort Smith. Terrazzo Contractors: Taylor Marble & Tile Company, Oklahoma City.

Example: Floors of Arkansas Court House Decorated with Fine Terrazzo

Fine Terrazzo made with Atlas White portland cement gives permanent beauty and distinction to any floor.

Because it is long-wearing, *Fine Terrazzo* is particularly suitable for floors where continued good appearance is important and foot travel is heavy. You can use it in any design and in any combination of colors. There is a minimum of upkeep. The smooth, easy-to-clean surface retains its freshness of color and sharpness of design without replacement or repair.

For colorful, economical floors, specify *Fine Terrazzo* made with Atlas White cement. Its original beauty will endure for the lifetime of the building. (See Sweet's Architectural File, Section 11-19.)

* * *

Write for more news and helpful information about these and other uses of Atlas White cement: —Stucco, Portland-Cement Paint, thin precast Architectural Concrete Slabs, Light-Reflecting Industrial Floors. Write to White Cement Bureau, Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York City.

Non-Staining Mortar

Mortar made with Atlas White portland cement is durable and non-staining. It is suitable for setting any stone, including limestone, sandstone, marble and granite.

The pure white color of Atlas White cement mixed with sand of any color provides a mortar that harmonizes with the color of natural stone.

For mortar of strength, beauty and durability, specify Atlas White portland cement.

Who ever heard of a TREE being **WELDED?**



Welding is the very latest thing in building ships and airplanes . . . but it is an age-old story to Nature. A tree's great mechanical strength, for instance, comes from the welding together of its mass of cellulose fiber by a mysterious and elusive substance called lignin.

Almost 19 years ago the late scientist, W. H. Mason, long an associate of Thomas Edison, discovered a way to duplicate—and, in fact, improve upon—Nature's own "welding process."

The result was one of the world's most remarkable materials, Masonite* Presdwood,* the ligno-cellulose hardboard which, weight for weight, has steel-like strength . . . is glass-like in smoothness . . . provides unusual workability and almost limitless versatility.

The Masonite Process starts by "exploding" wood, without either damaging the cellulose or removing the lignin. The cellulose fiber, of varying

degrees of plasticity, is then welded together again under different heats and pressures, producing ligno-cellulose hardboards suitable for many special purposes.

Today, in America's War Program, Presdwoods have more than 500 uses—saving steel, aluminum, rubber and other critical materials—and are not generally available for civilian use.

After Victory they will again be ready to provide the homes you design with sturdy exteriors, beautiful walls and ceilings, built-in furniture, kitchen cabinets and counter tops, and many other attractive features. Masonite Corporation, 111 West Washington Street, Chicago, Illinois.

*Trade-mark Reg. U. S. Pat. Off. "Masonite" identifies all products marketed by Masonite Corporation.
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MASONITE PRESDWOODS



THE LIGNO-CELLULOSE HARDBOARDS



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Engineered to meet

Contractors' Fast Field Assembly Methods . . .

One Project Contractor handling Shower Cabinet Installation in quantities reports that BATHE-RITE is "the only Cabinet of various makes he has handled that is completely satisfactory".

BATHE-RITE Engineers anticipated fast "Assembly-line methods" of field installation when they designed BATHE-RITE Shower Cabinets. Contractors have since proved the outstanding advantages of Bathe-Rite's construction features, both in assembly-gang installation and in pre-assembling and moving cabinets to the job. By both methods, Bathe-Rite saved more labor and time, made more attractive, rigid high quality installations and met highest wartime standards.

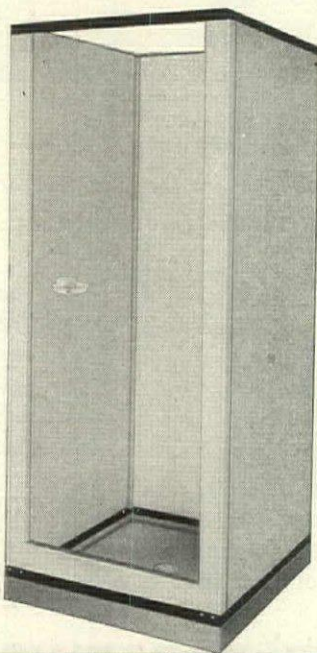
Let us tell you WHY Bathe-Rite Shower Cabinets prove superior from every standpoint of easy installation, appearance, convenience — for Housing, Factories, Institutions, Hospitals, Schools.

WRITE or WIRE for Details

Give name of project and quantity required. Delivery assured on any quantity.

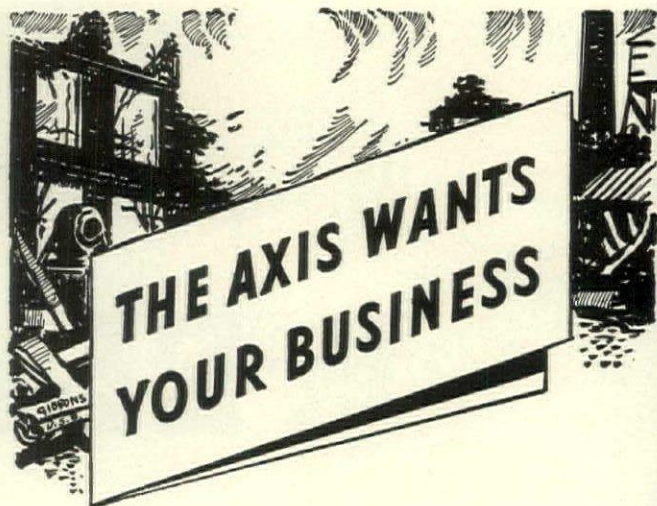


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THIS is more than a war of mechanical monsters clashing in the night . . . more than a war of production.

It is a war for markets—*your* markets! The Axis wants your business—wants to destroy it once and for all.

With so much at stake, there is no doubt you will want to do everything you can to meet this Axis threat. Two ways are open: Speed production and put 10 percent of your income into WAR BONDS! The only answer to enemy tanks and planes is *more* American tanks and planes—and your regular, month-by-month purchases of War Bonds will help supply them. Buy now and keep buying.

THE GOAL: 10% OF EVERYONE'S INCOME IN WAR BONDS

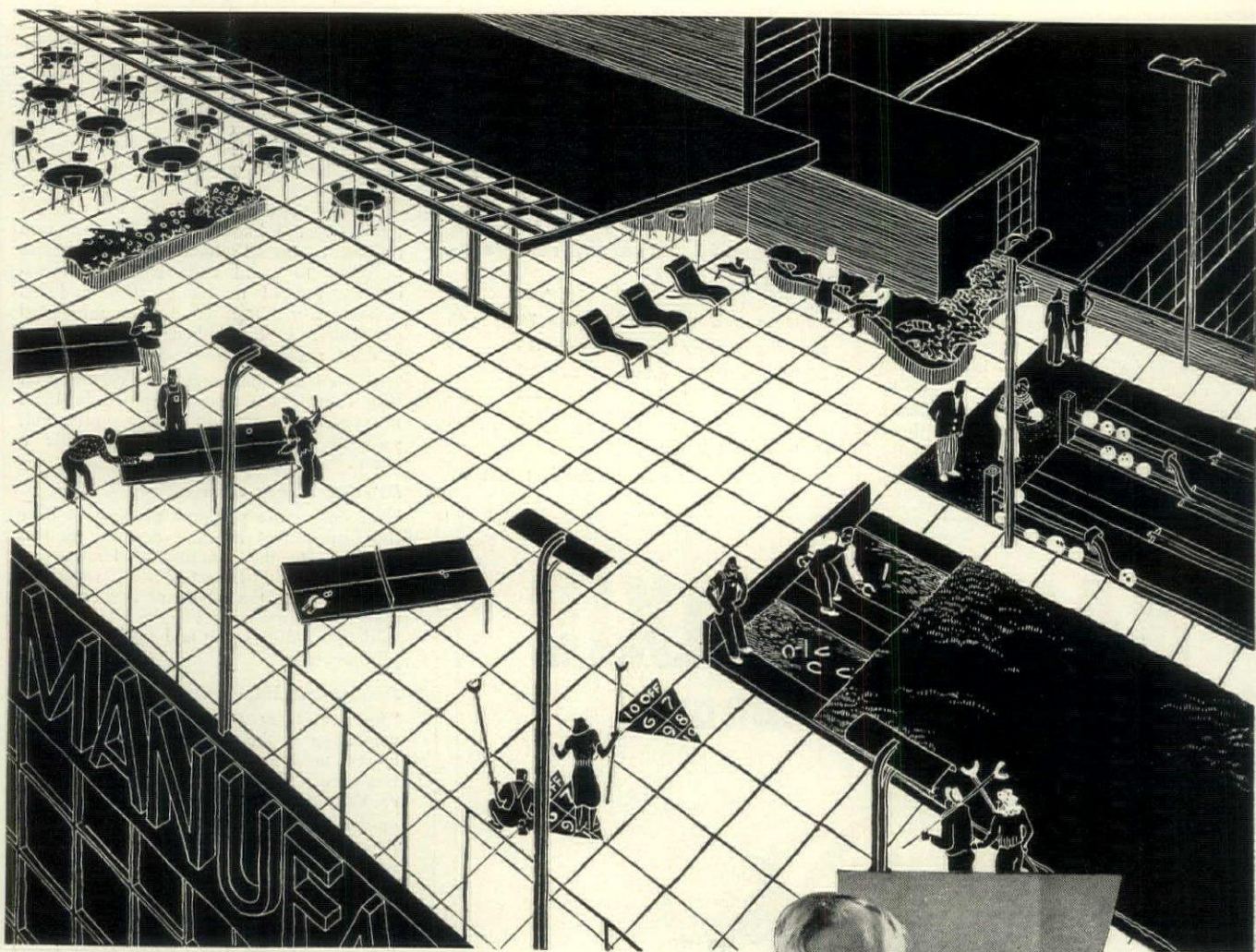
When you install the Pay-Roll War Savings Plan (approved by organized labor), you not only perform a service for your country but for your *employees*. Simple to install, the Plan provides for regular purchases of War Bonds through voluntary pay-roll allotments.

Write for details *today!* Treasury Department, Section R, 709 12th St. NW., Washington, D. C.



War Savings Bonds

This space is a contribution to Winning the War
by THE ARCHITECTURAL FORUM



FACTORY IN 194X

COMPLETE RECREATION FACILITIES for the use of employees at lunchtime and after hours . . . a roof-top cafeteria with tables in sunlight and shade . . . bowling alleys, floodlighted for evening use . . . ample space for deck-tennis, shuffle-board, horseshoes and other outdoor amusements.

These are exciting features of this factory project designed by architect Richard Bennett, member of the faculty of Yale University and of Vassar College, and winner of the recent Wheaton College competition.

"Facilities like these," says Mr. Bennett, "make the factory a potential community and social center. They can be located on factory roofs without necessitating any increase in floor or plot areas."



This is another in a series of architectural designs suggesting greater utilization of valuable roof space that is too often neglected.

Barrett coal-tar pitch and felt roofs have been standard for flat-roof construction since 1854. Yet they are ideally suited to accommodate the current trends in post-war planning. Whatever the design, Barrett Specification Roofs will continue to provide the maximum in dependable, long-lasting water-proofing and weather-proofing protection.

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SPOTLIGHT ON FHA

(Continued from page 118)

interest yield little more than the cost of servicing them during the later years. Lenders' experience in servicing FHA loans is that the process practically doubles or even trebles clerical overhead plus supervision. The additional costs should be compensated for through one of two methods—the writer favors the second—1) Through an interest rate of not less than 5%; 2) By a flat monthly collection service charge, the amount of which should be determined after a careful investigation of a number of institutions to determine the average cost. This charge would remain constant during the term of the loan. Churchill has stated our case beautifully. "We must beware of trying to build a

society in which nobody counts for anything except a politician or an official; a society where enterprise gains no reward and thrift no privileges."

11. Should the present system of valuation be revised so that the accent be on low ownership costs rather than low monthly payments? This might mean insuring high quality furnaces, refrigerators, etc.

	Yes	No
Builders and realtors	74	49
Building money groups	139	73
Dealers and manufacturers..	72	14
	285	136

Builders and Realtors

"If we don't wake up to the fact that we

have been giving small home purchasers a bad break, we are going to find ourselves pushed out of business by the pre-fabricators who can produce quality houses that won't fall apart in a year. Our business has not been conducted honestly. We gave the public tile baths and venetian blinds, but left out the insulation and waterproofing. We used the cheapest type of lumber. The amount of ill will created was terrific. I know several builders who refused to install phones in their homes in order to avoid calls from irate customers; one of my competitors had his index finger bitten off by an infuriated purchaser. If the industry is to survive it must realize it has a duty to society."

"As soon as manufacturers realize that they can do ten times as much business if they cut the costs of quality equipment, we will be able to give the public a break."

Building Money Groups

"Not unless the planners propose to have the Government insure everything that is necessary to the function of family life,—the butcher bill, cost of food, vacations. It seems that the planners are trying to plan the American people out of any initiative, self-reliance and pride of accomplishment."

Dealers and Manufacturers

"Any arbitrary rule such as cubic-foot valuations or the relating of monthly payments to borrowers' income should be tempered. They do not allow adequate consideration of efficient versus inefficient operating equipment nor high versus low operating costs. The objective should not be low amortization payments, which depend upon the appraisal based on first cost, but rather low home ownership cost, which includes operation and maintenance in addition to amortization. These are fundamentals which future FHA procedure should recognize and encourage in order to protect both the buyer and mortgage insurer. Houses are built for only one purpose—for people to live in. This means that the necessary functions of family life should be provided."

12. Should rental housing be further encouraged?

	Yes	No
Builders and realtors	47	110
Building money groups	51	185
Dealers and manufacturers..	48	87
	146	382

Building Money Groups

"Rental housing should be encouraged. We all know there are a great number of marginal workers who should never own homes. The slightest depression would wipe out their meager equities."

Dealers and Manufacturers

"Home ownership the basis of a stable country and good citizenship."
"Have you seen the National survey published in September 1942, by the Bureau of Urban Research, Princeton University. It bears directly on whether rental housing should be encouraged. According to this survey 86 per cent of home owners are glad they own their own home, 60 per cent of the renters wish they owned, only 8 per cent rent because they may have to move. In other words there is a latent desire for home ownership and in my opinion every effort should be made to make this materialize rather than encourage rentals."

NAIL THE AXIS WITH WAR BONDS

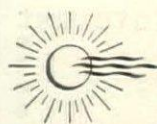


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FLOORING IN THOUSANDS
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STREAMLINE **HARDWOOD FLOORING**

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Sunshine and fresh air for tomorrow's better living



Imagine Ten Million Beautiful Homes

According to the National Resources Planning Board, there will be ONE MILLION HOMES PER YEAR built in America for the first ten years after the war! And with even further development in such modern conveniences as Ceco Steel Casement Windows, you can bank on those homes being beautiful, more livable. There will be an abundance of healthful, cheerful fresh air and sunshine provided by these easier-to-operate windows. War production now prevents your buying Ceco Windows for normal construction. But when you return to peacetime building, you will find this improved product there to help you raise even higher the standards of comfort in the homes you build!

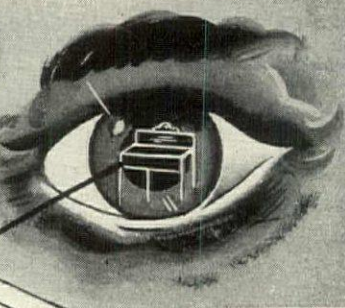
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Once in a while, after a hard day of building war materials for Uncle Sam, we like to dream a bit of the Roper (CP) Gas Range of tomorrow—the Post-War Model*. So far it's only a gleam in a designer's eye. But when it arrives, it will help you plan the ideal kitchen in the post-war American home.

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For your use get this valuable Free Booklet—"Care and Operation of the Gas Range."

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GENERAL SALES OFFICE AND PLANT: ROCKFORD, ILLINOIS

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In these days of hurried wartime construction you can't take chances — there's no time to waste. To be sure the job's done right — trouble free and fast — use Cabot's Shingle Stains. They do not peel or blister when used on unseasoned lumber. They penetrate well into the surface and protect the wood against decay and insects. They cost less than half as much as good paints, yet give maximum protection and beauty.

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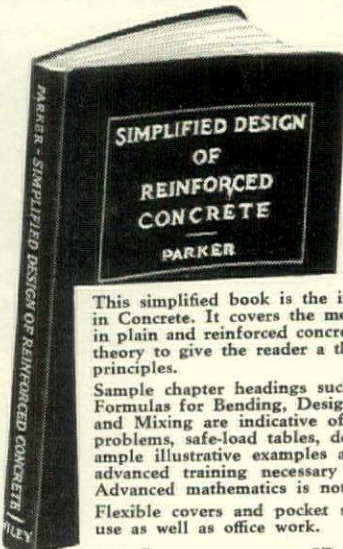
FOR FURTHER INFORMATION SEE OUR CATALOG IN SWEET'S

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by

Harry Parker

Professor of Architectural Construction, University of Pennsylvania



This simplified book is the ideal solution for a "refresher" in Concrete. It covers the most common structural elements in plain and reinforced concrete design, and includes enough theory to give the reader a thorough knowledge of essential principles.

Sample chapter headings such as Shear and Bond Stresses, Formulas for Bending, Design of Beams, and Proportioning and Mixing are indicative of the material covered. Practice problems, safe-load tables, derivation of basic formulas and ample illustrative examples are included so as to make, no advanced training necessary to understand the discussion. Advanced mathematics is not needed.

Flexible covers and pocket size make it excellent for field use as well as office work.

249 Pages 57 illustrations \$2.75

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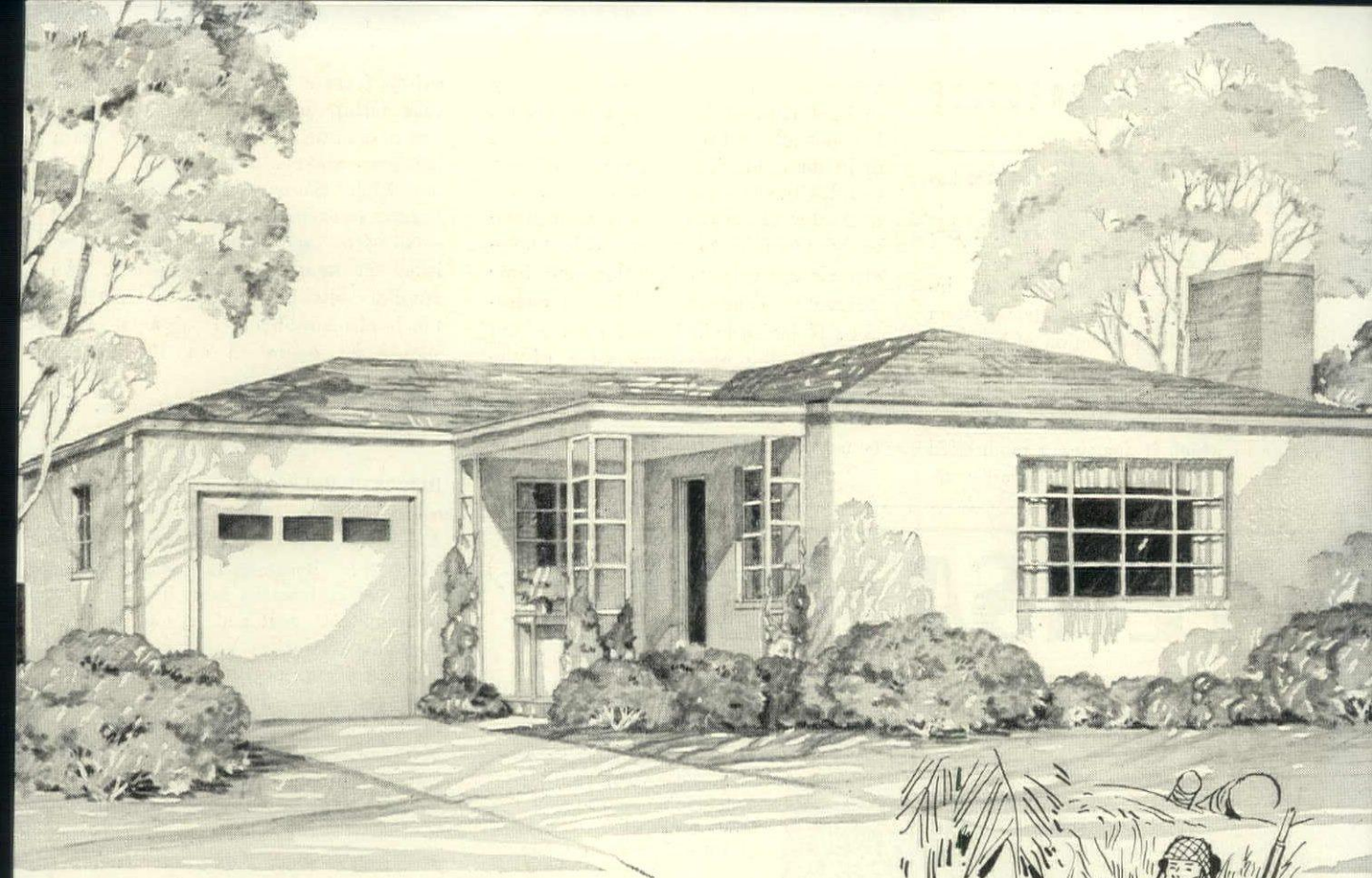
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Please send me a copy of Parker's SIMPLIFIED DESIGN OF REINFORCED CONCRETE on ten days' approval. At the end of that time, if I decide to keep the book, I will remit \$2.75 plus postage; otherwise I will return the book postpaid

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AF-7-43



FROM A FOXHOLE IN NEW GUINEA PVT. HOUSTON DREAMS OF

Home

"OH, BOY, when I get out of this jungle, I'm going to build me a sweet little cottage in California and stay there the rest of my natural life. It won't be big but it'll have every convenience I can cram into it . . . a shower with *hot and cold* running water for each bedroom . . . a handy little kitchen . . . and a certain girl named Sally who knows how to make a juicy steak sit up and say papa."

What kind of homes will the boys want when they get back from the wars in 194X? They've been fighting for a memory of home—a home better than anything else they've found in foreign countries. They'll be tired of strange

places—and they'll want something not *too different* from the home they left behind.

One thing you can be sure of, this mechanized war has given our fighters a healthy respect for the value and versatility of steel.

For post-war houses, steel will be increasingly important. Because it lends itself to mass production methods, steel windows, steel kitchen cabinets, pressed steel bathtubs, sinks and lavatories can be made cheaper and will cost less to install.

Prefabricated steel stairs, clothes closets, shower cabinets will reduce costs. Steel roofing, gutters, and downspouts will give the most economical service obtainable over a period of years.

Porcelain enamel, in a variety of colors, will give the architect something new to work with. It can be made in attractive paneling for bathrooms and into colorful maintenance-free shingles for roofing and a host of other products.

The war has speeded development of new steels, many of which will be available when the fighting is over. Our new booklet, "85 Ways to Make a Better Home" will show you what's new in steel products. Write for a copy.

U.S.S.
BUILDING STEELS

CARNEGIE-ILLINOIS STEEL CORPORATION, Pittsburgh and Chicago
COLUMBIA STEEL COMPANY, San Francisco
TENNESSEE COAL, IRON & RAILROAD COMPANY, Birmingham

United States Steel Supply Company, Chicago, Warehouse Distributors • United States Steel Export Company, New York



UNITED STATES STEEL

PRODUCTS & PRACTICE

(Continued from page 8)

PHOTOELECTRIC PROTECTION SYSTEM has a 1,500-foot operating range.

Name: Light Source Type L60M, Receiver Type A30M.

Features: Projecting a fence of invisible light, new photoelectric system is suitable to the protection of harbors, docks, industrial properties, airports and similar large areas. In operation, the light source is aligned with a receiver to which it focuses a modulated beam of infra-red light. Because re-

ceiver responds only to the frequency of light emitted from the light source, it is not affected by other artificial light or by daylight. This extreme sensitivity enables the equipment to function over a greater range than it has been previously possible to cover with photoelectric controls, and at the same time guarantees complete stability of operation. If invisible infra-red light is not required, the operating range of the system exceeds 2,000 feet. Once the beam of light projected to the receiver is momentarily broken, the alarm circuit goes into operation. An additional

safety feature is that either power or tube failure will cause the alarm circuit to operate as though the light beam had been broken. Receiver Type A30M and Light Source Type L60M are of rugged construction, built for unlimited service-free operation, and are furnished in weatherproof housings. An auxiliary latching relay with reset button is also supplied. Equipment is designed for operation on 105 to 125 volts AC.

Manufacturer: Photoswitch Inc., 77 Broadway, Cambridge, Mass.

IMPROVED VALVE prolongs life of steam trap.

Name: Corliss Valve, Ace Steam Trap.

Features: Because this valve never draws away from its seat, it is claimed wear on both seat and face of valve is prevented. Corliss Valve functions by rotating within a cylinder provided with inlet and discharge ports. In addition to its sensitiveness to slightest change in quantity of condensate, valve is extremely rugged and not subject to choking with scale, mud or sediment. Valve and seat are necessarily of bronze or stainless steel. Guide and chamber are of steam bronze and float is of seamless copper tested under high pressures. Body and cover are close-grained cast iron.

Manufacturer: W. B. Connor Engineering Corp., 114 East 32nd St., New York, N. Y.

SCREW for wood and plastics.

Name: Twin-Fast Screw.

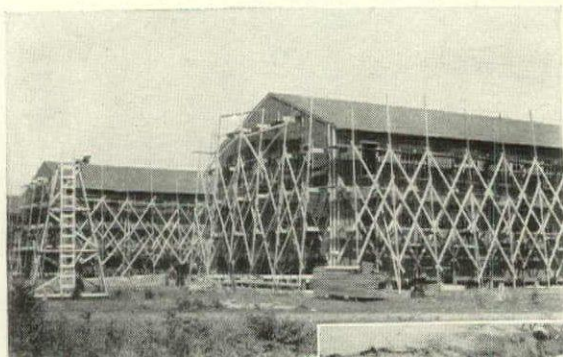
Features: Two parallel threads starting at opposite sides of shank terminate in a centered point. This construction affords a greater thread pitch than conventional screws do, so that driving speed is claimed to be double, although driving torque remains nominal since there are a standard number of threads per in. Because screw is

cylindrical (not tapered), it has greater strength and holds tighter. Balanced point formed by two threads prevents off-center assemblies. Screws come in all standard sizes in steel and brass, with flat, round and oval heads.

Manufacturer: The Blake and Johnson Co., Waterville, Conn.

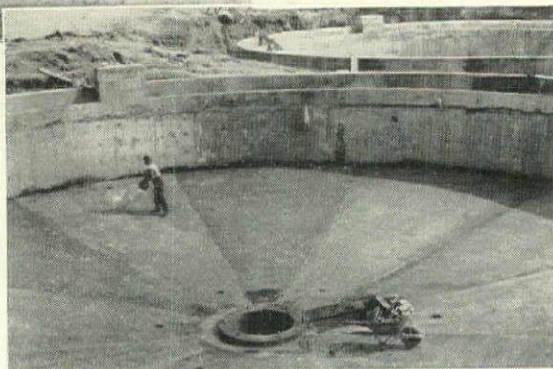
(Technical Literature, page 130)

VERSATILITY



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Sewer Disposal Plant

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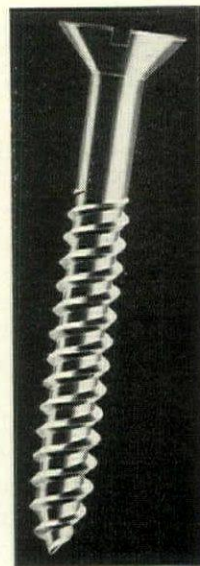
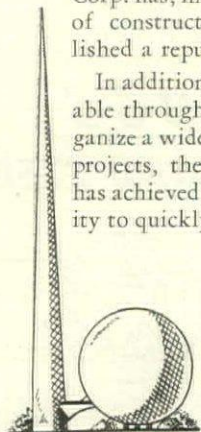
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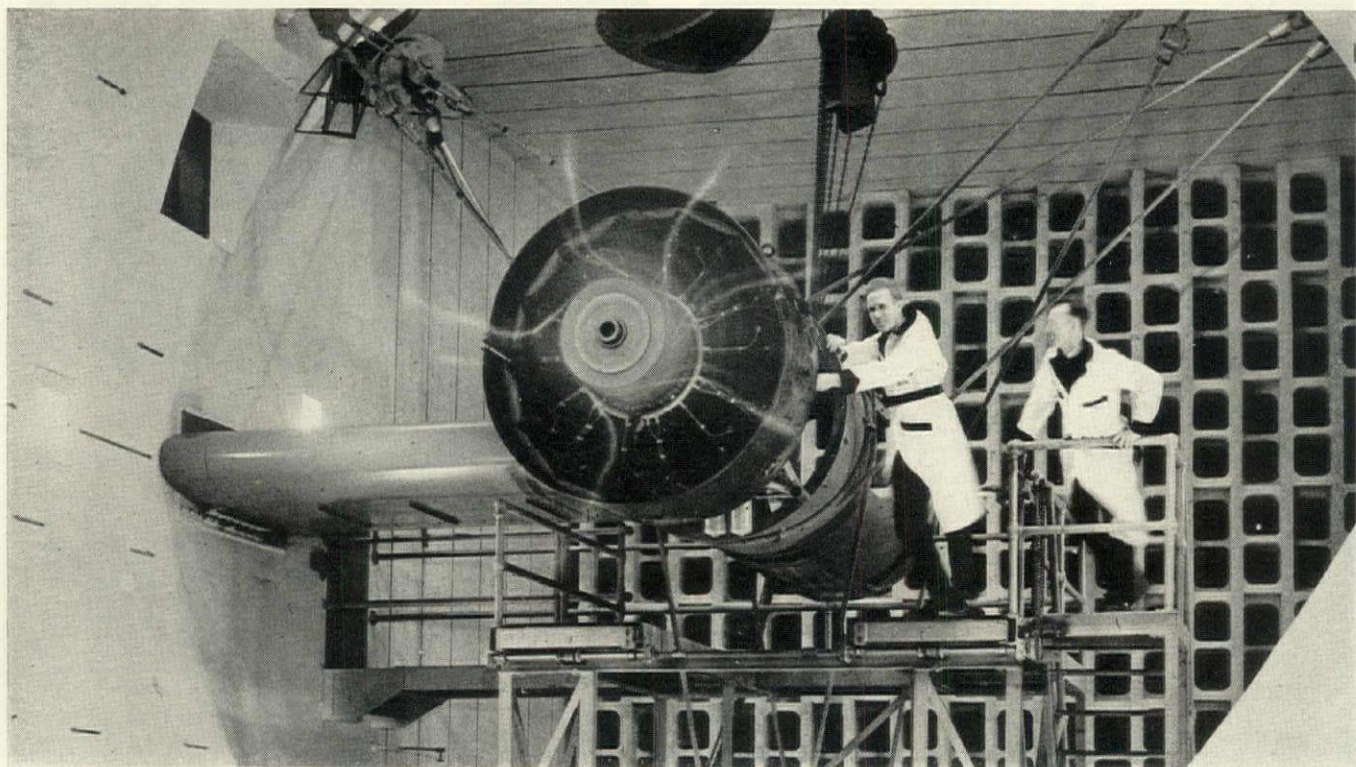
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about Aircraft Engine Research Laboratory

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2. 450,000 cubic yards of concrete and more than 8,000 tons of steel were used.
3. Water cooling tower has operating capacity of 47,500,000 gallons per day.
4. Electrical capacity has a total connected motor load of 109,160 horsepower.
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6. Huge refrigerator plant makes possible 67-degree below zero wind tunnel tests.
7. 556 telephones and extensions are required.

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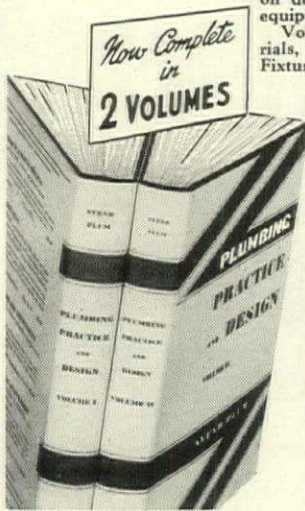
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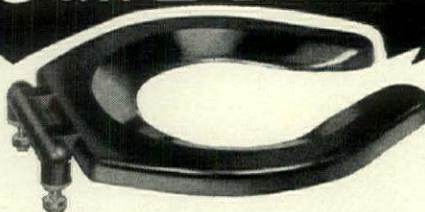
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CONCRETE DESIGN. *Simplified Design of Reinforced Concrete*, 249 pp., 5½x8. Textbook is one of a series of elementary books on structural design. Preliminary knowledge of mechanics and algebra are the only preparation necessary for study of this book, which is a complete exposition of the underlying theory and principles of concrete design. In addition to the usual design formulas, illustrative examples and tables are included. Architects, builders and engineers will find this a helpful reference in their work besides a valuable text for study. By Harry Parker. John Wiley & Sons, Inc., 440 Fourth Ave., New York, N. Y. Price \$2.75.

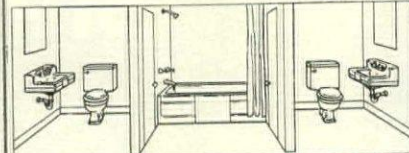
WOOD. *Wood and Its Place in the War Effort*, 32 pp., 8½x11. Beautifully planned and illustrated booklet shows some of the manifold applications of wood and its converted forms to production problems. Available in limited edition to companies engaged in war work. Kay Displays, Inc., 9 East 40th St., New York, N. Y.

SYNTHETIC RUBBER. *Synthetics in America's Rubber Program*, 18 pp., 8½x11. Series of four articles on synthetic rubber, what it is doing in the war, how it compares with ordinary rubber, what it is and how made, and what future it promises. Since three quarters of the entire wartime production will be butadiene synthetics, these articles deal largely with them. Prepared by W. D. Parrish, Technical Service Manager, Hycar Chemical Co., 335 South Main St., Akron, Ohio.

TEXTILES. *Continuous Process and Its Contribution to Textile Progress*, 28 pp., 9½x9. Chronicle of the major technical advances which have made textile history. Original illustrations follow the progress of textiles from a hand craft to a highly mechanized industry. Although published for private distribution, volume will be available in libraries, museums, textile schools, etc. Industrial Rayon Corp., 500 Fifth Ave., New York, N. Y.

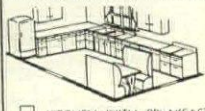

PLUMBING AND HEATING. *Bathrooms, Kitchens and Heating After "V" Day*, 24 pp., 8½x11.

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REFRIGERATION. *The Refrigerating Data Book*, 5th ed., 678 pp., 6½x9¼. Revised edition has been largely rewritten to give a more complete treatment of refrigeration principles and machinery. Book includes information based on current practice and theoretical explanations of refrigeration and air conditioning, together with analyses, examples, problems, solutions and illustrations. An advertiser's catalog is included in the appendix. *Data Book* may serve as a text and as a daily reference for men in the industry. Published by The American Society of Refrigerating Engineers, 50 West 40th St., New York, N. Y. Price \$4.

KITCHEN PLANNING. *You, Too, Can Plan Your Kitchen the Curtis Way*, 12 pp., 11x8½. Kitchens of various basic types are pictured and planning steps for acquiring a modern kitchen are explained. Cabinet units may be purchased separately and new units added when convenient. Illustrations also show uses for cabinets other than in the kitchen, such as a linen closet, bathroom cabinet, etc. Curtis Companies Inc., Clinton, Iowa.

BATHTUBS TO BOMBS. *How One Plant Went to War*, 20 pp., 11x8½. Pictorial report on wartime activities of plumbing fixture concern. Activities include assembly work, manufacture of bomb casings and machine tool castings. Vitreous china plumbing fixtures continue to be manufactured for cantonments, ships, war plants and housing. Eljer Co., Ford City, Pa.

DIESEL ENGINES. *Report on Oil-Engine Power Cost for 1941*, 44 pp., 8½x11½. Authoritative and useful data on cost of operation of diesel engines for executives and engineers concerned with the problem of economic power supply for industrial plants. Report covers 291 plants. Long-term comparative costs on some of these plants offer an excellent picture of true average costs, supplementing the figures for 1941. Published by The American Society of Mechanical Engineers, 29 West 39th St., New York, N. Y. Price \$1.25.

LIGNUM-VITAE. *Wartime Report on Lignum-Vitae*, 16 pp., 8¼x10¾. Report describes many diversified applications of lignum-vitae in the war effort, also prewar and postwar uses. This natural self-lubricating, tropical wood is now substituting for both critical metals and plastics in mechanical and industrial applications. Lignum-Vitae Products Corp., 96-100 Boyd Ave., Jersey City, N. J.

INSTRUMENTS. *Wheelco Measuring and Control Instruments, Bulletin No. Z6200*, 16 pp., 8½x11. Condensed listing and description of principal items of measuring and control equipment, including specifications and illustrations. Wheelco Instruments Co., Harrison and Peoria Sts., Chicago, Ill.

WIRING CODE. *Supplement to the 1940 National Electrical Code*, 50 pp., 3¼x6. Supplement contains all interim amendments which are to remain effective only during the war emergency. Also includes all interpretations to the 1940 edition that have been approved to date. National Board of Fire Underwriters, 85 John St., New York, N. Y.

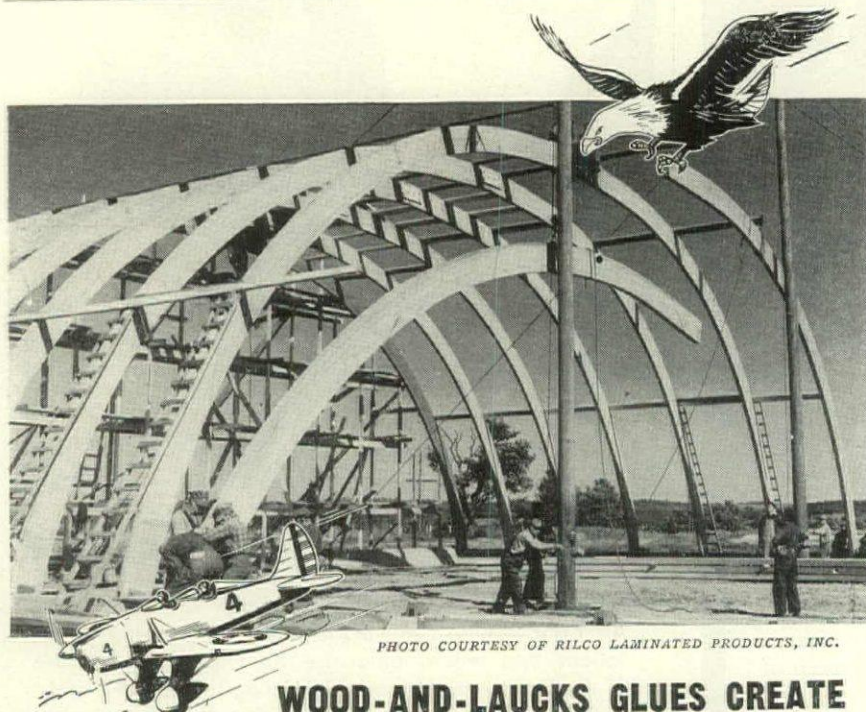


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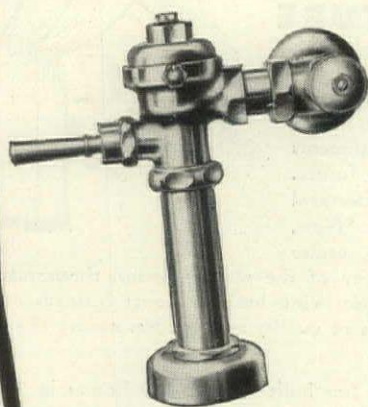
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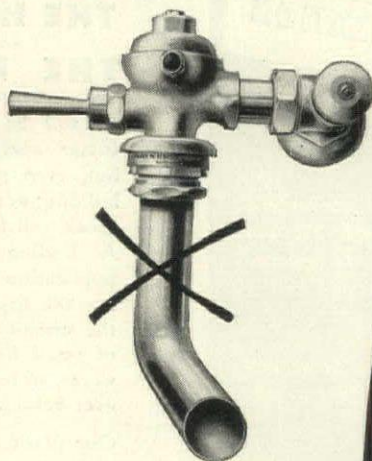


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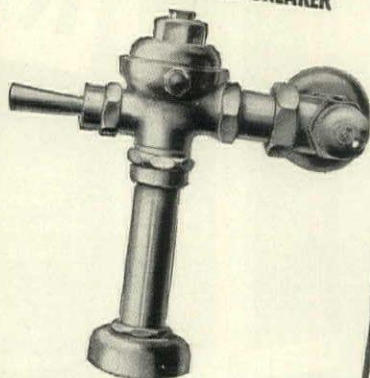


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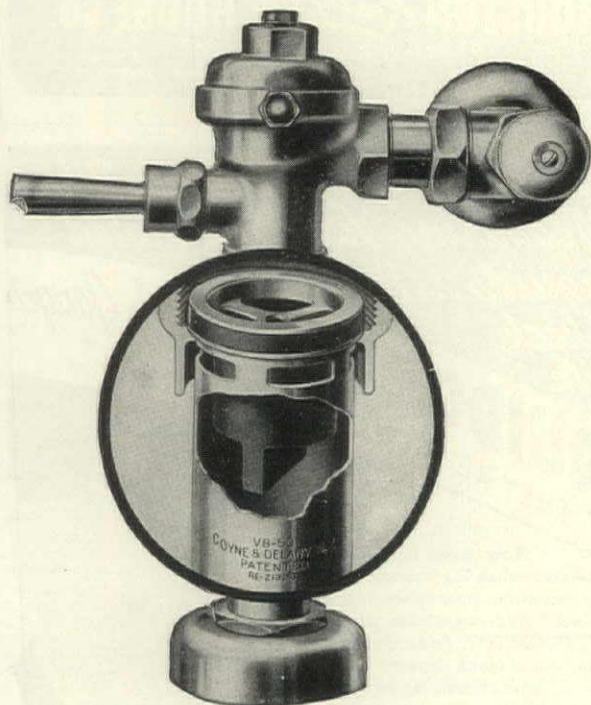
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Magnified cross-section view of Delany No. 50 Vacuum Breaker installed in Delany Flush Valve. Note the simplicity in operation, elimination of gadgets, unobtrusive design.

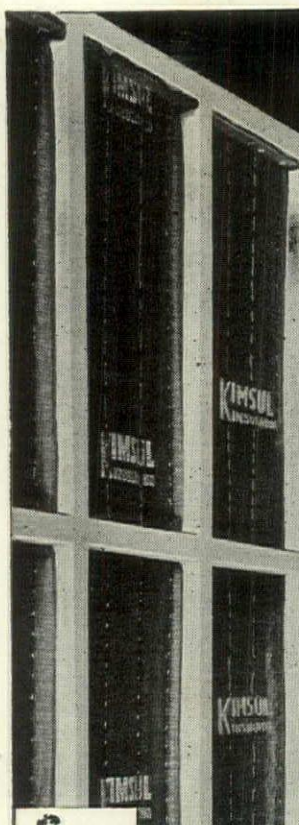
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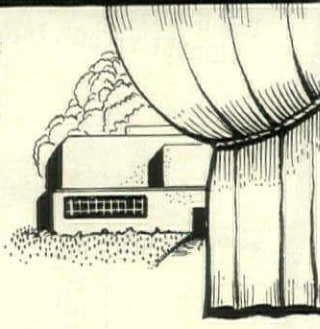
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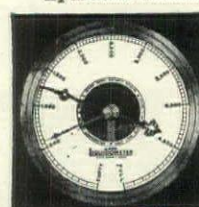
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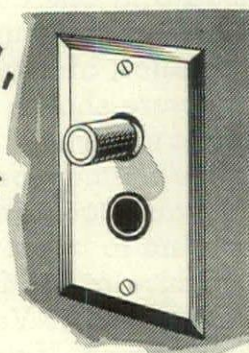
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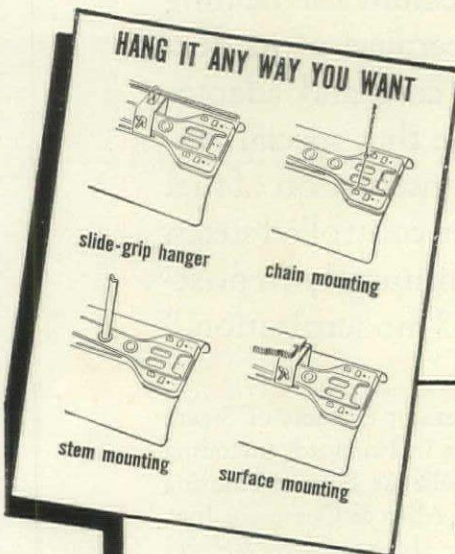
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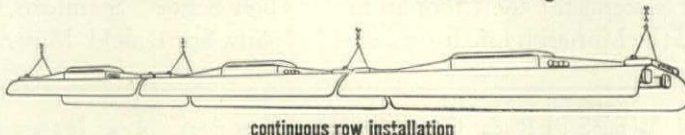
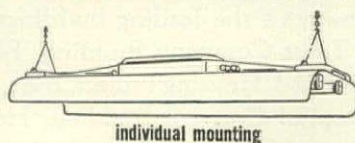
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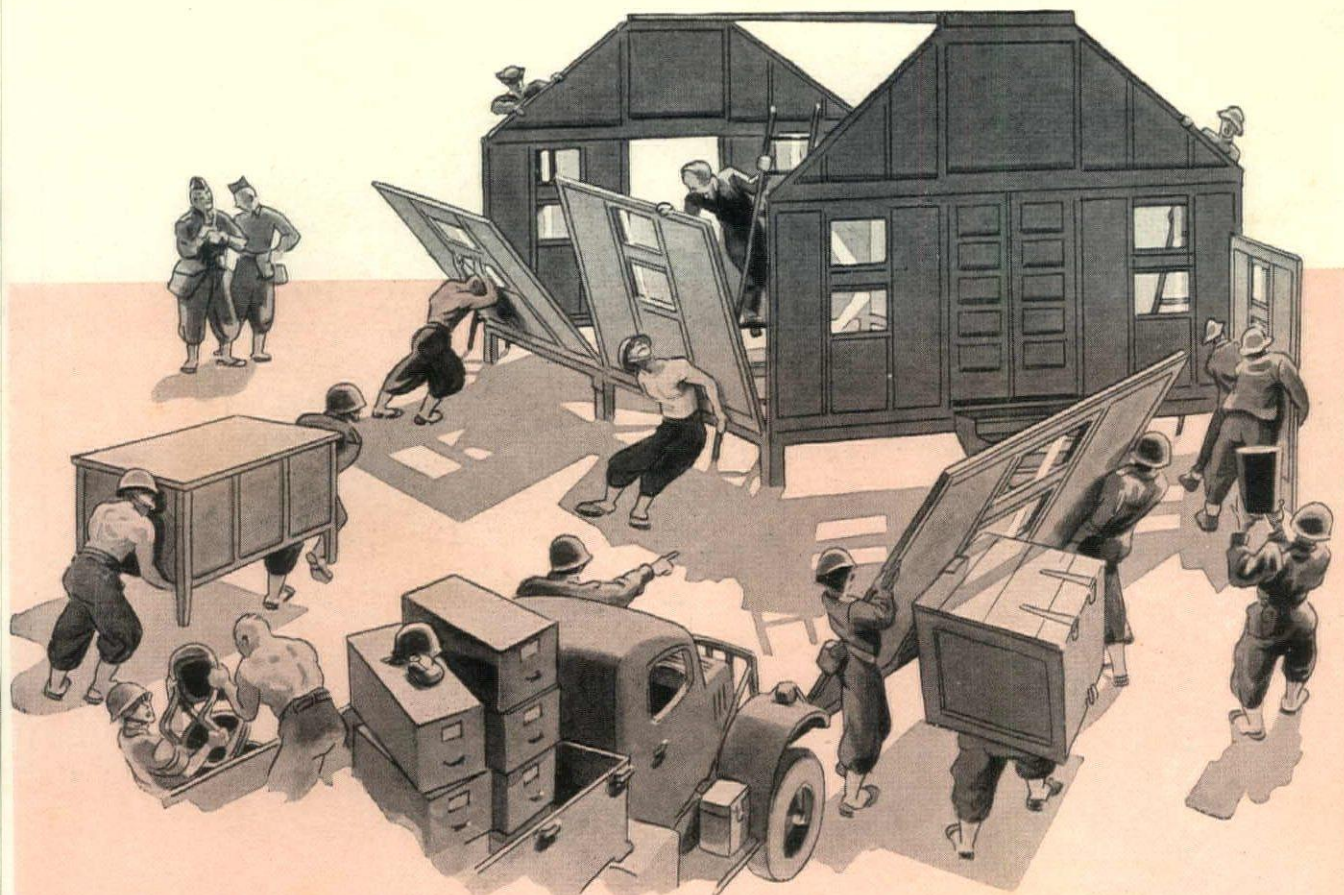
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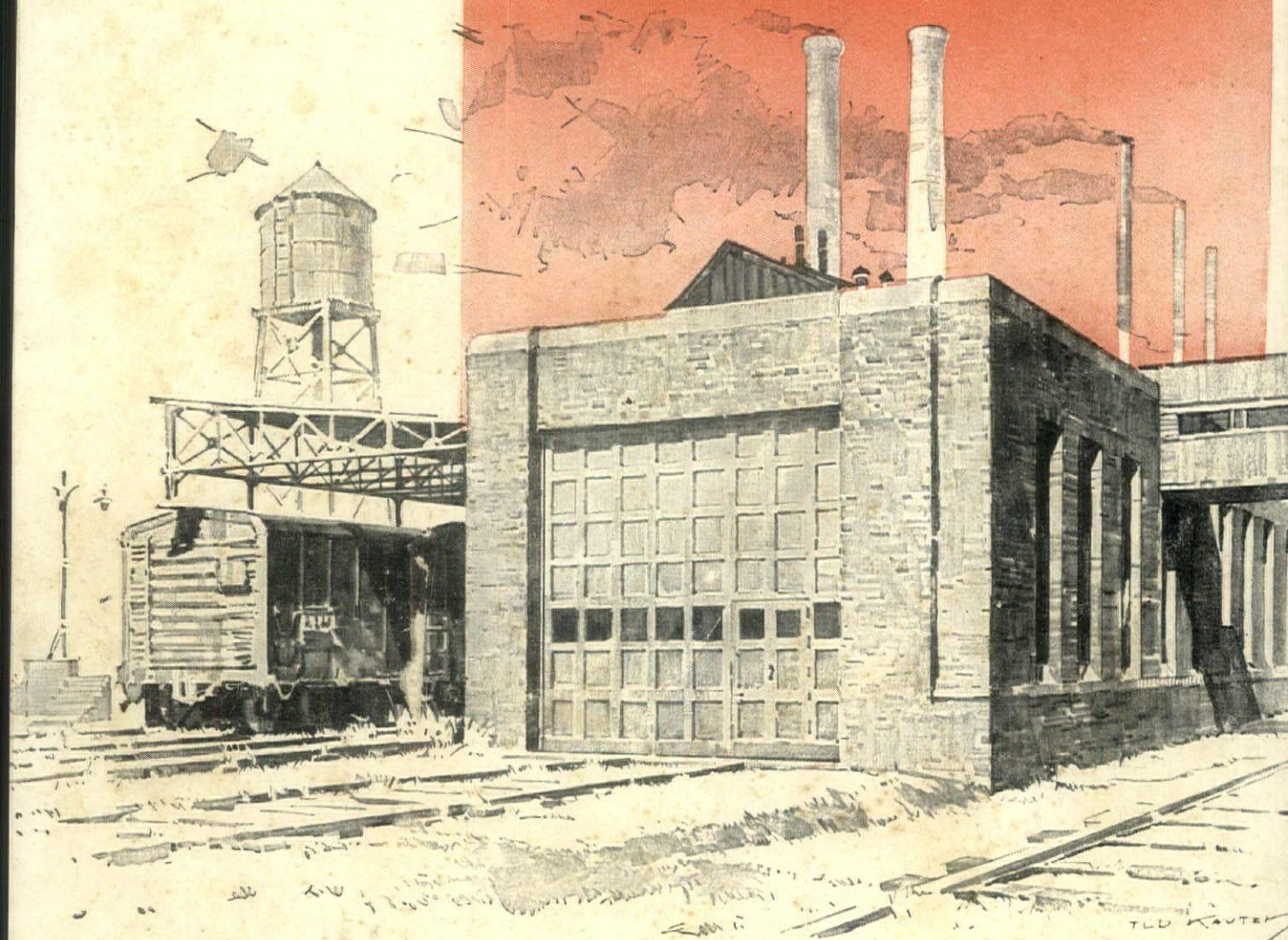
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