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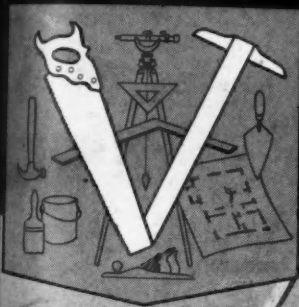
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DETROIT

AND BUILDING AGE

BUILDER

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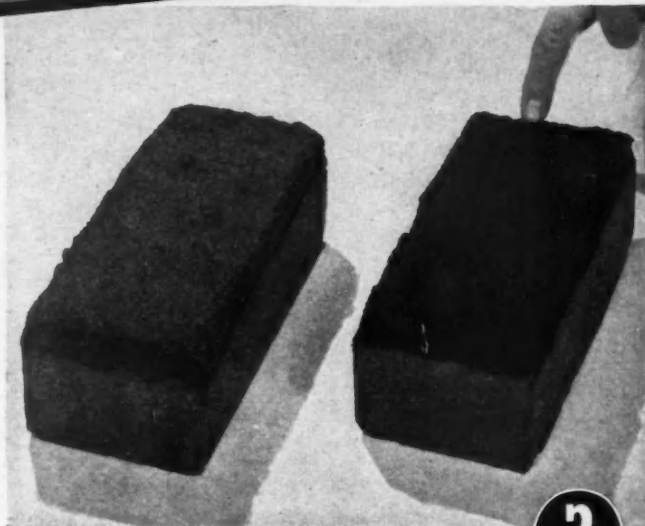
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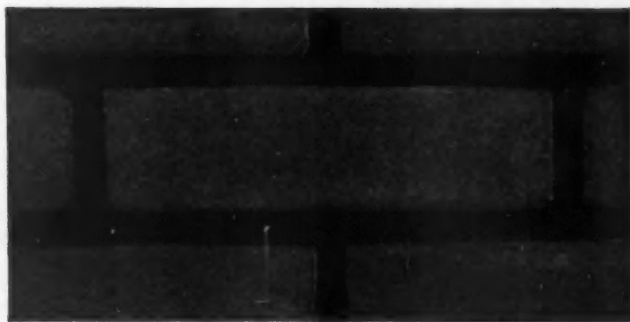
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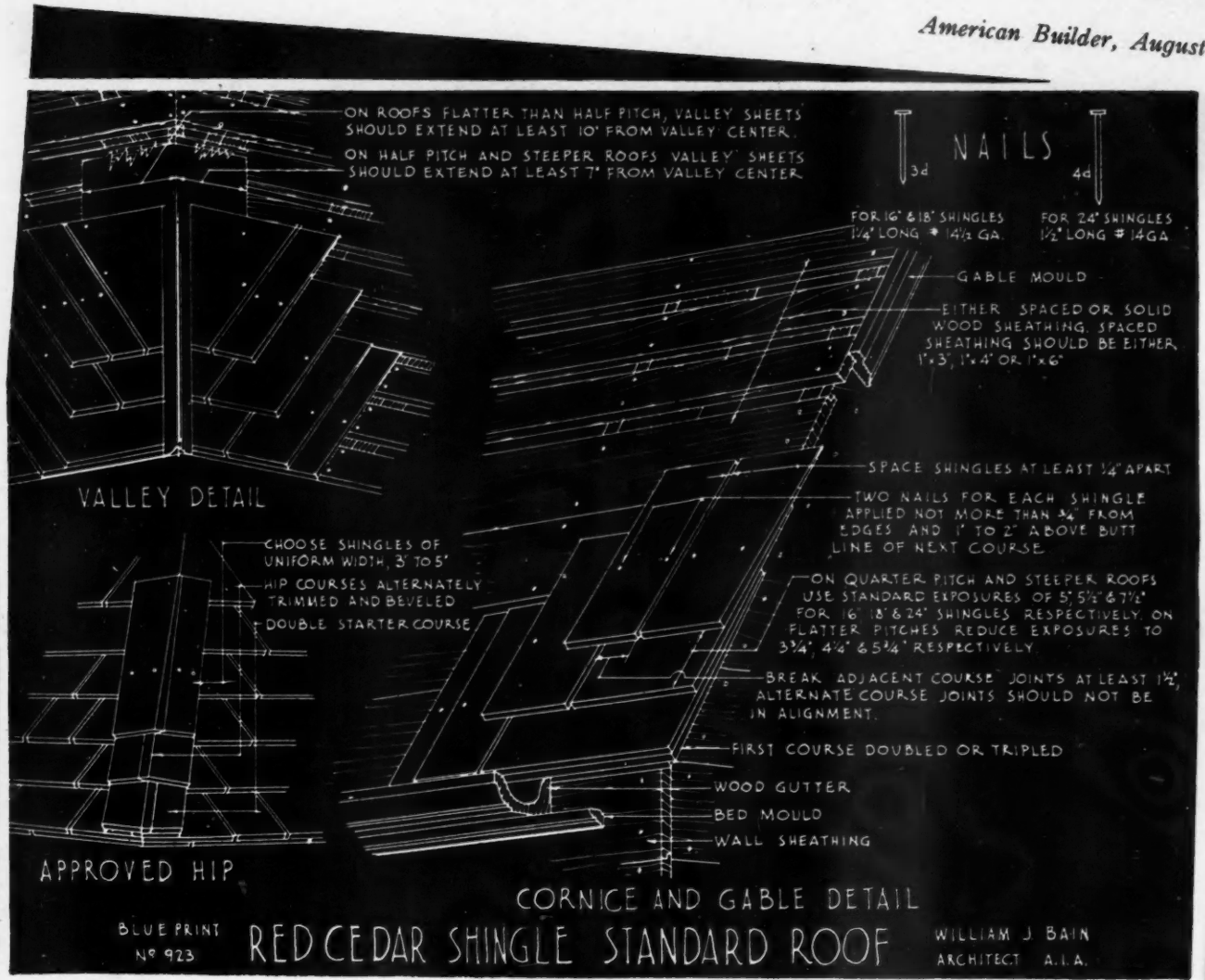
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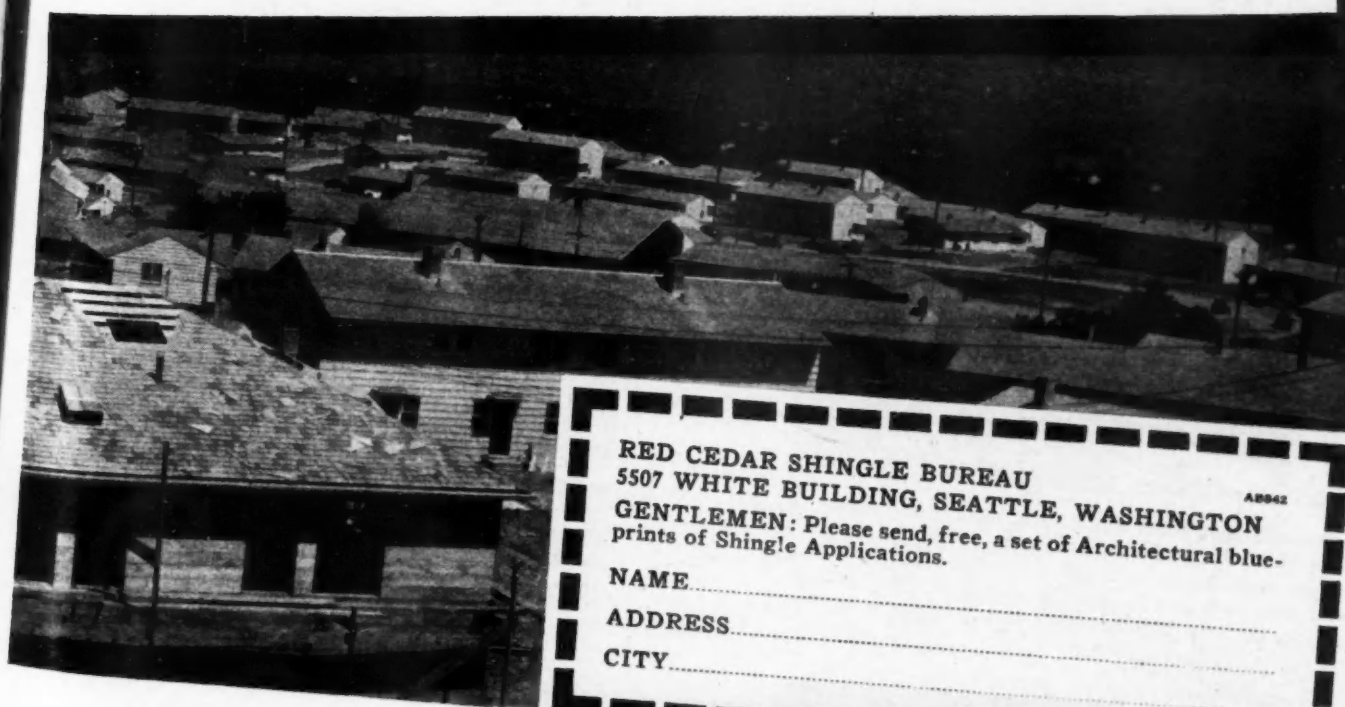
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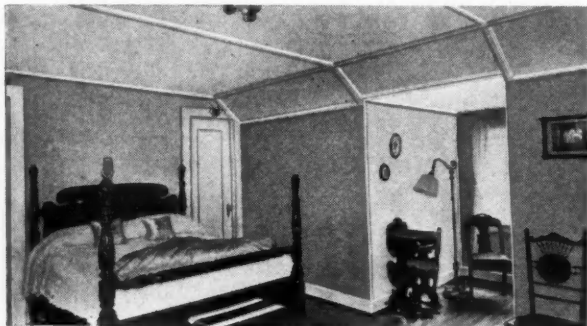
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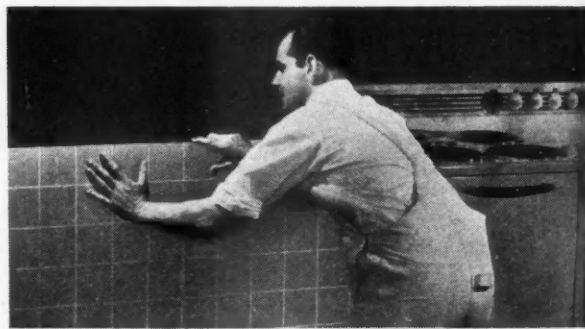
WHILE a good part of current output is going for direct war needs, Upson Panel Board is *not now on the critical list*. Shipments in reasonable quantities can be made for countless uses in remodeling, modernization, restyling and repair. Keep your stock up. Take steps to move it faster. For example...



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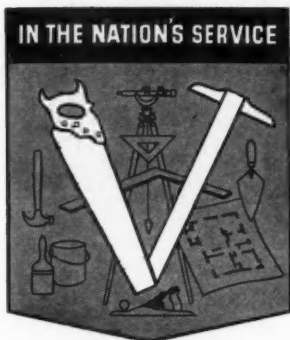
THE UPSON COMPANY LOCKPORT, NEW YORK

★ AMERICAN ★ AND BUILDING AGE ★ BUILDER ★

64 YEARS OF CONSTRUCTIVE LEADERSHIP

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METAL PRODUCTS...WALL PAINT
INSULATION...SOUND CONTROL

Publisher's Page

Inflation and Rents

SOUND and effective government policies during the war for preventing inflation should be supported by everybody, and should include control of prices and rents. But to be sound and effective, they must be equitable. Because they have not thus far been equitable, the danger of inflation increases daily.

A policy of "freezing" rents that applies to 85 per cent of the non-farm population was adopted in April. In 238 defense areas they were restricted to the basis of March 1; in 83 to the basis of earlier dates.

The rent an owner of property can afford to take depends on his total costs of owning, maintaining and operating it. If his rents are fixed while his costs increase, his profit and the value of his property decline or disappear. Millions of large and small property-owners were thus ruined during the great inflation in Germany in the 'Twenties. And our government, while controlling rents, is failing in two essential ways to limit costs.

First, it is still authorizing advances in wages—most recently in the steel industry—that stimulate demands for advances in other wages and in prices of materials. Second, it is permitting advances in farm prices which ostensibly justify advances in wages. Farmers cite the advances in wages, labor cites the advances in food prices; and between these two politically powerful groups everybody else is getting squeezed.

There will be less building with private capital during the war, anyway. But why should *government*, even during the war, thus reduce or destroy the income and property value of millions of its most thrifty and patriotic citizens?

And we must look ahead. A government official in control of rents in a large metropolitan area has just predicted continuance of government control of rents after the war. How drastically, how long, for what purpose? There will be a severe shortage of housing in communities throughout the country. If control of rents makes home building and owning unprofitable, private capital will not be invested.

The only alternative will be government building and owning. But government can use only the *taxpayers'* money. If private investors can not get enough rent to make investment pay, neither can government. And if government rents for less than ownership costs in competition with private ownership, it will destroy profits of private ownership, while incurring a loss of taxpayers' money.

This question of rents plainly requires scrutiny not only from a war standpoint, but from a post-war standpoint. First, it is unjust and senseless to "freeze" rents to help prevent inflation, and at the same time allow advances in prices and wages, continuance of which inevitably will cause inflation, anyway. Second, control of rents as a *war* policy can afford no argument for it as a *post-war* policy—unless, of course, the purpose is to prevent *private enterprise* building and owning for *profit*, and promote *government* building and owning at a *loss*—and in competition with privately-owned property helping in taxes to pay the loss.

Government control of rents should be used solely to help prevent inflation, and only in proportion to the control applied to all prices and wages for the same purpose. But there is serious danger it will be abused during the war and later; for there are many very influential persons who are looking for every condition, wartime or peacetime, which can be used as an argument for huge expenditures of the taxpayers' money on *government* housing at a *loss* to prevent *private* investment in housing at a *profit*.

Samuel O. Drumm,



INSTALLATION IS A MATTER OF "MINUTES"—not days, with the Coleman Floor Furnace. Scene is at Stansbury Estates project, Baltimore, Md.

**Low-Cost
Coleman
Heating
Units
Meet
Your
Small
Home
Budget!**



COLEMAN FLEXIBILITY MEETS ANY DEMANDS! ...Adapts itself to perfect installation in nearly every type of modern home, large or small.

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3 Title VI, Wichita, Kans. (FF)

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Audubon, N. J. (FF)
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Here's Your Proven Easy Way To Hold Down Heating Equipment Costs! Thousands of defense home installations, plus extra thousands of private home installations, have proven to builders everywhere the saleability and lasting satisfaction of Coleman Floor Furnaces (gas or oil), and Coleman Oil Heaters!

First, they're priced to fit your building budgets for small homes—but designed by the finest engineers in the industry to pro-

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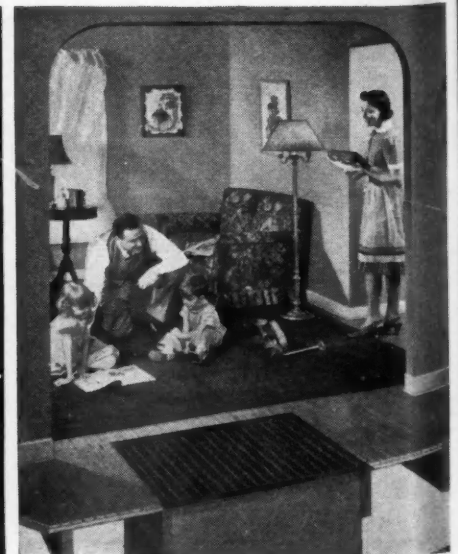
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America's Largest Selling
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for Oil or Gas

America's Popular
OIL HEATER
with Famous "Furnace-Type" Units



THE BLACK OF WAR ADDS ANOTHER *Plus* TO

BRADLEY
Quality



Under the impact of war, achievements of America's industries are unprecedented . . . in mass production of military essentials . . . in swift concepts of new developments and uses inspired by necessity.

In the attainment of these goals, lumber manufacture has played an important part. In genius, in research, in the immediate application of what each develops, producers of lumber are in step with those of metals, of plastics, of chemicals.

Out of this laboratory of war, emerging from the crucible of conflict, will come keener appraisal of basic materials, practical knowledge of their new and wider uses, greater service to mankind.

In this rigorous, creative school of experience Bradley is enlisted for the duration. What it is learning will become a fresh chapter for the book of Bradley Brand quality. Looking ahead to the building market of Peace after Victory, that book will be dedicated anew to the trade and building profession as the Standard of Comparison for hardwood and pine products.

BRADLEY LUMBER COMPANY *of Arkansas*
WARREN, ARKANSAS

On and Off the Record

by *Structor*

News, Views and Comments

POST-WAR TITLE VI—Right now I want to put in a word for a post-war FHA Title VI. The rental-purchase plan giving buyers a chance to acquire their equity over a 30-month period is working out. It makes home ownership easier than ever before. Title VI also minimizes speculative risk. Let's start working right now for a carefully planned post-war small home program by private builders along Title VI lines. The need for public housing would be largely eliminated because private builders would be able to give small home buyers so much MORE for their money they wouldn't take a public project as a gift.

The Title VI method makes possible what the public housers have always said was so much needed—rental housing. But the difference is that there is an *incentive* under Title VI to change the renters into owners, and the job can be done *without government subsidy*. This is something the building industry ought to start working on right away.

PD-545—Out of its capacious pocket, the War Production Board has pulled another form to help (?) builders. This is Form PD-545, to enable them to get utilities. It is only *two* legal pages long. The builder must get it filled out by the utility company. He then takes it to the Federal Housing Administration and files it along with his regular priority Form PD-105. Since both forms are processed together this may help speed up the utilities problem. But it means one more form to worry about.

WHY NOT SIMPLIFY?—As a matter of fact what is needed is one simple "package" priority that will cover everything. After all, war houses have now become pretty well standardized. By analyzing a dozen or so of the most common types on file at FHA, the War Production Board could quickly arrive at some over-all figures on the amount of materials that would be permitted. All that would be needed then would be a printed list of the maximum amount of critical materials allowed in each house. All the endless detailed reports and quantity estimates could then be thrown out the window.

THEY STOLE THE BOILER—The other day an apartment house boiler blew up, thereby causing a lot of trouble and making a good new priority story. The builder who owned the building immediately tried to get priority assistance, but it became quickly apparent that long before he could get the forms filled out the tenants would be yelling their heads off. It was a tough problem. His friend "X" had plenty of boilers in the warehouse, but "X" could not let him have one. However, he did point out that there was a faulty lock on the side door and that there would be no one around after twelve o'clock Saturday. At one o'clock the builder backed a truck up, stole the boiler, and soon had it at work. We suppose "X"'s books will show "one stolen boiler."

A WAR WONDER—We hope that the merger of Home Builders Institute and National Home Builders Association pans out. If it does it will be little short of a miracle, and the only possible answer will be that "war works wonders." Builders have always been such an ornery, individualistic fighting crowd that whenever they get together they do more harm to each other than to their real enemies outside the industry. That was certainly true whenever members of H.B.I. and H.B.A. got together. At one meeting in Washington it looked for a while as

though some of the boys were going to throw some of the others out. But the gentlemen under criticism were pretty husky individuals, and it didn't quite happen.

The emergency has made it necessary for builders to swallow their differences and get together in order to face the problems of the day at Washington. In doing so, they have found that they are all pretty much in agreement on important matters. Let's hope the merger works out.

BARRACKS VS. TRAILERS—To our mind trailers are a better solution to temporary war housing than barracks. Estimates of the cost of barracks run from \$300 to \$600 per man. A trailer, on the other hand, housing four men can be built for less than \$1,000 and the trailers could be more easily moved and used after the war.

TOUGH ON MARRIED WORKERS—So now American workers are to be herded in barracks. If they were young bachelors they might stand it a while, but the young fellows are in the Army. It looks like a long war, and I doubt that married men will be happy or do a good day's work in a barrack environment.

HOUSERS' VIEW—I suppose that public housing advocates will say that private builders have "failed to provide enough homes for war workers." There will probably be speeches in Congress to that effect. When that happens I know a good many builders who will be very happy to relate the story of how their jobs were strangled for lack of a few vital utilities or materials—how they were led on by promises of priority assistance and then miserably let down.

INTENTION OF ORDER—Limitation Order L-41 has been given such a variety of interpretations that apparently the War Production Board felt it would have to make a special statement. On June 26 an official document was issued (WPB-1376), which says: "*The intent of the order is to reduce non-essential construction to a minimum so that all possible material, equipment and effort will be available for use in direct war production.*"

"All construction work—including repainting and redecorating—which is not absolutely necessary, should be deferred for the duration.

"The intent of the order is to limit maintenance and repair to that which is absolutely necessary to keep a structure in sound working condition or to restore it to that condition."

If you have any doubts about L-41, there's your answer.

PLASTIC TUBS—It's a stimulating pastime in these priority ridden days to contemplate the home of the future. We hear of plastic bathtubs, aluminum and steel wall panels, new and wonderful combinations of plastics, light metals and plywood. They tell us that entire kitchen sink and cabinet units will be stamped out in one streamlined piece. Plastic soil pipes will reduce weight. Still further standardization of house equipment and parts will take place and bring about lower costs.

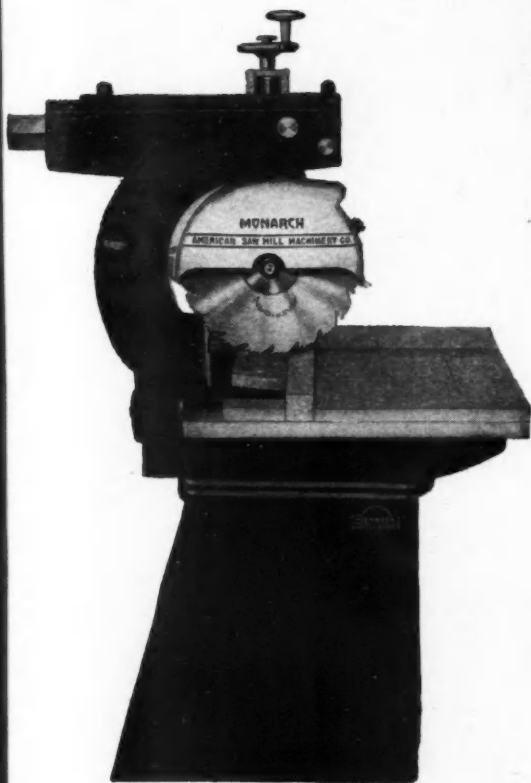
"Partial prefabrication" is the phrase being widely used to describe the use of future standardized wall sections. The competition between wood, steel, aluminum, copper, plastics and

(Continued to page 88)

NOTHING TO GET! IN YOUR WAY!

Monarch Uni-Point Radial Saw's Telescoping Ram Leaves Work Table Free and Clear

Enjoy the wide open spaces above the table! No long arm to invite headon collisions or strike operator's shoulder. With ram and saw returned behind guide fence, work table is left free and clear.



And here's another great time saving feature of this marvelous modern machine: The UNI-POINT Saw always enters the work at same point in table, whether set for horizontal, vertical or compound miter cross-cut angle.

Think what this means on a mass production job! No moving of material, stops or gauges. No need to raise or lower saw, or wait for saw to stop on cross-cut angle changes. Simply pivot or tilt, lock and start cutting. UNI-POINT stops automatically and accurately at all common positions.

And note: UNI-POINT locking levers are in "safety-zone" in front of and below table. No dangerous reaching over saw to make these adjustments.

For faster, more accurate production—whether army camp, housing project, industrial plant, shipyard or pre-fabrication construction—install these versatile UNI-POINT Radial Saws NOW and watch your output jump.

Write For Details

We also manufacture modern designed Saw Benches, Band Saws, Jointers, Planers, Lathes, Shapers, Mortisers, Sanders, Swing Saws and a complete line of Saw Mill Machinery. Send for Catalog 60.



AMERICAN SAW MILL MACHINERY CO.
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Letters

from Readers

*Facts, Opinion and Advice
Welcomed for This Dept.*

Navy Wants Construction Workers

Chicago, Ill.

To the Editor:

The Navy's Bureau of Yards and Docks must build hundreds of advanced fleet and air bases outside the continental United States. Approximately 40,000 qualified construction workers have been enlisted for this purpose. They are serving in many parts of the world and the need for them is becoming increasingly urgent.

The purpose of this letter is to inquire whether you would be interested in publishing an article in your publication on the subject. If so, we will cooperate with you. It is our belief that such an article would be a distinct contribution to the war effort as well as of interest to your readers.

U. S. NAVY RECRUITING STATION,
By Lt. R. E. Harrison, CEC-V(S), USNR.

Editor's Note: Such an article will appear in an early issue.

These Are Trying Times

Savannah, Ga.

To the Editor:

For the past several months your magazine has been promoting the sale of plywood, showing methods of using this material in every conceivable way. We appreciate the information and promotional work for our salesman, but we would like to have you spend some time telling us how we can obtain this board without having a priority number from an airplane factory or shipyard. An army camp with an A-1-J priority isn't strong enough to draw the perspiration from a fat man on a summer day.

We have used everything imaginable.

JOHN M. HARMON & SON,
By John M. Harmon, President.

Likes Paneling Details

Clinton, Iowa

To the Editor:

In the June issue of the *American Builder* you carried an article on page 66 on the subject of "Paneling in Knotty Pine." This was written by R. J. Alexander.

I think this article is very helpful and I found it extremely interesting. By running the details and drawings on page 67 you give a builder a very good idea of the whole subject.

In times like these, with practically all building stopped, other than Government work, the average carpenter and builder is seeking ideas which can create business for him. There is a big market in every community for remodeling work, and knotty pine paneling opens up a good possibility for creating business.

CLINTON HOMES, Inc.
By E. J. Wolf, General Manager

\$250 Profit on \$375 Job!

Bethlehem, Pa.

To the Editor:

The average building contractor, unless he has a government contract or sub-contract, is so discouraged by the many restrictions that the war necessarily has placed upon him, that he sees no way of continuing in business.

The smart man is looking for a new outlet in his own line, which will enable him to continue in business.

Our principal materials (for "Plasterbrick") are cement, sand, and water, of which there are apparently an abundance. Here is

an opportunity for reliable contractors to go into the home modernization field, a field at which most of them would have scoffed a few months ago.

The siding industry has been given a "black eye" by a certain element that resorted to misrepresentation and high pressure tactics in order to get business.

This is an opportunity for reliable contractors to get their share of this business, and allow me to assure you it is not a piker business, but worthy of the efforts of big business men, as well as small.

For instance, there are millions of old brick homes throughout the country from which the mortar is falling. Some owners

(Continued to page 30)



OLD STORE building above transformed as shown for \$375 (plus a profit of \$250).

Why READ AMERICAN BUILDER Now?

"I CAN'T BUILD UNDER L-41 ANYWAY"

"I CAN'T GET THE MATERIALS I NEED"

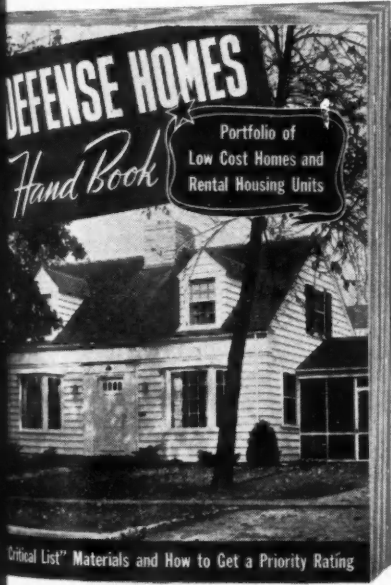
"I'M TOO BUSY WITH WAR WORK"

There is every reason in the world for you to read *American Builder* now, especially if you happen to be despairing about not being able to build under L-41.

With the aid of *American Builder* you will discover, like so many other builders are doing, that there is ample work you can do under L-41 and at a profit, too.

In the last issue, for example, *American Builder* uncovered no less than 100 remodeling, conversion and repair jobs which can be done under L-41. In this issue, more food for thought and action is offered in the \$500 house and structure business which is being done by an ingenious small town building contractor.

In coming issues you will find scores of additional suggestions which will help you locate the specific jobs you can do. Not only will these job opportunities be laid before you, but you will also be offered the most effective designs to use in doing such work and the best methods to hold down costs and to dispose with critical materials.



Subscribe to *American Builder* now and be prepared to meet any one of the innumerable eventualities which may come to pass during the unpredictable year ahead.

As busy as building men engaged in war construction work may be, by no means should they overlook the numerous practical ways *American Builder* can serve their needs.

American Builder is a literal "war building manual." It will keep you regularly informed on the best ways to speed-up construction. It will provide you with new design ideas and the most efficient and economical methods to perform every phase of a war building job.

American Builder's editors are constantly scouting war projects all over the country to bring you the best plans and methods used by others so that you can apply them in your own work. "Not Boxes, Not Barracks—But HOMES" in this August issue is a typical example of just that.

Make it a point to read *American Builder* regularly for these aids, and for the help it can be to you in interpreting and simplifying Government regulations and priority procedures.

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AMERICAN BUILDER, 30 Church Street, New York, New York

Enter my subscription for 1 year (\$2) 2 years (\$3)

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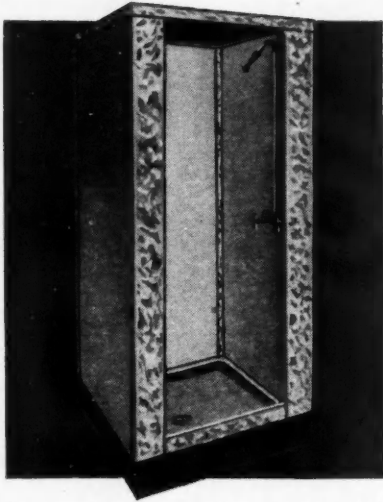
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Free ... Fill in the coupon at the right—attach your remittance \$2 for a one year subscription to *American Builder* or \$3 for two years and mail. As soon as your subscription payment is received, a postpaid copy of our 180 page DEFENSE HOMES HANDBOOK will be mailed to you free of charge.

Specially Designed

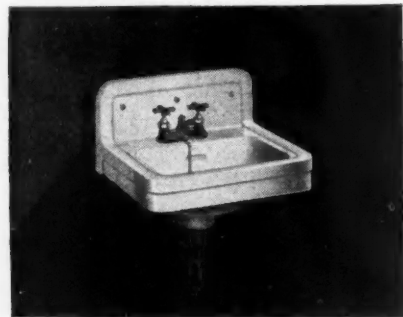
FOR DEFENSE HOUSING



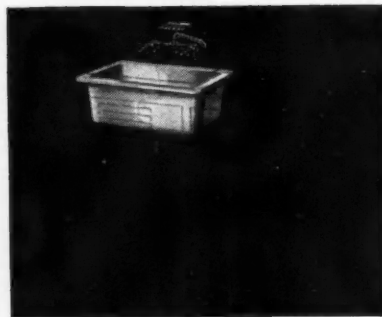
Non-metallic shower stall approved by U. S. engineers. Wall of fiberboard, baked-on enamel finish—metal parts galvanized steel. Receptor pre-cast concrete with integral drain. Size 32 x 32 x 75".



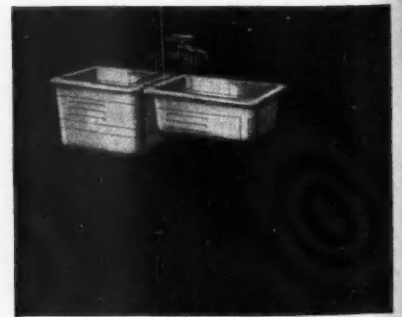
C 11-145 Newton closet of vitreous china. Quiet washdown action. Plain tank shelf top. Trimmings of non-critical materials.



CE-764 New "Victory Cantonment" Lavatory—Made of vitreous china with cast iron trim. Mounts directly on wall with screws—no hangers needed. Trim is cast iron.



CE 19-566 Duraclay kitchen sink with flat rim for installing in continuous counter. Size 24 x 18", 8" deep. Has galvanized strainer.



CE 21-235 Duraclay flat rim laundry tub for installing in counter. Shown with CE 19-566 sink. Size 22 x 18", 14" deep. Has galvanized iron waste plug with stopper.

Two essentials in the construction of any defense house are low cost and the minimum use of critical materials.

In support of our Victory effort, Crane Co. has developed special plumbing equipment designed to assure maximum service to America's army of workers and at the same time to conserve strategic materials.

Lavatories, closets and sinks of vitreous china or Duraclay require metal only in the trim and even here a newly developed Crane line of cast iron faucets and waste supplies practically eliminates the use of brass.

A new shower stall made largely of non-critical materials is substituting for bath tubs.

Your Plumbing Contractor can give you information and prices on this equipment, or call your nearest Crane Branch for the details.

CRANE

CRANE CO., GENERAL OFFICES:
836 S. MICHIGAN AVE., CHICAGO

VALVES • FITTINGS • PIPE
PLUMBING • HEATING • PUMPS

NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS

1942



**WAR WORK
TODAY—**

Kawneer

The Kawneer Company, Niles, Michigan—Manufacturers of
Rustless Metal Store Fronts, Doors, and Aluminum Windows.

**STORE FRONTS,
ALUMINUM DOORS
AND WINDOWS
TOMORROW**

The Kawneer plant has enlisted 100% for an important role in the war effort. Kawneer experience and ability in the fabrication of rustless metal is now contributing developments that speed up certain war work tremendously. Your Kawneer distributor has Kawneer Store Front Construction in his stock. Check with him for materials available. Look for improved Kawneer products when the flag is over.



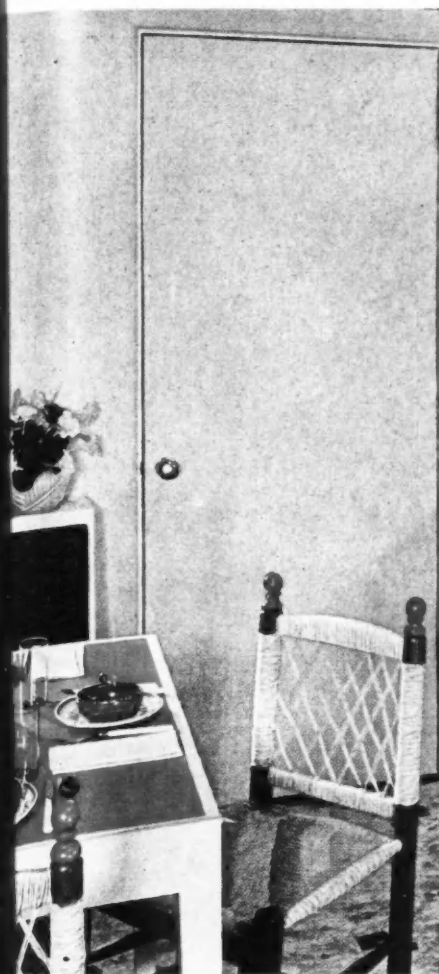
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nized

ES:
AGO
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IPS
ORS

Before —A Dreary "Workshop"—for the housewife—but also one of the many real opportunities for modernization with Nairn wall linoleum. Drab walls and ugly floor make housework seem harder. And actually, because walls are easily smudged and the corners dirt-catching, unnecessary drudgery is added. A hopelessly dingy room, but Nairn's unlimited decorative possibilities meet the challenge (below). →

• • • • •

After —A Bright, Cheery Room—and easy to keep that way permanently for Nairn wall linoleum is spotproof. The rounded surfaces at corners, door and windows eliminate dirt-catching. The wall pattern of creamy "Parchment" set off by gay, contrasting feature strips and Color Correlated with the new Nairn Treadlite floor "makes" the room. An added practical advantage is the use of stain-proof, easy-to-clean Nairn linoleum on sink top and splash back reducing the clatter and breakage of dishes.



The wall that is
modern today...
will be modern
tomorrow!

HERE'S THE WALL MATERIAL that stands as the yardstick of modernity. Its decorating possibilities put it years ahead. And it's built to last as long as the house itself! Nairn wall linoleum alone meets all the six "musts" of the modern wall:

1. **EYE APPEAL**—Wide range of handsome colors from soft pastels to rich, dark tones. Insets and feature strips make decorating possibilities almost limitless!
2. **COLOR CORRELATION**—Nairn walls are correlated both with Nairn floors and all the modern home furnishings. Now it's easy to plan harmonious interiors!
3. **EASE OF CLEANING**—Waterproof, stainproof Nairn wall linoleum is simplicity itself to clean. A damp cloth keeps original beauty intact!
4. **SMOOTH FLEXIBILITY**—Nairn wall linoleum can be rounded at corners, doors and windows. Forms a continuous smooth surface without cracks or wrinkles!
5. **LONGER WEAR**—Refinishing is never needed. Because colors are inlaid right through to the back, walls of Nairn linoleum last as long as the house itself!
6. **EASE OF APPLICATION**—Can be installed over both old and new walls without costly preparatory work. Walls of new houses may be covered as soon as plaster is dry—providing permanent, crack-free surfaces! Fully guaranteed when installed according to specifications.

CONGOLEUM-NAIRN INC.
KEARNY, N. J.

• • •

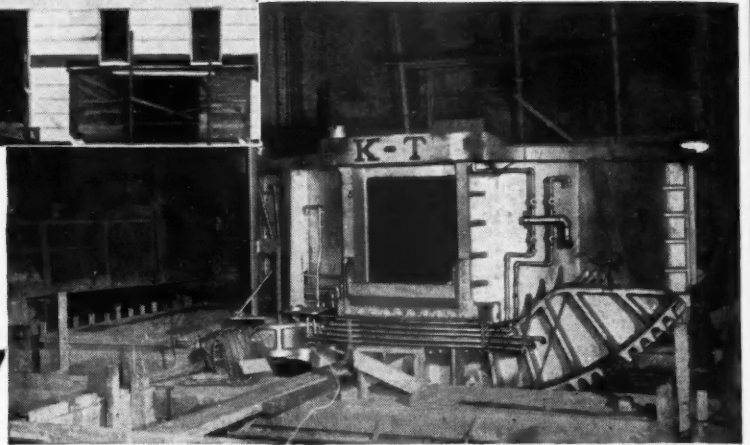
Left, a closeup of "Parchment" shows the characteristic delicate veining.

NAIRN WALL
—
LINOLEUM



HOMES FOR WAR WORKERS: "Your Early Strength Cement," says the contractor, "was a great help in delivering more than 100,000 concrete blocks on time."

Today's
"win-word"
is
SPEED!



WAR PRODUCTION PLANTS: The concrete base for this new steel mill furnace was made with Lehigh Early Strength Cement in order to get into war production as fast as possible.



CAMP FOR SOLDIERS: Barracks foundations, roads, sewage disposal plant and other concrete construction were hastened to completion by Lehigh Early Strength Cement.

Camps for soldiers, plants and equipment for production, housing for workers! With Time the big factor in this war, it goes without saying that those engaged in such construction will want to use every device capable of saving time.

One of these most certainly is Lehigh Early Strength Cement. For it brings concrete to service strength as fast as concrete can be safely brought; actually 3 to 5 times as fast as normal cement can do it. By eliminating idle waiting time, by permitting continuous construction and

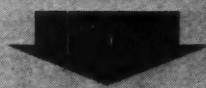
better coordination of the other trades, Lehigh Early Strength Cement has helped many a war project to get *quicker* into war production.

Shown here are only a few of the many types of enterprise in which Lehigh Early Strength Cement was utilized to speed up construction for the needs of war.

In all construction calling for concrete, let Lehigh Early Strength Cement do its time-saving stuff. You'll get quality concrete at the speed these times demand. For more information inquire of the Lehigh Service Department.

Lehigh **EARLY STRENGTH CEMENT**
for service-strength concrete in a hurry

LEHIGH PORTLAND CEMENT COMPANY • ALLENTOWN, PA. • CHICAGO, ILL. • SPOKANE, WASH.

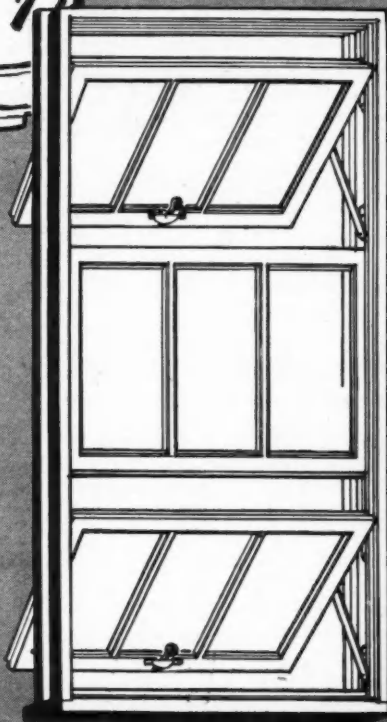


for industrial sash, TOO

IT'S CURTIS



IN-PROJECTING



OUT-PROJECTING

Traditional Curtis quality—traditional Curtis workmanship and care—these are some of the "extras" you get when you order your National projected wood sash units from Curtis. Curtis is prepared to manufacture these units in accordance with the designs and specifications of the National Door Manufacturers Association, Inc. . . . and to deliver them with Curtis promptness.

National projected wood sash consist of 18 standardized basic units, designed by Graham, Anderson, Probst and White. Each basic unit is a complete opening in itself and may be installed individually, or the various units may be combined both in height and width to meet almost every installation requirement.

The standardized frame is designed to accommodate either bottom pivoted, in-projecting vents, or top pivoted, out-projecting vents.

You will find National industrial sash units—as manufactured by Curtis—a material aid in speeding both the planning and installation of windows in industrial and commercial buildings, schools, hospitals, etc. Put your sash problems up to Curtis, and use their 76 years of experience in making sash and fine builders' woodwork. Write Curtis first for complete information on industrial wood sash.

1866 **CURTIS** **WOODWORK**

**CURTIS WOODWORK IS SOLD BY
RELIABLE DEALERS EVERYWHERE**

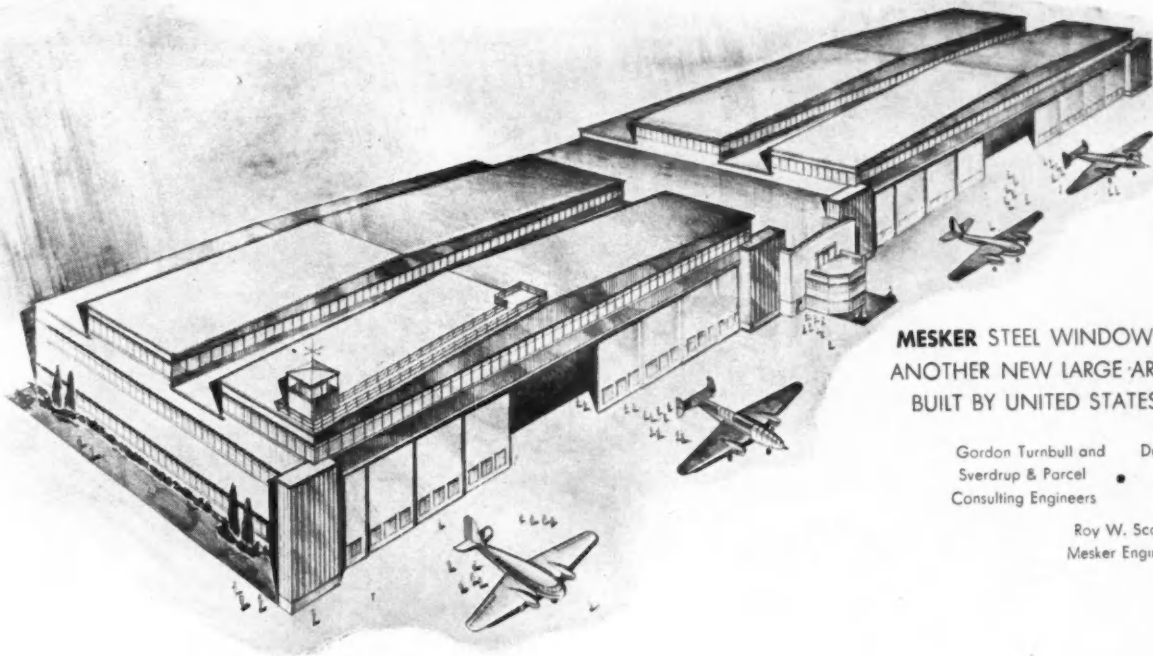
CURTIS COMPANIES SERVICE BUREAU
Dept. AB-81, Curtis Building, Clinton, Iowa
Gentlemen: Please send me complete information about
Curtis National projected wood sash units for industrial
building.

Name

Address

City State

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



MESKER STEEL WINDOW ENGINEERED
ANOTHER NEW LARGE ARMY AIR DEPOT
BUILT BY UNITED STATES ENGINEERS

Gordon Turnbull and Sverdrup & Parcel Consulting Engineers
Dunning James & Patterson Contractors

Roy W. Scovil
Mesker Engineer

STURDINESS that's good economy...

"Mesker" has always symbolized STURDINESS in Steel Windows; and hence, *good economy*. Mesker's Frame and Muntin Bars 1½" in depth have contributed much to this reputation. This feature facilitates economical glazing... without sacrificing maximum depth of Muntin Bar.

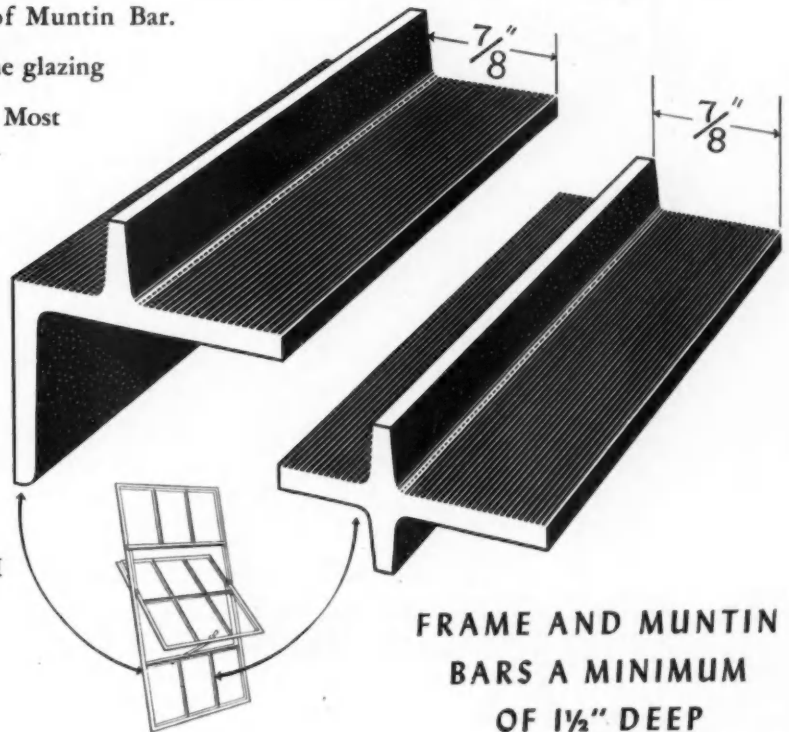
A minimum amount of putty is required, because the glazing rabbet is only 7/8". Glazing costs are *greatly* reduced. Most

important, Mesker's Frame and Muntin Bars 1½" in depth are a major factor in providing a life-time of economical, WEATHER-TIGHT

service. The extra depth of Mesker sections increases tremendously the strength of

Mesker Windows. The cruciform Muntin Bar on Mesker Windows is the deepest, strongest on the market. Summed up, only Mesker provides the ideal combination of MAXIMUM

strength with *minimum* glazing rabbet. Next time... *specify "Mesker"*



FRAME AND MUNTIN BARS A MINIMUM OF 1½" DEEP

THE DOUBLE THICK WEATHERING BAR

used on Mesker Industrial Sash is 1/4" thick... twice that used by others in Industrial Steel Sash. This exclusive feature, dramatically illustrated by the Visual Test Kit (free upon request), is indicative of the quality built into ALL Mesker products.

Mesker Brothers

STEEL SASH

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

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



**JUST WHAT
WE WANT!
YOU GET
THE JOB**

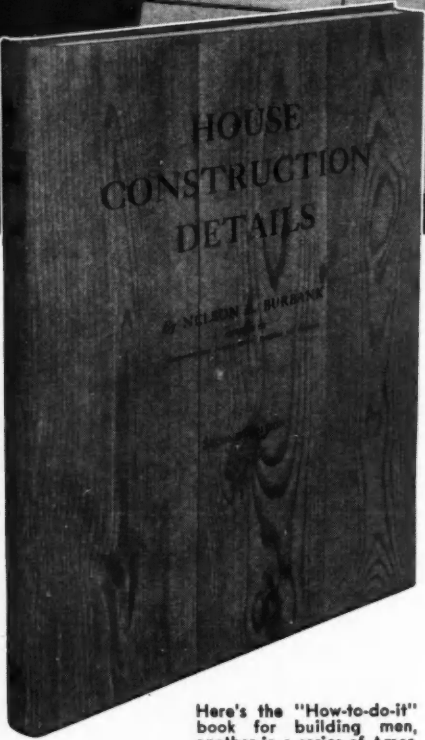
That's what satisfied owners and prospects say to the building man who knows how to alter a floor plan. Success often depends on your ability to suggest alternate materials, or on knowing how to handle some detail that has an owner confused. *The man who knows how* is the man who gets most of the jobs.

You too can be *The man who knows how*. It's easy, because you can read and learn at home or in your spare

time. *House Construction Details*, by Nelson L. Burbank can help you become *The man who knows how*. Here is the "how-to-do-it" book for building men, crammed with ideas, 1,500 illustrations, details and scale drawings, with short, clear explanations.

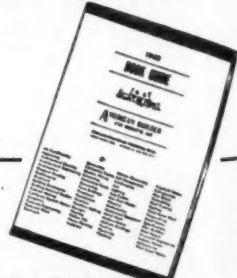
It's easy to find what you want in *House Construction Details*, because all drawings and details are grouped in construction sequence, beginning at the foundation and carrying through step-by-step to painting and finishing. Look over the table of contents below and see how well the book has been arranged.

There is a gold mine of ideas and practical information in *House Construction Details*—for the beginner who wants to learn or for the veteran who needs workable methods or saleable ideas *right now*.



Here's the "How-to-do-it" book for building men, another in a series of American Builder self-help books.

Send the coupon today for your copy of "House Construction Details." With it you'll receive FREE the 1942 Book Guide—your guide to profitable reading.



FILL OUT THIS GUARANTEED ORDER FORM

American Builder and Building Age,
30 Church Street, New York, N.Y.

Enclosed find \$3.00 for which send me a copy of the New Second Edition of *House Construction Details*, and a copy of the American Builder Book Guide FREE. If I do not find the book entirely satisfactory I will return it within 5 days of receipt and you will refund my \$3.00.

Name

Address

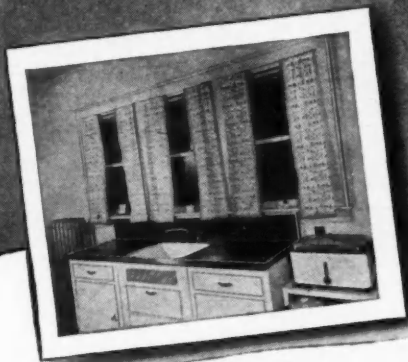
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**Contents of
The New Edition**

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| <ul style="list-style-type: none"> Floor Plans Set of House Plans Excavations Foundation Forms Foundations Outside Walls Inside Walls Wall Sheathing Ceiling Joists Roof Construction Bay Construction Roofing Cornices and Porches Exterior Wall Construction Interior Wall Coverings Interior Trim Stair Construction Windows Doors Hardware Closets Shelves Built-in Equipment | <ul style="list-style-type: none"> Finished Flooring Chimneys and Fireplaces Scaffolds Garages Heating Air Conditioning Elements of Electric Wiring Insulation Sound Proofing Gates Garden Furniture Sheperd's Corner Camps Cabins Cottages Farm Buildings Wood Connectors Pre-fabrication Modern Building Materials Painting and Finishing Modern Homes Index |
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How to make a home more modern today...

use
GLASS



Few avenues to home modernization remain practical or possible under today's conditions. That's one reason why more and more attention is being focused on remodeling with glass features. Glass is a noncritical material.

A more important reason, however, is the increased livability that comes from broader use of glass in the home. Larger window areas provide endless opportunities for brightening cheerless rooms. Practically every home is a potential prospect for window modernization. But in addition, scores of other modern comfort and utility features are made possible by the many different types of glass in the Libbey-Owens-Ford line.

These features are interestingly illustrated and described in a new consumer book we have just published. We think you'll be interested in the design and selling suggestions presented in this new publication just off the press. We will gladly forward a complimentary copy. Write Libbey-Owens-Ford Glass Company, 1206-A Nicholas Building, Toledo, Ohio.



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YOUR COMPLIMENTARY
COPY OF THIS NEW
LIBBEY-OWENS-FORD
GLASS FEATURES
BOOK



LIBBEY-OWENS-FORD
QUALITY *Flat Glass* PRODUCTS

BUILDING OUTLOOK

Timely Information About Building Markets and Probable Developments

CONVERSION of the building industry from normal, peacetime operations to a war footing is now at its peak. Further changes are to be expected, due to changes in the original War Production Board plans, and also to meet subsequent contingencies and emergencies. The principal subject of this bulletin is the shift in personnel of the industry brought about by the general economic conversion from peace to war. These personnel changes are of vital importance to every building material manufacturer; they have a definite bearing on both current and future sales planning.

Shifted to War Jobs

Toward the latter part of 1941, *American Builder* editors sensed a distinct change in normal operations of professional builders in certain localities of the country. The change became more apparent during the first quarter of 1942. At that time certain field tests were made as a basis for a comprehensive survey in June among retail lumber and material dealers, as well as builders, in all parts of the country. The June report indicated that more than 50 per cent of the carpenters and other building mechanics have migrated to war areas, have joined the armed forces, or otherwise are missing from their accustomed jobs and locations. To date, approximately 20 per cent of the established contractors and builders also are missing; and of this group, some of the more prominent operators have transferred their activities to construction of war housing, industrial construction, and other war activities.

Illustrative of changes from normal operations, a prominent Evanston, Illinois, builder is now constructing boats under government contract. Many big-name Long Island builders have discontinued operations at their homes bases, either temporarily until some of the confusing restrictions are lifted, or for the duration. Others have migrated to Norfolk, or other "hot" war centers. It is interesting to note that some of the more prominent migrants were persuaded by government officials to help out in the hot spots, where they encountered, in the process of building, a multitude of problems and troubles. A third interesting group, principals of prominent building companies, have become consultants or supervisors on large domestic or foreign military-base construction jobs.

Building Volume at New High

Those remaining on the job at home (there will be further shrinkage), if not engaged in local war construction, are carrying on with what Limitation Orders authorize. Viewed nationally, there is a large volume of small remodeling and modernization jobs. This work, while spotty, is impressive in the national total. F. W. Dodge figures for June, 1942, show that, with the exception of residential building, all other types of new construction more than doubled the same month a year ago. Consequently, for the first time in many years, total construction contracts awarded in June were in excess of a billion dollars. Volume is now at the annual rate the government set up as a goal some months ago. It is interesting to note that out of the total construction volume of \$1,190,000,000 for June, as reported by F. W. Dodge, \$1,105,000,000 is "public" construction. In other words, new construction is confined almost entirely to projects, industrial and housing, relating to war production.

Figures on construction contract awards for the first six months of 1942, as compared with the same period a year ago, show increases all along the line. Total construction increased from \$2,549,962,000 in 1941, to \$3,723,725,000 this year, a 46 per cent gain. The biggest expansion was in Public Works and Utilities, which leaped from \$644,443,000 during the first six months of last

year, to \$1,112,265,000 during the same period this year, a 72.7 per cent gain. Non-residential building likewise shot ahead from \$956,525,000 in 1941, to \$1,625,880,000 this year, a 70 per cent advance. The value of residential projects made a small gain, 3.6 per cent, from \$948,994,000 last year to \$985,580,000 this year, but the number of projects made a 26.4 per cent gain from 150,183 in 1941 to 189,770 projects this year.

American Builder's report on lumber and material dealers indicates that relatively few of those in business in 1941 have discontinued thus far; but it is apparent that there will be further mortality. Those yards first affected suffered, in the main, through lack of adequate financing, or from failure to accumulate inventories before various "freeze" orders went into effect.

Many dealers view the immediate future with considerable fear; others see an opportunity to wash out old habits of competitive practice. In contrast to reports of "absolutely no business" from pessimists, are statements from others who see "plenty of profitable small jobs to be had at every turn." Strange as it may seem, these conflicting statements may come from the same territories, which goes to prove that L-41, and other restrictive measures, work havoc with the unimaginative, but stir the progressives into action.

Manufacturers Convert to War

Changes in the construction industry parallel changes in the activities of manufacturers of products used in building. Because of restrictions on the use of many materials, some manufacturers have gone out of business, but this group, percentage-wise, is very small. Many manufacturers now devote their entire output to products required by the armed forces, or have converted to the point where war production accounts for half or more of their total business.

The industry quite generally believes that the post-war market will be of record size, with heavy demand for all types of construction. This is the composite opinion of manufacturers, building professionals, and mechanics. Some of the war dislocations will be permanent, but a "return to normalcy" probably will be effected more quickly than might be generally expected. The conversion from war economy to peace will be faster than the current movement from peace to war. End of the war is not in sight, but machinery exists now that was unheard of in November, 1918—Federal financial aid and encouragement for all types of both private and public construction, particularly housing. This factor is extremely important, and should be borne in mind by all who expect to survive.

Post-War Conditions Compared

There was tremendous demand for new homes following World War I. Volume moved up steadily, but it was not until 1922 that it assumed boom proportions—a boom that was inevitable, due to high incomes and consequent demand. Demand will be even greater at the close of this war, but stabilizing factors should prevent many evils of the 1920's boom. It will not be a runaway affair, for inspection of plans and construction will be more rigid than in the 1935-1941 period, as a result of experience gained by FHA regional offices. It is obvious that no change of Washington administrations during or after the war will bring fundamental changes in machinery of the Federal Housing Administration. Personnel may undergo a complete turnover, but the basic machinery seems as definitely set as the postal department. The foregoing factors project a long-range encouraging picture for those who expect to be on the job in post-war market.

HAVE YOU HEARD

the

NEWS

about

MENGEL

FLUSH

DOORS?



ASK a hundred architects or contractors whether they prefer *flush* doors or *panel* doors, and ninety-nine will probably say "I prefer flush doors, of course, but I can't always afford them".

Today the big news in the door industry is that Mengel is making really fine grid-core flush doors that sell at little if any higher prices than panel doors!

Mengel, as you probably know, is America's largest manufacturer of hardwood products. Mengel Flush Doors are made from our own lumber and veneers, in our own big factories. This manufacturing advantage, plus quantity production, means *greater values*.

Yes, Mengel Flush Doors *are* greater values. Faces, rails, stiles and lock-blocks—all wood

parts—are *genuine hardwood*. Corner connections are made with tight, strong, *lock* joints. Grid cores, frame members and faces are permanently resin-bonded in hot-plate presses. The door is sealed *tight* against moisture.

Whatever your needs, get all the facts about Mengel Flush Doors before you buy or specify any other kind. If your usual source can't help you, mail the coupon below. *That's all we ask!*

The Mengel Company, Incorporated
1124 Dumesnil Street, Louisville, Ky.

Gentlemen: Please send me full information about Mengel Flush Doors . Also about Mengelbord .

Name _____

Street _____

City _____ State _____



... and the Army and Navy, too!

WE cheered their heroism, their daring, their never-say-die spirit at Wake Island, for example.

Over and over in conversation, editorials, speeches, and every other form of verbal bouquet we told them how fine we thought they were. And how solidly we stood behind them.

But now comes the time when we've got to tell all that to the Marines and the Army and Navy in something more substantial than mere words.

Demonstration—not conversation—is called for now!

We've got to increase and maintain the club-houses which the men can use on their time off. 432 are already operating now. But that's not nearly enough.

We've got to help keep up their spirit by keeping boredom and monotony out of their lives. A fighter needs entertainment for his mind as well as guns for his hands, uniforms for his back, food for his stomach.

The USO camp shows are bringing the world's best entertainment to the armed forces. But we've only started!

Mobile units for troops in remote positions . . . troops-in-transit service at transportation stations . . . book gathering and distributing . . . these are just a few more expanding services the USO is giving.

For the USO—and you—are charged with the vital duty of helping keep up morale.

Fighting spirit is a real, a vital, a specific thing. An instrument of war like bullets, bombers, and tanks. Without it no victory can be won.

So it's your move now, Mr. and Mrs. America. That fountain pen you sign your check with is a machine gun today. Will you *start shooting?*

Send your contribution to your local campaign chairman or to National Headquarters, USO, Empire State Bldg., New York City.

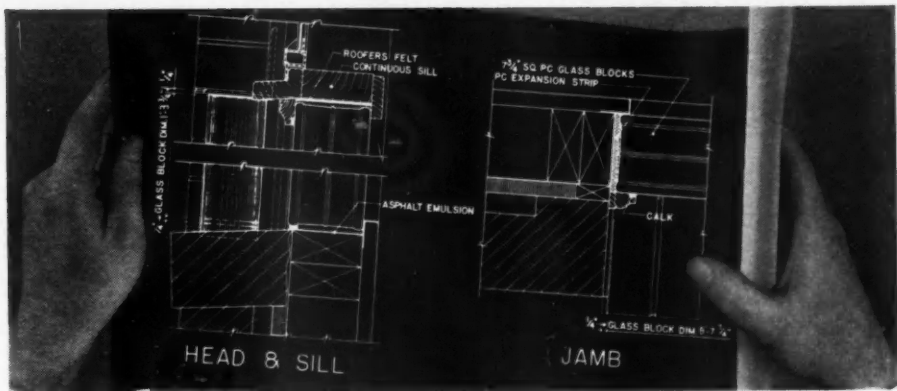
★ **USO** ★

"Budget" Suggestions for Low-cost Homes

*PC Glass Blocks add
smartness and utility*



DECORATIVE AND PRACTICAL!
A small panel of PC Glass Blocks like this floods work surfaces in the kitchen with daylight... adds immeasurably to the smartness of the home. Note the other small panel in the wall... admitting daylight and preserving privacy.



If you're working on low-budget homes of the "defense" type you'll find PC Glass Blocks a great help in dressing them up and making them more practical. In small panels, used for purposes such as that shown above, PC Glass Blocks cost so little that they fit snugly into even the tightest building budget.

Consider all the advantages this one modern material provides. Generous light transmission. Safeguarding of privacy. High insulation value. Easy cleaning. Easy installation. (See detail.) And smart, up-to-the-minute

good looks that add greatly to the sales appeal of any home.

Especially important these days, PC Glass Blocks are *immediately available*. And for small panels, no critical materials are involved in installation.

Use PC Glass Blocks for remodel-

ing, as well as in new homes. They more than pay their way! Eight beautiful patterns, three sizes to choose from. Mail the coupon below for descriptive literature.

"PITTSBURGH"
stands for Quality Glass

Pittsburgh Corning Corporation
2105-2 Grant Building, Pittsburgh, Pa.

Please send me, without obligation, your free descriptive literature on the use of PC Glass Blocks in the home.

Name.....
Street.....
City..... State.....



GLASS BLOCKS

Distributed by

PITTSBURGH PLATE GLASS COMPANY

and by W. P. Fuller & Co. on the Pacific Coast



LETTERS from Readers



(Continued from page 14)

point the bricks and some owners stucco them. While this strengthens the buildings in many cases, it does not add appearance to the buildings. We can teach any plasterer to do our work at a cost to him not exceeding \$7.00 per one hundred square feet. All he needs is various cements.

Our work can also be used in game rooms in the basements of homes to take the place of tile. It can be cut out in the shape of colored blocks for remodeling store fronts, etc.

Yes, we have something to sell, and our process can open up a field for many men, a field which will enable them to contribute their share to the war effort by maintaining the buildings that are now erected, and to continue in business.

We are enclosing a new set of photos, which if you will look closely, you will see had four different kinds of materials. This particular job cost us \$375. The contract sold for \$625. The working time was five days. The streamlining of the front of the building shows you other possibilities with this process.

As one of many, allow me to add my appreciation to you and your paper for your efforts in trying to keep the building business functioning in these trying times.

PLASTERBRICK CORPORATION,
By M. S. Long, President.

Sash Balances "Go to War"

Rochester, New York

To the Editor:

We have developed a new Type 242-FT sash balance specially for large scale housing work to reduce the amount of critical steel to the absolute minimum.

We are now furnishing about 4500 windows for the Manhattan Beach Coast Guard with a total steel content of less than 3 pounds per window.

Used in accordance with the late emergency specification E-FF-H-111 calling for single balances, with equalizers, on windows not over 2'-10½" wide, the steel content is reduced to 1½ pounds per opening.

This is of extreme importance to both small and large scale projects as metal content of a building is one of the controlling factors of priority.

Having nothing to do with new products but still of considerable importance we wish that you would put strong emphasis on the necessity of contractors obtaining and furnishing their suppliers with preference ratings. We do not believe that the average builder is alive to this necessity.

THE CALDWELL MANUFACTURING CO.
By J. D. Boucher, President



NEW Type 242-FT
Caldwell balance.

Glass Lined Water Heaters

Brooklyn, N.Y.

To the Editor:

The gas industry has done very little in constructing ranges, water heaters, refrigerators or house heating equipment of non-critical materials. In fact, most manufacturers of such equipment are now engaged in the manufacture of war materials. However, one development of note has been the manufacture of glass lined water heaters. The use of this heater conserves copper normally used in some type of water heaters. Our company made a rather

thorough investigation of this type of heater and has been successful in selling a limited number of them.

Some of the smaller range manufacturers plan to build to specifications a cooker type range to be known as the "Victory" model. The specifications will call for the minimum amount of critical material.

THE BROOKLYN UNION GAS COMPANY
By Hugh Cuthrell, Vice President

Linoleum for War Housing Avoids Restrictions

Kearny, N. J.

To the Editor:

When restrictions were first placed on cork a considerable amount of publicity was given to the fact that this would affect the linoleum industry. However, this was quite misleading inasmuch as cork had not been used in the production of household inlaid linoleum for many years. For it had been substituted wood flour, which enabled the linoleum manufacturers to get the bright colors that consumers demand. Quite recently restrictions were placed on burlap for use in linoleum other than that produced for defense. Here again, the effect on the linoleum industry was not as startling as might be surmised, inasmuch as inlaid linoleum on felt backing has been manufactured and sold for a period of ten years.

Congoleum-Nairn has been a leader in the development of the manufacture and sale of inlaid linoleum on felt backing, and quite recently we were able to announce our new Treadlite on Duplex felt backing. This material meets government specifications LLL-L-471, specifications applicable to war housing.

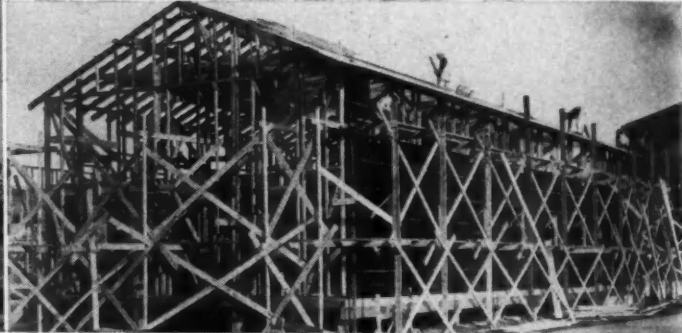
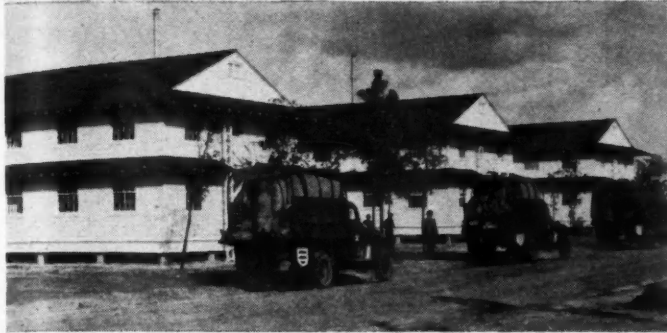
Generally, the privately financed war housing represents construction of a sort more permanent than the government built houses, dormitories, or camps. In these homes the use of wall linoleum in bathrooms and kitchens is general and sales indicate the heavier grades of linoleum, such as Nairn Treadlite DeLuxe—Inlaid Linoleum on Duplex Felt Backing and Nairn ⅜ inch Veltone, are popular. An example is the Heslop defense housing realty project at Akron, Ohio, involving 226 houses and 4300 square yards of Nairn linoleum for kitchen and bathroom floors, cove base and kitchen drainboards. The dealer was Turner Wallpaper Company, Akron.

CONGOLEUM-NAIRN, INC.

By W. C. Hendricks, Sales Promotion Manager.



4300 square yards of Nairn Linoleum for kitchen and bathroom floors, cove base and kitchen drainboards were installed in these 226 houses, by the Turner Wallpaper Company, Akron, Ohio.



BUILDINGS *to build an Army*

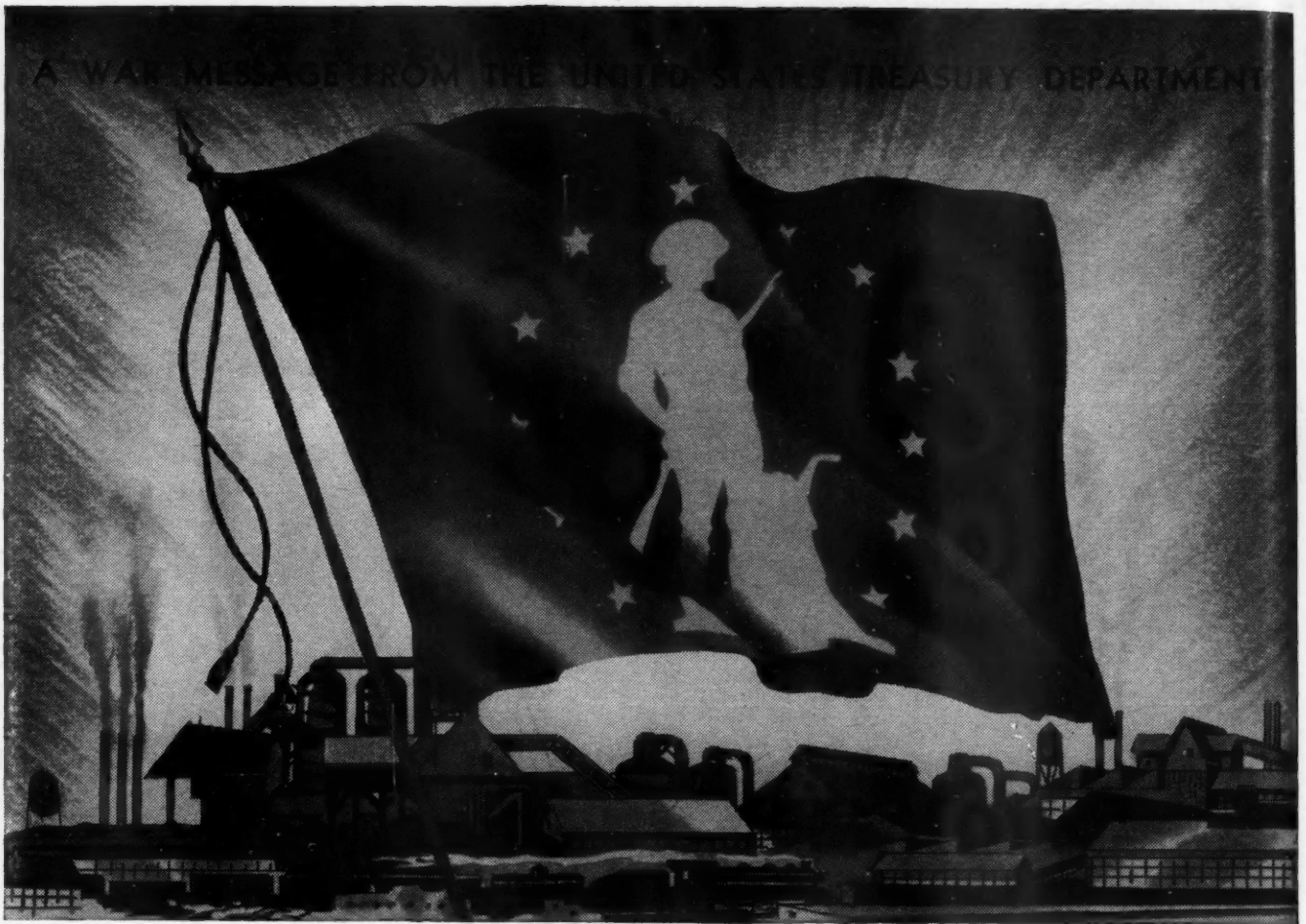
To shelter his huge and growing army Uncle Sam has become the world's greatest builder.

Supplying the hardware for hundreds of thousands of doors and windows is one of our tasks in this tremendous war building program.

Because of the importance of this work, it must come first. In order for us to supply you with the hardware you need, it is necessary that you furnish your dealer

with the data he needs in order to get the goods for you. The Stanley Works, New Britain, Conn. **STANLEY**
Trade Mark

STANLEY
HARDWARE



Next to the Stars and Stripes . . .

AS PROUD A FLAG AS INDUSTRY CAN FLY

Signifying 90 Percent or More Employee Participation in the Pay-Roll Savings Plan

IT doesn't go into the smoke of battle, but wherever you see this flag you know that it spells Victory for our boys on the fighting fronts. To everyone, it means that the firm which flies it has attained 90 percent or more employee participation in the Pay-Roll Savings Plan . . . that their employees are turning a part of their earnings into tanks and planes and guns *regularly*, every pay day, through the systematic purchase of U. S. War Bonds.

You don't need to be engaged in war production activity to fly this flag. Any patriotic firm can qualify and make a vital contribution to Victory by making the Pay-Roll Savings Plan available to its employees, and by securing 90 percent or more employee participation. Then notify your State Defense Savings Staff Administrator that

you have reached the goal. He will tell you how you may obtain your flag.

If your firm has already installed the Pay-Roll Savings Plan, now is the time to increase your efforts: (1) To secure wider participation and reach the 90-percent goal; (2) to encourage employees to increase their allotments until 10 percent or more of your gross pay roll is subscribed for Bonds. "Token" allotments will not win this war any more than "token" resistance will keep our enemies from our shores, our homes. If your firm has yet to install the Plan, remember, **TIME IS SHORT.**

Write or wire for full facts and literature on installing your Pay-Roll Savings Plan now. Address Treasury Department, Section D, 709 12th St., NW., Washington, D. C.

Make Every Pay Day "Bond Day"



U. S. **WAR Bonds** ★ **Stamps**

This Space is a Contribution to Victory by AMERICAN BUILDER AND BUILDING AGE

Do you want **HELP**
in selling attic insulation?



Then see your . . . **Lumber Dealer!**

● Authorities agree that 1942 is one of the best years for attic insulation in the history of the industry.

Never before have there been so many factors encouraging the use of any one material that goes into building. Of particular importance is the fact that insulation is a non-critical material. FHA is encouraging loans for this type of improvement.

The government is also encouraging the use of insulation as a fuel conservation measure. Cars, tankers

and trucks which transport fuel are needed for the war emergency.

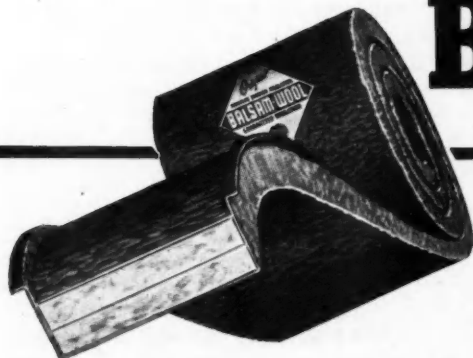
People have more money to spend and fewer places in which to spend it. They *will* buy this one great home improvement which they have long needed: insulation.

Balsam-Wool—sold only through lumber dealers—is *the* ideal insulation for attics. No other insulation is sold under such a comprehensive guarantee. No other insulation offers the buyer his *money back* if he is not completely satis-

fied. No other insulation has *all* the double values which Balsam-Wool is especially designed to provide.

A Plan to Increase Your Attic Insulation Jobs

We have worked out a plan to help increase attic insulation jobs—a plan tried and proved successful. We should like to explain this plan to you, and show you how, through your lumber dealer, you can get more business—more profit—with Balsam-Wool attic insulation—a non-critical material in a receptive market at a time when non-critical materials are scarce. Use the coupon attached to get full information on the Balsam-Wool Attic Insulation Program.



BALSAM-WOOL

SEALED INSULATION..

WOOD CONVERSION COMPANY, Dept. 119-8
First National Bank Bldg.
St. Paul, Minnesota

Gentlemen:
I want help in getting attic insulation jobs. Please send me complete information about the Balsam-Wool Attic Insulation Program.

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

BALSAM-WOOL—PRODUCTS OF WEYERHAEUSER—NU-WOOD

Old roofs bring new profits!



In other words . . . Re-roofing means business
—*right now!*

TEXACO
means more business
too—because it's a
name millions know!

Yes sir—everybody and his brother know Texaco. Right in your community home owners who need new roofs know this famous trade name. So tie it up with your own good name. Two good names, a good product and the need for a re-roofing job leave little room for argument in closing the sale!



TEXACO



SHINGLES and ROOFING

Made with Texaco's own asphalts 99½% pure

Right now in your community there are homes that need re-roofing. And home and farm owners have the money to pay for it.

There's a "natural" type of roofing for this profitable market, too. It's *asphalt*. When you sell *asphalt* shingles and roofing you're selling the most popular type of roofing in America—*actually a 2 to 1 favorite over all other types combined!* And—today, offering endurance, economy, beauty and fire-resistance, more asphalt shingles are being sold than ever before.

Texaco is a "natural" too, for Texaco's own asphalts, 99½% pure, are used in manufacturing Texaco Shingles. *And—Texaco is a name that millions know and trust.*

So—add up all this evidence, tie into this market with Texaco. It's a sales-clinching combination for profits!

★ ★ ★

Texaco Asphalt Shingles and Roofing are available to Texaco Roofing Dealers through a large network of Texaco warehouses—east of the Rockies. Drop in, write or 'phone your nearest Texaco Roofing Dealer today, or write The Texas Company, Roofing Sales Division, 135 East 42nd Street, New York, N. Y.



War Construction Hits Its Stride

WHEN, last winter, the estimates of the War Production Board began to indicate a 12 billion dollar program of essential construction for this year, many were skeptical.

That would mean a 10 per cent increase over the boom year of 1941 and it did not seem reasonable, at that time, that building in such volume could go forward, in the face of war-created shortages and confusion. On the contrary, a building slump was expected.

When Sullivan W. Jones, chief of the Housing Priorities Branch of WPB, addressing the annual meeting of the Chicago Building Congress, stated that 25 per cent of the total cost of our war effort would have to go for construction—and then charged the building industry with failure to co-operate and produce—many questioned his figures and resented his criticism.

* * *

WELL, the June contract records are in; and they certainly substantiate the Board's estimate. They reveal that total construction contracts let in June were in excess of ONE BILLION DOLLARS, or at a rate of 12 billion dollars and more for the present fiscal year!

Home building in June was the largest, except for March, of any month since last August.

Non-residential construction was almost double its best preceding month.

Public works and utilities, likewise, about doubled in June any month of the present era.

Here are the detailed figures as compiled by F. W. Dodge Corporation for the 37 states east of the Rockies. Add 10 per cent to cover the Pacific Coast and Mountain states.

	June 1942	June 1941
Residential contracts.....\$	185,471,000	\$205,634,000
Non-residential contracts	568,385,000	200,456,000
Total building contracts..\$	753,856,000	\$406,090,000
Public works contracts....\$	203,341,000	\$ 99,631,000
Utilities contracts.....	233,067,000	33,385,000
Total const'n contracts....\$	1,190,264,000	\$539,106,000

This June construction total of \$1,190,264,000 is 56 per cent larger than the biggest preceding month, August 1941, when the total construction figure was \$760,233,000. This is the first month in which the war construction tempo has actually gotten up to the billion dollar mark. Evidently the essential building needs of the war program are being taken care of and the build-

ing industry is rolling along *in high* to meet those needs, in spite of the many obstacles to efficient and orderly performance arising from shortages of materials and labor, haste in planning, and confusion "at the top."

The skill and experience of the nation's construction men have been poured without stint into the war job—housing, training camps, bases, munitions works, ship yards, bomber plants, food supply buildings.

These war production facilities are being created by the same men—organizations—materials—that formerly were devoted to the nation's peacetime building needs. What had been learned in the long and hard school of civil construction is now being utilized, though at a faster tempo, in the cause of war construction.

And, in a way to repay the normal building industry for this "take-over," construction men will no doubt return one of these days to their normal building pursuits greatly benefited by the new techniques, ideas and practices of the war period. What they are learning now of methods and materials will come back home for the handling of the PRE-post-war and the post-war civilian building needs.

* * *

GREAT as these officially reported building contract figures are for June, they still do not include the vast number of relatively small building improvement and maintenance jobs which are so necessary to the health and safety of the people and to the over-all productive capacity of the nation. This essential building service is carried on in every local community by carpenters, contractor-builders, and building supply dealers. Utilizing mostly non-critical materials and closely controlled by conservation and priority orders, these local building industry men have nevertheless been carrying on to render the service expected of them.

War construction has hit its stride of *Over a Billion a Month* in this month of June. There has been no failure to produce, nor will there be, so long as the building-for-war need exists. Now, it is *all out* for war construction. Presently, however—whether sooner or later—the opportunity for an expansion of civilian construction will come to balance off the declining war program. Planning for this transition should be under consideration now. Both the building industry and the government control bodies should be alert for this opportunity—to take up again *the building of America*.

ACTION—Not Words—



EDMUND KUHLMAN, executive director of the Builders Association of Metropolitan Detroit, proposes that fifty private builders, who have indicated willingness to do so, "be allowed immediately to start and complete 12,000 housing units by early next year." This offer is contingent on assurances of needed materials or acceptable substitutes and financing arrangements.

DETROIT is again dynamic. Detroit is again booming. Detroit is again confused. Great things have come out of this world capital of mass production. The solution to a critical war housing problem should require but little time and not much more effort.

And there is a real problem of what to do properly to house the war worker with Detroit occupancy now placed at 99.4 per cent. If it were not for the complications of outside interests and government bureaus, local talent would probably have the situation well in hand by now, as Detroit is a city of homes which in the past have been economically, efficiently and quickly built by the private home building industry of Detroit.

To find out exactly how badly building had bogged

Stop orders and red tape add to confusion at critical period in housing picture; occupancy is 99.4 per cent

By R. E. Sangster

down and what the consensus was as to the quickest and best way to provide needed shelter for war workers, *American Builder* staff members, including the writer, covered all fronts of the Detroit scene.

Generally, positive and constructive action must immediately be taken if there is to be housing when and where it is needed. The several committees will have to get beyond the conversational and bickering stages before long.

A war must be won. Forces must be supplied. Post-war advantages for any building group will be meager without victory. This is generally felt in Detroit, where the reaction of the majority concerned with this problem is: "Get on with the show; houses or housing, start something—whatever can be done now, get going with that."

And what can be done now? At a meeting on July 17 of Mayor Jeffries' Detroit committee on housing—a fact-finding group—Edmund Kuhlman, executive director of the Builders Association, reported that a survey covering fifty members of this association showed they could and would undertake to complete 12,000 units by early '43. In order to do this, however, within the approximate six months period, they would have to have assurances on certain materials (principally sheathing)

Detroit War Housing Situation at a Glance

1. Private building in Detroit was geared to produce 30,000 to 40,000 dwelling units in 1942.
2. In spite of confusion, red tape, freeze and Title VI stoppage, almost 5,000 privately built homes were completed in the first six months of '42.
3. FPHA did not complete a single defense housing unit in Detroit in past 6 months.
4. Willow Run "Bomber City" housing over-emphasized in proportion to its importance in the overall picture in this area. Estimated number of workers in Ford plant revised downward.
5. Private building industry will disintegrate if decision to go ahead with the balance of original program or a new one doesn't come out of Washington soon.

Will Break the Bottleneck of Detroit War Housing

and financing which would allow fifty per cent of the 12,000 units to be sold, the other 6,000 to be rented.

This may seem like a large order, but the record shows that in the two years—1940-41—private builders in the Detroit metropolitan area averaged over 1500 units a month. Early in '42 this same building group geared up their operations under assurances that an expanded program was most necessary and would be forthcoming. Thirty thousand units had been set as Detroit's quota; builders were ready to construct 30,000 to 40,000.

Then came the confusion. Financing bogged down. Paper work and red tape mushroomed. Quotas were changed and reallocations made in the middle of builders' operations. Lumber was frozen and THE TALKING STARTED. Committees were formed in Detroit. Other groups descended on the area from Washington.

Meanwhile, there has been a big drop-off in housing production. As compared to the 1940-41 average, less than 800 family dwellings per month were provided in the first six months by private builders. This is important because, in spite of difficulties, 5,000 houses do represent considerable production, particularly so when compared to the public housing record which shows no units completed in the first six months of '42.

Typical of the difficulties encountered by the Federal Public Housing Authority in providing housing for war workers is the Hermann Gardens project—a 1500-unit undertaking, started last year. It is now 70 per cent complete. However, no units are ready for occupancy and at present the best that can be expected is that the first 500 or 600 of these might be ready late in August.

Of course, the sensational front page news recently out of Detroit has been on the controversy centering about housing for Ford's Willow Run plant, and the general impression would be that

the critical housing problem concerns itself entirely with the squabble over Bomber City. Actually, this is only a PART of the over-all Detroit housing situation. Further, this part of the problem is becoming less significant daily, as estimates of the total number to be employed at the bomber plant are revised downward due to labor-saving operations. This is reflected in the latest reports from the Truman Senate Committee hearings, before which a revised program is being presented by NHA calling for 2,500 government built family homes against the proposed original 6,000, dormitories for 3,000 instead of 10,000, 1,000 light housekeeping apartments in place of 8,000, and 4,500 privately financed family homes. Whether even this program goes through will largely be decided by the volume of critical materials needed and available. (Utilities are a particular problem since the area near the plant is unimproved.)

Among the other pertinent facts which have been submitted for consideration in determining what to do about Bomber City are these three, of a group of points made by the Detroit Board of Commerce through Willis H.

(Continued to page 85)

BELOW: Typical views of some current Detroit war housing produced by private builders and photographed by "American Builder."





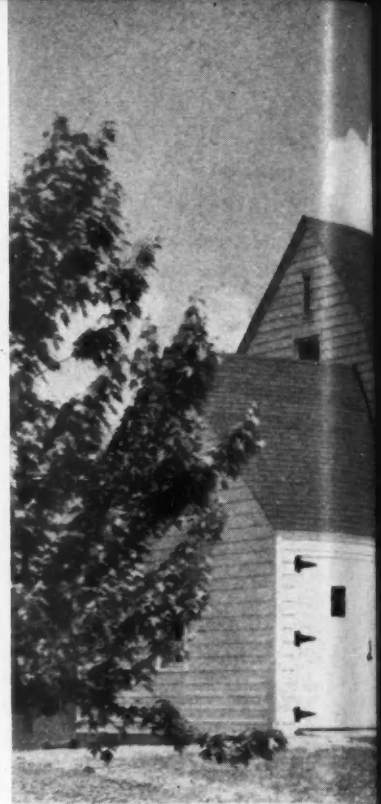
RALPH J. BLANK of Schenectady, N.Y.

**NOT BOXES...
NOT BARRACKS...**

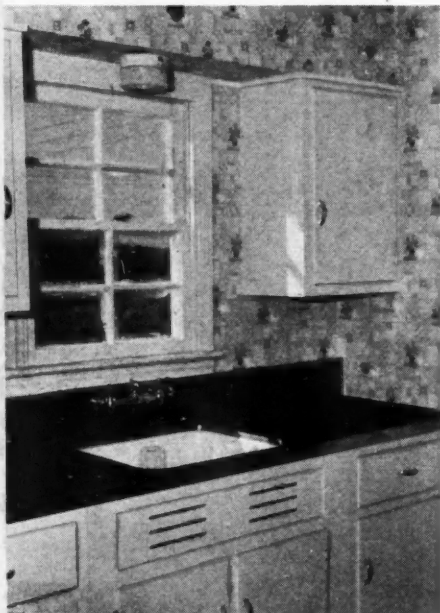
BUT HOMES

**are what we are building
for War Workers.**

**Gov't. red tape
makes it a
TOUGH Job**



By Joseph B. Mason



THE PLAIN unvarnished truth is that government Housing and War Production Board officials have got themselves so entangled in a maze of conflicting regulations, rules and priority procedures that no one in the building industry OR government can figure things out.

As Leon Marrano, president of Schenectady Homes Corporation, told me: "Trying to get action from government bureaus is like fighting a ghost—you can't make contact."

Builders have men and material available, ready and willing to build war houses on any terms the government will set—if they will only SET them and STICK to them. The best builders can get now are vague promises, a shrug of the shoulders or a frank admission that no one knows the answer to a problem. The bureaus have simply gotten so entangled in their own red tape that they have strangled themselves and the building industry, and the result is—barracks.

If the building industry has failed to provide war housing, it is not because private builders have not done everything possible to build. The story told by private builders is always the same—"We were urged to get into this work as a patriotic duty—they got us out on a limb—then for the sake of a

few lousy feet of wire or other materials, kept us from finishing the job."

In Schenectady, N.Y., is a typical small war-home project going ahead under the revised FHA Title VI. This job well illustrates what good small modern homes private builders can produce. The inside story of the delays, difficulties and problems encountered is astounding. Yet the builders are continuing to fight their way through; and when I visited the job late in June, had 50 houses in various stages of construction, with 20 completed. In many of these the occupants were already living, but were without electric power because the local utility, even though it had large stocks of copper wire on hand, could not unravel enough red tape to permit connecting the houses to the nearby power lines.

Niskayuna Estates is a Wagg, Inc., development, and credit for organizing and promoting the project is due Realtor Ralph J. Blank, president, who is also a member of the local real estate board's Housing Committee. Wagg, Inc., sold the land, handled the mortgage financing (through The Pioneer Building & Loan of Troy, N.Y.), and handles the sales. Construction of the 93 houses with a gross value of \$525,000 is being done by builder Leon F. Marrano, formerly of Mt. Vernon, N.Y., who has built many large apartments in the New York City area. The houses were designed by Nat O. Matson of White Plains, N. Y.

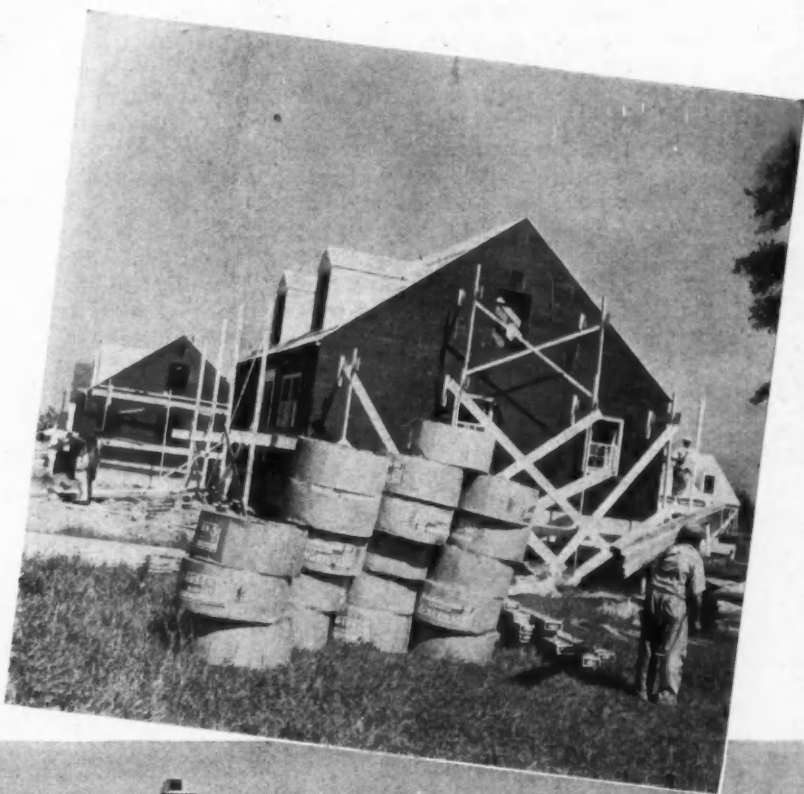
Both Ralph Blank and Leon Marrano say that the Schenectady war

MODERN KITCHENS and baths like these are standard equipment in \$40 a month Schenectady homes.



FOR \$40 A MONTH Schenectady war workers get these fine homes in Niskayuna Estates—sold under revised FHA Title VI terms.

1. **Married war workers will not produce effectively if family environment is bad.**
2. **Barracks are a poor solution to housing need.**
3. **Private builders have demonstrated ability to produce good low-cost homes quickly.**
4. **Private builders can produce houses with small amounts of critical materials.**
5. **Red tape, conflicting rules and restrictions must be eliminated and enough materials guaranteed to enable builders to finish jobs.**



LEON F. MARRANO (below) says getting action from U.S. officials is like "shadow boxing with a ghost." Insulated homes with attached garages are built under Title VI in 93-unit Niskayuna project. Floor plans are on next page.



39



American workers need decent homes and private builders are able to produce them if given a chance.

workers—the bulk of whom are employed in General Electric and Baldwin Locomotive plants—are particular about their houses. They won't put up with cheap construction, and they require modern conveniences and good design. The two basic floor plans used are 32' x 26' and 30' 6" x 28' 6" respectively.

There are two bedrooms downstairs and plenty of space above for two additional bedrooms to be added later. The living rooms are of good size and the plan features a kitchen-dinette arrangement that is efficient and attractive. Some of the houses have attractive garages separated by an open breezeway. And all of the houses are laid out on curved streets according to a modern subdivision plan.

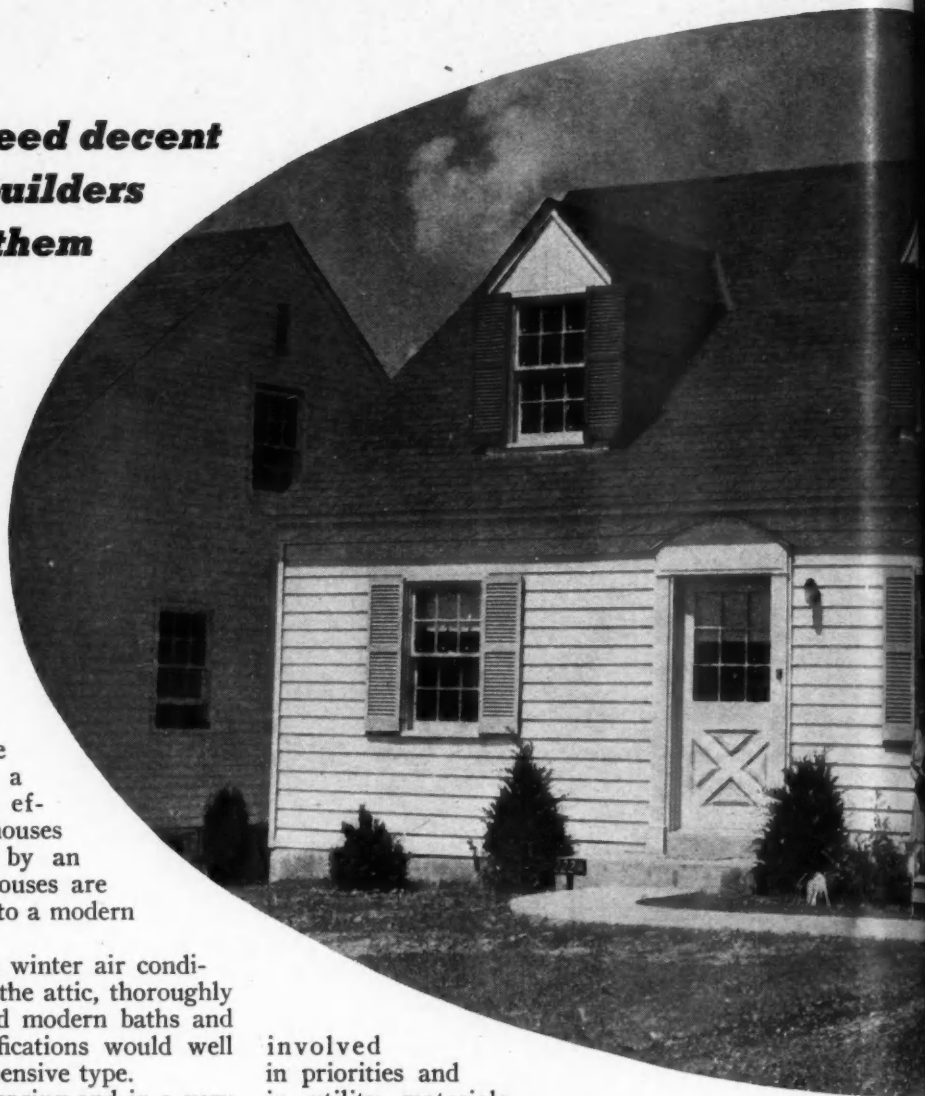
The equipment includes coal-fired winter air conditioning plants, blanket insulation in the attic, thoroughly waterproof basements, well equipped modern baths and kitchens; in fact, the list of specifications would well apply to houses of a much more expensive type.

The job was started early in the spring and in a very short time a considerable number of advance sales were made. But construction has been slowed up by a multitude of priority and material problems. The builders are straining every nerve to get houses completed because the buyers are clamoring for a place to live. Frequent telephone calls from heads of large plants are received, begging them to do something to get more houses for the workers. Yet it has proved almost impossible to get quick action from the various government bureaus

involved in priorities and in utility materials.

"If they would just let us get the materials, we would have the houses finished in a hurry," the builders reply. Numerous trips to Washington and New York have, for the most part, proved fruitless. According to Ralph Blank there are enough private home projects ready and waiting to start to supply an abundant amount of housing for Schenectady's war workers. Private interests have plans drawn,

(Continued to page 89)



SCHENECTADY HOME includes: A. Coal-burning winter conditioning. B. Modern flush doors. C. Sturdy hardware, quality paint job.

Purdue Research Offers a Low Cost House

EARLY in July there was completed, on the Housing Research Campus of Purdue University at Lafayette, Ind., an entirely new type of low-cost—yet adequate—"war worker's" home. Thrown open to the inspection of the local home-seeking public, this trim little shelter quickly caught the fancy of the people, and also won the interest of several of the leading local contractors and builders. FHA officials are giving favorable consideration to this house for mortgage insurance when built in defense housing areas under the official plans, specifications and authorization of the Purdue Research Foundation; and it is expected that in the very near future hundreds of these low-cost houses will be going up all over the country, built by enterprising contractors under the Purdue sponsorship.

Mr. Carl L. Boester, director of Housing Research, is the author of this design and has been active in working out all the practical details for its construction and equipment. He describes the house thus:

"We have a house that is low in cost, uses materials that are non-critical in the present situation, that can be built quickly, is easy to heat and yet will provide the essential comforts which all Americans want today.

"The Purdue house is fire-resistant and also, because of its framing, is highly resistant to the ground shock that accompanies demolition bomb explosions. The house is fully insulated to provide greater summer comfort and reduce to the minimum heating costs.

"The house contains a large living room, combined kitchen and laundry room, bedroom for parents and two small 'bunk' rooms which provide sleeping quarters for children of opposite sexes, and a shower bath with toilet and lavatory adjoining. There are three closets and ample storage space in the attic. The house is 24 by 28 feet. It is heated by a stove.

"The house can be erected in a week or less by trained workers and the entire cost will be between \$1200 and \$1500. It is designed to permit rental to war workers at \$30 per month which will permit complete amortization of costs within a five-year period.

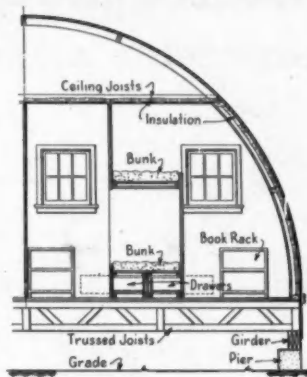
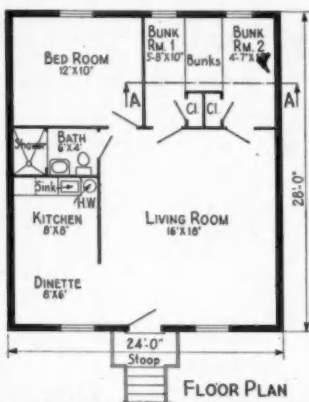
"In order that war housing will not be a post-war tax burden it should be a pay-as-you-go proposition. This means that it should be rental housing at a rent the worker can afford to pay and, if it is going to pay out in a short time, there is a maximum amount, we think not to exceed \$1500, which the building should cost.

"The following are the limitations or qualifications in the building of this house: The minimum of critical materials, even sub-critical materials, such as dimension lumber, should be used. There is little dimension lumber in the house and it is quite possible to use a lot of scrap and shorts, particularly in the bracing of the open web trusses which support the floor. The house should be spacious, hence the size chosen. It should be well insulated to save fuel, and have just the necessary essentials of plumbing and wiring. It should be fire-safe, or at least highly fire-resistant. The reason for the half-round shape is to make the house flexible enough to withstand ground shock.

"Emphasis should be put on the fact that this house has nothing to do with our past, present, or future research here at Purdue in the field of housing. It is simply an activity in behalf of the war effort with the handicap of the above mentioned limitations."

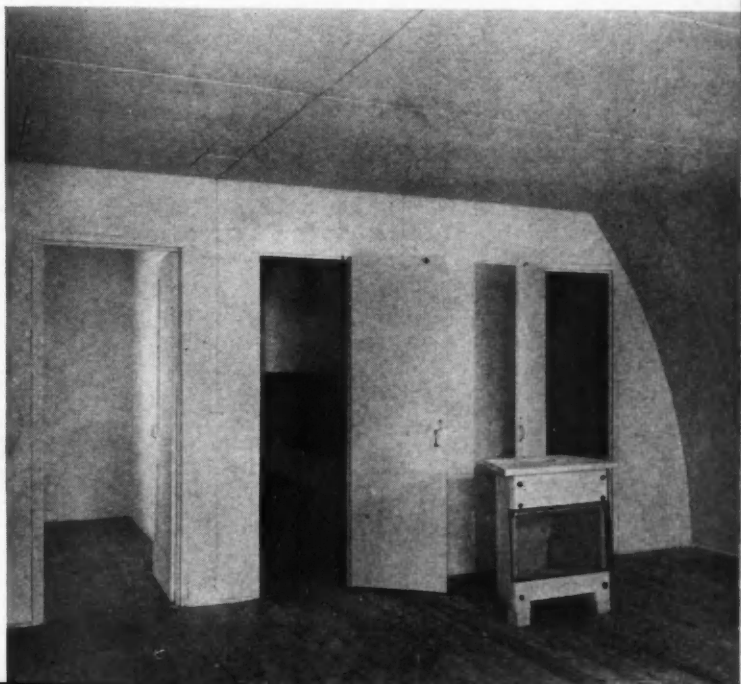


STEPS in building the Purdue war worker's house; top, curved-rafter and trussed-joist frame; middle, gypsum board is nailed on; bottom, waterproofing asphalt is sprayed on, to be followed by paint.



FLOOR PLAN and **SECTION AT A-A**
FLOOR plan and half-section through space-saving double-bunk room; below is photo of living room looking toward bedroom partition. House is insulated with wall thick Fiberglas.

CURVED rafter is made of four 1 by 4's bent to shape in form and glued; note floor trusses, 15" deep, 24" o.c., made of doubled 1 x 4's, braced—a shock-proof floor.



Tear off old porch and
exchange OLD for NEW

Use a PICTURE WINDOW

**Thousands of old homes
need brightening this in-
expensive modern way**

BUILDERS, architects and lumber dealers are well aware of the revolutionary changes which can be made in the exterior appearance and the interior livability of a house by correcting faulty window arrangements and judiciously increasing sizes of small openings. One of the best examples of what can be accomplished in this direction is the USG Remodel Research Home at Park Ridge, Ill.

Just one look at the before and after renovation photographs on these pages is convincing proof of the effectiveness of a vigorous window treatment that substitutes a big, dominant *picture window* for the old fashioned type that was all the rage in the so-called Gay Nineties. Architect Eugene Voita has done such an excellent job of improving the "eyes" of this 60-year-old dwelling that he might be called an *architectural optometrist*. Mr. Voita's prescription was ably filled by Contractor Carl Jensen.

One of the first decisions made in re-designing the house was to remove the porch and open up the front of the structure with a *picture window*. The magic which this double operation wrought is clearly seen in the contrasting photographs.

The new 7'-2" x 7'-2" window, produced from a Morgan Company design and glazed with Libbey-Owens-Ford glass, replaces a former conventional size sash, and contributes materially to the over-all window remodeling which makes the house appear less tall and gawky. The



accompanying close-ups of the Cinderella-like transformation tell a story in themselves.

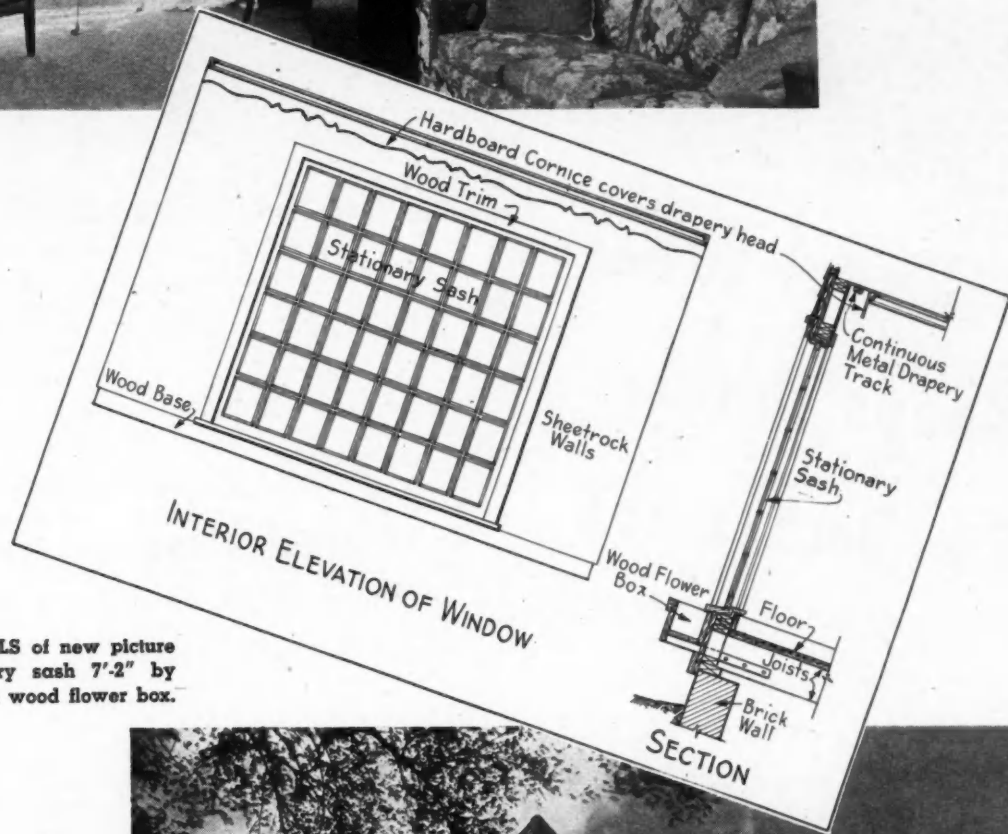
Cost of the entire project—a new frame, sash, 48 lights of glass, carpentry, and painting inside and out—was \$59.67. Cook County labor rates are \$1.62½ an hour for carpenters and \$1.83-1/3 an hour for painters.

Windows can be remodeled inexpensively as the above costs indicate. Neither do contractors and lumber dealers have to clear any priority hurdles to sell window modernization. Millwork and glass, the principal ingredients needed, are abundantly available. Another factor assisting the promotion of window improvement is the receptive mood of the public to rooms bathed with natural light, sunshine and cheerfulness.

Every city has its share of these old-style houses that are dark and uninviting, and so are not being utilized to their fullest in the present housing shortage. Carpenters and contractors would do well to make a consistent canvass for such rescue-work jobs.

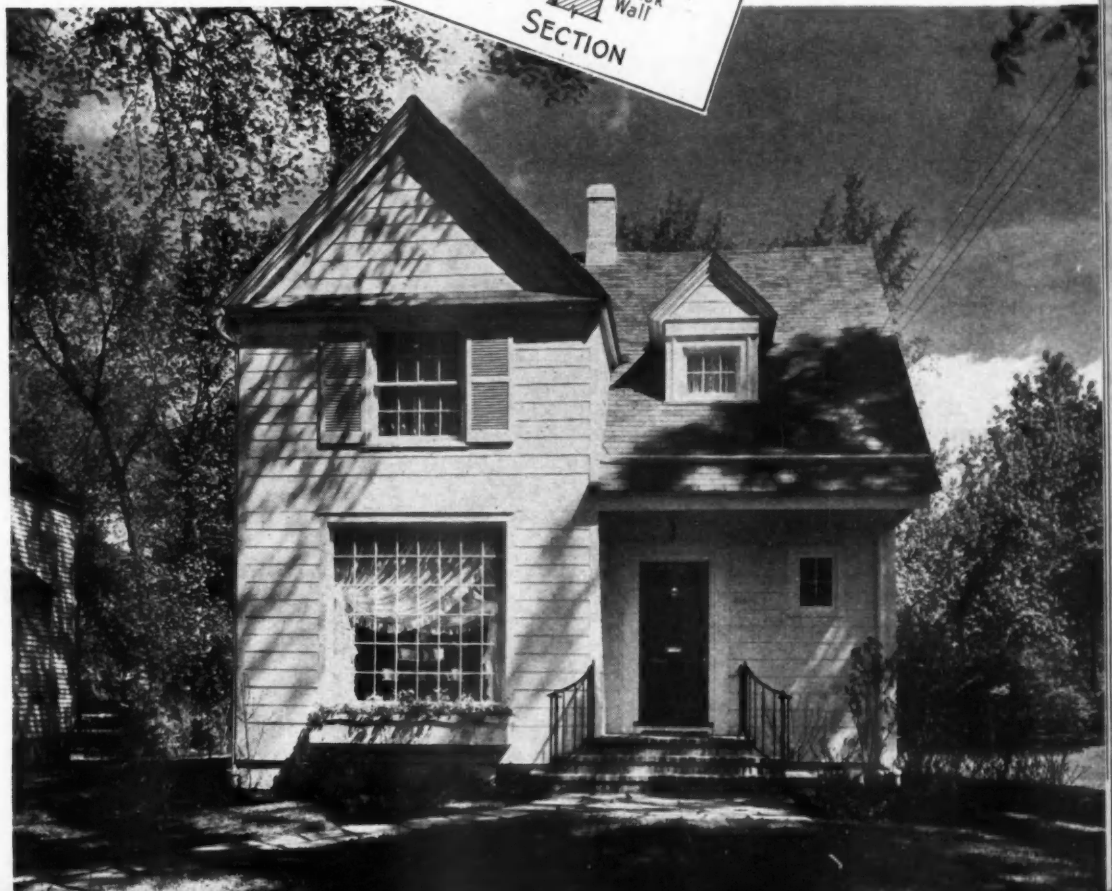


INSIDE, the living room is flooded with light. Traverse curtains of heavy material reach down to floor.



WORKING DETAILS of new picture window: stationary sash 7'-2" by 7'-2", with built-in wood flower box.

SIMPLE alterations have changed the whole expression of this 60-year-old Park Ridge, Ill., dwelling. Removal of the porch which prevented healthful sunshine from entering the rooms and modern treatment of windows aided the rejuvenation. Such pictures as these can help builders sell remodeling jobs. Eugene Voita, architect; Carl Jensen, contractor; U. S. Gypsum Co., owner.





A Novel Idea Keeps Builder in Business

THE House Doctor arrives at Knoxville, Tenn., home ready to take on another case.

Stuart Fonde, wideawake builder of Knoxville, Tenn., stays on the job with his "House Doctor"

STUART FONDE, alert, hustling home builder of Knoxville, Tenn., who has become nationally known through his communities of quality homes, was this year faced with the same problem as most other contractors: what to do, because of wartime restrictions, to stay in business?

He put on the same thinking cap that pioneered systems for mass-construction, as described in previous articles in *American Builder* on entire smokeless communities of low cost homes with electric heat and all-electric kitchens.

Builder Fonde decided on an experiment. He was not satisfied with the ordinary answer: try home repairs. Just haphazard home repair work could be costly for a home builder. Ordinarily it would mean trips back and forth from the plant. Trips in one part of town and then another. That would mean a waste of manpower, motorpower, and tires.

He decided to add a wartime necessity to the new undertaking—concentration of work. Start-

ing with a truck chassis, he built a new body in which he carried all kinds of supplies and equipment. There was space for lumber, nails, hinges, paint, bricks, cement, screens, and other materials.

Doors were built on the sides and on the rear of the truck, so that a workman could easily reach anything. There was also a place for everything.

Special compartments were built.

On the rear of the truck an extension workbench even provided a place for a combination saw and joiner that

RIGHT: All-around skilled workman, W. H. Stone, using a power-driven saw-joiner unit mounted at rear of truck.



could quickly and handily rip and size lumber.

Or on a job, the truck could be backed up to a home, if desired, the saw plugged into an outlet and that current used in the work.

Mr. Fonde thought the complete, traveling repair shop deserved some name, something which could be remembered easily.

"I thought of The House Doctor," he said. "Everybody knows of a house doctor and the name could easily be remembered." He decided to letter the name on the sides and back of the traveling shop, together with the phone number.

On the sides, he put this lettering:

**IF YOUR HOME IS SICK
CALL THE HOUSE DOCTOR
2-9691
ALL KINDS OF HOME REPAIRS**

On the back he just lettered in black, against the white-painted truck, "The House Doctor. 2-9691."

Places were provided on top of the truck for ladders. Thus The House Doctor was fully equipped to answer a call to any "sick home" (in need of repairs) and the next step was to let people know about this unusual change in business of Fonde.

Fonde ran a picture of The House Doctor in the Knoxville News-Sentinel, together with this ad:

"Home owners throughout Knoxville will welcome this new service. Minor home repairs are now available at a nominal cost. The House Doctor carries all necessary materials and equipment with him so there are no annoying delays when you want a job done.

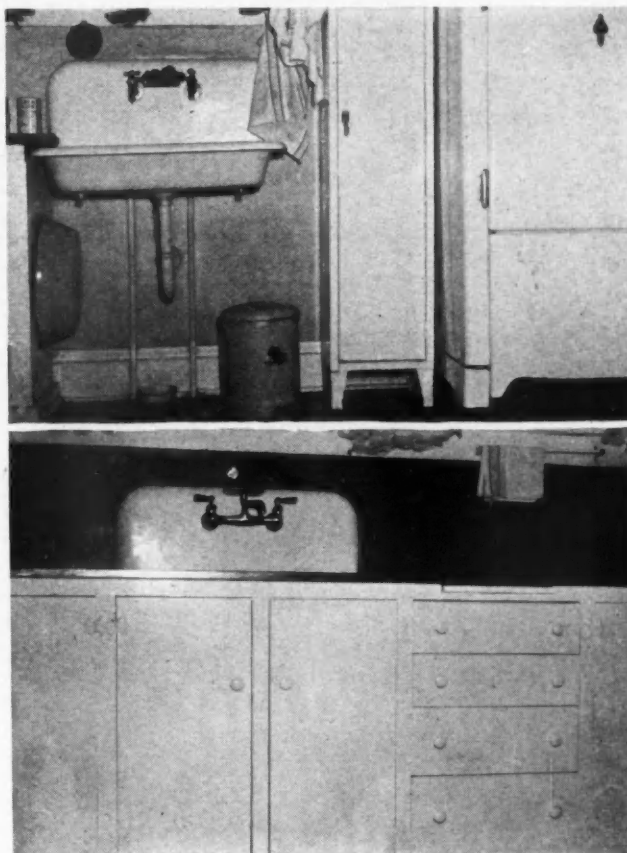
"If your home needs painting, if the screens need repairing, if the doors or windows need refitting, if you need cabinets or closet shelves built, if your porch needs repairing, if your floors need sanding or if your home needs any one of a number of other carpenter repair jobs done, just call Builders Supply Co., 2-9691 and the House Doctor will be sent out promptly."

Builder Fonde was pleased with the response. Home owners who before had not given any thought to home repairs now began calling for The House Doctor. Those who had not hesitated when they needed a physician for themselves, now began to take the pulse of their home and find that it needed the services of a House Doctor.

They discovered that built-in cabinets which they had long wanted could be built right on the job and made just right. Or complete repairs could be made without delays.

The House Doctor requires only one all-around skilled workman for most jobs. If more than one man is necessary on a job, others are sent.

Getting a competent man who can do anything in the way it should be done is an essential for The House



TOP VIEW in above illustration shows appearance of kitchen before Fonde's House Doctor had been called by home owner. Lower view shows the neat job of kitchen surgery after doctoring.

Doctor with as many varied jobs as have to be done.

Fortunately, Fonde's men are not only trained to do anything, but they have initiative. While in a community, the man in charge of the House Doctor will inquire if others in that neighborhood need work done. In that way he can concentrate on a community—making one trip do for several, keeping down unnecessary expense and complying with the wartime spirit of America to conserve.

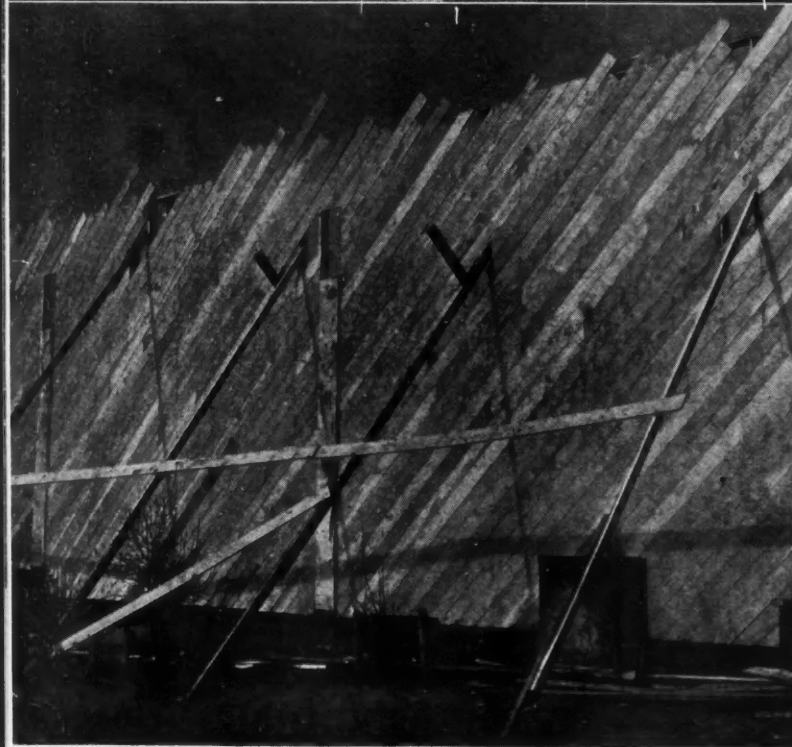
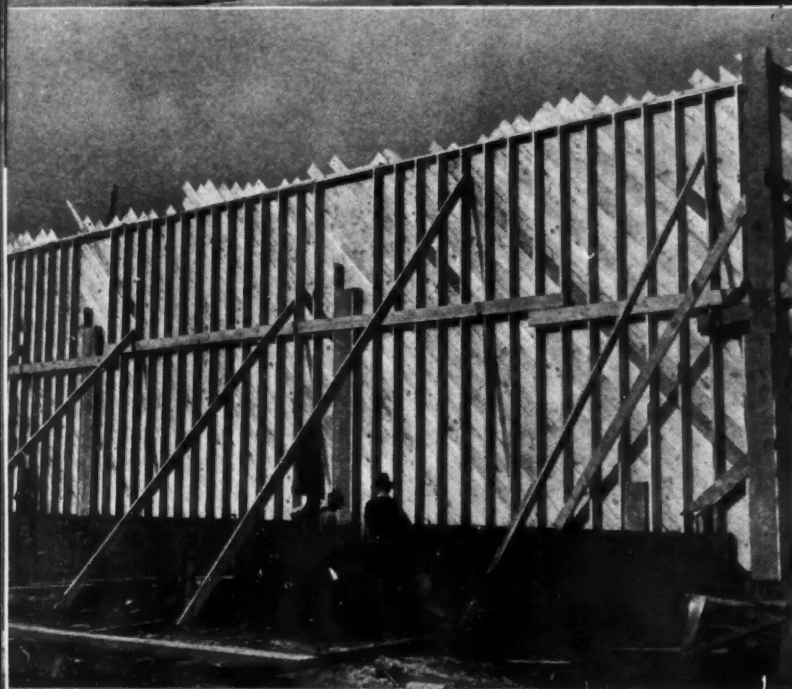
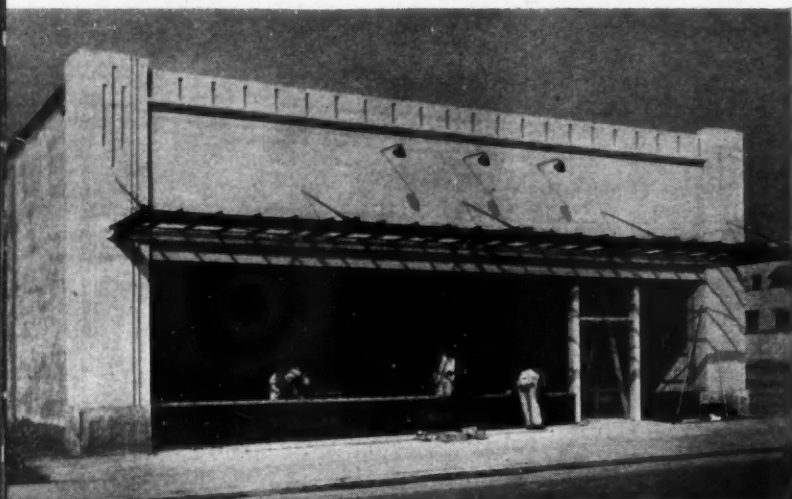
"We found it important to have a man who could do anything," said Stuart Fonde. "He can make repairs, paint, build cabinets, hang on screens, and even carries fuses.

"By doing as many jobs as possible in one community, he saves trips to the same section. He tries to save running around as much as possible. By having a completely equipped truck, with materials, the House Doctor doesn't have to come back to the plant to get what he wants. The man in charge of the truck makes a note of what he needs and when he returns at the end of a day he gets what he needs and is all ready to start out again in the morning.

"We find that our House Doctor really gets results."—Warner Ogden.



LEFT: One of the side doors of the House Doctor opened to allow workmen to reach painting materials carried to job.



Neighborhood Stores for Seattle Workers

30 new commercial structures designed by Architect T. F. Bellamy for Safeway Stores meet war conditions by conserving vital metal

BECAUSE the population of Seattle has increased by 45,000 war workers and because war workers must eat, the Safeway Stores, Inc., have built and have under construction approximately thirty new neighborhood stores within this area.

These standard type chain-store buildings, even as they are being built, are undergoing slight changes to meet wartime restrictions. All have been built with timber roof trusses. The only metals used for interior construction are timber connector rings and bolts. Where fire laws permit, timber is also used for the marquee.

If suitable lumber should be unobtainable it would cause this building to be discontinued, but inasmuch as recent reports indicate provision for defense housing, it is being presumed that that provision will include store space to meet the added consumers' needs. There is Safeway building under way in the many defense areas in the country. In Seattle over 150 wood trusses have been used during the past eighteen months.

Tennys Francis Bellamy, architect for the buildings in the Seattle area, speaking of the use of ring-connected trusses, states

TOP to bottom at left: One of the new Safeway Stores nearing completion in Seattle; where allowed, wood marquee replaces steel. In the first stage of construction, sidewalls are erected with posts in place for the timber trusses; diagonal sheathing provides wind bracing and makes a more durable wall.



TENNY FRANCIS BELLAMY
Architect

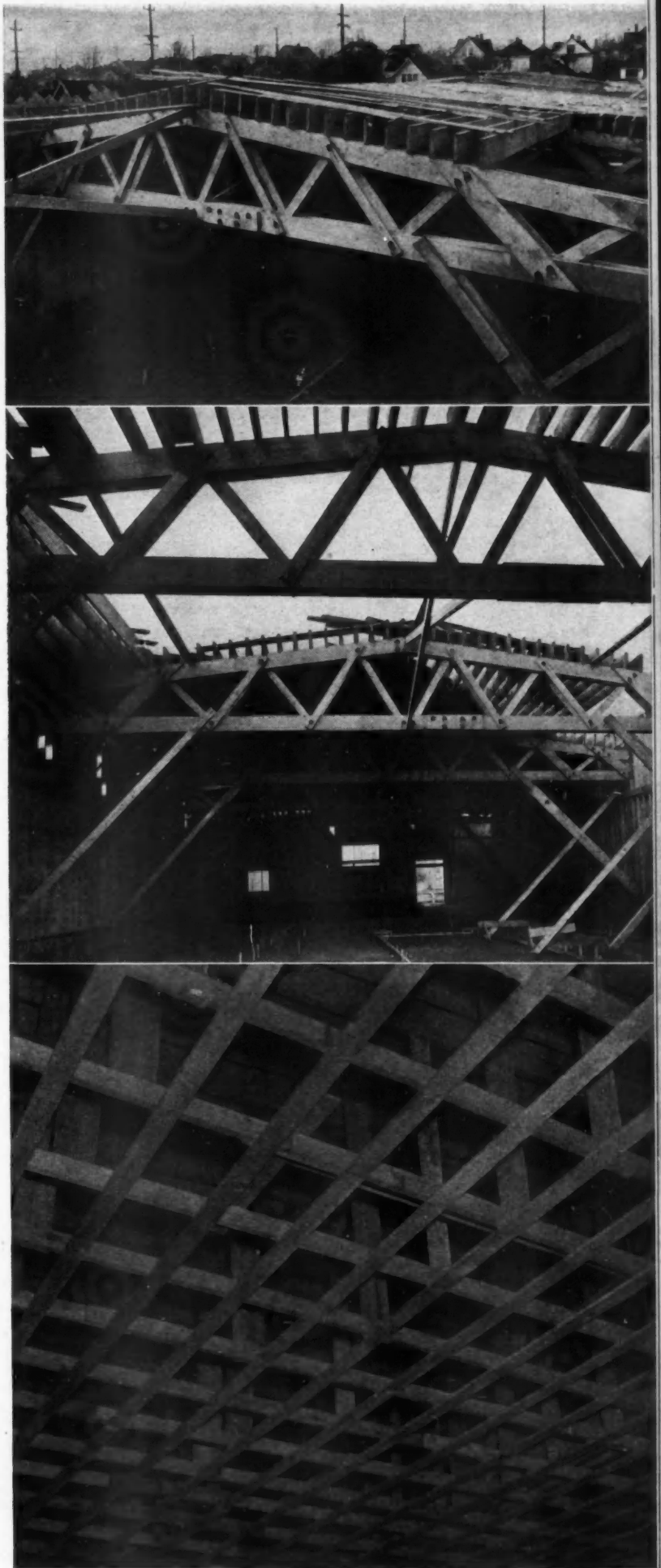
that these trusses used with double diagonal shiplap on both sides, make a framework so rigid that there is practically no shrinkage or settling.

With this rigidity of framework, stucco has been used as exterior finish on the majority of stores, with little or no fear of cracking or chipping.

The store illustrated here, completed last month, was built by Daniels & Turnquist at a cost of approximately 18 cents a cubic foot. The frame walls are placed on a concrete foundation and the roof finished with Carey 4-ply built-up roofing. Celotex board provides insulation and finish; the floor is covered with Tile-Tex asphalt tile laid over concrete. On the store front, Kawneer metal is used with Pittsburgh glazing.

Principal equipment items consist of Humphrey gas-fired unit heaters, Standard Sanitary plumbing fixtures, and a General Electric fluorescent lighting system.

Architect Bellamy has stepped a little outside his specialty in handling this job of designing. His reputation in the Puget Sound region rests more on his work with homes in the higher-priced brackets and for his understanding in the creation of ranch houses, log cabins, resorts and mountain retreats. Bellamy does most of his work in a picturesque office among the trees and estates of Blue Ridge, in north Seattle, where the blue waters of Puget Sound lap the curved shore and the snow-capped Olympics crowd close.



TOP to bottom at right: From above can be seen the method of laying roof sheathing over the rafters as illustrated in the view from below. Other than nails, etc., only metals used in interior are bolts and rings in timber trusses. Celotex ceiling tile is applied to the 1 x 4 stripping.

New Precast Floor Slab

PCA issues information bulletin on "Flexicore"

THE Cement Products Bureau of the Portland Cement Association, Chicago, is authority for the following new products information recently released in the form of a printed bulletin:

Description. In 1938, precast concrete cored floor and roof units known by the trade name "Flexicore" were placed on the market. Since their introduction these units have been extensively used in residential, commercial, industrial and agricultural buildings. The cored units are 6 in. deep and 12 in. wide. Each unit has two parallel longitudinal cores which displace about 60 per cent of its volume. Price Brothers Co., Dayton, Ohio, sponsor of Flexicore, has developed molds and prepared instructions covering manufacture and installation, and is the licensing manufacturer for these units, some features of which are patented*.

Advantages. Precast concrete cored floor construction has the same advantages of fire safety, rigidity, durability, and of freedom from rot, insect and termite infestations, shrinkage, sag, etc., as other types of concrete floors. In addition, the following advantages are claimed for this type of construction:

- speed of erection.
- immediate working deck with a minimum of delay to other trades.
- formwork is eliminated.
- less protection required for winter construction.
- bottom of units may be attractively painted, thus saving the cost of plastered ceilings.
- built-in ducts accommodate electric, telephone and other conduits.
- cored construction provides added sound and thermal insulation.
- A 4 to 6-in. saving in height of walls over joist type construction for each floor used.

Manufacture. Price Brothers Co. sells molds and furnishes design tables giving recommendations for sizes of bars and arrangement of reinforcement for various conditions of loading and span.

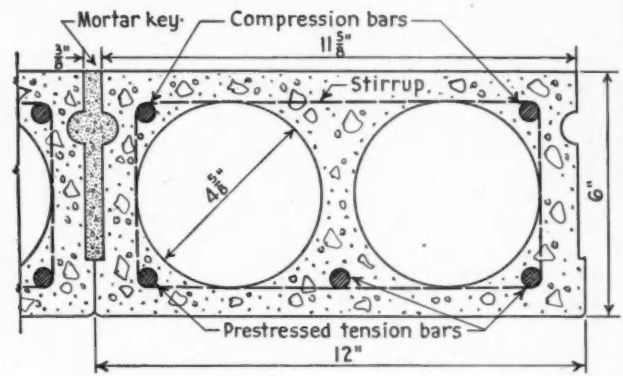
Vibration is employed to produce dense, high-strength concrete. Each unit is cast in a separate mold. Either

* It is not in accord with Portland Cement Association policies to discuss patent claims or to express an opinion as to the validity of any patents or as to the features covered by them.

heavyweight or lightweight aggregates can be used. Mixes are proportioned to obtain the required concrete strengths. After the units are removed from the forms they are cured under carefully controlled conditions, usually in moist-curing rooms.

Flexicore units are made by using flexible rubber tubes which are inflated by compressed air to proper diameter for forming the two longitudinal cores. These rubber tubes are deflated and withdrawn as soon as the concrete has hardened sufficiently—usually about 5 hours after casting. This permits two uses of the tubes per 8-hour day. Provisions are also made for providing initial stress in the tensile reinforcement.

Rigid conduit may be incorporated in the units, or openings for electrical outlets may be cast in the ceiling

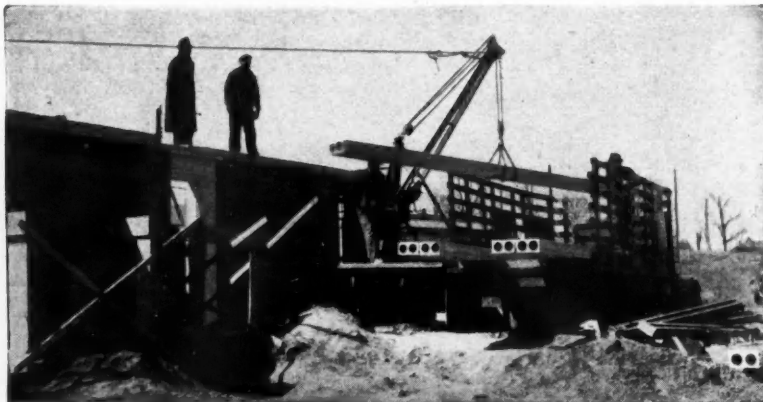


Section through typical Flexicore unit.

side and wired with flexible electric cable. Steel sections for stair wells, etc., may be cast in the units or units may be made in special shapes. Price Brothers Co. furnishes drawings showing construction details.

Installation. One of the advantages of precast concrete cored floor units is the ease and speed with which they may be erected. Manufacturers usually sell this type of floor in place as special handling equipment is required for efficient installation. Crews familiar with the construction can work efficiently with minimum delay to other trades. A residence floor is usually placed in 1 day with a crew of 4 or 5 men.

With this type of unit it is desirable that the supporting walls be level. A level base is provided by any one of



Hoisting units on job with special equipment mounted on a truck.



Special cart greatly facilitates installation of units.

the following three construction methods:

1. By building up a leveling course of mortar around the wall.
2. By setting precast concrete leveling strips.
3. By forcing mortar under the units after they have been placed and leveled.

As soon as the Flexicore units have been set, metal channels are fastened at the third points by bolting to a nut which has been previously placed in the keyway formed by the sides of adjacent units. Drawing the bolts up tight tends to align the separate units by pulling them up to the channels. Joints are then filled with a grout consisting of 1 part portland cement and 2 parts sand, which is allowed to harden with the channels in place until the next day.

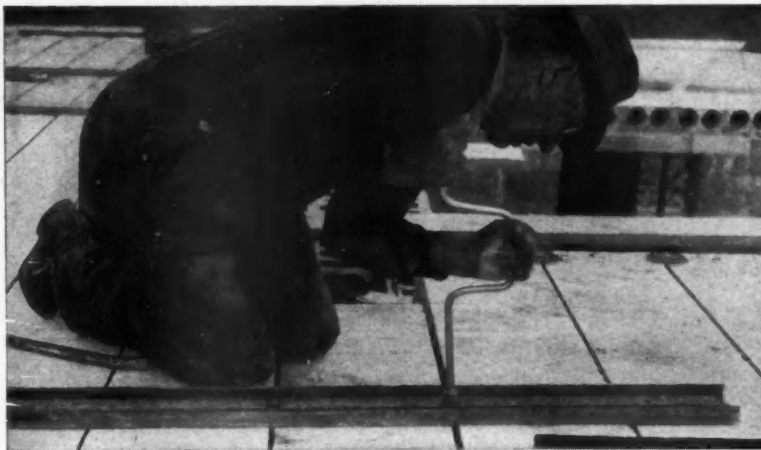
Floor and Ceiling Finishes. Although these units present a fairly smooth top surface, it is general practice to grind them sufficiently smooth for such mastic-bonded finishes as linoleum, wood block, and cork, rubber or asphalt tile. As a general rule such grinding is not necessary for over-all carpeting when a pad is used. Wood strip flooring is usually attached to sleepers. Sleepers may be attached by inserting a metal U-clip in the mortar joint between the slab units prior to grouting, or threaded toggle bolts which engage grooves between the slabs may be used to bolt the sleepers to the floor.

Attractive ceiling finishes are obtained by painting the underside of the slab units. In the event a plastered or a textured ceiling is desired, plaster can be applied direct to the slab units using a dash coat portland cement plaster for the first or bond coat.

Concrete Building Hints

A NEW PORTFOLIO of concrete house designs prepared by the Portland Cement Association is entitled, "Suggested Designs for Small Firesafe Concrete Homes." In its 16 pages a number of well handled house plans are presented. Along with the designs, numerous helpful details of construction and hints for good building practice are given. In reference to concrete floors, the following is stated:

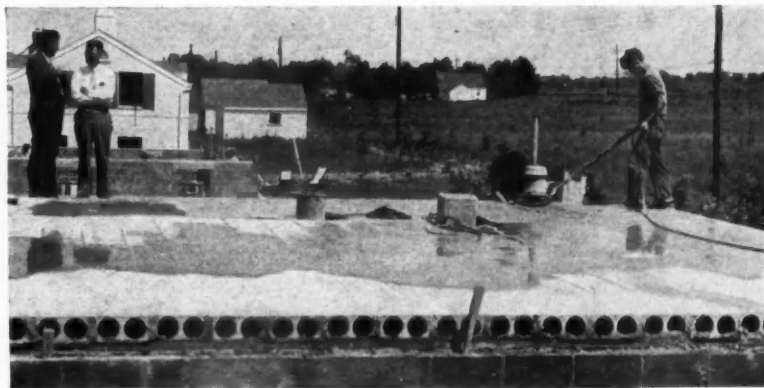
The greatest factor in limiting the spread of flames originating within a house (is a concrete floor). These floors are rigid, sagproof,



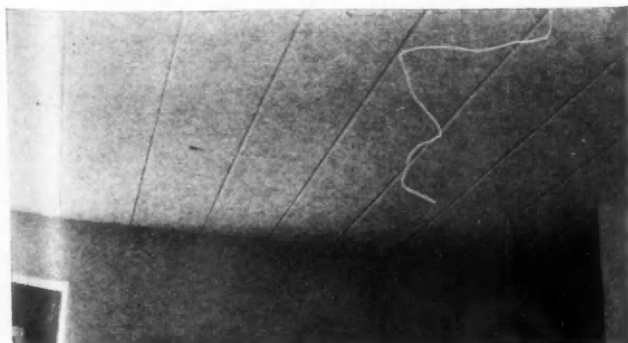
Floor is leveled prior to grouting with anchor bolts and steel channels. Bolts are turned into nuts slipped into keyway between units.



Grout is worked into joints to form mortar key as soon as channels have been placed.



Channels are removed the next day. For certain floor finishes the slab surface is ground smooth with a carborundum floor finisher.



The underside of Flexicore units is left exposed and painted. Ceiling may be plastered direct if desired.

comfortable, with the strength of floors in modern hotels and large apartments. They are warm and dry. For floor finish, select any floor covering desired—hardwood, carpeting, linoleum, rubber tile, terrazzo or colored concrete marked off in patterns—and place it on firesafe concrete subfloors.

The following "hints" are also given, showing how to lower building costs: Keep exterior lines of house simple; keep trim and window details plain; build for present income with a plan that will allow additions for future needs; ample living space is more important than special finishes or gadgets; quality construction secures preferential mortgage rating; firesafe construction will lower annual insurance expense; rigid floors and walls help prevent plaster cracking.

Wood Cornices

Their Design and Construction

By R. J. Alexander

CORNICES, originally, were merely the overhanging portions of a roof, serving as a protection against the elements. Later, these projections were ornamented by means of mouldings, dentils and carvings to become a design feature of the building. Climatic conditions often determined the type of building material available in a given locality, and thus determined styles of architecture. Climatic conditions have likewise determined the type of cornice suitable for a given section of the country.

There are individual types of cornices suitable to houses of Colonial, English, Spanish, French, Western and Modern design. Some of the more common types are illustrated. The designer and builder can, of course, use his ingenuity in adapting period types to his every-day requirements.

A well designed cornice is an important part of any building, and considerable thought and study should be given to its design and construction. Scale, the relation and size of one part to the other parts, plays an important part. While the size and contour of the mouldings are important, the good designer will be able to detail a suitable cornice from stock mouldings and lumber items.

The relative sizes of the cornices for the various parts of a building is another point worthy of careful consideration. The designer must remember that a small dormer will not have a cornice exactly like the main cornice of a house. It will probably be made up of fewer and smaller members; the projection will be less, or there may be no projection at all other than that of the moulding.

Cornices are generally designated as level cornices and rake or gable cornices. The gable or rake cornice always runs up the edge of the roof slope and in this way can be distinguished from the main or level cornice. Generally speaking, a main cornice consists of a frieze, a plancier, a fascia, a crown mould and a bed mould. These parts and their relative position in the cornice are designated in Fig. 11. These same parts may be used to make up a rake cornice, but the present trend toward simplicity in design has outmoded the heavy rake cornice, and now a frieze and crown mould are all that are generally used.

Appearance versus Utility

As mentioned above, the trend has been toward simplicity of design. The eave or level cornice has been reduced in size and projection, while the rake cornice has been clipped off almost flush with the side of the building. Undoubtedly these new designs have added something to the appearance of a house, but at the same time their value from a utility standpoint has been lessened.

A wide cornice offers protection to sidewalls and windows against all but a driving rain. It gives shade and a cooler house during summer months when the sun is high in the sky; and in cold weather when the sun is low in the sky, the wide eaves will keep out but few of the sun's rays. It becomes, thus, the problem of the designer and builder to conceive and construct a cornice that is suitable from both a design and utility standpoint, that adds to the appearance, without detracting from the livability of a building.

Figs. 1 and 1-A represent a section and elevation of the

gable return of a cornice suitable for a Colonial house, or one influenced by Colonial design. It represents a plain, simple cornice, free from ornamentation. The size of its members would be governed to some extent by the size and style of the house. Under ordinary conditions, a plancier of $\frac{3}{4}$ " x 8" material would be about right, with a $\frac{3}{4}$ " x 6" fascia. The crown mould should be about $\frac{3}{4}$ " x $3\frac{1}{2}$ " and a bed mould approximately $\frac{3}{4}$ " x 2" would be in scale.

The size of the frieze would be governed by conditions. If it forms the head casing of the window frames it should be $1\frac{1}{8}$ " thick, while the relationship of the cornice to the window heads, and the pitch of the roof, quite often determine the width of the frieze.

Fig. 2 is a section of an "open" or Western type of cornice. While not as popular as it was a few years ago, it is still appropriate to some styles of architecture, particularly to types using hipped roofs. In this style of cornice, the main rafters usually stop at the plate line, the rafter tails, or ends, being separate pieces, usually band-sawed and considered as part of the millwork. In most types of open cornice construction the roof sheathing over the rafters is exposed; consequently that part of the roof sheathing over the cornice projection will have to be of finish material, such as D & M, V-Joint, or M & B, and must be of the same thickness as the roof sheathing. In this connection, the nails used in shingling should be short enough so that they will not penetrate the face side of the sheathing.

Belt Cornice Useful

Fig. 3 is a section of a belt cornice that can be used advantageously at the second floor line of a two-story house to separate two kinds of exterior wall finish. It can also be used as a design feature to lower the apparent height of a two-story house having a high main eave line.

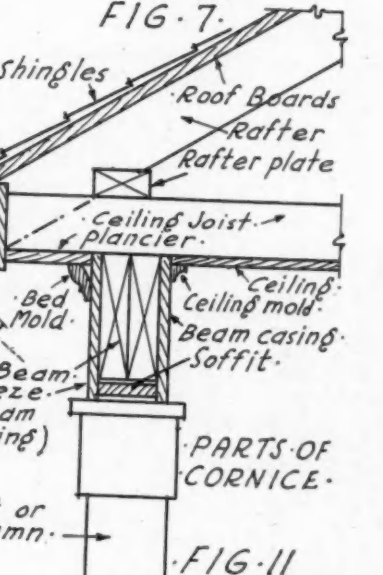
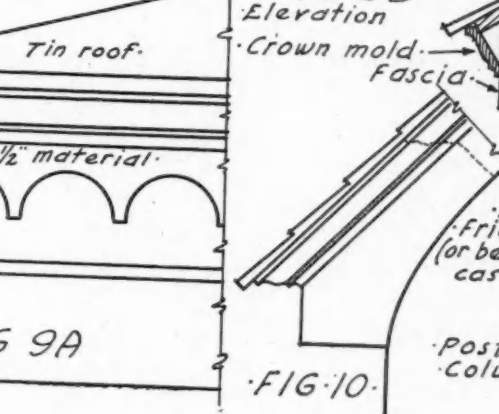
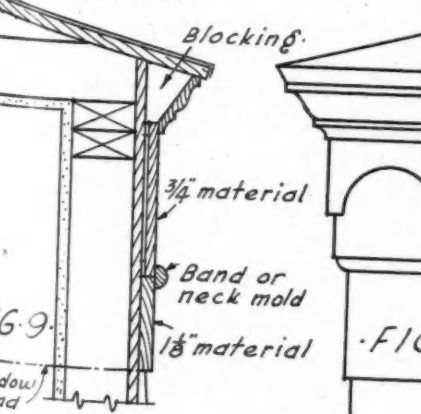
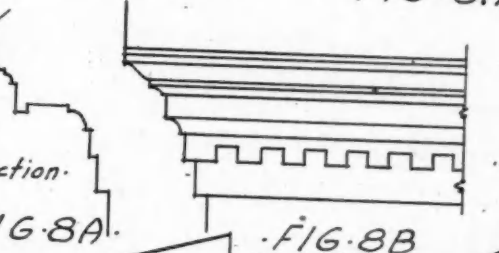
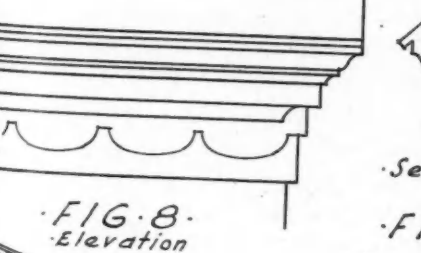
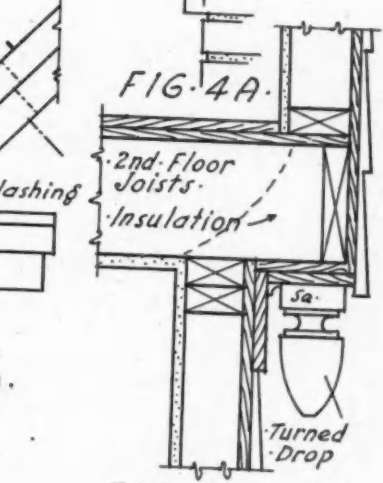
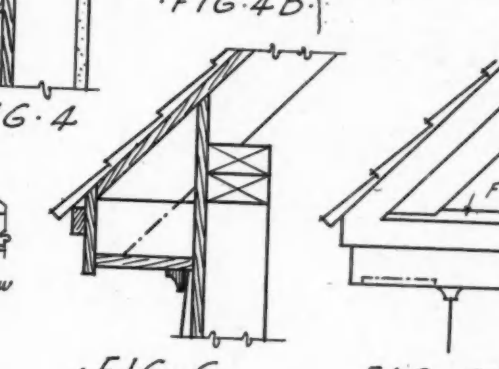
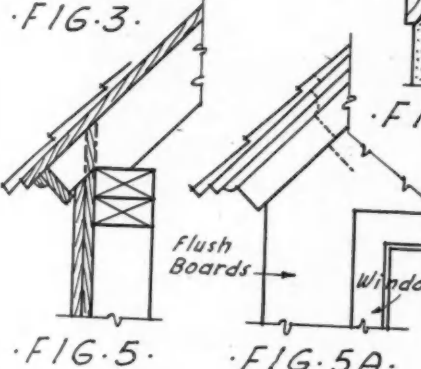
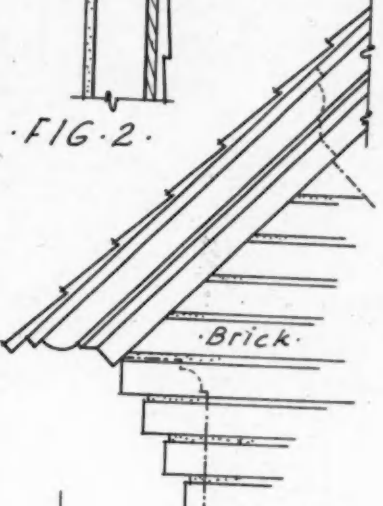
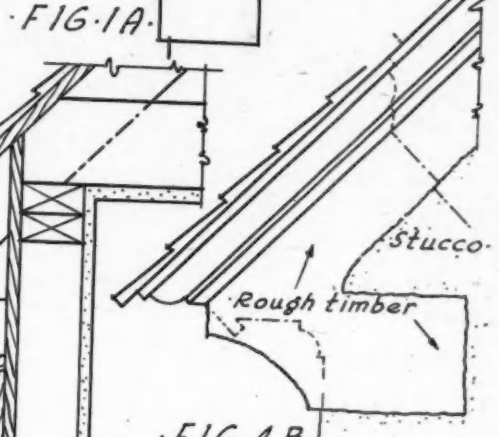
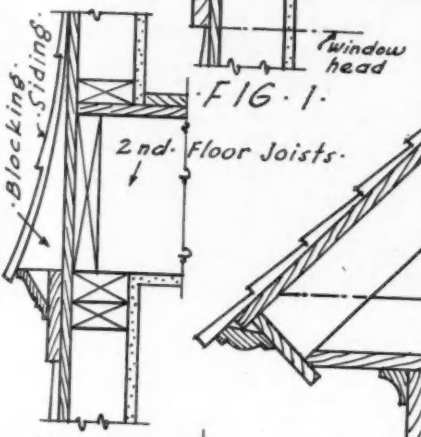
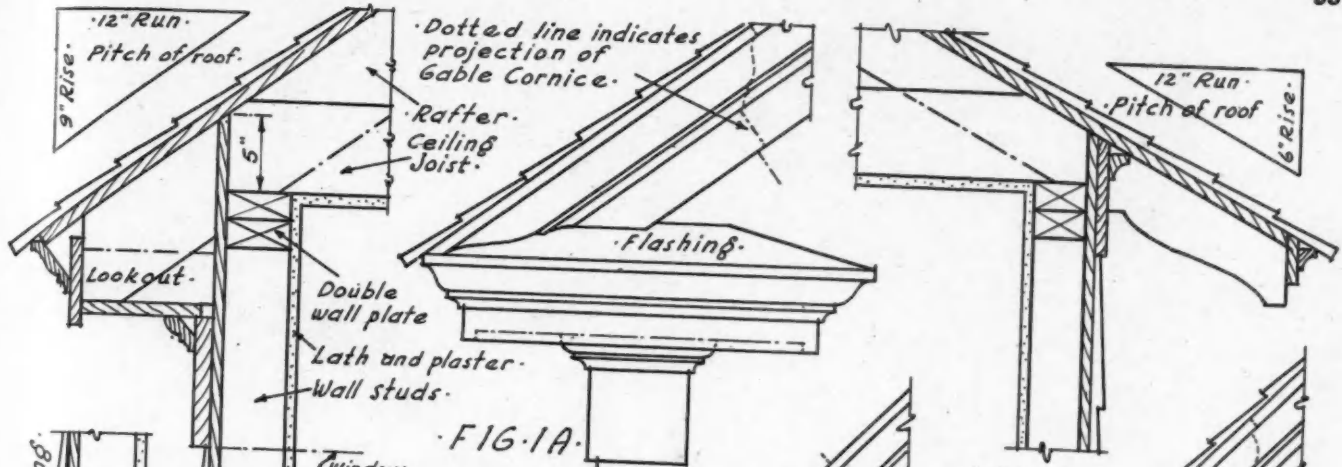
Figs. 4, 4-A and 4-B show in section and elevation a cornice and its return, suitable for a house of English design. The section shows that the crown mould and fascia are set at right angles to the pitch or slope of the roof; in other words, the rafter ends have been cut off square instead of plumb. Placing the crown mould in this position is necessary if it is to form a true miter and return up the gable cornice as shown on the return elevations.

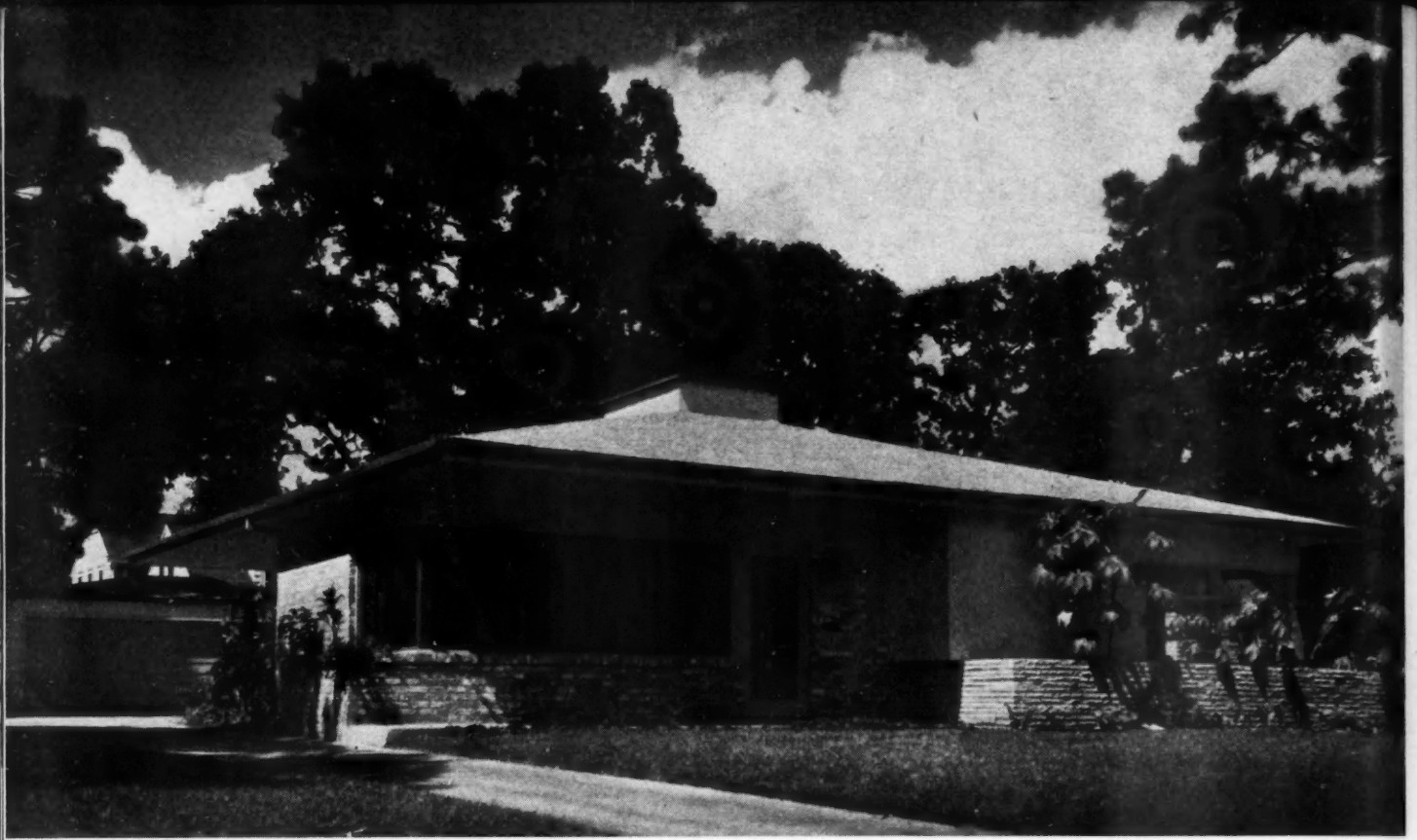
Figs. 5 and 5-A are details of a simple, small scale cornice suitable for a small dormer. The proper detailing of dormers, particularly their cornices, cannot be stressed too often. A dormer should be inconspicuous, and to help keep it that way heavy, overhanging cornices with returns should be avoided.

Figs. 6 and 6-A offer a suggestion for low-cost cornice construction. It can be used on simple cottages, small Colonial homes, and is especially well adapted to garage buildings. This cornice on a small detached garage would be entirely in harmony with the more ornamental cornice of a Colonial house.

Fig. 7. Not a cornice in the strict sense of the word, but a detail of an overhanging second story, so often found on two-story Colonial houses. Good construction would call for the joist being cantilevered out over the

(Continued to page 87)





In a Peaceful Spot, Home With a Future

Built in River Oaks, Texas, by J. J. Scholl; MacKie & Kamrath, architects



TO THE forward-looking men of the building industry who, regardless of their present circumstances, foresee a tremendous home building market in the post-war period, such design material as is presented on these two pages will be interesting. Here is shown a type of home which should be popular in many sections. Built near Houston, it was planned for that region but offers much of contemporary design that will be adaptable.

The five-room arrangement provides for large window areas, an open plan with good circulation, plenty of storage space and facilities for modern livability. Exterior design is simple in line, and interesting in the combination of materials selected. Wide, overhanging eaves protect the windows against frequent rains and against strong sunlight. The projecting stone wall partially screens the porch, and a window box is provided by an extension of the brick wall under the living room windows. The large chimney serves as a vent for both heating plant and attic fan. Overall dimensions are 46 by 50 feet, contents, 20,000 cubic feet.

Construction materials and equipment include concrete floor slab, brick veneer over frame, Barber built-up roof, 4-inch rock wool, Fenestra casement windows, Pittsburgh DSA glazing, Bryant gas-fired furnace, Kohler and Case fixtures.

THE PLAN features an openness which is heightened through the use of large window areas arranged for livable furnishings. Dining room is separated from the living room by bookcase and draw curtain. Utilities are well placed. Circulation is excellent.



THE TWO exterior views above indicate the dramatic simplicity of this Houston, Texas, home of the late pre-war era. Wide protecting eaves, large areas of wall and fenestration, good use of materials, tie it to the site.



UNDER the end of this living room corner window, the brick wall has been extended as a flower box. Natural finish Bruce block floors, plain painted Sheetrock walls add to the coolness and clean-cut attractiveness of the interior.



IN THE master bedroom, the same finish has been used with equal effectiveness. The door-high wall mirror picks up reflection of the bank of casement windows. Two good sized closets, bath and screened porch open off this room.

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NEW TOOLS, MATERIALS AND EQUIPMENT OFFERED

AB907 The new Coleman Dual-Wall oil floor furnace is announced in a 4-page 2-color data sheet from The Coleman Lamp and Stove Co., Wichita Kans. This equipment has been specially designed for low-cost defense industry homes and is offered as the ideal low-cost heating unit. The Dual-Wall register feature gives extra heating power into principal rooms on both sides of a central partition.

AB908 Nairn Treadlite, a new and improved inlaid linoleum on duplex felt backing, is presented in a new 4-page data sheet. Treadlite is offered in de luxe and service weights and is available in ample supply, since no critical, rare or imported materials go into its manufacture. Data sheet shows method of cementing Treadlite to wood flooring direct without using lining felt.

AB909 "National Projected Wood Sash Units" are announced in "Manual A" by the National Door Manufacturers Assn., Inc., 332 S. Michigan Ave., Chicago. This is a 10-page portfolio of details and specifications covering this newly developed industrial wood sash.

AB910 "Zonolite Concrete" is an impressive brochure of 86 pages and covers prepared by the Universal Zonolite Insulation Co., 135 S. La Salle St., Chicago. It is copiously illustrated and contains much factual data, tells what Zonolite concrete is, what it does, and how it is made. Specifications for insulating roof-fill, insulating structural roof decks and precast Zonolite blocks are included.

AB911 "Facts You Should Know About Home Insulation" is the title of a blueprint and black data book about Armstrong's Temlok sheathing, lath, and interior finish, prepared by Armstrong Cork Co., Lancaster, Pa. Close-up photographs of installations and large, clear working drawings make plain the building methods recommended.

AB912 "DeWalt Cuts Materials Accurately at any Angle" is the title of a new 16-page handbook by DeWalt Products Corp., Lancaster, Pa. It illustrates the use of the versatile DeWalt woodworking machine for numerous war production and building jobs.

AB913 The Western Pine Assn., Portland, Ore., has prepared a new 1942 edition of its "Standard Grading Rules," a vest pocket booklet of 116 pages. A mailing charge of 15 cents each is placed on these grading rule booklets by the Association.

AB914 "Glued Prefabricated Houses" is a timely 6-page data sheet from the Casein Company of America, 350 Madison Ave., New York City, describing the gluing methods recommended for plywood panel prefabricated house construction. A companion piece, "Glued, Laminated Wood Beams, Arches, Roof Trusses," presents much helpful information in this field.

AB915 "Reinforced Concrete, A Manual of Standard Practice" is a handbook of 64 pages and covers prepared by the Concrete Reinforcing Steel Institute, Build-

ers Building, Chicago. This is the third edition of this manual, and supersedes the first two editions since it contains many important changes.

AB916 "Weisway Cabinet Showers for Defense Living Quarters" is a beautifully presented 8-page data sheet from the Henry Weis Mfg. Co., Inc., Elkhart, Ind. It introduces new models requiring a minimum of critical materials.

AB917 A line of Sunbeam warm air furnaces and winter air conditioners, especially designed for defense housing, is described in a new catalog issued by American Radiator & Standard Sanitary Corp., Pittsburgh. The furnaces illustrated have been reduced in size to meet current conditions, and consequently less critical material is used in them.

AB918 The Structural Clay Products Institute, Washington, D. C., is carrying on an interesting educational campaign in behalf of easily obtained non-critical brick and tile units to substitute in construction for structural steel for many building uses. A 12-page data sheet has been issued entitled, "Saving Critical Materials in Defense Construction." It presents brick and tile walls, floors and partitions for industrial buildings.

AB919 "Corrugated Asphalt Siding" developed by the Certain-teed Products Corp., Chicago, is presented in a new 4-page application sheet. Corrugated asphalt siding is a new light-weight non-critical siding material in sizes 28 inches wide by 6, 7, 8, 9 and 10 feet long. It is for use wherever corrugated steel siding was formerly used.

AB920 "Extruded Color" through the use of Wernco extruded plastic decorative trim is presented effectively in a new 8-page celluloid finish brochure from R. D. Werner Co., Inc., New York City. Nosings, edgings, decorative strips, caps and covers are included in a selection of five colors, red, blue, black, ivory and green. These plastic mouldings take the place of stainless steel and aluminum mouldings now unobtainable.

AB921 Owens-Illinois Glass Co., Toledo, has issued a 24-page data sheet on glass block industrial lighting, entitled "Alternate Construction Details to Save Metal and Aid War Construction." It clearly shows how to install glass block in new and old buildings without using critical materials.

AB922 "Blackout, Air Raid Damage and Glass Splinter Protection" is an illustrated data sheet of 12 pages prepared by Clinton Carpet Co., Merchandise Mart, Chicago, to explain the use of Ozite air raid safety and blackout blanket. Several simple plans for protecting window openings are illustrated.

AB923 "Cover-crete," a ready mixed, ready-to-use resurfacer is described in a new 2-page data sheet from The H. W. Covert Co., 339 E. 48th Street, New York City. Cover-crete is a quick setting repair and resurfacing material for trucking aisles, sidewalks, etc.

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(August, 1942)

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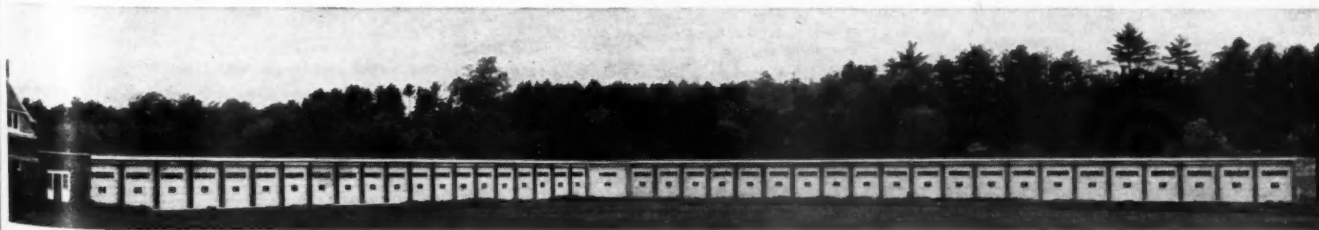
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"We're pushed aside" say Architects

Report of AIA Committee at June Annual Meeting paints gloomy picture

ARCHITECTS who are "war casualties" should be put to work planning post-war construction, says a report of the Committee on Architectural Services of the American Institute of Architects, which held its seventy-fourth meeting in Detroit June 23-25. A "press release" put out by the Institute summarizes this report as follows:

A large number of architects cannot be absorbed in the war effort, the report finds, and to employ them as planners "will involve no detraction from the prosecution of the war and no critical materials."

Bombs have taught the British public the need of planned reconstruction, according to the report, because it is "easy to appreciate the desirability of rebuilding a devastated area better than it was before." The United States, the report states, has plenty of devastated areas without having been bombed.

"Our great cities, especially, are full of them. We need planning now so as to assure better building when peace comes. We need it so as to absorb much of the shock which the end of the war effort will bring. We need it to show ourselves and the rest of the world that we really do intend to make it a better place to live in. This is a job for architects and architects of all people should take the lead in advocating planning now."

The committee, of which Frederick J. Woodbridge of New York is chairman, finds that the "impact of the war on building has made a major casualty of the profession of architecture."

The report emphasizes that the cost of planning for post-war construction will be "insignificant compared to our other war expenditures and it will be just about the only investment sure to yield a handsome return in the future."

The report urges the Board of Directors of the Institute to instruct a group of architects to explain to appropriate authorities of the government the real functions of the architect. The group also should "take whatever further steps may be necessary to overcome the appalling misconceptions now existing in this regard."

The report also recommends that architects executing work under war conditions and under Government contract be requested to submit a digest of their experiences in "candid and dispassionate reports."

A staggering army of witnesses testifies to the complete misconception of the function of the architect held by those in authority over the prosecution of the war, the report says. Architects, schooled in the importance of good plans, sound structure, and efficient functioning, have to call themselves site planners, construction engineers, or planning engineers to be considered in the emergency, it asserts.

"Planning has not been part of an engineer's training but it is the most fundamental part of the architect's," the report continues. "Engineers are needed to see that buildings stand up, that mechanical equipment works and for many other essentials, but architects are needed to plan. The architects' function as planners is often usurped by others who have invented a new terminology."

"Vigorous discussion of style and character is healthy and necessary but it is not the crying need of the moment. It should, however, be remembered that the very emphasis

Chairman Frederick J. Woodbridge, AIA, of New York City



on charm and beauty, the esthetic championing which has done much to label the architect a mere exterior decorator, was very properly part of his peace time responsibility.

"The proper function of the architect is to provide the best possible environment in which people can live and work and have their being. The best environment must be convenient and practical, safe and durable, and beautiful. Sir Henry Wotton's quaint dictum, 'Well building hath three conditions, commodity, firmness, and delight,' is a timeless truth.

"From time to time waves sweep the profession emphasizing one or another of these conditions at the expense of the others. There have been times when the architect had to be primarily an artist, others when he was to be a businessman, now he must be an engineer. It is not hard to discover the reasons for the shift of emphasis. They are always plausible, but they have always led the architect after false gods. There is only one god for the architect and he is a trinity, each part coequal with each. Whether architects cleave to tradition or experiment with radical design they are trying to produce the best possible facilities for work, play, assembly, worship and living.

"There is a growing weight of evidence that in the future the architect must again be both planner and master builder. There must be no competition between architect and engineer, no antipathy or jealousy. Each has a sufficiently magnificent role to play which in close collaboration becomes yet more splendid. Toward the establishment of standards and procedures for this enlarged service the experience of architects in the war should greatly contribute. Other experiences too deserve study, particularly the vast projects undertaken by the government before the war of which the Tennessee Valley Authority is a conspicuous example. These show the success of complete collaboration and imaginative planning.

"Whether architects remain a casualty to be buried without military honors and mourned only by antiquarians, or whether their wounds can be healed and they can live to fight another day depends chiefly on themselves. Upon their leaders, those who have been fortunate and able enough to receive war contracts and actively to assist the war effort as architects, rests a heavy responsibility. They may be the only ones to emerge from the war still in the practice of architecture. On the other hand, every architect, even though he may be obliged to give up his profession for the duration, must share the obligation to see to it that the rebuilding of the world shall be well and carefully planned."

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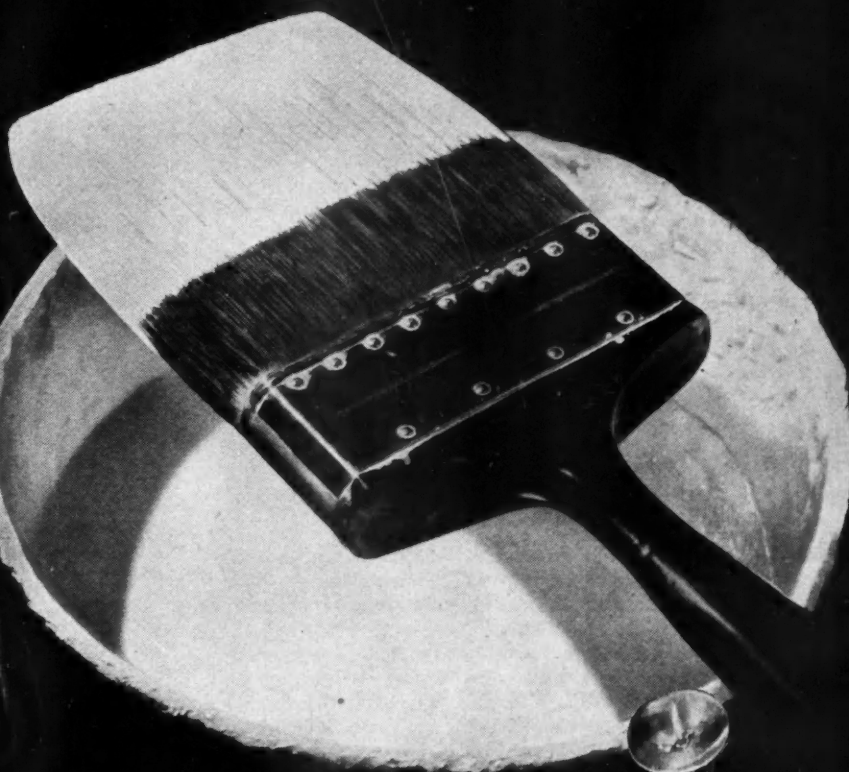
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How to Build Out Rats

with concrete floors,
foundations and walls

RATS are among our most destructive pests. It takes the labor of 265,000 farmers to produce the feed and food they destroy. Three rats will eat, contaminate or destroy enough feed to support 2 laying hens. Millions of small fowl are killed by them. Every effort should be made to reduce this needless loss, particularly at a time when it is so important to produce and save food.

Rat control. Farm building authorities agree that the best way to control rats is to build them out of buildings in which they normally find food and shelter. New construction should be made ratproof when it is built. Old buildings can easily be made so at low cost. In general, well-built concrete floors, foundations and walls have proved most effective barriers, the Portland Cement Assn., Chicago, points out in a recent data sheet.

The principal methods of making buildings ratproof are illustrated in Fig. 1. The two drawings on the left show how new buildings can be built with concrete walls and floors to keep out rats. Foundations should go down at least 2 ft. below the ground line to prevent rats from burrowing under them. Foundation walls should extend at least 2 ft. above the ground.

Methods of ratproofing old frame buildings are shown in the other two drawings. The one on the left shows how a concrete foundation wall has been placed under an old building and the space above the sill and between the studs filled with concrete to a depth of 2 ft. The concrete floor completes the job. The drawing on the right shows a building made ratproof by supporting it on concrete piers which give a clear open height of 18 in. under the building. The spaces between the joists and studs are filled with concrete as shown. Use same mix as for floors.

Foundation walls and footings. Small buildings, such as milk houses, poultry houses, hog houses, usually have footings 16 in. wide and 8 in. thick. Larger and heavier buildings, such as barns, large granaries, corn cribs, should have footings 24 to 30 in. wide and about 12 in. thick. Use a concrete mix of 1 part portland cement to 2¾ parts sand and 4 parts gravel or crushed stone for footings and foundation walls. Use not more than 5½ gal. of water per sack of cement, using average damp sand. Amount of materials needed per cu. yd. of concrete with this mix is:

- 5 sacks of cement
- 2/3 cu. yd. sand
- ¾ cu. yd. gravel or crushed stone, not larger than 1½ in.

Ratproof floors. Floors are usually made 4 in. thick unless heavy vehicles are to be driven over them, in which case they are made 6 in. thick. Use a mix of 1 part portland cement to 2¾ parts sand to 3 parts gravel or crushed stone. Use not more than 5 gal. of

water per sack of cement. Materials required for 100 sq. ft. of floor 4 in. thick are: 7¾ sacks of cement, ¾ cu. yd. sand, and 1 cu. yd. gravel or crushed stone (stone should not exceed 1½ in. in size).

In building feeding floors, barnyard pavements and other construction of that kind, it is advisable to place an apron wall around the edge extending it into the ground at least 18 in. as shown in Fig. 2. This will prevent rats from burrowing under the floor.

In laying concrete masonry walls use a mortar consisting of 1 part portland cement, 1 part hydrated lime or lime putty, and not more than 6 parts mortar sand. Be sure that all joints are well filled with mortar.

Emergency Wood-Treating Specifications Issued

IN ORDER to conserve chromium, copper, and phenol compounds for vital war uses, Emergency Federal Specifications for wood-preserved materials have been issued by the U. S. Forest Products Laboratory and the Federal Specifications Committee, at the instance of the War Production Board. As the title implies, the emergency formulas are offered as wartime substitutes, to be used where they will serve as suitable alternates to the standard chrome-bearing compositions, for preservative treatment of lumber for military, war-plant, and shipbuilding needs.

At present it is impossible to predict just how extensively government buyers will use emergency specifications, J. F. Linthicum, president of the American Lumber and Treating Company, Chicago, declares. Nor can the effect of these wartime specifications on the lumber industry be accurately determined until the general lumber freeze is lifted, he points out.

Chromium compounds are used in wood preservatives as fungicides and mordants—they prevent leaching of the preservative from impregnated wood. Phenolics and copper compounds are powerful fungicides. Over 1,500,000 pounds of chromates and 100,000 pounds of phenolics will be affected by the use of the emergency formulas. Those quantities are estimated to be the average annual poundage of the chemicals consumed in processing lumber to protect it against rot and termites.

The withdrawal of chromates, phenolics, and copper compounds will mean some lowering of wood-preserving standards, Linthicum states, although he calls the "emergency specifications" adequate for many wartime structural needs.

The specifications offer two formulas. One is a 50-50 mixture of borax and boric acid; the other contains equal parts of sodium fluoride, sodium arsenate, borax and boric acid (very similar to Wolman Salts except that the borax and boric acid replace chromate and dinitrophenol).

Both Wolman Salts preservative and chromated zinc chloride—the two preservative compositions in widest use—will be affected. No substitute for coal tar creosote is specified. However, provision has been made to relax Federal requirements for creosote purity during the emergency.

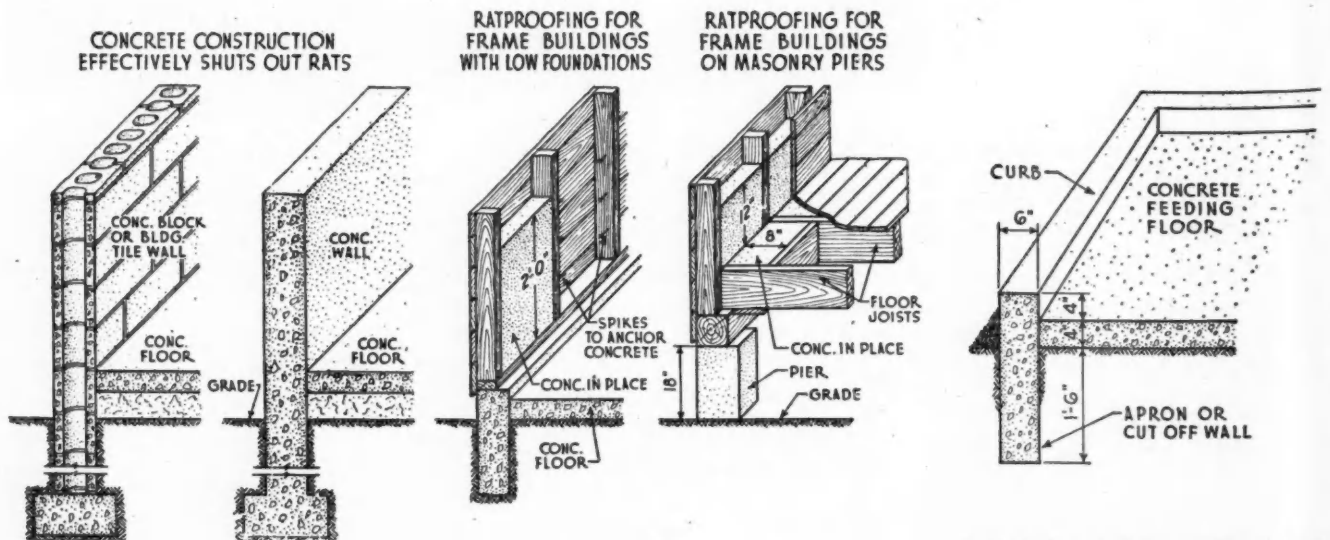
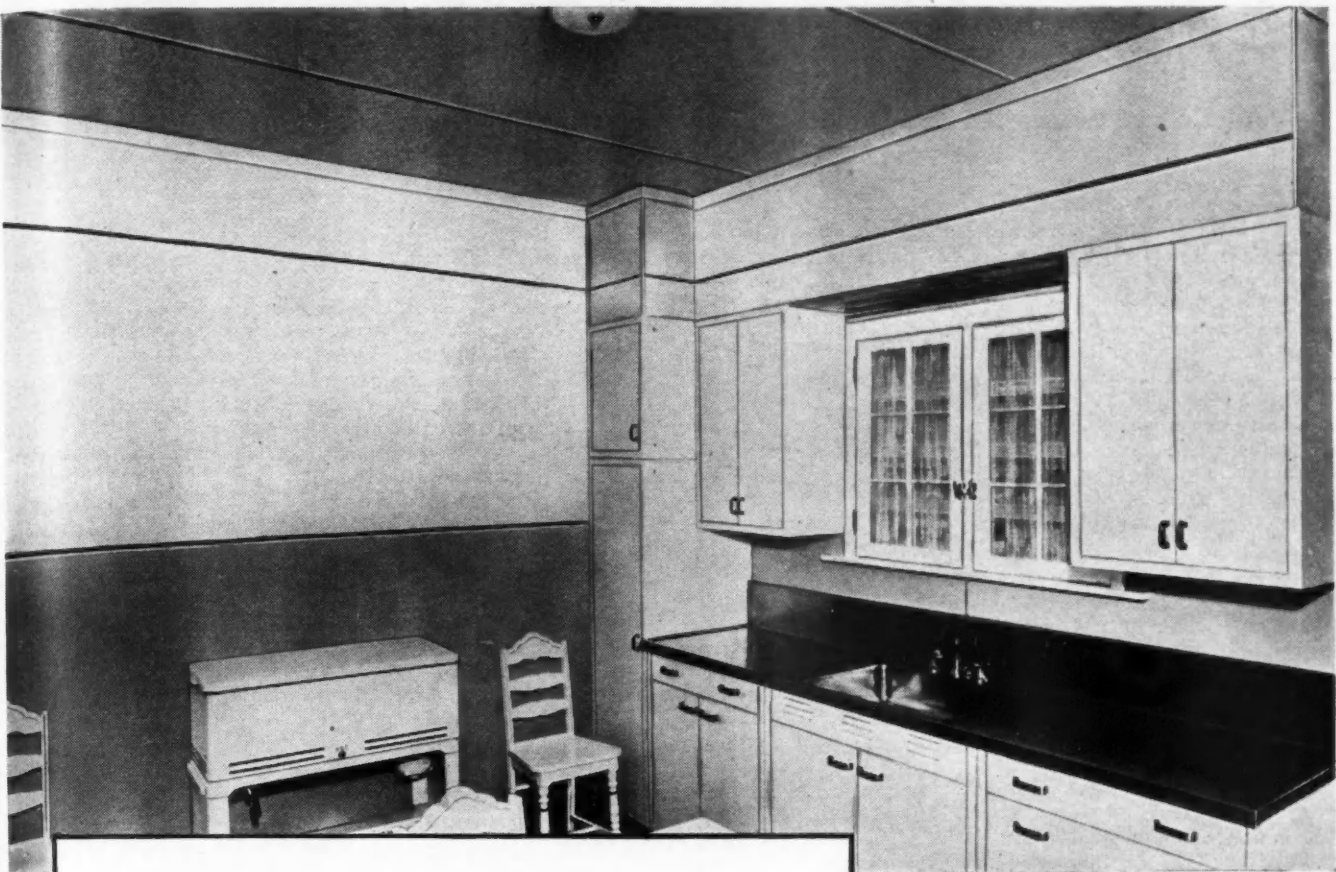


Fig. 1. Principal methods of ratproofing buildings.

2. Method of building curb and apron for concrete feeding floors.



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Semi-annual Survey of Real Estate Market

Real Estate Prices Advancing in Majority of Cities—Undersupply of Single-Family Dwellings in Two-Thirds of Cities of the Country

WAR conditions have decreased real estate turnover, but selling prices for real estate are higher today than they were a year ago in more than half (56%) of the cities of the country, and the trend is expected to continue, according to the 39th Semi-annual Survey of the Real Estate Market, compiled by the National Association of Real Estate Boards. In only 8% of the cities surveyed has the war, in draining away normal business, brought a price drop.

Defense areas, which now include most of the large cities, have the best story, all along the line. There, real estate prices have advanced in 64% of reporting cities, and are under last year's level in only 4% of the cities.

The survey covers 301 urban areas. Made from confidential reports of local member boards of the Association, it finds:

The real estate price rise has been a median of 10%.

War restrictions have narrowed the volume of transfers. While in 57% of the cities turnover is at least as heavy as it was a year ago, the rate has decreased in 43% of the cities, and, significantly, in 41% of the defense areas.

Demand for single-family dwellings has become greater than the supply in 64% of the cities of the country, and in 71% of the defense areas. This is in many ways the most significant fact uncovered.

Apartment space is not so tight. However, an undersupply of apartments is reported in 52% of all the cities of the country, and in 61% of the defense areas.

As a result of tire, auto and gas bans, near-in urban residential areas are beginning to experience a lift in real estate prices. The price job is observable in 78% of the very largest cities, and in 44% of all defense areas.

Usable industrial space is still available in 74% of the cities reporting and in 73% of defense areas, but there is need for remodeling or reconditioning industrial space in 44% of defense areas.

The private home building industry, almost paralyzed for a time even for defense housing, in many localities, by the lumber ban, now modified, and by stoppage of FHA financing, relieved by recent amendments, is definitely ready and able to meet the demand for war housing, if given its promised chance, where dwellings will be permanently needed. This the local boards emphatically report.

The outlook for the next six months is dominantly for further rise in real estate prices, the survey finds, but the turnover will probably continue to decrease. Higher prices are predicted as war's effect on real estate in confidential reports on 42% of the cities of the country, 57% of the largest cities, and 46% of defense areas. Prices at least as high as the present level are predicted in 90% of the cities, and in 92% of defense areas.

A shortage of lumber for needed war housing exists as a result of the lumber "freeze" order in one-third of all defense areas and in three-fourths of the largest metropolitan areas. It has hit one-fourth of all the cities of the country.

The reports indicate the importance of supplementing the very important plan recently worked out by WPB and NHA to assure utilities for defense housing by some allocation or other plan to assure war housing its lumber, officers of the Association point out. The new utilities plan was made necessary by the fact that tens of thousands of houses for war workers have been standing unfinished, or finished but vacant, waiting WPB permission for installation of gas, electricity and water. The new plan provides that priorities for utility extensions to accompany war housing projects will be processed at the same time as priorities for the housing itself. Governmental authorities now have under discussion procedure under which home builders and their supporting mortgagees could know that essential materials would be available wherever priorities for war housing are granted.

Home building costs have increased in the last six months in 94% of defense areas. According to the Association's survey, the median increase has been 10%. But in one city out of every four the rise amounts to at least 20%. Higher home building costs

have hit 100% of all reporting cities of over 200,000 population. Good news, therefore, for the private home builder is the system which has just been instituted by FHA for monthly adjustments in its cost data to meet building cost fluctuations realistically in insurance of war housing mortgages under the amended Title VI.

Reflecting the ban on civilian construction and priority difficulties for defense housing, subdivision lags in all of the largest cities. The subdivision market is less active than it was a year ago in 72% of the cities of the country, and in 70% of defense areas. However, 9% of the cities and 12% of defense areas report a pick-up in sale of subdivision lots.

Of the 301 cities surveyed, 59% had some new industrial construction within the year. Of defense areas surveyed, 67% had new industrial structures.

The Northwest leads the country in distribution of new industrial construction, with 75% of its cities reporting new plants or plant additions. The Great Lakes region is a close second with 74% of its cities so reporting. New industrial structures have been built in 64% of cities of the Southwest region, in 57% of cities in both the Central Atlantic and North Central regions, in 47% of New England cities, in 46% of the cities of the South Central region and in 44% of cities in the Southeast region.

Chicago Realtor Rooms Remodeled

ON TWO FLOORS of the 23-story Chicago Real Estate Board Building in the heart of downtown Chicago, the world's oldest and largest real estate board has its headquarters, newly remodeled with Rapp & Rapp, Chicago, as architects.

There, the Chicago Real Estate Board occupies two floors, containing offices, conference rooms, dining rooms and kitchen. Both floors are fully air-conditioned. Despite bans on various materials and the necessity of using many substitute materials, the remodeling job was completed in record time.

Shown here is the elevator lobby on the office floor, which is paneled in blond, silvered oak. The main dining room, decorated with predominating tones of soft browns and green, is illuminated by indirect, cove lighting.

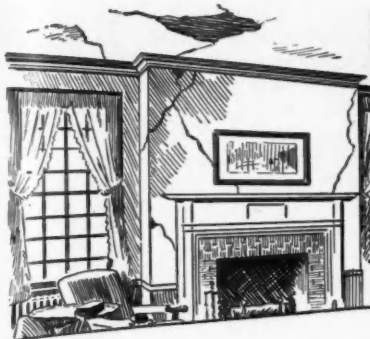
The platform is an unusual feature, built in sections so that it can be taken apart, built up again as a salad bar, for use as four serving tables, or stored away until it is needed. At the far end of the room is a sandwich bar.

Formerly the home of several divisions of the Illinois State Department of Finance, the two floors were split up into small offices, with hollow tile and plasterboard partitions.

Johnson & Anderson, Chicago, were general contractors.



NEWLY styled office of Chicago Real Estate Board.



"QUESTION: Because a plaster ceiling is badly in need of repair, the owner plans to put up a new ceiling. May he use another type of material, such as composition board, for the new ceiling, or must he use plaster?

"ANSWER: Where repairs are necessary, it is permissible to use any other type of material if the architectural or structural plan is not substantially altered."

—From an Official WPB Release



HIDE cracked plaster walls and ceilings!

Build extra rooms for war workers, too...
with Flintkote Insulation Board Products

There are three big markets for Flintkote Insulation Board Products today... three markets dealers and builders can go after and sell:

1. *Repairing cracked plaster walls and ceilings everywhere.* (See quotation from official WPB release, above.)
2. *Remodeling old houses in defense areas to provide added housing for war workers.*
3. *War Construction... residential, industrial and commercial.*

Consider the repair market alone. It is *not* restricted to defense areas. It exists wherever there are cracked walls and ceilings. In these days of limited private construction, owners must conserve existing structures. In stores, offices and homes old walls and ceilings can be quickly repaired, strengthened, beautified... with Flintkote Insulation Board Products.

FLINTKOTE BLACKOUT MATERIALS

Alert dealers and builders everywhere (particularly along the Coast and in defense areas) are fully prepared to answer all questions about Flintkote Blackout Materials and Fire-Retardant Roofs. These products, proved in England, are available in America today. Write for complete information and specifications.

Wide Variety of Colors, Sizes and Styles

Flintkote Insulation Board Products can be applied right over old plaster. These wood fibre, prefinished building materials are available in a wide variety of tile and plank sizes. Colors include Smooth or Ivory White, Green, Buff and Decoblend, a random blend of pleasing coral tones.

More speed, less labor

Because they require no setting, drying-out period or painting, Flintkote Insulation Board Products are ready for use the moment they are applied. Quickly and easily installed, these pre-cut factory finished units save precious time and labor.

For Homes of Today... and Tomorrow

From Flintkote's big new insulation board plant in the South rolls a steady stream of materials that play a big part

No ugly exposed nail heads



A common disadvantage of many interior finish materials—the unsightly nail heads showing along the joints—is now eliminated by the Flintkote Blind Nailing Joint. As shown in the diagram above, nails are completely concealed, leaving only a beautiful, unmarred joint. Air infiltration is reduced to a minimum.

in war construction... will play an even bigger part after the war in the improved home-of-tomorrow. But Flintkote Insulation Board Products are materials that *you* can sell... *right now*. For full information on the new Flintkote Insulation Board Products write to the nearest Flintkote branch office, or direct to The Flintkote Company, 30 Rockefeller Plaza, New York.

FLINTKOTE Building Materials



NEW YORK • ATLANTA • BOSTON • CHICAGO HEIGHTS • DETROIT
EAST RUTHERFORD • LOS ANGELES • NEW ORLEANS • WACO • LONDON

Getting Along with Less of Critical Materials

Wartime Substitutes Shown at Convention of Plumbing Industry

THAT PRIORITIES have become the mother of invention in the plumbing industry was indicated by an exhibit of substitute materials at the recent 60th annual convention of the National Association of Master Plumbers at Richmond, Virginia.

Plumbing fixtures of vitreous clay, shower bath cabinets made of concrete and wood, shower heads of porcelain, ceramic grease traps, and kitchen sinks made of stone—these and other plumbing and heating products made of plastics, glass, and other non-critical materials were on display.

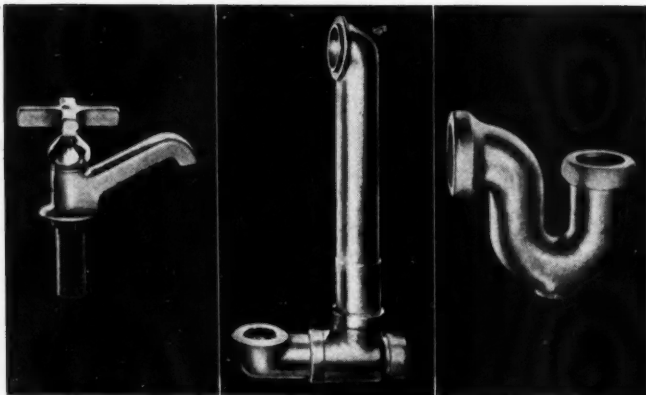
The exhibit indicated the measures taken by the plumbing and heating industries, which are ordinarily large users of metal now needed in the war effort, to assure health and sanitation in American homes during the war.

Commenting on the significance of the exhibit, Thomas J. Cronin of Binghamton, New York, president of the National Association of Master Plumbers, said: "The materials are an indication of the patriotism of the plumbing and heating industries in adapting themselves almost overnight to the nation's all-out war production effort, and conserving metals which are elsewhere needed for the successful prosecution of the war."

Among the wartime alternate materials shown in the exhibit were plastic soap dishes, faucets made of cast iron instead of strategic brass, glass floats for closet tanks, steel tubes for water heaters, cast iron relief and reducing valves, and new types of tubing. While faucets are made with a cast iron body, brass is used for the working parts. Nevertheless these items conserve from 75 to 100 per cent of the brass formerly required. Cast iron products are coated with a black plastic substance to provide protection against corrosion.

Ingenuity Solves Plumbing Shortage Problems

WHEN it appeared that all supplies of brass, copper, zinc, chromium, and nickel would be needed for the country's war efforts, the research laboratories of Crane Co., Chicago, proceeded to develop substitutes. The task of substituting one metal for another is not as easy as it sounds. Differences in characteristics between different materials call for considerable



L. to R.: Lavatory faucet of cast iron, essential operating parts of brass, finish baked on plastic covering both exterior and interior surfaces. Formerly constructed of cast brass and tubing this connected bath waste and overflow is now made of non-critical cast iron. Cast iron swivel "P" trap with cleanout, finished in plastic, only brass part is cleanout plug.

change in design and factory production. New foundry patterns have to be made and new methods developed for machining. The matter of finishing created another problem. Iron, which is replacing brass for many uses, rusts easily, and metallic finishes such as chromium or nickel cannot be used.

Faucets, traps, and shower heads of cast iron with working parts of brass were developed. The spud, connecting toilet bowl to the tank, which has always been made of brass, could not successfully be cast from iron, so the Crane laboratories found

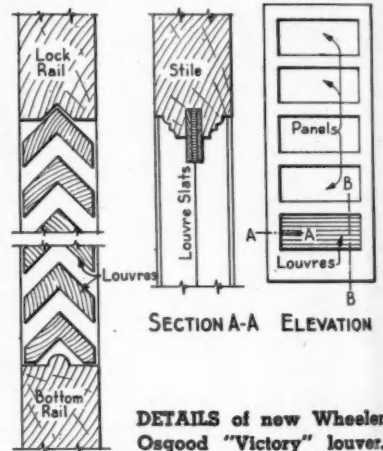
a satisfactory substitute in malleable iron with rust resisting coating; and spuds of this material are now available. Soap dishes, towel bars, lavatory legs, shower heads, yes, even faucets and drains that heretofore were all made from brass are being redesigned in modern plastic.

Translated into terms of the consumer, all this means one thing: that substitution of non-critical materials makes unnecessary the hardship of getting along without important sanitary plumbing fixtures. Home owners who accept such substitutes today are helping win the war while protecting the health and the comfort of their own families.

Wheeler Osgood Offers Victory Louver

THE Wheeler Osgood Sales Corporation, manufacturer of doors and plywood at Tacoma, Wash., has developed a popular all-wood specialty—the new Victory Louver. This louver was developed (patent applied for) as a substitute for the metal grilles that are being ordered by the government to use in the lower part of doors that are being installed in camps and war houses all over the country.

It will be noticed, from the accompanying detail, that this is an inverted "V" type louver and is exceptional in its design, as all other wood louvers are of the slat type. This "V" shaped louver allows as much infiltration of air as any other type, and at the same time is stronger and, what is more impor-



tant, allows very little, if any, infiltration of light.

This louver can be adapted to many different uses; size is no deterrent. In other words, this louver could be made up in full door size or installed in one or two panels. Likewise, the thickness can be adjusted and furnished in $\frac{3}{4}$ ", $1\frac{1}{8}$ ", $1\frac{3}{8}$ ", or $1\frac{3}{4}$ " thicknesses.

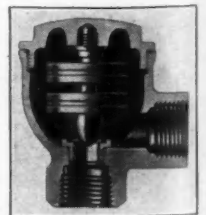
These can also be furnished for window screens. In other words, they could be used as blackout screens where ventilation is necessary during a blackout.

The installation shown is in a 5-cross panel door but does not limit the scope of installation.

Hoffman Trap Conserves Brass

STREAMLINED, simplified and stripped of critical materials, the new Hoffman "V . . ." series of Cast Iron Traps have joined with America's war program. This is a product of the Hoffman Specialty Company, 1001 York Street, Indianapolis, Indiana.

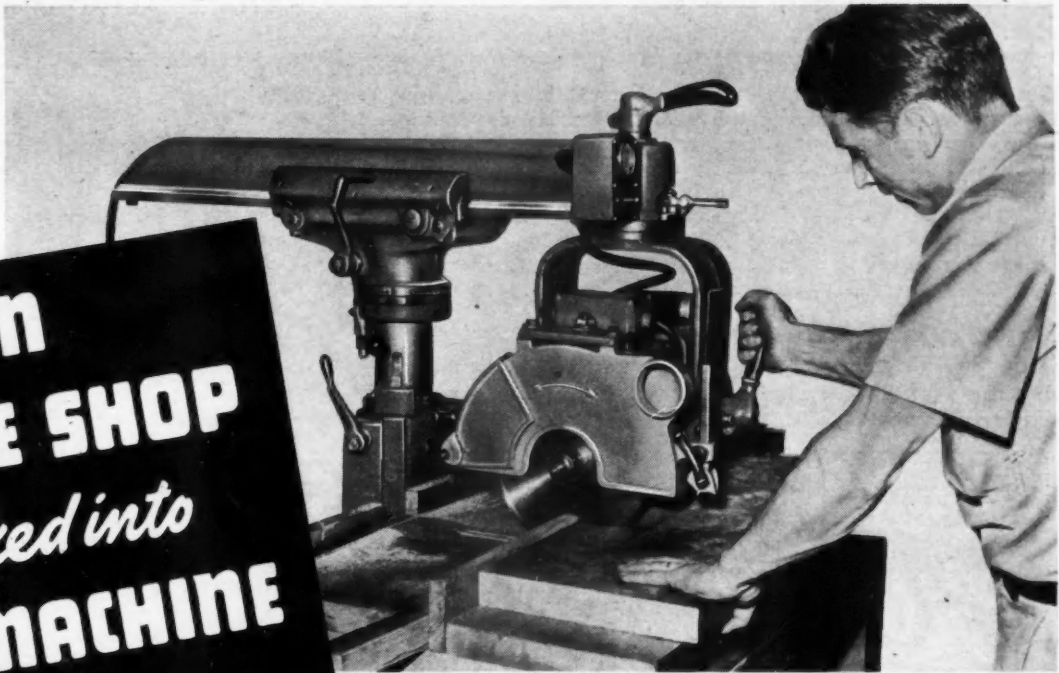
Illustrated is Type 17-D Radiator Trap. Body and cap are of quality cast gray iron. The inlet connection is $\frac{1}{2}$ " left hand thread—right hand thread on special order only. Nominal capacity, 200 sq. ft. of direct radiation. The thermostat is composed of four diaphragms of Adnic, a special noncorrosive alloy developed especially for this vital part. Diaphragms will not soften un-



CAST iron trap.

(Continued to page 66)

**AN
ENTIRE SHOP
packed into
ONE MACHINE**



WALKER-TURNER RADIAL SAWS

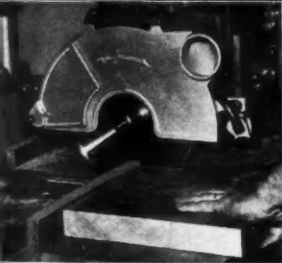
*make practically every kind of cut,
on every kind of material*

This compact machine provides enormous production capacity for a very small investment. Builders, therefore, have found it ideal equipment to enable them to bid successfully for war sub-contracts.

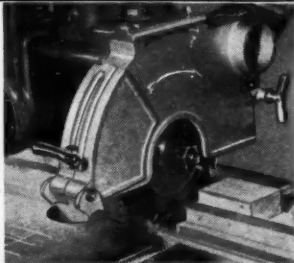
An outstanding feature is its patented, geared motor which gets the shaft so close to the work that much smaller blades and thinner abrasive wheels may be used. This produces greater rim force at the cutting teeth, faster cutting, cooler running and uses less power. Self-resetting shock absorber protects motor gears against damage. Price, only \$354.50 at factory. Prompt shipment for war work.

Walker-Turner Co., Inc., 1082 Berekman St., Plainfield, N. J.

CROSS CUTS AND RIPS



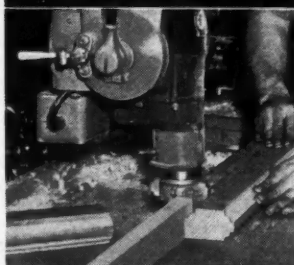
DADOES



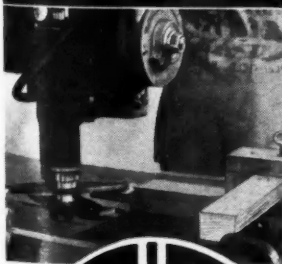
COMPOUND MITERS



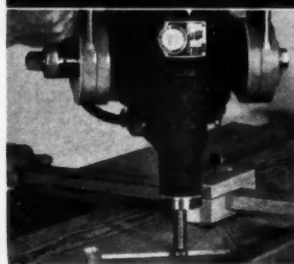
SHAPES



TENONS

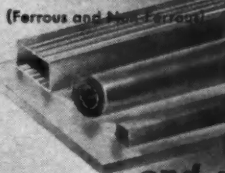


ROUTS



IN ADDITION TO WOOD, IT CUTS...

METALS



PLASTICS



CERAMICS



and many other materials



WALKER-TURNER MACHINE TOOLS FOR METAL, WOOD AND PLASTICS

DRILL PRESSES • BAND SAWS • BENCH SAWS • TILTING ARBOR SAWS • LATHES
JIG SAWS • RADIAL SAWS • RADIAL DRILLS • BELT AND DISC SURFACERS • JOINTERS
SPINDLE SHAPERS • GRINDERS • FLEXIBLE SHAFT MACHINES • CUSTOM BUILT MOTORS

Getting Along With Less of Critical Materials

(Continued from page 64)

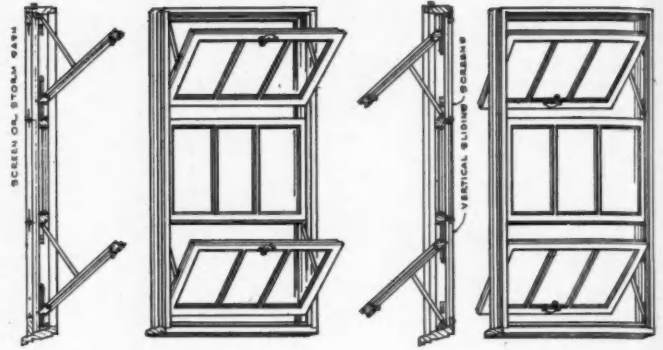
der temperatures far above those encountered in service, nor crack when subjected to repeated action. The valve pin is made of wear-resisting, special nickel-silver alloy, bronze or brass. The whole thermostat and pin assembly may be interchanged in all 17-D bodies.

A Hoffman "V . . . —" Trap feature of timely importance is found in the Renewable Valve Seat. Should long use or unusual circumstances show wear at this point, a simple replacement of this small part should restore the entire trap to useful service.

New Projected Wood Sash

AN IMPORTANT projected wood sash development of broad sales possibilities in the present priority emergency, particularly for industrial installations, has been announced by National

NATIONAL PROJECTED WOOD SASH



IN PROJECTING

OUT PROJECTING



RECREATION CENTER, YESLER HILL TERRACE (USHA) SEATTLE

HERE'S still another Laucks glue-laminated beam that speeded construction, saved money, saved valuable girder steel for war usage . . . and provided perfectly safe and beautiful structural members for a much-needed center in a wartime housing project!

These beams were 67' 2" long, 14" wide and 40" deep . . . used 7800 board feet of fir and spruce dimension lumber and 270 lbs. of Laucks Self-Bonding, Water-Resistant Casein Glue. Equivalent beams of girder steel would have weighed 10 tons and cost \$152 more. Attwell Construction Co., Seattle, sub-contractors, built them in 5½ days.

Investigate how Laucks Construction Glues can save time, money and critical materials on your jobs—in laminated arches or beams, in prefabricated and all types of dri-built construction with plywood and wallboard, in farm structures, etc.

For information, write Laucks, where 20 years laboratory research and practical experience guarantee the right use of the right glue.

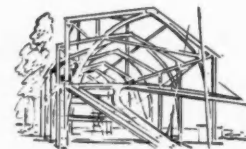
I. F. LAUCKS, Inc.

Seattle—911 Western Ave. Chicago—6 No. Michigan Ave.
Los Angeles—859 E. 60th Street
Portsmouth, Va.—Commerce and Broad Sts.
I. F. Laucks, Ltd.—Granville Island, Vancouver, B. C.

★Don't forget, LAUX REZ, the pioneer resin sealer and primer, protects wood as rust-proofing protects metal.



WOOD AND LAUCKS GLUE LAMINATED ARCHES FOR ARMY HANGAR



LAUCKS GLUE LAMINATED ARCHES FOR U. S. ARMY CHAPEL



LAUCKS GLUE FOR PREFABRICATED WARTIME HOUSING



LAUCKS CONSTRUCTION GLUES

Consult LAUCKS—America's Glue Headquarters

Door Manufacturers Association, Chicago. The new sash were engineered by the architectural firm of Graham, Anderson, Probst and White, under the supervision of a special technical committee representing the NDMA membership. These National Projected Wood Sash are offered in eighteen standard basic units, each basic unit an opening in itself.

The units may be installed individually or the various units may be combined in height and width, to meet almost every installation requirement in industrial and commercial buildings, schools, hospitals, etc., and in any type of wall construction. The standardized frame is designed to accommodate either bottom pivoted in-projecting vents or top pivoted out-projecting vents without modification or change in the hardware requirements. Streamlined in every detail, these units provide a maximum of light area per opening, thus combining beauty and utility. The operating hardware is friction controlled and holds the ventilator in any desired open position without danger of banging or slamming with resultant glass breakage. All necessary hardware for one complete unit weighs only about 3 pounds, which is most appropriate at this time in conservation of critical metals. Frames are completely factory fitted and all sash prefitted to exact size so as to minimize the installation labor in the field. All parts are treated with a toxic preservative to give them even greater durability under the severe service conditions imposed by modern construction. Since the ventilators are of the projected type rather than pivoted, screening may be easily installed.

National Projected Wood Sash are made particularly for manual operation and specially designed hardware is furnished with the units. When necessary, however, various types of mechanical operating devices are available for long line sections of horizontally projected ventilators.

The sash will be manufactured by many members of the National Door Manufacturers Association, as well as other mills, in every section of the country, and will be readily available to meet specifications.

A comprehensive manual (Manual A) containing complete information on National Projected Wood Sash, with specifications and detail drawings for both in-projecting and out-projecting types, various combinations of units and other information, will be mailed free on request to National Door Manufacturers Association, Inc., 322 South Michigan Avenue, Chicago.

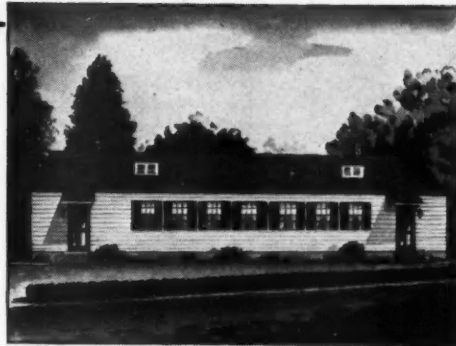
Again INSULITE Answers the Call!

UNCLE SAM has first call on all of us—on all we have and all we hope to be. No loyal American would have it otherwise. Despite increased production, Insulite today is hard pressed to meet tremendous war requirements.

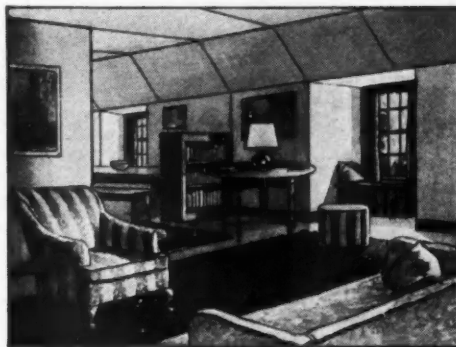
Today, as in World War I, Insulite is called upon to help build our Army and Navy to an all-time peak. The war building program has been greatly accelerated by the use of Insulite, thereby conserving other materials of which there's a critical shortage.

Structures built with Insulite require less fuel, for Insulite *insulates as it builds*. Insulite is quickly, easily applied—saves time and labor, two highly important factors today.

In this emergency Insulite's many plus values have firmly established it as a *basic building commodity*. When building returns to peacetime normal, the demand for Insulite will be increasingly greater.



The housing of war workers is a national emergency. Here again Insulite answers the call. Insulite enables contractors to build faster, sounder and more efficiently. Insulite helps to conserve lumber and other critical materials.



The equivalent of 150,000 new homes can be made available to house defense workers by finishing the attics of homes built with attic stairways in the past four years. Insulite is quickly applied to studding or existing walls.



When normal building activities are resumed and America again turns to new home construction, The Insulite *Approved Wall of Protection* will help make them safe and sound.



Saves Lumber

Insulite in construction requires a minimum of lumber and other critical materials. By using Insulite wherever possible, you release lumber for more critical needs.



Saves Time

Insulite saves time because it can be quickly applied. The large, easy to handle panels fit snugly into place. Used as interior finish, Insulite creates serviceable, attractive interiors without further decoration. Insulite gives effective insulation, too.



Saves Transportation

Insulite relieves the transportation shortage in two ways. First, Insulite occupies a minimum of space in freight cars. Second, each car of Insulite used in construction releases one car of fuel oil for war needs every two years.

INSULATE WITH

INSULITE

THE ORIGINAL WOOD FIBRE STRUCTURAL INSULATING BOARD

INSULITE
Minneapolis,
Minnesota



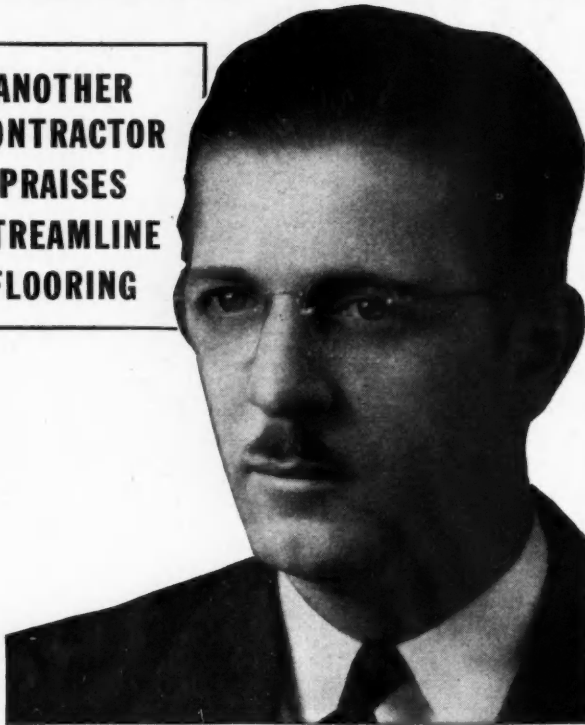
Division of
Minnesota and Ontario
Paper Company

REG. TRADEMARK

WAR HOUSING JOB

FINISHED 10 DAYS AHEAD WITH FACTORY-FINISHED STREAMLINE FLOORING

ANOTHER
CONTRACTOR
PRAISES
STREAMLINE
FLOORING



Wm. M. Irion, Whittenberg Construction Co.
Louisville, Ky., writes:

"Occasionally, during the conduct of our business, we come across some unusual building product. It is not often, however, that we have a completely satisfactory experience such as that which we have had through the use of your Streamline Flooring on the Louisville Defense Housing Project at Camp Taylor, Ky.

"Quick delivery, ease of installation and the fact that Streamline Flooring is 'Prefinished' all resulted in a surprising low cost.

"The use of Bruce Streamline Flooring obviated the necessity for finishing machines, floor finishing materials, and painters. We estimate that our completion date was advanced at least ten (10) days through its use.

"Its ability to withstand rough usage due to the hardness of its surface is to our way of thinking one of its most outstanding features. Bruce Streamline Flooring produces a superior floor and we are definitely sold on its use."

E. L. BRUCE CO.
1626 Thomas St., Memphis, Tenn.
Please send me a copy of your new book—
"Low Cost Floors for War Housing."

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

Send for
**FREE
BOOK**



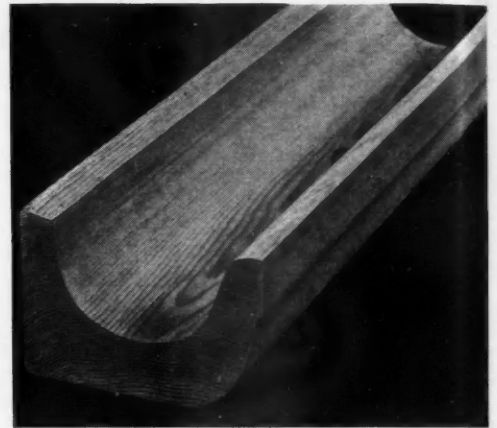
BRUCE *Factory-Finished* **STREAMLINE** **HARDWOOD FLOORING**
Trade Mark Reg. U. S. Pat. Off.
FLOOR FINISHES • YERMINIX • LUMBER PRODUCTS

Getting Along With Less of Critical Materials

(Continued from page 66)

Wood Ideal for Gutters

SHORTAGE of critical materials has focused attention once again upon the desirability of wood gutters in all types of house construction. Perhaps in no other category has wood better proven its versatility and adaptability than in gutters which must possess great strength and rigidity to carry heavy loads of water, snow and ice. In style and appearance they are ideally suited to all modern types of architecture and can easily be installed by carpenters at the time the house is built or when replacements are made. Douglas fir gutter has been extensively featured by Weyerhaeuser Sales Company, St. Paul, Minn., since before the outbreak of the war, which made it difficult to obtain moulded gutters of other materials. Wood gutter is available in long lengths and is made from carefully selected material which will permanently perform its function at the lowest annual cost.



FIR gutter meets need.

Roofing Nails Saved by New Process

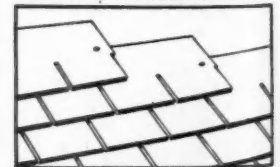
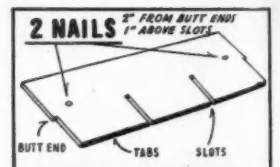
A STEEL conserving method of applying asphalt roofings with a plastic which replaces roofing nails has been developed by The Paraffine Cos., Inc., San Francisco. This method will save from 50-100% roofing nails, depending on the type of roofing used and the slope of the roof itself. A broad use of the new plastic method of roof application, known by the accurate term "Spot Welding," would mean the direct saving of tons of vital steel through roofing nail conservation.

Credit for the unique new plastic method goes to the company's Technical Engineering Department which developed the method by which both asphalt shingles and asphalt roll and strip roofings can be firmly anchored to the roof deck in a solidly welded, long lasting roof unit. It is the welding characteristic of the "Spot Welding" process which gives asphalt shingles exceptional resistance to the chief enemy of roofings—heavy winds which "blow up" under the roofing, causing it to loosen and to tear.

"Spot Welding" accurately describes the method. Spots of Hydroseal adhesive plastic are placed at intervals on the roof deck, replacing the usual heavy use of roofing nails on roof strip edgings and roof ends. In many cases the need for roofing nails is eliminated entirely.

J. I. Holder of the Technical Engineering Department has

(Continued to page 70)





Repair and remodeling jobs as well as new construction can be speeded, strengthened and beautified with Weldwood.

Wood's Good...
WELDWOOD
 is Better.

**Name formerly applied to Waterproof Weldwood only, now family name of all plywood products made by the United States Plywood Corporation.*



Living room attractively paneled in Walnut De Luxe Weldwood.

Build **STRONGER,**
 more beautiful interior
 walls . . . in less time

*Use the material that is guaranteed for the life of the structure—WELDWOOD**

Today, *speed* is of the essence. But on the *quality* you put into buildings now depends your future business. So combine the two . . . speed and quality . . . by using Weldwood.

This strong, durable, split-proof material, made by the world's largest producer of plywood, has been used for years in frame construction, boat building and other fields. Waterproof Weldwood, first of the phenolic resin bonded plywoods, was developed in 1932.

For walls requiring paint, paper or natural wood finish, in homes, cantonments, stores, offices, etc., Weldwood Utility Paneling makes rigid, beautiful interior walls. Where oak, mahogany or walnut paneling are called for, Weldwood De Luxe Paneling, faced with these woods, is available at reasonable cost.

Both Weldwood Utility and De Luxe Paneling are carried in 4 x 8 ft. stock panels in conveniently located warehouses.

For full information and illustrated catalog write to the nearest branch warehouse, or main office in New York. Ask your lumber dealer to quote on Weldwood.

UNITED STATES PLYWOOD CORPORATION
 616 West 46th St., New York, N. Y.
World's Largest Producer of Plywood

Branch Offices and Warehouses in Baltimore, Boston, Brooklyn, Chicago, Cincinnati, Cleveland, Detroit, High Point, Los Angeles, Newark, New York, Philadelphia, Rochester, San Francisco, Seattle.



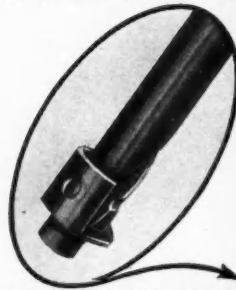
NEW PLASTIC GLUE . . . Weldwood Plastic Resin Waterproof Glue . . . makes strong, permanent joints. Readily mixed with cold water. Available in convenient sizes, 1 1/2 oz. cans up to 100 lb. drums. Literature, FREE sample on request.



Simplified Top Fastener. Easier to install. Permanent rigidity with one screw. Eliminates "play." Smoother, quieter operation.



"Spring-Flex" Bearing Arm. Spring steel arm adjusts automatically to different degrees of sash fit. Practically eliminates wood chatter. Always smooth, quiet, snug.



Play-Proof Guide Bracket. Guide bracket opening exact diameter of balance bottom, giving close, chatter-proof fit without binding.



Thousands of sets of Grand Rapids Invisible Sash Balances have been used, and are being used, in defense housing projects — in areas where all materials are subject to much critical inspection.

The fact that the simplicity of these installations has earned the hearty endorsement of all is but an additional point in their favor. The real test comes with use — the smooth, dependable performance under varying climatic conditions, the ease of tension adjustment, the absence of tapes or cables, and the actual invisibility of the entire working mechanism. Saves time, saves cost and saves on critical materials. This applies equally with either single or double balance installations.

Production is in high gear, but deliveries are governed by priorities as with other essentials. Get our 1942 catalog No. 42-SB-2, and we will gladly give you full delivery information. Grand Rapids Hardware Co., Grand Rapids, Mich.

"GRAND RAPIDS"
Sash Balancing Equipment
THE STANDARD FOR FORTY YEARS

Getting Along With Less of Critical Materials

(Continued from page 68)

compiled some interesting figures on nail conservation with this new plastic roofing process. Depending on roof rise and the type of roofing material used, economies in roofing nails resulting in use of "Spot Welds" vary from 47% in built-up mineral surface roll roofing on inclines of 1" to 4" per foot of roof rise, to 100% in built-up felt & gravel roofs in inclines of 1" rise per foot of roof or less.

Mr. Holder also notes that in the application of three and four tab asphalt shingles, savings of up to 50% of roofing nails can be effected when shingles are "Spot Welded" with Hydro-seal plastic.

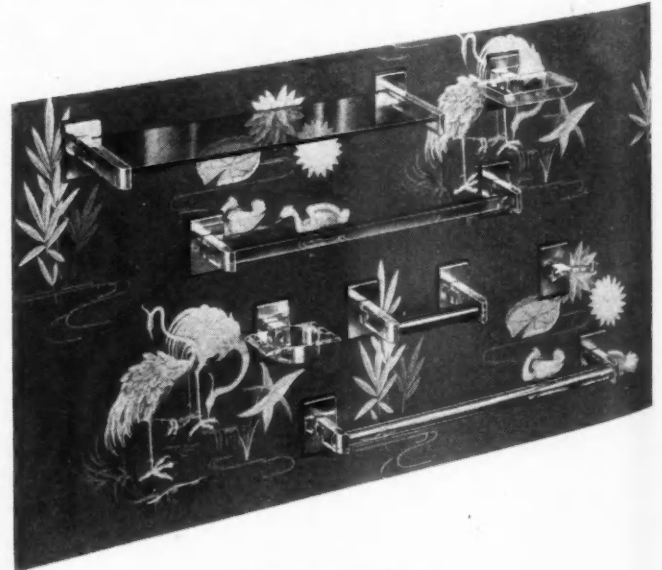
Lucite Bathroom Accessories

A NEW line of bathroom accessories moulded of Lucite is presented by The Charles Parker Co., Meriden, Conn. This consists of seven pieces accommodating most requirements and does not use critical material in its manufacture. By weight, eight times the amount of brass, the material formerly used, is saved.

Parker, after considerable research, has chosen Lucite as the most practical material for bathroom use. Its crystal clear beauty and pleasant touch provide a strong appeal.

The fixtures are attached to the wall by means of a patented device. Besides contributing to the clean appearance, this makes possible the use of proper wall fastening such as toggle bolts, masonry anchors, etc., depending on the wall construction. Theft proof screws are also provided when specified to make fixtures burglarproof.

The backplates are offered in three finishes. The transparent plate is for use where color or wallpaper is applied to back of plate to match wall finish. Black and chrome backplates are finished on back of plate showing through the Lucite but being protected by it. The towel bars are offered in glass and blonde wood, both round and square and in 18", 24" and 30" lengths.



LUCITE accessories.

All-Asbestos Duct Conserves Steel

OVER 2,000,000 lbs. of steel have been conserved on one air conditioning job alone by utilization of an all-asbestos, insulated duct produced by The Philip Carey Mfg. Company, Cincinnati. This great saving has been effected in the new War Department Building, now under construction in Arlington, Virginia, according to W. L. Steffens, vice-president of the Carey company. This product has been supplied for a number of other public and private construction jobs important to the nation's war effort, resulting in further conservation of large quantities of steel.

The need of war industries for steel, Mr. Steffens stated, plus the vast quantities of metal duct which would have been required



WORKMAN applying Carey Asbestos heat duct.

for what is believed to be the world's largest office building, found government officials receptive to the use of this product. According to the Carey official, the asbestos duct successfully met the rigid standards set by government engineers, and the large order followed.

This product, it is said, has an advantage in combining both duct and insulation; because it is constructed entirely of asbestos it is a natural sound absorber and non-conductor of sound. This permits effective hushing of fan and equipment noises and eliminates the "cracking" due to changes in air pressure or expansion strain, sometimes troublesome in metal duct systems.

Time and man-power are saved through factory fabrication of the ducts. Simple slip-joint construction permits telescoping of the sections, simplifies handling and eliminates shop work, as fittings can be readily made on the job. This affords quick, silent installation and is important where speed and quiet are essential, as many installations of Careyduct have been made in banks, hospitals and broadcasting stations without disturbing the occupants.

Plastic Window Edging

TENITE strips offer a solution to the problem of how to avoid cracks of light showing around the edges of blackout shades. These strips act as tracks, permitting easy raising and lowering of the shades and, at the same time, preventing any light from escaping.

The plastic Tenite forms an attractive edging around the window frame and does not in any way mar the decorative effect of the room. It retains its natural high luster without the aid of polishing agents.

The strips are available in both black and white Tenite, and are designed for use in industrial plants as well as private homes. They may be purchased at retail outlets where window shades are sold.

These Tenite strips are extruded by Extruded Plastics, Inc., Norwalk, Conn. They are distributed by Plastic Products Engineering Co., 500 Fifth Ave., New York, N.Y. Tenite is a product of Tennessee Eastman Corp., Kingsport, Tenn.



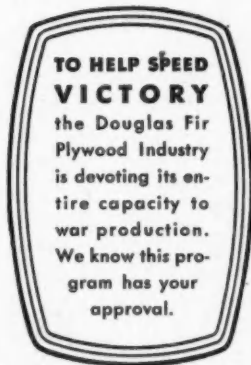
WINDOW guide is "Tenite."



Why we saw and test more than 131,000 specimens of Plywood a year!

● Arriving constantly at the Douglas Fir Plywood Association's research laboratory are panel sections representative of every member mill's daily production. The complete panels have already passed the routine yet critical examination of the Association's mill inspectors. But to determine if they *measure up fully* to the high industry standards established in cooperation with the National Bureau of Standards, our laboratory staff cuts the sections into small specimens, carefully numbers them and subjects them to many series of tests. For instance, exterior-type Douglas Fir Plywood must withstand soaking, boiling and baking, among other things, without delaminating.

These tests assure today's purchasers that the Douglas Fir Plywood they buy for war purposes will give the performance they expect. In addition, these tests form an important part of our intensified research program *which is aimed at making the Douglas Fir Plywood you will buy after the war more useful to you than ever before.* Douglas Fir Plywood Assn., Tacoma, Wash.



REMEMBER—there's a grade or type of Douglas Fir Plywood for every purpose. A genuine panel bears one of these "grade trade-marks":

- PLYWALL**—wallboard grade
- EXT-DFFPA**—waterproof type
- PLYSCORD**—sheathing grade
- PLYPANEL**—cabinet grade
- PLYFORM**—concrete form grade

DOUGLAS FIR PLYWOOD

Real Lumber
**MADE LARGER, LIGHTER
SPLIT-PROOF
STRONGER**

"A PRODUCT OF AMERICA'S ETERNALLY REPLENISHING FORESTS"

FOR THE YEARS TO COME



THE EVOLUTION of kitchen design and material preference has been practically a "housewives' revolution"—a MASS DEMAND for easier working conditions which Youngstown Pressed Steel has met with MASS PRODUCTION of efficiently planned, easy - to - keep - clean, all steel YPS Kitchens.

For the years to come, Youngstown Pressed Steel expects to maintain its leadership in the quality, beauty and up-to-the-minute efficiency of its YPS Kitchens.

When the pent-up volume of civilian buying is released — what a business that will be!

Be ready to meet it with YPS kitchen equipment.

YOUNGSTOWN PRESSED STEEL DIVISION
MULLINS MANUFACTURING CORPORATION
WARREN, OHIO

TRENDS in Equipment and Building Materials

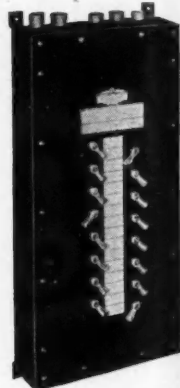
Dust-Tight Panelboard Offered by F-A

APPROVED by Underwriters' Laboratories, Inc., for "Class II, Groups F and G, Hazardous Locations," Frank Adam Electric Co., St. Louis, offers a dust-tight panelboard for use in dust laden atmospheres. This includes atmospheres containing carbon black, coal or coke dust, and grain dust. This panelboard may be used safely in shell loading plants, coal mines, coal storage rooms, flour mills, and similar locations.

It consists of a special cabinet and panelboard of the circuit breaker type—either (F-A) AC or (F-A) Dublbrak, as well as for other types of lighting branch circuit breakers.

Instead of the usual steel front, consisting of trim and door, this panelboard has a solid steel dust-tight front plate, gasketed all around, and secured to the extra-wide flange with screws. The corners of the box are welded, and mounting brackets are welded to the back of the box. Conduit outlets are dust-tight welded hubs. There are no screw openings through the box.

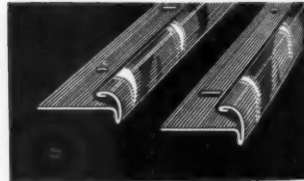
The circuits are externally operable by a mechanism for new (F-A) design. The dust-tight handles operate through bushings riveted directly to the steel cover plate, and engage the regular handles on the circuit breakers inside the cabinet.



IT'S dust-tight.

Chromedge Sink Edgings

ONE OF THE MOST practical non-drip sink edgings is now available in the line of rolled metal trims trademarked Chromedge, offered by The B & T Floor Company, Columbus, Ohio. Furnished in two sizes: R-171, for light weight wall and standard gauge materials, and No. R-171-A for $\frac{1}{8}$ " coverings. The section provides a small and neatly rounded bead along the outer edge of the sink top or counters. It is also desirable as an attractive finish for outside wall corners, and is suitable for a number of other types of installation. The ease with which the section can be fitted around corners and curves adds to its utility. Available in 12' lengths only.



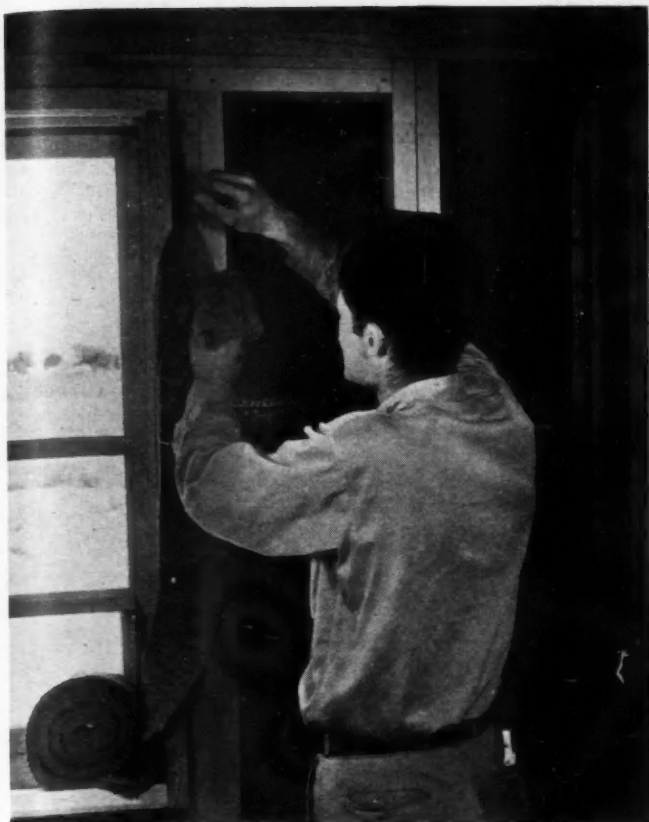
CHROMEDGE sink edgings.

B & T's extensive line of rolled metal trims trademarked Chromedge include numerous styles of linoleum insert trims as well as various other shapes for use as carpet trims, corners, edgings and bindings, nosings, and wall panel trims. The items carried in this line are some of the most popular items previously shown in the company's catalog of extruded trims and are now available for prompt delivery from extensive existing stocks.

Another Kimsul Building Product

KIMBERLY-CLARK Corporation, Neenah, Wisconsin, announces another building product, Kimsul Packaged Caulking Material.

Put up in compressed rolls four inches wide, and containing a strip 36 feet long when expanded for application, 1000 lineal feet of Kimsul will caulk approximately 1000 lineal feet of openings $\frac{5}{8}$ inches wide by $3\frac{1}{2}$ inches deep around window and door frames. This caulking material requires no special tools. The workman simply expands the strip as needed, splits it approximately in half; then, using a thin wood strip or putty knife, he rams the first half into the opening so as to fill about one-half of the depth. The



APPLYING new Kimsul packaged caulking material.

second half is then rammed in over the first to fill the depth of opening.

The advantages claimed for the product are:—It is low in cost. No waste is involved. It is clean and easy to handle. It saves storage space because it is compressed in packaging.

The use of Kimsul for caulking of openings around window and door frames is actually not new. It has been used for a good many years by insulating contractors who have cut their own strips from Kimsul Blanket Insulation, used to insulate walls, floors and ceilings of houses. Only the form of the product is new, there having been a demand for a convenient specification to speed up application on such large construction jobs as housing projects, barracks, contonments, offices and hospitals.

Old and New in Wrought Iron Nails

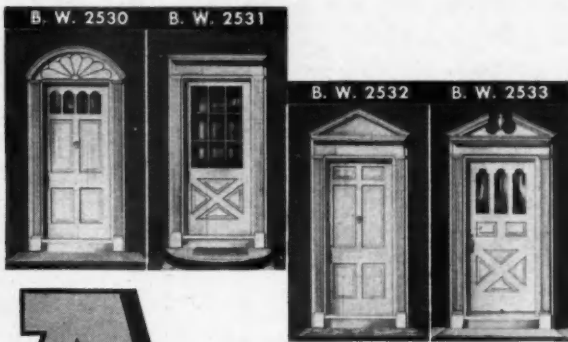
TWO HUNDRED NINETY year old Smith's Fort Plantation in Surry County, the oldest brick building in the state of Virginia, has given up perfectly preserved nails, which were driven back in 1652 when the building was constructed. Authorities attribute the remarkable life of these old nails to the fact that they were square cut out of genuine wrought iron.



LEFT, modern wrought iron nail; right, three antiques.

The Tremont Nail Company, Wareham, Mass., an old-time New England nail manufacturer, and one of the few still manufacturing wrought iron nails as they were made in colonial times, produced a modern unused counterpart of the original nails to illustrate the remarkable lack of corrosion shown in the illustration herewith. Left to right, modern nail and three wrought iron nails after 290 years of service. Note that the heads show some wear but that the bodies of the nails are just as healthy as that of their Massachusetts descendent.

The Tremont Nail Company, which has been manufacturing square cut nails for more than a hundred years, recently started cutting them out of genuine wrought iron plates as supplied by the A. M. Byers Company, Pittsburgh. Officials at Tremont state that they can quote on a full line of wrought iron nails in answer to any inquiry bearing priority. Business, apparently, is rolling in down at Wareham.



Available
Now for Home Improvement



B. W. 2534



B. W. 2538



B. W. 3548



B. W. 2552



B. W. 2564

Here's a product that is not on the restricted list and which is available now. There are many beautifully designed Bilt-Well entrances which will transform the appearance of any home and increase the entire value—the greatest improvement with the least trouble and expense. Best of all, this is work that can be done well within the limits of

BUY U. S. WAR SAVINGS STAMPS AND BONDS



BILT-WELL FRONT ENTRANCES

Open the way to bigger profits—greater satisfaction

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Please send me free complete information on Bilt-Well Colonial (low cost) Entrances.

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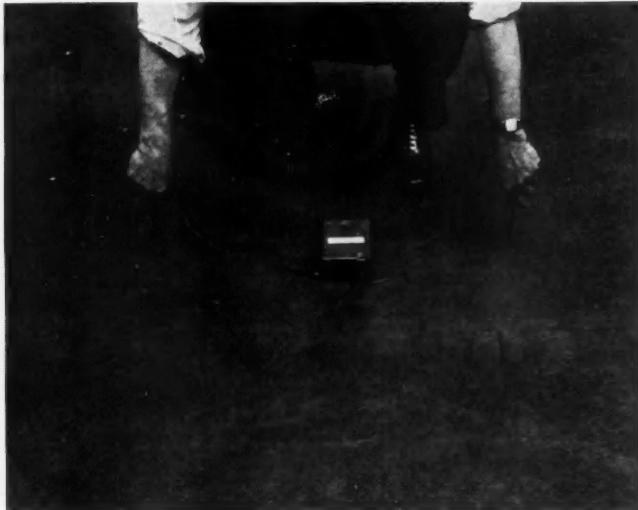
Trends in Home Equipment and Building Materials

(Continued from page 73)

Non-Sparking Floor

ARMSTRONG'S Conductive Asphalt Tile now meets the specifications of the War Department for floors installed in government ordnance plants, H. Dorn Stewart, manager of the Company's Resilient Tile Floors Department, Lancaster, Pa., has announced.

This development is a result of Change No. 1 in Ordnance Department Safety Bulletin No. 25. The change in specifications approves composition floors, such as Armstrong's Con-



TESTING a floor of Armstrong's conductive asphalt tile which is designed to prevent the accumulation of static electricity.

ductive Asphalt Tile, in addition to rubber and lead floors for ordnance operations.

Mr. Stewart said that this new product is the first conductive flooring specified by the government which contains no critical materials. Other floors now in use contain lead, rubber, or copper, all vital in the present war effort.

By the use of Armstrong's Conductive Asphalt Tile, such critical materials can be released for use elsewhere. The new low-cost tile provides a surface condition which results in less than .1 megohm resistance to static electricity under certain specific conditions. No open flames are required during installation or repair work.

Because of these safety qualities, this tile is especially suitable as a resilient flooring in arsenals, shell and bomb loading plants, powder plants, temporary field hospitals, and in various other industries in which static electricity presents a safety hazard.

Successful installations have already been made in several plants converted from the making of fireworks and similar materials to the production of bombs and flares.

Insulation Industry Achieving Fuel Saving Goal

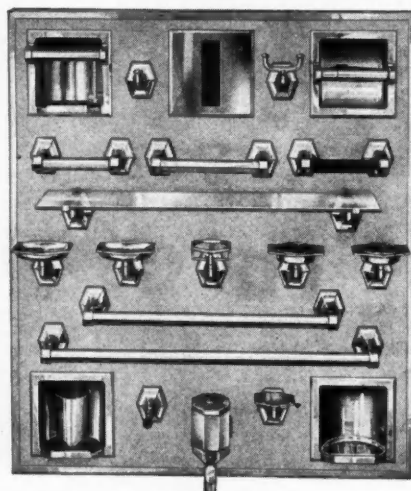
THE GOAL of the mineral wool insulation industry to save 80,000,000 gallons of fuel oil and 1,867,000 tons of coal through home insulation this year is well on the way to attainment, it was announced at the recent meeting of the National Mineral Wool Association in Cincinnati.

"Plants are operating at full capacity, 24 hours a day, in order to meet the demand for home insulation created by the probability of a fuel shortage next winter," Wharton Clay, secretary, told the delegates. "There is every reason to believe that we will be able to meet the goal set earlier this year and thus make a very substantial contribution to the conservation of both fuel and transportation."

A new and unexpected demand for insulation has developed from the Government's proposal to build large dormitories for the

MIAMI Metal BATHROOM CABINETS

Available for IMMEDIATE SHIPMENT



COLONIAL ACCESSORIES
Manufactured of "Zamac" metal.
Finished in coating of pure chromium.

Limited stocks of the famous Miami Steel Bathroom Cabinets and Accessories are available, as long as they last, for repair jobs, replacements and new essential housing. Further production of steel cabinets will be confined, for the duration, to the requirements of essential marine needs.

Regardless of what your cabinet requirements are, you may specify MIAMI with every assurance that the Miami reputation for fine craftsmanship and originality will be upheld; that Miami will continue to represent the most advanced ideas in the bathroom cabinet field. Write today for full information. Address Dept. AB.

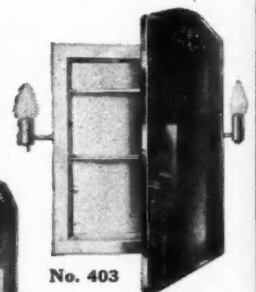
MIAMI CABINET DIVISION
The Philip Carey Manufacturing Company
MIDDLETOWN, OHIO



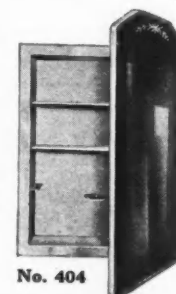
No. 2030

Master Jr. Model, with rounded corners. Stainless steel frame.

No. 403
For low-cost houses. Equipped with Colonial light bracket, light switch and electric convenience plug.



No. 403



No. 404

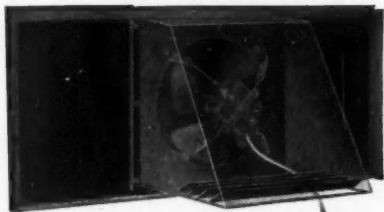
No. 404
Inexpensive recessed cabinet, designed for the extremely low cost home. Mirror is set in a steel, white enameled frame.

accommodation of war production workers, it was revealed. These group shelters will house 1,000 workers, three shifts each day, and it is currently estimated that several hundred such units will have to be built this year. Mineral wool insulation has been specified for the ceilings, walls and floors of these dwellings in order to assure restful daytime sleeping for the night shifts. It is expected that the insulation will reduce sleeping room temperatures to 15 degrees below the outside summer temperature, as well as provide fire protection and permit savings up to 40 per cent in winter fuel costs. In addition, it was pointed out, the use of insulation will enable smaller heating plants to be installed, thus saving critical metals and further reducing the cost of heating to the taxpayer.

No shortage of mineral wool is likely to develop, Mr. Clay stated, since no problem of priorities arises in its manufacture, the raw materials consisting of natural or waste products such as limestone, sand and slag.

Clay Offers New Blackout Window Ventilator

THE CLAY Equipment Corporation, Cedar Falls, Iowa, announces an electric blackout window ventilator to meet the demand for room ventilation during air raid alarms and blackouts.



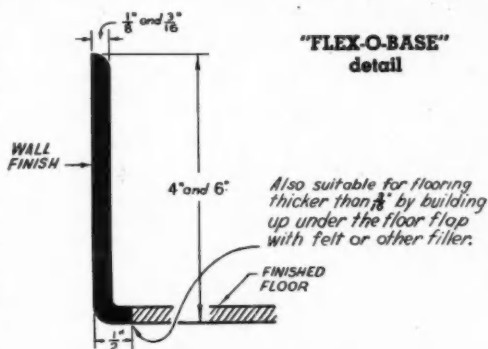
INTERIOR view of Clay blackout ventilator.

This Clay ventilating unit is easily and quickly installed from inside the room, allows no light to escape and provides 500 cu. ft. of free air delivery per minute when in operation. It is suitable for hospitals, institutions, hotels and public buildings.

Features of the Clay blackout window ventilator are: ease of installation, no tools required; fits varying size window openings; plugs into any convenient electrical outlet; absolutely light-proof, bug-proof and weather-proof; no back drafts; light weight for easy handling. The fan is 9½" in diameter operated by 110 volt 60-cycle electric motor. Panel is 24 gauge galvanized steel sheet. Shutters open automatically when fan is in operation and close when motor is shut off. The light shield fastened to the inside of the panel has a series of louvres on the underside permitting free passage of air, yet completely blacking out any light. The entire unit is finished in flat non-reflecting black.

Kennedy "Flex-O-Base" Popular

DAVID E. KENNEDY, Inc., Brooklyn, N.Y., is finding new interest today in its three types of flexible wall bases. These bases have been used for a good many years and have been proven intensely practical under severe usage. Today they are enjoying a greater sale than ever before because both builders and architects have come to realize that they replace bases formerly made of critical materials.

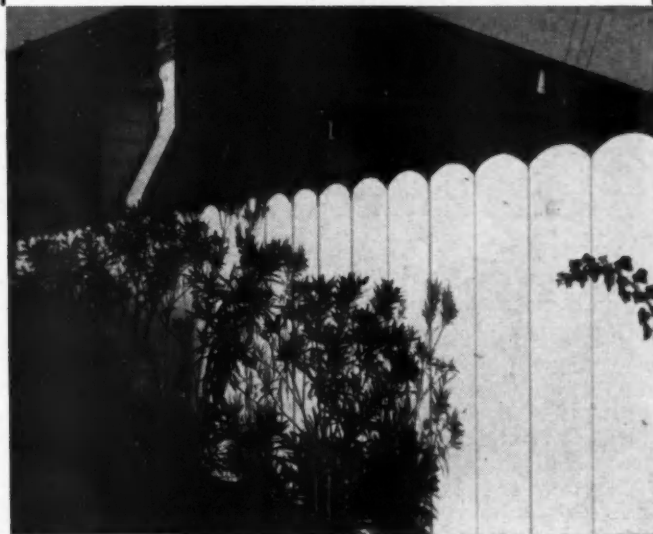


Two virtues are common to all three of the bases—they are extremely economical and—they are very flexible. Their flexibility and adaptability to curves is a feature that has attracted a great deal of comment. They are made of natural asphalts, asbestos fibre, and finely divided mineral fillers, combined and formed to shapes. Made in 44 colors, matching any Kentile color, they have an absolutely smooth, clean finish. They are almost indestructible from the hardest natural wear, are proof against mop marks or cleaning wear, resist acid, alkalis and fire.

Of the three styles, "Flex-O-Base" is illustrated. This molded

(Continued to page 76)

Out-of-door living requires fences for privacy. BUILD THEM OF WESTERN PINES*



Lunch in the patio, dinner on the back lawn, barbecued steak on Saturday night. These and sun bathing, too, can be the joys of every home owner. All he needs is the privacy afforded by a good looking fence built of Western Pines.

These fine woods lend themselves to many decorative designs. They hold paint, are sturdy and long lasting.

P. S. Remember, now, more than ever industrial properties are being enclosed and protected by wood fences.

The Western Pines will do your next job better. Try them.

WESTERN PINE ASSOCIATION

Yeon
Building



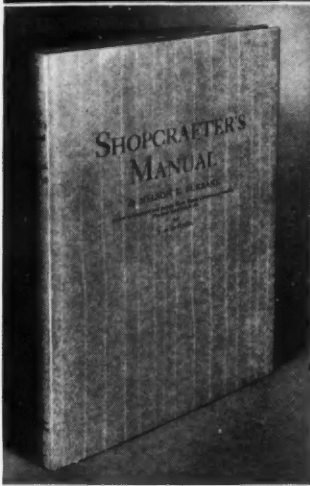
Portland,
Oregon

*Idaho White Pine *Ponderosa Pine *Sugar Pine

***THESE ARE THE WESTERN PINES**

THERE'S NO PRIORITY ON INGENUITY!

Why Not Build What
You Can't Buy Today?



LET THIS NEW BOOK HELP YOU

Shopcrafter's Manual

By

Nelson L. Burbank
and E. M. Mitchell

One hundred and forty projects—furniture for the home, garden, nursery, lamps, cabinets, chairs, tables, useful articles, novelties and toys made from commercial woods and veneers that you can get today. Large working drawings show construction details. Photographs show the finished article. Material lists and step-by-step instructions.

Here is a manual that will delight the home craftsman, the beginner or the experienced woodworker with power tools. Projects range from simple toys to useful furniture in modern designs and light finishes. Look over the accompanying list of projects, then send the coupon below for your copy of the new SHOPCRAFTER'S Manual.

142 pages—140 projects—8½" x 11"—\$2.00

Furniture for the Home—56 Projects, including benches, bookcases, cabinets, counter tops, desks, lamps, seats, stools, tables.

Garden Furniture—16 projects, including gates, lattices, pergolas, garden seats, chairs and tables, boat, bird houses.

Children's Furniture—12 projects, including a child's bed, chairs,

bath table, desk, lamp, and double bunks.

Toys—14 projects, including cut-outs, floating toys, children's playhouse, game table, ping-pong table, rocker, sled, toy box.

Novelties—42 projects, including brackets, signs, holders of various kinds, trays, shelves, aquarium, plaques, humidor.

FILL OUT THIS GUARANTEED ORDER FORM

American Builder and Building Age,
30 Church Street, New York, N. Y.

Enclosed find \$2.00, for which send me a copy of Shopcrafter's Manual, and a copy of the American Builder Book Guide FREE. If I do not find the book entirely satisfactory I will return it within 5 days of receipt and you will refund my \$2.00.

Name

Address

City and State

Trends in Home Equipment and Building Materials

(Continued from page 75)

core base is fast replacing all other quality bases in places where a perfect finish between floor and wall is desired. All keying or underbedding is eliminated. The wall is brought straight down to the floor and the base cemented into the right angle thus formed. Then the finished floor can be fitted right up to the base, making the job complete and perfect. It is available in 18" lengths in 4" or 6" heights. Wall flap is ⅛" and 3/16". Floor flaps are ⅛" or 3/16". If ¼" or thicker finished floor is used, floor flap can be built up by felt underneath. Outside and inside moulded corners are same heights and thicknesses, extending approximately 2" each way from corner.

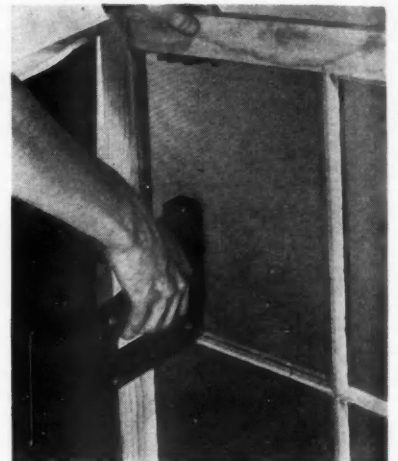
Reinforced "Vuelite" for Window Protection

A NEW type window pane of transparent plastic laminated with wire mesh which will withstand the explosion of a 150-pound bomb eight feet away has been developed for use in military construction and industrial plants in potential air raid zones.

The new material was developed by the Plastics Division of the Monsanto Chemical Company in cooperation with the United States Navy to end the menace of flying glass, which experience in England revealed was one of the chief dangers in an air raid.

Tested under vacuum shock conditions, it has stood up without appreciable damage under a 28-inch vacuum, while clear glass shattered at 15 inches and heavy, wire-reinforced glass at 26. At the Navy's Bureau of Yards and Docks, a quarter-pound ball dropped from a height of 20 inches smashed ordinary glass, while it required a two-pound ball from a height of 42 inches to penetrate a pane of this reinforced plastic. Even then, the missile left a clean-cut hole which could be repaired with cellulose tape with very little loss in breakage resistance over a solid pane.

The new material consists of standard, 16-mesh wire screening sandwiched between two sheets of Vuelite, Monsanto's transparent cellulose acetate sheeting originally developed for fluorescent lighting fixtures. Unlike the types of plastic-coated cloth and wire previously used to replace "bombed out" glass in England, it is as clear and transparent as a screened window of glass and can easily be installed in any conventional, multi-paned, steel or wood sash.



STAPLING "Vuelite" to window sash.

Frank Clarke Advanced

FRANK CLARKE has been appointed general manager of warehouses, Pittsburgh Plate Glass Company, succeeding B. J. Cassidy, who has resigned because of ill health after 44 years of service, H. B. Higgins, executive vice president, announced on June 22.

Mr. Clarke since 1934 has been district manager of the Company with headquarters at St. Louis. He joined the Company at its Atlanta warehouse in 1913 and successively served in various capacities. In 1926 he was transferred to Louisville, Kentucky, as the manager of a new branch established at that point. In 1928 he was transferred to St. Louis as local manager.

Previous to his joining the Pittsburgh Plate Glass Company, he had been engaged in the retailing and wholesaling of glass and paint products. Throughout his business career he has been active in glass and paint industry affairs and served as president of the St. Louis Glass, Paint, and Lacquer Association in 1935.

NEWS of the MONTH

Two National Builder Groups Merge

TO work out means through which private home building may be kept alive during the war period and through which it can supply as much as possible of our war housing needs, steps have been taken to unite the entire home building industry into a single organization. The new organization unites the memberships of the National Home Builders Association and the Home Builders Institute of America.



HUGH POTTER

In a joint release early in July, executive officers of the two organizations stated that tentative by-laws had been prepared and organization procedure worked out for the all-industry group, which is expected to work very closely with governmental agencies in its field.

Its name is "The National Association of Home Builders." The merger of the two existing groups forms a national association of home builders that will be truly representative of the entire home building industry, it is stated.

Local chapters of the Home Builders Institute of America and local associations of the National Home Builders Association are recognized in the new organization plan.

Officers of the new merged organization are:

- Hugh Potter, Houston, Texas, president.
- Harry J. Durbin, Detroit, vice president.
- Carroll Shelton, Philadelphia, secretary.
- George Ellis, Chicago, treasurer.

Objectives as outlined in the proposed by-laws:

1. To aid the Government in providing needed housing through private enterprise at low cost.
2. To collaborate with manufacturers for the production of new and less costly building materials.
3. To aid in standardization of building codes and to encourage the elimination of uneconomic and cumbersome governmental procedures affecting home construction to minimize cost and delay.
4. To co-operate with other trade associations interested in home building to secure united action in matters of national policy.

Celotex Moves to LaSalle Street

THE CELOTEX Corporation opened its new general offices in the 120 South LaSalle Building, Chicago, on July 20th. Approximately 265 officers, executives and employees transferred from the Palmolive Building at 919 North Michigan Avenue, where the company's general offices have been located since June, 1929.

The Celotex offices will occupy the entire twenty-first floor, most of the twentieth floor, and a section of the eighteenth floor at the new location.

Celotex has been headed by Bror Dahlberg since its founding in 1921. In addition to being president of Celotex, he is chairman of the Board of Directors of Certain-teed Products Corporation, which recently moved its general offices from New York to the 120 South LaSalle Building. Other Celotex officers are: vice presidents—Carl G. Muench, O. S. Mansell, H. W. Collins and M. F. Parsons; secretary-treasurer, Charles G. Rhodes.

Municipal Court House

Philadelphia, Pa.

William R. Moetor Keast, Architect, Philadelphia, Pa.; John McShain, Inc., General Contractor, Philadelphia, Pa.; Wm. Armstrong & Son, Inc., Plastering Contractors, Philadelphia, Pa. The original Ohio White Finish was used on all plastered walls and ceilings.



The original is always packed in bags distinctively marked with Red Zig Zag stripes.

The original Ohio White Finishing Lime is scientifically manufactured from the world's purest deposit of dolomite limestone. Thousands of architects, plastering contractors and dealers, who demand nothing less than the best, accept it as a standard for uniform high quality. It is sold everywhere through reputable building supply dealers whose service to the construction industry we value.

THE OHIO HYDRATE & SUPPLY CO.

Woodville, Ohio

For the Essential Building of Today



... and the Better Structures of Tomorrow

• Knapp Metal Casings are finding broad use in the essential construction program of today. With carefully planned application they help achieve rapid erection and over-all economy—in addition to the advantages of ruggedness and simplicity.

In the building plans of tomorrow too, Knapp Casings will play an important part. They will contribute much to the durability, beauty and practical design that will be featured in the better structures of the coming building era.

Our present activities, of course, are restricted to supplying products for essential construction permitted under the conservation program.

KNAPP METAL TRIM
KNAPP BROS. MANUFACTURING CO.
GENERAL OFFICES • JOLIET, ILLINOIS

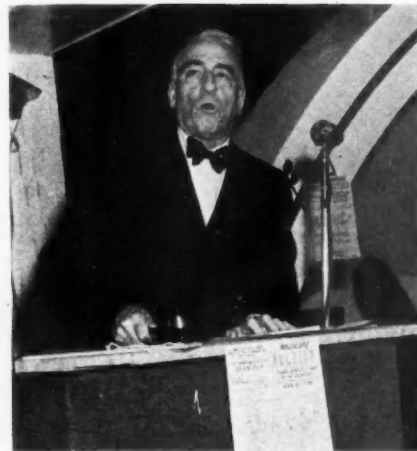
"Lost Horizon Realty Co."

Auctioned Off by Joseph P. Day

MEMBERS of the Real Estate Association of the State of New York, attending their Annual Convention at the Sagamore Hotel at Bolton Landing, were entertained by an unusual sight—the spectacle of Joseph P. Day, famous New York realtor, auctioning off the "Lost Horizon Realty Company" of "Shangri, La." This bit of foolery was the culmination of a successful convention marked by a record attendance.

White-haired and sprightly, Joe Day was in a genial mood, having just recently sold his Manhattan Beach property for a round 6 million. He was greeted by loud cheers as he climbed up on the specially prepared auctioneering stand at the convention and announced that this "old, established real estate business" had been ordered sold by the firm of "Coldwater, Wickerchair & Raft." It was sold "subject to unpaid bills, including repairs to sofa."

Included in the assets were "two genuine roll top desks, book-keeper's stool, four brass cuspidors, one cane-bottom rocker and two swivel chairs (waffle-bottom), and a hair-cloth sofa." Also



"SOLD!" cries Joseph P. Day, famous New York real estate man, as he knocks down Lost Horizon Realty Co., located at Shangri, La.

HANDBILL, below, gives picture of Lost Horizon Realty Corp., which was sold complete with cat, cuspidor, swivel-chair and aspidestra.

OLD ESTABLISHED
REAL ESTATE APPRAISAL
BUSINESS

LOST HORIZON REALTY CO.
SHANGRI LA.

BY ORDER OF:
COLDWATER, WICKERCHAIR & RAFT,
ATTORNEYS.
ARTHUR DONOVAN, REFEREE

ABSOLUTE
AUCTION

THURS. JUNE 25TH 1942
AT THE SAGAMORE,
BOLTON LANDING, LAKE GEORGE, N.Y.
RAIN OR SHINE



Assets include two genuine Civil War vintage roll top desks, one high book-keeper's desk and stool, four large brass cuspidors, one cane-bottom rocker and two cane bottom swivel-chairs (guaranteed to produce proper design waffle-bottom) one hair-cloth sofa, one rubber plant, one large aspidestra, two snake plants, FOUR BRASS COAL BUCKETS.

Agencies for the following can be continued by buyer: Schmutzig Coal and Fuel Oil Corporation, Sommer Painting and Decorating Company, Haffl Plumbers, Inc. Desk-room sub-tenancies include two attorneys, an electrician and a travel agency.

Joseph P. Day, Inc.
Auctioneer

CHRYSLER BLDG. N. Y. C.

LExington 2 - 5000

included were "one rubber plant, two snake plants, one large aspidistra and four brass coal buckets." Thrown in for good measure were agencies for the Schmutzig Fuel Oil Company, Schmerer Painting and Decorating, Misfit Plumbers, and desk room for two attorneys, an electrician and a travel agency."

A bid of 100,000 marks "in behalf of Adolph Schickelgruber" was rejected on the grounds of "poor risk."

The property was finally knocked down to George Long, President of the Board, for 5,000 mythical dollars to be turned over to the Board for more efficient management. Thus, Auctioneer Joseph P. Day added another sale to his historic career in which he has sold over 2 billion dollars worth of property.

New AIA Officers

RICHMOND H. SHREVE of New York was reelected president of the American Institute of Architects at the recent annual meeting. Walter R. MacCornack, dean of the School of Architecture, Massachusetts Institute of Technology, was again named vice president. Charles T. Ingham of Pittsburgh continues as secretary.

Raymond J. Ashton of Salt Lake City was chosen treasurer to succeed John R. Fugard of Chicago. New regional directors of the Institute are as follows: John F. Staub of Houston, Tex., Gulf States District; Kenneth E. Wischmeyer of St. Louis, Mo., Central States District; Henry H. Gutterson of San Francisco, Calif., Sierra-Nevada District; Albert Simons of Charleston, S.C., South Atlantic District.

Trigg Honored by Paint Industry

ERNEST T. TRIGG, President of the National Paint, Varnish & Lacquer Association, was honored June 30th by the nation's Paint Industry with a dinner at the Union League, Philadelphia, in celebration of his fifty years of service to the industry.

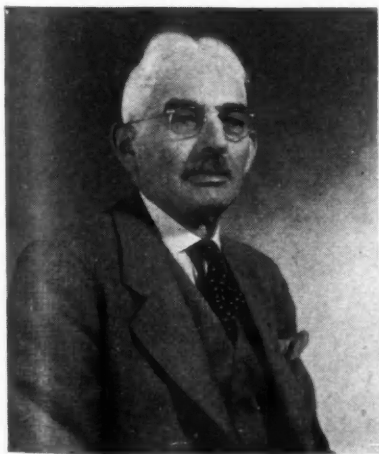
Three hundred and fifty of the leading paint manufacturers from all parts of the country and Canada as well as prominent civic and industrial leaders representing practically every line of endeavor attended.

The dinner was sponsored by the Philadelphia Paint, Varnish & Lacquer Association, and Samuel R. Matlack, president of George D. Wetherill & Co., Inc., acted as honorary chairman.

Death of Rudolph W. Lorch

RUDOLPH W. LORCH, dean of the sales staff of the National Brass Co., Grand Rapids, Mich., passed away June 18th, at the age of 75. In a letter to the National staff, E. B. Neuman,

secretary, paid Mr. Lorch this well deserved tribute: "Those of us who were associated with him for many years learned that he was the type of man who lived and worked for the better things of life. His ideals were high, always true and loyal to his God, country, family, employers and fellowmen. Never was he more happy and contented than when surrounded by his good wife, son, daughter and grandchildren. Mr. Lorch joined the sales staff of the National Brass Company in 1914.



RUDOLPH W. LORCH

That gave him 28 years of service with us. I have worked with him for 20 years. Never once did he complain about any assignment or responsibility. It's men like Mr. Lorch that makes life worth living—and the world a better place in which to live. It goes without saying he held the good will and confidence of his trade 100%. His family, his salesmen comrades, fellowmen and the National Brass Company suffer a great loss as he was of the old school, believing that what was worth doing was worth doing well."

QUICK JOBS

-AND GOOD!



LOW COST!

Modern mass production methods of prefabrication cut the initial cost of Barclay Panels!



LOW UPKEEP!

Barclay Panels never need renovating, won't chip, crack, craze or peel. They clean easily!



STYLED COLORS!

Barclay Panels have all the beauty and color of plastic. 12 standard colors. Others on order.

WHETHER you're an architect, builder or building supply dealer—you can't afford to overlook Barclay Plastic Coated Panels. These "panels of plastic" fit right into your own particular picture of war-time specification, use or sales!

Prefabricated from top-quality fibreboard, coated with modern synthetic-resin plastics, Barclay Panels bring you quality at low-

cost—a *must* today. Made in large sheets—they may be applied quickly, easily by semi-skilled labor. They need no finishing once applied, nor renovating later. Their highly polished surfaces have the beauty and color that appeals to all users!

See our catalogue in Sweet's!

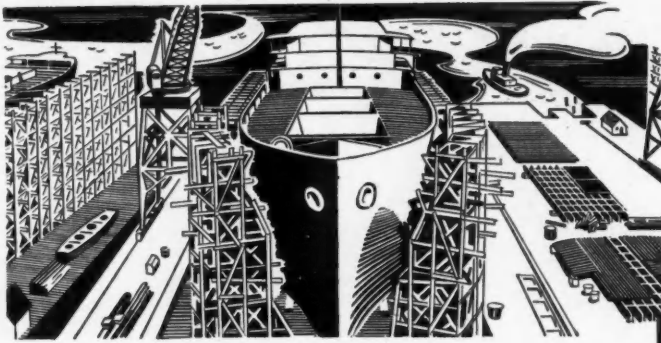
PROMPT DELIVERIES!

Barclay products are available. All orders—large or small—are being delivered promptly!



Barclay Manufacturing Company, Inc., Dept. ABS, Bronx, N. Y. Please send me free samples of Barclay Plastic-Coated Panels, and literature.

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



It's Speed They Wanted, but Wood Gives Them Long Life Too

NEW SHIPYARDS have been able to get into production quickly, thanks in part to the use of wood. The ease with which wood can be worked and erected has simplified and speeded this construction. Wood was available for immediate use; no long waits for scarce materials, badly needed elsewhere for combat equipment.

WOLMANIZED LUMBER*, employed in many of these structures, gives them long life. Vacuum-pressure impregnation with a dependable preservative makes this wood highly resistant to decay and termite attack. These shipbuilding facilities will, therefore, cost less to maintain.

SERVICE RECORDS covering a period of over fifteen years and installations of millions of feet of Wolmanized Lumber prove the economy of building with this long-lived wood. Investigations in industry's truly tough spots have shown that renewals because of decay have run less than 0.2%.

WARTIME STRUCTURES built of Wolmanized Lumber will be available for peacetime use. First costs are little more than where ordinary wood is used, and lower upkeep expense will simplify postwar financing. If you want information on how and where to use Wolmanized Lumber, write American Lumber & Treating Company, 1645 McCormick Building, Chicago, Illinois.

*Registered Trade Mark

WOLMANIZED LUMBER



WPB Official Calls for Immediate Action in Converting Eastern Heating Plants to Coal

THE IMPORTANCE of immediate action in the conversion of oil-fired heating plants in eastern states to coal firing was emphasized at recent national conventions by W. Walter Timmis, chief, plumbing and heating branch, War Production Board.

Mr. Timmis spoke at the 53rd annual convention of the Heating, Piping, and Air Conditioning Contractors National Association in Milwaukee, Wisconsin, and the 60th annual convention of the National Association of Master Plumbers in Richmond, Virginia.

"We have just got to convert at least 50 per cent of our existing oil burner installations on the coast to coal, and we have got to do it now," Mr. Timmis said. "We have made estimates of what is required in the way of scrap and pig iron to make grates and lugs and the other equipment necessary to effect these conversions, and sufficient raw material is being allocated to the manufacturers of boilers and furnaces so that they will be in a position to produce what is required."

Mr. Timmis pointed out that while manufacturers will have the material necessary to make grates, the real problem is to convince the public of the urgency of immediate conversion.

"All of you know," said Mr. Timmis speaking to heating and plumbing contractors, "how difficult it is to get the American people to do anything about their heating system until the first cold snap in the fall."

"We have tried it year after year," said Mr. Timmis who has a background of many years of experience in the heating business. "If people in the eastern states don't do something about their heating plants right now, it is going to be tragic. If everybody waits for the first cold snap, the grates will not be available."

"Manufacturers will not make enough grates unless there is some sign that there is going to be a demand for them. Furthermore, the people who should convert and are not doing so are obviously not going to be doing anything about buying their coal or even providing storage space for coal."

"The result will be that everybody will want their grates and their coal at the same time and the result will be confusion and hardship."

Pointing out that the delivery of fuel oil to eastern states may be reduced more than 50 per cent, Mr. Timmis urged heating and plumbing contractors to "pitch into the conversion job and see that it is done."

Home owners and owners of income property or industrial buildings do not need priorities to buy grates, Mr. Timmis said. Stokers, too, can be sold without a priority certificate.

Mr. Timmis also pointed out the importance of proper storage of oil burners which are taken out of boilers and furnaces. He said that all conversion work should be done by qualified men so that home owners would be assured of installations that would operate with the greatest efficiency.

Mr. Timmis made a distinction between those boilers which are especially designed for oil firing and those units which were made to burn coal and which were subsequently converted to oil firing. The latter, he said, are in the majority and it is this type of plant that should be converted.

Various surveys by private interests have indicated that from 50 to 80 per cent of house heating plants in eastern states are adaptable to coal firing, according to the Plumbing and Heating Industries Bureau.

Survey of Woodwork Care Offered

ONE of the most significant steps of recent years in locating and compiling authentic information on proper care of woodwork has just been completed by Ponderosa Pine Woodwork, 111 W. Washington Street, Chicago, Illinois.

The survey was conducted among lumber and millwork manufacturers, builders, dealers and jobbers throughout the country. The results, tabulated by Ponderosa Pine Woodwork, have now been embodied in an attractive folder which is being offered to lumber dealers for distribution to their customers.

The folder, entitled "Pointers on Care of Woodwork," is an unbiased statement of the facts concerning proper care of doors, windows, frames, interior trim, cabinet work and other interior woodwork.

In presenting the results of the survey, Ponderosa Pine offi-

Specials point out that the interior woodwork of the home is the one thing that comes under the inspection of the guest.

Doors, windows, stairs, baseboards, mouldings, panelings, mantels, china closets, kitchen cabinets and bookcases really "clothe" the home—add not only value but beauty and utility as well. Good woodwork, with proper selection of treated products and the proper care, should be a lifetime investment. It therefore goes without saying, Ponderosa Pine officials state, that woodwork is a vital consideration and it should be selected with a view to high value and economy. The Ponderosa Pine folder "Pointers on Care of Woodwork" gives detailed information concerning methods of woodwork care, starting with the manufacturer, following through with the lumber dealer, covering the installation of woodwork by the carpenter or contractor, and ending with the owner's part.

A copy of the folder may be obtained free. Imprinted quantities for customer distribution may be had for a nominal charge to cover cost of printing and handling.

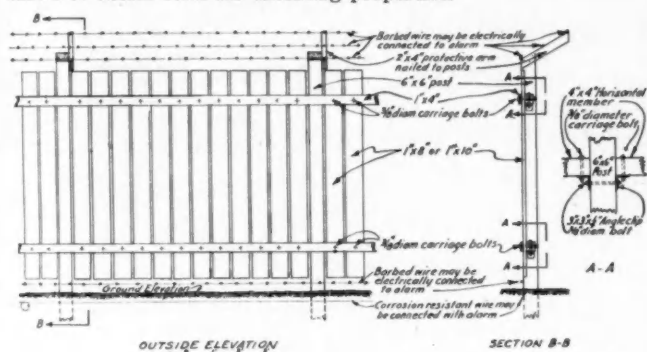
S-P Issues Industrial Wood Fence Booklet

ILLUSTRATING new industrial wood fences which may be used in the place of steel that is needed on the actual fighting front, a timely and useful booklet has just been published here by the Southern Pine Association, New Orleans.

The booklet contains detailed designs of various types of wood fences for plant protection. It may be had for the asking, according to H. C. Berckes, secretary-manager of the Association.

"These designs should be particularly interesting," said Mr. Berckes, "to lumber distributors, in that with them they may well be able to assist clients in solving plant protection problems.

"Some of the government agencies have requested copies so that these ideas embodying use of wood may be passed on to builders unable to obtain steel for enclosing properties."



SOUTHERN PINE INDUSTRIAL FENCE—Type "A"

Four basic plans are included in the Southern Pine Association booklet on wood fences, from which variations may be developed. Barbed wire used in each design could be electrically connected with an alarm.

The use of treated posts prolongs the life of the fence indefinitely. Several systems for securely fastening the fence boards to the rails are shown. Information as to sizes, grades of lumber, and footing also is given.

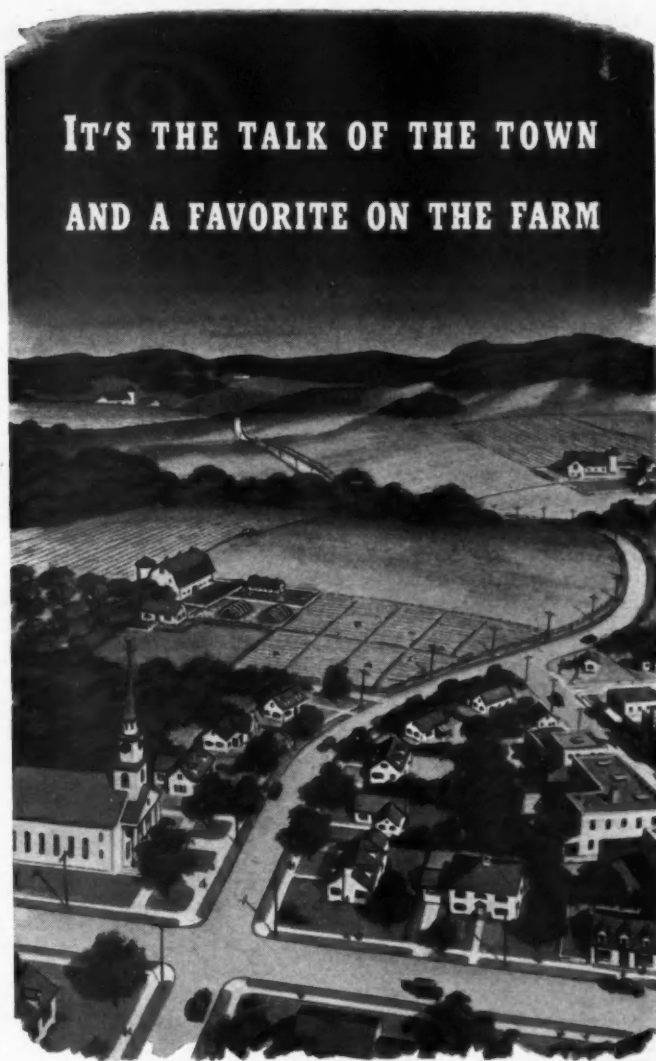
Stanley Deas Advanced

H. C. BERCKES, secretary-manager of the Southern Pine Association, New Orleans, has announced that Stanley P. Deas, veteran member of the organization, has been appointed assistant secretary-manager.

Mr. Deas succeeds Peter C. Gaffney, Jr., who has entered the army. Mr. Gaffney is 29 years of age and was appointed assistant secretary-manager last September. He was only 14 years of age when he first became associated with The Southern Pine Association.

Mr. Deas is 38. He has been with the Southern Pine Association organization for the last 18 years. He has served the organization in various internal capacities and in recent years has been active in trade promotion and public relations.

"His long familiarity with problems of Southern Pine producers," said Mr. Berckes, "and his intimate knowledge of emergencies arising because of wartime needs for lumber fits Mr. Deas for his new position as assistant secretary-manager of the Southern Pine Association."



IT'S THE TALK OF THE TOWN
AND A FAVORITE ON THE FARM

LEISURE DAYS are over for attics in city dwellings. Masonite* Cell-U-Blanket*—an improved type blanket insulation—is putting them to work as comfortable, livable bedrooms, making important fuel savings at the same time.

On the farm, this same blanket is bringing new efficiency to barns, poultry houses and other service buildings . . . making them better, more healthful living quarters for all kinds of livestock and poultry.

Cell-U-Blanket comes in rolls from which the proper lengths are cut and either nailed or stapled to studs and rafters. It provides a *positive vapor barrier*; will not shrink, sag or settle; is *wind-proof* and *moisture-resistant*.

Local lumber dealers can procure Cell-U-Blanket in 3 thicknesses, 6 widths and with either asphalt-impregnated coverings on both sides or with a non-metallic reflective surface on the flange side.



MASONITE

CELL-U-BLANKET

A new and better insulation — Sold by lumber dealers everywhere

MASONITE CORPORATION, Dept. AB-8, 111 W. Washington St., Chicago, Ill.
Please send FREE sample and complete information about Masonite Cell-U-Blanket insulation.

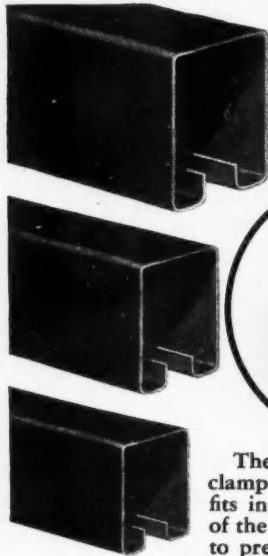
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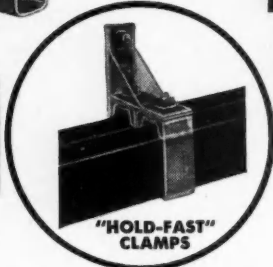
*TRADE-MARK REG. U. S. PAT. OFF. "MASONITE" IDENTIFIES ALL PRODUCTS
MARKETED BY MASONITE CORPORATION. COPYRIGHT 1942, MASONITE CORP.

STANLEY HARDWARE For Rolling or Sliding Doors

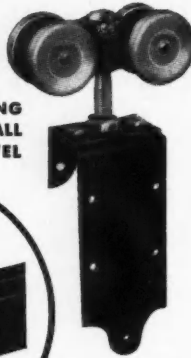


3 SIZES
FIT ALL
DOORS

ROLLER BEARING
WHEELS AND BALL
BEARING SWIVEL



"HOLD-FAST"
CLAMPS



The "Hold-Fast" Clamp consists of a clamping plate with bolt and nut, which fits into the track bracket. Tightening of the nut causes ends of clamping plate to press down on the track insuring a rigid, perfectly aligned surface for the trolley wheels. Any number of sections can be joined together into one continuous piece of non-rattling track, allowing the wheels to roll smoothly and noiselessly. The Stanley Works, New Britain, Connecticut.

STANLEY

TRADE MARK

HARDWARE FOR CAREFREE DOORS

HOW TO MAKE YOUR *Mall* TOOLS Last Longer and Work Better

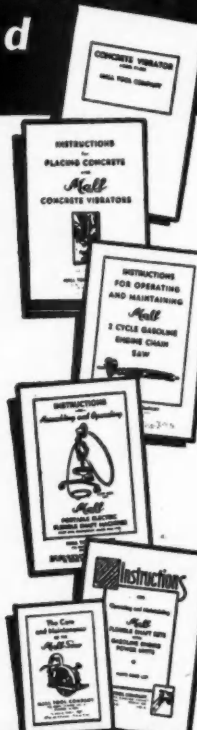
FREE INSTRUCTION MANUALS
are yours for the asking
Write for your copies TODAY!

MALL Instruction Manuals complete with easy-to-understand diagrams and practical suggestions covering the operation and maintenance of MALL Tools are available for MALL Concrete Vibrators, Concrete Surfacers, Portable Electric Mallsaws and Drills, Door Mortisers, Door and Surface Planes, Flexible Shaft Grinders and Polishers, as well as Chain Saws.

In addition, factory-trained representatives in principal cities are waiting to service your tools. A minor adjustment today may save a major repair job tomorrow and conserve critical materials for War Production.

Write AT ONCE for your FREE copies of MALL Instruction Manuals giving the serial number of your MALL Tools. Name of MALL Service Base nearest you will be furnished upon request.

MALL TOOL COMPANY
7737 SOUTH CHICAGO AVE.
CHICAGO, ILLINOIS



Stapler Speeds Fastening of Shingles

SMALL hand staplers, like the one shown in the picture, offered by Bostitch, Incorporated, East Greenwich, Rhode Island, are now widely used on many roofing jobs, as well as for interior sheathing and insulation. Ordinary hexagonal shingles are easily fastened by this method, but Dutch lap shingles presented a somewhat different problem. Here, by allowing a substantial overlap, the under shingle is nailed to the roof, while the staple holds the butts securely against wind and rain.

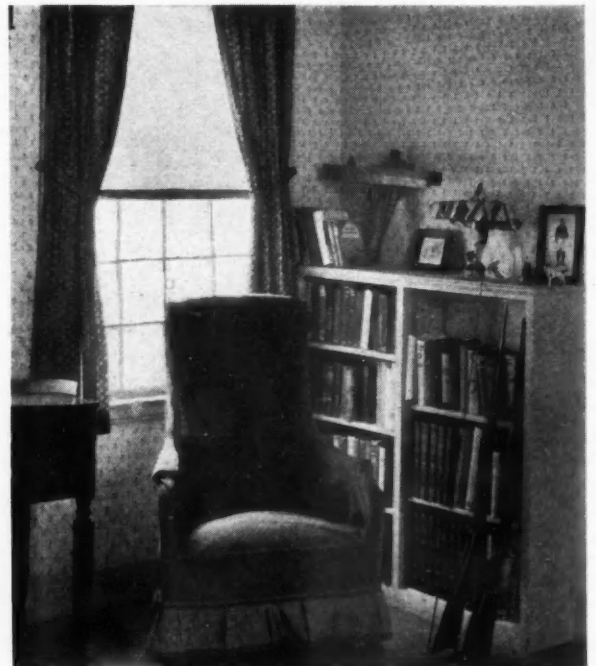
Advantages of using hand staplers, stapling hammers, etc., include greater speed, often one-handed operation, without tacks or nails to hold in mouth or pockets, and greater precision in spacing and driving.



BOSTITCH stapler used to secure asphalt shingles.

Light-proof Shades for War Housing

THE COLUMBIA Mills, Inc., 225 Fifth Ave., New York City, has developed a new window shade for war industry housing. Because these window shades are light colored but light-proof, they are used for bedrooms which accommodate people whose work is done at night and who need to sleep during daylight hours. They are being used so widely in homes today because of so many war workers on the "swing shift." They are also popular in



SHADOWPROOF, lightproof, this window shade allows a young defense worker to sleep during the daytime.

nursery rooms, helping the younger fry to nap during the afternoon or to retire while the sun is still in sight. And there is not any likelihood of their waning in popularity with shutterbugs who do their own film developing, or with those people who own movie cameras. In fact, these hobbies seem to be on the increase and perhaps it is not too fanciful to surmise that the house of the future will be complete with dark-room!

Because these window shades are decorative as well as timely, functional and extremely practical, they are right in line for war housing developments.

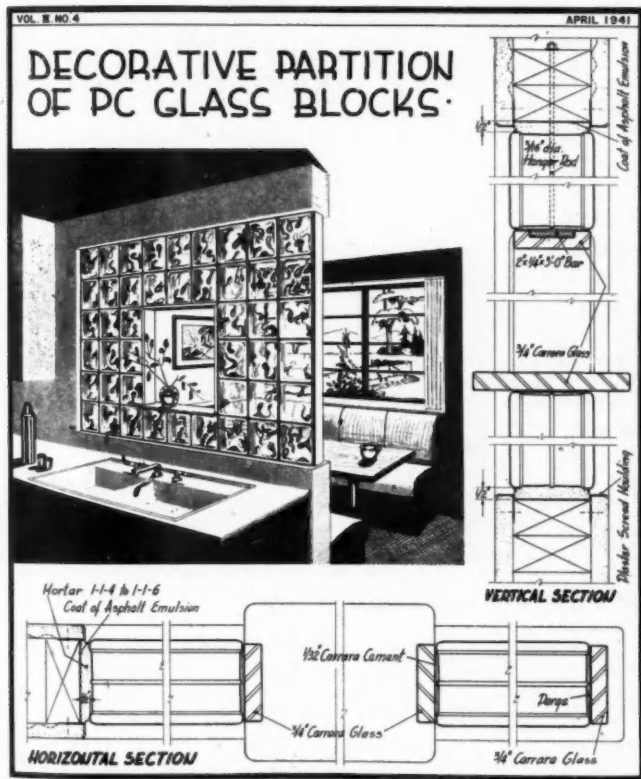
Glass Screen for Dinette

ONE of the series of data sheets—full of ideas for designers and builders—put out by the Pittsburgh Plate Glass Co., Pittsburgh, suggests a glass block separation between kitchen and dinette that should appeal to many. This decorative partition is illustrated herewith.

The blocks shown are the "Decora" pattern usually referred to as the 8" size. PC Glass Blocks are also available in sizes usually referred to as 6" and 12" blocks. Normally mortar joints are 1/4" thick. However, joints may be made from 3/16" to 3/8" thick as desired.

The pass opening in the partition has a utilitarian value and provides a shelf for such decorative items as the flower vase shown.

The design illustrates the use of 3/4" Carrara structural glass

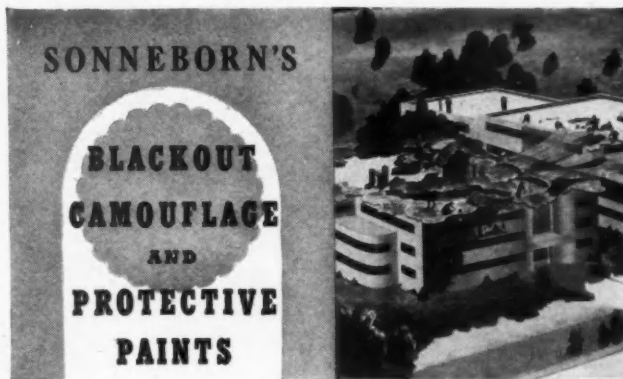


How to build an attractive glass screen between kitchen and dining alcove is shown in this detail, which is one of a numerous assortment of idea-sheets, fully detailed, from the Pittsburgh Plate Glass Co. Complete series offered to those interested.

as a trim for the exposed edges of the glass blocks. This trim provides a pleasing termination, in a material of the same character as the glass blocks.

Note in the "Vertical Section" of the construction details the use of 3/16" diameter hanger rods. These rods are used primarily to prevent deflection in the 2" x 3/4" x 3' 0" steel bar lintel over the pass opening, during the period of construction. They also serve as an additional safeguard well worth the additional cost for installation.

The plaster screeds used to terminate the plaster line around the glass blocks guarantee a neat edge which is plumb and true and prevents crack lines from appearing between the plaster and glass blocks.



FOR EFFECTIVE, DOUBLE-DUTY PROTECTION

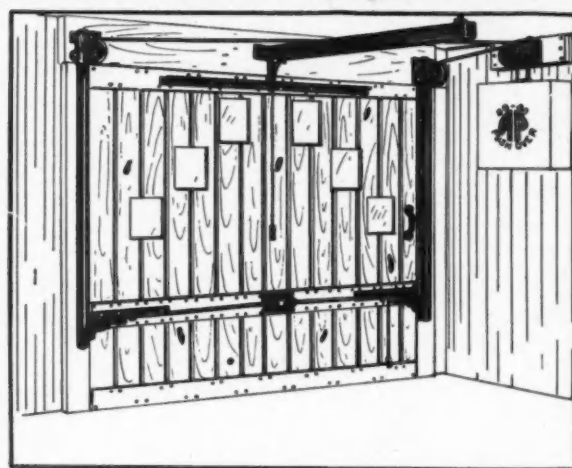
Wherever security requires blackout or camouflage, you can depend on the extra advantage of Sonneborn paints. These blackout and camouflage products meet fully the Government requirements as to opacity and non-reflecting qualities. They include various types of finishes specified by Government agencies for equipment and maintenance. And when you use Sonneborn paints, you benefit from products that are basically protective coatings—with a long record of lasting effective protection against weather and other sources of corrosion.

Write today for quotations—tell us—your specific problem or the product you require.

Where Results Count—Count on Sonneborn

L. SONNEBORN SONS, Inc.
88 Lexington Avenue New York, N. Y.

ALLITH



Allith-Prouty is at 98% of capacity producing goods for war purposes. We will be soliciting your valued business again—WE HOPE SOON!

ALLITH-PROUTY, INC.
DANVILLE, ILLINOIS

TWO WAYS TO BUILD FOR THE FUTURE

1

FOR VICTORY

BUY
UNITED STATES SAVINGS BONDS AND STAMPS



2

AFTER VICTORY

... use the **TECO System** of engineering timber to a construction job.

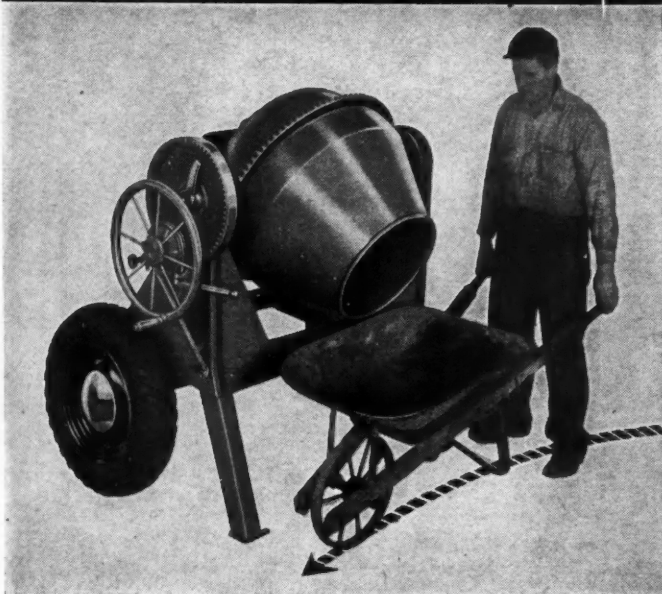
TECO CONNECTORS



The TECO Ring Connector spreads the load on a timber joint over practically the entire cross-section of the wood . . . brings the full structural strength of lumber into play.

Timber ENGINEERING COMPANY
WASHINGTON, D. C. PORTLAND, OREGON

3 1/2-S TILTING KWIX-MIX



End discharge
Air-cooled engine
Light weight
Welded construction

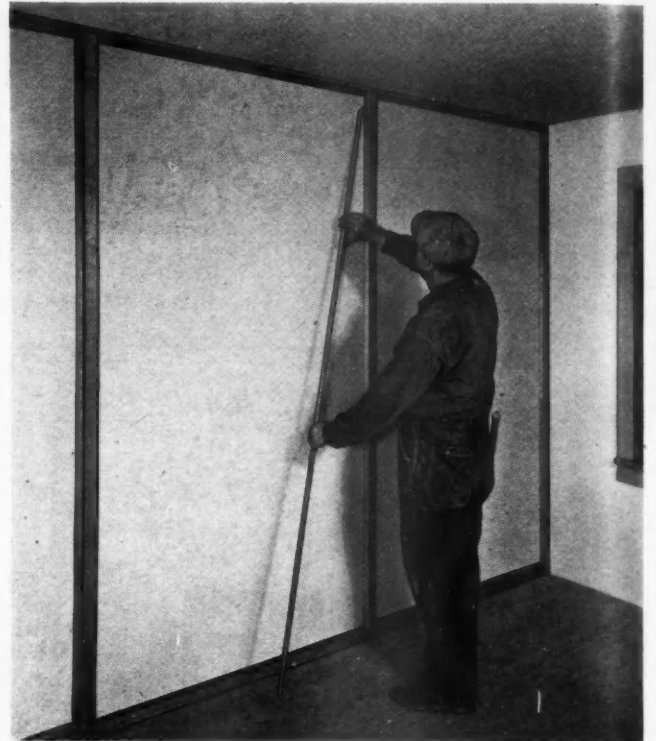
Anti-friction bearings
Spring mounting
High speed trailing
Write for Bulletin AB

KWIK-MIX CONCRETE MIXER CO.
PORT WASHINGTON WISCONSIN

Gold Bond 1" Solid Partition Panels Offered

NATIONAL Gypsum Company, Buffalo, has developed a type of partition system needed badly right now by architects engaged in planning wartime buildings . . . partitions constructed of readily available, non-critical materials—sturdy enough to last for the life of the building, yet so simple in construction that they can be quickly dismantled and salvaged.

Briefly, the system consists of a framework of 2 x 4's spaced 4 feet apart to permit the 4 foot wide Gold Bond Panels to be inserted—the latter units held permanently in place by wood mouldings. The work is fast and the walls go up with lightning rapidity—from 6 to 10 feet high and as long as desired. Where walls higher are needed a second tier is introduced.



WORKMAN locks in the gypsum panel.

Rigidity: The core or center of the Gold Bond Solid Partition Panels is processed gypsum rock—permanent and fireproof as the stone itself. Most architects are familiar with the sturdiness of ordinary half-inch gypsum board, which incidentally is approved by the government and is being used for sheathing many of the cantonment buildings. These new Gold Bond panels, actually twice as thick, build a rock-like wall.

Conserves Lumber: In ordinary wall construction, studs are spaced 16 inches on centers. With studs spaced 4 feet apart, as required by this system, the big saving in lumber is at once apparent. Further economies are effected through the use of 1 x 4's along the top and at the ends, wherever the partition end abuts a structurally sound wall.

Quicker Installation: It's easy to understand how this system cuts application time when one considers the simple steps in erection. First, the framework is built. Second, the panels are slipped into place with no nailing necessary. Third, the mouldings are applied. That's all there is to it. Carpenters get the "hang" of it in a few minutes and the work moves along rapidly.

Saves Nails: This sounds like a small item, but it amounts to considerable because there is actually a double saving—the cost of the nails plus the labor of applying them. The only nails needed are for the framework plus a few finishing nails in the mouldings. No nails are required for the gypsum panels.

Demountable: One of the big advantages of this system is that, despite its sturdiness, it can be quickly dismantled and erected elsewhere. Or the materials can be salvaged. Because no nails or other attachments are required to hold the Gold Bond Panels in place, the surface of the board is unmarred and can command a high resale price.

Detroit War Housing

(Continued from page 37)

Hall, who is manager of the Housing Bureau:

1. The bomber plant will employ less than one-quarter of the workers to be added to war production in the Detroit area during the next year, yet every housing unit projected by the Federal Public Housing Authority is for workers at the bomber plant, and not a single dwelling unit has been planned for all the other war workers in the Detroit area.

2. The War Production Board estimates an increase in war production employment in the Detroit area of from 524,000 in May, 1942, to 660,000 in November, 1942. These additional workers will be at work and will be housed somewhere long before the Housing Authority will have completed much, if any, of the projected housing.

3. Government regulations, priority restrictions and the difficulties in obtaining critical building materials have temporarily stopped new residential construction for war workers by the private building industry. Private industry . . . will be fortunate if it can obtain enough material to complete 4,000 dwelling units presently under construction. This industry is rapidly disintegrating. Builders have declared that if the war program requires all available critical materials they will suspend operations for the duration, because the war effort must come first.

Alternate proposals center around the complete abandonment of a "bomber city," except perhaps a few essential units for certain key men, and building whatever housing is needed within the Detroit metropolitan area, which includes the suburbs nearest to the Willow Run plant. So, as stated above, even housing for the Ford plant would be included in any program set up for the Detroit area. And for this reason, such proposals as have been made by the private builders to get some program under way seem to your reporter to be the most logical answer. With that as a new start, other phases of any program can be added to take care of such special problems as might arise—building in inaccessible or blighted areas where dormitories or other accommodations would be indicated, and such building as might be required to provide the necessary rental units for immigrant workers where present FHA requirements could not be met by private builders.

The importance of an early decision cannot be over-emphasized if Detroit's private home building industry is to contribute its needed capacity and abilities. Many large and important builders have exhausted their priority quotas and cannot stay in business indefinitely without further work. Many have already liquidated their organizations; others are daily completing their present program. For instance, Sanford Adler, one of the large Detroit builders interviewed, stated, "The city is behind 40,000 houses this year because of bureaucratic hold-ups and red tape. In February, builders geared up their organizations for mass housing and then were stymied all along the line with restrictions. My organization is geared to build 500 to 600 houses a year, and I would start 200 houses immediately if assured of materials and mortgage co-operation. In fact, I must have an immediate program to keep my organization together as we are finishing up programs on commitments and priorities that we already have. Otherwise, we will have to go into some other business, as other builders have been forced to do. . ."

It is fully appreciated by *American Builder* that getting an entire program under way, or any single part of it, requires more than a nod of the head. Even the pri-

(Continued to page 86)

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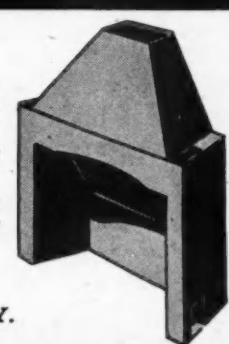


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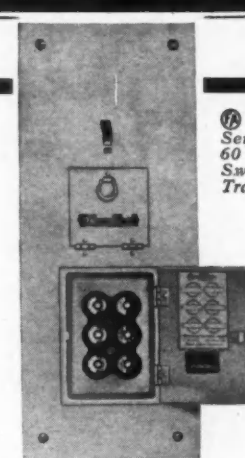
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Detroit War Housing

(Continued from page 85)

vate building which should be an important part of the eventual program must await certain relaxation of present regulations or the issuance of new orders to overcome present stumbling blocks. If the housing for in-migrant workers is to be single-family detached units or duplexes, to be delivered within the present cost brackets of the volume of war housing—\$4,000 to \$4,500—financing and the sale or rental of such units must be scaled or co-ordinated with the expected average wage of \$1750 to \$1800 a year. However, in talking to Detroit builders, practically all were of the opinion that as many houses as could be produced would sell to war workers already in Detroit at present or higher prices. It was further pointed out that every sale to a Detroiter would vacate premises, many rental, for these incoming workers.

This price house, although scaled down both because of costs and restrictions, still represents good value when compared to a currently proposed \$9,000,000 public housing project on which the only bid made ranged between \$7,000 and \$8,000 per unit. This was for individual units of practically the same type as are now being offered by individual private builders at from \$4,000 to \$5,000. Such \$9,000,000 projects can be bid on only by large industrial builders, due to restrictions and requirements set down for these large jobs. Further, it is felt that by breaking such public housing contracts down into smaller groups of units, more builders could participate.

That summarizes the Detroit situation as of the time this issue goes to press. It is to be hoped that those upon whom the final decision rests will make the wisest possible choice consistent with (1) winning the war; (2) providing the proper housing within the shortest time, and (3) doing so at the smallest cost to the taxpayer. The purpose of this article is to help clarify the Detroit picture so that any formula which must eventually be found for Detroit might provide an immediate overall pattern for a nation-wide solution to the war housing problem wherever it exists.

* * *

Now Plenty of Lead

New York, N.Y.

To the Editor:

Over the past few months a great change has taken place in the lead situation whereby supplies of pig lead have again become plentiful. As a consequence some of the restrictive orders emanating from various branches of the Government, relating to the use of lead products, have been modified and others are in process of being modified. Therefore, there is no necessity today for endeavoring to develop any substitutes for lead in its manifold applications to building construction.

For example, white lead paint is freely available and this standard product may be used with the greatest freedom today where fine painting is desired. A similar statement may be made about red lead.

In sheet metal work War Production Board restrictions limit the use of lead flashing to 2½ lb. weight, but this is a weight suitable for most flashing installations.

In plumbing our difficulty has not been in the lead but in the growing shortage of the solder necessary to make wiped joint installations, but we have been encouraging the use of lead welding or lead "burning" as a means of making a satisfactory plumbing installation.

So far as we can tell in this office, the easiness of the lead situation should continue for an indefinite period.

LEAD INDUSTRIES ASSOCIATION

By F. E. Wormser, Secretary

Wood Cornices, Their Design And Construction

(Continued from page 52)

first story wall, which would mean that the second floor joist would have to run at right angles to the overhanging cornice. On a small house, two of the turned drops will be sufficient, and they should be placed about a foot in from the outside, or ends, of the cornice. On a longer Colonial house, with central entrance feature, it would probably look better to use four of the drops, two placed as noted above, and another on each side of the entrance. The drops should be turned from a piece about 5" square and be approximately 9" long for ordinary construction.

Figs. 8, 8-A and 8-B offer suggestions for further detailing or ornamenting of Colonial cornices. The second frieze shown in Fig. 8 could be of 1/2" material, band-sawed in any one of several designs. Fig. 8-B shows the use of dentils, and here, too, there are many different methods of construction. In detailing ornamentation of this kind particular attention must be given to the scale of the parts.

Fig. 9 is a section through a cornice often used in bay window construction. It will be noted that two pieces of material are used to make up the frieze, to bring the cornice down to the window head. This wide frieze construction is often required on bays, attached garages and porches. The detail shows one member of the frieze of 1 1/8" material, to act as a head casing over the windows. Above is another frieze member of 3/4" material, with blocking behind it to bring it flush with the lower member, the joint being covered with a band, or neck mould.

Fig. 9-A shows an alternate and more ornamental elevation of a similar cornice.

Fig. 10 shows in elevation a simple treatment for the termination of a level cornice without the use of the more formal return. The cornice shown in Fig. 1 could be finished off in this manner, and would be less expensive than the treatment shown in Fig. 1-A. It must be remembered, however, that when the crown mould of the level cornice is to miter, and return up the rake cornice, as in this detail, it will have to be placed as shown on Fig. 4, that is, at right angles to the pitch of the roof. It is not necessary, however, to set the fascia as shown in Fig. 4; it can remain as detailed in Fig. 1.

Fig. 11 illustrates the various parts of a typical cornice, their usual names and locations. This figure also details a typical porch cornice.

Good cornice construction starts with the rough framing. The rafter seat should be cut accurately, and squarely, so that the rafter tails, or ends, will be in line. In Fig. 1 a measurement of 5" from top of wall plate to top of rafter, measured on outside line of plate, is specified. This measurement of 5" is for use on 2" x 6" rafters. Where 2" x 4" rafters are used this measurement should be reduced to 3". By using these measurements in detailing, it will be a simple matter to locate the rafter and obtain the proper seat cut location.

Lookouts and blocking should be cut square, properly lined up, and securely nailed. In cutting the rafter ends to the proper projection, a good method is to lay out the cut on the two end members, and then snap a chalk line between these two points. Marking the intermediate rafter ends in this manner will prove more accurate than if the projection of each member was measured individually from the face of the building. In marking the plumb cuts on the rafter ends, the safest plan is to plumb each member. A faster method, but one not quite so accurate, is to plumb one cut and then set a bevel square to the proper angle.

(Continued to page 88)

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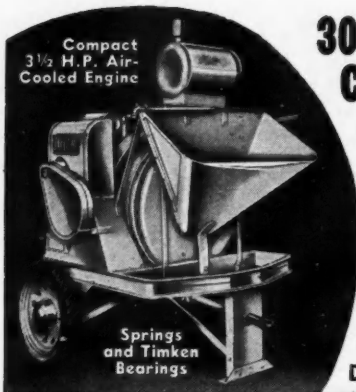
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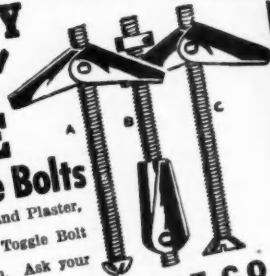
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FASTENING
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Wood Cornices, Their Design And Construction

(Continued from page 87)

In cornice construction use the longest lengths, and straightest pieces of material available. If two or more lengths must be used, place the two outside ends in position and then work toward the center, lining them up either by eye, or with a straightedge. Measuring out from the face of the wall at intervals, or down from the tops of the rafters, for lining up the members, is liable to result in a cornice full of waves and bulges. The eye or a long straightedge will prove to be more satisfactory.

The frieze, fascia, plancier and bed mould can be put in place in whichever order works out to best advantage, but each member should be lined up as it is put in place. The plancier should project slightly beyond the face of the rafter ends. The fascia should hang below the plancier about 3/8". The location of the crown mould in relation to the fascia is usually determined by the pitch of the roof. The top edge of the crown mould should be in line with the top face of the roof boards.

In building a cornice, it is a good plan to "tack" the members in place until the carpenter is sure that all work is square, plumb, level and true, and that all miters and cuts fit perfectly. Where cornice returns are used it is customary to construct them as the main cornice progresses, each member returned around the corner, and then back to the face of the wall.

Cornice work should be considered as finish carpentry or cabinetwork, with only the finest workmanship allowed. It should be protected during and after construction. If possible put a prime coat of lead and oil on the back sides and edges of all members, and between all joints. If this is not possible, see to it that all the exposed portions are properly primed as soon as the cornice work is finished. Only well seasoned lumber of good grade, that has been properly cared for at the lumber yard, should be used.

The figures shown here are only intended as suggestions. There is no limit to the number of good cornice designs available to the designer and builder. Many good types have not even been mentioned here. The designer and builder should watch for the publication of details and photographs of cornice work, and adapt them to his particular needs. Cornice work offers an opportunity for originality in design. Simplicity, however, is always better than extreme ornamentation; and the designer should remember that a cornice is not necessarily good just because it is different.

On and Off the Record

(Continued from page 12)

numerous other materials will be keen and will tend to produce better houses at lower cost. Home buildings will be mighty interesting—if we're still on hand to take part in it.

BARRACKS CAN'T DO IT—Bureaucracy, bungling and bad management came pretty near to strangling the war house program. So now Washington's great minds have turned to barracks. In doing so they are admitting that they have bungled housing. Private builders who "went out on a limb," bought land, invested money in plans and materials, got well started and then got chopped down by lack of essential materials, can't feel very happy about it. They say the various government bureaus and agencies simply got so tangled in their own rules, regulations, priorities and red tape that they strangled both themselves and the industry.

PRIORITY SHUTTLE—From bureau to bureau they go—builders trying to clear a priority or get a scarce material. They are shuttled back and forth between branches of WPB and FHA. All they get are vague promises, buck passing or hopeless shrugs. Finally the builder goes home, swearing he will never start another house as long as he has to rely on a confused "passel" of government employees who don't know their own minds.

Not Barracks—but HOMES

(Continued from page 40)

options on land and applications filed on at least 500 houses to rent, and are anxious to go ahead, yet due to a lack of priority quotas and to red tape difficulties, they are being held up.

In spite of the fact that private builders are ready and willing to build these houses and in many cases have already invested money in land and plans, several public housing projects (totaling 550 units) have recently been authorized. In one case a public housing project was authorized on land adjacent to the site of a large private apartment project which is ready to go but is being held up because of the need of getting approval for materials for a utility extension.

Private builders claim that if the public housing projects do go ahead, it will be conclusive evidence to them that the powers at Washington are definitely trying to hold back or discredit private building to permit the public housers to take over. The irony of the situation is that private financial interests are anxious to back the private jobs, and they can be built and sold with record speed without costing the government a dollar. On one of the projects, a \$504,000 four apartment job, Leon Marrano has not only purchased the land and drawn the plans, but has part of the equipment on the site ready to start his crews working.

Marrano is an experienced operator who is accustomed to handling large projects quickly and efficiently. At Niskayuna Estates he moved in bulldozers and earth moving equipment and got his foundations in with a speed that amazed the local builders.

Marrano believes that the building of small homes will be an extremely important part of the post-war period and that experience gained now in building war homes will be carried through into that period.

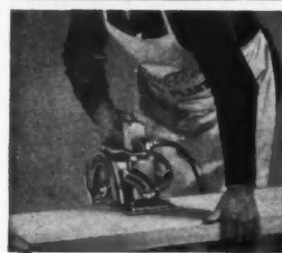
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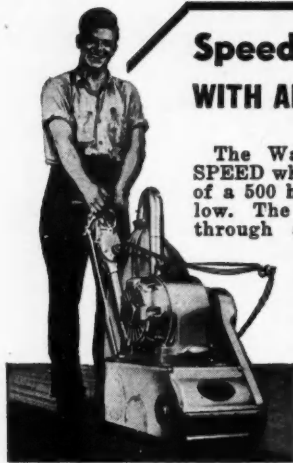
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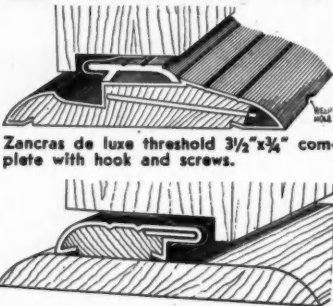


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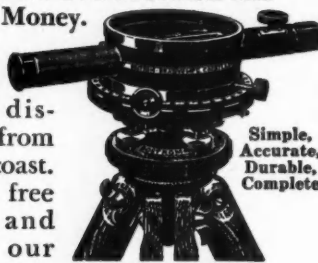
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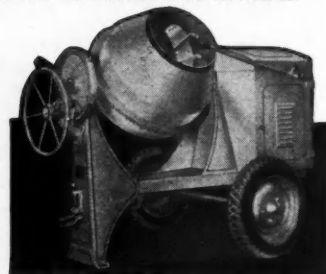


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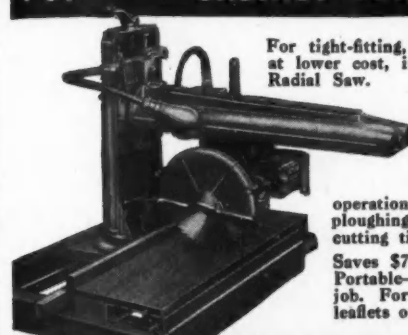
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First things come first! For richer, smoother finishes on Fir Plywood, use **FIRZITE** first. FIRZITE tames "wild" grain, reduces hair-line checking. Especially necessary on Exterior (Phenolic Resin Bonded) Fir Plywood. FIRZITE builds profits for dealers. Mail this ad with your letterhead for details and free "Firzited" panel.

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WOOD FINISHES INCORPORATED HOBOKEN, N. J.

For "CABINET-BUILT" FRAMING!



For tight-fitting, accurately-cut framing work, at lower cost, investigate the Wallace No. 1 Radial Saw.

With the exclusive Wallace ANGULATOR, it saws rafters without marking and with only ONE handling! Zips thru every kind of milling operations such as dadoing, grooving, ploughing, routing, shaping, fluting, and cutting tile and brick.

Saves \$75 to \$200 on average homes. Portable—easily carried from job to job. For extra profits, write today for leaflets on the No. 1 Radial Saw.

J. D. WALLACE & CO.
136 So. California Ave., Chicago, Ill.

QUALITYBILT

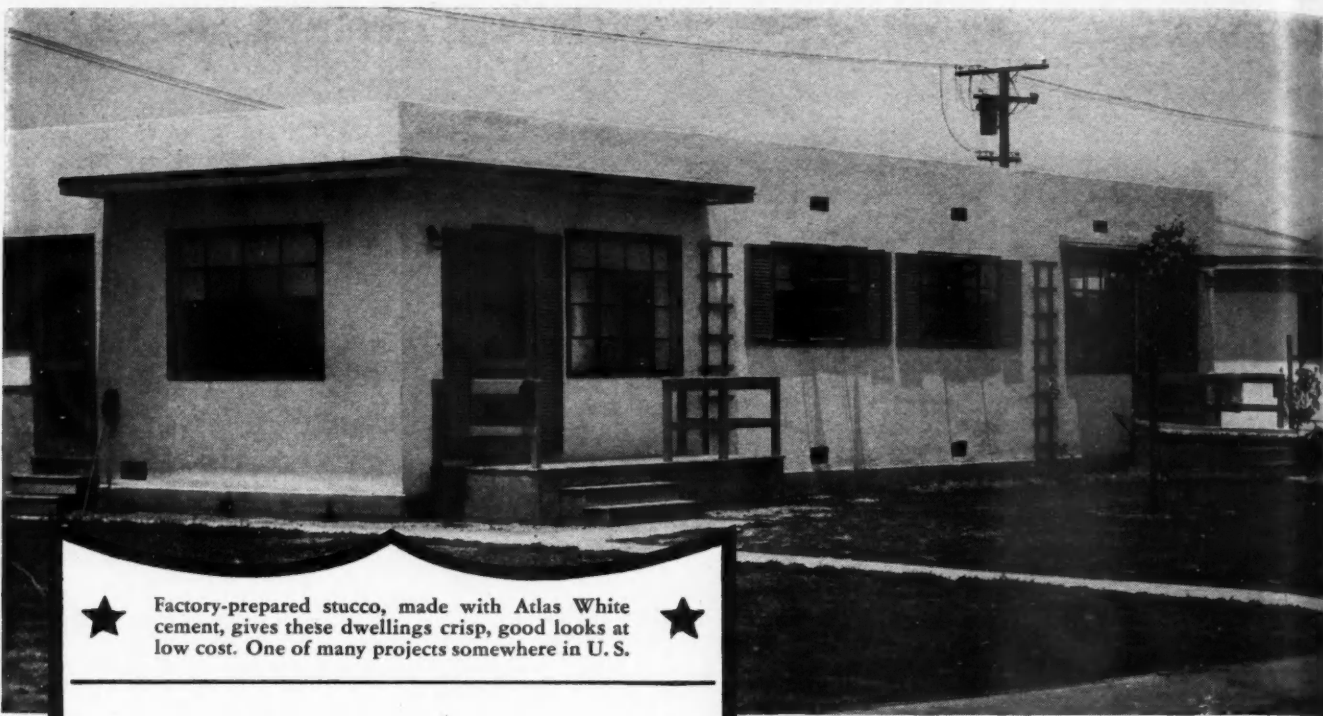
DISAPPEARING STAIRWAY

FOR OLD OR NEW HOMES

NOW--MAKE PROFITABLE SALES!

Yes Sir! Right now you can easily sell Quality-bilt Disappearing Stairways . . . they're easy to install . . . they're rigid and strong . . . they add many times their cost to value of the home, and make usual waste space usable. Get details now on how to create a profitable sales volume. See your dealer or write us. Dept. AM842.

FARLEY & LOETSCHER MFG. CO., Dubuque, Ia.



★ Factory-prepared stucco, made with Atlas White cement, gives these dwellings crisp, good looks at low cost. One of many projects somewhere in U. S. ★

STUCCO ON ACTIVE DUTY AT U. S. AVIATION BASE



**275 dwelling units
faced with Atlas White Stucco
for Uncle Sam's forces!**

A LOT of stucco has been going into housing projects at various Government bases. Here is another case where it has enlisted for the duration. The 275 dwelling units shown here are all faced with factory-prepared portland cement stucco, made with Atlas White cement.

This stucco provides an exterior with clean, attractive lines for many types of buildings. It's a sturdy resister of weather attacks in any climate. It's fire-safe. It's low in first cost and needs little or no maintenance over its long life. And, what is important today in many places, stucco fits in with fast new construction or rebuilding.

There are more and more examples of the use of stucco for both exterior and interior facing over concrete block, cinder block, or tile.

You will find Atlas White factory-prepared stucco suitable for defense workers' houses, stores, hospitals, theaters and other buildings essential to community and national welfare. Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York City.

OFFICES: New York, Chicago, Philadelphia, Boston, Albany, Pittsburgh, Cleveland, Minneapolis, Duluth, St. Louis, Kansas City, Des Moines, Birmingham, Waco.

AD-8-30

ATLAS WHITE CEMENT

A UNIVERSAL ATLAS PRODUCT

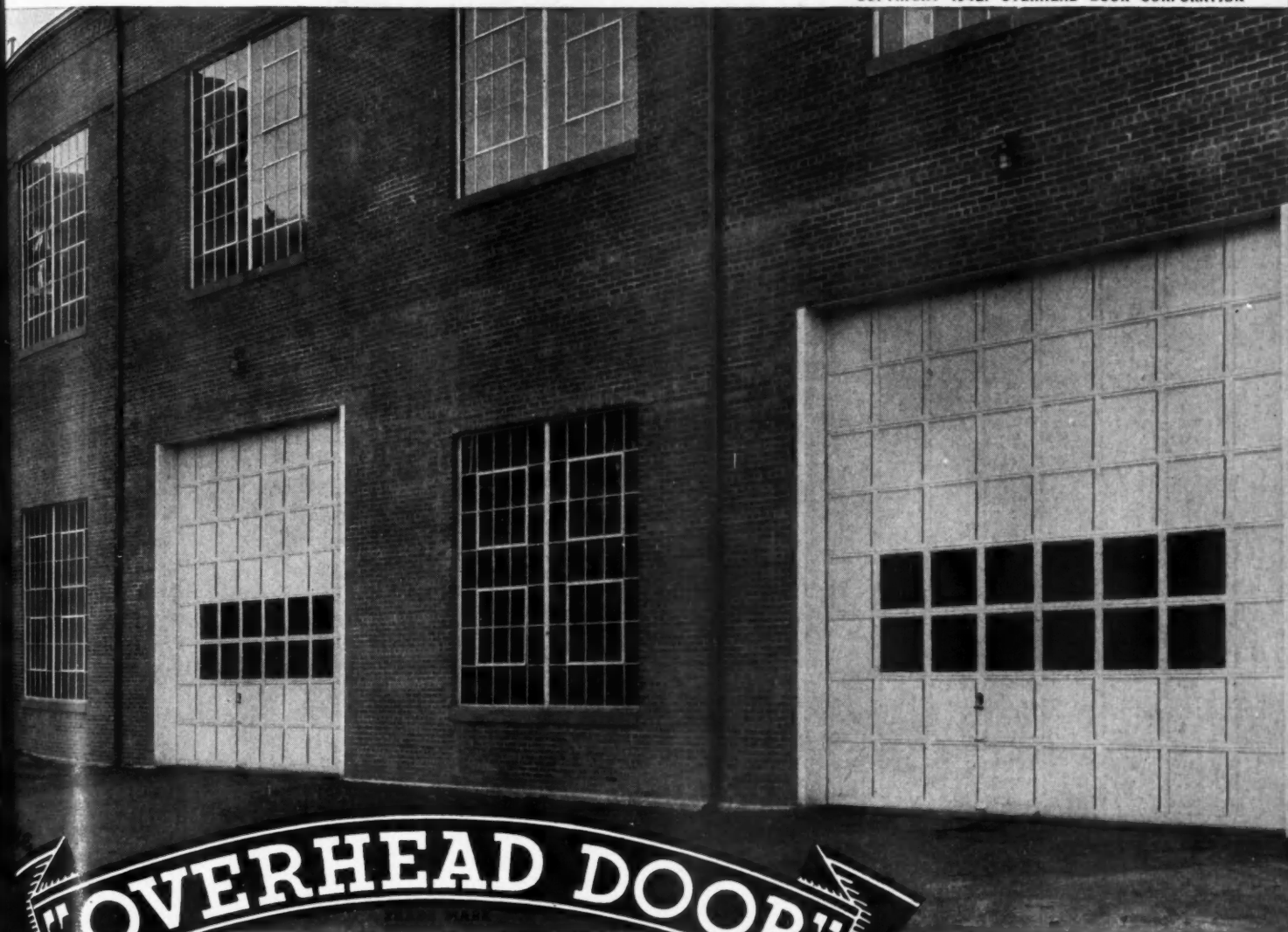


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TO WAR-TIME BUILDING. Doors that are expertly built for fast, dependable operation save valuable man-hours in any type of structure. That's why The "OVERHEAD DOOR" has been drafted for the duration. In war production plants, ordnance depots, army, navy, marine and coast guard buildings, our door is serving America as efficiently as ever it served the owner of a private home.

Specify The "OVERHEAD DOOR" for every job. Each door is built as a complete unit at our factory in any size to fit any opening. Reliable electric operators can be furnished for any door, with control by key switch, tread switch, push button or pull station located at a convenient point. Expert installation by a Nation-Wide Sales-Installation-Service.

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MIRACLE WEDGE

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