

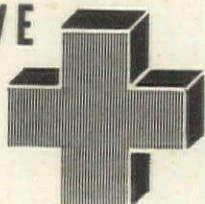
UNIVERSITY OF HAWAII
LIBRARY

APR 2 1945

THE ARCHITECTURAL FORUM



GIVE



Published by TIME Incorporated

EDITOR-IN-CHIEF.....Henry R. Luce

PRESIDENT.....Roy E. Larsen

EDITORIAL DIRECTOR.....John Shaw Billings

THE ARCHITECTURAL FORUM

MANAGING EDITOR

Henry Wright

ASSOCIATES: Louise Cooper, Mary Mix, Mary Sanders, Richard Saunders (Washington).

ASSISTANTS: Eleanor Bittermann, Joan Burns, Ruth Feierabend, Martha Howard, Mary Jane Lighthown, Charlotte Speight; Lawrence W. Mester (Production).

ART DIRECTOR: Paul Grotz

CONSULTANTS: Miles L. Colean, George Nelson

BUSINESS MANAGER: Vernon Hitchcock

CIRCULATION MANAGER: George Seufert

ADVERTISING MANAGER

George P. Shutt

PUBLISHER

HOWARD MYERS

IN MILITARY SERVICE: Robert W. Chastaney, Jr., William J. Conway, Robert B. Hanford, Jr., Joseph C. Hazen, Jr., George B. Hotchkiss, Jr., S. Chapin Lawson, Amnon Rubinstein, C. Elmo Smith, A. Banks Wanamaker.

THE ARCHITECTURAL FORUM is published monthly by TIME Inc., 350 Fifth Ave., N. Y. 1, N. Y. Subscription may be sent to publisher's office or to 330 East 22nd Street, Chicago 16, Ill. Address all editorial correspondence to 350 Fifth Ave., N. Y. 1, N. Y. Yearly subscription payable in advance. U. S. and Possessions, Canada, Mexico, South America, \$4.00. Elsewhere \$6.00. Single issues, including Reference Numbers, \$1.00. All copies mailed flat. Copyright under International Copyright Convention. All rights reserved under the Pan American Copyright Convention. Entered as Second Class Matter July 17, 1944 at the Post Office at New York, N. Y., under the act of March 3, 1879. Copyright 1944 by Time Inc.

TIME Inc., Time and Life Bldg., Rockefeller Center, New York 20, N. Y., also publishes TIME, LIFE and FORTUNE. Chairman, Maurice T. Moore; President, Roy E. Larsen; Vice President & Treasurer, Charles L. Stillman; Vice President & Sales Director, Howard Black; Vice Presidents, Allen Grover, Eric Hodgins, C. D. Jackson, P. I. Prentice; Comptroller & Secretary, D. W. Brumbaugh; Production Manager, N. L. Wallace; Circulation Director, F. DeW. Pratt. Producer, THE MARCH OF TIME, Richard de Rochemont; Director, Radio Programs Department, Frank Norris.

VOLUME 82, NUMBER 3

THE ARCHITECTURAL FORUM

MARCH

1945

NEWS 5

LETTERS 36

FORUM OF EVENTS 72

U. S. Navy Special Devices Division shows the folks how their boys are prepared for action.

INTERNATIONAL AIRPORT 97

The workmanlike design of the nation's first air gateway to Europe yields an efficient and unpretentious structure which sets a promising pattern for postwar airports.

PLANNING WITH YOU 107

An American architect, stationed in Italy as an ambulance driver, helps replan the bomb-shattered Italian village of Isernia.

THE WINDSOR CHAIR 112

Design analysis of an American folk product still unequalled for functional excellence and as an expression of available tools, techniques and materials.

PUERTO RICO 119

Richard Neutra's impressive public works program includes a complete new system of schools, hospitals and health centers.

HOUSES 131

A large house in Rhode Island . . . hillside house, San Francisco . . . a modern patio plan . . . New York town house.

PRODUCTS AND PRACTICE 143

Third in a series of articles on postwar building methods, materials and equipment, covering equipment for houses and other buildings.

BOOKS 172

Georgetown Houses of the Federal Period . . . Democracy Under Pressure . . . Coaching Roads of Old New England.

PREFABRICATION 190

Texas college students design a practical, compact house costing under \$2,000 and meeting minimum family needs.

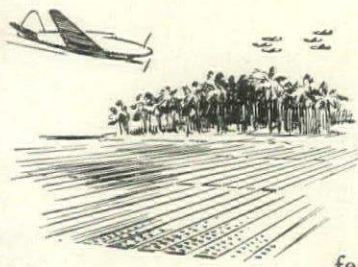
BUILDING REPORTER 218

Recessed cabinets for home fire extinguishers . . . new products . . . technical literature.

APRIL: A special issue devoted to a symposium on consumer preferences in postwar housing . . . including contributions by leading editors of general magazines.

THEY DIDN'T NEED WINDOWS ON GUADALCANAL...

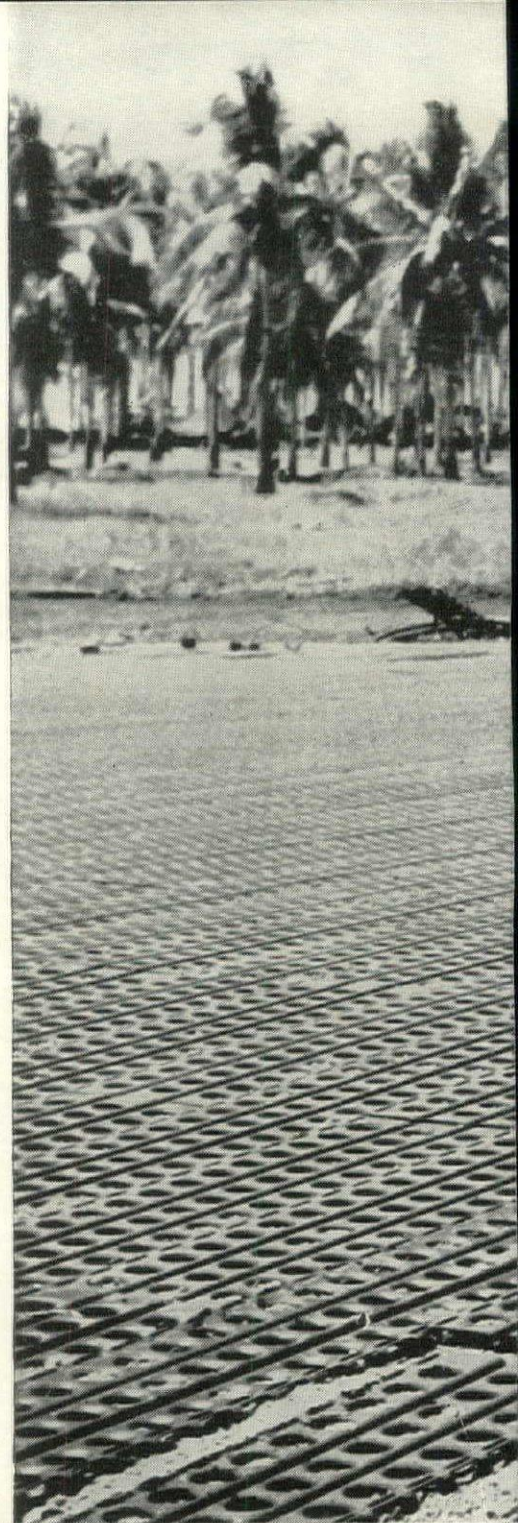
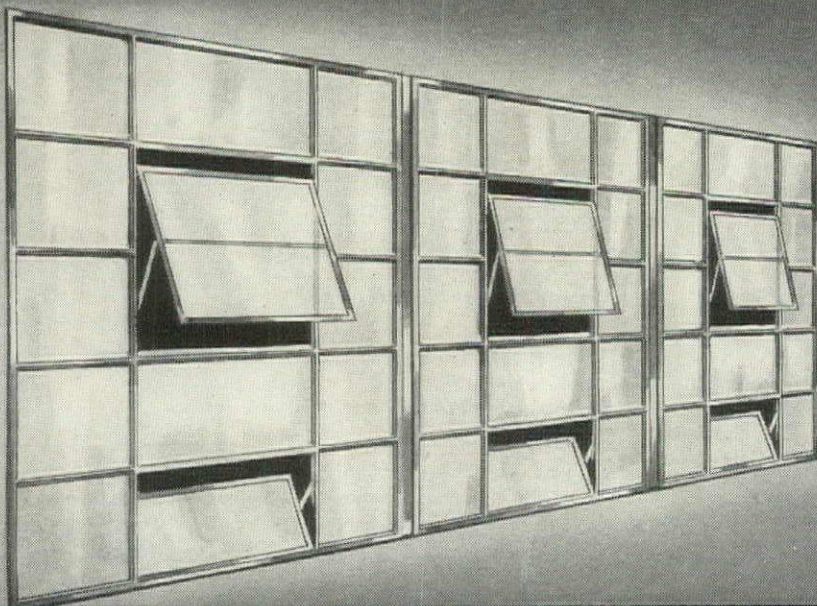
but they did need landing mats!



And they got them when they were most needed. In three years time Ceco has turned out millions of feet. Ceco landing mats have seen service on every continent . . . on every front.

This is another story of Ceco engineering skill. For landing mats are interchangeable, cut to the same exact pattern, and manufactured with closely engineered tolerances. As precisely, for example, as the New Ceco Intermediate Casement which will be available when the war ends.

This new Ceco window is of special interest to builders of hospitals and monumental type buildings. For like all Ceco Steel Windows it is *precision built...durable...beautiful*. A precision engineered window.



You'll specify Ceco, here's why! 1. *Ceco Steel Windows* have extra tight *all-weather seal*. 2. Always fit . . . no sticking, warping or swelling. 3. Far greater light area, let more sun in, easier to see out. 4. Controlled ventilation. 5. Use more steel, last the *lifetime* of your building. 6. Bonderized, a special protective coating against rusting. 7. *All these advantages at no premium cost.*

Ceco's line of Steel Windows includes Light and Intermediate Casements, Basement Windows, Architectural Projected, Commercial Projected and Pivoted Windows, Continuous Windows, Security and Utility Windows, Mechanical Operators, etc.

ENGINEERING



OTHER CECO ENGINEERED PRODUCTS:

All types of Steel Doors, Metal Frame Screens, Metal Lath, Metal Weatherstrips, Steel Joists, Steel Roof Deck, Meyer Steelforms, Adjustable Shores and Clamps, Concrete Reinforcing Bars and Welded Fabric.

CECO STEEL PRODUCTS CORPORATION

General Offices: Omaha, Nebraska
Manufacturing Division: 5701 W. 26th St., Chicago, Ill.



*The Mt. Washington Sanitarium, Eau Claire, Wisconsin.
Equipped with the new Ceco Intermediate Casement.*

MAKES THE BIG DIFFERENCE IN CECO CONSTRUCTION PRODUCTS

Do These Facts Surprise You?

Two out of every three homes today
have cracked walls and ceilings

One home owner in every four says
cracked plaster needs attention

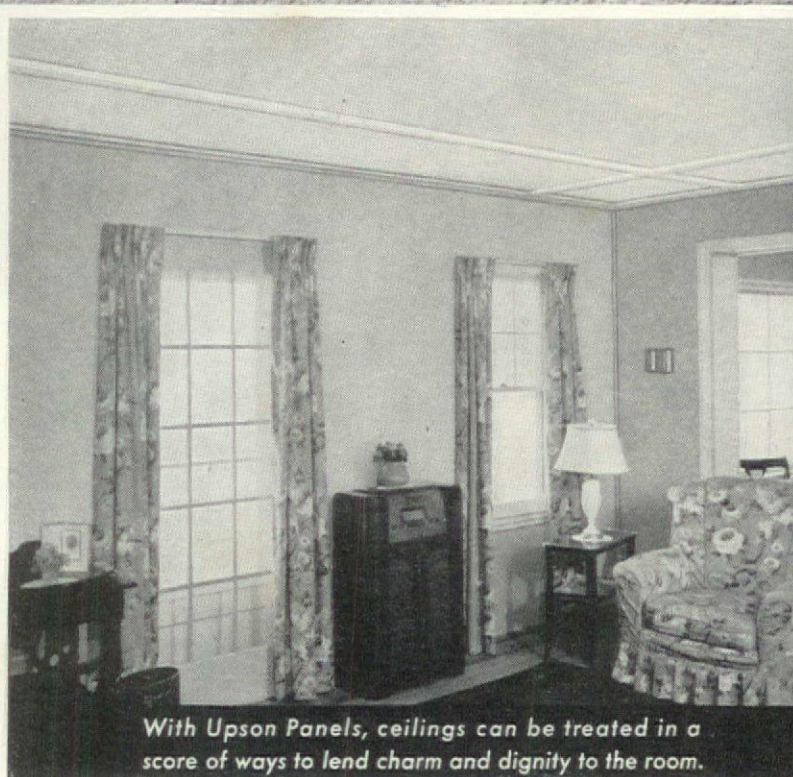
THESE FIGURES are not ours. They were revealed in a nation-wide survey made by the Reader-Consumer Panel of American Home Magazine.

If they surprise you, it's time to take serious notice *now* of the large number of Upson wall and ceiling jobs you can sell and install when material restrictions are lifted.

For, what other type of job will you have a chance to sell to one home owner in every four?

UPSON

P A C E M A K E R I N C R A C K P R O O F P A N E L S



With Upson Panels, ceilings can be treated in a score of ways to lend charm and dignity to the room.

Application is simple and profitable. The finished job is beautiful to look at—and permanently *crackproof*! Upson Kuver-Krak Panels, $\frac{1}{4}$ " thick, are made of the only material produced specifically for *re-covering* cracked plaster.

Consult your lumber dealer or write us for details on how you can begin. The Upson Co., Lockport, N. Y.

*Upson Quality Products Are Easily Identified
by The Famous Blue-Center*

NEWS . . . 56,000 more war houses (this page) . . . Wallace to spearhead urban redevelopment in Commerce Department (this page) . . . Murray Committee will gauge postwar building jobs (page 6) . . . House built like a plane is born in Wichita (page 8) . . . Prefabs for Britain fill many a plant (page 10).

RECONVERSION OUTLOOK

There will be no sudden lifting of war controls after the collapse of Germany. Prompt shifting of the war effort to the Pacific will mean tightened controls, especially of manpower to block any big shift from war to peace jobs. In communities where surplus manpower is available, Building can expect gradual acceleration of the H-2 or "hardship" housing program. There are no present prospects for easement of L-41 building restrictions.

Even when L-41 can be revoked, war price controls on building materials will stick. WPB and OPA are sure to use price controls during the reconversion period to check an inflationary scramble for materials. If L-41 were repealed entirely, Building would be the only major industry benefiting from material price ceilings whose end product is not price-regulated. A good bet is that L-41 authority for programming new construction according to price class will be the last part of that famous order to be wiped off the books.

Already price inflation in existing properties has reached threatening proportions. With Congress still reluctant to try to tax away speculative profits on real estate sales, OPA Administrator Chester Bowles asked for extension of the price control act to put a ceiling on property prices. But some thought it would be easier to check the bounding prices by clamping down on mortgage credit, the only kind of installment credit not now controlled.

Building's new war assignment was 56,000 more houses; public money would pay for 36,000, private capital supply the rest. After a long stall in the Budget Bureau, extension of the Federal Housing Administration's war insuring authority by another \$100 million was finally on its way to Congressional approval. This means that private building can soon get started on its quota of 20,000 houses. For the first time in many months the NH Administrator got approval for almost all the public war housing money he asked from the cautious House Appropriations Committee. The new appropria-

tion of \$84,373,000, which will soon clear Congress, brings public expenditure for war housing to more than \$1½ billion. Spurred by Army and Navy demands for immediate housing, the Committee, for once, did not try to whittle down NHA's definition of urgent need.

But Congress was not yet convinced of the need, almost equally urgent, for planning postwar public works. Of the \$75 million in federal funds it promised to state and local governments for works planning (ARCH FORUM, Jan. '45), Congress is ready to supply only \$5 million. While Mayor Fiorello La Guardia and others tried to convince Congress that pennypinching now would mean dollars wasted later, New York went ahead with its own plans for keeping Building busy in 194X. First step towards cooperative private redevelopment was reported from Brooklyn, where savings banks said they would team together to buy acreage that would be condemned by the city when it starts work on Brooklyn's proposed civic center. The banks will finance an apartment development adjoining the civic center site.

FULL BUILDING EMPLOYMENT?

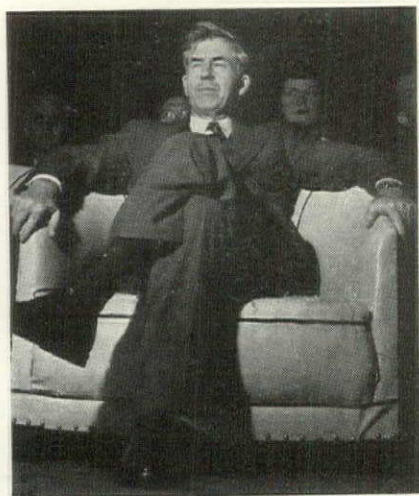
With Senate confirmation of Henry Wallace as Secretary of Commerce at month's end, rumors mounted in Washington of big things ahead for Building. Already building men are being quietly tapped for Commerce jobs. The Budget Bureau is looking at plans that would give the Department responsibility for an urban redevelopment program and for technical assistance to construction enterprise.

Because a thriving building industry is the keystone of full national employment, because the rebuilding of our cities is perhaps the most challenging opportunity before private initiative, men who have worked with Wallace say he can be expected to put these two goals near the top of the Commerce job. As Secretary of Agriculture, Wallace expanded the extension service that gives the farmer expert help in improving his product. It is a good bet that he will steer the Department of Commerce in

(Continued on page 6)

the same direction, make it serve the urban economy just as Agriculture serves the rural economy. One proposal now under study is to group under Commerce government aids and services relating to city planning, neighborhood development, traffic control, land use and taxation. The Department is already operating in some of these fields, but it lacks the direct and familiar approach that Agriculture has developed in its extension service.

Commerce has paid scant attention to building problems since Herbert Hoover's study of home ownership and of building codes. Hoover left the Department a weighty legacy of research activities, and the flow of statistical and fac-



WALLACE: let's work together

tual data has never ceased. But, for the most part, the Department has lacked the drive to put its research in useable shape and in the hands of men who need it. Examples:

► Census Bureau housing studies are a gold mine of information for those who know how to analyze them. Wallace's approach would be to have economists and marketing specialists relate these statistics to what the average builder should know about buying trends.

► Bureau of Standards materials testing is the most valuable part of the Department's present service to building. But the Bureau's last published study of building materials was so technical that almost nobody in the industry could understand it.

► Park-and-shop developments have been statistically measured by the Department, but the figures have never been interpreted.

Under an active service program as planned by Wallace, all these studies and many new ones could provide valuable guidance for building enterprise.

"If unemployment of men results from unemployment of ideas, we will know whom to blame."

—ANON.

"EVER-NORMAL" CONSTRUCTION

Like Henry Wallace, Senator James E. Murray (Dem., Mont.) believes the system that yielded a \$170 billion national income in time of war can yield 60 million jobs in time of peace. With Wallace, Senator Murray believes that existing government mechanisms—taxation, social security, foreign trade regulation, monopoly control, fiscal policy—can be used to supplement the competitive effort of private capital in maintaining an "ever-normal" economy.

The Murray bill, giving the federal government power to balance the national job budget, is now before Congress. It is no coincidence that the author of this plan for evening out the irregular cycles of business activity is interested in the building industry. For of all industries, construction shows the highest booms and the lowest busts. Last month Senator Murray said that his Small Business Committee will soon undertake the umpteenth probe of Building's problems.

The Committee will go to work on these questions:

- How much of a 60 million job goal can Building reasonably be expected to provide?
- How soon will it be ready to put men to work?



MURRAY: how many building jobs?

- Will it need special help to get off to a prompt reconversion start?
- How can a public works program best be used to keep Building on an even keel?

Unlike some of the Congressional

building inquiries that have preceded it, the Murray study will not be a witch-hunt. The Committee is not anxious to travel the rutted roads of old controversies. It hopes instead to point new directions.

REAL ESTATE PRICE CURB?

For months the Federal Housing Administration has spoken solemnly about the threat of runaway real estate prices. For months the Federal Home Loan Bank Administration has frowned at soaring appraisals. For months lenders have told each other how important it is to get a firmer grip on giddy values. But real estate and farm land prices are still chasing each other up the hill of inflation. A National Housing Agency "opinion" survey found that house prices in some war-crowded cities have increased as much as 75-100 per cent over the last four years. Small money was booming the market (it was easy to buy, impossible to rent), but big money was in it, too. Trustees and institutional owners shook many an expensive foreclosure out of old portfolios: in New York, Chicago, Los Angeles, Miami, it was a poor week that did not see a dozen downtown properties change hands. In a period of bounding prices and ready money, real estate remained the only major commodity unregulated by federal price control.

Last month the worry about real estate inflation spread beyond federal housing circles. Secretary of the Treasury Henry Morgenthau joined the general viewing-with-alarm, put in a word for a capital gains tax designed to halt speculation. Federal Reserve Board Chairman Marriner Eccles dramatized the danger for the Senate Banking Committee: "It means that the soldier will come home, buy a farm or home at inflated prices and then find the same thing happening to him that happened after the last war—the bottom drops out."

Eccles wants Congress to add a clause to the existing capital gains tax, strong enough to wring out all of the profit in quick turnover of real estate or securities. The tax would be graduated according to the length of ownership preceding sale. Profits from quick resales would be taxed away. Proposed more than a year ago to check farm land price rises (ARCH FORUM, Sept., '43), this kind of tax has so far failed to arouse much enthusiasm from Congress. There were no signs that Congress was ready to take Eccles advice, close the road up the hill that leads to mortgage collapse.



ARCHITECTS stage their own political rally at Waldorf-Astoria, hear Joseph Hudnut, dean of Harvard's Graduate School of Design (left), and George Howe, Public Building Administration Commissioner for Design and Construction. John Burchard (MIT) smokes a pipe.

PLANNING IS POLITICS

Weary of city planning and rebuilding as practiced on the podium instead of on the ground, some 100 top-flight architects and planners got together in New York last month to organize a society whose credo will be action instead of debate.

The members of the new American Society of Architects and Planners are men who believe that modern design is more than putting flat roofs and corner windows on little houses. In spirit, the Society is closer to CIO's Political Action Committee than to any traditional pattern of professional organization. Just as labor is beginning to understand that its traditional aims can best be achieved by action on the political front, conscientious planners are seeking the political force without which their professional aims may be forever frustrated.

Although ASAP is dedicated to action, opposed to fruitless verbiage, a semantic controversy pre-empted a large part of the first meeting, a day-long session at the Waldorf. (Shouted one member: "I am anti-semantic!") Heated discussion about what the new group should call itself was finally resolved in time to hear the National Housing Agency's Jacob Crane report on British planning and AFofL's Boris Shishkin tell about labor's stake in better building.

Dean Joseph Hudnut, elected ASAP president, told members that they cannot hope to be politically effective until they end separatism in their own ranks. "It is unthinkable that planners, however enraptured by the promises of science, can long continue an indifference to the interpretation of their subject matter in the language of structures set in space, or that architects, discover-

ing the true dignity of their art in social serviceability, should long neglect its power to give meaning and importance to the human drama."

The Society will make a beginning on its theme of linking planning to action by going to work to secure backing for a unified neighborhood development. Recognizing that sound planning and building calls for teamwork that will include not only architects and planners but also sociologists and economists, ASAP hopes to devise a pattern for such collaboration. George Howe is the group's vice-president; Hugh Stubbins, Jr., is secretary.

LOST & PROFOUND DEPARTMENT

"One New York decorator derived very happy inspiration from the sudden sight of a blue garbage can trailing a bit of watermelon."

HOUSE & GARDEN

BOOM FOR PREFAB

The first 500 barracks units promised by the U. S. to house French dock workers were already on their way. Last month WPB voted a top priority rating for the first 7,000 family units promised to Britain, approved a material allotment to cover the whole job of 30,000 houses. Enough space in British ships to deliver the houses would soon be earmarked. Even the closet door controversy (ARCH FORUM, Feb., '45) had smoothed into amity. The British negotiators had argued stubbornly for closet doors; WPB had been equally as

(Continued on page 10)



NHA's Charles Ascher, Marcel Breuer, Robert Kennedy (M.I.T.)



G. E. Kidder Smith, Philip Johnson, Harvard's Walter Gropius, Eero Saarinen



Lt. Vernon DeMars, Paul Lester Wiener, Elizabeth Mock (Museum of Modern Art)



Hugh Stubbins, John Johansen, Morris Ketchum, Jr.



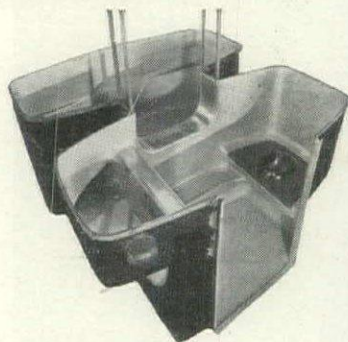
José Sert, Siegfried Giedion, Herman Field



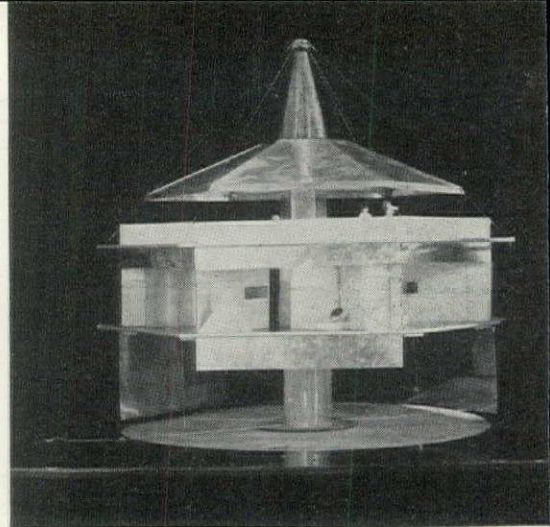
Boris Shishkin (AFofL), Oscar Stonorov, Catherine Bauer Wurster

Ignoring the past, embracing today, will this round prefab capture tomorrow?

Last month in Wichita, Kansas the first house completely engineered for factory production was finished—on paper. Beech Aircraft was turning out the first parts for a full-sized model. If the model meets Beech engineering tests, the aircraft company will stand ready to produce the house by the thousands. If the model meets Army Air Force tests for barracks use in the Pacific theater, both materials and immediate volume orders will be assured—and the mass-produced house, presaged by visionaries over the last quarter-century, will be on its way to a mass market.



PLASTIC BATHROOM in new Dymaxion will stem from this Fuller unit. The company has recently acquired patents from Phelps-Dodge.



ORIGINAL DYMAXION (1927) had two hexagonal decks from Duralumin mast. Walls between decks were translucent plastic. Rooms in new model have same shape but are curved on outer edge.

Inventor Buckminster Fuller likes to explain the tension support principle basic in his house design as a matter of using every existing force to maximum advantage. Fuller's radical re-design of house structure has existed as a stimulating theory for two decades. If the famous Dymaxion house is finally translated into the reality of mass production, it will be because powerful new economic and technological forces are available and because Dymaxion Dwelling Machines, Inc., a radically new kind of corporation, proves able to take advantage of them.

A major force—with all the pull of a giant vacuum—is the 94 per cent cut-back looming ahead of the nation's war-expanded aircraft plant. This is what made Beech Aircraft, whose output last year reached \$190 million, ready to listen to Fuller's plan for a house that could be built like an airplane.

Two million men and women are working night and day to speed the flow of war aircraft. The unplumbed political force of millions demanding the right to work has only just begun to be expressed through the labor unions. This is why the International Association of Machinists, now swelled to seven times its prewar strength of 100,000, defied old prejudices to appoint its president, Harvey Brown, to Dymaxion's board of directors, becoming at once the first union to be represented in the management of a private corporation and the first AFofL union to back a factory-produced house.

Symbol of a new force beginning to emerge in U. S. business, Dymaxion's president, William Stix Wasserman, is an international banker with a rather flamboyant talent for making money. But Wasserman represents more than capital seeking investment, more than the know-how for entering foreign markets—although both of these are impor-

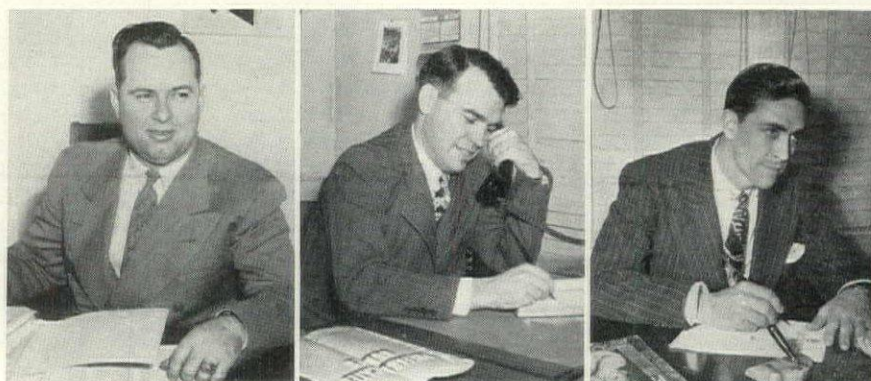
tant to the enterprise. He is, as his friend Henry Wallace put it, a "business man who understands the social value of business vision." His reason for backing Dymaxion: "The only excuse for capital is its willingness to take risks."

Precision Production. Operating within this capital-labor combine is the technological force that may be decisive in bringing the mass-produced house to birth. Growing up from a custom-building industry with an output of 3,675 planes in 1938 to a mass-producing industry with a 96,369 output in 1944, aircraft manufacturing has put in the nation's hands the most highly developed technology the world has ever known. "We no longer have to hope," says Fuller. "We go right to the tables and come out with a solution we know will be feasible today." Tools and techniques have been brought to a precision never glimpsed in the heavy engineering that invented mass production. Light engineering—as developed to produce, say, a 50 ton weight that will move through the air at about half the speed of sound—has yielded a new kind of mass production machinery, whose full range and flexibility have yet to be exploited. Add to

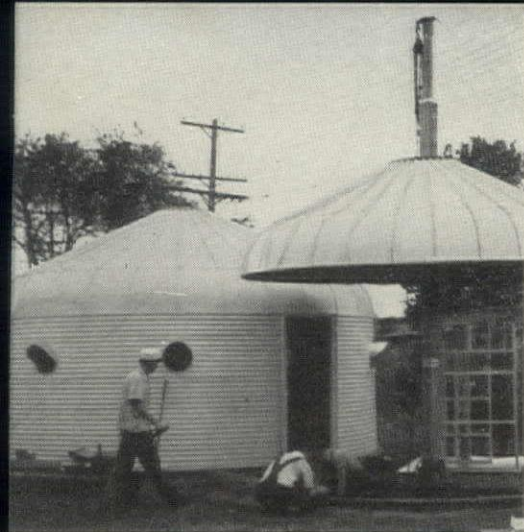
this the miracles of alloy chemistry—Reynolds' aluminum alloy with the tensile strength of steel at a third the weight, steel alloys with three times the weight-strength factor of earlier steel. Add in the size of the war-built facilities for producing these materials. You may reach Fuller's conclusion: "The U. S. must use its war-spawned technology to rebuild a war-shattered world."

Back of these new forces is an old force, tremendously accelerated by the bombs that have left 70 million homeless: world-wide housing need. Already representatives of the French and British governments are asking for quotations on 1945 delivery of Fuller's dwelling machine. And in the house-hungry U. S., those who heard about a \$4,000 house, completely equipped for livability even to air conditioning, were asking, "How soon?"

Farmers May Help. One big block of housing need will focus on the Dymaxion board through the member soon to be appointed by the National Farmers Union. Farmers' cooperatives, the firm hopes, will join with labor unions in boosting the house to the mass market



UNION LEADER C. R. Richards says Dymaxion design sells itself to machinists on the basis of their own shop experience. . . **REALTOR WILLIAM GRAHAM** will buy Dymaxions for 800 Wichita lots . . . **AUTO DEALER J. A. BUTTS** says he will put them up.



EL GRAIN BIN HOUSE Fuller developed in 1941 for housing collapsed under the stress of steel shortage. e were purchased by the Army and flown to far-off ts for barracks use.



BUCKMINSTER FULLER (above) at his desk, which is hung from fine aluminum wires. Completely rigid, desk illustrates tension support principle of house. Dymaxion officers Herman Wolf and Cynthia Lacey (below) show how tension-hung aluminum circle makes one phone serve three. Such Fuller capers encourage many to take crackpot shots at him.



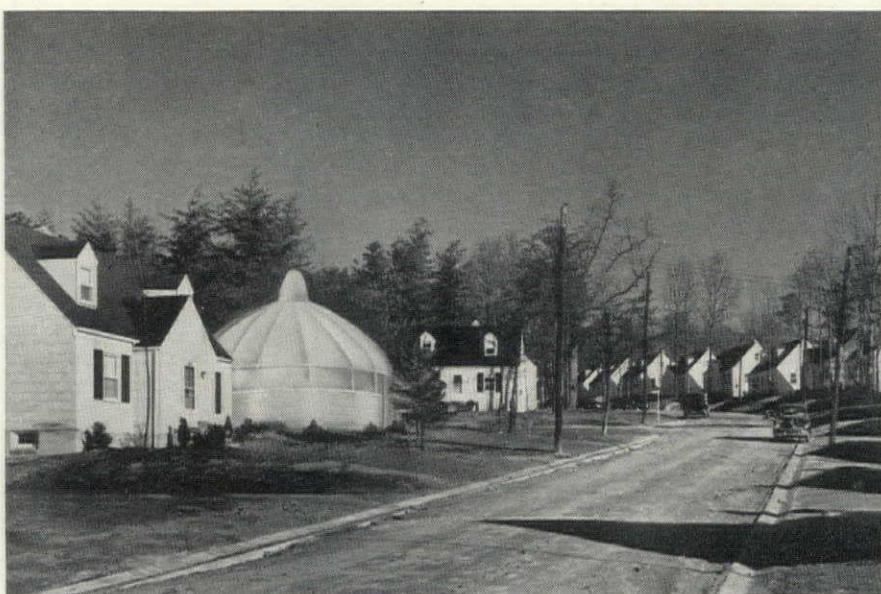
DYMAXION'S PRESIDENT William St. Wasserman believes the Corp. is right step toward 60 million postwar jobs. John Gaty, head of Beech Aircraft, and Harvey Brown, head of International Association of Machinists (below) get together on Dymaxion planning.

which its production formula demands. Other board members: Leon Henderson (who resigned while on a special mission for the Foreign Economic Administration); Laurence Hartnett, general manager of General Motors of Australia; Morris Rosenthal, vice-president of Stein Hall Co.; T. K. Quinn, president of Monitor Equipment Corp. and former vice-president of General Electric; William M. Parkhurst of Shattuck, Bangs & Davis, attorneys. Fuller is chairman of the board.

Labor Boost. Dymaxion officers are two young men who know a lot about labor and a young woman who worked with Fuller at the Foreign Economic Administration. Cynthia Lacey, who helped plan Dymaxion's corporate set-up, is assistant secretary-treasurer. Gregory Bardacke, who went to work for the hatters' union when he got out of college, will become Dymaxion's vice-president on completion of his job as chief of WPB's labor service section. Herman Wolf, who helped the garment workers' union found the New York Dress Institute and worked on the government's War Production Drive, is secretary-treasurer. These men were influential both in securing Dymaxion's labor backing and, with Wasserman, in raising the kind of money that would welcome labor as part of the management team. Dymaxion stock sells for \$10 a share, and there are few big stockholders. Most of the \$90,000 raised to finance production of the prototype model has come in a few hundred dollars at a time, practically all of it from investors interested in the kind of dividends measured by more than dollars.

Labor gave the Dymaxion design its first decisive boost towards production. When Fuller last summer looked around for the right first step towards somebody's postwar assembly line, he went,

(Continued on page 20)



WILL FULLER'S NEW DYMAXION look like this phantasy sketched from published description? If it does, will village fathers permit its use on conventional streets? How and where to market round aluminum houses is one unsolved Dymaxion problem. Union sponsorship of planned Dymaxion neighborhoods might be one answer.

determined to leave them out of the emergency houses. This breach in Anglo-American relations turned out to be simply a confusion of terms: the British had been talking about water closets.

The U. S. prefabers who will go to work next month on the first batch of British houses will have the help of priorities as high as anything the Army and Navy have except for the most critical war items. Bathtubs will go into the first 7,000 houses; after that, WPB hopes the British will supply the bathtubs—maybe using an efficient ceramics model they have already developed. Use of lumber will be cut to a minimum; exterior siding will be wallboard or fiberboard.

The Federal Public Housing Authority has mailed invitations to bid to 300 prefabers, who must send in their price estimates by March 5. FPHA expects the first batch of houses to be ready for shipment by April 1, and the rest of the British order (financed by the Foreign Economic Administration under lend-lease) to be filled before the end of the year.

The barracks units for France were being produced by a dozen prefabers at a clip of 80 a day. Daily wire reports from each contractor kept production on schedule. FPHA said all 5,000 units would be ready to ship by the end of March.

Wherever produced, all barracks parts are made to a single standard and are therefore interchangeable. Standardized production here means standardized assembly in France. With the units, FPHA sent a manual written in French, with measurements converted to the metric system, showing how to assemble the panel construction.

So far, the French units are split among these prefabers:

Houston Ready-Cut, Houston, 200 units; Green Lumber Co., Laurel, Miss., 550 units; National Housing Co., Dallas,

920 units; Tovell Construction Co., Martinsville, Va., 500 units; Goedde Lumber Co., East St. Louis, Ill., 150 units; John A. Johnson Construction Co., Brooklyn, 500 units.

UNLOVED NHA

Last month the National Housing Agency, which has tried to do good by practically everybody, had reason to wish that virtue might be oftener its own reward. NHA has taken pride in the way it has sliced the war housing job to keep a healthy sector of private building enterprise and building money alive. But, as one business group after another buttonholed Senator Robert Taft and his inquiring committee (government witnesses had already been heard; see ARCH FORUM, Feb., '45), one thing was clear: nobody loves the National Housing Agency.

When in 1942 the President used his war powers to group all the federal housing agencies in one operating arm, the NHA was hailed by many as a long-overdue move toward effective administration. Even the National Association of Real Estate Boards, which now wants to take the housing jig-saw puzzle apart again, seemed to feel that the unification was in large part its own idea. The National Housing Agency's lease on life expires with the war emergency. Official spokesmen for builders, realtors, lenders and material manufacturers are anxious to discourage any inclination Congress may have to keep NHA on the job. Most of their anxiety focused around the public housing member of the NHA family.

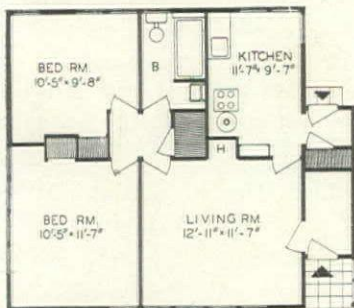
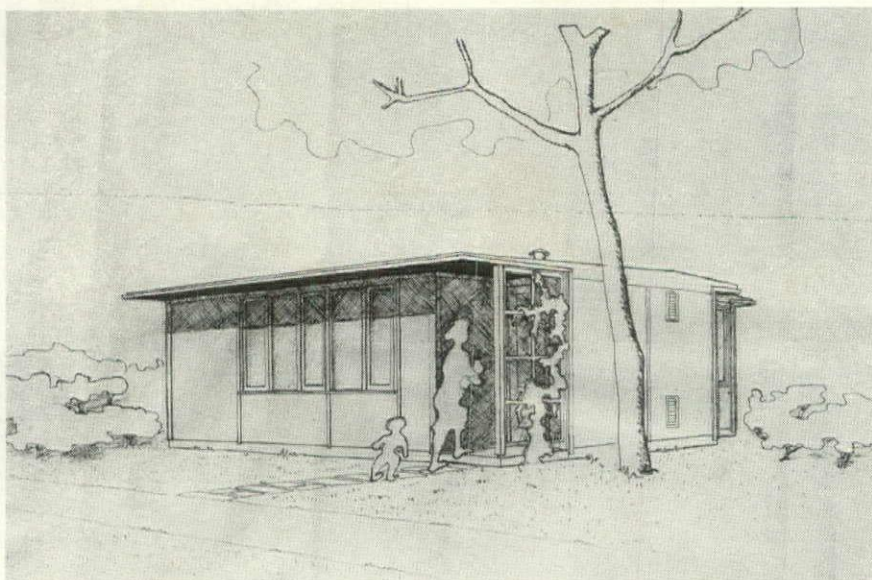
February's sheaf of Taft Committee testimony yielded no criticism of NHA's operations. Everybody thought its war job had been well done. But most of the witnesses seemed sure that killing NHA would mean a death-knell for public housing.

Eric Johnston, president of the U. S. Chamber of Commerce, is convinced that the Federal Housing Administration and the Federal Home Loan Bank Administration "should not be handicapped by being made a part of either a war housing liquidation activity or of a subsidized rental government housing activity." Johnston thinks anything NHA may have to do about disposal of temporary and permanent war housing can be done better by an "appropriate liquidation agency in the Treasury Department." He would also give the Treasury the job of winding up the affairs of the United States Housing Authority, the Home Owners Loan Corporation, and the Defense Homes Corporation.

Producers Council head, Douglas
(Continued on page 12)

"Just because there's a ceiling on rents doesn't mean there's a roof over your head."

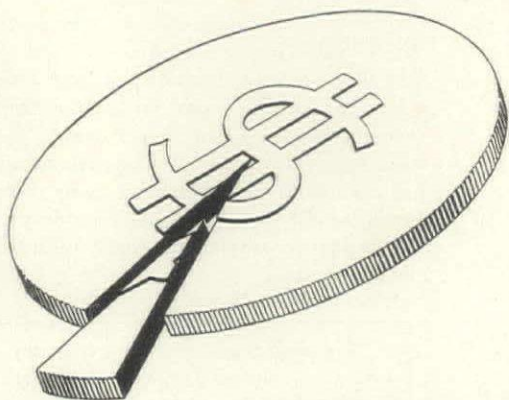
—CHARLES ABRAMS,
Housing Economist



Reni Photo

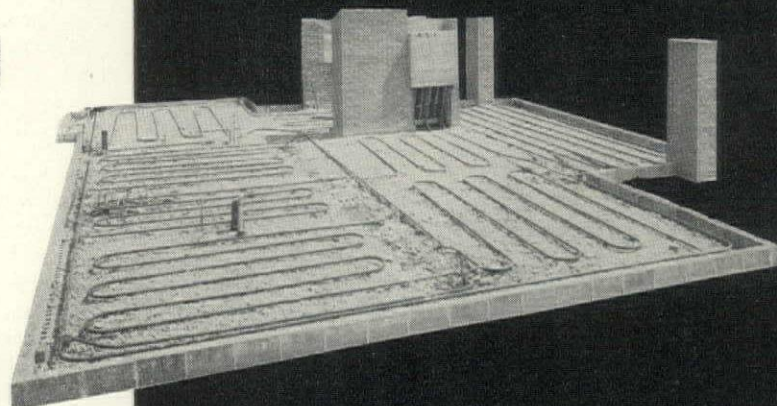
PREFAB HOUSE FOR BOMBED-OUT BRITISHERS is on display in Washington, near the Federal Public Housing Authority building. U. S. prefabers will soon go to work on 30,000 of these houses—the biggest job they have had for many a lean year. To make Britishers, who are accustomed to fireplaces, feel more at home in the temporary units recessed space for a heating stove has been planned to give some of the effect of a fireplace.

Wondering about costs?



*A **small** slice
of the building dollar*

installs BYERS RADIANT HEATING



Practically every home has to be built inside a pocketbook, so it is only natural that the question of the cost of Byers Radiant Heating should be uppermost in the mind of everyone contemplating its use.

Since the size of the heating plant varies not only with the house but with its location, no universal figures can be quoted. But by a fortunate circumstance, costs of six Byers Radiant Heating jobs, all designed by one architect, all located in areas with approximately the same climatic conditions, and all installed by experienced contractors, have been made available. The figures very definitely indicate that Byers Radiant Heating is completely practical from an economic standpoint in any architect-designed home; and they should give you a practical basis for allocating the building dollar in any preliminary planning.

The homes were all in the \$5000-\$8000 class; one costing \$5200, one \$6000, two \$6500, and two \$8000. The cost of the Byers Radiant Heating ranged from \$490 to \$625. The group-average house cost was \$6700, and the group-average radiant heating cost \$530.

You will recognize that these are comparable to the usual pre-war costs of a quality wet-type system. Actually, the comparison is more advantageous to radiant heating than the figures show, for all these homes had considerable glass area—a feature that

seems to be anticipated in post-war building—and this would have demanded a considerable increase in size of the usual pre-war installation.

Just as experience answers questions about cost, so does experience answer any questions about the proper pipe material. Byers Wrought Iron offers an unmatched combination of advantages: ease of fabrication, excellent welding qualities, high heat emission, thermal expansion almost identical with that of concrete and plaster so that cracking is avoided and bond maintained, and *demonstrated durability and dependability*.

Please feel free to ask us about any points you want clarified. Since this company pioneered the collection and distribution of engineering information on radiant heating in this country, and has since sat at the right hand of designers of hundreds of jobs, we have most of the answers in file . . . and will be delighted to pass them on to you.

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

BYERS WROUGHT IRON

FOR EXTRA SERVICE

IN CORROSIVE APPLICATIONS

CORROSION COSTS YOU MORE THAN WROUGHT IRON

(Continued from page 10)

Whitlock, wants to return FHA and FHLBA to the Federal Loan Agency, give the Federal Works Agency responsibility for any needed public housing, and ask the Department of Commerce to collect facts and statistics that will be useful to private building. Whitlock's proposal was favored by a majority of the private groups who appeared.

END OF FUEL BILLS?

One cold bright morning late in February George Lof turned off the gas furnace that heats his bungalow in Boulder, Colorado. All day long room temperatures stood at 70°. By the time the sun went down, Lof was ready to call his solar heat trap a working success.

Lof, who teaches engineering at the University of Colorado, installed the 12 by 20 ft. heat trap on the south slope of his bungalow roof at a cost of \$500, thinks the mechanism might be produced in quantity for less than half that cost. Unlike the experimental unit at the Massachusetts Institute of Technology and a good many water heating installations in use in the southern states, Lof's trap is designed to heat air. The air enters the trap at the eaves, passes through a double layer of glass panels (the bottom layer is painted black for heat absorption), and is carried by ducts to the furnace pipe system. Temperature can be varied by controlling the speed of the air moving through the glass layers. Lof will soon add a storage tank which, he thinks, will make the solar unit a self-sufficient heating device in southern states. He will also contrive a

canvas screen to roll over the glass panes for keeping heat out in summer and protection against hail damage.

The solar-conscious (302 days of sunshine) University of Colorado has been doing a substantial amount of heat trap research, with help from WPB's Office of Production Research and Development. After basic principles had been worked out by using a battery of huge light bulbs inside the laboratory, a 20 by 30 ft. trap was built on the roof. One day last August the laboratory trap caught an average of 31 per cent of the solar energy hitting it and delivered air at a temperature of 160°. Set up by these results, Lof installed what reputedly is the first solar trap ever actually used for home heating.

"We need legislation and treasury rulings to permit families to pledge war bonds in lieu of a cash down payment to build or purchase a home. Owner occupants would thus retain their bonds to maturity and then reduce the indebtedness on their home purchase."

—MORTON BODFISH

U. S. Savings and Loan League

BILL OF DIVORCE

If the times have joined government and business in marriage, the National Association of Real Estate Boards is a querulous and unwilling spouse. To those with the patience to follow the gyrations of lobbyists, cantankerous NAREB has often seemed loath to live with, fearful to live without government. Under the marriage bed, the realtors have always seen "tendencies, theories and practices which historically have led to the decay of democratic processes." Last month the Association filed a dignified new bill of divorcement.

NAREB wants to be divorced from quite a lot of things, including rent control ("an enforced contribution by 12 million property owners to 14 million tenants"), the Federal Public Housing Agency ("no more public housing should be built"), the National Housing Agency ("should be abolished and replaced by a Central Mortgage Bank"), federal taxes ("we are creating a federal tax monopoly which may eventually destroy our democratic system"). The Association wants all federal housing agencies "streamlined into one Central Mortgage Bank . . . framed to permit establishment of a Mortgage Discount Corporation, privately owned but publicly regulated."

Except for reaching into the public purse for a certain amount of alimony, NAREB wants nothing to do with government. "The immediate restoration

(Continued on page 16)



Water scoots to somewhere the instant it lands, or collects, on slick-surfaced flashings. WASCO copper-fabric flashings not only directs dissipation, it facilitates drainage. But, these are least among WASCO warrants for preference. WASCO forms a permanent water stop at less cost, with less labor, and more dependability, than costlier, 16 oz. copper. Our A.I.A. Folder tells why some 1,570 Architects have specified WASCO for flashing more than 3,000 important buildings. May we send it?

WASCO Flashing Company

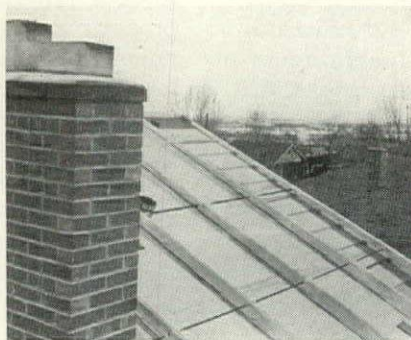
86 Broadway

Cambridge 42,

Mass.

wasco

COPPER-FABRIC FLASHING



SOLAR TRAP heats Colorado home

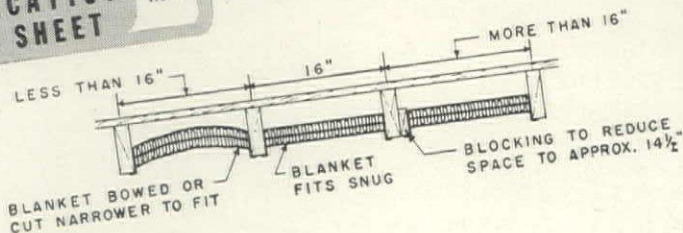


Balsam-Wool

APPLICATION DATA SHEET

SEC
D
No. 4

APPLICATION OF BALSAM-WOOL TO IRREGULARLY SPACED FRAMING



RAFTERS AND COLLAR BEAMS
SPACED VERY IRREGULARLY

DOUBLE-THICK
BALSAM-WOOL

2" x 2" FURRING
16" O.C.

NEW KNEE
WALL STUDS
16" O.C.

NU-WOOD
INTERIOR
FINISH

NEW COLLAR
BEAMS 16" O.C.

SECTION

SCALE 3/4" = 1'-0"

THE top drawing illustrates methods of applying Balsam-Wool between framing members spaced slightly more or less than 16" o.c. Balsam-Wool is also available to fit between framing members spaced 20" and 24" on centers.

When rafter spacing is too irregular for the above method, Balsam-Wool Blanket may be installed between 2" x 2" furring, applied 16" o.c., at right angles to the rafters and collar beams, as shown at left. These furring strips also serve as a base for the interior wall finish.

Double-Thick Balsam-Wool is recommended for attic rooms for greater fuel savings and winter and summer comfort. In this application it is necessary that the entire flange of the blanket be carried over the face of the 2" x 2" furring. When knee wall studs and collar beams are not in place, these members may be installed (spaced 16" o.c.) to receive the Double-Thick Balsam-Wool Insulation.

For the interior walls and ceiling, either Nu-Wood Interior Finish or Nu-Wood Insulating Lath and plaster is recommended because of the additional insulation value gained.

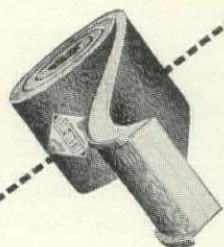
WOOD CONVERSION COMPANY
First National Bank Building
Saint Paul 1, Minnesota

BALSAM-WOOL Products of Weyerhaeuser NU-WOOD

- High Thermal Efficiency
- Built for Permanence
- Non-Settling
- Flame-Proof
- Wind-Proof
- Moisture-Proofed

Balsam-Wool
DATA SHEETS
-YOURS FOR
THE ASKING!

These sheets offer you a convenient, authoritative source for data on applying insulation . . . because they represent the best application practices . . . because they help you provide greater owner-satisfaction in insulated structures. Prepared by the makers of Balsam-Wool—leaders in the field of blanket insulation—these data sheets are yours for the asking, without obligation. Mail the coupon for your set!



Balsam-Wool

SEALED INSULATION

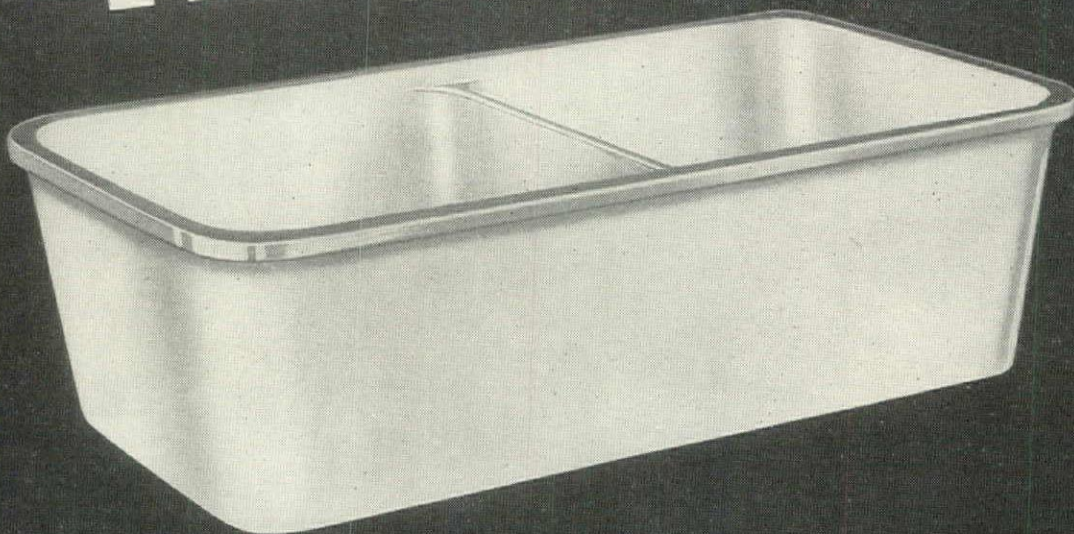
- | | |
|---------------------|---------------------|
| 1. WINDPROOF | 4. LASTING |
| 2. MOISTURE-PROOFED | 5. NON-SETTLING |
| 3. FIRE RESISTANT | 6. HIGHLY EFFICIENT |

BALSAM-WOOL • NU-WOOD
Products of Weyerhaeuser

WOOD CONVERSION COMPANY
Dept. 147-2, First National Bank Bldg.
St. Paul 1, Minnesota
Gentlemen:
Please send me set of application data sheets.

Name Address City State

NEW



2-COMPARTMENT

VITREOUS CHINA

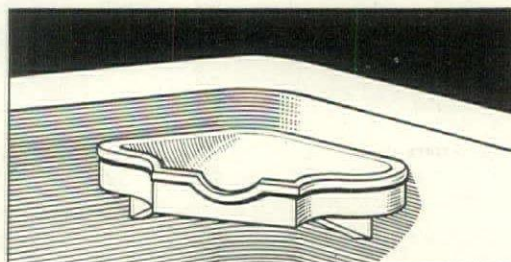
FLAT RIM SINK

Size Overall: 32" x 18" x 8 1/2". Inside Depth 7 1/2". Two 3 1/2" Center Outlets.

This new *Aberdeen* two-compartment sink is Case quality throughout... made of thoroughly vitrified, non-porous, acid-proof *china*, fired at 2200° F. The built-in soap dish illustrated is an added convenience and is available, when specified, with all Case *Aberdeen* sinks.

Case fixtures are distributed nationally by selected wholesalers, sold and installed by leading Master Plumbers. Look for "Case" under "Plumbing Supplies" in the classified Telephone Directories of metropolitan areas, or write to us.

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



Case

LIFETIME PLUMBING FIXTURES



The place to look for information on:

- Metal Lath and Accessories
- Expansion Corner Beads
- Solid Wing Corner Beads
- Base Screeds and Picture Moulds
- Window Stools
- Metal Bases
- Metal Casings, Special Moulds, and Corner Grounds
- Blackboard Moulds
- Chalk Troughs (with Insulmat Sound Deadening)
- Chair Rails
- Cove Moulds
- Metal Access Doors
- Steel Roof Deck

... and other steel building materials

Data helpful in designing fireproof steel-reinforced plaster construction in the **MILCOR** Manual

A handbook of steel building products that permit you greater freedom in expressing your conceptions

The Milcor section in Sweet's is a working manual designed to help you in the application of metal lath, corner beads, metal trim, casings, and window stools as mediums which are artistic as well as utilitarian.

Here is a quick picture of the industry's most complete line of fireproof steel building products—which will again be available to help you meet tomorrow's design requirements: smooth, simple, unbroken planes... sweeping curves... ornamental relief... crackproof surfacing for radiant heating installations... etc.

Long wartime curtailment of these preferred construction methods daily emphasizes the fact that temporary construction is only temporary. Thus the basic advantages of steel-rein-

forced plaster—as briefed in the following paragraph — are now appreciated by your present and prospective clients more than ever before:

Fire-safety — guarding both lives and property. Space economy. Sound retarding properties. Sanitation for health. Crack and impact resistance — assuring permanent beauty of plaster walls and ceilings.

Also included in the Milcor Manual are pages on Milcor Steel Roof Deck — a basically sound, quickly-erected type of industrial, public, and residential construction. Application details are illustrated, tables of safe loads are given, etc.

On all your design and specification problems concerning fireproof steel construction — for structures large and small — refer to the Milcor Manual in Sweet's, with confidence that you will receive real help in doing a creditable job with less time and trouble.

MILCOR STEEL COMPANY
MILWAUKEE 4, WISCONSIN

Baltimore 24, Md. • Chicago 9, Ill. • Kansas City 8, Mo. • Los Angeles 44, Calif. • Rochester 9, N. Y.

... equipped to serve you better through acquisition of
THE J. M. & L. A. OSBORN CO.
CLEVELAND 14, OHIO
DETROIT 2 • BUFFALO 11 • CINCINNATI 15
as a **MILCOR** subsidiary

**YOU SHOULD
HAVE THESE
CATALOGS**



● Check your file of Stewart Fence literature. If you do not have all the catalogs listed below, we will be glad to send them to you. Stewart Chain Link Wire Fence and other wire products are available NOW for certain protective purposes. Write us for full information.

STEWART CATALOGS

CATALOG 81, Standard Iron Fences (with Channel Rails) Gates and Arches

CATALOG 80, Standard Iron Fences (with Angle Rails)

CATALOG 79, Standard Chain Link Wire Fences and Gates

CATALOG "D," Highly Ornamental Iron Fences and Gates

CATALOG R-38, Railings, Pier Lanterns, Interior Gates, Veranda Work, etc.

CATALOG W-40, Window Guards, Wire Mesh Partitions, Folding Gates, etc.

CATALOG I-42, Industrial Fence Specifications Manual

The Stewart Iron Works Co., Inc.
1265 Stewart Block Cincinnati 1, Ohio

Stewart IRON and WIRE
FENCES

MONTH IN BUILDING: NEWS

(Continued from page 12)

of a free market after the war will do more than any other one thing to create intense action, provide employment, and overcome shortages." Noting the dangers of real estate inflation (see page 6), NAREB firmly said: "We do not believe that any restrictive or regulatory legislation can be beneficial in halting or controlling this trend. If any law is enacted which seeks to control capital values it would make static our entire economy."

NAREB is already actively courting a new alliance, aimed to increase its potency. The Association has long sought but never quite found the way to the hearts of property owners. Said NAREB's new president, Van Holt Garrett, Denver: "There are many threats at hand to the ownership of property. These threats, which are real, can only be countered by proper organization of our property-owning citizens. They are the bedrock of our nation, and they should be given the means of uniting their strength and influence."



VAN HOLT GARRETT

RENT CONTROL SPREADS

When the New York State legislature finally put a lid on climbing commercial rents (ARCH FORUM, Jan., '44), it wrote in a formula for easement where the lid would clamp down a little too hard. Under the new state law, manufacturers and wholesalers will pay rents not more than 15 per cent higher than they paid on March 1, 1943. But if the landlord's return is less than six per cent after expenses, plus two per cent for amortization, he may ask the courts to adjust his rent schedule upward. To figure his return, the landlord may use present assessed valuations. While court calendars filled up with adjustment petitions, the landlords' ancient war against New York's high tax assessments came to a sudden truce.

At mid-month the law got its first judicial nod of approval from a Municipal Court Justice who ruled that a tenant who pays ceiling rent may not be evicted for the duration of the "public emergency" as defined by the rent control act. In the first decision on constitutionality, another municipal justice said: "Commercial space to earn a livelihood is a necessity of life. It is just as essential to the well-being of the citizens of this country as is dwelling space. The argument that the legislature cannot use

its police power to regulate this essential sphere of necessary activity is specious."

In New York pressure mounted for extending commercial rent control to stores and offices. In Washington real estate interests contemplated a gloomy and almost certain prospect: business and commercial rents would be brought under national control when Congress extends the Price Control Act, expiring in July. Even the Congressmen who have been opposed to this kind of rent control are worried by the ugly threat of real estate inflation (see page 6). Commercial rent control would be one way of tying down ballooning real estate prices.

BOOST FOR REBUILDING

In the opinion of the Illinois Supreme Court, the power of eminent domain may legally be used to acquire urban land for private rebuilding. This use is a public purpose even if public controls cease when the development is finished, the Court ruled.

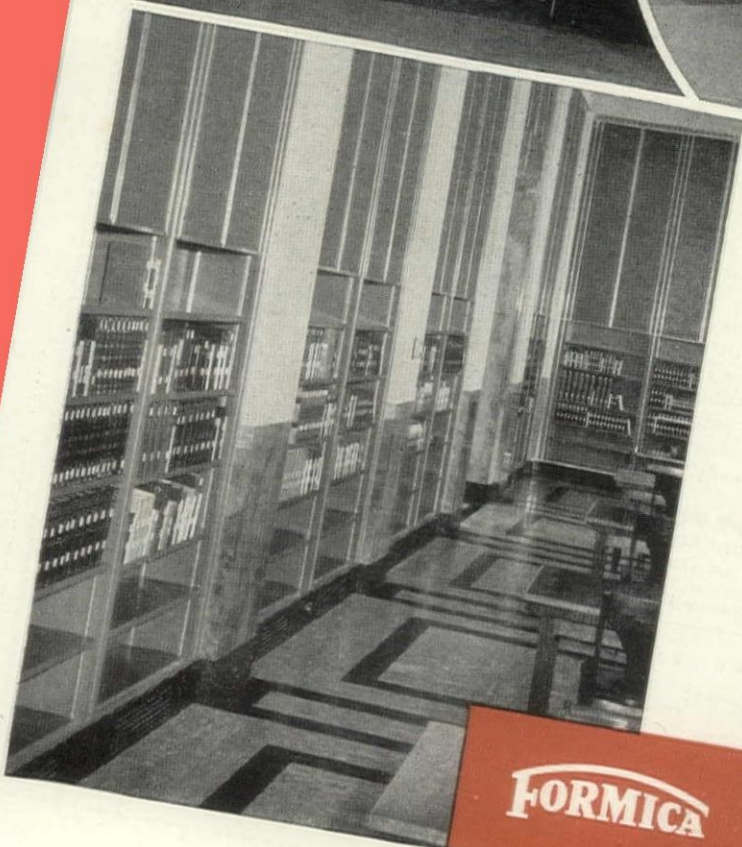
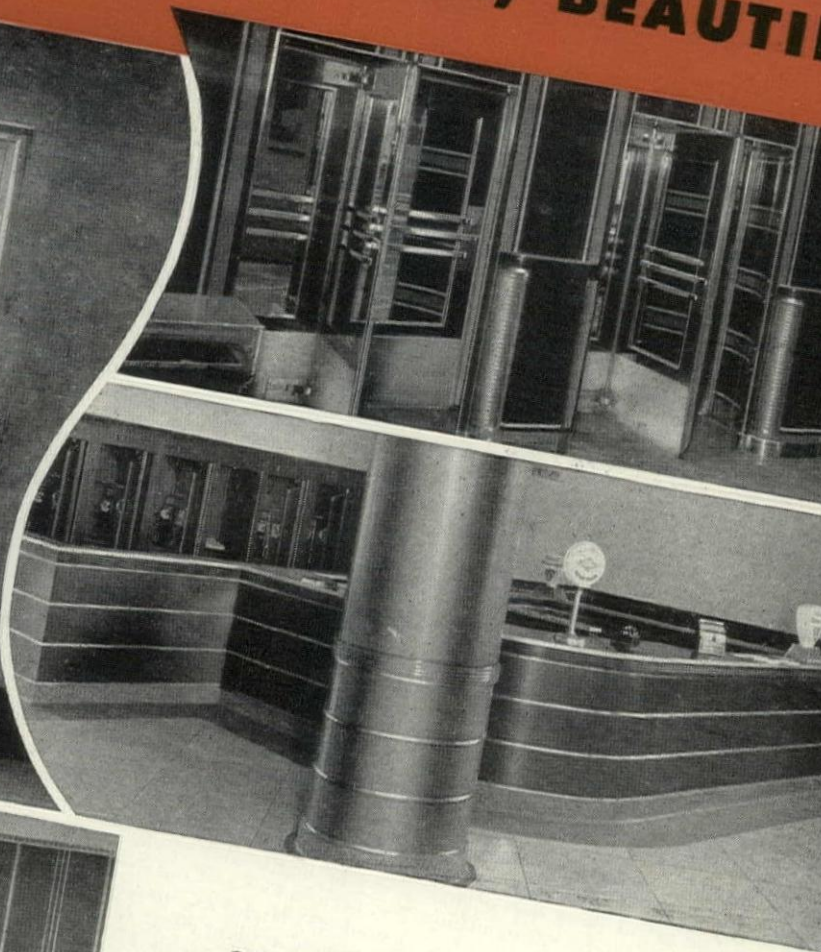
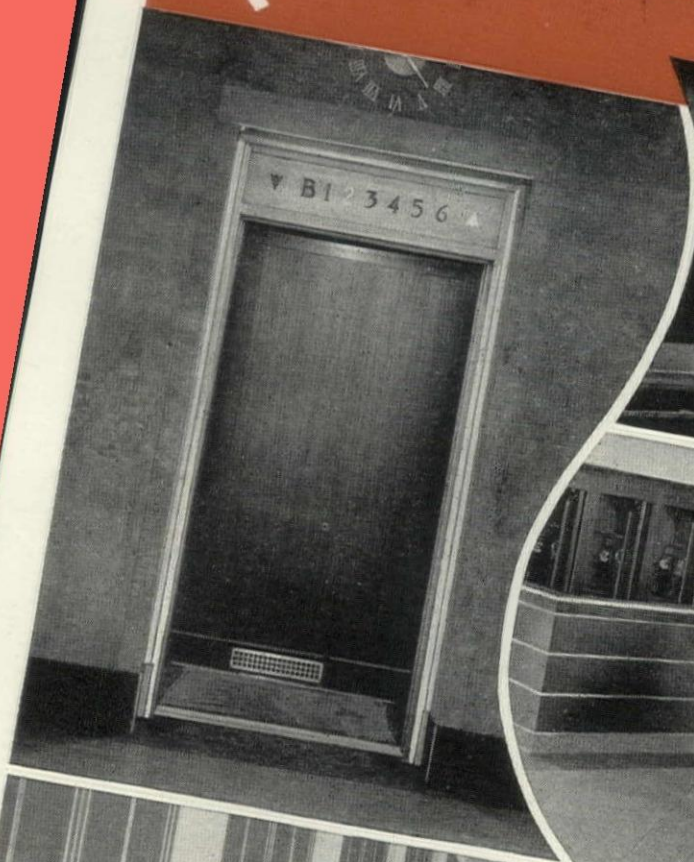
The Supreme Court decision, reversing the ruling of a lower court, means that the Illinois Redevelopment Corporation Law will stay on the books. It also means favorable judicial precedent for similar legislation promising public aid for private rebuilding, now pending in Indiana, Michigan, and Washington.

A year ago an Illinois circuit court justice had ruled (ARCH FORUM, Feb., '44): "Since all public control for the perpetuation of public uses is removed with the completion of the redevelopment area . . . the purposes for which the property would be taken and used would be a private purpose for pecuniary profit."

The Supreme Court's reply: "The fact that continued use of the property for public purposes, after the elimination of slum and blight areas and the redevelopment of such areas has been achieved, is only partially assured and safeguarded by the act, is wholly immaterial. When such areas have been reclaimed and the redevelopment achieved, the public purpose has been fully accomplished."

The Illinois law, passed in 1941, grants the power of eminent domain to any private corporation which has assembled 61 per cent of a redevelopment site by voluntary transactions. No tax exemption is provided. If private initiative is to undertake the rebuilding job, use of the power of eminent domain is imperative. But this single public tool is hardly enough. "It is very questionable," said Walter H. Blucher of the American Society of Planning Officials, "if urban redevelopment can take place by private developers in any large urban areas with only this inducement. Some further form of subsidy is required."

IN PUBLIC PLACES...IT IS TOO VERSATILE, BEAUTIFUL



● Where beauty and endurance are the requirements in a modern material, leading architects have been choosing Formica with greater and greater unanimity. In public places where wear is severe and continuous these installations have given the highest satisfaction over many years.

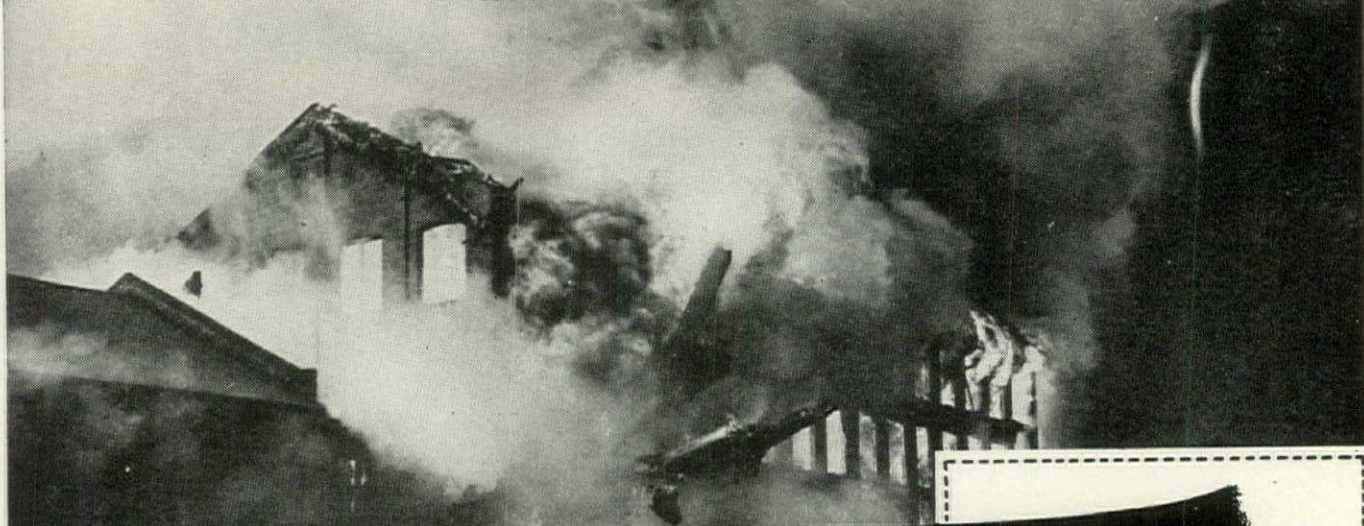
The wide range of deep limpid colors, patterns, and "Realwood" in which actual wood veneers are incorporated in the plastic sheet, provide many attractive decorative effects.

Typical installations shown include a ticket counter and column covering, department store revolving doors, the interior of an elevator, and shelving, wall paneling and table tops in the Annex to the Library of Congress.

FORMICA

THE FORMICA INSULATION COMPANY
4620 SPRING GROVE AVENUE
CINCINNATI 32, OHIO

It's Too Late To Do *Anything* About This Fire



HERE'S HOW TO OUTFLANK FUTURE FIRES

Most plants have "hot spots." Yet, even in these locations, fires that start big and fast, can usually be extinguished quickly . . . with no break in production schedules . . . if you get at them *soon enough* with *enough* of the right extinguishing medium.

Cardox Guards Tough Hazards

It is no coincidence that frequently when hazards are toughest to handle protection is provided by Cardox Fire Extinguishing Systems.

A Cardox System—engineered for the specific hazards it covers—extinguishes both large and small fires, indoors and outdoors, by a timed *mass* discharge of Cardox CO₂. This non-damaging, non-contaminating fire extinguishing medium—stored at 0°F. and 300 p.s.i. in a single storage unit containing 500 pounds to 125 tons—is instantly available in TONS for large fires, IN POUNDS for small ones.

Enhanced CO₂ Performance

Enhanced extinguishing performance is possible because—as controlled and

applied in Cardox Systems—(1) Cardox CO₂ has uniform extinguishing characteristics regardless of plant or atmospheric temperatures; (2) Applications can be engineered to the requirements of each indoor and outdoor hazard covered; (3) High CO₂ snow yield provides increased cooling effect (carbon dioxide released at 0°F. yields 45% CO₂ snow); (4) Effective projection through relatively great distances is achieved—even outdoors.

If you would like more information for use in solving current war plant fire protection problems—or in formulating fire protection plans that will prevent dangerous delays in getting post-war production in high—write on company letterhead for Bulletin 635.

CARDOX CORPORATION

BELL BUILDING • CHICAGO 1, ILLINOIS

District Offices in

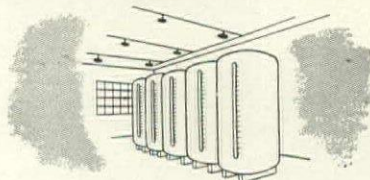
New York, Boston, Washington, Detroit, Cleveland, Atlanta, Pittsburgh, San Francisco, Los Angeles, Seattle

BUY WAR BONDS

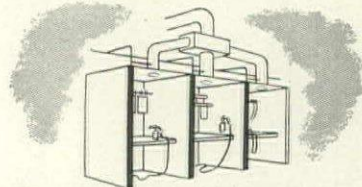


FOR EXAMPLE...

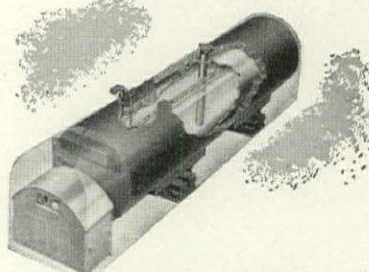
These are "hot spots" . . . one large . . . one small . . . typical of the hundreds where fire extinguishing performance provided by Cardox Systems assures maximum protection.



Here highly flammable oils are stored in long rows of tanks, each holding 10,000 gallons. If fire strikes, the Cardox System floods this huge room with cold, inert carbon dioxide in which fire cannot exist.

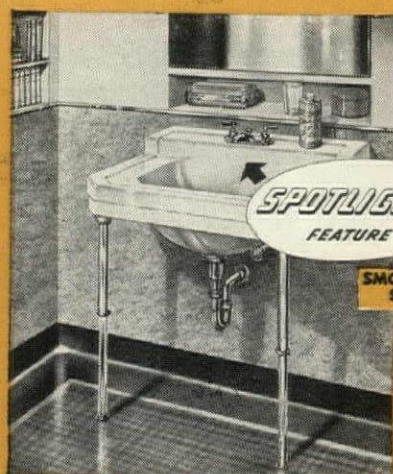
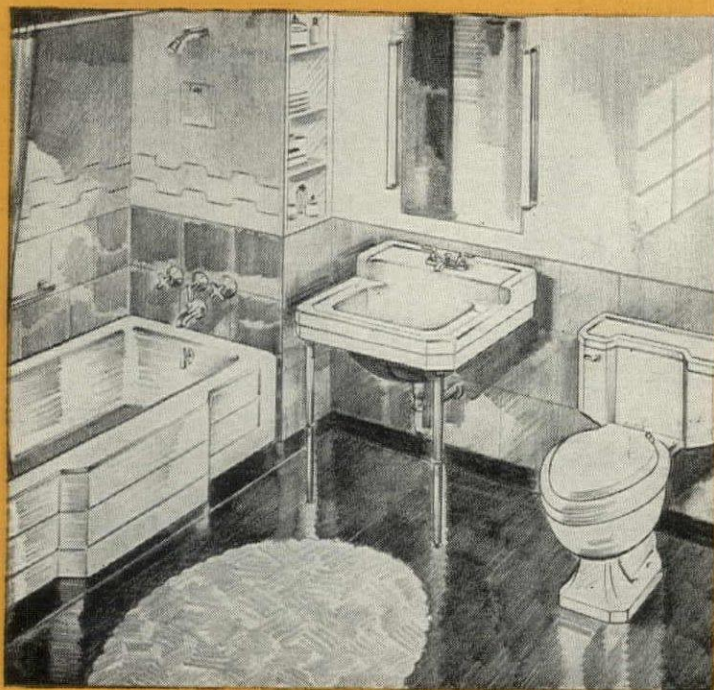


Spray Booths, relatively small in size, can start big fires. Local direct application of Cardox CO₂ prevents spread of fire and gives quick extinguishment within the booth and exhaust ducts.



Cardox CO₂ is maintained at controlled low temperature of 0°F. and 300 p.s.i., and is supplied instantly from a single storage unit.

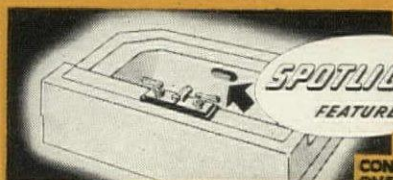
ELJER PLUMBING FIXTURES



SPOTLIGHT
FEATURE

SMOOTH BACK
SURFACE

SAVOY LAVATORY



SPOTLIGHT
FEATURE

CONCEALED
OVERFLOW

Suggestion=Acceptance

WHEN YOU SPECIFY ELJER

SPOTLIGHT
FEATURES

Eljer fixtures have many "spotlight features" which will appeal to all home buyers.

For example, the CONCEALED OVERFLOW OUTLET in Eljer vitreous china lavatories. The unbroken smoothness of the back surface is a good selling point not only for the fixture, but for the house, itself.

To constant high standards of in-built quality for the entire line, Eljer adds strong merchandising touches with "spotlight features". Check these features in the Eljer catalog and you will specify Eljer fixtures for your jobs.

ELJER CO. FORD CITY, PA.

Write for your copy of Eljer's Condensed Catalog

SINCE 1907 MAKERS OF FINE PLUMBING FIXTURES

(Continued from page 9)

Workability for easy tailoring!



when available again — SPECIFY:

"U.S." NAUGAHYDE

"U. S." Naugahyde—so pliant it practically flows to fit every curve, bend, recess or angle—will be a revelation to you in minimizing coated-fabric tailoring problems. You'll also like its almost limitless range of never-dimming colors—its imperviousness to staining—its resistance to edge-wear, abrasion, scuffing, flexing, wrinkling. Unaffected by moisture, most solvents, alcohol, gasoline, many acids, fumes, disinfectant solutions, it cleans easily with soap and water. There is also Flameproof "U. S." Naugahyde that does not support combustion from carelessly dropped matches or cigarettes.

With a quarter-of-a-century of coated fabric experience back of them, "U. S." Rubber Company scientists developed a great many distinct coated fabrics for the armed forces and have also coated millions of yards of nylon, rayon, cotton, and glass cloth for military purposes.

"U.S." Naugahyde

REG. U. S. PAT. OFF.


Serving Through Science

UPHOLSTERY

UNITED STATES RUBBER COMPANY

1230 Sixth Avenue • Rockefeller Center • New York 20, N. Y.

not to one of the aircraft production giants, but to Eric Peterson of the International Association of Machinists and to Walter Reuther of United Auto Workers (CIO). IAM caught on immediately, named Beech Aircraft as tops in the country for sound labor policy, sent one of its representatives to help Fuller sell Beech on a plan for producing the model.

Reuther was enthusiastic, too—he had been one of the first to look to the

INS

AP



THOMAS: house production is not UAW business . . . **REUTHER:** a factory house can mean UAW jobs.

factory-built house as one reconversion solution for aircraft plants. But UAW's executive council cautiously thumbed down Reuther's request to be appointed to Dymaxion's board of directors. Resolutely adopting the "consumers' point of view", housing spokesmen for UAW's million members said: "It is not our business to endorse a specific housing product. We are interested in all efforts to lower housing costs. Mr. Fuller's solution is as yet unproven. We are watching his work with interest. . . We are also watching Mr. Kaiser."

UAW's head, R. J. Thomas, is somewhat less eager than Reuther to challenge the jealous AFofL building trade unions by moving in on house production. IAM, on the other hand, is beginning to feel its strength as the biggest AFofL union, and odds are on the machinists' readiness for any fight necessary in the AFofL council, long dominated by the building trades. The nature of the Dymaxion product adds up to a good jurisdictional argument. It is more machine than house; erection will require no carpentry, masonry, or plumbing skills. It may well be that machinists will not only produce it in the

(Continued on page 24)

In River Forest there's a lady who's
Delighted



Aluminum windows in a residence
 in River Forest, Ill.



"Aluminum windows are just fine! Lift one and see how easily they work." Here's enthusiasm based on three and a half years of living with them. "We'll certainly have aluminum windows if we build again."

Sash and frames are narrow, giving maximum glass area. Asked what care was taken to keep them look-

and attractive. "I guess we wipe them off and wash the windows. Nothing more."

Alcoa does not build windows. A number of manufacturers will make aluminum windows available to you as soon as the war permits. Specify them for your new home and add to the joy of living there. ALUMINUM COMPANY OF AMERICA, 1840 Gulf Building, Pittsburgh 19, Pennsylvania.



Windows of
ALCOA ALUMINUM

This Kind of Talk

about Aluminum Windows sells
 houses, and keeps them sold

"Aluminum windows are the outstanding thing in our home. We love them!"

"Our neighbors are jealous of our aluminum windows. If we build another house, we'll certainly have them again."

"Maintenance? We haven't had any. Just wipe them off when we wash the glass."

That's the kind of talk the Alcoa men are hearing, as they inquire how aluminum windows have performed in the years since they were installed. It's mighty gratifying, even though Alcoa supplied just the aluminum. Various manufacturers were responsible for making this versatile metal into fine windows.

Homeowners, architects, builders, bankers, all speak highly of windows made of Alcoa Aluminum. ALUMINUM COMPANY OF AMERICA, 1866 Gulf Bldg., Pittsburgh 19, Pennsylvania.



Advertisements like this, appearing in various home magazines, promise windows of Alcoa Aluminum as soon as the war permits.

ALCOA FIRST IN ALUMINUM





We know the answer to this one . . .

If sometimes tenants complain about not enough heat . . . If other times they're annoyed at too much heat . . . If your fuel bill has shown a decided increase . . . there's only one answer: Your heating system needs *control*.

A Webster automatically-controlled Steam Heating System will assure even heat in every room, regardless of exposure or outside temperature. No overheating . . . No underheating . . . No costly waste of rationed fuel.

In the Webster Moderator System, there are just four control elements—an Outdoor Thermostat, a Main Steam Control Valve, a Manual Variator and a Pressure Control Cabinet. These controls are an integral part of the Webster

System — assuring the highest expression of comfort and economy in modern steam heating.

More Heat with Less Fuel

Actual surveys made by Webster Engineers show that seven out of ten large buildings in America (many less than ten years old) can get up to 33 per cent more heat out of the fuel consumed.

We'll let you be the judge . . . Send for our free booklet "Performance Facts", and read case studies of 268 modern steam heating installations in commercial and institutional buildings. Shows savings in dollars and cents. Can we help you? Address Dept. AF-3.

WARREN WEBSTER & COMPANY, Camden, N. J.
Pioneers of the Vacuum System of Steam Heating :: Est. 1888
Representatives in principal U. S. Cities :: Darling Bros., Ltd., Montreal, Canada



The Webster Outdoor Thermostat automatically changes heating rate when outdoor temperature changes.

Fuel-Saving
Starts With
CONTROL

AUTOMATIC
Webster
Steam Heating

Noise Is on the Way Out



with SABINITE "M"

In modern construction, noise is conspicuous by its absence . . . clatter and chatter belong to the "noisy-nineties" . . . yes—noise is on the way out, replaced by Today's Quiet Way . . . Sabinite "M".

—and what's more . . . "patch-as-patch-can" patterns are on the way out, too . . . No longer need the decorative scheme be tied to a fixed ceiling design . . . for Sabinite "M" is just as beautiful and no more noticeable than the plaster walls themselves. It follows flowing contours or simple, unbroken surfaces with ease and flexibility.



ACOUSTICAL
PLASTER
FINISH

All these advancements group themselves around the fact that Sabinite "M" is an acoustical plaster finish. Combines noise quieting, decoration, light reflection, and fire protection in one material. Can be used for new construction or reconditioning and sound conditioning present interiors as well.

Sabinite "M" follows accepted methods. Any good plasterer can apply it. All of this means that the "quality of quiet" is placed within reach of thousands of homes and buildings with Sabinite "M" . . . Today's Quiet Way.

Sabinite is a trademark owned by the United States Gypsum Company



UNITED STATES GYPSUM

Manufacturers of Building and Industrial Products Since 1901

GYPSUM • LIME • STEEL • INSULATION • ROOFING • PAINT

THE BEAUTY OF TILE
PLUS
THE QUIETNESS...
THICKNESS...RESILIENCE
OF LINOLEUM



New, Improved
PABCO
Soil-Sealed
LINOLEUM

Patterned in 9-inch Cross-
Directional MARBLED
SQUARES in One Tone, Two
Tones and Contrasting Tones!
Available with Victory!

★ **No two Marbled Squares alike!** Each square is exquisitely marbled, with individual grain-ing and real depth and purity of color. Each square is set cross-directional to add to floor-beauty and artfully hide all seams.

★ **Easy to Repair** or make Partition-Changes! Any area or single 9-inch Marbled Square can be replaced if damaged or heavily worn, without appearance of "patching."

★ **Easy to Maintain!** Pabco Linoleum is Soiled-Sealed to resist dirt, stains, scuffmarks; Super-Waxed for easier cleaning.

★ **Built-In** quietness, resilience, and thickness!

SEND for 24-page, full-color "Architectural Trends In Linoleum," Dept. 945, nearest Pabco office below.



THE PARAFFINE COMPANIES • INC.
NEW YORK 16 • CHICAGO 54 • SAN FRANCISCO 19
Makers, also, of Pabco Mastipave, Grip-Dek and
Sani-Grip Floor Coverings

60 Years
OF MANUFACTURING
EXPERIENCE
Since 1884



(Continued from page 20)

factory, but also put it up at the site.

John P. Gaty, the engineer who is vice-president and manager of Beech, has heard more schemes for prefabricated housing than he likes to remember. "None of them has ever made such sense," he said. "In every other proposal I've heard, cost of shipping would eat up the cost saving made by factory production. We hope to be able to ship eight Dymaxions in a freight car. This would mean that transportation cost anywhere in the country won't amount to much more than \$50. Fuller is aiming at a house that will weigh not more than two tons, ship in 150 cu. ft."

Round House. The new Dymaxion will be round. This is the most important modification Fuller has made in the basic Dymaxion design he first outlined in 1927 (ARCH FORUM, July, '29). The essential principle is unchanged: utilities are grouped about a central mast support, from which a light shell enclosing living space is hung in tension. Use of aluminum for the outer shell, new light-weight steel for the main structural supports, Nylon-type material for interior finish, plastics for windows and plumbing fixtures is a major factor in weight reduction.

The 1927 Dymaxion was hexagonal in shape. Fuller began to work with curved parts when he developed the grain bin house in 1941, much-publicized as a bomb-proof war housing solution. The round shape of the new design means that additional structural strength will derive from even distribution of stress over the house surface. It also means that the house will fit easily into metal-working techniques developed to produce the curved surface of the airplane fuselage. Curvature of parts yields maximum materials economy.

Fuller has turned his back on prefabrication's search for a single wall material that will provide insulation as well as surface and structure. The dwelling machine will be kept at an even temperature winter and summer through application of what Fuller, while he waits for patents, roughly describes as "aeronautical principles." To doubters, he simply points out that the aircraft designers have found out how to maintain a constant interior atmosphere in outside temperatures ranging from -80° to 140°.

500 Parts. Fuller's point of view on materials is: "We can't afford to use any but the best we can find for the purpose." In the building field this is iconoclasm; in aircraft design it is the first rule in the book. All the Dymaxion

(Continued on page 28)

Breeze Flexible Conduit

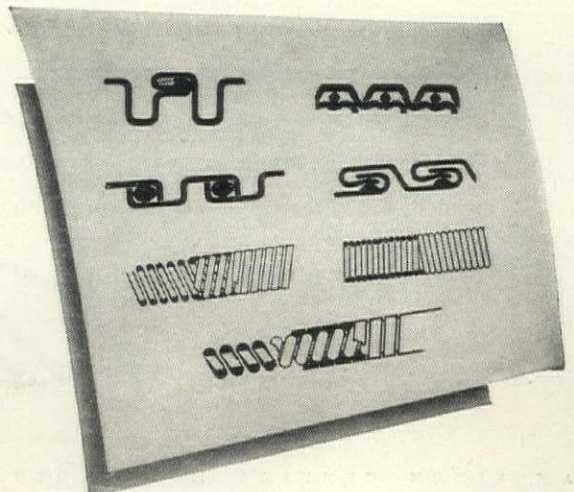
for shielding or ducts



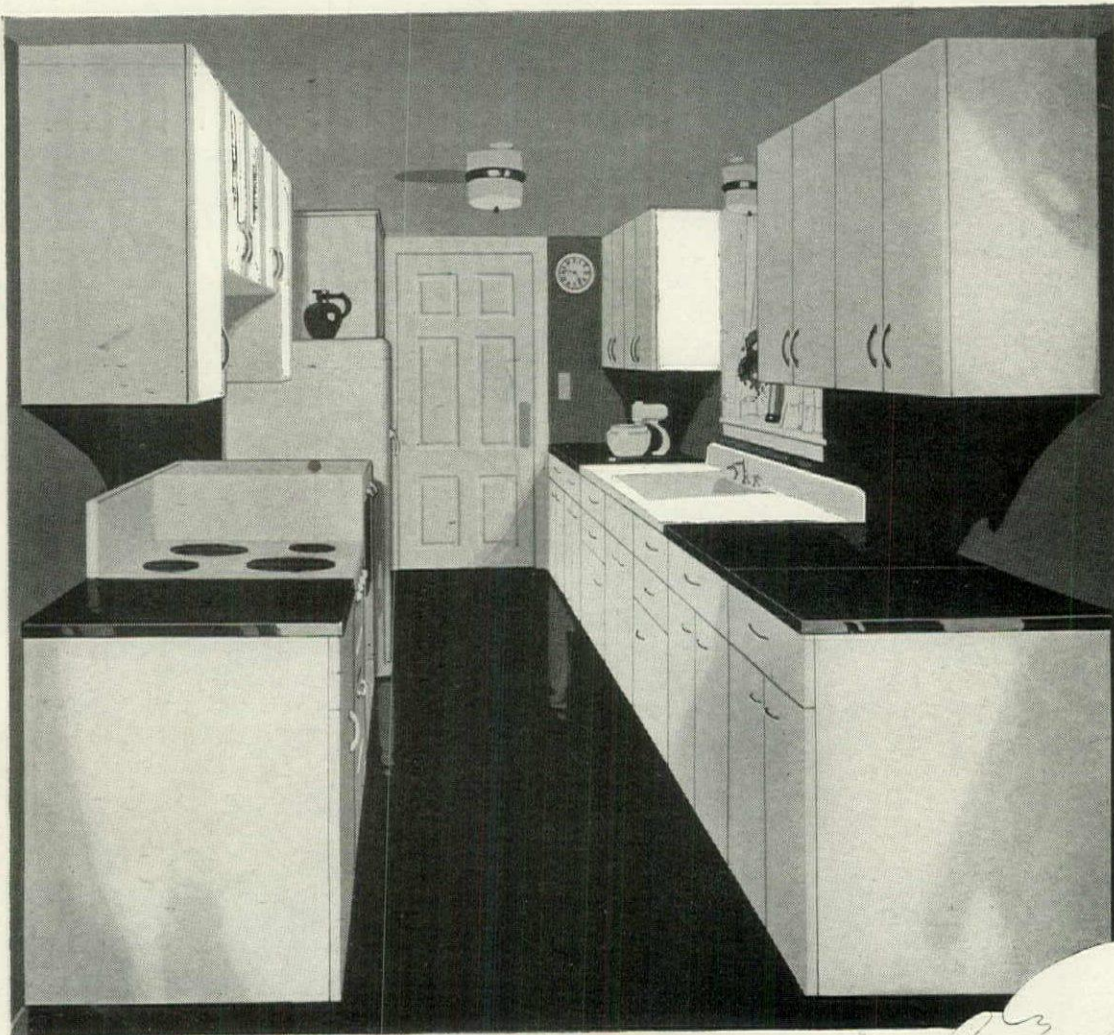
Breeze Flexible Tubing, manufactured in many diameters from a wide variety of metals, is used as ventilation and exhaust ducting in industrial, aircraft, marine and automotive applications. The same basic tubing, with the addition of a braided metal covering, becomes light-weight shielding conduit, used extensively for shielding ignition systems and any electrical circuit to insure dependable radio communication.

Manufactured from a continuous strip of metal, Breeze Flexible Tubing and Conduit can be furnished cut to length, with necessary end-fittings for any conduit installation.

Many different types of interlock construction — plain, packed, and soldered—are available to meet varying use requirements. A few of these are illustrated below.



Breeze 
CORPORATIONS, INC.
 Newark, New Jersey



The world's busy Spots

In addition to other famous busy spots we emphatically add the kitchen — the busiest spot in the home. • That's why American Kitchens are ready planned and built — a saving for you. • American Kitchens can be purchased for much less than the necessary materials on the open market — more savings.

• American Kitchens are nationally advertised — have consumer acceptance. • American Kitchens are the last word in modern design — rich in eye appeal. • American Kitchens are easily installed — any mechanic can set them up quickly. • American Kitchens are durable — made of steel to last a lifetime.

American KITCHENS

AMERICAN CENTRAL MANUFACTURING CORPORATION, CONNERSVILLE, INDIANA

ARCHITECTURAL METALS

...add distinctive beauty to any structure you design!

There's no limit to the ways you can use architectural metals to add to the beauty and utility of any structure you design.

Because of their extreme versatility, architectural metals lend themselves readily to architects' thinking. They enable you to achieve the effects you want, not only from the decorative angle but from the purely utilitarian angle as well.

As you design for tomorrow make full use of architectural metals in the entrance, in stairways, balustrades, doors, windows, grilles, and all types of exterior and interior decorations. Use them, too, for structural and protective building devices, fire escapes, coal chutes, and a hundred other service equipment items.

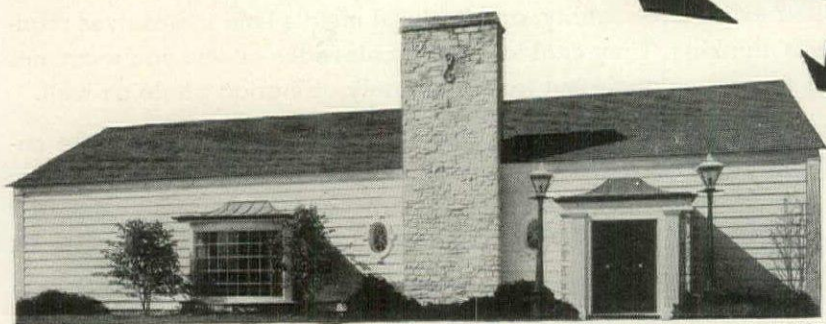
Architectural metals, both ferrous and non-ferrous, will be readily available for use again as soon as building restrictions are lifted. Write today for a Directory of Leading Architectural Metal Fabricators who are anxious to assist you now in the "get ready" period. Address Dept. F3.



**NATIONAL ASSOCIATION OF
ORNAMENTAL METAL MANUFACTURERS**

209 CEDAR AVE. TAKOMA PARK
WASHINGTON 12, D.C.

How to keep a house from growing old



DAVID OLIVER, DESIGNER



New homes can have enduring youth if painted at regular intervals with Eagle White Lead.

The 2000-year-old white lead formula has been admired by painters and architects alike for generations. Thomas Jefferson approved white lead for exterior and interior surfaces. Pure white lead ground in pure linseed oil has preserved many of the world's architectural masterpieces. There is no better paint than white lead, and no better white lead than Eagle!

In addition to making things beautiful, Eagle White Lead protects against the ravages of time and weather. Its tough, durable film is flexible...expands and contracts with temperature changes. Eagle does not crack or scale, but ages gracefully by even chalking, so that when repainting time finally comes, the surface is in perfect condition. Eagle's broad coverage and great hiding power combine with its long life to make for true painting economy.

Speed the final victory with more War Bonds!

THE EAGLE-PICHER LEAD COMPANY

Cincinnati (1), Ohio

Member of the Lead Industries Association



**EAGLE
WHITE LEAD**



MONTH IN BUILDING: NEWS

(Continued from page 24)

materials are expensive (aluminum 45 cents, alloy steel 30 cents, Nylon \$1.60 per lb.). But, through repetition of parts, a precision design, volume orders, Dymaxion production costs may conceivably drop somewhere near the automobile figure of 17 cents a pound. One very favorable cost factor: the dwelling machine has only 500 types of parts, as compared to the automobile's 5,000, the airplane's 25,000 to 45,000.

God Bless Our Dwelling Machine. Factory-made heating, refrigerating, air-conditioning, laundering, dish washing, bathroom and cooking units will be fitted into the central mast. A ventilator at the top of the mast will draw outside air into the dwelling; the plastic windows that circle the house need never be opened, although special louvers will be provided. According to Fuller, automatic controls will grade solar illumination imperceptibly to the dwelling's own lighting system, whose color controls will provide change in interior color and intensity as desired. Living space will amount to 1,000 sq. ft. The dwelling machine's one concession to nostalgia: a fireplace for buyers not completely reconciled to mechanics.

If the design turns out to be foolproof as a production formula, will it connect with a market? Will U. S. families buy a round house?

The people who live in Wichita often say that the town is "kind of slow about taking up with a new idea." But the 14,000 workers at Beech registered immediate approval of the Dymaxion plan—if a sharp drop in the quit rate after its announcement is a fair index. In a town where they turn out a B-29 aluminum giant every seven hours there is nothing particularly startling about a proposal to turn out an aluminum house. And, in a town where they point out a mile-long line-up of B-29's as the most beautiful part of the scenery, there is nothing appalling about a row of aluminum houses.

Wichita is Sold. Neither C. R. Richards nor W. E. Edmondson, the representatives of IAM's District 70 who helped present the Dymaxion plan to Beech, were at all slow to take up with Fuller's idea. Master mechanics who have worked on almost all kinds of aircraft assemblies, these men are representative of the big reservoir of machine skills in Wichita, where almost everybody with enough room in his garage has become a sub-contractor for one of the four aircraft plants. Checking what

(Continued on page 32)

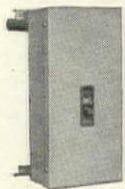


BUSDUCT

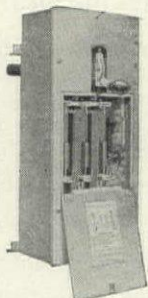
means greater

FLEXIBILITY
and **ECONOMY**
of Operation

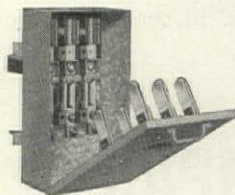
FA PLUGIN UNITS



Left: FA Circuit Breaker provides full automatic protection against short circuits or dangerous overloads. Time-delay action prevents unnecessary interruption of service.



Right: FA Shallbrak operating switch incorporates FA Kamklamp fuseholders and pressure type solderless connectors in a unit designed for safety and efficiency.



Left: FA Klamp-switch has silver-plated contact parts on an extra heavy insulating block. Easy to install and operate.

These three units can be arranged to attach on either or both sides of the Plugin FA Busduct. Their rugged construction permits heavy usage and frequent connect and disconnect to accommodate changing plant conditions.

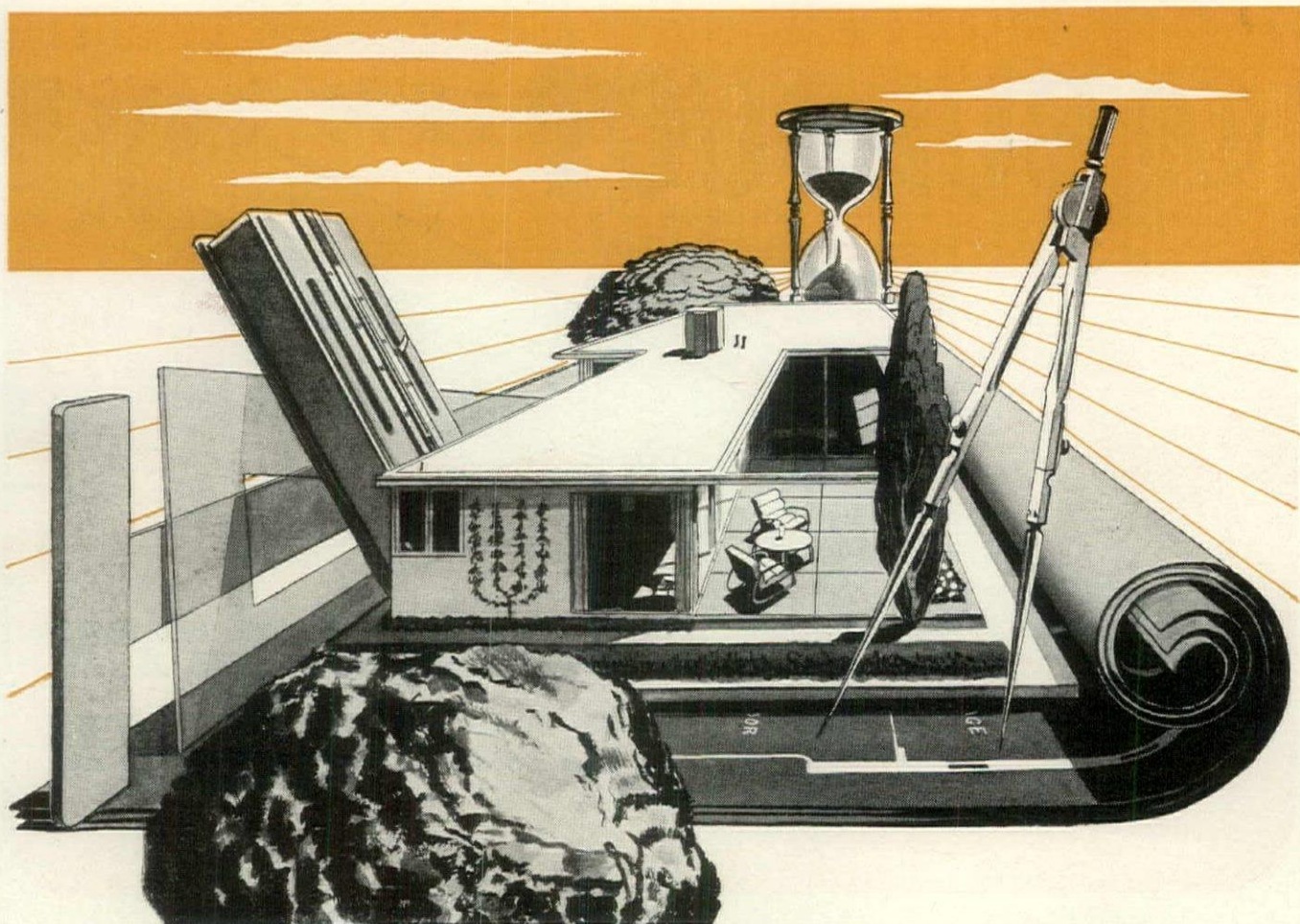
Your electrical distribution problems are solved for the present and a long time to come when you select FA Busduct. Correctly engineered, it provides all the capacity needed for heavy and light machinery. From the service entrance, Feeder FA Busduct carries the heavy current with minimum voltage loss directly to where it is needed. Plugin FA Busduct provides multiple outlets for equipment that is closely grouped.

A plugin outlet every foot means shorter distances from power source to machine . . . it means convenience, flexibility, the elimination of many long lead-ins with a consequent economy of operation. Convenient for adding new equipment . . . flexible for relocating present equipment or rearranging the entire plant layout, it is made in standard 10 foot sections that are easy to install and reassemble should the plant layout change again.

FA Busduct for lighting and power distribution is designed for 2, 3 and 4 wire systems, 250 volt DC and 575 volt AC maximum. Write today for Bulletin 65 giving complete descriptions. There is a FA Sales Engineer near you who will be glad to assist in planning new or extended electrical installations.

Frank Adam
ELECTRIC COMPANY

Box 357, ST. LOUIS, MO.



PLAN FOR THE FUEL OF THE FUTURE

With peace will come amazing new Anthracite-burning equipment bringing new concepts of comfort, convenience, and efficiency in home heating. Paralleling these advances are today's modern methods of mining and preparation which make D & H Anthracite the model modern

fuel.* Be sure to include anthracite heating equipment in your plans for post-war American Homes.

**Clean—no soot. Economical—more heat for less money. Convenient—use can be fully automatic. And above all, Healthful—maintains even temperature, eliminating constant fluctuation between hot-and-cold, on-and-off periods.*

THE HUDSON

SCRANTON,



COAL COMPANY

PENNSYLVANIA

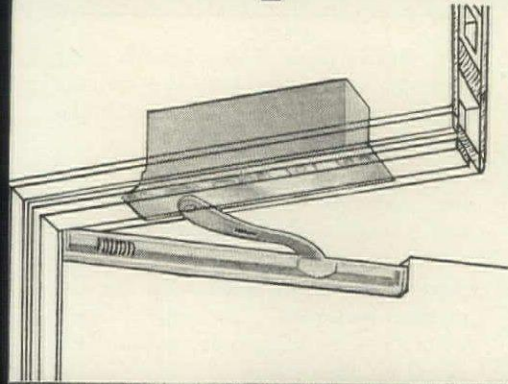
PRODUCERS OF D & H ANTHRACITE

: : : : TUNE IN D & H ANTHRACITE'S SUNDAY MORNING WORLD NEWS 9 A. M. EVERY SUNDAY, CBS. : : : :

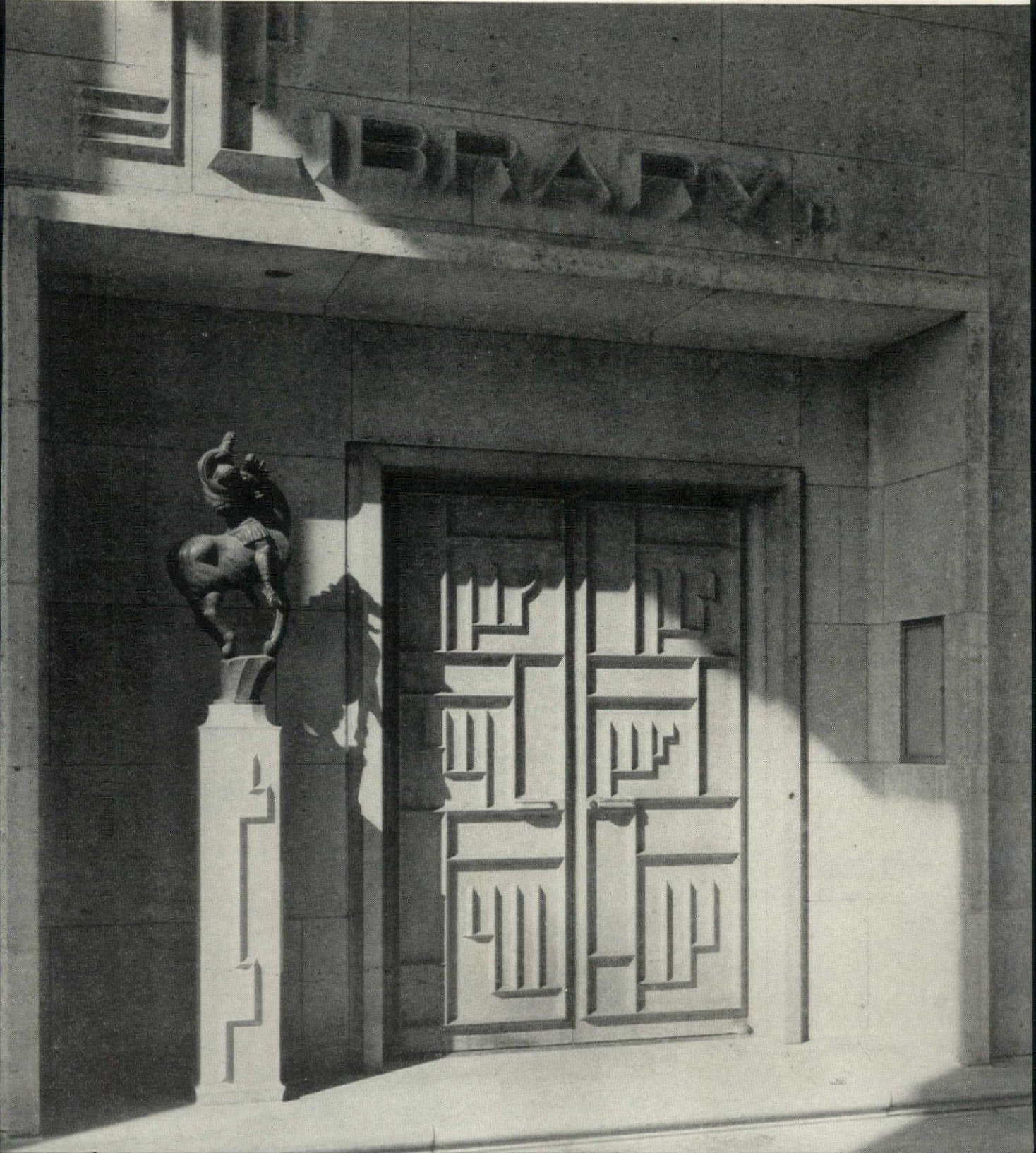
Library Doors

SAARINEN AND SWANSON ARCHITECTS
LCN DOOR CLOSER No. 206 SPECIFIED

Control by LCN overhead concealed method carries over into function the sheer beauty and modern styling of Eliel Saarinen's doors for Cranbrook Library and Museum. • NORTON LASIER COMPANY, CHICAGO



DOOR  CLOSERS



(Continued from page 28)

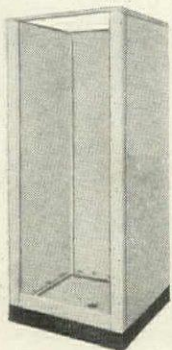
A step forward . . .

STANDARDIZATION

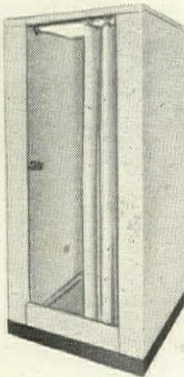
OF SHOWER CABINET AND GLASS DOOR SIZES

The standardization of shower cabinet and glass door sizes announced by Fiat marks a step forward in the industry that will be of definite benefit to the architect, builder, jobber and plumber. Standardization will expedite bathroom planning, make possible bigger values in showers, simplify jobbers stocks, and promote uniformity in installation methods.

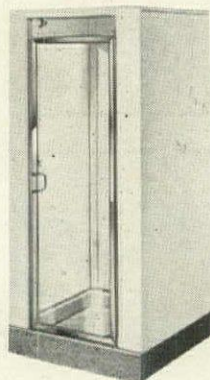
Fiat showers are classified into four groups with six basic sizes.



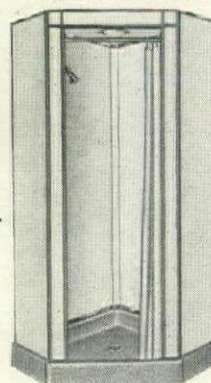
... GROUP NO. 1
Skipper type, low cost showers
32 x 32 x 76



... GROUP NO. 2
Cadet type, medium priced showers
32 x 32 x 80
36 x 36 x 80
36 x 36 x 80 (corner)



... GROUP NO. 3
Marine, Ensign type, for "above average" installations
32 x 32 x 80
36 x 36 x 80
40 x 40 x 80 (corner)



GROUP NO. 4.....
Admiral type, de luxe class
32 x 32 x 80
36 x 36 x 80
40 x 36 x 80
36 x 40 x 80
40 x 40 x 80 (corner)

Measurements conform to the American Institute of Architects 4" unit module system.

Glass Shower Doors
One standard size—
24 x 72

AVAILABLE FOR DELIVERY NOW

NO. 85—Recommended for homes, clubs, hospitals or public buildings. Size 36 x 36 x 78. Deep type receptor—heavy 1/4" MASONITE walls.

NO. 80 Volunteer—has remarkable strength and is easily erected. A good shower for economical installations. Size, 32 x 32 x 76 and 30 x 30 x 76.



FIAT

METAL MANUFACTURING COMPANY

1205 ROSCOE ST., CHICAGO 13, ILLINOIS
21-45 BORDEN AVE., LONG ISLAND CITY 1, NEW YORK
32 SAN GABRIEL BLVD., PASADENA 7, CALIFORNIA

they heard from Fuller against their own shop experience, both were quickly convinced of the design's production possibilities.

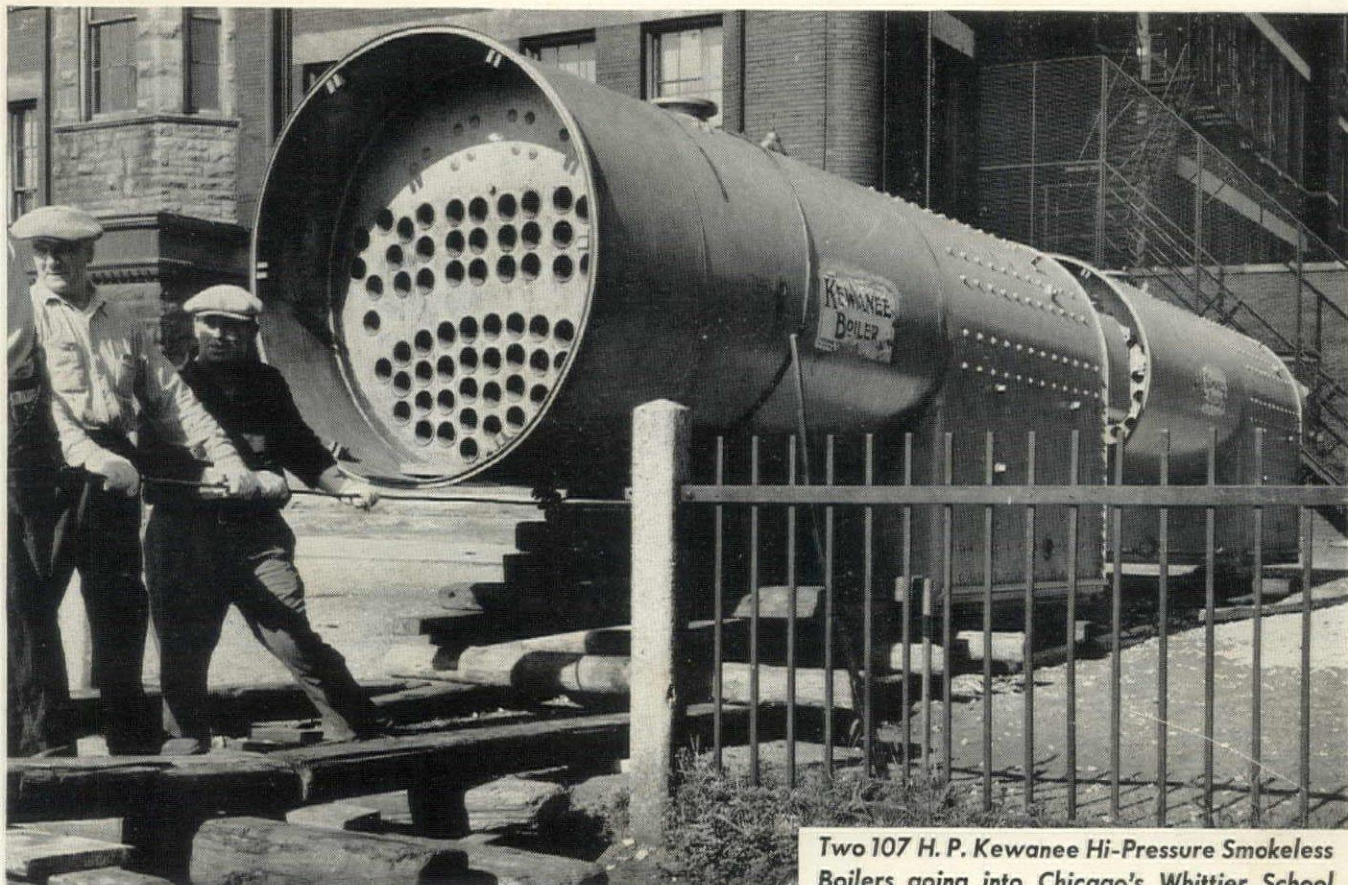
Wichita's city manager hopes to see the town's 6,000 units of temporary war housing replaced by dwelling machines. Somebody reminded him that there would be no window in the Dymaxion bathroom. His reply: "We'll write a new building code that can be a model for the country."

To William Graham, an experienced realtor who has supplied a whacking lot of war housing in Wichita, the Dymaxion design makes sense as a house that will link more easily into his real estate business than conventional construction. Graham built two big war housing developments, made money because of the job standardization possible. "If mass building can cut costs below what I ever thought possible," Graham says, "it is certainly reasonable to expect immense cost cutting through factory production." Graham owns about 800 scattered lots in Wichita which he wants to develop after the war. "I won't be able to use my cost-cutting system for these isolated building jobs. I'm planning to put up dwelling machines."

Auto Money? Unless Graham wants to maintain an erection and servicing crew, he'll need help from somewhere. This is where automobile dealer Jake Butts—and hundreds like him—comes into the picture. Butts, whose firm sells Wichita its Cadillac, Oldsmobile and Buick cars, believes that automobile sales and service methods are a natural for distribution of the dwelling machine.

"From the show room for display of models right down to the numbered bins for replacement parts, we've got the equipment," Butts says. "We've got the trained mechanics. We've got the sales organization and the financing methods." Butts, used to financing where the equity is on wheels and depreciates with precarious rapidity, thinks auto finance channels will leap at a chance to adjust rates to a point where cautious building money will be up against tough competition.

Even among the most enthusiastic protagonists of the mass-produced house, there are some who gasp at Fuller's revolution in structural design. Those who fear revolution have been quick to dismiss him as a high-powered Buck Rogers. Others have called him a genius born ahead of his time. But it may well be that the times have caught up to Fuller.



Two 107 H. P. Kewanee Hi-Pressure Smokeless Boilers going into Chicago's Whittier School

KEWANEE

Heavy Duty Smokeless BOILERS

Every characteristic which makes Firebox Boilers especially advantageous for Hi-Pressure steam is incorporated in the Kewanee Heavy Duty Smokeless Series for hand firing.

Big, high fireboxes . . . long gas travel . . . large water content . . . unimpeded waterways . . . generous steam space . . . insure ample steam with economy comparable with the best.

FOR COAL, OIL, GAS
100, 125, 150 LBS. STEAM WORKING PRESSURE
25 TO 304 HORSE POWER

15,589 KEWANEE BOILERS HEAT 10,742 SCHOOLS

**For Heating
and Power**

**75 YEARS
BOILERMAKERS**



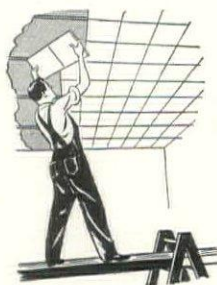
KEWANEE BOILER CORPORATION
KEWANEE, ILLINOIS

Branches in 60 Cities—Eastern District Office: 40 West 40th Street, New York City 18

Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION



Movable Walls. J-M Transite Walls are strong, sturdy, durable. They provide a complete system of dry-wall construction—are even used to finish the interior of the outside building walls. Can be taken down and re-located almost overnight with complete salvage. Available for any height—even for low railings and counters. Made of asbestos and cement, they have a smooth, hard surface. J-M Transite Walls are fireproof. Last indefinitely. May be left in original gray finish, painted, or decorated.



Acoustical Ceilings. Ceilings of the J-M Unit Office System are sound-absorbing, demountable, acoustical units which permit hung ceiling construction, concealing air-conditioning ducts, overhead conduit, etc., yet making this service equipment readily accessible. J-M Acoustical units are easy to clean, easy to maintain, have high light-reflection coefficient. An exclusive Johns-Manville patented construction system permits interchangeability of flush-type fluorescent lighting and Acoustical ceiling units.

Now, Executive Offices can be flexible, too!

Johns-Manville's System of Unit Office Construction—Walls, Ceilings, Floors—gives architects complete flexibility as well as interesting new design possibilities for post-war offices.

AN ENTIRELY NEW concept in flexibility, styling and comfort of executive offices now becomes possible with J-M Unit Office Construction. For this System is made up of:

- ... movable walls which offer complete freedom of design. Easily erected and re-located using same materials.
- ... acoustical ceilings composed of demountable panels which have the added advantage of allowing for flush-type fluorescent lighting.
- ... resilient, decorative floors, made of individual units which permit easy office alterations.

These three types of materials for walls, ceilings, floors, combined into one design,

offer limitless possibilities of office arrangement and decorative effects. The acoustical ceiling and resilient floor make possible new quiet and efficiency. The Transite Walls, while having all the advantages of a permanent wall, also provide flexibility to meet changing business conditions. And the use of these J-M interchangeable unit materials keeps maintenance costs low, permits expansion or rearrangement of offices at low cost and remarkable speed.

Moreover, each of the materials in this J-M Unit Office family is durable and substantial, easy to clean, moderate in cost. Their use means you write only one specification and gain one manufacturer's responsibility.

A new brochure showing the many and varied uses of this J-M Unit Office System is available to architects and engineers. Ask for brochure No. BM-287A. Write Johns-Manville, 22 E. 40th St., New York 16, New York.

This executive office is part of a complete J-M "Unit Office" layout. Note especially the decorative treatment of the Transite Wall panels, and the flush-type fluorescent lighting combined with the J-M Acoustical ceiling.



Colorful, Resilient Floors. J-M Asphalt Tile Flooring completes the J-M Office System.

Quiet and comfortable to walk on, they are easy to clean, easy to maintain. Made of asbestos and asphalt, they will withstand hard wear and give years of service. Manufactured in small units in a wide variety of plain and marbled colors, permitting a great many designs and patterns. The individual units make it simple to extend the pattern or patch the floor.



Johns-Manville Unit Office Construction

G-E Wiring Material News

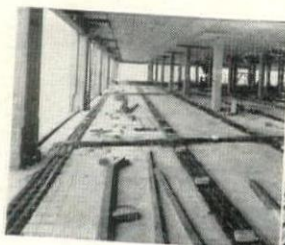
GENERAL ELECTRIC SILENT SWITCHES



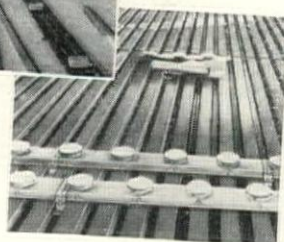
G-E Mercury Silent Switches are ideal for nurseries, classrooms, home bedrooms and other locations where the click of a switch might prove disturbing. These switches have a smooth, silent action—make practically no noise on the make or break. They have long life. Specify them for new buildings and for remodeling jobs.

UNDERFLOOR ELECTRICAL DISTRIBUTION SYSTEMS

Here are two types of underfloor wiring—G-E Fiberduct and G-E Q-Floor Wiring. Both give unusual flexibility to factories, stores, offices, etc. Electrical outlets can be preset or added later as needed.



Specify G-E Fiberduct for masonry and wood type construction



Specify G-E Q-Floor Wiring with Robertson Q-Floors

FLAMENOL BUILDING WIRE

(Small Diameter—Thermo-plastic Insulated)

For
Entire Wiring
Systems

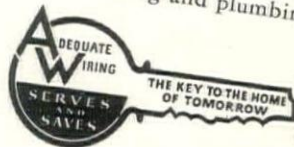
Flamenol* Building Wire is available for use in all locations: Type SN for general purpose wiring; Type SNW for wiring in wet locations. Their thermo-plastic insulation has long life, is flame retarding and resistant to oils, acids, etc. Type SNW insulation also has a low moisture absorption rate.

*Reg. U.S. Pat. Off.



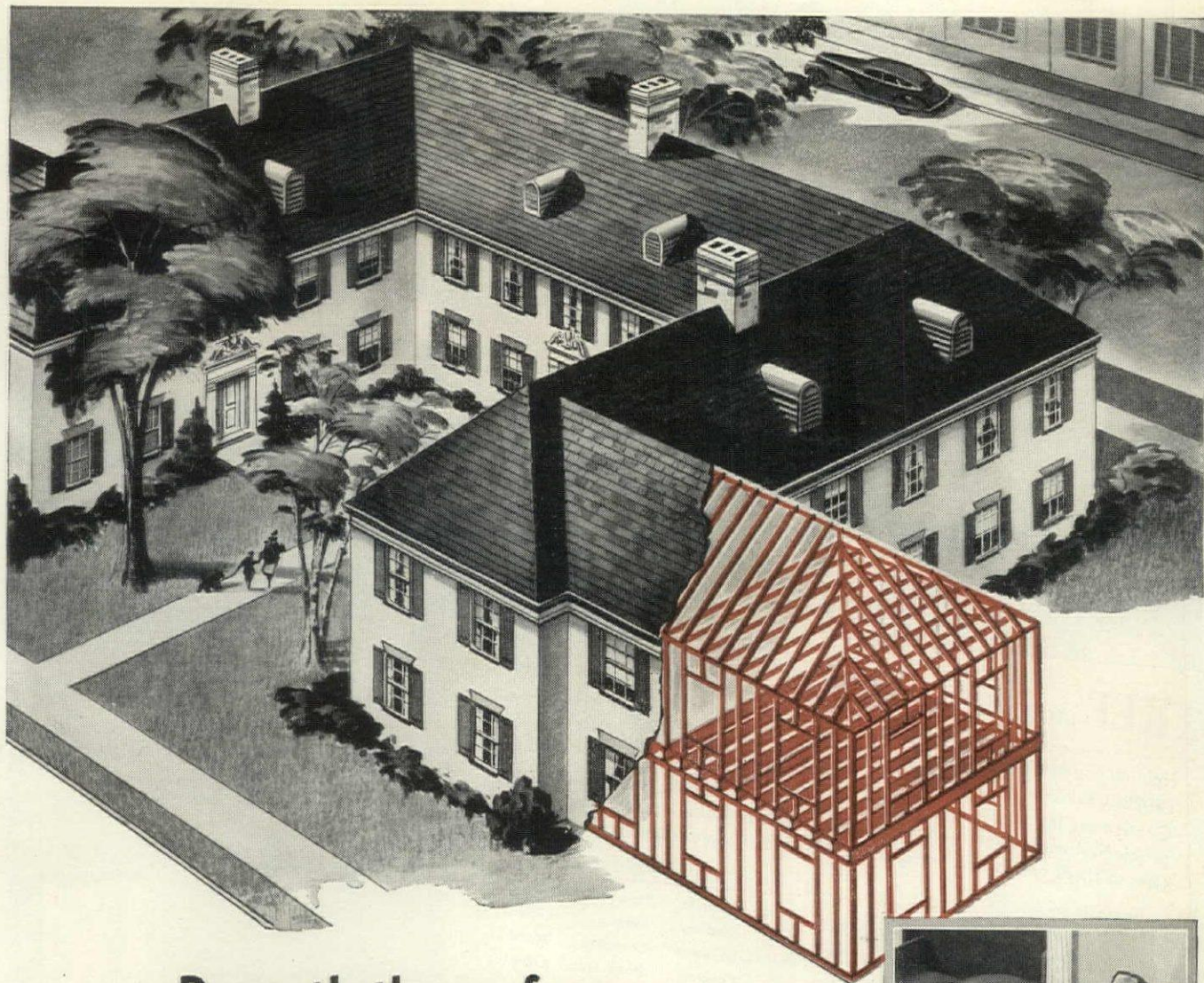
ADEQUATE WIRING IS ESSENTIAL

Arthur C. Holden, Pres. of N. Y. Chapter of A.I.A., says, "Architects are studying improvements in wiring and electrical facilities which mark an important advance for postwar installations. Adequate wiring is as essential as adequate heating and plumbing."



BUY WAR BONDS AND HOLD THEM

GENERAL  ELECTRIC

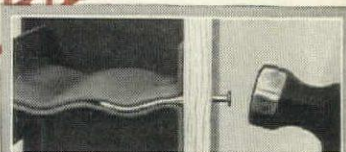


Beneath the surface a lasting framework of steel

From the exterior, the built-in quality of this attractive terrace cannot be seen. Yet beneath the surface is a steel framework that denotes a progressive architect and builder, alert to the advantages of new materials and the sales value of permanence, fire-safety, rigidity and imperviousness to dry-rot.

These qualities—to the home builder, home buyer or investor—are as salable as grace and beauty of design. They are attainable without sacrifice of originality or economy, through the designed efficiency of standardized Stran-Steel framing systems, new and improved.

Light in weight, rust-proofed, and featuring a patented nailing groove for the simple attachment of collateral materials, Stran-Steel members provide an ideal material to work with. Architects and builders who have an eye for practical values are thinking in terms of Stran-Steel.



YOU NAIL TO STRAN-STEEL

Think in terms of

STRAN STEEL

SERVING TODAY IN THE
NAVY'S FAMOUS QUONSET HUT

GREAT LAKES STEEL CORPORATION

STRAN-STEEL DIVISION • 37TH FLOOR PENOBSCOT BUILDING

DETROIT 26, MICHIGAN

UNIT OF NATIONAL STEEL CORPORATION

Lighting

FREE LIGHTING INFORMATION SERVICE REQUEST FORM

Lighting Engineering Staff
FEDERAL ELECTRIC COMPANY, Inc., 8700 S. State St., Chicago 19, Ill.
Gentlemen: The following information is given you to help solve my lighting problem. I understand there will be no charge or obligation for this service. (Please check or fill in proper spaces below) (Send photograph if possible)

Space To Be Lighted		Size	Colors, Walls, etc.	
Shop..... <input type="checkbox"/>	Lobby.. <input type="checkbox"/>	Height.....ft.	Ceilings: Medium <input type="checkbox"/> Dark..... <input type="checkbox"/> Light.. <input type="checkbox"/>	
Store..... <input type="checkbox"/>	Halls.. <input type="checkbox"/>	Length.....ft.	Walls: Medium <input type="checkbox"/> Dark..... <input type="checkbox"/> Light.. <input type="checkbox"/>	
Auditorium.. <input type="checkbox"/>	Factory <input type="checkbox"/>	Width.....ft.	Floor: Linoleum <input type="checkbox"/> Carpeting <input type="checkbox"/> Wood <input type="checkbox"/>	
Office..... <input type="checkbox"/>	Type.....		Concrete <input type="checkbox"/> Stone, etc. <input type="checkbox"/> Others <input type="checkbox"/>	

Construction.....

Work For Which Lighting Is Required

General..... <input type="checkbox"/>	On dark material.. <input type="checkbox"/>
Reading..... <input type="checkbox"/>	Display..... <input type="checkbox"/>
Drafting..... <input type="checkbox"/>	Decorative..... <input type="checkbox"/>
Shop Work..... <input type="checkbox"/>	Proofreading..... <input type="checkbox"/>

Present Lighting

Type.....	Footcandles (if known)
Now.....	fc. Needed.....fc.
	Current available
Phase.....	Cycles.....Volts.....

Type.....sq. ft. Exposure: ☐ North ☐ South ☐ West ☐ East
Windows: Area, Approx., total.....

CHANGES CONTEMPLATED: (any changes in structure, equipment, colors, windows, or use of space, that would affect lighting — please state briefly)

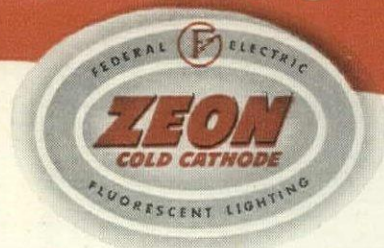
MY PROBLEM: (state here, or in a letter, any specific questions, present problems, unusual or custom-built requirements, special colors or changes of lighting intensity to be included, architectural features such as concrete or steel beams, coves or troffers, etc.)

NAME:.....

POSITION OR TITLE:.....

**HAVE YOU TAKEN ADVANTAGE OF THIS
NEW FEDERAL ELECTRIC CO. SERVICE?**

Information Service



Many new lighting installations are now being planned. Most of them will use fluorescent lighting. This lighting is still new to many people. It is important to the user, and to the lighting industry, that these new installations are so designed that they give the full benefit of the glareless illumination, flexibility, and economy of fluorescent lighting. Therefore Federal Electric Company, Inc. offers its help, and the counsel of its lighting engineers, through *Lighting Information Service*.

This company offers to share, freely, with any prospective user, or his architect, consulting engineer, and electrical contractor, the benefit of its 15 years' experience in the manufacture of gaseous discharge lamps and in designing lighting installations. Take advantage of this service. Fill in the form below; or, if you prefer, describe your problem in detail in a letter. Our engineering staff will make a sincere effort to help you with your plans, so that you get the best possible results from whatever fluorescent lighting you install.

DID YOU KNOW THAT THERE ARE 2 KINDS OF FLUORESCENT LIGHTING?

"Hot Cathode" is the common heater filament type of fluorescent lamp; "Cold Cathode" is the improved shell-electrode type, of which Zeon is the outstanding example. Long life, lower maintenance cost, greater flexibility are some advantages of Zeon Cold Cathode Fluorescent Lighting.

HOW THIS SERVICE CAN HELP YOU. Federal Electric Company, Inc. Lighting Engineers will study your problem. They may write you for additional information, or may call on you.

After a complete analysis, they will recommend the type and amount of fluorescent lighting required, best location and type of fixtures, wiring, connections, load, and any other equipment or changes recommended.

This service does not replace that of the architect, consulting engineer, or electrical contractor, but is simply specialized advice to them or to you. There is no charge for this service, and no obligation, other than your cooperation in giving us full information needed for a sound recommendation.

WHAT IS YOUR PROBLEM? Do you want help in planning a job, advice on the amount, type, and color of illumination? Perhaps you would simply like to have us check your plans. We will be glad to help you. Federal Electric Company, Inc. does not install lighting equipment, but sells it to contractors and wholesalers—and is glad to assist them in securing successful installations.



FEDERAL ELECTRIC COMPANY, INC.

LIGHTING  DIVISION

8700 S. STATE ST., CHICAGO 19, ILL.
TELEPHONE VINCENNES 5300

225 N. MICHIGAN AVE., CHICAGO 1, ILL.
TELEPHONE STATE 0488

SUBSIDIARY COMPANY . . . FEDERAL
BRILLIANT COMPANY, ST. LOUIS, MO.

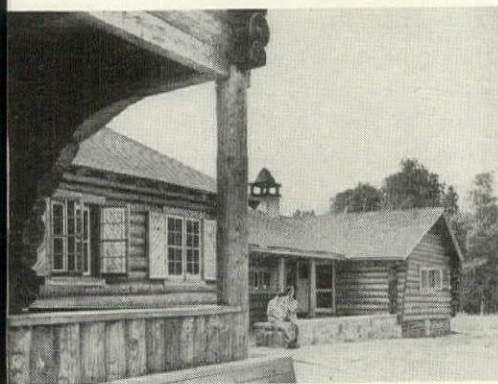
Branch Offices: Cincinnati • Dallas • Duluth • Houston • Indianapolis • Kansas City • Louisville • Milwaukee
Minneapolis • New Orleans • New York • Philadelphia

LETTERS

Letter from Little Norway . . . Kickback on the In-Out-Living Room . . . Ex-G.I. blasts veteran's loans.



Vesle Skaugum in Canadian woods



Main Lodge at Vesle Skaugum



Swimming pool, Little Norway

LETTER FROM LITTLE NORWAY

This letter from a lieutenant in the Royal Norwegian Air Force describes the training camps for airmen designed and built in Canada under his supervision:

Forum:

During the next few months the Royal Norwegian Air Force will move its training facilities from Canada to a locality nearer the Norwegian homeland. Four and one half years will then have elapsed since the first Norwegian airmen came to Toronto and set up a training camp there to enable our Air Force to continue the fight against Germany.

Since that time, thousands of young men have escaped from Norway and

joined their countrymen in the new camp, Little Norway, where they went through a rigorous training before being sent to combat zones.

In the fall of 1941, it was also found necessary to set up a rehabilitation camp and manning depot. Here, new recruits from Norway were put through the paces of physical training to regain lost health and strength after the period of strain in occupied Norway and the long voyage to Toronto, which often took them all around the world. For this purpose property was purchased in Northern Ontario in a setting of lakes and huge forests, familiar and dear to Norwegians.

The Commanding Officer, Colonel Reistad, specified houses which would make the new soldier feel at home, and since the lumber situation was difficult, he proposed that we build log cabins or houses in the "old country" way.

The buildings were therefore designed after the pattern of Norwegian ski lodges with the idea in mind that they could be used after the war as a resort hotel.

The log houses were built rapidly, and construction methods simplified to the extreme. In Norway corner joints are done elaborately and the logs somewhat flattened. However, our corner joints were done simply, and the logs cut only on the underside to give better weather protection.

As the logs were cut green, a considerable allowance had to be made for shrinkage, and we generally allowed $\frac{1}{4}$ in. per ft. around doors, windows and masonry. The ceilings were insulated with rockwool, and cedar shingles were used for roofing instead of the traditional Norwegian "turf" roof, which was considered too much of a fire hazard in addition to requiring a very heavy roof construction.

The time required for building in this way was not much longer than would have been necessary for frame construction, as the work could proceed immediately without waiting for lumber allocations. In other words we found it easier and quicker to cut logs than red tape.

Shortly after the completion of Vesle Skaugum it was found desirable to transfer the Little Norway training center from Toronto to Muskoka Airport, about 40 miles from Vesle Skaugum. The size of this new camp was

too large for the small gang of trained carpenters employed on the first job to tackle alone. Most of the barracks, therefore, had to be built in conventional frame construction.

The messes for officers, N.C.O.'s and airmen, however, were built in the Vesle Skaugum style, with logs from the property. The interior log walls were left uncovered and part of the furniture was made on the job, so that a genuine Norwegian character was given to the interior at little cost.

A swimming pool in front of the mess was dug by the soldiers themselves, and was made entirely of wood and canvas. A log retention frame was built and the sides of the pool were made of used form-lumber, waterproofed with canvas, two coats of all sorts of spare paint from the job, and two coats of the final blue, which had to be specially purchased.

It is possible that these buildings are not quite as modern in appearance as they would have been if built in Norway before the war. But we hope that this to a large extent will be excused by the fact that we all have been very homesick and therefore have built somewhat under the influence of a too romantic spirit.

Lt. JOHN ENGH
Royal Norwegian Air Force

THE RUSSIAN MYSTERY

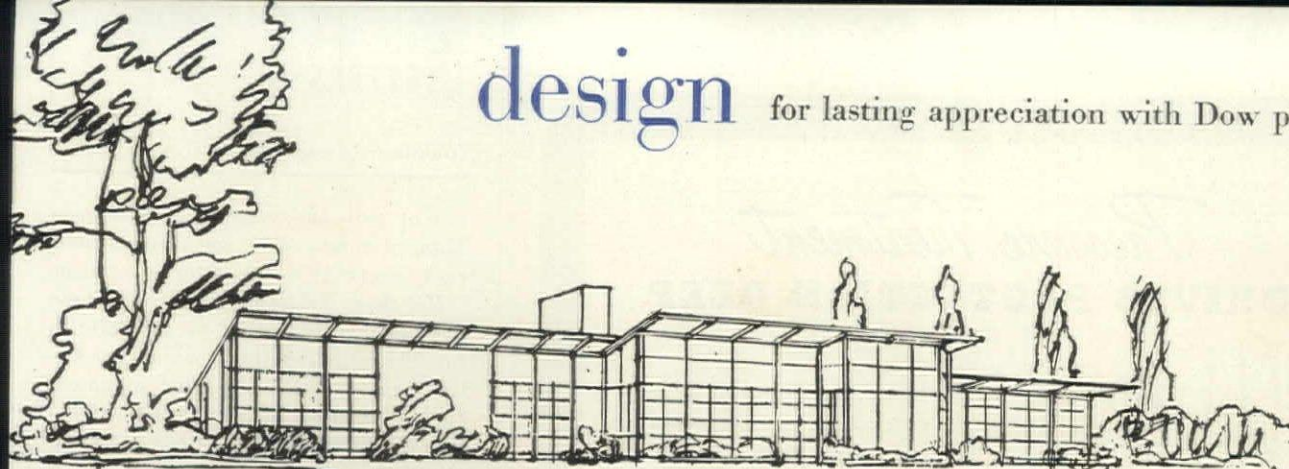
Forum:

Like so many of us in the U. S., I have been anxious to accept in good faith a large part of the current propaganda painting the U.S.R.R. in more humanistic terms, largely because for so many years I have felt that, though the means might not have justified the ends, there had been an overdose of anti-Russian feeling.

It is then with some misgiving that I view the designs for postwar Russian cities in the December issue. I have become one of the large group of architects which believes that a society expresses itself through its buildings. I have noted an ever greater degree of humanism coming into practically all contemporary work (barring the Fascist states) whether it be in domestic building, memorials (as for instance the English ones illustrated in the same issue), or even in large scale civic design. I have felt these forms to be con-

(Continued on page 38)

design for lasting appreciation with Dow plastics

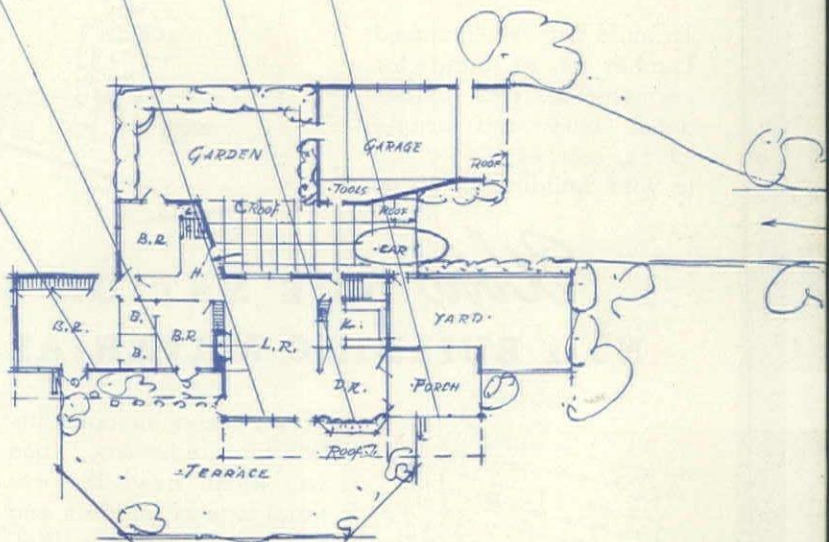


Screen from SARAN

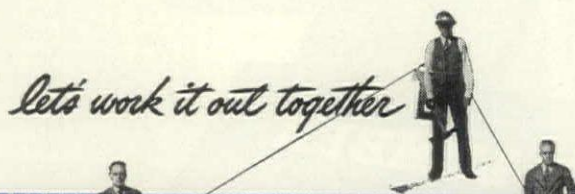
Many an architect and builder now in the Pacific area has lifted an interested eyebrow at the amazing performance of screen made from Saran. He's watched it on duty day in and day out under conditions too tough for metal screen.

These men will insist on using screen from Saran in buildings and homes they plan after the war. They know from actual observation that it won't rust even in steamy jungle atmospheres (made of Saran plastic, it's not affected by salt air, rain, snow, fog, or acid fumes). They know how strong and resilient it is—how it resists dents and bulges (tensile strength 40,000 pounds per square inch). They have seen that it admits more light (it's translucent). They appreciate how easy it is to handle (about one-fifth the weight of metal).

Add to these important advantages the fact that screen from Saran won't be expensive after the war, and you can understand why it will be in wide use in hospitals, public buildings and homes. Why not get acquainted with screen from Saran now?



Designed by Wallace Frost, Architect, Birmingham, Michigan



We at Dow feel that the successful use of plastics in architecture is not a one-man job, nor even a one-industry job. It calls for the combined skill and experience of architect plus fabricator plus raw materials producer. Working together, this team saves time and money and puts plastics to work successfully. Call us—we'll do our part.

THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN
New York • Boston • Philadelphia • Washington • Cleveland • Detroit
Chicago • St. Louis • Houston • San Francisco • Los Angeles • Seattle



STYRON • ETHOCEL • ETHOCEL SHEETING
SARAN • SARAN FILM • STRIPCOAT

(Continued from page 36)

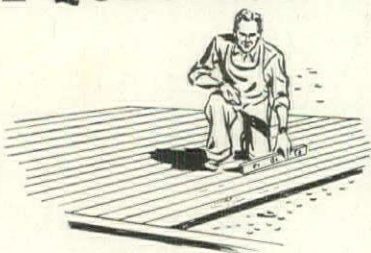
Pressure Treatment DRIVES PROTECTION DEEP



Wolman Salts* solution is driven deep into wood under high pressure in steel retorts. You get positive protection when you specify Wolmanized Lumber*.

Treated Wood **ANSWERS** SERVICE-LIFE QUESTION

To build with Wolmanized Lumber is to build for permanence. This lumber defies decay and termite attack, assures longer life to your building projects.



Wood **THE NATION'S** No. 1 BUILDING MATERIAL



When peacetime construction gets under way, wood will again head the material lists of builders and contractors. Specify Wolmanized Lumber and get *all* of wood's advantages.

AMERICAN LUMBER & TREATING COMPANY

*Registered
trademarks

WOLMANIZING

FLAMEPROOFING

CREOSOTING

1647 McCormick Building, Chicago 4, Illinois

sistent with this Age of the Common Man, of communism, socialism, democracy, eventually true internationalism.

But these Russian examples force me to pause and wonder if we are quite as far along toward this goal of international understanding as I had supposed. If these designs are expressive of the true Russian culture I am forced to feel that their goal does not seem to be, even broadly speaking, the same as are ours. I see no indication of the professed eventual submergence of the State in the people, but rather the opposite; for these completely mechanical design forms proclaim in no uncertain terms the power and the glory of the Super-State, reduce man to but a cog in that State. I find again that same frightening spirit of coldness and awesomeness which has characterized so much of the German architecture under Hitler; the same impersonality and pomp of the totalitarian architecture of Paris.

Perhaps we can justify it in the same score as we must justify Washington—on the grounds of representing an expression of the immature boastfulness of a young country growing in power.

Yet I find this somewhat difficult to believe in this era of enlightened planning. I merely wonder if there really exists the bond of progress which we have had pictured to us lately and which we would like to believe.

Cornell University THOMAS J. BAIRD
Ithaca, N. Y.

Could it be that Russia, sure of herself within her own boundaries, must still try to impress what she considers a potentially unfriendly world by her strength and power? Or could these buildings reflect the suppressed yearning of the Russian who suddenly finds himself elevated from serfdom to citizenship? A current yarn concerns conversation between Stalin and an American who apparently shares Reader Baird's reaction to proposed Russian buildings. Stalin: "Twenty-five years from now they will know better. Then we will tear down all these buildings and start over again."—Ed.

FUNCTIONAL DESIGN FOR CHINA Forum:

For many years the China Institute has been promoting cultural exchange between China and America. Our new project is to cooperate in the production of a film on functional architecture for the U. S. Government.

This film is intended primarily for use in China. It will explain and illustrate American modern functional design so that the Chinese public in general and architects in particular may bear in

(Continued on page 42)



Reliability

CHARTING a course or transferring ideas into workable plans calls for reliable instruments which one can trust. Among these is the drawing pencil—great in productive capacity when it measures up to precision standards.

VENUS Drawing Pencils are engineered to give you drafting perfection without failure: accurately graded to assure uniformity in all 17 degrees... *strong* in performance... *smooth* and *clean* in action.



Put VENUS to the test on your drawing board. Send us a postcard or a note for two free samples. Specify degrees wanted.

VENUS DRAWING PENCILS

AMERICAN LEAD PENCIL COMPANY, HOBOKEN, NEW JERSEY



at one time, yes... but not today!

Westinghouse addresses this ad to architects in the belief that they share with us the responsibility for providing superior circuit protection for American Industry.

The progressive building professional recognizes that the protection of electrical circuits is one of the major problems in industrial plants... department stores... schools... theatres. His specifications for circuit protective equipment are continuously calling for a higher degree of quality and efficiency... a *modernness* that is in keeping with the rest of the equipment being selected for today's and tomorrow's buildings and factories.

The answer to this demand is the "De-ion" (fuseless) Circuit Breaker for 115, 220, 440 and 550-volt circuits. It helps to eliminate production delays... distinguishes between harmless overloads and dangerous short-circuits... assures the best protection at the lowest lifetime cost of any protective device.

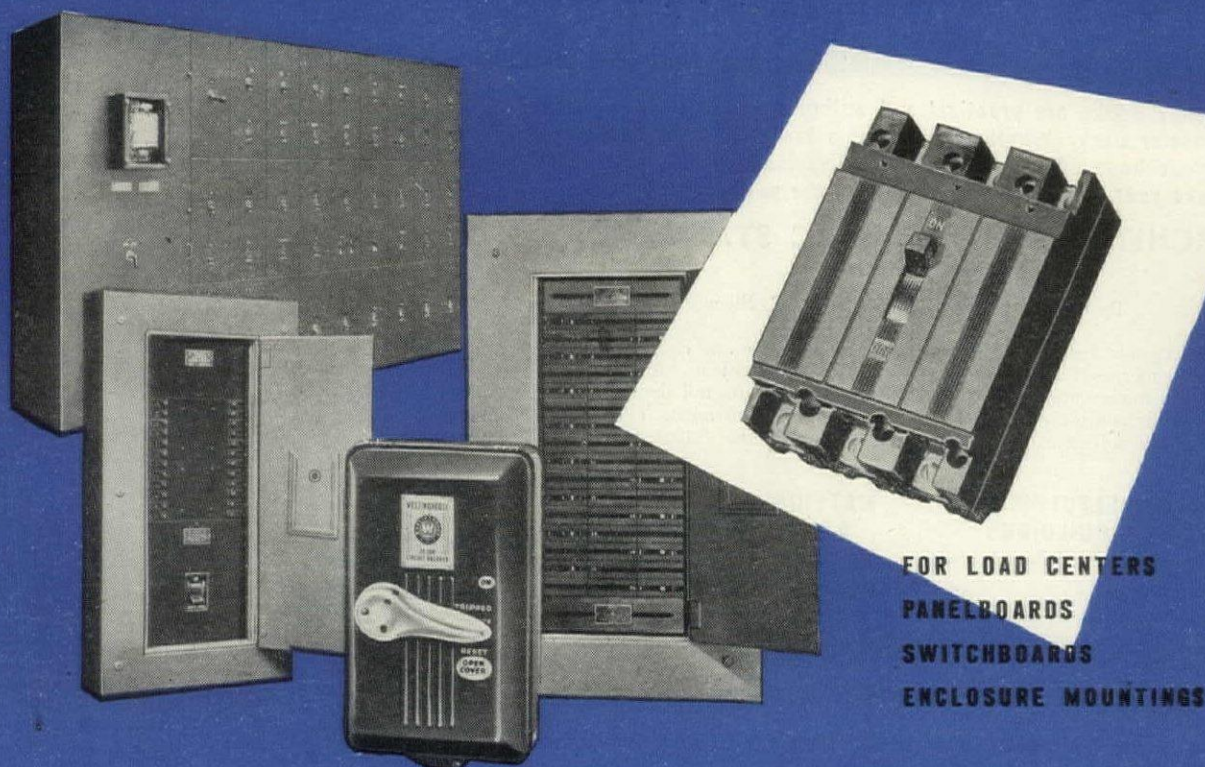
Reasons why are given on the opposite page.

J-60565-A



Westinghouse
PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

there's only **ONE** adequate type of circuit protection for modern plant equipment....



"DE-ION" (fuseless) CIRCUIT BREAKERS

here's why...

1 More positive protection for circuits and machines. "De-ion" Breakers give accurately calibrated, *automatic* protection against severe overloads and short circuits . . . the same protection that safeguards vital equipment on our modern battleships.

2 Keeps machines on the job. No unnecessary time out—"De-ion" Breakers do not interrupt production on harmless momentary overloads. When breaker does operate, service can be restored simply by closing the breaker. Nothing to replace or repair—no idle time lost waiting for special maintenance attention.

3 Greater Safety. Completely molded insulated enclosures are positively sealed to protect workers and maintain calibration. Circuit breakers cannot be blocked with coins, nails, or other foreign articles.

4 Lower costs—"De-ion" (fuseless) Circuit Breakers have a lower lifetime cost. Nothing is destroyed or requires replacement when breaker operates. Ask your Westinghouse representative for facts and figures. Westinghouse Electric & Manufacturing Company, P. O. Box 868, Pittsburgh 30, Penna.



"DE-ION" (fuseless) CIRCUIT BREAKERS

WILEY Books

in ARCHITECTURE

These Wiley Books are practical and authoritative—designed to help you do better work. Whether you want a “refresher” or want to increase your knowledge, look over the important titles listed below. Then make your selection and order from the coupon today.

ARCHITECTURAL GRAPHIC STANDARDS Third Edition

By Charles G. Ramsey and Harold R. Sleeper

344 Pages

\$6.00

This architectural “best seller” presents the authoritative and convenient answer to the questions raised in solving the architect’s daily problems. All data, standards, and information are shown graphically, so that pictures tell the story clearly. The essential facts are given without excessive detail or ornament. This book has proved itself an indispensable time- and effort-saver to the draftsman, architect, and engineer.

MECHANICAL AND ELECTRICAL EQUIPMENT FOR BUILDINGS

By CHARLES M. GAY and CHARLES DeV. FAWCETT

Second Edition, 453 Pages

\$5.00

Completely revised; treats fully all advances in the field, and contains up-to-the-minute and expanded tables. Includes: sanitation, heating, ventilating, air conditioning, lighting, acoustics and water supply.

SIMPLIFIED DESIGN OF ROOF TRUSSES FOR ARCHITECTS AND BUILDERS

By HARRY PARKER

195 Pages

\$2.75

A compact, thorough treatment of the essential principles and methods behind the design of the most common types of roof trusses. Comprehensive enough for the practicing architect or builder . . . simple enough for the beginner.

PLUMBING PRACTICE AND DESIGN (2 Vols.)

By SVEND PLUM

VOL. I, 315 Pages, \$4.50

VOL. II, 329 Pages, \$4.50

These volumes represent a complete working library on plumbing. They offer the essential, modern data on plumbing in handy reference form.

ARCHITECTS' AND BUILDERS' HANDBOOK

By FRANK E. KIDDER and HARRY PARKER

Eighteenth Edition, 2315 Pages

\$8.00

Contains information on every subject likely to come up for consideration by architects and builders.

MATERIALS AND METHODS OF ARCHITECTURAL CONSTRUCTION

By CHARLES M. GAY and HARRY PARKER

Second Edition, 636 Pages

\$6.00

Now revised, this book gives the latest uses of pressed wood, plastics, and structural glass, as well as the newest tables on the strength of materials and properties of structural steel.

SIMPLIFIED DESIGN OF REINFORCED CONCRETE

By HARRY PARKER

249 Pages

\$2.75

Contains simple, succinct explanations of all the usual reinforced concrete members in buildings. Gives all necessary tables.

STANDARD PLUMBING DETAILS

By LOUIS J. DAY

119 Plates

\$6.00

Covers every phase of plumbing graphically, with no text description. The drawing tells the whole story—installation, connections, and how they fit together. This valuable book presents sound, reliable information covering best modern practice.

SIMPLIFIED ENGINEERING FOR ARCHITECTS AND BUILDERS

By HARRY PARKER

214 Pages

\$2.75

A practical book containing the important basic principles employed in the design of structural members in buildings. Features practical problems with their solutions.

ON APPROVAL COUPON

JOHN WILEY & SONS, Inc., 440 Fourth Ave., New York 16, N. Y.

Please send me on ten days' approval the books I have checked in this advertisement (or I am attaching to this coupon a separate list of the books desired). At the end of that time, if I decide to keep the books, I will remit indicated price plus postage; otherwise I will return the books postpaid.

Name

Address

City and State

Employed by AF-3-45

LETTERS

(Continued from page 38)

mind this new development in their post-war construction program. To a minor degree this film will give information concerning the use and production of modern materials in America, such as plywood, glass, plastics, stainless and structural steel, etc.

Circumstances necessitate editing of the film largely from already existing footage. Therefore, the film producer, Ted Nemeth, (729 7th Ave., New York City, telephone, Lo. 3-1795) would like to get in touch with architects, manufacturers of modern building materials or any individuals or organizations who have motion picture material on the above topics (preferably 35mm black and white). Those having such footage are requested to get in touch with Mr. Nemeth . . .

CHIH MENG, Director

China Institute In America
New York, N. Y.

ROCK ME DADDY

Forum:

It isn't tradition—just solid comfort. Have always wondered at the reluctance to introduce a modern rocking chair. Hooray for Ralph Rapson!

O. N. GOLEMBROWSKA

Harvard University
Cambridge, Mass.

"QUIET CORNER"

Forum:

My usual tremendous respect and admiration for THE ARCHITECTURAL FORUM is occasionally shattered, I'm sorry to say, when I find you publishing bad house plans with perfectly serious intent, and no apologies. Are we to believe that you highly approve of everything you publish . . . ?

House plans have been a sort of hobby with me and it is about a specific plan which you published (see ARCH FORUM, Dec. '44, p. 101)—the Indoor-Outdoor Living Room by Samuel A. Marx, that I write.

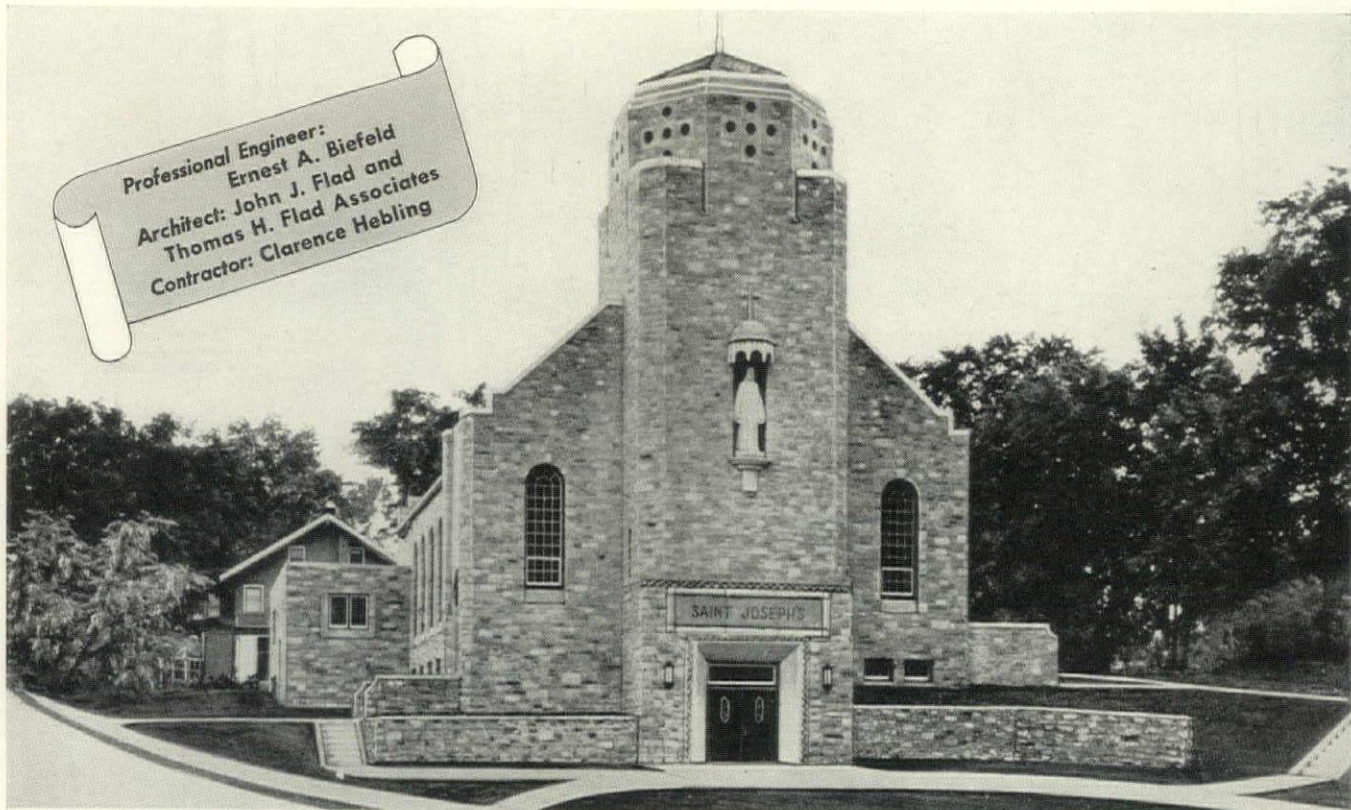
The main idea is superb—"revitalizing an outworn design . . . achieving useful and gracious living space," but the execution defeats its purpose. . . .

A. Destructive Criticism. Consider how awkward a "quiet corner" can be for any household, when in order to get to it, you are obliged to go through the living room itself. . . .

1. Awkward Situations: Suppose you were curled up in the "quiet corner" in your pajamas and the minister came to call. Query: how could you sneak

(Continued on page 46)

Professional Engineer:
Ernest A. Biefeld
Architect: John J. Flad and
Thomas H. Flad Associates
Contractor: Clarence Hebling



LOOK AT *THIS* RECORD!

3000 SQ. FT. OF RADIATION HEATED FOR \$480 PER YEAR

The way to do a *better* job of heating *cheaper* is to install a B & G Monoflo Forced Hot Water System—and here, in proof, is another bit of air-tight evidence:

In this northern Wisconsin Monoflo installation, the church and detached parish house are heated by 3006 sq. ft. of radiation, divided into three zones. Two zones handle the church, while the parish house is on the third zone. The boiler is stoker-fired, with thermostatically controlled B & G Boosters keeping room temperature at the desired degree.

At only \$480 per year for heating the buildings seven days a week, the operating cost of this system is amazingly low!

The economy of forced hot water heating is perfectly understandable when operating principles are examined. The most common cause of high heating cost is inability to closely control the heat supply. B & G Forced Hot Water Heating, because of its ability to *automatically and continuously* balance the heat output with the heat loss, never wastes fuel by delivering unwanted heat.

B & G Equipment now available for modernization

Any steam or hot water system can be quickly converted to B & G Forced Hot Water Heating. Materials have been released—a huge market is waiting. Get in now on this profit opportunity.



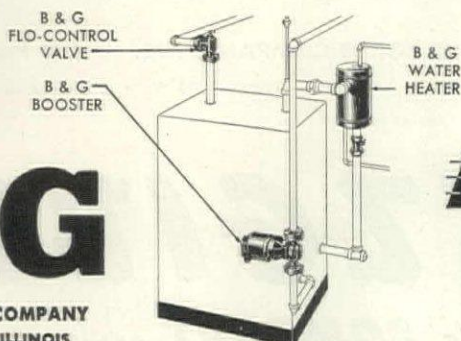
HOT WATER EVERY HOUR OF THE DAY... WINTER AND SUMMER

This is a plus value of B & G Forced Hot Water Heating! A B & G Water Heater, installed on the same boiler that heats the house, furnishes a virtually limitless supply of hot water for all household uses. Not only in winter, but in summer as well—and at insignificant cost.



Better heating for the small home

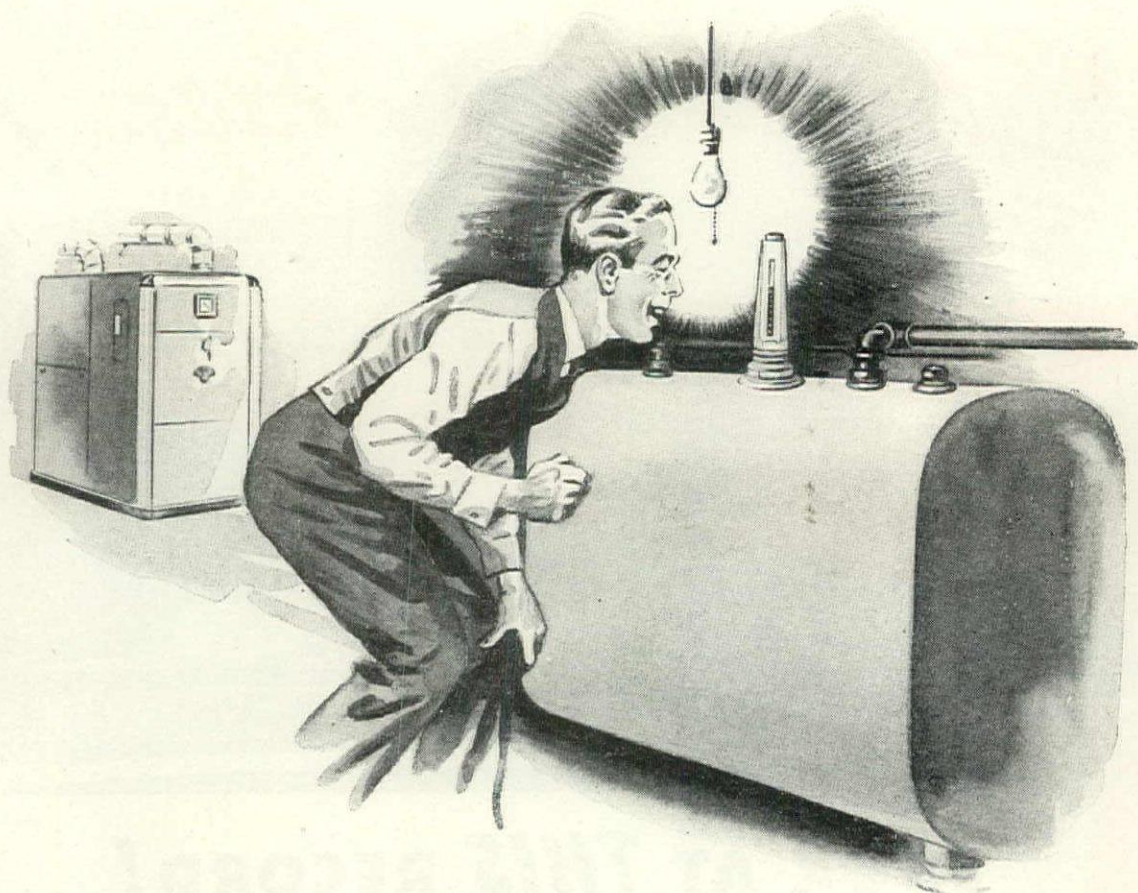
This attractive residence is equipped with a B & G Monoflo Forced Hot Water Heating System, selected for its ability to provide luxurious comfort at low cost. The house is one unit of a complete village development on Long Island, New York.



B&G

BELL & GOSSETT COMPANY
MORTON GROVE, ILLINOIS

MONOFLO TRIPLE DUTY SYSTEM



Picture of a man congratulating himself

He's thanking fortune—or some good dealer-salesman—that he has a fuel-saving Fitzgibbons steel boiler to see him comfortably through these days of fuel restriction. To him it's been just another winter of being thrifty with fuel, careful with the thermostat, of shutting off heat from unused rooms. He still has his comfort when he wants it.

In other homes, not so fortunate, folks are petitioning their rationing boards, with indifferent success, for enough fuel to see them into summer. Fuel rationing has taught them a lesson, the hard way. Thousands of these people have told us lately that they want Fitzgibbons steel boilers as soon as war conditions will permit.

Perhaps it *will* be soon. Fitzgibbons engineers are testing out improved designs in heating equipment, which will be announced when the time comes. To be sure you will get this data without delay, write us now.

FITZGIBBONS BOILER COMPANY, INC. • 101 Park Avenue, New York 17, N. Y.

Works: OSWEGO, N. Y. • Branches in Principal Cities

Member Indoor Climate Institute

Member Steel Boiler Institute



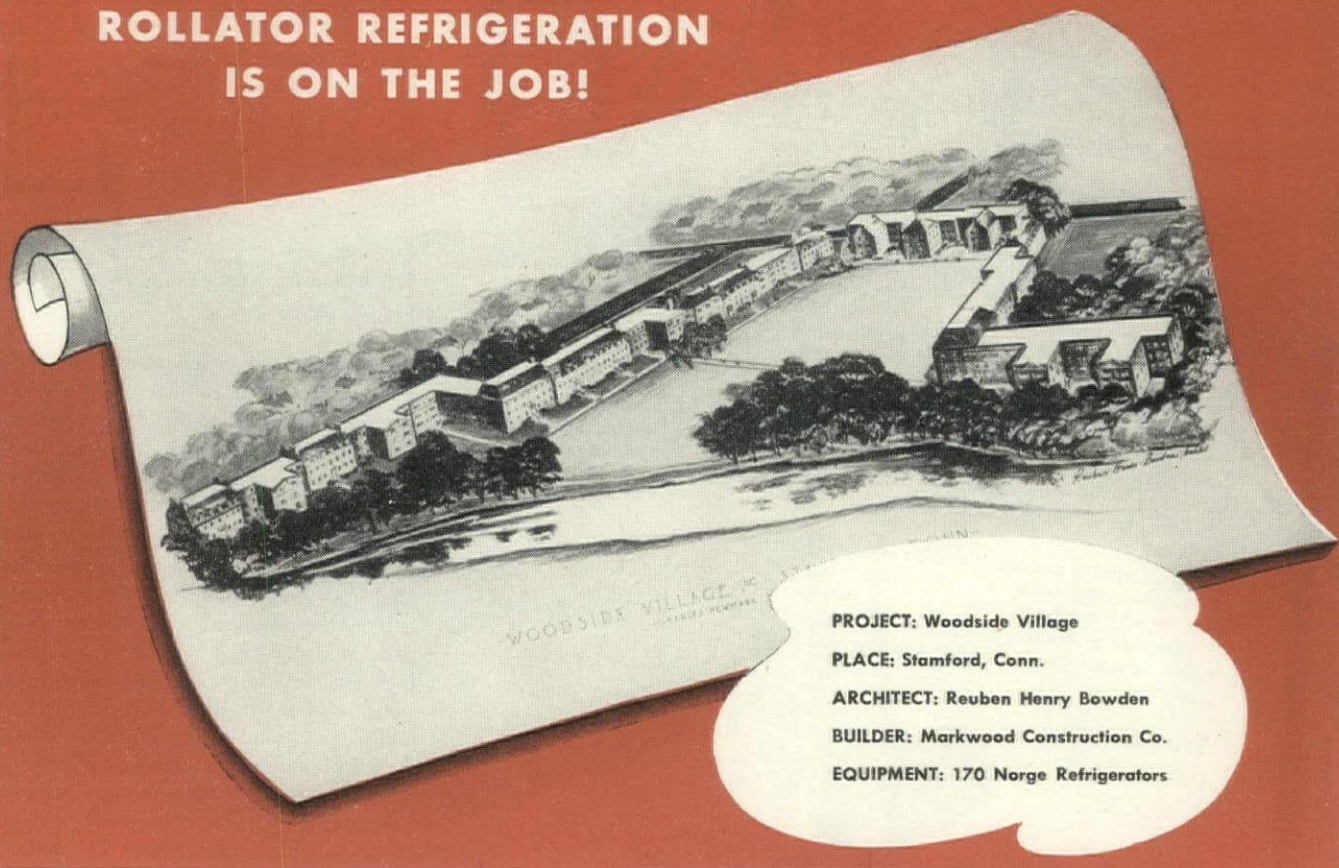
FITZGIBBONS

THE NAME THAT MEANS **COMFORT** IN THE HOMES OF AMERICA

Woodside Village

IN STAMFORD IS NORGE-EQUIPPED!

**ROLLATOR REFRIGERATION
IS ON THE JOB!**



PROJECT: Woodside Village
PLACE: Stamford, Conn.
ARCHITECT: Reuben Henry Bowden
BUILDER: Markwood Construction Co.
EQUIPMENT: 170 Norge Refrigerators

Here is further evidence of the high regard in which architects and builders hold Norge household appliances. The installation of 170 refrigerators is typical of this oft-expressed preference.

SEE NORGE BEFORE YOU BUY

NORGE HOUSEHOLD APPLIANCES

NORGE DIVISION, BORG-WARNER CORP., DETROIT 26, MICH.

ROLLATOR REFRIGERATORS
HOME HEATERS

GAS RANGES

RO-TA-TOR WASHERS

ELECTRIC RANGES
COMMERCIAL REFRIGERATION

(Continued from page 38)

*PROVED SATISFACTORY IN EXHAUSTIVE BREAKDOWN TESTS

Gentlemen:

We are very much pleased with the workmanship your men have shown in the installation of the last 19 Winkler Stokers which you have put into our various apartments.

It may be of interest for you to know that we formerly used oil in these buildings and then turned over to several makes of stokers, which have been operating for the last eight years, and which you have replaced with your Winklers.

* The Winkler Stoker you installed last year has been put thru exhaustive breakdown tests and has proved to be very satisfactory. This warranted us placing the order for the additional Winkler Stokers.

In the coming season, it will be necessary for us to replace approximately the same number of stokers which we are sure will be Winklers.

We wish to thank you for your prompt service and also your personal attention devoted to this job.

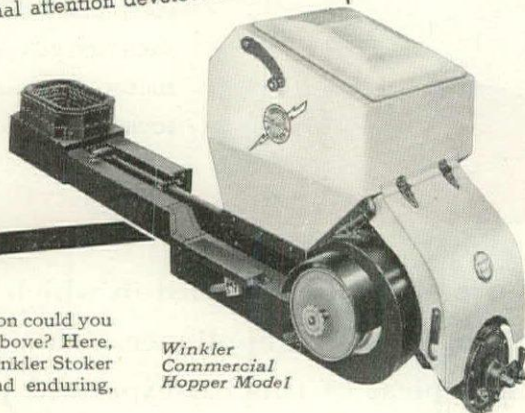
Yours very truly,
(NAME ON
REQUEST)

What better guide to stoker selection could you find than the letter reproduced above? Here, in actual comparative tests, the Winkler Stoker proved its *genuine* efficiency and enduring, dependable performance.

You have only to make a casual examination of a Winkler to see that it combines sound, creative engineering and precision workmanship with brute strength. *There is no shear pin in a Winkler—its fully automatic transmission gives full protection against overload. It has extra power! A rock dropped in the Crusher Block opening of a Winkler is ground to fragments without interrupting stoker operation. Ordinary obstructions in the coal do not put a Winkler out of action!*

The Winkler Econo-mizer Burner is noted for refinements of engineering which minimize segregation of coal sizes, provide for correct air distribution and in general improve combustion efficiency. The heat content of the coal is fully utilized—that's why Winklers make economy records.

Winkler
Commercial
Hopper Model



Send for this latest catalog of
Winkler Stokers

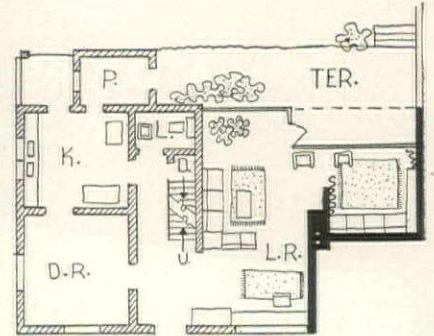
WINKLER

fully automatic STOKERS

U. S. MACHINE CORPORATION • LEBANON, INDIANA

around the back way, get dressed and make a presentable appearance?

Or what if the high school set wants the alcove, while the grown-ups have the living room, or vice versa. Do they want to be continually running back and forth through the living room group for more cokes, etc?



MARX PLAN

Mr. Marx praises his alcove as a sick room in case of necessity. Consider the complications of caring for a patient who is quartered miles from the bath room and kitchen. What is it that is "conveniently situated for the patient?"

Any number of fine inconveniences arise for the house guest who is given the alcove as guest room. Separated as he is from the bathroom by the living room and the front hall, he has to use both tact and ingenuity, not to mention a sense of humor, in preparing for the night. In other words, someone is always interrupting something, or getting stranded in Mr. Marx's "quiet corner." It is staggering to think of all the old "colonial plans" which may be modernized badly on the strength of this article. It is more than sad to realize that such bad mistakes can be made by architects themselves and it is even more sad to realize how duped the poor renovated family will feel when they realize what a bad arrangement they have spent their money on so hopefully and confidently.

B. *Constructive Criticism.* This can best be presented, I believe, by a room-by-room explanation of the suggested plan.

Hall: Mr. Marx's changes are very good here.

Living Room: Front of room, use Mr. Marx's ideas.

Alcove: The crucial point of the plan. It should be on the other side of the living room, toward the back. The convenient back entrance improves the general circulation of the whole plan and its consequent livability. With this arrangement, the alcove has convenient

(Continued on page 50)



Whether it's for a single home or
a huge building project

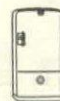
*Look to the favorite
Look to Frigidaire*

The World's Tallest Structure—New York's EMPIRE STATE Building.

From ground floor to observatory, 86 floors above, you'll find dependable Frigidaire equipment—cooling drinking water for thousands of tenants and visitors . . . preserving flowers in the florist shop . . . providing complete refrigeration for the meats, vegetables, fruits and dairy products served from the Empire State Club kitchens. "Frigidaire has proved an exceptionally sound investment, based on fine performance over a period of 13 years," says Robert C. Brown, Vice President of Empire State, Inc.

**Frigidaire
Peacetime Products**

FOR HOMES AND APARTMENTS,
OFFICES AND BUSINESS
ESTABLISHMENTS



Household Refrigerators
—in all sizes and models
—including the famous
Frigidaire Cold-Wall.



Electric Ranges—from
small apartment models
to full size deluxe cabinet
models.



Fully-automatic Electric
Water heaters—in many
capacities and models.



Home Freezers for freez-
ing foods and storing
frozen foods in the home.



Portable self-contained
type Air Conditioners—
for window installation.



Home Air Conditioners
—complete in a single
package.



Water Cooling equip-
ment for all applications.



Self-contained, large ca-
pacity, Air Conditioners.



Refrigeration Cooling
Units and Compressors
for large refrigerators.

Get Free Conservation Booklet

which tells how to care for and keep
existing equipment in good repair
until you can replace it with new
equipment. Get free copy from your
Frigidaire Dealer. Look under "Re-
frigeration" in Classified phone book.
Or write Frigidaire,
406 Amelia St., Day-
ton 1, Ohio. In Can-
ada, 318 Commer-
cial Rd., Leaside 12,
Ontario.



VICTORY IS OUR BUSINESS!

For Excellence



in War Production

FRIGIDAIRE

Made only by

GENERAL MOTORS

Peacetime products

COMMERCIAL REFRIGERATION • AIR CONDITIONERS
BEVERAGE, MILK, AND WATER COOLERS
ELECTRIC REFRIGERATORS • RANGES • WATER HEATERS
HOME FREEZERS • ICE CREAM CABINETS

A Powerful Force That Can Help Sell

Your Postwar Homes

THE KITCHEN will be a powerful factor in selling postwar homes. And kitchens designed around America's most popular gas range will have a real advantage in public acceptance.

That is why we believe you will be interested in the Magic Chef advertisement shown at the right. It is one of a series designed to stimulate public interest in New Freedom Gas Kitchens with Magic Chef Gas Ranges. This particular advertisement appears in the March GOOD HOUSEKEEPING and other leading national magazines.

Consistent national advertising is one of two major reasons why Magic Chef has become a *magic name* to millions of American homemakers. The other reason is the unparalleled performance record of the product—performance based on quality of design and manufacture.

Why not let these powerful Magic Chef forces help sell *your* postwar kitchens in the homes you design or build?

Further details on Magic Chef Gas Ranges and how to fit them into your postwar kitchen planning will be gladly sent on request. Just write us today.

AMERICAN STOVE COMPANY
4901 Perkins Avenue • Cleveland, Ohio
NEW YORK • PHILADELPHIA • CLEVELAND • CHICAGO
ST. LOUIS • ATLANTA • LOS ANGELES



RED WHEEL GAS RANGES
AND HEAVY DUTY GAS COOKING EQUIPMENT

Look for the
"CP" Seal on
Magic Chef



Awarded to
Quick Meal Stove Co.
Division of American
Stove Co.

We have planned *New Kitchen Freedom* for you



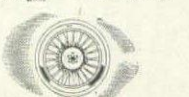
1 Automatic Oven Cooking! Simply set clock and temperature control. Gas turns on and off automatically; cooks a whole meal while you are away.



2 Red Wheel Oven Heat Regulator! Accurate control of oven temperatures at all times. Just set regulator—better baking and roasting assured.



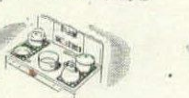
3 Automatic Lighting! All burners light automatically on your C. P. Magic Chef. No matches—just turn on the gas.



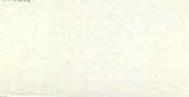
4 Even Heat! Magic Chef top burners are designed for perfect top burner cooking. Special Simmer Control for "waterless" cooking.



5 Swing-out Broiler! Makes broiling easy—prevents smoking and food catching fire. Wonderfully easy to clean.



6 Convenient Work Top! The top of your Magic Chef is a convenient working surface for preparing or serving foods.



...In the Postwar Magic Chef ...the Gas Range with a Dozen Magic Helps

Picture yourself in the "dream kitchen" that can soon be yours! A "New Freedom Gas Kitchen" planned in countless thoughtful ways for your ease and convenience—and a kitchen built around a beautiful postwar Magic Chef. This Magic Chef brings you everything you'd ever hoped a range could offer—a round dozen "Magic Helps," in addition to sturdy quality and ultra modern design. Soon, we hope, you can see the postwar Magic Chef at your Gas Company or Magic Chef dealer's showroom. Soon, too, we hope you'll be able to have one of your own!

If you live beyond the gas mains, postwar Magic Chef ranges will be available for "Pyrofax" Gas in eastern and central states and for other L. P. (bottled and tank) gases elsewhere.



Magic Chef

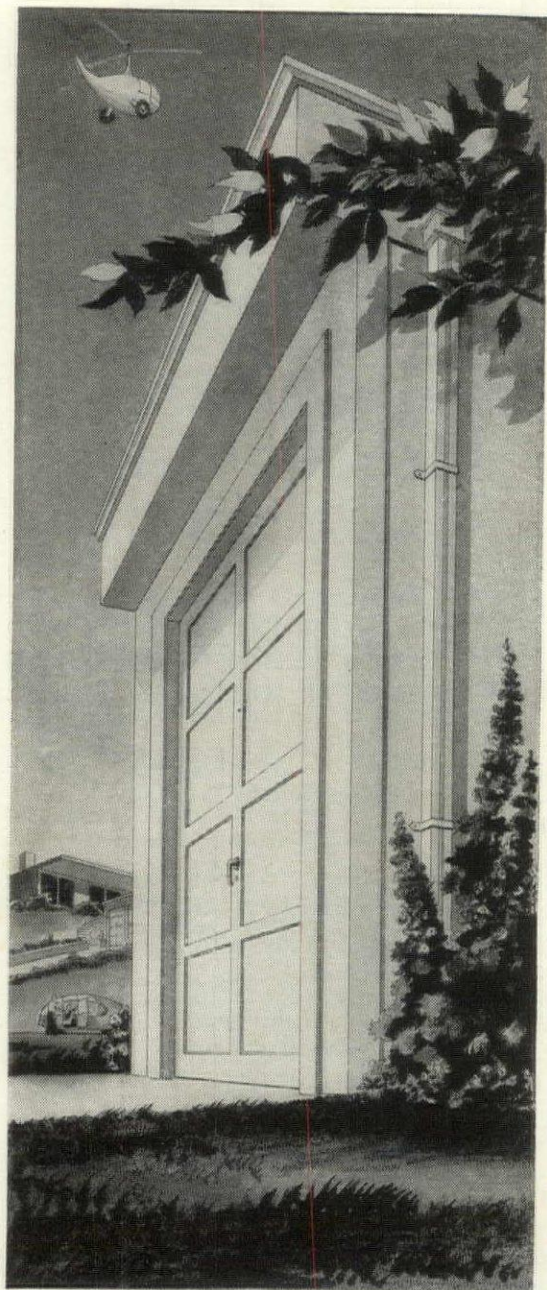
AMERICAN STOVE COMPANY • Cleveland, Ohio
Copyright, 1945 American Stove Co.



- 8 Non-Clog Burners!
- 9 Magic Insulation!
- 10 Cross-Fire Oven Burner!
- 11 Easy Cleaning!
- 12 Porcelain Finish!

THE SATURDAY EVENING POST • GOOD HOUSEKEEPING
WOMAN'S HOME COMPANION • ARCHITECTURAL FORUM
PARENTS' MAGAZINE • BETTER HOMES & GARDENS

45,265,474 READERS



A Trouble-Free More Attractive Overhead Door

READY for production the moment war restrictions are lifted is an *improved* self-energizing, overhead-type CRAW-FIR-DOR. It will be more durable, more trouble free, easier to install and operate. Two important factors will make this true: (1)—The Crawford Door Company, maker of Craw-Fir-Dor hardware, has gained valuable precision experience through war-time manufacture of parts for fighting planes. (2)—An extensive research program has thoroughly explored the Craw-Fir-Dor operating principle, improving mechanical detail.

Craw-Fir-Dor can be specified now for early postwar building. Production plans are fully developed and the improved Craw-Fir-Dor will be ready within weeks after the "go-ahead" is given.

For special residential or industrial installations, write: Crawford Door Company, Detroit, Michigan, maker of a complete line of sectional, overhead-type doors.

Craw-Fir-Dor
SELF-ENERGIZING · ONE PIECE · OVERHEAD TYPE
GARAGE DOOR

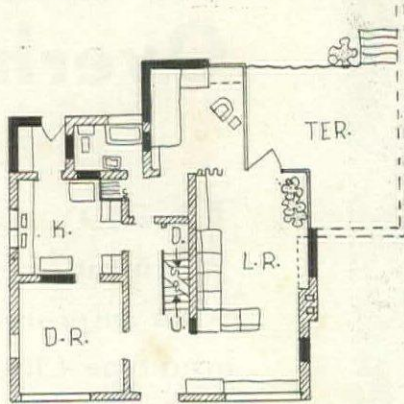
F I R D O O R I N S T I T U T E
The National Association of Fir Door Manufacture
Tacoma 2, Washington

LETTERS

(Continued from page 46)

access to powder room and small closet space, both of which are vital to its use either as sickroom or guest room.

Back Hall: Note that intelligent use of the former lavatory space is the key to the success of the plan. It provides circulation to all parts of the house.



FITTON PLAN

Powder Room: Moving the lavatory fixtures into the old pantry space should be fairly easy and not too expensive.

Dining Room: Position of door into kitchen is changed.

Kitchen: The former kitchen was full of waste space. The refrigerator is now several steps closer to the sink counter. The stove is much more convenient moved nearer the sink. New cupboards will be built in above the sink.

Back Entry: By enclosing the former back door stoop, winter drafts can be kept out of the kitchen. Broom closets and cupboard space is provided.

After studying the suggested plan, I hope it will be realized how many minor, miscellaneous inconveniences of the original plan Mr. Marx could also have improved while he was at it, with only slight added expense which more than makes up for the advantages gained.

ELIZABETH FITTON

Princeton, N. J.

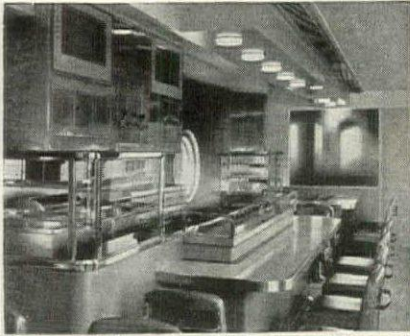
THE FORUM is impressed with Reader Fitton's ingenuity, suggests that most families don't mind occasional contact with each other, explains that architect Marx was not given the liberty to change any part of the house except the living room, since this would have cost several hundred extra dollars.—Ed.

RED TAPE LOANS

Forum:

In this month's FORUM you have an item, Inflation Blocks GI Home Loans. I thought you might be interested in some additional difficulties the GI encounters in purchasing a home, particularly with reference to obtaining loans.

(Continued on page 54)



Compact Kitchen: Capacity 600 complete meals per day. Planned and equipped by The John Van Range Co.

Let us detail...

Your Kitchen Blue Prints

Provision for mass feeding has become a MUST to architects responsible for industrial and commercial projects as well as for hospitals, schools and other public institutions. Because of the highly specialized nature of food service planning, leading architects find it profitable to avail themselves of the assistance of

JOHN VAN RANGE FOOD SERVICE ENGINEERING

When you have such projects on your boards or in prospect you, too, will find our help acceptable. We will utilize the available floor space to maximum advantage and locate all service intakes and outlets on your own blue prints. We have been serving the profession in this way for nearly a century.

Proceeding from a sound architectural plan we design, manufacture and install all equipment, both for preparing and for serving food. Competent engineering and expert craftsmanship combine with superior materials to reduce costs of operation and maintenance.

We invite your inquiries

The John Van Range Co.
EQUIPMENT FOR THE PREPARATION AND SERVING OF FOOD

Branches in Principal Cities
328 EGGLESTON AVE., CINCINNATI, O.



YOUR "G. I. JOE" WOULD CALL IT

"JUSTIFIED EXPENSE ON THE HOME FRONT" ... BUT HE'D EXPECT HIS MONEY'S WORTH BECAUSE JOE'S A PRACTICAL GUY AND HE GETS RESULTS! HE'D WANT TO KNOW ... "HOW GOOD IS IT?"

And our answer would be, "A ROOF IS AS GOOD AS THE MATERIALS, DESIGN, AND WORKMANSHIP THAT GO INTO IT."

Money, manpower, and materials to maintain dependable service in roofs are justified when you specify ABESTO COLD PROCESS ROOFING MATERIALS. Used with any standard brand roll roofing Abesto makes a new protection that will give many more years of efficient service.

There are several plans for the roof that needs repair that you, as designers and builders, know in general. We'd like you to see the specific ABESTO PROCESS for these general plans.

Abesto materials plus Abesto Cold Process design make good workmanship simple and easy ... so the combination of Abesto materials, Abesto Cold Process design, and that good workmanship will give a roof that "G. I. JOE" would okeh as *justified expense!*

Write for our free specification sheets which show the various types of construction for which Abesto is used.

ABESTO MFG. CO.
MICHIGAN CITY, IND.

Yes, it's time now to *decide*. It's time to clear mental decks for immediate action. It's time to decide what line of Oil Burners and other Heating Equipment is going to be your most valuable ally, your most profitable partner, come postwar. Indeed, it is time to consider the possible costs and hazards of delaying

decision; the immediate rewards for prompt action, the future rewards for wise decision.

Don't wait for the Victory Whistles to start blowing



We invite you to build with TORIDHEET. We invite you to turn TORIDHEET'S reputation, quality and value to your own profit. We invite you to convert TORIDHEET'S nationally recognized operating efficiency, low service costs and low maintenance costs into a powerful sales tool for your own growth and advancement. We invite you to benefit from the broad, helpful, sales policies back of TORIDHEET.

Decide to do this now. It will instantly help you. It will at once provide you with a sound, intelligent base for planning, for building, for selling post war.

You will discover that the TORIDHEET dealer backs you with all those vitally necessary cooperative helps, that contribute to the success of your plan . . . An alliance with TORIDHEET is a pleasant, satisfying experience for both you and your clients.

TORIDHEET DIVISION

CLEVELAND STEEL PRODUCTS CORPORATION • CLEVELAND 2, OHIO

OIL BURNERS

AIR CONDITIONING UNITS

COAL AND GAS FURNACES

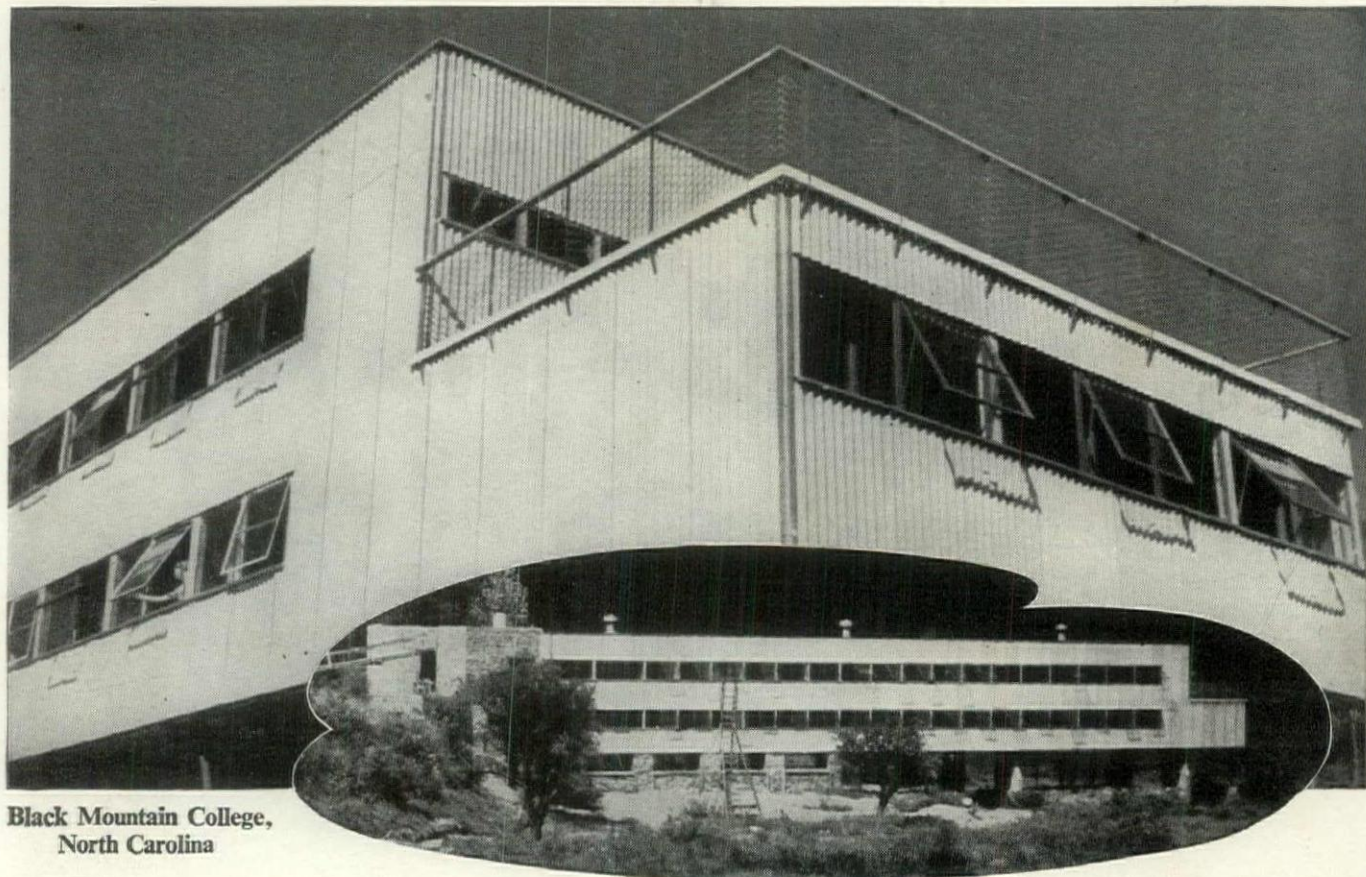


OIL BURNER BOILERS

OIL WATER HEATERS

CORRUGATED TRANSITE

for Modern Streamlined Buildings?



Black Mountain College,
North Carolina

Yes, more and more, architects find J-M Corrugated Transite ideal for expressing the new design trend for simplified construction.

BECAUSE of its amazing durability and fireproof characteristics, *Corrugated Transite* has been used extensively, and with outstanding success, in industrial construction for many years. Now architects are discovering that it is equally adaptable to EVERY type of modern building. Unusually attractive in appearance it lends itself to flexibility of design.

An excellent example of this new trend is the modern, streamlined college building shown above. Here, the entire exterior walls are *Corrugated Transite*. In other cases used vertically and even horizontally, it provides pleasing contrasts in combination with other exterior building materials, such as stone, brick, etc.

Here are a few of the outstanding advantages of J-M *Corrugated Transite* that have made it popular in war-

time use and that qualify it for your consideration, no matter what type of construction you plan . . .

1. It's durable, because it's made of asbestos and cement, two almost indestructible materials, compressed and corrugated under terrific pressure for extra strength.
2. It's practical, because it can't burn, can't rust, can't rot, and has high resistance to acids, to gaseous fumes, and to severe temperatures.
3. It's economical, because it requires little or no maintenance, is 100% salvageable . . . easily and quickly installed.
4. It's versatile, because its stone-gray color and beautiful, symmetrical lines blend well with modern architectural plans and designs.

If you desire more specific and detailed information as to how *J-M Corrugated Transite* can solve your construction problems, send for our illustrated brochure on this subject. Call or write Johns-Manville, 22 East 40th Street, New York 16, New York.



Johns-Manville *Asbestos* **CORRUGATED TRANSITE**

RESTORE YOUR BUILDING WITH A WATERFOIL RAINCOAT

The Unique Treatment for Exterior Masonry

It took ten years of laboratory and field research to develop Waterfoil . . . the "raincoat" for buildings. Waterfoil improves the appearance of the structure and lengthens its life.

Waterfoil is manufactured from irreversible inorganic gels. Reacting with the lime hydrate in the masonry,

WATERFOIL
THE UNIQUE TREATMENT FOR EXTERIOR MASONRY SURFACES

bonds chemically and physically, forming a hard dense coat. It lets out water vapor but impedes water absorption inwards thus preventing reinforcing bar rust and spalling; masonry can breathe, as it should! The appearance of the structure is like new.

If you are responsible for property maintenance and its protection, you should have the important information contained in the Waterfoil literature. Why not send for it today?

A.C. HORN COMPANY

Established 1897

Manufacturers of Materials for
Building Maintenance and Construction
Long Island City 1, N. Y.
Houston, Texas
San Francisco, Calif.



LETTERS

(Continued from page 50)

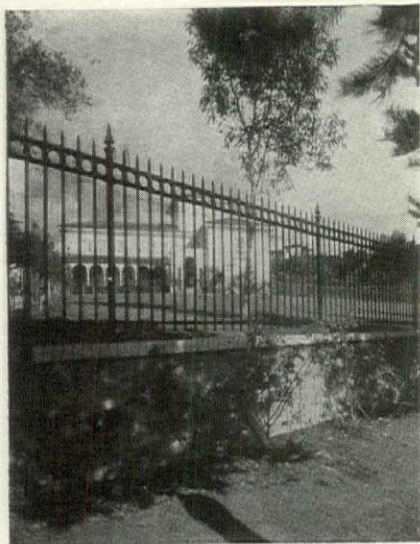
I was discharged from the Army about a year ago and last summer one of our enterprising realtors persuaded my landlady that she should sell her house which I have rented for five years. The asking price was modestly set at only 50 per cent above its "reasonable normal value" and since all other houses here apparently sell for approximately the same inflationary prices, I had to raise a down payment and buy it along with a 15 year mortgage at 6 per cent interest.

Before I decided to select this house I looked at at least 150 other houses in the same price range all over the San Francisco Bay area. Renting a house was impossible. As you know, this is probably the most critical housing shortage area in the country. I found several houses that I considered satisfactory, and this is where the shortcomings of veterans' loans come in.

As soon as I found a satisfactory house I notified the State veterans' bureau who would send some one out to appraise it. If the house was not sold by the time he got there (even though it might take him less than a day to examine the property), he would invariably find some small matters that would have to be taken care of, such as a joist needing replacement, before a loan could be approved. Naturally the seller wouldn't wait around and have repairs made before accepting other offers. And I could not afford to risk my down payment on a house to hold it until the place could be repaired and a loan granted. I finally decided to take the house I had lived in. The Veterans' Bureau wouldn't even consider making a loan on it because it hasn't a frontage on the street. Access is by means of a permanent right-of-way, and its seclusion is one of the principal assets of the house in my opinion. The State Code on Veteran's Housing has no law which excludes from loan provisions a house without a street frontage. It is excluded simply by administrative rule, apparently on the grounds that there is more risk to the investment. Yet the house is in one of the best residential districts in Berkeley and has never been vacant since it was built twenty years ago. This factor of course was not considered.

The point I wish to make is this: Since both State and Federal Veterans' housing loan agencies operate similarly, the returning veteran will probably run into the following barriers, among others, which may make such loans inaccessible to large numbers of veterans.

(Continued on page 58)



3 REASONS Why Architects Specify ANCHOR Fence

HERE'S why so many architects make Anchor-Weld Iron Fence the artistic "finishing touch" to their projects:

1. Beauty. Anchor-Weld Iron Fence achieves beauty by architecturally correct designs, use of grooved square pickets and rails, and ornamentation to suit personal taste.

2. Strength. Anchor-Weld Iron Fence cannot sag or get out of alignment. Each joint of picket and rail is *permanently* fused at *eight* points by Anchor's exclusive flange-welding process.

3. Long Life. Same size members for pickets and rails assures unusually long life. Copper-Bearing Steel guarantees maximum weather resistance and paint adhesion, minimum maintenance bother and cost.

Free Specifications Manual For Your A. I. A. File 14-K

Let us send you our free 44-page Specifications Manual on Iron Picket and Chain Link fences and gates for your A. I. A. File 14-K. Prepared especially for architects and engineers, it contains installation photographs and sectional drawings . . . describes in detail the various heights, weights, structural features and applications of Anchor-Weld iron picket fences and gates . . . includes helpful sample specifications for many types of fencing jobs. This book will prove helpful in planning many of your postwar projects. For a free copy write: Anchor Post Fence Co., 6635 Eastern Ave., Baltimore 24, Md.

Nation-Wide Sales and Erecting Service

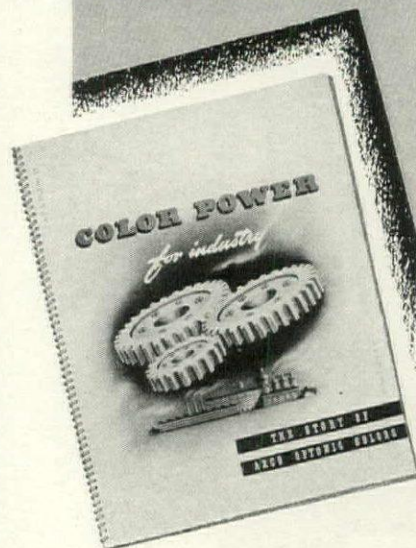
**ANCHOR
FENCE**

A Skill
You'll Need

The
APPLICATION
of

Optonics

The Science of
COLOR IN
INDUSTRY



SEND FOR THIS Booklet

Because the functional uses of color are acquiring an ever-increasing importance, you'll want to be thoroughly posted on the Optonic Color System . . . the new science of using color to improve production, safety conditions and employee morale, and reduce absenteeism. A note on your business letterhead will bring you our new booklet on the subject—"Color Power for Industry."

THE ARCO COMPANY
CLEVELAND, OHIO • LOS ANGELES, CALIF.

ARCO
Paints for Industry

inviting you

to visit our newly decorated
and refreshed New York display rooms,
where fine furniture by Tomlinson
finds the setting it deserves,
where the available selection
of living room, dining room and
bedroom furniture and our decorator's
collection of antiques would,
in normal times, be remarkable...
is, in these times, exceptional.

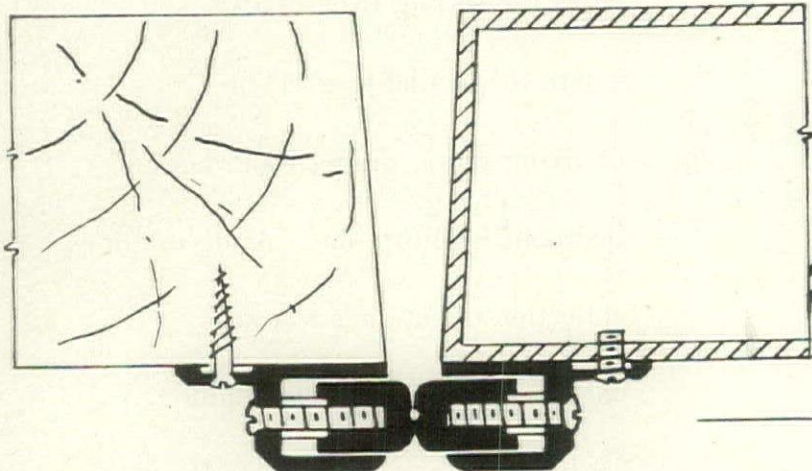
The ideas about living
you see presented today are
prophetic of great things ahead...
when the reunited homes of America
become a happy reality.

Furniture by
TOMLINSON

in New York: 385 MADISON AVENUE

IN CHICAGO: 1666 MERCHANDISE MART . **IN PITTSBURGH:** 907 PENN AVENUE . **AND IN HIGH POINT,** NORTH CAROLINA

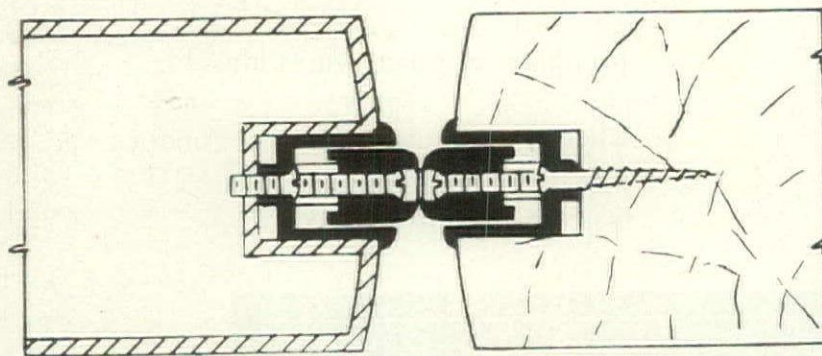
★ MICHAELS PRODUCTS



*for
your future
plans*

Type "A" shown above may be applied to either wood or hollow-metal bevel doors. Or as a stop bead, or at bottom of doors.

adjustable Astragals



Type "E" Mortise Astragal may be applied to bull-nose hollow-metal or wood double doors, or at bottom of doors.

MICHAELS PRODUCTS:

- | | |
|-----------------------------------|--------------------------------|
| Fixtures for Banks and Offices | Kick and Push Plates |
| Welded Bronze Doors | Push Bars |
| Elevator Doors | Wire Work |
| Elevator Enclosures | Cast Thresholds |
| Check Desks (standing and wall) | Extruded Thresholds |
| Lamp Standards | Extruded Casements |
| Marquise | Store Front Sash |
| Tablets and Signs | Exhibit Cases |
| Name Plates | Parking Meters |
| Railings (cast and wrought) | Bronze and Iron Store Fronts |
| Building Directories | Bronze Double Hung Windows |
| Bulletin Boards | Bronze Casement Windows |
| Stamped and Cast Radiator Grilles | Bronze Markers and Plaques |
| Grilles and Wickets | Wrought Iron Lighting Fixtures |
| Bronze Lighting Fixtures | |

Michaels Adjustable Astragals of extruded bronze or nickel are designed to compensate for expansion or contraction of doors and to keep them closed as tightly as possible.

They prevent draughts, air currents and help to keep out dirt and dust.

Michaels Astragals are simple, practical, rugged, easily installed and adjusted, and are available in several styles for any type of door. Send for literature which contains complete details and specifications.



THE MICHAELS ART BRONZE CO., Inc., COVINGTON, KENTUCKY

Manufacturers since 1870 of many products in Bronze, Aluminum and other Metals

MODERNIZING THE BATHROOM IN THE POST-WAR HOME



Architects will find Weisway Cabinet Showers effectively meet the demand for more and better bathing facilities in the extensive remodeling, as well as new building, which follows the war.

In the meantime, Weisway Models V and V Deluxe provide satisfactory bath facilities for war-time needs in homes, institutions, industrial plants.

"Before" and "After" pictures on this page show the striking modernization easily possible with complete, self-contained, leakproof Weisway Cabinet Showers. This installation also emphasizes the rapidly growing popularity of the shower as the healthful, cleanly bath. This Weisway was originally installed to supplement the tub. In a few months the tub was removed, replaced by the built-in dressing table!

Architects are invited to write for information about the complete line of Weisway Cabinet Showers for peacetime living—as well as the special war-time models which are immediately available.



HENRY WEIS MANUFACTURING CO., INC.
302 OAK STREET, ELKHART, INDIANA

Weisway

CABINET SHOWERS

Combine BEAUTY with UTILITY by specifying Flawn



Here is the modern grass. A permanent year 'round sod retaining its attractiveness in spite of punishment.

BEAUTY: Flawn stays green in the summer heat. Flawn is so thick it chokes out weeds. Flawn grows slowly—only one mowing a month. All summer it provides your building a setting of richly textured carpeting of trim green.

UTILITY: Walk on it; play on it. Together with its "good looks" Flawn adamantly resists heat, weeds and bugs—it retains for all summer its captivating, rich texture. You actually can't suppress Flawn because the more traffic it receives, the finer the leaf growth and the less mowing it requires.

Flawn is impervious to Jap Beetles, Grubs and Cinch Bugs. It will crowd out Crab Grass.

If you can't believe the facts write today to

GRASS SEED DIVISION
**F. H. WOODRUFF
AND SONS, INC.**
Milford, Conn. • Toledo, Ohio
Atlanta, Ga. • Bellerose, L. I., N. Y.
Sacramento, Calif. • Dallas, Texas

LETTERS

(Continued from page 54)

1) In a seller's market which we will probably have for many years, the lapse of time involved in getting final approval of a loan will make it extremely difficult for a veteran to get the house of his choice unless he can risk a down payment to hold it.

2) The bureaucratic restrictions are such that it is likely that the veteran will have to select his house in a district or area not of his choice, probably in some FHA approved realtors' subdivision of architecturally prehistoric cracker-box houses.

3) Appraisers apparently are bankers and real estate men, whose ideas on housing are generally extremely conservative and who look upon any sort of modern architecture as a poor financial proposition.

4) Inflation, as you point out, will cause many rejections, and it's possible that such inflation will last beyond the time limits in which a veteran may apply for a loan.

These barriers are enough to convince me that the housing benefits of the GI Bill are extremely dubious. Incidentally one of its big shortcomings is that loans cannot be obtained under it for refinancing in order to take advantage of lower interest rates. The worst feature, however, is the time limit placed on applying for a loan. If the bill is to have any real meaning, it will have to be amended to take cognizance of economic realities and made flexible in application to those realities.

ROBERT A. MUIR

Berkeley, California

To bungling Veteran's Administration a reprimand and timely warning to mend its ways. Indications are that Congress will presently extend the time limit on applications.—Ed.

FLEXIBLE LIBRARIES

Forum:

It seems to me your review of Fremont Rider's book (see ARCH FORUM, Dec. '43, p. 176) missed the real point for the architect.

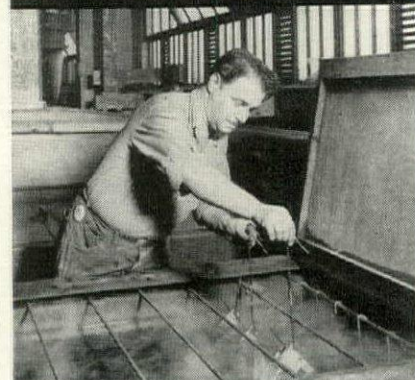
The book raises one challenging point for any architect who is now to plan a library building. Technological developments of the sort described by Rider are on their way, but it is too early to say they have arrived and to scrap the stack. As insurance against the failure of the technological change to come about, the stack needs a provision for future accessions over an adequate period (don't ask me what an adequate period is!). But such a stack is a big thing, a costly thing, a specialized thing,

(Continued on page 62)

These Fumes



VANISHED!



...and so did Labor Turnover

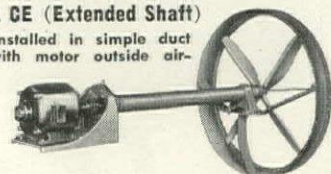
In this plating room at J. P. Seeburg Corp., Chicago, nine Propellair fans dispose of disagreeable fumes from tanks containing acids, cleaners, and greasing and etching solutions.

Vapors are drawn right from the surface into vents at the end of each tank, then upward into wood ducts leading to outside exhausts. Photographs show ventilation first "off," then "on." It's easy to understand why Superintendent of Finishing O. W. Towner says, "The efficiency of Propellair fans is far beyond anything I have ever seen."

Propellair ventilation can't always cut labor turnover to zero, as it did at Seeburg, but it can always provide *maximum* air movement at *minimum* horsepower. There are types and models for every industrial need. Send for Catalog 10-AF.

MODEL CE (Extended Shaft)

Easily installed in simple duct work with motor outside air-stream.



"MOVING AIR IS OUR BUSINESS"

PROPELLAIR
INC.
SPRINGFIELD · OHIO



REG. U. S.

PAT. OFF.

THE HOUSE OF SIGNAL SERVICE SINCE 1884

Announcing...

the acquisition by the Faraday Electric Corporation of the signal systems business of the Holtzer-Cabot Electric Company of Boston

Combining this old established signal systems business with our Stanley & Patterson Division will result in the widest and most complete line of signal systems equipment in the country.

The rigid standards of efficiency and quality and the high type of service which have been established by each of these organizations in the past will, of course, be maintained in the future. Manufacturing will be done in Adrian, Michigan and Boston, Massachusetts.

STANLEY & PATTERSON DIVISION
OF FARADAY ELECTRIC CORPORATION
434 Newbury St., Boston 15, Mass.

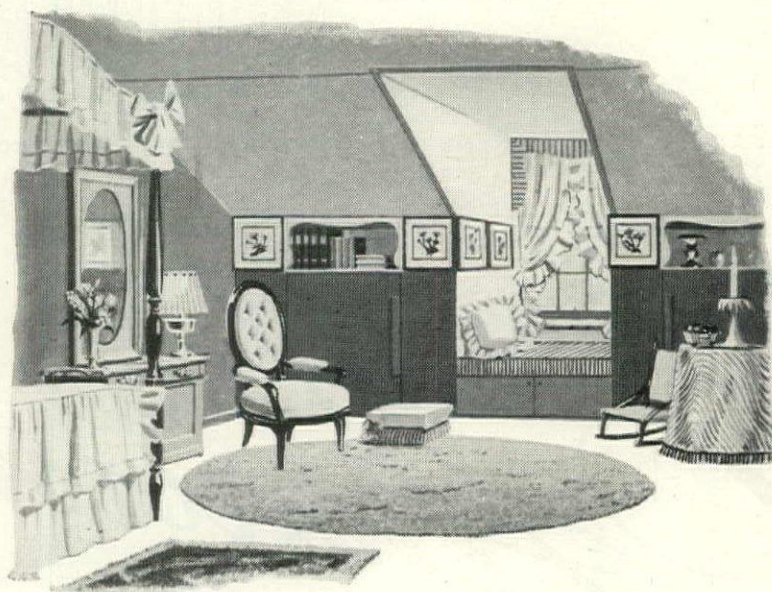
Branches in all Principal Cities

IN CANADA: Burlec Limited, Toronto 13

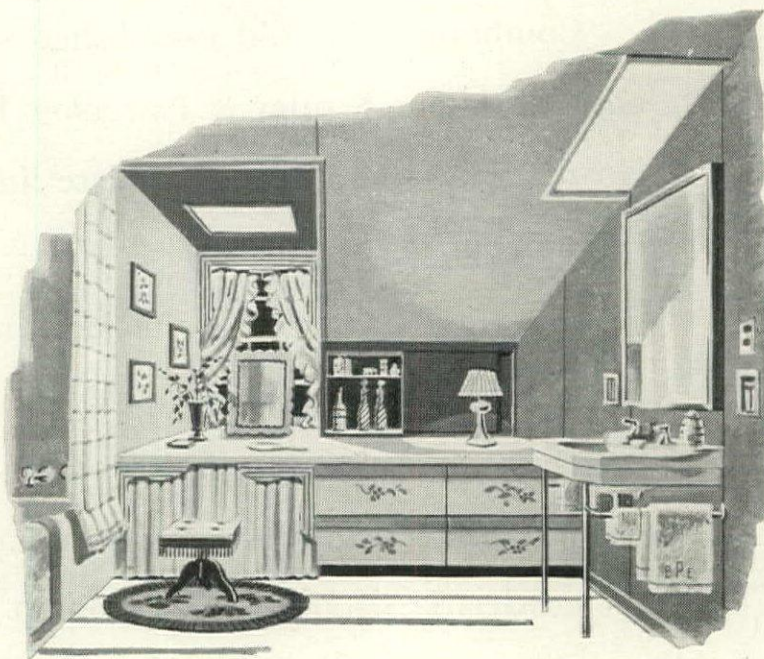
Here's an idea with wide appeal for the huge post-war remodeling market . . . just the sort of practical and attractive idea you can use to help a home-owner make up his mind. It's a bedroom and bath for the unfinished attic—"twins" in construction and in decoration. And an ideal job for Masonite* Presdwoods, the versatile building materials made from exploded wood fiber. They go up quickly and easily over bare rafters (or old plaster), producing easy-to-paint-and-clean walls, ceilings, built-in furniture—and even flooring.


You can create the most up-to-date bathroom interiors with Masonite Presdwoods. They are available in a ready-to-paint smooth surface or in custom finishes of gleaming baked-on enamel in a variety of designs and colors. They resist moisture, scrubbing, hard wear-and-tear . . . and you can rest your mind about cracking or splintering—these hardboards are grainless. Let us send you complete data. Write Masonite Corporation, Dept. AF-3, 111 W. Washington Street, Chicago 2, Illinois.

"Masonite" is a trade-mark registered in the U. S. Pat. Off., and signifies that Masonite Corporation is the source of the product.



THINK YOU CAN PRODUCE TWINS?



MASONITE  **BRAND PRODUCTS**

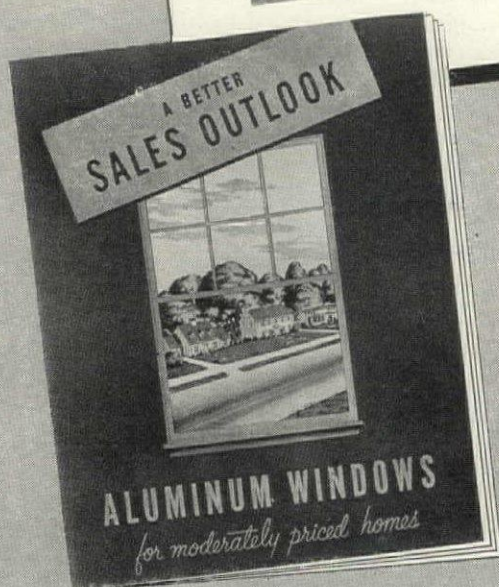
ALUMINUM WINDOWS FOR MODERATELY PRICED HOMES

GENERAL BRONZE CORPORATION

announces

the formation of a new subsidiary **THE ALUMINUM WINDOW CORPORATION**

This new company will specialize in the production and sale of fine quality aluminum windows in stock sizes for residential and apartment construction. It will be backed by all of the resources and experience that have made General Bronze Corporation world leaders in the production of non-ferrous windows.



For Architects designing Residences and Apartments


This colorful, well-illustrated book gives complete information on these new ALWINCO Aluminum Windows. It should be a part of every architect's files. Write today on your letterhead for a Free copy.

THE ALUMINUM WINDOW CORPORATION

A Subsidiary of General Bronze Corporation

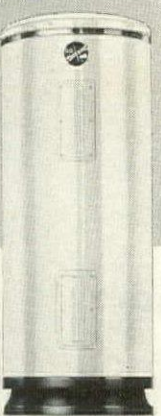

34-11 Tenth Street

Long Island City 1, N. Y.



In This Land of Many Waters

YOU NEED PERMAGLAS!

"THERE IS ONLY ONE PERMAGLAS"

PERMAGLAS "asks no favors" of any waters... it likes them all... hard waters of the plains, soft waters of the mountains, acid waters of the bayous, iron-laden waters of the ore regions, or whatever type of water predominates in your part of this land of many waters.

A. O. Smith engineers devoted 23,000 test-years to perfect Permaglas... the one and only sparkling blue, mirror-smooth, glass-fused-to-steel that resists corrosive action in ALL waters, and delivers hot water as clear and pure as the source of the water itself, *always*.

WRITE for "The Inside Story of Permaglas." It will help you give valuable water heater facts to your clients.

BUY AN EXTRA WAR BOND THIS MONTH



A.O. SMITH Corporation

NEW YORK 17 • PITTSBURGH 19 • CHICAGO 4
TULSA 3 • HOUSTON 2 • DALLAS 1
LOS ANGELES 14 • SEATTLE 1
International Division: MILWAUKEE 1
In Canada: JOHN INGLIS CO., LIMITED

MANUFACTURERS OF

SMITHway
Permaglas
GLASS LINED

AUTOMATIC STORAGE WATER HEATERS

A LETTER FROM THE PUBLISHER

Dear Reader:

Response to our G. I. Jobs program has been something less than spectacular. Whatever the reasons, our determination to help servicemen find jobs in the building field remains undiminished.

For those who skipped this department last month, we briefly review our proposal:

To help discharged servicemen locate positions in the building field, we will publish without charge forty-word advertisements citing the applicant's qualifications for whatever type of position he seeks. Also, we will maintain a registry of jobs available to assist these men in locating suitable employment. Finally, we will shortly publish a pamphlet for general distribution to those in or recently out of the services. This pamphlet, *Building, War and Postwar*, will review the recent past and its implications for postwar practice; no charge to anyone requesting a copy, but printing will not be completed until sometime in March. Meanwhile, below are sample comments on the program. If we can help you or others you know, please address G. I. Jobs, c/o ARCHITECTURAL FORUM, 350 Fifth Avenue, New York 1, N. Y.

Forum:

We are delighted with your letter in the FORUM, outlining your plan for assisting in the postwar placement of architects.

As you may know, the American Friends Service Committee is administering, under the Selective Service System, a program of work of national importance for men classified by their draft boards as conscientious objectors. There are, within Friends Civilian Public Service camps and units, men with architectural training and experience who, we believe, can

make a real contribution to postwar America through their professional activities...

Your plan seems to us to be a very helpful approach.

EARLE EDWARDS

Civilian Public Service

Forum:

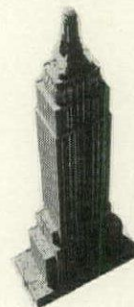
I read in the FORUM that you are planning to publish a pamphlet which will review the major building events of the war years.

This sort of pamphlet might be extremely valuable to our Outposts or Information Libraries overseas.

We would very much appreciate it if you could send us some more information on Building, War and Postwar and advise us if some copies might be available to us.

MARJORIE D. MATHIAS

Office of War Information, New York



Mention of 350 Fifth Avenue (slang for Empire State Building) reminds us that we have just moved into the 50th and 49th floors with our good neighbors on FORTUNE. Here we will not only work, but hold exhibitions and, in general, engage in a variety of nefarious practices which are such a delightful feature of journalism as we practice it. You are cordially invited to come and see all for yourself on your next visit to the World's Biggest Store just one block west of us.—H. M.

LETTERS

(Continued from page 58)

and it can become an awful thing if it remains empty.

This means that flexibility has become a requisite of library planning and anyone who makes a building anchored in monumentality may cause the same anguish to his posterity as has been caused the present generation by library architects of the past.

This same determination to have flexibility of use throughout the building is

limiting librarians' ambitions to settle their readers in no matter how good a replica of Caracalla's baths or the nave of Bourges.

JOHN E. BURCHARD

Director of Libraries
Massachusetts Institute of Technology
Boston, Mass.

We appreciate Mr. Burchard's interest and the fact that he makes the point of new technological developments versus the old stack much more clearly than Mr. Rider. We suggest that a book dealing with the new design aspect of libraries and their requirements would be of wide use.—Ed.



No Foolin'

The April issue
of this magazine will
show and tell you all about

BURNHAM'S SENSATIONAL NEW DEVELOPMENT IN RADIANT HEATING

Only 30 days more to wait before you get the whole story on Burnham's latest development on Radiant Heating! So watch for our Advertisement in the April issue of this magazine. Worth waiting for? You bet. For here is a new type of Radiant Heating equipment which...

- Makes rooms more comfortable at lower temperatures.

- Saves fuel. Provides more healthful living conditions.
- Is so inconspicuous as to be practically invisible.
- Fulfills the engineering ideal of "placement where heat loss is greatest".
- Is 100% practical. Easy to install.
- Reasonable in price. And built for life-long, trouble-free service.



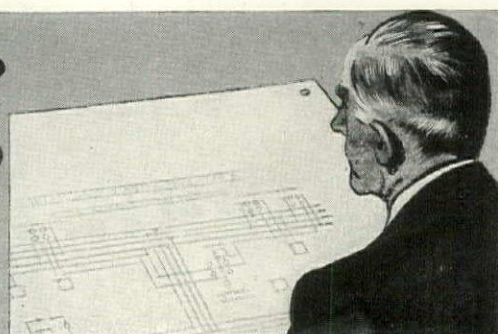
Burnham Boiler Corporation

IRVINGTON, N. Y., Dept. J • ZANESVILLE, OHIO, Dept. J

Export Department
50 CHURCH ST., NEW YORK 7, N. Y.



IF WE WERE IN THE MARKET FOR HOSPITAL COMMUNICATING AND SIGNALLING EQUIPMENT



Here's what we'd want to know about each source of supply.	Here are the answers as they apply to Connecticut Telephone & Electric Div.
● Are they experienced?	Connecticut Telephone & Electric is one of the oldest names in communications . . . a pioneer since the early days of the telephone.
● Are Hospital Systems a principal product, or just a sideline?	A principal product for many years.
● Are they abreast of the times?	As prime contractors for Signal Corps and Air Corps communications, C.T. & E. engineers are closely associated with every improvement in their field. None will be overlooked in our post-war hospital equipment.
● Who uses their equipment?	Over 600 leading hospitals use C.T. & E. systems. We will gladly supply their names.
● Is their line complete?	For details, write for Bulletin 102, describing the C.T. & E. Hospital line. Hospital executives and their architects will be particularly interested in CONNECTACALL two-way nurse-patient systems, Doctors' Registry and Paging Systems, and Special Interior Circuits.
● Can they help us with modernization as well as new construction?	Yes. Hundreds of C.T. & E. systems have been installed in existing hospital buildings.
● Can they give us authoritative engineering help?	C.T. & E. Advisory Planning Service is famous for its extensive practical assistance. We invite you to sample it without obligation. Write today.



CONNECTICUT TELEPHONE & ELECTRIC DIVISION

GREAT AMERICAN INDUSTRIES, INC.

MERIDEN,



CONN.

When that *air castle* settles to earth



● It's fun to build castles in the air. Today millions of people are buying war bonds to pay for that dream home of the future. After the war, when that air castle settles to earth, the dreams will have to be tempered by practical reality.

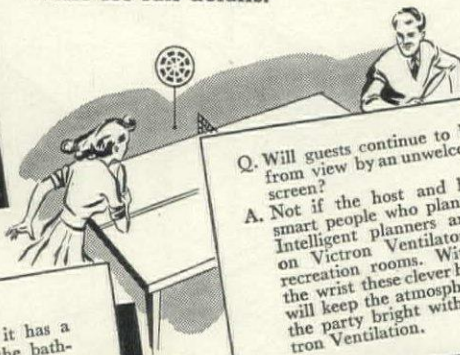
No building plan will be complete or satisfactory unless it provides for certain important essentials. For instance—adequate and intelligent ventilation. Write for full details.



Q. Will a clean, odor-free kitchen be a "must"?
A. *Definitely!* No woman would go on being a willing slave to grease, grime, heat and odors if she knew a way out. That's where a Victron Ventilator comes in—to provide cool, clean comfort for the housewife in the room where she spends the greater part of her time.



Q. What's the answer to bathroom "droopiness"?
A. Let a Victron Ventilator carry away the steam before it has a chance to settle. Continual circulation of air will keep the bathroom sparkling and fragrant. Gone are the days when it was necessary to open a window and risk a draft or get all steamed up while bathing. The Victron Ventilating Fan assures a well-ventilated, even-temperated bathroom. Never again need hubby's shave suffer from the annoyance of a fogged-up mirror, for the Victron Ventilating Fan instantly whisks away the steam and moisture.



Q. Will guests continue to be hidden from view by an unwelcome smoke screen?
A. Not if the host and hostess are smart people who planned ahead. Intelligent planners are insisting on Victron Ventilators in their recreation rooms. With a flip of the wrist these clever home-owners will keep the atmosphere clear and the party bright with magic Victron Ventilation.

MANUFACTURERS OF VICTRON DESK AND PEDESTAL
FANS—VICTRON VENTILATORS—VICTRON

VICTOR PRODUCTS

DEPT. AF-345

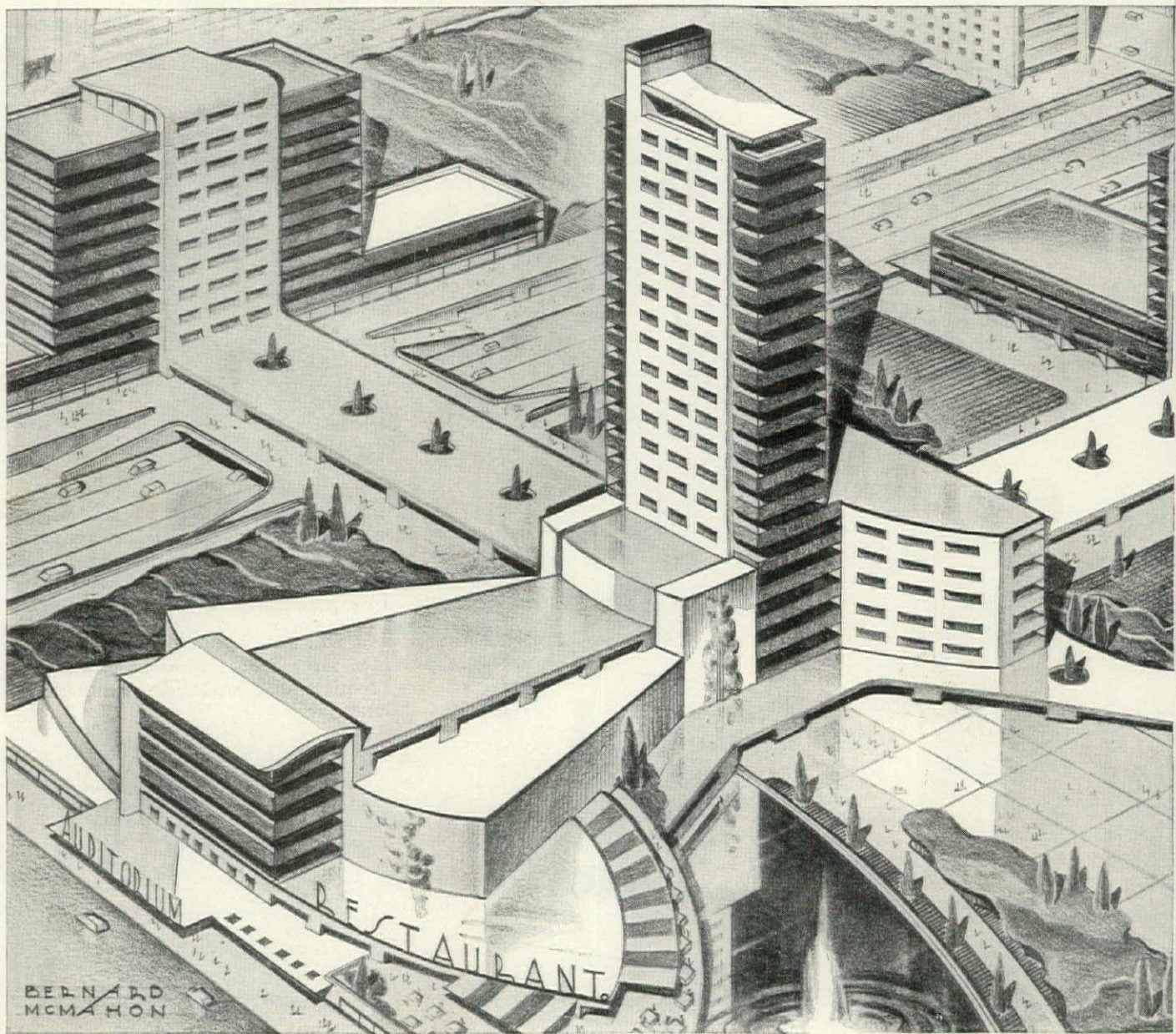


FANS—VICTRON AIR CIRCULATORS—VICTRON EXHAUST
PORTABLE IRONERS—VICTRON F.H.P. MOTORS

ELECTRIC INCORPORATED

2950 ROBERTSON AVE., CINCINNATI, OHIO

Specify MESKER **1** $\frac{3}{4}$ "* STEEL WINDOWS



• Sworn facts from Sweet's Catalog have time and time again proved the quality supremacy of Mesker Steel Windows. Quality the architect can depend on.



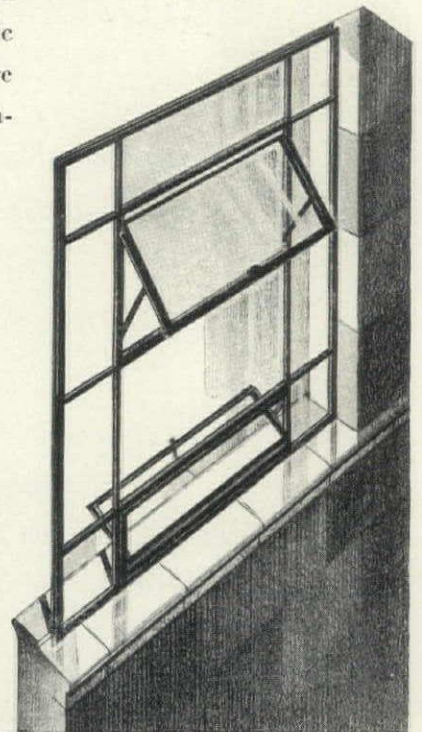
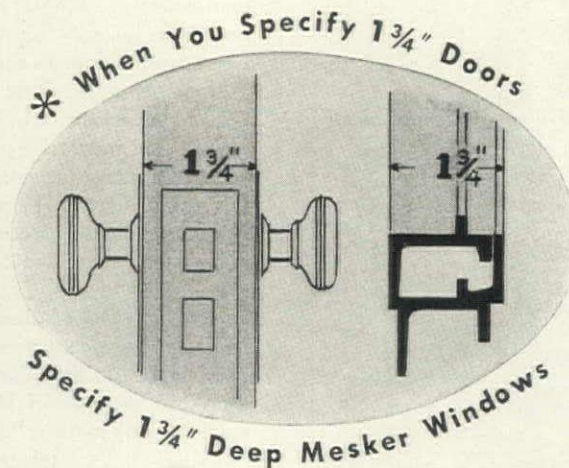
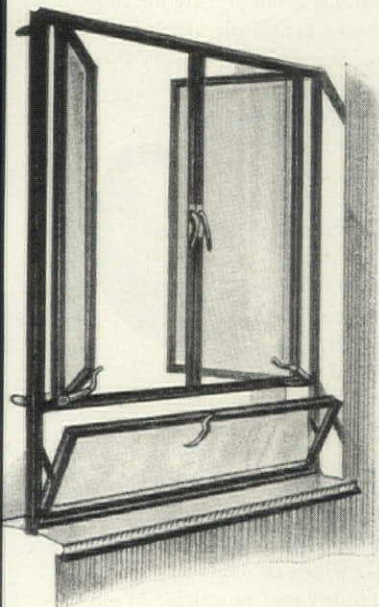
If you have not yet received your copy of the Mesker Brothers Book of Windows for Public Buildings, write for a copy TODAY. There is no obligation.

FOR YOUR NEW PUBLIC BUILDINGS . . .

Versatile in design, these Mesker Steel Windows for Public Buildings are an appealing compliment to your architectural design. More important, they provide these features not found in ordinary double hung windows: • No draft built-in sill ventilators. • Awning type weather protection. • Washed entirely from inside the building. • No weatherstrips to "sing" in high winds. • Steel: Always easy to open and close—no weight to lift, no friction to overcome.

Mesker Windows for Public Buildings

The Mesker Steel Windows for Public Buildings are composed of the Series 200 M and 200 P Casements. These windows are a full $1\frac{3}{4}$ " thick. Versatile in design they provide the perfect window for Civic Centers, Court Buildings, Airports, Police and Fire Stations, City Halls and other Government or Community Buildings.



Mesker
STEEL WINDOWS

MESKER BROTHERS • 426 SOUTH 7th STREET (2) SAINT LOUIS

First steps in modernization

Heating equipment
of adequate capacity

Automatic
comfort control

Units thoroughly proved
by extensive use

National Radiator Products
offer all these plus
advanced, efficient design . . .

Write for literature

The NATIONAL RADIATOR Co.

231 Central Avenue, Johnstown, Pa.

OVER 50 YEARS OF SERVICE

TO THE BUILDING INDUSTRY



THE FORUM

Richard Neutra, who designed for Puerto Rico (p. 119) with one hand while teaching architecture at Bennington with the other, is still recovering from the shock of academic life. Striding into this outpost of unbridled femininity, he removed the girls' feet from the mantel, placed them firmly under drafting tables. However, when he tried to keep them there on 24 hour shift the Bennington freedom both spoke and got up. The Neutra spirit took another beating when he was quartered in a tiny Colonial cottage. Asked about sunsets he muttered darkly: "Sunsets! Through 2 by 4 holes you eclectics call windows?"



If **Joan Burns** had any respect for pre-natal influence she would have given birth to a small Windsor chair instead of a bouncing boy. Working against time she managed to finish her design analysis (p. 112) just a split second ahead of the stork's arrival. This devotion to duty intensifies an awe we always feel in her presence. How she juggles her FORUM job, Columbia night school and life en famille without getting nervous

twitches leaves us goggle-eyed—especially during the time when junior was kicking her amidships every time she put poche brush to paper.



William Lescaze, designer of the Norman house (p. 140) is master of the undiluted severity he brought with him twenty-five years ago from Switzerland. Applying it in equal quantities to houses, office buildings, radio studios and industrial plants, he has converted many a sentimentalist to Lescaze austerity. How far he carries this esthetic asceticism is apparent—a man of many pipes, there is not a curve in his carload.



Tracing the effect of directives, counter directives, forms and triplicates on a usually placid architect might well prove a fertile field for the psychiatrist. We present, therefore, the case of Mr. G. who has obviously developed an army mule or "don't hurry me" neurosis; "Your telegram alluding to deadlines neither terrifies nor moves us stop the sign above our desk reads why be difficult when it is only a little more trouble to be impossible unquote stop we are slap happy with urgencies, emergencies, necessities, priorities stop as for the peace and quiet of a postwar planning office so what stop or as my 19 month old daughter comments succinctly quote aw foo unquote (signed) Charles Goodman, principal architect, ATC."



COMPARE THE
—EXPERIENCE—

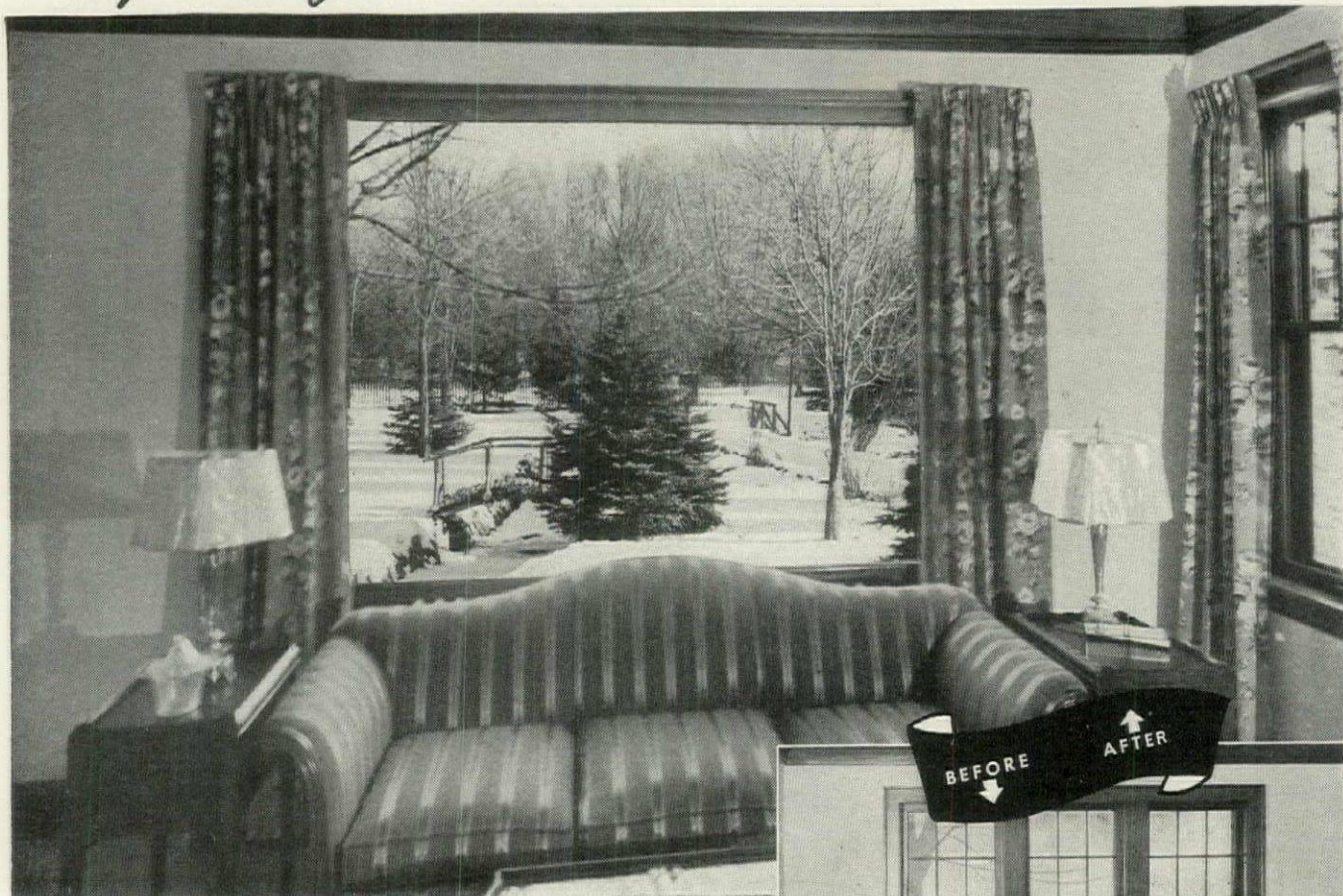
OF YOUR
NEIGHBOR
WHO OWNS A
WILLIAMS
OIL-O-MATIC
WITH THAT OF
THE OWNER
OF ANY OTHER
OIL BURNER



War Bonds are the world's
best investment. Buy all
you can as often as you
can—and keep them!

WILLIAMS
OIL-O-MATIC
HEATING
BLOOMINGTON, ILLINOIS

For more cheerful, more interesting rooms
"Open" your walls with GLASS



Cheerfulness goes hand in hand with daylight and outdoor beauty.

And so, why not plan your postwar houses to bring in the daylight and make the most of outdoor views? "Open" the rooms to both—with glass.

In some climates, large windows have presented a problem of heat loss on coldest days. But that problem has now been answered by Libbey-Owens-Ford's amazing new Thermopane, the windowpane that insulates.

Because Thermopane is such a simple and practical way to insulate glass areas, it enables you to provide the charm of bigger windows with new standards of comfort and heating economy. In windows, Thermopane looks like regular glass—but what a difference it makes!

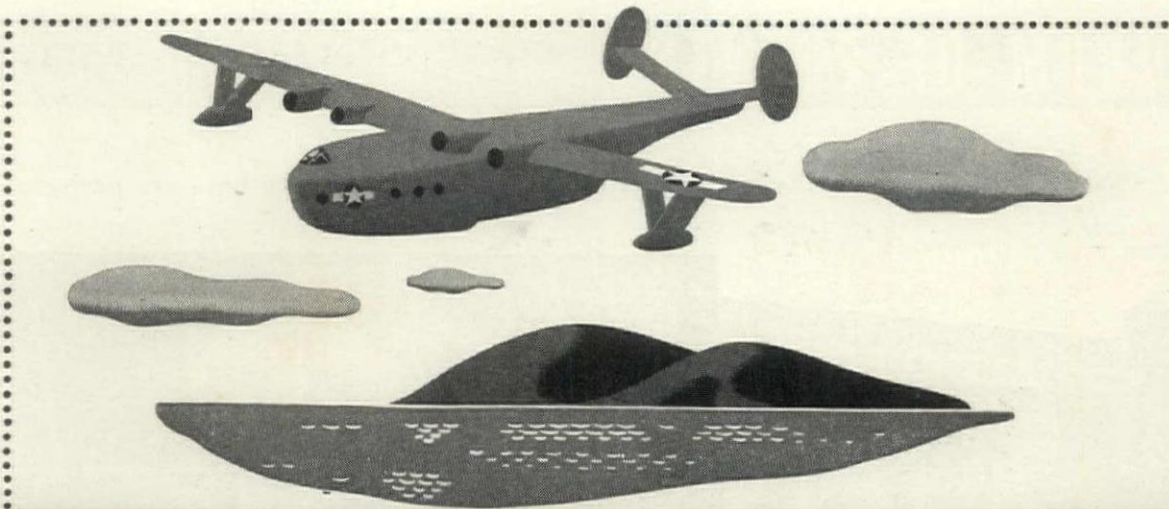
Thermopane is described briefly at the right. But if you want all the facts . . . the sizes, weights and types of glass in which Thermopane can be fabricated . . . insulation values . . . how to install Thermopane, write for copies of our illustrated Thermopane book and our new Technical Data Sheets by Don Graf. Libbey-Owens-Ford Glass Co., 1535 Nicholas Bldg., Toledo 3, O.

Thermopane... the windowpane that insulates
Makes big windows practical in any climate

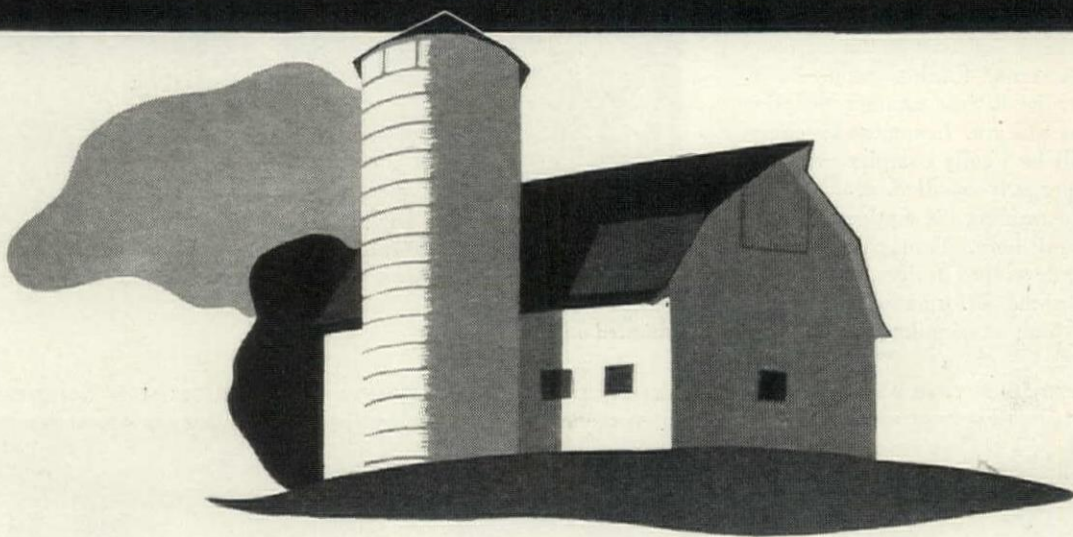
Thermopane provides effective insulation because a dehydrated layer of air is hermetically-sealed between its two panes of glass. Thanks to the patented Bondermetic Seal, used to prevent dirt and moisture infiltration, there are only two glass surfaces to clean. This double-glass windowpane fits into a modified sash, just like a single pane of regular glass . . . stays in all year. It's a modern, practical way to provide the assurance of winter comfort and heating economy.



LIBBEY • OWENS • FORD
a Great Name in GLASS



Whether you build Bombers or Farm Houses . . .



.....your product can be improved with a Kimpreg* Surface

A revolutionary new alloy-like material is achieved by fusing to plywood's surface a cured plastic skin of KIMPREG. This resultant material is not a plywood in the ordinary sense, not a conventional plastic laminate. It is a brand new, better structural medium with countless applications in many products—including, very probably, those you plan for post-war production.

With KIMPREG, plywood is converted into an improved substance which can be machined, formed and fastened like ordinary wood—yet has a plastic's smooth, tough surface and beautiful, permanent, paintless finish.

KIMPREG adds the following advantages to plywood: 1) increases durability and flexural strength; 2) provides resistance to moisture and vapor; 3) armor-plates

against extreme abrasion; 4) prevents surface checks; 5) diminishes grain-raising effects; 6) makes the material scuffproof, splinterproof, snag-resistant; 7) affords a stainproof, washable, "wipe clean" surface; 8) creates resistance to chemical action, decay, temperature-extremes, fire, vermin, and mold. Moreover, it is warm to the touch, does not have the chill "feel" of metal surfaces.

Today all KIMPREG is required for military needs, ranging from airborne "prefab" huts to glass-smooth tables for packing parachutes without snagging. Hence, the wartime color of KIMPREG is a soldierly olive-drab. Post-war, however, it will be offered in a variety of appealing hues.

Now is the time to investigate the possibilities of KIMPREG-surfaced materials for your peacetime requirements.

TRADE MARK

Kimpreg
TRADE MARK

A PRODUCT OF
**Kimberly
Clark**
RESEARCH

**Send Coupon for FREE KIMPREG Book to:
Kimberly-Clark Corporation, Neenah, Wis.**

AF-345

Name

Firm

Type of Business

Address

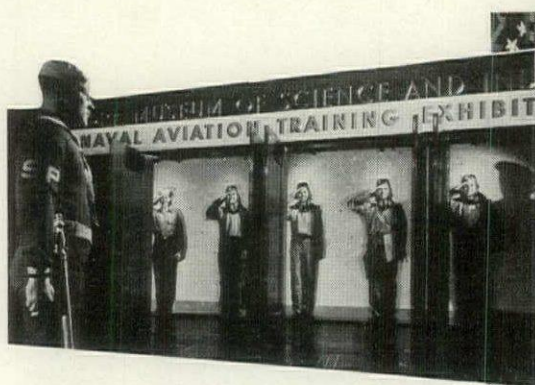
City State

Among the users of KIMPREG are: Buffelen Lumber & Manufacturing Company; Olympic Plywood Company; Washington Veneer Company; and The Wheeler, Osgood Company; all of whom are currently producing a Douglas Fir Plywood surfaced with KIMPREG. This product is sold under the trade name of Inderon.

FORUM OF EVENTS

U. S. Navy Special Devices Division shows the home folks how their boys are prepared for action.

U. S. Navy Photo



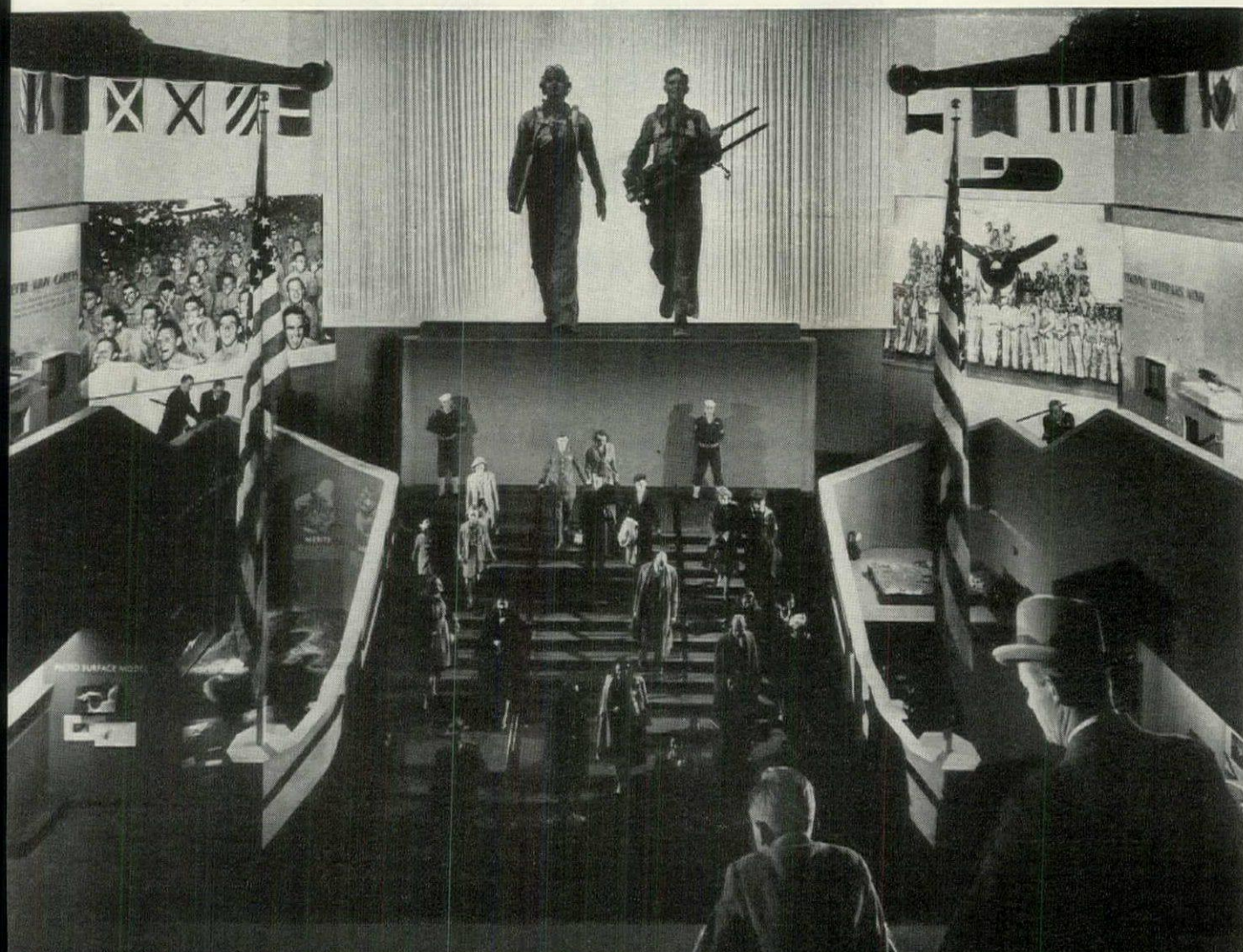
To his family and friends the air cadet may be a second Flash Gordon—but to the Navy he is just another fledgling with a lot to learn. In combat his equipment will be highly complex, sensitive and, if properly handled, deadly efficacious. In training his equipment is all of this and more. Through a series of specially developed devices that recreate and record the performance of both man and machine in simulated battle, the



FAVORITE WITH LAYMEN WAS PHOTOGRAPHIC ANTI-AIRCRAFT TRAINER

(Continued on page 74)

DRAMATIC LIGHTING AND PHOTOMURALS ENLIVEN ROTUNDA OF NEW YORK'S MUSEUM OF SCIENCE AND INDUSTRY



“Wow!”

“I can’t pull this curtain just yet . . .
BUT . . .

I’ve just had a look at what Spencer
Heater is planning for after the war,
and Brother, you are going to rub
your eyes, then look again and again when the time comes.

Behind this curtain . . . 50 years of experience in building heaters is teaming up
with the aircraft production experience of The Aviation Corporation. Believe
me . . . the result will be something to see, and something you’ll want to include
in your specifications for the great post-war homes you’re going to build.”



DROP US A LINE and we'll let you know more about
the great things Spencer Heater is planning for the
homes you're going to design and build.

SPENCER HEATER

**DIVISION — THE AVIATION CORPORATION
WILLIAMSPORT, PA.**

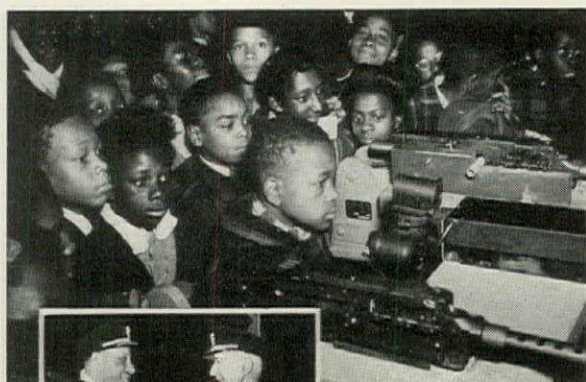
Copy. 1945, The Aviation Corp.



THEME PANEL STARTS VISITORS AT OUTSET OF PILOT'S CAREER

cadet is thoroughly versed in attack and defense before leaving the ground. Some of these miraculous training machines are included in an exhibit now touring the U.S. They range from miniature planetariums to electronically operated anti-aircraft guns. Aside from its intrinsic excitement, the exhibit has the important effect of convincing the home front that in training as in combat, our armed forces profit by the most advanced equipment conceivable.

SMALL FRY PUT ELECTRONIC GUNS TO FULL USE



CAPTAIN LUIS DE FLOREZ, USNR, Director, Special Devices Division, Navy Bureau of Aeronautics, and CAPTAIN EDWARD STEICHEN, USNR, Photographic Officer, Navy Bureau of Aeronautics.

Tile-Text means Healthy Hospital Floors

Sound, sturdy, time-tested floors are essential to efficient operation of a hospital. The floors in any institution get more actual usage than any other part of the building structure.

When you discuss flooring with your hospital client, remember that the health of both the staff and the patients of that institution are of prime importance. Tile-Text Asphalt Tile protects that health in two ways. First, its smooth, compact surface prevents wearing in of grime and dirt, with consequent ease of maintenance. Second, the composition of Tile-Text will not support any form of bacteria or germ life.

In addition, Tile-Text floors have other advantages for hospitals. Their *resilience* reduces leg fatigue. The surface of Tile-Text is *slip-safe*. Their *low cost* saves construction money, and their time-tested *durability* means long life and minimum replacement cost. Add to these virtues highly *attractive appearance*, and you know why millions of square feet of Tile-Text have been specified for use in hospital areas during the past twenty years.



Robinson Memorial Hospital, Ravenna, Ohio — Chas. G. Kistler, Architect

Specify Tile-Text for the hospital you are now planning—and if we can be of assistance with helpful data, don't hesitate to call on us.

The TILE-TEXT Company

CHICAGO HEIGHTS, ILLINOIS
101 PARK AVENUE, NEW YORK CITY

These Features Mean

EFFICIENCY PLUS

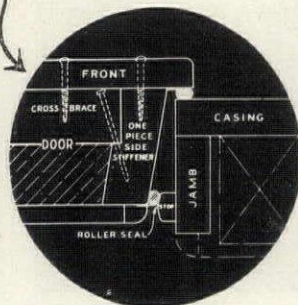
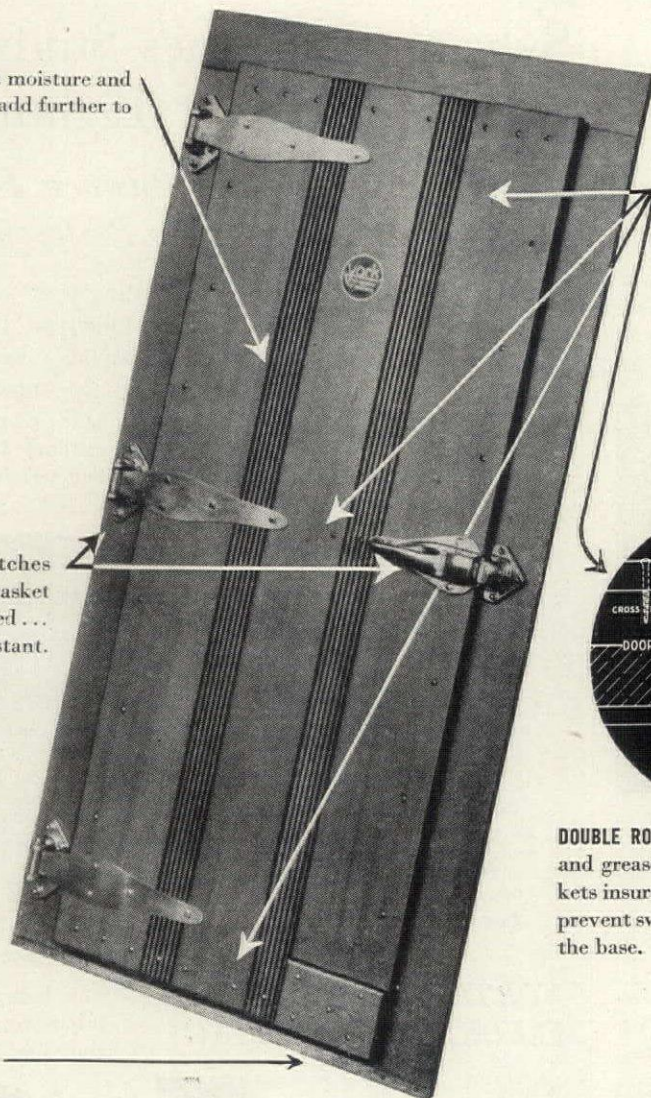
In Cold Storage Doors

VERTICAL PANELS prevent moisture and dirt accumulation and add further to structural strength.

CROSS BRACING prevents sagging or warping . . . makes York Doors structurally strong . . . rugged.

SELF-ADJUSTING hinges and latches maintain constant and even gasket pressure. Hardware is streamlined . . . built for heavy duty . . . rust resistant.

KICK PLATE takes the bumps and reinforces the door against damage from shavings, ice or other obstructions that may be swept into the doorway.



DOUBLE ROLLER SEAL with two water and grease-proof, wear-resistant gaskets insure perfect, enduring seal and prevent sweating and deterioration at the base.

YORK Cold Storage Doors keep temperatures and operating costs lower. The special advantages shown above reduce spoilage hazards and provide the structural strength to withstand almost limitless opening and closing. York Cold Storage Doors are specialized for every refrigeration service. Doors for all applications are available to your clients through a York factory branch or distributor nearby. York Corporation, York, Pennsylvania.



Send for the "Architects' and Engineers' Manual York Cold Storage Doors." It gives complete information—plus valuable tables and data for refrigeration plants.



YORK REFRIGERATION AND AIR CONDITIONING

HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885

SYLVANIA NEWS

ARCHITECTURAL EDITION

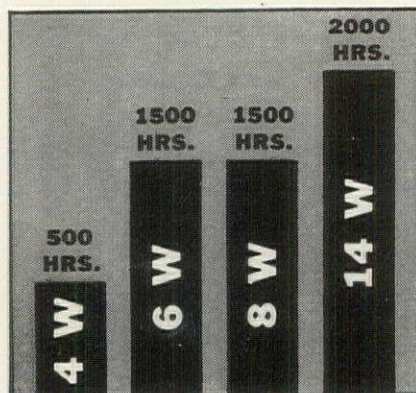
MARCH

Published in the Interests of Better Sight and Sound

1945

Life Ratings Raised on Smaller Sizes of Fluorescent Lamps

New life ratings, based on a 3-hour burning cycle, under specified test conditions, have been announced for Sylvania Electric's 4, 6, and 8-watt miniature fluorescent lamps, as well as for the 14-watt T-12 lamp. Ratings have been based on the 3-hour cycle, since this approximates



Graph shows the new life ratings of 4, 6 and 8-watt miniature and 14-watt medium-base lamps, based on 3-hour cycle under specified test conditions.

the conditions under which these lamps are most likely to be used.

With the exception of the 4-watt size, all ratings represent a longer life than indicated in previously published data.

DID YOU KNOW...

That Sylvania Germicidal Lamps, under proper circumstances, can be installed in air conditioning ducts, as a means of destroying air-borne bacteria?

* * *

That the Sylvania-sponsored fluorescent lighting maintenance plan offers commercial establishments a simple means for keeping their equipment at full efficiency? Service is provided by contractors on a fee basis.

Sylvania Launches Study of Home and Commercial Lighting Trends

Consumers and Business Firms Being Queried on Their Preferences and Plans

In order to obtain first-hand information that will be helpful in evaluating postwar trends in domestic and commercial lighting, Sylvania Electric Products Inc. has undertaken an extensive survey of the ideas of homeowners and business establishments on the subject of illumination. Thousands of personal interviews have been conducted with householders, with a view to determining their preferences on types of lighting for various rooms. Calls are

SYLVESTER SURVEY



"Pardon me, but do you plan to use fluorescent lighting in your business after the war?"

NORTHWEST INSTALLS FLUORESCENT TUBING



Decorative possibilities of Sylvania fluorescent tubing are shown in this installation in the New York ticket office of Northwest Airlines.



Here is one of Sylvania Electric's questionnaire-type advertisements.

now being made on stores, offices, and other commercial establishments to learn their plans on the use of fluorescent lighting after the war.



These interviews form one of the two major phases of Sylvania Electric's comprehensive program. The second phase consists of a series of questionnaire-type advertisements appearing in national magazines and business executive publications.

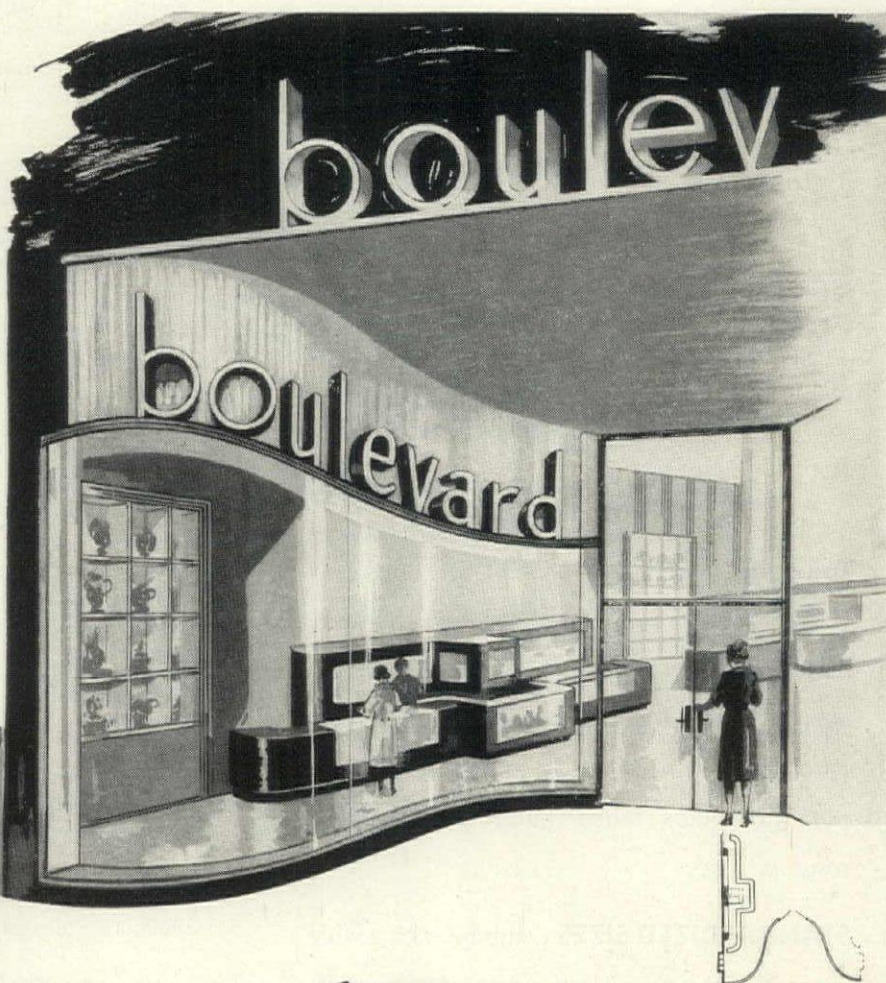
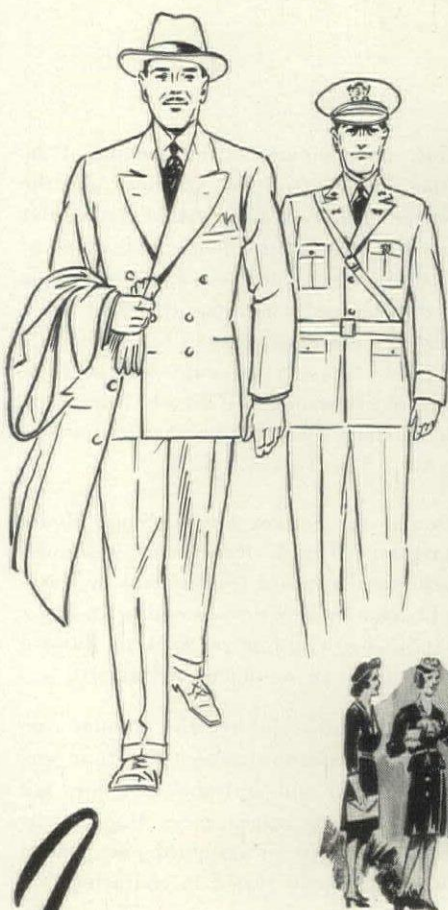
Results of this survey will be published in future issues of SYLVANIA NEWS, to guide architects in their postwar planning of lighting installations.



SYLVANIA ELECTRIC

SYLVANIA ELECTRIC PRODUCTS INC., Salem, Mass.

MAKERS OF FLUORESCENT LAMPS, FIXTURES, ACCESSORIES; INCANDESCENT LAMPS; RADIO TUBES; CATHODE RAY TUBES; ELECTRONIC DEVICES



WHAT THE WELL DRESSED "Front" WILL WEAR

*A Complete
Line for
Every Design*

The store front of today and tomorrow artfully combines beauty and utility to attract the beholder and invite his patronage.

With the complete Brasco Construction, unusual effects in modern metals, glass and lighting, are easily attained. It offers the architect endless possibilities in bold, attractive design because the line is completely unified—the various members complementing each other to make a harmonious whole.

But Brasco offers much more. Precision engineering, heavy-gauged metals and stoutly reinforced bars assure trouble-proof construction and safety to glass. Structurally sound, Brasco brings beauty that never wears out. Visual evidence is presented by thousands of installations all over the continent.

Brasco
MODERN
STORE FRONTS

BRASCO MANUFACTURING CO.
HARVEY • (Chicago Suburb) • ILLINOIS

National Distribution Assures Effective Installation

Copr. 1945 by Brasco Manufacturing Co.

STANDARDIZED

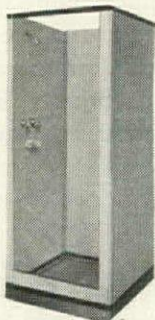


Take the GUESSWORK Out of Post-War Bathroom Planning . . . Every architect, builder and home planner will welcome the idea of **STANDARDIZED SIZES** for "Bathe-Rite" Shower Cabinets — ready to fit your post-war plans when building operations resume.

STANDARDIZED SIZES combine with a wide choice of attractive "Bathe-Rite" designs suitable for installation in every type of home or public building. You can make specific plans **NOW** with full confidence that "Bathe-Rite" Shower Cabinets will fit these plans exactly. Into each "Bathe-Rite" go many "extra-value" features of design, construction, greater strength, easier installation.

INCLUDE "BATHE-RITE" Standardized Sizes in your forthcoming plans and specifications.

4 Popular Standardized
"Bathe-Rite" Models,
ranging in size from
32" x 32" x 80". Ask
for details and range
of measurements.



MILWAUKEE STAMPING CO.

802-5 South 72nd Street • Milwaukee 14, Wisconsin

FORUM OF EVENTS

(Continued from page 74)

COMPETITIONS

Artists for Victory, Inc., have announced the opening of the second painting competition "Portrait of America" and the decision of its sponsor, the Pepsi-Cola Co., to make it a regular annual event. It is hoped that in broadening the scope of prizes and program requirements both the art and the artists will benefit. Among the changed conditions this year are a greater number of prizes, the artist's right to retain the title to his picture and to receive the sale price if a sale is made. All entries must be received between April 1st and April 15th. Entry blanks may be obtained by writing to Artists for Victory, Inc., 101 Park Ave., New York 17, N. Y.

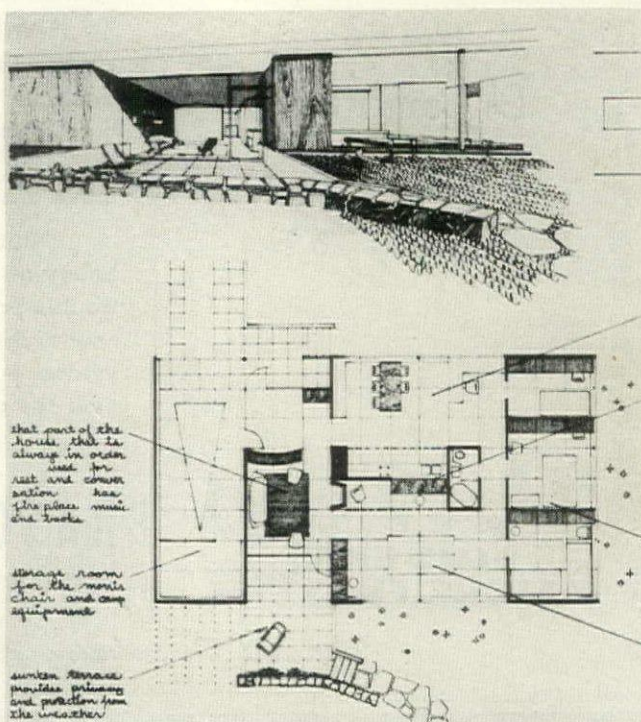
First and second prizes in the Second Annual Small House Competition of the magazine *Arts & Architecture* sponsored by U. S. Plywood Corp., were awarded to architects in Washington, D. C.; first to Lt. Charles D. Wiley, second to Lt. (j.g.) Russell M. Amdal, U.S.N.R. Third prize went to Edward F. Catalano of Buenos Aires, now a student at Harvard.

Over-all results served best to reinforce the popular conviction among architects that standardization of certain sections of the house is practical and desirable and does not necessarily produce a monotonous appearance. Many of the plans submitted utilized a module or standard part system though the designs were extremely varied in character.

The house which won the first prize is described by its designer as "an all-weather plywood house with a new space conception." It can be used as a single or a double dwelling without noticeable loss of privacy. It is designed on a 4 ft. module and intended for prefabrication. Its most interesting char-

(Continued on page 82)

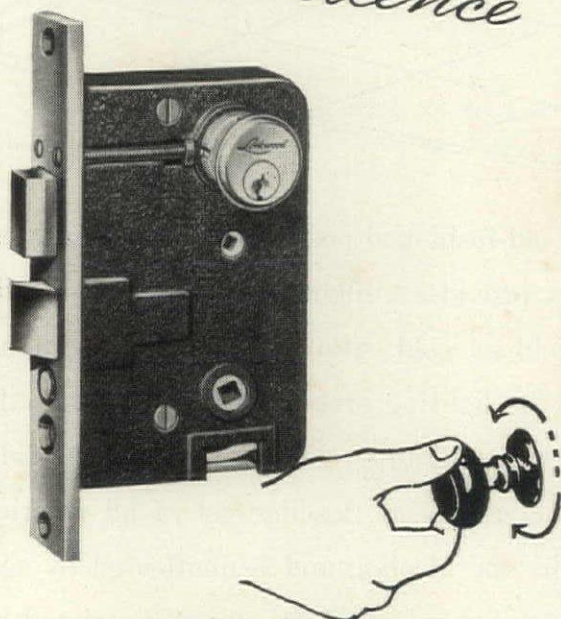
First Prize: Lt. Charles D. Wiley



Lockwood Leads

WITH PROVED FEATURES FOR POSTWAR BUILDING

The Evidence



Lockwood Series 5100 of Standardized Cylinder Knob Locks.

Standard dimensions of The Hollow Metal Manufacturers' Association.

All locks in this series interchangeable in the same mortise.

Cast Bronze Pin Tumbler Cylinder and trim on Cast Iron Case.

PLUS Equipoise Balanced Knob Action — a Lockwood EXTRA.

LOCKWOOD resourcefulness and ingenuity stepped into the future when it created Equipoise knob action for its standardized mortise locks. It is an oft-forgotten fact that men and women usually turn knobs in opposite directions. But Lockwood's Equipoise action is precision-built to compensate for this habit. The lightest touch turns Equipoised locks in either direction.

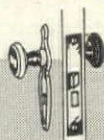
Especially important is this specification in planning locksets for banks, hotels, hospitals, apartments, schools and other buildings where women have to open the doors. The 5100 series, with Equipoise action, is modern as tomorrow, tested and proved today. Specify it in your postwar buildings and you add the earmark of good lock design.

You will find Lockwood hardware specifications simplified in Sweet's Architectural File 17bl, 1945 edition. A limited number of additional copies is available. Write for yours, if interested.

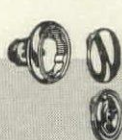
A-2

LOCKWOOD
HARDWARE MFG. CO.
FITCHBURG, MASSACHUSETTS
Division of Independent Lock Company

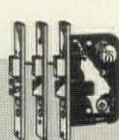
PATRICIAN



POLYFLEX



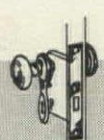
MORTISE LOCK



BOR-LOG



UNIFAST



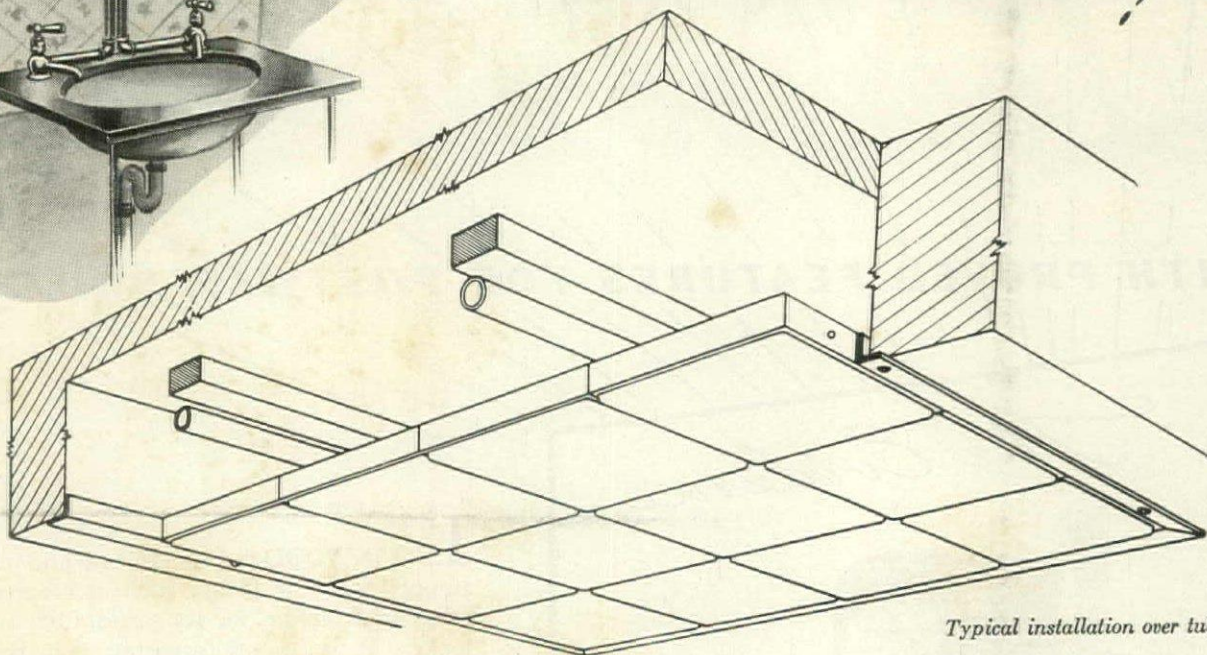
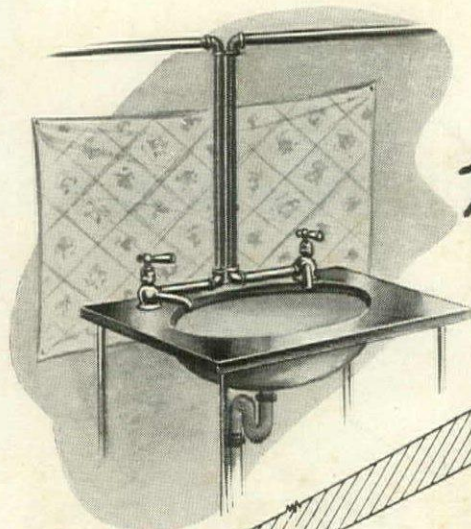
CAPE COD



BALL BEARING CLOSER

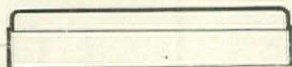


Hide YOUR LIGHT PLUMBING!



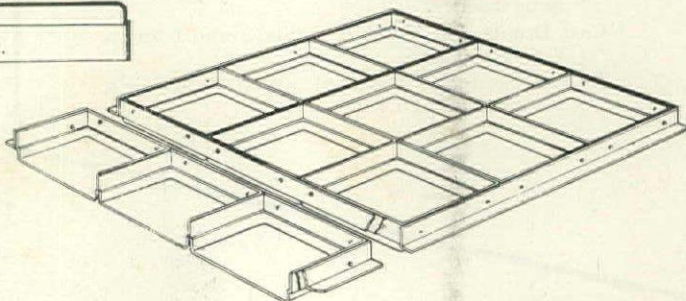
Typical installation over tubing.

Bare light tubing will be as unsightly and old-fashioned postwar as open plumbing. The answer is in Lumitile, which not only provides a higher quality, scientifically diffused light, but offers an attractive shield for cold cathode and tube type lighting, and greatly enhances the beauty of the lighting area. Lumitile increases the emission surface from that of the bare tube itself, to twelve or more inches wide. Molded of styrene, and has all the characteristics of this lightest of all plastics. Lumitile is resistant to water, acids, alkalis and alcohol, and is unaffected by age. It has high dimensional stability and does not warp. Production now restricted by war, but contractors can supply it postwar in a wide variety of colors. For further interesting information about Lumitile installations, write us today for free folder.



Section of individual tile; six- and eight-inch squares.

Diagram shows assembly of tile, from tube side, with angle iron supports and plate between panels. Also indicates optional felt strips. Panels may be butted together to form continuous lighting areas.



Lumitile

327 EAST EIGHTH STREET
CINCINNATI 2, OHIO

Roddiscraft

New Prefabricated Door Unit A Completely Assembled Opening



IN keeping with the trend toward prefabricated factory-finished parts, Roddis has developed the Door Unit—a complete opening, accurately manufactured to size, including the door, jambs, stops, and casings, put together with the hardware applied, and finished according to specifications.

Door — Manufactured to size.

Jambs — Manufactured to architects' detail insures perfect fitting.

Casings and Stops — Manufactured to architects' detail.

All — Finished to approved sample, assembled with door hung in place, and shipped, ready for immediate installation.

This Door Unit is CABINET WORK, i. e., one compact, shop-assembled unit, doweled, glued, and nailed together and completely factory-finished, all lending to a durable, permanent product which will retain tight miters and other joints. The profiles of casings and stops will be

made to architect's design. The Door Units are manufactured on a mass production basis in our plant by experienced craftsmen using modern machines and jigs. This streamlined method of manufacture results in substantial economies over the "assembly-at-the-building-site method."

Advantages of the **Roddiscraft** Door Unit

Reduces handling at the building site.
Saves field labor costs.

Applies the economies of mass production.

Saves time at building, enabling building to be occupied sooner.

Instead of paying out interest on partially completed building, owner is collecting rent.

Simplifies the supply problem.

Fixes responsibility at one source.

Factory-fitted to insure perfect fitting.
Factory-finished by craftsmen.

Door Unit can be conveniently removed and reset without damage to meet tenant layout requirements.

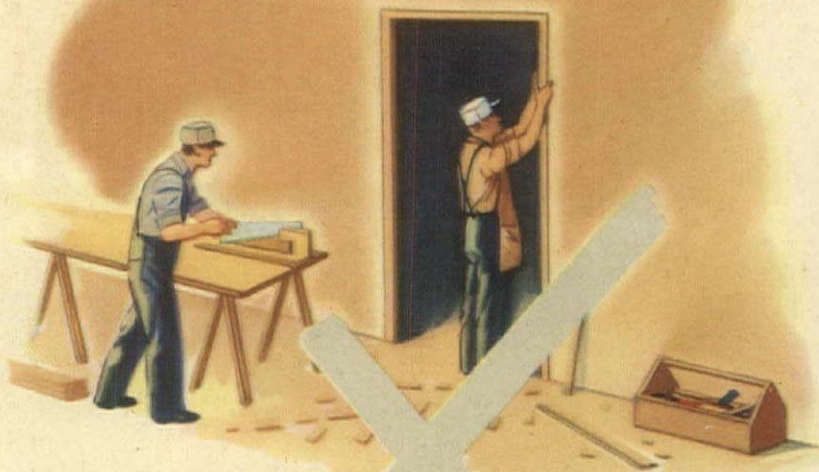
Split Jamb Construction

All Roddis Door Units are made with split jamb to allow for variations in wall thickness. The stops prevent the joints from being exposed.

WAREHOUSES

Cambridge 39, Massachusetts
229 Vassar Street
Chicago 8, Illinois. 1440 W. Cermak Road
Cincinnati 2, Ohio. 457 E. Sixth Street
Dallas, Texas. 2615 Latimer Street
Kansas City 8, Missouri
2729 Southwest Blvd.
Long Island City, New York
Review and Greenpoint Avenues
Louisville 10, Kentucky
1201-5 S. 15th Street
Marshfield, Wisconsin
Milwaukee 8, Wisconsin
4601 W. State Street
New York 18, New York
515 W. 36th Street
San Antonio, Texas. 727 N. Cherry Street

OLD METHOD



Fitting Jamb

Attaching Jamb

Gaining Jamb for Hinges
and Lockplate

Sanding Jamb

Finishing Jamb

Sizing Door Height

Sizing Door Width

Sanding Door

Gain for Hinges

Applying Hinges

Fitting Lock

Applying Lock

Cutting Casings to Length

Mitering Casings

Sanding Casings

Applying Casings to Jamb

Finishing Casings

Cutting Stops to Length

Mitering Stops

Boring Stops for Screws
and Washers

Applying Stops to Jamb

Finishing Stops



NEW METHOD

Roddiscraft DOOR UNIT

The RODDISCRAFT Door Unit — completely factory-finished, fits accurately into openings — is installed in one simple operation.

The RODDISCRAFT Door Unit can be quickly installed with simple tools. Tests indicate that 12 door units can be installed in the time formerly required to fit and finish one opening, saving costs and valuable time.



fit-in red, white, and blue • dowel trade-mark — permanently establishing identity and responsibility.

See Sweet's Architectural File — for complete
RODDISCRAFT Door Line and Specifications.

Roddiscraft

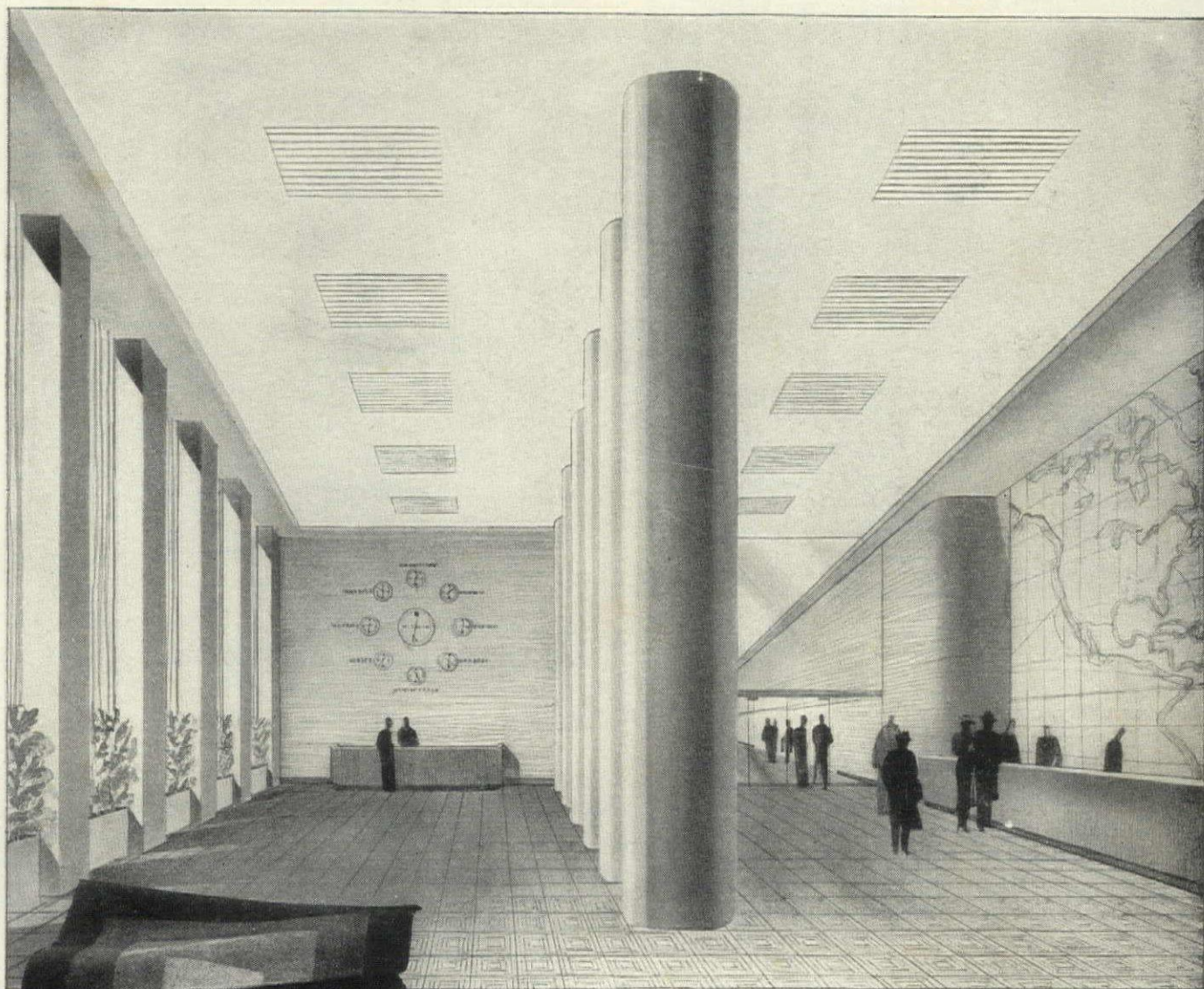
RODDIS LUMBER & VENEER COMPANY

MARSHFIELD

Dealers in all Principal Cities

WISCONSIN

Accenting the Architectural Design with the Right Carpet!



SPACE and time are the architect's theme for this post-war lobby. Around the world time and large area maps recognize the coming importance of long distance travel.

The volume of space and perspective is re-emphasized in the selection of a Bigelow pattern that fits the design.

When Bigelow looms again make contract carpet, Carpet Counsel will be ready to help you select the right carpet for the right spaces at no extra cost per square yard.

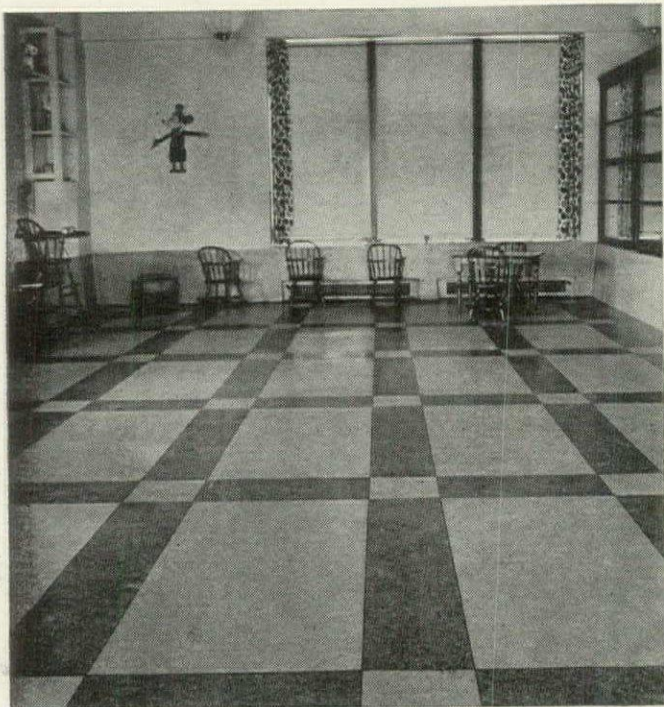


BIGELOW-SANFORD CARPET CO., Inc.

140 MADISON AVENUE, NEW YORK 16, N. Y.



FINE TERRAZZO FOR MODERN HOSPITALS



Receiving ward for children, St. Vincent's Hospital, Philadelphia. Architect, Henry D. Daggett & Sons; Terrazzo Contractor, United Marble Co., Inc.; both of Philadelphia.

Proven utility, combined with colorful beauty and faithful reproduction of designs and patterns, has demonstrated the value of fine Terrazzo for hospital floors—and wainscots too.

Sanitary, easy to clean and keep clean, economical to install and maintain, fine Terrazzo has the permanence and durability of concrete even under the heaviest foot traffic. Beauty and detail of design depend upon the varieties of marble chips and the color of the cement matrix.

Whether contrast or blend is desired, in the matrix lie the color overtones which can deaden or illuminate the floor's beauty. With Atlas White portland cement (plain or waterproofed), any color of matrix is possible. Its natural color is unsurpassed where pure white is desired, and gives true color values to the mineral pigments added when other shades and tones are required.

* * *

For further information, write to Atlas White Bureau, Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York 17, N. Y.

The matrix is as important as the marble chips

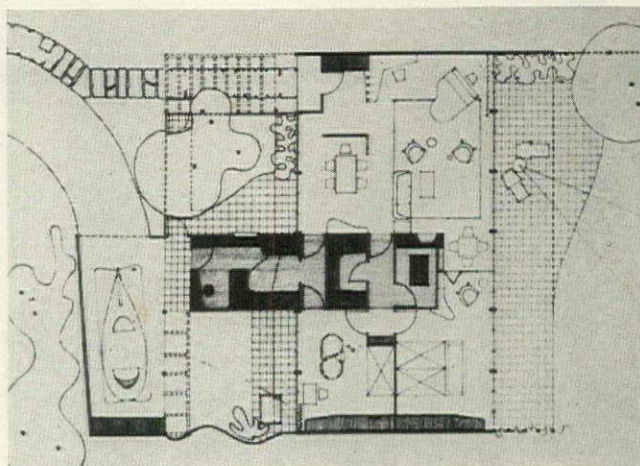
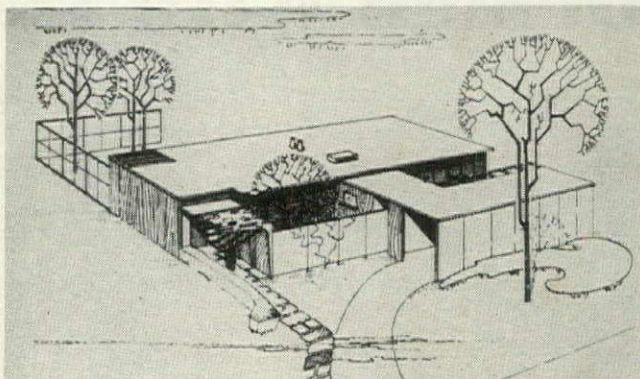
AF-T-6



ATLAS WHITE CEMENT
for FINE TERRAZZO

FORUM OF EVENTS

(Continued from page 78)



Second Prize: Lt. (j.g.) Russell M. Amdal, U.S.N.R.

acteristic is the floor level located two feet below grade so that, from within, flowers and plants appear at sill height.

The winner of the second prize has provided a child's bedroom with an adjoining court which permits supervision of play from the kitchen. The service unit divides the living and recreation area from the sleeping area and acts as a sound barrier between the two.

Winners of the 36th Division Memorial Museum competition have recently been announced. Alden B. Dow won first place, Rather & Rustay, second, J. Murrell Bennett, third, Donald S. Nelson and Thomas D. Broad, fourth. The program called for a design "of monumental and enduring character" to memorialize the sacrifices and services of the men of the 36th Division. It was also stated that the building should incorporate all appropriate modern facilities such as air conditioning.

Architect Dow's plan features an auditorium and a round central court for exhibitions. Sixteen rectangular piers encircling a small garden in the middle create 32 auxilliary surfaces for display.

Describing his design, Mr. Dow says: "Peace is generally regarded as a form of perfection. This is symbolized by the old symbol of perfection, the circle. In this building it takes on the form of a court open to the sky. Peace, or perfection, also represents freedom. Freedom in this building is illustrated by the openness of this court to the sky and more intimately by the freegrowing garden in the center."

(Continued on page 86)



Are Your
BENDIX
 Installation
 Plans
 Ready?

The biggest news in home laundry equipment, is the Bendix! Prospective home owners everywhere will want the Bendix Automatic Home Laundry—will *demand* its miracle performance. And you'll want to be *ready* on the spot—with plans that wed the Bendix to kitchen, playroom, bathroom, basement or utility room.

The Bendix takes only 4 square feet of floor space. So modern, it washes, rinses and damp-dries automatically—eliminates set-tubs completely! Helps sell the house. Available in many states for FHA financing. Your Bendix distributor has all the answers. Look for his name now in the classified section of your phone book.

BENDIX De Luxe Model: 26" wide, 36" high (control panel back board at rear). 38" high from floor, 22¾" deep.

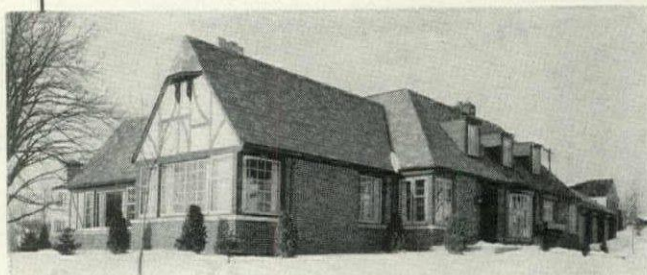
BENDIX Standard Model: 25¼" wide, 35" high, 22¾" deep.

BENDIX^{automatic} Home Laundry

Bendix Home Appliances, Inc., South Bend, Indiana . . . Pioneers and Perfectors of the Automatic "Washer"

"Watch Out for Vapor Condensation" . .

. . . says
WALTER G. MEMMLER



A recent home designed by Walter G. Memmler. Mr. Memmler is past president of the Association of Wisconsin Architects (Milwaukee Division), chairman of the Committee on residences of the Milwaukee Metropolitan Master Planning Association.

"New methods of air-conditioning, heat control and humidifying systems will put new demands on the walls of tomorrow's homes," Mr. Memmler says. "Vapor condensation within the walls will create serious trouble unless guarded against in construction.

"I believe in the Approved Insulite Wall of Protection (and specify it) because I have found, through practical experience with it, that its construction is scientifically sound, and permits what little vapor that escapes the barrier to pass harmlessly to the outside. I've never had an instance where vapor condensed within the wall and, of course, my clients also get greater structural strength and high insulation—all in one."

May we send you complete information on the Approved Insulite Wall of Protection? Send us the coupon today, for complete details, without obligation of course.

DOUBLE INSULATION *plus* VAPOR CONTROL

That's What the Approved Insulite Wall of Protection Gives You



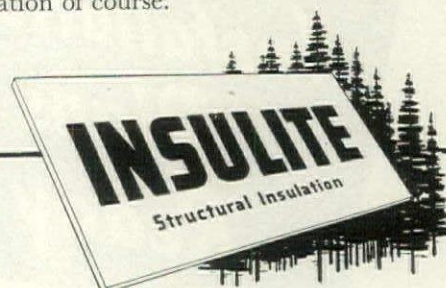
On outer-walls, Insulite Bildrite Sheathing builds a wind-proofed, weather-tight wall of high insulation efficiency, superior bracing strength, and a wall free from open cracks or knot-holes.



On inner-walls, Insulite Sealed Lok-Joint Lath builds a second wall of insulation, a strong and rigid plastering surface. Lath marks are eliminated, plaster cracks reduced to a minimum.



Sealed Lok-Joint Lath, with asphalt barrier against the studs, retards vapor travel. Bildrite Sheathing, being permeable to vapor, permits what little vapor escapes the barrier to pass towards the outside.



Made Exclusively from Wood

INSULITE, Dept. AF35, Minneapolis 2, Minn.

Please send me your free booklet, "Scientific Facts."

Name

Address

City State

Good Buildings Deserve Good Hardware



Think OF Corbin FOR THE Best IN BRASS AND BRONZE!

"Biggest housing boom yet headed this way" say members of the real estate profession and housing authorities. And what's more important, it will be in large measure a period of *quality* construction.

More than likely everything that goes into or on a house will be of higher quality for three reasons: (1) Substitute-shy home owners and prospective home builders are "fed up" with inferior materials (2) They will have

the cash to pay for what they want (3) They will want to buy the security of long-established trade marks.

In builders' hardware, look to P. & F. Corbin to again supply the best in brass and bronze (and other materials too) for this new, great market.

Look to Corbin for everything that it takes in authentic design and helpful detailing to make your projects as outstanding as you *planned* them!



P. & F. Corbin

THE AMERICAN HARDWARE CORPORATION, SUCCESSOR

NEW BRITAIN, CONNECTICUT • SINCE 1849

(Continued from page 82)

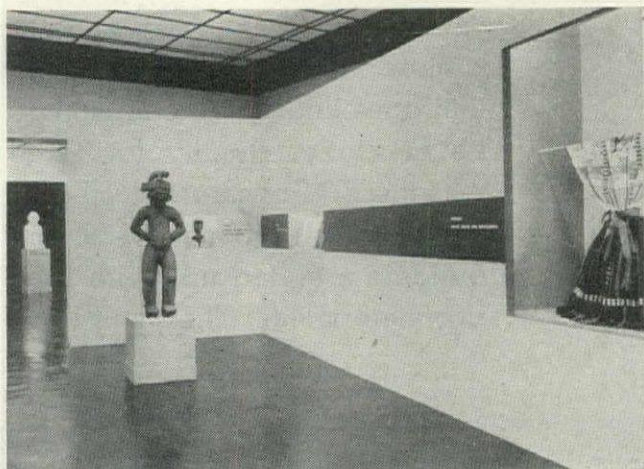
The 19th annual Alumni Collaborative Competition of the American Academy in Rome will close in April. Full details may be had by writing to the Alumni Association, R-1232, 101 Park Avenue, New York 17, N. Y.

EXHIBITIONS

The National Antique Show, the largest exhibit of antiques ever shown, will be held at Madison Square Garden, New York, from March 12th through March 18th. Design and display will be under the direction of David Robinson, industrial designer. Dealers from all over the U. S. are expected to participate in the show whose aim will be "to encourage collecting and to stimulate the taste for the things of the past."

The Museum of Modern Art has announced the opening of a small permanent gallery on the first floor for the joint use of the Department of Architecture and the Department of Industrial Design. Here small, special displays will be on view for two or three months at a time. Some will deal with new and timely developments in architecture and industrial design; others will show past achievements and illustrate basic principles. Heretofore these branches of modern art have been represented in the Museum only by occasional large exhibitions.

Art of the United Nations, recently displayed at the Art Institute of Chicago presented a careful selection of 37 objects of art, one from each of the United Nations. Included were paintings, sculpture, prints and decorative arts, chosen, within the limitations of a world at war, for their esthetic excellence. The selection was not limited to any period, civilization, style, medium or stage in a nation's growth. The oldest work was executed before 2,200 B.C.; the latest, in 1943. Neither was



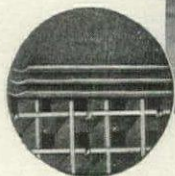
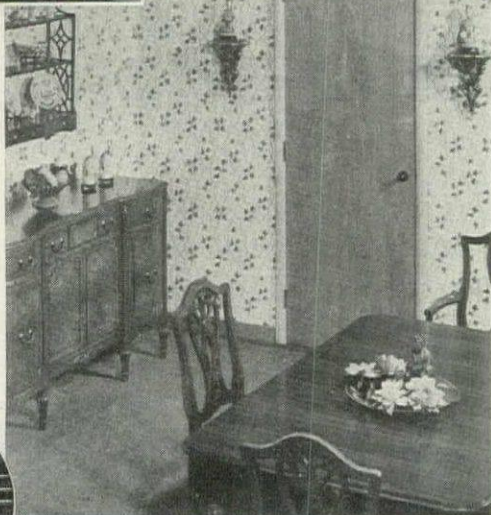
Horizontal band joins recessed display cases

this a war exhibition. No object, even those by contemporaries, dealt with the present struggle. Mr. George Kepes, responsible for the admirable and unusual staging of the exhibit, took full advantage of the diversity of the material. Each object was given powerful individual emphasis in a variety of separate settings. A few ingenious devices, as simple as the

(Continued on page 90)

PAINE REZO DOORS

for interiors worthy
of your name and
your clients investment



U. S. Pat. 1,887,814
The exclusive interlocking grid core within the Rezo-door allows constant air circulation, adds extra strength and provides greater rigidity.

Doors are a dominant feature of every room. How important, then, that you specify a door that will work with your plans, like the Paine Rezo . . . a door that widens your opportunity to design refreshing effects with attractive, flush interior surfaces. But Paine Rezo doors do

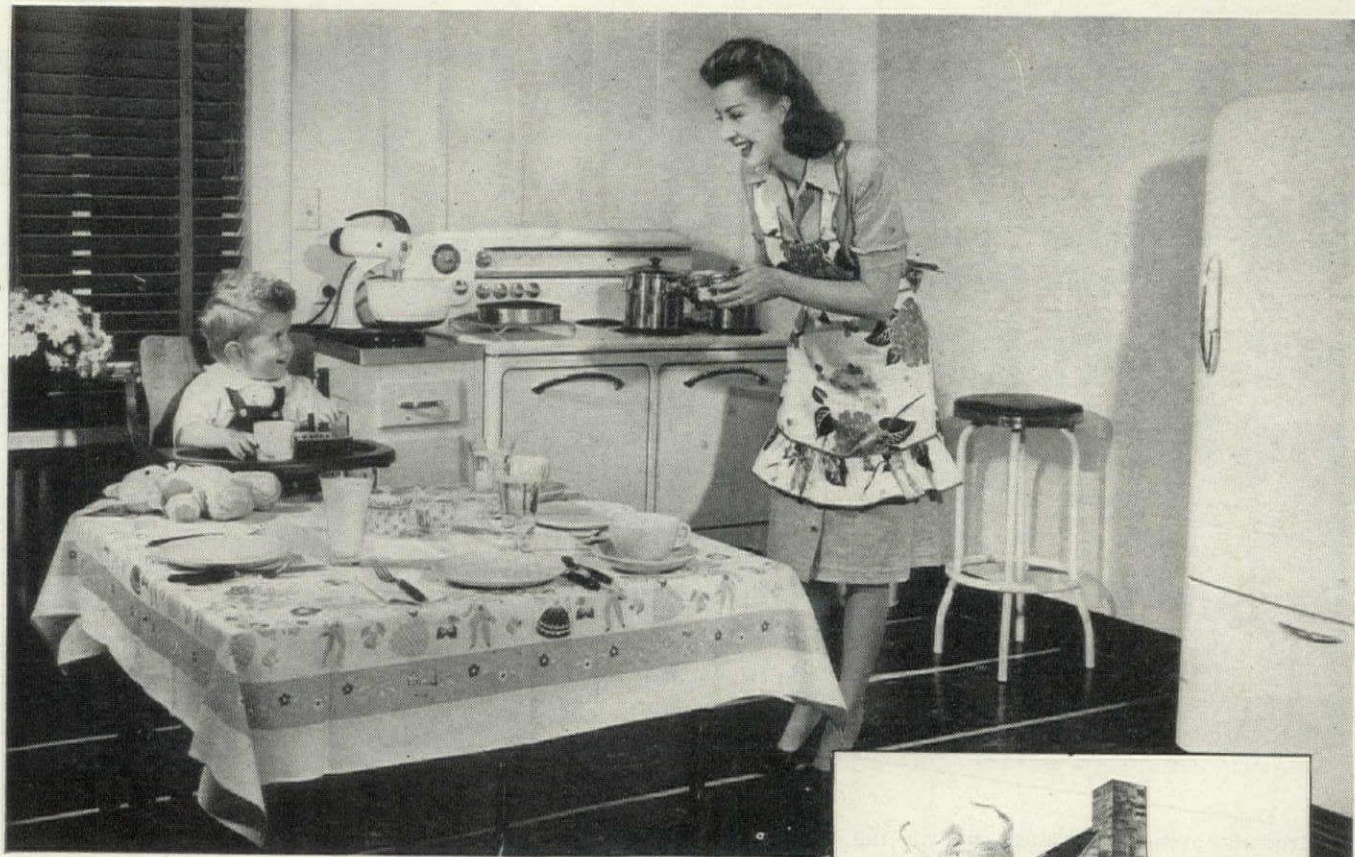
not alone serve as a tool for better architectural design; they fulfill your client's interest, and yours, too, in long, trouble-free service. The patented air cell construction that only Paine Rezo offers, prevents warping, provides greater strength, extra rigidity and lightness in weight, at an installed cost no greater than that of common panel doors. No wonder, then, that the Paine Rezo is the flush door most frequently specified by architects . . . for more than one million have already been installed from coast to coast. Write now for detailed bulletin.

Manufactured by the
PAINE LUMBER CO., Ltd. Oshkosh Wisconsin
ESTABLISHED 1853

MAKE SURE YOUR NEW HOME
NEVER CAN "CHOKED" ITSELF...



...on your good money!



AN ADEQUATE CHIMNEY is your assurance that you'll always be free to choose any heating fuel you desire—including money-saving Bituminous Coal, of which America has a 3,000-year supply! And, when used with a modern coal stoker, dependable Bituminous Coal is not only smokeless, clean, and "automatic"—but also gives the most uniform heat of any fuel.

● One of the most expensive mistakes you can make, when buying or building a new home, is to get a *skimpy* chimney—no matter what kind of fuel you plan to burn. For a chimney that's *too small* chokes off your choice of ever using any except the *most expensive* fuels. And these may become even more costly in the years ahead.

If, on the other hand, your home has an *adequate* chimney, a chimney big enough to handle all fuels equally well, you'll be free at any time to burn any fuel you choose—including the most dependable and economical of all—Bituminous Coal!

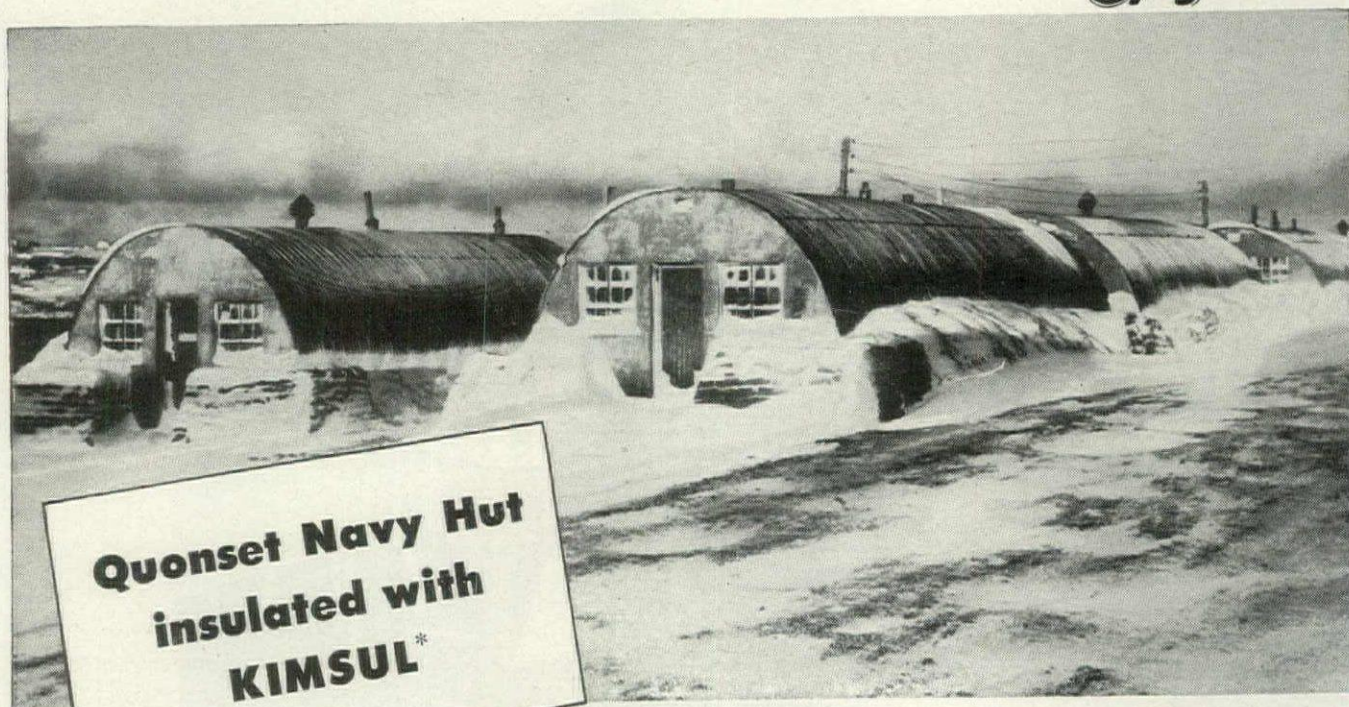
It may surprise you to learn that the extra cost of such a chimney amounts to only about \$16 for the average 7-room house! And burning Bituminous Coal can save enough money to pay a good slice of your taxes or interest. No wonder 4 out of every 7 homes in the U. S. heat with Bituminous Coal!

Your architect or builder will tell you that a chimney adequate for burning Bituminous Coal is also efficient for any other fuel you ever might choose. Talk it over with him—it will pay you to do so!

BITUMINOUS COAL INSTITUTE, 60 EAST 42ND STREET, NEW YORK 17, N. Y.

(This is one of a series of advertisements now appearing in home-makers' magazines)

Take a tip
from the Navy!



**Quonset Navy Hut
insulated with
KIMSUL***

Official U. S. Navy Photo

In freezing arctic wastelands, and in the heat of the tropics, the Navy's famous Quonset huts provide welcome shelter to thousands of men, and protect vast quantities of supplies from the elements. These huts, insulated with KIMSUL, to protect against heat and cold, are the most widely-used prefabricated houses on earth. Prefabricated, easily transported and quickly constructed, these structures serve as barracks, administration buildings, hospitals, workshops and warehouses.

The advantages which make this insulation best for the Navy's use are highly desirable in insulating homes, too. The low cost of KIMSUL is important. So is the remarkable speed and ease with which it can be installed. And KIMSUL

is one of the best heat-stoppers known. Its k factor is 0.27.

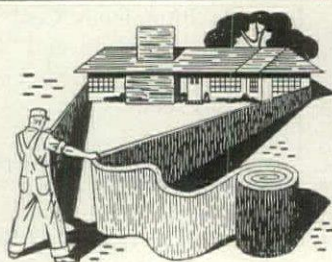
This is the ONLY many-layer insulation. Its construction is scientifically superior to that of loose "bulk insulations", and to blankets with only one or two plies. Why? Because you get uniform coverage over every inch of insulated area. The density doesn't vary; hence, there are no heat-leaks through unprotected spots.

Furthermore, KIMSUL, unlike other insulations, cannot sift or settle. Rows of strong stitching hold the blanket's shape permanently, prevent sagging. KIMSUL stays put, and stays RIGHT, for the life of the structure in which it is installed.

Take a tip from the Navy—specify KIMSUL insulation.

*For complete technical data on Kimsul Insulation refer to Sweet's 1945 Catalog or write
Kimberly-Clark Corporation, Neenah, Wisconsin*

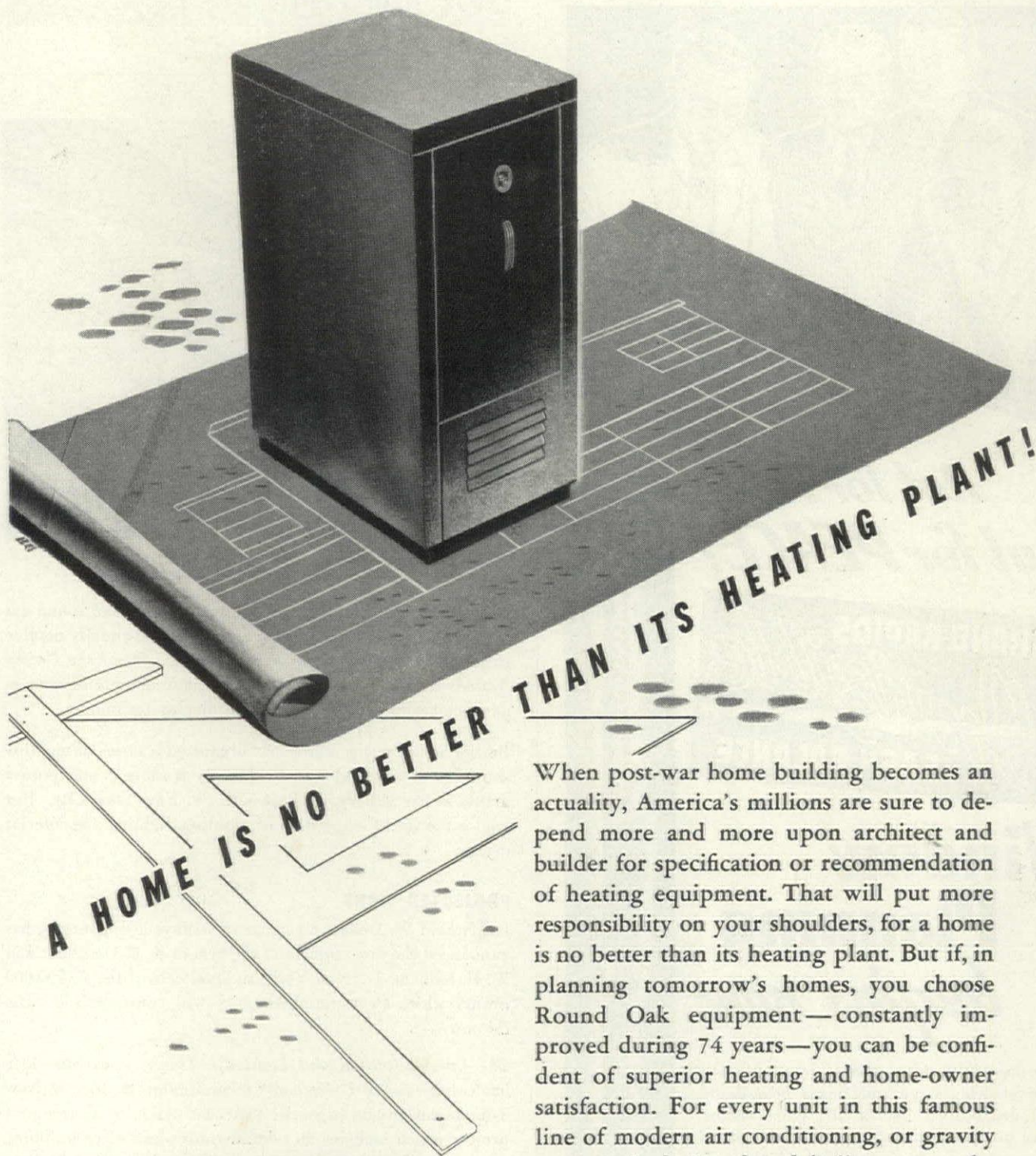
WRAP THE
POSTWAR HOME
IN A KIMSUL
BLANKET



KIMSUL
INSULATION

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

A PRODUCT OF
**Kimberly
Clark**
RESEARCH



A HOME IS NO BETTER THAN ITS HEATING PLANT!

When post-war home building becomes an actuality, America's millions are sure to depend more and more upon architect and builder for specification or recommendation of heating equipment. That will put more responsibility on your shoulders, for a home is no better than its heating plant. But if, in planning tomorrow's homes, you choose Round Oak equipment—constantly improved during 74 years—you can be confident of superior heating and home-owner satisfaction. For every unit in this famous line of modern air conditioning, or gravity systems, is designed and built to meet the most rigid requirements in its classification—for quality, ease of installation, heating efficiency, fuel economy, and dependability.

KEEP FIGHTING—BUY WAR BONDS!

ROUND OAK'S
POST-WAR LINE WILL INCLUDE

★ **KITCHEN APPLIANCES**

Gas Ranges
Electric Ranges
Gas Combination Ranges
Electric Combination Ranges
Kitchen Heater Gas Ranges
Coal and Wood Ranges
New Kitchen Heaters

★ **HEATING EQUIPMENT**

Steel Furnaces
Cast Iron Furnaces
Gas, Oil, or Coal
Air Conditioning Systems
Space Heaters
Electric Water Heaters
Gas Water Heaters
Oil Water Heaters
Stokers
Blower-Filter Units

Famous



Round Oak
FURNACES

COAL • OIL • GAS

© 1945, Round Oak Co., Dowagiac, Michigan



***Not for WAR
-but for PEACE!***

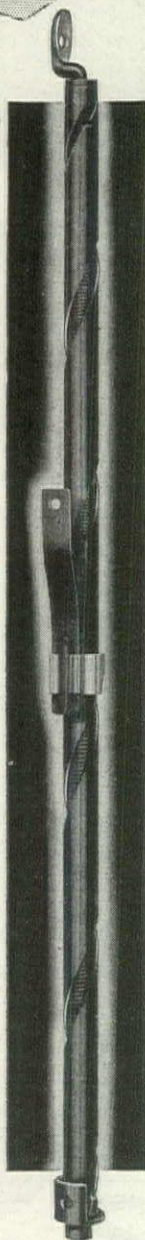


Window Planning *begins now*

The men in uniform who so frequently are seen studying large scale maps plan death and destruction. But on the Home Front other groups — not in uniform — study plans for war's great aftermath — the building of homes for an enduring peace.

When the reconstruction era begins, time will be a vitally important factor. That is why, among other considerations, window planning must be under way now. And that is when the Grand Rapids Invisible Sash Balance must be a part of that planning.

Now being used in thousands of war housing projects, the Grand Rapids Invisible has proved itself smooth and dependable in performance; easily and quickly installed — an asset to contractors in war time and a boom to profits in peace.

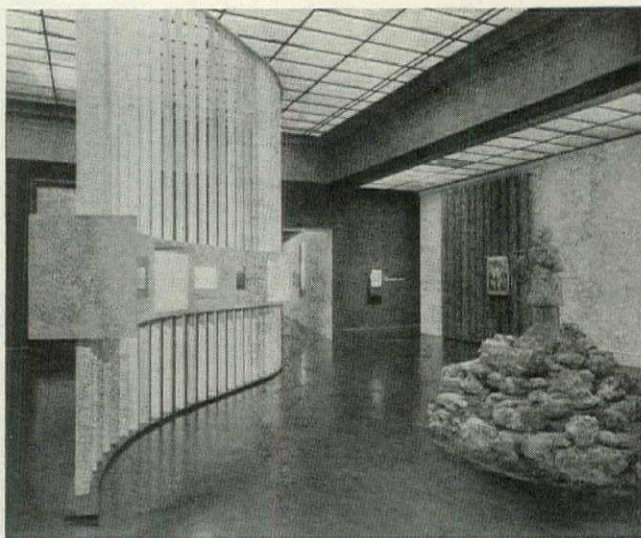


At present governed by government priorities. Send for catalog for information and delivery details.

GRAND RAPIDS HARDWARE COMPANY
GRAND RAPIDS • MICHIGAN

FORUM OF EVENTS

(Continued from page 86)



Wood and stone elements enrich primitive art objects

curving wood display wall, served to integrate and round out the show as a whole. Following an earlier and equally notable exhibition staged by Mies van der Rohe, *Art of the United Nations* further strengthens the Art Institute's prominence in advancing and developing modern display technique.

Bertha Schaefer, decorator, has organized a series of monthly showings of oils and water colors by leading contemporary artists at her gallery, 32 East 57th St., New York City. Her goal is the visual integration of painting, lighting and interior design.

PROJECTED WORK

Dr. Harold W. Dodds, president of Princeton University, has announced the appointment of the firm of R. B. O'Connor and W. H. Kilham, Jr., New York, as architects of the \$3,500,000 library which Princeton University will construct following the war.

The Courier-Journal and Louisville Times, Louisville, Ky., has commissioned Lockwood Greene Engineers, Inc., of New York to design and supervise the construction of a large new project which includes an administrative and office building, newspaper plant and radio station. The radio station, WHAS, is a unit of the CBS system.

ANNOUNCEMENT

ROLAND A. WANK, formerly head architect for the TVA and chief consulting architect for the REA has resigned from government work to join the design staff of Albert Kahn Associated Architects and Engineers, Detroit, Mich.

OPENING OF OFFICES

NATHAN A. SEIDERMAN, Architect, announces the establishment of his offices at 45 John St., New York 7, N. Y.

ISABEL BARRINGER and THEODOR MULLER, formerly associated with Dorothy Draper, Inc., announce the establishment of the firm of Muller-Barringer, Designers, at 11 W. 57th St., New York 19, N. Y.

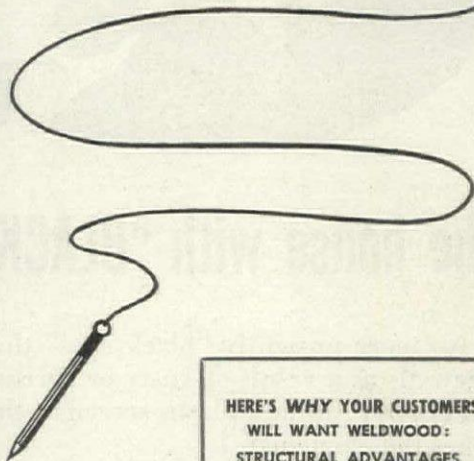


Julius Gregory, New York architect, designed this dri-bilt home in Dobbs Ferry, N. Y.

The interior beauty of structural Weldwood Walls is well illustrated in this Bayott Weldwood hall and stair-well. Modern design is carried out with flush doors matching the wall.

Other parts of the house are paneled in Weldtex and other Weldwood hardwoods.

BEAUTY and the BUDGET



HERE'S WHY YOUR CUSTOMERS WILL WANT WELDWOOD:

STRUCTURAL ADVANTAGES

Dri-wall construction cuts building time as much as six weeks . . . eliminates dangers of warping, swelling and cracking in sash and woodwork due to the tons of water in plaster walls. All standard grades of Douglas Fir plywood are made in Weldwood's giant West Coast plants.

DECORATIVE FEATURES

Weldwood . . . in genuine mahogany, walnut, oak, knotty pine, figured gum, birch and Weldtex (striated Weldwood) . . . achieves the warmth and beauty of wood-paneled rooms at unbelievably low cost. Modern streamlined production has made this possible.

Inexpensive Weldwood Utility Panels, with satin-smooth hardwood faces, provide ideal wall surfaces for paper or paint . . . never show checking or grain-raise.

ECONOMY

Final results balanced against investment show Weldwood Plywood construction to give far more value per dollar than old-fashioned materials.

Because Weldwood can be installed rapidly . . . inside and out . . . building time is cut down, with resultant savings in labor cost.

DURABILITY

Weldwood Plywood Panels are crack-proof and are guaranteed for the life of the building. Weldwood walls are permanent walls, requiring no upkeep.

His client demanded unusual beauty . . . yet provided a relatively modest budget.

It was the usual stumper. But this architect solved it . . . easily.

He designed a dri-bilt home specifying Weldwood Plywood.

Dri-wall construction cut labor costs considerably by saving six weeks in building time. And his client got a structurally better house.

He brought the interior to vibrant life with Weldwood Hardwood Plywood rooms . . . paneling in Mahogany, Walnut, Oak and Birch. A luxury? Yes, in appearance. But the cost? . . . well within the budget . . . and much

less than you would expect.

He specified economical Weldwood Utility Panels for walls that were painted and papered. They provide a permanently smooth hardwood under-surface . . . free from checking or grain-raise.

Now his client has a home that will give him permanent satisfaction at a minimum cost for upkeep. *Weldwood Plywood Panels are guaranteed for the life of any structure in which they are used.*

Perhaps his experience suggests something to you.

THE MENGEL FLUSH DOOR

Light . . . Strong . . . Permanently beautiful. Matches perfectly with Weldwood Walls.



Waterproof Weldwood, so marked, is bonded with phenol formaldehyde synthetic resin. Other types of water-resistant Weldwood are manufactured with extended urea resins and other approved bonding agents.

WELDWOOD Plywood

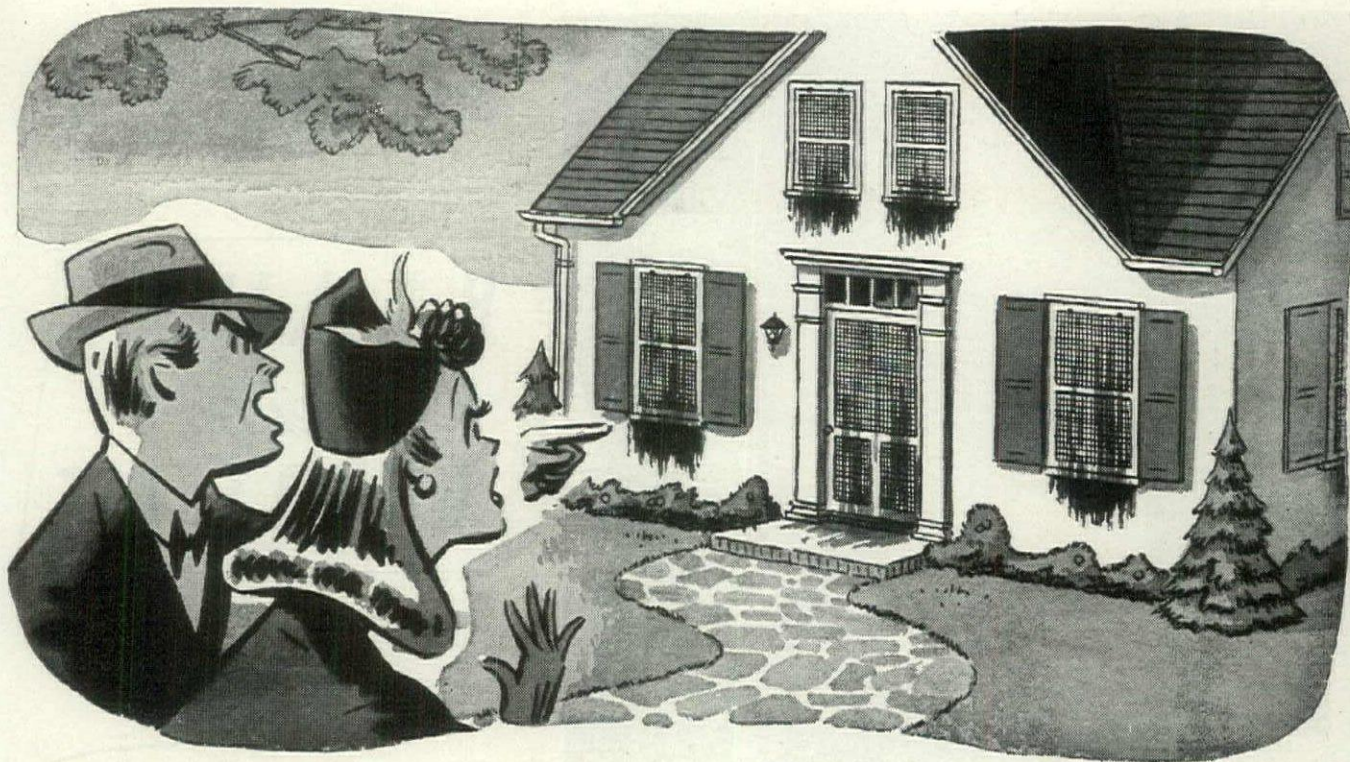
Weldwood Plywood and Plywood Products are manufactured and marketed by

UNITED STATES PLYWOOD CORPORATION THE MENGEL COMPANY

New York, N. Y.

Incorporated
Louisville, Ky.

Distributing units in Boston, Brooklyn, Chicago, Cincinnati, Cleveland, Detroit, High Point, Los Angeles, Newark, New York, Oakland, Philadelphia, Pittsburgh, Rochester, San Francisco, Seattle. Also U.S.-Mengel Plywoods, Inc., distributing units at Atlanta, Jacksonville, Louisville, New Orleans. Send inquiries to nearest point.



The house with "BLACK EYES" needs new screens of LUMITE

● No more unsightly "black eyes" that disfigure sills and sidewalls as a result of rusty or corroded window screens. For LUMITE, the new plastic screen cloth, woven from Saran,* defies the elements!

When LUMITE is used, there's no necessity for constant repainting of tell-tale streaks and splotches. LUMITE does not rust or corrode, nor is it affected by acid fumes, salt air, rain, snow, heat or cold. Furthermore, LUMITE plastic screen cloth itself never needs painting. A wipe-off with a damp cloth restores its fresh, new look immediately.

As for durability, the tensile strength runs as high as 50,000 pounds per square inch, gives sturdy resistance against dents and bulges. LUMITE simply *can't wear out* through natural causes!

Tested every day, under every condition, by the Armed Forces, LUMITE offers a great new "proven" product for postwar building. We can't ship any LUMITE until after the war, but we'll gladly send samples and information.

*A product of the Dow Chemical Co.

TESTED IN WAR READY FOR PEACE

Not just a postwar dream product... millions of feet of LUMITE are now in actual use, protecting the Armed Forces against disease-carrying insects.

- ★ Will not rust or corrode... long-lasting
- ★ Non-staining... no streaking of sills or sidewalls
- ★ Strong, resilient... no dents or bulges
- ★ Unaffected by fumes or salt air
- ★ Non-inflammable
- ★ Will be competitively priced

The new plastic insect screen cloth

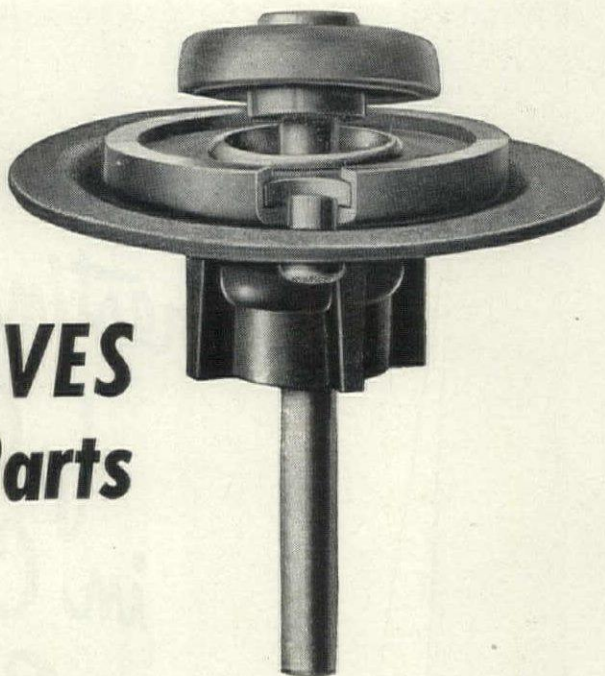
LUMITE

CHICOPEE MANUFACTURING CORP. Lumite Div. 40 WORTH ST., NEW YORK 13, N. Y.

World's Largest Makers of Plastic Screen Cloth



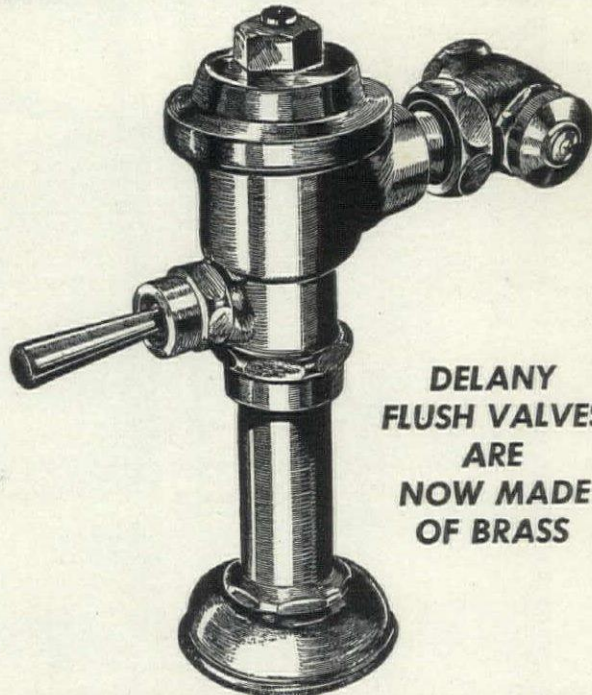
DELANY FLUSH VALVES Have Only 6 Moving Parts



DELANY No. 50 VACUUM BREAKER Has Only One Moving Part

**ASSURING THE SIMPLEST,
MOST EFFICIENT, AND
EASIEST TO MAINTAIN
FLUSHOMETER ASSEMBLY
— with full protection
against back syphon-
age and resulting water
contamination.**

Send for folder F



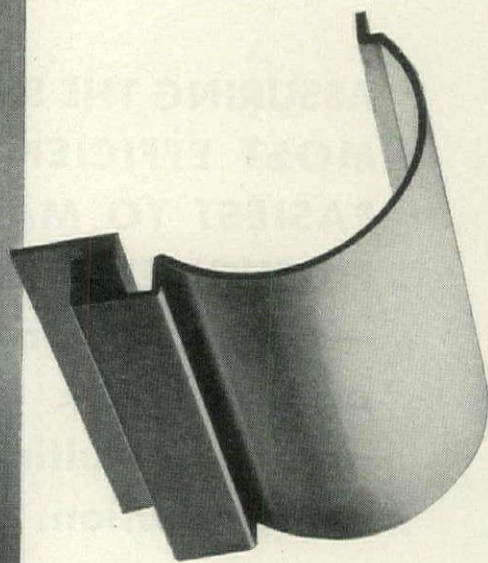
**DELANY
FLUSH VALVES
ARE
NOW MADE
OF BRASS**

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

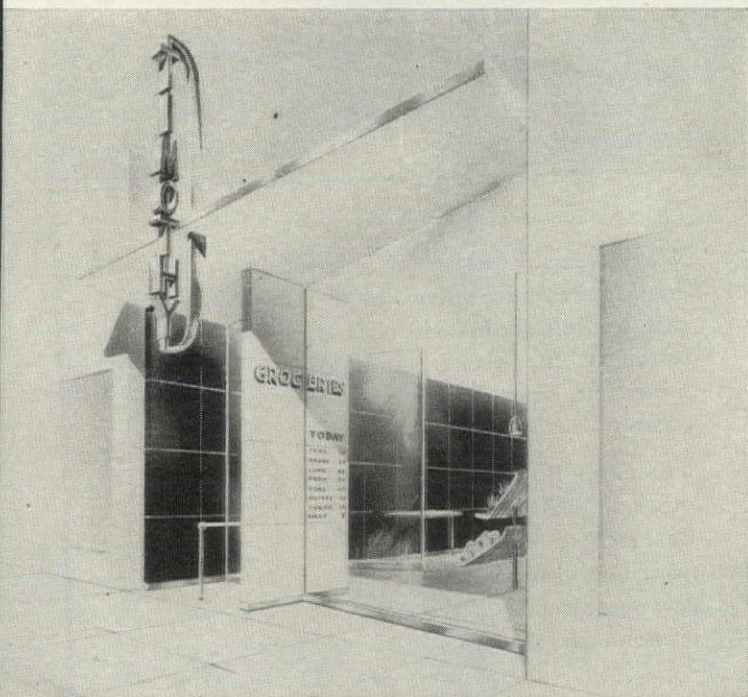
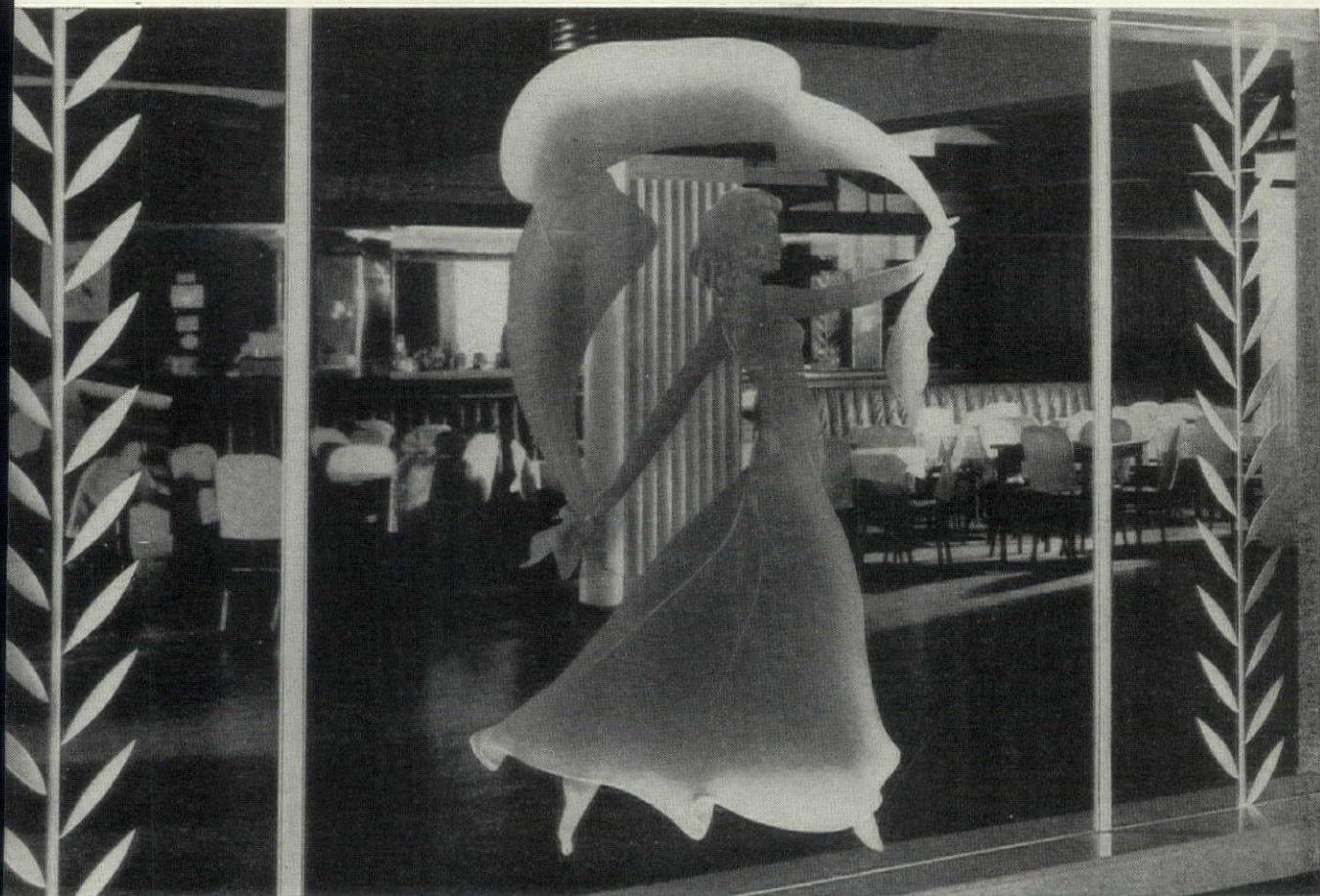
Interesting applications of GLASS in Commercial Buildings



HEAVY PLATE GLASS has proved itself to be one of the most versatile materials yet employed in the creation of eye-catching interiors. In this interesting application, tall panels of Plate Glass are used, accordion fashion, to give beauty and appeal to a store interior. *T. H. Robsjohn-Gibbings, designer—René Brugnoli, architect.*



STURDY, RUGGED STRENGTH is a marked characteristic of the Pittco De Luxe line of store front metal. This is an extruded metal construction, which combines an unusual ability to withstand hard usage with an exceptional purity of line and clean, sharp contours. Thus, Pittco De Luxe offers the architect both beauty and strength to assist him in designing store fronts and interiors of distinction and durability.



LIFE-SIZE MURALS of edge-lighted, decorated Plate Glass are now practical. For hotel, restaurant, store and theatre interiors, they offer a new design medium to architects. In the edge-lighted mirror panel shown, the sand-blasted figure is full life-size; the mirrored panel 7 feet square.

GLASS, SKILLFULLY USED, has played an important part in creating the present trend toward "open vision" in store design. Long the leaders in the store field, Pittsburgh Glass and Metal Products assure the satisfactory execution of the architect's design—the maximum effectiveness of the store front and interior as advertising and sales-building media. *Store design by Skidmore, Owings and Merrill, architects.*

We believe you will find much to interest you in our new illustrated booklet of ideas concerning the use of Pittsburgh Glass in building design. Send the coupon for your free copy.

Pittsburgh Plate Glass Company
2067-5 Grant Building, Pittsburgh 19, Pa.

Please send me, without obligation, your new booklet entitled: "Ideas for the Use of Pittsburgh Glass in Building Design."

Name.....

Address.....

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

Design it better with

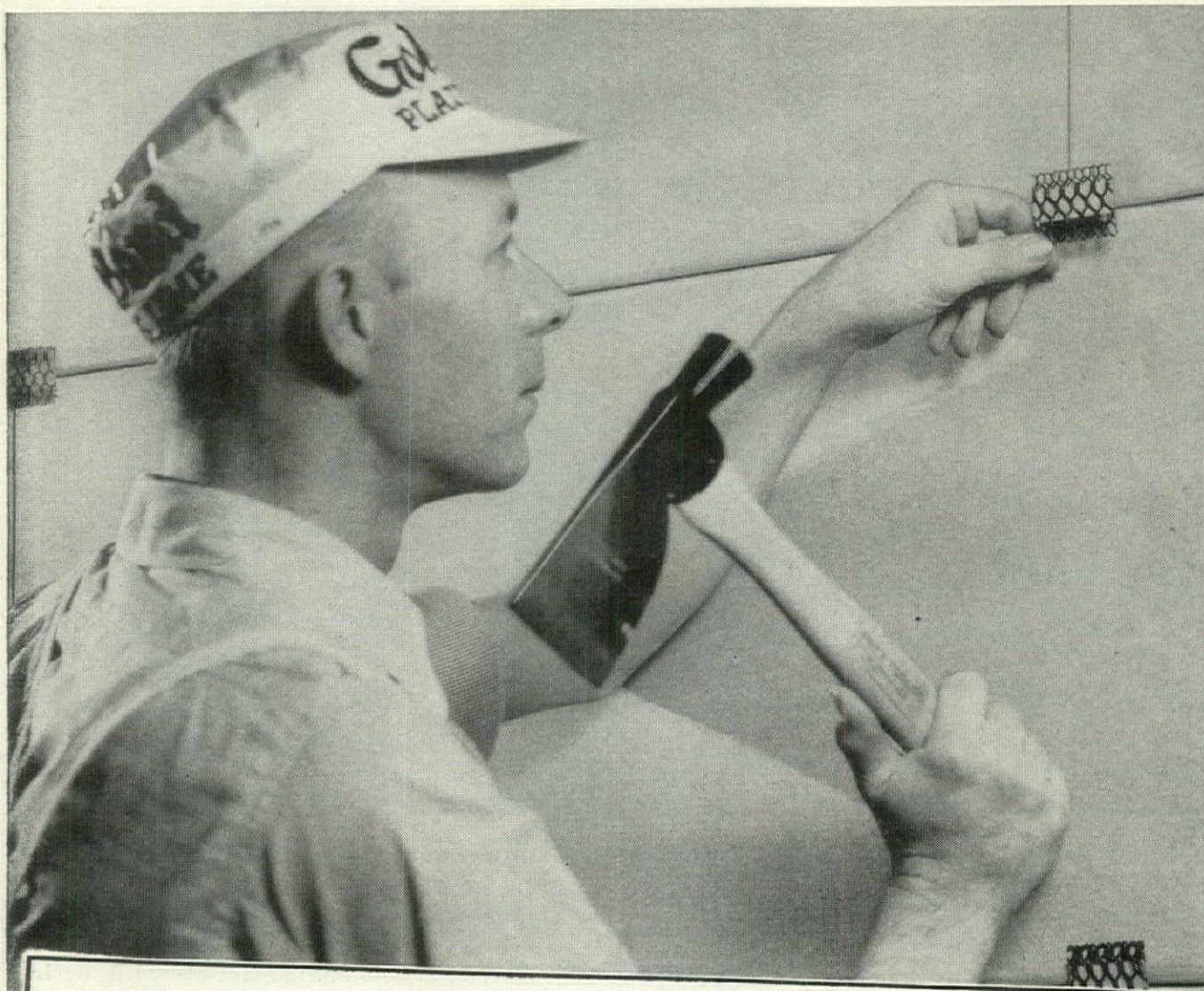
PITTSBURGH GLASS

*The Accepted Line
for Every Architectural Use*



"PITTSBURGH" stands for Quality Glass and Paint

PITTSBURGH PLATE GLASS COMPANY

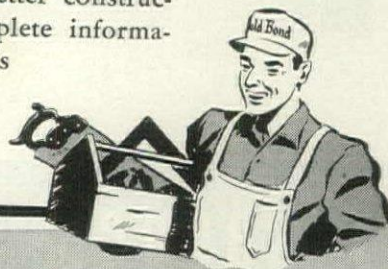


WILL YOU SETTLE FOR A WALL THAT DOESN'T?

BELIEVE it or not, the Gold Bond Floating Wall is an important step towards solving the age-old problem—plaster walls settling with subsequent repairs and added expense. We don't claim this system will "hold the house together" despite h--- and high water.

We do say, however, that it provides free floating action that gives the wall flexibility so that settling strains are not so readily transferred to the plaster. In addition, it adds 1-hour fire protection and reduces room-to-room noise.

The Gold Bond Floating Wall System is another important contribution by Gold Bond Research to better construction. For complete information see Sweet's or write us.



BUILD BETTER WITH GOLD BOND

Wallboard • Lath • Plaster • Lime • Metal Products • Wall Paint • Insulation • Sound Control

NATIONAL GYPSUM COMPANY • EXECUTIVE OFFICES • BUFFALO 2, N. Y.



AIR TRANSPORT COMMAND

ATC INTERNATIONAL AIR TERMINAL

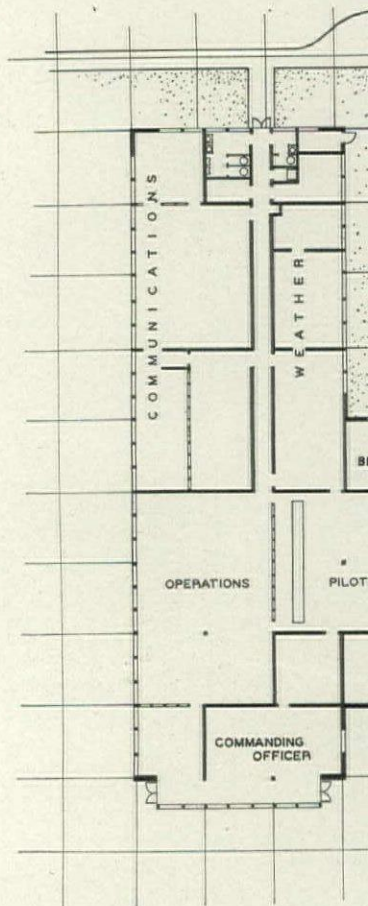
The newest major world port is landlocked on the Potomac flats just outside Washington, D. C. Blood plasma, engine parts to put a B-29 back on a bombing route weigh in measure-for-measure with diplomats and generals for a place in the metal bellies of its fleet. Wounded soldiers are rushed home to expert care through its facilities. In its portable steel-ribbed hangar, Douglas C-54's are readied for departure, at a moment's notice, to all the political and military fronts of the world.

Built by the Air Transport Command of the Army Air Forces at a cost of \$500,000, the Washington Port of Aerial Embarkation was ready to handle its first flight four months after Major Gen. Harold L. George signed the order to start construction.

Since this terminal will undoubtedly tend to set a pattern for the rush of airport building bound to follow the war, it is fortunate that its design was never afflicted by anybody's notions about what the nation's first air gateway to Europe ought to look like. War material shortages initially determined the unpretentious and straight-forward quality of both design and construction. But a second and even more influential determinant was the architect's own positive sense of how precisely structure must be fitted to function. Goodman, who believes in "getting out on the field and talking to grease monkeys," spent weeks

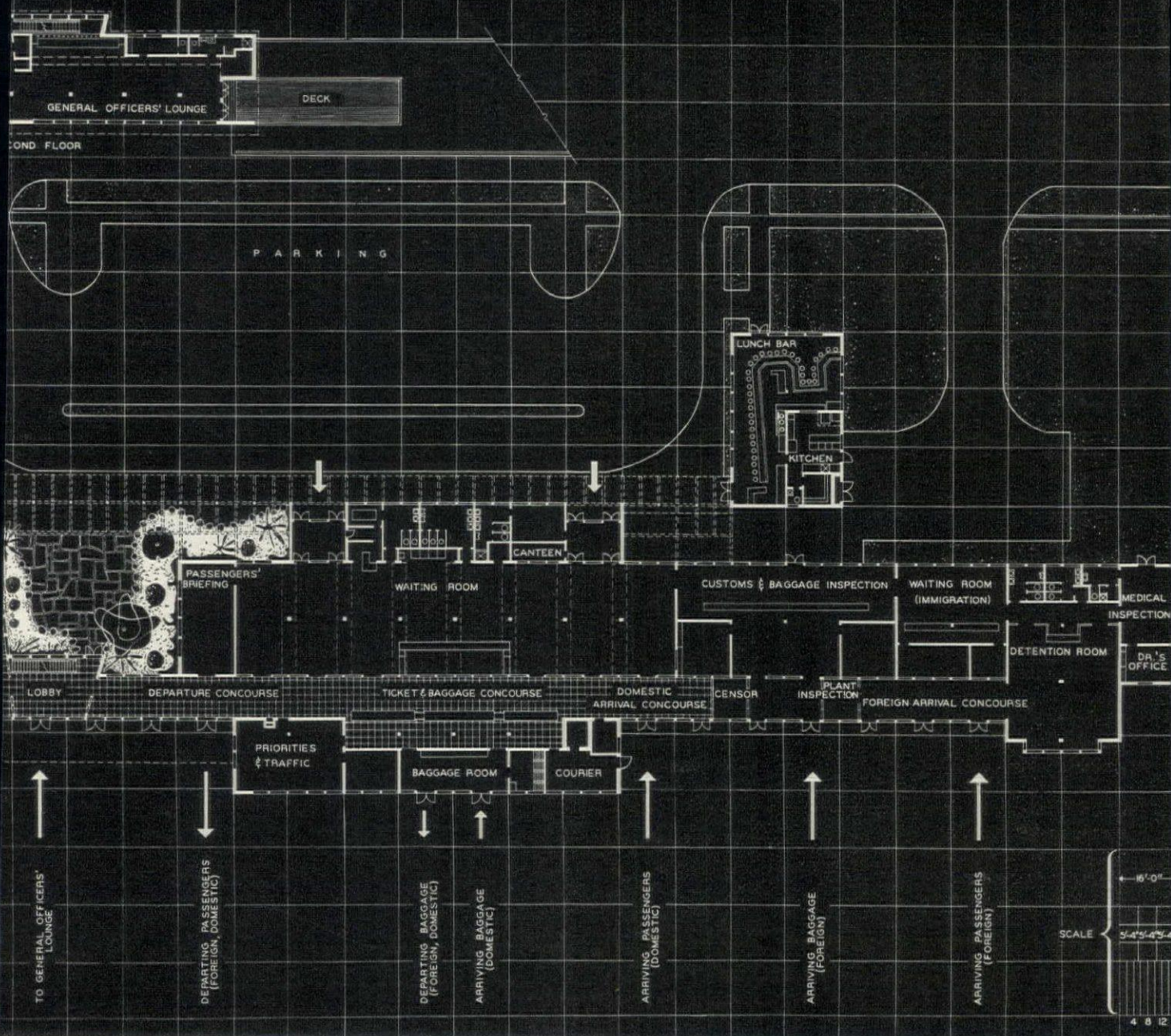
learning every step of flight operations and passenger and freight handling before he sat down at a drafting board. The terminal plan, therefore, stemmed directly from a flow chart plotted to move embarking and debarking passengers through a variety of processing stages with no crossing of paths and no bottlenecks.

Another major design consideration is stated by Col. Frank H. Collins, commanding officer of the base: "ATC's phenomenal expansion made it necessary to develop a dynamic system of building design free of structural complexities, which would be economical and simple to construct, revise and expand." Clear-cut separation of operating units, dictated by traffic flow requirements, also permitted insulation of each by a land area giving room for easy expansion. In effect the airport is three buildings under a single roof. Outgoing and incoming passengers are serviced in completely separate sections; flight personnel in still another distinct unit. Chief construction simplification is the architect's use of a 5 ft. 4 in. module by which windows, doors, all smaller structural parts were sized to drop into the structure's 16 by 16 ft. wooden grid-work. This framing freed both interior and exterior walls of load-bearing requirements, paid off in flexibility and permitted use of glass for 75 per cent of the exterior wall area.



FOR THE WORLD'S GREAT AS FOR G. I. JOE, THESE SIMPLE GLASS DOORS LEAD TO AND FROM THE NORTH AT





CIRCULATION IS DIRECT, SERVICES HANDY . . . FROM FRONT DOOR TO PLANE DOOR NOT A STEP IS WASTED

ARCHITECT: Charles M. Goodman

CONSTRUCTING AGENCY: U. S. Engineers

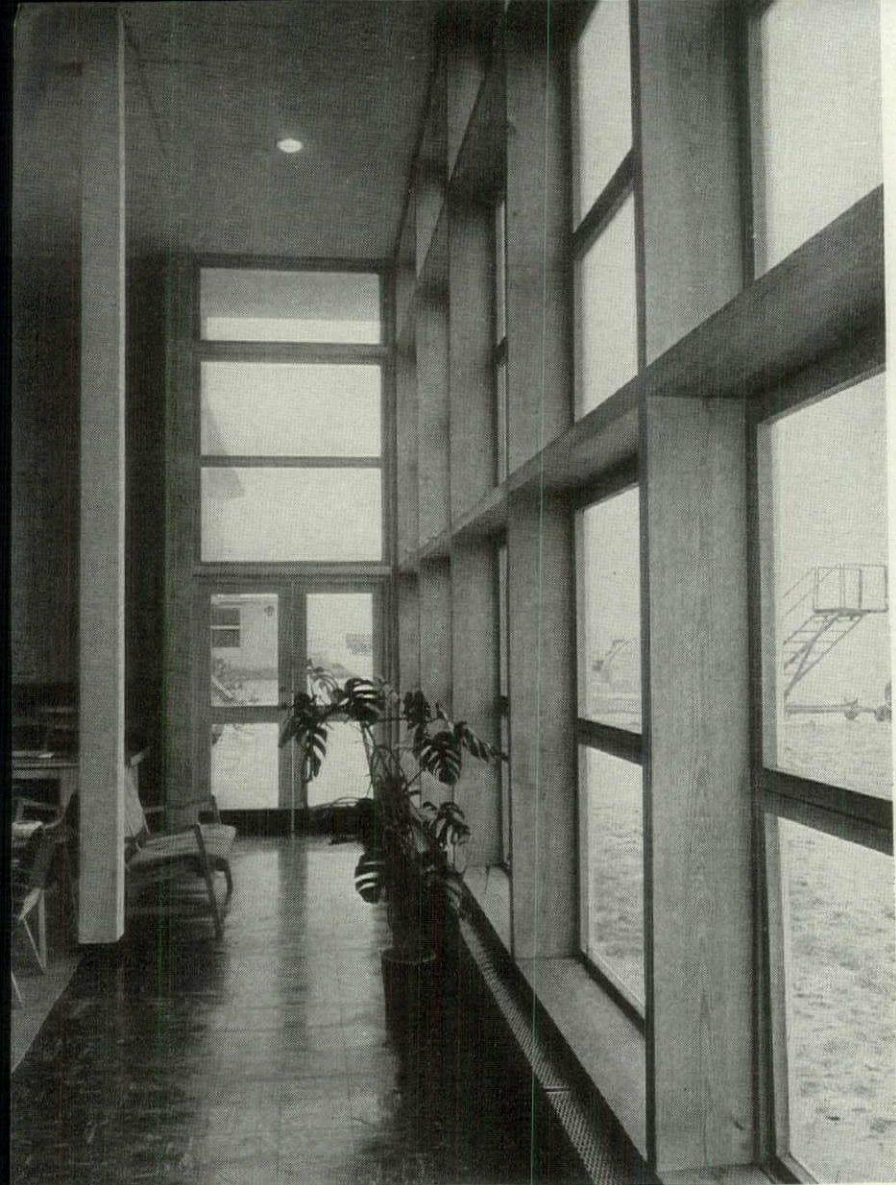
Colonel John M. Johnson, District Engineer

CONTRACTOR: Charles H. Tompkins Co.

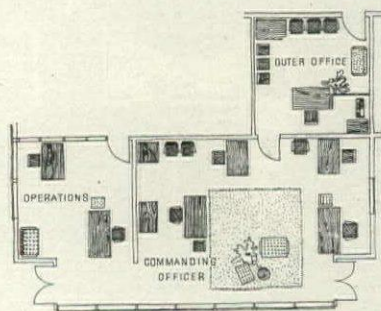


FUNCTIONAL SEPARATION MEANS DIRECT APPROACH TO ANY UNIT FROM DRIVEWAY

AIR TRANSPORT COMMAND

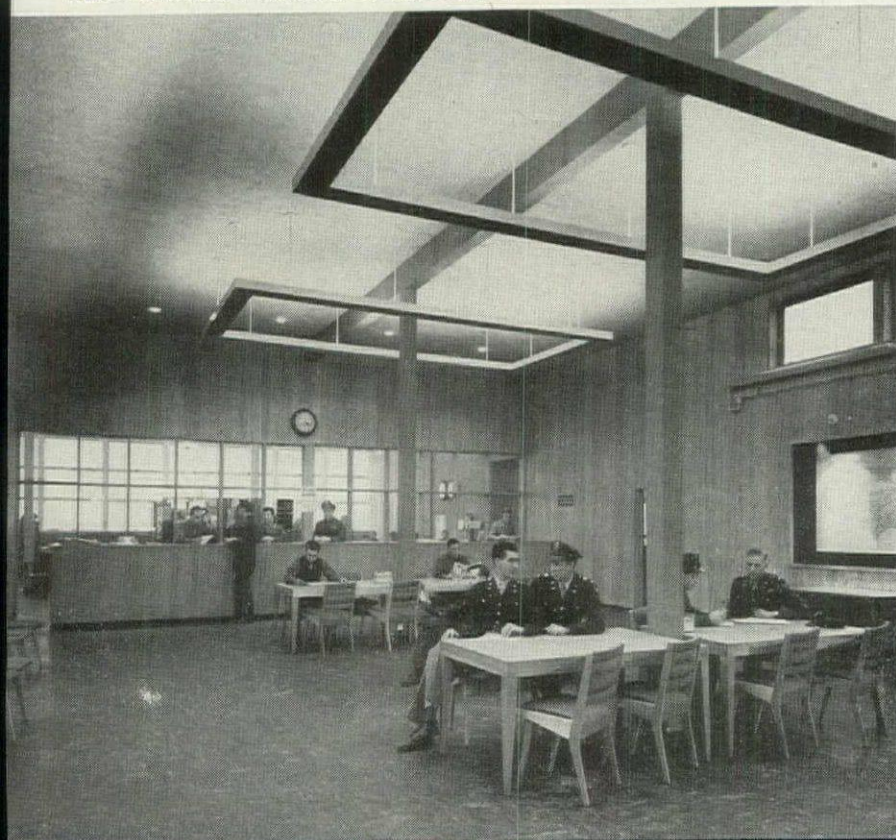


COMMANDING OFFICER VIEWS ENTIRE FIELD THROUGH GLASS WALL

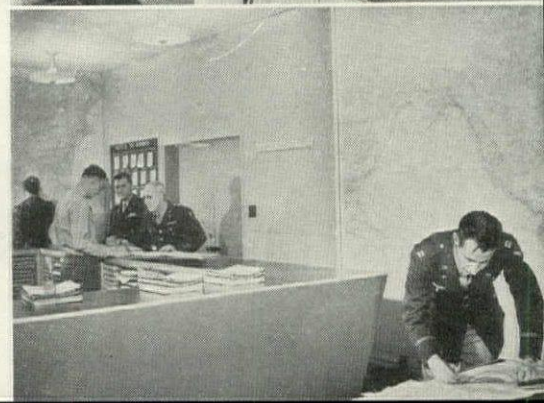
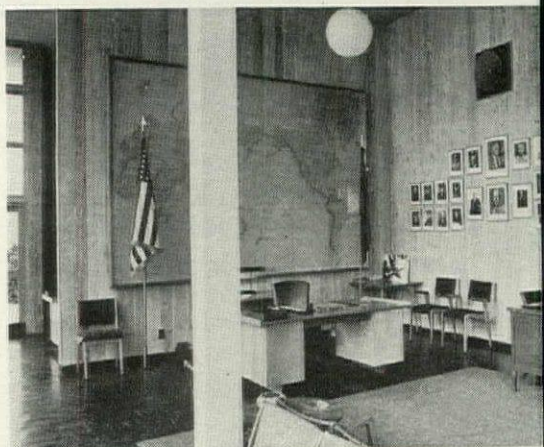


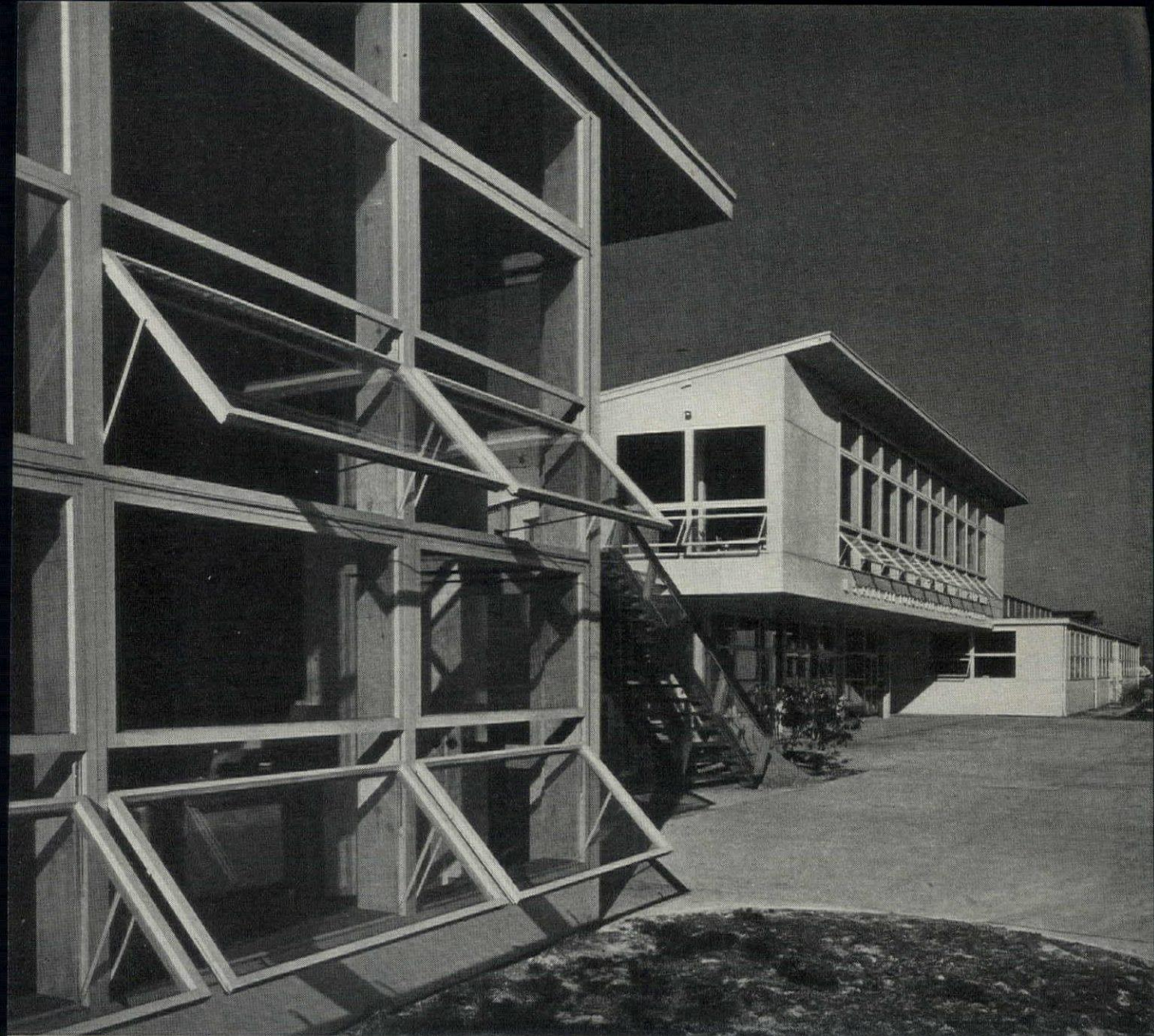
All photos by Ben Schnall except those marked by asterisk, OWI, through Library of Congress, Lehey photographer

RED-PAINTED FRAMING BRIGHTENS GRAY WALLS OF PILOTS' LOUNGE;



BRIEFING ROOM AND C.O.'S OFFICE ADJOIN



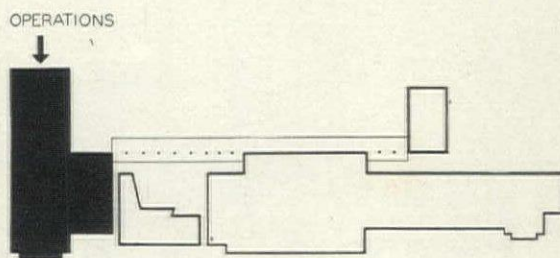


EXTERIOR OF C.O.'S WINDOW SHOWS HOW SASH AND FRAMES ARE APPLIED TO OUTSIDE SURFACE OF WALL FRAMING

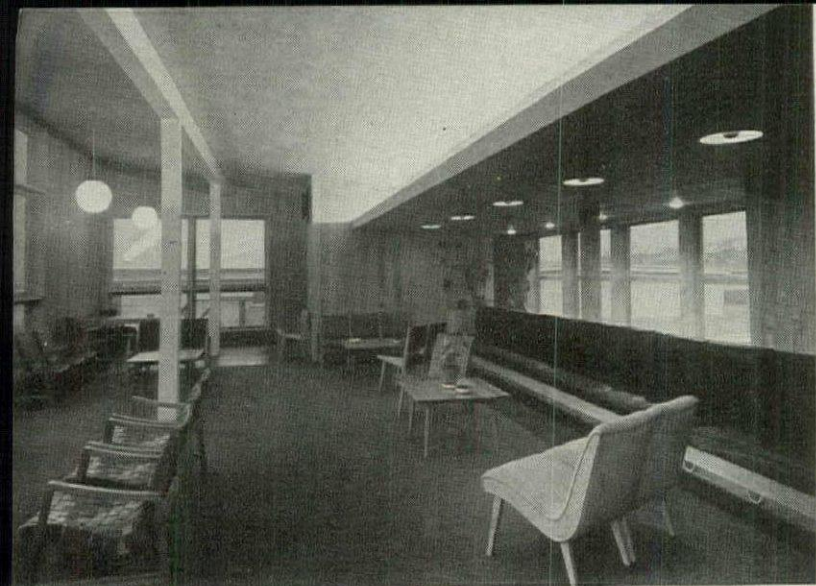
Operations wing is self-contained, with its own carefully developed circulation pattern.

Not counting Theater of Operations installations, this airport is the first to take advantage of war-born radio flight controls. Reaching out from these rooms, radio spans every mile of the routes that lead over the hurricane winds, the thousand miles of seawaste, the ice cap of the North Atlantic.

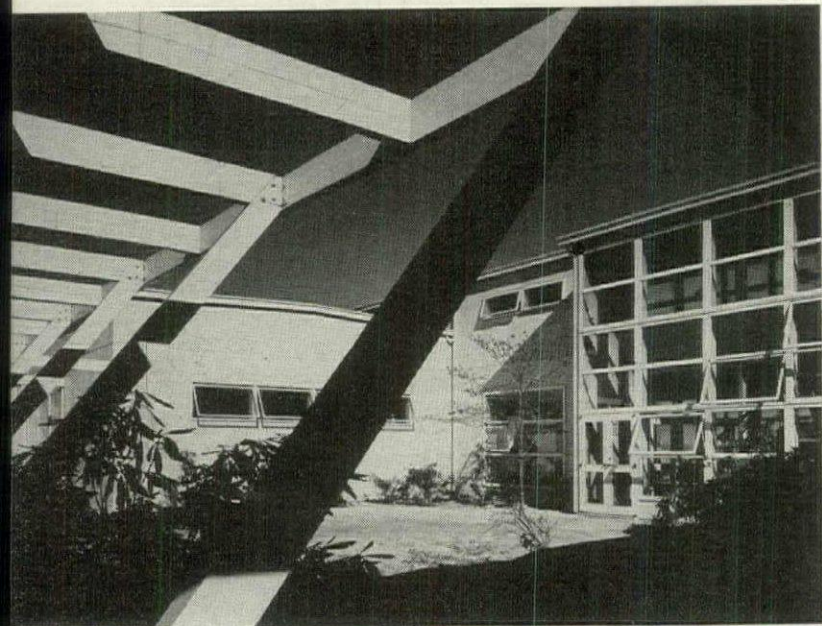
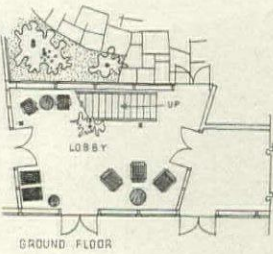
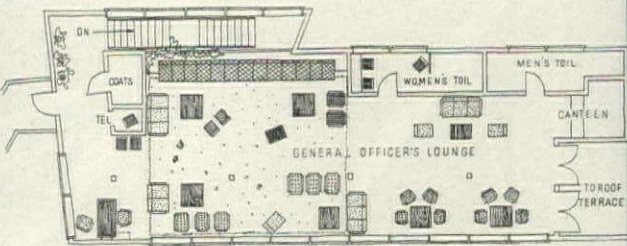
With all necessary services arranged for ready access from field or front driveway, flight personnel need never pass through the passenger terminal. Yielding maximum circulation efficiency and increased light and air for both units, the clear-cut separation of the operations wing from the larger mass of the terminal proper is also utilized for placement of an exterior stairway which gives direct access to the field from a special second-story lounge for passengers whose eminence requires privacy and a certain amount of luxury.



AIR TRANSPORT COMMAND

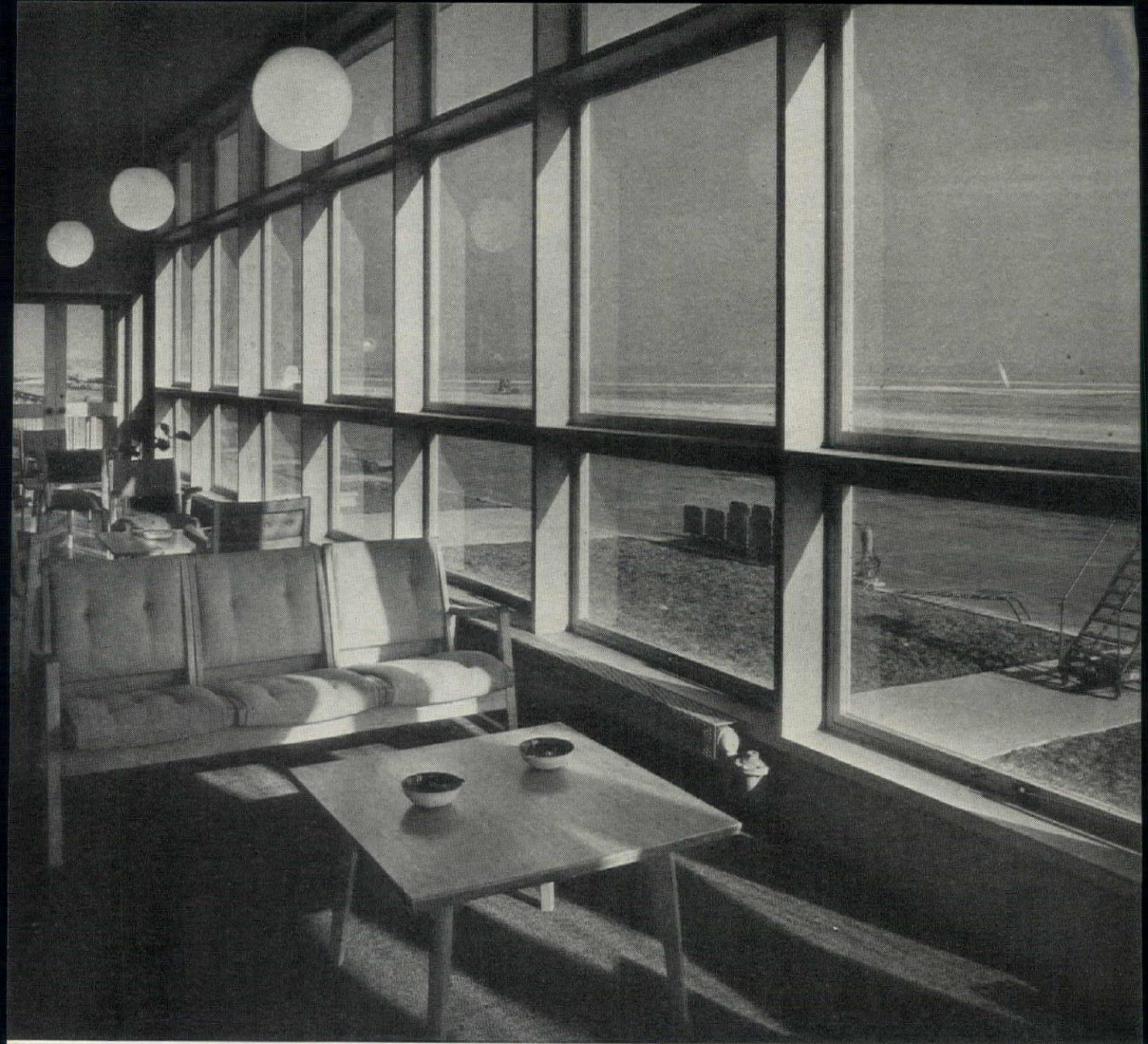


* STAIR TO SECOND FLOOR LOUNGE IS HIDDEN BEHIND DIVAN



* ROOMS LOOK OUT ON PLANTED COURT; FREE - STANDING STAIRWAY LEADS TO SPECIAL LOUNGE FOR DIGNITARY

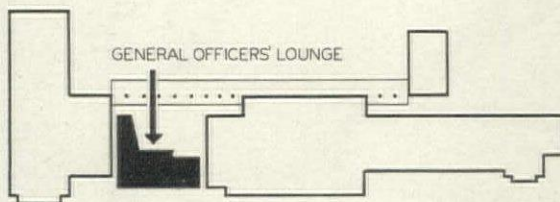


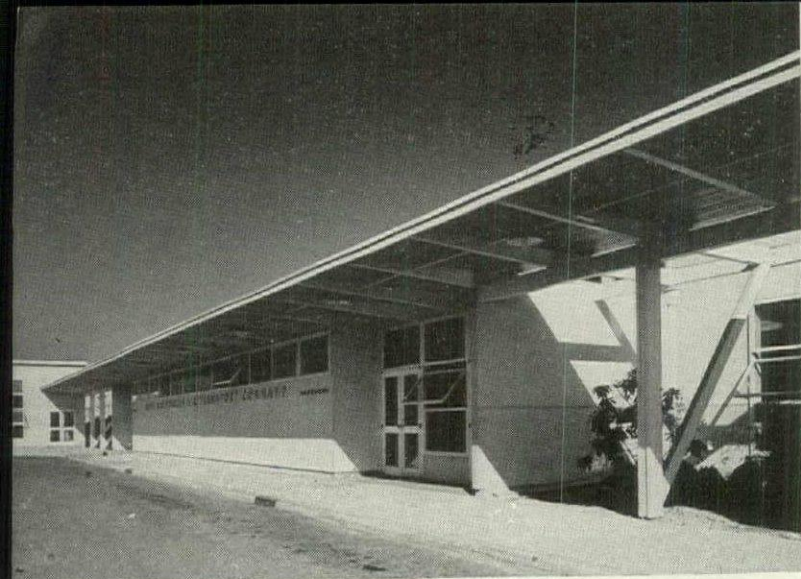


STOCK MODERN FURNITURE AND LIGHTING EQUIPMENT, USED THROUGHOUT, ARE GOOD LOOKING AND ECONOMICAL

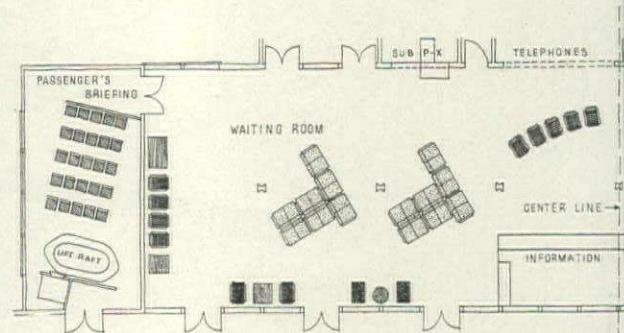
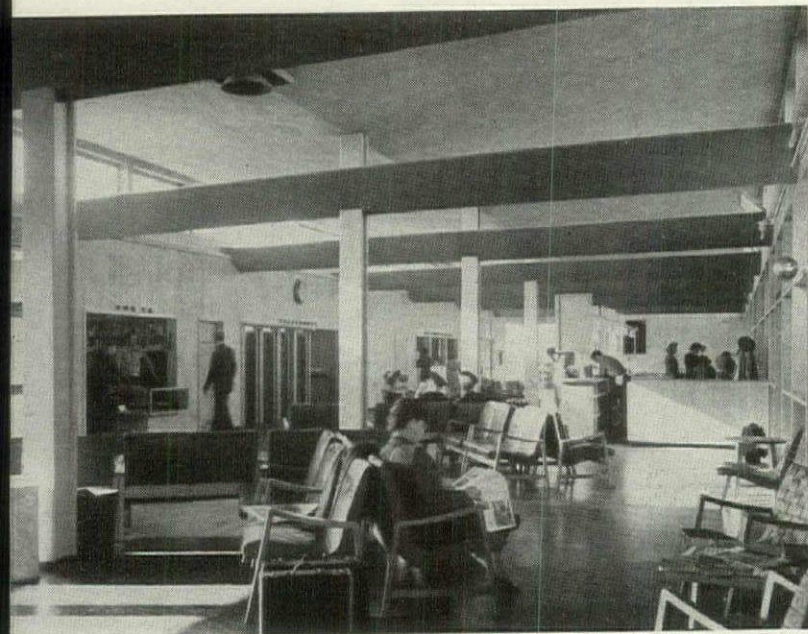
Very Important People may view the field from a lounge which balances luxury and simplicity.

VIPs are such frequent passengers that the airport has its own abbreviated lingo to describe them and an abbreviated circuit to route them. While opaque glass blocks the view of the field from the main waiting room, the glazed wall of the VIP lounge looks directly on it. Because of security requirements, this is probably the first important terminal lacking any provision for spectators. While regard for view would certainly have indicated larger glass areas than the stock windows, this design possibility was deliberately sacrificed to allow complete standardization of the structural system. Careful handling of details, which gives warmth and intimacy to the whole building, is evident here in the lighting built into dropped ceiling, the decorative line of the Vulcan heating unit, and the bright, strong color in surface finishes and Hans Knoll furniture.



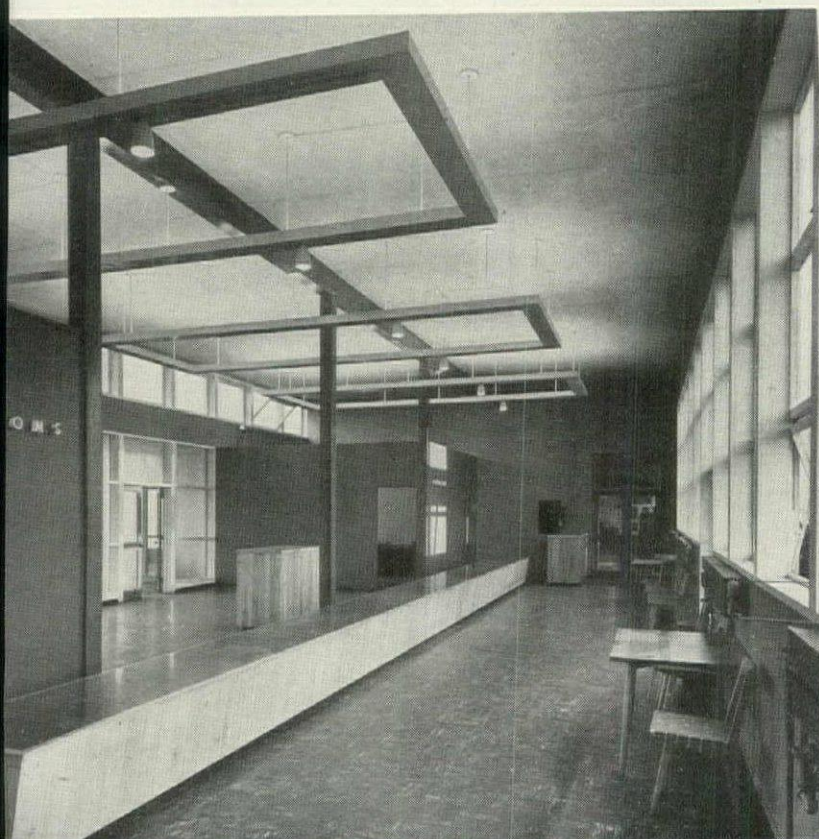


THESE DOORS CONNECT MAIN WAITING ROOM WITH DRIVEWAY



American Aviation

LONG COUNTER FOR CUSTOMS INSPECTION; BRIEFING ROOM DRAMATIZES WHAT TO DO IN CASE OF FORCED LAND

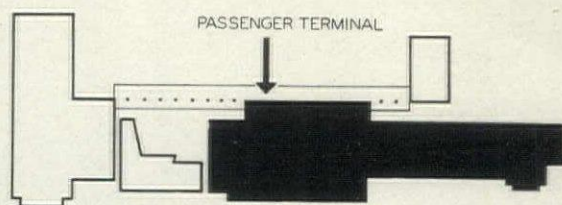




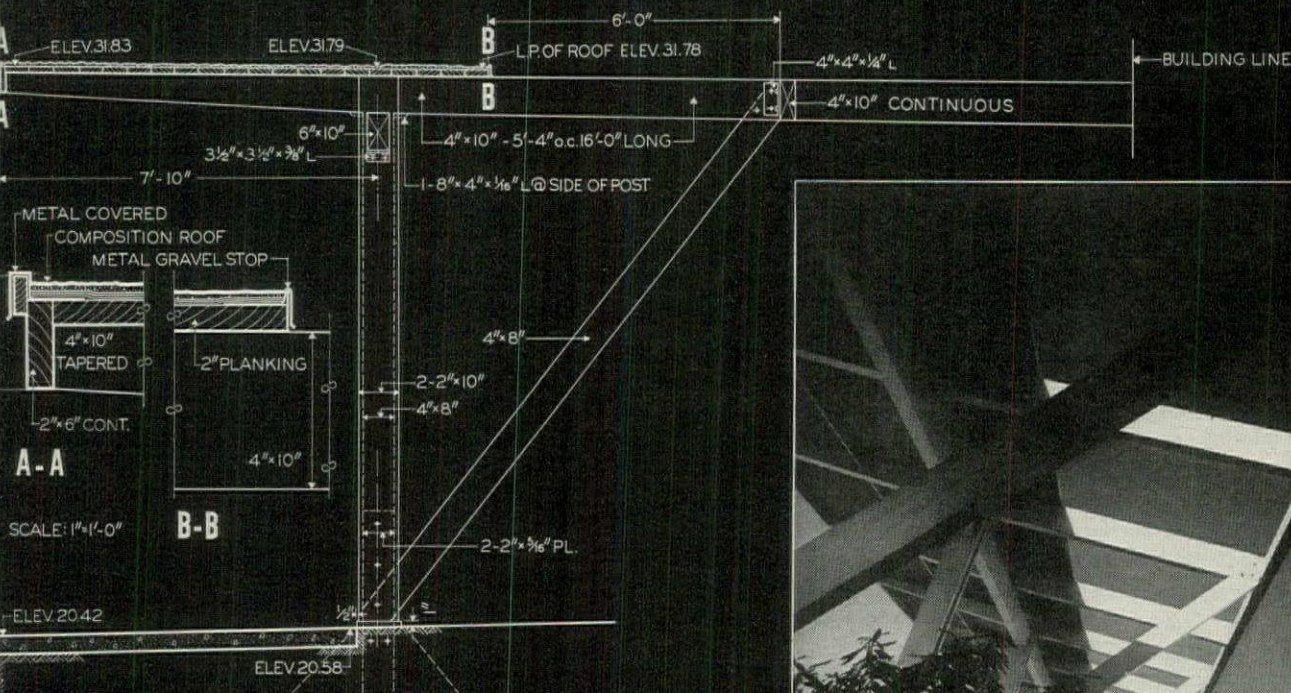
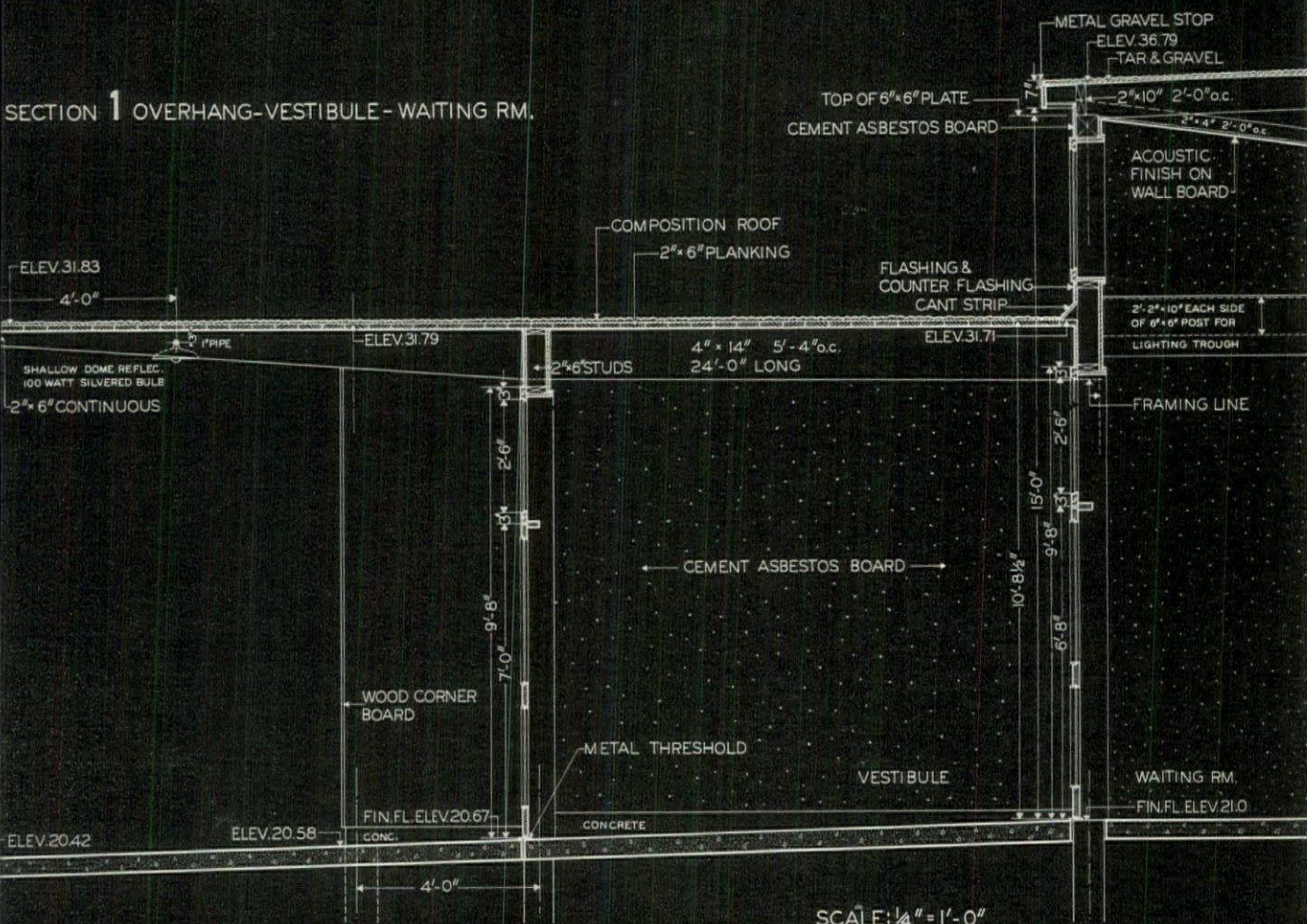
FROM EITHER WAITING ROOM OR FIELD PASSENGERS CAN ENTER THIS SPACIOUS BAGGAGE-HANDLING CONCOURSE

Waiting room is rimmed by logical sequence of facilities to speed arrival and departure.

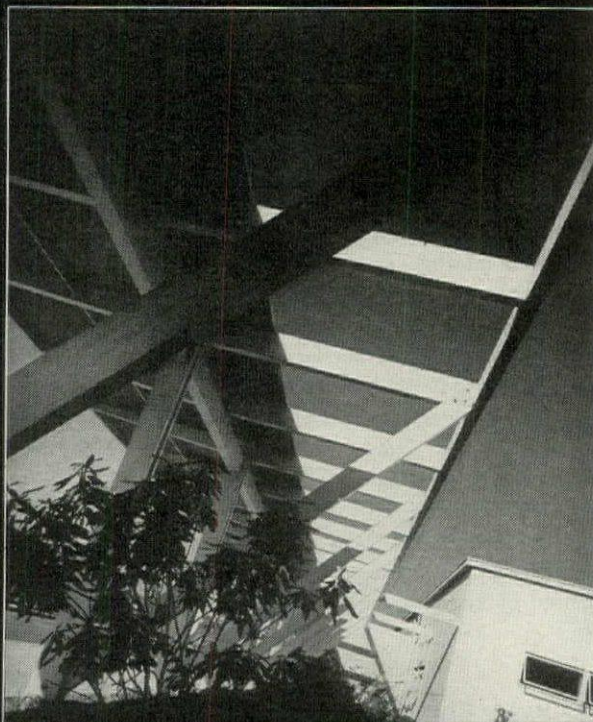
Best measure of the effectiveness of the airport design is the scant 15 minutes it takes to route an incoming passenger and his baggage through medical and customs inspection, immigration and intelligence interviews, rail transportation desk. In 45 minutes, an outgoing passenger can be ticketed, weighed, debagged, medically inspected, relieved of any last-minute worries at a personal service desk, painstakingly briefed on how to live on a raft. Briefing for what ATS jocularly calls ditching is a highly specific business. Changeable panel displays illustrate every piece of emergency equipment; there is a life-sized raft and a real-as-life movie of a forced landing. This skilfully executed solution for processing international traffic will pay continued dividends in the postwar years when the terminal will be operated by CAA and used by anybody who wants to fly to Europe.



SECTION 1 OVERHANG-VESTIBULE-WAITING RM.

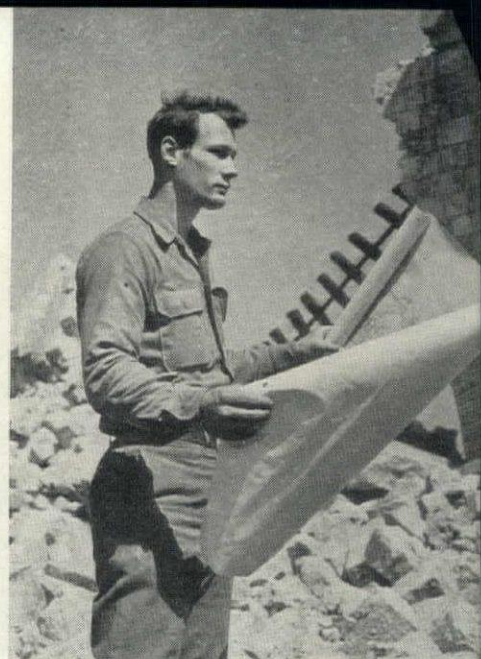


KEY PLAN



PLANNING WITH YOU

Perhaps no one but John Hersey knows whether kindly Major Joppolo in "A Bell for Adano" lived in fact as well as fiction. But in another small Italian city a real American, John C. Harkness, has effectively assumed the role in moments spared from evacuating wounded between Isernia and Cassino. Ambulance driver by circumstance, architect by trade, young Harkness has worked with native colleagues in replanning from the rubble a fine Isernia for tomorrow.



HARKNESS AND PLAN AMID RUBBLE

On September 10, 1943 American planes dropped their first bombs on Isernia, a quiet farming village in the hilly central portion of Italy, then occupied by the Germans. Ten other raids followed and the destruction was continued by German demolition squads before evacuating the town. When the British arrived on November 4, rail lines were hanging loose from crumpled stone bridges, huge craters pockmarked the roads, public buildings were a mass of rubble, approximately one-third of the homes were leveled. Of the 13,000 inhabitants only 10,000 were still alive.

Like hundreds of other cities throughout Europe, Isernia's destruction followed a definite pattern: American bombers blasted a large area in the center of town; German explosives planted on the outskirts put bridges, roads, power plants and the railroad station out of commission. As in other war-gutted towns the civilian population, homeless, stunned, suffered most.

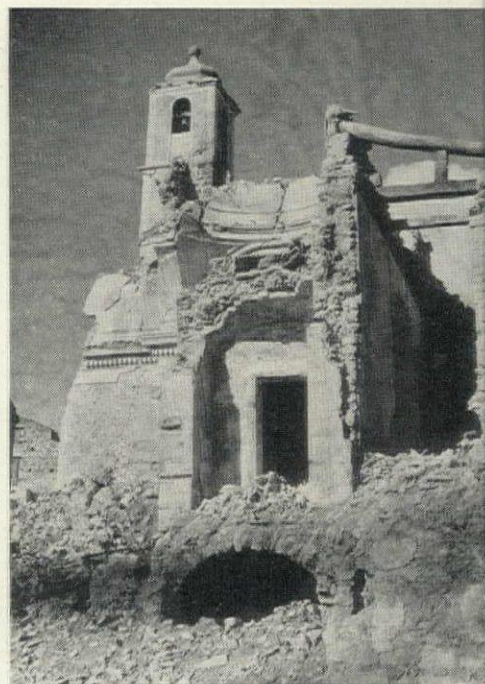
Because of the similarity between Isernia's plight and the situation in other towns which have become battlefields in total war, this small Italian village is a test case illustrating the problems of reconstruction which will be met throughout the war theaters.

In Isernia, this destruction is the latest of many disasters which have periodically shattered the town since its beginning around 2,000 B.C. Today's reconstruction, like that which followed each new attack, from Roman times down to the present, started the day destruction ended. It is not a post-war job. Civilians lucky enough to have escaped unhurt start digging for their dead, or to recover their property. They need shelter and start rebuilding their ruined homes, stone by stone, at best following the old pattern, at worst

modifying to fit disorders that cannot immediately be cured. Much work, of course, is done by the advancing military machine. Bridges and roads must be rebuilt immediately while utilities and sewer systems must be put in working order to maintain sanitary conditions. This is reconstruction in its unplanned form which of necessity begins at once. As soon as possible, however, it should follow some plan, not merely to restore the town to its prewar condition, but to take advantage of the opportunity to improve it.

PLANNED RECONSTRUCTION

Unlike many Italian towns similarly blasted by the war, Isernia is fortunate in having an architectural and engineering firm which has undertaken this job almost from the beginning. Their preliminary solution, the work of Giuseppe Tarra, is an example of academic planning, relying on a formal pattern of building placement. Of particular interest, therefore, is a second reconstruction plan, executed by a young American architect, John C. Harkness, while he was stationed in Isernia with the American Field Service. Harkness worked in the office of the local planners and with their help reached a fresh solution which may well influence the final reconstruction of the town. It coincides with the local plan in many respects, but differs strongly in certain basic attitudes. The Tarra plan directs Isernia's growth eastward, almost completely separating new construction from the prewar town. The proposed dwelling units are thus grouped together on a flat open space together with several reconstructed factories. The Harkness plan provides a more informal multiple grouping of houses on hilly sections near the demolished town center, but oriented toward the open



RUIED CHURCH IN TOWN CENTER

ISERNIA, CENTRAL ITALIAN VILLAGE





PREWAR POSTCARD shows winding approach to lower end of town which passes terraced gardens on the slope. One of Isernia's many churches can be seen beyond river near road in foreground.

country. An analysis of the town's geography and the habits of its townspeople will help in understanding the problems involved in such a plan.

PHYSICAL ANALYSIS

Any city which has survived the series of destructions which has been the history of Isernia must have a real reason for being. This reason, no prehistoric accident, has remained valid for centuries and is rooted in the farming country which makes up the central part of Italy. The land is hilly, ascending to rugged mountains in the Capricotta and Rocarrassa areas toward the north. It has been the custom of Italian farmers to group together in little villages, going out to their small fields each day, rather than spotting their farmhouses about the countryside as we do in America. An innate wish to live in groups is largely responsible for this arrangement and may stem from a desire for protection in the Middle Ages. A further expression of the same desire is seen in the way so many of the little villages are perched on hilltops. Thus, Isernia is essentially a farming town whose influence extends into the surrounding country. However, unlike the typical small village of 500 to 1,000 people Isernia, with a prewar population of 13,000, shelters more than just the farmers of the area.

Geographically, Isernia is at one of the crossroads of central Italy. It lies at the head of the Volturno Valley which opens out to Naples and connects with the Liri Valley leading to Rome. In the opposite direction, it is near the Sangro Valley, the other side of a divide which tapers toward the Adriatic. It is situated on the winding road to Campobasso in the southwest which swings down the Volturno Valley to Naples. Isernia is therefore, a

trading center for the surrounding country, a central marketing town for many smaller villages from which grain is brought to be ground in its mills.

The fact that Italy has very little in the way of natural resources also exerts a constant influence on the growth of its towns. Water power and sun (because of a high percentage of clear days even in winter) are the greatest natural sources of energy in this part of the country. Isernia is well located for utilization of water power, since it is on top of a rise, flanked on either side by the Sardo and Carpino rivers which drop sharply in a short distance. To take advantage of this phenomenon, nine electrical plants are already located on the two rivers, supplying power and light for the town and its small cloth and grain factories. By consolidating these into one or two larger units it is believed that the cost of electricity, already low, can be reduced sufficiently to make feasible its postwar use for cooking and heating.

LAYOUT ANALYSIS

The old lower part of Isernia, mainly destroyed by bombing, is medieval in location and layout. It is crowded onto the top of a ridge, in a long line, with the hills falling away steeply in terraced gardens to the rivers on either side. The streets are extremely narrow, making auto traffic impractical in normal times, although during the war machines have crowded in. The narrowness of the town makes it possible to provide most of the houses with good light and air, and to take full advantage of really stupendous views of the surrounding countryside. In the past the great majority of houses faced in toward the narrow central street rather than out towards the landscape.

The first consideration of both plans,



ROAD ENTERING TOWN is held by high retaining wall. Note the ramp at right which leads steeply up into center of old town—suitable for carts and donkeys, but not for automobile traffic.

therefore, is to get more light and air into the center of town. Under the Harkness scheme, destroyed areas are turned into squares and parks, or are rebuilt much more sparsely with special thought to orientation. Since the main auto traffic is already routed around this part of town, the most important problem is provision of parking space on the outskirts so that people can leave their cars and walk in. Traffic is much less of a problem than it would be for a community of equal size in the United States, as there are no more than fifty privately owned automobiles in the entire town.

In the newer, upper part of town, the existing street pattern is the familiar rectangular plan with through traffic going down a central main street. Although the population density is much lower in this section, it lacks much of the charm of the older town. The main problem here is to reroute traffic around the town and adopt a layout sympathetic to the landscape.

PLANNING FOR USE

Because of the slow growth of most Italian towns, there has been little organization into different functions up to the present time. In the Harkness plan for Isernia, efficient segregation is an important factor. Of the dwellings destroyed, approximately 75 per cent belonged to farming people. These buildings are therefore reconstructed around the outside of the town—grouped in different directions to face their fields. If successful, this scheme will move most of the farmers out of the central area thus reducing congestion of wagons, horses and mules.

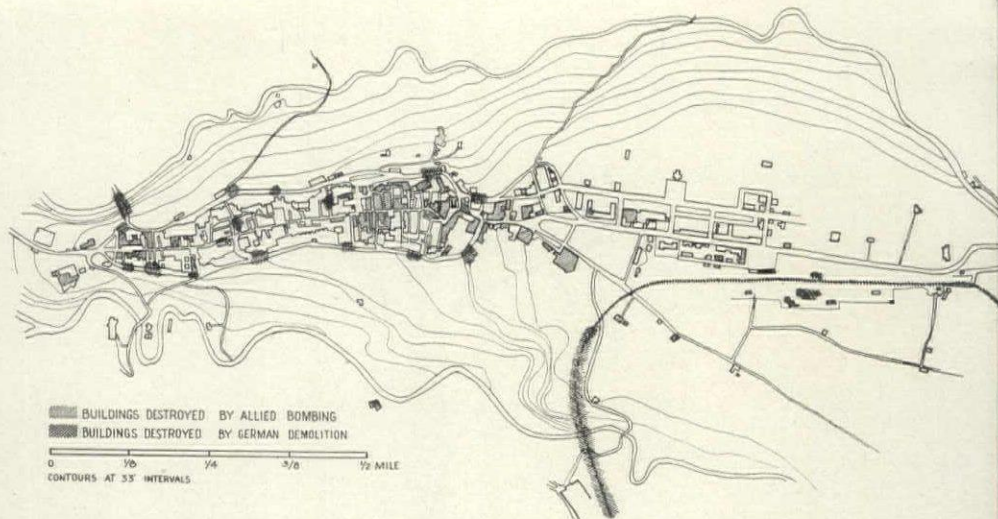
The central part of town where the destruction was greatest is to be left open as a market place or "mercato." Here the farming people from the sur-



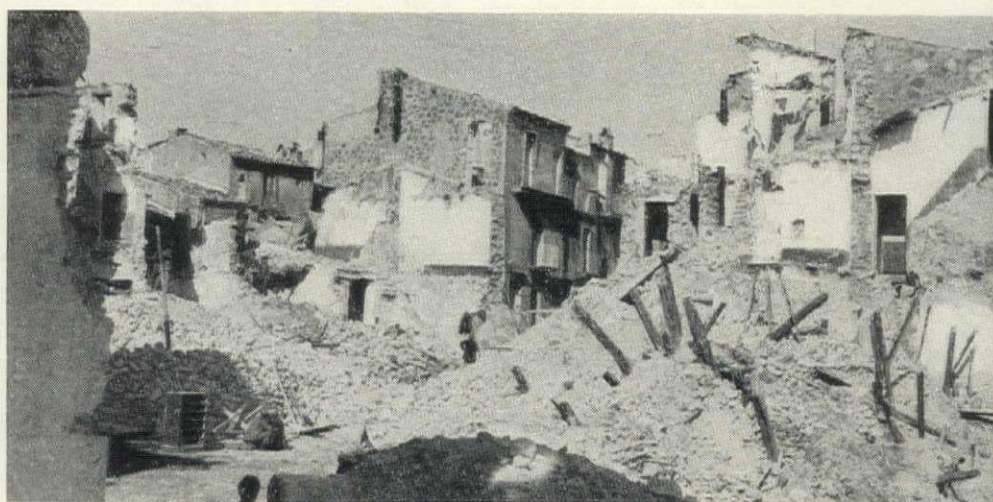
OLD TOWER AND GATE were undamaged by bombing, will be seen to better advantage in new uncrowded plan.

Photos: George C. Holton

CENTER OF TOWN (right) took worst punishment. Buildings have been partially wrecked, their walls and foundations so shaken that they must be completely torn down. Reconstruction will leave this section open, making room for a spacious much-needed market place.



DESTROYED AREAS of original town are concentrated in the center as a result of American bombing raids (shown by hatching) and on the outskirts where fleeing German demolition squads blew up roads, bridges, railroads and power plants (shown by cross hatching).



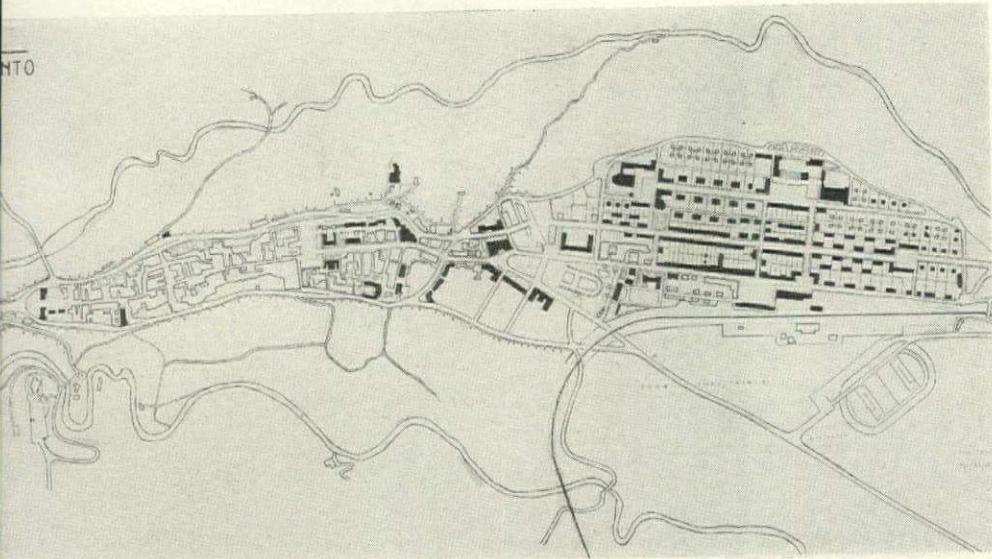
RAILROAD BRIDGE (center left), erected early in the twentieth century, will not be rebuilt under the Harkness plan. Instead, the mainline of the railroad will bypass Isernia, while a short dead-end line from the main track will service the town.

VEHICULAR TRAFFIC BRIDGE (extreme right) affording main approach to town from south and west was wrecked by retreating Germans, has undoubtedly been restored by American engineers to allow passage of troops. The other route up the hill is too steep for anything save donkey and foot traffic.

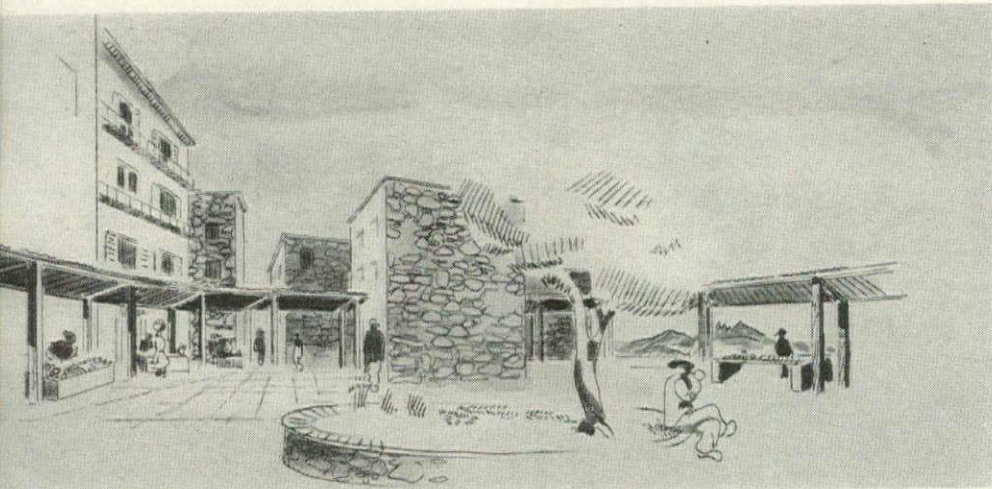


CLEARING THE WRECKAGE from town center (below) was started at once by Yank truck crews in order to make Isernia useful to the advancing army. This type of reconstruction is of military necessity, and because of the speed required waits for no plan.

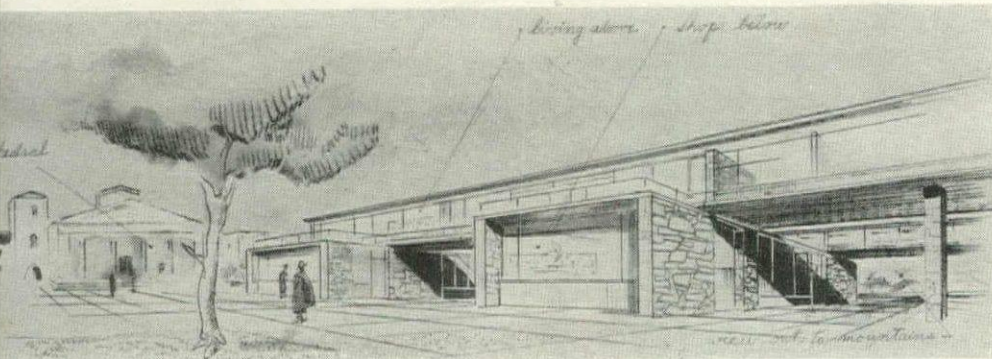




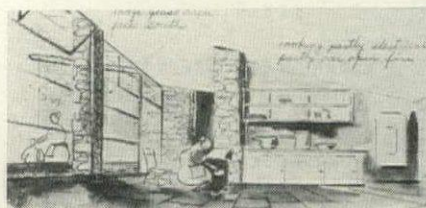
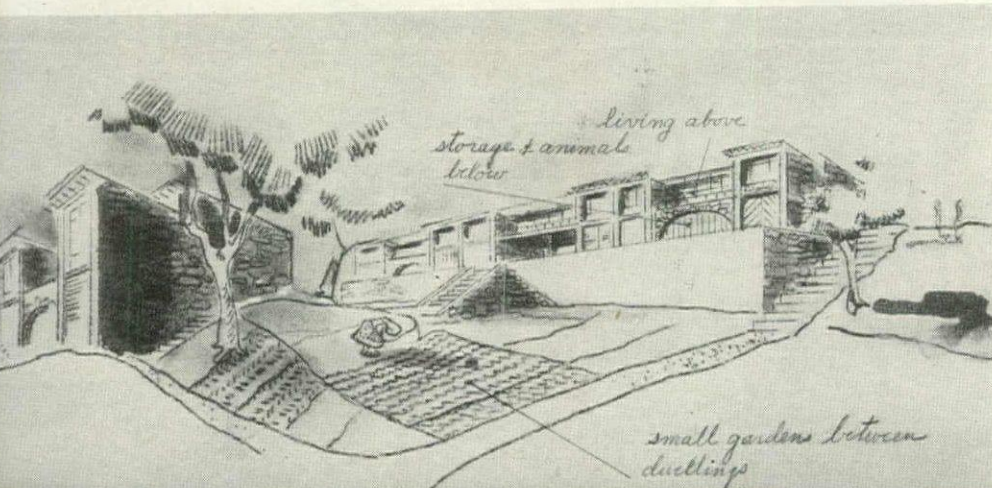
THE NEW ISERNIA as planned by Guiseppe Tarra, Italian architect, (left) follows a formal street pattern, places most new building east of the older, bombed-out town on a flat open space. The Harkness plan (right) utilizes a scattered housing arrangement which takes full advantage of the natural topography. Farmer's homes are grouped on the outskirts of town facing their fields and placed to receive the maximum amount of air and sun. The heart of the town, formerly overcrowded, is opened up where old buildings have been destroyed by bombing. New civic developments are carefully placed for most efficient use.

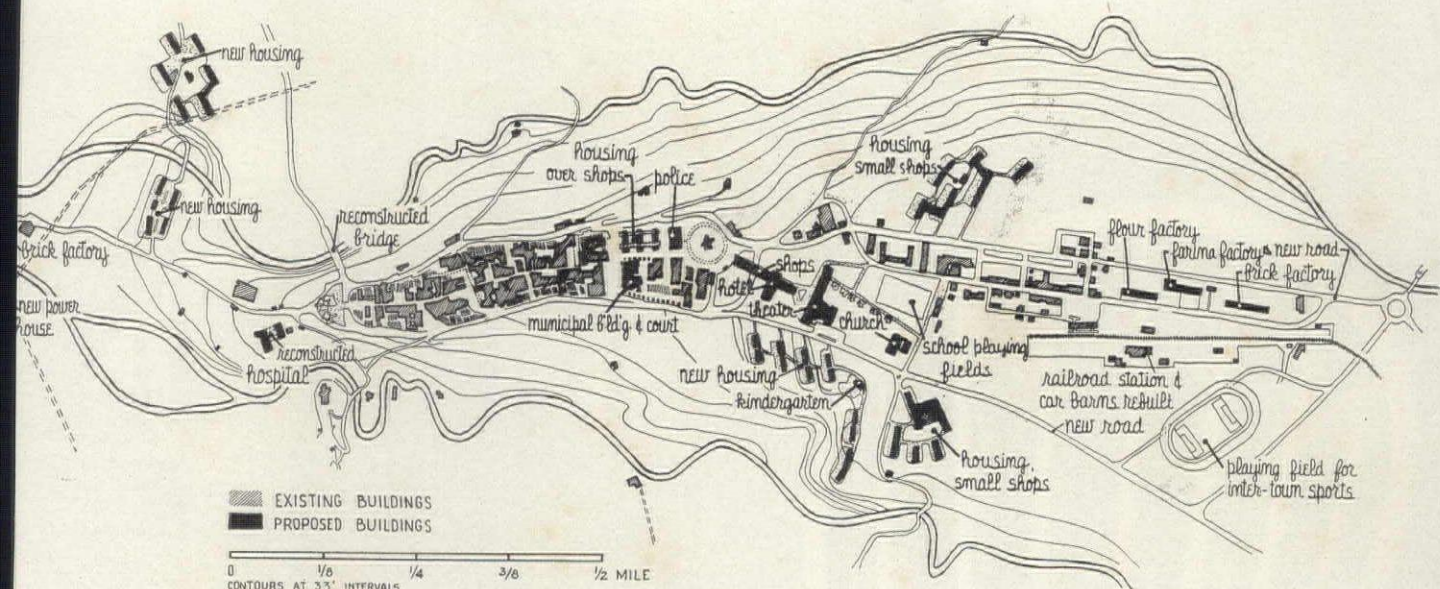


OPEN MARKET (left) is planned to replace a large section in the almost totally destroyed central area of Isernia. The space set aside for this purpose is conveniently located for farmers who bring in their produce. It is also large enough to allow a separate parking space for wagons, thus relieving former congestion. New buildings for shopkeepers in the town proper (lower left) combine well-designed stores on the first floor with living space above, take advantage of beautiful mountain view.



FARMERS' HOMES (below left) are also divided into two areas with storage and housing for animals on the first floor, living space on the second. These homes are logically placed on the outskirts of town, oriented towards the farmlands beyond. Space is allowed for small gardens between dwellings. The typical postwar house (below) will have large glass areas toward the south to take advantage of solar heating. Its cooking facilities will be partly electrical, partly the old-fashioned open charcoal fire.





rounding country will come twice a week to sell their produce. Formerly this took place in the crowded square of the cathedral, spilling up and down the adjoining streets. In the new scheme, wagons will be left in a special parking area at the lower level.

A permanent shopping center designed to take advantage of sunlight and air, is scheduled for a space near the market, while the administrative and business section is located in the newer part of town. Beyond the business section a theater and hotel are placed in a large park. Fortunately the schools, none of which were destroyed, are all grouped near the proposed park space so their location need not be changed. Because of this convenient juxtaposition, part of the park can be utilized for playing fields. Intertown football matches and similar recreation will require a larger field outside of town where the land is more level. This need not be done until everything else is completed, but such a field is a healthy aspect of community life and should be considered in any complete picture since the people themselves have long planned for it.

The industrial life of Isernia is limited to several small factories run by electrical power from the two rivers. Although relatively noiseless and smokeless, these factories should be grouped together for the most efficient functioning of the town. Located on the road which was formerly the main route, but is now only a secondary loop, they are convenient to the railroad, thus simplifying transportation problems.

RESIDENTIAL PLANNING

In determining the site and orientation of dwelling units, those local factors which influence housing are of great importance. As was pointed out earlier, Italy is short on natural resources.

There is no oil, gas or coal and since wood is limited, it (and the charcoal made from it) will always be relatively expensive. Sensible planning must get the highest possible value out of what Italy does have: water power and sun. The residential scheme, therefore, orients housing blocks as close to due south as their contours allow, thus utilizing the solar system of heating. Since glass is a cheap natural product in many parts of Italy, the proposed large glass areas are not unreasonable for low cost housing. The solar factor, combined with a desire to take advantage of the lovely views, determines house and site location. Natural orientation as opposed to a rigid, inward-turning block structure is the chief difference between the Harkness and Tarra plans.

In considering actual house design, the customs of the inhabitants must be considered. The fireplace is a center for all social functions in this part of Italy as well as the sole source of heat during the winter months. At present small windows with no thought toward orientation do little to relieve the coldness and dampness of the interior. Additional warmth received from the sun through large glazed areas would be a great advantage. The fireplace, deep-rooted in local house design would, of course, be kept and would still be used for evenings and bad weather.

With the increase in electricity, fireplaces might be supplemented by electric heaters which could be moved from room to room as needed. Judging from prewar rates, electrical heating would compare favorably with the cost of wood or carboni. Electricity would also be a competitor with charcoal for cooking, because of its comparable price and advantage of cleanliness.

In analyzing this farming village Harkness has considered an additional question—the relation of prefabrication to

reconstruction in Italy. American housing projects have shown that at least mass site fabrication in wood is highly efficient. However, in central Italy and in most of central Europe there is relatively little lumber; stone is the main building material. In addition, there will be much unemployed labor which will have to be put to some productive activity, probably rebuilding their own homes and towns. It does not seem, therefore, that the shell of the house—walls, roofs, etc.—are well-adapted to prefabrication methods. But the mechanical core, including heating, plumbing and cooking is particularly suited to mass production. Building whole rooms, especially kitchen and bath in the factory and shipping as a unit is impractical because of high costs and the difficulty of fabricating appropriate designs and sizes. It is therefore apparent that any mechanical part should be boiled down to its simplest form and designed for packing in the minimum shipping space.

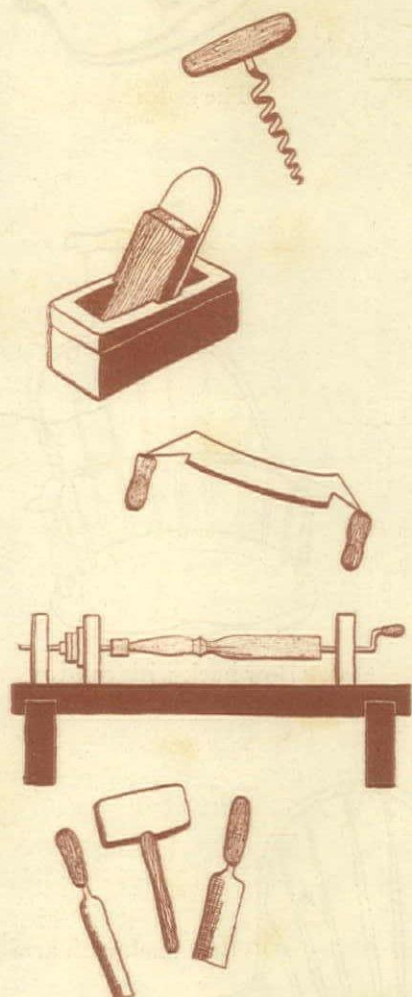
Concludes Harkness: "The reconstruction job which will be in the hands of builders after this war will certainly be the largest in history. American architects and builders should be involved with this job. My sketches were made to try to learn something about the colossal problem, and although Isernia is only a sample of the work ahead, it is a specific sample. Work done at home at this time is inevitably in the form of generalities. An opportunity to be on the site made possible a study of real conditions in a typical Italian town."

To satisfy increased demands, THE FORUM'S planning booklet, "Planning With You," has again been reprinted. Copies for distribution can be obtained by sending \$10 for the first hundred, \$5 for each additional hundred.

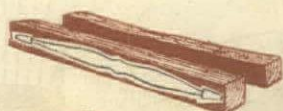
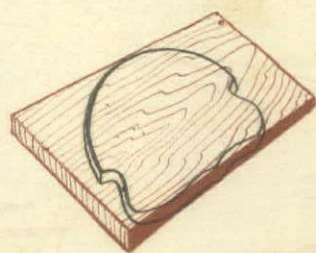
THE ARCHITECTURAL FORUM
350 Fifth Avenue, New York 1, N. Y.



The Windsor Chair . . . product of American skill, tools and materials, is still unequaled in comfort and utility . . . its significance in contemporary design.



These readily available materials and simple tools were the basis of the design.

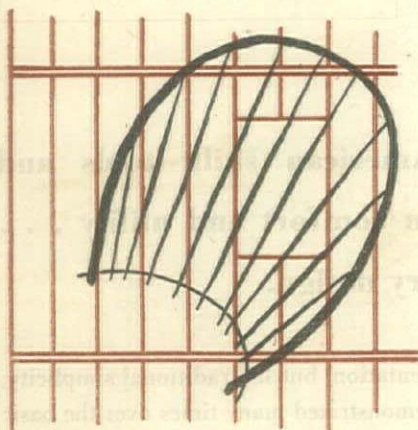


The American heritage is not noted for ostentation, but its traditional simplicity, rationalism and tenacity of purpose have demonstrated many times over the basic soundness of our approach to the problems of everyday life. And, despite the fact that America's contributions to art and design have been less spectacular than its influence in other fields, there have been notable exceptions to this generality. One such is the Windsor chair. Appraised on the basis of design, construction or utility, it surpasses any other chair of a comparable period and, on all three counts, fully expresses the yet-to-be-achieved functional ideal of modern designers.

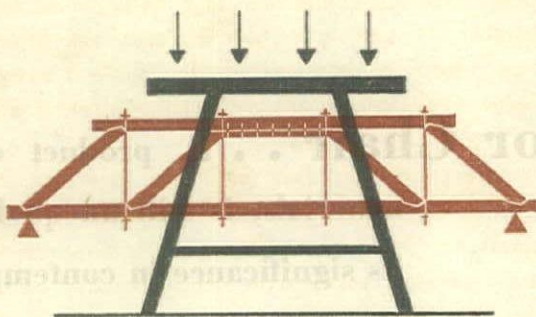
This was no mean achievement. A chair is one of the most difficult problems to face the designer. Its relation to the human body is the most intimate of any piece of furniture. It must be mobile, easy to handle, good looking and must resist complex stresses; it should not cost too much. Its construction calls for resourcefulness and skill. And, because in chair design these characteristics — common to all design problems — are brought into the sharpest possible focus, an analysis of the Windsor chair reveals principles as applicable to building as to furniture. Like its contemporary, the Colonial farmhouse, the Windsor is one of the best models we have for an approach to present-day design.

The Windsor chair, as we know it, is essentially American: a faithful reflection of the economic, social and political conditions that were roots of our present democracy. Legend contends that the genus of the style originated in an English village adjacent to Windsor castle. The validity of this theory, however, has never been substantiated and some authorities prefer to believe that the basic type evolved from a massive English Gothic chair. Actually, this question is of little consequence since in the century of its development the American Windsor became a highly distinctive and vernacular household article of purely domestic design. Its widespread use among all classes except those people of fashion who — with the British aristocracy — patronized the master craftsmen of the Queen Anne and Georgian periods, gave it a truly colonial character possible only in the social climate of the new world. Before the appearance of Windsors on the American scene, chairs of any type were uncommon in lower-class homes. Many farmers knew nothing more comfortable than a hearthside bench, settle or "joynd" stool. The earliest Windsors were little more than these same stools with the addition of a low, curved, spindle back. This type made its appearance in Philadelphia about 1725 and for a time was known as the Philadelphia chair.

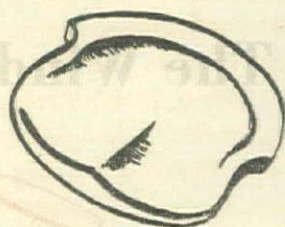
As the design evolved and was elaborated it became known as the Windsor in deference to those skilled English craftsmen who, until this day, have served their apprenticeships in the shops that supply Windsor castle and the surrounding lands. In pre-revolutionary America, however, chair making was only partly the work of such specialists. Lack of adequate communication and transportation facilities made it necessary for much furniture to be made at home, in front of the common fireplace during the long winter months. As the popularity of the Windsor chair spread, it changed from a cabinet maker's item to a folk product in which endless design variations were applied to a single structural formula. To assist this fireside industry, general stores, prior to 1825, carried "chair



The spindle back

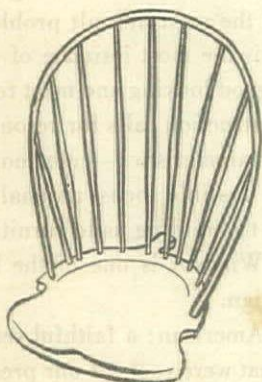


Splayed legs

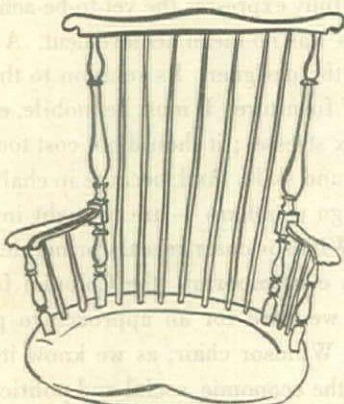


The saddle seat

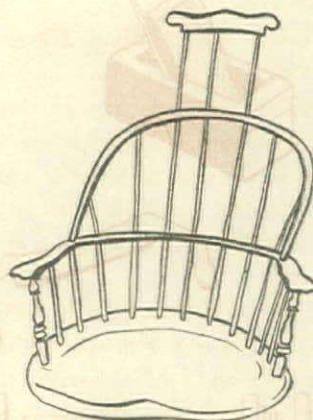
FIVE BASIC TYPES . . .



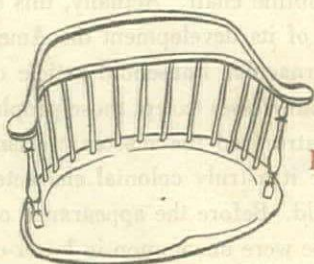
Bow back



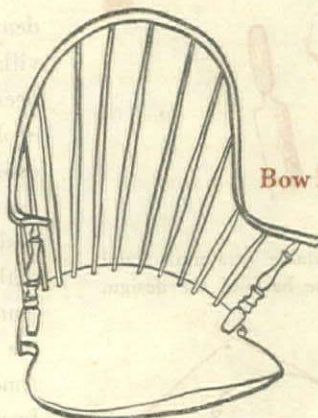
Fan back



Bow back with comb



Low back



Bow back with arm

COUNTLESS VARIATIONS



Triple back armchair



"Duck-bill" joints



High bow back



Comb back, short arm



Double comb back

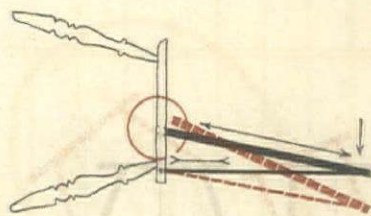
parts"—spindles, stretchers and legs—sold by the bundle. This early form of prefabrication was probably instituted by local wheelwrights who could turn spindles as easily as spokes. Some Windsor chairs had hoop backs, some high backs with single or double combs. All had three basic features: the spindle back, saddle seat and splayed legs. Last to be developed was the Windsor writing chair with its broad arm, forebear of the golden oak desk chair so common in the American schoolroom.

Despite its superficial heterogeneity, the Windsor chair was, in design and manufacture, a unique product of the tools, materials and social customs of the time. Though a few (like the small, bow-back chair pictured in the frontispiece) were intended for a specific use—spinning, rocking the cradle, cooking on the hearth—the typical Windsor was broadly utilitarian. Its multiple use for working, dining, relaxation and entertainment represents precisely what the best contemporary designers have attempted to develop in furniture: a structural vocabulary expressive of production techniques and applicable to a wide variety of purposes.

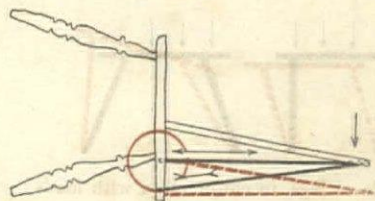
Eastern forests supplied various woods used in the chairs. Spindles and bows were usually made of hickory or white oak because of their natural resilience, pliability and resistance to fracture. Pine or white wood planks, both easy to shape, were preferred for the hand carved saddle seats. The direction of the grain in the seat, always crosswise, was determined by the fact that all cutting and shaping would thus be in line with the grain. Easily turned woods—ash, maple, birch and chestnut—were most often used for the legs and stretchers.

The three characteristic structural features of the Windsor chair: spindle back, saddle seat and splayed legs, combine three disparate principles to create a sound, lightweight, flexible whole. The spindle back, progenitor of balloon frame construction, approximates several engineering forms. The bow member can be considered as a tie rod for the cantilevered spindles; taken as a whole, the back spindles act as an openwork cantilevered truss; the sweep of the bow and the spindles forward at the sides creates flanges like those of a channel beam. The evolution of the spindle back represents an unending effort on the part of the early craftsmen to improve on the comfort of the design. In its later, more elaborate form the back had bowed instead of straight spindles for added resiliency and better support; the individual spindles became finer and longer; backs became wider; first one, then two or three combs were added. The basic structural principle, however, remained the same and all Windsor chairs, whether bow, fan or comb back, have great strength, flexibility and comfort.

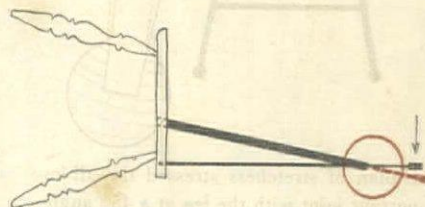
The saddle seat represents the only rigid structural element. Customarily made from two inch planking, its thickness provided an extremely firm mortise joint since the leg tenon projected through the seat from bottom to top. Green lumber was used to create tighter joints through subsequent shrinkage. In spite of its



Unbraced bow back functioned like the suspension rods supporting a marquee, stressing the joint at the seat.



Diagonal braces were added at the back of many chairs, relieving the tensional stress where the bow enters the seat.



Spindles supporting the high comb-type back acted in pure cantilever, were shaped accordingly.



Bow back armchair



Braced fan back



Writing arm



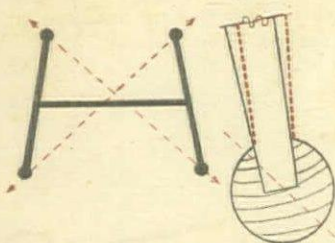
Three legged



Splayed legs increased width of the base, made the Windsor difficult to overturn.



Angle of legs, in conjunction with loads acting vertically, braced chair against side sway.



H-plan of stretchers stressed the all-important joint with the leg at a 45° angle, making it less likely to come apart.

thickness, the pleasant contour of the saddle seat, rounded and tapered at the edge, produces a feeling of lightness that is a credit to the skill and artistry of the colonial craftsman.

Stability, one of the Windsor chair's most important virtues, was assured by the cant of the legs. Their angle stiffened the entire base against sidesway. Almost invariably the stretchers were arranged to form an H, leaving the front open between the legs. This characteristic provided horizontal and vertical bracing against the outward, diagonal strain of the splayed legs, making it difficult for the joints to pull apart. The broad base, of course, reduces the tendency of the chair to overturn.

The end of the Windsor chair era is popularly placed near 1825. For a hundred years prior to this date its design evolution had remained vigorous and purposeful and, compared to any other chair style, its life span was incredibly long. Though the Windsor has continued to be produced in chair shops and factories down to the present time, its history from 1825 is one of sorry decadence. For years it saw heroic service in hotels and stores from coast to coast; its nadir is represented by the Windsor type "executive" chair mounted on a massive swivel base. While such corruption is not pleasant to contemplate, it is, nevertheless, an understandable result of nineteenth century industrial expansion. With the advent of the factory, the principles of the hand crafts no longer applied. No Windsor chair, pure or decadent, is adaptable to modern production methods or living standards. Steam heat dries out its numerous joints, renders the entire structure brittle and shaky. In colonial times, the selection of the wood, careful shaping and delicate joinery were decisive factors in the quality of the product. Mass manufacture can afford neither the time nor the facilities for such methods.

The standard kitchen chair is a typical, low cost, mass produced item which, unfortunately, inherited some characteristics of the Windsor. In use, it is usually found with missing spindles, a cracked seat and rickety frame. The cheap tubular chair, on the other hand, is a natural invention of the mass production system and stands up relatively well.

Windsor desk and dining chairs still clutter this country's furniture show-rooms and while they lack the beauty and structural finesse of originals, their "Early American" connotation mysteriously provides perennial appeal. This illogical perpetuation of an obsolete household article has produced only sad facsimiles. The highly individual and widely varied character of the true Windsor defies reproduction, challenges simulation.

THESE MODERN CHAIRS ARE CONTEMPORARY ATTEMPTS TO RECAPTURE THE WINDSOR'S UTILITY AND GRACE IN TERMS OF MACHINE PRODUCTION

Ever since the founders of the Bauhaus first focused attention on the potentialities of machine production and modern materials, designers all over the world have been striving to achieve a balance of comfort, utility and functional expression in a machine-made chair equal to the Windsor. It is only now being recognized, however, that these self-conscious efforts to express the machine actually were preceded by a number of highly successful—if unconscious—examples of industrialized furniture of at least equal merit. Two examples of this kind are included in the collection of chairs shown on the following pages: the original Thonet "ballroom" chair and the twisted wire "ice cream parlor" chair which enjoyed such enormous

popularity just before the last war. Taken together with the more deliberate attempts of designers such as Breuer, Aalto, Rohde, etc., these chairs represent a continuous effort over the past 50 years to exploit the manifold possibilities of machine fabricating techniques. The designs shown stand out among their fellows because each involved—as did the Windsor—one or more significant structural innovation: some unique contribution to the technique of chair building. The Windsor formula has yet to be equalled for all-round comfort and usefulness. But its modern counterparts have the important advantages of greater adaptability to mass production, lighter weight and increased durability.

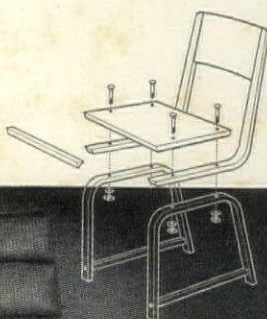


← **1900 THONET.** The familiarity and seeming agelessness of this chair are strong testimony for both the design and construction. Produced by a steam bending and twisting process invented in Austria about 1830, it remains today one of the best selling chairs in the world. An estimated five to six million have been produced by the American industry alone. The Thonet chair has three great qualities: indestructibility, light weight and low cost. Prosaic though its appearance may be, to date no designer has produced a chair that can eclipse its durability and economy.

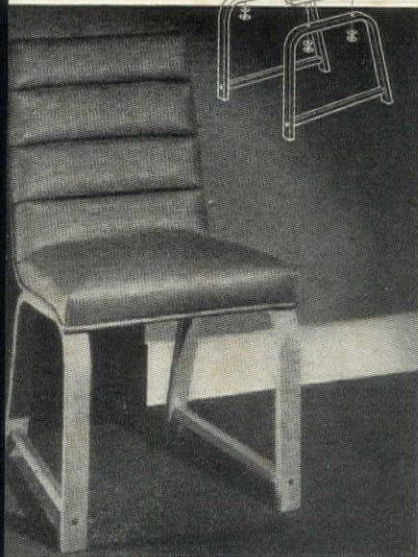


Tom Leonard

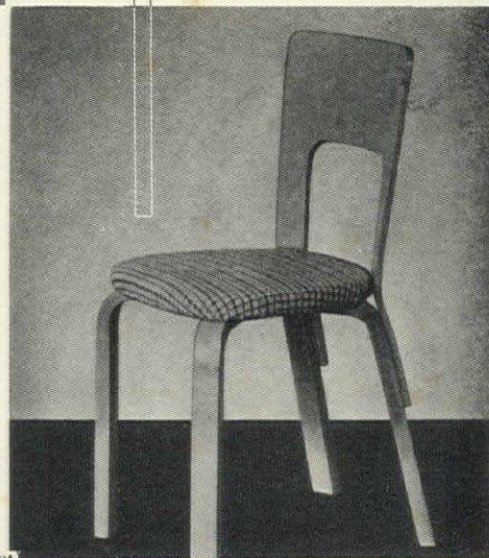
→ **1928 MARCEL BREUER and MART STAM.** Forerunner of the chromium jubilee of the thirties, this chair was one of the first to introduce a frame made from a continuous piece of sprung tubular metal. It was also one of the first frankly utilitarian designs to invade the American living room where, for a decade, it held sway in metallic chastity. Its extremely simple production process contributed to widespread imitation and an eventual flooding of the market.



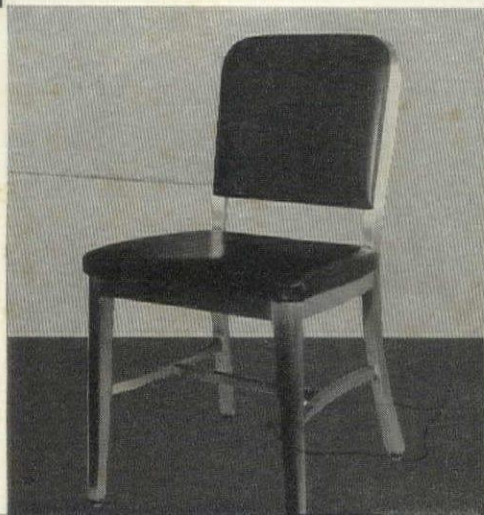
↑ **1905 ANONYMOUS.** As much a part of the pre-World War I scene as the hobble skirt, the "ice cream", or barber shop chair, enjoyed an autonomous glory as picturesque as the product itself. Purely commercial in character, it originated in an era when functional design was more taken for granted than ballyhooed. Its quaint contours are the direct result of the manufacturing process—machine twisted wire—not a hangover of Victorian fussiness. Doomed to total extinction by the stationary stool, the ice cream chair vanished from the American scene unsung and without legacy.



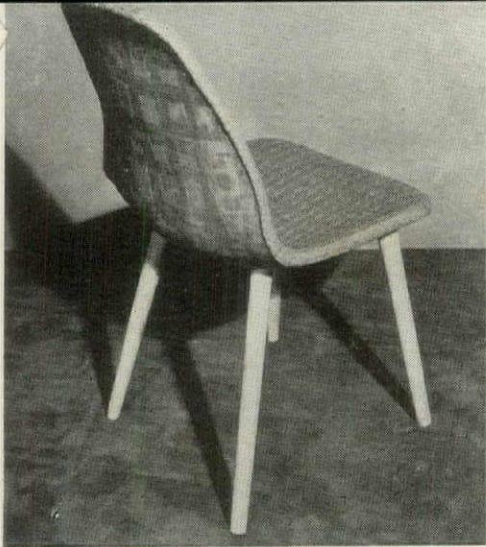
← **1931 GILBERT ROHDE.** This more recent version of the bentwood process, using the straight grain of the wood without twisting, is based on a carefully studied stress analysis which produced a sturdy, lightweight, flexible chair. A single piece of wood carrying through from the side rail of the back to become the side rail of the seat resists strain at the chair's most critical point: the back legs. Designed specifically for convention halls, stores and public places, over 250,000 of these chairs were sold prior to 1940 when manufacture was discontinued.



→ **1935 GENERAL FIREPROOFING CO.** It was not until weight was generally recognized as an important factor that aluminum was introduced into furniture. This chair was among the first to utilize such an alloy and remains today in widespread demand, particularly for hotel use. Made with fused metal tubing, it is capable of withstanding the hardest wear, a virtue which partially offsets its higher cost in competition with comparable wood and steel chairs.



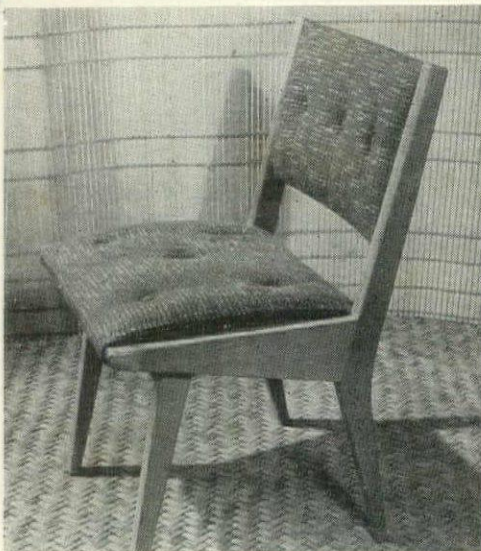
↑ **1936 ALVAR AALTO.** This chair, a single item from a complete line of furniture, illustrates Aalto's immense contribution to both the industry and the consumer: his development of attractive, standardized, mass produced furniture within the price range of the lower income brackets. In America this remains the unrealized aim of most designers. In prewar Finland it was a reality. Based on technical and practical considerations, Aalto's system of manufacture and distribution includes interchangeable, nesting parts and, of course, his famous invention, the solid-leg laminated at the bending point which is screwed into place.



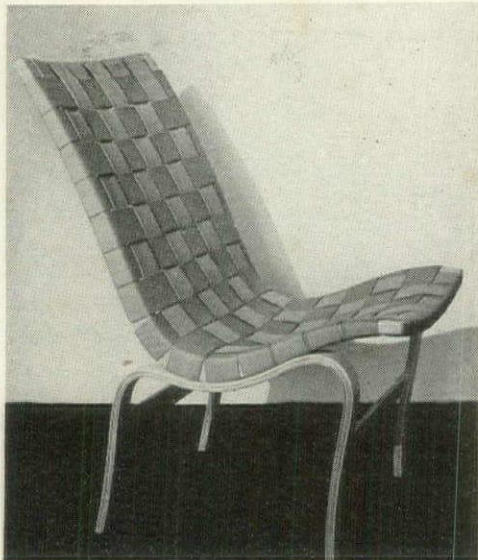
Sunami, Courtesy Museum of Modern Art

←
1940 EERO SAARINEN and CHARLES EAMES. Winner of the competition "Organic Design in Home Furnishings" sponsored by the Museum of Modern Art, was a line of furniture including this chair. The design-principle is one of continuous contact and support for the body, substituting a thin laminated wood shell for the conventional built-up frame. A weak point is obviously the bracing of the splayed legs and while a special joint has been devised for this purpose, the chair has not yet been put into production and its serviceability remains undetermined.

→
1941 JENS RISOM. A successful program of providing the consumer with a well designed, inexpensive, mass produced line of modern furniture has been that of Hans Knoll Associates. This chair, designed under wartime limitations, requires a minimum amount of material and labor. Ordinary lumber is used for the frame, no springs are used in the upholstery. Stretchers are omitted since the tapered apron renders them structurally unnecessary. As sturdy as it is refined, this small chair meets stringent government requirements as well as those of design.



Roy Stevens



Herbert Matter

←
1935 BRUNO MATHSSON. An occasional piece of furniture rather than a utilitarian chair, this Finnish design consists of bent, laminated members. As in the case of the Saarinen chair, the contour was determined by a desire for uniform support. Continuity of line in the body and the supporting frame provide balance and allow for the recumbent back. While this design is certainly more fluid and elegant than the average contemporary chair, comfort was sacrificed to style. As a reclining chair, the absence of arms is unfortunate.

→
1940 JORGE FERRARI HARDOY. Representative of the bold experiment now going on in furniture design is this Argentine hammock chair. Gently rounded angles distribute the body load from the one-piece, suspended, leather back and seat to the supporting frame of bent steel rods, combining strength, rigidity and economy of material. Frankly a lounging chair, the design invites sprawling sideways, is comfortable in any position.





PUERTO RICO

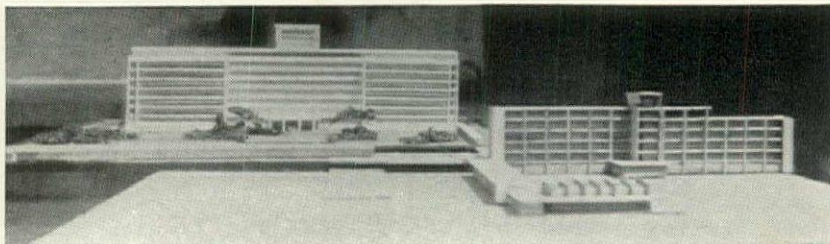


For “colonial” Puerto Rico Richard J. Neutra designs a school and hospital system, first step in a planned program to meet the island’s newly awakened sense of its independent destiny.

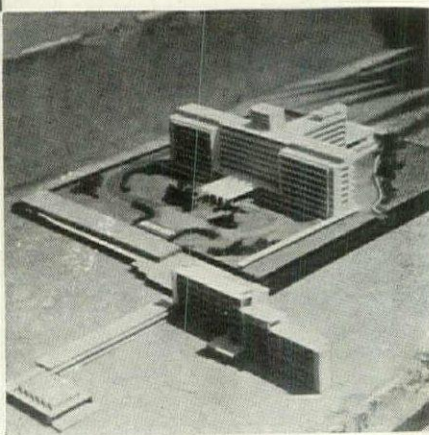
In the West Indian island of Puerto Rico, last outpost of U. S. sovereignty in the Atlantic, an impressive planning program is underway. Its goal: to set up a minimum standard of living for every Puerto Rican family and to improve their health, education and social outlook. An integral and important part of this program is a complete new system of schools, hospitals, and health centers, both rural and urban, designed by Viennese-born, U. S. architect Richard Neutra, head of California’s State Planning Board and former professor of architecture at Bennington College.

Neutra’s assignment is of particular significance, for it is toward Puerto Rico that the eyes of South America are turned. This small tropical island, strategically located between the two hemispheres, is regarded as the Latin American guinea pig in the hands of the North American experimenter. What happens in Puerto Rico may answer the question of all the Latin





HOSPITALS rise as high as eight stories. Their breeze fronts have a porch-like openness, while the lee fronts permit exit of cleansing air currents.



countries surrounding the Carribean as well as the British and Dutch colonies in this hemisphere. Their attitude is: What shall we look forward to if the gringos or "yankis" have their way? Apart from politics, are they in earnest about helping those who have long been colonials to grow into peoples — independent peoples capable of taking an independent place in the modern world?

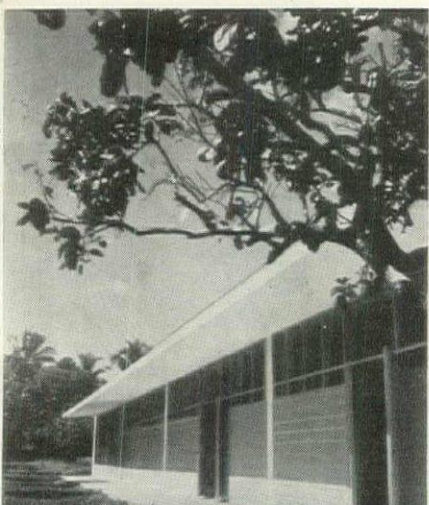
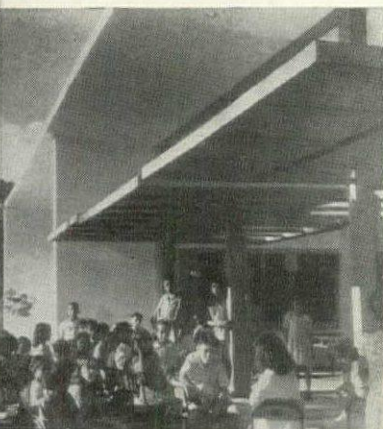
So far Latin America has seen little in Puerto Rico to encourage her about the gringos. A mountainous island only 100 miles long and 35 miles wide with a population of 2 million, Puerto Rico has been given world-wide publicity for its *miseria y hambre*—misery and hunger. Certainly there is unrelieved overpopulation, poverty in living and housing, undernourishment, and disease, illiteracy, maldistribution of lands and tools to produce wealth and food. Nature, however, has made of Puerto Rico a lovely island. Behind coastal fringes of cocoanut palms rises a skyline of interior mountains towering into a sunny sky. A trade wind climate prevails with neither extremes in temperature nor a well-defined dry season. Showers usually last but a few minutes and are followed by brilliant sunshine. The temperature averages 76 degrees in winter, 80 in summer. These natural assets provide all the more incentive for correcting the man-made deficiencies which have come about through centuries of colonial misrule.

Under both Spanish government, which ended in 1898, and present American sovereignty Puerto Rico has had limited powers of self-rule, but has not been allowed representation in the national government which makes decisions affecting its welfare. The island has had no voice in determining tariffs, coastwise shipping, labor laws and agricultural policy, although under the Organic Act it has secured considerable independence in the management of internal affairs. The U. S. has not taxed Puerto Rico for federal purposes and has returned excise taxes collected from continental consumers of Puerto Rican goods in the U. S.

After taking Puerto Rico by force in 1898, the United States until recently has shown a deplorable disinterest in its ward. Belatedly we are asking ourselves: Should the U. S. provide assistance on a basis comparable to that for a state? Provide only the type of assistance associated with the "good neighbor" policy? Provide special help? Whether Puerto Rico's future is determined by itself, by the U. S. or by both countries working together depends on the answer given to these questions.

The Puerto Ricans themselves know that they cannot

SCHOOLS are oriented toward the prevailing breezes, classrooms open into shrubbery-enclosed courts by means of center-pivoted doors (above). Corridors (right) are cement walks under a roof projection.



REXFORD G. TUGWELL, Governor of Puerto Rico
DR. RAFAEL PICO, Chairman, Planning, Zoning and
Urbanizing Board

SERGIO CUEVAS, Commissioner of the Interior
SANTIAGO IGLESIAS, JR. Former Commissioner of Labor
PAUL EDWARDS, Chief, War Emergency Program
LOUIS STURCKE, JR., Chief, Bureau of Budget
DR. FERNOS ISERN, Commissioner of Health
DR. JOSE CANDARA, Department of Health

RICHARD J. NEUTRA, Architect
LUIS M. GUILLERMET, JR., Exec. Director and Sec., Committee on Design of Public Works
JACINTO CALIB, Chief Assistant, Committee on Design of Public Works
STEPHAN V. ARNESON, Program Director
JOSEPH BLUMENKRANZ, Hospital Consultant

FRANK BECK, Head of Drafting Room
HENRY KLUMB, General Design
OSVALDO L. TORRO, Architect
PABLO REICHARD, Architect
MIGUEL FERRER, Architect
LUIS TORREGROSA, Chief Structural Engineer
ANTONIO CALDERON, Chief Civil Engineer
JAIME COBAS, Chief, Mechanical Electrical Section

exist without assistance from the U. S. However, like "possessions" the world over, this island has outgrown its status of complete domination by a larger power. The popular plan is to develop the island's resources and expand its production to the greatest possible extent with protection and subsidies. This movement reached political success in the last November elections when the majority of legislative seats were won by the "populares," the party founded by Luis Munoz Marin to awaken the peasant to his electoral responsibilities. This meant a reinforcement of planning aims and an endorsement of Rexford G. Tugwell, for years hailed by the growing popular party as the best American governor ever sent to the Island.

Tugwell had been attacked and blamed by the opposition coalition, a violently active minority of sugar planters and other special interest groups, for socializing Puerto Rico. Like many an oppositional statement, this was mainly for continental consumption and was based on a measure of continental ignorance. Actually democracy, in the form of the long-dormant peasant vote was making its demands heard. The power and luxury enjoyed by the wealthy minority at the expense of a miserably under-privileged peasant population was slipping away. For the first time the government was working hard and systematically on a most advanced system of rural health centers, village schools, district hospitals, etc. These projects were given urgent priority before the institutions of higher professional training which were also in the planning stage. To accomplish such an extensive program, Tugwell (under the auspices of the Planning Urbanizing and Zoning Board) appointed a Committee on Design of Public Works with a goal of producing detailed plans for \$50 million worth of building during a three-year planning period. It was this committee which chose Neutra as acting architect and consultant. In addition to his actual designing duties, it was the government's intention that Neutra should train young Puerto Rican architects and engineers. This is an important factor in the integrated development plan of the island. When in operation, the public works' projects are expected to turn out trainees to serve the island and its various new industries fostered by the half-governmental "Industrial Development Corporation." The workers thus trained would also be encouraged to emigrate to other countries in need of skilled artisans, preferably to parts of Latin America.

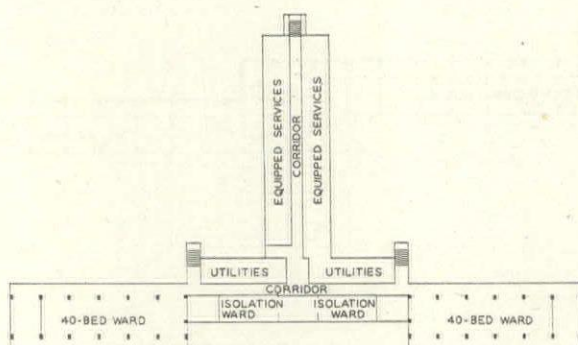
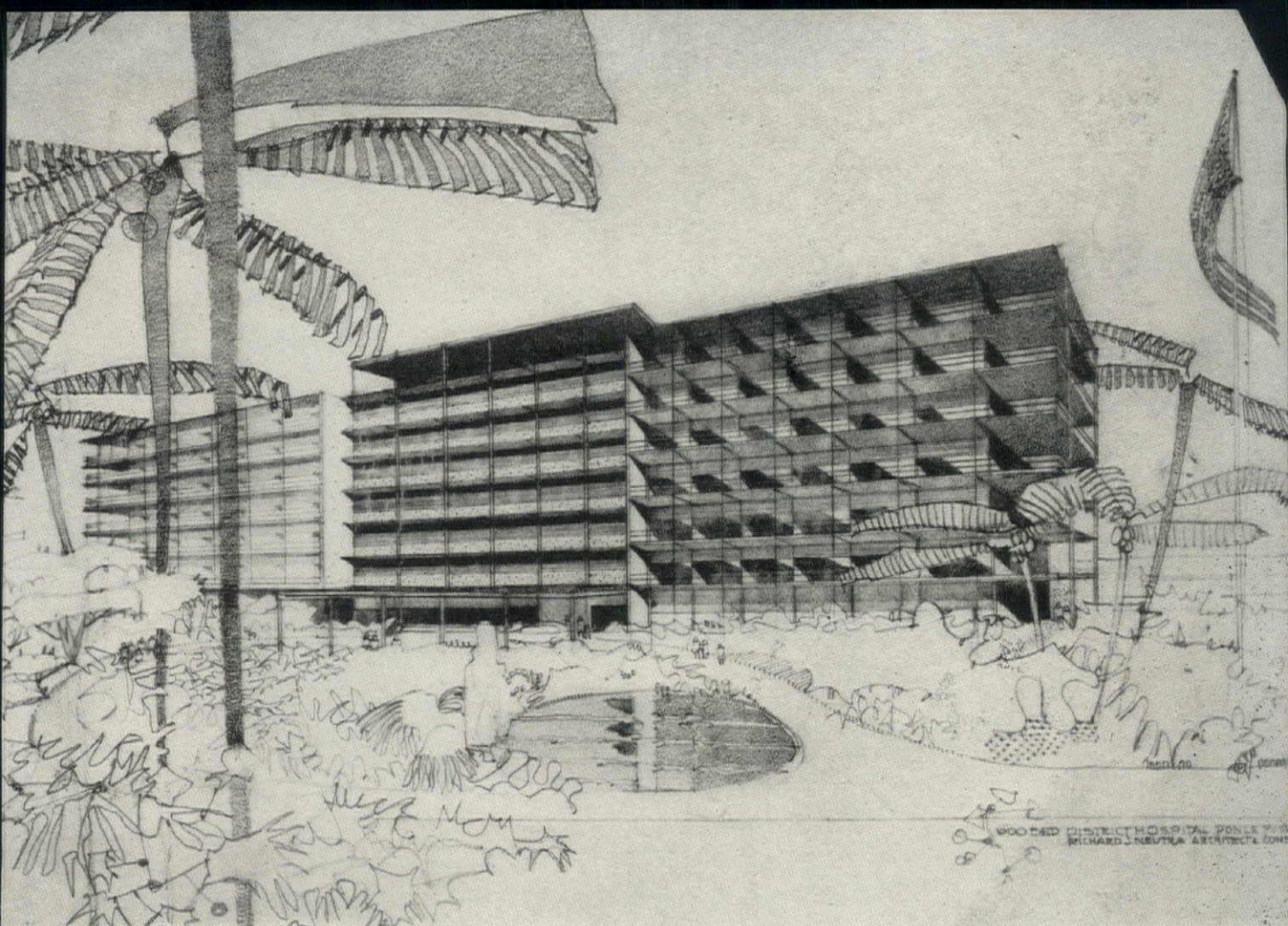
Starting in the fall of 1943, therefore, with the ever-growing help of Puerto Rican engineers and architects,

Neutra embarked on a concentrated design program which put supposed tropical leisure to shame. Open air schools were designed for over 150 villages. One hundred twenty-eight rural health centers were planned, designed and redesigned to bring a preventive health program and a social service into the mountains of the interior. Four large district hospitals and an insular home for girls were also among the important projects, while a fifth hospital in the metropolitan area of the capital of San Juan was designed in conjunction with the medical college there.

The importance of these designs to the planning program as a whole results from Neutra's design approach. First, architectural treatment was completely compatible with the warm tropical climate. The outdoors was used as a space auxiliary with no additional building cube and no extra cost. Building types developed in the temperate zones were carefully restudied in their relationship to the function of heat economy. For example, it might be extravagant to propose in New York a pavillion for contagious diseases with an adjacent wing for services—janitor's and doctor's washrooms, serving pantries, sterilizing and utility rooms—all laid between two different corridors. One of them is the "contaminated" corridor used after contact with the patients and the other is the clean corridor for use after being disinfected. Such a double corridor is expensive to build, to heat and to ventilate. But in Puerto Rico these two "corridors" are simply two inexpensive roof projections. The scheme is therefore feasible.

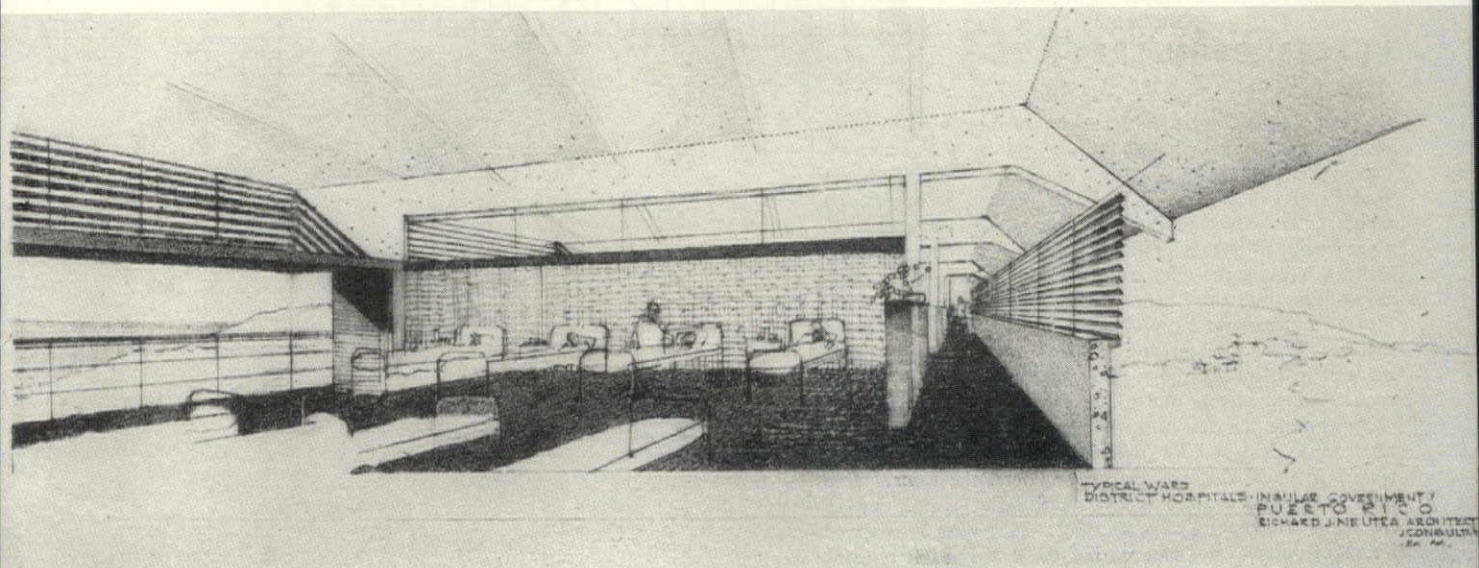
The second feature of the Neutra approach is his unit design which allows a standardization of rooms to be used in different arrangements for different sites. According to the needs of the specific community, more or fewer rooms can be employed to form a complete building. The classroom units, for instance, can be used singly or in rows to form buildings of various lengths. Hurricane resistant reinforced concrete of standardized design is the favored building material. Besides hollow concrete tile, other shop or yard-made elements and a number of prefabrication schemes were studied to facilitate transportation over poor truck roads to scattered village sites, and to reduce work on the premises.

The Neutra designs were approved by the Public Works Committee last May and one of the schools has already been built. It is expected that Puerto Rico will be able to carry through its project if current expenses are kept low, normal federal participation continued and existing economic relations with the United States undisturbed.

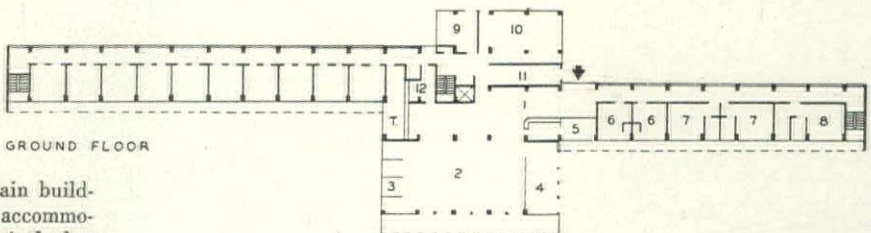
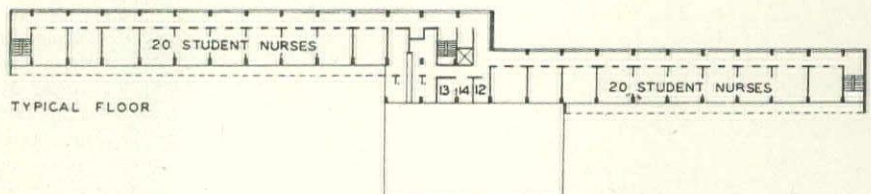


TYPICAL WARD

Wings of the extremely narrow main hospital buildings from back to front are open to breezes from both directions. Movable louvered blinds make these rooms no more than semi-interiors, but they are protected from tropical insects by non-corrosive screening which covers all open areas including balconies. A generous roof overhang excludes excessive sunshine. Glazed windows and mechanical air conditioning are used sparingly in the hospital buildings and are restricted almost entirely to the area of adjunct services such as surgical and delivery suites and certain isolation rooms.



CAGUAS DISTRICT HOSPITAL
PUERTO RICO
RICHARD J. NEUTRA ARCHITECT, CONSULTANT
JUNE 1944



NURSES' DORMITORY

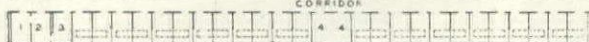
Living space for nurses necessarily occupies a main building in any hospital group, the one shown here accommodating 300 nurses, students and graduates. Its typical plan consists of two wings, six stories high, and a central area which extends beyond the building line at one-and-a-half story height to form a communal living room equipped with visitors' bays on the left side, a reading alcove on the right. Doors lead from this room to open courts. The rest of the central area on the ground floor is occupied by an information and mail center and two rooms at the rear for sorting and distributing linen. The right wing contains single rooms for instructors and an apartment for the matron in charge, while the left wing is divided into bedroom-living room units designed for two nurses. These rooms are repeated in both wings of the upper floors, the central area being equipped with a shower and toilet group, sewing room and kitchenette. The top floor right wing is reserved for night nurses who sleep during the day, the left remains open as a sundeck with a superb view.

1. Lobby
2. Living room
3. Reception bays
4. Reading room
5. Information and office
6. Individual room
7. Instructors room
8. Matron's apt.
9. Soiled linen.
10. Clean linen
11. Trunk storage
12. Kitchen
13. Sewing
14. Laundry

1. Nurse in charge
2. Examining Doctor
3. Bath
4. Nurse's station
5. Utility
6. Service pantry
7. Dish sterilizer
8. Nurses' toilet
9. Patients' bath
10. Doctors' toilet
11. Laboratory
12. Scrub-up
13. Sterilizer
14. Operating

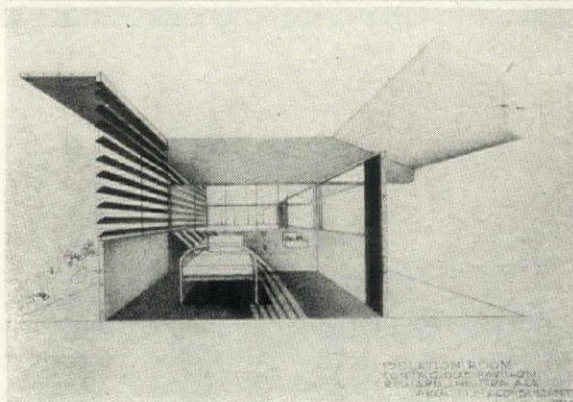
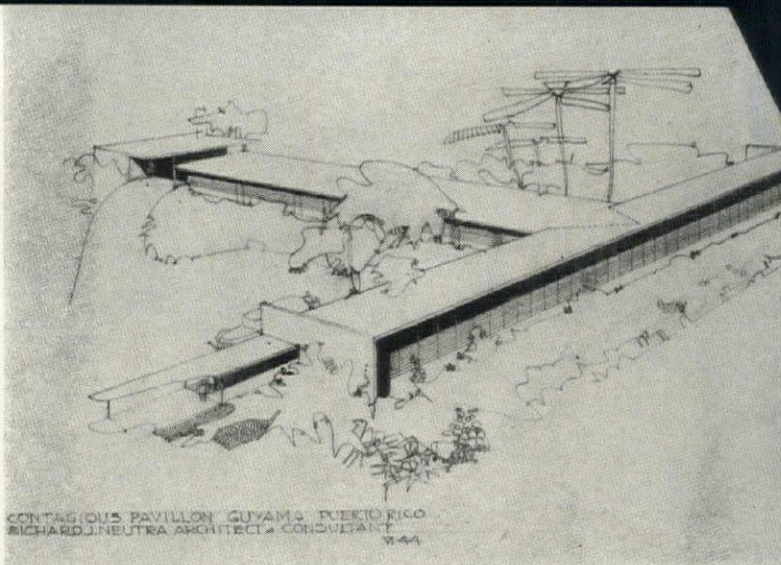


15. Clean linen
16. Soiled linen
17. Incinerator
18. Clean receptacles
19. Contaminated receptacles
20. Sterile bedding
21. Contaminated bedding

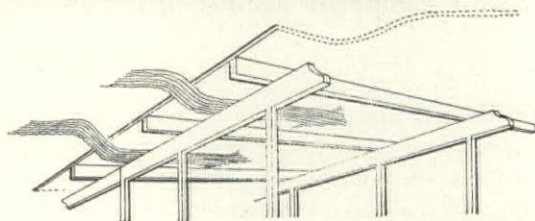


CONTAGIOUS PAVILION

Isolation for contagious diseases is provided by a separate one-story building connected to the main hospital by a covered walk. Individual rooms for patients occupy the top section of the T-shaped structure. An operating room, laboratory, sterilizing rooms, space for clean and soiled linen and bedding, toilets, baths and an incinerator are placed in a branch which extends from the center of the patients' section. This ingenious design makes possible the use of two separate corridors, clean and contaminated, placed on either side of the service rooms. As mentioned before, these corridors eliminate the danger of spreading disease, since one is used after contact with patients, the other only after nurse or doctor has been disinfected. Made merely by extending the roof, they add little to the building cost.

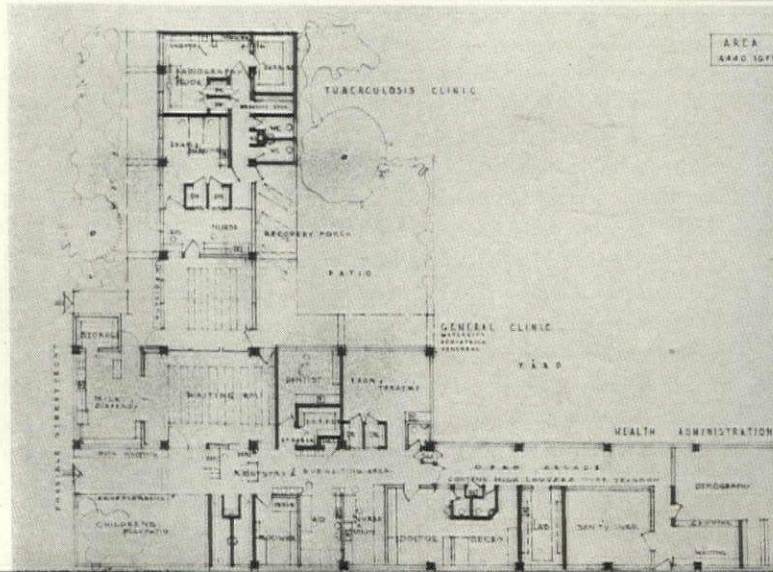
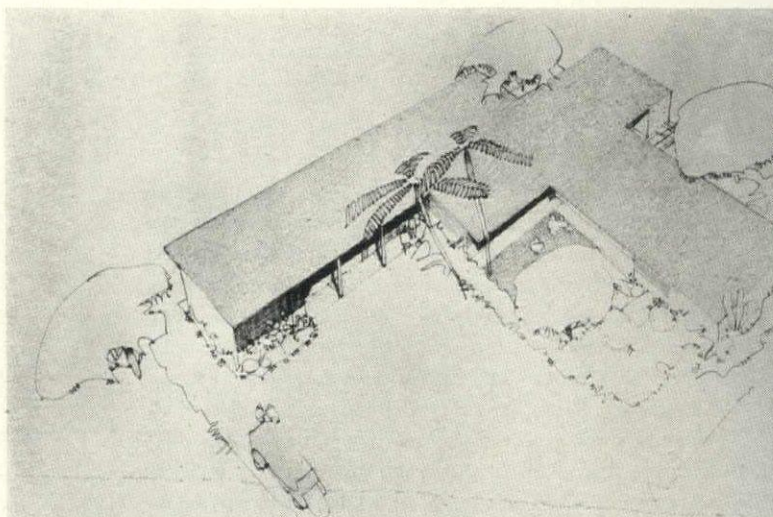


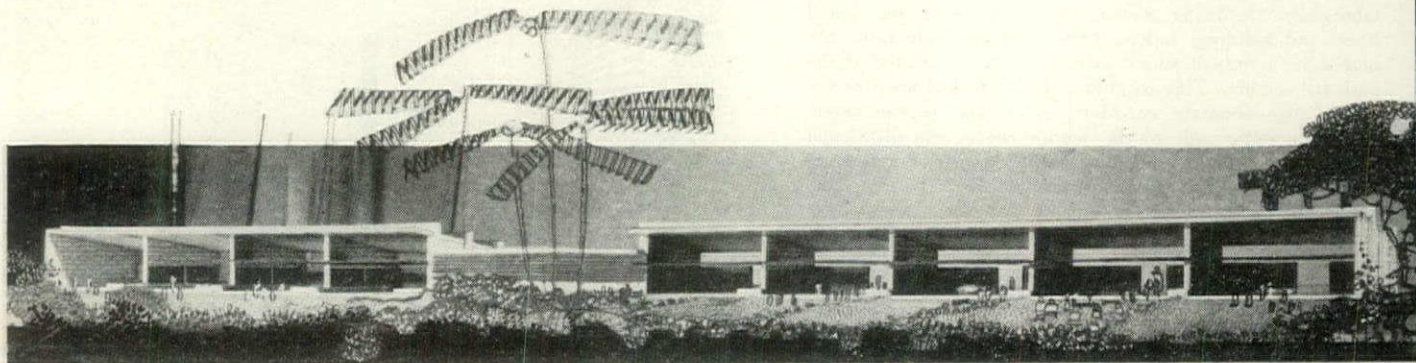
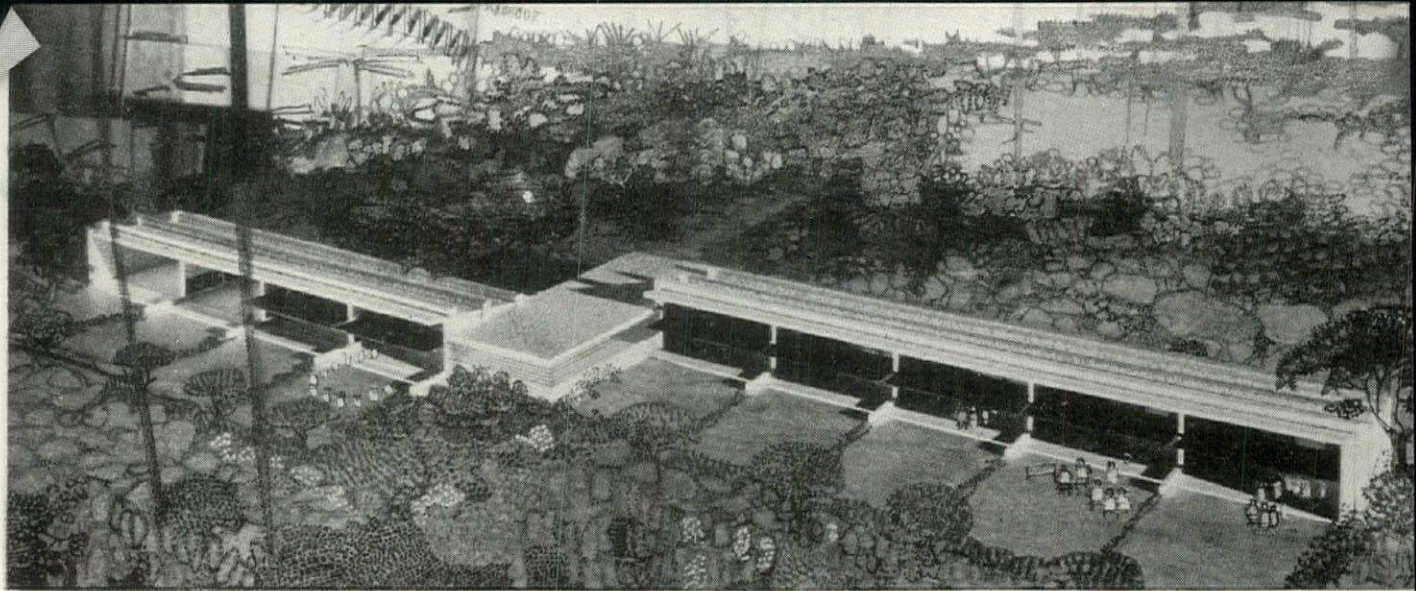
VILLAGE HEALTH CENTER



Ventilated roof construction

Designed to bring a social health service into the small villages of the interior, the health centers are distinguished from hospital clinics in that they practice preventive medicine and "case holding"—attracting persons with incipient tuberculosis, venereal disease or similar ailments to systematic repeat visits—rather than dealing with cases of acute illness. In addition to this function, the health centers are intended as meeting places where the "Jibaros," the poor mountain peasants, may enjoy their own social life, play dominos in the evening, strum a guitar or dance on the spacious porch. Neutra has provided a bench around the wide opening of the milk dispensary, making it into a stage for teachers or entertainers addressing the assembled community. Suitable programs will teach the villagers about child care, diet, cloth making and housekeeping. Neutra's intent is to dissolve the "institutional" character of these centers and make the villagers—who for centuries had little reason to trust a distant government—feel that the buildings are their own community property.





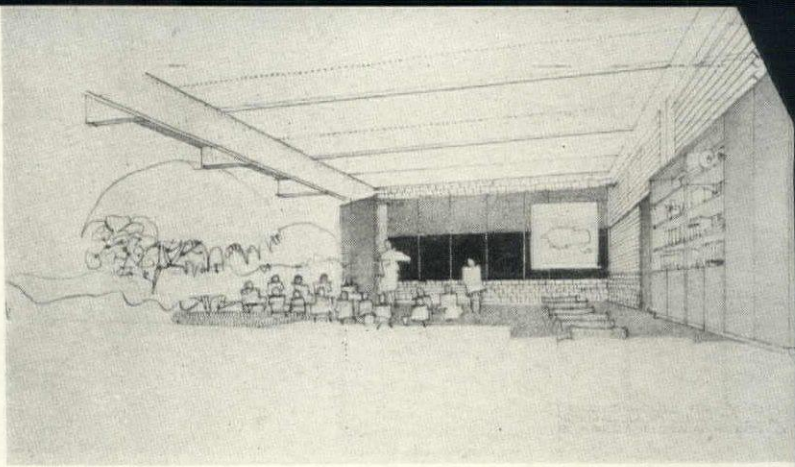
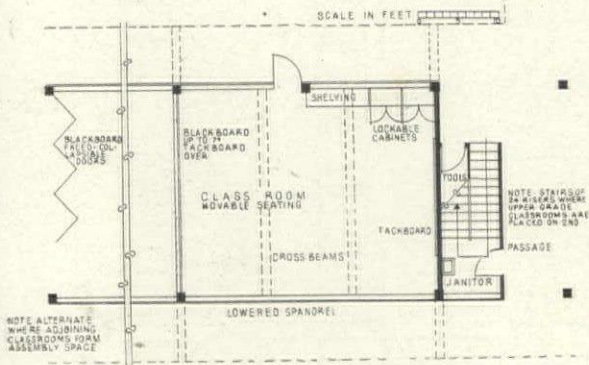
SCHOOLS are planned by the hundreds in Puerto Rico's campaign against illiteracy.

Of all necessary projects none will so profoundly influence the long-exploited peasant population as the building of rural schools. To insure educational facilities for the maximum number of communities, therefore, Neutra has designed his schools as classroom units complete in themselves, thus permitting the construction of one or many rooms according to specific needs and providing great flexibility of arrangement. Each classroom expands and opens into an outdoor court on one side, doubling the useful instructional area without increasing costly building cubage. Lockable compartments which form a baffle wall between classrooms and open walkways on the other side, are used for storing books, writing, drafting and modeling materials together with unfinished pupil work. The site allotted to these schools should be large enough to serve as a neighborhood center accommodating also the health station, milk dispensary and village fountain. Hedges of hibiscus will shield the extremely open plan from outside view and segregate the open air courts from each other.

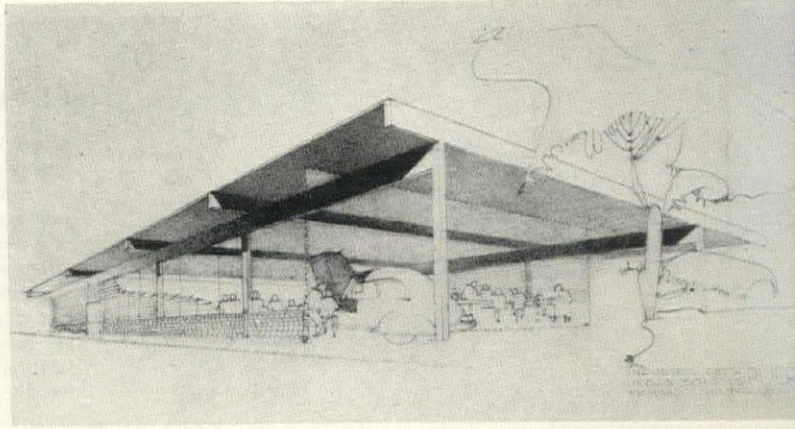
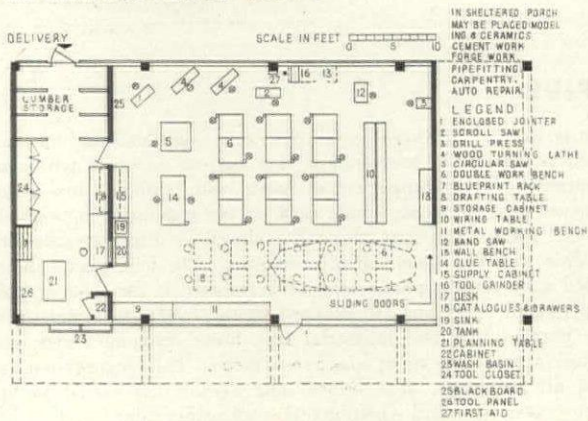
A typical classroom (1) is airy and informal with movable stools and tables, reminiscent of the conventional schoolroom only because of its blackboard. As in all interiors, a continuous sub-soffit air change is accomplished with lowered spandrel spanning between the end walls. The sloping ceiling aids in reflecting

light toward the work area. The industrial arts shop (2) is an open space under a roof projection, carefully planned for specialized use. Drafting tables, electric wiring tables, wood-working benches with their machine tools and a metal working bench are carefully segregated from each other. A gluing table, painting bench and blueprint tank are near the sink adjacent to the drafting area. Separated from the shop proper by a glass panel, a smaller room offers space for storage, a library, planning table, and instructor's desk. The home economics laboratory (3) is placed near the shop structure at some distance from the quiet academic areas. A well-articulated space idea provides a combined cooking and sewing area open to the living room where meal service and managing of living quarters is taught. This is one of the few classrooms having continuous fenestration and is further distinguished by a small porch and model garden at its entrance. Lunch facilities (4) are designed as cafeterias for quick serving. The children form a line which passes handwashing troughs on one side of the building, files into the interior past the serving counter, and scatters to tables. Scraping and stacking of their own dishes is done outdoors at the other side of the building and china, glasses and cutlery are then taken into the dishwashing department of the kitchen.

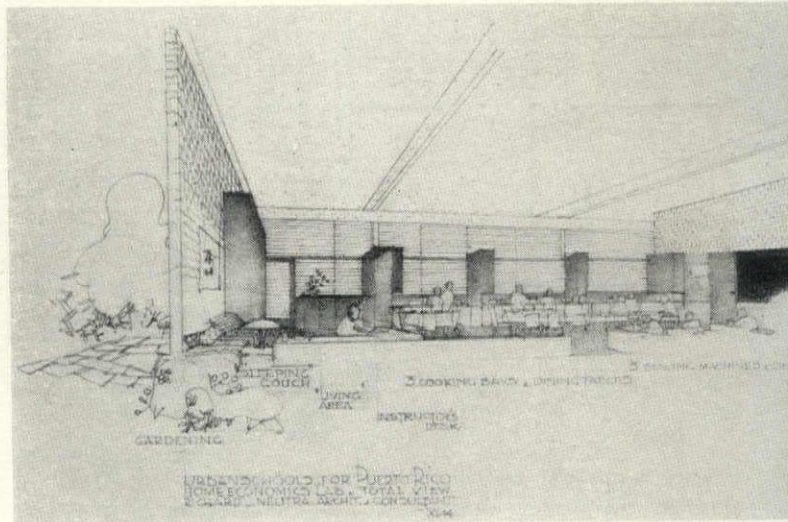
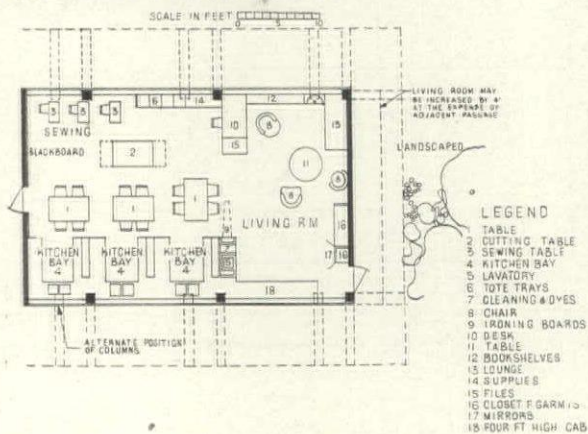
1. TYPICAL CLASSROOM



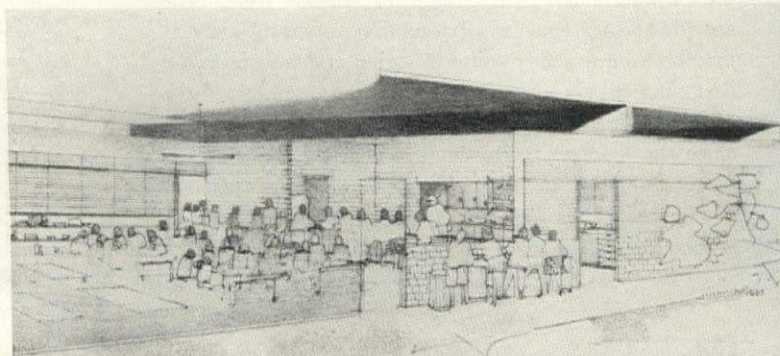
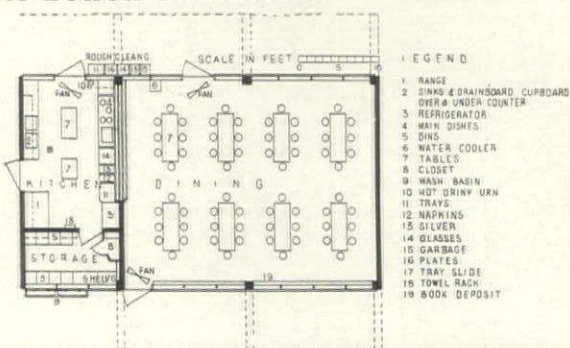
2. INDUSTRIAL ARTS



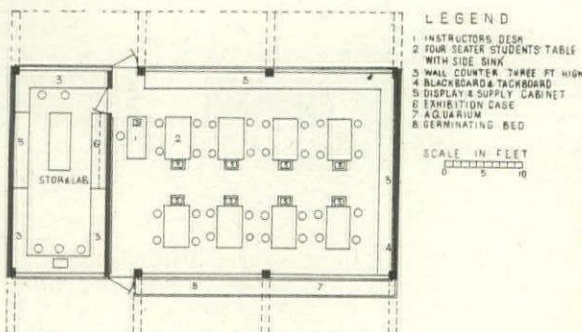
3. HOME ECONOMICS



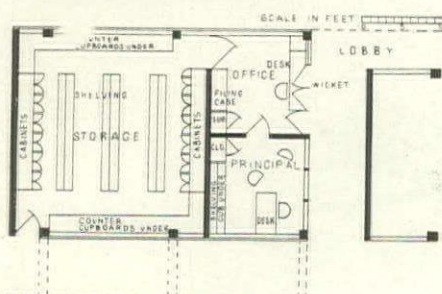
4. LUNCH FACILITIES



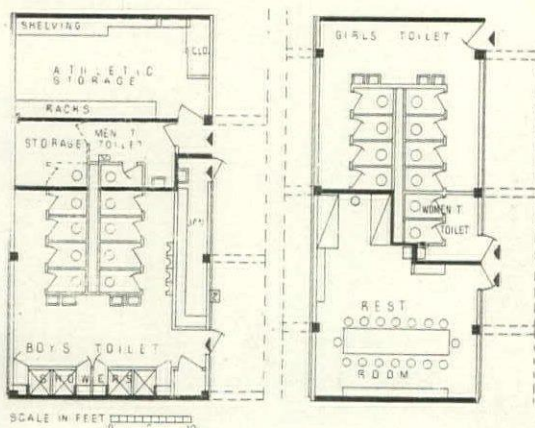
5. SCIENCE



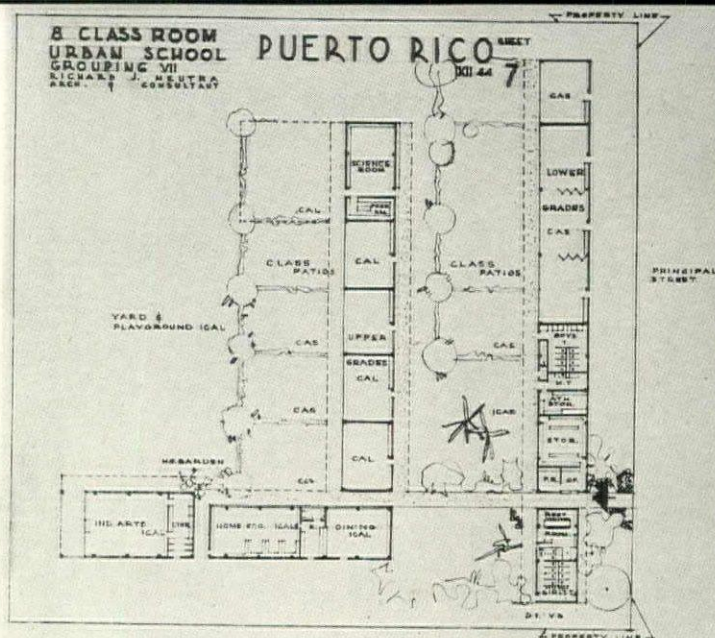
6. ADMINISTRATION



7. TOILETS

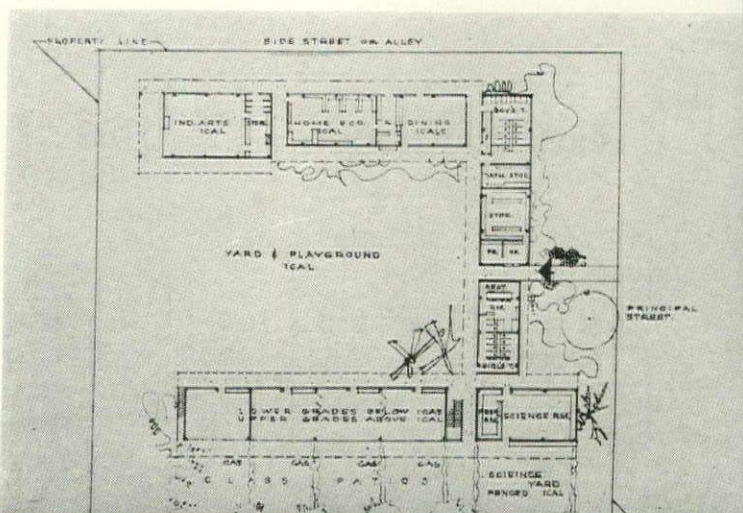
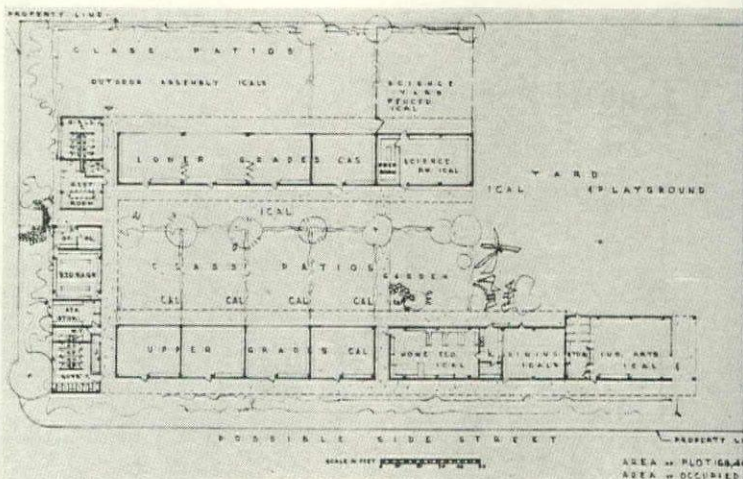


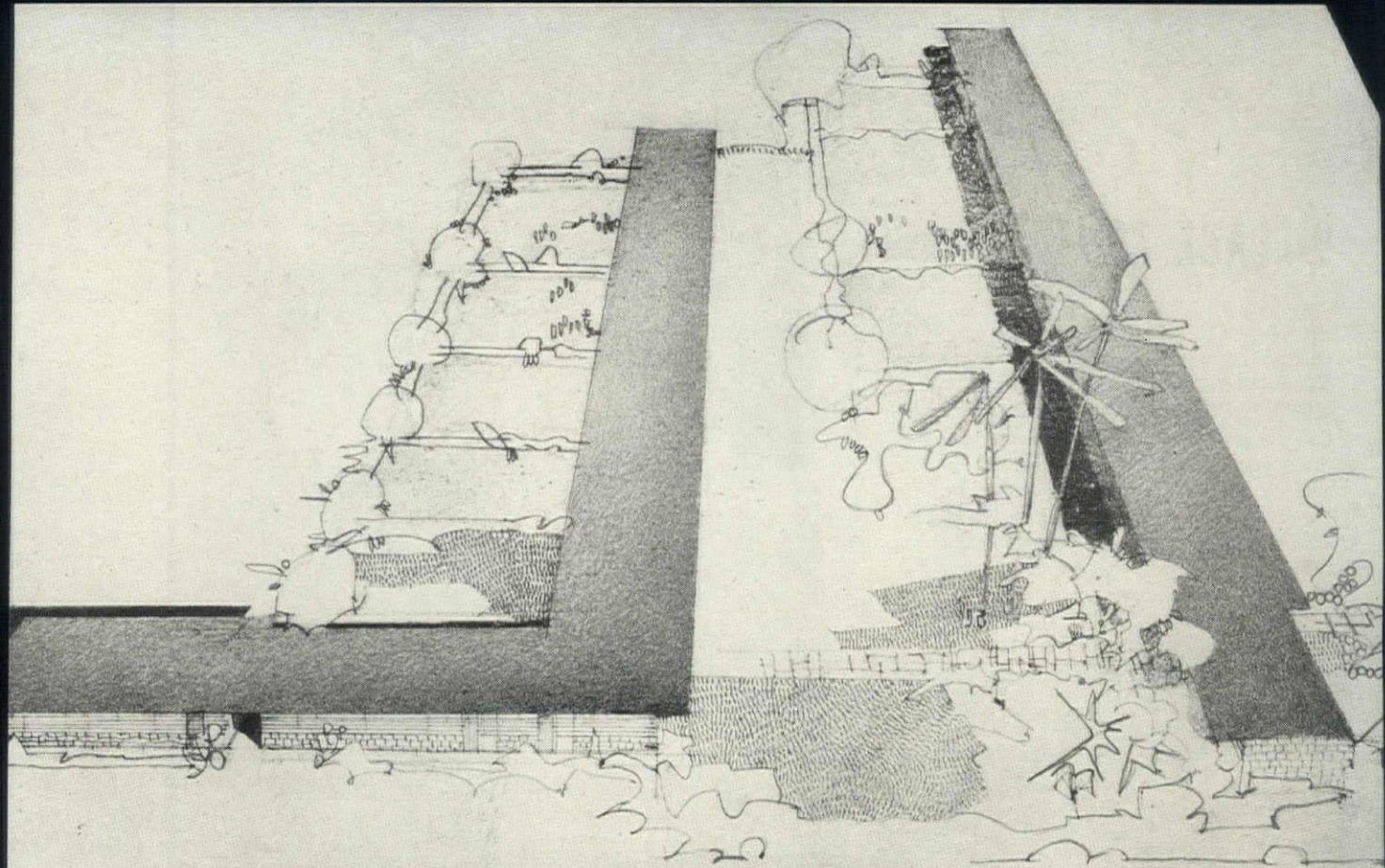
Science rooms (5) are not too specialized, but fit diversified programming without waste. Instead of distant storage for each science, extra equipment is kept in a small adjoining storage and laboratory room which may also serve for individualized experimentation. The main room is equipped with demonstration table, regular school seats and a bench along the window front. The outside science court is particularly important since it may be used to study soil cultivation and for observing living insects, reptiles, birds, etc. Administration offices (6) including a reception room for visitors, principal's office and teachers' restroom, are near the building entrance. Toilets (7) have separate sections for teachers and students. Showers and a space for athletic storage is included in the men's room.



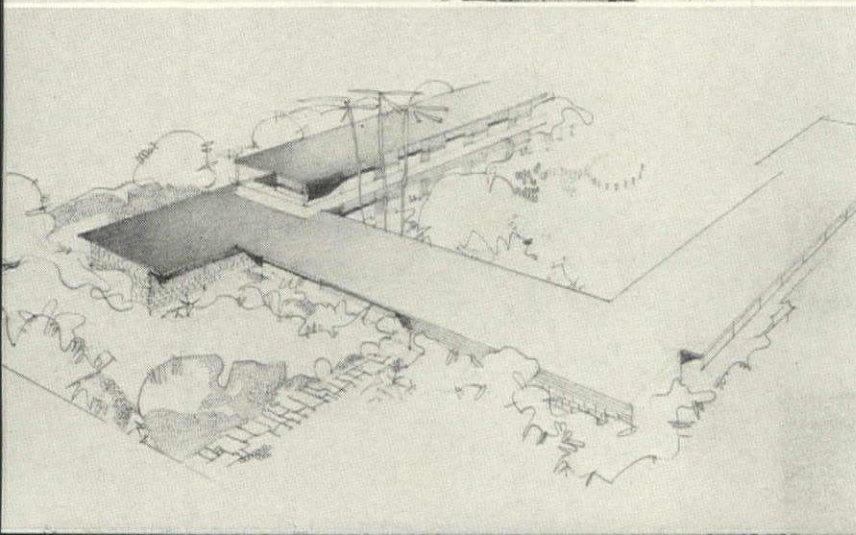
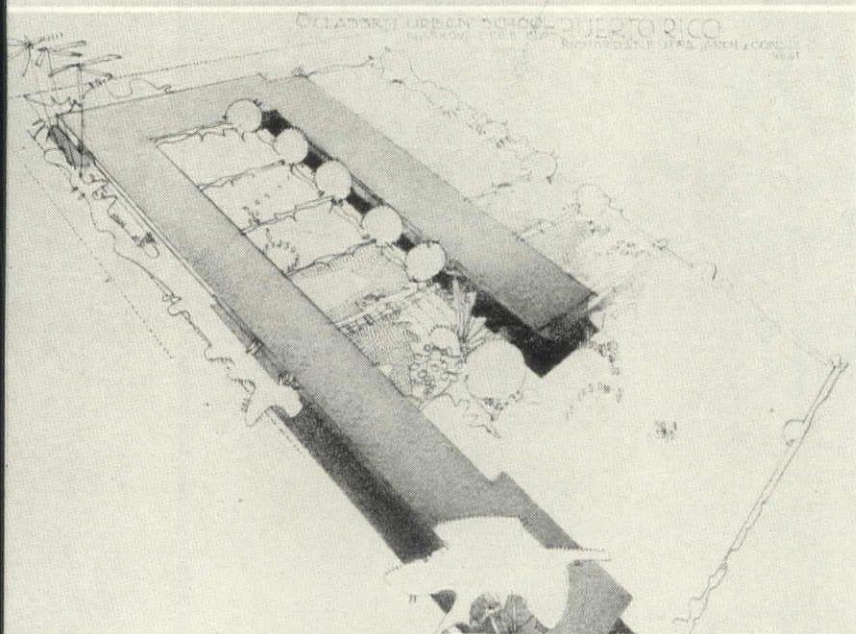
GROUPING

School units can be arranged in innumerable combinations, but must be oriented to catch the breeze. For this reason, enclosed patios and the conventional block arrangement of rooms with windows only on one side are never used. Instead, single rows or freestanding rooms are the rule. Of the many variations, three are shown to illustrate the flexibility possible with the same schoolroom units. The first plan (above), an L-shaped arrangement plus a long separate row, is for a square plot. Lower grades and restrooms are grouped in the free row, upper grades are in the parallel row, and industrial arts, home economics and lunch facilities are apart from quiet classroom areas. This segregation is a keynote of all the plans. The second one (below) is varied to fit a long, narrow site, the third (bottom) is a two-story plan.



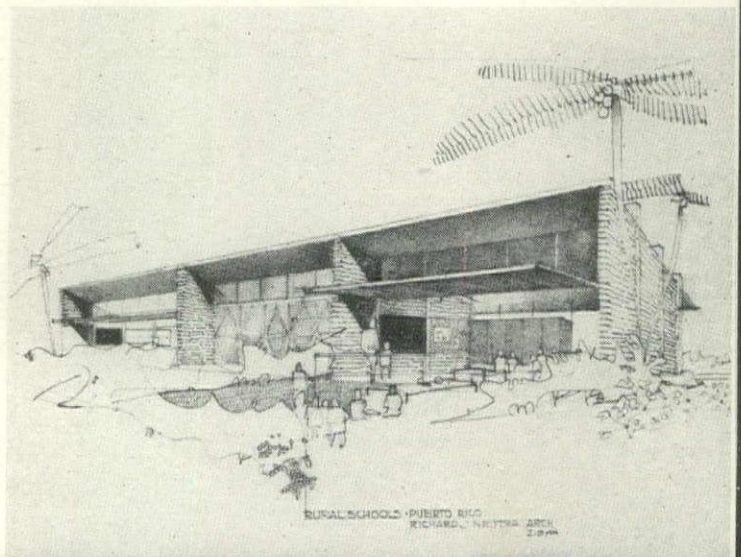
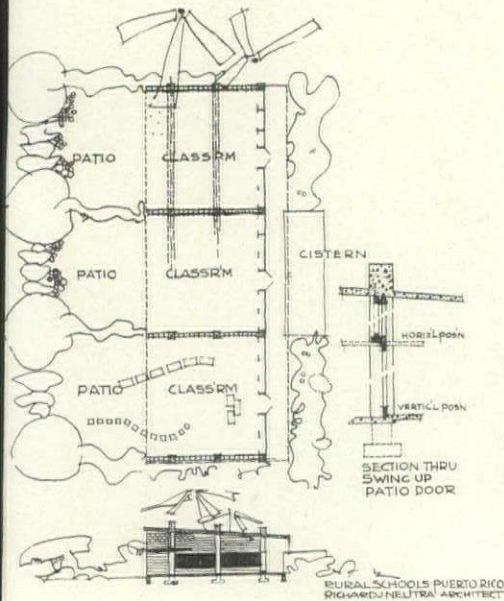
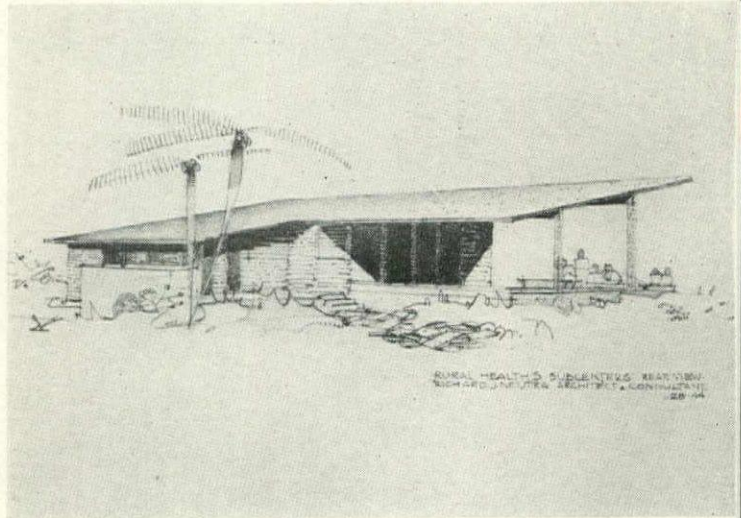
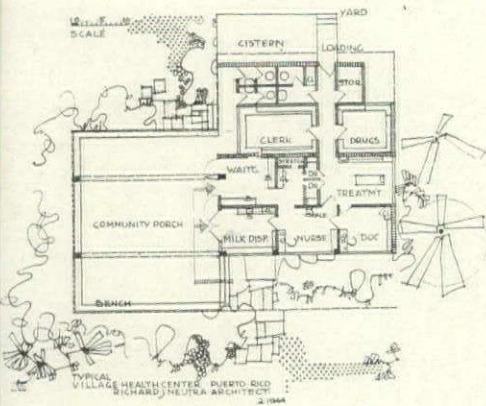
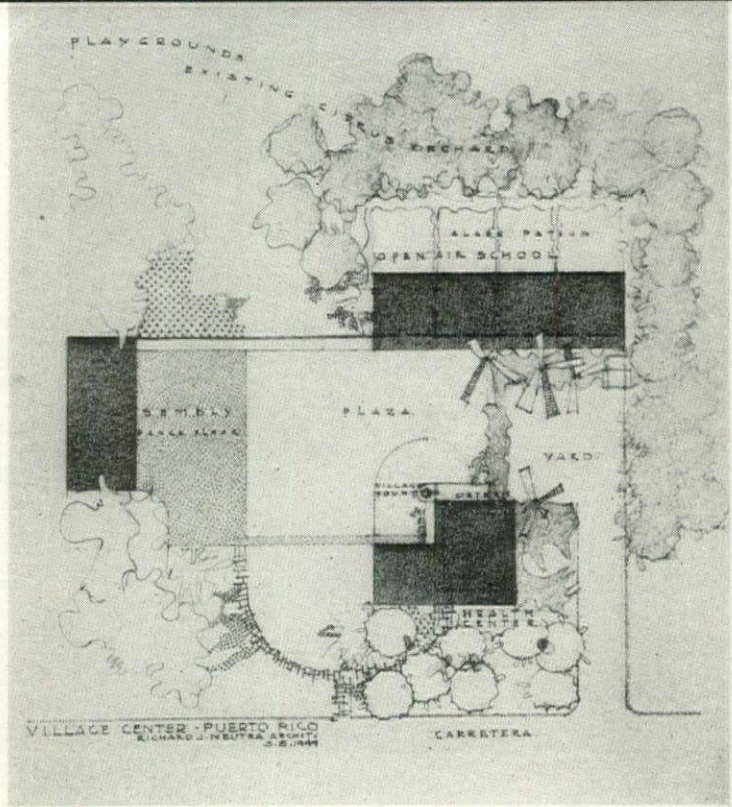


8 CLASS URBAN SCHOOLS PUERTO RICO
 ONE STORY GROUPING #7
 RICHARD J. NEUTRA ARCHITECT & CONSULTANT
 VI 44



VILLAGE CENTER

One of the most important ideas in the Neutra plan is his grouping together of school, health center, and, in larger villages, a social hall to provide some real focus for community life. Here music and entertainment, partly provided by the villagers themselves, partly by teachers or professionals, will help to make the people feel that the center belongs to them. Adult education will also be carried on—sewing clubs, agricultural meetings, classes in animal husbandry, plus broadcast programs of news and civic issues. With this end in mind, Neutra has related the design of all the buildings to insure a harmonious group.



HOUSES

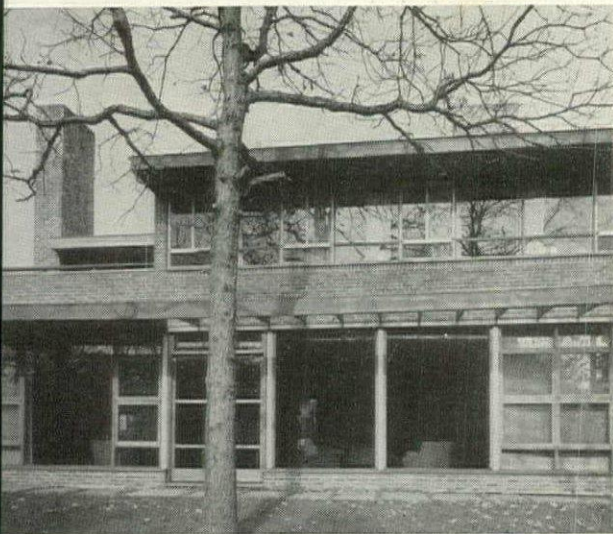
A large house in Rhode Island (p. 132) . . . Hillside house, San Francisco, Calif., (p. 134) . . . A modern patio plan (p. 138) . . . New York City town house (p. 140).

WOOD SUNSHADES, PLATE GLASS AND BRICK WALLS DETERMINED THE UNUSUAL CHARACTER OF THE FACADE

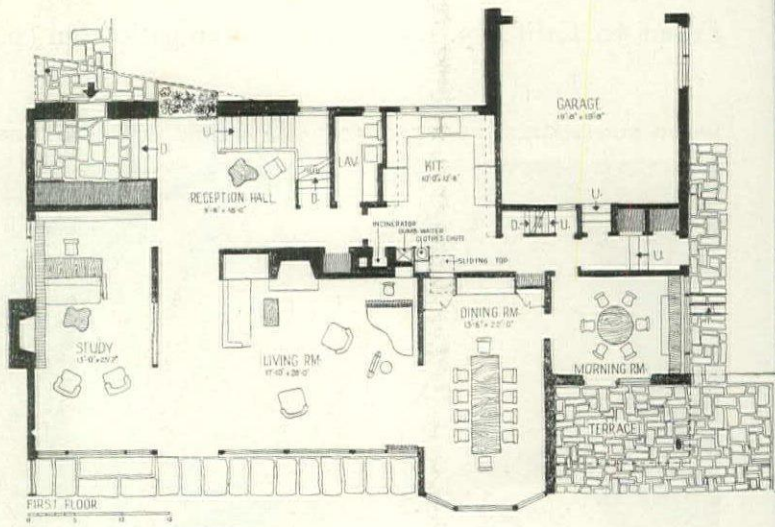


HOUSE IN PROVIDENCE, R. I. Samuel Glaser and Ladislav L. Rado apply mod

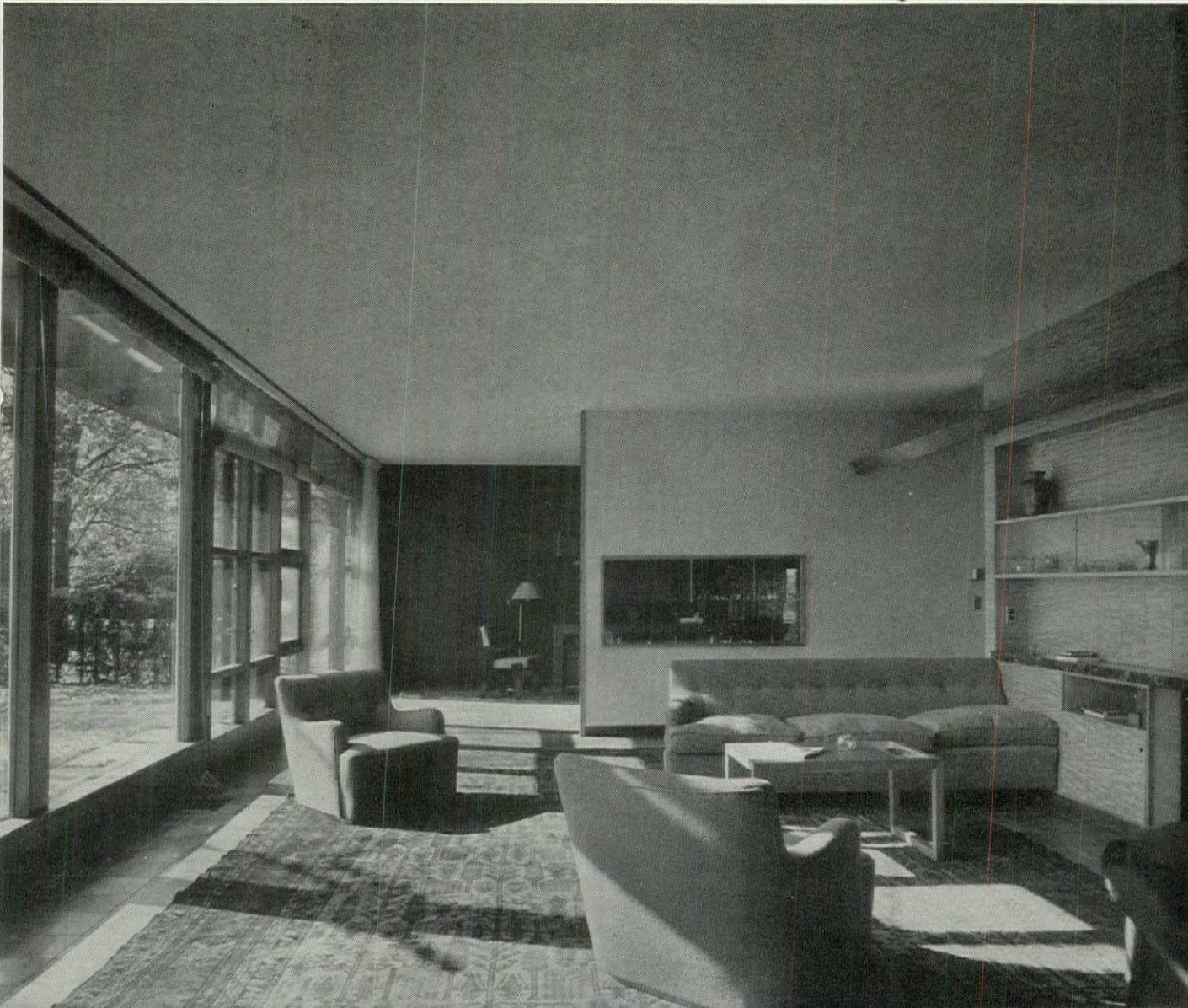
Photo: Cushing Gellatly



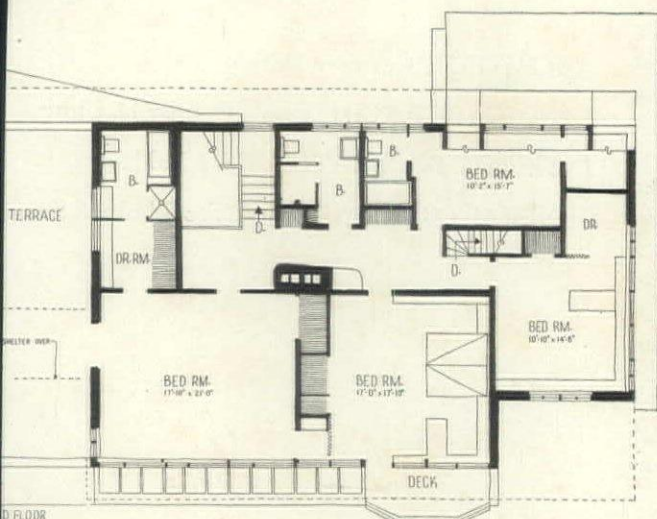
EXTERIOR BESPEAKS STURDY CONSTRUCTION



CONTINUOUS WINDOWS AND OPEN RELATIONSHIP OF LIVING ROOM AND STUDY ADD TO GENERAL SENSE OF SPACIOUSNESS



ign to an old-fashioned living pattern.

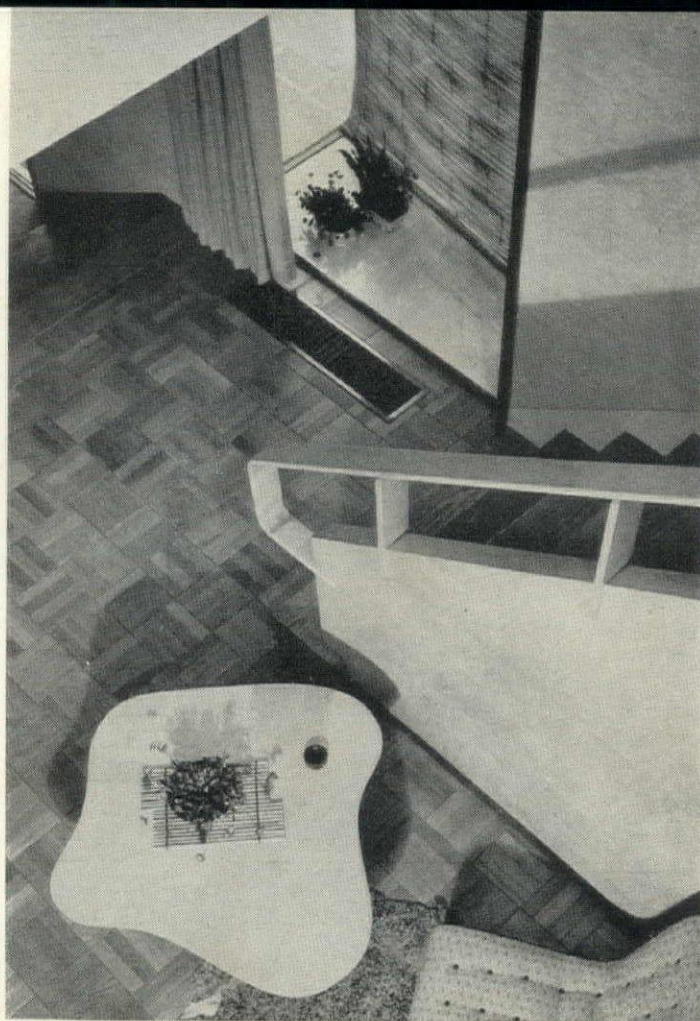
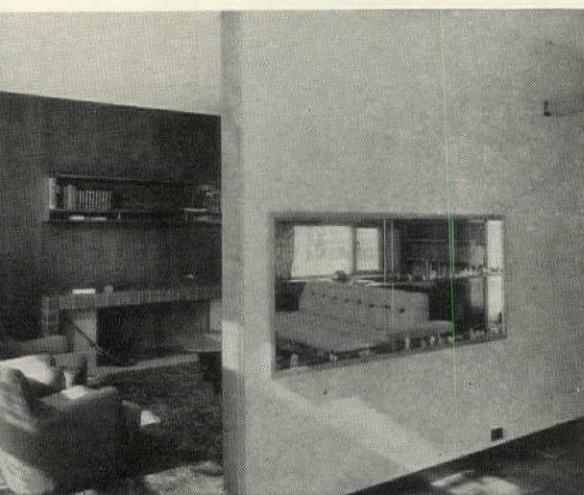


GENERAL CONTRACTOR, F. N. Gustafson & Son

ENING IN PARTITION IS USED AS A DISPLAY CASE



UDY IS FURNISHED AS A SECONDARY LIVING ROOM



STAIR DETAIL ECHOES SUBSTANTIAL CHARACTER OF HOUSE

Since the great majority of modern houses built within recent years has emphasized economy of space, this larger, more formal example is a refreshing variation. The inclusion in the plan of a reception hall and morning room is reminiscent of a living pattern more often associated with traditional than modern architecture, but this impression is counteracted by a thoroughly modern organization of space, particularly as it affects circulation and service facilities. Only two short partitions divide the large living-dining area that occupies the entire front of the house. These, however, provide the necessary feeling of intimacy. Two fireplaces, one in the living room and one in the study, create two distinct furniture groups dividing the rooms atmospherically rather than structurally. The morning room, on the other hand, is segregated and can be reached from the upstairs without entering the main living area. A generous terrace is provided on each floor. Both are partially sheltered and located for maximum privacy. The second floor plan stresses light, comfort and convenience. The two bedrooms at the front of the house can be used individually or shut off to form a double sleeping unit with its own dressing room and bath.

CONSTRUCTION OUTLINE:

FOUNDATION—concrete. Waterproofing—Toch Bros. STRUCTURE: Exterior walls—brick veneer, boarding, studs, U. S. Gypsum Co. rock-wool, wire lath and plaster or plywood. Floors—oak, E. L. Bruce Co. ROOF—slate. Deck—Traffic Top, Celotex Co. INSULATION—rock-wool, U. S. Gypsum Co. SHEET METAL WORK—lead coated copper. Ducts—galvanized iron. WINDOWS: Sash—Fenestra steel, Detroit Steel Products Co. Weatherstripping—Chamberlin Metal Weatherstrip Co. Glass—Thermopane and plate, Libby-Owens-Ford Glass Co. DOORS—flush plywood, Roddis Lumber & Veneer Co. Garage doors—Overhead Door Co. HEATING—forced warm air system, filtering and humidifying and convectors. Boiler—International Boiler Works Co. Thermostat—Minneapolis-Honeywell Regulator Co.

HILLSIDE HOUSE, SAN FRANCISCO, CALIF. An inverted scheme by Gardner Dailey

Fitting a ten room house to a 30 ft. lot is in itself a major problem, but in the design of this residence the architect was faced with other equally challenging considerations. The site is located in a built-up hillside section and in order to overcome the surrounding obstructions to the view, it was most logical to reverse the conventional house plan and place the main living area on the top floor with bedrooms on the two lower levels. In California, however, where terrain and climate have encouraged a highly flexible building pattern, this solution is less of an innovation than it would be in other sections of the country.

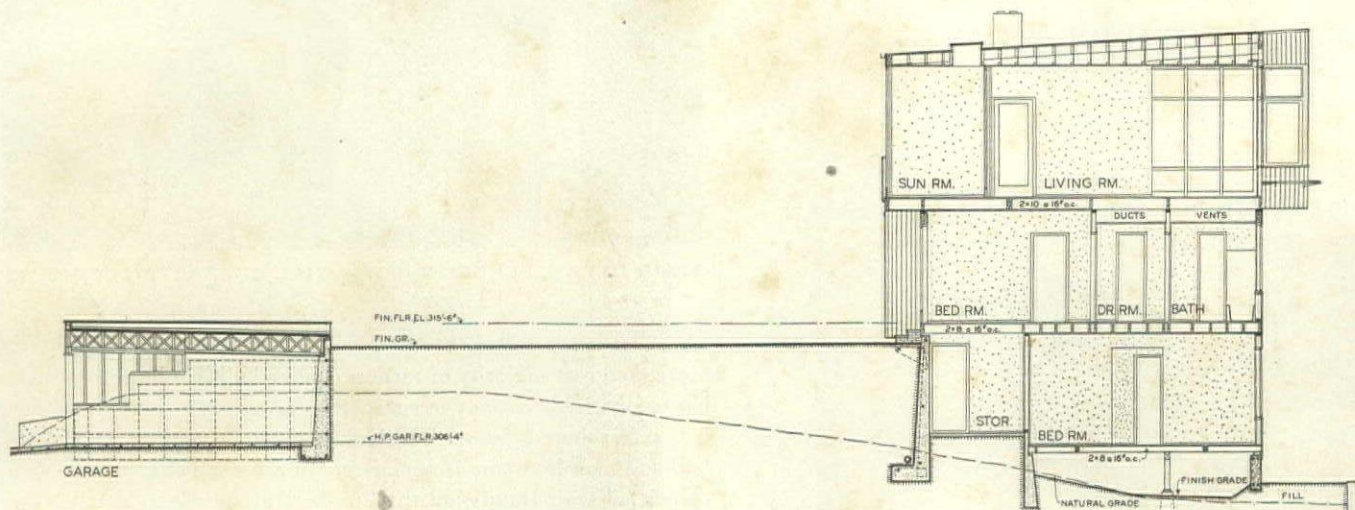
The owner, whose hobby is gardening, wished to have the house subordinated to the grounds. By placing it at the back of the property, the garage at the front and filling the intervening grade to the level of the garage roof, a generous garden with a planting area on the garage roof was produced. The surrounding fence of redwood siding is treated as an integral part of the house and garage walls.

ARCHITECT, Gardner Dailey

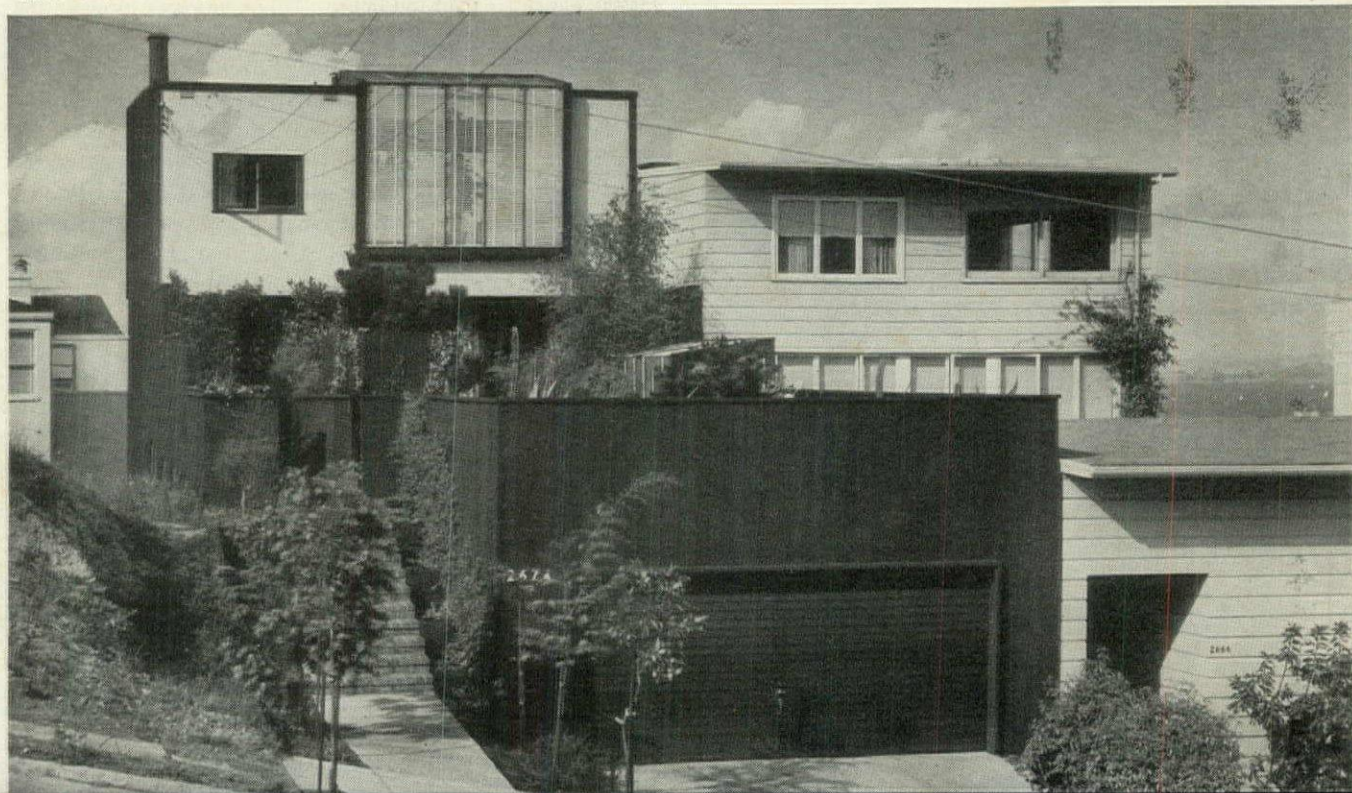
LANDSCAPE ARCHITECT, Thomas D. Church

INTERIOR DECORATOR, Fritz Baldauf

GENERAL CONTRACTOR, C. Stockholm & Sons

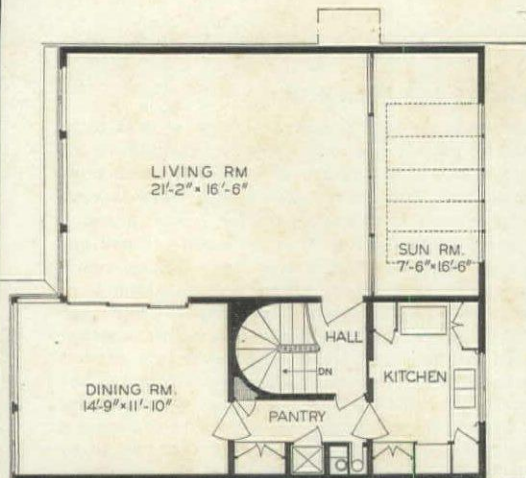


SIMILAR PARTS, CONTRASTING FACADES IDENTIFY TWO HILLSIDE HOUSES BY ARCHITECTS DAILEY AND WURSTER



ley makes the most of a harbor view.

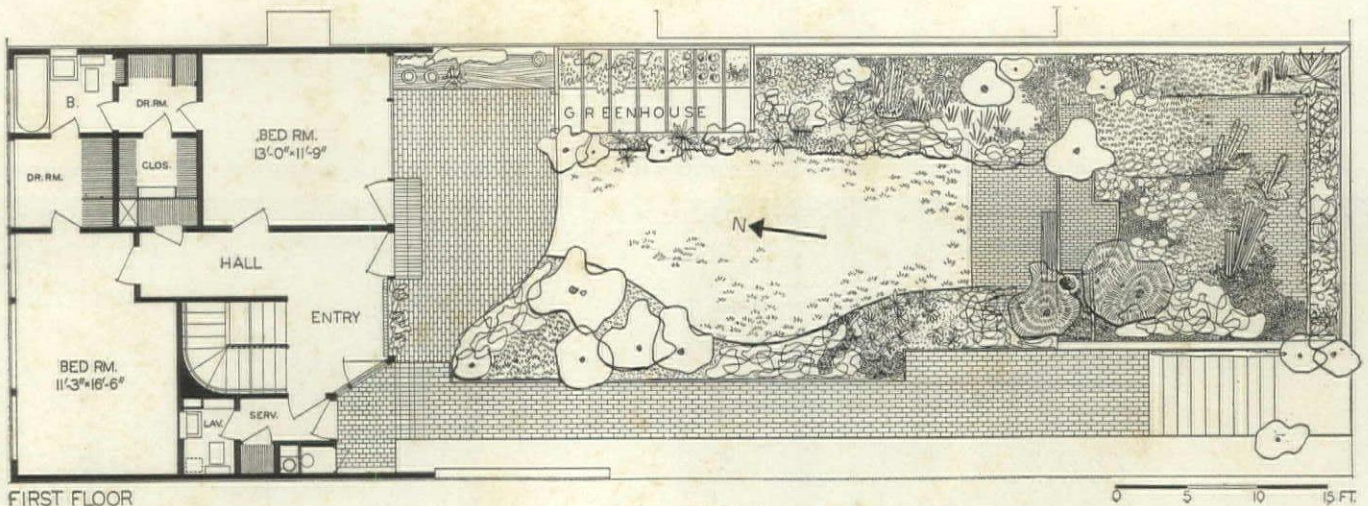
Photos: Roger Sturtevant



SECOND FLOOR

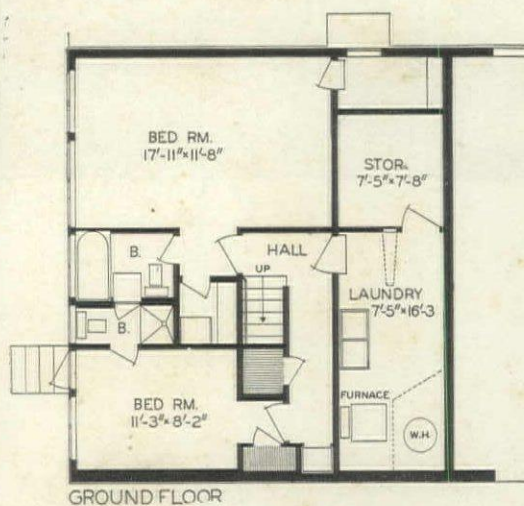


ENCLOSED GARDEN HAS ABUNDANT PLANTING, COMPLETE SECLUSION

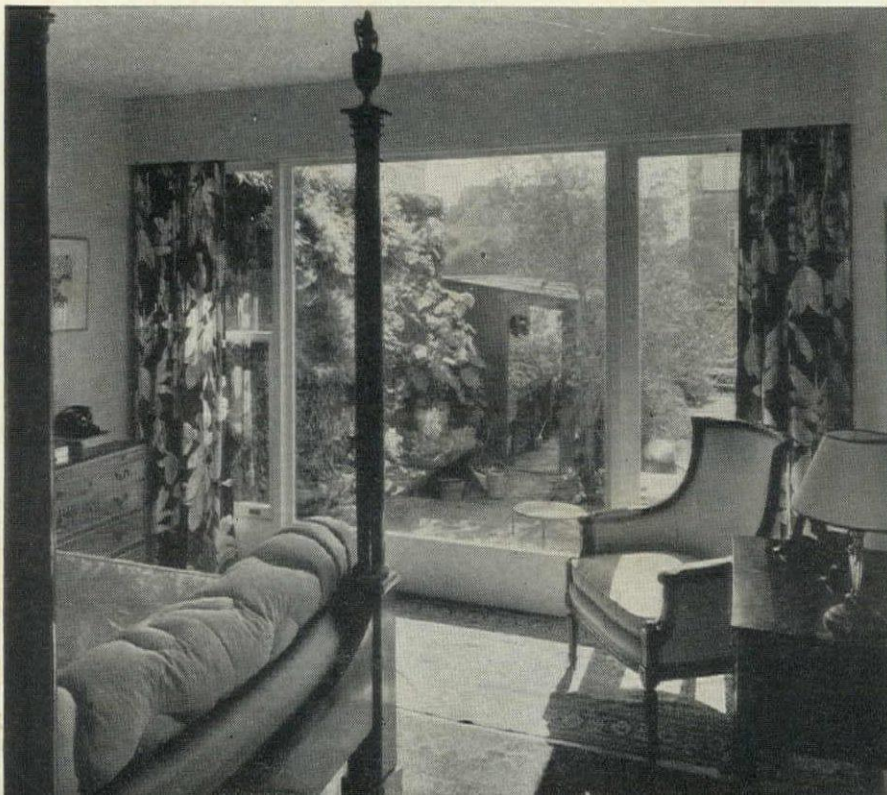


FIRST FLOOR

FIRST FLOOR BEDROOM OPENS DIRECTLY INTO THE FRONT GARDEN



GROUND FLOOR



HILLSIDE HOUSE, SAN FRANCISCO, CALIF. Simple, straightforward design and large glass areas for

On entering the house from the garden, one actually arrives on the second floor, so only one flight remains before reaching the living room. The lower bedroom floor which has an excellent view, is above the grade of the rear of the lot but below the grade of the garden. The kitchen on the top floor is served by a dumbwaiter which acts as a delivery box. This and the garbage chute give the kitchen complete service without use of the stairs.

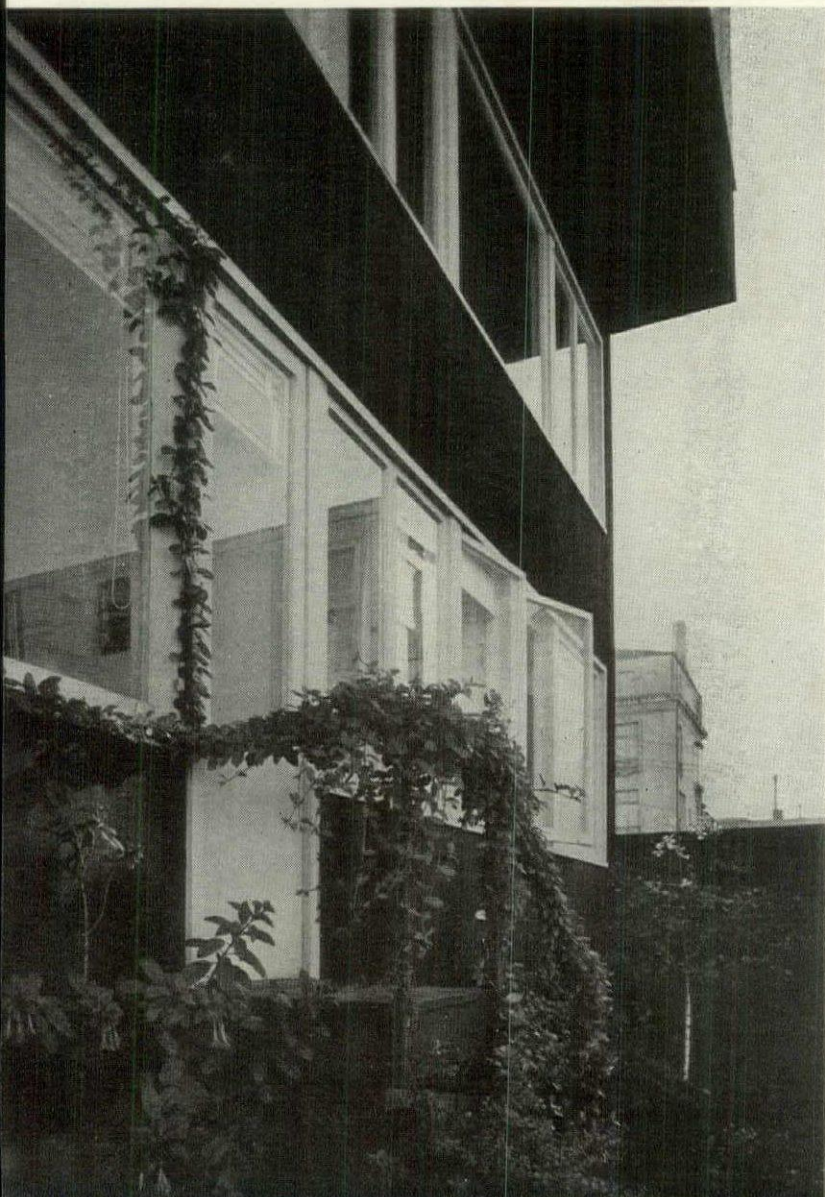
The front face of the house is of plywood painted cream. All other walls are of stained redwood siding. The garage roof, although of wood construction, is covered by a succulent garden growing in five inches of sand. The joists supporting the roof were designed to carry this load and an extra heavy roofing membrane was placed over the sheathing.

The interior architecture was carried out with the purpose of creating a contemporary background for the owner's collection of antiques. This consideration, however, in no way hampered an honest structural solution. The absence of a fireplace in the living room is a result of the owner's desire to have the conservatory the focal point of the living area.

FINISHES AND EQUIPMENT:

Construction is Douglas fir frame with 1 by 8 resawn redwood set vertically and stained. Front and rear elevations are of post and lintel construction. The front face of the house is covered with hot pressed exterior grade plywood painted cream white. Interior walls and ceilings are of plaster. Floors are oak, dining room, garden room, kitchen, pantry and bathrooms are covered with linoleum. The kitchen on the top floor is served by a dumbwaiter and this together with the garbage chute gives complete service without the necessity of using the stairway. The heating system is a forced warm air system using a Customaire furnace by the Heating Equipment Co. The automatic storage water heater is by Pittsburgh Water Corp. All lighting is indirect from fixtures designed by Hanschen & Goddard.

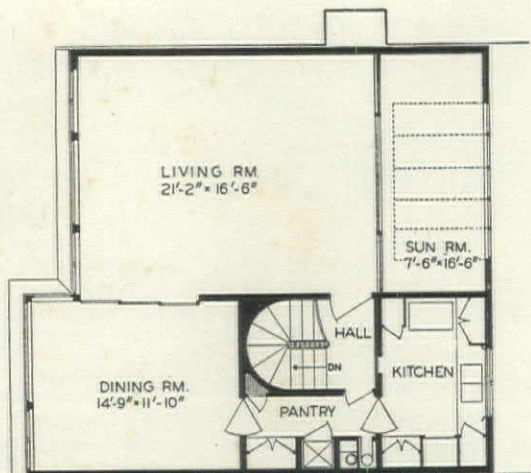
REAR OF HOUSE HAS RIBBON FENESTRATION, REDWOOD SIDING



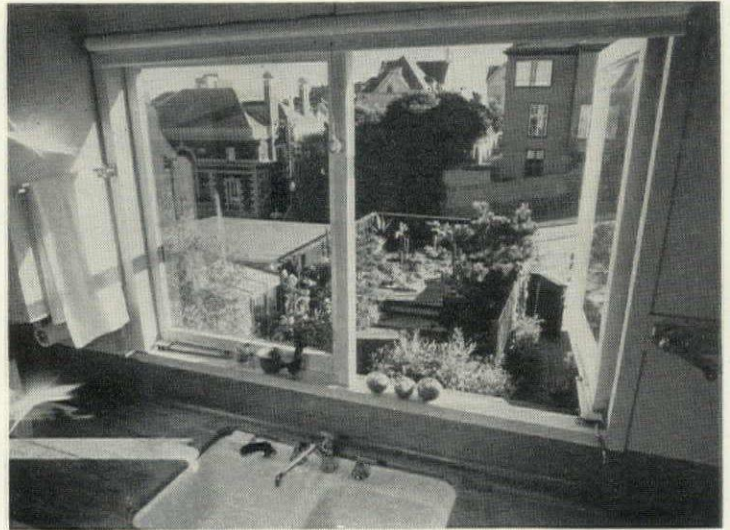
BAY WINDOW CREATES SMALL CONSERVATORY



integrated setting for the owner's twin hobbies, gardening and antiques.

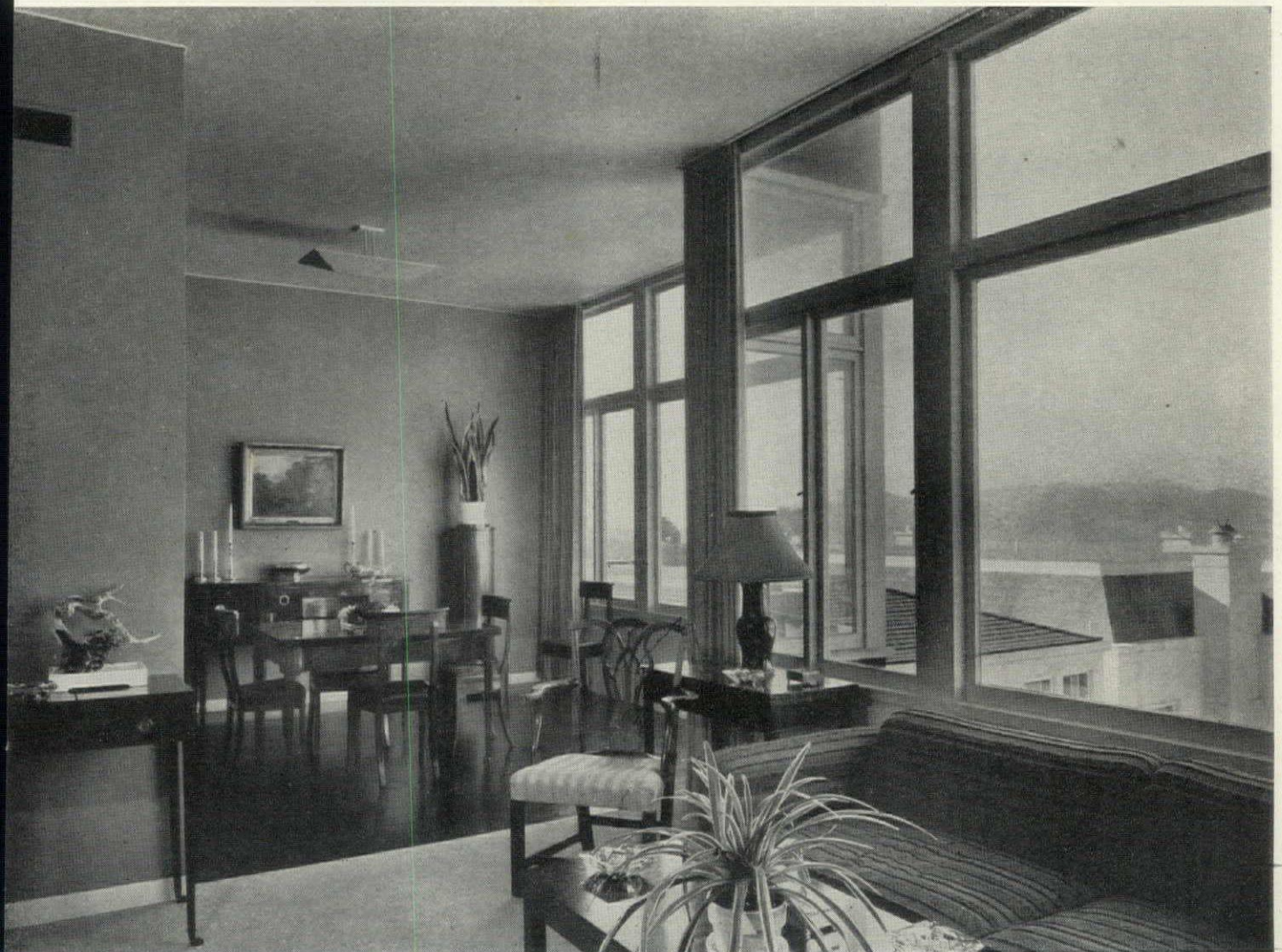


SECOND FLOOR

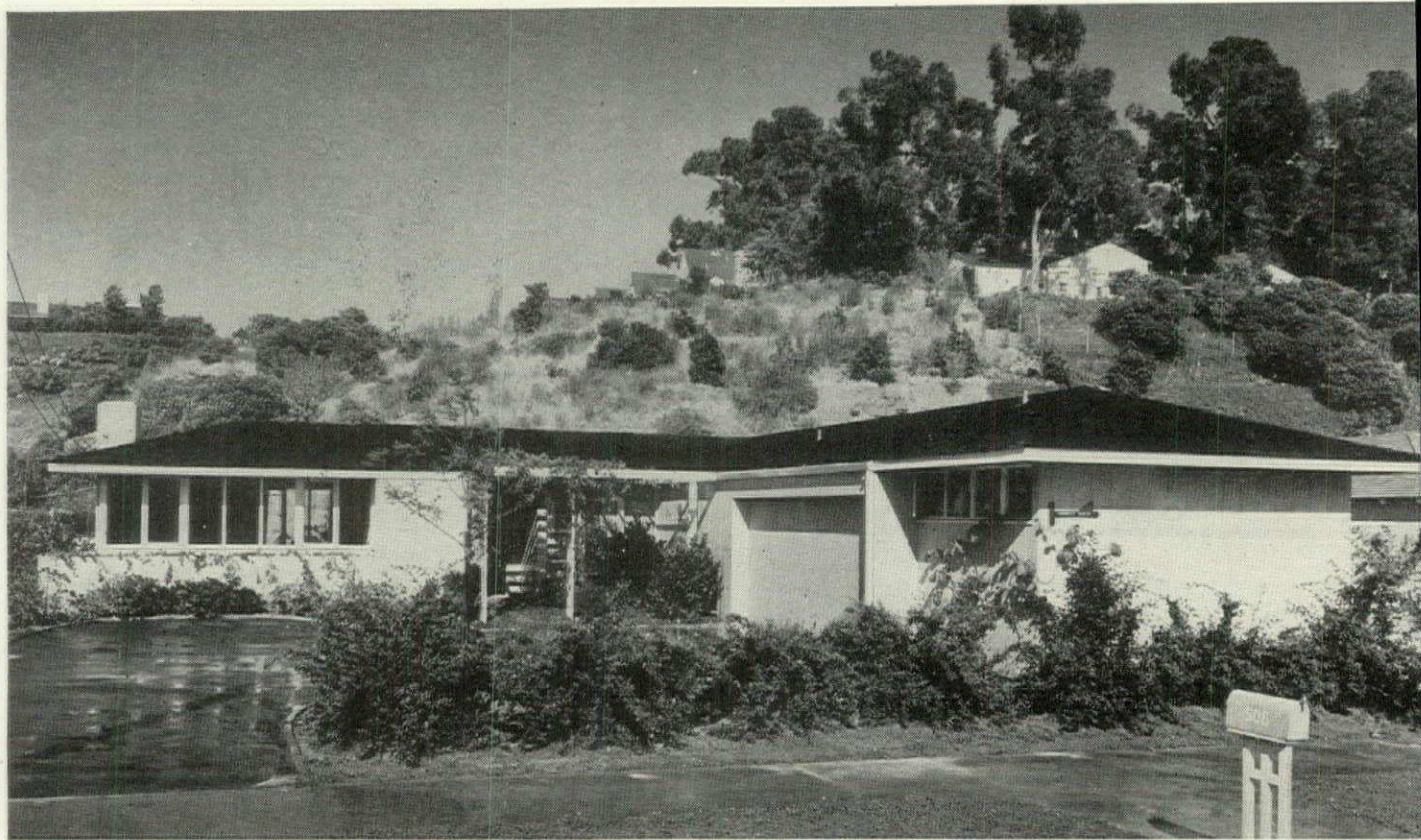


SECOND FLOOR KITCHEN OVERLOOKS ENTRANCE AND GARDEN

LARGE EXPANSE OF GLASS ON SECOND FLOOR OPENS THE LIVING-DINING AREA TO A PANORAMA OF HILLS AND WATER



HOUSE IN WEST LOS ANGELES, CALIF. Thoughtful location and separation



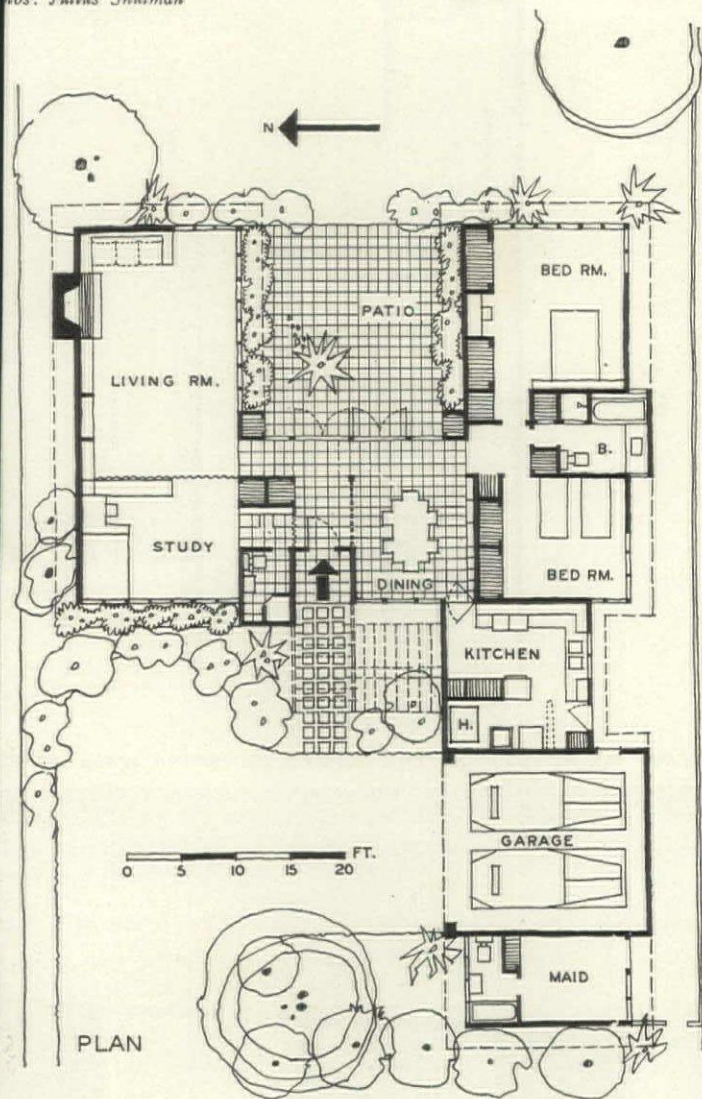
GARAGE AND SERVICE WING AT FRONT OF HOUSE SHIELDS ENTRANCE COURT, AFFORDS AMPLE AND CONVENIENT PARKING

LIVING ROOM HAS A TRIM, URBAN APPEARANCE CONTRASTING AGREEABLY WITH THE RUSTIC INFORMALITY OF THE PATIO



g and sleeping areas effects a major improvement in the familiar patio plan. Griswold Raetze, Designer.

Photos: Julius Shulman

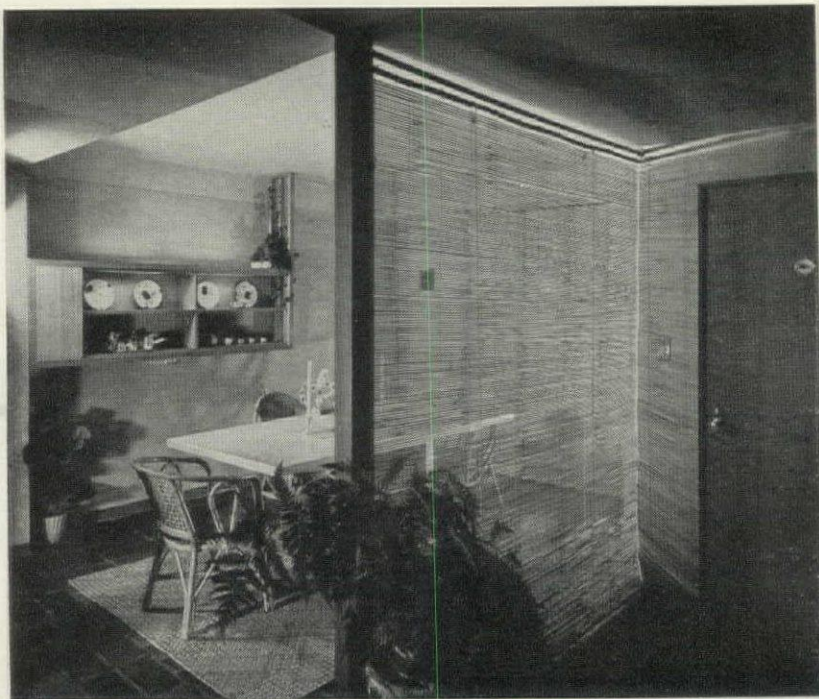


The mild climate of the southwestern states accounts for the great popularity of patio houses in that section of the country. It does not, however, explain the persistent and impractical custom of locating the living room across the end of the court so that it becomes virtually a passageway between the other rooms of the house. In this case the conventional plan has been greatly improved by clearly dividing the living and dining areas and placing them on either side of the patio. Because of its paved flooring and open treatment the dining room appears on the plan as part of the court. In reality it functions more or less as a unit away from the main circulation and closely related to the service wing. The orientation of all rooms to the south provides the sleeping area with needed privacy and opens the living room to the patio. While the location of the maid's room beyond the garage gives it desirable seclusion, this solution would hardly be practicable in a colder climate.

CONSTRUCTION OUTLINE:

STRUCTURE: Exterior walls—V-joint vertical boards; inside—studs and plaster. Floors—concrete slab and tile. WEATHERSTRIPPING—Chamberlin Weatherstrip Co. WINDOWS: Sash—steel casement, Continental Specialties Co., Ltd. Glass—double strength, quality B, Libbey-Owens-Ford Glass Co. WALL COVERINGS: Kitchen and bathrooms—Sanitas, Standard Coated Products Corp. HARDWARE—Schlage Lock Co. ELECTRICAL INSTALLATION: Wiring—flexible conduit. Switches—Hart & Hegeman. Fixtures—Pryne & Co. KITCHEN EQUIPMENT: Range and refrigerator—Westinghouse Electric & Mfg. Co. LAUNDRY AND BATHROOM EQUIPMENT—Crane Co. HEATING—warm air, forced air unit, Race furnace, Southern California Air Conditioning Co.

HANGING REED SCREEN DIVIDES DINING ROOM FROM ENTRANCE HALL



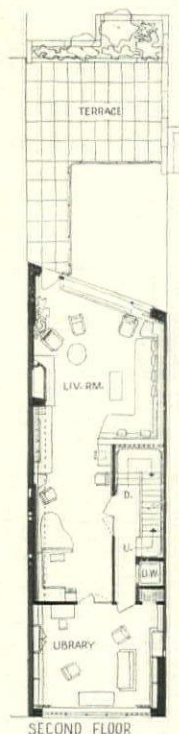
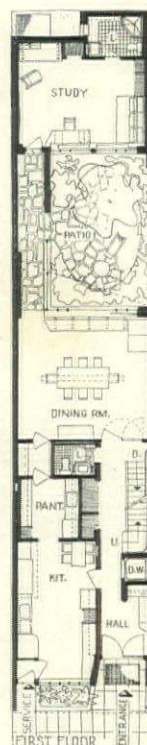
A VINED TRELLIS SHADES THE FRONT DOOR



TOWN HOUSE, NEW YORK, N. Y. This Lescaze design was included in the Model

The venerable brownstone front, despite its awkward proportions, has at one time or another undergone a wide variety of ingenious rejuvenating measures. This example is one of the latest and best. Designed for urban living in its most gracious form, the plan allocates one entire floor to a living room and library and places smaller living areas on all other floors. The study, separated from the main structure by an atrium, can be used for relaxation and entertainment independently of the main living room and its adjoining library. Guaranteeing maximum privacy for all members of the household, the two children's rooms, one on the third and one on the fourth floor, have adjacent sitting rooms. Service facilities occupy the front of the house at street level where the outlook is least favorable. The dining room at the rear faces the study across a pleasant garden.

Because of the long narrow shape of the plan, bath and storage facilities have been concentrated in the center of the house to free high priority exterior wall space for the more important rooms. The rear of the house at second and third floors levels is cantilevered at an angle. This affords a southwesterly orientation and takes advantage of added light from the long axis of a typical New York grid-shaped block. The projection also provides a small overhang for the garden and a balcony for the top floor.



SECOND FLOOR LIVING ROOM EXTENDS THROUGH TWO-THIRDS OF THE HOUSE'S DEPTH. GLAZED, SLANTING WALL AT EN

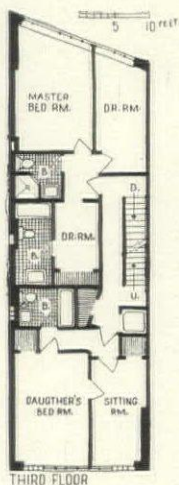


seum's recent selection of outstanding architecture.

ARCHITECT, William Lescaze

HEATING ENGINEER, Leslie Hart

GENERAL CONTRACTOR, Sheppard-Pollak

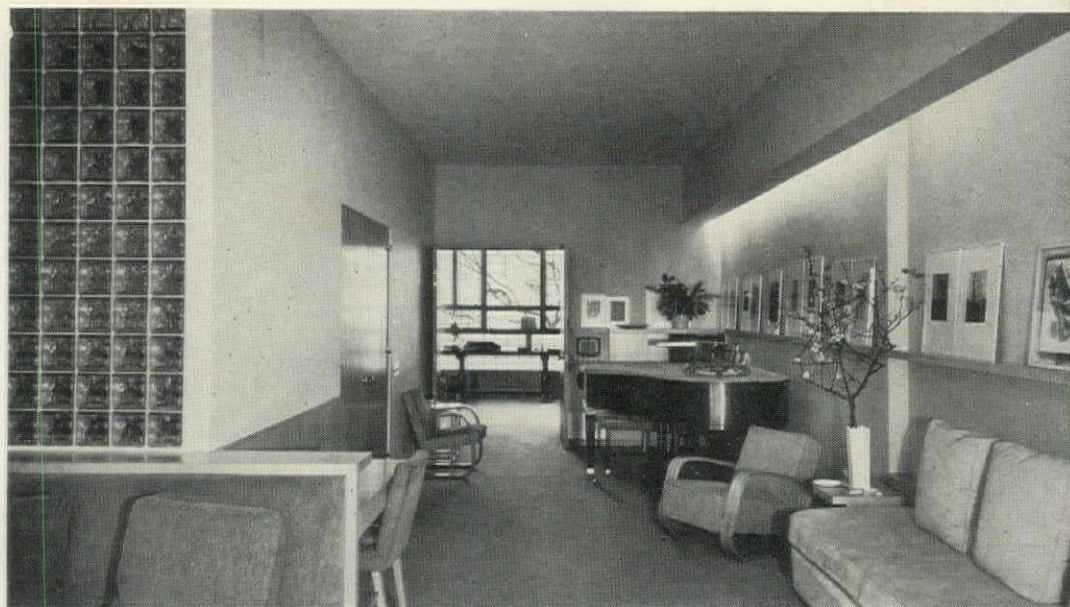
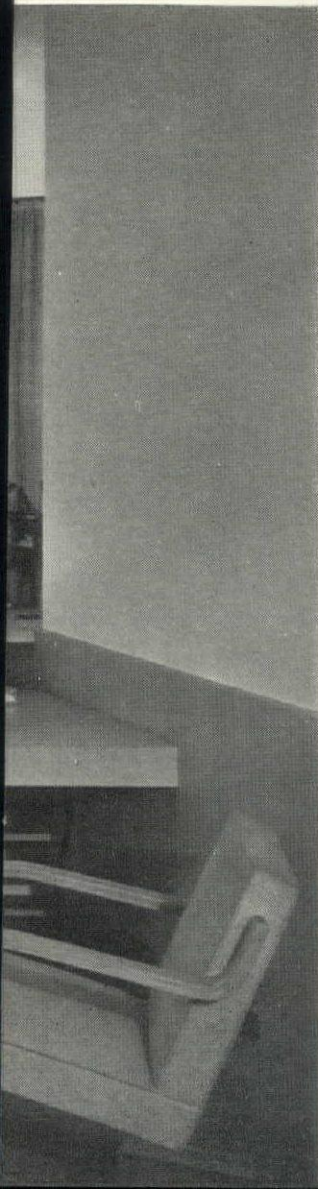


Photos: Gottscho-Schleisner

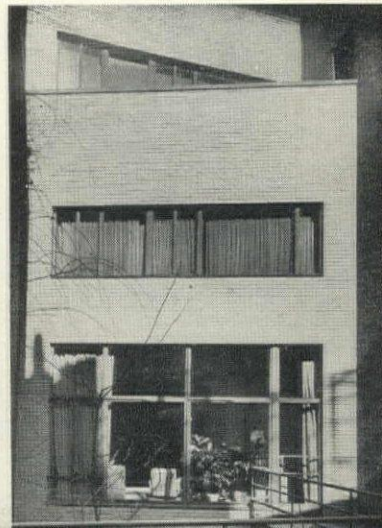


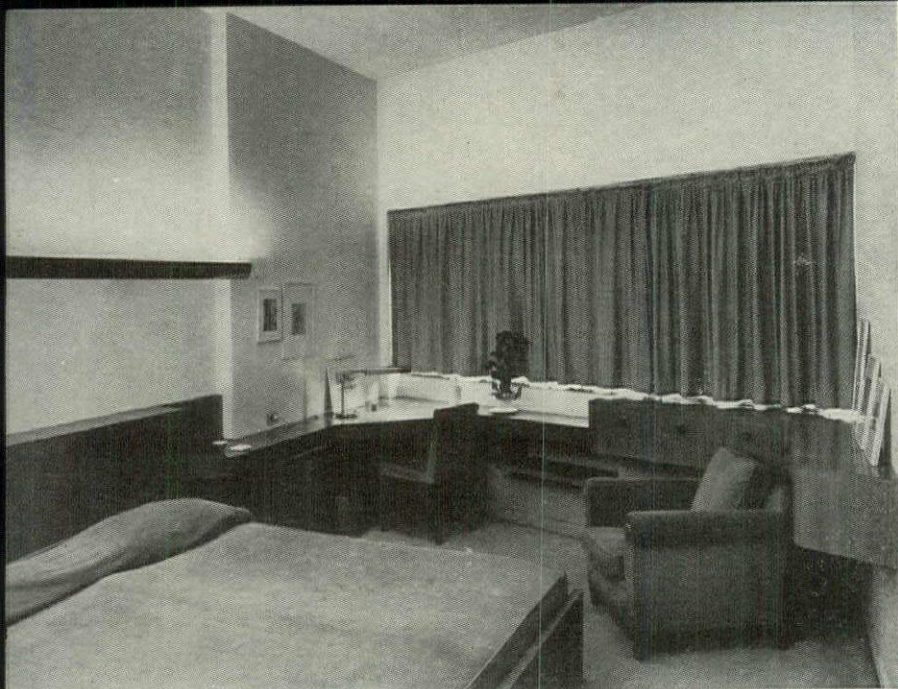
ENS ONTO ROOF TERRACE

LIBRARY AT OPPOSITE END OF ROOM CAN BE CLOSED OFF WITH FOLDING DOORS



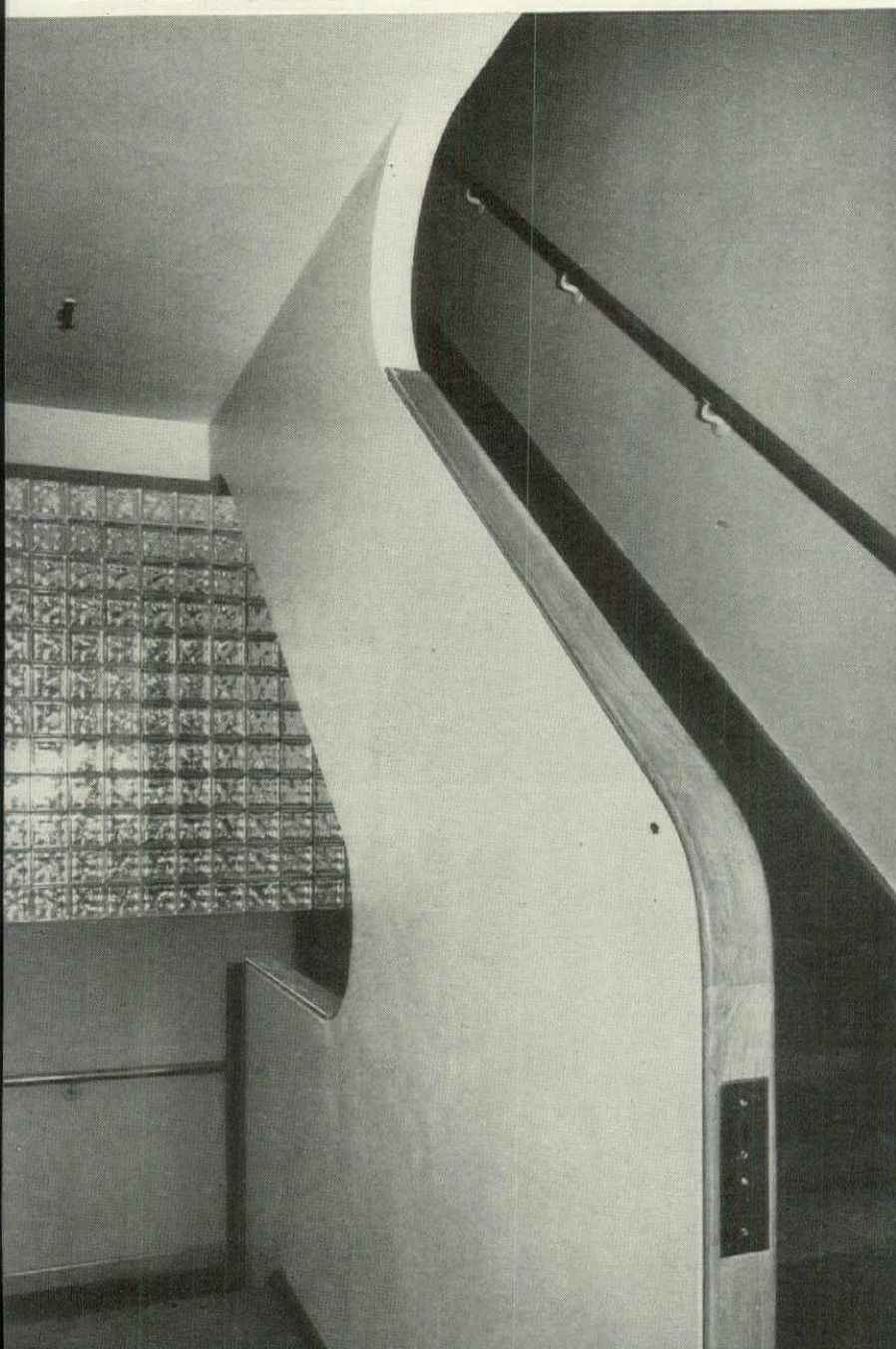
CANTED BACK WALL IS A STANDARD
FEATURE OF LESCAZE'S TOWN HOUSES





COMFORTABLE MASTER BEDROOM FACES REAR GARDEN ON THIRD FLOOR

CENTRAL STAIRWELL IS LIT BY GLASS BLOCK PANEL IN LIVING ROOM



CONSTRUCTION OUTLINE:

STRUCTURE: Exterior walls—4 in. face of light brick, 8 in. common brick, wood furring and plaster. Floors—oak. **ROOF**—tar and felt, The Barrett Co. **INSULATION:** Roof—rockwool. **FIREPLACE DAMPER**—H. W. Covert Co. **SHEET METAL WORK:** Flashing—copper. Lead-ers—cast iron. Ducts—galvanized iron. **WINDOWS:** Sash—steel, Croft Steel Windows, Inc. Glass—plate, Pittsburgh Plate Glass Co. Glass blocks—Decora, Pittsburgh-Corning Corp. **FLOOR COVERINGS:** Main rooms—carpet. Kitchen—linoleum. Bathrooms—tile. **HARDWARE:** Schlage Lock Co. **ELECTRICAL INSTALLATION:** Wiring system—BX. Switches—Mercury. **KITCHEN EQUIPMENT:** Range—gas, Frigidaire Div., General Motors Corp. **BATHROOM EQUIPMENT**—American Radiator - Standard Sanitary Corp. Cabinets—Charles Parker Co. **PLUMBING:** Soil and branch pipes—cast iron. Vent pipes—steel. **HEATING**—two pipe steam system.

POSTWAR BUILDING TECHNIQUES

To provide an accurate picture of postwar building—seen through neither rosy futuristic spectacles nor through dark glasses—THE FORUM has prepared a series of articles dealing with those postwar developments which will inevitably influence future building of all types. The first article which appeared in January was devoted to new building techniques. The second, in February, discussed new materials, exploring the potentialities of their future applications. In this issue the last article reports on new equipment and its increasingly important role in postwar homes.



3. EQUIPMENT (This issue)

In the past few years thinking in regard to building has undergone a change. Besides new methods and materials developed during the war, there has been a shift in the basic idea of what constitutes a saleable house. Formerly, houses were considered shells to which the buyer added equipment as he could afford it. To compete successfully on the postwar market, however, houses like modern cars, will come fully equipped and the extra cost will be included in monthly mortgage payments in many states. FHA has approved the inclusion of major home equipment as part of the mortgage collateral. Just what items are eligible in any community depends on local custom and fixture law as determined by each state FHA office working with lending institutions. The advantages of this system are obvious. Monthly payments on a \$4,600 house plus installments on range, refrigerator and washing machine purchased separately total \$50.80. With house and equipment financed together, total monthly payments would be only \$37.32. To make the most of the postwar home market, therefore, it is important that architect and builder be informed on the type of equipment available.

HEATING

While war-rationed families turn down the thermostat and resort to extra sweaters in eking out their meagre oil and coal supplies, furnace companies are hard at work on new heating systems which will insure against the slightest shiver in postwar homes. The more efficient burning of coal is one result of such experimentation. Anthracite Industries Inc. has already completed an experimental furnace unit, forerunner of postwar models which will be based on a new principle of burning coal. The test furnace is merely a small steel tube 18 in. long and 6 to 8 in. in diameter which uses a concentrated fast-burning fire as opposed to the former method of burning anthracite slowly in a large fire-box. Almost complete combustion is obtained without secondary air spaces. In addition the mechanism is completely automatic—coal is fed into one end of the small tube by a worm or plunger and ashes are discharged at the other end, making stoking and ash removal unnecessary. A small jacket around the sides of the tube is filled with water for cooling the burning coal enough to eliminate clinkers, and this water is drawn off through pipes for heating the house, thus eliminat-

ing the need for a separate boiler. The furnace can also be used for steam with an enlarged jacket and for warm air systems by substituting fins for the water jacket. Initial cost of this unit will be substantially lower than prewar furnaces of similar capacities because of its simplicity and ease of installation. One unit is sufficient to heat a six- to nine-room house and combined units can be installed for industrial heating. Since less coal is ignited at one time and the burning is more complete, less coal will be used during a heating season. Because of its small size, the unit is a particularly good solution to heating the basementless house, and it is one of the few inexpensive furnaces which can be used with hot water radiant heating.

Equally important is the new furnace developed by Julian R. Fellows at the University of Illinois for burning bituminous coal. This hand-fired "down-draft" burner utilizes soft coal without producing any smoke, and if widely accepted would eliminate or at least greatly reduce the soot nuisance in American cities. Smoke and gases are forced through the burning coals where they are mixed with preheated auxiliary air, thus burning completely. This increases heat obtained from the fuel by 25 per cent, might cut fuel bills in half. The "down-draft" burner is incorporated into two devices: a new furnace without any moving parts and a conversion unit which can be placed in almost any present furnace to give it down-draft advantages. The new furnace can be adapted to gravity or forced warm air circulation, to space heaters, stoves, boilers and water heaters. The conversion unit, a box-like affair, is pushed into the old furnace door.

In addition to the new developments in furnaces for large houses, the use of small heaters has increased during the war. Many housing projects have utilized improved space heaters—either coal, oil, gas, or wood types—and these will undoubtedly be used to a greater extent for heating small houses after the war. Some of the new small heaters come as completely packaged units requiring no extra installation work. Others do the heating job without costly ductwork. The new units incorporate improved draft and thermostatic control and cost approximately one-half as much as conventional basement furnaces. Since they occupy little space they are particularly suited for one-story and basementless homes.

Also a postwar potential is the use of individual room heaters, spotted about the house to provide separate tem-

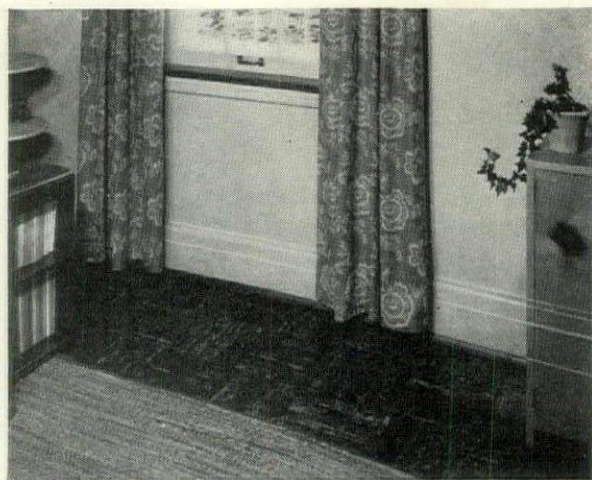
perature control in each room. This idea has come into prominence because of the tiny heaters developed for airplanes during the war. Postwar versions of such heaters could substantially reduce fuel bills because only the rooms in use would be heated.

Infra red lamps, either portable or attached, offer a possibility as an auxiliary heat source for postwar homes. It would be feasible to keep the air at a minimum temperature with a regular heating system, switching on the lamps when and where needed. Heat lamps may also be used in bathrooms, etc., where extra heat is desired at certain times.

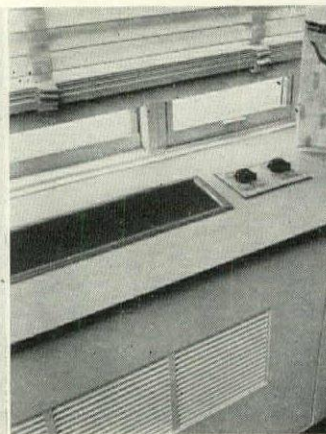
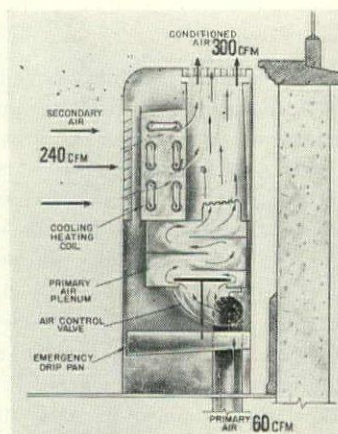
Radiant heating, the revolutionary and much-discussed new system of heat supply, is sure to come into greater use after the war. Until recently this system was limited almost completely to floor applications. Coils for the hot water are imbedded in the concrete foundation, thus automatically eliminating cold floors and producing an even distribution of radiated heat impossible with convection of warm air. Recently, however, new methods of application have been developed. One system, perfected by the International Heater Co., consists of circulating hot air at a temperature of approximately 130° above a suspended ceiling in each room of a house. The air used for heating is not used for breathing. A partition is attached to the underside of the ceiling joists and 3¼ in. below this is suspended a conventional plaster ceiling. Within the enclosed space guide strips are placed for proper deflection of the air. The air is conveyed to and from the ceiling chamber by small riser pipes concealed between the studs within the walls. This system is particularly important because its low initial cost makes radiant heating available for the low price field.

A similar new system developed by the Crane Co., is the application of radiant heating to baseboard panels made of metal and painted to conform with room decorations. Hot water or steam circulates through channels in the enclosed space. The panels can be of suitable size and number to provide the correct amount of heat in relation to size of room and outdoor climate. Applicable to either new or old homes, it is the only form of radiant heating yet developed that can be applied to existing buildings at reasonable cost.

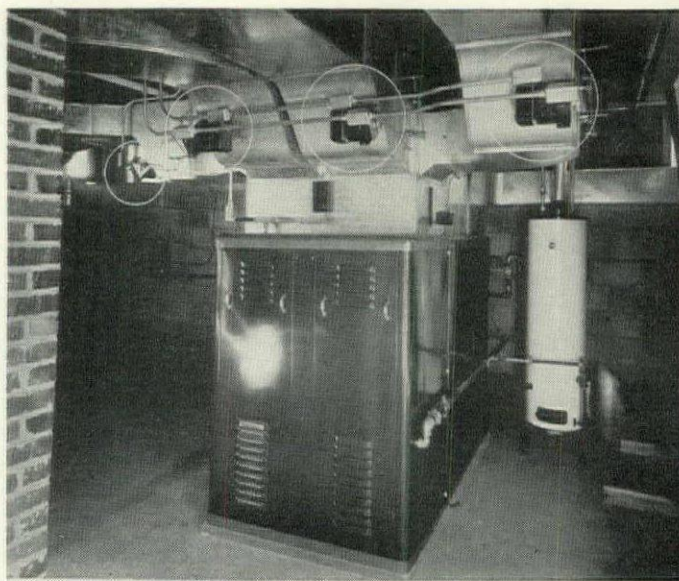
The American public, long accustomed to high standards of comfort, will find equipment available after the war for raising these standards still higher. Of these luxury items, the Moduflow control system (Minneapolis-Honeywell) is perhaps the most important. A similar system was used before the war in apartment houses and large industrial establishments. The small scale application of this principle of heat control for homes is a real advance in domestic heating. Where used to provide sectional control of a house from the central heating unit, it will solve the problems of exposure variations which cause some parts of a building to cool more rapidly than others, and will also regulate the heat in relation to changes of outdoor temperature. With conventional, intermittent on-off thermostats, the heat response is sluggish, allowing temperatures to go outside the normal comfort range. With the Moduflow system, the rate of heat supplied will be constantly equal to the heat loss from the house. When there is no heat loss, as in mild spring and fall weather, an automatic cut-off shuts off the entire heating system. There are three types of Moduflow controls: the bypass and reset methods for hot water and warm air and the modulating valve method for steam. The bypass system, best for radiant heating, keeps the heating



RADIANT HEATING, either hot water or steam, can now be used in a special metal baseboard panel designed by the Crane Co. This system is particularly suitable for remodeling.



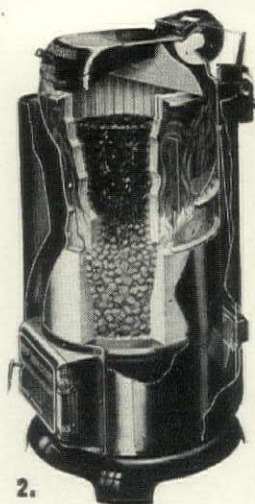
CONTROLLED TEMPERATURE both summer and winter is supplied by Carrier's Weathermaster which allows individual room control by heating or cooling the air at room outlet.



MODUFLOW CONTROL SYSTEM, developed by the Minneapolis-Honeywell Regulator Co., keeps heat input constantly equal to heat loss, thus maintaining the house temperature always within a comfort range impossible with former sluggish thermostats.



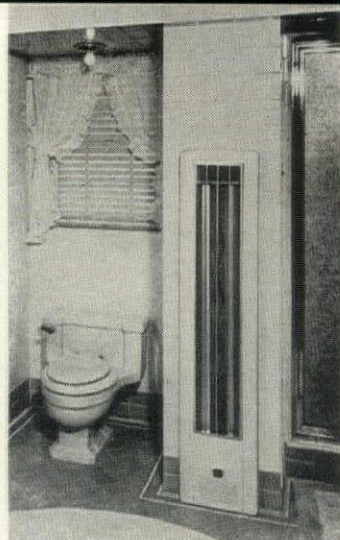
1.



2.



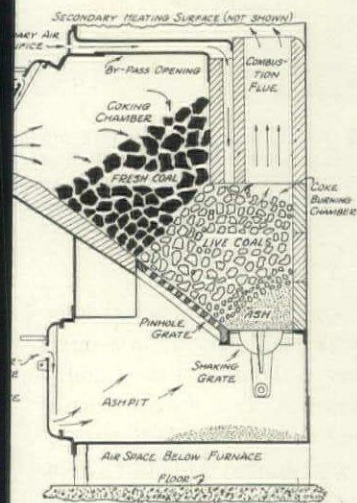
3.



4.

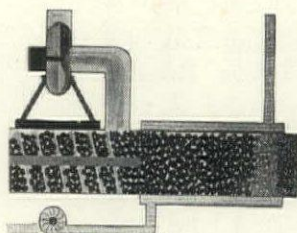
SMALL HOME HEATING can be done by a midget portable heater developed for the AAF (1), by the Conservator Circulating Heater, burning both coal and its gases (2), by a Chrysler space heater supplying radiant and convection heat (3).

INDIVIDUAL ROOM HEATING which allows separate temperature control is possible by using Panelray (4), a wall-installed radiant heater. Infra red lamps (5) are an auxiliary heat source applied where extra warmth is needed.



6.

LARGER HOMES can be heated by a new down-draft furnace (6) designed to burn bituminous coal without producing smoke. A down-draft conversion unit can be applied to old furnaces. New principle of burning anthracite (7) uses tube-like furnace only 18 in. long.



7.

5.



medium continuously circulating unless more heat is required when just the right temperature of heated water or air is delivered. The reset method, most practical for single thermostat control, constantly resets a temperature controller to produce the proper amount of heat. The modulating valve method regulates the quantity of steam used.

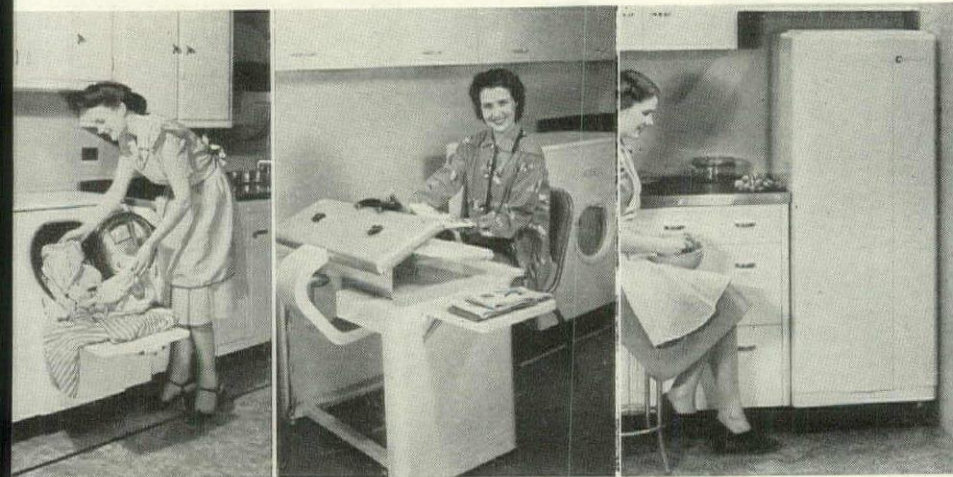
Developments in the field of air conditioning have also surged forward during the war. Combination cooling and heating units which also humidify or dehumidify the air according to season will be available for postwar use. They were manufactured to a limited extent before the war and have been thoroughly tested in actual field use, but their production on a large-scale basis for the moderately priced home has never before been realized. Both Servel and the Chrysler Corp. have developed these year-round air conditioners. The Servel model, made before the war, cost about \$1,000, comparing favorably with the cost of cooling systems which had to be added to heating equipment. In spite of the comparison this cost is high and promises to be reduced after the war. Summer operating costs in a test installation averaged \$1.00 a day and will undoubtedly be much the same at postwar electrical rates. The products of both companies are best suited for new construction, since the ductwork can then be arranged with both summer and winter outlets. The change from winter heating to summer cooling is accomplished merely by turning a manual control.

Carrier Corporation's Weathermaster, another important air conditioning development, combines not only summer and winter air treatment, but provides the added luxury of individual room control to suit the needs and desires of different occupants. Other important advances are the complete elimination of all return air ducts, the reduction of the air supply ducts to conduits the size of a plumber's waste

pipe—4 in. to 6 in. in diameter—and a unit size reduction of about one-third compared with other systems. Because of the small ducts, air velocities of 4,000 ft. per minute can be reached, and this high velocity discharge induces air from the room to enter the room grille in volume where it mixes with the treated air and leaves the unit at a relatively low velocity. Only about 20 per cent of the air volume necessary for the whole building is treated at the central unit. A supplementary device for heating or cooling the air is provided with each room unit, thus allowing separate regulation of heat, cold and humidity to suit individual requirements. Although promised at reduced cost in comparison with prewar prices for air conditioning equipment, this system is designed particularly for offices, hotels, apartment houses, hospitals and other large buildings. It would undoubtedly be too expensive for any but the most luxurious home.

Still in the experimental stage, a new method of air conditioning called reverse cycle refrigeration, heats and cools by extracting heat from the outside air. It will probably be available four or five years after the war. The system is based on a "heat pump," a refrigerating system in which advantage is taken of the heat given off in the process of cooling air rather than of the cooled air itself. Since there is heat in the air at all times, even in winter, the heat pump operates by simply extracting this heat from the cold air, adding the heat produced by the electrical energy of doing this work. The cold air is thrown off and the warm air thus produced piped through the house.

An adjunct to ordinary air-conditioning and heating systems is the Precipitron, a Westinghouse device now being used to "launder" air in factories, thus removing the menace of dust in precision war production. A postwar model for homes will clean the air of an average six-room house for



LAUNDRY EQUIPMENT includes the Westinghouse Laundromat (left) an automatic cycle washer which is vibration-free and can therefore be installed in kitchen or work center; the General Electric automatic hot plate ironer (center); and the Westinghouse water heater (right) equipped with automatic double action thermostatic controls.



NEW RANGES, although similar to 1942 model have many advantages. The General Electric (left) boasts a triple oven, automatic oven timer, 6 qt. thrift cooker. Westinghouse unit (center)

only 60 cents to \$1.00 in monthly electrical costs. The Precipitron actually electrocutes dust particles, giving them a positive charge so that they are attracted to negatively charged plates. It removes 90 to 95 per cent of the dirt oil, smoke grease, bacteria and pollen, thus reducing housecleaning chores and cutting dry-cleaning and laundry bills.

Another method of air sterilization which kills all bacteria although it does not remove dust particles is the Westinghouse Sterilamp. A gaseous discharge lamp of the cold cathode type it radiates far ultra violet and operates only a few degrees above the surrounding temperature. It is already being used in hospitals to prevent contagion, in food and cosmetic industries to insure purity, and in restaurants for sterilizing eating and drinking utensils. Used in an air-conditioning system it insures pure, uncontaminated air.

THE WORK CENTER

There has been a great deal of discussion about the combined work center for postwar homes, where cooking, laundry and all household tasks usually done in different parts of the house will be concentrated. The work center would eliminate running up and down the cellar stairs and would allow the housewife to keep her eye on several operations at once. In key with this thinking, equipment manufacturers have improved their products and introduced new ones. Some of the models were almost ready for mass distribution when war broke out, others are war-born ideas.

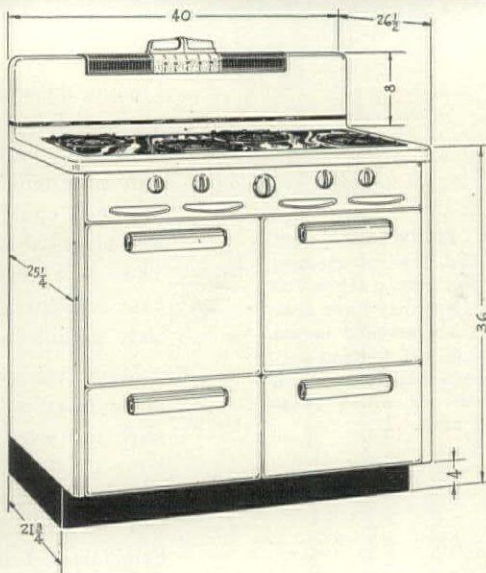
Both Bendix and Blackstone manufactured before the war completely automatic units which washed, rinsed, and damp dried clothes in a continuous process. Now General Electric and Westinghouse have developed automatic laundries. Major improvement in these postwar models will be the elimination of vibration, making them a more acceptable part of the upstairs work center. In addition to the cycle washers, one of the most important advances is the invention of a tumbler dryer which can be used in conjunction with the cycle washer. Each company has its own version of this dryer which eliminates hanging out clothes and does away with ironing of towels, sheets and pillowcases. Westinghouse and General Electric have also developed improved automatic

ironers, and their equipment thus includes the washer, dryer and ironer—making the laundry process complete in a small space. Similarly Blackstone has designed a unit laundry which takes care of the three functions in a floor area only 25 by 96 in. The three matching units in standard counter height, can be assembled in any desired sequence, in a straight line or around a corner. The Hamilton and the Lovell companies have also developed automatic clothes dryers which are available in either electric or gas models. The Lovell gas dryer incorporates a range control which can be set at bone dry or any of four degrees of damp dry for ironing.

Like laundry work, the process of preparing meals—a tedious and time-consuming problem—will be simplified in postwar kitchens. Although stove and refrigerator manufacturers all proclaim that their immediate postwar models will be the same as 1942 versions, and that revolutionary changes will not be attempted for ten months or longer after the war, those models which will be available are new to the public and have many improved features. Enlarged broilers, warming ovens, deep well cookers, automatic timing devices and insulation against heat loss will be found in the new ranges. Westinghouse, Tappan, Lindeman and Hoverson are the only companies reporting stoves equipped with glass oven doors—darling of the “dream ad” copywriters.

Still in the experimental stage are two revolutionary developments which may be incorporated into many postwar gas stoves. The first is single point automatic ignition, based on making flame travel downward, in circles and around corners. This means matchless ignition for ovens and broilers through an ignition tube from a single standing pilot on the top of the stove to the oven and broiler burners. The second is a completely new type of enclosed burner, made possible by the development of a new form of flame which can burn in the products of its own combustion. This method may be developed to the point where burner and grates can be combined, serving as a support for utensils and providing smooth top section styling.

Another startling development is the principle of magnetic induction cooking, applied to a stove called the “Mystery Speedster.” This method is similar in principle to a radio re-



features switch control of heat, illuminated by cowled fluorescent lamp. It also has automatic oven timer and a deep well cooker. Roper gas range (right) is designed to fit flush with the wall and standard cabinets, has staggered burners, different heat speeds.

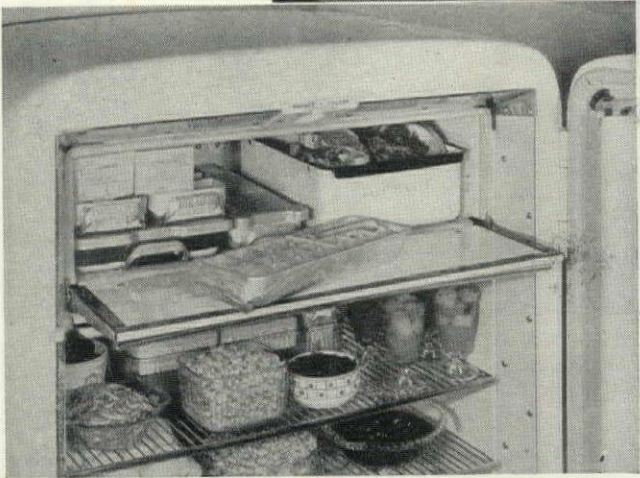
ceiver set and cooks without any heat in the stove itself. A transformer set in the range top transmits 60 cycle magnetic pulsations from the open-ended transformer cores. Waves surge through iron pole pieces in the bottom of a special cooking utensil, causing eddy currents to circulate in the aluminum mass and transferring heat to the food.

Besides the new stoves there have also been developments in the dishwasher line. General Electric promises an electric sink equipped with a garbage "Disposal" which grinds and disposes of all garbage automatically and with an electric dishwasher capable of washing a service of six in ten minutes. The Q.E.D. Dishwasher Co. will have a separate unit, unique in that it requires no motor. This hydraulic washer is completely automatic, even lifting dishes up to the drainboard level after washing is completed.

Like stoves, most postwar refrigerators will be similar to 1942 models, with a few additional features, such as extra compartments for storing meats, more efficient "crisping" compartments for vegetables, and in the General Electric, a butter conditioner. Frigidaire, Admiral and Gibson, however, are offering a new idea in refrigeration. Working on a principle of stratification, these refrigerators are separated into specialized sections. A top compartment for freezing is completely sealed off from the rest of the refrigerator, preventing the air below from coming in contact with the freezing chest and losing its moisture in the form of frost. Thus foods can be stored without covering and will remain fresh and crisp losing no moisture.

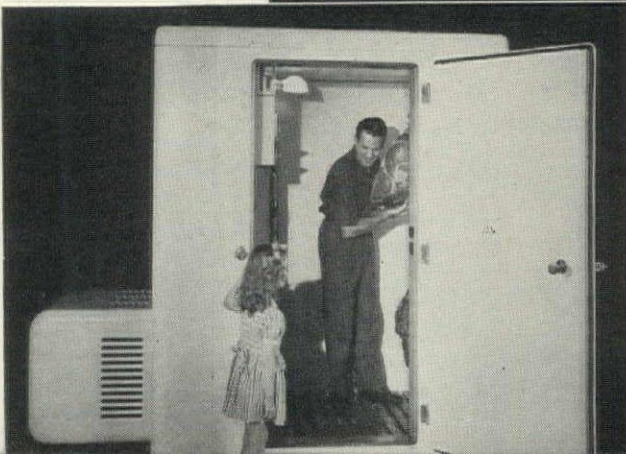
Another innovation in refrigerators concerns their structure. Aluminum frames said to be 50 per cent lighter than all-steel types have been developed by Lindsay & Lindsay. These frames employ neither rivets nor welds, but socket lock screws to fasten the side panels in place. With such construction it should be easier to move the refrigerator for cleaning and dusting.

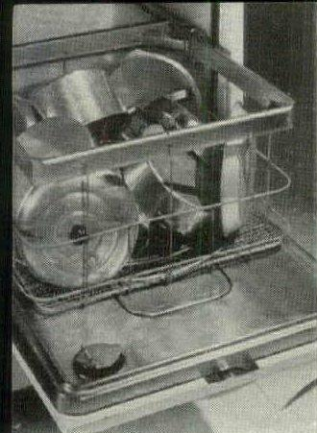
Of interest in connection with the postwar work center is the Earle Unit Kitchen designed by Guyon Earle, a realtor who became dissatisfied with conventional kitchenette equipment for small apartments. They will be manufactured for general use after the war. The important feature of the Earle kitchen is complete redesign of kitchen equipment.



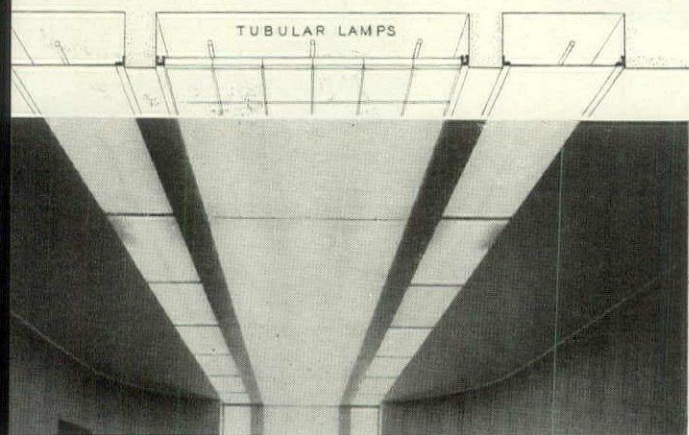
POSTWAR REFRIGERATORS may be the drawer type designed by Guyon Earle for his Unit Kitchen (top) or the shelved version with separate freezing compartment like the Frigidaire (above). Unit Kitchen costs less than equipment purchased separately, uses less electricity than standard refrigerators.

HOME FREEZERS will be available in small sizes for ordinary use and in large models for farm storage. Coolerator freezer (below) is equipped with baskets for convenient access to stored food, International Harvester's walk-in cooler for the farm (bottom) holds thousands of pounds of food.

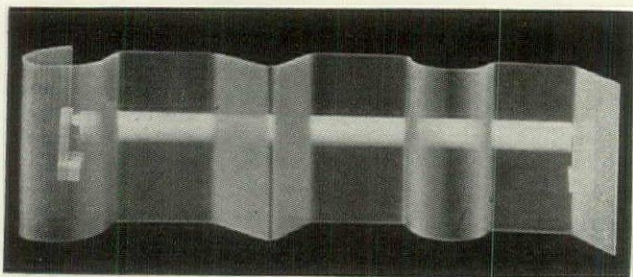




AUTOMATIC DISHWASHER put out by Edison General Electric Appliance Co., both washes and dries dishes after they have been scraped and are stacked in the machine. Trap at left-hand corner of door releases Calgonite, a water conditioner which takes the place of soap.



LUMITILE, a shield for tube lighting installations, diffuses the light without an appreciable loss of lumens, adds to the decorative effect and protects the lamps from dust.



LOUVERPLAS, a plastic for use with fluorescent lighting, can be molded into different shapes to produce the desired fixture. It becomes transparent or translucent at different angles.



FLUORESCENT TUBING will be available in round shapes particularly suitable for use in home fixtures or in the conventional floor lamp. It will also be made in extra long slim sizes designated as Slimline for cove and showcase lighting.

Finding the standard refrigerator too bulky and under-counter models too cramped, Earle incorporated refrigerated drawers into a counter-high section and recessed the freezing unit and milk compartment above—flush with the other overhead cupboards in the unit. Next to the refrigerator was placed the sink and next to the sink the electric range. Thus stove, refrigerator, sink, overhead cupboard space and base cabinets are incorporated into a compact unit particularly suitable for small kitchens.

Many refrigerator companies are planning to put out home freezers in different models for farm and city use after the war. Some rural units may have a capacity as large as 40 cu. ft. for storing several thousand pounds of food, while urban units especially for apartment dwellers will be available as small as 4 cu. ft. capacity. The Frigidaire, General Electric, Coolerator, Admiral and Harder units are similar in design to rectangular ice cream cabinets. The Coolerator has the added feature of easy-to-reach baskets. Also a rectangular box, the Arctic Trunk is unique in that it is the simplest of all the freezers, actually costing less than the most popularly priced refrigerator. The Deepfreeze is made in a patented round shape, and besides its regular double model promises the tiny 4 cu. ft. apartment model. The Wilson Cabinet Co. will put out a complete line from small home storage units up to large farm freezers. International Harvester Co. is concentrating on the farm market, however, providing a line of Zero Chests in various sizes. More important, they have worked out a series of combination units, offering both zero temperature and ordinary refrigeration in the same chest.

LAMPS

During the war years there have been many developments in both incandescent and electric discharge lamps which will provide increased utility and greater freedom of decorative use. Hot cathode fluorescent, already almost universal in business and industry, will undoubtedly be used in homes after the war. Longer life ratings for this standard fluorescent type have been announced, and new circular shapes have been designed especially for floor lamps and other home lighting fixtures. These new lamps come in 20 w., 30 w., and 40 w. ratings and in 8½ in., and 12¼ in. and 16 in. diameters. Another new fluorescent development is the Slimline, much longer and thinner than former fluorescent tubes. It will be used for continuous lighting in showcases and cove lighting. Slimline lamps come in sizes up to 96 in., are designed to burn at various levels of brightness and will have the instant starting ballast, a completely new innovation. This ballast boosts the voltage high above normal to strike the arc, then drops to normal fluorescent operating voltage. To use this ballast, a lamp must be specially designed to withstand the high voltage shock starting. White and daylight lamps in 40 w. size are available with this new feature.

Cold cathode fluorescent has always had the instant starting advantage, but the fact that it operates on high voltage has so far limited it to business and industrial use. After the war, transformers and auxiliary parts will be engineered along with the new units to accommodate the proper voltage. This will eliminate special engineering jobs heretofore required and make cold cathode practical for use in the home. There is some talk that hot and cold cathode will not be distinguished as such after the war, but classified under the general term of fluorescent.

(Continued on page 150)

All Over America

You will find Dependable
Sales and Installation Service

available on

Ro-Way

OVERHEAD TYPE DOORS

*There's a
Ro-Way for
every Doorway!*

RO-WAY
OVERHEAD
TYPE DOORS

are available now for
Industrial Buildings,
Commercial Buildings,
Government Buildings
and Agricultural
Buildings.

**AGRICULTURAL
BUILDINGS**

**INDUSTRIAL
BUILDINGS**

**COMMERCIAL
BUILDINGS**

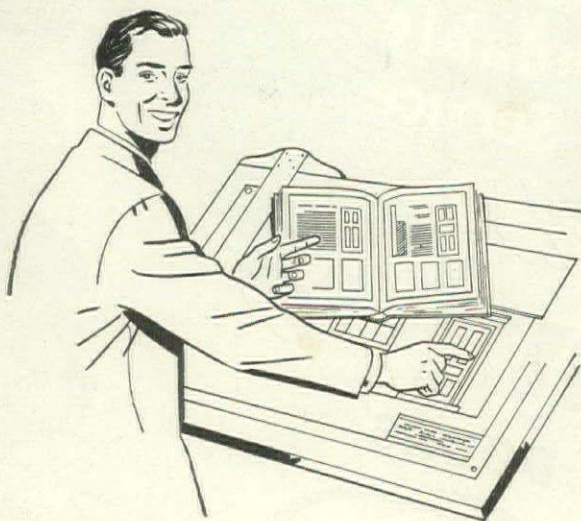
**GOVERNMENT
BUILDINGS**

Write for Ro-Way's 88-page "Time-Saving Specification Book" for Architects.
Please attach professional card or letterhead. See our Catalog in Sweet's

ROWE MANUFACTURING CO.
986 Holton St. • Galesburg, Ill., U.S.A.

SIX STEPS OF PROTECTION IN THE PUBLIC INTEREST

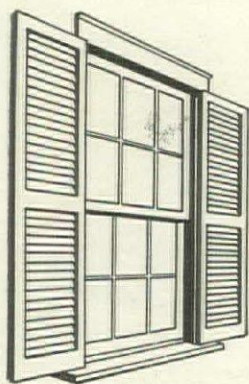
... (6th of a Series)



Knowledge is protection

Because architects and builders take pride in quality construction ... because homeowners want long-lasting value ... the NDMA seal of approval on toxic preservative treated wood products has won widespread acceptance. Knowledge of that seal—and of the principles for which it stands—has resulted in an increased measure of public protection ... in an increased understanding of wood's ability to keep pace with modern service requirements in such building products as windows, doors, screens and frames.

It is for this reason that the sixth step in the NDMA program consists of educational effort in the public interest ... consistent effort which spreads knowledge of the scientific research, the careful testing symbolized by the NDMA seal of approval.



The NDMA Seal of Approval—available by license to all manufacturers and distributors who conform to the toxic preservative standards of the NDMA—represents these six steps of protection:

1. An efficient test for measuring effectiveness of toxic preservatives
2. Minimum standards governing the toxic preservative treating of wood-work products
3. A seal identifying products treated in conformity with NDMA Toxic Preservative Standards
4. Mill inspection of treating equipment and practices
5. Laboratory check-tests of preservative solutions
6. Educational effort in the public interest

NATIONAL DOOR MANUFACTURERS' ASSOCIATION
McCORMICK BUILDING · CHICAGO, ILLINOIS

LICENSE
NO.
000

TOXIC-PRESERVATION

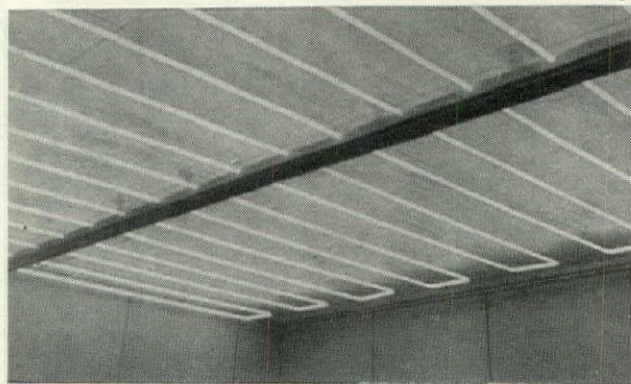
APPROVED

NATL. DOOR MFRS. ASSN.

POSTWAR BUILDING TECHNIQUES

(Continued from page 148)

Electrical Products Corp.



COLD CATHODE tubes can be bent and carried around corners.

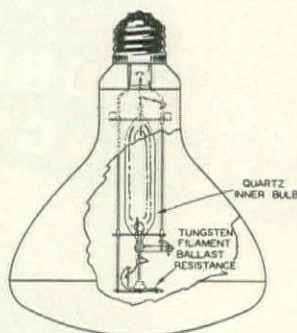
For industrial applications, the new 3,000 w. mercury vapor lamp will supply the most economical lighting. Producing 120,000 lumens per lamp, it is especially designed for mounting in high bay areas and where a minimum number of light sources is required. These lamps in combination with incandescent units have been successfully installed in the unique indirect lighting system of the huge Budd Assembly plant at Bustleton, Pa.

At the opposite end of the scale from the huge mercury vapor lamps is the tiny fluorescent 1/10 w. glow lamp. It has been used by the Army and Navy for various indicating purposes, and will lend itself to postwar use as a night light for bathrooms, stairways and halls. This lamp is most economical, its annual energy consumption at average domestic power rates amounts to less than three cents.

Black light, which is near ultra violet radiation with the visible light filtered out is used to activate fluorescent coatings, making them glow in the dark. There are several types of lamps which can produce black light. One is the 2½ w. argon glow lamp which needs no auxiliaries and can be used on either AC or DC. It is low in power but is the simplest and cheapest method. Another small lamp, the 4 w., RP-12 produces quite an amount of visible light in addition to the

ultraviolet radiations. Standard fluorescent made with a special phosphor can also produce black light, and mercury vapor lamps are used when a more powerful source is needed. A special incandescent lamp, the purple X, is also effective for short burning periods.

One of the most important new developments in home lighting is the new 275 w. sun lamp which can be screwed into an ordinary lighting socket.



SUN LAMP screws in socket.

Used over the bath tub or the bathroom mirror it will provide its owner with a tan while bathing or dressing. This bulb is a combination of the tungsten and discharge types of radiation—a mercury vapor lamp containing an internal tungsten filament ballast which operates at incandescence. This filament's infra red heat combines with the ultraviolet tanning rays to produce a light similar to real sunshine.

Infra red drying lamps are an important incandescent innovation which have been used extensively for quick-drying

(Continued on page 154)



For 55 Years

Wheeling has been producing high grade steel products and has never deviated from this policy. Now the complete line of Wheeling Fireproof Building Materials has been augmented by Steelcrete Expanded Metal products, long known and preferred by architects. Always include Wheeling in your specifications.

WHEELING CORRUGATING COMPANY

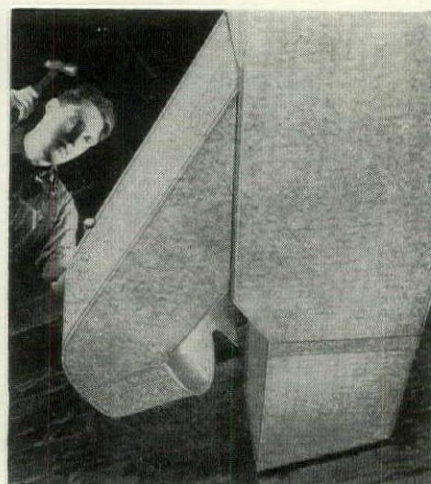
WHEELING, WEST VIRGINIA

OFFICES AND WAREHOUSES IN PRINCIPAL CITIES



Plan with STEEL

FOR PEACETIME BUILDINGS



In heating, ventilating and air-conditioning ducts in all sorts of buildings, U·S·S Paint-Bond Sheets withstand corrosion, can be painted immediately.

In this up-to-date hospital cafeteria, counter tops of U·S·S Stainless Steel with fronts of porcelain enameled VITRENAMEL are strong, durable, easy to keep immaculately clean.

War-Tested U·S·S Steels for Building

U·S·S STAINLESS AND HEAT-RESISTING STEELS to provide permanent beauty, assure high resistance to corrosion and heat, and to reduce weight.

U·S·S VITRENAMEL—A special, high quality steel for porcelain enameling.

U·S·S GALVANIZED SHEETS to provide easy formability, workmanlike appearance and long life.

U·S·S COPPER STEEL to give at least twice the atmospheric corrosion resistance of regular steel at little additional cost.

U·S·S COR-TEN—A high-strength steel with two to three times the resistance to atmospheric corrosion of Copper Steel.

U·S·S PAINTBOND—A galvanized, Bond-erized sheet that permits immediate painting and holds paint tighter. In the South and West, U·S·S DULKOTE, a sheet with properties of equal value is available.

U·S·S STEEL ROOFING AND SIDING in every wanted form for residential, industrial and farm applications.

U·S·S STRUCTURAL SECTIONS—A complete range of sections and sizes to meet every building requirement.

THE widely known versatility of steel leaves no doubt about its importance in postwar building. No other material can do so many things so well.

No matter what the requirements—strength, durability, fire-resistance, appearance, economy, freedom from repairs—the chances are that steel will meet them better. For there is a type of U·S·S Steel specifically designed to give satisfactory service and maximum life in practically every application.

U·S·S Steels include Stainless Steel for kitchens, restaurants, cafeterias, in schools, hotels, hospitals. VITRENAMEL, the special base for porcelain enamel, which offers so many attractive possibilities ranging

from washrooms to store fronts. Copper Steel and COR-TEN for air-conditioning and ventilating systems. Galvanized sheets that can be painted without prior weathering. Also a wide range of structural sections, concrete reinforcing bars, steel sheet piling and bearing piles for foundation work.

No other steel producer can offer such a wide variety of steel building products in so many different analyses, sizes and shapes.

The generous use of steel in planning postwar buildings will help you create stronger, safer, more durable structures for less money.

Check this list of U·S·S Steels and note how their special properties fit in with your postwar plans.

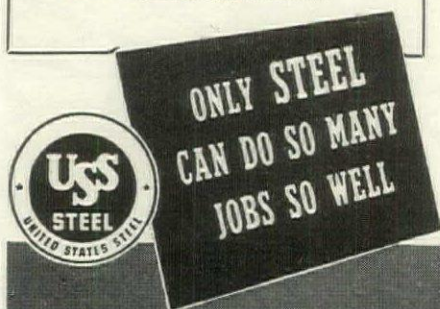
CARNEGIE-ILLINOIS STEEL CORPORATION, Pittsburgh and Chicago

COLUMBIA STEEL COMPANY, San Francisco

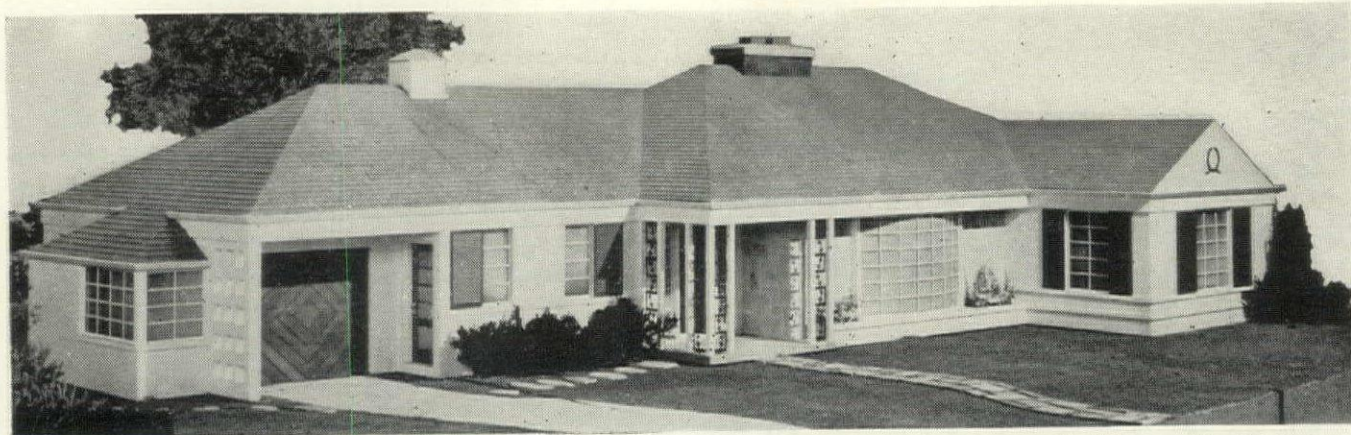
TENNESSEE COAL, IRON & RAILROAD COMPANY, Birmingham

United States Steel Supply Company, Chicago, Warehouse Distributors

United States Steel Export Company, New York



UNITED STATES STEEL



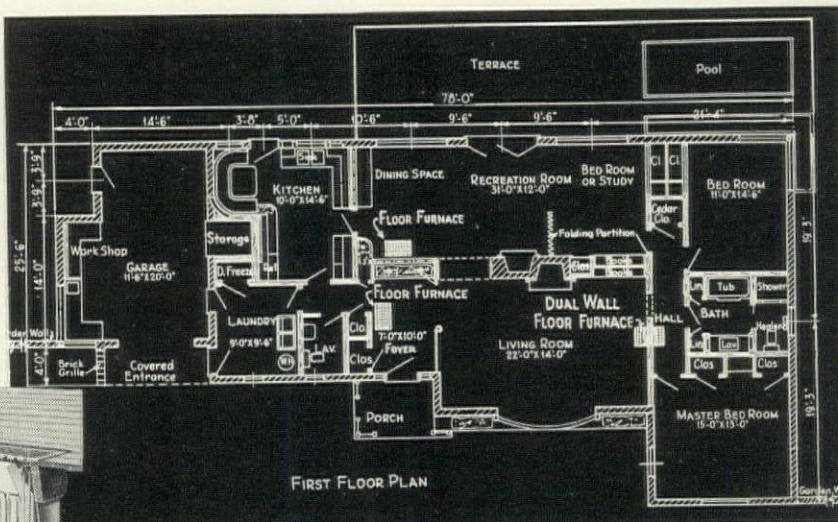
A Home To Live In, Play In—This design, winner in the Suburban Home class of the recent American Builder prize competition, is by Charles and Arthur Schreiber of Chicago, Illinois. It takes full advantage, with its triple-purpose rec-

reation area, of the trend toward building ample play room into tomorrow's homes. Adapted from American Builder Magazine, to show how a new idea in home heating—the Coleman Floor Furnace—can help increase comfort and "livability."

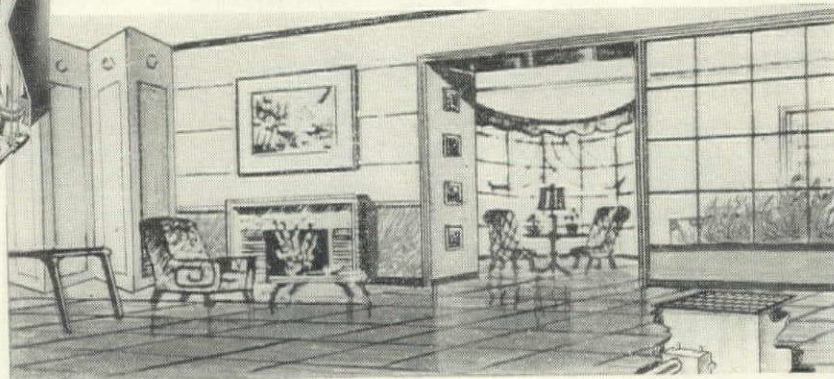
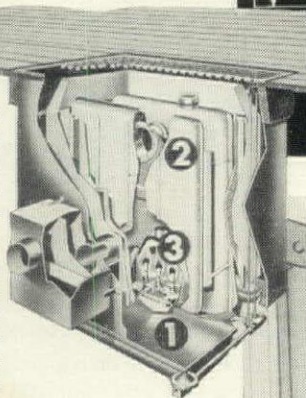
Two Sparkling New Ideas For More Livable, More Salable Homes of Tomorrow

Warm-Floor Comfort; Low-Cost Area Heating—The floor plan below shows how a Coleman Floor Furnace system can provide independent, automatic heating, with "warm-floor" comfort, for each of the three major areas of the house. Such a system includes one or more individual, automatic units (3 used here). Each floor furnace can be set to give ideal comfort for its own area—operates independently of other units—with minimum fuel expense. The initial cost of a multiple installation may be lower than that of a central heat plant capable of doing an equal job. Note that no basement is needed for warm floors with this new advancement. Coleman Floor Furnaces will be available post-war in gas, oil or LP-gas models.

Write for catalog and detailed information, Dept. AF-536, Coleman Lamp and Stove Co., Wichita 1, Kansas.



This Cutaway View of the Coleman Floor Furnace shows how 3 important features especially combat cold floors and increase comfort: (1) Coleman's exclusive patented streamlined bottom that speeds warm-air travel, up to 35%—warms a bigger area; (2) Large area of heating surface for fast warming of cold air before it flows out of the furnace; (3) Big efficient burner that gets most heat out of fuel for low-cost operation. At right: "Phantom floor" shows how the furnace is set in the floor, with only the register at floor level, in recreation room of Shreiber house.

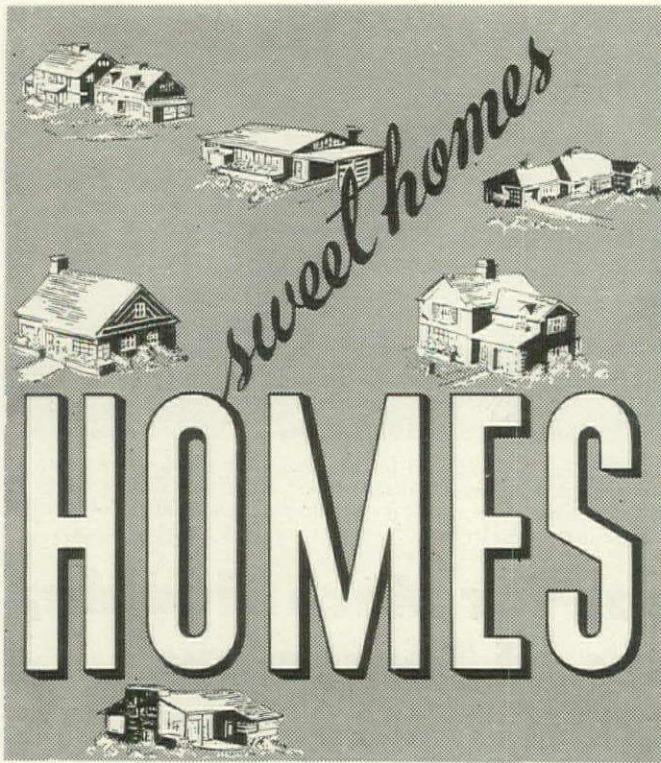


THE "HOT" NAME IN HOME HEATING

Coleman

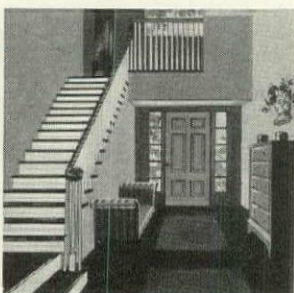
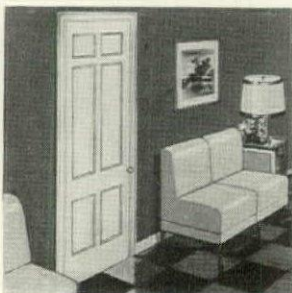
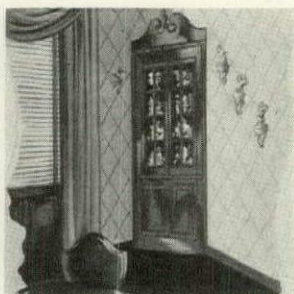
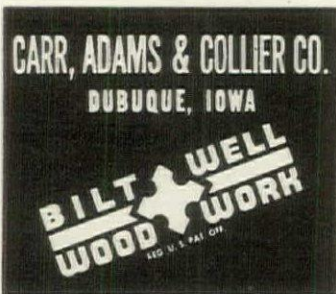
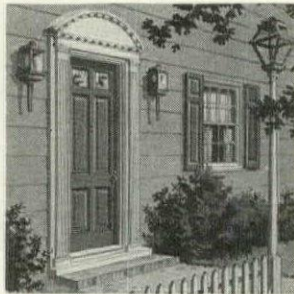
THE COLEMAN LAMP AND STOVE COMPANY • WICHITA 1 • CHICAGO 11 • PHILADELPHIA 8 • LOS ANGELES 54 • TORONTO, CANADA

(Continued from page 150)



Their world has changed since that fateful yesterday, but home, in whatever locale, is still "home sweet home." As one famous correspondent writes: "Bring out a picture from home and every G.I. will follow suit." Many of the boys have never seen or cuddled "Junior," but they dream about him gamboling across his nursery floor.

The boys know that their "homes of tomorrow" will be everything that the skill, experience and craftsmanship of America can produce, and the finest in woodwork will come from Biltwell.



enamel on tank parts and other war machines. Hundreds of them placed to form a tunnel reduce 15 to 20 hours drying time to 15 or 20 minutes. These lamps are similar in construction to ordinary incandescent bulbs, but a special filament produces more heat, less light. They will continue to find widespread industrial application and might be used to advantage for home drying of paint jobs.

Incandescent spot and flood lamps have been developed with their own built-in reflectors, and are important news for industrial lighting. Since their surface is hermetically sealed with the lamp it cannot be affected by dirt, moisture, or vapors and does not deteriorate. Reflector spots project narrow beams for use where light of high intensity is required over a small area. Projector spots are similar except that their surface is of hard glass for outdoor use. The flood lamps are similar in construction except for more deeply frosted bulbs which provide a wide beam suitable for floodlighting displays and operations.

In addition to the new lamps which have been developed, fixtures themselves have been improved and redesigned. Plastics are being used to a much greater extent because they are lightweight, easily formed and have good stability and lasting quality. Plastic tiles and translucent or engraved plastic sheets such as Lumitile, Plexiglas and Louverplas give the architect and interior decorator a tool with which to make lighting a real part of the design. An engraved Plexiglas sheet placed against an opaque wall and lighted from one edge makes the light appear to come from the engraved portions of the material. Thus the wall rather than a lamp appears to be the light source. Louverplas, a sheeting with hairline partitions running through the material, gives transparent and translucent effects when placed at different angles. These materials can also be colored to give softer and more dramatic effects.

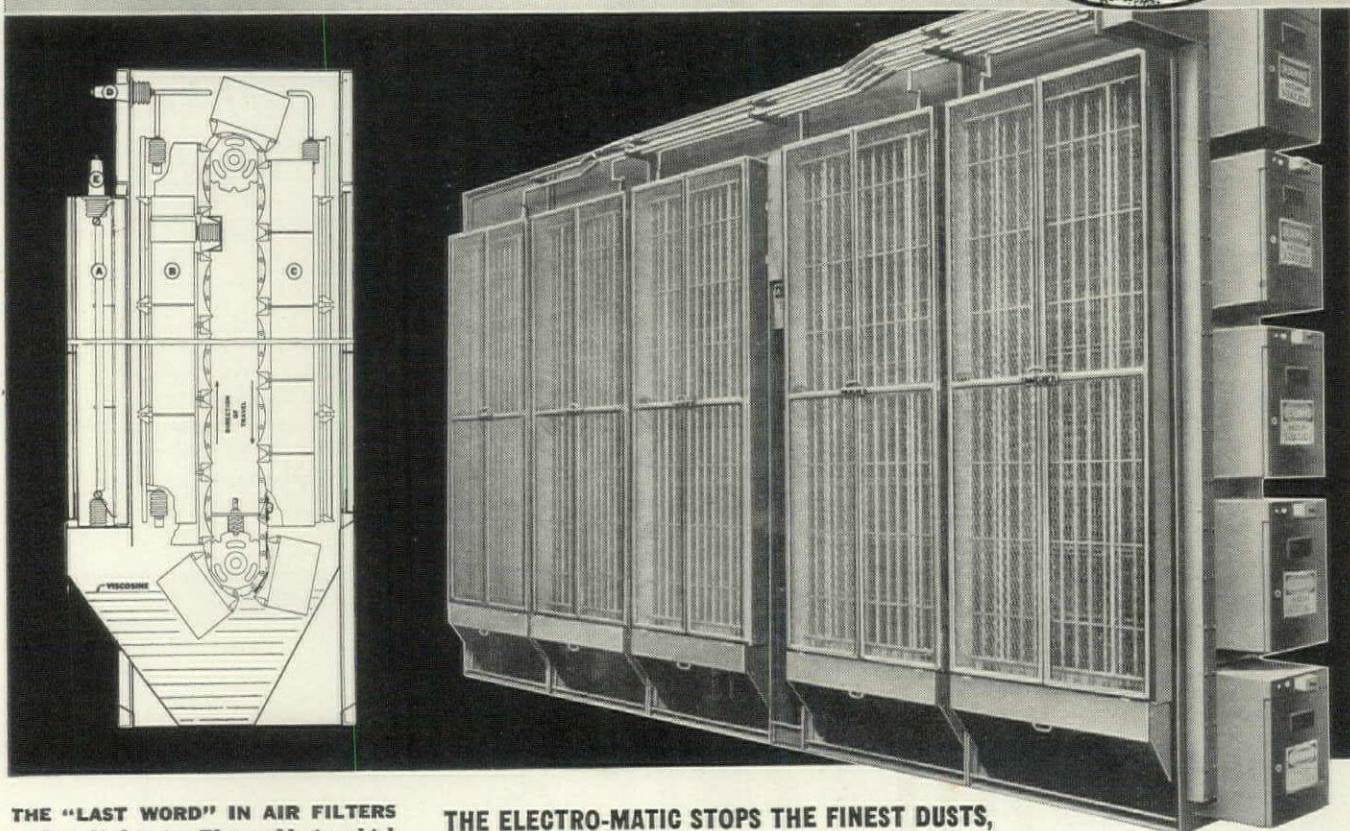
WIRING

Electrical wiring in the postwar home will require much more attention than it received in prewar installations. Even today 95 per cent of American homes are inadequately wired to carry efficiently an appliance load which has increased steadily through the years. With more and more appliances promised for the postwar home, this situation will become really serious. Realizing that appliances are worthless if houses are not equipped with wiring systems capable of carrying their load, Westinghouse Electric & Mfg. Co. has developed a wiring plan that will stand the strain of serving air-conditioning equipment, quick-freeze units, automatic laundries, new types of lighting and more elaborate radio apparatus. As yet they are not thinking in terms of home television sets and sound systems for inter-house communications, but the fact that these new devices will be a factor in postwar house design gives the Westinghouse estimate even more validity.

In contrast to the service conductor of two No. 8 wires 50 amp. switch and two to four branch circuits now allowed by WPB for an average five-room house, Westinghouse recommends three No. 4 entrance wires, a 100 amp. switch and 18 branch circuits. They also include three branch distribution centers throughout the house to carry the greatly increased

(Continued on page 158)

Super Clean Air



THE "LAST WORD" IN AIR FILTERS is the self-cleaning Electro-Matic, which is also outstanding because of the effectiveness with which it applies the principles of electronic precipitation. Dust laden air enters the ionizing unit (A) where all dust particles receive a positive charge. Then it passes through the continuous, belt-type filter curtain where, both at the front (B) and the back (C), dust particles are attracted to negative charged, oil coated filter plates. Plates are cleaned and re-oiled continuously as they pass through the oil bath in the base.

THE ELECTRO-MATIC STOPS THE FINEST DUSTS, SMOKE, FUMES and oil vapors.

Particles so small they can be seen only with the new electronic microscope, are removed by the AAF Electro-Matic Air Filter. The Electro-Matic removes 85% of these fractional micron sized particles, providing super clean air. In addition to its high efficiency the Electro-Matic can operate continuously at maximum efficiency because it is self-cleaning, which avoids the need for stopping the filter to clean collector plates. Where *really clean* air is needed to meet production requirements or to give employees the very best of working conditions . . . the Electro-Matic is the answer. Write for Bulletin No. 250-C.

AMERICAN AIR FILTER COMPANY, INC., 427 Central Avenue, Louisville 8, Kentucky. In Canada: Darling Bros., Ltd., Montreal, P. Q.

AAF

ELECTRO-MATIC

THE ELECTRONIC AIR FILTER

THE WAR...

YOUR ELEVATORS...

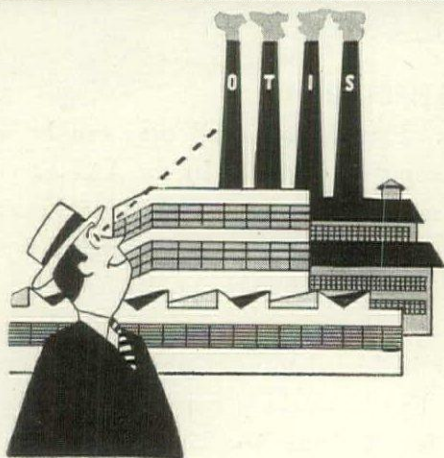
AND YOUR EYES



1. On flat-tops, battleships, and cruisers, Otis precision-built elevators have been and are today serving the United States Navy on the seven seas. From our experience in providing this equipment have come marked improvements in design, new manufacturing techniques, and a store of knowledge destined to provide still further improvements in Otis Elevators after the war.



2. Today, therefore, when planning the modernization of your present equipment, give particular consideration to Otis Elevators. This company, with 244 offices throughout the United States, is in a position now to co-operate with you in the preparation of plans and surveys.



3. So, keep your eyes on Otis. In the days ahead, this company, through the continued use of advanced methods and new skills, will, as in the past, be ready to assure you of the last word in efficient and economical vertical transportation.



Remember, there is an Otis representative as near as your telephone. He will be glad to discuss future plans for new elevator or escalator installations or the modernization or maintenance of existing equipment. Call him today.



ELEVATOR COMPANY

OFFICES IN
ALL PRINCIPAL CITIES

You give them the Best
when you Specify

Lo-"K" *flameproofed* COTTON INSULATION

- + LOW THERMAL CONDUCTIVITY
- + LIGHT WEIGHT
- + FLAME-PROOFED
- + MOISTURE-RESISTANT
- + RESISTS ROT AND MILDEW
- + VERMIN-RESISTANT
- + FLEXIBLE
- + EASY-TO-INSTALL
- + ECONOMICAL

You have only to note Lo-"K's" check list of PLUS VALUES and special features on the left to understand why leading architects, contractors and builders everywhere are recommending modern, better, more scientifically designed Lo-"K" Cotton Insulation for every type of job.

Lo-"K" cuts time, labor and costs all along the line yet it qualifies in every respect as a more practical, efficient insulation for all-weather comfort.



**LOCKPORT COTTON
BATTING CO.**
LOCKPORT, NEW YORK
Established 1870

AVAILABLE NOW in ample, priority-free amounts at your lumber or building material dealer . . . in lightweight, easy-to-handle blanket rolls sized for all standard construction.

**WRITE TODAY FOR THE
FULL STORY on Lo-"K"
Insulation Advantages**

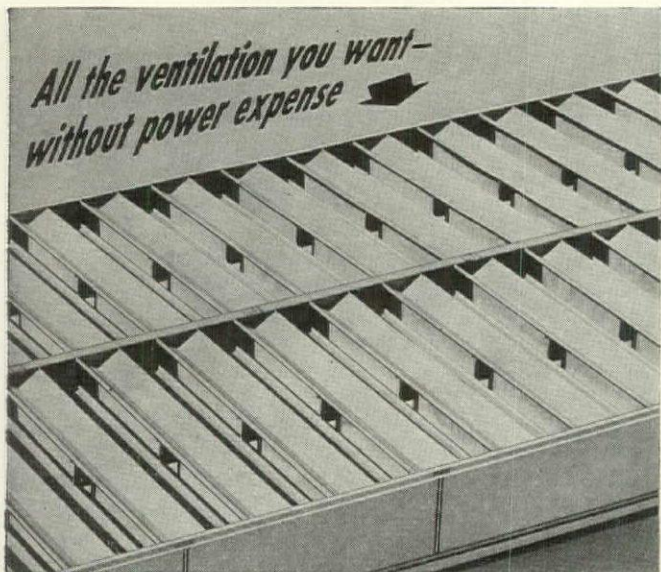
Lockport Cotton Bating Company
Dept. AF-3 Lockport, New York

Gentlemen: Please send me the facts about Lo-"K" Cotton Insulation for better building—

- ☐ ARCHITECT ☐ DEALER
☐ CONTRACTOR OR BUILDER

Name _____
Address _____
City _____ Zone _____ State _____

(Continued from page 154)



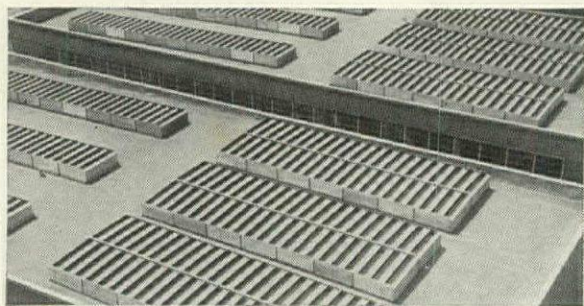
Swartwout **AIRMOVER** "Open Roof" Method of Industrial Ventilation

Can be custom built when necessary
... a facility architects appreciate

● "All the ventilation you want" means enough ventilation to clear workrooms of excess heat, smoke and fumes, gaining the employee comfort that improves morale, promotes efficiency, reduces spoilage and accidents. Swartwout AIRMOVER installations are doing just that in many important factories.

Only 32 inches high, this remarkable modern ventilator spreads over as much of your roofs as necessary, according to the nature of your operations. Uses no power — air flow is *natural* (gravity) with least possible air friction through roof.

Standard units, or custom built to your needs. Easily installed on any type of roof, on old or new buildings. Write for the full story.



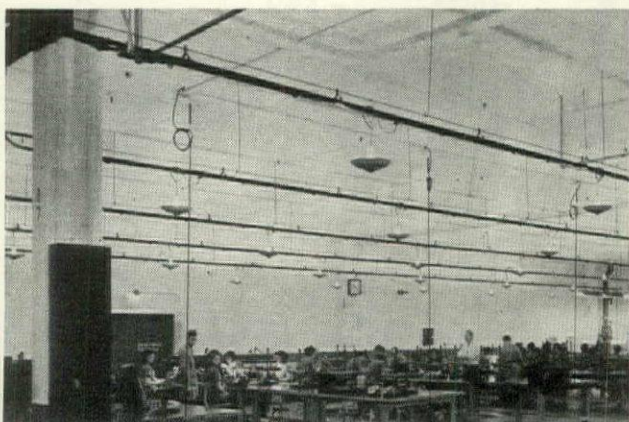
THE SWARTWOUT CO.
18511 Euclid, Cleveland 12, O.

Specialists in Air Movement
by *Natural* Methods

circuit load. Feeder conductors to these branch panels from the main distribution center are 3 wire, 230 v. lines capable of carrying large current loads at twice the usual efficiency. With this system, lights will never dim when heavy equipment is switched on, and all appliances will work at top efficiency. Westinghouse may be over-generous with its wiring recommendations, but their plan is indicative of the increased post-war needs which must be considered by every architect and builder.

New thought, too, must be given to wiring for schools and industrial establishments. Postwar schools will make much greater use of the motion picture and the radio and such equipment should be included as an integral part of the school plan—of equal importance with plumbing, heating and other electrical facilities.

Industry will also be carrying increased electrical loads because of the new and greatly improved lighting installations which are now being recognized as most important to peak production. To provide the necessary wiring in many expanding factories, a new system of branch wiring was developed to combat the problem of critical material shortages. Because of its convenience, this method will probably



PLASTIC DUCT wiring system developed by the Pierce Laboratory, Inc. uses small amount of steel, less than half the copper necessary for conventional systems. It is an efficient and economical method of secondary wiring.

continue to be used as secondary wiring in industry after the war. The Pierceway system consists of tubular copper conductors enclosed in molded plastic ducts which are easily installed in interlocking sections on ceiling, walls or benches. It is an efficient economical method for supplying power to portable tools and small equipment and, in overhead applications, for supplying lighting current.

DOORS

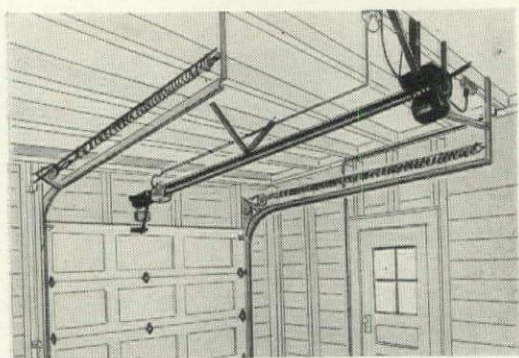
Door and window developments have gone forward toward simplification and standardization. The Roddis Lumber and Veneer Co. has developed a prefabricated door unit which includes the door itself, jambs, stops and casings, put together with the hardware applied, and factory finished according to

(Continued on page 162)

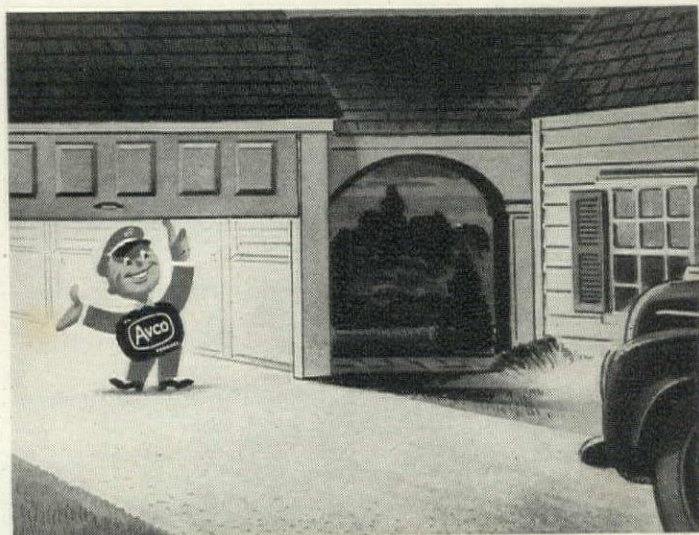
An ELECTRONIC "extra" for the Garage that can sell an Entire House!



Every builder knows how often an inexpensive "extra" can turn "lookers" into enthusiastic buyers. With a woman it may be something special in the kitchen that makes her say, "This is the house I want!", with a man something special in the basement . . . But here's an exciting modern electronic "extra" that will sell them both — an Avco Automatic Door Operator on the garage!



What is it? An Electronic device that gives the modest householder the convenience and protection of a private doorman!



How does it work? The householder drives up in his car, presses a control button on the dashboard . . . and the Avco Automatic Door Operator goes to work . . . it opens the garage doors, turns on the garage lights, (and for a slight additional cost) the yard floodlights and the lights in the entrance to the house! He drives in and parks, goes into the house, presses another control button and the Avco Automatic Door Operator closes and locks the garage doors and turns off garage, yard, and entrance lights *automatically*. The process is simply reversed when the householder is going out.



AVCO Automatic DOOR OPERATORS

THE HORTON MANUFACTURING
DIVISION

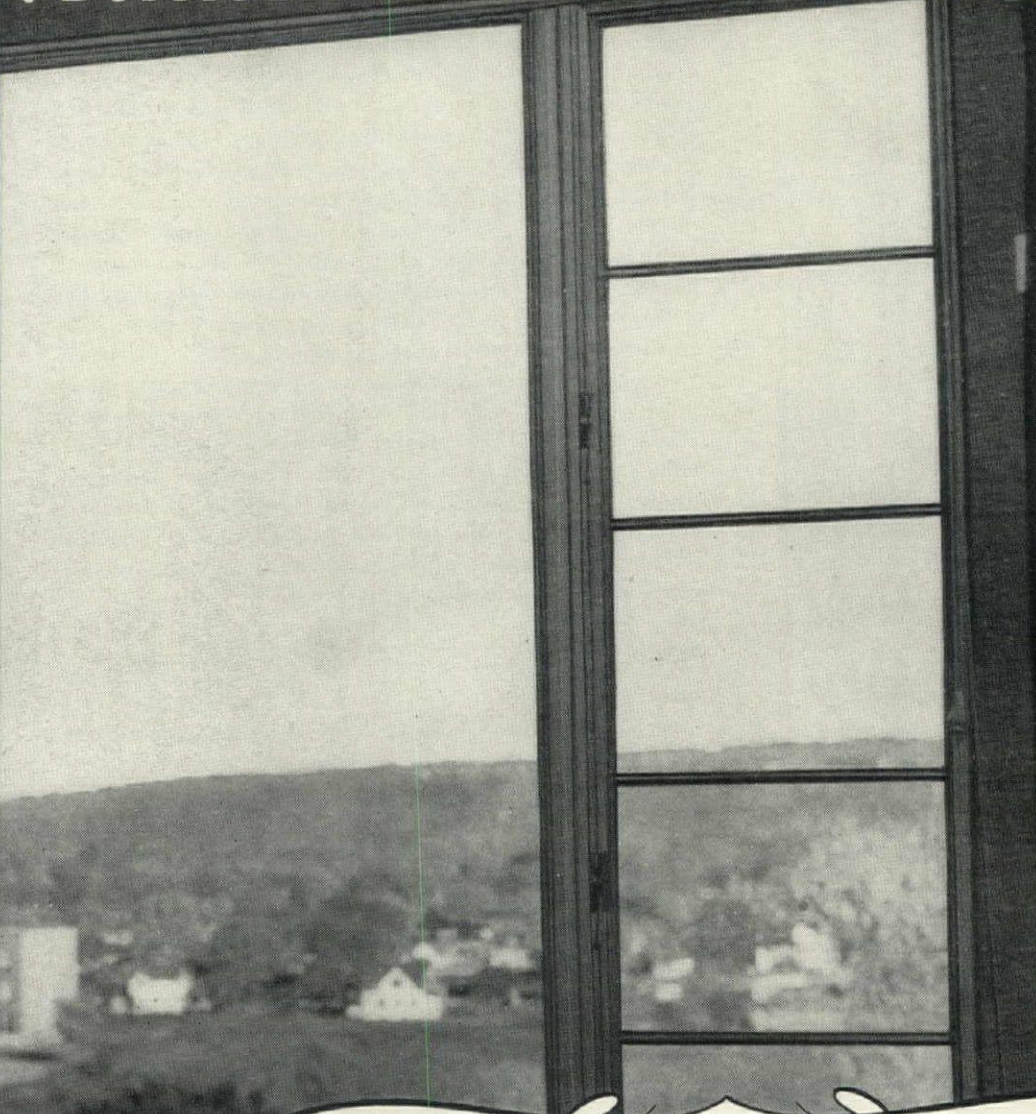
The Aviation Corporation,
Detroit 9, Michigan

THE SALES IMPACT of this ultra-modern convenience will be plain to every builder and architect . . . The Avco Automatic Door Operator gives reliable service every day of the year at low cost . . . can be simply attached to any type garage door. We'll be glad to send you full details on request.

Windowalls FOR A.



. DINNER GARNISHED WITH A VIEW



DINING ROOM WINDOWALL OF ANDERSEN COMPLETE WOOD WINDOW UNITS

This is how one architect invites you to sit down to a dinner garnished with a view. Perched high on a bluff that looks down upon a busy valley, this WINDOWALL captures and frames a picture that changes with the seasons.

These windows are weathertight, like a wall—transparent, like a window. Operat-

ing sash on each side of the picture window provide ample ventilation.

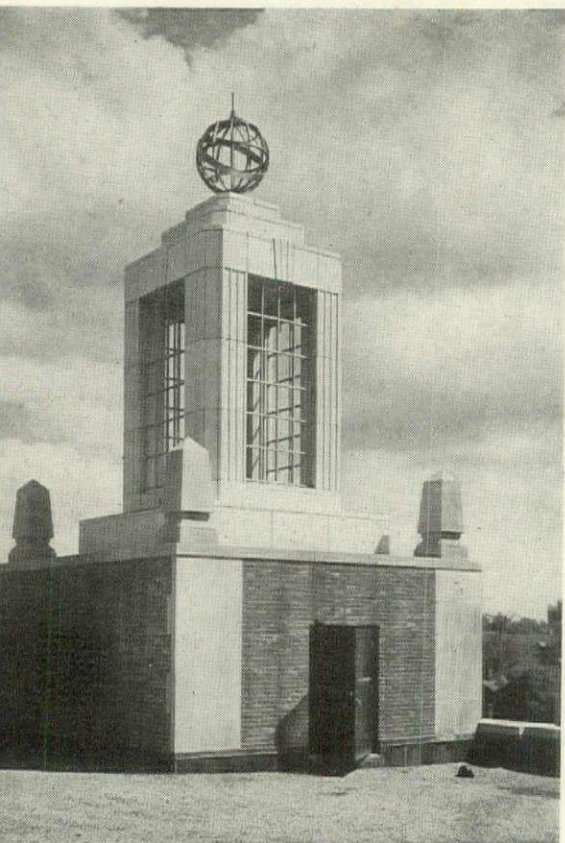
They are Andersen Casements set on either side of a "picture window"—all stock units available now or after the war from millwork and lumber dealers. Remember, too, that they're made of beautiful, enduring, insulating wood.

Illustration shows Andersen casement "Picture Window" unit, over-all rough opening size 10' 1 1/4" wide by 5' 6 9/16" high. Unit has standard Andersen Casement ventilating sash on each side of fixed center sash. For additional details, see Sweet's Catalog, or write to Andersen.

Andersen Corporation BAYPORT MINNESOTA



(Continued from page 158)



th enduring beauty by SEAPORCEL

The Seaporcel* Ceramic coated metals used to form the facades of this building will not fade or discolor through the years. Constant exposure to adverse weather conditions that would quickly destroy ordinary porcelain enamel finishes fail to dull the smooth lustre of its Seaporcel surfaces.

Available in practically any shape, color, shade or type of finish, Seaporcel gives the architect or designer almost unlimited latitude in creating building surfaces, sign faces, signs, etc. Its fast color and ease of cleansing make it an ideal building material.

Seaporcel is now available in limited quantities with the permission of your local W.P.B., and we are ready to help you plan your post-war buildings and signs. Write today for additional information.

U.S. Pat. Off.

ORCEL PORCELAIN METALS, INC.

Borden Avenue, Long Island City 1, N. Y.

Formerly Porcelain Metals, Inc.

specification. The profiles of casings and stops will be made to the architect's design. Substantial economies are gained by use of this door unit as it not only insures perfect fitting and finishing, but applies the economies of mass production and reduces labor costs. It is easily installed and is made with a split jamb to allow for variations in wall thickness. The Fir Door Institute offers Fac-Tri-Fit precision-made doors that are pre-fit at the mill, trimmed to size and ready to hang without sawing. They may be ordered completely machined—gained, bored or mortised by high speed precision tools. Another door offered by the Fir Door Institute which is gaining in popularity is a sliding door for homes, offices, hotels or apartment houses. Modern in appearance, it saves space wasted by the average swinging door. These units are simple to install, low in cost and operate smoothly and quietly. The frame comes completely set up ready for use, and two metal rollers glide quietly in the cylindric 1 in. channel grooved into the header. Doors and finishing hardware are selected separately. The units are designed for standard 2 by 4 partitions and stock width 1 3/8 in. doors, and can be ordered with doors pre-fitted at the factory. U. S. Plywood and the Mengel Co. will jointly produce a low-priced hollow core flush-type door available faced with gum and other hardwoods.

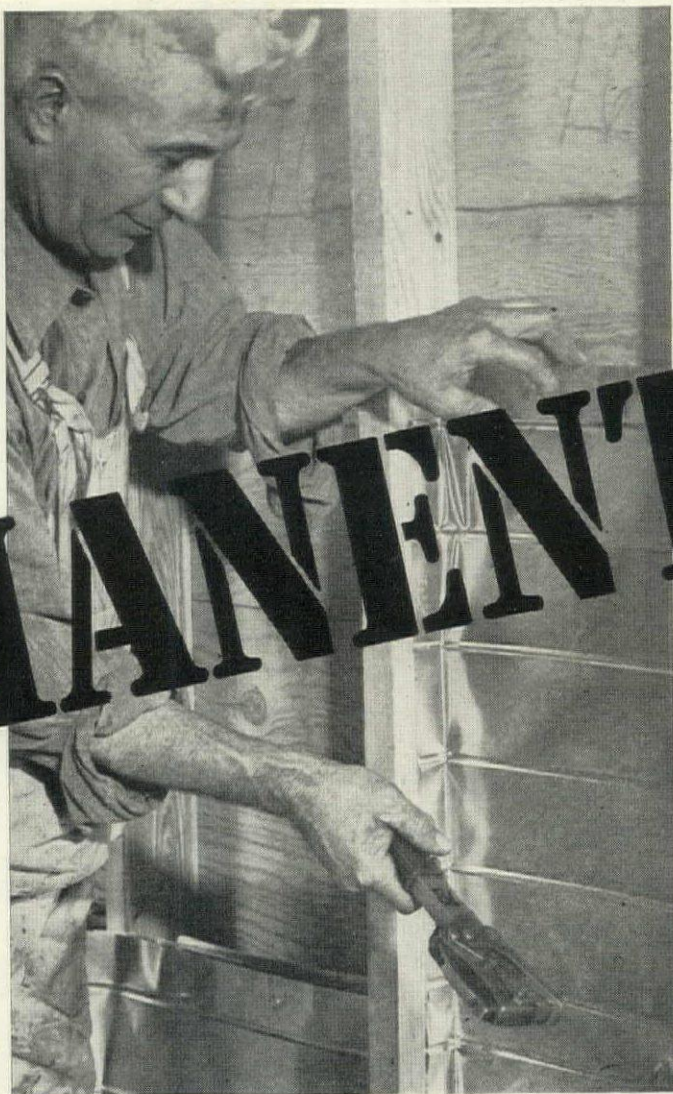
WINDOWS

Steel window manufacturers have already announced that their postwar units will be made in new sizes to coordinate with modular masonry, offering increased convenience to designers and builders. The Anderson Corp. are also planning to manufacture their wood windows in stock sizes which will be further standardized to conform more nearly to the modular system. Their postwar plans include developments of a new double-hung wood window to supersede their Victory unit. Croft Steel Products Inc. will offer a complete window finished in aluminum and plastic, prefabricated, assembled and packaged ready for installation in rough walls. They report it will be the most economical window ever developed, far lower in cost than either the regular double-hung wood window or the prewar steel casement. Various low cost window units have been developed for war housing, barracks, temporary schools, etc. and because of their economy will probably continue to be manufactured for the inexpensive home. One such unit made by the Rolscreen Co. is an awning type wood window which may be used with standard 2 by 4 frame or thin wall construction. It sets into the studding without frames, sash weights or balances and comes assembled except for lock handles. Another development is an all-season window with interchangeable screen and storm sash inserts, easily operated from the inside. Because of the lowered cost of aluminum and the greatly speeded wartime production techniques, aluminum windows will be available for the first time at reasonable prices. The Aluminum Window Co. has already announced a line of surprisingly inexpensive aluminum windows which will be available as soon as restrictions are lifted. They are suitable for the moderately priced home and come in stock sizes—9 double-hung and 8 casement sizes—obtainable in several different muntin arrangements. Plastic window screening which is impervious to corrosion and unaffected by moisture also offers advantages for future

(Continued on page 166)

Steel Insulation
is

PERMANENT



Ferro-Therm

Reg. U. S. Pat. Off.

STEEL INSULATION

***has 100% efficiency for
the life of the building***

If you are weighing the *value* of insulating materials, consider this fact: Ferro-Therm Steel Insulation has 100% efficiency for the life of the building. It has the structural strength, rigidity and permanence that only steel possesses. And it cannot settle or pack down, as the sheets are stapled *permanently* in place.

Ferro-Therm is the most effective barrier ever developed for resisting the penetration of heat *from either side*. It reflects 95% of all radiated heat. In winter it reduces fuel costs by 25%-30%; in summer it reduces the temperature in a house by 10° to 12°. And, because it is *steel*:

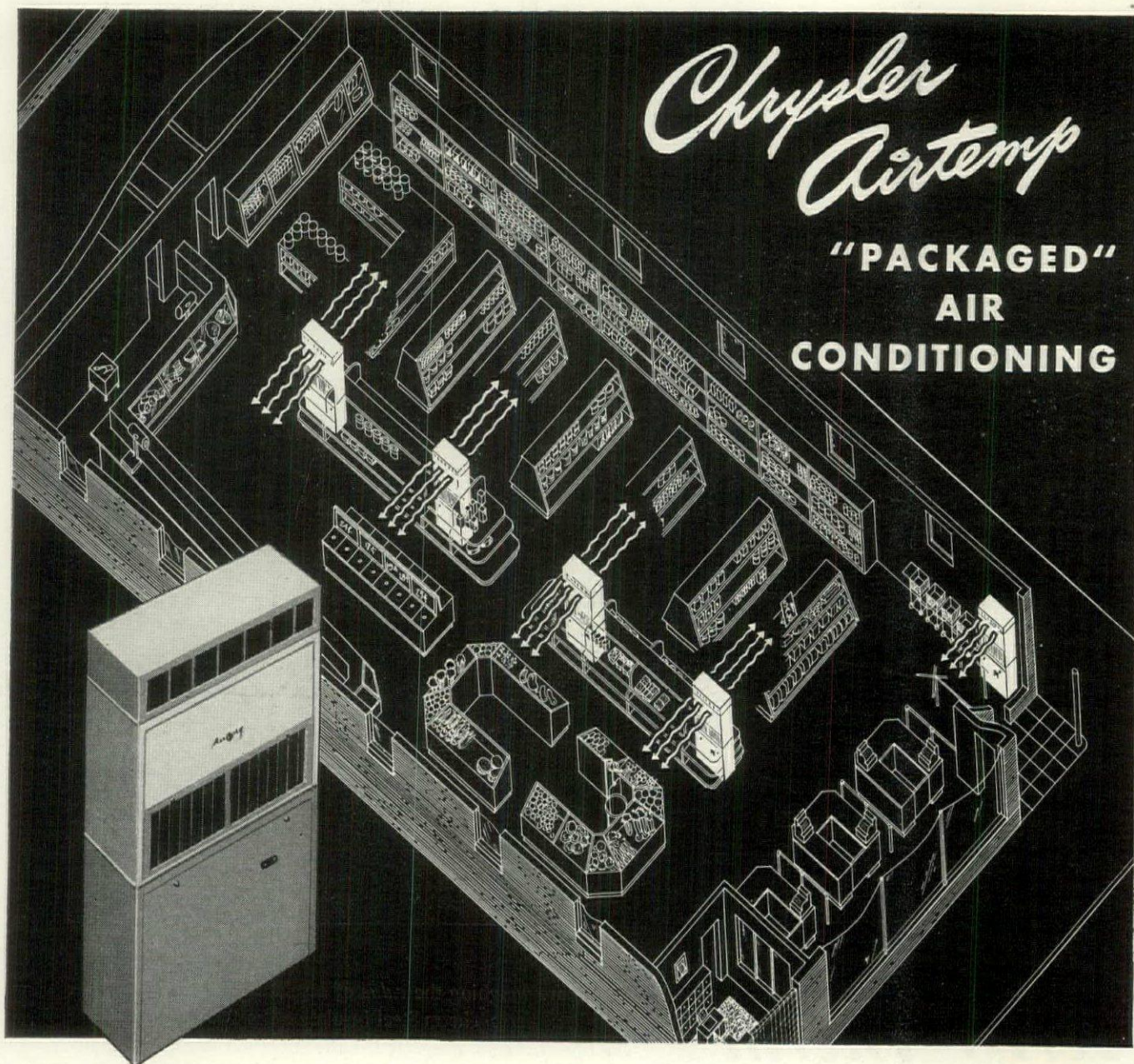
1. It forms a definite fire-stop for wooden framework.
2. It does not absorb moisture, or convey any moisture to wooden framing members, which would cause them to rot.
3. It completely prevents the penetration of termites, rodents and insects.

A comprehensive report on the use of Ferro-Therm by the U. S. Army and Navy and leading authorities on insulation will be sent upon request. Write for your copy now.

AMERICAN FLANGE & MANUFACTURING CO. INC.

Ferro-Therm Division

30 ROCKEFELLER PLAZA, NEW YORK 20, NEW YORK



Chrysler
Airtemp

**"PACKAGED"
AIR
CONDITIONING**

Indispensable to the Modern Super Market

Air Conditioning is increasing profits in many retail stores. Cool, clean, properly dehumidified air attracts customers, encourages them to stay longer and steps up "impulse buying". It protects fruits and vegetables by retaining their freshness and eye appeal. Perishables move faster, thereby reducing waste.

Chrysler Airtemp pioneered "Packaged" Air Conditioners. These time-tested units are ideal for the big open areas of Super Markets. Easily and quickly in-

stalled, singly or in multiple, Chrysler Airtemp hermetically sealed "Packaged" Air Conditioners provide quiet, dependable, trouble-free temperature-humidity control at low up-keep. Steam coils may be added for winter heating to provide year-round air conditioning.

Architects are finding the flexibility of application of the "Packaged" Air Conditioners decidedly helpful in remodeling and in new building design. • Airtemp Division of Chrysler Corporation, Dayton 1, Ohio.

Buy More War Bonds! Tune in Major Bowes every Thursday, CBS., 9 p.m., E.W.T.

CHRYSLER  **AIRTEMP**
HEATING • COOLING • REFRIGERATION

YOU will want to

See this Film...

the dramatic story of ALUMINUM

HERE is a 34-minute educational film on aluminum that is jam-packed with interesting information on its processing . . . from the mining of bauxite, refining it to alumina, reducing the oxide to metal . . . right on through to the rolling of sheet, rod and bar . . . and the manufacture of fabricated parts.

This film, titled "A Recital of Faith," portrays the great advances in aluminum technology during the war years, and the infinite possibilities for aluminum in the post-war world.

Underlined is the part Reynolds Metals is prepared to play in co-operation with engineers and manufacturers who are now using, or plan to use aluminum, and the new lightweight, high-strength aluminum alloys.

Showings easily arranged

Every audience that has seen "A Recital of Faith" has praised it in glowing terms. It is now available, without charge, for showings before technical groups, engineering societies and manufacturers . . . 35 mm. or 16 mm.

For full information, just write Reynolds Metals Company, Aluminum Division, 2500 South Third St., Louisville 1, Ky. On your letterhead, please.



REYNOLDS

**The Great New
Source of**

ALUMINUM

INGOT • SHEET • SHAPES • WIRE • ROD • TUBING • FORGINGS • CASTINGS • PARTS • FOIL • POWDER

(Continued from page 162)

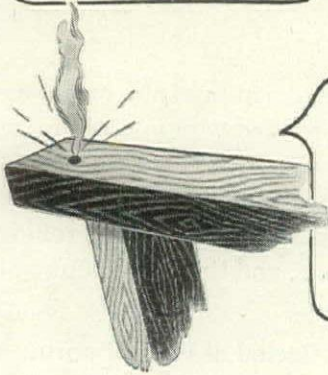
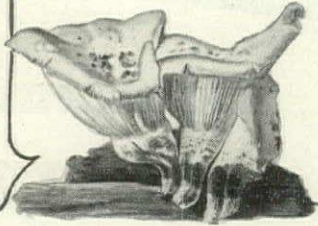


JOE TERMITE:

"Wood-hungry as I am, I'd rather starve than eat CZC-treated lumber."

LENTINUS LEPIDEUS:
(Wood-decaying fungus)

"As a food, CZC-treated lumber is terrible. I can't stand the stuff."



SAMMY SPARK:

"I can't seem to get going on CZC-treated wood. It leaves me cold."

3 Dissatisfied "Consumers"

Most testimonials sing out praises. But here are three from highly dissatisfied "consumers." To them, lumber that has been pressure-impregnated with CZC (Chromated Zinc Chloride) is repulsive.

Yet, the desirable properties of the wood, such as strength, workability, etc., remain unchanged. It is odorless and clean to handle. When lumber is again available, be sure you have on hand this book on the advantages to you of CZC-treated lumber. **USE THE COUPON NOW!**

DU PONT CZC

CHROMATED ZINC CHLORIDE

Makes Wood Repel Termites—Resist Decay—Retard Fire

E. I. du Pont de Nemours & Co. (Inc.), Grasselli Chemicals Department, Wilmington 98, Delaware.

Gentlemen: Please send me "FACTS ABOUT LUMBER"

Name _____

Company _____

Address _____

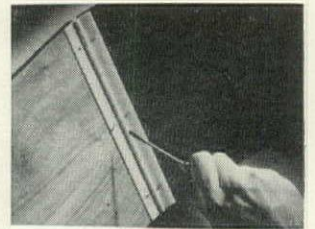
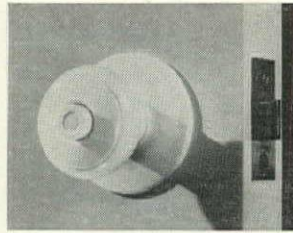


REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

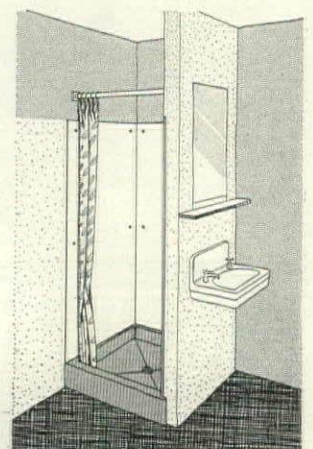
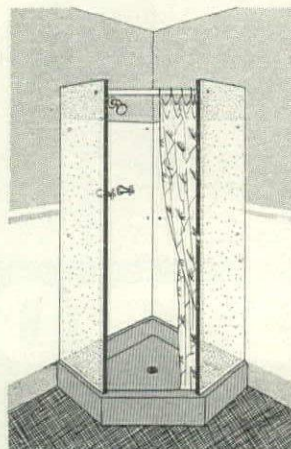
HARDWARE

Manufacturers of every type of hardware are planning new merchandise for their postwar lines. Most companies will undoubtedly utilize plastics to a degree never before tried and some are experimenting with formerly too expensive metals which will be cheaper after the war. Aluminum is one such metal which will be seen much more often in the postwar home. Plastics, however, will be everywhere. We may expect plastic doorknobs, doorpulls and keyhole plates; plastic bathroom and closet fixtures; electric switch plates made of plastic; even plastic screws, bolt, hinges, catches and hooks. Du Pont de Nemours Co. is cooperating with manufacturers on a line of extremely good looking lucite bathroom fixtures including towel racks, soap dishes, glass holders, paper hold-



PLASTIC HARDWARE includes doorknobs and piano type hinge.

ers and hooks. Of particular interest is the great diversity of closet fixtures, designed to make the postwar closet a truly functional unit with neat and convenient places for all the diverse articles which are usually crowded in upon each other in a hopeless jumble. Knap and Vogt has done an excellent job in designing a great variety of closet fixtures, easily attached to either closet wall or door. They include garment brackets, extension rods, utility racks, swinging trouser and skirt hangers, shoe racks, and portable shoe stands, tie racks, hat and coat racks, umbrella and cane holders. For the bathroom this company also presents sliding towel racks and for the kitchen disappearing pan racks.



PREFABRICATED SHOWER CABINETS made by Pittsburgh Plate Glass Co. are easily installed in existing bathrooms.

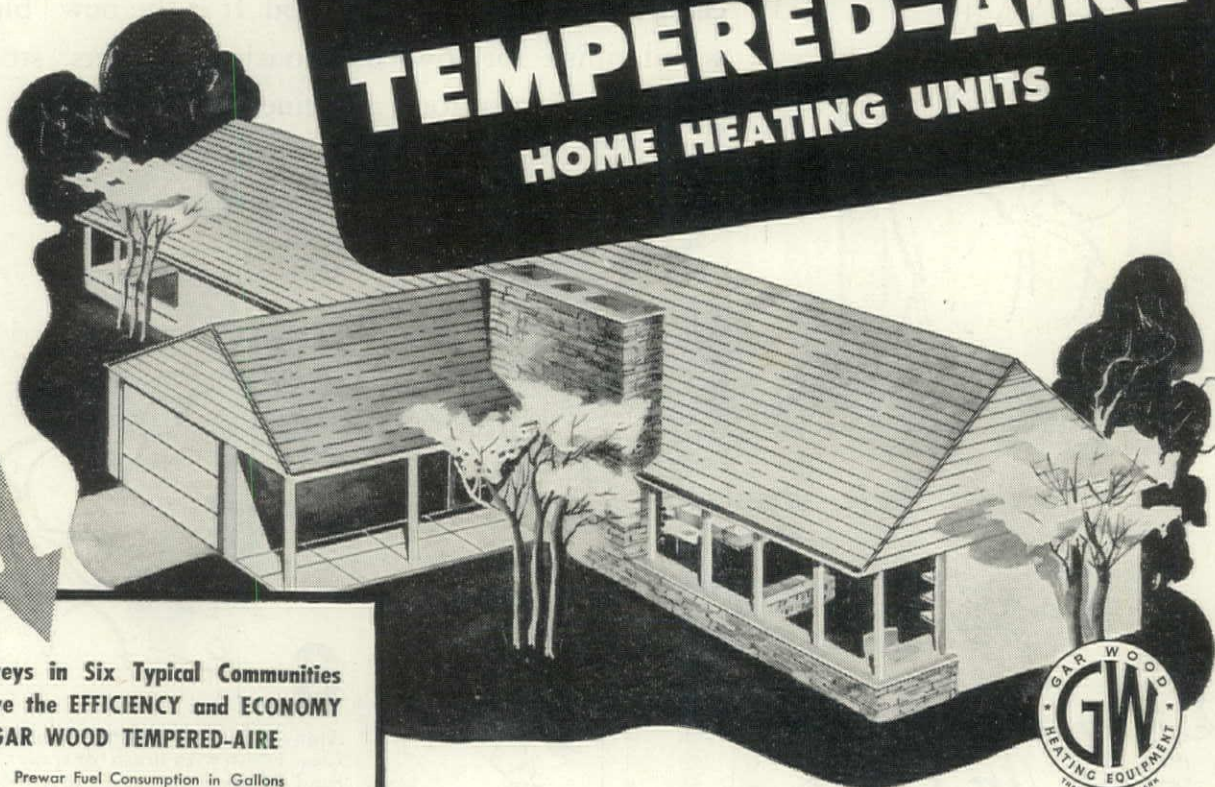
Build Long-Term Satisfaction into Your Homes

with these **EFFICIENT, ECONOMICAL**

Gar Wood

TEMPERED-AIRE

HOME HEATING UNITS



Surveys in Six Typical Communities Prove the EFFICIENCY and ECONOMY of GAR WOOD TEMPERED-AIRE

Prewar Fuel Consumption in Gallons
Per Square Foot of Floor Area

IN ROCHESTER

Average for territory 1.65
Average GAR WOOD equipped77

IN TOLEDO

Average for territory 1.54
Average GAR WOOD equipped77

IN DETROIT

Average for territory 1.54
Average GAR WOOD equipped71

IN HARTFORD

Average for territory 1.30
Average GAR WOOD equipped90

IN DREXEL HILL, PA.

Average for territory 1.18
Average GAR WOOD equipped85

IN RICHMOND

Average for territory97
Average GAR WOOD equipped86

Good homes, well planned and well built, offer the greatest possibilities for heating efficiency. Be doubly sure that your homes will give the utmost satisfaction by recommending either oil or gas-fired Gar Wood Tempered-Aire Units . . . famous for efficient, economical operation. Actual surveys have proven their outstanding performance. Ask the Gar Wood dealer in your community to notify you when the new post-war Tempered-Aire models are available.

BUY U. S. WAR BONDS TO ASSURE VICTORY!

GAR WOOD INDUSTRIES, INC., HEATING DIVISION

7924 RIOPELLE STREET

DETROIT 11, MICHIGAN

HOISTS and BODIES . . . WINCHES and CRANES . . . TANKS . . . ROAD MACHINERY . . . MOTOR BOATS

PEN-CHROME

"BLONDE" WOOD FINISHES

O'Brien, specialists in fine wood finishes since 1875, urge you to investigate Pen-chrome for plywood, trim, cabinets, floors—any new wood. It is the new "blonde" wood finish for low-cost housing projects, store remodeling, institutions and fine residences.

1

Sand the wood smooth—free of dirt and smudges.

2

Apply Pen-chrome Wood Stain sparingly, with brush (or spray).

3

Apply thin coat of Pen-chrome Clear Finish with brush (or spray). Sand lightly.

4

Apply second thin coat of Pen-chrome Clear Finish.

The result is a beautiful, low-cost, wax-like "blonde" finish that will stand years of wear and cleaning.

Full specifications on O'Brien's complete line of paints, varnishes and enamels will be found in the 1945 Sweet's Catalog.

O'BRIEN

FINE FINISHES SINCE 1875



TEST PACKAGE: Try Pen-chrome. A test package—one-half pint of stain and one-half pint of Clear Finish to seal the stain—will be sent without charge to architects and builders requesting it on their business stationery. Specify color: Sandalwood, Driftwood, Platinum, Blonde, Maple, Bleached Mahogany.

O'BRIEN VARNISH COMPANY
102 N. JOHNSON ST., SOUTH BEND 21, INDIANA

YOU

HAVE 1 OR 2 THINGS
TO DO BEFORE

APRIL 16

**REMEMBER—\$55,000 IN AWARDS—AND
A VALUABLE REFERENCE FOR YOUR FILES**

If you have already obtained your program for the General Motors Design Competition you have only one thing to do—forward your solution before the closing date, April 16, 1945.

If this competition has escaped your attention until now, you have two things to do—get a copy of the program from the Professional Adviser now—and submit your solution before April 16th. Forward the coupon to get the rules, program and other needed materials. Act now, so that you will have as much time as possible to develop a winning solution.

You will want a share of the \$55,000 in prize awards: 5 distinct competitions, with 5 First Awards of \$5,000 each, 5 Second Awards of \$2,500 each, 5 Third Awards of \$1,000 each, 5 Fourth Awards of \$500 each, 20 Honorable Mentions and 20 Special Awards of \$250 each.

Practicing architects, builders and contractors will want the book "Design for Dealer Establishments," which will afford an interchange of ideas with other leading members of the profession. This book will reproduce many of the winning plans and design details, plus other reference material. It will be sent to all who enter a solution that meets the minimum requirements of the competition. Enter one or more solutions by April 16th.

COMPETITION APPROVED BY
AMERICAN INSTITUTE OF ARCHITECTS
AND
ROYAL ARCHITECTURAL INSTITUTE OF CANADA

AR-3

I-3

PP-3

JRAIC-3

George Nelson, A.I.A., Professional Adviser, c/o The Architectural Forum,
Empire State Building, 350 Fifth Avenue, New York 1, N. Y.

I intend to enter the GENERAL MOTORS competition. Please send me the
program, including the conditions governing the competition and awards.

Name _____

Firm (if any) _____

Address _____

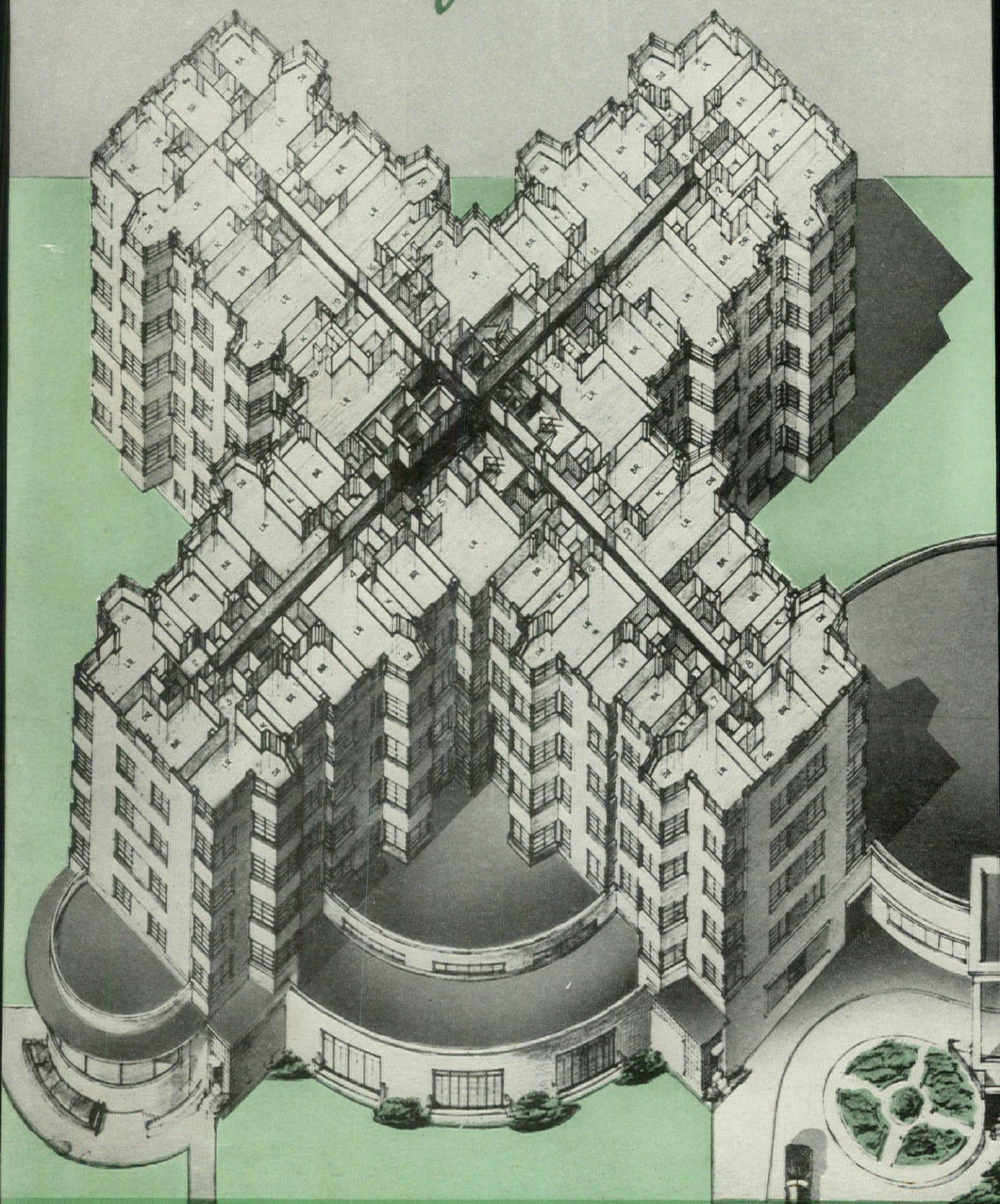
City _____ State _____

Check one: Architect _____ Designer _____ Draftsman _____ Student _____

Other Occupation _____

AF-3

DESIGNED *for* TOMORROW



THE \$4,000,000 SCHOOL HOUSE LANE APARTMENT PROJECT,
GERMANTOWN, PHILADELPHIA. AARON COLISH, ARCHITECT

with PERSONALIZED HEATING CONTROLS



Mayer I. Blum, operator of the 2601 Parkway Apartments, Philadelphia's largest and finest, which houses 520 families, and the creator of the School House Lane project.

TO BE CONSTRUCTED ...

As soon as Building Materials are Released

HONEYWELL Personalized Heating Control, is the greatest advance in apartment heating since automatic heating itself. One or more thermostats in each apartment permits tenants to select and regulate temperatures according to their own individual requirements or desires.

The \$4,000,000 School House Lane Apartment project, designed for tomorrow, will be one of America's outstanding apartment buildings. It consists of two buildings, of cross design, with spacious garage between, and contains 451 one and two bedroom apartments. The project incorporates many new and successful innovations, including sun bathing facilities with showers and lockers. Public spaces will be air conditioned, and air conditioning of apartments will be optional.

Mayer I. Blum, the creator of the project, is one of America's outstanding apartment builders and operators. He is also president

of the corporation which owns and operates the 2601 Parkway apartments, Philadelphia's largest and finest. It is significant that Mr. Blum has selected Honeywell Personalized Heating Control, with individual thermostats in each apartment. He recognizes that Personalized Heating Control will attract tenants, hold tenants, save in maintenance and save fuel.

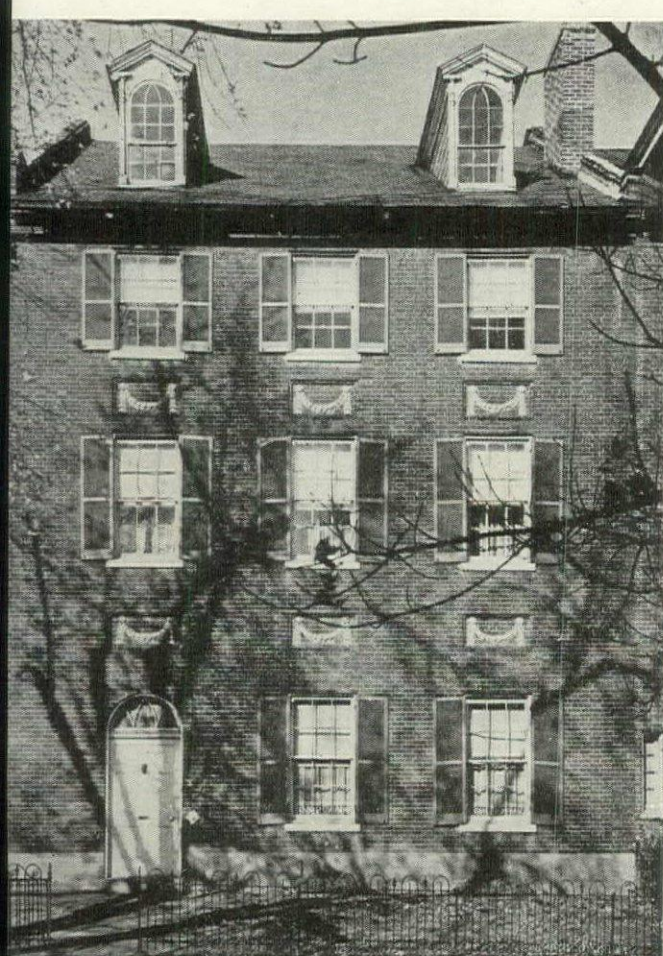
As soon as materials are released, construction of School House Lane Apartments will begin. Plans are completed — materials are selected — including Honeywell Personalized Heating Control. If you are planning or working on an apartment job, we suggest that you, too, capitalize on Honeywell Personalized Heating Control. A request will bring you complete information. Minneapolis-Honeywell Regulator Company, 2740 Fourth Ave. South, Minneapolis 8, Minnesota. Branches and distributing offices in all principal cities.

Honeywell Personalized Heating Controls are Available Now!

MINNEAPOLIS
Honeywell
CONTROL SYSTEMS

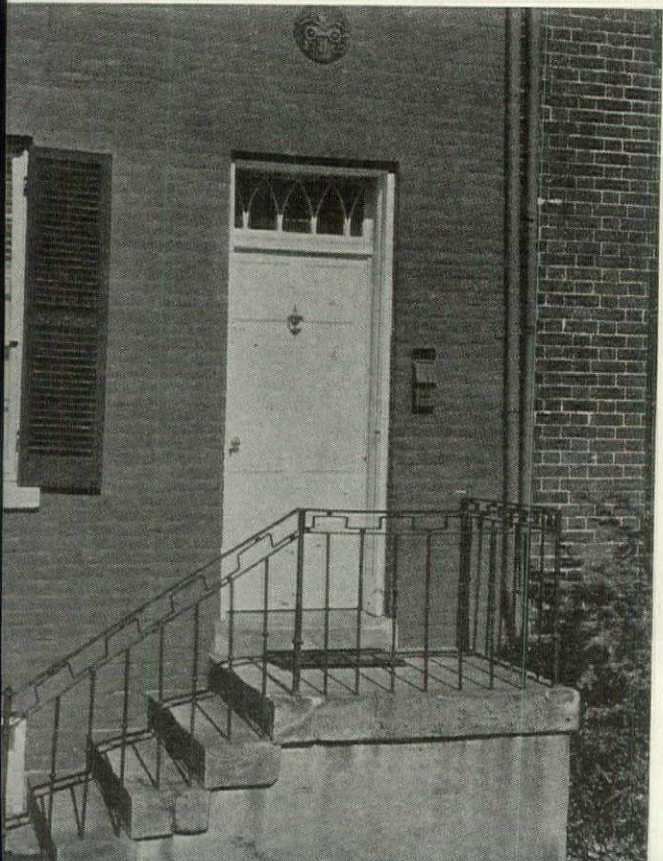
BOOKS

Georgetown Houses . . . Democracy Under Pressure . . . Coaching Roads of Old New England



JOHN COX HOUSE HAS SWAGS IN RECESSED PANELS

FLAT ARCH IS UNUSUAL FOR FEDERAL PERIOD



INTERIOR OF CHARACTERISTIC ELEGANCE

GEORGETOWN HOUSES OF THE FEDERAL PERIOD. By Deering Davis, Stephen P. Dorsey and Ralph Cole Hall. Architectural Book Publishing Co., Inc., New York. 130 pp. Illustrated. 8½ in. by 11 in. \$5.

Unlike Williamsburg, Georgetown remains today a living community. Its power of survival is due not to a Rockefeller endowment but rather to its quiet defiance of a long period of neglect and decline that began in the middle of the nineteenth century. In its earlier prominence as a busy seaport, urban and social center, Georgetown was partially to blame for retarding the development of the newly purchased federal capital adjacent to it. However, the eventual expansion of Washington spelled decline and blight for the older town. Its incorporation as a part of the District of Columbia in 1871 was more an affirmation of weakness than an attempt to restore its earlier prestige.

Like many other victims of neglect, Georgetown retained in its isolation physical and cultural traits that would have normally disappeared with the tides of healthy urban expansion. Many of the older inhabitants, descendants of the town's founders, preferred its quiet elegance and exclusive location to Washington's newer and more imposing character. These families, whom we can thank today for the preservation of invaluable architectural and historical documentation, lived on in Georgetown, maintaining their former living standards in a community that was all but consumed by blight. Many of their children are now witnessing its restoration to a charming residential section of great cultural and historical interest.

The simplicity and informality of Georgetown architecture is an illustration of the Federal style in its most restrained and utilitarian aspect. That it pro-

(Continued on page 176)

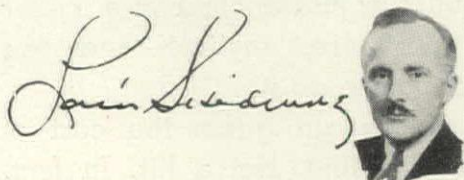
THERE IS A NEW TREND IN STORE DESIGN

SKIDMORE, OWINGS AND MERRILL'S conception of a grocery

"The ordinary 'corner grocery' need not be the disordered complexity that accident and usage have made it—a customer-confusing mess of everything from soup to nuts piled in the aisle and on the counter. In our plan we have allowed for complexity of function, but an ordered complexity.

"Cleanliness and easy maintenance are of paramount importance for a food-sales space. We consider glass in its various forms particularly suited to this purpose.

"The old type store window with its 'display' and 'Specials for Today' plastered all over the glass, serves only as a barrier. A window is a thing to look into, not at. In our plan, the whole store is the 'display'."



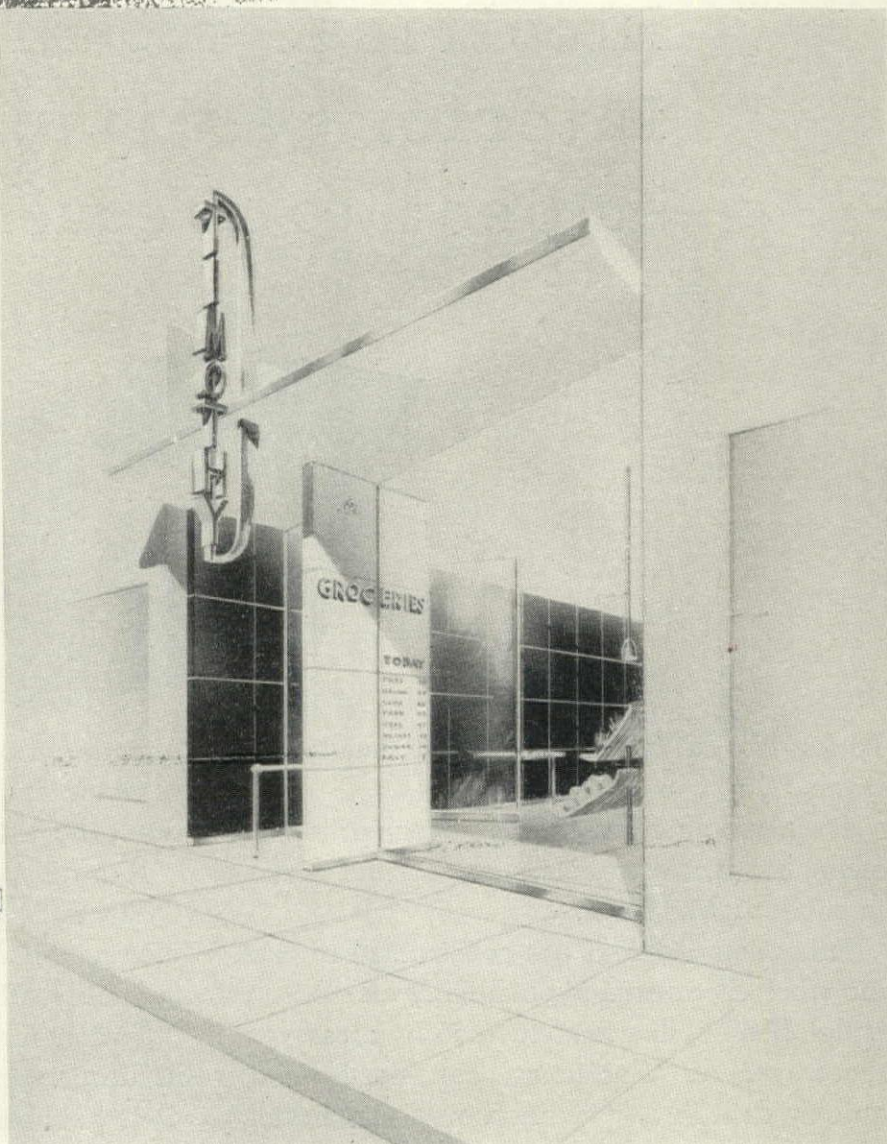
The new trend in store design demands versatile, adaptable construction materials. Pittsburgh Glass and Pittco Store Front Metal more than meet these requirements in a complete line of high quality products. They give the architect freedom in design, provide a type of glass for every need.

Near you is one of our nationwide system of branches and dealers, ready to serve you.

In 21 magazines Pittsburgh Plate Glass Company advertising urges merchants to plan *now* for postwar modernization, alterations, and new buildings—with the help of an architect.

"PITTSBURGH"

stands for Quality Glass and Paint



A 44-page book of ideas, styles, techniques and materials for building or modernizing retail stores—for the exclusive use of architects and designers. Mail the coupon for your free copy of "There is a New Trend in Store Design." It will be sent to you without obligation.

Pittsburgh Plate Glass Company
2158-5 Grant Building, Pittsburgh 19, Pa.

Please send me, without obligation, a free copy of the book "There is a New Trend in Store Design."

Name _____

Address _____

City _____ State _____

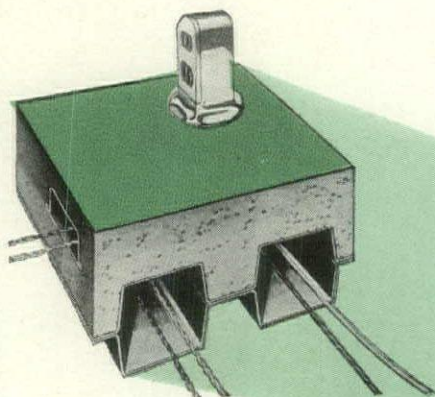


PITTSBURGH PLATE GLASS COMPANY

PRODUCTS FOR STORE FRONTS AND INTERIORS

SPECIFICATION:

Keep floor plans fluid.
Electrical requirements and
interior partitions
subject to frequent change.



Looks like a terrific technical headache, doesn't it?

It's a specification that is never written as such, but is, nevertheless, a constant factor in modern buildings.

Robertson Q-Floors are constructed so that the whole floor area is potentially an electric outlet. Steel cells are connected by crossover raceways. An electrician can easily and quickly drill in any six-inch area and install an outlet—for a production machine or an office machine. Floor plans stay fluid.

So far as the electrical future goes, a Q-Floor will stay limitlessly modern. Q-Floors in any building remove all worries about increasing mechanical demands. You can

change an outlet or add another in a matter of minutes, anywhere, anytime—and you don't dig a trench to do it.

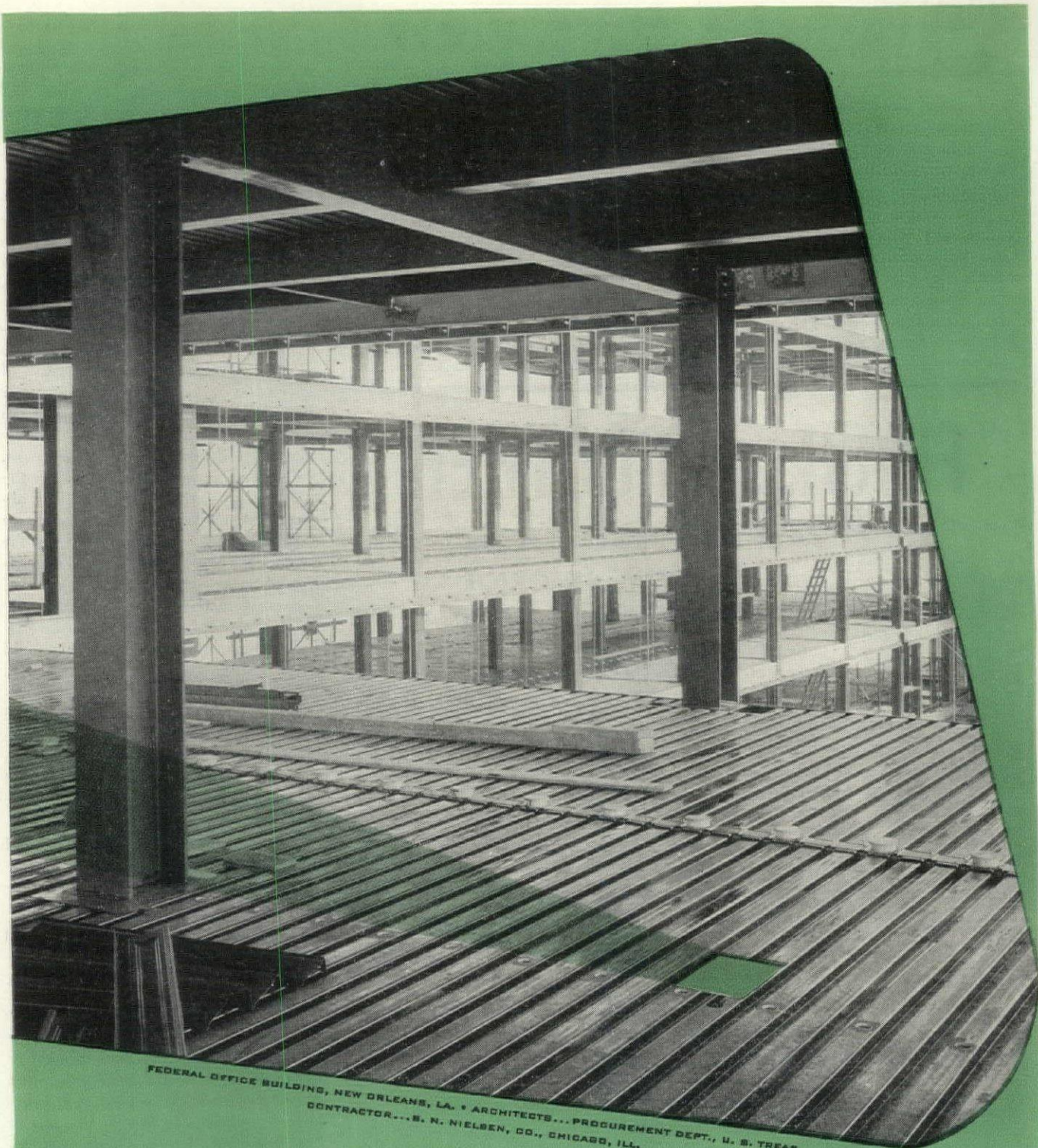
Naturally, you might guess the cost of Q-Floors is out of line. Not a bit. In fact, they have many structural advantages which favorably affect construction time and cost.

Two men can lay 32 square feet of Q-Floor in thirty seconds. The floors can be completed almost as soon as the structural frame. No wet materials cause delay. The Q-Floor immediately becomes a working platform for all other trades. Installation is quiet, clean, fireproof, with no shoring or forms. Q-Floors are light in weight which makes possible the significant saving of lighter framework.

A Robertson representative will be glad to place more specific reference at your disposal and discuss the details of Q-Floors in general, or in relation to your current job. Electrical Fittings for Q-Floors are handled by General Electric construction materials distributors. For Q-Floor literature, write H. H. Robertson Co.

TIME-TESTED — OVER 3000 ROBERTSON Q-FLOOR INSTALLATIONS.

THE EASIEST THING FOR A BUILDER TO FORGET—
Floors are what a building is for



FEDERAL OFFICE BUILDING, NEW ORLEANS, LA. • ARCHITECTS... PROCUREMENT DEPT., U. S. TREAS.
CONTRACTOR... S. N. NIELSEN, CO., CHICAGO, ILL.

Q-FLOORS

H. H. ROBERTSON CO.

2403 FARMERS BANK BUILDING
PITTSBURGH 22, PENNSYLVANIA



OFFICES IN 45 PRINCIPAL CITIES
WORLD-WIDE BUILDING SERVICE

(Continued from page 172)

duced a well developed urban residential pattern as well as manorial and public buildings is clearly indicated in the Davis-Dorsey-Hall book. Full page exterior photographs of the more outstanding houses are included along with architectural details, interiors and gardens. However, the accompanying text reduces the work and its importance to a "decorator's item." Descriptions of the individual buildings read like a mixture of Elsie de Wolff's best 1925 prose and

the files of the D.A.R. The beauty of Decatur House on N. St. is passed over in the following manner: "... Seven years after her husband's death Mrs Decatur, still dwelling upon her personal tragedy [the Commodore had been killed in a duel], refused to enter Washington proper lest she meet his opponent, or his second, whom she considered much to blame. As a result, in the words of an English visitor of that time, 'She sees a great deal of company at home' ... Later, Mrs Decatur, who had become a devout Catholic, probably through her close friendship with the Carroll family, moved to a frame house

near Georgetown College. Her grave is in the cemetery there and several mementos of the Commodore may be seen today at the University. The house, well known for its fine doorway, is the property of Mrs Franklin Mott Gunther and has been leased by the Countess de Martino." The present lessee and the dwelling of Mrs Decatur, either on her personal tragedy or in Decatur House, are undoubtedly matters of great interest to the first families of Georgetown. To a national readership they are slightly less intriguing.

A little further along, under a photograph of the Berry House living room which shows a shocking display of neo-classic swags and plaques over a delicate federal mantel, the caption says: "The original mantel with the design above it arranged by David Levitt, well known mural painter, to nullify the effects of modern wall lights." The absence of an active verb from the sentence should be no more confusing to the reader than the author's grave condonation of an extremely unpalatable bit of decorative hoodwinking, which, fortunately, is not at all representative of Georgetown interiors though this could never be discovered by reading the book. As it stands, purportedly a serious introduction to the historical background and architectural characteristics of the town, it is intellectually on a par with the story about our first president and his birthday hatchet. Had the work been published as a picture story, captionless and textless, it would have had infinitely more dignity and prerogative and an equal amount of documentary value.

DEMOCRACY UNDER PRESSURE. By Stuart Chase. The Twentieth Century Fund, New York. 142 pp. 5½ in. by 8 in. \$1.

Even before the US entered the war, the Twentieth Century Fund, a non-partisan research institute, had decided to devote an increasingly large proportion of its resources to investigation of problems of postwar adjustment. As part of this program, Stuart Chase was invited to write six reports to appear under the series title, *When the War Ends*. The first volume, *The Road We Are Travelling* (1942) interpreted the sweeping social and economic changes that had occurred between the two world wars. *Goals for America*, which appeared the same year, established a post-war budget of our needs and resources and offered proof that we have ample manpower and means to produce them. The third volume, *Where's the Money Coming From?* (1943), demonstrated the ability of our nation to finance the outlined program for full employment of our human and material resources.

(Continued on page 180)

FINER, SMOOTHER

ARCHITECTURAL EFFECTS with CALCIUM CHLORIDE IN YOUR CONCRETE

Concrete has been developed from a rough and ready construction material into a vehicle for the expression of architectural beauty as well as for rugged strength.

The addition of calcium chloride in the concrete mix gives concrete the greater plasticity needed to make it flow into intricate forms more readily without tamping to distort the forms. Such concrete leaves smoother surfaces, fewer voids and less blemishes. It provides the high early strength and built-in curing so desirable in protecting fine formwork against damage.

Our Bulletin 28, "Early Strength Concrete," gives the facts. Write for your copy.

CALCIUM CHLORIDE ASSOCIATION

4145 Penobscot Bldg., Detroit 26, Mich.

CALCIUM CHLORIDE

SPEEDS WINTER CONCRETE CONSTRUCTION





Cotton Insulation *truly* is the *featherweight* "champ"

So light is Cotton Insulation that a thousand square feet weighs but 219 pounds. Each square foot which supports it carries *less than 4 ounces of weight*. Yet this feather-light weight is but one of the many advantages of Cotton Insulation. In insulating value it exceeds any other commercial insulation.

Cotton is no longer the insulation of tomorrow. It is the insulation of *today*. Wherever building materials are sold, it can be purchased. No priorities are required. One man can install it - just unroll it like a rug. It's truly the "champ" of the insulation field.

**NATIONAL COTTON COUNCIL OF AMERICA
COTTON INSULATION ASSOCIATION**

LOAD FACTOR COMPARISON

The chart below shows relative weights of cotton and seven other insulating materials. These tests proved cotton to be by far the lightest of all commercial insulation.

	This is Cotton Insulation's Weight
_____	IT IS 40% LIGHTER THAN NO. 1
_____	IT IS 70% LIGHTER THAN NO. 2
_____	IT IS 75% LIGHTER THAN NO. 3
_____	IT IS 80% LIGHTER THAN NO. 4
_____	IT IS 83% LIGHTER THAN NO. 5
_____	IT IS 90% LIGHTER THAN NO. 6
_____	IT IS 94% LIGHTER THAN NO. 7

HANDLES EASILY

One person can insulate an attic in a few hours, or experienced applicators are available to install Cotton Insulation.

SIMPLE TO INSTALL

To lay it flat, just unroll it like a rug. For upright installations, you simply clip it on. Not abrasive. Harmless to skin and clothing.

MAXIMUM INSULATION

Exceeds other materials 4% to 36% in insulating effectiveness. Can cut fuel bills up to 30%.

LIGHT IN WEIGHT

With 20% to 25% less bulk required, Cotton Insulation represents a structural load factor 40% to 90% less than the same thickness of other materials.

WILL NOT BURN

Even a blowtorch at 1800° will not make it burn. Nor will freezing affect it. Does not attract vermin.

WILL NOT PACK DOWN

It stays fluffed and efficient with permanent resiliency. Neither age nor vibration will pack it down.

MADE TO GOV'T STANDARDS

Production is government inspected. FHA and FPMA approved. No priorities needed.

SEND FOR THIS BOOK TODAY!

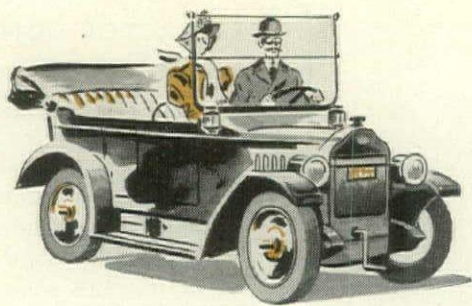
In this book you will find the full amazing story of Cotton Insulation and a full detailed account of government tests. Every architect, contractor, builder, and dealer can benefit by it.



National Cotton Council
P. O. Box 18, Dept. 70
Memphis 1, Tennessee

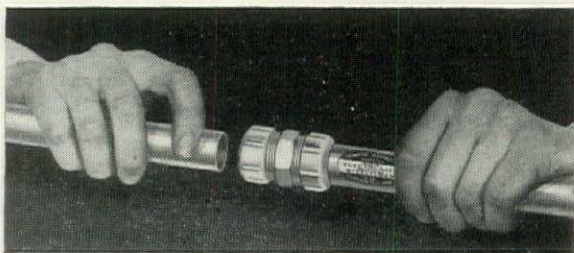
Please send me your book containing government analyses of the properties and use of Cotton Insulation.

Name.....
Occupation.....
Address.....
City.....State.....

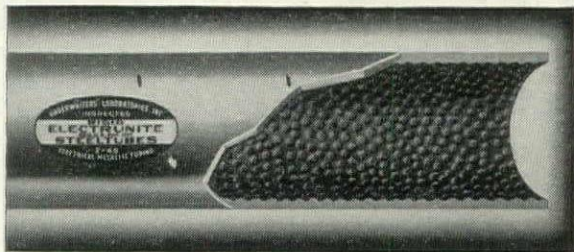


LIKE THE AUTOMOBILE *Electrical Raceways*

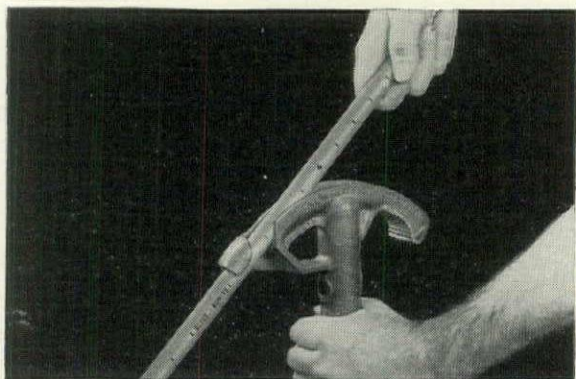
IN ELECTRICAL CONDUIT



Simple compression-type fittings make strong, water-tight joints in a jiffy . . . end laborious "steam fitting" work.



Exclusive knurled inside surface makes wire pulling as much as 30% easier.



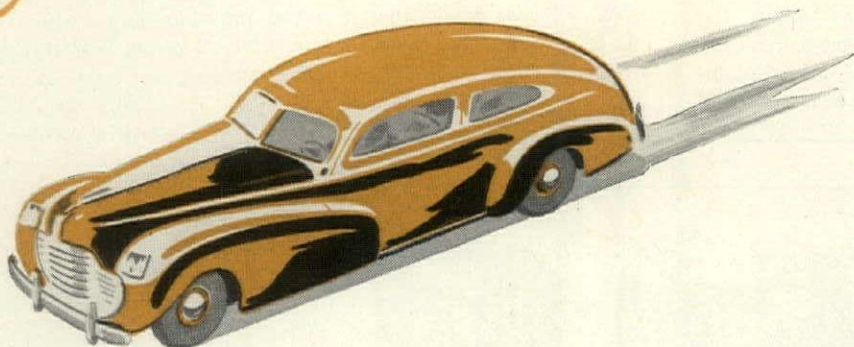
The ELECTRUNITE Bender predetermines accurate bends—is easy to use.

SEE SWEET'S FILE

or write us for detailed information on these Republic Building Products

Pipe—Sheets—Roofing • Enduro Stainless Steel • Toncan Enameling Iron •
Electrunite E.M.T. • Fretz-Moon Rigid Steel Conduit • Taylor Roofing Terns
• Berger Lockers, Bins, Shelving, Kitchen Cabinets • Truscon Steel Windows,
Doors, Joists and other building products

have gone modern, too!



IT PAYS TO BE MODERN WITH SAFE, LOW COST RACEWAYS OF REPUBLIC ELECTRUNIT E. M. T.

Republic ELECTRUNIT E.M.T.—the modern streamlined raceway for wiring—is safe. It is approved by the National Electrical Code—for exposed, concealed or concrete slab construction.

Light in weight, ELECTRUNIT E.M.T. offers adequate electrical and mechanical protection as determined by Underwriter's Laboratories. This weight reduction is made possible because it is threadless—no excess steel is needed to act as a base for threading.

Two easy-to-use, compression-type fittings—coupling and box connector—create strong, water-tight joints which will not work loose even under vibration. In addition, the box connector makes it possible to combine ELECTRUNIT E.M.T. with existing threaded conduit installations and fittings.

Continuous protection against rust and corrosion is

furnished by a uniform, tightly-adherent zinc coating. Such protection—unbroken by threads and unmarred by biting pipe wrench teeth—cannot be duplicated with old-style methods.

Because it eliminates tedious thread cutting . . . is quickly and accurately bent in the shop or on the job . . . makes wire pulling easier, ELECTRUNIT E.M.T. enables you to keep jobs moving.

Yes, ELECTRUNIT E.M.T. is the modern, safe, low-cost electrical raceway for practically every type of building construction. For further details see your local ELECTRUNIT Distributor, or Republic Steel and Tubes Division Representative.

REPUBLIC STEEL CORPORATION
STEEL AND TUBES DIVISION • CLEVELAND 8, OHIO
Export Department: Chrysler Building, New York 17, New York



Republic
ELECTRUNIT E.M.T.

REG. U. S. PAT. OFF.

LIGHT WEIGHT THREADLESS RIGID STEEL CONDUIT

(Continued from page 176)

In *Democracy Under Pressure*, his fourth book, Mr. Chase offers an analysis of pressure politics by lobbyists and discusses the increasing tendency toward monopolistic practice. However, the author is not out to make a case against all pressure groups. He advocates group representation (without prescribing a precise pattern) because the geographical basis of congressional elections does not permit the fair recognition of strong, existing economic and

political bodies. He plugs again and again the necessary interdependence of all factions, striking hard at those pressure groups which operate without regard for the common good. In order of their formation they are, Business, Labor, the Farm Bloc.

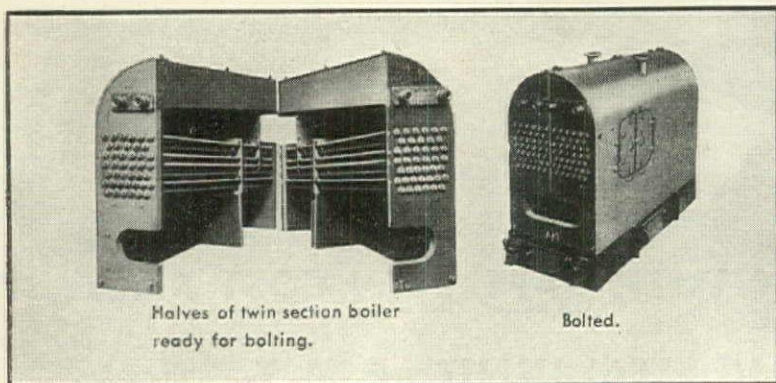
Business and industrial lobbies, which have existed ever since revolutionary times, evolved naturally enough from tariff disputes. Once a tariff had been granted, a lobby was usually maintained in Washington to see that it stayed in effect. Labor began its lobby tactics in 1890. The farmers organized following the collapse of farm prices after the

World War I boom. Though it is a comparatively young group, the farm lobby is one of the most potent.

Mr. Chase's strongest indictment of special interest groups is their habitual reliance on a formula which tends to restrict production. Almost invariably they advocate a high unit price rather than high production figures. The farm bloc fights for "parity" or prices pegged at high levels. Labor demands high hourly wages in preference to set annual earnings which would insure steady production throughout the year. Business interests are usually intent on realizing the highest price traffic will bear with a consequent reduction in distribution. These attitudes are naturally at odds with the basic concept of the enterprise system which envisages a constant lowering of price levels, wider distribution, more production, more employment, an ever ascending standard of living.

Finding the tracks of pressure politicians all over Capitol Hill, Mr. Chase is naturally distressed to find nobody at all exerting pressure on behalf of Mr. and Mrs. Average Voter. Since the author has lost none of his well-known knack for trapping fairly complex economic concepts in simple and impelling terms, few of his readers will fail to join him in viewing with alarm. This is, however, a good deal easier than sharing his optimistic conviction that it is not much more difficult to curb the powerful lobbyists than to understand what they are up to. For, as always, Mr. Chase returns from his pilgrimage through the economic wilderness with some shinningly specific notions of what to do next. Federal legislation to regulate lobbies is, not surprisingly, his first proposal (sixteen states already have such laws). He also wants to keep everybody minutely informed about all off-stage action on the Washington scene. Finally, he recommends that consumers organize in a sort of super-lobby which will represent the common interest. Mr. Chase has been busier trying to define this common interest than most writing men you could name, and it is likely that he overestimates the readiness of consumers to come to terms on what will do them the most good. All of us are consumers and so far we have notably failed to find any magic common denominator. But the size of the war plant that must be converted to new use should demonstrate for us all the essential unity of producer's interest and consumers' good. This is an old notion, but it has never been very popular. It is doubtful if Mr. Chase's determined pursuit of the consumer point of view will help to make it more so.

(Continued on page 184)



A "FUEL-SAVER" TWIN-SECTION Requires No Field Welding

The Type C, twin section, is a heating boiler in halves requiring no field welding, for installation where Type C one piece cannot be carried through existing passages. The only erection work is the bolting together of the two halves.

For years, International's "Fuel-Saver" Type C heating boilers have fulfilled the requirements for low cost heating in office and apartment buildings, hotels, schools, theatres, industrial plants, etc.

"Fuel-Saver" Boilers have cut heating costs in thousands of installations. They are especially suitable for post-war heating requirements providing—

QUICK STEAMING: Due to rapid and positive internal water circulation.

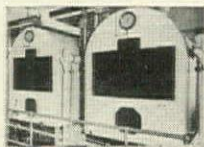
MAXIMUM HEAT ABSORPTION: Due to effective distribution of heated gases.

EASE OF CLEANING: Due to accessibility of heating surfaces.

Type KD heating boiler is shipped "knocked down" permitting the parts to be carried through a door or window. This eliminates costly cutting and patching of building walls, reduces boiler outage and speeds reconversion.

Complete range of standard sizes rated in accordance with S. H. B. I.—15 lb. A. S. M. E. Standard—for hand, stoker, oil or gas firing.

Every International Representative is a competent boiler man able to assist in solving heating problems.



Write for bulletin describing Type C and Type KD Boilers.
See description in Sweet's Architectural File of full
line of heating boilers.

Boiler
Builders for

59

Years

THE INTERNATIONAL BOILER WORKS CO.

HEATING DIVISION

320 BIRCH STREET

EAST STROUDSBURG, PA.

HEATING BOILERS TYPES C, KD, DD, K

POWER BOILERS TYPES CR, FR, LFR, LFS



Suggested color plan for up-to-date office lobby decorated according to the principles of COLOR DYNAMICS.

Color Dynamics...

**The scientific utilization of energy in color
to promote efficiency and morale in office quarters!**

DOES your lobby give visitors the feeling of a flabby, disinterested handshake? Or does it reflect accurately the spirit and the character of your company?

With Pittsburgh's science of *Color Dynamics* you can create color combinations in good taste and of great beauty that will make your reception room an extension of the personality of your organization.

Color Dynamics is not an untried theory or experiment. It is based upon

the physical and mental reactions of human beings to color.

Applications of its principles have demonstrated in scores of industries that it relieves workers' eye fatigue, reduces absenteeism, betters quality and quantity of production. Naturally, *Color Dynamics* recommendations for offices are different, but the fundamental rules still apply.

Through the scientific use of energy in color you can

select color arrangements that stimulate energy, improve efficiency and comfort—literally raise morale. With it you can create optical illusions... make ceilings appear higher or lower, rooms look longer or wider, halls seem wider and lighter.

You'll find the whole absorbing story explained in our new book, *Color Dynamics*. Send for your free copy—today. Write Pittsburgh Plate Glass Company, Paint Division, Dept. AF-3, Pittsburgh 22, Pa.



PITTSBURGH PAINTS
PITTSBURGH PLATE GLASS COMPANY, PITTSBURGH, PA.
PITTSBURGH STANDS FOR QUALITY PAINT AND GLASS

Simple Suggestions for More Attractive Wall Design Treatments with Douglas Fir Plywood

No. 2 of a Series

Illustrated below is another of many wall design treatments possible with Douglas fir plywood. In this instance, a two-panel treatment is used, with panels in horizontal arrangement. Vertical joints should be used at each side of top of doors and at top and bottom of windows as shown in diagram. In cases where the width of the wall is 10 feet or less, however, panels may be run horizontally with the openings

cut out (Note B in diagram).

In all cases, follow this basic rule: start at the openings with vertical joints and divide the plain wall spaces in an orderly pattern for the most pleasing effect. If special patterns, or patterns made up of small panels are desired, the most satisfactory method is to

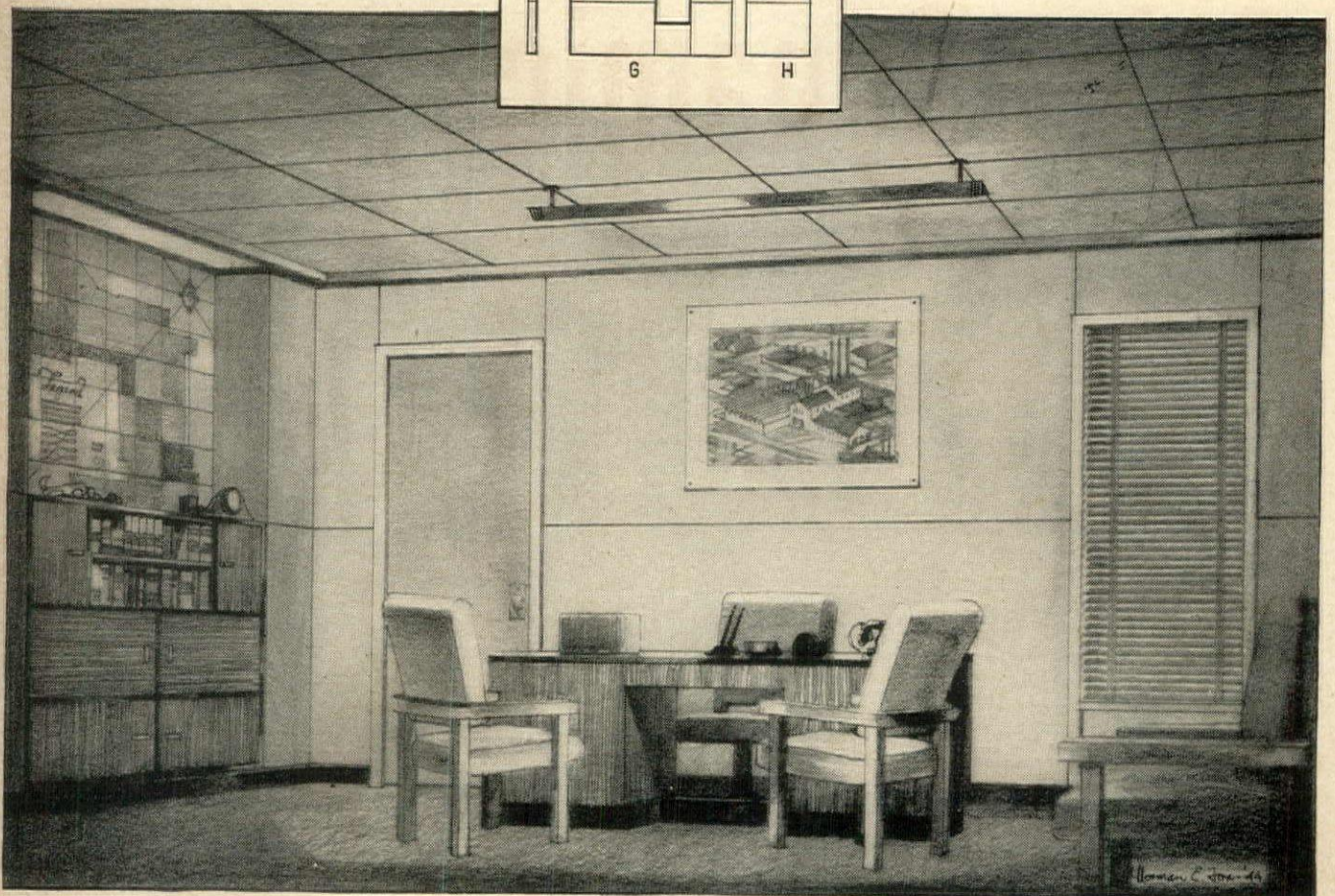
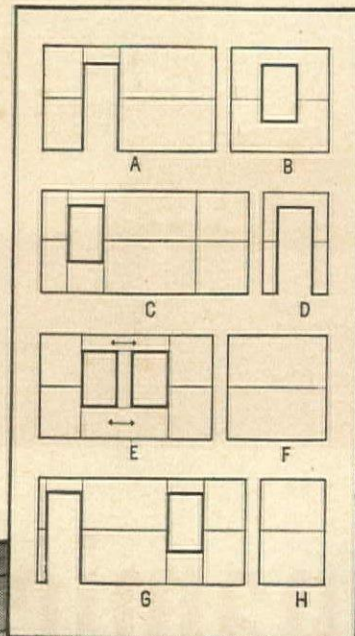
sheath with $\frac{5}{16}$ " of $\frac{3}{8}$ " Plyscord placed horizontally and apply the finish panels (Plypanel or Plywall) as desired. For technical data on these various grades, see Sweet's File for Architects.

**DOUGLAS FIR PLYWOOD
ASSOCIATION**
Tacoma 2, Washington



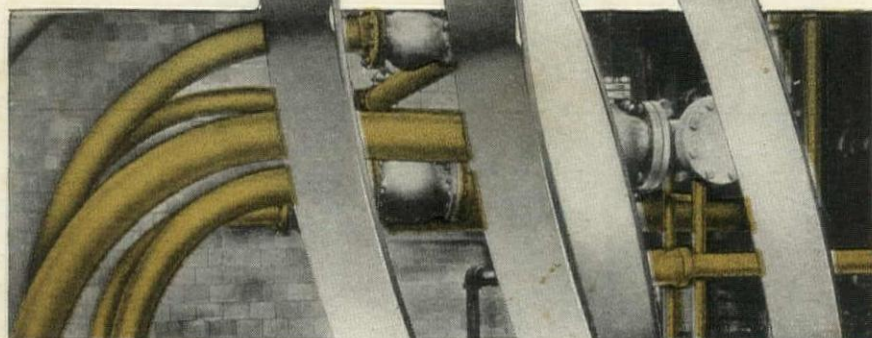
**CAN PLYWOOD BE SPECIFIED NOW
FOR POSTWAR USES?**

The increased capacity of the industry will make **MORE** Douglas fir plywood available for civilian consumption **THAN EVER BEFORE**, as soon as the needs of the armed services lessen or war restrictions are lifted. There will be no reconversion delays; the same types and grades of Douglas fir plywood that are now being made can flow immediately into peacetime building and construction.



ASSURE MAINTENANCE-FREE PIPE

CONNECTIONS WITH . . .



IT'S THE

SILVER RINGS..

An outstanding feature of all Walseal valves, fittings and flanges is a "SILVER RING"—a ring of silver brazing alloy—incorporated in one or more of the ports. Because of these "SILVER RINGS," Walseal fittings, when heated by an oxyacetylene torch, make permanent Silbraz joints which are stronger than the pipe itself... joints that resist shock and vibration; that do not creep or pull apart under any temperature or pressure which the pipe itself can withstand.

In thousands of installations in buildings, ships, diesel engines... Silbraz* joints made with Walseal valves and fittings are assuring trouble-free and maintenance-free, "one-piece" copper and brass piping.

For details regarding the installation of Walseal products for making leakproof Silbraz joints, write for booklet 84. For information on Walworth's entire line—including Walseal products—write for Catalog 42.

*Registered trade-marks



WALSEAL
VALVES
FITTINGS
FLANGES

Make it a "one-piece pipeline" with WALSEAL

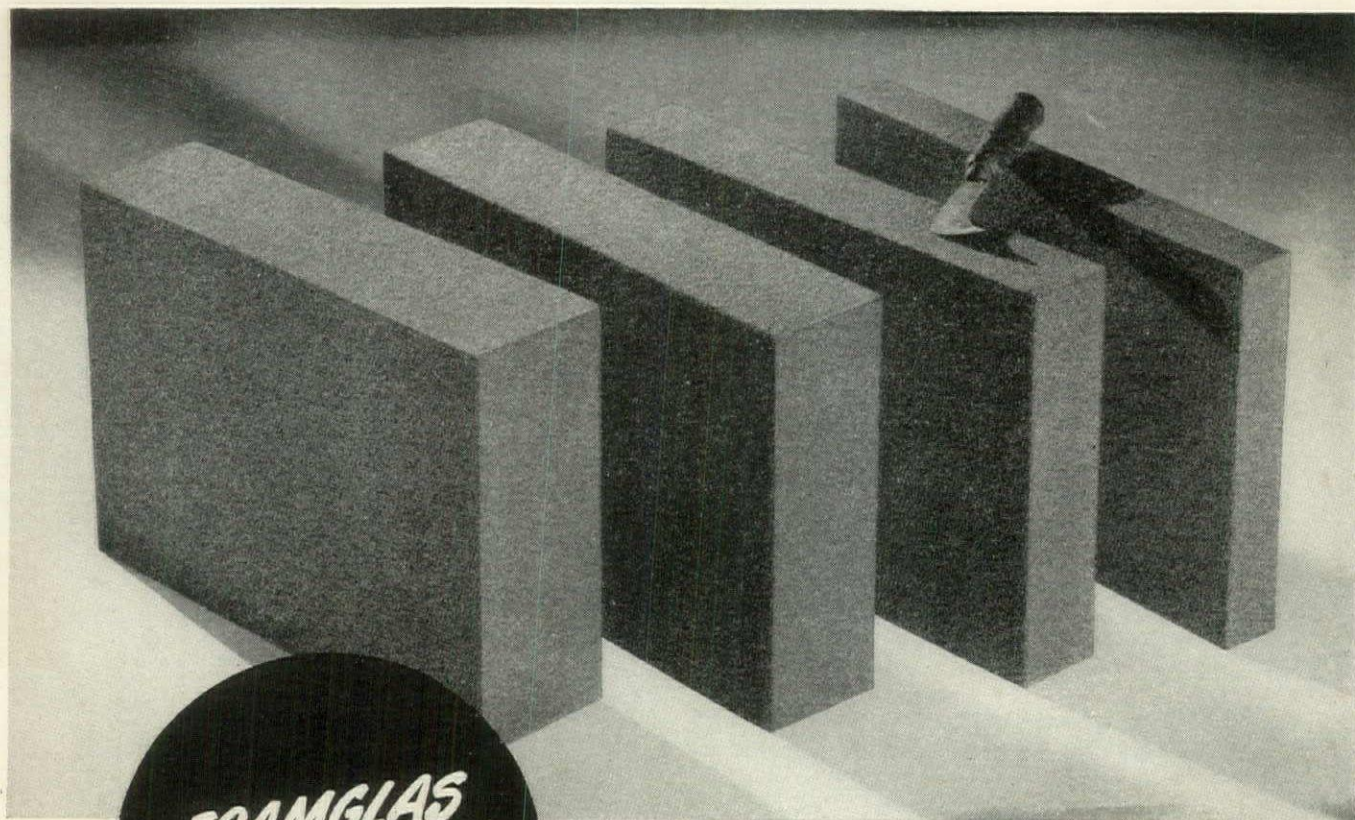


12 AWARDS
TO 4 PLANTS

WALWORTH
valves AND fittings

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

DISTRIBUTORS IN PRINCIPAL CENTERS THROUGHOUT THE WORLD



**FOAMGLAS
INSULATION**

— **is permanent insulation**

THE only material of its kind, PC Foamglas is waterproof, vaporproof, fireproof. It has licked the toughest insulation jobs — on roofs, in walls, floors and equipment — in all sorts of plants, all over the country.

Moisture, acid atmospheres, fumes, can't break down the cellular structure of PC Foamglas Insulation. It is made of glass. Its insulating qualities remain unchanged through-

out the life of structures in which it is installed.

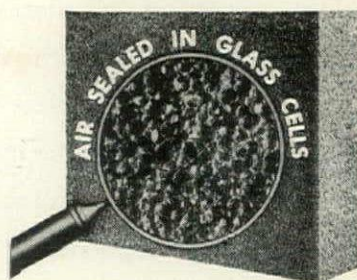
Freedom from repairs and replacement makes PC Foamglas an exceptionally economical insulating material in the long run.

When you are facing insulating problems, get authoritative, complete information on PC Foamglas. Check the convenient coupon now and mail it in. We shall be glad to forward free copies of the booklets

you select. Pittsburgh Corning Corporation, 632 Duquesne Way, Pittsburgh 22, Pa.

• Also Makers of PC Glass Blocks •

*FIRST COST
IS LAST COST*



In the Holeproof Hosiery Company's throw room, rigid control of relative humidity and temperature must be maintained, condensation prevented. PC Foamglas Insulation licked this tough problem.



This concrete floor, insulated with PC Foamglas, is being laid to insure comfortable working temperatures. It will prevent downstairs heat from penetrating this room through the floor.

Pittsburgh Corning Corporation
Room 623, 632 Duquesne Way
Pittsburgh 22, Pa.

Please send along my free copies of the booklets on PC Foamglas Insulation checked below.

Roofs ☐; Walls ☐; Floors ☐

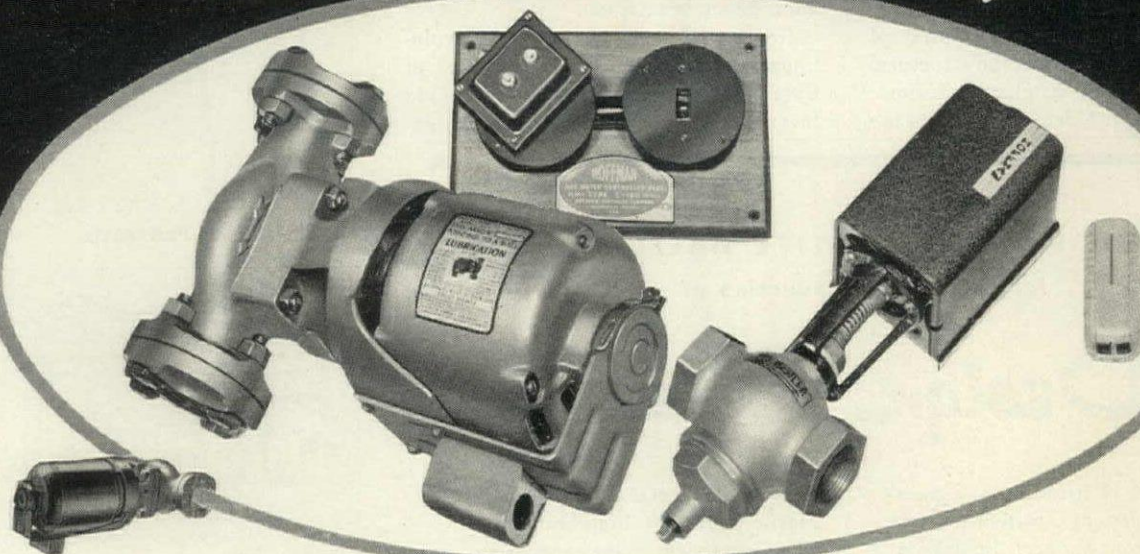
Name _____

Address _____

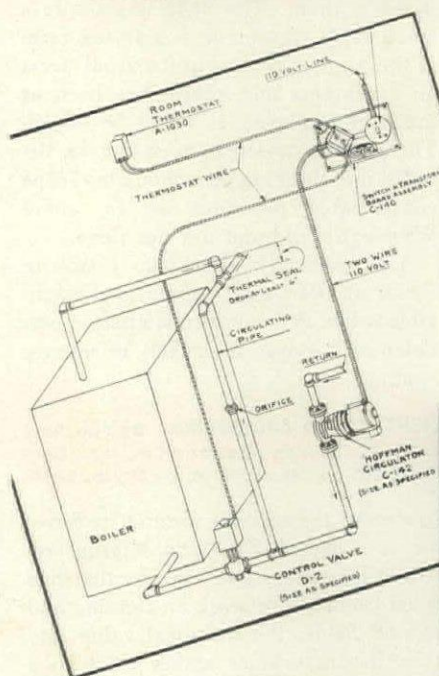
City _____ State _____

PC FOAMGLAS *Waterproof
Fireproof* **INSULATION**

A NEW HOFFMAN HOT WATER *Comfort Package*



A POPULAR-PRICED CONTINUOUS CIRCULATION SYSTEM . . . THERMOSTATICALLY CONTROLLED



All the advantages of a continuously circulated forced hot water heating system can now be obtained with simplified and inexpensive equipment. The new Hoffman Comfort Package combines a Circulating Pump, Control Panel, Control Valve and Thermostat—adaptable to any hot water heating system.

In operation, the Comfort Package effects a constant balance between heat loss and heat supply, so that home temperature is held uniform, regardless of weather variations. Note in the diagram that the boiler is bypassed from the rest of the circulating system. Hot water from the boiler is admitted *only* when the temperature of the circulating water drops below the temperature required by weather conditions. Hence the system keeps pace with the actual need for heat and never delivers a fuel-wasting excess.

The Hoffman Comfort Package offers heating at its best, yet the cost is within the budget of even modest homes. Send the coupon for booklet.

OUTDOORS 30°
INDOORS 70°

OUTDOORS BELOW 0°
INDOORS 70°

OUTDOORS 40°
INDOORS 70°



HOFFMAN SPECIALTY COMPANY

1001 York St., Indianapolis 7, Indiana

Makers of Valves, Traps, Vacuum and Condensation Pumps,
Forced Hot Water Heating Systems . . . sold everywhere by
wholesalers of Heating and Plumbing Equipment.



Hoffman Specialty Co.
1001 York St., Dept. AF-3, Indianapolis 7, Ind.
Send at once your booklet on the new Hoffman
Comfort Package.

Name..... Title.....

Firm Name.....

Address.....

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

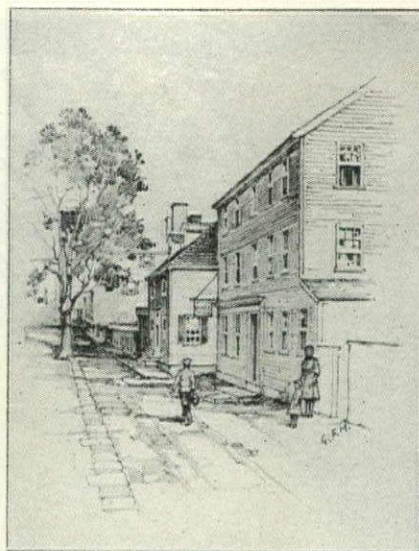
(Continued from page 180)

COACHING ROADS OF OLD NEW ENGLAND, Their Inns and Taverns and Their Stories. By George Francis Marlowe. The Macmillan Co., New York. 200 pp. Illustrated. 5 1/4 in. by 8 1/4 in. \$3.50.

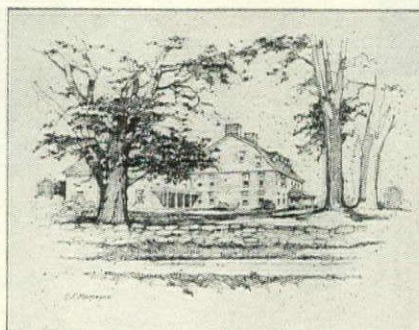
While this work is presented with less brocade and more calico than *Georgetown Houses of the Federal Period* it is equally saturated with local color. Selecting the five principal routes of earlier days that served as the structural framework of New England's historic development, Mr. Marlowe conducts the

reader through villages and towns steeped in Americana. Since the inns and taverns played such an important role in the political and social growth of the region it is to be expected that the buildings themselves figure in the text. The author, however, does not set himself up as an architectural critic. A few of his own pencil sketches (see cuts) are used as illustrations but otherwise little effort is expended on the merits and beauties of salt boxes, gable roofs, hand hewn beams, etc.

He recalls anecdotes of Revolutionary days, of British spies, of George Washington's journeys, of old taverns and the dramas that were en-



Mr. Staver's Inn, Portsmouth



Wayside Inn, South Sudbury

PLASTIC-FINISHED MARLITE WALL PANELS

for Faithful Reproduction of

Design Ideas

If it is a note of friendliness; a cheerful, festive design; a pattern of grace or symmetry; or a stately, dignified atmosphere you want to capture for a room interior you're planning—then you'll want the character, warmth, color and beauty of Marlite wall paneling to bring your creative designs to purposeful life.

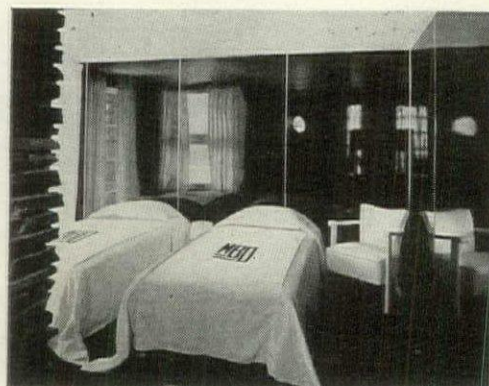
Marlite is manufactured in a wide variety of colors and patterns. Large, wall-size panels range from plain colors to genuine wood-veneers, permitting full freedom of decorative originality and design ingenuity. Harmonizing moldings in plastic, wood,

presdwood and metal are available.

Marlite's pioneer high-heat-bake-finish is impervious to the penetrating effects of dirt and moisture, and retains its original lustre and beauty for many years. Marlite is moderately priced and serves equally well for new construction or remodeling—for all types of rooms in all types of buildings.

★

These two photos typify the ultra modern and attractive interiors possible with Marlite paneling. Genuine Marlite wood-veneers provide the setting for the hot shoppe with plastic-finished Marlite (mirror black finish for walls and white Marlite for ceiling) in the bedroom.



MARSH WALL PRODUCTS, INC. • 31 MAIN STREET, DOVER, OHIO

PLASTIC-FINISHED WALL PANELS • FOR CREATING BEAUTIFUL INTERIORS

acted in them. The book is actually a small scale travelogue—a trying form of literature at best—but the usual stress on quaintness and charm has been as much underplayed as could be hoped. The reader, however, must not be deluded into thinking he is going to escape considerable reference as to where Washington did and did not sleep.

Architecturally speaking, *Coaching Roads of Old New England* is of negligible value. As an informal glimpse into Colonial history, it makes refreshing reading.

LIGHT, VISION AND SEEING. By Matthew Lukesh. D. Van Nostrand Co., Inc., New York. 299 pp. Illus. 5 1/2 in. by 8 1/2 in. \$4.50.

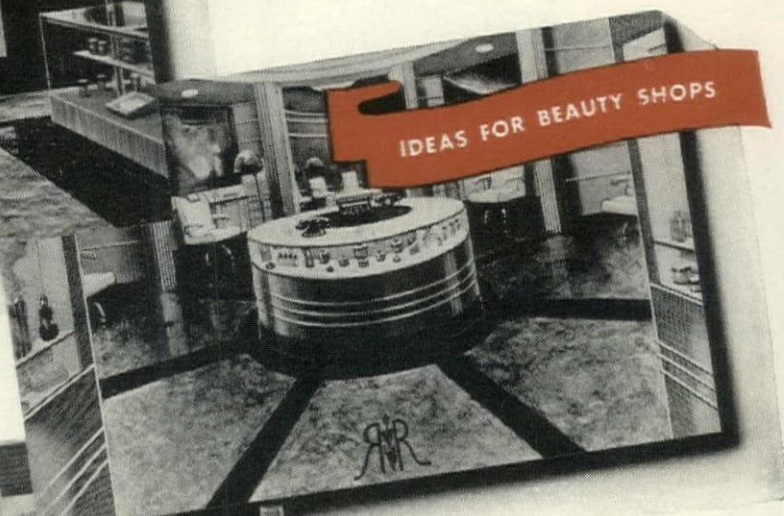
In view of the author's position as director of General Electric's lighting research laboratory and the fact that this is his twenty-third work on lighting and related fields, the technical value and scientific importance of his latest book needs no underscoring. While the interrelationship of all factors, light, lighting and brightness, vision and seeing are simply enough treated to be understood and applied by the layman it would be difficult to conceive of a more accurate and exhaustive presentation. The ever-increasing importance of light engineering and optical conditions makes this book all but indispensable to a complete architectural library.



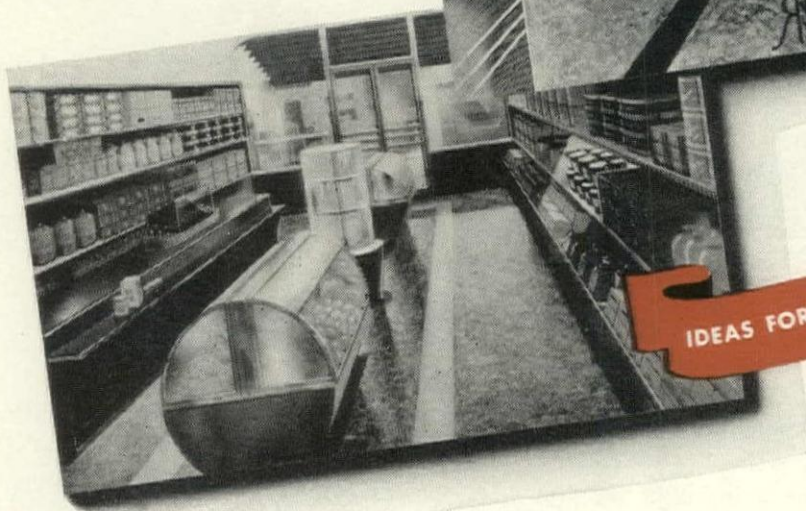
for the ARCHITECT Planning STORE INTERIORS



IDEAS FOR DRUG STORES



IDEAS FOR BEAUTY SHOPS

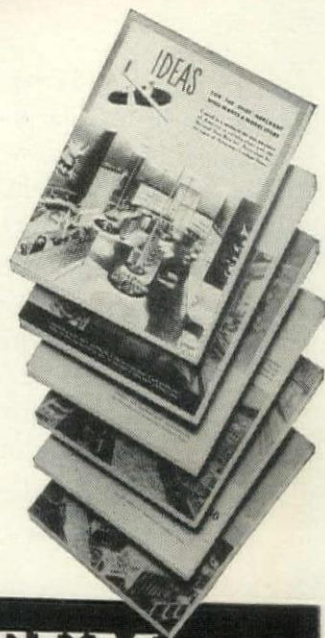


IDEAS FOR GROCERY STORES

IDEAS FOR STORE INTERIORS

These and other types of retail outlets are shown in six new illustrated Ideas Portfolios, which are yours for the asking. These portfolios contain the best ideas of those gathered by Armstrong's through research conducted in collaboration with the leading trade association in each field. The portfolios form the basis for a special series of Armstrong advertisements, now appearing in national magazines, designed to stimulate retail merchants' thinking about future building and remodeling. Architects the country over have commended this Armstrong program, not only because it has directly contributed to improved plans, but also because of its high reference value.

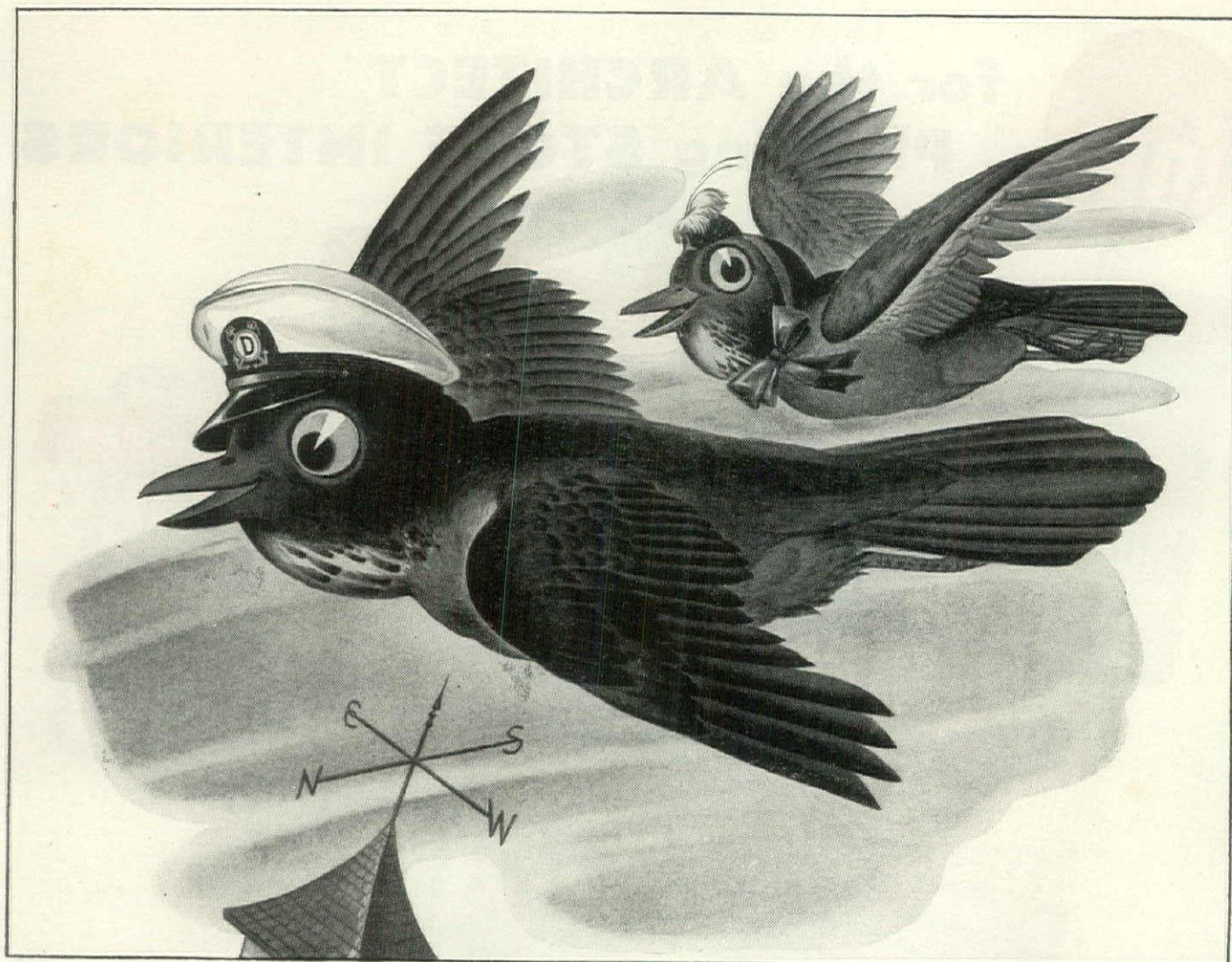
FOR YOUR FREE SET of six portfolios, plus full-color reproductions of model retail interiors, write Armstrong Cork Company, Floor Division, 2303 State Street, Lancaster, Pa.



ARMSTRONG'S LINOLEUM



ARMSTRONG'S LINOWALL • ARMSTRONG'S RESILIENT TILE FLOORS



Looking Ahead

THERE'S no better time than now for looking ahead to what industry will offer the home-builder of tomorrow—or for laying by a nest-egg of War Bonds to finance your home when you build it after Victory!

- ● Amazing developments for the future home owner will come out of America's vast war experience. Defoe's Housing Division, for example, is developing a method of producing factory-built homes, that have individuality of design—plus the economy of volume production.

- ● You may plan a Defoe house of any size—kitchen complete with labor-saving equipment,

living room, dining room, bath rooms, and bed rooms that contain built-in electric outlets, closets, bookcases, shelves, doors and drawers. And, if you wish, you may finish the exterior according to your own architect's or builder's plans.

- ● Today, of course, all of America's building facilities—including Defoe's—are concentrated on production for Victory. But when the Axis is defeated, large-scale production of these scientifically designed homes will be a major part of Defoe's postwar contribution to better American living standards and full employment.

HOUSING DIVISION — DEFOE SHIPBUILDING

COMPANY, BAY CITY, MICH.

BACK THE ATTACK
—BUY WAR BONDS

Defoe



*Four White Star Renewal Citations now decorate
the Navy "E" Award won by Defoe workers.*

SHIPS FOR VICTORY
SERVANTS FOR PEACE

A HOT SUMMER IN WASHINGTON MIGHT HAVE "MOVED" THE RHINE



Worthington Air Conditioning Helps Meet the Menace of the Expanding Maps

In a little-known windowless building somewhere near Washington, D. C., out of which 100,000 maps a day have poured for fighting forces overseas — air conditioning prevents the fraction of a millimeter's error which atmospheric changes might cause in military maps. Such errors might "change" the course of rivers . . . spoil the accuracy of artillery fire . . . put parachutists on the wrong side of the ridge.

Humidity makes map film and printing paper stretch. Dryness shrinks them.

The two Worthington centrifugal refrigerating

machines installed in this "map factory" are part of the broad line of equipment Worthington can supply for air conditioning purposes.

Making so many of the "vitals" . . . from Diesel engines, condensers and compressors to valves and V-belts . . . Worthington is best able to engineer completely integrated systems for best results.

Write for facts on Worthington's fifty years in air conditioning, data on historic installations, and catalog material. *Worthington Pump and Machinery Corporation, Harrison, N. J.*

AR 4-11



AIR CONDITIONING

REFRIGERATION



PRATT & LAMBERT PAINT AND VARNISH



A glance at these remodeled interiors of the Greenbrier Apartment House, Chicago, shows what can be accomplished with careful redesigning, plus appropriate decoration. One objective successfully attained was the pleasing arrangements of the suites involved, with ample light and equitable distribution of the space available.

Pratt & Lambert Paint and Varnish have been used exclusively by Wm. Joern & Sons, not only in their entire new construction program, but also in their maintenance, rehabilitation and remodeling operations in cities from Rochester, N.Y., to Wichita, Kans. Whatever your work may be, the Pratt & Lambert Architectural Service Department offers you a valuable, timely, distinctive decorative and specification service that simplifies one of your ever-present problems.

PRATT & LAMBERT-INC.

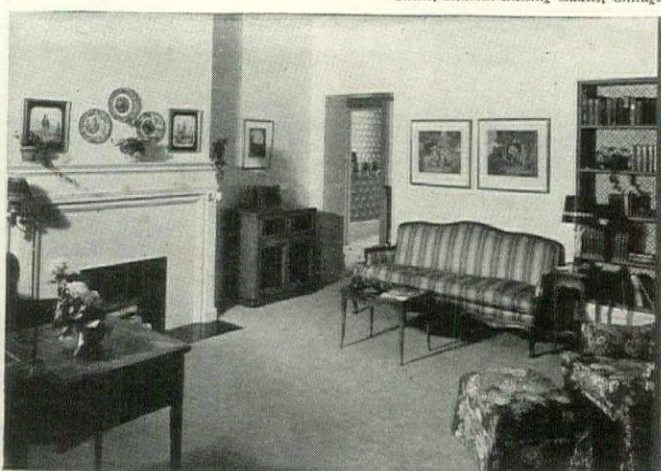
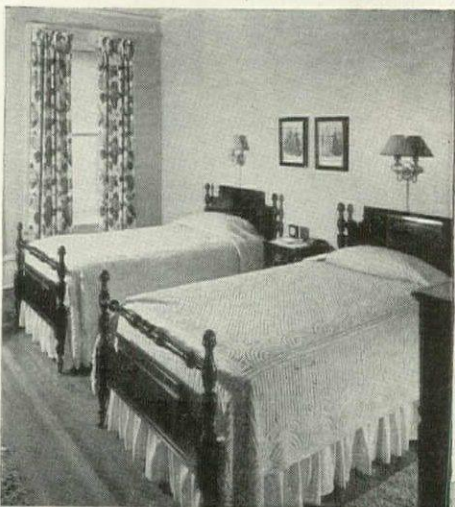
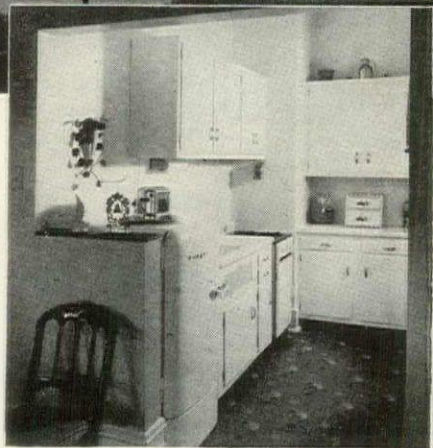
Paint & Varnish Makers

NEW YORK : BUFFALO : CHICAGO : FORT ERIE, ONT.

GREENBRIER APARTMENT HOUSE, CHICAGO, ILL.

WM. JOERN & SONS, Realtors, Builders, Managers, Chicago;
JIM T. POMEROY, Architect, Orland Park, Ill.; TRIANGLE
DECORATING CO., N. RAPOPORT CO., Painting Contractors, Chicago.

Photos, Hedrich-Blessing Studios, Chicago





"Janitrol
KEPT
ME WARM
OVER
EUROPE"

HERE'S a flier on furlough, planning for the time when his dreams for a home of his own will become a reality. How natural in his selection of heating equipment, to look to the same manufacturer who today is providing our Armed Forces with the world's finest aircraft heaters.

But there's more than a friendly feeling behind this flier's preference for Janitrol. He knows that the same engineering skill and combustion research behind the Janitrol Aircraft Heater are also applied to Janitrol home heating units. Just as the aircraft heater was designed *specifically* to burn

gasolene as a fuel, all Janitrol industrial and domestic heating units are built *specifically* for the efficient combustion of gas. So it's a sure bet that Janitrol Gas-Fired Winter Air Conditioner the flier is planning on will be his best buy in performance and long lasting economy of operation.

Well, he's right. There's no other type of gas heating equipment which combines all the outstanding features Surface Combustion has engineered into Janitrol. Amplifire burners which concentrate the flame into a smaller, hotter space. Multi-thermex tubes which quickly transfer heat to the air stream. New automatic controls

to maintain accurate temperatures for greatest possible economy. Complete factory assembly on popular size models to save installation time and costs. And extreme compactness to save space in the modern home. These are only a few of the many Janitrol advantages which will give America's home owners new heating comfort and long-lasting liveability just as soon as critical materials are again available.

To help your clients with their postwar homebuilding plans, write Surface Combustion, Toledo 1, Ohio, for further descriptions and information.

Janitrol

**GAS-FIRED
HEATING EQUIPMENT**



Winter Air Conditioner



Gravity Furnace



Conversion Burner



Unit Heater



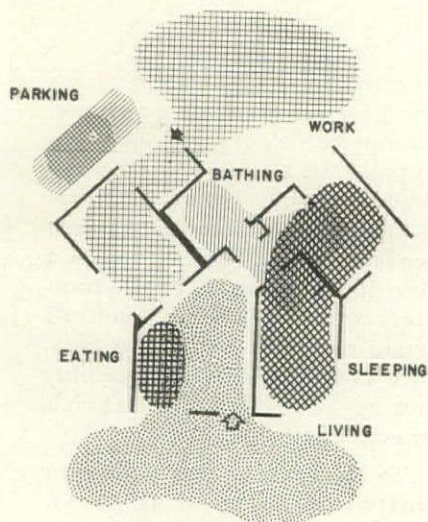
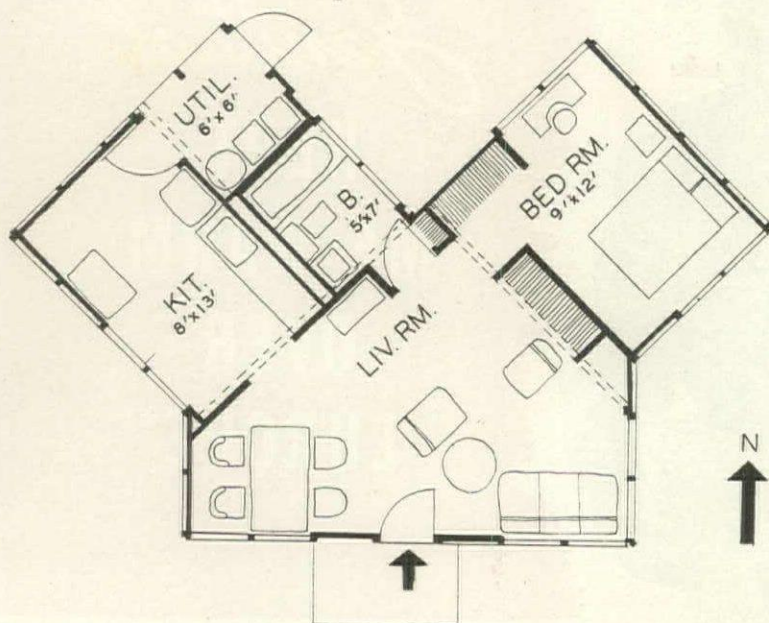
Boiler



Floor Type
Blower Unit

PREFABRICATION

Texas college students design a practical, compact house costing under \$2,000 and meeting minimum family needs.

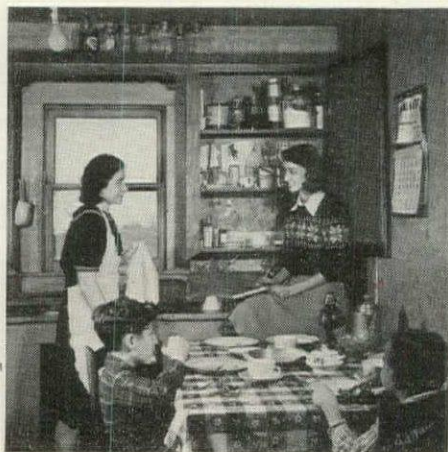
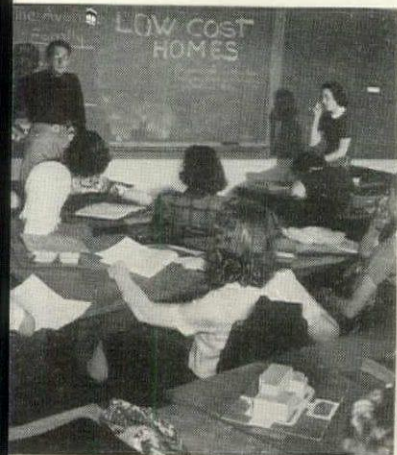


ACTIVITY CHART (left) suggested important reductions in space requirements by showing that the same area could support a number of non-conflicting activities. The chart was created from a survey of the habits and customs of the people who will occupy the low cost Texas house. Students investigated housing conditions and housewives cooperated by keeping time charts of their activities. From these data the activity chart was formulated. The compactness of the plan (above) adds to the working efficiency without sacrificing any living comforts.

Designed for quick assembly and to cut labor costs this ingenious space saving house is natural for prefabrication methods. Planned by students of the Texas A & M College working with students at the Texas State College for Women, who served as guinea pig "clients," it is a real contribution to the fund of low cost housing plans. Smaller and more compact than most low cost houses it employs a number of space saving innovations that are based on a fact finding survey. Every detail in the house was carefully investigated and discussed before it was finally accepted.

The "average" Texas family, they found, was a man and wife having two children and earning an income of \$1,000 to \$1,500 a year. The Texas House they were to live in was to be located in an "average" town of 4,800 inhabitants, provided with the public utilities of water, electricity, sewers and gas and supporting a local millwork shop capable of supplying the necessary milled lumber. The design of the Texas House was a community affair; cooperative housewives kept time-charts of their various household activities forming the working data for the conclusions that were reached in plan. With this time-activity data the students were able to establish, 1) a basis for planning the correct relation of one area to another, 2) a basis for determining the correct size of activity areas, 3) the time and percentage of use of all areas for which proper orientation can be determined, 4) new minimums which eliminate waste space and provide a basis for combining ac-

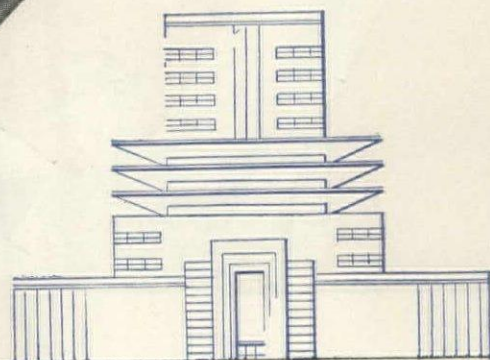
(Continued on page 194)



SOCIAL STUDY, FIELD SURVEYS AND MODEL MAKING ARE COMBINED TO HELP SOLVE LOW COST HOUSE PROBLEM



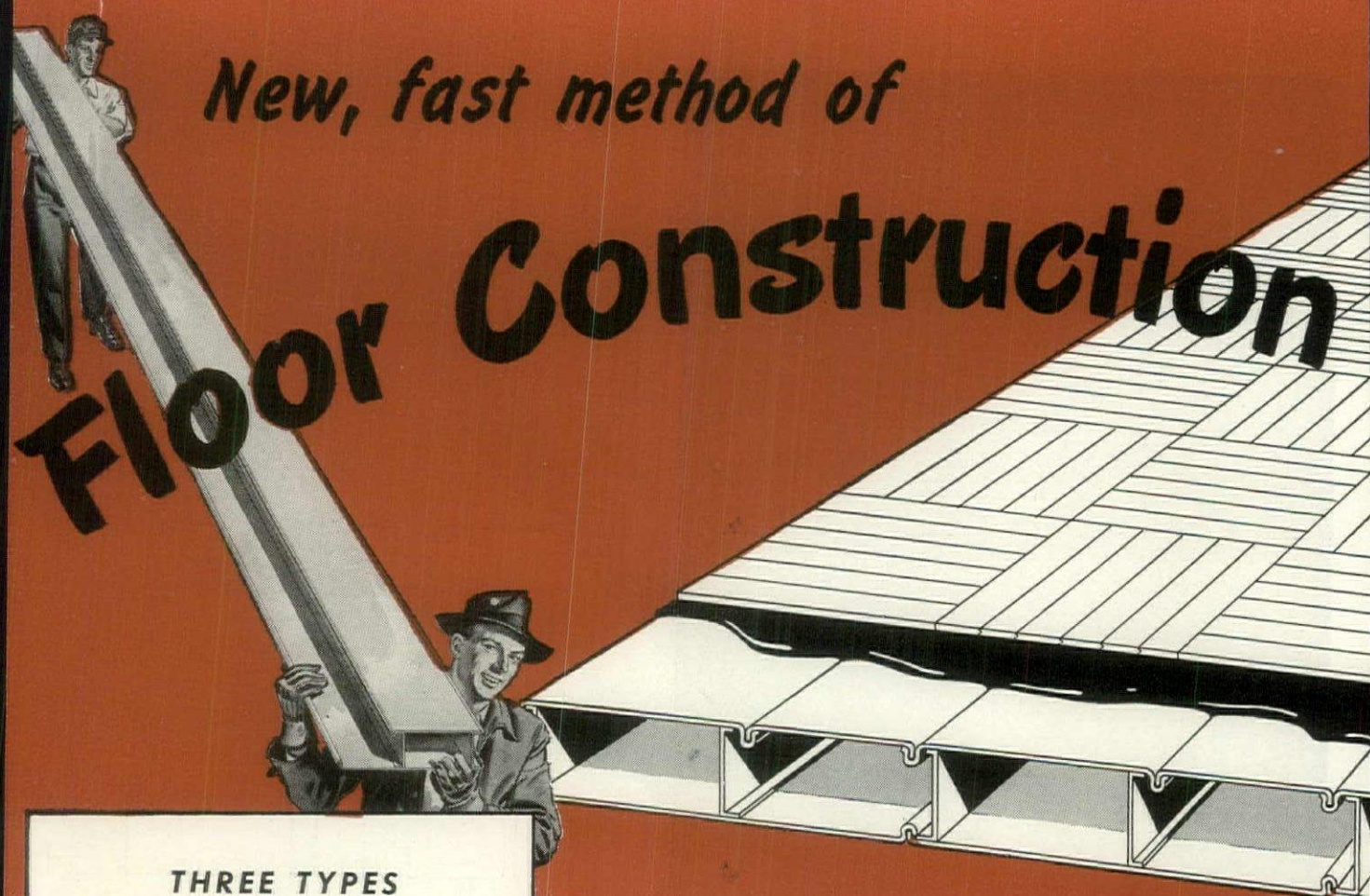
Re-wiring of existing structures



CONDUITS—RACEWAYS
WIRE AND CABLES FOR
EVERY PURPOSE

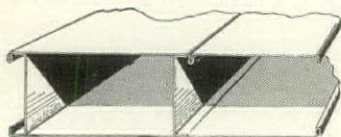
and wiring of new buildings in the post-war era will call for electrical materials that will carry a burden of demand far beyond today's expectations. Such insurance in building wiring and raceways, such extra inherent quality are certain when the National Electric System of wires, cables and raceways is employed. Specify National Electric products for all electrical wiring requirements in domestic and commercial buildings. Our 350 page handbook of electrical products and engineering data is available on request.

National Electric
PRODUCTS CORPORATION
Pittsburgh, Pa.

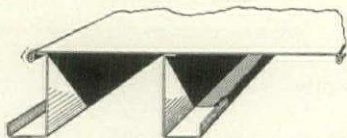


New, fast method of Floor Construction

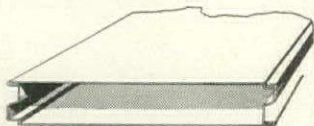
THREE TYPES



TYPE A. Two channels with top and bottom plate which, with service cover, form a two-cell box beam shape when interlocked with adjacent section. 16" width, 3" to 9" depth elements of sections in combinations of 18 to 10 gage, spot-weld assembled.



TYPE B. One flat surface and two channel-type ribs. Flat side up or down, inside or outside. 16" width, depth 3" to 9" elements of sections in combinations of 18 to 10 gage. As with Type A, permits easy application of wood, concrete or other materials for floors, walls or roofs.



TYPE C. Panels set horizontally or vertically for walls. Normally filled with insulation at the factory. Corrosion-resistant metal can be used for outside sheet. Walls can be covered, inside or outside. 2" and 3" depth, 16" width. Gages vary according to application requirements. Readily framed for windows.

The illustration above shows a way to build floors with new speed and economy. It employs the "Type A" Fenestra Building Panel as the main structural element, with the upper surface covered with a cemented-down, wood-finished floor ... the under surface left exposed as a painted paneled ceiling.

Fenestra Panels permit great savings in field labor. Panels are interlocked. Type A panels have an open channel in which service facilities can be laid speedily. Then the service cover is interlocked into place.

The three types of Fenestra Building Panels shown at the left provide—with their many possible variations of length and gage—great flexibility of building design. Further information will be found in Sweet's Architectural File for 1945. In the meantime, mail the coupon for our descriptive folder.

ROOFS

WALLS

FLOORS

DETROIT STEEL PRODUCTS COMPANY,
Building Panels Division (formerly Holorib Div.)
Dept. AF-3, 2252 E. Grand Boulevard,
Detroit 11, Michigan

Please send me, without obligation, information on Fenestra Building Panels

* Name _____

Company _____

Fenestra

BUILDING PANELS FOR



WILL IT RUST?

MOLTEN ZINC—applied by the Hot-Dip Galvanizing Process—provides the greatest possible protective coating against rust. A positive bond between coating and base metal is the result of the high temperatures employed in the Hot-Dip Method. The definite fusion of the two metals means longer life and service. Thousands of installations—their life increased twenty to forty years—are testimony to savings of millions of dollars in costly maintenance and replacement.

No guesswork in the Hot-Dip Process! Years of experience in laboratory and field have proved the rust prevention value of Hot-Dip Galvanizing. It is *most* economical and *dependable*.

If your products or installations are exposed to conditions that cause corrosion—let us tell you how Hot-Dip Galvanizing will extend their life and save you money. Write today. American Hot-Dip Galvanizers Association, Inc., First National Bank Building, Pittsburgh 22, Penna.

"If it carries this seal
it's a job well done."



Buy from the qualified members listed below and KNOW you are getting a genuine HOT-DIP job.

CALIFORNIA

LOS ANGELES GALVANIZING CO., HUNTINGTON PARK
ATLAS GALVANIZING, INC., LOS ANGELES
EMSCO DERRICK & EQUIPMENT CO., LOS ANGELES
JOSLYN CO. OF CALIFORNIA, LOS ANGELES
WESTERN GALVANIZING COMPANY, LOS ANGELES
HUBBARD & CO., OAKLAND
JOHN FINN METAL WORKS, SAN FRANCISCO
SAN FRANCISCO GALVANIZING WORKS, SAN FRANCISCO
SUPERIOR PACIFIC GALVANIZING CO., LOS ANGELES
RHEEM MANUFACTURING CO., RICHMOND
INTERNATIONAL DERRICK & EQUIPMENT CO., TORRANCE

CONNECTICUT

WILCOX, CRITTENDEN & COMPANY, INC., MIDDLETOWN

GEORGIA

ATLANTIC STEEL CO., ATLANTA

ILLINOIS

EQUIPMENT STEEL PRODUCTS DIVISION OF UNION ASBESTOS AND RUBBER CO., BLUE ISLAND
JOSLYN MFG. & SUPPLY CO., CHICAGO
STANDARD GALVANIZING CO., CHICAGO

MAINE

THE THOMAS LAUGHLIN CO., PORTLAND

MARYLAND

SOUTHERN GALVANIZING COMPANY, BALTIMORE

MICHIGAN

RIVERSIDE FOUNDRY & GALVANIZING CO., KALAMAZOO

MINNESOTA

LEWIS BOLT & NUT CO., MINNEAPOLIS

MISSOURI

COLUMBIAN STEEL TANK CO., KANSAS CITY
MISSOURI ROLLING MILL CORP., ST. LOUIS

NEW JERSEY

DIAMOND EXPANSION BOLT CO., INC., GARWOOD
L. O. KOVEN & BROTHER, INC., JERSEY CITY
INDEPENDENT GALVANIZING COMPANY, NEWARK

NEW YORK

ACME STEEL & MALLEABLE IRON WORKS, BUFFALO
THOMAS GREGORY GALVANIZING WORKS, MASPETH, (N. Y. C.)
ATLANTIC STAMPING CO., ROCHESTER

OHIO

THE WITT CORNICE COMPANY, CINCINNATI
THE FANNER MFG. CO., CLEVELAND
THE NATIONAL TELEPHONE SUPPLY CO., CLEVELAND
INTERNATIONAL DERRICK & EQUIPMENT CO., COLUMBUS
THE NEWARK GALVANIZING CO., NEWARK
COMMERCIAL METALS TREATING, INC., TOLEDO

OREGON

GALVANIZERS, PORTLAND

PENNSYLVANIA

LEHIGH STRUCTURAL STEEL CO., ALLENTOWN
AMERICAN TINNING & GALVANIZING CO., ERIE
PENN GALVANIZING CO., PHILADELPHIA
HANLON-GREGORY GALVANIZING CO., PITTSBURGH
OLIVER IRON & STEEL CORPORATION, PITTSBURGH

RHODE ISLAND

JAMES HILL MFG. CO., PROVIDENCE

WASHINGTON

ISAACSON IRON WORKS, SEATTLE

WISCONSIN

ACME GALVANIZING, INC., MILWAUKEE

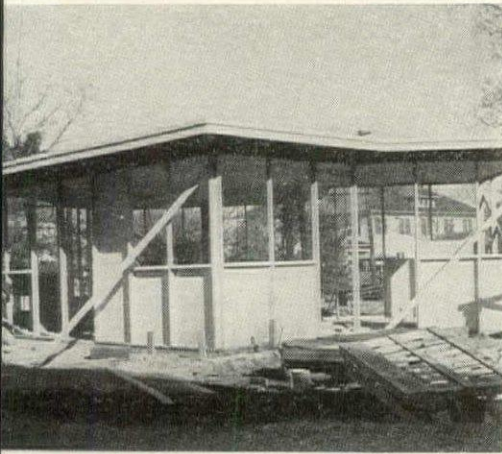
For the best Zinc Coating
use

hot-dip

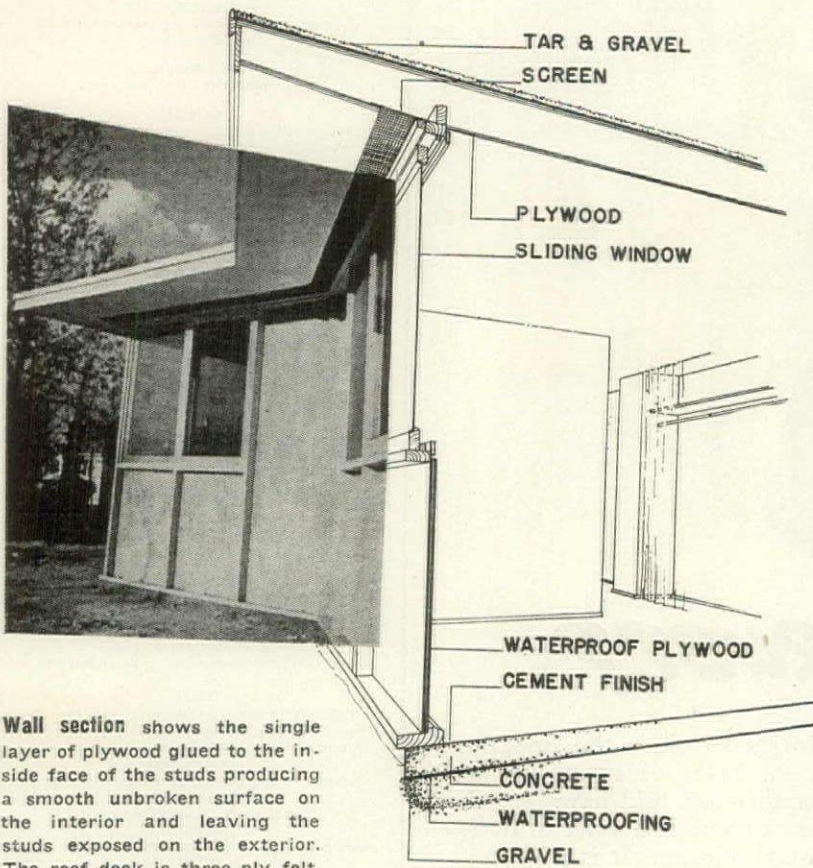
GALVANIZING

PREFABRICATION

(Continued from page 190)



Exterior view shows panel spacing of studs for prefabrication and ease of erection. Sliding sash were made locally. Detail view of eave overhang shows slot for roof space ventilation. Generous overhang protects wall from summer sun.



Wall section shows the single layer of plywood glued to the inside face of the studs producing a smooth unbroken surface on the interior and leaving the studs exposed on the exterior. The roof deck is three-ply felt, asphalt and gravel on one-half inch plywood nailed to the joists.

Interior plywood panels are finished in soft tones to reveal grain, then waxed. Large space serves as living-dining-sleeping combination without crowding. Kitchen is ample for housekeeping tasks of low income family.



tivity areas for more flexible use of the house.

After correlating all field data the pattern of family activity took the following definite form:

Working Time	34 per cent
Sleeping Time	31 per cent
Playing Time	24 per cent
Eating Time	11 per cent

The time-pattern was then translated into an area-pattern as follows:

Working Areas	31 per cent
Sleeping Areas	23 per cent
Playing Areas	36 per cent
Eating Areas	10 per cent

These figures were transposed to the drafting board and model and determined the size, shape, and disposition of the rooms.


The Texas House is smaller in total square foot floor area than the conventional box-like low cost house. The saving of space is accomplished by the intelligent use of minimum areas and the proper combination of non-conflicting activities into one area. The plan also provides for expansion by extending the living room wall the width of one plywood panel. By introducing an interior partition and a door an extra room can be provided. At the utility porch a carport can be added by extending the roof over the area.

The large area devoted to kitchen and utility porch in comparison to the total area of the house was deliberately planned because it was established that the major portion of the housework in this particular income group was devoted to the preparation of food and laundry work.

The separate bedroom, contrary to most planning and usage, is provided for the children and not the parents. The parents use the sleeping space combined with living and eating activities. The common sense of this is apparent when you consider the early-to-bed routine of the children and the evening work or recreational time spent in the living space by the parents. In this scheme the activities of the parents are in no way restrained by the sleeping time of the children. The children's bedroom becomes on occasion a "closed door" sanctuary for reading, writing or any activity that needs quiet and solitude.

The most important change made in the established use of combined living areas was to separate the kitchen from the cooking-eating-living area and to create in its place an eating-living-sleeping combination. The living area combined with a sleeping area was found to be more desirable and flexible

(Continued on page 200)



WHAT IS THIS ?

It is an artist's conception of what skyscrapers of tomorrow will look like, when full utilization is made of the possibilities presented by air conditioning. With no need to open windows to secure fresh air, huge panels of glass can run from bottom to top throughout the entire building flooding it with sunlight. Moreover, in skyscrapers of the future, light alloys will play an important part. Girders, pillars, window casings and trim will be made of light alloys produced by Bohn. For both strength and beauty can be achieved through the use of these alloys. Bohn is an important name to remember as an outstanding source for light alloys.

BOHN ALUMINUM & BRASS CORPORATION
GENERAL OFFICES—LAFAYETTE BUILDING • DETROIT 26, MICHIGAN
Designers and Fabricators
ALUMINUM • MAGNESIUM • BRASS • AIRCRAFT-TYPE BEARINGS

BOHN



Things you can count on...

Sure as sunrise . . . your guarantee of quality when you specify Flintkote.

You can count on it. Your clients get the best when your designs incorporate Flintkote Building Materials.

And that's important to you.

Because your reputation rests on the homes you design. And only so long as those homes live up to service expectations is your reputation secure.

You can count on Flintkote to protect your reputation, by building maximums of quality and service into every product.

In asphalt roofings . . . in sidings . . . insulation and insulation board products . . . in protective coatings.

You can count on fine quality materials . . . skilled labor under experienced supervision . . . almost 50 years' leadership in the field . . .

You can count on all these, plus a strong sense of pride in the products you specify.

Yes . . . you can count on Flintkote.

Your Sweets Catalog has complete specifications on Flintkote Building Materials. Or we will be glad to supply you with detailed information in answer to a note from you.

The Extra Years of Service Cost No More!

THE FLINTKOTE COMPANY

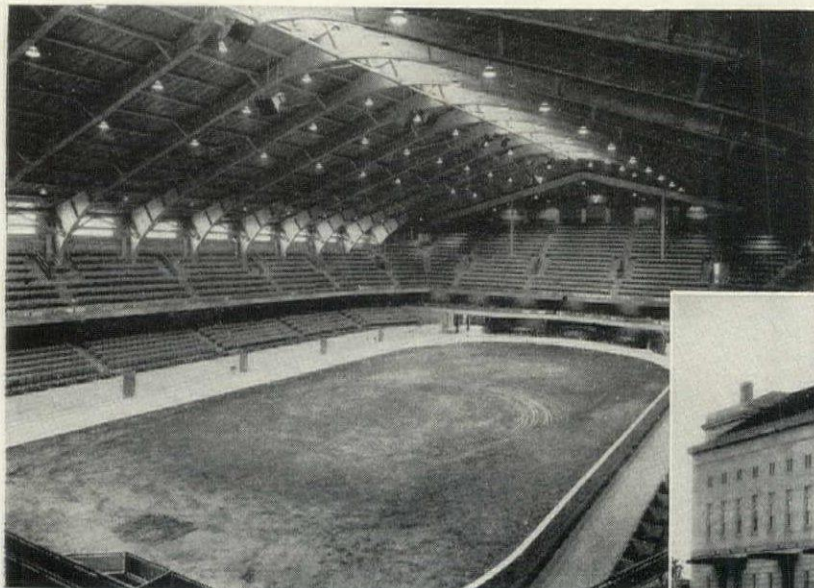
50 Rockefeller Plaza

New York 20, N. Y.

★

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



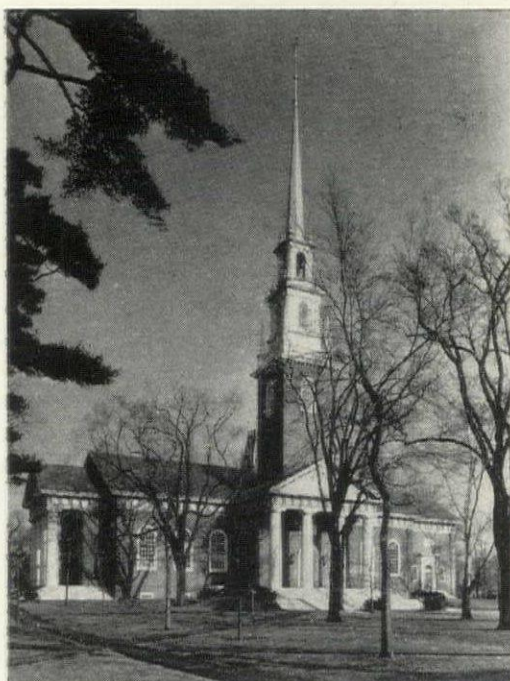


← International Amphitheatre, Union Stock Yards, Chicago, showing finished ceiling effect of underside of Featherweight Concrete Roof. A. Epstein, Engineer. Poirot Construction Co., Contractors.

Raleigh Memorial Auditorium, Raleigh, North Carolina. Roofed with Featherweight Nailing Concrete Slabs. Archt., Atwood & Weeks, Inc. Contractor, York Construction Co.



Permanent ROOF PROTECTION... for PERSON and PROPERTY



Appleton Memorial Chapel, Harvard University, Cambridge, Massachusetts. Roofed with Featherweight Nailing Concrete Roof Slabs. Archt., Coolidge, Shepley, Bulfinch & Abbot, Inc. Contr., Hegeman, Harris Co., Inc.

Life never ends for the FEDERAL ROOF because concrete actually becomes harder and stronger with age. No other roofing material affords equal protection, equal permanence, for institutional and public buildings of every type as well as industrial and railroad buildings.

Featherweight Concrete Roof Slabs represent the highest advance in fireproof roof construction. These factory precast slabs are made of top quality concrete, vibrated for density and reinforced for strength. Light in weight, they save structural steel and provide the most economical roof construction known today.

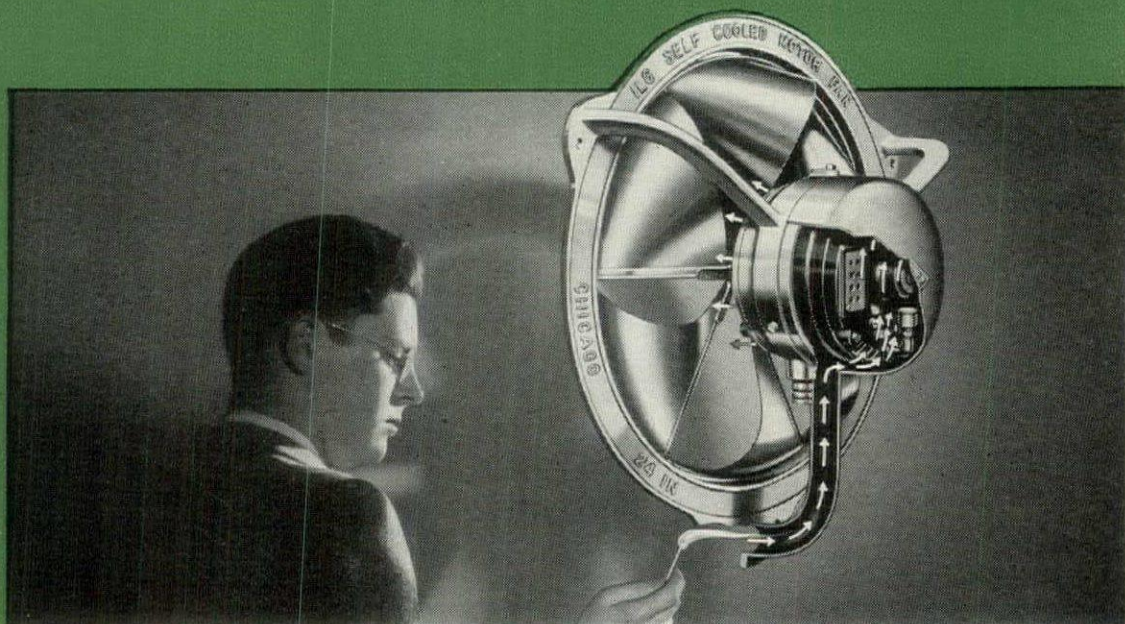
Installation is simple and speedy. Featherweight Concrete Precast Roof Slabs are laid directly on the purlins in any weather, immediately ready for the composition or ornamental covering. There's your FEDERAL ROOF . . . fireproof, and never requiring painting, repairs or replacements during its endless years of faithful service.

[. . . CHANNEL SLABS for flat or sloping roofs (composition covering required) . . . NAILING CONCRETE SLABS to securely hold slate, tile, copper or other ornamental roof.]

**Featherweight
CONCRETE PRECAST
ROOF SLABS**

FEDERAL CEMENT TILE CO.
608 SOUTH DEARBORN ST. - CHICAGO 5, ILL.
For Over 38 Years - - - Sales Offices in Principal Cities

WHY ARE ILG MOTORS "SELF-COOLED"?



To operate at peak efficiency in the polluted air stream of an exhaust fan!

Open-type motors for ventilating duty have windings exposed to dust, grease and foreign matter in air stream—soon "gum-up," lose efficiency, require more power, overheat. Fully enclosed type motors must be larger to avoid overheating, consume more current, block out greater portion of fan area—deposits form a blanket of insulation causing motor to "run hot."

Recognizing these difficulties, ILG designed and built its own motor with patented self-cooling feature to operate at peak efficiency with an exhaust fan. Since it is an open-type motor, you reap the benefits of smaller size, lower operating costs

(saves 5 to 10%!). Removable metal hood over motor prevents foreign matter from depositing on windings to interrupt service. Vent pipe brings in fresh, cool, outside air to circulate through motor. Motor stays clean, cools itself, operates efficiently for years with a minimum of attention.

For more details on this exclusive ILG feature and free copy of 88-page ILG-BOOK, phone nearby Branch Office (consult classified directory) or write us today.



VITALIZED VENTILATION

AND AIR CONDITIONING

FREE!

88-page book on solutions to ventilating problems.



WANTED: GRADUATE ENGINEERS!

for ILG Branch Offices, also Research and Engineering Departments. Exceptional opportunities now and post-war for graduates of accredited technical schools. Send details on education, experience, health, age, marital status, etc.

ILG ELECTRIC VENTILATING CO., 2899 N. Crawford Avenue, Chicago 41, Ill., Offices in 38 Principal Cities

BASIC ENGLISH...AGE OF FLYING AND TOMORROW'S LUXURIES



1. Bridging The Gap between the scientist's language and layman's is part of our editorial mission. Therefore, Willis N. Carrier, (center) Board Chairman, Carrier Corp., and L. N. Hunter, Research Head, National Radiator Co. test House Beautiful's Editor Ralph Bailey's vocabulary, so he can gratify, in simple basic English the public's curiosity about what makes air-conditioning tick.



2. Flying High yourself is the only way to determine how the predicted age of Private Planes will affect people's homes and community living. So Editor-in-Chief Elizabeth Gordon took a flying course. And for her down-to-earth conclusions on the subject, read "Will You Fly Your Own Plane After The War?" in the March House Beautiful.

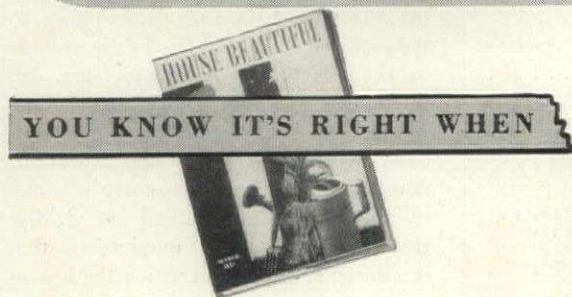


3. Complete Coverage of the Post-War picture takes in plans for Post-War fabrics and fabric finishes. And here's Marion Gough, Chairman of House Beautiful's Post-War Textile Committee, previewing the subject with Albert C. Woodruff, Vice-President, Banco, Inc. Read her article "You Are Going To Need A New Definition Of The Word 'IMPRACTICAL'" in the March House Beautiful.



4. Trend-Spotter House Beautiful foresees a wider market for luxury goods because of increased war incomes. Finding out what Retail Stores intend doing about the matter, takes House Beautiful Editor Sara Little to John Brennan, Ad Manager of Georg Jensen, Inc. Here they discuss that store's Post-War plans for serving the larger market for luxury items.

HOUSE BEAUTIFUL is the magazine that interprets your market for you! It's FIRST in the home field... the must magazine for those who make it their business to know their business.

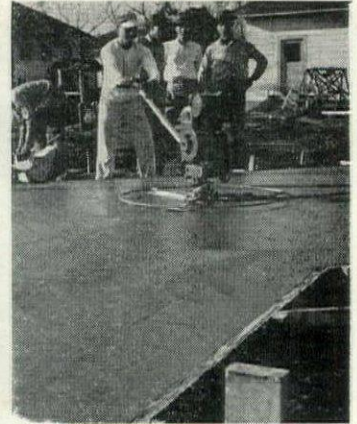
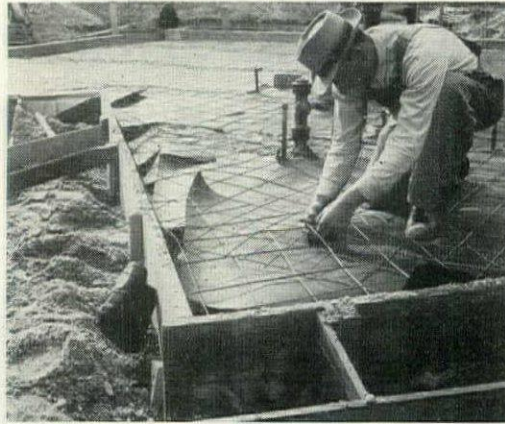


It's Right from
HOUSE BEAUTIFUL

(Continued from page 194)

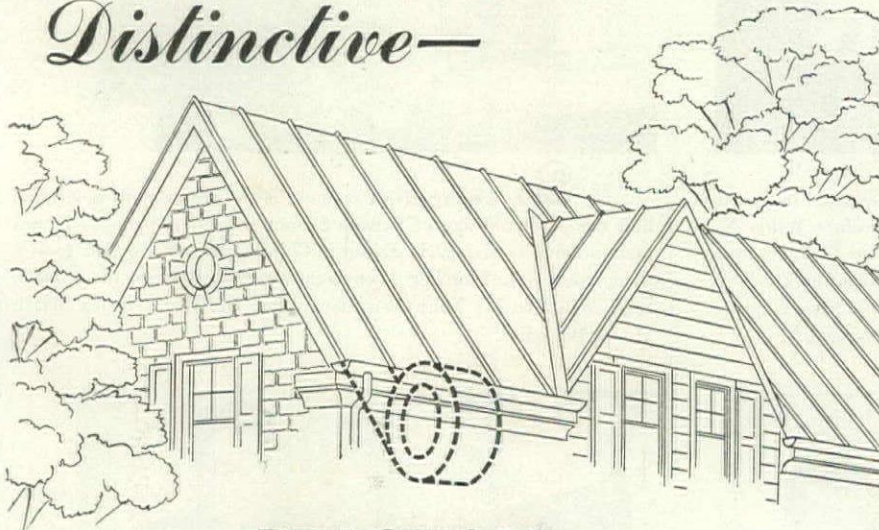
than the living space combined with cooking and laundry activities. During the day the bed is used as a couch and is a decorative part of the recreation and living area.

The Texas House was carefully designed with due appreciation for the Texas sun and prevailing winds. The generous roof overhang shades the exterior wall from the eight months of strong sunlight and the house is so oriented that a maximum of sunlight in



CONCRETE DUSTED WITH CEMENT IS SURFACED BY TROWELLING MACHINE

Distinctive—



PRACTICAL . . . FOLLANSBEE seamless terne roll roofing

The Architect who strives for distinctive appearance in either traditional or modern design, and who must work within conservative budgets, is particularly appreciative of the possibilities inherent in Follansbee Seamless Terne Roll Roofing.

- Standing seams may be designed in a variety of patterns to lend character and distinction to many structural types . . . and Follansbee Seamless Terne roofs may be painted any color to achieve harmonious effects.

- A comparison of installation and maintenance costs is highly favor-

able to Follansbee Seamless Terne Roll Roofing. The exclusive seamless feature cuts installation costs—and low maintenance is best illustrated by the original Terne roofs still protecting buildings dating from Colonial days.

For greater detail write for Specification and Data file



FOLLANSBEE STEEL CORPORATION
GENERAL OFFICES · PITTSBURGH 30, PA.

Sales Offices—New York, Philadelphia, Rochester, Cleveland, Detroit, Milwaukee.
Sales Agents—Chicago, Indianapolis, St. Louis, Nashville, Houston, Los Angeles,
San Francisco, Seattle; Toronto and Montreal, Canada.
Plants—Follansbee, W. Va., and Toronto, Ohio

ALLOY BLOOMS & BILLETS, SHEETS & STRIP · CLAD METALS · COLD ROLLED CARBON SHEETS & STRIP
POLISHED BLUE SHEETS · ELECTRICAL SHEETS & STRIP · SEAMLESS TERNE ROLL ROOFING

the four winter months penetrates the rooms warming them with solar heat. A band of insect screen on the soffit of the eaves overhang provides ventilation for the enclosed roof space. Beds are placed directly in the path of the prevailing breeze and no partitions interfere with its progress through the house. As a Texan will tell you, a breeze is no good unless it is blowing directly on you. Movement of air for physical comfort in this climate is extremely important.

An interesting construction detail is the molded sill which receives the studs and forms a mechanical watertight joint at the point where the plywood panel joins the sill. The molded sill also serves as the interior base molding. The one-half inch resin-bonded plywood panels are glued to the studs with water resistant glue and are held in place by finishing nails until the glue sets up. The bottom edges of the panels are sealed with a waterproof compound.

The interior walls and ceilings are covered with 1/4 in. plywood nailed to the joists and studs. The interior plywood is finished with a color coat wiped with cheesecloth to reveal the grain and which also serves as a filler. Wax is used as a finishing coat and besides giving a soft tone can be revived at no great cost. The floors are concrete with a finish of heavy traffic wax built up in three applications and polished between each application.

Every detail in the Texas House was motivated by some reasoning, even to the selection of the gray-green paint on the exterior walls and the bright yellow on the soffit of the eaves overhang. In selecting gray-green a valid criticism is levelled at the standard white paint color scheme of the average low cost development. The white color scheme in making the house stand out vividly from its background emphasizes the smallness of the lot on which the house

(Continued on page 206)



...with *Precipitron* * the Electronic Air Cleaner

A NEW PRINCIPLE FOR CLEANING AIR

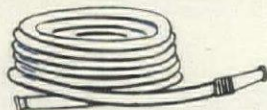
Dirt, smoke and soot—

passes through an electrostatic field

receives a positive (+) charge

and is drawn to a collection plate of opposite polarity (—)

where it remains until flushed down the drain.



All the sunshine or rain-swept breezes of the countryside could not provide your plant or office with air as clean, as free from dirt, as that obtained through Precipitron. Employing an electronic method, Westinghouse Precipitron is the most effective air cleaner yet developed . . . gives three to five times the efficiency of ordinary mechanical air filters.

Precipitron removes microscopic air-borne particles of dirt, dust, smoke, soot, abrasives as small as 1/250,000 of an inch. It cuts down spoilage of materials, deterioration of equipment and fixtures, expense of maintenance. At the same time it increases efficiency and comfort.

Clean air is vital to production, to good working conditions, to good health. It will pay you to install Precipitron. For complete information call your nearest Westinghouse office. Or write Westinghouse Electric & Manufacturing Company, P. O. Box 868, Pittsburgh 30, Pa.

ARCHITECTS . . . PLANNING POSTWAR BUILDING

should include Precipitron in their plans . . . to assure the most modern, most efficient air cleaning. Suitable for every type of building, office . . . or homes where forced ventilation is used. Write for application data and specifications. J-04503

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



Westinghouse

PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

P R E C I P I T R O N

Let Us on Herman



WHEN specifying heating and ventilating equipment for any type of industrial, commercial or public building—an Architect needs complete files of up-to-date catalogs and literature.

During the past several years, some outstanding new products have been added by Herman Nelson. In addition, important improvements have been made in other Herman Nelson Equipment widely used by Architects. These new products and improvements in existing equipment will enable you to provide even more satisfactory heating and ventilating results for your clients. However, they may also require changes in your specifications if maximum efficiency and economy are to be obtained. For these changes in specifications you will need complete, up-to-date Herman Nelson catalogs in your files.

Herman Nelson Product Application Engineers are anxious to assist. Catalogs and literature on all Herman Nelson Products are ready for your files. If a Product Application Engineer has not already called to assist you in completing your catalog files of Herman Nelson Products, please fill in and mail the coupon at the lower right hand corner of this advertisement. The nearest Herman Nelson Product Application Engineer will assist you in completing your files.



Complete Your Catalog File

Nelson Heating and Ventilating Products

Herman Nelson Branch Offices

Boston—J. E. Carey, Mgr., J. F. Flannery, Product Application Engineer.
Chicago—C. A. Pickett, Mgr., J. C. Donaldson, Herman Stai, Product Application Engineers.

Detroit—M. E. Van Vliet, Mgr., E. C. Seyphol, Product Application Engineer.
Milwaukee—Carl Amundson, Product Application Engineer.
Minneapolis—Homer Melvin Bird, Product Application Engineer.
Moline—Anthony Spoodis, Product Application Engineer.

New York—Robert F. Ruggles, Mgr., E. V. Loughran, Product Application Engineer.

Philadelphia—P. A. Cavanagh, Mgr.
St. Louis—Henry C. Sharp, Mgr., E. Paul Harder, Product Application Engineer.

Syracuse—Lawrence C. Ward, Product Application Engineer.
Washington—J. M. Osborne, G. M. Heslop, Product Application Engineers

Herman Nelson Product Application Engineers

Albuquerque, N. M.—Boyd Engineering Co., Ltd.
Atlanta, Ga.—Felix J. Commagere
Birmingham, Ala.—Hugh C. Boisclair
Buffalo, N. Y.—Edward H. Cox
Cape Elizabeth, Me.—The Partridge Co.
Charlotte, N. C.—Charles M. Setzer & Co.
Cincinnati, O.—Kenneth B. Little Co.
Cleveland, O.—H. W. Kaiser Company
Columbus, O.—Russell H. Smith Equipment Co.
Dallas, Tex.—W. E. Lewis & Co.
Denver, Colo.—Fox & Company
Des Moines, Iowa—Products, Inc.

Duluth, Minn.—Williams-Swanson Co.
El Paso, Tex.—Boyd Engineering Co., Ltd.
Grand Rapids, Mich.—O. D. Marshall
Houston, Tex.—D. R. Rippey
Indianapolis, Ind.—George Heidenreich
Jackson, Miss.—H. M. Ludlow
Kansas City, Mo.—H. H. Wright Company
Louisville, Ky.—John Zimmermann
Los Angeles, Calif.—F. J. Hearty & Co.
Memphis, Tenn.—Southern Sales Co.
Miami, Fla.—R. P. Kelley

Milwaukee, Wis.—C. W. Miller
Minneapolis, Minn.—P. R. Reese
Nashville, Tenn.—Southern Sales Co.
New Orleans, La.—L. Villere Cressy Co.
Omaha, Neb.—Verne Simmonds
Pittsburgh, Pa.—Allegheny Engineering Co.
Richmond, Va.—W. Wallace Neale
Saginaw, Mich.—W. A. Witheridge Co.
Salt Lake City, Utah—Rushby C. Midgley
San Antonio, Tex.—Harry J. Dalton
San Francisco, Calif.—E. C. Cooley Co.
Spokane, Wash.—R. L. Nelson

Herman Nelson Distributors

Babbitt Steam Specialty Co.
New Bedford, Mass.
Bailey-Farrell Co.
Pittsburgh, Pa.
E. Best Plbg. & Htg. Supply Co.
Quincy, Ill.
W. L. Blake & Co.
Portland, Me.
The Blodgett Supply Co.
Burlington, Vt.
J. C. Bowles Co.
Seattle, Wash.
Braid Electric Co.
Nashville, Tenn.
Brock-McVey Co., Inc.
Lexington, Ky.
Bruce-Rogers Co.
Fort Smith, Ark.
Garrett Burgess, Inc.
Detroit, Mich.
Calcasieu Lumber Co.
Austin, Tex.
Canney-Plue, Inc.
Rutland, Vt.
Carman-Thompson Co.
Lewiston, Me.
W. A. Case & Son Mfg. Co.
Erie, Pa., and Jamestown, N. Y.
Cedar Rapids Pump & Supply Co.
Cedar Rapids, Ia.
Central Metal & Supply Co.
Baltimore, Md.
Consolidated Supply Co., Inc.
Portland, Ore.
Cooper Supply Company
Tulsa, Okla.
Harry Cooper Supply Co.
Springfield, Mo.
Cordes Supply Co.
Milwaukee, Wis.

Dallman Supply Co.
Sacramento, Calif.
Desco Corporation
Wilmington, Del. and Chester, Pa.
R. B. Dunning & Co.
Bangor, Me.
Electric Supply Co.
Atlanta, Ga.
Ewing Supply Co.
Burlington, Ia.
Fox Electric Supply Co.
Elgin, Ill.
Globe Machinery and Supply Co.
Des Moines and Cedar Rapids, Ia.
Griffith Electric Supply Co.
Trenton, N. J.
Hajoca Corporation
Ashville and Charlotte, N. C.,
Richmond, Norfolk, Roanoke,
Danville, and Staunton, Va.
Hall & Knight Hardware Co.
Lewiston, Me.
Hansen Supply Co.
New London, Conn.
The Hardware & Supply Co.
Massillon, O.
Heating Trades Supplies, Inc.
Toledo, O.
Holyoke Supply Co., Inc.
Holyoke, Mass.
The Hughes Supply Co.
Mansfield, O.
Inland Supply Co.
Champaign and Danville, Ill.
Inland-Peoria Supply Co.
Peoria, Ill.
International Engr. & Supply Co.
Providence, R. I.
E. Keeler Company
Williamsport, Pa.

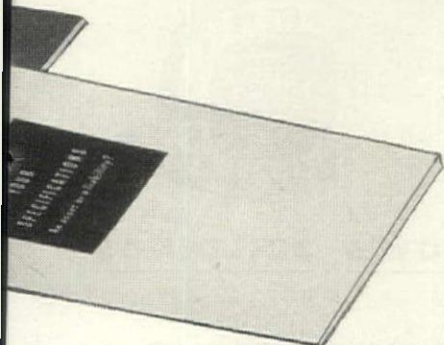
Kester Machinery Co.
Winston-Salem, High Point and
Burlington, N. C.
The W. H. Kiefaber Co.
Dayton and Hamilton, O.
Latrobe Plumbing Supply Co.
Latrobe, Pa.
Lehigh Valley Supply Co.
Allentown, Lansdale,
East Stroudsburg and Easton, Pa.
LeValley, McLeod, Kinkaid Co., Inc.
Elmira, Olean, Schenectady, N.
Luzerne & Lackawanna Supply Co.
Wilkes-Barre, Pa.
Manufacturers Selling Co.
Trenton, N. J.
Marsden & Wasserman, Inc.
Hartford, Conn.
Chas. Millar & Son Co.
Utica and Binghamton, N. Y.,
Springfield, Mass., & St. Johnsbury, Vt.
Morrison Supply Co.
Fort Worth, Amarillo, Lubbock,
Wichita Falls and Sweetwater, Tex.
Mott Bros. Company
Rockford, Ill.
Murphy Supply Co.
Green Bay, Wis.
The Ohio State Supply Co.
Youngstown, O.
Palmer Plumbing Supply Co.
Laconia and Rochester, N. H.
Palmer Supply Co.
Portland, Me.
The Penn State Supply Co.
Sharon, Pa.
Reading Foundry & Supply Co.
Reading, Pottsville, and Lebanon, Pa.
W. J. Riley Supply Co.
Monroe, La.

Robbins-Gamwell Corporation
Pittsfield, Mass.
The Roedel Company
Zanesville, O.
The Salina Supply Co.
Salina, Kan.
San Antonio Machine & Supply Co.
Corpus Christi and Waco, Tex.
Southern Equipment Co.
San Antonio, Tex.
Strong, Carlisle & Hammond Co.
Cleveland, O.
Tay-Holbrook, Inc.
San Francisco, Fresno, San Jose and
Stockton, Calif.
The Tholen Bros. Supply Co.
Leavenworth, Kan.
The Topeka Steam Boiler Wks. Co., Inc.
Topeka, Kan.
Trimble & Lutz Supply Co.
Wheeling, W. Va.
Geo. E. Trudel Co.
Manchester, N. H.
U. S. Supply Co.
Kansas City, Mo., Wichita, Kan.,
Oklahoma City, Okla.,
and Omaha, Neb.
The Universal Supply Co.
Parkersburg, W. Va.
J. A. Welsh & Co., Inc.
Houston, Texas
Washburn-Garfield Co.
Worcester, Mass.
Western Maryland Supply Co.
Hagerstown, Md.
Wigman Company
Sioux City, Ia.
Yelton-Weaver Supply Co.
Springfield, Ill.

THE HERMAN NELSON CORPORATION

Manufacturers of Quality Heating and Ventilating Products

GENERAL OFFICES: MOLINE, ILLINOIS • FACTORIES AT MOLINE, EAST MOLINE AND CHICAGO, ILLINOIS



THE HERMAN NELSON CORPORATION, Moline, Illinois

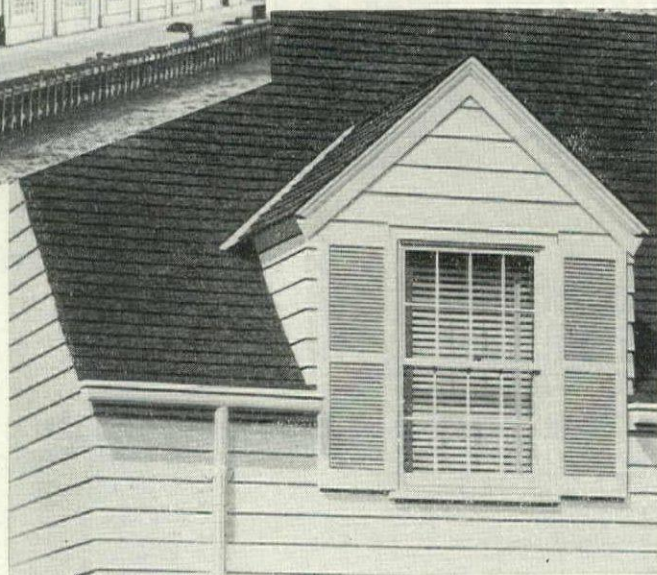
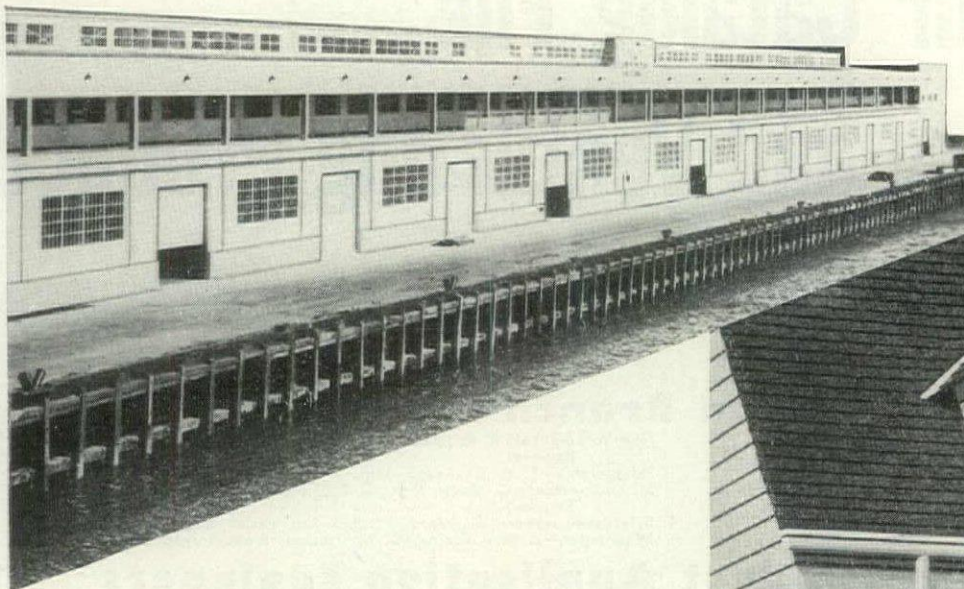
Yes—We would like to have our files of literature on Herman Nelson Heating and Ventilating Products brought up-to-date.

Firm Name

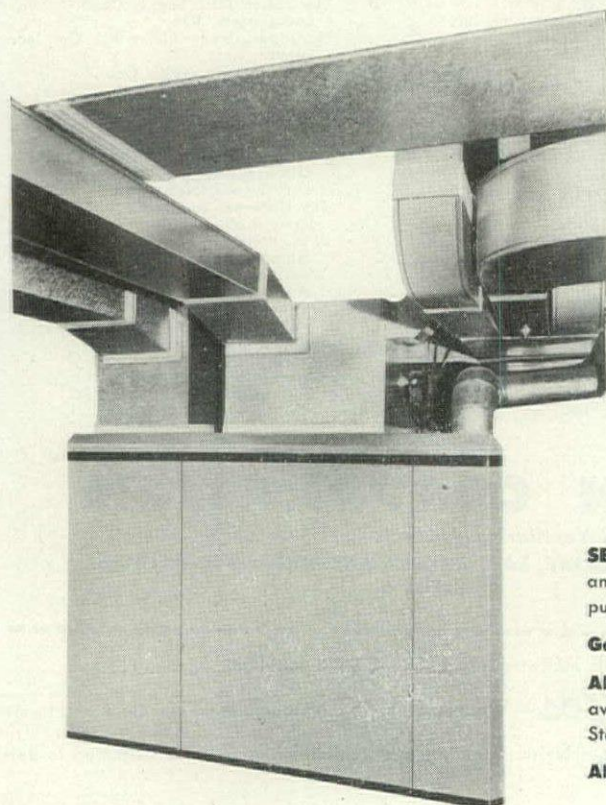
Address

City

State



**INFORMATION YOU NEED
BEFORE YOU DETAIL
SHEET METAL WORK TO BE
PAINTED**



Wherever your plans call for a paintable galvanized sheet, ARMCO Galvanized PAINTGRIP sheets will give your clients long, satisfactory service . . . in siding for piers and other industrial structures, in roof-drainage and furnace casings for residences, in exposed air-ducts for homes and commercial buildings.

This original mill-Bonderized galvanized sheet requires no acid-etching or weathering. It takes and preserves paint because it has a neutral surface film that insulates the paint from the zinc. This retards drying out of the paint oils, prevents early peeling, gives double protection. Exposure tests show that paint lasts several times longer on PAINTGRIP than on ordinary galvanized sheets.

ARMCO PAINTGRIP will save your clients paint and repair bills, and spread your good name as an architect who thinks far beyond the completed building. The American Rolling Mill Company, 411 Curtis Street, Middletown, Ohio.

FOR EXPORT: THE ARMCO INTERNATIONAL CORPORATION

SEE SWEET'S CATALOG for uses, advantages and general specifications of these Armco special purpose sheets:

Galvanized ARMCO Ingot Iron

ARMCO Galvanized PAINTGRIP STEEL (also available with ARMCO Ingot Iron or Copper-Steel base).

ARMCO Stainless Steel

**HELP FINISH THE FIGHT—
WITH WAR BONDS**



SPECIAL PURPOSE SHEET STEELS FOR TOMORROW'S BUILDINGS

Ready for Your Planning Boards —these Truscon Architectural Projected Steel Windows

Here are the new postwar types and sizes of Truscon Architectural Projected Steel Windows —you can incorporate into your postwar planning now. These quality units will be ready just as soon as our wartime obligations are fulfilled.

These new types and sizes are based upon the Project of Coordinated Dimensions of building materials. They provide the long, shallow glass lights predominant in contemporary design. Bar centers match those of Commercial Projected and Pivoted Windows so they can be used harmoniously in the same elevation.

Write for your copy of Truscon's Steel Window Section which will appear in the 1945 "Sweet's Architectural File." It will contain types and sizes and installation details on all Truscon window designs.

TRUSCON

Steel Company

YOUNGSTOWN 1, OHIO

Subsidiary of Republic Steel Corporation



1-8 7/8"	3-4 7/8"	4-0 7/8"	5-0 7/8"	6-8 7/8"
201	211	221	231	241
2-9"	FA	I	JA FA JA	GA FA GA
202	212	222	232	242
4-1"	FA	I	JA FA JA	GA FA GA
203	213	223	233	243
5-5"	FA	I	JA FA JA	GA FA GA
204	214	224	234	244
5-5"	FA	I	JA FA JA	GA FA GA
205	215	225	235	245
6-9"	FA	I	JA FA JA	GA FA GA
206	216	226	236	246
6-9"	FA	I	JA FA JA	GA FA GA
207	217	227	237	247
8-1"	FA	I	JA FA JA	GA FA GA
208	218	228	238	248
8-1"	FA	I	JA FA JA	GA FA GA
209	219	229	239	249

- DIMENSIONS SHOWN ARE WINDOW OPENING DIMENSIONS.
- ALL UNITS ARE VIEWED FROM THE OUTSIDE. VERTICAL MUNTIN BARS MAY BE ADDED AT CENTER LINE OF ALL WINDOWS EXCEPT 1-8 7/8".
- VENTILATORS WHERE SHOWN PROJECTING OUTWARD MAY BE FURNISHED TO PROJECT INWARD PROVIDED ALL VENTILATORS IN THE SAME UNIT PROJECT IN.
- FIXED UNITS ARE AVAILABLE IN ALL SIZES SHOWN FOR VENTILATED UNITS.

GLASS SIZES	
NO.	SIZE
A	17 7/8" x 13 5/8"
B	17 7/8" x 14 5/8"
CA	19 5/8" x 15 5/8"
D	37 5/8" x 13 5/8"
E	37 5/8" x 14 5/8"
FA	39 5/8" x 15 5/8"
G	45 5/8" x 13 5/8"
H	45 5/8" x 14 5/8"
I	47 5/8" x 15 5/8"
JA	9 5/8" x 15 5/8"

AIA FILE NO. 16E

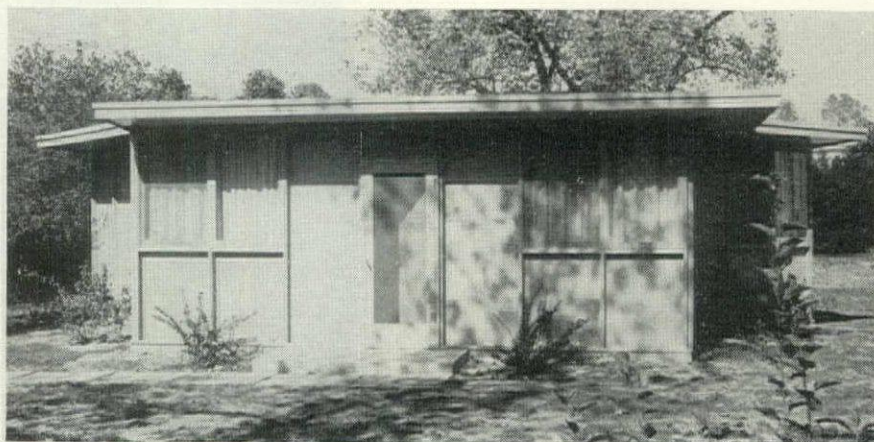
PREFABRICATION

(Continued from page 200)

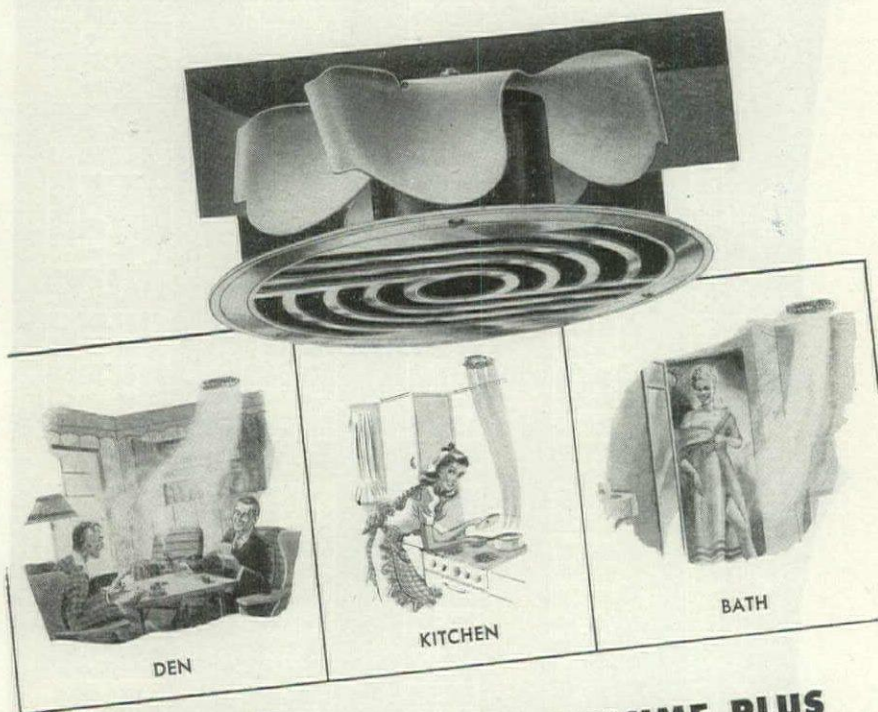
stands and also the monotonous regularity of an all-over white dot pattern. The Texas House blends with a soft harmony to its background and the yellow on the soffit of the eaves overhang gives a pleasant color-glow to the light it reflects into the rooms.

The plumbing system—gas, water and waste disposal piping—is designed for prefabrication as all of the piping is conveniently concentrated in one wall.

A danger to prefabrication is the placing of low cost houses on small lots.



EXTERIOR HAS DIGNIFIED SIMPLICITY WITHOUT COSTLY ORNAMENTATION



Well designed houses lose their punch in crowded and monotonous development patterns. This practise can defeat the purpose of good low cost house planning by lack of garden space, cramping play areas and creating long ungainly side alleys on narrow lots. The Texas House was planned for a minimum lot of 70 ft. by 100 ft. which allows for a service entrance and ample drying yard.

An important feature of the house is a large plywood dining table which is the hub of much of the working and recreational activity. Principally used for dining, it doubles like an experienced vaudeville trouper for ping-pong, homestudy, dressmaking and hobbies.

The structure was build under contract by a local firm of contractor-carpenters.

The most important factors in a low cost house are the low cost figures which are conveniently itemized as follows:

FLOOR

Concrete and steel
Gravel and grading
Labor\$ 154.75

WALLS

Framing walls and roof
Plywood and labor.....\$ 754.89

ROOF

Felt, asphalt and gravel
Galvanized metal flashing
Labor\$ 60.00

MILLWORK

Windows and doors
Kitchen cabinets
Bath room cabinets
Labor\$ 248.00

PLUMBING

Roughing in, fixtures
and hot water heater
Labor\$ 250.00

ELECTRIC WORK

Wiring, panel box
Switches and service plugs
Labor\$ 63.00

PAINTING

Exterior and interior finishes
Waxing and labor.....\$ 175.00

TOTAL

\$1,705.64

Blo-Fan OFFERS VOLUME PLUS POWER IN "Spot" Ventilation...

MORE THAN A FAN—more than a blower—the Blo-Fan offers the combined advantages of both. Installed in the ceiling—directly over the source of foul air, smoke and steam—the Blo-Fan literally forces that air out of the house.

Cup-shaped portions of the blades scoop up large quantities of air, which the blower sections eject into the exhaust duct. This *volume plus power* ventilates before the unwanted air and odors can penetrate other rooms.

Both new construction and modernization plans should provide the fresh, clean rooms and furnishings that Blo-Fans make possible.

See Sweet's for 1945

FREE BOOKLET



Write today for your copy of our booklet "Danger Spots."

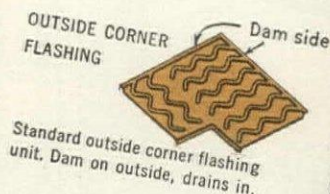
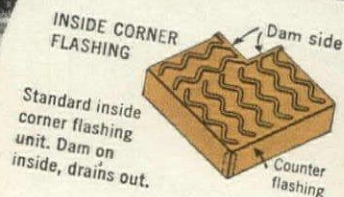
PRYNE & CO., INC.
1245 E. 33rd St. • LOS ANGELES, 54

BRANCHES (TO BE RE-ESTABLISHED AFTER THE WAR)
SAN FRANCISCO • SEATTLE • CHICAGO • NEW YORK



Anaconda Through-Wall Flashing installed in Brighton School, Rochester, N. Y. Contractor William H. Long; Architect Charles Carpenter, Rochester, N. Y.

Anaconda Through-Wall Flashing



Anaconda Through-Wall Flashing is efficient, positive and durable. Relatively inexpensive, it is adaptable to practically every masonry condition.

1. The 7/32" high zig-zag corrugations provide complete bond in the mortar in all lateral directions.
2. The integral dam throughout its length is the full height of the corrugations. Flashing will drain itself dry on a level bed—thus reducing to a minimum the possibility of wet walls and heaving by frost.
3. The flat selvage permits ready assembly with counter-flashing or other adjacent sheet metal.

4. Flashing can be locked endwise and a watertight joint secured by nesting one or two corrugations.

5. Due to the design of the dam, flashing can be set within 1/4" of the face of the wall and still provide sufficient bed for pointing of the mortar joint. Thus the flashing protects more of the wall than is possible with flashing types having turned-back dams.

Although not available today, Anaconda Through-Wall Flashing should be on your list of postwar construction necessities. Send for Publication C-28 or refer to Sweet's Catalog.

4556

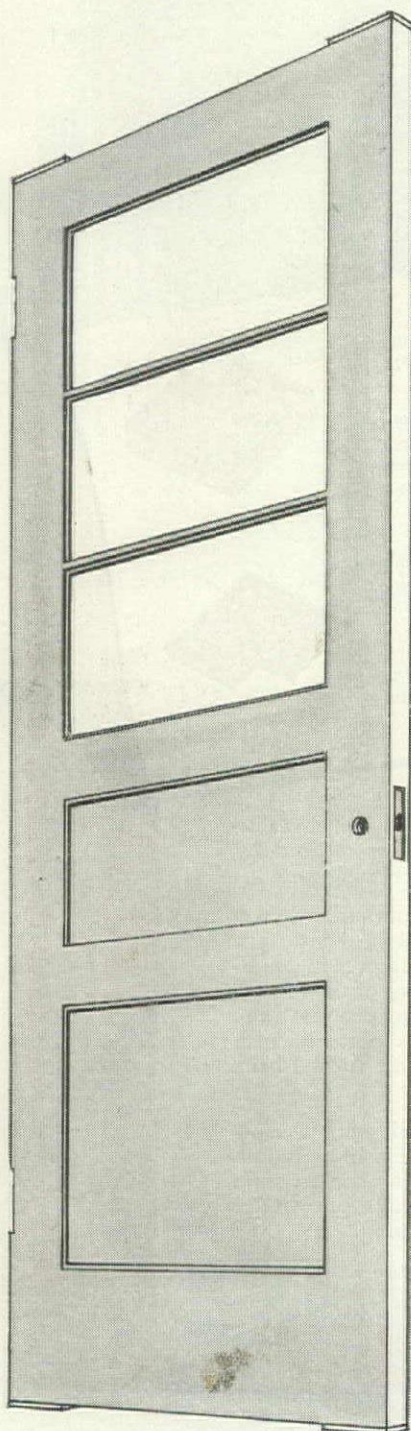
WAR BONDS... Buy more bonds and have a bigger part in victory



Anaconda Copper

THE AMERICAN BRASS COMPANY—General Offices: Waterbury 88, Connecticut
Subsidiary of Anaconda Copper Mining Company • In Canada: ANACONDA AMERICAN BRASS LTD., New Toronto, Ont.

Every door will hang right -- when you specify "Douglas Fir Doors, FACTRI-FIT"!



Write for our new catalog showing the complete line of Douglas fir interior doors, TRU-FIT entrance doors, and new specialty items. It is yours for the asking.

Douglas fir doors specified FACTRI-FIT reach the job ready to hang. They're not only **pre-fit to size** at the mill, but **gained** and **bored** or **mortised** as well. The work is clean, precise, correct. You don't have to worry about the marring or "butchering" which results so often because of dull tools or unskilled workmen on the job.

Remember, too, that Douglas fir doors are featured in modern, attractive three-panel designs—designs ideally adaptable to all types of building. They're manufactured of Douglas fir—the wood made durable by nature—assuring your client a lifetime of satisfactory service.

Douglas fir interior doors may be specified FACTRI-FIT for a limited number of essential jobs **right now**. . . . When war needs lessen, of course, they will be immediately available for all civilian building.

FACTRI-FIT

FEATURES

1

FACTRI-FIT doors are pre-fit at the mill, trimmed to exact size, ready to hang without sawing or fitting.

2

FACTRI-FIT doors may be ordered completely machined at your option—gained, bored or mortised by high-speed precision tools.

3

FACTRI-FIT doors (like all Douglas Fir Doors) are edge grade-marked for ease in ordering, specifying and supplying.

4

FACTRI-FIT doors are scuff-stripped to protect the precision-cut corners during handling and shipping.

NOTICE: Douglas Fir Interior Doors are manufactured three ways:

- 1—STANDARD—Purposely made oversize for fitting to inexact openings.
- 2—PRE-FIT—Trimmed to size, ready to hang.
- 3—FACTRI-FIT—Prefit, gained, and bored or mortised.

Douglas Fir DOORS

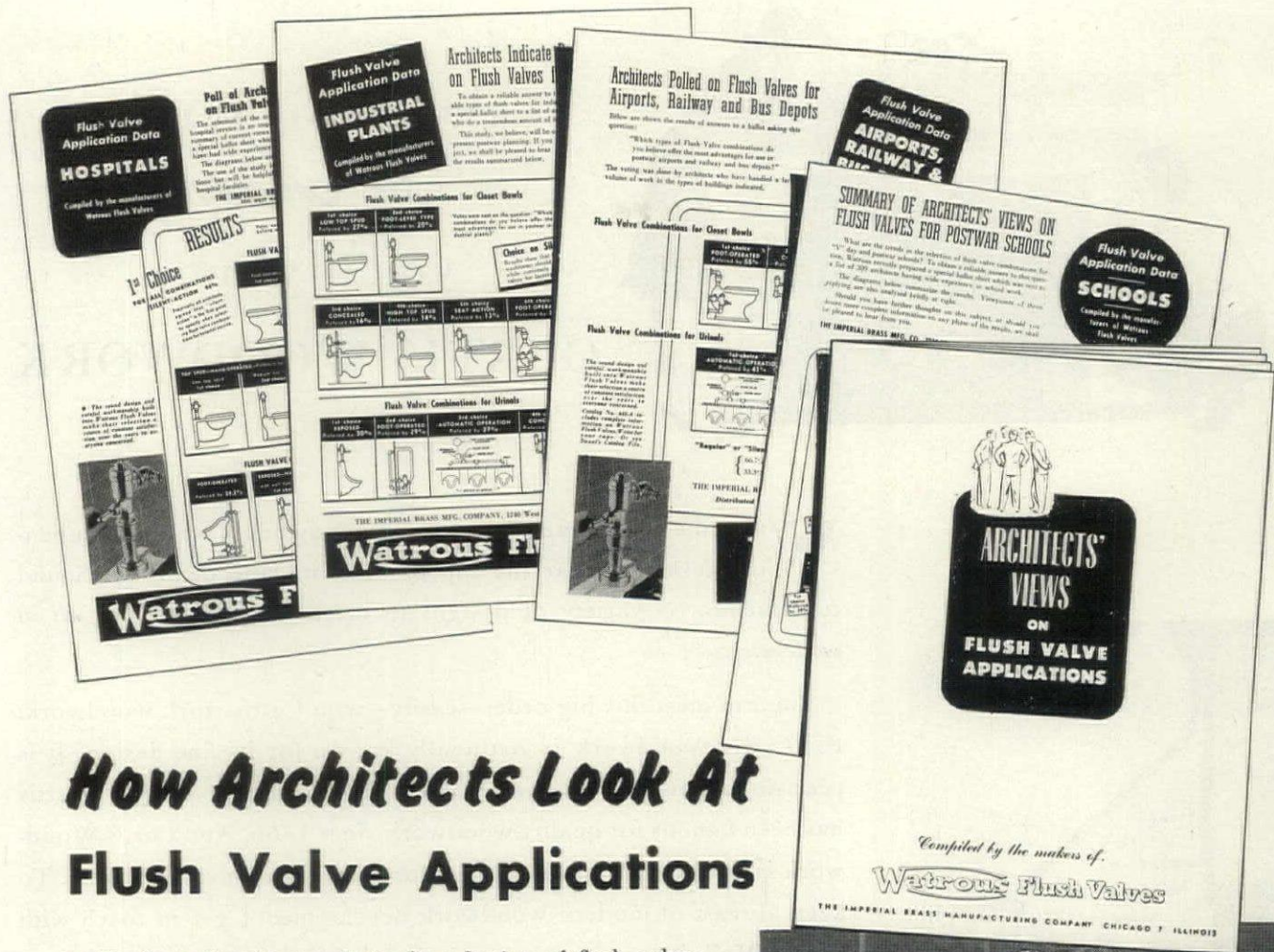
FIR DOOR INSTITUTE

Tacoma 2, Washington

*Remember!
NATURE MAKES
DOUGLAS FIR
Durable!*

*Durable Douglas Fir Doors
are made from all-heart-
wood, vertical-grain, soft,
old-growth Douglas Fir.*

THE NATIONAL ASSOCIATION OF DOUGLAS FIR DOOR MANUFACTURERS



How Architects Look At Flush Valve Applications

■ To determine the trends in the selection of flush valves for various types of postwar buildings, the manufacturers of Watrous Flush Valves recently completed an extensive poll among architects. The results of this poll covering schools, hospitals, industrial plants, airports, railway and bus depots, have already been published in the form of advertisements.

These application Data Sheets have now been reprinted in Bulletin No. 477, "Architects' Views on Flush Valve Applications". This bulletin includes a general summary which shows, among other interesting details, that a growing preference is indicated for foot-operated flush valves. It also shows that silent-action flush valves are now preferred for many applications.

We believe this bulletin will be particularly helpful in connection with your postwar projects. Write for Bulletin No. 477.

THE IMPERIAL BRASS MFG. CO.
1238 W. Harrison St., Chicago 7, Illinois

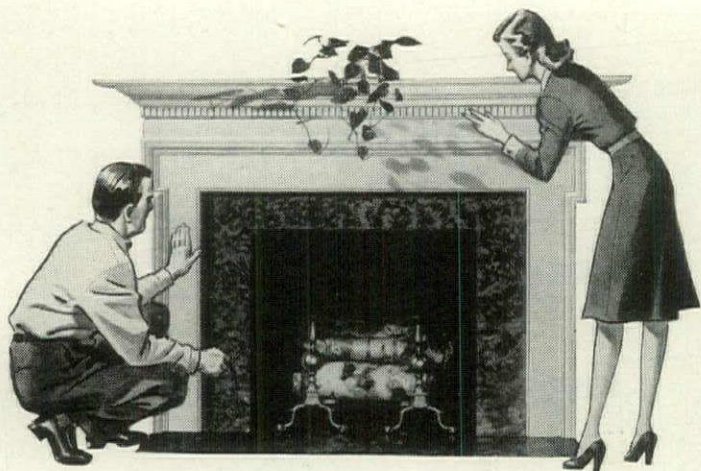
Watrous Flush Valves



Specify Watrous FOR POSTWAR PROJECTS

The sound design and careful workmanship built into Watrous Flush Valves make their selection a source of constant satisfaction over the years to everyone concerned.

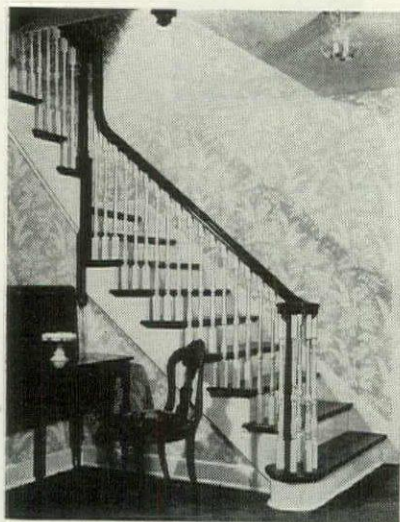
Catalog No. 448-A includes complete information on Watrous Flush Valves. Write for your copy. Or see Sweet's Catalog File.



because they'll
be *choosy*
you'll want
CURTIS WOODWORK

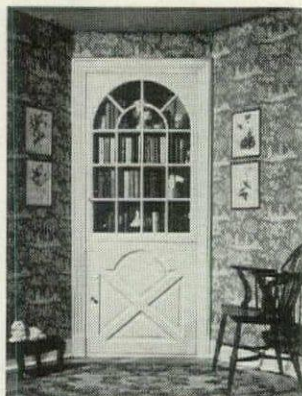
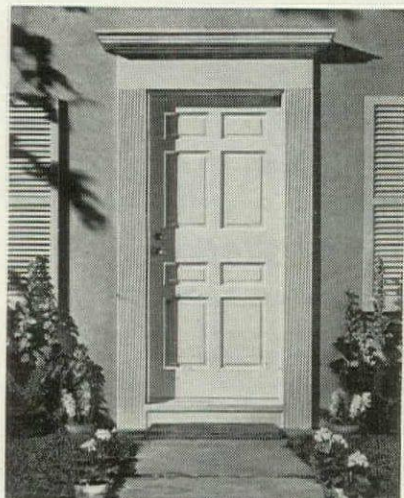
WHAT the public wants in post-war woodwork is—plenty! Authentic styling is near the top of the list. Fine detailing. Sound construction. A variety of designs to meet every taste. *And all at moderate cost!*

You can meet this big order—easily—with Curtis stock woodwork. For Curtis Woodwork is nationally known for its fine design. It is precision manufactured . . . available in a wide variety of styles. Curtis has been famous for quality woodwork since 1866. And Curtis Woodwork is available for every purse—for every style or size of home. To keep abreast of modern woodwork developments, get in touch with Curtis. Mail the coupon for interesting, informative literature.

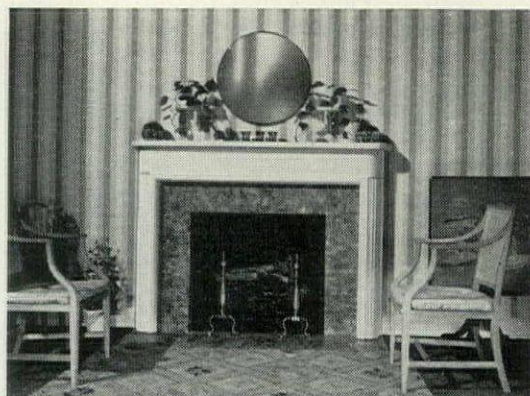


No home you plan need lack a graceful stairway—for Curtis stairways, made up of stock parts, provide correct architectural design at moderate cost. Several style selections.

Finely detailed, yet sturdily constructed, Curtis entrances give any home that "out-of-the-ordinary" look. This is only one of many Curtis stock designs.



Curtis china cabinets help you add a greater measure of beauty to post-war homes. Made with and without doors in wide price range.



Curtis mantels—beautifully detailed—will be available in a wide variety of styles for post-war building. These mantels combine the best features of traditional design with sound workmanship and construction.

**MAIL THE COUPON
FOR INFORMATION!**



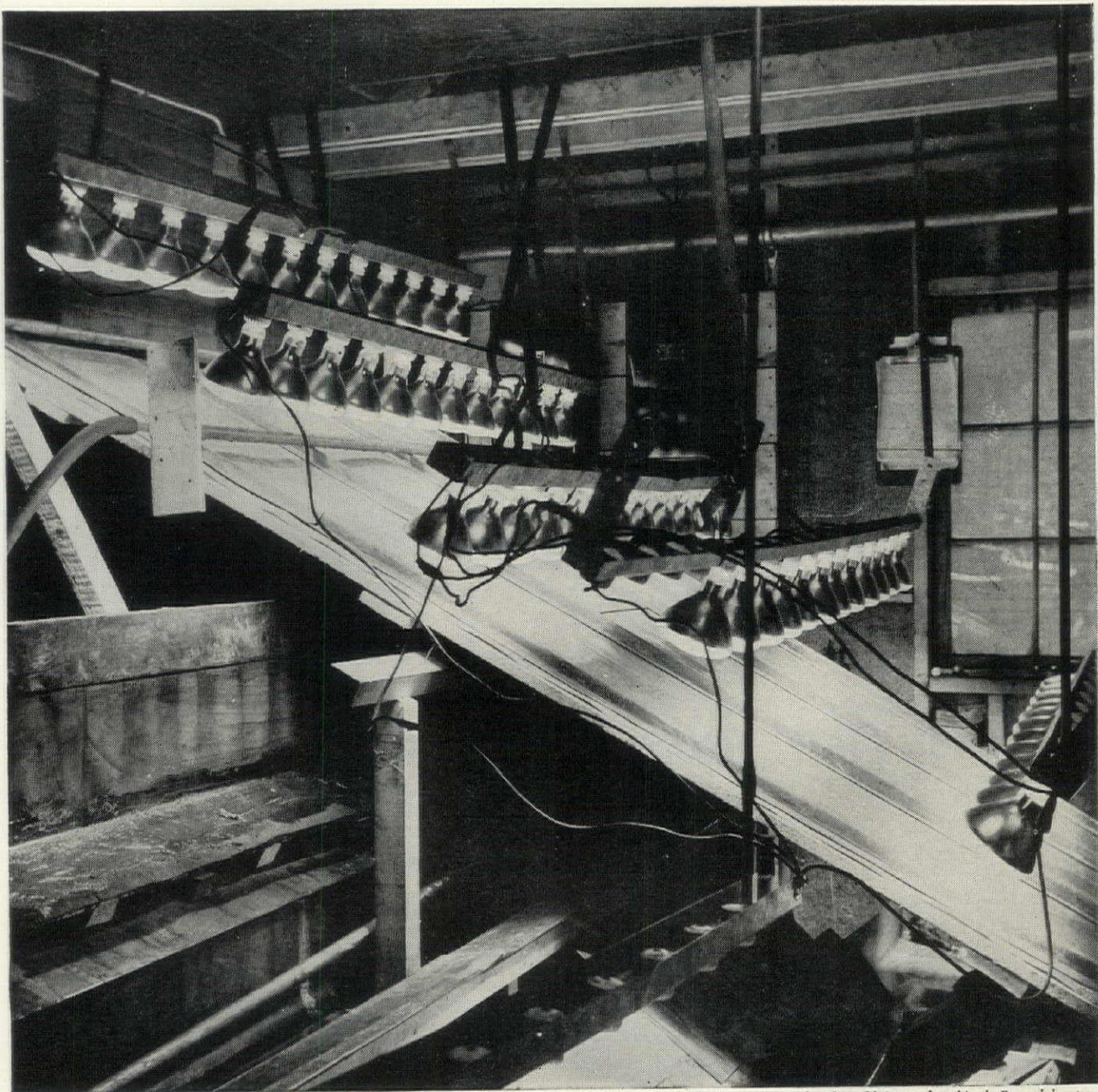
Curtis Companies Service Bureau
Dept. AF-3W, Curtis Building
Clinton, Iowa

Gentlemen: Please send me information on Curtis Stock Woodwork for post-war homes.

Name.....

Address.....

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



Tests on experimental roof panel being conducted in the Revere Laboratory.

This picture will mean a lot to you

Here is a photograph of one of many laboratory tests conducted by Revere during the past three years to determine if the usual methods of specifying and installing sheet copper for gutters, roofing and the like, were the best that could be devised.

Result: some radically new ideas were developed on the specification and application of sheet copper on buildings for new construction and repairs.

The information thus obtained is now being compiled and when ready will be made freely available to the profession. You will find it invaluable, because it reduces sheet copper con-

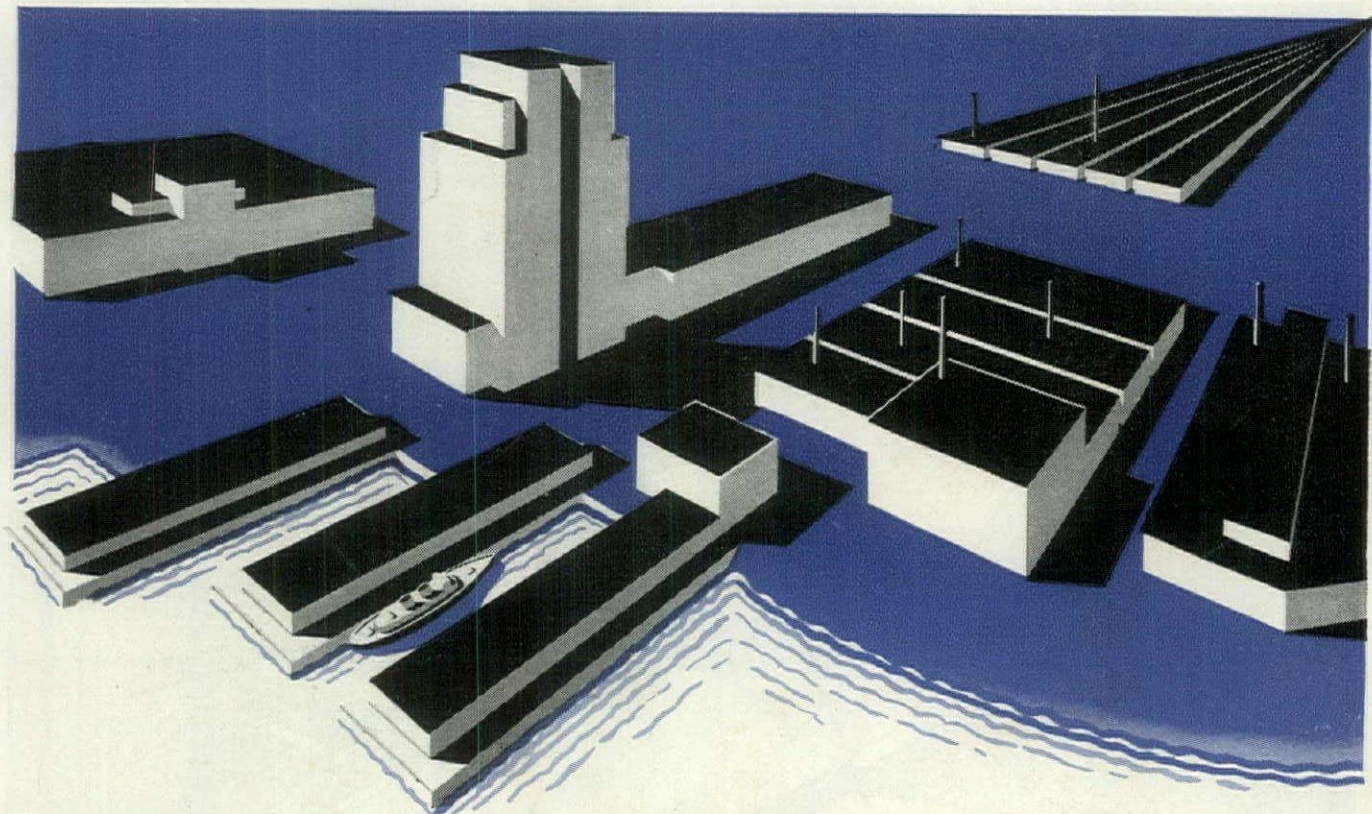
struction to a matter of engineering design, assuring satisfactory performance. On request we will put your name on our list to receive a complimentary copy of a forthcoming new Revere manual for architects and workers in sheet copper. Write Revere Executive Offices.

REVERE

COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

Executive Offices: 230 Park Ave., New York 17, N.Y.



These "Flat Tops" are winning the war that never ends!



LONG LIFE Carey roofs applied more than 30 years ago are still giving watertight service.



FREE ROOF INSPECTION SERVICE. A periodic survey by Carey Roofing Experts protects your clients by preventing roof trouble before it starts. No obligation.

Carey BUILT-UP ROOFS have piled up an impressive 50-year record in winning the never-ending war against weather and costs. Many applied more than 30 years ago are still going strong with a minimum of maintenance. This record is evidence of the low-cost, long-life performance delivered by Carey roofs—*asphalt, asbestos, or coal tar pitch type*—on all kinds of deck construction.

Your Carey Service Representative will be glad to consult with you on any roofing problem you may have. For ready reference use the Carey Built-Up Roofing Specification Catalog.

Carey

THE PHILIP CAREY MANUFACTURING CO.
LOCKLAND, CINCINNATI 15, OHIO

Careyduct • Industrial Insulations • Rock Wool Insulation • Asbestos Shingles and Siding • Asphalt Shingles and Roofings
Built-up Roofing • Roof Coatings and Cements • Waterproofing Materials • Asphalt Tile Flooring • Pipeline Felt
Expansion Joint • Asbestos Wallboard and Sheathing • Corrugated Asbestos Roofing and Siding • Miami-Carey Bathroom Cabinets and Accessories



LOW COST PROTECTION for your clients is assured by the long life and minimum maintenance service of Carey Roofs



NATIONWIDE ORGANIZATION of Carey-Approved Roofing Contractors and Carey Service Representatives assures dependable application service regardless of job location.

IN CANADA: THE PHILIP CAREY CO., LTD.
OFFICE AND FACTORY: LENNOXVILLE, P. Q.



"It's the JANITOR... he can't keep his eyes off the handsome new Venetian blinds"

Actually, no janitor would be so daffy. From our experience, they're all practical men who recognize value when they see it. Who know that the name "Columbia" means value in smooth performance, quality and easy upkeep.

Right now, supplies are limited, so your pres-

ent shades or Venetian blinds may have to do for a while. But if they are Columbia-made, you know you can depend on them for the duration. After that, there will again be that wide selection of good styles and sturdy quality which has made our name famous.

See Sweet's Architectural Catalogue for more information on Columbia products.

Columbia WINDOW SHADES
AND VENETIAN BLINDS

THE COLUMBIA MILLS INC. • 225 FIFTH AVENUE, NEW YORK 10, N. Y.

Get This FREE BOOKLET for your reference library

Tells how best to provide for using visual aids
in school, church, hospital, and other buildings

VISUAL aids are now important teaching tools in almost every educational program . . . are destined to be as commonly used as textbooks. Your clients will recognize the wisdom of providing for the most effective, convenient use of visual aids in your plans for building or remodeling.

Let this new, free handbook help you. It covers the requirements of both classroom and

auditorium . . . gives experienced counsel on seating arrangements; locations for projector, screen, loudspeaker, cables, and wall sockets; electrical specifications; illumination and acoustics; projection booths; service and storage rooms; other important considerations.

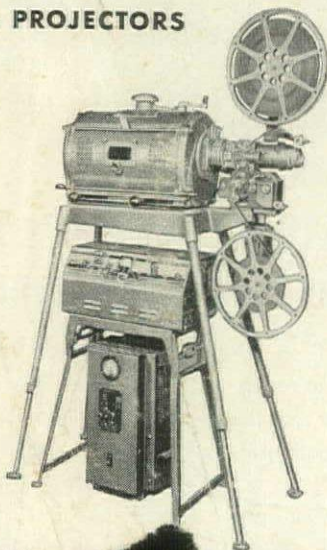
To get your copy, pin the coupon to your letterhead. No obligation!

BELL & HOWELL PROJECTORS



FILMOSOUND 16mm. sound-on-film projectors are overwhelmingly preferred by educators and other users. Built in a full range of capacities to meet every need for lastingly superior sound and picture reproduction.

FILMOARC 16mm. sound-on-film projector with powerful arc lamp illumination. Provides brilliant pictures and ample sound volume in large auditoriums.

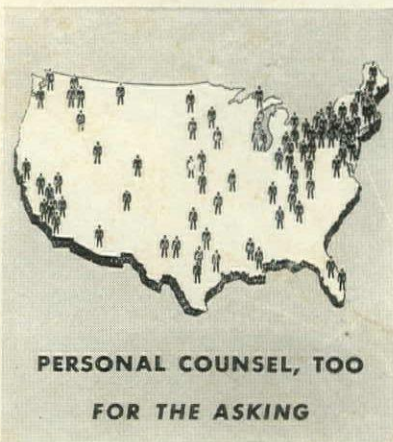


Products combining the sciences of OPTICS • mechanics

PRECISION-MADE BY



Bell & Howell



PERSONAL COUNSEL, TOO
FOR THE ASKING

Near you is a member of the B&H staff of Special Representatives. Thoroughly informed on visual education, he is able and willing to help you work out any related problem. Get acquainted with him now . . . he'll urge you to ask for his aid at any time. Send the coupon to learn his name.

Bell & Howell Company, Chicago; New York; Hollywood; Washington, D. C.; London. Established 1907.

★ ★ ★

Buy and Hold More War Bonds

BELL & HOWELL COMPANY
7139 McCormick Road, Chicago 45

Please send, without obligation () copy of Architects' Visual Equipment Handbook; () name of nearby B&H Special Representative; () Details about Filmosounds and Filmoarc.

Name

Address

City State AF 3-45

PARTIAL LIST OF DISTRIBUTORS

ALEXANDRE, JULES, INC.
Harrisburg, Pa.

APPLIANCE WHOLESALERS
Newark, N. J.

BROWN ROBERTS HDWE. &
SUPPLY CO.
Alexandria, La.

BURNS, JUDSON C.
Philadelphia, Pa.

BUTLER BROTHERS
Chicago, Illinois

CALIFORNIA HDWE. CO.
Los Angeles, Calif.

FONES BROTHERS HDWE. CO.
Little Rock, Ark.

GRANT, U. S. SUPPLY CO.
Los Angeles, Calif.

HI-SPEED TIRE & ACCESSORY
CO.
Toledo, Ohio

HOFFMAN HARDWARE CO.
Los Angeles, Calif.

HUBBARD, S. B. Co.
Jacksonville, Fla.

JOHNSON ELECTRIC SUPPLY CO.
Cincinnati, Ohio

KING HARDWARE COMPANY
Atlanta, Ga.

LEE HARDWARE CO. LTD.
Shreveport, La.

McCLUNG, C. M. & COMPANY,
INC.
Knoxville, Tenn.

MASBACK HARDWARE CO.
New York City, N. Y.

MURCHISON, J. W. CO.
Wilmington, N. C.

NASH HARDWARE CO.
Fort Worth, Texas

ORGILL BROTHERS & CO.
Memphis, Tenn.

PEELER HARDWARE CO.
Macon, Ga.

PRESCOTT & CO.
Boston, Mass.

RADIO TELEVISION & APPLI-
ANCE CO.
Seattle, Washington

ROBERTS SANFORD TAYLOR CO.
Sherman, Texas

SCOTT, CHARLES B. CO.
Scranton, Pa.

SELLER LOWENGART CO.
San Francisco, Calif.

SHARP HORSEY HARDWARE CO.
Atlanta, Ga.

STANDARD SALES CO.
Spokane, Wash.

STRATTON BALDWIN CO.
New Orleans, La.

TOWER, H. M. COMPANY
New Haven, Conn.

TOWNLEY METAL & HDWE. CO.
Kansas City, Mo.

TYRELL HDWE. CO.
Beaumont, Texas

VAN CAMP HDWE. & IRON CO.
Indianapolis, Ind.

VAN HOOGENHUYZE, WM. H.
CO.
San Antonio, Texas

VIRGINIA CAROLINA HDWE.
CO.
Richmond, Va.

WAHN, DISTRIBUTORS
Division of the George H.
Wahn Co., Boston, Mass.

WORTHINGTON, GEORGE
COMPANY
Cleveland, Ohio

WRIGHT & WILHELMY CO.
Omaha, Nebr.

ZION COOPERATIVE
MERCANTILE INSTITUTION
Salt Lake City, Utah.



VISIBLE electrical conveniences are often the factors that hasten clients' approval of new homes. And, to housewives, the kitchen range is often the major accessory!

In postwar L&H Ranges, you will find more *ultra* values and cooking conveniences than you expect. Electric ranges will have new automatic temperature and time controls to enable housewives to cook safely and conveniently while out of the kitchen or home. Gas ranges will be "tailor made" for the gas to be used.

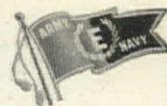
Colorful, streamlined beauty will distinguish *all* L&H Ranges. Innumerable new features to assure maximum cooking efficiency and savings in time and labor will be available.

For 70 years, Lindemann & Hoverson have manufactured kitchen ranges of unsurpassed quality. The postwar L&H models will be even more attractive and easy to use.

To be sure of ranges that best fit your plans — and assure client satisfaction — keep L&H in mind! Send us your name *now* — so that complete presentations of the advanced L&H ranges can be mailed to you when war needs have been met and civilian production resumed.

A. J. LINDEMANN & HOVERSON CO.

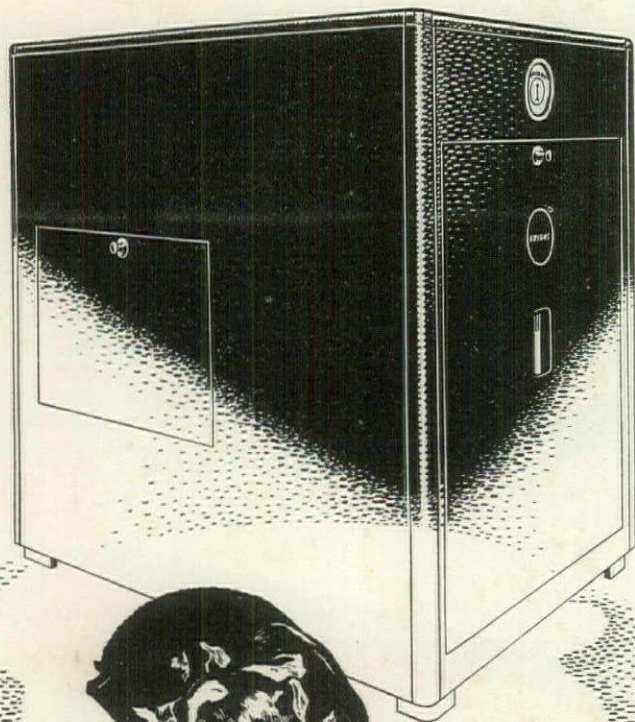
MILWAUKEE 7, WISCONSIN



Manufacturers of ELECTRIC RANGES • ELECTRIC WATER HEATERS • GAS RANGES • OIL STOVES • PORTABLE OVENS • OIL HEATERS • WICKS

AN AUTOMATIC END TO FIRE

WORSHIP



Think how long people have been tied to a fire pit. Centuries!

Only within recent years has a homeowner been able to touch a gadget on the wall, go away—for a month if he wants to—and know that come storm or blizzard, an automatic gas heating unit will hold the temperature in his home exactly where he wants it.

Bryant pioneered the compact, fully automatic gas boiler . . . since has followed with perfection of winter air conditioners, gravity furnaces and conversion burners. Bryant steadily brought the price down, with the conviction that even the smallest of homes is entitled to the convenience, comfort and cleanliness of modern, automatic heating . . . gas heating with fluid fuel, always on tap, never needing to be stored, shoveled or cleaned out afterwards.

"Let The Pup Be Furnace Man"—a suggestion to every homeowner in favor of more leisure from Bryant, one of the Dresser Industries.



THE PLUS OF DRESSER

Back of every Bryant product stands DRESSER INDUSTRIES—a central source of strength backing the independent managements within the Dresser Group. Dresser Industries furnishes them a Plus—a double backing that is a solid foundation for progress; a double O.K. upon their products that is extra assurance of satisfaction to their customers.

DRESSER Mfg. Division, Bradford, Pa.

THE BRYANT Heater Company, Cleveland, Ohio

CLARK Bros. Co., Inc., Olean, N. Y.

PACIFIC Pumps, Inc., Huntington Park, Calif.

INTERNATIONAL DERRICK & Equipment Co.,
Columbus and Marietta, Ohio; Beaumont, Texas;
Torrance, Calif.

ROOTS-CONNSVILLE Blower Corp.,
Connersville, Ind.

STACEY BROS. Gas Construction Co.,
Cincinnati, Ohio

BOVAIRD & SEYFANG Mfg. Company,
Bradford, Pa.

DRESSER Mfg. Co., Ltd.,
Toronto, Ont., Canada

VAN DER HORST Corp. of America,
Olean, N. Y. and Cleveland, Ohio

Storefront Designers counsel . . .



"GO ALL THE WAY WITH ALUMINUM"

Storefronts conceived as a community project raise the tone of the entire group. More buyers are attracted to the neighborhood, and everybody profits.

Alcoa Aluminum serves a double purpose in this work. It helps give the desired impression that here's a wide-awake community. Aluminum gives a feeling of richness coupled with stability.

At the same time, each store is able to achieve an individuality in keeping with its wares. Aluminum is a very versatile material.

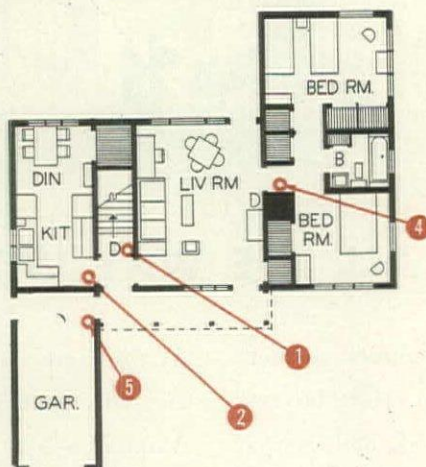
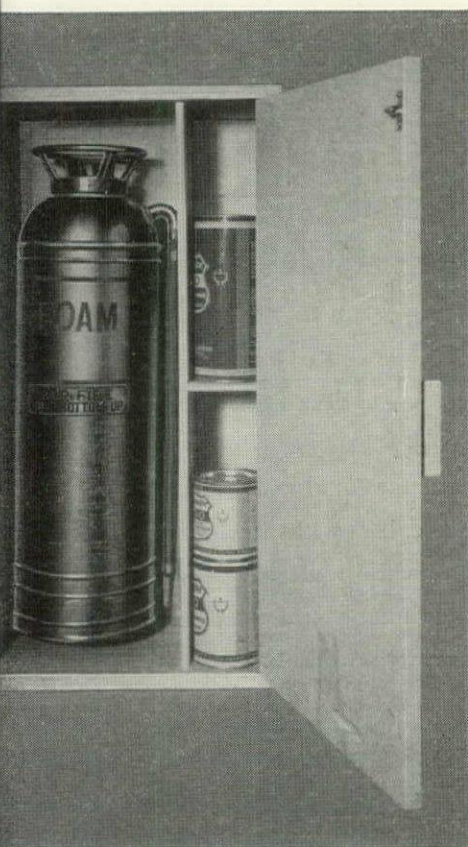
Experience with aluminum storefronts, windows, doors and decorative work has proved that it pays to modernize with Alcoa Aluminum. ALUMINUM COMPANY OF AMERICA, 2166 Gulf Building, Pittsburgh 19, Pennsylvania.

Alumilite-finished* Aluminum Storefront, Architects: Block & Hesse, New York (*process patented)



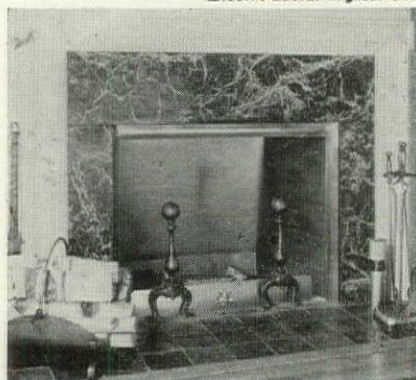
ALCOA FIRST IN ALUMINUM





WALL NICHES for housing fire extinguishers provide convenient access to the fire-fighting equipment in case of emergency. Built into the house, they conceal unsightly extinguisher behind a flush door.

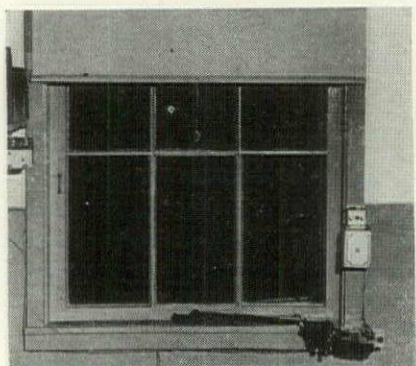
Electro Metallurgical Co.



STAINLESS STEEL used as a fireplace lining increases heat output, is easy to clean.

FIREPLACE LINING of 22 gauge, satin finished stainless steel, greatly increases heating efficiency and adds much to the decorative effect of this ordinary fireplace. Increased heat is obtained because of the steel's highly reflective surface which is also easy to clean, and has lasting brightness. The installation shown was "tailor-made" by an ingenious owner. Steel was cut, bent to shape, and sprung into position without the use of any fastenings. In addition to the lining, stainless steel curved plates are used for decoration.

THE LEAR ACTUATOR which has been used on aircraft to control landing gear, wing flaps, etc., will be available after the war for such tasks as opening and closing windows or doors. It could be used to operate simultaneously a number of windows in a house or a bank of windows in a factory. It is also suitable for regulating the flow of air or heat in connection with modified air conditioning. The actuator is a simple device with a tiny motor for its power unit. The motor is connected to the spot where its power is needed by a direct telescopic arm which expands or contracts as desired, or by an arm which moves arcwise where needed. The illus-



AUTOMATIC CLOSURE of windows or doors is possible with Lear Actuator.

FIRE EXTINGUISHER CABINETS or niches planned into original or remodeled home construction, offer quick, easy-to-reach fire protection in case of emergency. Research has shown that approximately 60 per cent of all fires, and 50 per cent of all deaths due to fire occur in dwellings. Steps to increase home fire protection could be aided to a great extent by architectural provision of extinguisher cabinets for housing fire-fighting devices. Designed into the building, they would also provide concealment for the unattractive extinguisher. As a guiding principle, the Safety Research Institute, Inc. recommends that extinguishers be located where they are accessible from at least two directions, but not adjacent to hazards such as stoves or heaters. Usually one extinguisher per floor in a compactly built house of less than six rooms per floor will constitute adequate protection. The architect can be guided in this matter by recommendations of the National Fire Protection Assn. Cabinets containing the devices should be large enough to eliminate difficulty in removing the extinguisher, and should be placed high enough to be out of reach of young children. The five generally approved locations for extinguishers in homes are 1) at the top of the basement stairs, 2) in the kitchen, near a door leading outside or to another room, and at a distance from the range, 3) in upstairs hallways, near the landing, 4) in a hall or doorway between wings or different sections of the home, and 5) in the garage, near a door.

tration shows the actuator crudely installed on the sill of a casement window during a test, but for postwar use the power unit could be concealed beneath the window sill, probably behind the radiator covering. Outside the window is a moisture switch. As rain strikes the switch the actuator is started and promptly shuts the window. A push-button switch on a table furnishes independent control when desired.

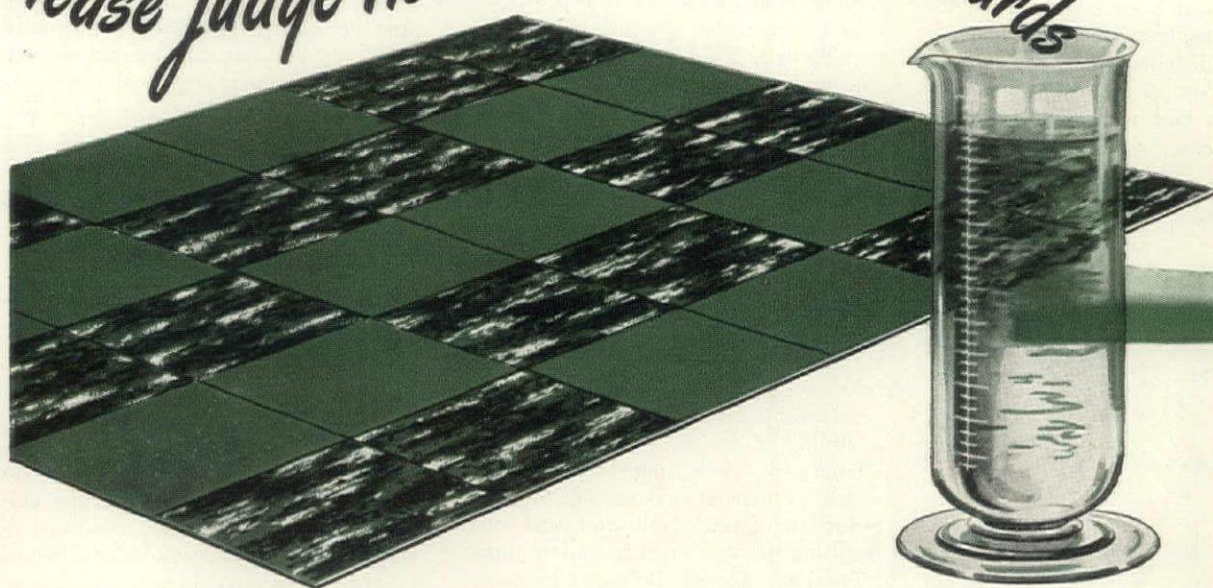
NEW PRODUCTS

WALL COVERING is durable, inexpensive. Name: Quaker Wall Covering.

Features: Quaker Wall Covering is a flexible, inexpensive wall covering fabricated on a lightweight, fresh-fiber felt backing, and having the same lasting, easy to clean enamel finish as Quaker floor covering. Available in two designs

(Continued on page 220)

Please judge floors by "TEST TUBE" standards



Some things you can see with the naked eye. You can *see* the sparkling beauty of Kentile floors. Kentile is laid tile by tile and you normally combine 15 tile sizes, each one available in 44 colors. Even within the limited range of wartime colors and sizes the possibilities are marvelous. You can also *see* that the colors go through to the back—can't rub off. You can *see* that alterations are always possible tile by tile without disturbing the rest of the floor. And you can *see* how Kentile wears by observing the floors in Rockefeller Center, the Pentagon Building or Woolworth, A & P and Walgreen stores. Their maintenance men will tell you, too, how quickly anyone can clean Kentile floors by simple mopping. But we say "Please ask about the *unseen* factors." We can list below only a few "test tube" standards for floors. To be really informed, write for the Kentile catalogue. It's sent without obligating you any way, shows the Kentile color range and some pattern possibilities, and tells you the standards that determine maximum durability, usability, beauty and economy. Write David E. Kennedy, Inc., 80 Second Ave., Brooklyn 15, N. Y.



Kentile is so alkali and moisture resistant it can be laid right on concrete in direct contact with earth and below grade.



Kentile eliminates grease problems because in areas where oils or fats fall you can use matching GREASEPROOF Kentile.



Kentile bears 1000 lb. rolling loads without denting or cracking.



Kentile edges are micromatic square so that the tiles are seal-set together—an absolutely firm, bonded floor covering.



Kentile colors are structurally component parts of the tiles through and through to the back—can't "wear off."



And . . . Kentile invites "price testing" too. You won't find any durable floor that costs less.



KENTILE
Asphalt Tile

Trade Mark Reg.

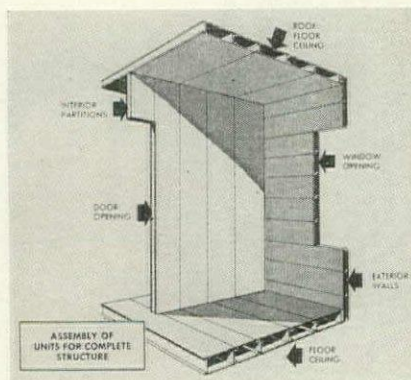


BUILDING REPORTER

(Continued from page 218)

and six colors, it is applicable for bathrooms, kitchens, laundries, and for commercial establishments such as restaurants, food shops, and other places requiring low cost walls that are safe from dirt, grease, smoke and water.

Manufacturer: Armstrong Cork Co., Lancaster, Pa.



STEEL BUILDING PANELS for postwar building.

Name: Fenestra Building Panels.

Features: This new line of building panels may be used to sheath the floors,

walls, partitions and roofs of virtually all types of buildings. The design is based on smooth, flat panels of sheet metal complete with channel-type ribs, assembled at the factory, thus providing both framing and covering material in a single unit. Used for floors, the panels will replace joists, rough flooring and also plaster or plaster board ceilings, since the smooth surface of the units is suitable as a finished ceiling. Some types are filled with insulating materials at the factory, and will provide sound-proofed walls, floors and roofs as well as effectively reducing heat loss. These insulated partition panels can be load-bearing in some types of structures. Installation is quick and easy and reduces labor costs. A variety of types and a considerable range of sizes permit great flexibility of design. Other advantages offered by these panels are lightweight permanent construction, rigidity, reduction of settlement problems with resulting plaster cracks, and a durability that reduces building maintenance costs for the life of the building.

Manufacturer: Detroit Steel Products Co., Bldg. Panels Div., 2250 East Grand Blvd., Detroit 11, Mich.

MORTAR CEMENT has characteristics desired by bricklayers, masons and masonry contractors.

Features: This new mortar cement has been developed to incorporate improved characteristics of plasticity, yield, water retention, durability and strength. It is described as a smooth buttery product, which spreads and trowels easily. In addition this mortar cement has low volume change, color properties acceptable to the trade, durability in accord with a quality cement and strength that meets all requirements. It complies with specifications of the Federal Government and the American Society for Testing Materials.

Manufacturer: Universal Atlas Cement Co., 135 E. 42nd St., New York, N. Y.

ADHESIVE cuts bonding and assembly time.

Name: Amberlite PR-245.

Features: This adhesive promises to lower plywood production cost by cutting bonding and assembly time in hardwood plywood. It assures durable bonds, moderate flow during cure, fast cure at usual bonding temperatures and ability to cure at temperatures as low as 160° F. The fast curing property substantially increases output of a hot press thus lowering the glue line cost. A thermosetting phenol formaldehyde, Amberlite PR-245 comes in dry powder

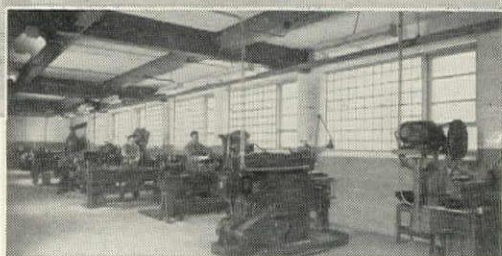
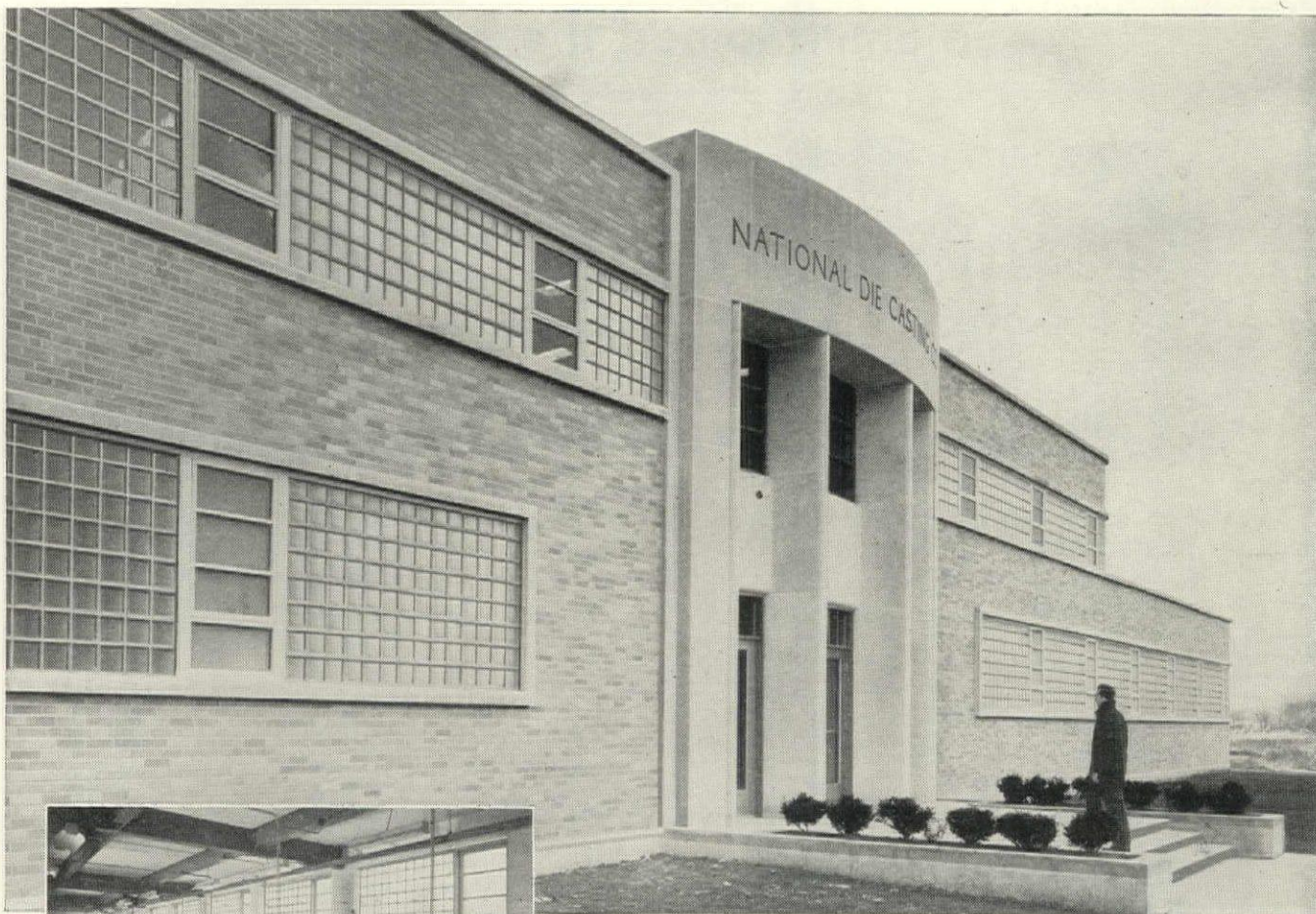
(Continued on page 226)

After the war What?

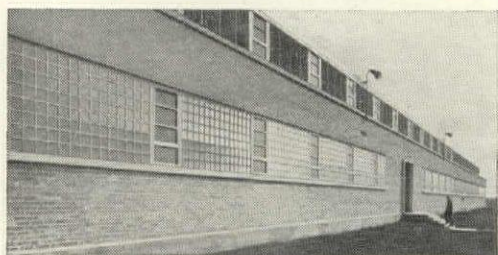
- Postwar building will keep in step with modern design—with new techniques of proven worth. And it will continue to make skilled use of those products of nature handed down by the wisdom of the ancients: wood, stone, brick, mortar and **good lime plaster.**
- **Scientifically processed** from rock quarried from the heart of the world's purest deposit of dolomitic limestone, the **original Ohio White Finishing Lime** and its famous twin, Hawk Spread will continue to assure walls and ceilings of enduring beauty.
- **Both brands are always fresh,** both make pure white easy working putty that spreads far.
- **For your protection** the **original Ohio White Finish** and its famous twin, Hawk Spread are always packed in bags distinctively marked with **Red Zig Zag Stripes.**

THE OHIO HYDRATE & SUPPLY CO.
Woodville, Ohio

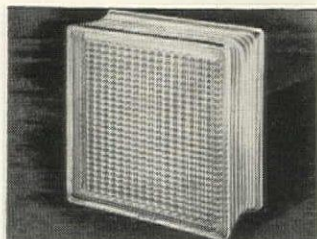
For literature describing our complete line of Ohio lime products, write to



National Die Casting Co., Chicago, Ill., Architect—
Bernard R. Klekamp, Chicago, Ill., Associate Architects
—Holzmann & Holzmann.



Panels of Insulux bring daylight in—keep prying eyes out. They help solve problems of temperature, humidity and dust control.



Insulux Glass Block is a functional building material — not merely a decoration. It is designed to do certain things that other building materials cannot do. Investigate!

Insulux is a beautiful building material *... Practical too!*

Many of the buildings of tomorrow are sure to display lustrous, light-flooded panels of Insulux Glass Block.

The reason? Insulux is a functional building material—not merely a decoration.

Panels of Insulux diffuse light far better than ordinary windows, and provide privacy along with light.

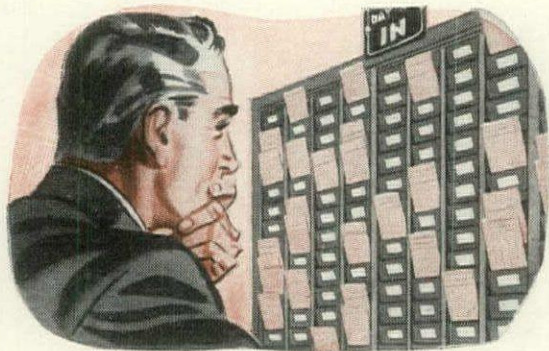
They reduce heat loss and condensation. They prevent the infiltration of dust and dirt. They reduce the cost of air conditioning.

Furthermore—panels of Insulux keep upkeep charges down. They are fireproof—non-combustible. They do not rot, rust or corrode. They are easy to clean—and to keep clean. And—they never need painting.

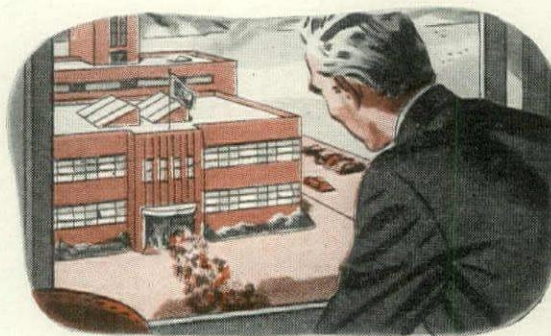
OWENS - ILLINOIS
INSULUX
GLASS BLOCK

For technical data, specifications and installation details, see our section in Sweet's Architectural Catalog, or write: Insulux Products Division, Dept. B-18, Owens-Illinois Glass Company, Toledo 1, Ohio.

So Smith joined the parade



- 1 Smith hired many well-trained workers,
But they never seemed to stay.
No one could have called them shirkers —
Jobs were fine, so was the pay.



- 2 While at Johnson Brothers' factory
Jobs were hard to get — and prized.
Workers found things satisfactory;
Johnsons' had been modernized.



- 3 Did Smith take a long shellacking
'Ere he copied Brothers J?
No, he added what was lacking
And his air's *correct* today.

It pays to be sure that your clients have correct air conditioning . . . that temperature, humidity, circulation and ventilation are scientifically blended for the comfort of customers and for personnel efficiency . . . that air cleanliness is complete for protection of merchandise and furnishings.

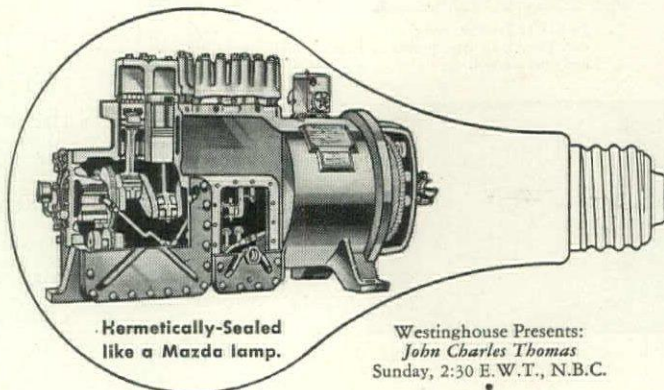
Be sure your clients get it. Call for Westinghouse application assistance early in the planning of new or modernized commercial or industrial buildings. . . . Phone your nearest Westinghouse office or write Westinghouse, 150 Pacific Avenue, Jersey City 4, N.J.

THE SERVICE-PROVED HERMETICALLY-SEALED COMPRESSOR

These Westinghouse economy-satisfaction advantages have been proved by years of service in thousands of installations:—

No Shaft Seals. During wartime refrigerant shortages, few Westinghouse systems were ever "down." Why? Because seal leaks, cause of 90% of all system failures, are eliminated.

Few Parts to Wear . . . Direct-Drive Efficiency
. . . Space-Saving Refrigerant-Cooled Motor.



Westinghouse **CORRECT** **Air Conditioning**
PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

residence roof in 1945



This efficient and livable roof plan by Charles H. Warner, Jr., in charge of instruction in architectural design at Columbia

School of Architecture, provides the same sort of flexibility and fluidity that is being favored for modern interiors.

Instead of a fixed surfacing, Mr. Warner has suggested flexible mats which can be laid over the roof, and moved around or rolled up and stored away when not in use. Similarly constructed screens are also movable and can be set to give wind protection or privacy. These and other roof accessories—decorative tubs for shrubs, wading pool, sand box, etc.—are all specially

mounted so that they can be used without damaging the roof. A novel solarium with revolving sides and top serves as storage space in winter weather.

Through these devices the owner is able to expand or contract the living area at will.

* * *

Barrett Specification Roofs vastly extend the opportunities for architects and builders to make greater use of roofs after the war. Already Barrett Roofs are serving in many unusual ways—for gardens high above the street at Rockefeller Center, for outdoor recreation spaces and for parking accommodations. This trend toward greater utilization of wasted roof areas seems bound to grow. If you are interested in any project involving new uses for roofs, why not discuss your problems with us.

THE BARRETT DIVISION

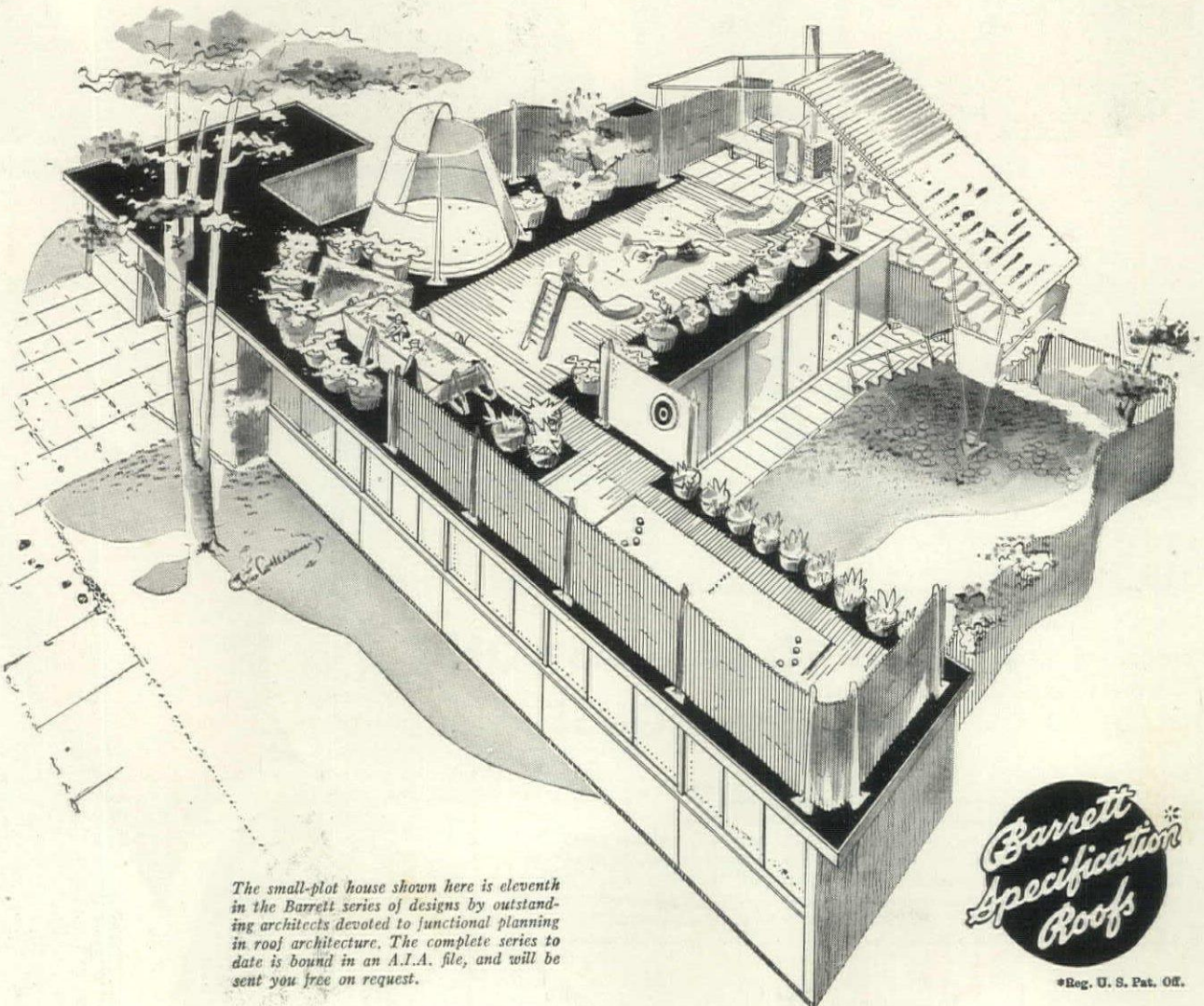
ALLIED CHEMICAL & DYE CORPORATION

40 RECTOR STREET, NEW YORK 6, N. Y.

2800 So. Sacramento Avenue
Chicago 23, Ill.

Birmingham
Alabama

In Canada: The Barrett Company, Ltd.,
5551 St. Hubert Street, Montreal, Que.



The small-plot house shown here is eleventh in the Barrett series of designs by outstanding architects devoted to functional planning in roof architecture. The complete series to date is bound in an A.I.A. file, and will be sent you free on request.

*Barrett
Specification
Roofs*

*Reg. U. S. Pat. Off.

Post pages.

NING POST

A ROOF TO LAST AS LONG AS THE HOUSE

In the kitchen of his Colonial home, a young engineer, named Robert, was testing a principle of the internal combustion engine.

His experiment, designed to the kitchen sink, was a piece of aircraft gas pipe, capped with a cylinder. The cylinder, a hand-wheel from a bicycle, came from the back of the house. It was connected to the

the rest of the engine with a... had served its purpose. The idea was proved.

But he did not stop to applaud himself. "The man who thinks he has done something," he said, "hasn't even started." He noted was already starting with thoughts of a new and better engine for transportation use.

Just ahead for the promising which was to prove

to some extent.

Today, at... will give... are done...

. plant the seed...
that grows into homes like these



***People purchase products
that are pictured in the***

SATURDAY EVENING
POST

BUILDING REPORTER

(Continued from page 220)

form, readily soluble in water, alcohol or mixtures of the two. For bonding either plywood or laminated constructions, the resin is used with catalyst Q-108 to accelerate the rate of cure. Permissible limits in assembly time for various applications range from a minimum closed assembly period of 30 minutes to a maximum open interval of several days, thus permitting flexible spreading and pressing schedules. The adhesive may be used with veneer moisture contents ranging from 4 to 10 per

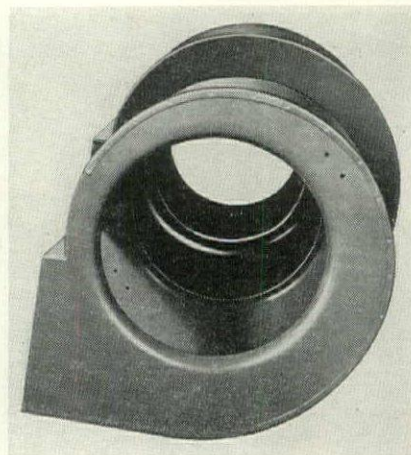
cent with uniform success. It is also adapted to the laminating of timbers where higher bonding temperatures are unobtainable and where durability is important.

Manufacturer: Resinous Products & Chemical Co., 222 N. Washington Sq., Philadelphia, Pa.

BLOWERS for furnaces and air conditioning units reduced in size.

Name: Series "V" Viking Blowers.

Features: The desirable characteristic of compactness has been incorporated with other features in this new series of blowers for furnaces and air condition-



ing units. The over-all size of these new blowers has been reduced from 10 to 15 per cent without impairing their operating efficiency. Designed to operate against high static pressures encountered in air conditioning units, the blowers perform with greater quietness, lower power consumption, and slower speed than former models. These advantages plus the small size of the blower casing make it suitable for new air conditioning unit design. Photograph shows the comparative housing sizes of old and new models.

Manufacturer: Viking Air Conditioning Corp., 5600 Walworth Ave., Cleveland, Ohio.

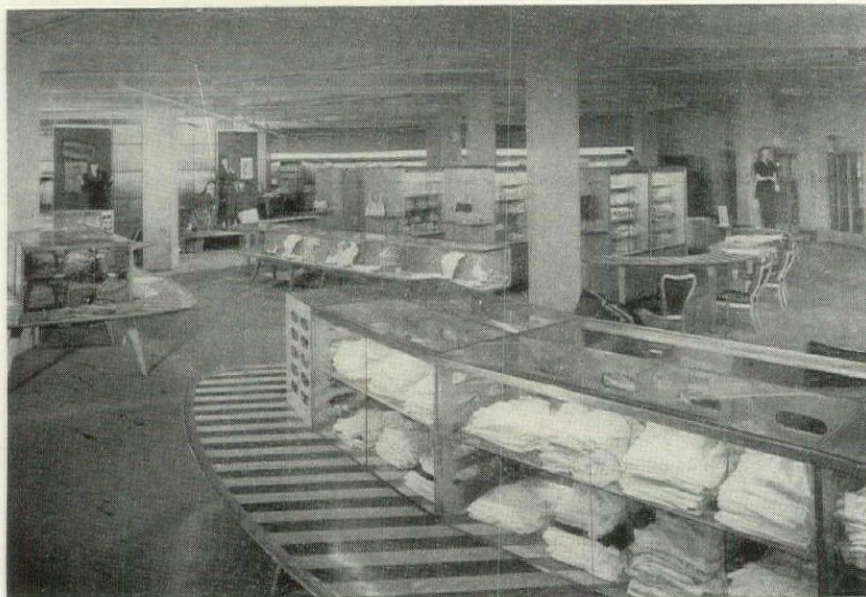


GROUND RESISTANCE TESTING without cranking.

Name: Model 255 Vibroground.

Features: Model 255 Vibroground provides a greater range of low and high ground electrical resistance testing. It gives accurate, speedy readings for all ground conditions but is particularly adapted to arid or wet regions or where extremes of dryness or moisture are found. Model 255 has four ranges 0-3, 0-30, 0-300, 0-3000 ohms, and comes complete with self-contained power supply which eliminates hand cranking. With its direct readings no calculations are necessary. Reverse readings are unnecessary and polarization errors cannot occur. The design also excludes

(Continued on page 232)



FREE STYLING

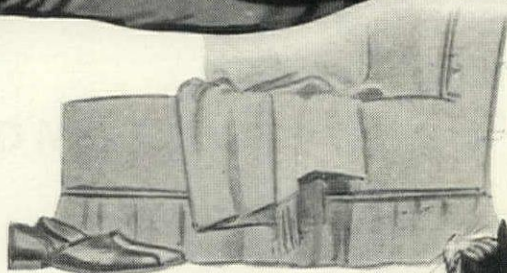
Today's very definite trend toward "free styling" of store layout is uniquely met with Grand Rapids' flexible line of equipment which adapts itself to any plan. Incidentally, its slenderized lines and lack of ornamentation permit it to fit unobtrusively into any architectural design created to provide individual expression for the client.



GRAND RAPIDS STORE EQUIPMENT CO.

Main Offices and Factories: Grand Rapids, Michigan; Portland, Oregon; and Los Angeles, California
Offices and Showrooms: New York, Chicago, Pittsburgh, Memphis

REPRESENTATIVES IN PRINCIPAL CITIES . . . CONSULT PHONE BOOK



NOTHING TO SLEEP ON...



...IS SO RESTFUL AS FOAMEX*



The above cross section shows how **Foamex**, Firestone's latex foam, modernizes mattresses (and furniture upholstery). One sag-proof, molded material provides both springyness and softness.

Foamex not only makes mattress construction wonderfully simple. It *feels* simply wonderful.

It floats you to super-relaxation on millions of super-buoyant air-and-latex cells.

All those cells breathe. That's why *Foamex* mattresses and furniture cushioning are better

ventilated, dust-proof, damp-proof, odor-proof.

And all those "floating comfort" cells are welded permanently together. No loose padding to lump, no inside parts to sag. No wonder *Foamex* lasts practically forever.

The cushioning-power of *Foamex* is so high, all we can make goes to shield fighting men against concussion.

But remember: After the war, *Foamex* will help in your fight for better living. *TRADEMARK



ANOTHER CONTRIBUTION TO A BETTER WAY OF LIFE by

Firestone

LISTEN TO THE VOICE OF FIRESTONE MONDAY EVENINGS OVER NBC

NOTHING TO SIT ON IS SO RESTFUL AS FOAMEX

Lighting menu

FOR TOMORROW'S RESTAURANT



GENERAL ELECTRIC brings you another in its series of lighting perspectives for tomorrow . . . presents some inviting suggestions for lighting a restaurant by designer Donald Deskey, New York.

Says Mr. Deskey:

"A restaurant may provide the best of food and service but unless it also provides a pleasing atmosphere, it falls short of the mark. In producing such an atmosphere *an essential ingredient is light* . . . conceived in terms of function and dramatic quality.

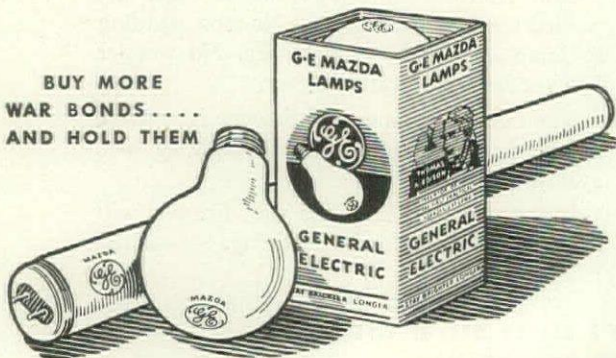
"So the items in our lighting menu for a postwar restaurant include these:

1. a street facade which emphasizes a flooded surface of light, with a sign of small letters.
2. general illumination of relatively low intensity . . . reflected rather than direct.
3. 'local light' for diners, with the intensity varied for table groupings and hand-controlled at individual tables.
4. no unshielded light sources; and opaque instead of translucent shields should be used where low ceilings or restricted space prevail.
5. color is as important as the color of surface materials. Seasonal changes make desirable a range of atmosphere . . . but always with the lighting flattering to the individual."



A new booklet "Lighting Menu for Tomorrow's Restaurant" provides additional details of Mr. Deskey's ideas for postwar restaurants . . . ideas which can be applied to small space or large. Write General Electric, Dept. 166-AF3, Nela Park, Cleveland 12, Ohio.

BUY MORE
WAR BONDS . . .
AND HOLD THEM



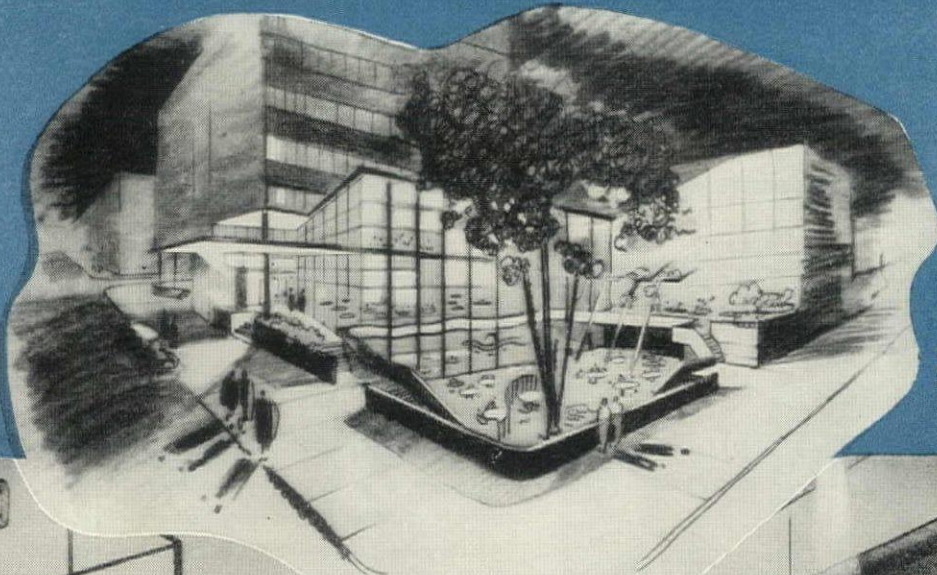
THE CONSTANT AIM OF G-E LAMP RESEARCH

IS TO MAKE G-E LAMPS *'Stay Brighter Longer'*

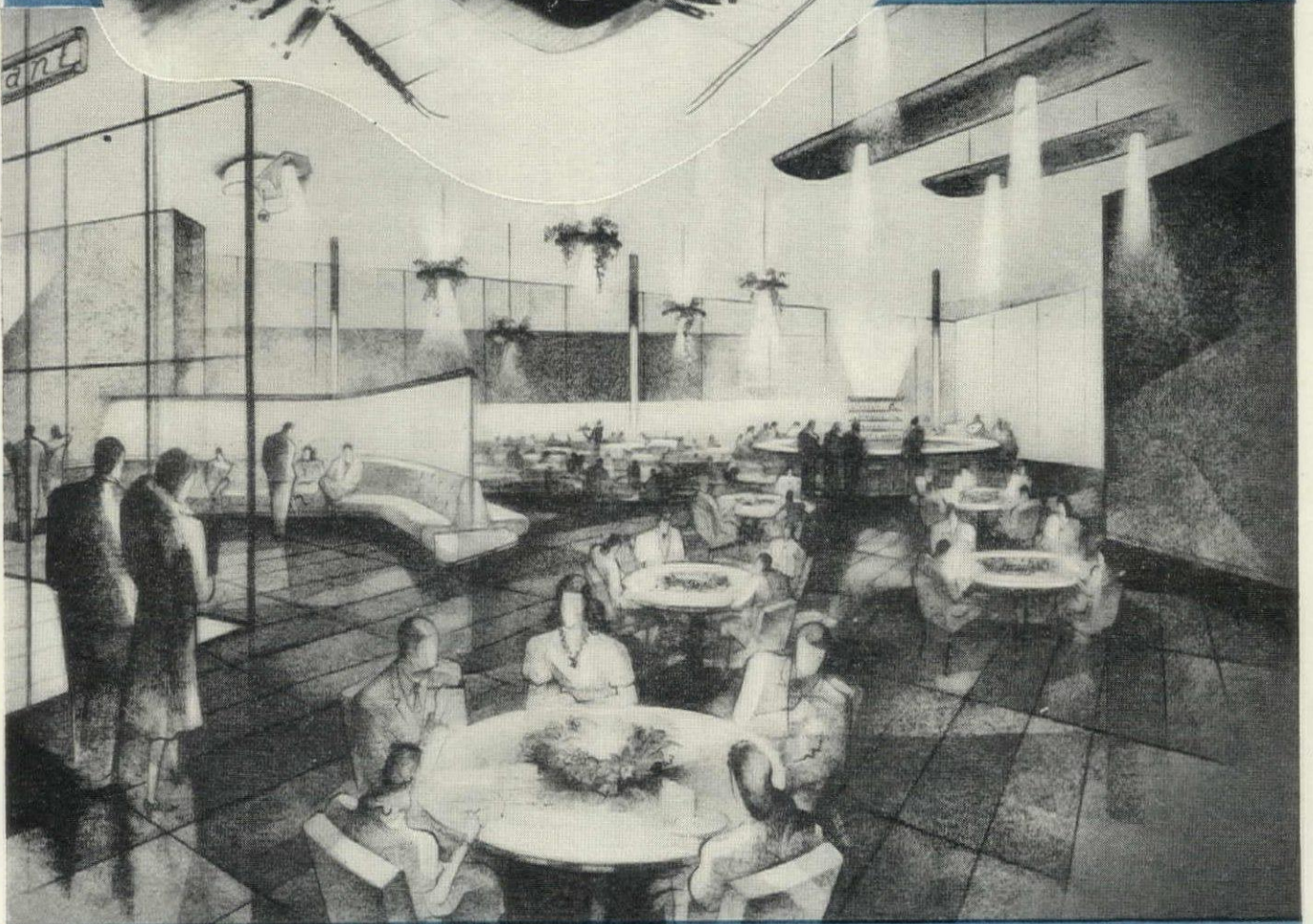
G-E MAZDA LAMPS

GENERAL  ELECTRIC

Hear the G-E radio programs: "The G-E All-Girl Orchestra", Sunday 10:00 p. m. EWT, NBC; "The World Today" news, Monday through Friday 6:45 p. m. EWT, CBS; "The G-E Houseparty," Monday through Friday 4:00 p. m. EWT, CBS.



No investigation has been made by General Electric Company regarding the patent situation on the design or construction suggestions shown in this advertisement.



HANGING FLOWER BASKET

This might utilize several of the new circular fluorescents (circline lamps) to provide soft light overhead and back light for the flowers. Concealed in the center is a filament lamp to give soft diffused down-light when desired.

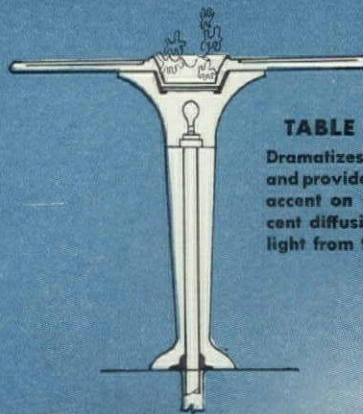
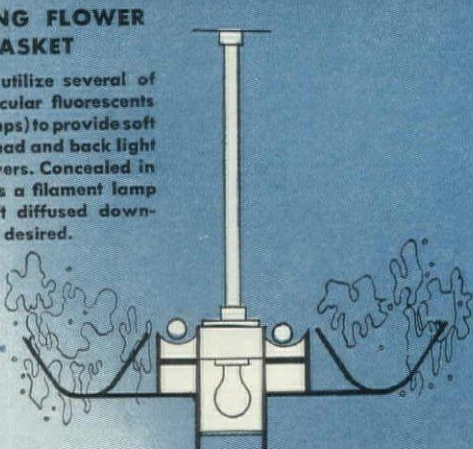
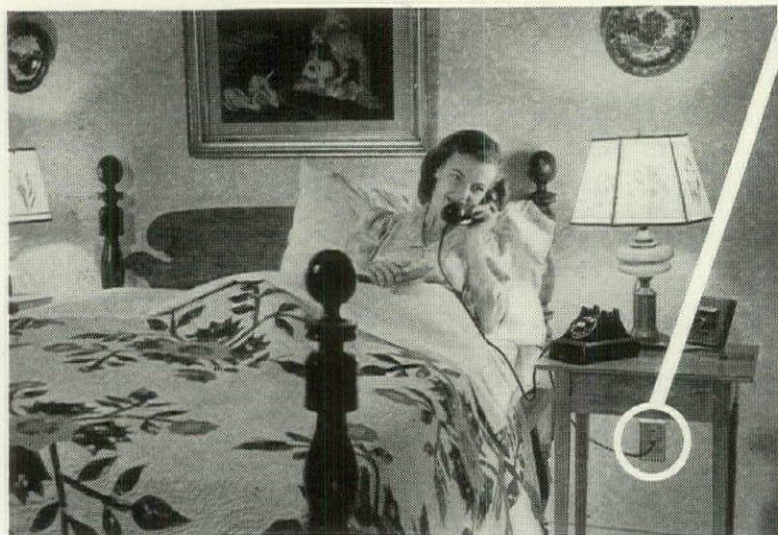


TABLE CENTER UNIT

Dramatizes flower arrangements and provides an attractive lighted accent on the table. A translucent diffusing shield softens the light from this built-in unit.

Planned in advance means built in for good



Built-in telephone facilities in tomorrow's homes should be planned right from the start. After construction it may be impossible to install conduit in the walls—to carry concealed wires to convenient outlets.

Today, due to wartime conditions, many people must wait for telephone service. But the day will come when telephones will again be available for all. Prepare for it now:

- ① *Help clients select convenient locations for telephone outlets and mark them on your drawings. Your telephone company will be glad to assist you.*
- ② *Specify conduit to be built in during construction.*

BELL TELEPHONE SYSTEM



A CASTLE? NO!

... APARTMENTS

... and the tenants are grateful for PAYNEHEAT

Unique in exterior design, suggesting a magnificent home, this Southern California apartment building is also noteworthy for its equipment. The PAYNE gas-fired heating installation assures a lifetime of dependable, healthful, economical warmth. ★ Ideal for apartment buildings is the time-tried PAYNE "Unit" system, now progressively improved as ...

Payne ZONE-CONDITIONING

Circulated winter warmth ... cooling summer ventilation if desired ... controlled by zones (individual apartments, groups of rooms or single rooms). Write for new ZONE-CONDITIONING booklet.

PAYNEHEAT

NEARLY 30 YEARS OF LEADERSHIP

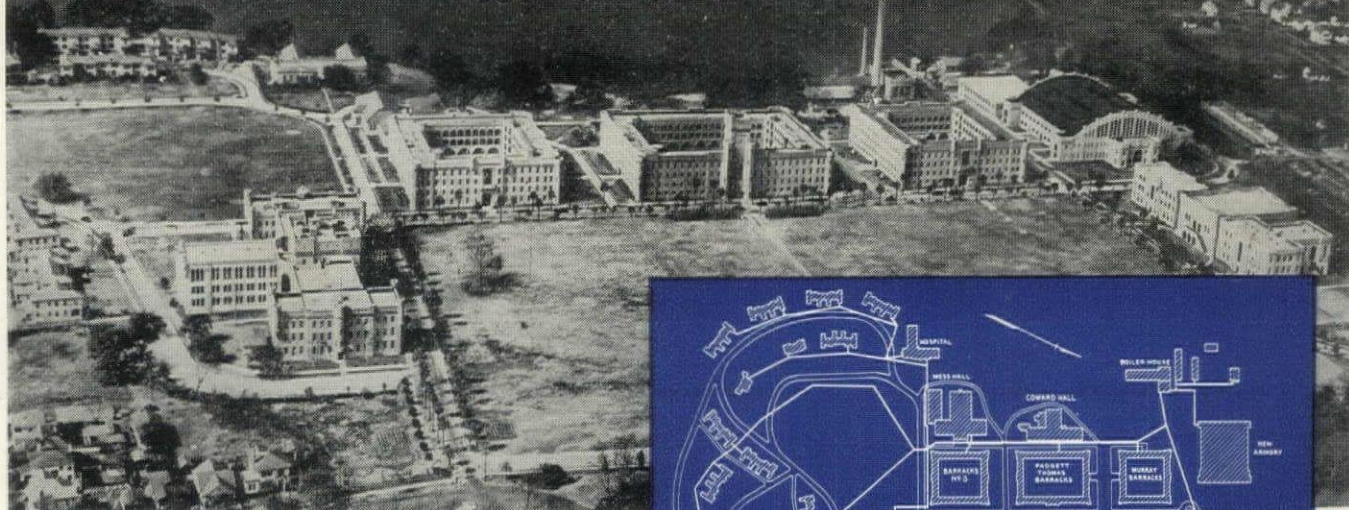


CHATEAU COLLINE APARTMENTS, LOS ANGELES
Architect, P. P. LEWIS • Builder, A. W. ZIMMERLE

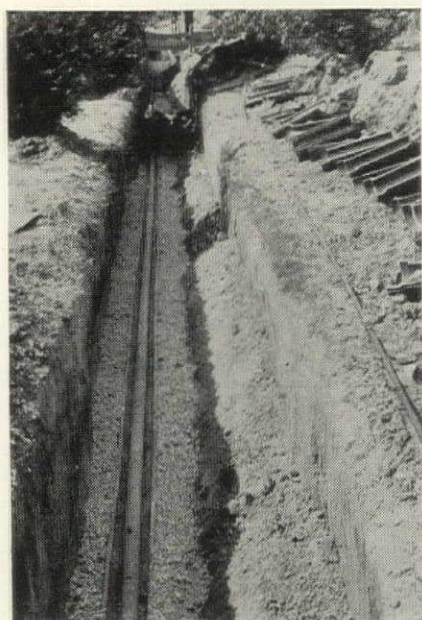
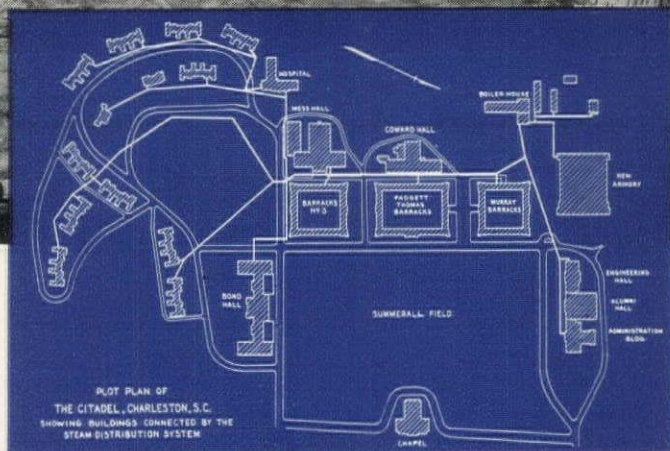
Payne FURNACE & SUPPLY CO., INC., BEVERLY HILLS, CALIFORNIA

Central Heating at the Citadel

SUGGESTS AN IDEAL POSTWAR MODERNIZATION PROJECT for INSTITUTIONS



**RIC-WIL CONDUIT INSULATES
AND PROTECTS STEAM PIPING
to buildings on 78 ACRE Campus**



*Steam Pipe Line being installed in
Ric-wil Tile Conduit at the Citadel.*

The Citadel, The Military College of South Carolina founded in 1842, was one of the pioneer institutions to incorporate the advantages of central heating—installing such a system in 1904. Greatly enlarged, this system is still giving satisfactory service.

In 1920, planners of the new Citadel, looking far into the future, provided central heating for the new home of the college as a matter of course. New additions in 1926-27, 1936-37 and subsequently have made necessary expansion of the central plant and distribution lines. Today every permanent building on the campus except the chapel, is heated from the central plant.

Any Institution Can Enjoy These Advantages of Central Heating:

- Savings of 15% or better in overall fuel consumption.
- Elimination of separate boiler tending for each building unit.
- Elimination of smoke and soot which destroy original beauty of buildings.
- Increase of available space in building basements.
- Elimination of coal delivery and ash removal from buildings.
- Uniform, clean heat provided quickly, whenever needed.
- Central unfailing source of hot water.

Engineers and architects with present or post-war projects on their boards, will find the new Ric-wil Catalog No. 44 a valuable source of information on efficient Central Heat Distribution for institutions, industrial or commercial building groups, housing projects and municipalities.

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

(Continued from page 226)

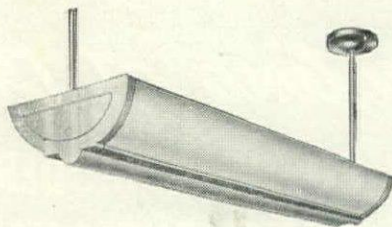
strays from all sources. The portable welded metal case is water tight, thus assuring accurate readings even on sodden ground.

Manufacturer: Associated Research, Inc., 231 South Green St., Chicago 7, Ill.

LUMINOUS-INDIRECT LIGHTING FIXTURE for schools, offices, etc.

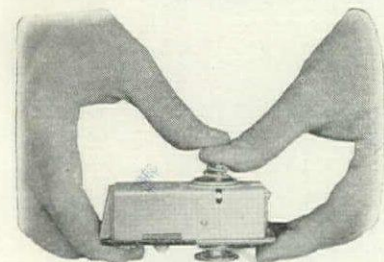
Name: Cadet.

Features: The Cadet was designed to provide superior visual conditions for



critical eye tasks in offices, drafting rooms, schools, etc., and has recently been installed in study rooms of the U. S. Military Academy at West Point. It is a luminous-indirect luminaire suspended 24 in. or 30 in. beneath the ceil-

UNUSUALLY STURDY ★ SWITCH CONSTRUCTION

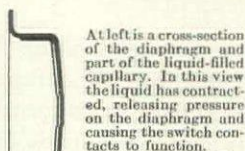


8 EXCLUSIVE FEATURES OF WHITE-RODGERS HYDRAULIC-ACTION TEMPERATURE CONTROLS

1. May be mounted at any angle or position, above, below or on level with control point.
2. Hydraulic-Action principle incorporating solid-liquid filled bulb and capillary provides expansion force comparable to that of a metal bar.
3. Diaphragm motion uniform per degree of temperature change.
- ★4. Power of solid-liquid charge permits unusually sturdy switch construction resulting in positive contact closure.
5. Heavier, longer-wearing parts are possible because of unlimited power.
6. Dials are evenly and accurately calibrated over their entire range because of straight-line expansion.
7. Controls with remote bulb and capillary are not sensitive to change in room temperature. Accuracy of control is not affected by temperature changes in surrounding area.
8. Not affected by atmospheric pressure. Works accurately at sea level or in the stratosphere without compensation or adjustment.

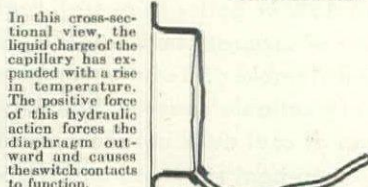


LIMITLESS POWER OF HYDRAULIC-ACTION ASSURES POSITIVE CONTACT



CONTRACTED

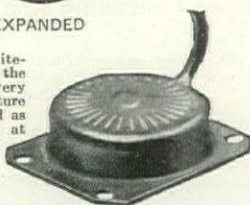
At left is a cross-section of the diaphragm and part of the liquid-filled capillary. In this view the liquid has contracted, releasing pressure on the diaphragm and causing the switch contacts to function.



EXPANDED

In this cross-sectional view, the liquid charge of the capillary has expanded with a rise in temperature. The positive force of this hydraulic action forces the diaphragm outward and causes the switch contacts to function.

Illustration of the White-Rodgers diaphragm body, the actuating element of every White-Rodgers temperature control. It is so designed as to exert FULL pressure at the point of contact with the switch mechanism.



WHITE-RODGERS ELECTRIC CO.

1292C CASS AVENUE

ST. LOUIS 6, MISSOURI



Controls for Refrigeration • Heating • Air-Conditioning

ing in individual or end-to-end lighting arrangements. Translucent cream-white deflectors deliver 90 per cent of the light upwards and 10 per cent down, best results being obtained with an off-white ceiling. The over-all efficiency of light output obtained with the Cadet is high for luminaires of this type. It is available now with suitable priority ratings in 48 in., 60 in., and 96 in. lengths, for 40 w., 100 w. F lamps, respectively.

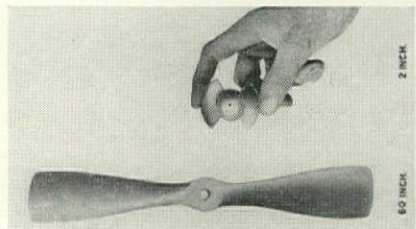
Manufacturer: The Edwin F. Guth Co., 2621 Washington Ave., St. Louis 3, Mo.



OPEN REFRIGERATOR for display of frozen food in clear view.

Features: Frozen foods can be displayed within clear view and easy reach of customers by means of this self-service display refrigerator. A glass front on the case allows full view of the merchandise, and any desired product can be reached without the nuisance of having to slide or lift doors. Mirrors on the case add sales appeal. Designed to eliminate reaching down into the refrigerator for merchandise, the new open self-service display case gives the same refrigeration service as conventional closed cases. They will be available as soon as restrictions are lifted by the WPB.

Manufacturer: Hussmann Refrigeration, Inc., 2401 N. Leffingwell St., St. Louis 6, Mo.



AXIAL FLOW FANS in new sizes.

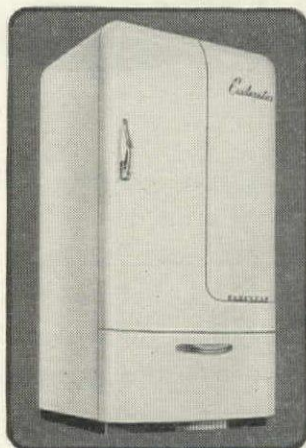
Features: These unique high efficiency axial flow fans, 60 in. and 2 in., are believed to be the largest low pressure and the smallest high pressure propellers engineered and produced on the West Coast. The midget 2 in. propeller has been developed for a complete fan unit.

(Continued on page 238)

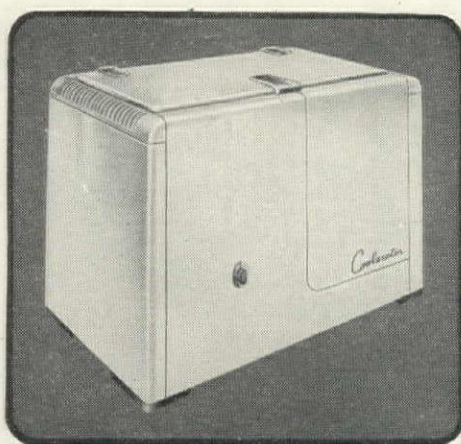


Only COOLERATOR offers you ALL 3 KINDS of REFRIGERATION!

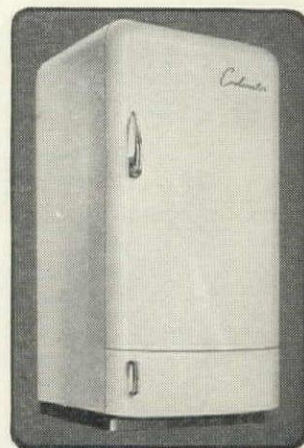
For Every Type and Price Range of Home Building, Coolerator Has the Refrigeration to Best Complete Your Plans! For Full Details, Write THE COOLERATOR COMPANY, Duluth 1, Minn.



COOLERATOR ELECTRIC



HOME AND FARM FREEZERS



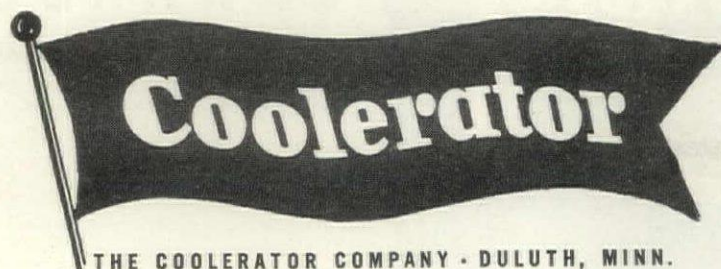
ICE REFRIGERATOR

PRICE RANGE OF HOMES	NEW ELECTRIC COOLERATOR 7½ cu. ft. and 9 cu. ft.				FREEZERS 6½ and 15 cu. ft.				COOLERATOR ICE REFRIGERATOR 5¼ and 6½ cu. ft.			
		Width	Depth	Hgt.		Width	Depth	Hgt.		Width	Depth	Hgt.
over \$15,000.00	9½ cu. ft.	33½"	25¼"	66½"	15 cu. ft. 6½ cu. ft.	30¾" 28¾"	72" 47"	38" 37¾"	6½ cu. ft.	31½"	27¼"	59½"
\$ 8,000.00 to \$15,000.00	9½ cu. ft.	33½"	25¼"	66½"	15 cu. ft. 6½ cu. ft.	30¾" 28¾"	72" 47"	38" 37¾"	6½ cu. ft.	31½"	27¼"	59½"
\$ 5,000.00 to \$ 8,000.00	9½ cu. ft. 7½ cu. ft.	33½" 31½"	25¼" 25¼"	66½" 61½"	15 cu. ft. 6½ cu. ft.	30¾" 28¾"	72" 47"	38" 37¾"	6½ cu. ft. 5¼ cu. ft.	31½" 28"	27¼" 25"	59½" 55¾"
below \$ 5,000.00	7½ cu. ft.	31½"	25¼"	61½"	6½ cu. ft.	28¾"	47"	37¾"	6½ cu. ft. 5¼ cu. ft.	31½" 28"	27¼" 25"	59½" 55¾"

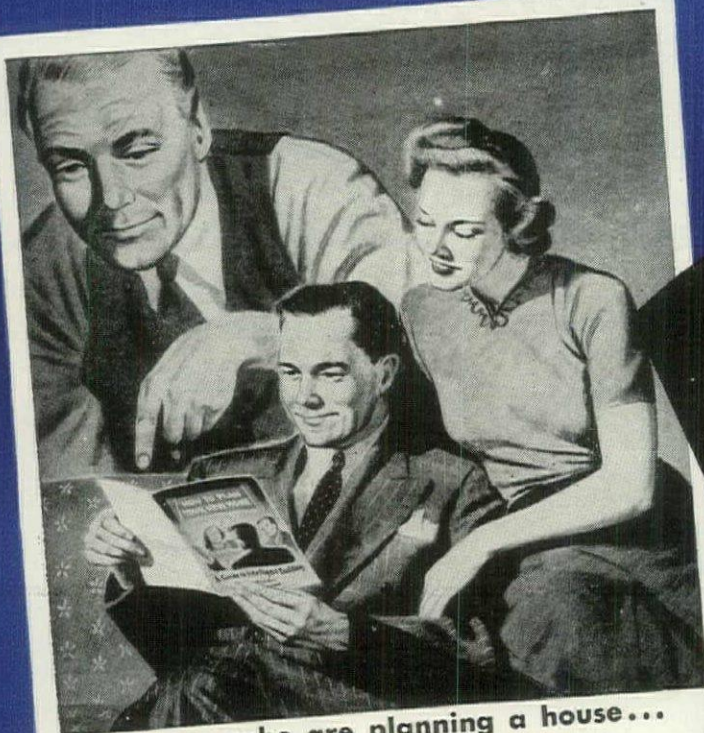
Under this one name "Coolerator" you can provide practically any kind of a home refrigerator . . . from the largest capacity Freezers and Electric Refrigerators to the most economical Ice Conditioned Refrigerators. This is a set-up unique in the refrigerator business . . . backed by a company with a proven record of fine styling and

durable construction . . . with ten years of national advertising . . . nearly a million satisfied customers. Ready for early production of genuine postwar models, not makeovers of former styles.

Before you design or build postwar homes, remember Coolerator's unique, complete home refrigerator lineup.



**America's Largest
Sole Specialists
in Home Refrigeration**



To you, who are planning a house...

Here are the answers!

● Full of questions about that home you're planning? Here's a helpful little book—free, of course—that tells dozens of ways to avoid headaches and costly mistakes, and helps you plan practically.

Naturally, you'll want the expert advice of an architect on the building of your home, but even he must have help from you. You'll find that "How To Plan Your New Home" simplifies building problems, prepares you for down-to-earth planning.



With constantly changing postwar conditions, methods and materials, the services of an architect will be a building "must" for satisfactory results. Write for a copy of this invaluable booklet now—and get the important answers about that future dream home of yours!

Architects endorse this book... Get yours free!

Edwards and Company, Box 390, Norwalk, Conn.

Please send a free copy of the booklet, "How To Plan Your New Home".

Name _____

Street _____

State _____

City _____

(Save Postage—Paste coupon on Penny Postcard)

Plan your house now!

START RIGHT—

WITH AN

ARCHITECT.

EDWARDS

SINCE 1897

ELECTRICAL SIGNALING

Bells • Chimes • Telephones • Alarms
for Homes, Offices, Schools, Hospitals

THIS BOOK IS ABOUT YOU!

● Architects, take a bow! You're in the "best seller" class. To date, over 75,000 prospective home builders have requested free copies of this book written for you... about you... prepared by Edwards and Co. in cooperation with the American Institute of Architects.

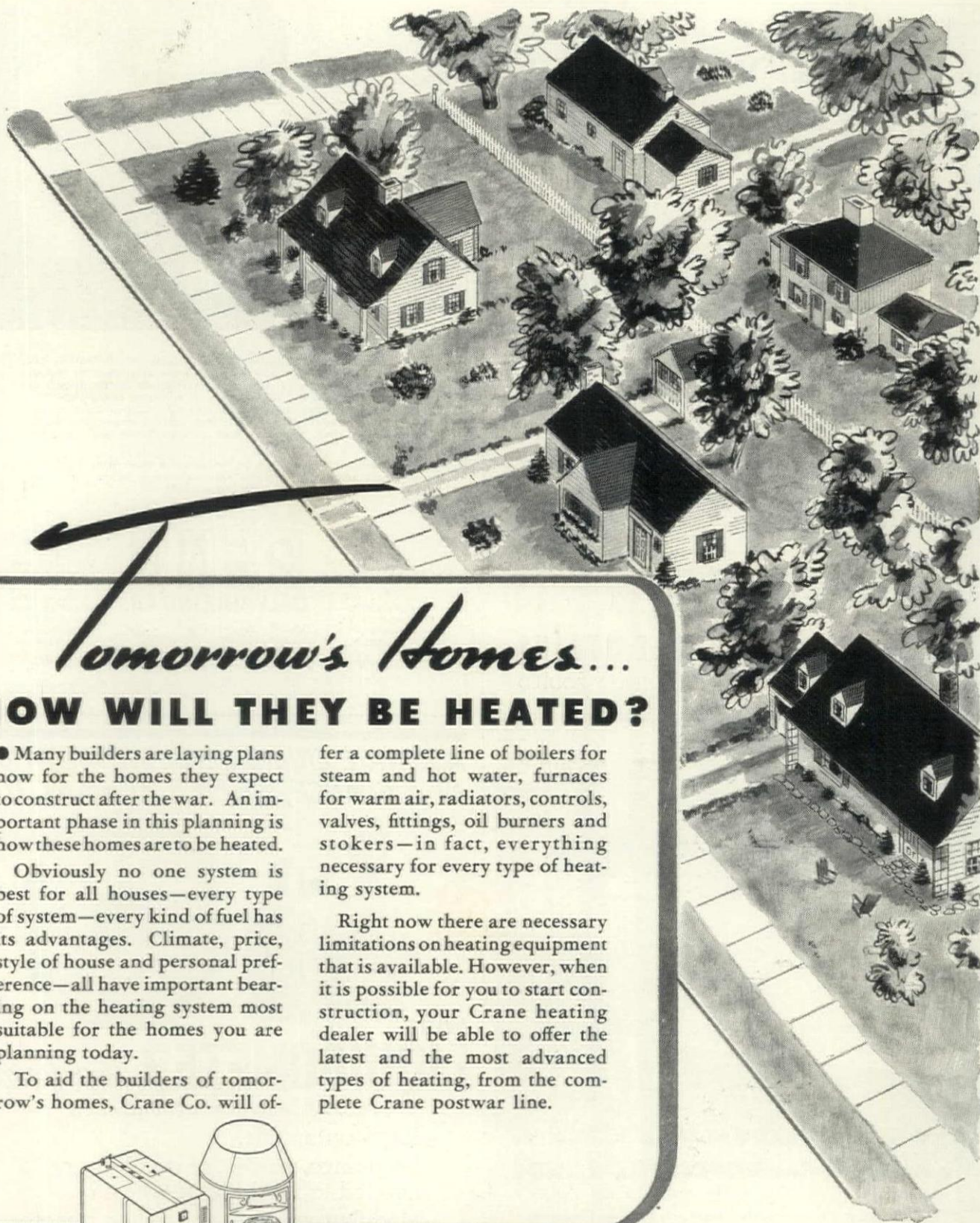
This latest advertisement in *The American Home* is one of a series addressed to the home planning public... emphasizing the need of the architect's services and experience... and offering detailed information through the booklet.

Limited quantities of this booklet are available to architects—imprinted, if desired, with the architect's name and address. Write for a sample copy today. You'll find it helpful in selling your prospective clients on *yourself*!

EDWARDS

AND COMPANY, NORWALK, CONN.

In Canada: Edwards & Co., Ltd.



Tomorrow's Homes...

HOW WILL THEY BE HEATED?

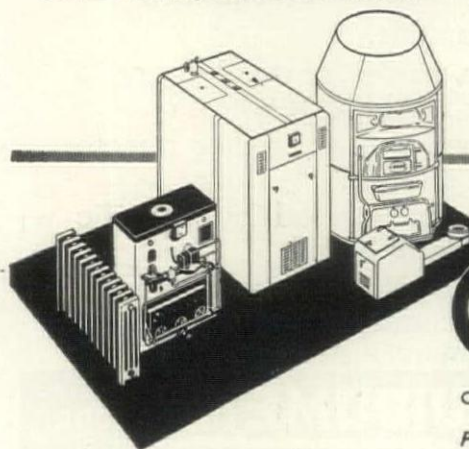
● Many builders are laying plans now for the homes they expect to construct after the war. An important phase in this planning is how these homes are to be heated.

Obviously no one system is best for all houses—every type of system—every kind of fuel has its advantages. Climate, price, style of house and personal preference—all have important bearing on the heating system most suitable for the homes you are planning today.

To aid the builders of tomorrow's homes, Crane Co. will of-

fer a complete line of boilers for steam and hot water, furnaces for warm air, radiators, controls, valves, fittings, oil burners and stokers—in fact, everything necessary for every type of heating system.

Right now there are necessary limitations on heating equipment that is available. However, when it is possible for you to start construction, your Crane heating dealer will be able to offer the latest and the most advanced types of heating, from the complete Crane postwar line.



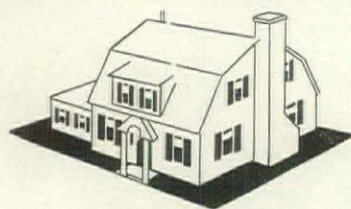
CRANE



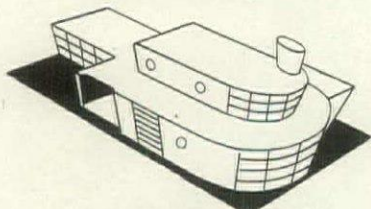
CRANE CO., 836 S. MICHIGAN AVENUE, CHICAGO 5, ILL.

PLUMBING • HEATING • VALVES • FITTINGS • PIPE

NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, AND HEATING DEALERS



TRADITIONAL



MODERN

The RIGHT STAIN for the RIGHT BUILDING !

YOU can count on Cabot's famous Shingle Stains to give lasting beauty and permanent protection to all types of buildings! Quick, easy to apply, they cost less—won't peel or blister even when used on green lumber. Among the wide choice of colors—from clear brilliant hues to old New England grays and browns—you'll find the *right* stain for *any* building—traditional or modern!

WRITE TODAY for color card and your copy of "Stained Houses"—contains full information. Samuel Cabot, Inc., 1267 Oliver Bldg., Boston 9, Mass.

Cabot's SHINGLE STAINS

CREOSOTE

HEAVY-BODIED



THE NEW FREEDOM GAS KITCHEN featuring a fine ROPER GAS RANGE

The gas industry is extensively advertising the New Freedom Gas Kitchen to American housewives everywhere. When that "dream" kitchen is born after the war, there'll be a new *Certified Performance* ROPER GAS RANGE that will fit perfectly, providing an ideal cooking service. Write today for Free kitchen booklet "A Peek into the Amazing New World of Tomorrow".

ROPER
GAS RANGES

GEO. D. ROPER CORPORATION, Rockford, Illinois, manufacturer of ROPER, "America's Finest Gas Range" for all gases including L.P. (Liquefied Petroleum) gas.



Those underworld saboteurs, **RUST** and **CORROSION**, are back . . . nibbling away at your iron and steel products. If you are wise, you'll beat these criminals to the draw . . . by using **PENNizing**, the nemesis of rust and corrosion. The **PENNizing** process of Quality Hot Dip Galvanizing is the **ONLY** sure way to guarantee long-lasting protection at an economical cost. Stop . . . look . . . let **PENN** show you the way.

PENNizing is the process of revitalizing your iron and steel products by Quality Hot Dip Galvanizing as perfected by the Penn Galvanizing Company since 1910.

HOT DIP
GALVANIZING

GALVANIZED
IRON AND STEEL
PRODUCTS
FURNISHED

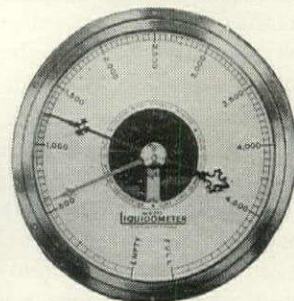
PENN
GALVANIZING CO.
"the Nation's Largest"

PICKLING AND
PAINTING
•
PICKLED AND
PAINTED IRON
AND STEEL
PRODUCTS
FURNISHED

Gen. Offices: 2201 E. Tioga Street, Philadelphia, Pa.

PLANTS: No. 1, 2201 E. Tioga St. - No. 2, 2400 E. Tioga St.
No. 3, 3548 N. Sepviva St.

ACCURATE LIQUID LEVEL INFORMATION AT A GLANCE, WHEN YOU WANT IT—



WITH LIQUIDOMETER Tank Gauges

"THEY'RE ALWAYS DEPENDABLE"

100% automatic.

No pumps, valves, or auxiliary units needed to read them.

Models available for either remote or direct readings.

Accuracy unaffected by specific gravity of tank liquid.

Approved by Underwriters' Laboratories for gauging hazardous liquids.

Write for complete details.

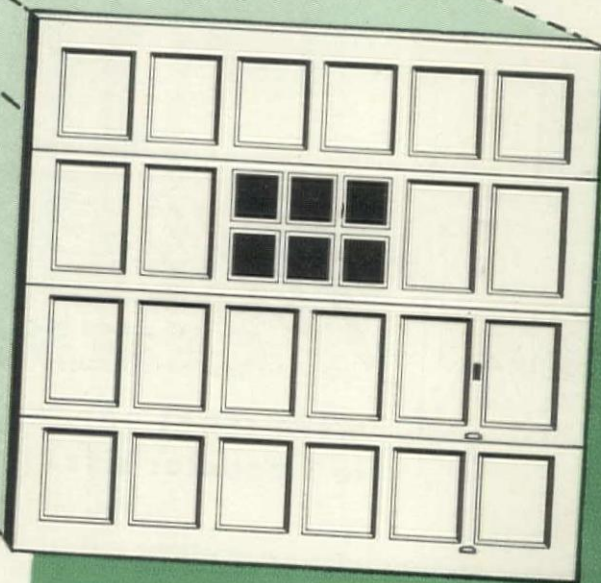
THE **LIQUIDOMETER** CORP.
36-30 SKILLMAN AVE., LONG ISLAND CITY, N.Y.



This standard six-light muntin Crawford Door for residential garage application conforms pleasantly with a number of architectural styles. Sturdiness and ease of operation combine with good design to make it a leader in popularity.

... on the
Post-War
Building
Boom ...

HERE'S OUR SLANT



We believe there is conclusive evidence that there *will* be a building boom. Residential construction has been cut to the bone since Pearl Harbor. What building has been done has been emergency housing—much of it temporary in nature. We know the money is ready and waiting and we know that the American desire to own homes is deep and basic. We also believe in being ready. Therefore, though almost our whole effort at present is in war work, we have been exploring new materials and methods so that we can rapidly reconvert to the manufacture of high quality, fine appearing, easy operating Crawford Doors when post-war building gets under way. If you, too, are thinking ahead why not get in touch with us *now* on *your* door needs.

Crawford Door Company, 401 St. Jean, Detroit 14, Mich.

Crawford

UPWARD - ACTING
DOORS

Residential Garage Doors
Commercial & Industrial Doors
Hand or Power Operated Doors
Craw-Fir Doors

BUILDING REPORTER

(Continued from page 232)

and will be powered by a tiny motor of approximately .002 hp. It will deliver 30 CFM at .30 in. S.P. The 60 in. low pressure propeller driven with a 10 hp, 1150 rpm motor delivers approximately 60,000 CFM free air, and 5,000 CPM at 1/2 in. S.P. Wide general industrial use of these fans is expected, particularly where space, economy and efficiency is important in air movement. They are built in both single stage and multi-stage assemblies. The two-stage type doubles

the single stage pressure characteristics of any given unit.

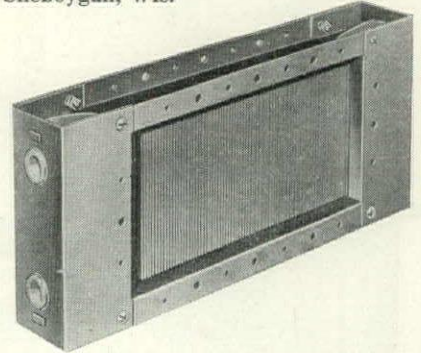
Manufacturer: Dynamic Air Engineering, Inc., 1619 South Alameda, Los Angeles 11, Calif.

PLASTIC COMPASS has improved features. **Name:** No. 5702.

Features: This improved plastic compass replaces Esco's former model and incorporates the standard .047 in. diameter compass lead used most commonly by architects and engineers. A positive clamping device provides for removal and replacement of the lead in the new model. Other features include

lightweight, easy adjustment, uniform tension spring washer, removable and replaceable shouldered compass point. The compass is 5 1/2 in. long, is \$1.75 FOB Sheboygan, Wis.

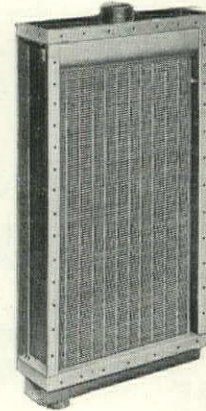
Manufacturer: Engineering Mfg. Co., Sheboygan, Wis.



HEATING COILS for air conditioning, heating, drying and processing systems.

Features: This new and broader line of copper blast heaters and booster units has been introduced to meet the specialized requirements of extended surface

heating coils in modern air conditioning, heating, drying and processing systems. It incorporates design modifications which contribute to improved performance and durability, and which adapt the coils more closely to requirements of heating engineers and drying equipment designers.



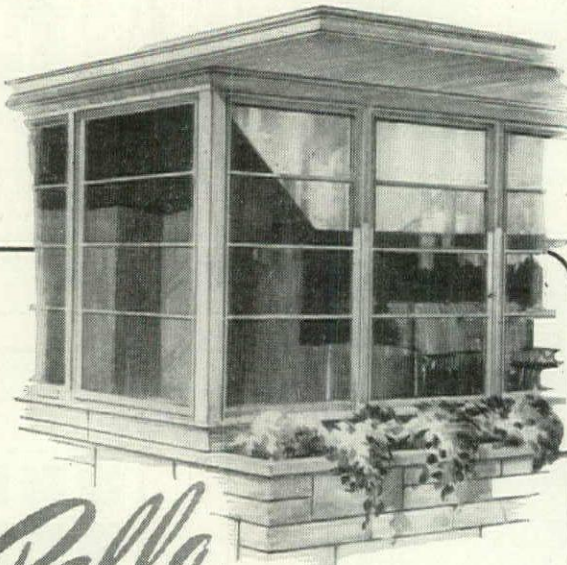
Features include all-copper and copper alloy condensers, scientifically die-formed fins permanently bonded to tubes by metal, pressure-resisting brazed construction of steam carrying passages, and new provision for even steam distribution within the coils. Casings are designed for duct installation in vertical or horizontal positions and the new baffle arrangement helps direct air flow through coil. The Modine line, available now with priority, includes standard blast heaters steam distribution blast heaters and booster units. Standard blast heaters are available in 7 types, 17 lengths and 3 widths. Steam distribution blast heaters and booster units are also furnished in many different types, lengths and widths.

Manufacturer: Modine Mfg. Co., Racine, Wis.

FLUORESCENT FIXTURE for easy maintenance.

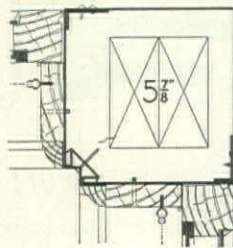
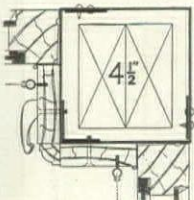
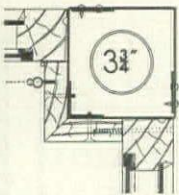
Features: This fixture equipped with the E-Z Servicer is designed to eliminate the inconvenience of maintenance prob-

(Continued on page 244)



Pella CASEMENTS

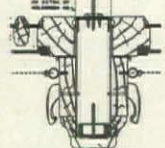
with steel corner mullions
in 3 popular sizes



for greater light area and neater appearance

LARGER GLASS AREAS are easier to achieve through the use of these *smaller* steel corner mullions . . . created by Pella designers. Prefabricated of heavy gauge, galvanized, rust-proofed steel. Pella corner mullions are available in three *space-saving* sizes—ranging in size from 5 7/8" x 5 7/8" down to 3 3/4" x 3 3/4", creating a neat, narrow-line corner.

Pella prefabricated corner mullions save material and hours of construction time. Steel construction prevents rotting and warping. Permanent plumbness assures smooth window operation. Investigate Pella's extensive line of stock size casement units that permits more than 480 possible combinations of single windows, corner windows, bays, picture and kitchen windows. All factory fitted and assembled, ready to set right in the wall.



◀ PELLA'S ALL-STEEL JOINING MULLION is only 1 1/8" wide! It is a real space saver, stronger than the best wood mullion.

FREE for Architects and Builders . . . A file pocket containing 22 loose sheets of scaled details that enable you to create individual and unusual window arrangements from Pella's stock size Casement Units. Send for your FREE set today. The Rolscreen Company, Dept. A-35, Pella, Iowa.

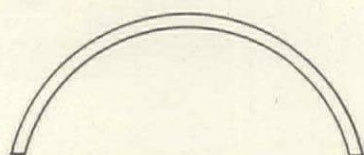


Pella

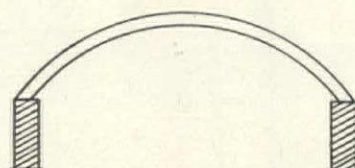
CASEMENT WINDOWS

ALSO PELLA AWNING AND PROJECTED SASH AND PELLA VENETIAN BLINDS

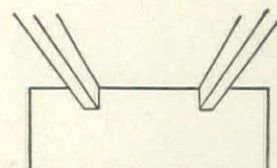
Where you can use arches and beams of WOOD AND LAUCKS GLUE



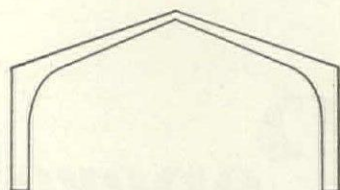
BEAM ARCHES
Hangars, barns, garages,
arenas, natatoriums



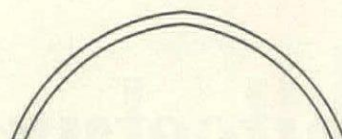
BEAM ARCHES WITH WALL
Commercial structures, shops,
halls, warehouses



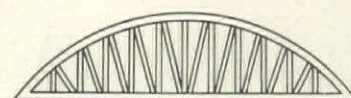
BEAMS
Stores, garages, shops,
homes (flat ceilings)



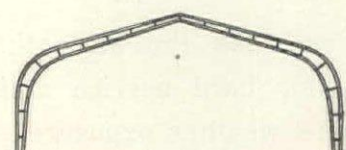
BOOMERANG ARCH
Community halls, theatres,
armories



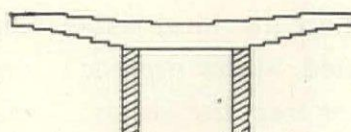
PARABOLIC ARCH
Hangars, rinks, riding
academies, arenas



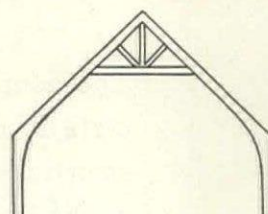
BOWSTRING ARCH
Industrial and commercial
structures, piers



PLYWOOD ARCH
Schools, gymnasiums, rural
and domestic buildings



CANTILEVER BEAM
Service stations, station
platforms, drive-ins



GOTHIC ARCH
Churches, chapels, funeral
parlors, theatres

Arches and beams laminated with Laucks Construction Glues have won a permanent place in the new architecture of America.

When building construction resumes you'll find them in a multitude of well-demonstrated applications: for hangars, gymnasiums, community halls, churches, passenger stations, in commercial, industrial, rural and even domestic structures.

Architects, builders and owners all appreciate the clean design, the freedom from supports, and the beauty of the material itself. They appreciate the safety and long life insured by new "engineering in wood" principles and the research of Laucks glue chemists that

provided the modern construction glues for these strong, enduring structural members.

For full information about Laucks Construction Glues, as used for laminated arches, or plywood, prefabrication, stressed-cover construction, or dry-built construction, contact "America's Glue Headquarters"...

I. F. LAUCKS, INC.

In the West

Seattle (4), Wash.
Los Angeles (1), Calif.

In the East

Lockport, N. Y.
Portsmouth, Va.

IN CANADA

Laucks, Ltd.: Vancouver, B. C., Stanbridge, Que.





City Auditorium, York, Neb., designed by Meginnis & Schaumberg, architects, of Lincoln. Architectural concrete details produced by use of milled wood and plaster molds. Smooth exterior concrete walls cast in plywood forms.

Architectural Concrete

will fit your design requirements for any type of building

The adaptability of architectural concrete is demonstrated by its use for structures of all sizes from the largest public buildings to the smallest building for private use.

Architectural concrete meets most exacting design and service requirements at reasonable cost. It combines both architectural and structural functions in one firesafe, economical material.

Maintenance cost is low because

concrete provides the strength and durability for hard service and the most severe weather exposure.

In addition to the advantages of strength, firesafety, long life and distinguished appearance—concrete gives low annual cost, the true measure of economy in buildings.

Send for literature on recent design and construction practice with architectural concrete. Free in United States and Canada. See Sweet's Catalog.

PORTLAND CEMENT ASSOCIATION

Dept. A3-7, 33 W. Grand Ave., Chicago 10, Illinois

A national organization to improve and extend the uses of concrete . . . through scientific research and engineering field work

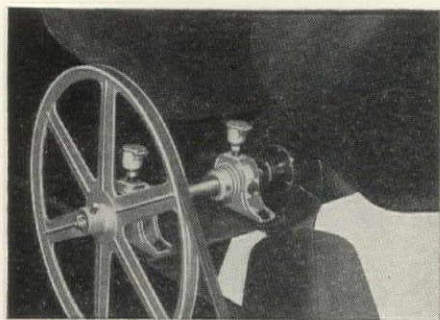
BUY AND KEEP MORE WAR BONDS

**This Big Boy really
Changes Air...
21,100 Cubic Feet
PER MINUTE!**



**EMERSON-ELECTRIC 48-in.
EXHAUST FAN...BELT DRIVEN**

Clear the Air.. in a Big Way!



Why They're Quiet...

This rear view of the blade assembly shows clearly why these large fans operate quietly. Polished steel shaft is held in rigid alignment by two pillow blocks, securely bolted to a heavy base plate. Motor is adjustably mounted to permit increase or decrease of belt tension.



Emerson-Electric power-operated gun turrets and electric motors for aircraft contribute to Allied military might on all battle fronts of the world.

These Emerson-Electric Belt-Driven Exhaust Fans operate so quietly, it is difficult to realize, by sound, that they are efficiently handling a huge volume of air.

Powered by specially-engineered Emerson-Electric Motors, these fans have a newly perfected type of blade, rigidly assembled and dynamically balanced to minimize vibration.... Resilient hub mountings insulate the fan from its housing.... Fan-shaft bearings have a lubricant capacity sufficient for 2,000 hours' operation.

Made in 48-in., 42-in., and 36-in. Sizes

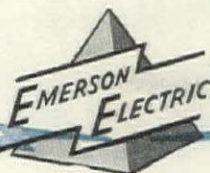
Production of Emerson-Electric Heavy-Duty Exhaust Fans has been resumed on a limited basis—in three popular sizes—suitable for factories, stores, plants, mills, lofts. These models will be available only on priorities—specified by the War Production Board.

Write for Bulletin X4566, it gives complete information.

**THE EMERSON ELECTRIC MANUFACTURING COMPANY
SAINT LOUIS 3, MO.**

Branches: New York • Chicago • Detroit • Los Angeles • Davenport

EMERSON
MOTORS • FANS



ELECTRIC
APPLIANCES

402

"Uniform Good Results"

because

WHEELER OSGOOD

Tru-sized
Reg. U. S. Pat. Off.
DOORS

**ARE COMPLETELY MANUFACTURED
READY TO INSTALL!**

America's leading builders are depending more and more on Tru-Sized doors to insure efficiency, uniform good results, and economy of time and money, on all kinds of construction projects. Tru-Sized doors are uniform in quality and modern in design. They are precision-made to exact book opening and fit perfectly any jamb that is plumb and square.

Tru-Sized doors are a product of America's largest door manufacturer—designed by engineering wood-craftsmen to help carpenters and builders do a better job than ever before.

MOORE SPAINITS
CONCRETE PLASTER
CONCRETE AND FACE BRICK
SEWER PIPE AND FITTINGS
PARTITION TILE
KICK BRICK, BLUE LINING
RUSKIN HARDWARE

CAMPBELL COAL COMPANY
ESTABLISHED 1884
Jobbers and Distributors of
MATERIALS FOR BUILDING

TWELVE WAREHOUSES—GENERAL OFFICE: 216-240 MARKET STREET, N.W.
P. O. BOX 1498
ATLANTA 1, GEORGIA.

January 30, 1945

CURTIS
DOORS &
LUMBER
POLYMER
KICKING
WATERPROOF
SPECIAL M

ALL PRICES SUBJECT TO APPLICABLE GOVERNMENT PRICE CEILING PREVAILING AT TIME OF SHIPMENT, AND SUBJECT TO PRICE SALE OF GOODS
OFFERED. STOCKS, CONTRACTS, ETC. NOT BINDING. WHEN OUR CENTS APPROVED BY THE GENERAL OFFICE IN MEETING AND ADVISED BY MAIL
PART BY OUR SHIPPER. WE ASSUME NO LIABILITY ARISING FROM OURSelves ANYTIME OUR CONTRACTS AFFECTING PRICES, INSTRUCTIONS, OR INFORMATION ON
TRANSPORTATION. YOUR RESPONSIBILITY CARRIES WHEN CARRIER ISSUES BILL OF LADING FOR SHIPMENT RECEIVED IN GOOD CONDITION. FREIGHT
RATES NOT GUARANTEED.

The Wheeler, Osgood Company
Tacoma, Washington

Gentlemen:

Several months ago we furnished millwork for 500 units of War Housing, for which our contract required us to furnish door openings completely assembled at our Mill.

Wheeler, Osgood Company supplied the nearly 4000 doors for this work, which were fitted to net size and machined for hardware at your factory. The variations in net sizes, due to job conditions and machining for several different types of locks and latches, made the door schedule quite complicated. We were very much pleased with your promptness and accuracy in filling this order; the service of your Company in handling the prefitting and machining was a great help to us in meeting deliveries required by the construction schedule.

Yours very truly,
CAMPBELL COAL COMPANY

Carlidge Leasure
Carlidge Leasure



NO SAWING NO PLANING NO FITTING

**MAIL
COUPON
TODAY**

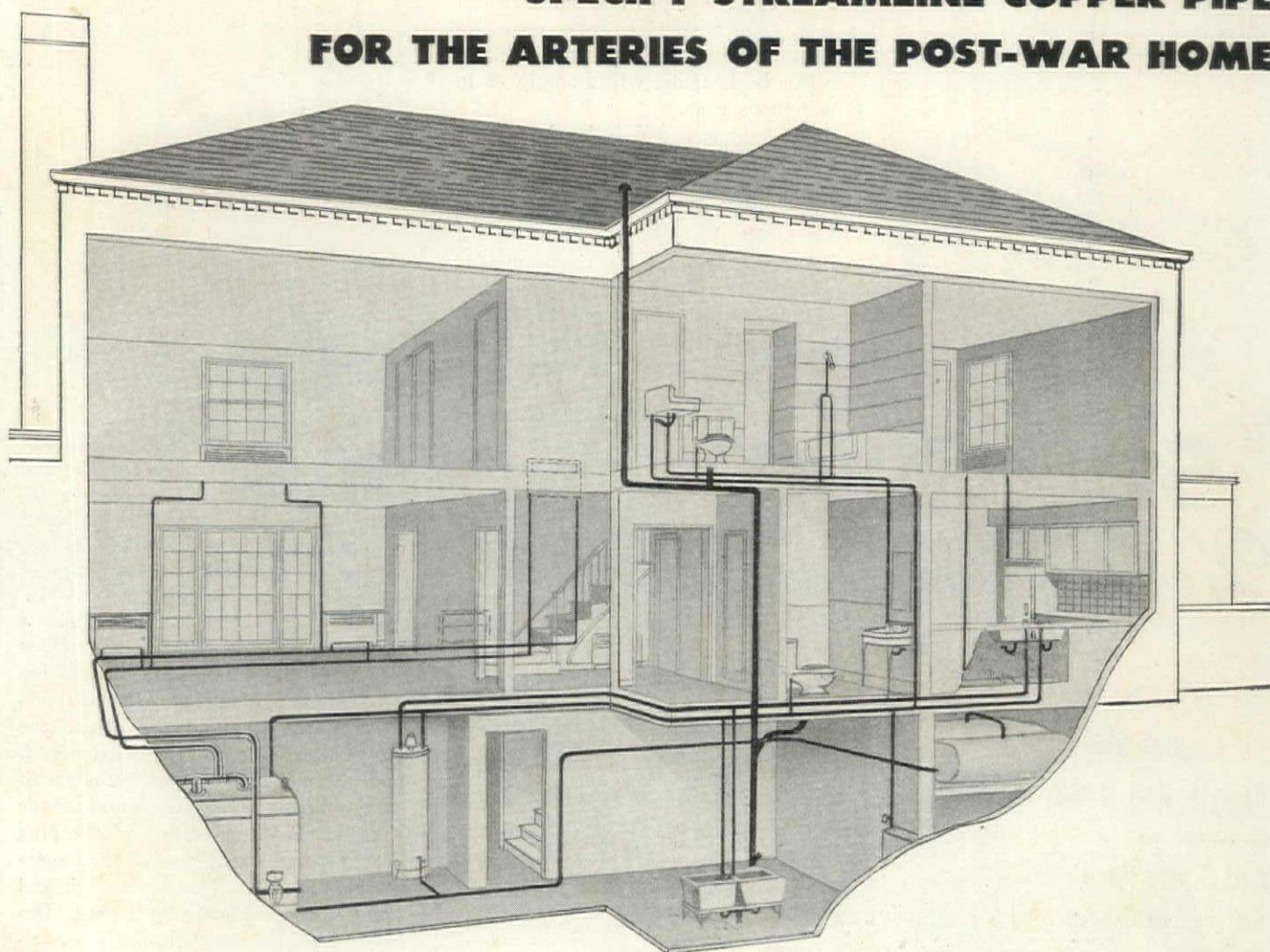
The Wheeler, Osgood Company, Dept. 11-26
Tacoma 1, Washington.

Please send me free literature and detailed guide sheet for ordering Tru-Sized Doors.

Name _____
Firm _____
Address _____
City _____ State _____



SPECIFY STREAMLINE COPPER PIPE FOR THE ARTERIES OF THE POST-WAR HOME



When specifying or installing a plumbing or heating piping system, the following leading questions concerning the arteries of the building should be of paramount importance. You should be able to answer them with a positive "yes".

Will the piping system continue to give peak service year after year for the life of the building?

Will the modern fixtures in the bathroom, kitchen and laundry be adequately supplied with a full flow of water?

Will the radiators maintain their maximum efficiency in heating every room in the house?

Will it be free from leaks, particularly in concealed places behind the walls and between floors and ceilings?

Will it be forever free from internal clogging due to rust?

Will it actually add to the resale value of the property?

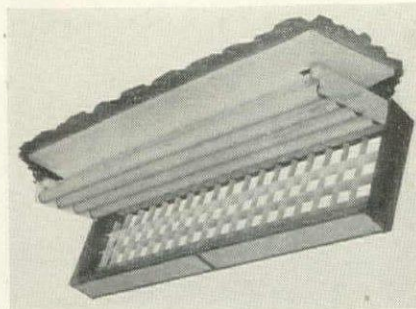
If the answer to any of these questions is NO—then you are not installing the piping system

that will give you the utmost for the money expended, but if you wish to answer all these questions with a positive YES—then your choice will be genuine STREAMLINE Copper Pipe and STREAMLINE Fittings and you will specify and accept nothing else.

A STREAMLINE piping system offers the greatest possible resistance to rust and leaking water. It provides a lifetime, trouble-free, plumbing or heating system that, with the possible exception of extremely abnormal water conditions, will outlast the building in which it is installed. Plan on specifying and installing STREAMLINE Copper Pipe and Fittings for your postwar construction—or for replacement.

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

(Continued from page 238)



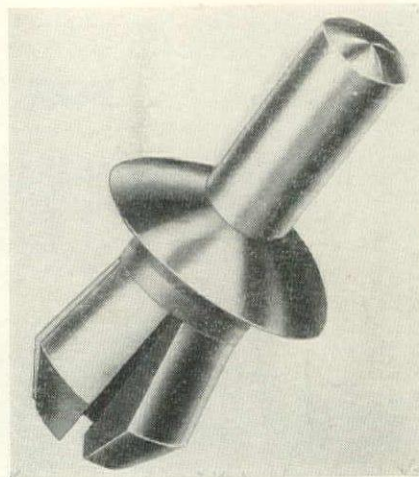
lems common to most conventional fixtures. It is hinged so that one man can easily open it for cleaning or changing tubes without the use of special tools. It can be installed either singly or in continuous rows.

Manufacturer: R & W Wiley, Inc., Dearborn and Bridge Sts., Buffalo 7, N. Y.

BLIND RIVET of plastic.

Name: Des Rivet.

Features: These plastic rivets, molded as one piece and consisting of a head with plug attached by a thin breakaway section and a tapered shank split to form four tapered fingers, have proved to be superior fastening devices in innum-

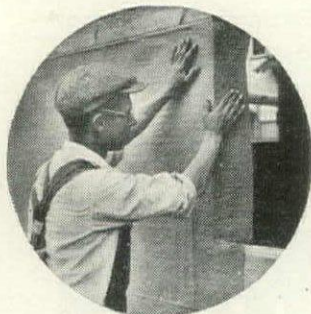


SISALKRAFT

Worthy of Your Skillful Design



As a moisture barrier back of plaster, SISALKRAFT protects wood frame and insulation from moisture condensation. Photo shows plaster base being applied over SISALKRAFT.



As flashing, SISALKRAFT is economical to use and easy to install.

FAITHFUL IN ITS PERFORMANCE!

Added assurance of performance in construction and long-lasting comfort are yours when you specify SISALKRAFT over the sheathing — as flashing around window and door openings — as the moisture barrier beneath plastered surfaces. The *intact application* of this sisal-reinforced, asphalt bonded building paper shuts out wind and weather—assures maximum protection of the wood structure and absence of drafts.

Samples of SISALKRAFT may be secured from your local lumber dealer — or write direct.

able applications with metal, wood and plastic components. The shank and head are hollow to the same diameter as the plug. The design of the rivet is based on a wedging action and takes full advantage of the flow characteristics of plastic materials under pressure. Installation can be accomplished in a single operation by one man. Des Rivet is applied by pressing the tapered fingers into a drilled hole. Impact from the rivet gun instantaneously shears the plug and drives it into the plastic shank until the plug is flush with both ends of the rivet, maintaining the contour of the rivet head. Wedge action of the plug in the tapered shank expands the fingers against the walls of the drilled hole and upsets the shank end of the rivet. Des Rivet may be inserted singly or assembled in sticks by inserting the undriven plug of one rivet into the shank of another. A wide variety of shapes and sizes are available in several plastic materials, and may be obtained in all conventional and many special colors. **Manufacturer:** Plastic Development Div., Victory Mfg. Co., 1105 Fair Oaks Ave., South Pasadena, Calif.

LOW COST PRESERVATIVE against rot, decay, mildew and insects.

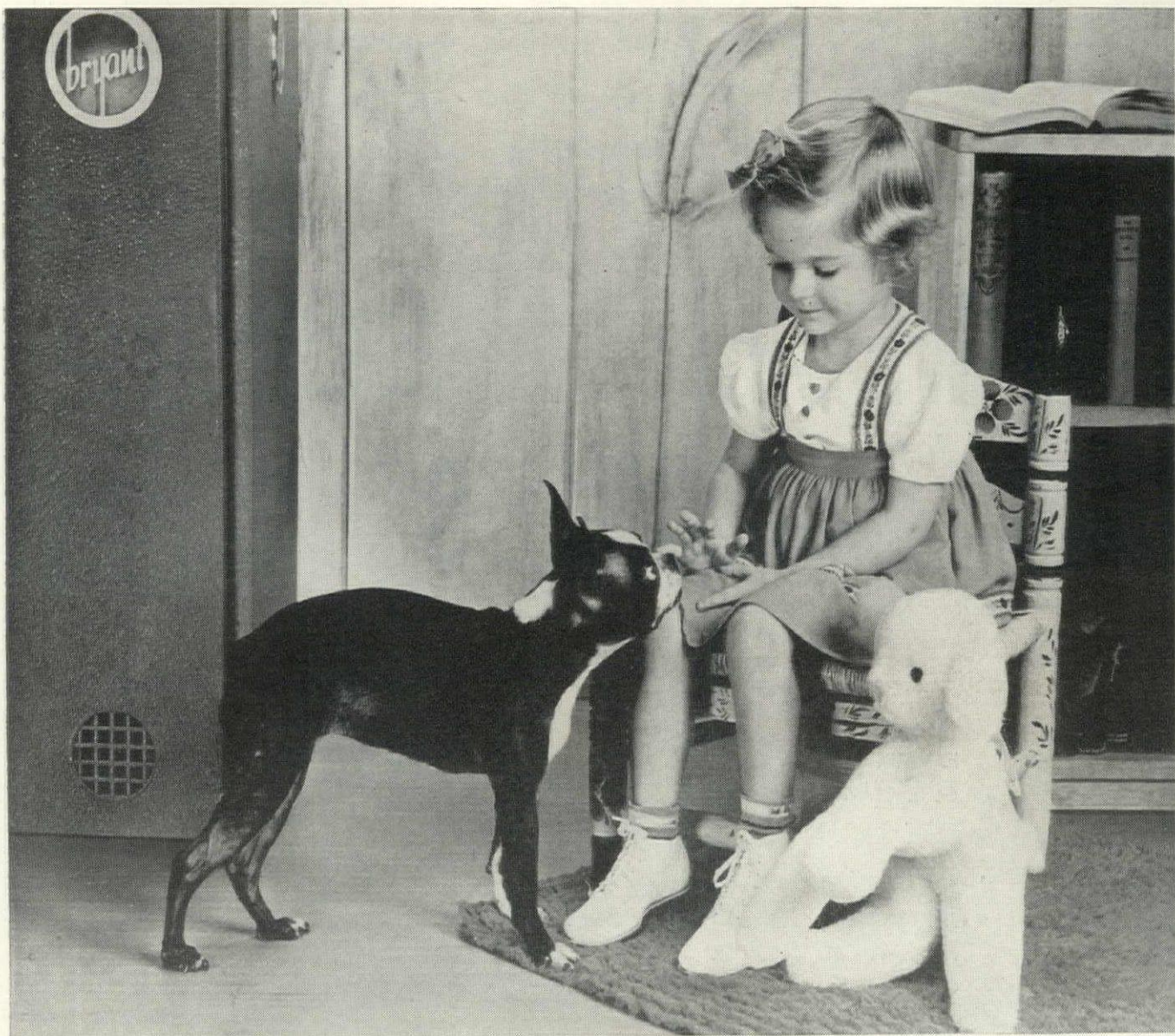
Name: Triple-A Naphthenate Preservatives.

Features: Triple-A Naphthenate Preservatives control or prevent dry rot, decay, fungi and molds in wood by sealing it against the attacks of these destructive organisms. Used on the interior or exterior of wooden structures, it provides long term protection at low cost. Non-poisonous to humans, it can be applied by brush, spray, dipping or pressure impregnation. It is available in four formulas, one of which can be used on heavy fabric. The material comes ready for use in 1, 5, 30, 55 gal. containers. One gal. will treat approximately 200 sq. ft. of wood surface, 350 sq. ft. of cotton duck or 25 lbs. of rope. **Manufacturer:** Quigley Co., Inc., 527 5th Ave., New York 17, N. Y.

(Technical Literature, page 250)

THE
SISALKRAFT CO.
205 W. WACKER DRIVE - CHICAGO 6, ILL.
NEW YORK - SAN FRANCISCO - LONDON - SYDNEY
In Canada Write to: Alexander Murray & Co., Limited, St.
Montreal - Toronto - Halifax - Saint John - Winnipeg - Vancouver

Manufacturers of SISALKRAFT, FIBREEN, SISAL-X,
SISALTAPE AND COPPER-ARMORED SISALKRAFT



KEEP THE LITTLE LAMBS IN MIND

Surveys show that families with youngsters will be one of the most important groups in the postwar homes market. That means still greater demand for modern heating . . . the kind provided by Bryant automatic gas heating.

When you include Bryant in your new home plans, the client is assured efficient, economical heating. Compact design frees more space for your planning. Attractive cabinets of crackle gray harmonize with any interior. And, the ex-

panded Bryant line offers you any type of gas heating from small units that fit into closet spaces to large, complete winter air conditioning systems.

Watch how your postwar clientele develops among families with children . . . and let the nearest Bryant representative work with you in choosing automatic gas heating for those homes where we all must *keep the little lambs in mind!*

THE BRYANT HEATER CO., CLEVELAND, OHIO
One of the Dresser Industries

bryant
GAS
HEATING



LET THE PUP BE FURNACE MAN

Announcing the formation of

PRECISION-BUILT REG. U. S. PAT. OFF HOMES CORPORATION

OFFICERS

F. VAUX WILSON, JR., *President*

G. L. APPLE, JR., *Vice President*

G. S. CLARK, *Vice President*

J. A. HEINRICH, *Secretary*

E. L. SIMMONS, *Treasurer*

DIRECTORS

J. F. BARRETT, *Chairman*

J. J. DEMPSEY

B. OUTERBRIDGE

PAUL W. CADWALLADER

SIDNEY F. DWYER

E. L. SIMMONS

C. F. DALLY

ERICH LOEB

F. VAUX WILSON, JR.

With an authorized capital of \$1,000,000, Precision-Built Homes Corporation becomes the largest single corporate organization in the country devoted exclusively to the promotion of housing construction.

Under a broad program of expansion, the company will promote the Precision-Built System of Construction by: (1) merchandising Precision-Built Homes directly through selected department and furniture stores, as well as to operative builders, lumber dealers, contractors, realtors, insurance companies, lending institutions, prefabricators, industrial companies for employees, and through the export market; (2) licensing Precision-Builders to set up fabricating

plants in major centers to service department and furniture store customers, and other outlets for Precision-Built Homes. It is planned to blanket the country with non-competitive fabricating plants, operating on a 75-mile radius.

Precision-Built Homes Corporation will continue the intensive research and study—originated nine years ago by Homasote Company—whereby it has become possible to apply mass production methods to conventional construction, without sacrificing flexibility of design. Licensees are ready to start large-scale home-

building—just as soon as wartime restrictions permit. Precision-Built Homes Corporation invites inquiries on all phases of its activities.



PRECISION-BUILT HOMES CORPORATION . . . TRENTON 3. NEW JERSEY




NATION WIDE

AIR FILTER SERVICE

Dotting the nation from border to border and coast to coast are Air-Maze factory representatives. They are competent air filtration engineers trained, experienced, and ready to assist you with your air filtration problems.

Take advantage of this Air-Maze service because Air-Maze has specialized in engineered, precision-built air filters for twenty years. So, whether your interest applies to air conditioning, ventilating, compressors, blowers or engines, you can have *engineered air filtration* in every Air-Maze filter.



Typical Air-Maze Panel for heavy-duty service.

Air-Maze air filters are constructed of metal throughout. They are easily washable—last indefinitely. For further data on types and application send for catalog AGC-144. And remember—"If it uses air, use AIR-MAZE".

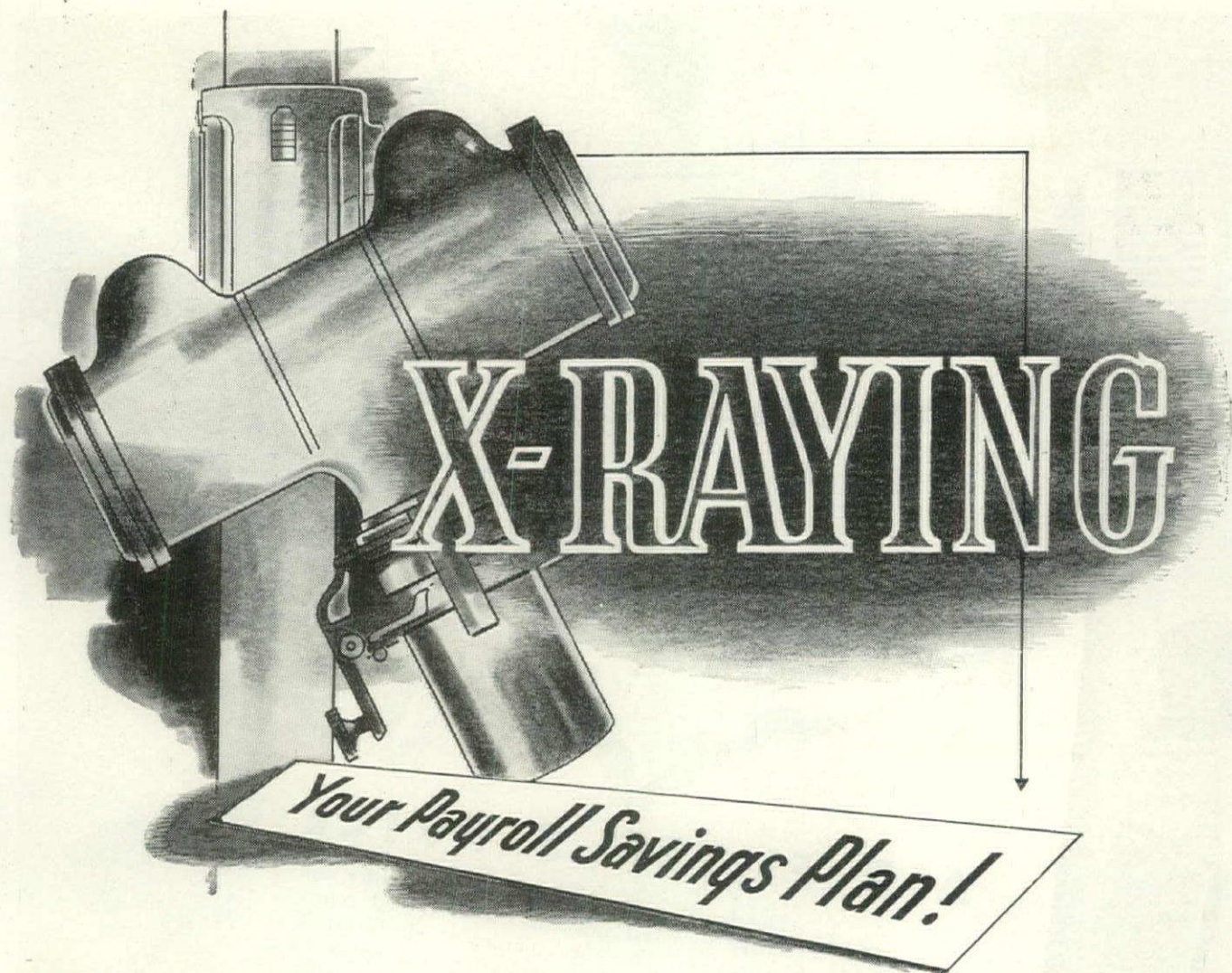
AIR-MAZE CORP. • CLEVELAND 5, O.

Representatives in Principal Cities. In Canada: Williams & Wilson, Ltd., Montreal, Quebec, Toronto, Windsor; Fleck Bros., Ltd., Vancouver.

IF IT USES AIR...USE

AIR-MAZE

ENGINEERED AIR FILTRATION



We can all see with the naked eye that the Payroll Savings Plan provides the most stable method of war financing. Analyze it under the X-ray of sound economics and other important advantages are evident.

A continuous check on inflation, the Payroll Savings Plan helps American Industry to build the economic stability upon which future profits depend. Billions of dollars, invested in War Bonds through this greatest of all savings plans, represent a "high level" market for postwar products. Meanwhile, putting over Payroll Savings Plans *together* establishes a friendlier re-

lationship between management and labor.

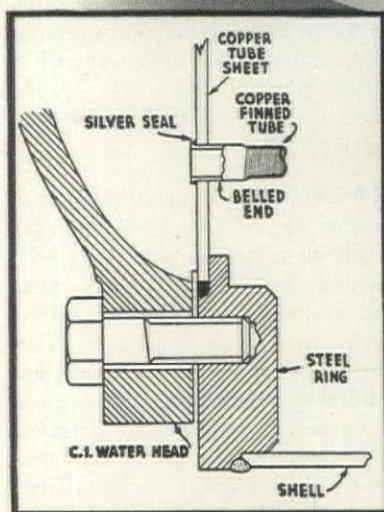
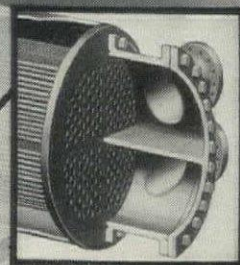
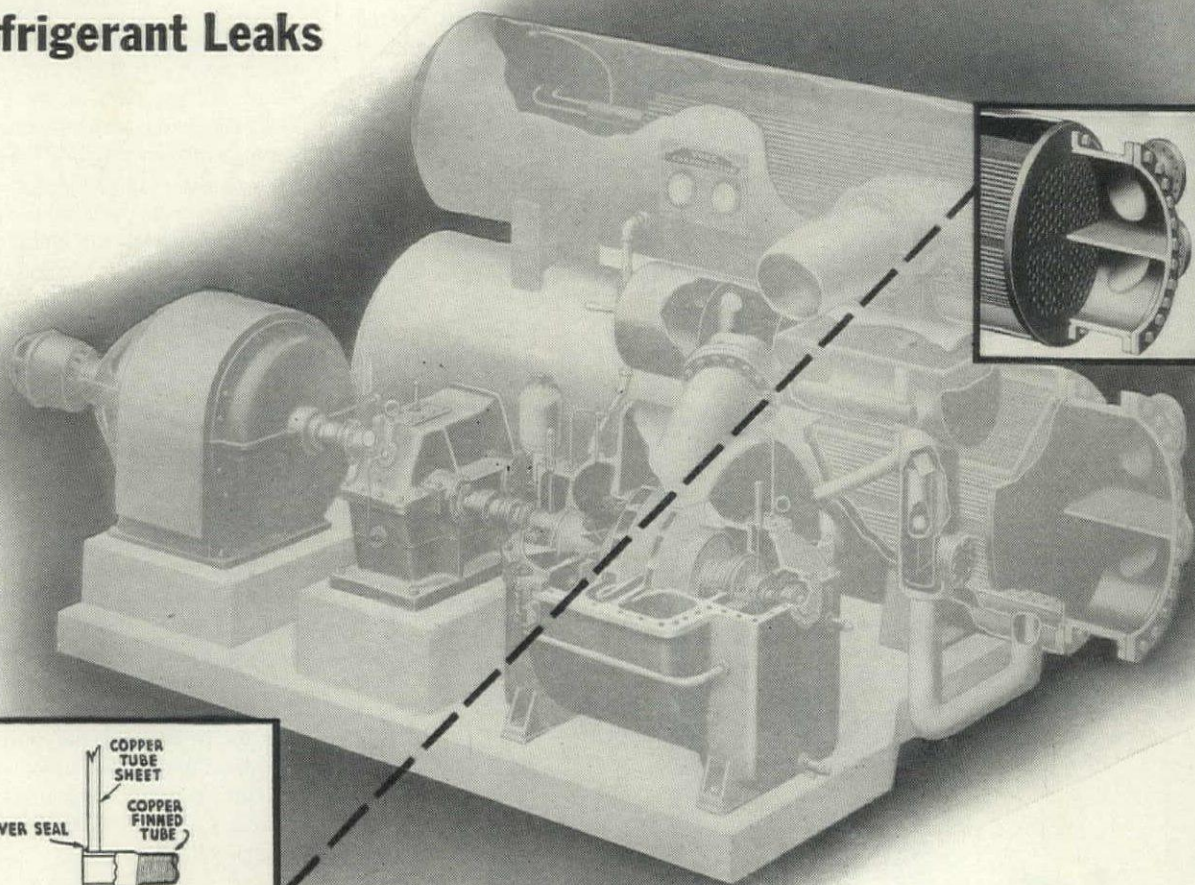
To working America the Payroll Savings Plan offers many new and desirable opportunities. Through this systematic "investment in victory," homes, education for their children and nest eggs for their old age are today within the reach of millions.

The benefits of the Payroll Savings Plan to both management and labor are national benefits. Instilling the thrift principle in the mind of the working men and women, the Payroll Savings Plan assures their future security—and is a definite contribution to the prosperity of postwar America!

The Treasury Department acknowledges with appreciation the publication of this message by

This is an official U.S. Treasury advertisement prepared under the auspices of Treasury Department and War Advertising Council.

To Prevent Refrigerant Leaks



Permanently Silver-Sealed CONDENSER JOINTS

The York Allis-Chalmers Turbo REFRIGERATION Compressor

FINNED copper tubes are "Silver-Sealed" into copper tube sheets forming permanent leak-proof joints. Individual tubes may be readily removed with the use of simple tools. Condenser shells are constructed from materials selected for their resistance to corrosion, provided with removable heads and special internal supporting plates for the tubes, and thoroughly tested after assembly.

York Corporation, York, Pennsylvania.

Other outstanding features

1. Low center of gravity of compressor—permitted by trough type cooler—cuts vibration, provides accessible operation.
2. Stainless steel impeller blades resist erosion and corrosion assuring perfect wheel balance. Blade rivet heads are eliminated to provide unobstructed gas flow.
3. Balance piston to equalize wheel thrust makes necessary only a positioning thrust bearing, and results in less bearing friction losses.
4. Simplified refrigerant shaft seal.
5. Pre-rotation vanes permit greater capacity reduction (down to 10%.)



YORK REFRIGERATION AND AIR CONDITIONING
HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885

(Continued from page 244)

RESIN GLUE. *The Interesting Story of Plaskon Resin Glue*, 28 pp., 8½ in. by 11 in. This colorful booklet describes the many new construction techniques possible with resin glue. It includes the history of glue, and the development of modern, permanent bonding, water-proof resin types. Methods of using them in fabricating and a wide range of interesting present day applications are illustrated and described. Plaskon Div., Libbey-Owens-Ford Glass Co., 2112 Sylvan Ave., Toledo 6, Ohio.

GARAGE PLANNING. *How to Plan Your Garage*, 18 pp., 6 in. by 9 in. This informative booklet offers sound advice on planning the home garage. It brings to attention those objects usually stored in the garage, or those which would be stored there if adequate room were provided. It offers suggested plans and renderings for large garage layouts and for lean-to additions which might house the workshop, storage room, etc. Cupboards and bins to tidy the garage are also attractively illustrated. A section is devoted to ways of avoiding driveway difficulties and is followed by a discussion of driveway toppings. Various Crawford garage doors are pictured and

their construction features and ease of operation are discussed. Crawford Door Co., 401 St. Jean St., Detroit 14, Mich.

WINDOWS. *A Better Sales Outlook—Aluminum for Moderately Priced Homes*, 16 pp., 8½ in. by 11 in. This booklet describes the advantages of aluminum windows which will be produced in stock sizes and at surprisingly low cost as soon as restrictions are lifted. Installation details are included for both double hung and casement types. The Aluminum Window Co., A Subsidiary of General Bronze Corp., 34-19 10th St., Long Island City, N. Y.

FOR ARCHITECTS AND ENGINEERS PLANNING TODAY FOR TOMORROW

Standard Elevator and Dumb Waiter Specifications



FREIGHT ELEVATORS
HOSPITAL ELEVATORS
SIDEWALK ELEVATORS
RESIDENCE ELEVATORS
ELECTRIC AND HAND POWER DUMB WAITERS
HAND POWER ELEVATORS

Mail coupon for your copy

Here's a 24-page, easy-to-read, helpful elevator and dumb waiter specification book for postwar planning* architects and engineers. It contains complete specifications covering the Sedgwick line of electric and hand power elevators and dumb waiters—describes in detail the machine, motor, brake, operation, control and lists other per-

inent information needed by those who specify vertical transportation equipment.

This book of "Standard Specifications for Elevators and Dumb Waiters" will be mailed—without obligation. Just mail the coupon for your copy.

*At present Sedgwick Elevators and Dumb Waiters are available only on suitable priority.

SEDGWICK MACHINE WORKS, 140 W. 15th St., New York 11, N. Y.
ELEVATORS • ROTO-WAITERS • SPECIAL LIFTS • DUMB WAITERS

Sedgwick Machine Works
140 West 15th Street, New York 11, N. Y.

Gentlemen: Please send me a copy of "Standard Specifications For Elevators And Dumb Waiters"

NAME.....
COMPANY.....
ADDRESS.....
CITY..... ZONE..... STATE.....

FLOORS. *Belden Acid-Proof Brick Floors*, 16 pp., 10⅞ in. by 8⅜ in. This brochure describes an acid-proof brick floor, designed to give a tough, wear-proof, acid-resistant, working surface suitable for all types of industry. Data on sizes and shapes of the bricks and the different finishes available are covered together with complete instructions for installation with a special acid-proof cement. Also included are installation photographs illustrating use of the bricks in industrial plants, and test reports from recognized testing laboratories giving technical data on physical characteristics. The Belden Brick Co., Canton, Ohio.

INSULATION. *Cotton Insulation*, 36 pp., 5¼ in. by 8 in. This attractive booklet describes the properties and advantages of cotton insulation, including weight, resiliency, flame resistance and the effects of freezing and thawing. Special chapters are devoted to a discussion of cotton's noncapillarity, cohesiveness, repellence to mildew and household pests, and its ease of handling and installation. Interesting photographs of tests conducted by the War Food Administration illustrate the various characteristics of the insulating material. National Cotton Council of America, P.O. Box 18, Memphis 1, Tenn.

(Continued on page 256)



It's Got to work!

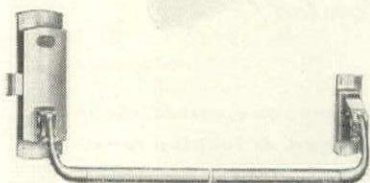
Money-back-if-not-satisfied is cold comfort when a panic bolt jams. It's *got* to work—fast—the first time... nobody can afford to second-guess when human lives hang in the balance. The last place in the world to gamble with inferior hardware is where panic bolts are concerned.

This may be an extreme example of the desirability of insisting on first quality hardware. But, from your own experience you know the grief that follows a skimpy hardware allowance for any building.

For just a few extra dollars your clients can have Russwin brass or bronze hardware which, in addition to lifetime security and trouble-free operation, gives you an opportunity to make the hardware a definite part of the builder's design.

Your nearby RUSSWIN dealer will be glad to help you to make hardware an asset rather than an eyesore to the buildings you design and build.

Russell & Erwin Manufacturing Co.
New Britain, Connecticut.



The RUSSWIN Rim Fire Exit Bolt is of unit type construction; all working parts are enclosed within the active case on the inside of the door. When applied there is no possibility of binding. Smoothness of action is assured.

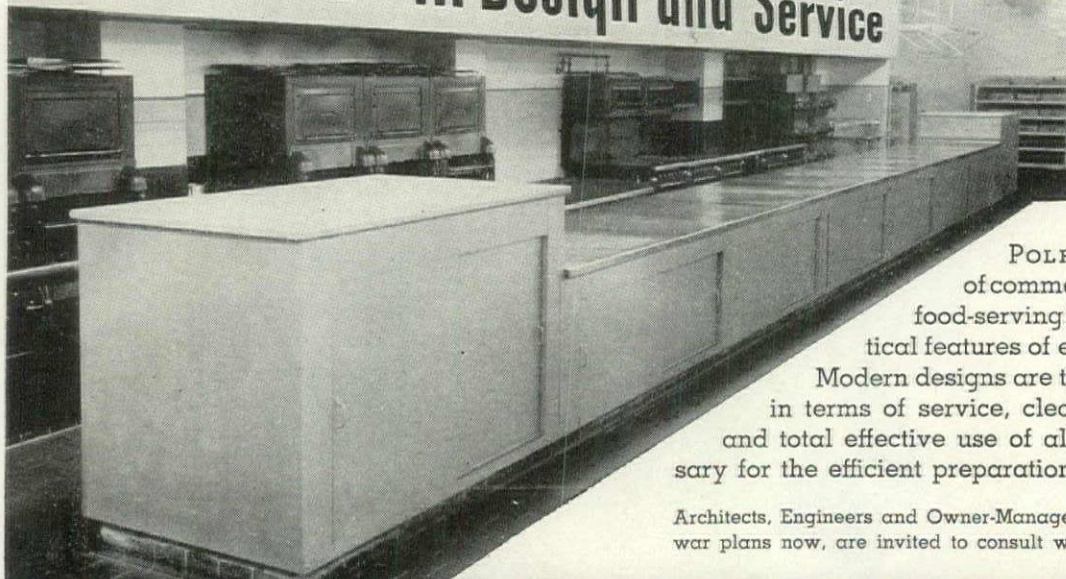
FOR ENDURANCE - - SPECIFY WROUGHT OR CAST BRASS AND BRONZE

FOR DESIGN AND WORKMANSHIP . . . SPECIFY

SINCE 1839
RUSSWIN
DISTINCTIVE HARDWARE

EFFECTIVE - in Design and Service

ENGINEERING COUNSEL
INSTITUTIONAL LAYOUTS
METHODS & MATERIALS



POLHEMUS installations of commercial and institutional food-serving facilities provide practical features of every-day importance.

Modern designs are the product of thinking in terms of service, cleanliness, space utility and total effective use of all the elements necessary for the efficient preparation and service of food.

Architects, Engineers and Owner-Managers desiring to make post-war plans now, are invited to consult with our engineering staff.

ESTABLISHED 1865

P. B. POLHEMUS CO., INC.
ROSELLE, NEW JERSEY
ENGINEERING • MANUFACTURING • INSTALLATION

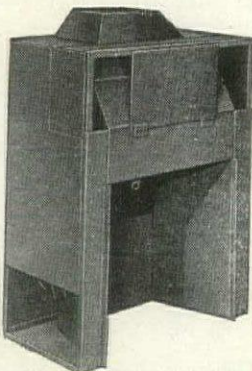
1010 VERMONT AVE. N.W.
WASHINGTON, D. C.

11 PARK PLACE
NEW YORK 7, N.Y.



Majestic

You'll "WARM UP" to the MAJESTIC CIRCULATOR FIREPLACE



... and it will warm up for you! Their cold air inlet and warm air outlet grilles circulate heat with furnace-like efficiency. That means a warmer room with less fuel. Majestic Circulator Fireplaces simplify and speed up fireplace installation, are made to fit any mantle design and come in a complete range of sizes. Save on masonry work and take the guesswork out of fireplace construction with Majestic Circulator Fireplaces. You'll want to plan on them for new construction work.

THE MAJESTIC CO.
980 Erie St., Huntington, Ind.

Building Necessities



Industrial Designer Wanted!

A nationally known company, established for 56 years in Chicago, is looking for a creative industrial designer for a permanent connection.

Work will be pleasant as we have a complete Engineering Department to cooperate in the production of major appliances of a diversified nature.

We want a man capable of studying our industry, and designing our products into leadership. We have a modern and fully-equipped plant to produce the kind of merchandise a top-flight designer would be proud to be associated with.

Address Architectural Forum Box 462

Remember - **TODD BURNERS**

*will cut your Clients'
Heat and Power Costs*

WHETHER you are designing a new building, or planning the modernization of an existing structure, you can be sure of an efficient steam plant when you recommend TODD burners. For TODD is the recognized leader in the field of modern automatic combustion equipment for industrial and commercial boiler rooms of all types. Hundreds of plants using TODD oil and gas

burners report fuel savings up to 10% and more, with corresponding power increases. You can assure similar savings for *your* clients!

Call on TODD combustion engineers at any time. They will be glad to confer with architects and engineers on the latest developments in modern combustion equipment and installation methods.



COMBUSTION EQUIPMENT DIVISION TODD SHIPYARDS CORPORATION

601 West 26th Street, New York 1, N. Y.

NEW YORK, BROOKLYN, ROCHESTER, HOBOKEN, NEWARK, BARBER, N. J., PHILADELPHIA, SO. PORTLAND, ME., BOSTON, SPRINGFIELD, MASS., BALTIMORE, WASHINGTON, CHICAGO, GRAND RAPIDS, TAMPA, GALVESTON, HOUSTON, MOBILE, NEW ORLEANS, LOS ANGELES, SAN FRANCISCO, SEATTLE, TACOMA, MONTREAL, TORONTO, BUENOS AIRES, LONDON



ON THE FIRING LINE OF AMERICA'S WAR PRODUCTION FRONT

A REPORT on the PERFORMANCE of MINWAX CAULKING COMPOUNDS

A RE-APPRAISAL of materials should be an essential part of plans for post-war construction. In connection with caulking compounds, performance on actual jobs is the surest measure of dependability and permanence. The service being rendered by MINWAX Caulking Compound on the building illustrated is confirmed by the statement of the caulking contractor. His latest report justifies the belief that on the basis of *cost per year of service*, MINWAX Caulking Compounds offer real economies.

Further evidence is contained in a report of job inspections made by the Pittsburgh Testing Laboratories, which is available on request, together with our latest booklet, "Weatherproof Caulking." Just address The MINWAX Company, 11 West 42nd Street, New York 18, N. Y.

In 1937, MINWAX Caulking Compound was installed on the addition to the famous Bankers Trust Company building, New York City. After 8 years of service the material was found to be in satisfactory condition.



MUNRO WATERPROOFINGS Inc.
ENGINEERS AND CONTRACTORS
501 FIFTH AVENUE
NEW YORK 11, N.Y.

February 1, 1945
The MINWAX Company, Inc.
New York 18, N. Y.

Gentlemen:

We installed MINWAX Caulking Compound on The Bankers Trust Company Building addition in 1937 and a recent inspection of the work by us showed the material in satisfactory condition. This is one of many buildings we have caulked with your materials during the past 18 years on which we have had thoroughly satisfactory results.

Very truly yours,
MUNRO WATERPROOFINGS, INC.
A. G. Munro
A. G. Munro, Pres.

For the 27th Consecutive Year, our Complete Catalog is in Sweet's
BUY BONDS! MORE THAN BEFORE!

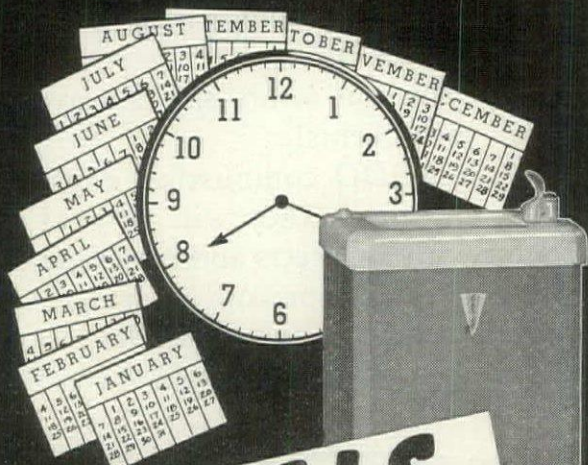
Waterproofings
Caulkings
Dampproofings



Wood Finishes
Waxes
Protective Coatings

COMPLETE CATALOGS IN SWEET'S

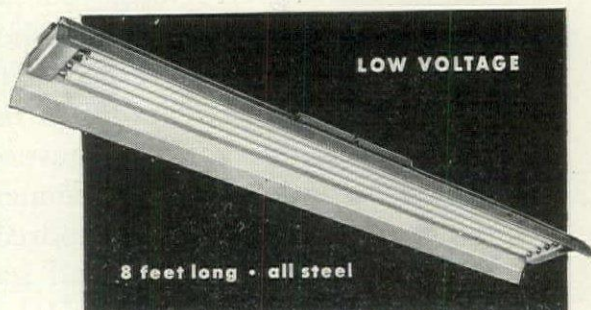
Around the Clock, the Year Around!



OASIS
Electric Water Coolers
Bring Healthful,
Economical Thirst Relief

EBCO MANUFACTURING COMPANY
401 W. Town St., Columbus 8, Ohio

*COLOVOLT COLD CATHODE INDUSTRIAL FIXTURES



Here is the new Colovolt industrial fixture, one of a complete line of industrial and commercial "packaged" units. Equipped with the standard 93" Colovolt 10,000 hour lamp, Colovolt fixtures may be used singly or in continuous line lighting in multiples of 8 feet. Instantaneous starting, no flickering, guaranteed for 1 year except for failure due to breakage are extra advantages of the Colovolt Cold Cathode low voltage fluorescent lamp. The long life expectancy of Colovolt lamps may be realized even when constantly turned on and off, and *pre-scheduled re-lamping, with no loss of production or time, is now possible with Colovolt installations.*

Contact your electrical wholesaler or jobber, or write us for full details and prices.


*Trade mark registered U. S. Pat. Off.



GENERAL LUMINESCENT CORPORATION

622 S. FEDERAL STREET

CHICAGO 5, ILLINOIS

**If it's a problem of
Heating or Cooling
start with the facts on
this complete  line**

Oil-fired Boiler

Gas-fired Boiler

Oil burners

Warm Air Conditioners

(Oil-fired and Gas-fired)

Room Coolers

Cooling and Heating Coils

Remote Room Air Conditioners

Central Plant Air Conditioners

Condensing Units

(for air conditioning and refrigeration)

Evaporative Condensers

Water Coolers

Beverage Coolers

Storage Cabinets

Cube Ice Makers

Conditioned Air Cooling Units

(for commercial refrigeration)

For problems ranging from the heating of a residence to the cooling of a giant office building, General Electric's complete line of equipment will be ready to meet your peacetime needs . . . and G-E engineers will be ready to assist you in the layout of installations.

G-E Heating, Air Conditioning and Commercial Refrigeration Equipment is competitively priced . . . G-E's reputation for engineering experience is your assurance of complete reliability, undivided responsibility — and

ready acceptance by your clients.

Though war now consumes most of our production, it's none too early to get the facts on this comfort-giving equipment your clients want now . . . and will soon demand!

☆ **BUY...and hold...WAR BONDS** ☆

General Electric Company, Air Conditioning and Commercial Refrigeration Divisions, Section 5133, Bloomfield, New Jersey.

**AUTOMATIC HEATING AND COOLING
AIR CONDITIONING AND COMMERCIAL REFRIGERATION**

GENERAL  ELECTRIC

Tune in: The "G-E HOUSE PARTY" every afternoon Monday through Friday, 4 p. m., E W T, C B S . . . The "G-E ALL-GIRL ORCHESTRA," Sundays, 10 P. M., E W T, N B C . . .
"THE WORLD TODAY" News, Monday through Friday, 6:45 P. M., E W T, C B S

(Continued from page 250)

PLASTIC COATINGS. *Amercoat*, 12 pp., 8½ in. by 11 in. This catalog presents technical facts about Amercoat, a compound of thermoplastic, synthetic resins, solvents and pigments, used to protect metal, concrete and wood from corrosion or contamination. A list of industries using Amercoat and illustrations of actual installations are included. Amercoat Div., American Pipe and Construction Co., P.O. Box 3428, Terminal Annex, Los Angeles 54, Calif.

DOORS. *An Improved Prefabricated Ellison Balanced Door Unit*, 12 pp., 8½ in. by 11 in. Full information about the Ellison modern entrance door is included in this booklet which covers installation, operation, hardware, door arrangements, and standard and special door designs. It also contains drawings of typical units, installation, and construction details. Ellison Bronze Co., Inc., Jamestown, N. Y.

ELECTRICAL WIRING. *Manual of Better Home Wiring*, 8 pp., 8½ in. by 11 in. This helpful booklet sets forth simply the wiring requirements and specifications recommended as minimum stan-

dards for better wiring. It gives the minimum wiring requirements for service entrance equipment, circuits, distribution centers; lighting, switch, special purpose, radio and telephone outlets. Part two is devoted to suggested specifications for single family dwellings. Better Homes Dept., Westinghouse Electric & Mfg. Co., 306 Fourth Ave., Pittsburgh 30, Pa.

VAPORSEALS. *Destructive Bubbles of Moisture; Permanent as the Pyramids*, 4 pp., each, 8½ in. by 11 in. The first booklet gives information about Brownskin Vaporseal and how it is used as an effective protection for insulation. The installation is illustrated by diagrams of wall sections. *Permanent as the Pyramids* describes Copperskin, a continuous layer of sheet copper bonded to Brownskin sheathing paper. Advantages offered by its use, and complete installation data are included. Diagrams illustrate various installations. Angier Corp., Framingham, Mass.

AIR CONDITIONING. *How to Plan Your Postwar Air Conditioning Today*, 16 pp., 8½ in. by 11 in. This illustrated booklet discusses how to plan postwar air conditioning to control temperature and humidity, clean the air, and provide adequate ventilation and air circulation. It illustrates and describes necessary equipment including compressors, condensers, units and coils. Installation photos illustrate three general types of air conditioning—self-contained factory-built within-the-space units; self-contained factory built central plant units; custom-built central units. Westinghouse Electric Elevator Co., 150 Pacific Ave., Jersey City 4, N. J.

CHEMICALS. *Labors of War for Peace*, 44 pp., 9 in. by 12 in. This booklet, a review of former advertisements, focuses attention on the many and diversified products Hercules Powder Co. has developed to supply the industrial front. It describes the use of various items such as chemical cotton, paper makers chemicals, synthetics, terpene and rosin chemicals, explosives, etc. and illustrates the finished products—paints, plastics, industrial explosives. This company, through its resources offers help to other companies with reconversion and expansion problems. Hercules Powder Co., Wilmington, Del.

REQUESTS FOR LITERATURE

NASHAAT MORSY, Architect and Official Surveyor, 167 Khedevi Ismail St., Cairo, Egypt, would like to receive literature, catalogs, technical data and samples of manufacturers products.

MELVIN A. YOUNG, 660 St. Catherine St. West, Montreal, Canada, would like to receive latest catalogs for an A.I.A. file.

Designing a swimming pool?

... Design the water, too!

Your clients may not want to *drink* it. But it's nice to know the water they swim in is as *pure* as drinking water. And it is when you specify Permutit*—maker of every form of equipment to control water quality.

Permutit Water Conditioning removes the impurities found in natural water supplies. Permutit equipment is used wherever good water is needed—in industrial plants, municipalities, shops, homes.

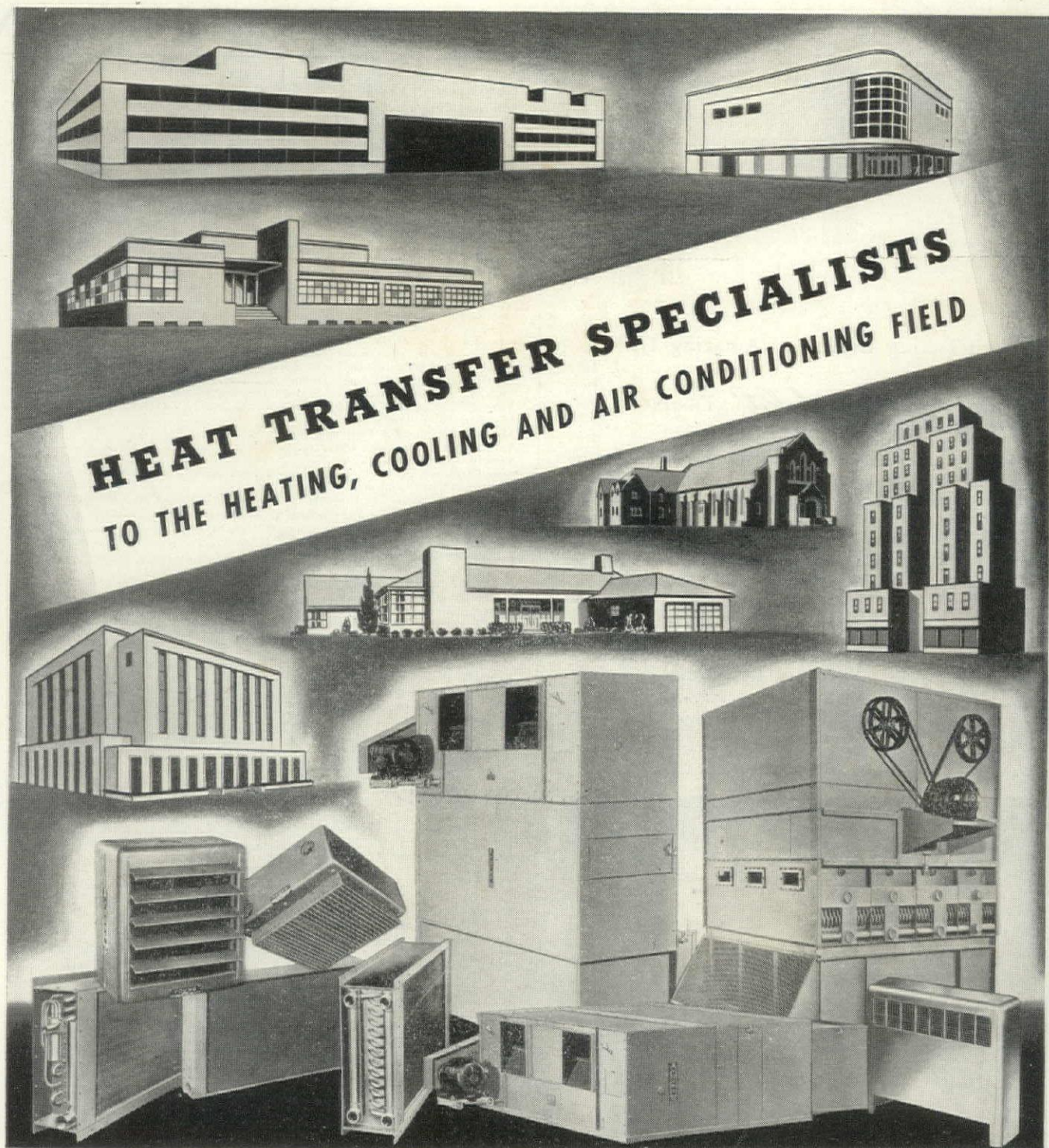
Let Permutit help solve your water problems. Write to The Permutit Co., Dept. AF, 330 West 42nd St., New York 18, N. Y. or Permutit Co. of Canada, Ltd., Montreal.

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

PERMUTIT

WATER CONDITIONING HEADQUARTERS





The accent, tomorrow, will be on comfortable living. An accumulated demand for modern heating and air conditioning equipment merely awaits the lifting of current restrictions. Young is ready with a complete line of heating, cooling and air conditioning units for homes, apartment buildings, factories, stores, schools, office and public buildings. You should become thoroughly acquainted with these Young products. Write today for full information

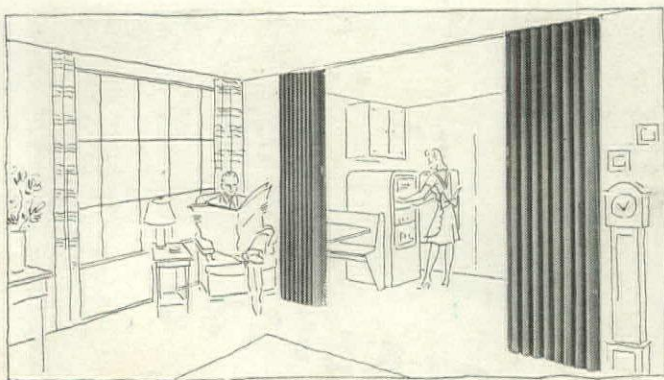
YOUNG

HEAT TRANSFER PRODUCTS

Manufacturers of Oil Coolers • Gas, Gasoline, Diesel Engine Cooling Radiators • Heat Exchangers • Engine Jacket Water Coolers • Unit Heaters • Convectors • Condensers • Evaporators • Air Conditioning Units • Heating and Cooling Coils • and a Complete Line of Aircraft Heat Transfer Equipment.

YOUNG RADIATOR CO., Dept. 155-C, RACINE, WISCONSIN, U.S.A.

Application Engineers in Principal Cities — Consult your Phone Directory



Breath-Taking Beauty . . . Amazing Utility

. . . with *Modernfold* Doors

Your clients will appreciate the beauty and utility of Modernfold Doors. With its beautiful fabric covering, this strong, metal-framed accordion-type door makes any room irresistibly attractive! And you never saw such utility! Quick, easy room division . . . elimination of door-swing area . . . many feet of floor and wall space made usable! These are only a few advantages of this amazing Modernfold. You'll want the whole story! Write today for all the facts . . . see how Modernfold's beauty and utility can help you in your business.

NEW CASTLE PRODUCTS

1613 I Street, New Castle, Indiana

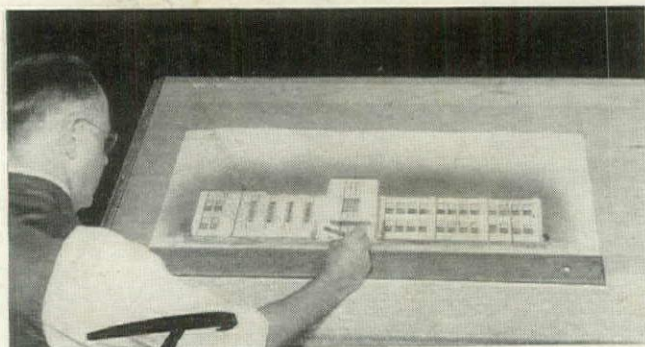
Distributors in All Principal Cities

In Canada

Richards, Wilcox Canadian Co., Ltd.

LONDON

ONTARIO



Fountains

FOR TOMORROW'S SCHOOLS

That new school building that's on the board now awaiting the easing of civilian restrictions—it's probably the most modern in school design. All the latest comforts and conveniences are being specified . . . and of course that includes Halsey Taylor fountains.

For here are the fountains for the building of tomorrow, available today for essential replacements and health-safe installations. Get our latest catalog illustrating and describing the complete Halsey Taylor line.

THE HALSEY W. TAYLOR CO., Warren, O.



Halsey-Taylor
DRINKING FOUNTAINS



A-2

SPECIFICATION AND

The advertising pages of FORUM are the recognized market place for those engaged in building. A house or any building could be built completely of products advertised in THE FORUM. While it is not possible to certify building products, it is possible to open these pages only to those manufacturers whose reputation merits confidence. This FORUM does.

Abesto Mfg. Co.	50
Adam, Frank, Electric Co.	29
Air-Maze Corp.	247
Airtemp (Division of Chrysler Corporation)	164
Allied Chemical & Dye Corporation (The Barrett Division)	223
Aluminum Company of America	21, 217
Aluminum Window Corp. (Subsidiary of General Bronze Corp.)	61
American Air Filter Co., Inc.	155
American Brass Company, The	207
American Central Manufacturing Corporation	26
American Flange & Manufacturing Co., Inc.	163
American Hot-Dip Galvanizers Ass'n, Inc., The	193
American Lead Pencil Company	39
American Lumber & Treating Company	38
American Radiator & Standard Sanitary Corporation	260
American Rolling Mill Company, The	204
American Stove Company	48
American Telephone & Telegraph Co.	230
Anchor Post Fence Company	54
Andersen Corporation	160, 161
Arco Company, The	54
Armstrong Cork Company	185
Aviation Corporation, The (Spencer Heater Division) (Horton Mfg. Division)	73, 159
Barrett Division, The (Allied Chemical & Dye Corporation)	223
Bathe-Rite Division (Milwaukee Stamping Company)	78
Bell & Gossett Co.	43
Bell & Howell Company	214
Bendix Home Appliances, Inc.	83
Bigelow-Sanford Carpet Co., Inc.	81
Bituminous Coal Institute	87
Bohn Aluminum and Brass Corporation	195
Borg-Warner Corporation (Norge Division)	45
Brasco Manufacturing Company	77
Breeze Corporation, Inc.	25
Bryant Heater Co.	245
Burnham Boiler Corporation	63
Byers, A. M. Company	11
B & T Metals Company, The	259
Cabot, Samuel, Inc.	236
Calcium Chloride Assn.	176
Cardox Corporation	18
Carey, Philip Company, The	212
Carr, Adams & Collier Company, Inc.	154
Case, W. A. & Son Mfg. Co.	14
Ceco Steel Products Corporation	2, 3
Celanese Celluloid Corporation	Cover III
Celotex Corporation, The	Cover II
Chicopee Manufacturing Corp.	92
Chrysler Corporation (Airtemp Division)	164
Cleveland Steel Products Corp.	51
Coleman Lamp and Stove Company, The	153
Columbia Mills, Inc., The	213
Combustion Equipment Division (Todd Shipyards Corporation)	253
Connecticut Telephone & Electric Co. Division (Great American Industries, Inc.)	64
Coolerator Company, The	233
Corbin, P. and F.	85
Coyne and Delany Co.	93
Crane Co.	235
Crawford Door Company	237
Curtis Companies	210
Defoe Shipbuilding Company	186
Detroit Steel Products Company	192
Douglas Fir Plywood Association	Opp. 181, 208
Dow Chemical Company, The	37
Dresser Industries	216
Du Pont, E. I. de Nemours & Co., Inc. (Grasselli Chemicals Department)	166
Eagle-Picher Lead Company, The	28
Ecco Manufacturing Co., The	254
Edwards & Company	234
Eljer Co.	19
Emerson Electric Manufacturing Co., The	241
Faraday Electric Corporation (Stanley & Patterson Division)	59
Federal Cement Tile Company	197
Federal Electric Company, Inc.	34, 35
Fiat Metal Manufacturing Company	32
Fir Door Institute	49
Firestone	227
Fitzgibbons Boiler Company, Inc.	44
Flintkote Company, The	196
Follansbee Steel Corporation	200
Formica Insulation Company, The	17
Frigidaire Division (General Motors Corp.)	47
Car Wood Industries, Inc.	167
General Bronze Corporation (Aluminum Window Corp. Div.)	61
General Electric Company	Opp. 33; 228, 229, 255
General Luminescent Corporation	254
General Motors Corporation	47, 169
Grand Rapids Hardware Company	90
Grand Rapids Store Equipment Co.	226
Grasselli Chemicals Department (E. I. Du Pont de Nemours & Co., Inc.)	166
Great American Industries, Inc. (Connecticut Telephone & Electric Div.)	64
Great Lakes Steel Corporation (Stran-Steel Division)	33
Hoffman Specialty Co., Inc.	183
Homasote Company	246
Horn Company, A. C.	53
Horton Mfg. Co. Division (Aviation Corp.)	159
House Beautiful Magazine	199
Hudson Coal Company, The	30

BUYING INDEX

ILG Electric Ventilating Co.	198
Imperial Brass Company	209
Insulite Company, The	84
International Boiler Works Co.	180
Johns-Manville	Bet. 32 & 33, 52
Kennedy, David E., Inc.	219
Kewanee Boiler Corporation	Opp. 32
Kimberly-Clark Corporation	71, 88
Lasier Company, Norton	31
Laucks, I. F., Inc. (Subsidiary of Monsanto Chemical Company)	239
Libbey-Owens-Ford Glass Co.	70
Lindemann, A. J. & Hoverson Co.	215
Liquidometer Corp., The	236
Lockport Cotton Bating Co.	157
Lockwood Hardware Mfg. Co.	79
Lumittle	80
Majestic Company, The	252
Marsh Wall Products, Inc.	184
Masonite Corporation	60
Mengel Company, The	91
Mesker Bros.	66, 67
Michaels Art Bronze Co., Inc., The	56
Milcor Steel Company	15
Mills Industries	252
Milwaukee Stamping Company (Bathe-Rite Division)	78
Minneapolis-Honeywell Regulator Co.	170, 171
Minwax Company, Inc.	254
Monsanto Chemical Company Subsidiary (I. F. Laucks, Inc.)	239
Mueller Brass Co.	243
National Cotton Council of America	177
National Door Manufacturers' Association	150
National Electric Products Corporation	191
National Gypsum Company	96
National Radiator Co., The	68
Nelson, Herman Co.	202, 203
New Castle Products	258
Norge Division (Borge-Warner Corporation)	45
O'Brien Varnish Co.	168
Ohio Hydrate & Supply Co., The	220
Ornamental Metal Manufacturers, National Association of	27
Otis Elevator Company	156
Overhead Door Corporation	Cover IV
Owens-Illinois Glass Company	221
Paine Lumber Company, Ltd.	86
Paraffine Companies Inc., The	24
Payne Furnace & Supply Co.	230
Penn Galvanizing Co.	236
Permutit Co., The	256
Pittsburgh Plate Glass Company	94, 95, 173, 182
Pittsburgh Plate Glass Company, Paint Division	Opp. 180
Polhemus, P. B. Co., Inc.	252
Portland Cement Association	240
Pratt & Lambert, Inc.	188
Propellair, Inc.	158
Pryne & Co., Inc.	206
Republic Steel Corporation	178, 179
Revere Copper and Brass, Incorporated	211
Reynolds Metals Company, Aluminum Division	165
Ric-Wil Co., The	231
Robertson, H. H. Company	174, 175
Roddia Lumber & Veneer Co.	Bet. 80 & 81
Rolscreen Company	238
Roper, Geo. D. Corporation	236
Rotary Lift Co.	259
Round Oak Company	89
Rowe Manufacturing Co.	149
Russell & Erwin Mfg. Co.	251
Saturday Evening Post, The	224, 225
Seaportel Porcelain Metals, Inc.	162
Sedgwick Machine Works, Inc.	250
Siskraft Company, The	244
Smith Corporation, A. O.	62
Spencer Heater Division (Aviation Corp.)	73
Stanley & Patterson Division (Faraday Electric Corporation)	59
Stewart Iron Works	16
Stran-Steel Division (Great Lakes Steel Corporation)	33
Surface Combustion Corporation	189
Swartwout Co., The	158
Sylvania Electric Products Inc.	76
Taylor Co., Halsey W.	258
Tile-Tex Company, The	74
Todd Shipyards Corporation (Combustion Equipment Division)	253
Tomlinson	55
Truscon Steel Company	205
Upson Company, The	4
United States Gypsum Company	23
U. S. Machine Corporation	46
United States Rubber Company	20
United States Steel Corporation	82, 152
Universal Atlas Cement Co. (United States Steel Corporation Subsidiary)	82
Van Range, John, Co., The	50
Victor Electric Products, Inc.	65
Walworth Company	181
Wasco Flashing Company	12
Webster, Warren & Co., Inc.	22
Weiss, Henry Mfg. Co., Inc.	57
Westinghouse Electric Elevator Co.	222
Westinghouse Electric & Manufacturing Co.	40, 41, 201
Wheeler Osgood Company, The	242
Wheeling Corrugating Co.	151
White-Rodgers Electric Co.	232
Wiley, John & Sons, Inc.	42
Williams Oil-O-Matic Heating Corporation	69
Wood Conversion Company	13
Woodruff, F. H., and Sons, Inc.	58
Worthington Pump and Machinery Corp.	187
York Corporation	75, 249
Young Radiator Company	257



THIS A.I.A. FILE GIVES NEW SLANTS ON ELEVATORS

Follow the new trend in building construction . . . the use of Rotary Oildraulic Elevators for two, three and four-story service. Learn how these modern (push-up instead of pull-up) elevators save space and structural costs . . . give smooth, dependable, trouble-free service. Write for catalog RE-301 containing complete information and Architect's Layout Data.

ROTARY LIFT CO., 1066 KENTUCKY, MEMPHIS 2, TENN.

Rotary OILDRAULIC ELEVATORS

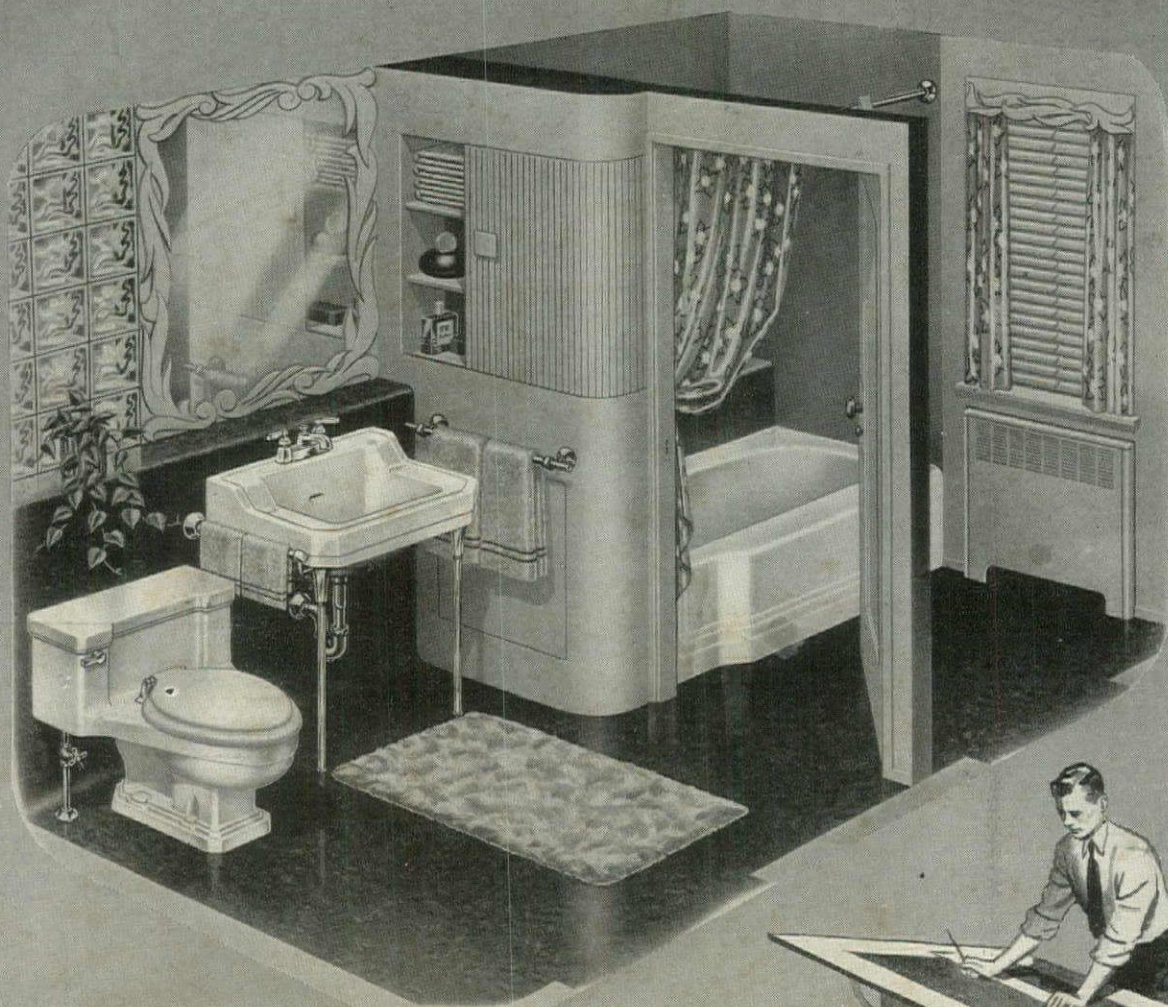
Trims that STAND OUT

in beauty
permanence
utility and
ease of
installation

B&T METAL TRIMS Trade marked **CHROMEDGE** TRADE MARKED REG. U. S. PAT. OFF.

Chromedge aluminum and stainless steel trims not only stand out, they stand up—they're durable as well as beautiful. And there will be striking new features in the B & T line that will give you the jump on competition! Write for details on the new B & T dealer policy.

The B & T Metals Co., Columbus 16, Ohio



Duo-Use Design...

newest idea for bathrooms introduced by "Standard"

FOR CLIENTS who want the luxury of two separate entrances to the master bathroom, the Duo-Use Design originated by "Standard" is ideal. It also enables you to plan a bathroom that can be used by two people at the same time—practical for apartments and hotels as well as homes.

Above is one of many ways to employ the Duo-Use idea. A simple partition with connecting door divides the room, yet doubles its duty—one section for bath and shower, the other for water closet and lavatory. There's extra wall space for cabinets and closets,

extra doors for accessibility.

Yet Duo-Use calls for no extra plumbing fixtures or extra piping.

Our design department will be glad to work with you in creating Duo-Use bathrooms for homes or apartments you may now be planning.



AMERICAN RADIATOR & Standard Sanitary

New York CORPORATION Pittsburgh