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TECHNOLOGY DEPT

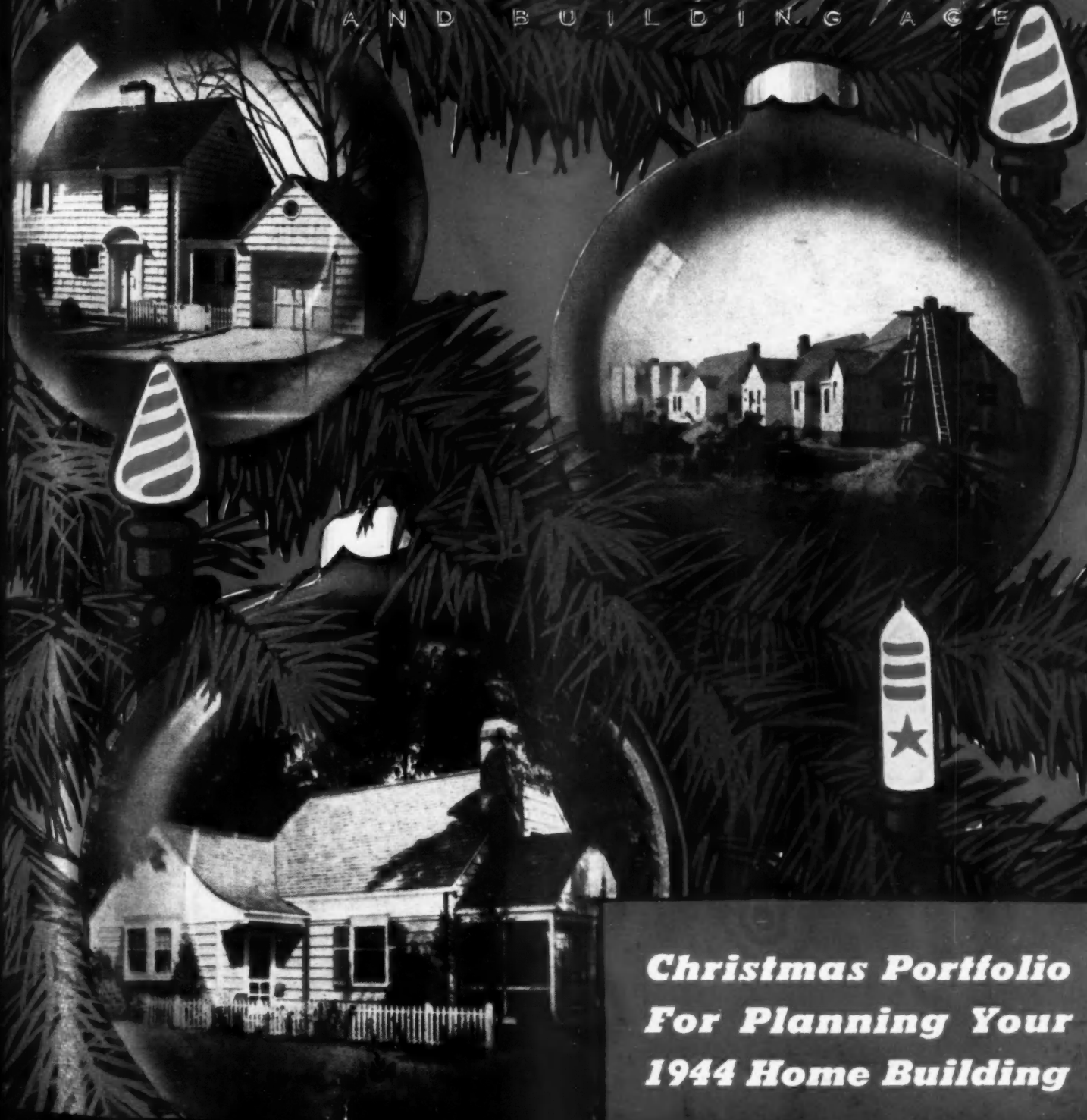
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AMERICAN BUILDER

REDESIGN
BUILDING PAPER

AND BUILDING AGE



***Christmas Portfolio
For Planning Your
1944 Home Building***

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From Blueprint to Completion *Days Faster!*



Because **CELO-SIDING**
TRADE MARK
 Does 3 Jobs!

Get the Jobs You Want Today with CELO-SIDING The Multiple-Function Building Material

Plenty Available! Scores of military and industrial building projects have been completed. That now leaves plenty of Celo-Siding available for general building purposes.

Ideal for Every Climate! Millions of square feet of Celo-Siding have been used in every type of climate with outstanding results. Due to its strength, resistance to the elements and insulating qualities, Celo-Siding is ideal for small houses, farm buildings, machine shops, factories, warehouses and small general buildings of every type.

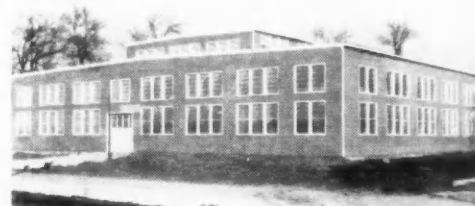
What Celo-Siding Is. It is a multiple-function material . . . siding, sheathing and insulation in one quickly applied material. The board is composed of cane fibre, coated on all sides with an asphalt compound.

An extra coating is applied to the weather surface and crushed mineral granules are pressed in to provide a durable, good appearing exterior finish. Applied direct to studing, Celo-Siding saves critical lumber, time and labor.

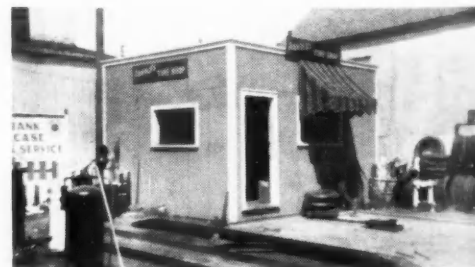
Specifications. Celo-Siding is available in buff or green. Units are $\frac{7}{8}$ " thick and 2' x 8' or 4' x 8' and 10'. The small board has T&G joints on long edges. The big board has square edges all around. Each is suitable for vertical or horizontal construction—joints sealed with caulking compound.

Your Celotex Dealer is ready now to fill your needs for Celo-Siding. Talk with him today about prices and the many applications of Celo-Siding . . . the building material that does 3 jobs.

Typical House in Bill Holt FPHA Project at Great Falls, Mont., showing wall constructed with Celo-Siding.



Here is how Celo-Siding is used in wall construction of factories, machine shops and warehouses.



A Minnesota auto service man is proud of this small building. Walls constructed with Celo-Siding.

CELOTEX
REG. U.S. PAT. OFF.
BUILDING PRODUCTS

THE CELOTEX CORPORATION, Dept. AB 12-43
 Chicago 3, Illinois

Please send me complete information on Celo-Siding, the multiple-function building material.

Name _____

Address _____

City _____

State _____

Published monthly by Simmons-Burdman Publishing Corporation, 105 W. Adams St., Chicago 3, Ill. Subscription price, United States, Possessions, and Canada 1 year \$3.00; 2 years, \$5.00; foreign countries: 1 year, \$4.00; 2 years, \$7.00. Single copies, 25 cents. Entered as second-class matter Oct. 11, 1930, at the Post Office at Chicago, Illinois, under the act of March 3, 1879, with additional entry as second class matter at Mount Morris, Illinois. Address communications to 105 W. Adams St., Chicago 3, Ill.



Sunshine and fresh air for tomorrow's better living



The Standard of Living We Are Fighting For!



CECO WARTIME PRODUCTS:

- Landing Mats..... Portable Panel Bridges
- V-Type Trestles..... Screw Posts
- Glider Sub-Assemblies
- Ship Parts for Navy and Maritime Commission

CECO PEACETIME PRODUCTS:

- Commercial, Industrial, Cosement & Basement Windows
- Metal Lath and Accessories..... Welded Fabric
- Column Clamps..... Adjustable Shores
- Meyer Steelforms..... Concrete Reinforcing Bars
- Metal Frame Screens..... Metal Weatherstrip
- Steel Joists..... Steel Roof Deck

America has never stood still! Our higher standard of living has shown constant improvement. Until war interrupted this process, Americans have always climbed higher and higher in the creation and adoption of those things which made life better. When the war is over, America will expect its architects and builders to resume that progress. Postwar homes promise to be even finer, even more beautifully designed than those you offered in the pre-war period. Ceco has always gone forward, will always go forward. Ceco is planning now to progress tomorrow . . . with you!

Ceco STEEL Windows

CECO STEEL PRODUCTS CORPORATION, MFG. DIVISION, 5701 W. 26TH ST., CHICAGO

What do you want to know about the coal industry?

ROY SPALTHOFF, New York Riveter, asks:

Why are there more strikes in coal mining than in other industries?

There are many people who think as you do, because anything affecting the coal industry is so important that it gets widespread publicity. But the fact is, our contract with the union comes up for discussion every two years, and there are rarely strikes at any other time. Naturally, we wish the record were better. We hope that all future strikes can be avoided. Up to this time, however, strikes in our industry have been spectacular rather than frequent.



ART ROLLINS, Carrizozo, N.M. Druggist, asks:

Why don't you give miners better working conditions?

We are working on this problem all the time. Straight through the lean years of the "thirties" we have been shifting the hard work to modern machines. Men formerly had to lie on the mine floor and gnaw at the coal with picks and shovels in doing what is called "undercutting." Today, 90% of the undercutting is done by mechanical gophers, driven by electricity. About 40% of all coal is now loaded into mine cars by mechanical loaders — more will be handled this way as machines become available. These machines also by saving costs, have helped us to pay steadily better wages. As an official report of the National War Labor Board shows, the wages of coal miners today are twice what they were in 1933.

ELAINE KOTHE, Detroit Secretary, asks:

Why do miners have to buy in company stores?

Many people have this impression, but the truth is, miners are free to buy where they please.

Company stores were originally started for the convenience of miners, and before the days of the automobile, to their present size.

There are some mining towns today which are served only by company stores. This is likely to be true in towns where mines will soon be worked out, and outsiders do not wish to start in business.

But in most mining towns there are many stores, and chains and independents are welcome. In many cases miners will tell you that company stores are the best in town.

It must be remembered that the bituminous mining industry is made up of many separate companies operating in many towns under many conditions. In all honesty, some company stores are better than others just as some independent stores are better than others.

But, coming back to the original question, there are no rules requiring company stores, and there haven't been any such rules for many years.



**BACK
THE ATTACK—
WITH
WAR BONDS**

Bituminous coal is by far America's most important fuel. For that reason we feel that the public has a right to know what kind of industry is providing this coal today.

Our business is an open book. Anyone who takes the trouble can dig out any fact he wants to know about it.

But we'd like to save you that trouble. So we have invited thousands of people to send us their questions—and in a series of advertisements such as this we'll try to answer the ones which seem to have widest interest.

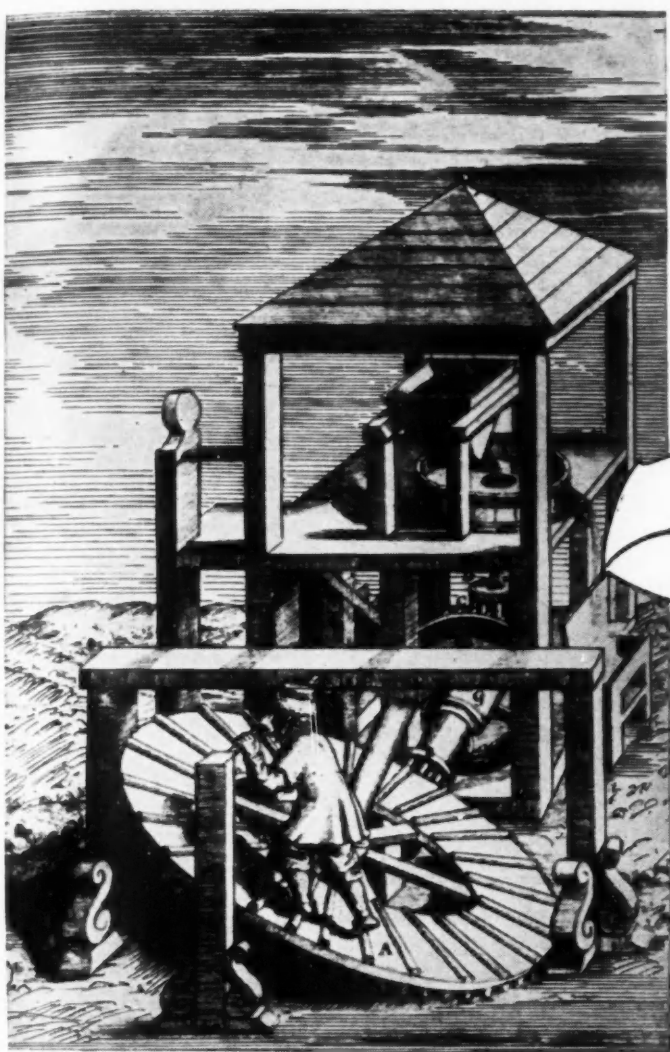
Our story is a big one, and we cannot hope to tell it all at one time.

But we believe the more you know about it, the more you will realize that we try to live up to our duties to our country, our customers, and the people who work for us.

BITUMINOUS COAL *Institute*

60 East 42nd Street

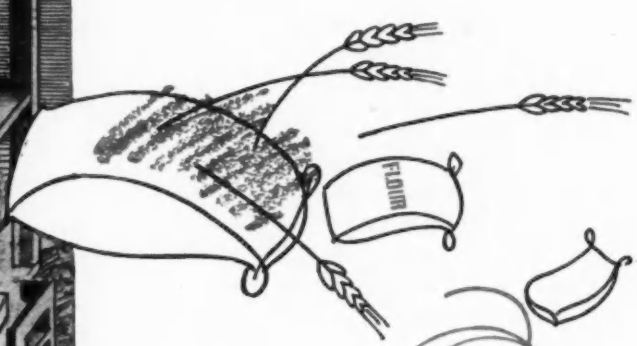
New York 17, N.Y.



BETTMANN ARCHIVE

DOODLED IN THE MIDDLE AGES.

Once labor was so cheap a man could design a foot-powered mill like this — without being laughed at. But the dreamer-upper of this low-gear nightmare never pocketed royalties on it, for (like thousands of other bright-ideas-on-drafting-boards) it never got built.



Are you

Doodling

or planning for

that building boom?

A QUARTER CENTURY ago all you people were expecting a boom in industrial building.

America's war plants were running full blast—and new products, new ways of processing, new ideas in fabrication were making old plants old hat. "Once peace comes," said the building industry, "there will be a mad rush to build and rebuild all through American industry."

Well—here we are again. And builders are dreaming once more of a postwar industrial building boom.

But will it happen?

Maybe, but booms don't grow out of needs and dreams. *If you want an industrial building boom, you'll have to help set it off.* You'll have to show the executives who need new plants that new plants can be produced so efficiently and economically *they can't afford not to build them!*

And the most economical and effective way to point this out and drive it home is through the pages of **TIME**—the first-choice magazine of business executives, plant owners and managers—the magazine they turn to for informa-

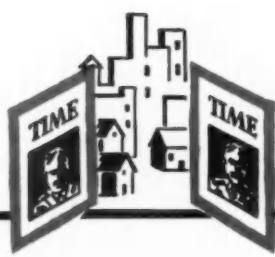
tion to help them think ahead and plan ahead and see the shape of things to come—the magazine they believe in and vote their favorite over all others they read.*

What's more, **TIME** is the magazine in which business and industry prefer to tell their own product stories!

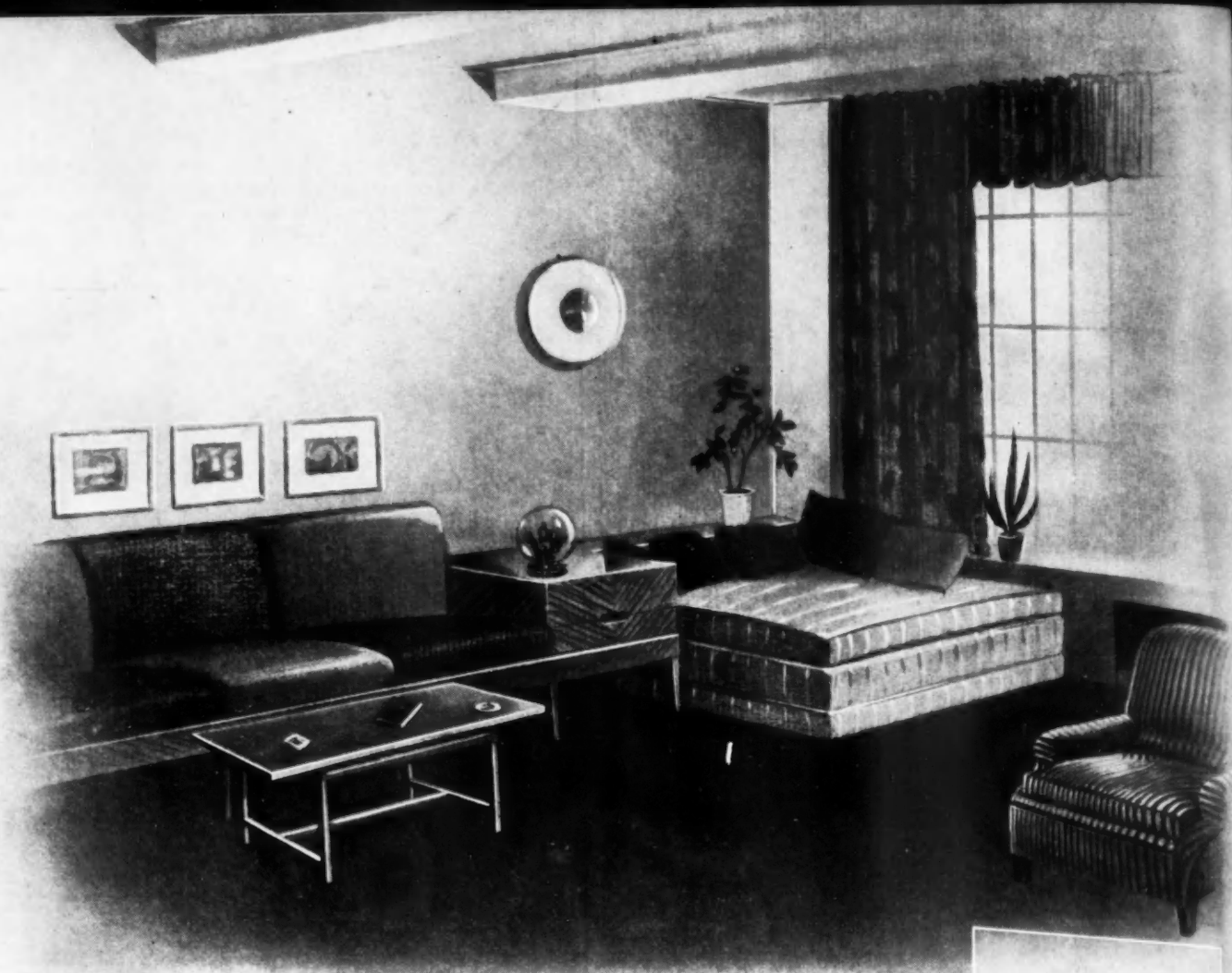
*Among these people are executives and engineers, Government officials, mayors, bankers, architects, and 22 other groups of leaders—all of whom recently voted "**TIME** is America's most important magazine."

TIME

THE GATEWAY



TO THE BUILDING MARKET



HOW YOU CAN BUILD NEW SALES APPEAL INTO POSTWAR HOMES

... and added Dollar Value, too!

DRY-BUILT FULL-WALL construction offers a wide-open sales opportunity. Full-wall size panels with a smooth pebbled surface of alluring beauty and efficient insulating value will be ready for the homes you will build when restrictions are lifted.

Thicker, stronger, sturdier *Strong-Bilt Panels*—proved in scores of thousands of homes during the past four years!

When you use Strong-Bilt Panels—

Your walls go up faster—saving valuable building time over tedious, old-fashioned methods. One panel covers an entire wall of an average size room, thus solving the problem of joints. No complicated or time-consuming system

of filling and taping. No nails to countersink. No nail holes to fill. Floating Fasteners anchor the panels securely from the back.

Your insulation is built-in. Inherent qualities of the material provide efficient insulation up to 3½ times that of plaster.

You have enduring crackproof walls, for Strong-Bilt Panels positively will not crack, splinter or chip.

You avoid moisture troubles. No water. No waiting for plaster to dry. You eliminate the 1000 lbs. of moisture which may be introduced into the building of an average six room house.

Booklets with latest information on dry-built full-wall construction in conventionally-built and prefabricated homes are ready. For your copy, write The Upson Company, Lockport, N. Y.

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THE CRACKPROOF BEAUTY SURFACE
WITH EFFICIENT INSULATING VALUE



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AMERICAN BUILDER
AND BUILDING AGE

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Letters

For legislative reference

To the Editor: You have given the industry an attractive as well as valuable publication in the October number, and I am glad to have it for reference in connection with housing legislation which may come before Congress for discussion and enactment.—HOMER FERGUSON, United States Senate, Washington, D. C.

Stand on your own feet

To the Editor: The Government is very lenient when you do not need its help, but generally when it gets the noose around your neck your home and industry mean nothing.

Therefore, my warning is that unless business, and that includes builders, and the people quit begging from the Federal Government it will not be many years before you will have a socialized and regimented industry throughout this nation. From the experiences that we have all had with the OPA and WPB and a lot of the other alphabetical set-ups, let us hope that day will never come.—WM. LEMKE, Congressman from North Dakota, Washington, D. C.

L-41 frankly restrictive

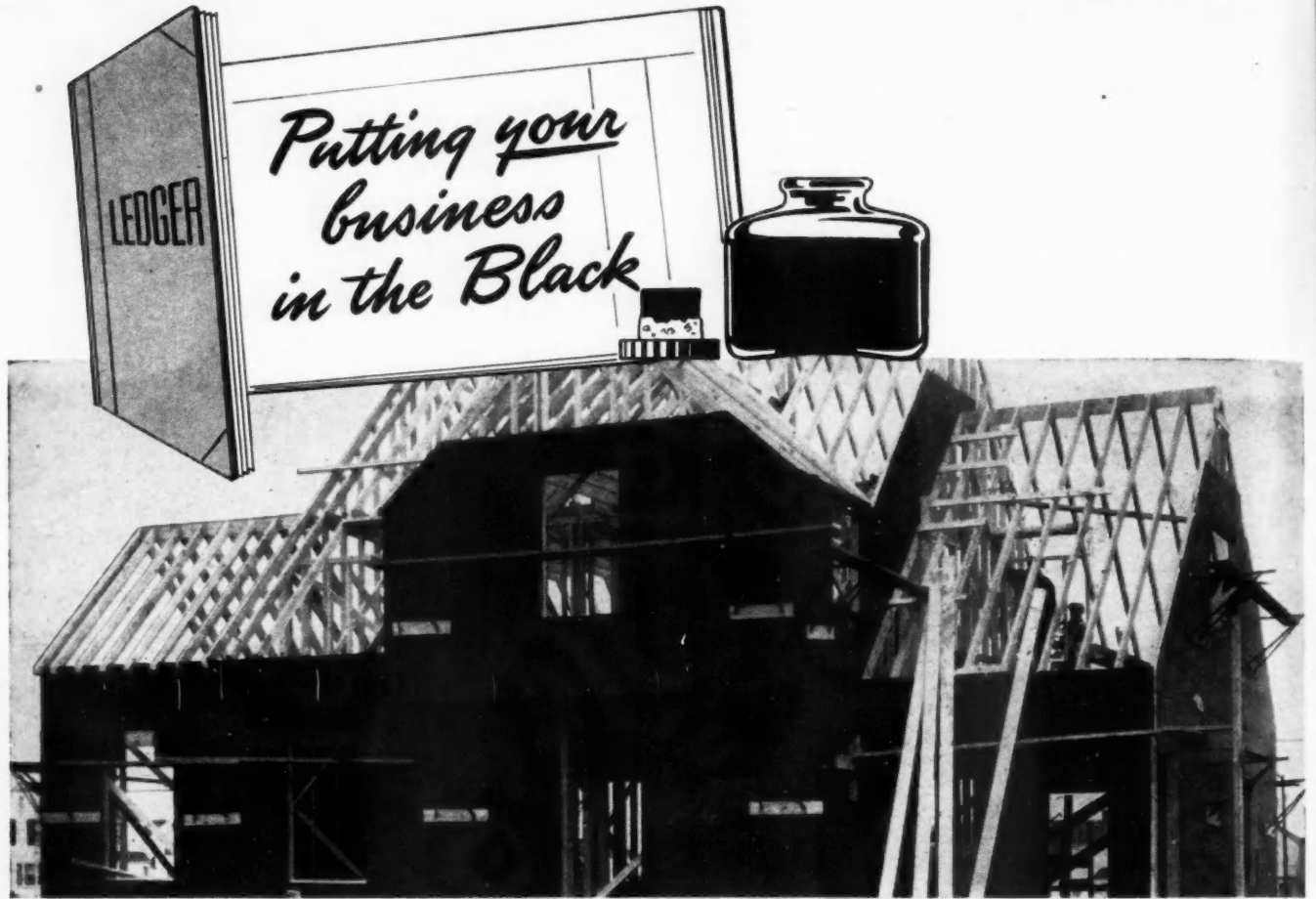
To the Editor: I have read the October *American Builder* with a great deal of interest. The following comments occur to me:

The purpose of Limitation Order L-41 is still frankly restrictive—that is, to curtail construction so that there will be the least possible waste of manpower, materials and equipment resources. It is, of course, true that the materials situation has changed somewhat since L-41 was first issued, but the growing shortage of manpower has now become a major concern, so that any proposal to resume construction previously halted or to build new facilities now has to pass an even higher hurdle than before.—BRUCE CATTON, Director of Information, War Production Board, Washington, D. C.

Opposes public housing

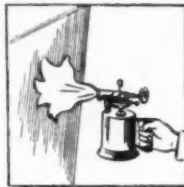
To the Editor: I am now, and have been for the entire period of my service in Congress, opposed to the federal policy of constructing governmentally

(Continued to page 72)



WHEN you use Gold Bond Gypsum Sheathing on a job, then you're really operating at a profit! For these big lightweight panels of processed gypsum rock fit standard stud spacing with a minimum of trimming. There's no waste. Construction time is reduced at least 10%. And it takes but a few hours to sheathe an entire house! That's important in these days of high costs and shortages. It will be even more important after the war's over and the biggest building boom in history will get under way!

And Gold Bond Gypsum Sheathing gives better protection from the weather! Unlike other older types of sheathing, there are no cracks or knot holes to let in the wind. The V-Type joints stay tight because panels won't warp, shrink, or swell. And because of its rock-like construction, Gold Bond Gypsum Sheathing adds greater structural strength to the building—greater rigidity. This in



turn helps prevent plaster cracks and sagging doors and windows.

Best of all, Gold Bond Gypsum Sheathing is absolutely fireproof! The processed gypsum core sees to that. It adds important fire protection at no additional cost. You can apply a blowtorch to it for hours and it still won't burn.

There's plenty of Gold Bond Gypsum Sheathing available now for emergency jobs. After the war, wood siding, brick, stone, or stucco can be added for a "permanent" finish.



BUILD BETTER WITH
Gold Bond
Everything - for walls & ceilings

More than 150 different products for
 MODERN CONSTRUCTION
 AND WAR PRODUCTION
 WALLBOARD...LATH...PLASTER...LIME
 METAL PRODUCTS...WALL PAINT
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See Your Gold Bond Dealer

NATIONAL GYPSUM COMPANY . . . EXECUTIVE OFFICES, BUFFALO, N. Y.

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

Publisher's Page

What Is Private Enterprise?

A RECENT Gallup poll indicates that not three people out of ten can define "free private enterprise." This is significant, but not surprising. Until the last decade nobody in this country, excepting a handful of socialists and communists, attacked private enterprise enough to require definition and defense of it. The Gallup poll shows need for defenders of private enterprise to state clearly what it is, and to try to force promoters of state socialism to make clear what they are attempting to substitute for it.

Private enterprise—otherwise called "capitalism"—is simply *private* ownership and management of property used in production, transportation and marketing. Socialism is *government* ownership and management of such property. The more you increase government ownership or management, or both, the more, necessarily, you restrict private ownership, or management, or both, and the farther you go toward socialism. Russia has socialism. Germany virtually has socialism, because, while property there is ostensibly left in private ownership, it is actually government-managed.

Russia and Germany show that a nation cannot have socialism with any of either the "freedom" or the "democracy" which the promoters of socialism in this country say they are trying to safeguard and increase. For the more property a government acquires and manages the more powerful it becomes; the more property and power it gets, the more bureaucratic and autocratic it becomes in its efforts to manage with anything resembling efficiency; and the more autocratic it becomes the more completely freedom and democracy are destroyed. We have during the war the nearest approach to socialism that we have ever had. We can still vote. We can still express criticism of the government if it cannot be construed as "seditious." For the duration, that is about all the freedom and democracy we have left.

"Free private enterprise" is undermined by private business or labor monopolies. When thus undermined, it can be more easily destroyed by government controls, huge government spending, and consequent excessive taxation. Every dollar of spending by government on anything that could be provided by private enterprise creates government-property that competes with some form of private enterprise and increases taxes on private property and private individuals. Therefore, whoever advocates government spending on anything that could be provided by private enterprise—whether housing, power plants, means of commercial transportation, whatever it may be—is, to that extent, attacking private enterprise and promoting socialism.

This is hard doctrine for many to accept—including many business men who, while professing devotion to private enterprise, selfishly yearn to benefit by huge government spending on "public works" after the war. But when did anybody in this country begin discovering that huge government peacetime spending is essential to adequate employment and prosperity? Only a decade ago when the New Deal included in the National Recovery Act an appropriation of \$4 billion to "prime the pump" because an Englishman named John Maynard Keynes had sold the doctrine of "pump-priming" to official Washington.

It is dangerous doctrine for everybody but the politicians and bureaucrats, who, as in Russia and Germany, would get more and more power as we got more and more socialism.

Samuel O. Drumm,



*PLAN their
Peacetime Home
NOW*

The swing in post-war living will lean more and more toward the suburban acre and half acre tract where the Cape Cod and ranch type home call for Red Cedar Shingle roof and double-coursed side walls.

The Red Cedar Shingle industry has maintained its contact with the post-war building prospects through advertising in the Home Building magazines and other promotions.

Let us send you a complete set of blueprints of correct shingle application so you can have them in your file for ready reference.

Fill in coupon below and mail.

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RED CEDAR SHINGLE BUREAU

White Building, Seattle 1, Wash. Canadian Office, Vancouver, B. C.

RED CEDAR SHINGLE BUREAU, 5508 White Bldg., Seattle, Wash. AB 12-43

Please send me, free, a complete set of Blueprints which show how Red Cedar Shingles are properly applied on roofs and sidewalls.

Name

Address

City State



Red Cedar
SHINGLES

U. S. BULLETIN ★ DECEMBER

**WINNING
THE WAR
COMES
FIRST!**



- ★ **Men and materials** have gone to war. U. S. Radiator and Pacific Steel Boiler are today helping in the production of vital war material. Until this war is won, that is our foremost job.
- ★ **Serious delays** in production schedules, and uncertainties of delivery dates on even the most essential civilian equipment, are understandable under present abnormal conditions. But we should like to go on record that we are bending every effort to give you the best service possible consistent with the primary demands of our country.
- ★ **Please feel free** to write us regarding your problems. Let us work with you now and plan with you for the future when normal service can be resumed.

**U. S. RADIATOR
IN THE WAR**

Magnesium Castings for U. S. war planes are in production in one unit of U. S. Radiator Corporation. Use of light metal alloys is one of the most important developments in the air war today.

Prefabricated Ship Hull Sections for U. S. Maritime Cargo Vessels are being built by Pacific Steel Boiler Division of U. S. Radiator. This Division is also making gun mounts, foundations and platforms.



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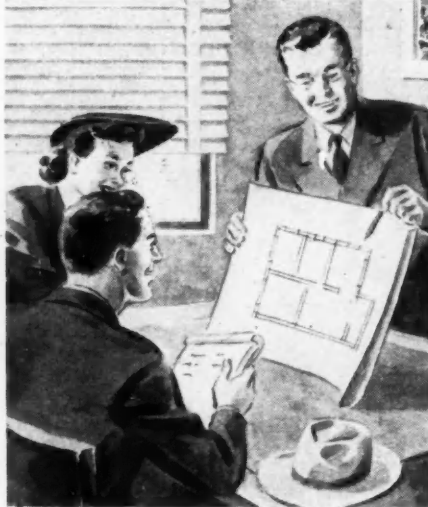
Manufacturing Plants At:

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

How Coleman's Post-War "PACKAGED HEATING" Will Save You Time, Money, Worry!



Here Is Packaged Heating at its best!... Ready-made, powerful, compact units—shipped complete for quick installation in wall, floor, basement or closet!



They're Priced To Fit Budgets— wall and floor furnaces, new central heating plants—some only half the size of an ice box, but engineered to heat 8-room homes!



Easy To Sell—attractive, workfree, space-saving units, Coleman-engineered for amazing new fuel efficiency and economy—uniform "living" comfort from floor to ceiling.

LARGE SPACE ADS IN NATIONAL MAGAZINES Tell Buyers This Story!
The story of Coleman's new "magic heat plants," for after the war, is being told in 24,000,000 magazine messages this fall alone! Full-page and half-page space, making Coleman a name that will sell for you, when post-war building begins!

Ready-Made, Post-War Heating Systems For New And Old Homes!...Automatic—Nationally Advertised—Tops In Heating!

The post-war automatic heating plants by Coleman offer you a new kind of "packaged heating"—designed to save you time, money, worry and detailed work!

Here are floor and wall furnaces—plus a new type of highly-engineered, compact, central heating plants—some only half the size of an ice box,

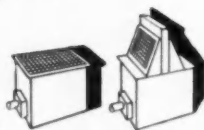
yet so powerful they can heat an 8-room home! Automatic warm air heating, priced down to new low levels.

Coleman "Packaged Heating" fits *your* big market—homes from the lowest price bracket up to the \$10,000 class! And we're selling Coleman to that market today—in large space national advertising!

Coleman

THE COLEMAN LAMP AND STOVE COMPANY
WICHITA • CHICAGO • PHILADELPHIA • LOS ANGELES

LEADERS IN HOME HEATING



FLOOR AND WALL FURNACES



CENTRAL HEATING PLANTS



WATER HEATERS



SPACE HEATERS

MONARCH UNI-POINT RADIAL SAW

Does More - Saves More - Costs No More

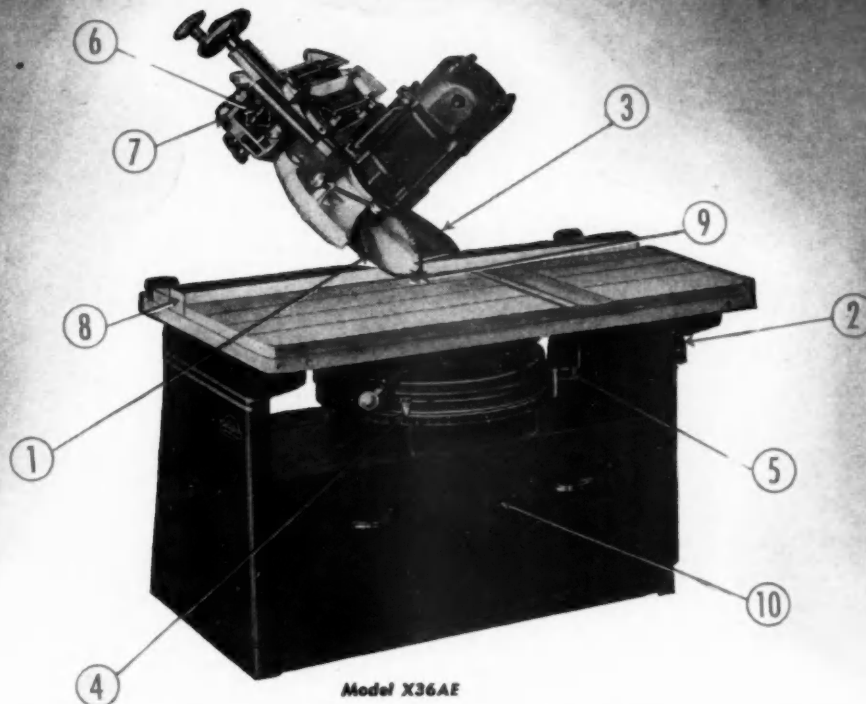


Illustration above shows saw in compound miter position—saw cuts into lumber at same point regardless of angle. For compound angle simply tilt column and pivot base according to desired angle of cut.

THESE 10 FEATURES TELL YOU WHY

1. Saw Blade never needs to be raised or lowered for any cross cut angle. Once set for cutting, it's always right, regardless of angle. Usual adjustment eliminated. Time saved!
2. It is never necessary to shut off saw and wait for blade to stop to change degree of cross cut angle, whether bevel, miter or compound miter. Pivot or tilt to degree as desired and immediately start cutting. More time saved!
3. Column tilts at base to any vertical angle from 0° to 45°. Scale on column shows exact degree of tilt. Any bevel cross cut angle can be set instantly and accurately. Regardless of degree, however, saw blade always cuts lumber at same point. One point cutting means many adjustments eliminated. More time saved!
4. By pivoting the base, saw blade is quickly set at any horizontal miter up to 80° to right, 45° to left. Large scale shows exact angle and simplicity of adjustment saves many operator-motions. Saw always cuts through same point—even when combining vertical and horizontal angles to obtain a compound angle cut. More time saved!
5. Automatic stop instantly locks machine at positions for straight cross cutting, and 45° miter angles on either side. Simple. Fast. No fussing with gadgets to "true up" cut. More time saved!
6. Telescoping ram, which carries saw back and forth, is hardened steel. It rides on 32 wide hardened steel roller bearings. The bearing ways in the housing are also hardened steel. Nothing to wear out. Permanent accuracy. Finger-touch motion. Effortless operation. More time saved!
7. Housing does not extend over table. Therefore, no long arm to block vision, bump shoulder or otherwise offer physical hazards to operator. Safe and time saving!
8. Guide fence adjustable. Moved back to extreme position cross cut capacity is 25" wide. Maximum depth of cut 4 1/4" ripping from 0" to 31" wide.
9. Uni-Point principle (one point cutting) means elimination of many adjustments. Saving—25% or more on production. On machines with swinging arms, which cut at different points on different angles, gauges must be adjusted for every different angle cut. With Uni-Point, one point cutting means gauges or stops always remain fixed. More time saved through simplicity of operation!
10. Modern in design, attractive in appearance, precision-built, with permanent accuracy and rigidity to last a lifetime! All ten points, and many others, mean that Uni-Point guarantees greater production per man hour.

The price? In line with other quality radial saws which lack UNI-POINT's outstanding advantages.



MONARCH
UNI-POINT RADIAL SAW

AMERICAN SAW MILL MACHINERY CO.
60 MAIN ST.
HACKETTSTOWN, N. J.

Established 1903

Radial Saws
Shapers

Saw Benches
Sanders

Band Saws
Mortisers

Jointers
Swing Saws

Planers
Saw Mill Machinery

Lathes

WANTED! 5,000 MEN With Building Experience

If you expect to resume building after the war; if you want to stay in business during the present national emergency, then join with other home builders, large and small, who are banded together for the first time in one big national association.

Builders: The National Association of Home Builders looks after your interests today and protects your future. It provides you, for the first time, with eyes, ears and a voice in Washington. It represents you when and where you need it. It sees that your interests are considered when decisions are made and when plans are prepared. You need this organization and what it can do for you *today* and *tomorrow*.

Find out today about the National Association of Home Builders—who belongs, and what it can do for you. Get the next four issues of the *Washington News Letter* without charge or obligation. Send the coupon below. Ask for the Special Free Trial Offer. Or send the coupon with your check for active membership in the National Association of Home Builders, together with weekly copies of the *Washington News Letter* to the end of 1944—both for \$10.00. It is the biggest value you can buy today. You will find it the best \$10.00 you ever spent.

This advertisement sponsored by Joseph E. Merriam, First Vice President, and Chairman, Emergency Committee, National Association of Home Builders.

USE THIS COUPON NOW

National Association of Home Builders of the United States AB 12
1737 K Street, N. W., Washington, D. C.

CHECK ONE

- Please enroll my name as a Member of the National Association of Home Builders. Check enclosed () Send invoice () Payment of \$10.00 entitles me to all membership privileges and weekly copies of the *Washington Letter* for the balance of this year and all of 1944.
- Without charge or obligation please send me the next four issues of your *Washington Letter* and full information about the National Association of Home Builders.

Name

Firm

Street & No.

City and State

NATIONAL ASSOCIATION OF HOME BUILDERS OF THE UNITED STATES

22 W. Monroe Street
Chicago, Ill.
DKachon 2848



1737 K Street, N. W.
Washington, D. C.
DKachon 8250

July 25, 1943 WASHINGTON LETTER No. 74

Dear Members:

YOUR EMERGENCY COMMITTEE SCORES AGAIN

The six amendments just issued by NHA provide more tangible evidence of the effective service which your Emergency Committee has rendered the industry. This Committee, at its monthly meetings in Washington, has established a better understanding between builders and Government. As a result a number of directives helpful to builders have been issued, obtained. Here's a well earned pot of gold from the Committee.

"SECURITY DEPOSIT" HITS A SNAG

As we go to press the "Security Deposit" is seriously out on a limb. Its fate will be reported in the next issue.



Frank W. Cortright

- DEALERS
- MANUFACTURERS
- REALTY MEN
- MORTGAGE LENDERS
- OTHER BUILDING MEN

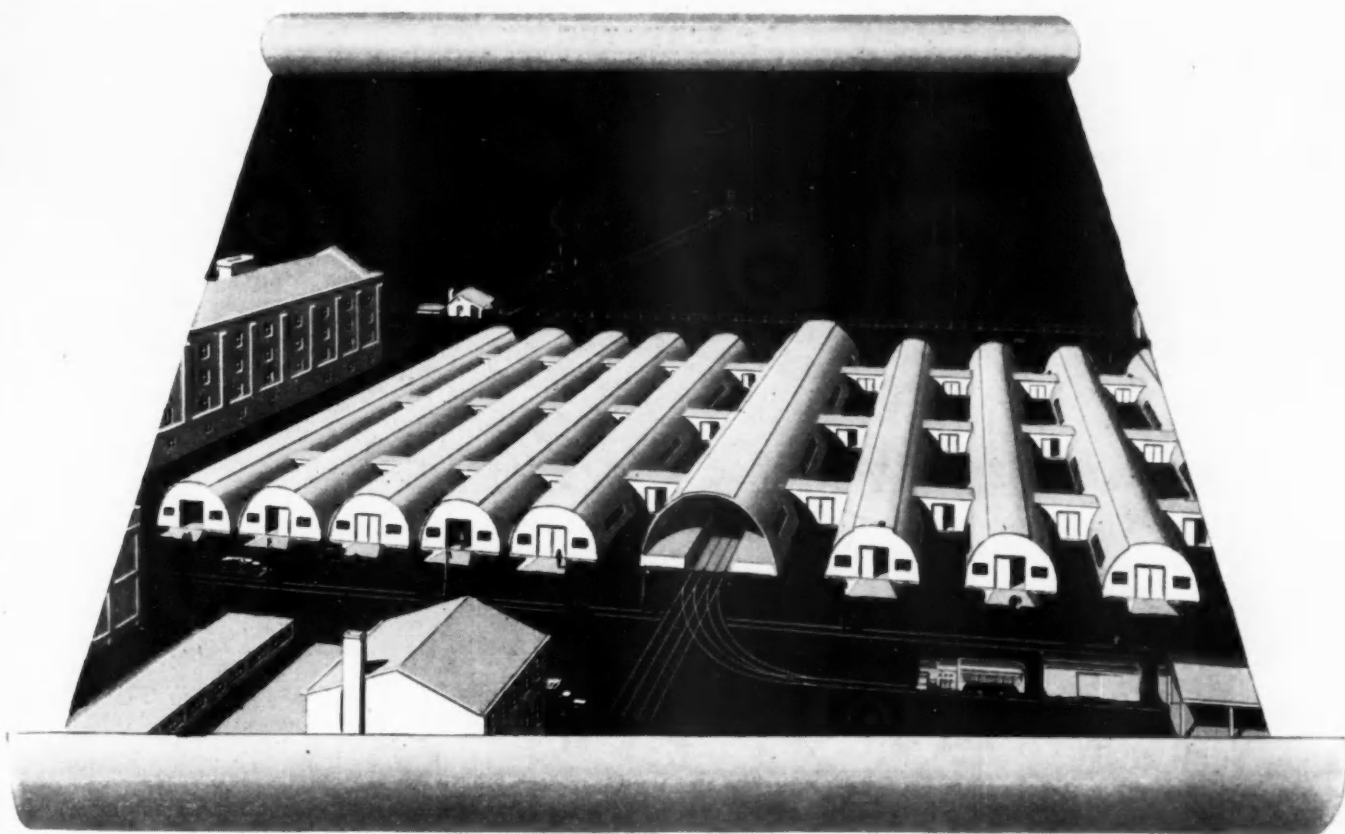
Special FREE Trial Offer

Now you too can receive the weekly *Washington News Letter* of the National Association of Home Builders, formerly sent only to builder members of the association. Now available to dealers, manufacturers, realty men, mortgage lenders and other building men through official action by the association at its recent annual convention.

The *Washington News Letter* is written and edited in the shadow of the capitol dome by Frank W. Cortright, Executive Vice-President of the Association. It tells you about every happening or coming event that affects the building business. It tells you about legislative changes and how to interpret government directives. It tells you what is about to happen and what you should do about it. The *Washington News Letter* gives information that is worth many times its cost to you; information it would be hard to get unaided. It does a job that you can't do alone, and can't afford to leave undone.

Send the coupon at the left. Ask for the Special Free Trial Offer. The next four issues of the *Washington News Letter* will be sent to you without charge or obligation. Or send the coupon with your check for \$10.00 and receive this valuable service each week to the end of 1944.

EFFICIENCY FROM THE GROUND UP



There is little doubt that the high point of industrial efficiency achieved during these war years will prove an important holdover in the days of peace. Manufacturers will continue their emphasis on peak efficiency in every phase of their operations—including the very buildings in which their operations go forward.

Strip steel by Stran-Steel—expanding in scope and usefulness under the stress of war—fits ideally into this postwar picture. By virtue of its efficiency of design, economy in application and great versatility, it is destined to have an important place in the plans of designers who will help reshape industrial tomorrow.

Manufacturer of the U. S. Navy's Famous Quonset Hut

STRAN STEEL

DIVISION OF GREAT LAKES STEEL CORPORATION
1130 PENOBSCOT BUILDING, DETROIT 26, MICHIGAN

UNIT OF NATIONAL STEEL CORPORATION

On and Off the Record

by **STRUCTOR**

News, Views and Comments

TIGHT L-41—It is pretty clear that the War Production Board does not favor much relaxing of present building restrictions. The new, revised L-41 shows this. Manpower shortage is still given as the basic reason for keeping L-41 so tight.

BLANDFORD AND BUILDERS—NHA Chief Blandford sat on the platform and took everything the builders at the Cleveland Conference had to give, thereby generating some well-earned respect. Later on he mixed with some of the roughnecks present, and before he left was being called "Jack."

"By God, he's human after all," one builder was heard to say.

POST-WAR HO HUM—A lot of us are getting pretty tired hearing about those super-super-modernistic machine-built push-button houses of the future. Personally, I think that the popular magazines and a good many newspapers are being taken for a ride by publicity experts. But I am learning to be philosophical about it.

There may be something in the thought that any kind of publicity about the wonderful homes of the future does some good by getting people to thinking and talking about home ownership. Even though it's

fantastic, it tends to make them think about looking around for something better. Just to talk about a house that's better than anything they have ever had before isn't enough, the publicity experts say. To really stir up public interest in home ownership you have to talk about something sensational, they declare.

Well, that's what the publicity experts say and if it makes you feel any better, you're that much ahead.

STRENGTH IN ADVERSITY—The war has done one good thing for the building industry—it has brought residential builders together into one strong, national association which can speak for them in Washington and elsewhere. Last month the meeting at Cleveland was probably the biggest gathering of active, progressive home builders there has ever been. This association will have a big future if it keeps its feet on the ground and builds up a representative membership of small, as well as large, builders.

IN PRAISE OF CHISELERS—I have heard a good many people in the building industry called "chiselers." Usually the name calling is done by someone who is slipping—he's losing business because he's behind the times, or in a rut. As a matter of fact, chiselers have been responsible for some mighty beneficial progress in housing and other commodities. They often expand a market by bringing prices down to where people can afford to buy. They make the other fellow keep on his toes. They are the sparkplug of free enterprise and competition.

Whenever a cozy group gets together and agrees on prices, markets and quotas, progress begins to slow down. Then everybody suffers, including the price fixers themselves.

RENT CONTROL INJUSTICE—To the already widespread injustice of rent control, OPA has added a whopper.

In its order of October 27, 1943, it establishes rent control in some twenty-two new counties at the levels that prevailed March 1, 1942. Move the clocks back twenty months, says OPA. It doesn't make any difference that the cost of practically everything has gone up drastically during those

twenty months. Because you are a wicked property owner and a landlord you get a retroactive roll-back that surpasses all records.

OPA has the gall to call this "stabilizing rent ceilings."

TRIPLE FARM BUILDING—Government agricultural experts have been doing some careful estimating on post-war farm building. They say that to repair, remodel, and replace out-moded and worn-out farm structures will require an enormous program of construction. The experts estimate 250,000 farm houses and 700,000 farm structures will be needed each year for ten years after the war. They estimate a post-war farm building program of a billion and a half dollars a year, which is three times the pre-war volume. That ain't hay.

ALBERT LEA—I am keenly interested, as I know builders will be, in what Albert Lea, Minnesota, an agricultural, industrial community of 12,000, is doing about its post-war future.

Every business man was contacted concerning what he could do to maintain employment there after the war and also hire returning service men. Then "Victory Aids" interviewed everyone in town to find out what goods and housing they expected to buy in the first two years after.

As might be expected, building led the way as to what Albert Lea citizens want and expect to buy. Construction or purchase of new houses by 442 city people was indicated at an average cost of \$4,068.

Construction of 150 farm homes was indicated with an average cost of \$3,150. City residents said they intended to make repairs on their houses to a total cost of \$367,000, while farm home owners said they would do work totalling \$486,000.

Farmers indicated their intention to build 360 barns, averaging \$1,473 and 360 silos at \$539 each.

There are thousands of small towns and rural communities like Albert Lea. The Committee for Economic Development, the Chamber of Commerce, and numerous other groups co-operated in Albert Lea's program and a manual describing it has been published entitled, "A Procedure for Community Post-War Planning." This ought to be worth studying.

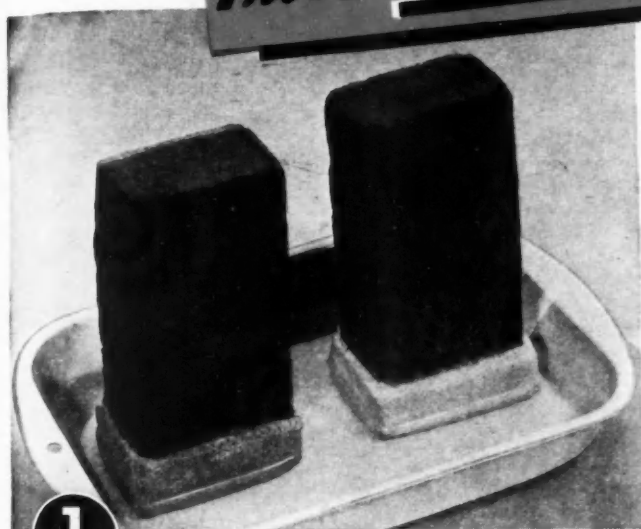
Off the Record

By Ed Reed



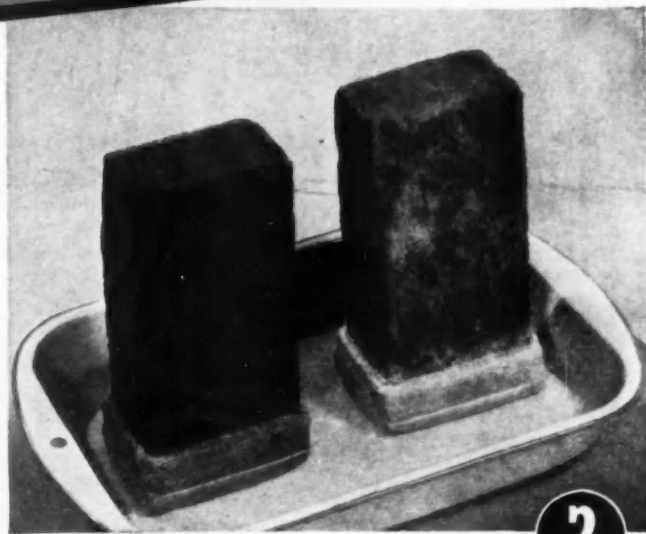
"She doesn't know anything about house-keeping, Dad—but according to the ads all you'll need do in the post-war house is push a lot of buttons!"—(Courtesy, *The Chicago Sun*.)

MAKE THIS TEST -
Prove **BRIXMENT is BEST!**



1

"Cap" one brick with Brixment mortar (left), and one brick with mortar made with 50-50 cement and lime. After mortars have hardened, place both brick in a pan of shallow water. (Photo 1.)



2

Keep about an inch of water in the pan. Even if soluble salts are present in the brick or sand, you will soon be convinced that *Brixment mortar helps prevent efflorescence.* (Photo 2.)

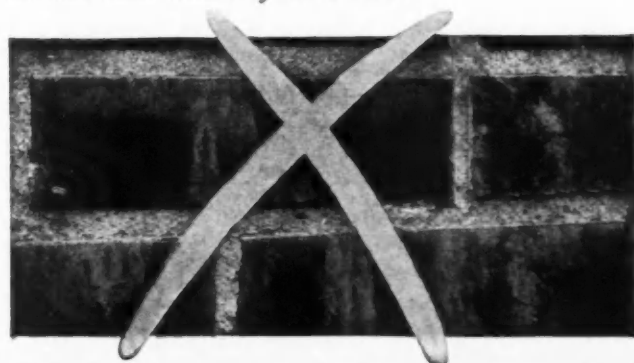
BRIXMENT Helps Prevent EFFLORESCENCE!

EFFLORESCENCE is an outcropping of minute white crystals on brickwork. When these crystals occur on colored mortar joints, the condition is sometimes mistaken for *fading*.

Efflorescence is caused by the presence of soluble salts in masonry materials. When reached by water, these salts dissolve, and are drawn by evaporation to the surface of the wall.

Brixment itself *does not cause efflorescence* because it is practically free from soluble salts. Even when such salts are present in the sand or brick, the waterproofing in Brixment mortar usually *prevents*

them from coming to the surface. . . . Bricklayers who have used Brixment mortar for years say they have far less efflorescence with Brixment mortar than with *any other kind.*



BRIXMENT

For Mortar and Stucco

Louisville Cement Company, Incorporated, Louisville, Kentucky. Cement Manufacturers for Over a Century.

*When PEACE comes
rushing up the road...*



When Peace comes,
it'll roll out of your shop
in a truck—in *your* truck—
loaded with Flintkote Building Materials
for those post-war homes
your customers have been waiting
so long
to build.
There'll be bundles and bundles
of Asphalt Shingles,
Roll Roofings
and Brick-Type Sidings.
There'll be Insulation Board
and Decoblend.
Rock Wool Insulation, too,
and Waterproofing.
Not forgetting
Sheathing Board or Asbestos Shingles

and Sidings, or Dampproofing and Sound
Deadening materials, either.
They'll *all* be there again
on that great day—
as much as you
want or need—
and when you want them.
You'll just pick up your 'phone
and call Flintkote,
and the merchandise will come!
And your customers will grin, pleased! ...
And the houses will go up! ...
And smiling families will move in! ...
And kids will play in the yard
And start dreaming of houses of their own! ...
Gee! You can practically see PEACE
rushing up the road with outstretched arms!

THE FLINTKOTE COMPANY, 30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.
ATLANTA • BOSTON • CHICAGO HEIGHTS • DETROIT • EAST RUTHERFORD • LOS ANGELES • NEW ORLEANS • WACO

LUMBER & WAR BONDS

help to keep 'em landing!



More lumber for war! More war bonds to finance the war! These are Uncle Sam's imperative needs now. As loyal Americans all, we are meeting them.

But some day, perhaps sooner than we dare hope now, these tunes will change. With Victory, instead of more lumber for war, it will be more lumber for building. With Victory, instead of buying bonds to finance the war, we'll be cashing our bonds to finance post-war construction.

As Bradley has supplied its customers in the past . . . is meeting Uncle Sam's war demands now . . . so will it be ready to fill your demands of the New Day with Bradley Brand lumber and lumber products in full stride with post-war developments.



Signal Corps photograph—Keystone

BRADLEY LUMBER COMPANY *of Arkansas*
WARREN, ARKANSAS

Engineering



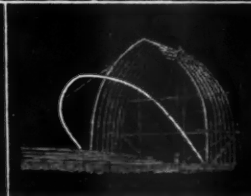
Engineering in Lumber is progressively increasing the efficiency of wood as a structural material. Modern wood products are making important contributions to better, more economical construction.



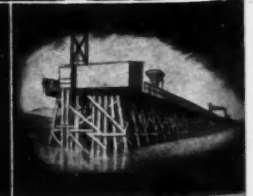
Teco Metal Timber connectors make it possible to join wood members; utilize 80% or more of the working strength of wood.



Modern structural glues make possible Glued Laminated Wood roof trusses, arches, plybeams and other structural members.



Glued wood laminated framing members combine roof and side-wall in a unit, giving stronger, more wind-resistant buildings.



New processes for the treatment of wood extend its service life, broaden its uses, and increase its value in many fields.

Ply
liti
Sha
det

g
in

Lumber

opens new fields of service for wood

IN THE NATION'S tremendous war building program wood is serving a vital role of supply. Because of Engineering in Lumber, wood was ready to do the big building jobs, not as an emergency item, but as a versatile, easily workable, widely adaptable material.

Lumber, fabricated under the Teco Connector System of timber engineering, is serving as roof trusses for war factories covering thousands of acres. It has built bridges, shipyard structures, towers, storage and supply buildings.

Laminated wood structural members have been engineered and factory fabricated for many types of roof trusses, and for structures where wide, post-free spans are needed, such as giant airplane hangars, drill halls, chapels. Wood is serving the war effort in hundreds of different ways from airplanes to landing barges.

Lumber will serve an increasingly important function in our postwar building. It has demonstrated a new versatility to meet more needs. Engineering in Lumber, a continuing study, is developing improved lumber products and new ways of joining and applying lumber for greater economy, strength and durability.

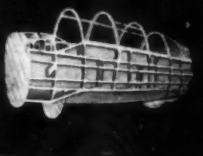
☆ ☆ ☆

**SEE YOUR 4-SQUARE DEALER ABOUT
ENGINEERED 4-SQUARE BUILDING SERVICES**

Contractors and Builders may be working on "post-war" jobs sooner than they expect. In the meantime, it will pay you to familiarize yourself with the 4-Square Home Building Service and the 4-Square Farm Building Service, as well as the ABC budget payment plan. Ask your 4-Square Dealer about them.

WEYERHAEUSER SALES COMPANY

FIRST NATIONAL BANK BUILDING • SAINT PAUL, MINNESOTA



Plywood is proving its versatility in countless applications. Shapes and strengths can be predetermined for specific uses.

4-SQUARE LUMBER

Decorative Harmony in Any Key . . .



FIREPROOF—Made from Gypsum rock that will not burn, Sheetrock walls and ceilings form a fire-armor that fights the spread of fire and protects the building framework underneath.



"WELDED WALLS"—Panel joints concealed and welded together by Perf-A-Tape . . . stronger than the panels of Sheetrock themselves.



VERMIN-PROOF—Sheetrock has a mineral core . . . it does not attract or support vermin of any kind.



WON'T WARP OR BUCKLE—Sheetrock is like a stone wall. It does not twist and pull out of shape with changes in temperature and humidity conditions.

SHEETROCK

"Fireproof" WALL AND CEILING PANEL

Choose the "Color-Key"—the texture—design and treatment—*then go ahead!* Over the smooth, even, ivory surface of Sheetrock*, a wide variety of finishes and treatments is possible.

Sweeping, unbroken surfaces may be had—joints concealed and "welded" with Perf-A-Tape*, or made a part of the decoration with "Panel-Wall" method.

Whether it be paint, wallpaper, Calci-mine, Casein paint, Texture paint or any usual finish that is sprayed, brushed or pasted on, it may be successfully applied over *pre-cast* Sheetrock walls and ceilings.

Pre-decorated Sheetrock may be purchased in pastel shades or woodgrain effects—ready to apply. If you want a special effect, you can have that, too.

—and beneath the surface-beauty of Sheetrock is a core made from gypsum that will not burn—which acts as a "fire armor" to retard the spread of fire and protect the framework underneath.

Just name your job—Sheetrock will meet the requirements quickly, easily and at low cost. No wonder Sheetrock is the best known and most widely used gypsum wallboard in the world.

*Trademarks Reg. U. S. Pat. & Tm. Off.



UNITED STATES GYPSUM

300 WEST ADAMS STREET, CHICAGO, ILLINOIS

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

GYPSUM WALLBOARD • SHEATHING • LATH • PLASTER

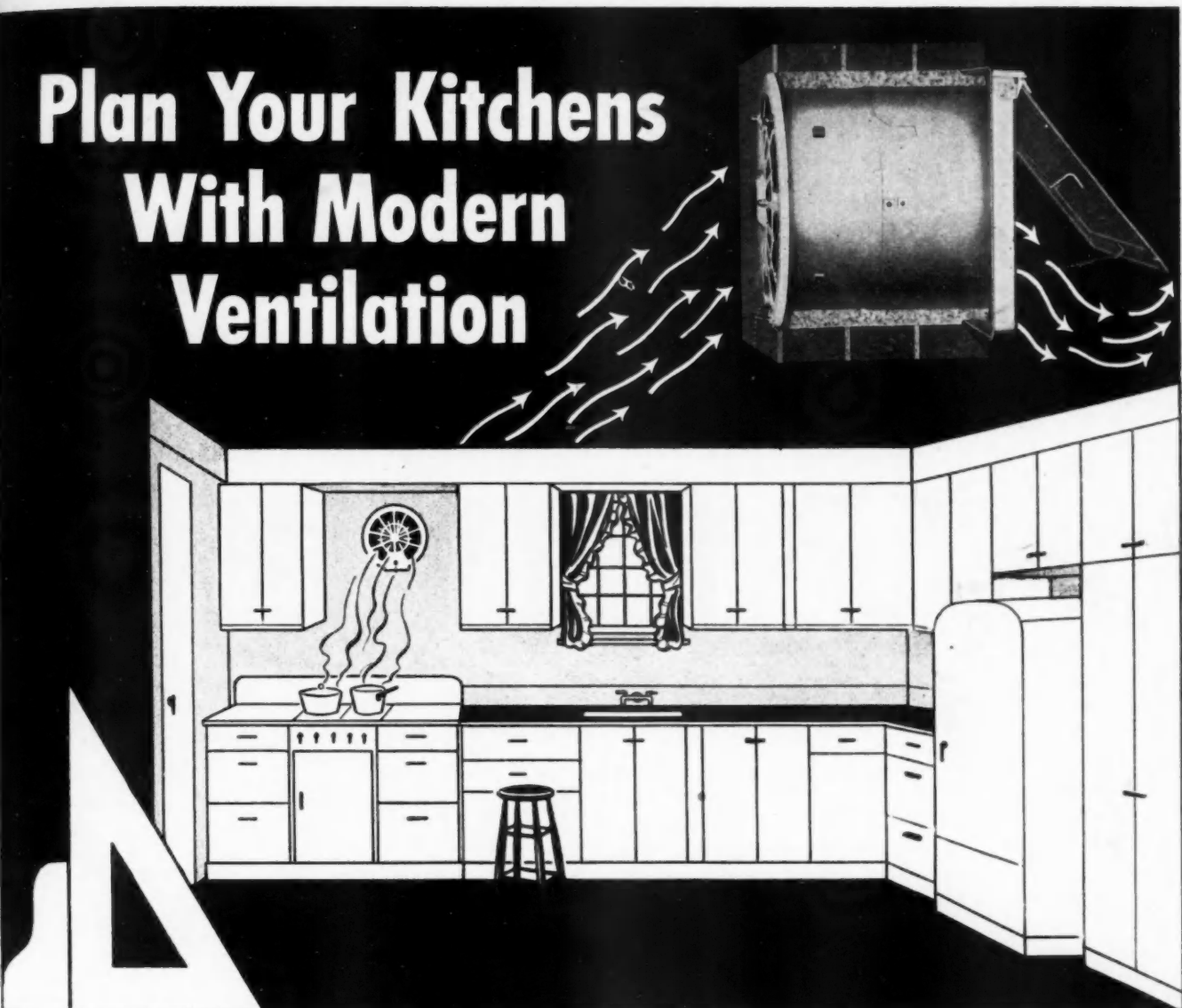
FIREPROOF GYPSUM

The World's most widely used Mineral for making Fireproof Wall and Ceiling Products

GYPSUM PRODUCTS • STEEL • INSULATION • ROOFING • PAINT

GYPSUM FIREPROOF ROOF DECK AND PARTITION

Plan Your Kitchens With Modern Ventilation



EMERSON-ELECTRIC KITCHEN VENTILATORS
Will Make the Kitchens You Plan
Free of Cooking Odors—Smoke—Steam and Excessive Heat

Write now for full information on the complete line of Emerson-Electric Kitchen Ventilator Fans. They are a welcome "must" for future homes—their effective operation, substantial construction and long life have been proved in thousands of installations... "After Victory", both Emerson-Electric Ventilators and Home Cooler Fans will be available in the same dependable quality characteristic of Emerson-Electric equipment for more than 53 years.

THE EMERSON ELECTRIC MANUFACTURING CO.
 SAINT LOUIS

Branches: New York • Chicago • Detroit • Los Angeles • Davenport

Now 100% War Production



Home Cooler Fans

Turned on after sundown, home cooler fans expel hot air trapped in attics and living rooms; draw cooler outside air into and through entire house... Direct drive, 12 to 30 inch. Belt drive, 24 to 48 inch. Capacities up to 20,000 CFM.



EMERSON  **ELECTRIC**

HOME COOLER FANS • KITCHEN VENTILATORS



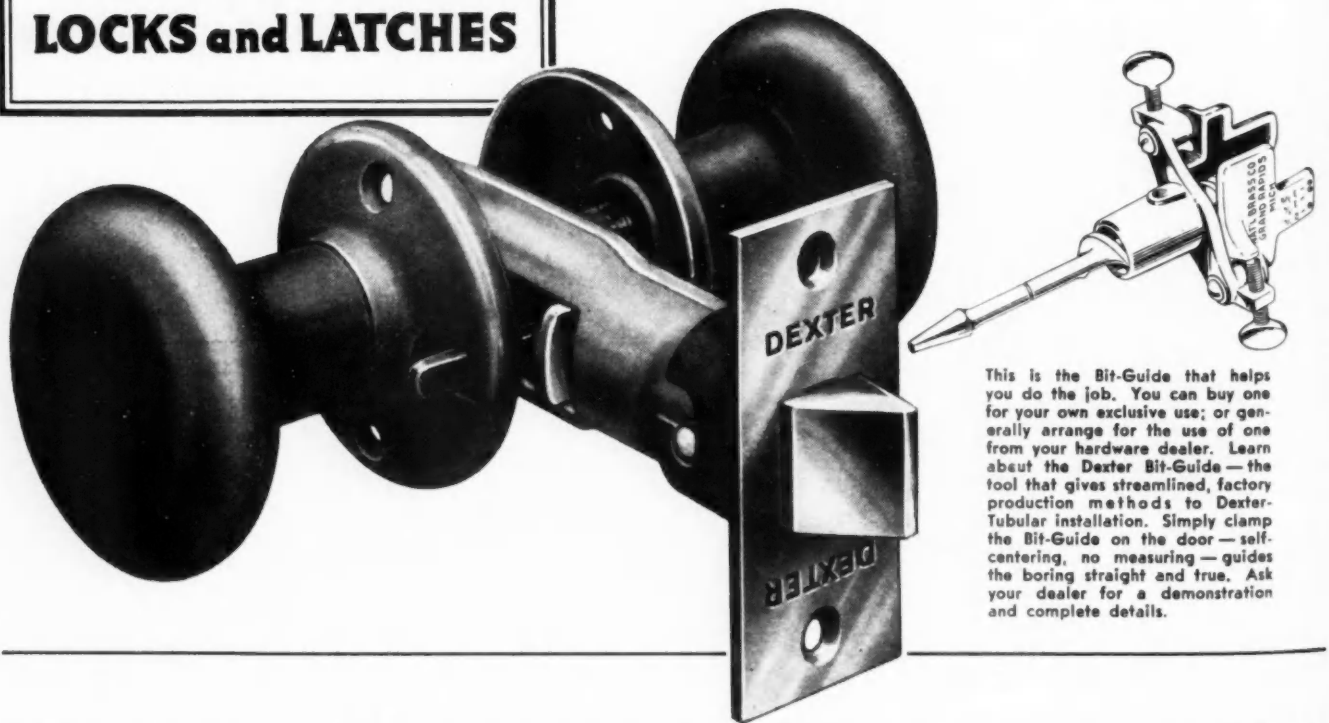
I'M NO DUNCE
I KNOW

**IT'S EASIER
TO BORE A ROUND HOLE
THAN TO MORTISE
A SQUARE ONE!**

Wise, too, are builders who insist upon DEXTER-TUBULARS. As easy to install as it is to bore a round hole. You can do a better job, faster with DEXTER-TUBULARS; save precious time and costs of installation. DEXTER-TUBULARS are built to last for the *lifetime* of the building in which they are used . . . guaranteed by the DEXTER *Lifetime Warranty*.

They're available now. DEXTER-TUBULARS conform with WPB Regulations, including Hardware Order L-236. You are invited to write for full details. Let us send you the "Commander Line" Catalog illustrating DEXTER-TUBULAR Locks and Latches, and Cabinet Hardware that conform with Federal Regulations. Write today — no obligation.

**DEXTER
TUBULAR
LOCKS and LATCHES**



This is the Bit-Guide that helps you do the job. You can buy one for your own exclusive use; or generally arrange for the use of one from your hardware dealer. Learn about the Dexter Bit-Guide — the tool that gives streamlined, factory production methods to Dexter-Tubular installation. Simply clamp the Bit-Guide on the door — self-centering, no measuring — guides the boring straight and true. Ask your dealer for a demonstration and complete details.

Manufactured by **NATIONAL BRASS COMPANY**
GRAND RAPIDS, MICHIGAN

Washington News Summary

New Order L-41 Speaks Plainly

Here Are the Highlights of the Rewritten Order

A completely re-drafted Order L-41, which limits construction, has been issued in simplified form by the War Production Board. The new language of the order is intended to make the restrictions more easily understandable by the public.

Typical of the language of the revised order is its introduction, explaining the purpose of L-41: "This order limits construction. It is necessary in order to conserve materials, construction equipment, labor, and transportation. In most cases, except where the construction is of a special kind, you must get permission from WPB for construction."

The introduction goes on to explain that this permission is not to be confused with preference ratings or priorities: "If a construction job is allowed, either because it is not of the kind restricted by the order or because permission has been obtained, it may still be necessary to get preference ratings for the materials and fixtures which are needed.

On the other hand, if you have ratings for materials, or materials on hand, you may still have to get permission to use them for a particular construction job."

In addition to simplifying the regulations and instructions, the revised order makes the following changes:

1. The limit on farm construction, including residential, is placed at \$1,000. Previously, there were separate limits, farm residences not being considered part of the farm unit.

Other Limits as Follows

2. A limit of \$200 is placed on any type of construction for which a higher specific limit is not authorized by the order. This overall limit formerly was \$1,000. 3. The exception, originally made by L-41-b, for the insulation of buildings, has been liberalized in accordance with WPB policy relating to fuel conservation. On the other hand, the exception covering the conversion of heating equipment from oil to coal has been eliminated because of the coal situation. 4. Minor capital additions under CMP Reg. 5 in certain of the

more essential industrial plants are excepted from the L-41 restrictions. 5. In calculating costs to determine if a job is within specified L-41 limits, the cost of used materials, or the value of labor furnished free, need no longer be included. 6. Cost limits now refer to the calendar year, instead of to any consecutive twelve months period. 7. Installation of plumbing equipment rated on WPB-2631 (formerly PD-851) is permitted if the cost is under \$200.

Some Things Are Added

Schedule B, listing various kinds of construction relating to operations of farms, railroads, utilities, mines, etc., which may be begun without WPB permission, has been altered in several respects. Drilling of water wells, certain radio facilities, and timber access roads financed wholly or in part by defense highway appropriations have been added. With issuance of the revised L-41, Orders L-41-a, L-41-b, L-41-c, and Interpretation No. 1 are revoked, inasmuch as their provisions are

(Continued to page 68)

Handy L-41 Reference Chart for Determining What Forms for What Jobs and Where to File

TYPES OF CONSTRUCTION	APPLICATION FORM	WHERE FILED
Farm including buildings less than \$10,000	WPB-2570 (formerly PD-200-C)	District War Production Board having jurisdiction over site.
\$10,000 or more	WPB-617 (formerly PD-200)	War Production Board, Washington, D.C.
War Housing owned by FPHA	Letter	WPB, Washington, D. C.
5 families or less per building, less than \$10,000	WPB-2896 (formerly PD-105) or WPB 2879.1	Local FHA field office.
\$10,000 or more	WPB-2896 (formerly PD-105) or WPB-2897 (formerly PD-105A)	Same.
Hotel or apartment for 6 or more families providing quarters for war workers. Less than \$10,000	WPB-2896 (formerly PD-105) or WPB-2897.1	Same.
\$10,000 or more	WPB-2896 (formerly PD-105) or WPB-2897 (formerly PD-105A)	Same.
Hotel or apartment for 6 or more families not providing quarters for war workers. Less than \$10,000	WPB-2570 (formerly PD-200C)	WPB district office.
\$10,000 or more	WPB-617 (formerly PD-200)	WPB, Washington, D. C.
Public roads	PR 1 PA	State Highway Department.
Water, gas, steam, electricity, telephone facilities for public use	WPB-2774	WPB, Washington, D. C.
Factories, plants, industrial units. Less than \$10,000	WPB-617 (formerly PD-200)	WPB district office.
\$10,000 or more	WPB-617 (formerly PD-200)	WPB, Washington, D. C.
All other kinds of construction less than \$10,000	WPB-2570 (formerly PD-200-C)	WPB district office.
\$10,000 or more	WPB-617 (formerly PD-200)	WPB, Washington, D. C.

AMERICAN BUILDER

Throws Spotlight on Importance of Private

Billion Jobs a Yearly in New Building
Need for Private Housing Greatest in U. S. History

Million New Homes a Year, Prediction
Build Homes After The War

Building of Homes in United States During the War
Post-War Building To Give Most Jobs

Post-War Home Boom To Provide
Need for Private Housing Greatest in U. S. History

THE SEATTLE TIMES
Listing Exchange Weekly Report
New Homes and After-the-War Prosperity
CHICAGO—The need for private housing is the greatest in U. S. history, according to a report by the American Building Magazine. The magazine says that the current boom devoted to building of new homes is only a small part of the total need. It says that the total need for new homes is 1,000,000 a year. The magazine says that the current boom is only a small part of the total need. It says that the total need for new homes is 1,000,000 a year.

Million New Homes a Year, Prediction
CHICAGO, Oct. 17 (AP)—The American Building Magazine predicts that the United States will build a million new homes a year after the war. The magazine says that the current boom is only a small part of the total need. It says that the total need for new homes is 1,000,000 a year.

Build Homes After The War
Four Billion Dollar Market in Sight in Home Building
CHICAGO, Oct. 17 (AP)—Private home building will take its place among the top job-creating industries after the war by producing a minimum of 1,000,000 jobs a year, the American Building Magazine says.

Post-War Building To Give Most Jobs
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Post-War Home Boom To Provide
CHICAGO, Oct. 17 (AP)—Private home building will take its place among the top job-creating industries after the war by producing a minimum of 1,000,000 jobs a year, the American Building Magazine says.

Post-War Demand For Homes High
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AMERICAN BUILDER

10-Point Post-War Program Quoted From COAST to COAST

Dramatic presentation of post-war building in the October American Builder became NEWS of vital interest to millions of prospective home owners.

Building War Seen as Industry
CHICAGO, Oct. 21 (AP)—Private home building will take its place among the top job-creating industries after the war by producing a minimum of 1,000,000 jobs a year, the American Building Magazine says.

Home Construction To Take Spotlight
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Again Speaks for the Industry

Building as Key to Post-War Prosperity

Postwar Job Seen in Home Building
Chicago, Oct. 23 (AP)—Private home building will take over the war job of the top-revenue industry in the country, a minimum of a million jobs a year, the industry predicts.

Building Industry Seen Postwar Job Creator
Used for private homes is now greatest of all activities in the nation, according to a survey by the National Building Industry Association. The survey shows that the industry will create a million jobs a year after the war.

2 Million Jobs Seen Yearly in Home Building
\$4,000,000,000 Market of a Million Residences Annually is Predicted
CHICAGO, Oct. 23 (AP)—Private home building will take the place of war production as the top job-producing industry in the country after the war, according to a survey by the National Building Industry Association.

10-Point Home Building Plan Seen as Job Maker
A 10-point plan for home building after the war was outlined by the National Building Industry Association on Oct. 14.

Home Building To Increase Jobs After War Demand For Workers Heavy
CHICAGO (AP)—Private home building will bear the brunt of the job boom after the war, according to a survey by the National Building Industry Association.

Million Homes A Year Seen As Postwar Job Stimulant
A million homes a year will be built after the war, according to a survey by the National Building Industry Association.

Private Home Building Seen As Top Job-Creating Industry
Private home building is seen as the top job-creating industry after the war, according to a survey by the National Building Industry Association.

Postwar Seen in
Chicago, Oct. 23 (AP)—Private home building will take the place of war production as the top job-producing industry in the country after the war, according to a survey by the National Building Industry Association.

Ten-Point Plan Proposed To Restore Private Enterprise
Home Building Pictured as Key to Postwar Prosperity
CHICAGO, Oct. 23 (AP)—A ten-point plan for restoring private enterprise after the war was outlined by the National Building Industry Association.

Need For Private Homes
Four million homes of war era needed for two million men
CHICAGO, Oct. 23 (AP)—A survey by the National Building Industry Association shows that four million homes of the war era are needed to house two million men.

The Corner Lot
By ROBERT S. LEWIS
Real Estate Editor
Chicago for an end to real estate speculation and private inurement.

Need For Private Homes Greatest in History
By producing a required minimum of a million homes a year to the nation's 100 million population, the building industry will take its place among the top job-producing industries in the country.

Million Postwar Homes Would Employ 2,000,000
ALTON ILL TELEGRAPH
A million postwar homes would employ 2,000,000 men, according to a survey by the National Building Industry Association.

Sees Boom for Home Building
Chicago, Oct. 23 (AP)—Private home building will take the place of war production as the top job-producing industry in the country after the war, according to a survey by the National Building Industry Association.

Business Briefs
Minimum of Million Dwellings Expected Each Postwar Year
CHICAGO, Oct. 23 (AP)—A minimum of a million dwellings will be built each year after the war, according to a survey by the National Building Industry Association.

2,000,000 TO WORK ON POSTWAR HOMES
The National Building Industry Association predicts that 2,000,000 men will be employed in the home building industry after the war.

Million Postwar Homes Would Employ 2,000,000
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Home Building Will Provide Jobs for Many
Postwar Needs Would Provide Employment for Over 2,000,000 Men
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NEW HOMES SEEN 4-BILLION MARKET
Trade Magazine Says Postwar Requirements Will Create Jobs for 2 Million.
CHICAGO, Oct. 23 (AP)—A survey by the National Building Industry Association shows that a market of 4 billion new homes is needed after the war.

HOME BUILDING LOOKED TO AS JOB PRODUCER
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American Builder's continuous and constructive post-war activity helps shape public opinion in favor of private building. Newspapers all over the country have presented its industry program to more than 8 1/2 million families.

WHEELER OSGOOD ANNOUNCES A NEW PRODUCT

Tru-sized DOORS

TRU-SIZED Doors
are easy to install
—no planing—
no sawing—
no fussing



AMERICA'S largest manufacturer of doors presents the newest development in house door manufacture—*Tru-Sized* Doors. Pre-fitted to save time, money and work! These beautifully designed doors, for both exterior and interior use are precision-made by master craftsmen.

Because they are manufactured of famous Douglas Fir, *Tru-Sized* Doors are uniform in quality, super-strong, rot-proofed by nature and highly resistant to marring.

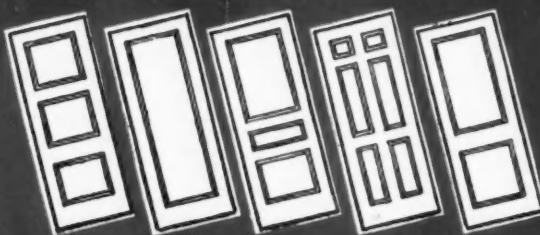
★ *Tru-Sized* Doors are ready to install. No planing or sawing is necessary.

★ *Tru-Sized* Doors are precision machined to exact book opening.

★ *Tru-Sized* Doors require no fitting—which means speed on the job.

These improved Wheeler Osgood doors are available first for war housing projects—and limited quantities are available for other essential home construction.

THERE'S A *Tru-Sized* DOOR FOR EVERY PURPOSE
FOR FULL INFORMATION—RUSH COUPON!



Wheeler Osgood Sales Corp. Dept. 7
Tacoma 1, Washington

Please send me free literature and detailed guide sheet for ordering *Tru-Sized* Doors.

Name.....

Firm.....

Address.....

State.....

City.....

Proud to be a builder

ONE of the most satisfying comments the editors of this publication have had recently was made by the spokesman for a group of builders, who said of our "War to Peace" issue: "It made us proud to be members of this building industry."

The builders of this nation can and should be proud—proud of the fact that until the war started they were building *more* homes and *better* homes than any country on earth. Proud that during the war period they have built more than 600,000 good, livable, privately financed houses, despite the almost impossible conditions imposed upon them.

And they can be proud of the kinds of sensible, livable, attractive houses which they are now busily planning to build after the war.

Set all-time record in 1941

Despite the uninformed rantings of some people who have judged the whole industry by a few parts of it, or have condemned the work of builders everywhere because of what they happened to see in one or two isolated cases, the builders of this industry have done a good job.

Particularly in the past five years the building industry has made tremendous strides, and has produced each year more attractive, well built, well laid out, and *better equipped* houses at constantly lower cost of ownership. This steady progress culminated in 1941 when 715,000 houses were built, of which more than 80 per cent were individual family homes, averaging \$4,000 in cost.

This tremendous volume of good small homes was so spread throughout the land that many persons in high places, who should know better, do not even yet realize that an *all-time record for small single-family homes was set that year.*

Hugh Potter's remarks on this subject at the recent New York Herald Tribune Forum were broadcast to the world; yet still are worth repeating:

"We have developed more new materials, newer methods of land planning and more experiments in home financing—despite the fact that our building wages are triple those of any other country," he said. "High technical knowledge has enabled us

to produce *more new, desirable housing than all the other nations of the world together, and at less cost per cubic foot for similar facilities.*"

War houses also good

Now the builders of the country are engaged in constructing war housing, and in the confusion many of the good things that have been done have been lost sight of. This issue of *American Builder* presents a number of examples of war houses which are definitely good—which show that the steady progress towards better planning and better homes is continuing, even despite the terrific handicaps of war.

American Builder has frequently stated that progress in the building field is inevitably *evolutionary*, not *revolutionary*. Right now, *today*, there are many thousands of individual building firms incorporating the lessons of yesterday and today in plans for a *better house for tomorrow*. The post-war home is thus definitely in the making *right now*. Their experiences in *war housing* have taught many builders what NOT to do as well as what TO do to improve their product.

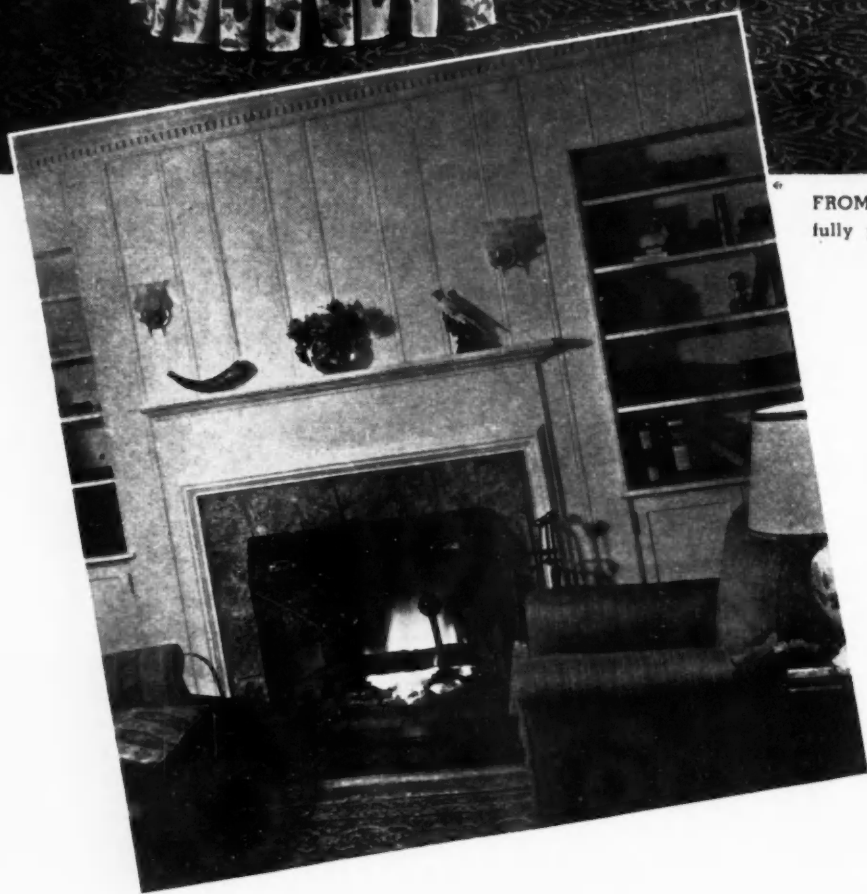
The kinds of houses being planned will be, our previews indicate, vastly better than anything that has been done before in this or any other land. They will put the power of industrial progress into more livable, convenient, low upkeep houses at lower cost. These will be the finest houses the world has ever seen, but not fantastic, or radically different from pre-war in appearance.

Strength through adversity

Private builders are displaying a new-found determination and ability to whip the public housers. This they are doing not only by effective political opposition, but also by *doing a better job.*

As Fritz Burns said at the recent Cleveland Builders war conference, private builders will not rest until every city, town, and village in the land has all the *decent, well built homes it can possibly absorb.*

Builders have met the challenge of public housing. They have gained strength through adversity. And they will be prepared to meet the challenge of post war in a way that will continue to enable them to say, "I am proud to be a builder."



FROM California (above) to New York (left), a carefully planned fireside has important buyer appeal.

Planning Your 1944 Homes

IN the year ahead much planning will be done, whether for war or peace. There is still part of the war housing job to be finished, and builders have already started blueprinting their post-war designs. The following pages will help you with both these important jobs.

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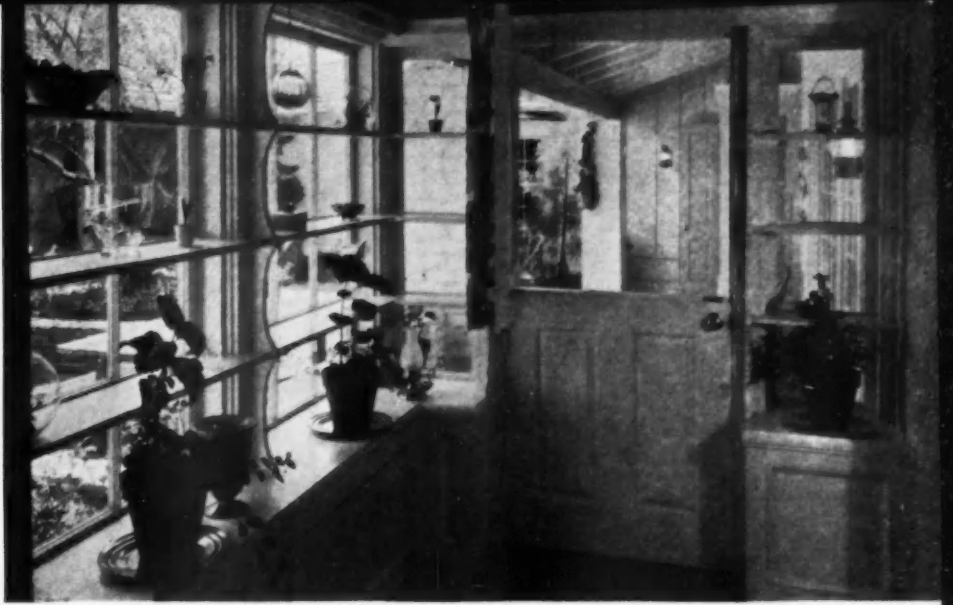
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Interiors In Wood

After the war there will unquestionably be a return to the trend toward wall finish in a variety of materials. Wood, and more particularly plywood, will again be available for use as shown here below.

CHEERFUL corner treatment detailed in wood, seen in California home. (Mott Studios photo.)



LIVING ROOM of W. F. Coleman home near Seattle has walls and ceiling of Philippine mahogany faced plywood; William Bain, architect; den, shown below at right, has stone fireplace, walls of knotty cedar faced Douglas fir plywood; dining room of this interesting home is finished with gum-faced plywood wainscot. Speedwall grass cloth covered plywood above dado, mahogany ceiling.





ROLLINGWOOD HOMES are attractively designed and grouped on winding streets as indicated in photos above and plot plan of part of project below. Kitchen is well lighted.



Fine War Homes Built in Only 693 Hours

Charm and livability achieved by Bohannon in Rollingwood project, first described in April *American Builder*. New cost-cutting methods developed.

THE remarkably successful private enterprise building methods of the Bohannon organization of San Francisco were described in an article in the April *American Builder*. At that time a new project, "Rollingwood," at Richmond, Calif., for workers in the Kaiser shipyards was just getting started. Prominently described was Bohannon's latest revised three-bedroom floor plan featuring an extra war worker's room.

Bohannon has now completed the Rollingwood project and has established another remarkable record in war home production. Both the standard two-bedroom and three-bedroom models built throughout Rollingwood with variations in exterior are shown at right.

Study of these plans reveals how expertly this West Coast builder has laid out a small house to provide spaciousness and livability throughout. Not only are the houses themselves well laid out and unusually well designed, but they are attractively grouped on curving streets laid out according to sound land-planning procedure to minimize traffic hazards.

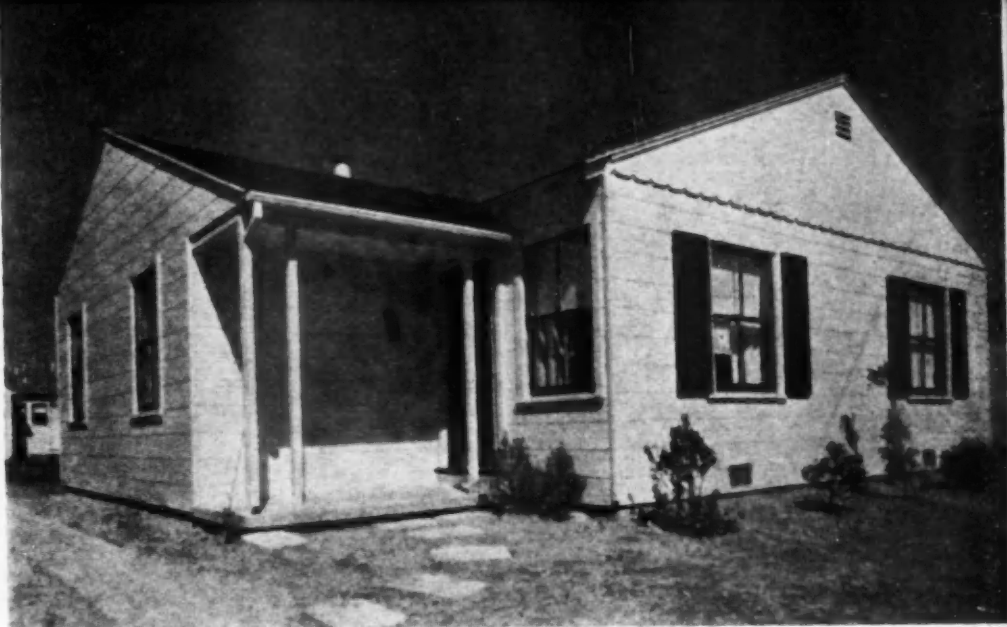
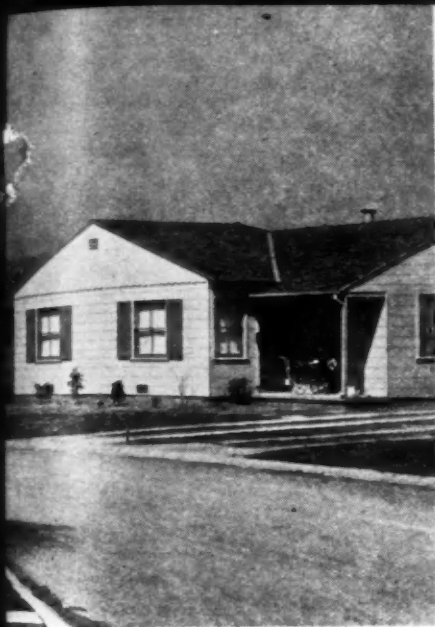
A part of the subdivision layout is detailed at

left, including hours shopping. In the *Builder* non's costs, including designed of a use of floors, according him to houses be possible rication

See *N.A.B.* on Bohannon

UNUSUAL ing "extra private e

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left, indicating the method of grouping houses in the area nearest the shopping center.

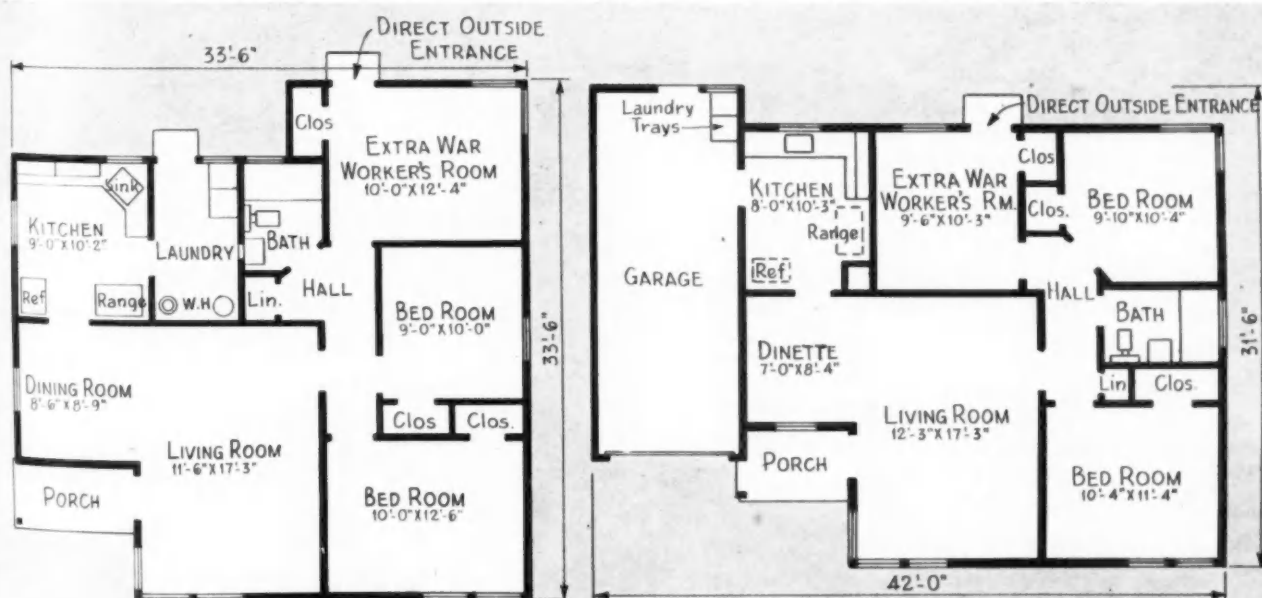
In the April issue, *American Builder* described in detail Bohannon's cost-cutting production methods, including the use of expertly designed removable forms, pre-sawing of all lumber in a cutting yard, use of special trailers with roller floors, and many other features that, according to Bohannon, enabled him to produce these attractive houses at lower costs than would be possible through factory prefabrication.

See NAHB Convention story for more on Bohannon's pre-cutting methods.



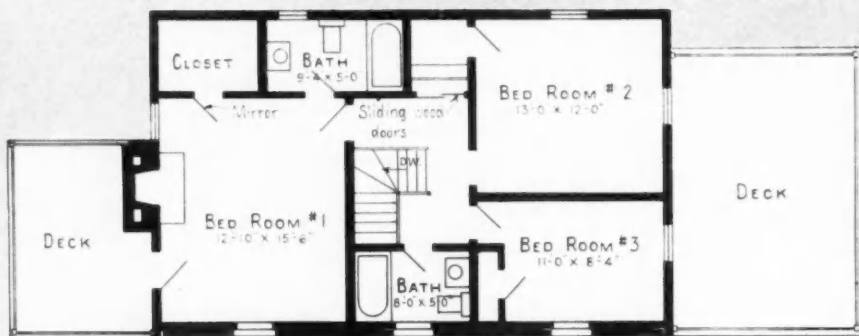
UNUSUALLY attractive two- and three-bedroom war homes featuring "extra war worker" rooms are the result of Bohannon's efficient private enterprise methods. Houses are a happy contrast to public

housing. They are built under FHA Title VI without any cost to taxpayers. Photos above and plans below show basic models used with variations throughout the Rollingwood project.

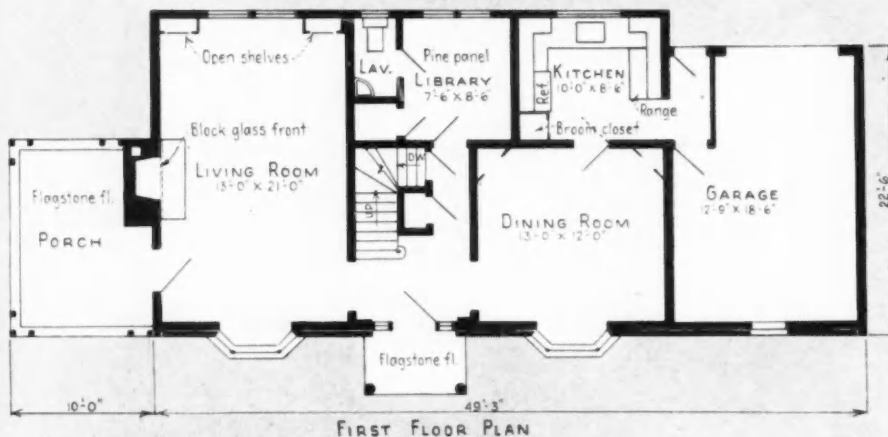




DESIGN TYPES FOR POST-WAR BUILDING—



SECOND FLOOR PLAN

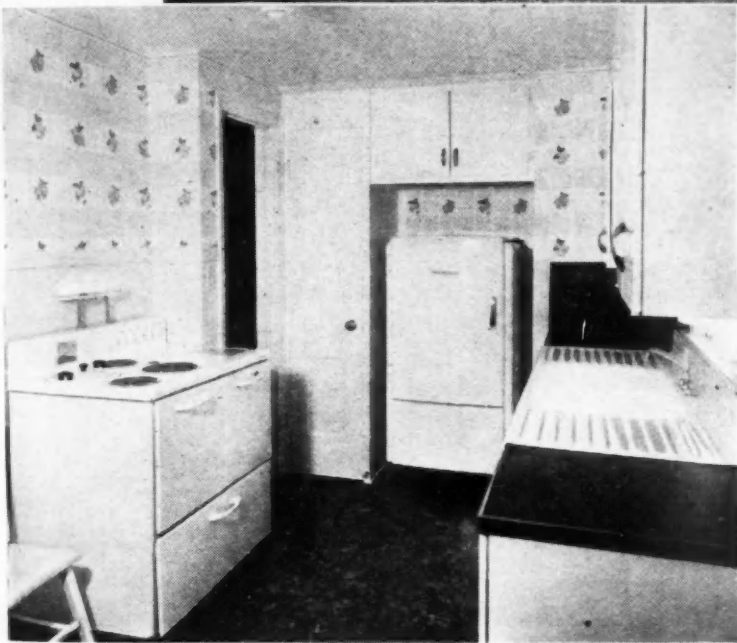
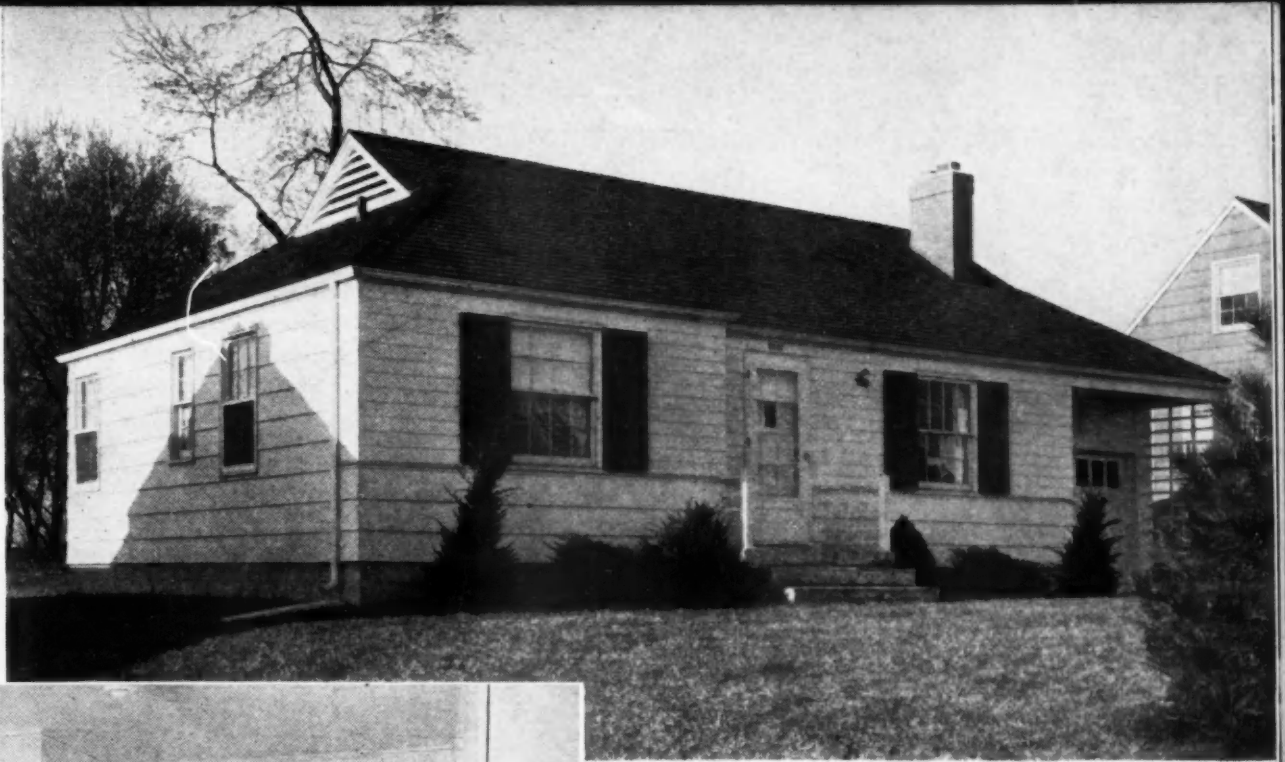


FIRST FLOOR PLAN

WHEN building resumes, one thing is certain—the public will not have lost its desire for attractive appearance and livable arrangements. On the contrary, makeshift war housing, stripped of most niceties that create a home, will make these even more appreciated. Here are two built just before the war, of types which builders can look to for sales.

A Larger Home with Economy in Styling and Plan

AN impressive and dignified atmosphere has been given to the home above, built by Newell & Daniel, Inc., on Long Island. The simple rectangular plan of the body is economical; porch and garage wings with useful decks above lend width. Library on first floor has handy lavatory. Three good sized bedrooms, two baths and roomy closets work out without waste on second floor.



5 Rooms and Garage, Compact and Livable

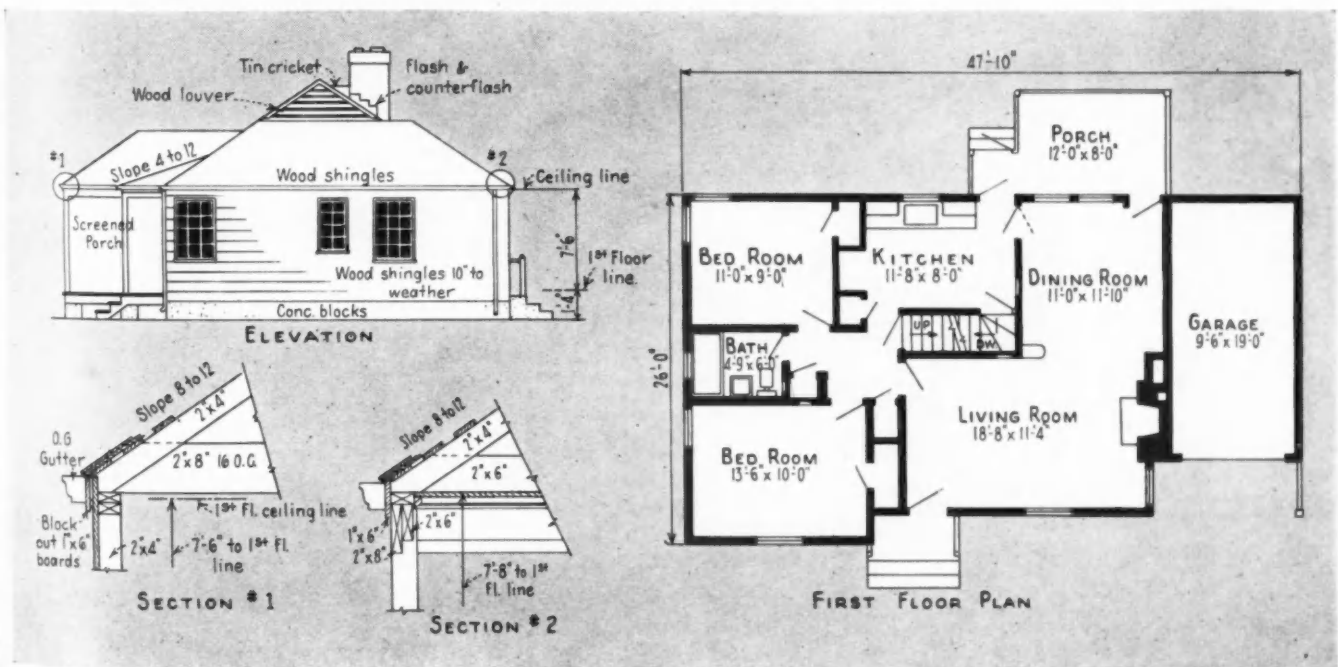
GOOD five-room homes are pretty much a standard commodity with builders, but this one has just about everything. It is one of 100 homes built by J. C. Nichols in his Prairie Village development, Kansas City, opened Sept. 1, 1941. These fine little homes of the type shown were snapped up almost immediately; this is easily understandable when the excellent plan, trim appearance and high value are considered. Note the circulation, open plan and screened porch.

Illustration by J. C. Nichols

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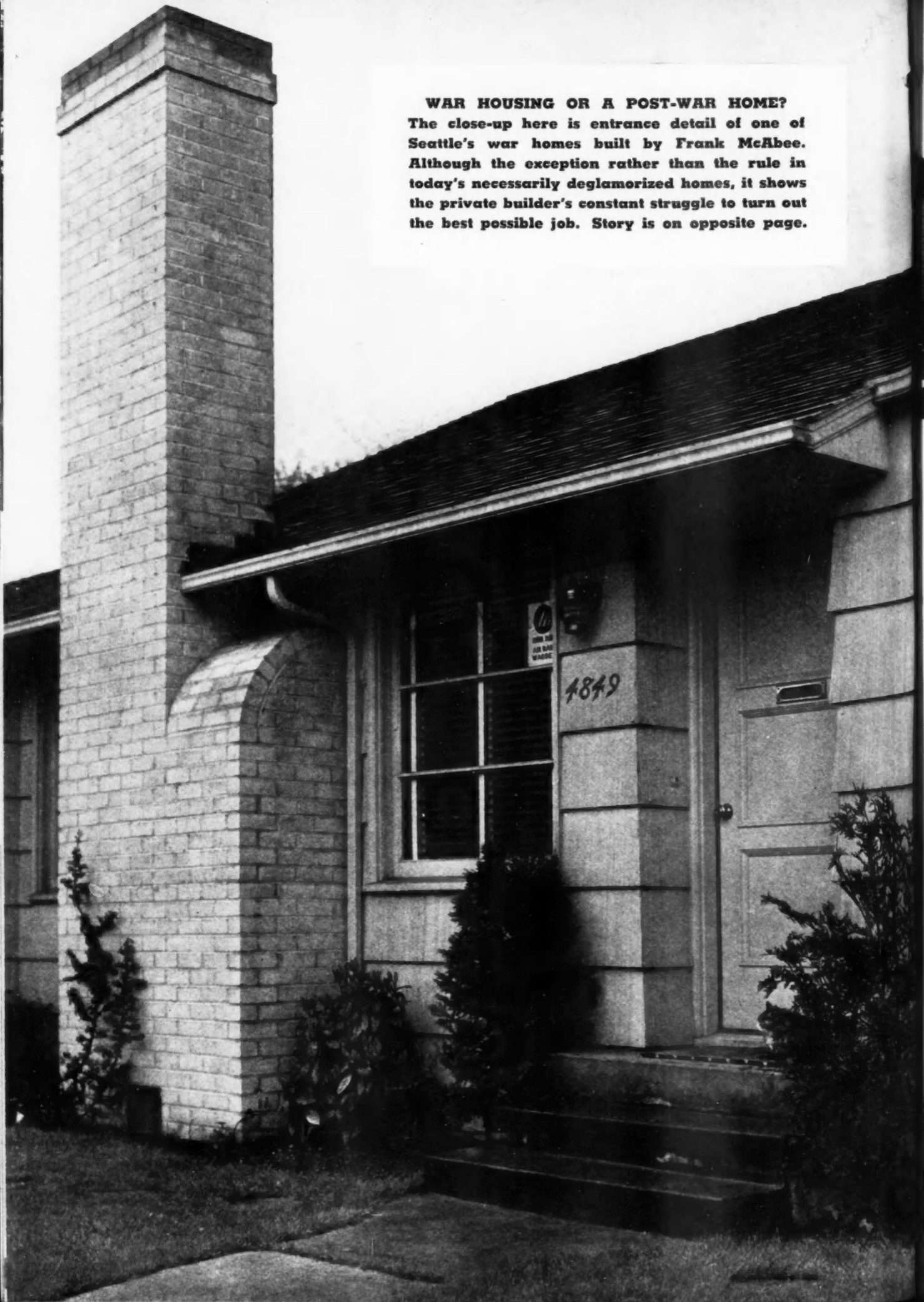
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WAR HOUSING OR A POST-WAR HOME?

The close-up here is entrance detail of one of Seattle's war homes built by Frank McAbee. Although the exception rather than the rule in today's necessarily deglamorized homes, it shows the private builder's constant struggle to turn out the best possible job. Story is on opposite page.



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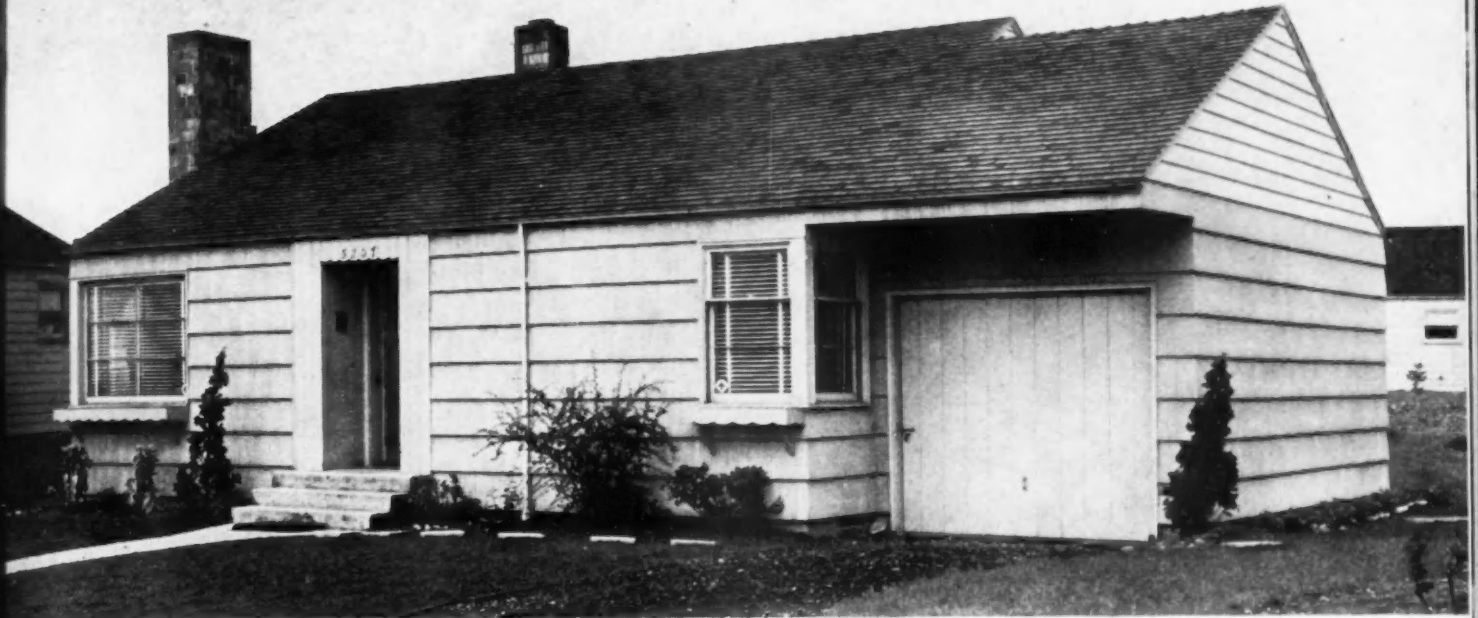
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Seattle Pattern for Good, Small Post-War Homes

Four builders used three basic plans to produce 200 Title VI homes in a single, unified development allowing benefit of standardized operations

THE house above is one of 200, all built from three excellent basic plans by Paul Hayden Kirk for Columbia Ridge development, Seattle. Numerous exterior variations were worked out; the entrance detail opposite shows how the fireplace in the plan at the right was moved around for an alternate front elevation.

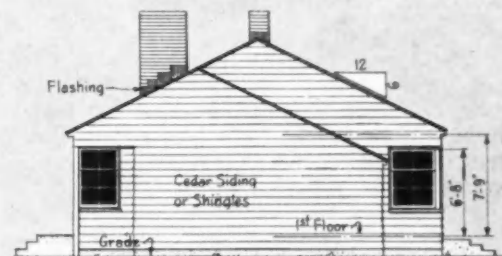
This war project, on which there were 50 houses apiece built by F. R. McAbee, Inc., Ray Seelye, Inc., Arthur H. Ormsby, Inc., and Swanson Construction Co., is definitely a post-war low-cost home pattern. It points to a trend toward small homes well designed, well planned, well built. Larger developments in any one area, plus several builders' operations on the project, made possible small homes the public can afford. Needless to say, the units were all sold in a short time.

The typical plan at the right has good circulation with the utility room connecting the rear entrance, kitchen and back hall. This is an unusual feature in four-room design. Also, dining space is part of the living room to give additional openness; there is no waste space. Other features are fireplace, recessed entrance, attached garage, linen closet connected to bath.

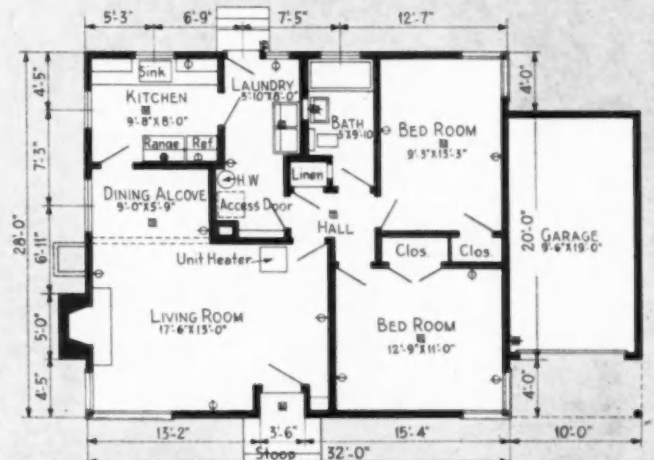
THE exterior view, elevations and floor plan on this page are typical of the 200-home Columbia Ridge development, Seattle. Other units will be shown in later issue.



FRONT ELEVATION



RIGHT SIDE ELEVATION



FIRST FLOOR PLAN



POPULAR small town war homes built by Lex Marsh of Charlotte, N. C., fit into variety of communities. Above, several are shown on an attractive street adjacent to higher priced property.



LEX MARSH, JR.

Carolina War Model Fits Small Town Needs

Same standard plan used on scattered sites in several towns. Double-duty room is popular feature

FOR its Standardized War Home Model this month (No. 4 in a series) *American Builder* presents a 992 sq. ft. floor area house being built by Lex Marsh, Jr., of Charlotte, N. C.

Lex Marsh is building this little house under FHA Title VI on scattered sites in a number of North Carolina communities. He has perfected one master plan with three exterior variations which he finds fit well into various types of communities.

An outstanding feature of this

standard plan is the double-duty room next to the kitchen which serves as either a dining room or as an extra bedroom. This flexibility is highly important, according to Marsh. There is also ample dining space in the kitchen for the average small family.

Another feature of this standard plan which makes it popular in the Carolina area is the center hall arrangement which permits the installation of a very economical type of heating plant. For war housing, a small space heater is installed. However, in post-war, an inexpensive cen-

tral heating unit could be installed in this area with flue connections kept to a minimum. The same chimney serves both the heating plant and the adjacent fireplace.

As the accompanying PD-105 material list shows, critical metals are kept to a minimum. This is helped by the economical grouping of the kitchen and bathroom plumbing.

Builder Marsh is demonstrating that Title VI war housing does not necessarily have to be confined to big cities or to mass projects. He has built more than 60 houses of the type shown, most of them on scattered locations and in several different communities—some as far as 200 miles from his home town of Charlotte, where at present there is no building.

These are well constructed little houses that will become a permanent part of the communities in which they are built.

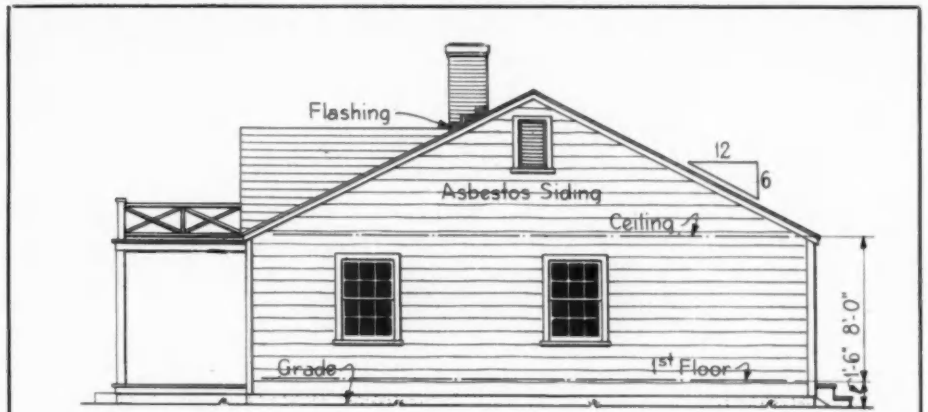


ALL FHA Title VI war housing is not confined to big cities or mass projects. The North Carolina houses illustrated at left and above are being built by Lex Marsh in small groups and on scattered sites and they fit well into many different communities. The standardized floor plan with area of only 992 sq. ft. is flexible, economical and very popular.

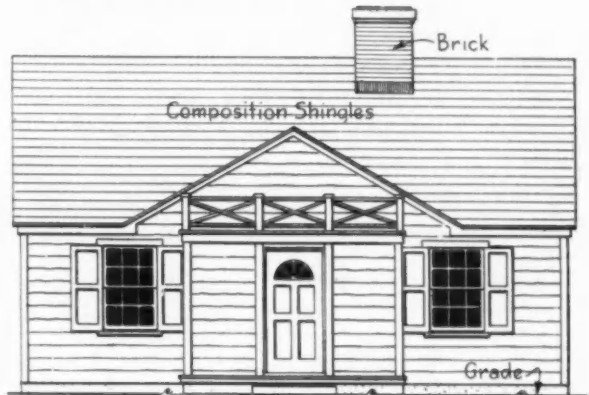
FOURTH of American Builder's series of Standardized War Homes complete with PD-105 material list.

Popular plan—992 sq. ft. floor area fits variety of small town sites.

Double-duty room next to kitchen serves as dining room or bedroom. Center hall provides efficient, economical heating arrangement for adjacent rooms.



RIGHT SIDE ELEVATION



ALTERNATE FRONT ELEVATION



FRONT ELEVATION



FIRST FLOOR PLAN

Critical Materials Required for 21 Lex Marsh Houses as Listed on WPB Form PD-105.

PD No.	Quantity	PD No.	Quantity	PD No.	Quantity
225—Fireplace dampers.....	21	2941—Double-hung sash hardware.....	210 sets	333—Nonmetallic sheathed cable.....	6,930 l. f.
272—Joint reinforcing.....	714 s. y.	2945—Window screen hardware.....	210 sets	341—Nonmetallic outlet box.....	315
273—Corner beads for vertical corners:		2976—Shade fixtures.....	210 sets	350—Nonmetallic plates and wiring devices.....	378
Nonmetallic coating.....	630 l. f.	2981—Nails and screws, non-metallic coating.....	10,500 lb.	361—Clamps, lock nuts, connectors, bushings and nipples.....	147 lb.
Zinc coated.....	252 l. f.	2982—Nails, zinc coated.....	1,050 lb.	362—Hangers, straps, supports, sleeves and fastenings.....	42 lb.
275—Nails, staples and tie wire.....	735 lb.	321—Nonmetallic service cables.....	420 l. f.	363—Cable connectors, copper and copper alloy.....	84
2923—Entrance hardware.....	21 sets	323—Service cable heads.....	21	370—Solder.....	10 1/2 lb.
2924—Rear door hardware.....	42 sets	324—Service equipment, including enclosures.....	21	381—Interior lighting fixtures.....	126
2925—Bathroom door hardware.....	21 sets	Panel boards, including enclosures.....	21		
2926—Interior door and closet door hardware.....	189 sets	332—Insulated single conductors.....	420 l. f.		
2929—Screen door hardware.....	63 sets				
293—Cabinet Hardware:					
Doors.....	105				
Drawers.....	21				

(Continued to page 72)

Standardized War Home Model Selected by National Association of Home Builders

War Conference Highlights

PRESIDENT Roosevelt sent a message expressing his appreciation to U. S. builders for their contributions to war housing. "Government and private industry have worked as a team in the war housing effort," he said. "I am confident that this teamwork will continue—and will be utilized to tackle the great job ahead when victory is won."

FOUR HUNDRED active home builders is believed to constitute the largest gathering in history.

PRECUTTING vs. prefabrication forum was high spot in technical subjects. Bullish on site prefab, Dave Bohannon recited the facts behind his 700 war home job—average hours only 693 hours. On the bearish side, others questioned progress until codes and standards are clarified, labor problems ironed out. Interesting statistic by Vaux Wilson: Costs 50 cents a mile to haul a five-room prefab house.

CHICAGO delegation of more than forty made a strong bid for their candidate, Joe Merrion. After several days of electioneering, friendly compromise was reached, Merrion becoming vice president and head of Emergency Committee.

BEST STORY—Some of the builders discovered that NHA chief Blandford was not such a bad guy personally. Early one morning, when bright ideas were being generated fast, someone proposed running "Jack" for president of NAHB. Vice presidents were to be Bohannon, Merrion and Gerholz; Nixon, campaign manager; votes to be freely bought by priorities. It made the best story of the meeting.

CLEVELAND HOSTS—The Cleveland Builders' Association as hosts made many friends. Their cocktail party was a big success. American Builder also held a small (?) party for NAHB directors and friends.

DOMESTIC ILLITERACY—Best phrase of the meeting was coined by Speaker James C. Downs, who said that "domestic illiteracy" was the curse of modern women who are no longer able to bake, do laundry, can, sew, and thereby no longer need such a big house. He called divorces "serial polygamy."



CAPACITY CROWD of home builders from every corner of the country attended

"Stop Public Housers" is Th

More than 400 from 40 states attend largest builders' conference in history. Raise \$50,000 budget, discuss war and post-war homes. Gerholz elected president of Association.

MORE than four hundred home builders from all parts of the United States assembled in Cleveland last month to discuss war and post-war home building problems.

The occasion was the War Conference of the National Association of Home Builders, and the meetings, luncheons and dinners of the three-day session were crowded to capacity.

High point of the conference was an address by John B. Blandford, Jr., National Housing Administrator, who told the builders that post-

war housing will be "predominantly a job for private enterprise." He gained the admiration of builders by volunteering to answer questions from the floor following his prepared address.

Running through the meeting was a strong current of opposition to public housing. In his opening address Fritz Burns, president, pointed out that private building would have been stopped long ago if it had not been for the effective and vigilant effort of the Home Builders' Emergency Committee and the National Association of Home Builders.

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The Cleveland war conference of the National Association of Home Builders. NHA Administrator Blandford addressed session pictured above.

Theme of Cleveland Builders' Meeting

Frank Cortright, executive vice president, described the growth of the Association in the past year from 712 members to approximately 1700, and the number of associations from 15 to 31. The Association is now the authorized voice of the home building industry, he said, and is called on by government officials, manufacturers, and other groups for advice and consultation.

Evidence that NAHB has become an important group in the building industry was given by the fact that a preliminary budget of \$50,000 was quickly over-subscribed, and steps are under way to raise double this amount for an operating reserve and to establish a research institute.

Basic Objectives Set

A strong slate of officers was elected for the coming year with Robert P. Gerholz of Flint, Mich., as president, Joseph E. Merrion of Chicago, 1st vice president, and Ralph S. Duke of St. Louis, Mo., secretary.

The four basic objectives of NAHB for the coming year were summed up at the convention as follows:

1. Rapid completion of the War Housing Program.
2. Early relaxation of L-41 so as to permit gradual resumption of civilian construction.
3. Continued functioning of an independent and completely equipped FHA, prepared adequately to serve private building demands in the post-war period.
4. Vigorous opposition to the expenditure of taxpayers' funds for public housing—a job which it is felt private enterprise can do, reaching even the lower income families, if properly implemented.

The War Conference was opened with an address of welcome by the Hon. Frank J. Lausche, mayor of Cleveland, and official greetings from George J. Goudreau, president of the Builders' Association of Greater Cleveland, a new and vigor-

ous addition to NAHB. Following reports of committees on FHA legislation, public housing and homes for veterans, Joseph E. Merrion, first vice president, presented charters to the 31 affiliated local builders' associations in an impressive ceremony.

The second day of the convention was opened with an address by Ralph S. Duke, president of the Builders' Guild of St. Louis, who described that organization's interesting Home Purchase Agreement plan. Carl R. Boester, housing research executive of Purdue University, described the importance of housing research to the builder. Better engineering, he said, would enable the reduction of costs, and in this connection he described a new type of pictorial presentation—illustrative drawings that "even a high school boy could understand."

The Federal Housing Administration was represented at the convention by Earle S. Draper, deputy commissioner, and Curt C. Mack, direc-



BOB GERHOLZ, Earle Draper of FHA and Dave Bohannon talk business. At right, Curt C. Mack, FHA Underwriting Chief.

tor of underwriting. Both took part in a builders' problem forum which was enlivened by questions from the floor. NHA Administrator Blandford also took part in this forum, and the three government officials were put on the spot with a variety of questions.

In his remarks, Draper said that FHA will revert to Title II as soon as possible after the war. He said that as much good housing as possible should be built by private enterprise. He also stressed the importance of building more rental housing in the post-war.

Hugh Potter of Houston, Tex., president of the Urban Land Institute, and well known in both building and real estate circles, was toastmaster at the Home Builders' luncheon on the third day of the conference. He urged rebuilding of

blighted areas of cities through private enterprise action, such as is recommended by the Urban Land Institute.

"If Congress elects to let private builders perform the needed post-war housing, they must do a good job," he said. "It is important that they avoid selfishness or inefficiency in their operations, making a fair profit but delivering a better type of home."

Will Aid FHA

One of the most stirring addresses of the conference was made by Colonel William H. Evans of Los Angeles at this luncheon, as part of the finance drive to raise ample funds for the work of the Association.

"We have a service to perform and definite things to do," Evans said. "We are going to be called on

to develop future legislation, to get more money for FHA, to develop plans for homes for returning soldiers. We will need to set up state organizations of home builders to carry on this work. We must work with Congress—change codes—fight for the basic American principle of private enterprise."

Following Evans' address, numerous subscriptions were made from the floor by prominent builders from all parts of the country. Many of these ranged from \$100 to \$1,000. The various city and regional associations made contributions ranging from \$500 to a top of \$7,700 by the Building Contractors Association of Southern California. As a result of the rapid growth in membership and of the contributions of individual builders, a preliminary budget of \$50,000 was quickly subscribed.



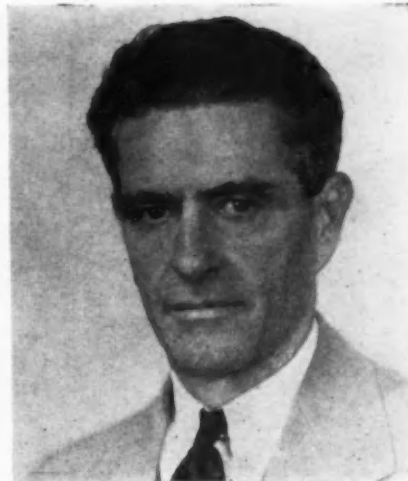
NOTABLES, including Congressman Edward Hebert and Major M. V. O'Connell, U.S.M.C., spoke at the home builders' annual dinner.



ROBERT P. GERHOLZ, president.



JOSEPH E. MERRION, vice president.



RALPH S. DUKE, secretary.

Gerholz, Merrion, Duke to Head NAHB

Strong leadership in war and post-war home building promised. Will fight for end of public housing, early relaxation of L-41, strong FHA, sound legislation.

THE RECORD—"We have met the challenge of public housing by building **BETTER** homes that have kept workers on the job. We have met the problems of our time by organizing, and have found strength in adversity. We are ready and organized to meet post-war housing problems. Let us destroy the slums, check blight, build fine houses, and continue our efforts until private enterprise has provided every city and town in the land with all the decent homes it can possibly absorb."—Fritz B. Burns.

THE FUTURE—"We will finish the war housing job quickly, in spite of all difficulties. We will demand an early relaxation of L-41 so that we can do the job that has to be done ahead. We will **STOP** the public housers in their tracks, and we are now organized to make our voices heard around the length and breadth of America."—Robert P. Gerholz.



FRITZ B. BURNS, retiring president, receives certificate of appreciation from new president.

Unusual Tribute to Burns

HIGH POINT of the closing session of the convention was the extraordinary tribute paid to Fritz B. Burns, retiring president, under whose leadership NAHB was welded into a strong, national organization. Dave Bohannon told the meeting that Burns had given "\$10,000 of his own money and about five years of his life" to the job.



Joe Merrion, Carl Boester and George Goudreau talk about research.



Petersen and Bohannon talk prefab.

Blandford says private builders have predominant home role

IN the feature address of the war conference John B. Blandford, Jr., administrator of the National Housing Agency, stated that production and financing of post-war housing will be "predominantly a job for private enterprise," with the government standing ready to extend whatever technical or financial aid is needed.

He said Congress will determine future housing policies; and warmly defended the job NHA has done in war housing.

He stood up on the platform and answered questions from the audience in a way that did much to dispel some of the questions and fears of builders.

Extracts from his speech are as follows:

600,000 by Private Builders

The private building industry is pressing down the home stretch of its important wartime housing job.

By November 1, private builders had completed approximately 600,000 new family dwellings under the war housing program and had more than 60,000 additional units under construction.

This substantial program—already involving a private investment of more than \$3,000,000,000 and providing housing for more than 2,500,000 persons—is by no means the final contribution of private builders to the war housing program. Roughly 170,000 additional privately financed units will be required. About 115,000 already have been programmed for specific localities, with priorities already issued or immediately available.

Since the establishment of the National Housing Agency in February, 1942, our basic policy has been to secure maximum participation by private builders and private lending institutions in the war housing program.

By our policy of maximum assistance

to privately financed operations, private enterprise is carrying more than \$3,000,000,000 of the investment in new war housing. As a result of these joint policies, public financing has been required for less than 22 per cent of the job of housing in-migrating war workers.

No "Freeze" Attempted

By shifting to temporary construction, we have saved approximately \$400,000,000 in federal funds in the cost of public war dwellings alone. By working out a conversion technique whereby family dwellings can be produced at one-half the cost of even a temporary new dwelling, we are saving another \$75,000,000.

These are useful facts to have in mind when fanciful statements are sometimes heard that public housers, so-called, have seized control of the war housing program in order to freeze out private builders, or that the National Housing Agency has wastefully squandered public funds, or that temporary war housing is a horrible example of "strip-tease" jerry building. The truth is that public financing is carrying the full impact of wartime uncertainties by meeting emergency needs which by no stretch of the imagination could be considered a proper vehicle for long term private financing, whether or not insured by the Government.

When the decision was made to meet these temporary war needs with temporary construction, a deliberate effort was made to provide minimum standardized dwellings which would be suitable only for short-term use under wartime standards—definitely substandard in relation to adequate permanent housing. The objective, of course, was to economize on critical materials, to hold to a minimum the outlay of gov-

(Continued to page 71)

PRECUTTING VS. PREFAB FORUM

HIGH point of the technical discussions at the NAHB conference was the twelve-round bout between "Kid Prefab" and "Buzz Saw Precutting."

Taking part in the discussions were David D. Bohannon, well known San Francisco builder, who precuts all of his material on the job; Arvid Petersen, Detroit builder who has been building prefabricated war houses; and F. V. Wilson, Jr., vice president of the Homasote Co.

Wilson, however, said that he prefers the words "precision building" to prefabrication in describing the type of operation he proposes for post-war.

Bohannon, the first speaker on the forum, described precutting methods which have enabled him to cut the time on his latest project, Rollingwood, to 693 working hours per house. He maintained that through precutting, efficient organization and mass methods at the site, he could produce cheaper than factory fabrication.

Petersen, who is a well known builder of Detroit, described his yard-prefabrication methods, but concluded that to be widely used and successful, many of the present restrictive codes, labor rules and other barricades will have to be removed.

Wilson gave a striking picture of future home merchandising through department stores, and estimated a 10 to 32 per cent saving by precision building methods over conventional construction. In addition to taking part in the forum, Wilson was feature speaker at the Tuesday luncheon, and described the results of his firm's activities with department stores under the title, "What 200,000 Home Buyers Expect in the Post-War Homes."

Of the visitors to the department

(Continued to page 82)



Downs at the microphone.

Downs Describes Tomorrow's Town

JAMES C. DOWNS, Jr., of Chicago, described to an enthusiastic builder audience the trends and changes that are affecting the town of tomorrow.

"What happens to people eventually happens to buildings," he said. A sharp decrease in the size of families has taken place. A city of 100,000 in 1900 would require 20,000 houses, he pointed out, whereas now the same population would require 33,000.

Not only are families smaller, but the home is no longer used as extensively as a gathering place, and it no longer is a "production center."

"Domestic Illiteracy"

The housewife of today is prone to "domestic illiteracy," according to Downs, meaning that she no longer uses the house for laundry, baking, making clothes and other domestic pursuits as of old. The home of tomorrow will be not only smaller but will have to be more "automatic."

The effect of divorces, according to Downs, is to make more family units—the wife does not go home to mother, she sets up a new household. He referred to the increasing number of divorces as "serial polygamy."

The cities of the future will have an increasing number of small, well equipped apartment units in the close-in areas for divorcees, widows, old people and small families in which the wife has a job. The more "old fashioned" type of family will move to the suburbs.

Downs predicted a continuing increase in the price of real estate and of houses. In fact, all prices, all wages and services are mounting to higher levels and will not go back to pre-war figures, he said.

GOOD FELLOWS GET TOGETHER TO TRADE WARTIME KNOW-HOW



DEEP DISCUSSION: Al Balch, Seattle, Jim March, Tacoma, and E. O. Brady.



DETROIT LEADERS: Ed Kuhlman, Harry Durbin and Joe Holtzman.



CONVIVIALITY: Harry Quinn and L. B. Harris, Chicago, and H. A. Dixon, Pittsburgh.

SEEN AT LUNCHEON: Standing, Joe Meyerhoff, Baltimore, Joe Mason, Walter Durham. Seated: A. E. Taylor, Jack and Ray Heslop, and Harold Cassidy, Akron.



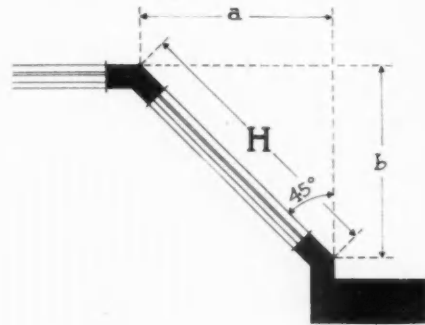
HANDY NOTEBOOK WORK SHEETS

American Builder JOB HELPS

Prepared by
Don Graf

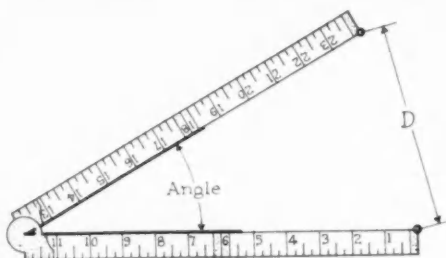
Builders' short cuts, time savers and how-to-do-it ideas shown in convenient 3x5 notebook size for use in office or on the job. A continuing editorial feature appearing monthly. Sheets or notebooks are not for sale or available from any other source than the editorial pages of American Builder.

HOW TO FIND SIDES OF BAYS



a-b	H	a-b	H
1'-6"	2'-1 ¹ / ₁₆ "	2'-10"	4'-0 ¹ / ₁₆ "
1'-7"	2'-2 ¹ / ₁₆ "	2'-11"	4'-1 ¹ / ₁₆ "
1'-8"	2'-4 ¹ / ₁₆ "	3'-0"	4'-2 ¹ / ₁₆ "
1'-9"	2'-5 ¹ / ₁₆ "	3'-1"	4'-4 ¹ / ₁₆ "
1'-10"	2'-7 ¹ / ₁₆ "	3'-2"	4'-5 ¹ / ₁₆ "
1'-11"	2'-8 ¹ / ₁₆ "	3'-3"	4'-7 ¹ / ₁₆ "
2'-0"	2'-9 ¹ / ₁₆ "	3'-4"	4'-8 ¹ / ₁₆ "
2'-1"	2'-11 ¹ / ₁₆ "	3'-5"	4'-10"
2'-2"	3'-0 ¹ / ₁₆ "	3'-6"	4'-11 ¹ / ₁₆ "
2'-3"	3'-2 ¹ / ₁₆ "	3'-7"	5'-1 ¹ / ₁₆ "
2'-4"	3'-3 ¹ / ₁₆ "	3'-8"	5'-2 ¹ / ₁₆ "
2'-5"	3'-5"	3'-9"	5'-3 ¹ / ₁₆ "
2'-6"	3'-6 ¹ / ₁₆ "	3'-10"	5'-5 ¹ / ₁₆ "
2'-7"	3'-7 ¹ / ₁₆ "	3'-11"	5'-6 ¹ / ₁₆ "
2'-8"	3'-9 ¹ / ₁₆ "	4'-0"	5'-7 ¹ / ₁₆ "
2'-9"	3'-10 ¹ / ₁₆ "	4'-1"	5'-9"

HOW TO FIND ANGLES WITH 2-FT. RULE



2-foot Rule Being Used to Measure a 30° Angle

Angle	D	Angle	D
10°	2 3/32"	33°	6 13/16"
15°	3 1/8"	34°	7 1/32"
16°	3 11/32"	35°	7 7/32"
17°	3 9/16"	36°	7 13/32"
18°	3 3/4"	37°	7 5/8"
19°	3 15/16"	38°	7 13/16"
20°	4 5/32"	39°	8 "
21°	4 3/8"	40°	8 3/16"
22°	4 19/32"	41°	8 13/32"
23°	4 25/32"	42°	8 19/32"
24°	5 "	44°	9 "
25°	5 3/16"	46°	9 3/8"
26°	5 13/32"	48°	9 3/4"
27°	5 19/32"	50°	10 1/8"
28°	5 13/16"	52°	10 17/32"
29°	6 "	54°	10 29/32"
30°	6 7/32"	56°	11 9/32"
31°	6 13/32"	58°	11 5/8"
32°	6 5/8"	60°	12 "

In the example illustrated, the legs of the rule would form a 30° angle when the distance D (measured with another rule) was 6 7/32" as shown in the table. Values in the table will give other angles similarly, which will be sufficiently accurate for most bench work.

HOW TO PLACE CONCRETE IN WINTER

DANGER OF FREEZING—If concrete is allowed to freeze during the first 72 hours after placing it may be damaged permanently. It is usually necessary to heat one or more of the concrete ingredients, during freezing weather, so that the mix as it is placed and for 5 days thereafter will be not less than 50°F.

PRELIMINARY PRECAUTIONS—Before concreting is started, all ice, snow, and frost should be removed from the interior of forms and from reinforcing steel and imbedded parts. This is most easily accomplished with steam. Concrete should never be placed on a frozen subgrade, as later thawings will cause settlement.

MIXING WATER—Heating the mixing water is generally the most practical and efficient means for warming the concrete. Water is not only easy to heat, but each pound of water heated to a given temperature has roughly 5 times as many heat units stored in it as in a pound of aggregate or cement at that temperature.

The temperature of the water should not exceed about 165°F because of the danger of causing a "flash set" of the cement. (This has occurred at mixing water temperatures as low as 140°F.) The maximum temperature of the water that is safe to use can readily be determined on the job by experiment.

AGGREGATES—The use of the over-heated aggregate from close to the flue of fire-flue heated piles is to be discouraged. Overheating the aggregate causes incipient cracks in the aggregate particles, excessive drying in parts of the placed concrete, accelerated setting action, and produces fog in the mixer which renders inspection during mixing difficult.

ADMIXTURES AND SPECIAL CEMENTS—The use of high early strength cement reduces the time required for protection about one-half. Not more than 2 lbs. of calcium chloride per sack of cement will safely speed up hardening but is not a substitute for heating the materials. Special quickhardening cements requiring no heating, are available for special purposes.



NEEDED: Hundreds of Millions of Dollars Worth of Building Materials

AMERICAN BUILDER has just completed a detailed survey of inventory conditions in retail lumber and building material yards of all types, in all parts of the country. It reveals a startling picture of wartime conditions and post-war buying needs. Hundreds of millions of dollars worth of building materials are needed merely to restore dealer stocks to 1941 levels.

Retail and jobber stocks have shrunk so much, or are so badly out of balance, that the industry could not go ahead with even a moderate amount of new building if building restrictions were immediately removed. Many essential items now missing from dealer stocks will have to be restored before building can be resumed on a large scale. All lumber items are scarce. More than 4 billion feet of lumber alone are required to re-stock the nation's lumber yards, in addition to the need for restoring jobber stocks, and assuming that not a stick of lumber is used for construction. The dealers also need more than 11,000 cars of millwork of various kinds, together with huge quantities of other lumber items and materials of all types.

Supplies of wood shingles, plywood, strip flooring, wood lath, hardboard, metal lath, hardware, tools, metal sheets, valley and flashing metals and woven wire fencing are seriously depleted. Lack of wood shingles has increased demand for asphalt roofing products. Adequate supplies of gypsum board, plaster and cement are available, according to dealers.

Used Lumber a Problem

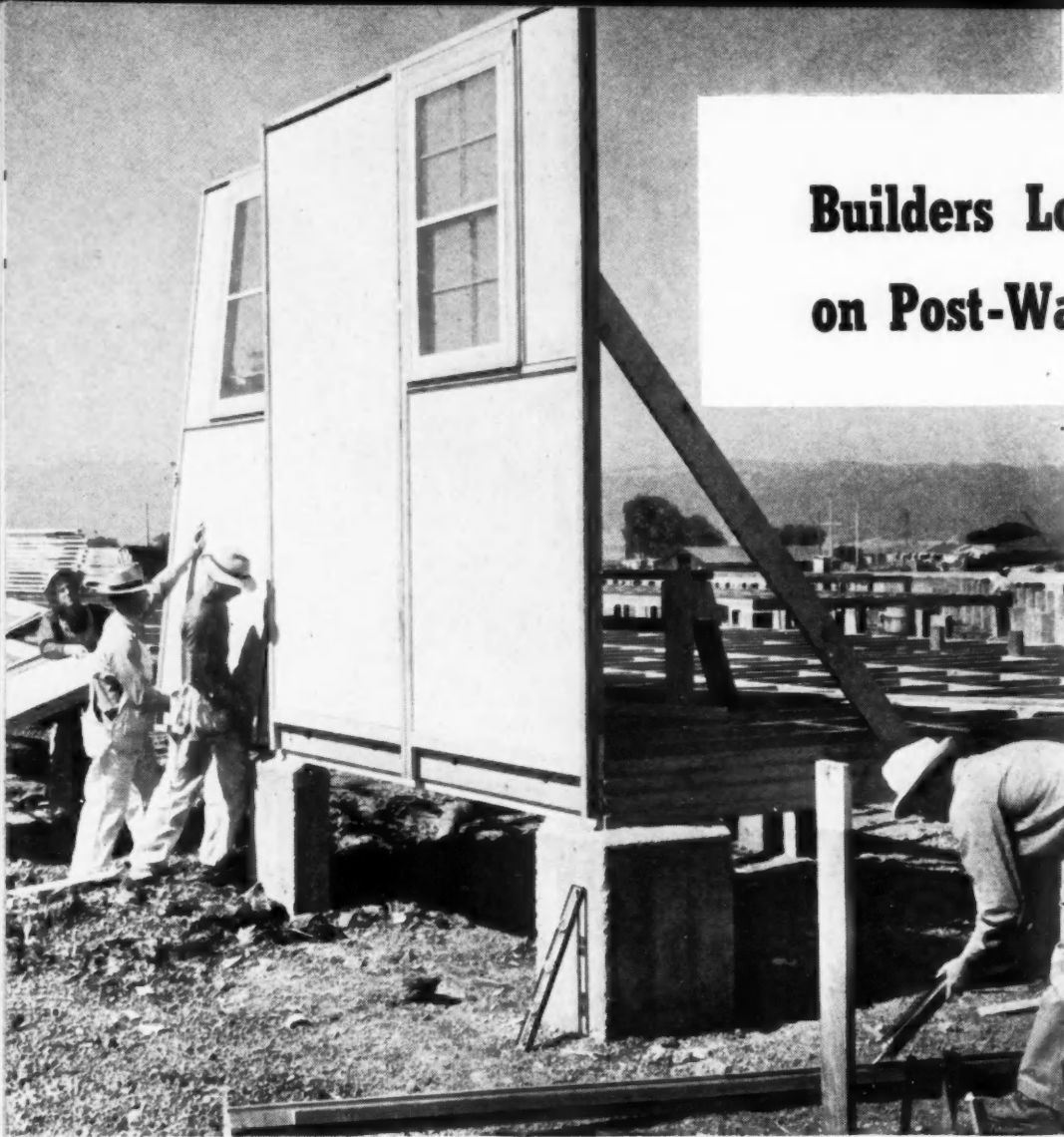
More detailed reports now are being prepared to show dealer buying needs by products, by regions, sizes of towns, types of trade served, sales volume, inventory and inventory shrinkage. These reports will be presented to manufacturers, trade associations, legislators and others to show that the need for orderly restoration of stocks in lumber and building material yards is as important and as critical a factor in assuring post-war prosperity as is orderly removal of building restrictions at the earliest possible moment, as was so dramatically pointed out in the October *American Builder*.

On the other side of the ledger is the possibility of a "flash flood" of surplus and used lumber now stand-

ing in army camps and other military or naval structures that may be dumped on to the market after the war. This lumber may be needed after the war. We should keep in mind that available supplies of lumber and lumber products have declined because astronomical quantities are required for military use. When a big bomber has to be shipped, instead of being flown overseas, the packing cases used require enough lumber to build an ordinary bungalow. Shipping cases and crates for ammunition, food, machines and materials of war likewise consume enormous quantities of lumber and will be needed so long as we continue to ship goods out of the country.

The time manufacturers will require to restore dealer stocks after the war will depend on how quickly building gets under way, and how much of their post-war production goes into immediate use. The job may require anywhere from three months to two years, depending on the product and on conditions within the industry. In any event, manufacturers in the building field now have an assured market, a back-log of post-war business that is ready and waiting.

Builders Look for Answers on Post-War Prefabrication



Numerous questions on prefab construction asked at NAHB convention show much current interest on this subject. Consensus: No one yet has final answer.

Navy program now using Modulok panel system for hospitals is explained and pictured here in Case Study No. 5.

PREFAB PROGRESS

To iron out the postwar problems on marketing prefabricated homes, manufacturers of such factory-produced construction have formed the Prefabricated Home Manufacturers Institute. Harry H. Steidle is managing director, with headquarters in Washington, D. C. Members have turned out 100,000 war units.

THE new wave of interest in getting the right answers to postwar prefabrication was easily the top technical consideration of the National Association of Home Builders' Convention held last month in Cleveland. Various phases were considered with on-the-job reports from experienced members and experts. Plenty of bugs were dragged into the open, and it was evident that much remains

to be done on the labor and merchandising aspects. War progress has been remarkable, however.

Over 100,000 structures have been put up in slightly more than two years, and builders foresee the possibilities of changes in traditional methods as a result of the proven job methods. For instance, the U. S. Navy's current temporary hospital program now under way has many interesting features that might be adapted to post-war building.

These projects include three large new hospitals at Pacific Coast bases with a total of 89 ward buildings of a unique prefabricated type, to accommodate a total of 2,850 beds; when fully equipped, they are expected to represent an investment of around ten million dollars.

Two more hospitals of the same type are scheduled for early construction. Prefabrication of Navy hospitals, officials point out, makes it possible to have parts stored in advance at strategic points to be shipped immediately wherever needed for speedy construction.

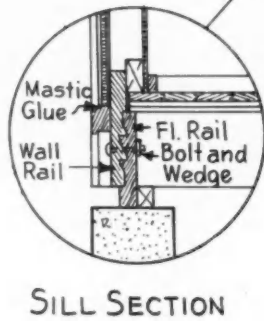
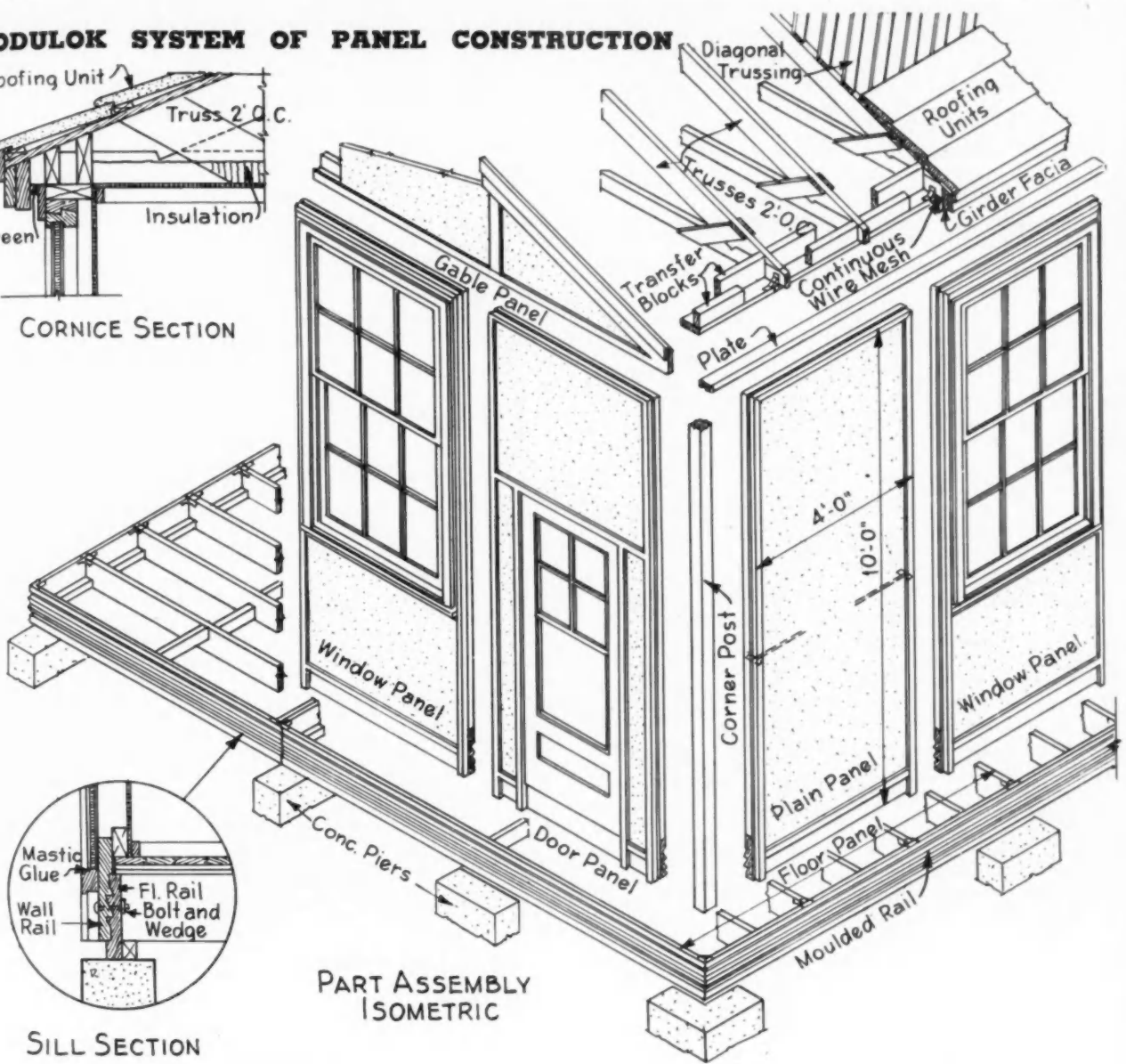
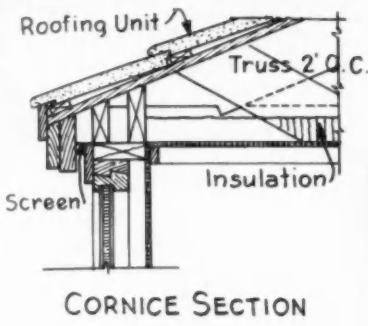
The hospitals just completed, pre-

fabricated by Modulok, Inc., are the first of this type ever built and are regarded as far superior to the shack construction of many other wartime hospitals which are viewed as temporary. The Modulok system was originated by Arnold Southwell, architect, and Teel Williams. They were built at substantially less cost than so-called permanent masonry construction and are expected to supply service for a long time at very low maintenance cost. All such units are demountable and can be moved after the war, if desired, to be used elsewhere by the Veterans' Administration. Previously, Modulok had completed many prefabricated buildings for the military service since its organization 18 months ago. These included barracks in Florida for the Navy and Coast Guard, Navy barracks and other housing facilities in Virginia, Navy housing in Maryland and Army housing in Texas.

Actual construction work on the hospitals was handled by several leading western contractors, who have expressed themselves as impressed not

(Continued to page 80)

MODULOK SYSTEM OF PANEL CONSTRUCTION



ISOMETRIC DRAWING above shows parts assembly of Modulok system of prefabrication. Details indicate rails at sill and assembly of panels at plate, cornice and roofing units. Below, Navy hospital ward building, 28 by 212 feet, being assembled; panels are ready to be set in place equipped with sash, doors, screens, hardware. Eight-foot shingles are being laid on diagonal sheathing.



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\$200 JOBS

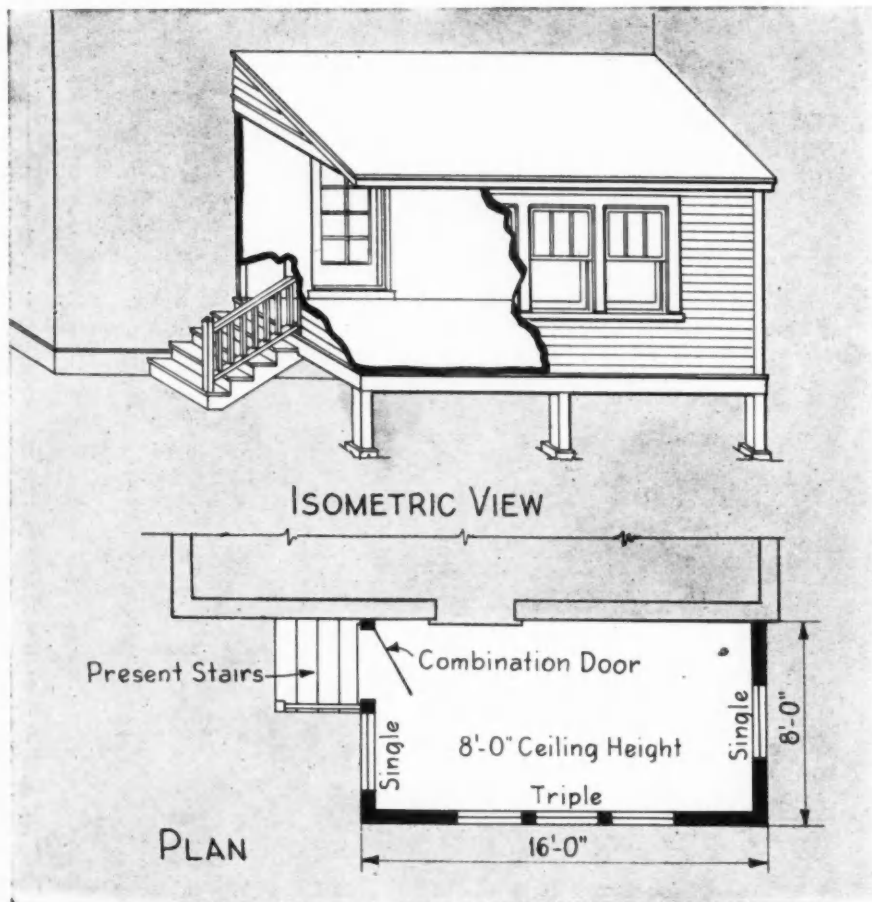
This "Ten-minute method" makes it easy to quote a price quickly and close a sale on the first visit.

By Oscar F. Pederson

IT IS the purpose of this article to tell how to estimate quickly on remodeling and repair operations. This can be done on the first call. You can generally give your customer his price within ten minutes after measuring the job and get his answer right then and there. No more long lists to sweat over and await a price on. No more trying to figure each labor item separately. No more call backs to quote—if your

customer is still interested after all this time has elapsed since your first call was made.

This quick estimating system might be called the "square foot method" or the "ten minute method." Every operation is jotted down on your estimating pad, with the necessary quantities. You will know how much it costs you, material and labor, per square foot, for each item. It is then only a matter of arithmetic



TYPICAL porch remodeling job as estimated with this article.

How to estimate and sell them quickly

to arrive at a total price and get your customer's reaction immediately. With this method you can figure as many as ten jobs in one evening, and know that your price is right!

This method has been tested and proved by many leading contractors of the Chicago area for the past several years. Naturally there are certain circumstances on jobs that may cause you to deviate from this system slightly and charge additional for certain things that are out of the ordinary.

Our first example is a porch enclosure with check rail, windows, and bevel siding. We are all familiar with enclosure work as this is one of the most popular forms of remodeling today. The labor is based on an average of \$2.00 per hour and the material is figured at Chicago prices, which are about average. The unit prices as shown are being used today in the Chicago market and they allow for waste, etc. It is not necessary to add for bevel siding and sheathing as is customary, as the allowance is included in your unit price per item.

How to Figure a Job

This is a typical porch enclosure. (See sketch at left.) This porch is 8 x 16 ft. open from floor to ceiling except for porch railing. Customer wants the following specification: One combination door at one end, one check rail window next to door, a triple check rail window across front, a single check rail window at opposite end, close in from floor to ceiling 8/0 high with 2 x 4 studs 16" O.C., common sheathing lumber, and 6" bevel siding. Here is your quick estimate and how it works.

1. 5 check rail windows complete (2 singles, 1 triple) @ \$18.00.....\$ 90.00
(Windows are figured at \$18.00 per opening installed)
2. 1 rear combination door complete..... 20.00
3. 200 square feet 2x4 studs 16" O.C. @ .12..... 24.00
4. 200 square feet sheathing lumber @ .12..... 24.00
5. 200 square feet 6" bevel siding @ .16..... 32.00
6. Remove old hand rail..... 5.00
7. 32 lineal feet 1x3 and 1x4 No. 1 W.P. or equal corner boards @ .15..... 4.80

Total price.....\$199.80

Items No. 3, 4, and 5 are figured the following way:

The perimeter of the three sides of

the porch is 32 lineal feet multiplied by the eight foot height or a total square foot count of 256 square feet. Give credit on the door of fifteen feet and credit on each window of 10 feet or a total of 65 square feet off of 256 square feet. For quick estimating purposes this is correct and right.

This method is much quicker than making out a list etc., and will enable you to price a job as simple as the one outlined above in a matter of minutes. But suppose your customer doesn't want to spend \$200.00. Maybe he doesn't want bevel siding and sheathing but instead wants something cheaper. One alternate is then to change the 2 x 4 studs to 24" O.C. and to use drop siding which requires no sheathing under. Your quick estimate would then be—

5 check rail windows complete @ \$18.00.....	\$ 90.00
1 rear combination door complete (This includes door, frame, hardware).....	20.00
200 sq. ft. 2x4 studs 24" O.C. @ .10.....	20.00
200 sq. ft. 1x6 drop siding @ .18.....	36.00
32 lin. ft. 1x3 and 1x4 corner boards.....	4.80
Remove old hand rail.....	5.00

Total price.....\$175.80

This can be made even cheaper by using 1 x 6 clear fir vertical partition and horizontal 2 x 4 studs with a vertical stud every 4 ft. You can figure 200 sq. ft. partition and 2 x 4s \$.25 per sq. ft., or \$50.00. This is against \$56.00 for drop siding and regular studs. This would bring your price down to \$170.00.

Check rail windows for open type porches are figured at \$18.00 per opening installed complete with inside trim. However, if it is a house check rail window to be replaced or changed to a different size or different location the above rule will not apply. We will go into that type of remodeling later.

Making Later Changes

Now let us assume that a year has passed and our customer of this mythical porch enclosure above decides he wants to have his enclosed porch finished on the inside to a complete room.

Let's start from the floor and work up. The floor area is, we know, 8/0x16/0 or 128 sq. ft.

130 sq. ft. 2x4 sleepers 16" O.C. (To make the floor level) @ .07.....	\$ 9.10
130 sq. ft. 1x4 clear Y.P. finish flooring @ .20.....	\$26.00
(Not necessary to add for tongue and groove as this is included in your square foot price)	
130 sq. ft. 2x4 ceiling joists 16" O.C. @ .07.....	\$ 9.10
260 sq. ft. 3" thick rock wool batts for floor and ceiling @ .10.....	\$26.00
110 sq. ft. 1x2 furring 16" O.C. over outside house wall @ .10.....	\$11.00

This last item is figured the following way:

The porch is 16/0 long and will have an 8/0 ceiling height. This is a total of 128 sq. ft. and then take out credit for the door that now leads from the house to the porch.

Now let's take the perimeter of the room: 8/0 plus 8/0 plus 16/0 plus 16/0

equals 48 lineal feet. Multiply this by the room height of 8/0 and we have a total of 384 sq. ft. of wall space. But wait! We have to give credit on 2 doors and five windows or approximately 84 sq. ft. This leaves us with 300 sq. ft. of wall space net. To this add 130 sq. ft. for the ceiling. This is a grand total of 430 sq. ft. of interior wall finish. If your customer wants a reasonably cheap job figure plasterboard.

430 sq. ft. plasterboard 3/8" thick @ .10.....	\$ 43.00
200 sq. ft. 3" rock wool batts for walls @ .10.....	\$ 20.00
44 lineal feet 2 member Y.P. base @ .25.....	\$ 11.00

Total selling price of finished room.....\$155.20

Your customer may want you to finish the joints of the plasterboard with either lattice strips or cement tape type joint construction or panel strips. If so add \$.05 per square foot for this. On the other hand, he may want something a little fancier than plain sheet rock. Insulation type planking for walls and tile for ceiling may be figured at \$.17

per sq. ft. Be sure however to allow for horizontal header studs if this type of material is used. If your customer has a preference for knotty pine, simply eliminate the plasterboard charge and figure the knotty pine at \$.25 per sq. ft. This price takes care of knotty pine base and picture moulding and allows for waste etc. A good many customers will want knotty pine walls and insulated tile for the ceiling. This can be done by simply splitting up the estimate and show one total for the walls and another for the ceiling.

Advantages of Method

And there we have completed our mythical porch enclosure in its entirety, even though a mythical year has passed between jobs. You will find that the square foot system works fast. The important thing is to be sure and allow for every step in the entire job. To start your square foot guide I am showing, in the table below, the square foot installed prices as I have worked them out in Chicago for the items listed in the three classifications.

SQUARE FOOT INSTALLED PRICES AS FIGURED IN CHICAGO AREA

STUDS AND RAFTERS		MATERIAL AND LABOR	
		Studs	Rafters
2 x 4	No. 1 Y.P. or equal 16" O.C., per sq. ft.....	.12c	.15c
2 x 4	No. 1 Y.P. or equal 24" O.C., per sq. ft.....	.10c	.12c
2 x 6	No. 1 Y.P. or equal 16" O.C., per sq. ft.....	.14c	.17c
2 x 6	No. 1 Y.P. or equal 24" O.C., per sq. ft.....	.12c	.14c

JOISTS, SLEEPERS, AND FURRING		MATERIAL AND LABOR	
		2 x 4	No. 1 Y.P. or equal 16" O.C., per sq. ft.....
2 x 4	No. 1 Y.P. or equal 24" O.C., per sq. ft.....	.06c	
2 x 6	No. 1 Y.P. or equal 16" O.C., per sq. ft.....	.10c	
2 x 6	No. 1 Y.P. or equal 24" O.C., per sq. ft.....	.09c	
2 x 8	No. 1 Y.P. or equal 16" O.C., per sq. ft.....	.13c	
2 x 8	No. 1 Y.P. or equal 24" O.C., per sq. ft.....	.12c	
2 x 10	No. 1 Y.P. or equal 16" O.C., per sq. ft.....	.18c	
2 x 10	No. 1 Y.P. or equal 24" O.C., per sq. ft.....	.16c	
2 x 12	No. 1 Y.P. or equal 16" O.C., per sq. ft.....	.23c	
2 x 12	No. 1 Y.P. or equal 24" O.C., per sq. ft.....	.19c	

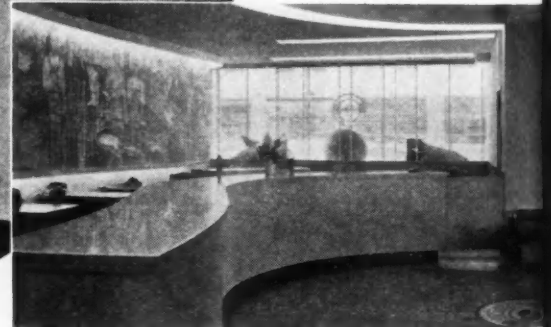
MISCELLANEOUS		MATERIAL AND LABOR
Porch check rail windows, complete. Not larger than 30 x 24 or 28 x 28 glass size.....each \$18.00		
(If larger than this, charge extra as material will cost more.)		
Rear combination door complete including frame, trim and hardware..... each 20.00		
1 x 6 or 1 x 8	No. 2 Sheathing lumber, per sq. ft.....	.12
6"	bevel siding W.P. with paper under, per sq. ft.....	.16
1 x 6	clear fir drop siding, per sq. ft.....	.18
1 x 4	clear Y.P. finish flooring, per sq. ft.....	.20
Rock wool batts,	3" thick, per sq. ft.....	.10
1 x 2	common soft pine furring strips 16" O.C., sq. ft.....	.10
3/8"	thick plasterboard, per sq. ft.....	.10
Cement tape joint treatment,	per sq. ft.....	.05
Lattice strip or panel mould joint treatment.....		.05
Insulation, board type, wall planking and ceiling tile, sq. ft.....		.17
Knotty pine wall planking—base included, per sq. ft.....		.25
1 x 6	clear fir vertical partition and 2 x 4 horizontal studs with a vertical every 4/0, per sq. ft.....	.25
2 member Y.P. base, per lineal foot.....		.25

Streamlining a Ticket Office

Curving contours promote speedy service for airline passengers



LEFT: Counter cases by Nordquist & Nelson; cork tile floor, and mural painted on canvas. Below: Public side of bleached Bayott mahogany curving ticket counter.



A HIGH PRIORITY commercial alteration job recently completed in Seattle is believed to foreshadow a popular trend to graceful curves and streamlining for shops, stores and salesrooms just as soon as war restrictions can be lifted. The Northwest Airlines, Inc., struggling with a traffic increase of 103 per cent—mostly Army, Navy and other urgent war travel—was permitted to move its city ticket office into larger space and to alter the arrangement as needed.

The quarters secured was a prominent corner, at street level. For the new occupant the entrance was moved around the corner onto the quieter side street for greater convenience in loading the airport buses; the old entrance was glassed-in as a show window; and a show window on the side was removed to accom-

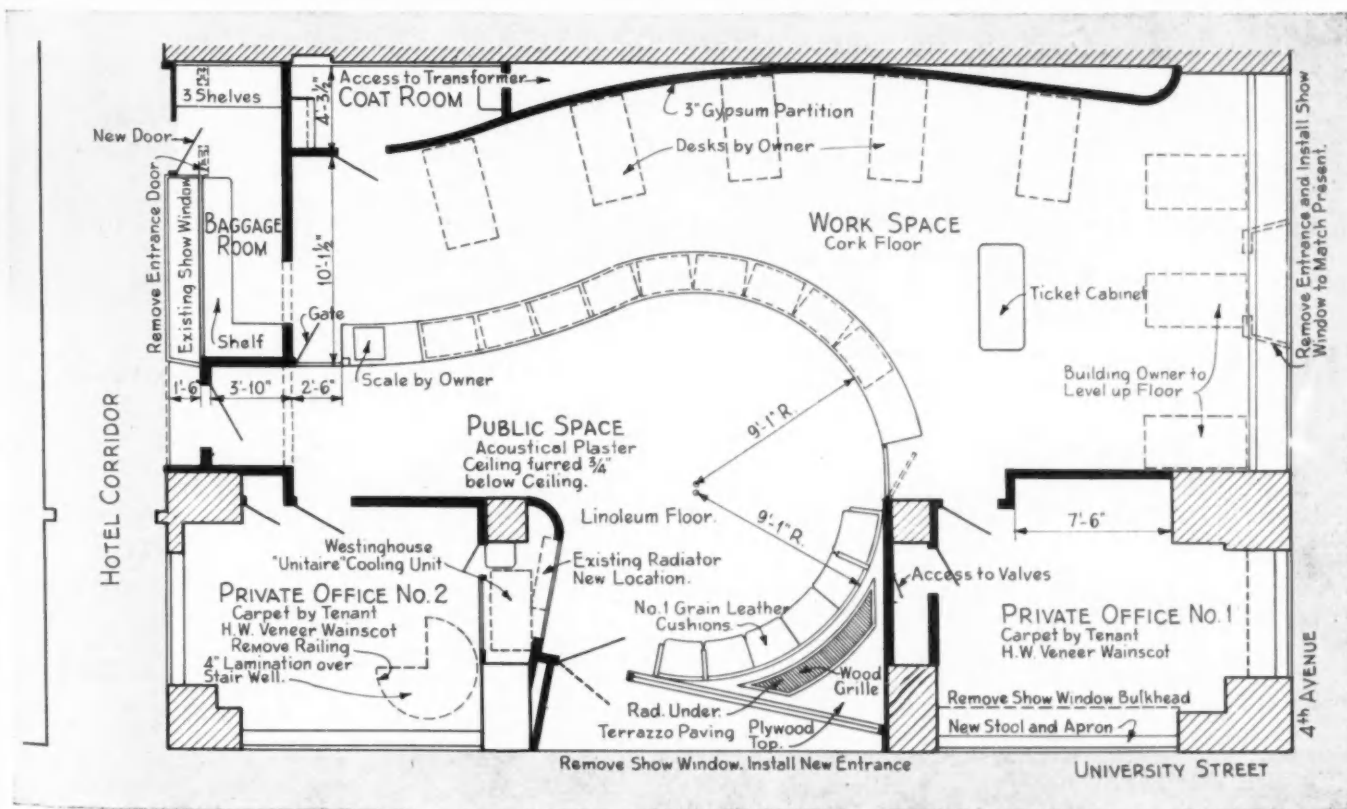
modate the new entrance. This was given a triangular set-back, recessed 4 feet at the door but only 8 inches at the approach side. The all-glass door and adjacent clear glass window give an inviting view of the circular public space waiting room and ticket counter. Overhead indirect lighting is in a curving trough on the ceiling above the curving counter.

The problem of converting this store space into an attractive sales office was complicated by the presence of two large posts 24 inches square, placed practically in the middle of the floor plan; also by a series of deep ceiling beams. In the remodeling, note how the posts have been absorbed by the private office partition layout, while the ceiling was smoothed out by means of a new suspended ceiling to carry the indirect lighting.



ABOVE: Entrance is recessed at an inviting angle, with an all-glass door. Plan (below) shows how circular public area, ample work spaces and two private offices are features of remodeled office. William J. Bain, architect, and J. B. Warrack, contractor.

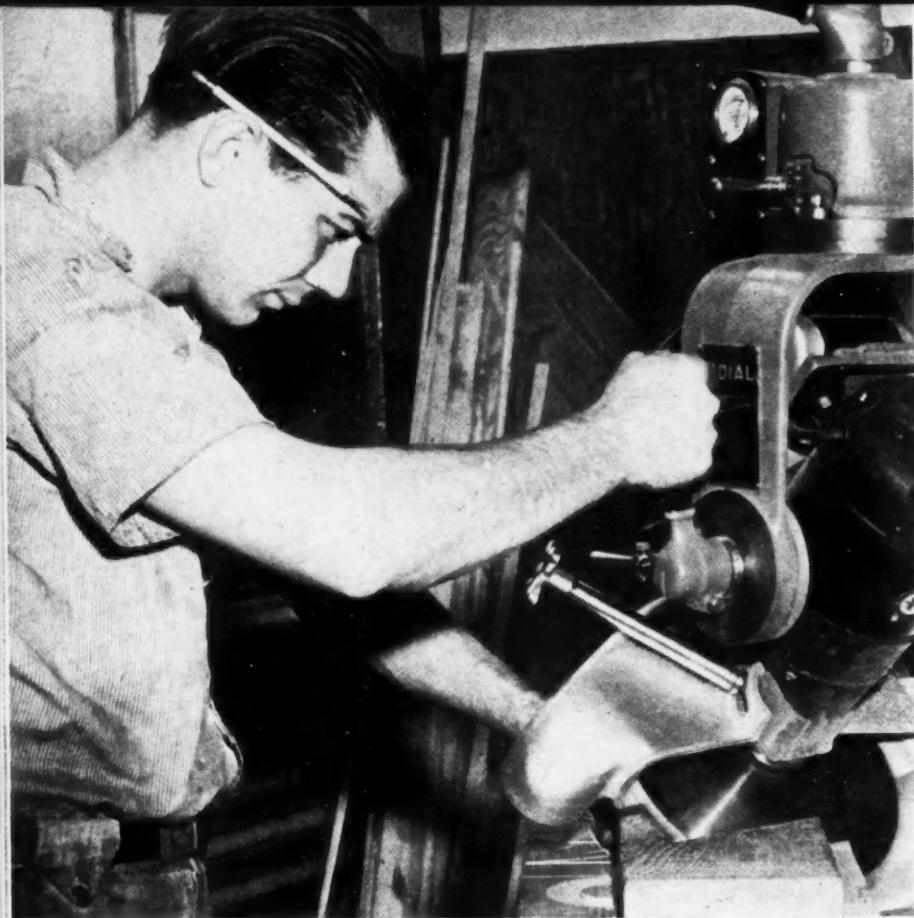
A Wartime Expansion Job That Sets a Post-War Pattern



ater cases
st & Nel-
tile floor.
painted on
low: Pub-
bleached
mahogany
st counter.

angular
3 inches
adjacent
circular
overhead
ceiling

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A GOOD power saw of universal or radial type is the heart of precutting.

BY shop is meant the place where the precutting is done. As a minimum, it involves a power saw and a bench with provision for accurate gauge stops, so that any required length or number of pieces having the same length can be turned out at will. It also involves some suitable means for handling lumber in, through, and out. Small or large, it is the place where lumber is converted into *Precut Framing*.

The man handling the saw posts a cutting schedule where he can refer to it. This is a substitute for the old system of intermittently making a measurement, walking to the lumber pile, selecting a stick, marking off the

PRECUTTING PROGRESS

In a recent survey covering over a thousand lumber dealers in 28 states, 66 PER CENT were found to be precutting lumber for buildings other than houses. This material was then assembled into units for sale. Eighty-eight PER CENT of these yards plan to continue such operation after the war. Watch this important trend.

measurement, squaring and cutting the stick and returning to nail it in place. With his cutting schedule and tally, the sawyer knows at any time exactly how many pieces of whatever lengths will be required. If in the mill, he will likely be cutting for stock. If on the job, he will be turning out requirements for that job. In all cases, he is saving time, trouble, and expense.

The saw should be able to turn out accurate square and angle cuts. The blade should make a clean cut, without tearing or coarseness.

The bench stops, or saw gauges, may be merely cleats of wood nailed to the bench or fence. This works nicely for a small amount of cutting. For real production, a series of stops are used—one for each length. Several types are on the market. Briefly, these are selective gauges, made so that any one can be used whenever desired; as the stick is pushed against the back fence the other gauges automatically disengage themselves.

The combination of saw, bench and stops should be capable of turning out lengths within 1/16" of the scheduled length.

It is not only possible but entirely practical to convert random-length No. 3 grade lumber into scheduled-length No. 2 and higher grade Precut Framing. Primarily, this involves cut-

No. 3 of the current series on precutting with power saws; described here by T. C. Combs are the advantages of this operation in up-grading and —

How to

ting the required lengths from the portions of the longer stick which lie between large knots. For example:

Take a 14-foot 2" x 4" of No. 3 dimension which has two 2½" knots about three feet from each end. We cut two door headers 2'-6" long from the ends, and a 6'-8-11/16" door trimmer and a 9" cripple from the middle. We throw away the trimmed ends and the blocks containing the large knots. Not only are the four scheduled lengths ready for nailing—they are now at least No. 2 grade dimension.

With selective stops, the sawyer who also knows lumber grades, cuts the longest scheduled length of specified grade that he can from the portion of the random-length stick before him. The usual minimum is No. 2 for vertical members and No. 1 for members to be framed horizontally. He does this rapidly and accurately, cutting everything from the shortest cripples to 7'-9" studs. His scrap is nominal, as evidenced by a recent series of controlled runs which gave a reclaim of 90 percent, and sometimes more, of Precut Framing—No. 2 and higher grade cut from No. 3.

When raising grade while precutting, pieces to be beveled, such as bracing and fire blocking, are first cut square. They are later cut to angle, several at a time.

The essence of the success of cutting-grading is the fact that the growth characteristics which classify a stick as No. 3 rather than No. 2 or No. 1, occur at rather widely spaced intervals along its length. The remainder of the lumber, almost without exception, is of high quality.



THE shop set-up should allow for efficient handling of stock from the time it is unloaded until bundled for delivery to job.

Organize a Shop for Precutting Framing

Actually, almost as much Precut Framing can be cut from random-length No. 3 as from specified-length No. 2 or No. 1. All grades develop some scrap, the difference being in the vicinity of 5 percent. "Cutting stock" has been used in a variety of industries, such as furniture manufacture, over a period of many years.

Sorting in the shop of all the pieces necessary for a door or window frame is quite simple. Again, a schedule is

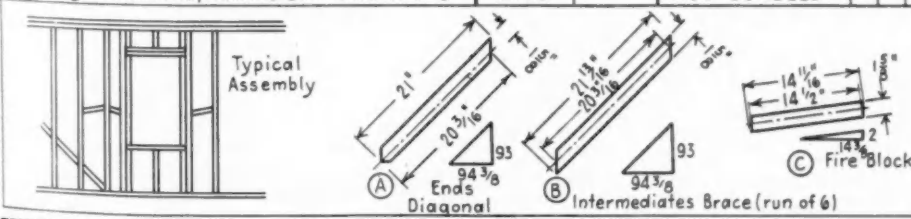
posted for ready reference and a convenient work space arranged. Completed bundles are tied and crayon marked or tagged to show the size of door or window. At this point we begin to reap the benefits of the effort involved. Bundles eliminate "leg work" and losses which occur when loose short lengths are sorted and scattered at the job.

Pieces are arranged within bundles so that a minimum number of ties

will hold them in place during transportation. The shortest pieces are placed in the centers of bundles. The completed bundle should be compact and shaped for solid loading.

Bundles are tagged to indicate the contents. In the case of knock-down door and window framing, the tag designates the finish size of the opening. Bundling is the final step before delivery to the job which will be continued in the next article.

CUTTING LENGTHS						STANDARD PRECUT WALL FRAMING										BUNDLING													
UPPER	HEADERS	SILL	TRIMMERS	LOWER	ITEM	SASH OR DOOR SIZES	PIECES PER BUNDLE										BOARD FEET PER BUNDLE												
CRIPPLES	1pc 3 5/8 x 3 5/8 2pc 1 5/8 x 3 5/8 NO. 2 DIM.	1pc 3 5/8 x 5 5/8 2pc 1 5/8 x 3 5/8 NO. 1 DIM.	HEADERS 1 5/8 x 3 5/8 NO. 2 DIM.	1 5/8 x 3 5/8 NO. 2 DIM.	CRIPPLES 1 5/8 x 3 5/8 NO. 2 DIM.		1-11 1/4"	2-5 1/4"	2-11 1/4"	3-1 1/4"	3-5 1/4"	3-11 1/4"	4-5 1/4"	7-9 (Stud)	6-8 1/16"	5-3 1/2"	4-9 1/2"	4-3 1/16"	3-3 1/2"	3-3 1/2"	2-5 1/16"	1-9 1/16 (Bev)	1-9 1/16"	1-3 1/16 (Bev)	1-2 1/16 (Bev)	0-8 1/16"	0-6 1/16"	TOTAL	
0'-8 1/16"	1'-11 1/4"	1'-11 1/4"	3'-3 1/2"	3'-3 1/2"	D. H.	1 5/8 x 3 5/8	1												2	2							2	8	13.8
0'-8 1/16"	2'-5 1/4"	2'-5 1/4"	4'-3 1/2"	2'-3 1/2"	WINDOW	2 5/8 x 4 5/8		1											2		2						2	8	14.7
0'-8 1/16"	2'-11 1/4"	2'-11 1/4"	3'-3 1/2"	3'-3 1/2"		2 5/8 x 3 5/8			1												3						3	10	18.4
0'-8 1/16"	2'-11 1/4"	2'-11 1/4"	4'-3 1/2"	2'-3 1/2"		2 5/8 x 4 5/8				1									2		3					3	10	16.3	
0'-8 1/16"	3'-5 1/4"	3'-5 1/4"	4'-9 1/2"	1'-9 1/16"		3 5/8 x 4 5/8					1											3				3	10	18.4	
0'-8 1/16"	3'-11 1/4"	3'-11 1/4"	4'-9 1/2"	1'-9 1/16"		3 5/8 x 4 5/8						1							2			4				4	12	19.2	
0'-8 1/16"	3'-11 1/4"	3'-11 1/4"	5'-3 1/2"	1'-3 1/16"		3 5/8 x 5 5/8							1						2				4			4	12	20.6	
0'-6 1/16"	4'-5 1/4"	4'-5 1/4"	4'-9 1/2"	1'-9 1/16"		4 5/8 x 4 5/8							1									4				4	12	26.1	
0'-8 1/16"	2'-5 1/4"		6'-8 1/16"		DOOR	2 5/8 x 6 5/8									2											2	5	11.8	
0'-8 1/16"	3'-11 1/4"		6'-8 1/16"			2 5/8 x 6 5/8									2											3	6	13.7	
0'-8 1/16"	3'-1 1/4"		6'-8 1/16"			2 5/8 x 6 5/8									2											3	6	14.6	
0'-8 1/16"	3'-5 1/4"		6'-8 1/16"			3 5/8 x 6 5/8									2											3	6	15.1	
SEE SKETCH (A) & (B) BELOW						DIAG. BRACE																6				6	7.4		
SEE SKETCH (C) BELOW						FIRE BLOCK																				10	10	8.4	
1 5/8 x 3 5/8, No. 2 DIMENS, TRIMMED BOTH ENDS TO 7'-9"						STUD								NOT BUNDLED														5.17	



* Note: Figure in upper left applies to one-piece upper headers. For two-piece upper headers, multiply by two. Figure in lower right applies to sill headers.

A.L.S. SURFACED SIZES
FHA STANDARD FRAMING

CHART showing various lengths of pieces of framing for standard door and window sizes; this schedule of data prepared by the author.



PUT THESE IDEAS TO WORK! SAYS: "Home-Front Homer"

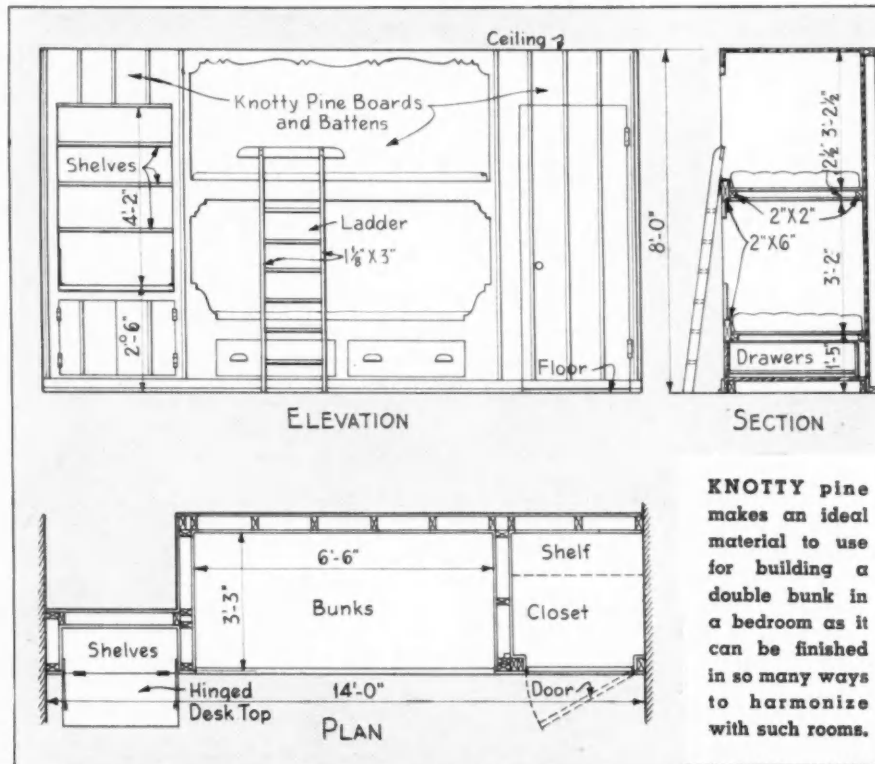
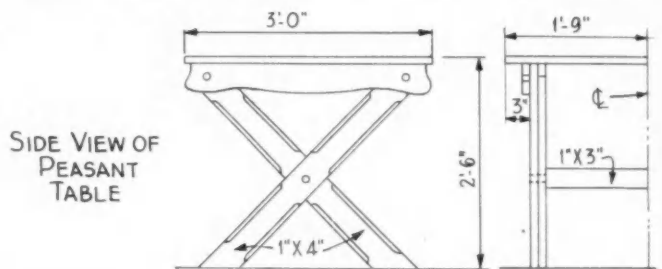
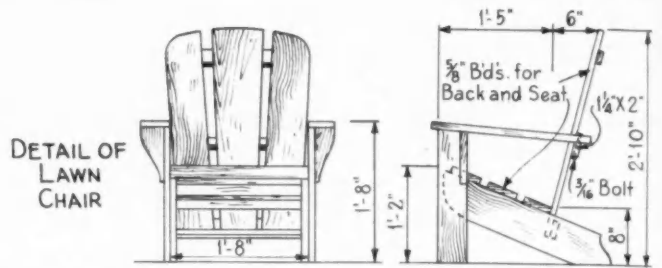
Winter Activities for Good Business

Here are some how-to-do-it items for both inside and outside jobs that will be easy to sell because of their practical use in both home and farm

How to Build Chairs and Tables that will serve indoors and out

RECREATION room and garden furniture have much in common because of the generally rustic type of furnishing used in both locations. The making of furniture of this type is a profitable occupation for days when weather or some other cause keeps you away from larger jobs. The chair and table are popular types, and can be made of short pieces of scrap lumber for the most part. Any kind of wood is suitable because the pieces should be painted for protection, especially when used in the garden.

It is important to follow the dimensions given as they are right for comfortable use. A sample of each piece, or other similar items, to show to people, will create orders for spring delivery, thus making it possible to be occupied on off days at a profit. The use of a good quality of paint is recommended because of the exposure the furniture will have to withstand. White, bright red, and light blue-green are the most popular colors for this use.



How to Conserve Space by Making Double Bunks

ENLARGING the capacity of a bedroom by the use of double bunks is an unusually satisfactory way to meet the problem. Many a small bedroom can be made much more livable by eliminating the double bed and building in bunks as shown in the plan.

The layout often makes possible the addition of built-in desk and shelves to partly replace furniture and closet space. Large drawers or wide shelves under the lower bunk provide space for blanket storage. If the existing closet is small, an additional one can be built at the end of the bunks, as shown in the drawing.

Lights should be installed for each bunk so that reading in bed will be comfortable, and of course a ladder is essential to reach the upper bunk. Heights can vary with ceiling heights.

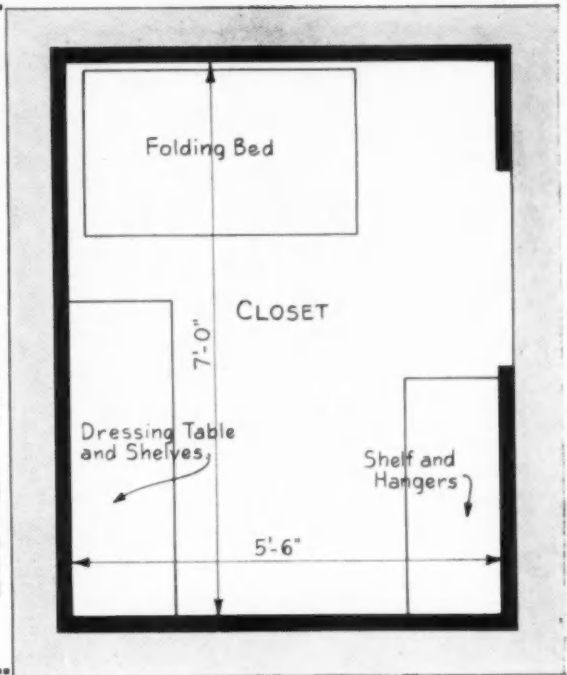
KNOTTY pine makes an ideal material to use for building a double bunk in a bedroom as it can be finished in so many ways to harmonize with such rooms.

How to Convert a Small Bedroom To Double Uses

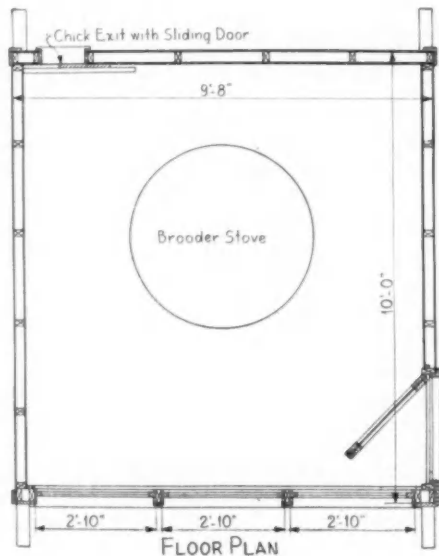
MANY houses have small bedrooms that are seldom used for anything more than occasional sleeping, yet they take up a considerable portion of the total useable area in the house. Such rooms can be converted into rentable quarters for defense workers, or for just more comfortable living for a family in its own home, by making the little room over into a bed-sitting room or a library or sewing room, yet retaining its usefulness as a sleeping room.

The accompanying floor plan shows how the existing closet can be enlarged to form a dressing room, and how to arrange the built-in dressing table, the clothes hanger and shelf, and roll-away folding bed for best use. The dressing table has a tier of drawers at one side and a large mirror against the wall. When the bed is rolled out into the room, the closet makes a comfortably large dressing room. There should be a light in the ceiling and twin sidelights for the dressing table. A full size mirror on the inside of the closet door is a welcome addition.

No matter the shape or size of the original room, this alteration will make it larger and more attractive because of the elimination of the bed and dressing table when not in use. Plaster over gypsum lath or wall-board can be used in the new partition, whichever is more suitable to match the existing walls. The finishing and decorating of the partition could well be in contrast to the other walls. There should be an opening at top and bottom of the door for ventilation.



How to Build an Approved Brooder House Using Gypsum Board for Outside Walls

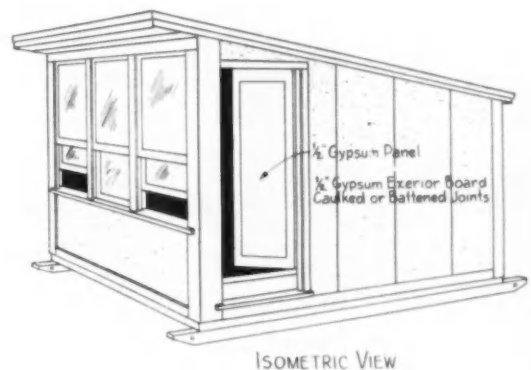
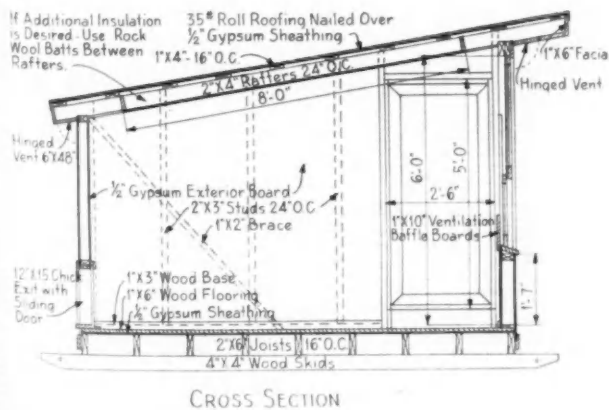


MILLIONS of farm buildings of all sorts and descriptions are badly needed if the farms of America are to keep up with the heavy load of complete production placed upon them by the Government. Farm labor is scarce, which means that the farmer and his helpers have their hands full with their job of production. The new building they need must, in a large measure, be built by professional builders.

While the War Production Board has broadened the farm building limit to a degree, and the Agricultural Department is promoting the building of farm buildings, there still remains a shortage of some building materials to hamper this necessary work. The brooder house shown in the drawings uses a minimum of lumber and a maximum of non-critical items, most of which are available in lumber yards throughout the country.

The brooder house is built on skids so that it can be pulled from one location to another on the farm. The flooring of 1" x 6" boards over 1/2" gypsum sheathing is supported by 2" x 6" joists placed 16" on centers. An optional floor can be made of 55-pound saturated felt nailed to 1" gypsum plank, thus eliminating the need for wood if it is unobtainable. The three upper sash are 30" x 28" and are fixed, while the lower sash are 30" x 14" and slide up.

An alternate roofing construction can be made by using 1" laminated gypsum board nailed directly to the rafters, then covered with 35-pound roll roofing nailed to the gypsum board. This eliminates the 1" x 4" wood runner strips. Cement and lap the roofing well, and roll it out in a warm place to settle before using.

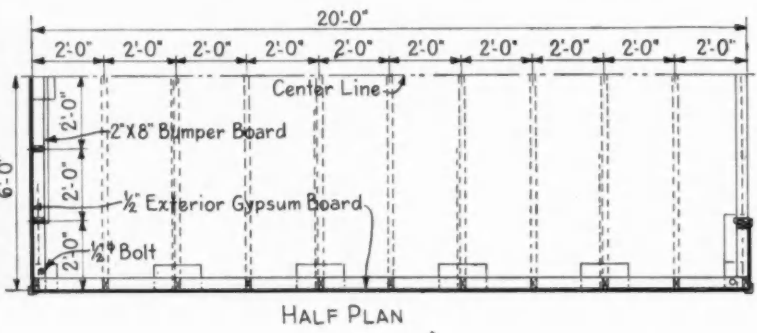
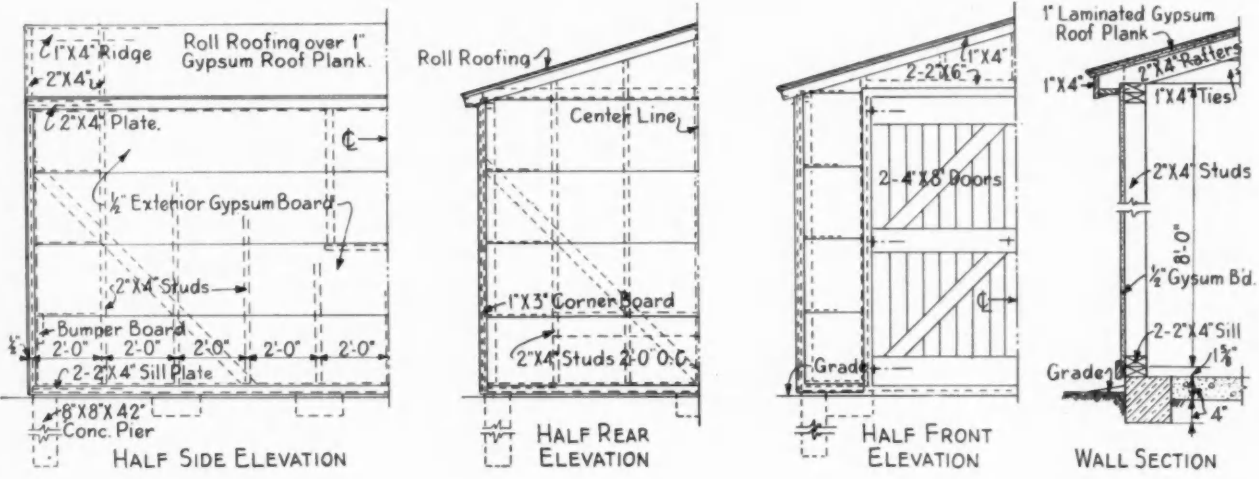


Space Bunks

of a bed-bunks is to meet bedroom available by and build-plan. possible the shelves and closet shelves de space existing one can bunks, as for each will be a ladder per bunk. heights.

DO IT

HOW TO BUILD AN EASILY ERECTED ONE-CAR GARAGE



BILL OF MATERIALS

1/2" GX Board	16—2x10 Side Wall
1/2" GX Board	10—2x 6 Front Wall
1/2" GX Board	2—2x 6 Front Wall
1/2" GX Board	2—2x 8 Front Wall
1" Laminated Plank	14—2x10 Roof
Side Wall Studs	26— 2x4— 8' Long
Rear Wall Studs	5— 2x4—10' Long
Front Wall Studs	3— 2x4— 8' Long
Front Wall	2— 2x6— 8' Long
Front Wall	2— 2x6—10' Long
Sill	8— 2x4—10' Long
Sill	3— 2x4—12' Long
Plate	12— 2x4—10' Long
Filler Strip	8— 1/2x2—10' Long
Sill Trim	8— 1x3—10' Long
Rafters	22— 2x4— 7' Long
Rafter Ties	5— 1x4—12' Long
Rake Boards	4— 1x4— 7' Long
Bracing	6— 1x4— 8' Long
Cornice	10— 1x4—10' Long
Corner Boards	4— 1x2— 8' Long
Door Trim	7— 1x3— 8' Long
Door Boards	2— 1x8—12' Long
Door Boards	2— 1x4—10' Long
Boards T&G	22— 1x6— 8' Long
Bumper Board	1— 2x8— 8' Long
Hinges	3 Pr.—4" Strap or Butt
Stay Bolts	2 —1" Top & Bottom
Anchor Bolts	4— 1/2x12—In Concrete
Concrete Blocks	11—8x8x16
Poured Piers	4—8x8x42
Roll Roofing	3 Squares
Nails	5 lbs.— 5d Common
Nails	5 lbs.— 8d Common
Nails	12 lbs.—16d Common
Nails	5 lbs.—20d Common
Cinders	4 1/2 to 5 yds. Tamped

MACHINERY on the farm is fully as important as the harvesting of crops and their hauling to market. In fact machinery, which includes trucks and cars as well as tractors and other equipment, is so vital to the success of keeping up farm production that its care and housing are of great importance. Naturally such care includes the garage for truck or car.

The garage shown in the plans and elevations above can be built with a minimum of critical materials. Whether it is for farm use or for urban housing of cars, it is a thoroughly substantial structure with a weather-defying exterior of gypsum board. The board specified has T & G edges or may be V-jointed, and the recommendation is that it be applied horizontally. Plans from the Architectural Dept. of National Gypsum Co.

A 4" cinder floor is recommended and it can serve the purpose until a concrete floor may be poured on top of it. There are four corner posts of poured concrete into which are set anchor bolts for the two 2 x 4 sill plates. There are also two 2 x 4 plates on top of the studs, making the basis for a sturdy framing. Corner braces of 1 x 4 stock are set into the studs to provide staunchness against wind pressure.

The location of windows is optional, one on either side or one at the rear. The opening should be double framed, and the size can be made to accommodate any used sash that may be available.

Roof sheathing is 1" laminated gypsum plank covered with roll roofing, both materials being non-critical and generally available in lumber yards throughout the country. The same is true of the gypsum board for exterior walls. The door, as shown, is of a type that can be made up on the job to swing on strap or butt hinges. If an overhead door is available, it can be substituted or one can replace the swinging door at a later date. Studding is set at 24" on centers, and cement blocks spaced at 4' intervals between corner piers. The outside dimensions are 12" by 20', making a minimum of waste in cutting.

According to the War Food Administration there are ten billions of dollars invested in farm building, and the cost to replace them would be from two to three times as much, and the deterioration is such that a total of 1500 millions of dollars must be spent annually to keep the farms of America going concerns. So the word is, "Get your finger in this tremendous market."

How to Do Industrial Reconditioning —A Big Job Going Begging

Backlog of this important work piling up for post-war; find that only necessary repairs are being made now under war pressure.

MANY buildings are not getting the maintenance attention needed today and so one of the phases of building which should experience a considerable upsurge after the war is the reconditioning of buildings. Literally thousands of buildings of importance will require some reconditioning by that time, since maintenance men have had little opportunity to think of exterior upkeep under the stress of war production.

What reconditioning has been carried on in the past two years has been for absolutely necessary repairs. It is, however, in the sense of extending the life and increasing the value of America's great industrial plant, rather than as a last minute stop-gap, that promises the great era of reconditioning after the war. Much of this work will necessarily be "preventive."

Buildings responding most effectively to reconditioning are the older concrete and brick structures. Concrete structures of today will come in for far less of this treatment than their predecessors, because concrete as a building material has been constantly improved. Particularly the understanding of its expansion and contraction properties, and the use of admixes, densifying the concrete against moisture and providing what is termed integral waterproofing have made concrete into one of the modern age's most successful construction mediums.

One expert on such work, E. B. Spencer of the Rust Engineering Co., Pittsburgh, recently stated:

"Where concrete is reconditioned, the buildings are either quite old or may have been inadequately designed. It is, however, a tribute to the fine qualities of concrete that many quite old structures are still giving service, often despite improper allowance for expansion."

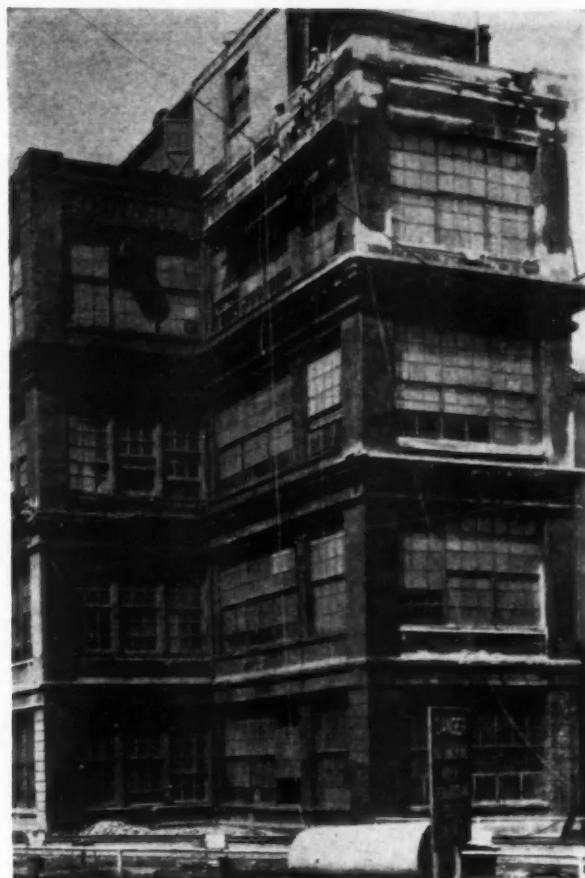
The characteristics calling for reconditioning, obvious to any layman, are cracking and spalling of the surface. This damage may have developed originally from fine cracks in the concrete, allowing entrance of moisture and subsequent frost action. Spalling is the result.

In addition, moisture will cause the reinforcing steel to form a coating of rust, which exerts an expanding pressure against the surrounding concrete, which also results in spalling. Modern builders have largely overcome this exposure of reinforcing to rust by placing it deeper in the concrete. The condition described occurs chiefly in older structures where reinforcing was often placed near the surface.

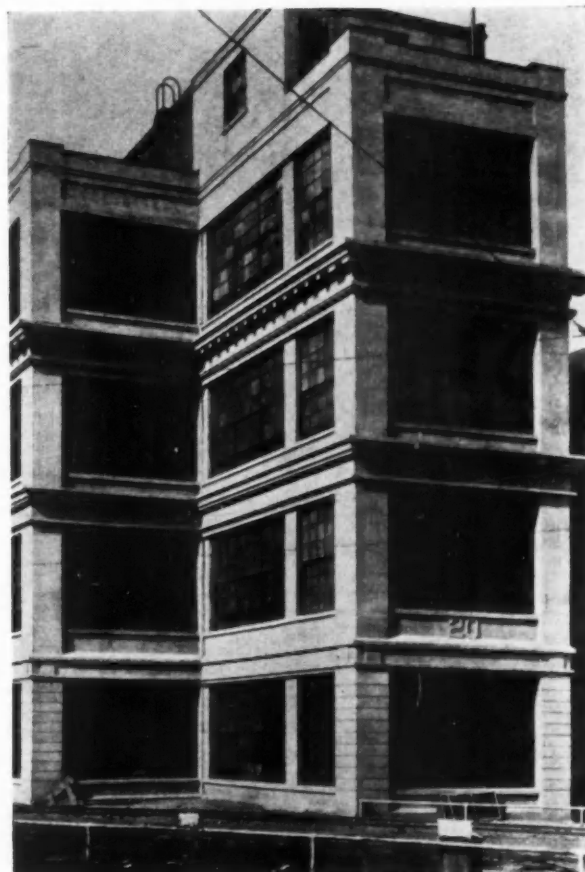
How to Repair Concrete Structures

If allowed to continue, spalling will eventually result in serious damage to buildings. The repair procedure is often compared to a dental job. The damaged concrete is cut out down to good concrete. The steel, if exposed, is cleaned; or, if rusted to the point of being valueless, is cut out. Next a metallic bonding coat is applied, providing a mechanical bond between old and new work. The area is filled to the original contour of the surface by one or

(Continued to page 85)



BADLY SPALLED—Ledges, corners, walls and sills of this manufacturing plant are disintegrating, need attention.



RECONDITIONED—The bad spots in same structure have been removed, patched, and the entire building refinished.



← PRE-PAINTING SIDING ON WAR JOB

How to SAVE on War Housing

AMONG the labor and material saving devices used in the recent building of a 38-unit war housing project at Anniston, Ala., was the pre-painting of the siding used in the construction of the four and five room houses.

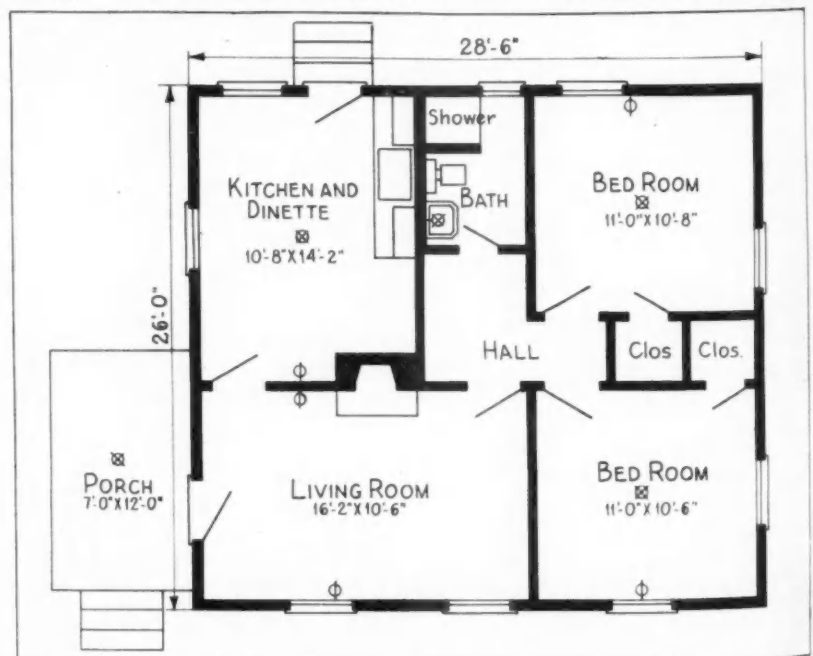
The siding was dipped in a creosote shingle stain, a special vat being constructed for that purpose with a rack for the dipped pieces to dry. A half dozen different colors were used on the project in order to give variance. Carpenters on the job carried along buckets of stain into which they could stick the ends of boards which had to be sawed to fit. Six-inch resawn siding was used on the job, with the rough side turned out.

No sheathing was used on this project, the siding being applied directly to the studs with a 15-lb. saturated felt in between. All rafters, ceiling joists and studs were placed on 24-inch centers, this being one of the first times this width had been approved by FHA. On account of the wider centers, one half-inch instead of $\frac{3}{8}$ inch sheet rock was used

(Continued to page 85)



TYPICAL war housing by Sam F. Coleman, Anniston, Ala., on which siding was predipped in creosote using a trough and rack, as shown at the top of the page.



PLAN for five-room Title VI house on which economies have been worked out



No Side Pull or Twist

-on the Sheave
Wheel of the
Rō-Way
OVERHEAD TYPE DOOR

"CROW'S FOOT" OUTER BEARING SUPPORT

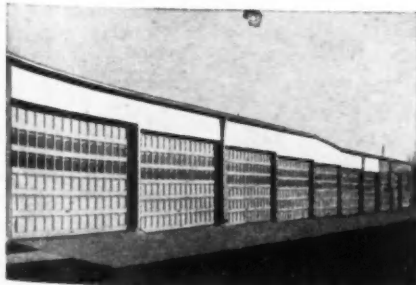
(Only Ro-Way has this Improvement)

The sheave wheels have to carry the entire dead weight load of any overhead type of door on which they are used. To make sure the sheave wheels on Ro-Way Doors will always stay in perfect alignment and that there will never be any twisting or sagging of the sheave wheels to cause friction, we perfected this "Crow's Foot" Outer Bearing Support.

When you install a Ro-Way Door you know it will give extra service because this extra engineering care has gone into its manufacture. Users appreciate more and more the extra values Ro-Way gives without any extra cost. That's why Ro-Way Overhead Type Doors are specified today by so many leading architects and demanded by so many contractors and builders.



Warehouse of American Stores Co., Baltimore, Md. Equipped with 7 Ro-Way Overhead Type Doors. Consolidated Engineering Co., Contractors.



18 Ro-Way Overhead Type Doors were installed in C. D. Kenny Warehouse, Baltimore, Md. Installation by Kirson Construction Co., Contractors.

Other Exclusive Features of Rō-Way Doors Include:

- "Friction-Reducing Track". Rollers ride well away from the track side walls.
- "Double-Thick-Tread" Track Rollers with 7 ball bearings to each roller.
- "Zip-Lock"—allowing quick, easy adjustment of Twin Torsion Springs.
- "Tailor Made" Springs. Each power-metered to the weight of the door it is to operate.
- Rust-proof Hardware—all Parkerized and Painted after fabrication.

Write for complete new Catalog of Ro-Way Overhead Type Doors for Industrial, Commercial and Residential use. See our Catalog in Sweet's.

ROWE MANUFACTURING CO.

770 Holton Street

Galesburg, Ill., U. S. A.

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

"BACK THE ATTACK — WITH WAR BONDS"

Window Walls.

... with **ANDERSEN**

COMPLETE WOOD WINDOW UNITS

Window Walls—oriented to bring the beauty of the outdoors to the comfort of the indoors... Window Walls—oriented to frame a living picture. Yes, window walls of Andersen Complete Window Units, arranged in expansive groups, will play a prominent part in the design of the 194X home.

To undertake successfully this larger role, it will be more essential than ever before that windows be specified which will truly function as integral parts of the home... smoothly operating, thoroughly weathertight, built to provide a lifetime

of trouble-free service. This will require windows highly adaptable to many situations.

Andersen is aware of this larger scope for windows, and promises that as progressive architects give new functions to windows, Andersen window engineering will rise to the occasion.

In 194X, as in the past, Andersen Complete Wood Windows will be distributed through the regularly established channels of the millwork industry. For details, consult Sweet's architectural catalog, or write directly to the Andersen Corporation.

Andersen Corporation

BAYPORT • MINNESOTA

ORIENTED TO A VIEW

in the 194X HOME

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or



ONLY THE RICH CAN AFFORD POOR WINDOWS



War Housing Items from the CAPITAL

By Frank W. Cortright

Executive Vice-President, National Association
of Home Builders of the United States



Situation Looks Bright—After lengthy deliberation, the House Appropriations Committee has reduced the NHA Administrator's request for supplemental funds for public war housing. He asked the Committee to appropriate the \$200,000,000 balance of the amount authorized in the last extension of the Lanham Act. Committee has now approved an allotment of \$50,000,000.

"The Committee is disturbed over the possibility of public housing being over-built, with construction of war industry facilities approaching a peak," the report states. "There is a more and more intensive utilization of existing manpower indicating a tendency to decrease the necessity for immigration. Therefore, the request for \$200 million has been reduced to \$50 million, and with the unprogrammed \$10 million (referring to balances on hand) would give a total of \$60 million for new programming to meet immediate situations now in sight or to arise. The Committee would prefer to consider the needs more often, and be certain of them, than to grant the entire amount for the remainder of the fiscal year at this time."

There is little doubt that if the cut in the public appropriation is not restored, more construction must be allotted to private builders. The House Appropriations Committee carries influence and it is evident that this Committee is resolved to insist upon many economies in government expenditures. It is also apparent that the general trend in Congress is toward economy now that the country is confronted with the necessity for increasing taxes.

Poor Planning—What apparently is the first large Title VI FHA insured project to encounter serious difficulty is the 1600 unit Riverdale Development project at Norfolk, Virginia. Due to a combination of circumstances beyond the control of the developer, this project has been unable to obtain enough tenants to permit it to be operated successfully. Among the factors responsible are inadequate transportation, failure of the war worker recruitment plan, and the insistence of WPB that coal cooking ranges be installed. Prospective tenants will not use such archaic cooking equipment. Despite attempts to solve the problem by liberalizing occupancy regulations and reducing rents, the project apparently can not be put on a sound basis. It seems obvious that Americans want and will strive to get

the highest standard of living within their means. As the above difficulty with one project points out, it is bad business to try to retrogress in the quality or types of equipment used in any housing venture.

Utility Limits Boosted—WPB has increased the cost limits on materials for utilities hook-ups from the previous top of \$500 for overhead, and \$1500 for underground extensions to \$5,000. This welcome news and important change is accomplished by a simplified procedure which should eliminate some of the delay and red tape builders have encountered in the past. The title of the change is Supplemental Utilities Order U-1-h, and it has been sent to all the utilities. The order is procurable by builders from local WPB or FHA offices.

Maybe AA-1 Ratings—Although no government officials will admit it, rumors persist that AA-1 ratings will be assigned to war housing in a few of the most critical spots. For many months the need for this has been apparent, and it now appears that this action will soon be taken. It is generally agreed that, although it is not a cure-all for our current problems on materials, it will at least put us in the running with a far better chance of getting what we must have. Although these ratings will be assigned initially to only a handful of hot spots, they will probably be extended to other areas as extreme needs develop.

Selling Out—To dispose of the "mutual ownership" project inherited from its predecessor agency in the field of public housing, FPHA has worked out a new "home security policy" centering around a lease plan with a sales option. Briefly, this involves the leasing of projects to non-profit tenant controlled corporations with provision for outright purchase at the end of two years. The purchase price would be arrived at by dickering between appraisers for the tenant corporation and the FPHA at the end of this period. If an agreement is impossible, outside appraisers would then be consulted. Rents during the leasing interval would be the same as for comparable facilities in other publicly constructed war housing projects. The amounts thus paid in over and above operating expenses, debt service including amortization on a 40-year basis, and payments in lieu of taxes, would be treated as an earning by the corporation and would be deducted

from the purchase price.

Of the eight "mutual ownership" projects taken over during construction and completed by the FPHA, two have already been disposed of to tenant corporations—Walnut Groves in South Bend, and Greenmont Village in Dayton, Ohio. The original theory under which these projects were started was that where there appeared to be a fairly good prospect for permanent employment in connection with the war production program, it would be a good idea to permit the workers to build up an equity in the developments. As war needs became more pressing, Congress frowned on all experimentation in connection with housing and specified that the government was to stick to temporary construction as much as possible. In deferring the operation of the mutual ownership plan for two years, the FPHA was prompted mainly by a desire to keep the projects open to war workers—something that it doubted it could do effectively if it relinquished control at the outset.

Lumber No. 1 Problem—Looking back over the last two years, there has almost never been a time when lumber was not a source of worry to the home builder. During most of 1942, we were on edge either because of a freeze or rumors of a freeze. It is small wonder, therefore, that such rumors are now cropping up with increasing frequency in various parts of the country almost every day. Production is steadily declining, and boxing and crating needs rapidly increasing.

Top administrative sources, however, insist that no lumber freeze is in the immediate offing. It is recognized that it is almost impossible to formulate a drastic regulation which is both intelligent and workable. The Lumber Branch is frankly disturbed over their production and distribution problem, and is seeking an equitable, sound procedure. When and if they can determine a more effective plan than that now in operation it will undoubtedly be used. Hardwood flooring is unobtainable in many parts of the country, and the only answer seems to lie in substitutes such as Ponderosa pine. FHA suggests that where these softwoods are used, allowance in construction be made for later laying hardwood. A general freeze may come later unless conditions improve, and in the meantime, builders should protect themselves in every way possible.

Who Builds Stores?—To combat labor turnover and absenteeism in war plants, the Federal Works Agency is considering the pros and cons of launching a construction program to provide essential shopping facilities in some of the faster growing production centers. Surveys by War Manpower Commission and WPB have demonstrated conclusively that such facilities are often just as necessary as housing.

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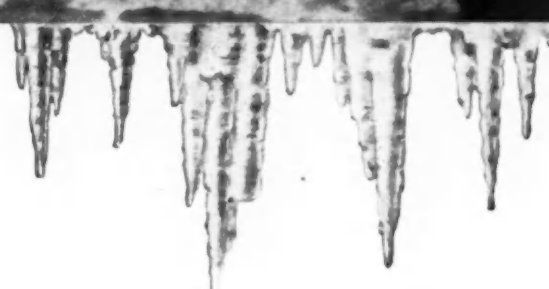
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No longer is cold weather the bugaboo it used to be to concrete construction. Every construction man knows that with proper precautions concreting can be safely carried on through winter.

With Lehigh Early Strength Cement, winter concrete construction has another safeguard . . . one that also speeds up construction and with a savings in costs. For concrete made with Lehigh Early Strength Cement cures beyond the danger of damage by frost 3 to 5 times faster than when made with normal Portland cement. This quick curing brings other benefits. The concrete reaches service strength in $\frac{1}{5}$ to $\frac{1}{3}$ the time taken by normal Portland cement concrete poured under the same conditions . . . delays are eliminated because the concrete can be put into service quickly, which helps maintain a continuous construction schedule . . . forms can be removed more quickly and re-used, saving on form costs . . . the expense of heat protection, when needed, is lowered 50% to 70% because of the quicker curing.

The Lehigh Service Department will send you, free on request, data on the practices recommended for cold weather concreting with Lehigh Early Strength Cement. You are invited to send for this helpful information.



**Lehigh
CEMENT**

LEHIGH EARLY STRENGTH CEMENT
for service-strength concrete in a hurry

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

(Continued from page 64)

The approach most favored would involve the construction of shopping centers adjacent to large plants so that workers could attend to their shopping needs on their way home. Frequently the employees of such plants are drawn in from outlying communities devoid of shopping facilities. FWA has been advised by its legal department that the construction of stores and certain other essential services such as barber shops and beauty parlors can be financed under Title II of the Lanham Act—the Community Facilities Section. The question is, why not have private enterprise build the needed structures?

Meanwhile, FPFA has already signed leases for the operation of 150 stores and service centers it has built in connection with public war housing projects. The range of establishments involved includes grocery stores, drug stores, beauty parlors, barber shops, pick-up counters for laundry and dry cleaning services, and many other types of establishments. In all, some 17 types of commercial service are recognized as being necessary, depending of course on the size of the project and its nearness to built-up areas. Leases are negotiated through the services of local realtors working on a per diem basis and usually are based on the volume of business done, rang-

ing from 2 per cent of gross sales in the case of grocery and drug stores to 10 per cent of the take for barber shops and beauty parlors.

Sudden Changes Nowadays—

The War Production Program has reached the stage where sudden changes are the rule rather than the exception. NHA is, therefore, devoting increasing attention to occupancy standards for war housing, and is taking steps to make adjustments wherever they are necessary. For example, in a growing number of cases, cut-backs have been ordered by military authorities in various production programs. In other instances, sweeping changes are made in the design of planes and other items of military equipment. Wherever these changes are made in production schedules, the housing program is necessarily seriously affected in some way, and to prevent vacancies the occupancy requirements must be eased.

Public Housing Angles— One main point of this subject deals with the twin problems of low cost housing and slum clearance. A previously expressed view by the Emergency Committee of the NAHB was reaffirmed that the public housing experiment has failed. That, in most instances, public construction costs have been exorbitant, and that the shelter provided has not given relief to those in greatest need. It was agreed by the committee, which impressed upon Congress the necessity for writing into the Lanham Act the clause requiring the removal of temporary housing upon the termination of the emergency, that home builders should unite with all other groups who oppose further use of public funds for this questionable enterprise. To solve the problem of the slums, rehabilitation work by private enterprise was advocated. The view was expressed that such a method can be made effective through the extension of federal credit to private interests and the reassembly of land by cities with broad powers of eminent domain. In this connection, the broad objectives suggested in the program of the Urban Land Institute for rebuilding blighted sections were approved by the committee.

Where it is found that families on the extremely low income level cannot pay economic rent, the position is taken that public assistance should be made available in the form of rent subsidies. Stated more specifically, needy families should be issued rent certificates, bridging the gap between the amounts that they are able to pay and the lowest rates for which housing can be made available. These certificates would be issued through local relief boards. Also, it is pointed out, that a large part of the need of extremely low income families can be met through the process of making more extensive use of older houses brought up to proper standards for the purpose.



The Answer Is PLYWOOD

One of the first demands of war was for a strong, durable, light-weight material, adaptable to a multitude of uses. The answer was Plywood. 375 employees are producing Aberdeen Plywood at peak capacity for its part in the fabric and structure of many implements of war.

Among the first materials available after the war will be Aberdeen Plywood, since no re-tooling will be necessary for civilian needs. In war, as in peace, precision production marks the character of Aberdeen Plywood.

Remember the name **ABERDEEN PLYWOOD**

ABERDEEN PLYWOOD

MANUFACTURERS OF HOT PRESS DOUGLAS FIR PLYWOOD



Corporation
FOOT OF ALDER STREET
Aberdeen, Washington

A Million Houses!—Promising that there will be no public housing blitz after the war, the NHA Administrator said recently that every effort will be made to stimulate the private building industry into full productivity as soon as peace returns. "It is definitely true," he said, "that the NHA and its responsible officials are hopeful and confident that production of a million or more new homes a year can be attained once full production of peacetime goods is possible. He believes that one essential element of the formula to secure a successful program is that "all elements in the housing industry and the government join forces in a really concerted effort." As he sees it, the production and financing of this housing will be predominantly a job for private enterprise, with the government standing ready to extend whatever technical or financial aid is desirable.

The chief responsibility that the Federal Government should bear involves the underwriting of mortgage insurance, the Administrator believes. Thus he takes the position that the extent of federal financial aid for post-war residential construction will be determined by how much of the total need can be financed by private enterprise unaided. He recognizes the possibility that some direct federal financial assistance in the acquisition of land may be needed. But he was firm in declaring that "it should be obvious that direct public financing could be available for only a small part of a postwar housing program of the magnitude that this nation needs and should have."

Rental Housing—Deputy Commissioner of FHA, Earle S. Draper, long one of the staunchest friends that the builders have in the government setup, made a strong plea, in a recent speech, for the cause of home ownership. He pointed out that wherever possible, ways should be found to permit people to buy their own homes. At the same time, he said that the building industry must also concentrate on providing good housing for the large numbers of people who must rent.

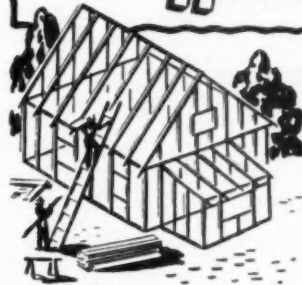
One possible stumbling block that may keep the private building industry from reaching its full stride the first year after the war, concerns the availability of certain essential items of equipment. Mr. Draper sounded the warning that manufacturers cannot spring into full operation automatically as soon as the last shot is fired. He pointed out in this connection that many of the producers of home equipment items are now engaged almost exclusively in war production and must re-tool before they can turn out their regular products again. While the percentage of private building protected by FHA mortgage insurance has risen from a pre-war level of 35% to 85% during the current period of wartime risks, he realizes full well that this trend will be reversed after the war and that private capital on its own

may take over a larger portion of the program than ever.

How Many Houses?—Following a survey made through its 62 field offices, the FHA has announced that the probable building volume for the first year after the war will amount to about \$2,000,000,000 in new residential construction with an additional \$3,000,000,000 worth of repair and improvement work. Stated in terms of dwelling units, this anticipated program will cover between 350,000 and 400,000 houses with an average value of \$5,000 each. A program of this size will put an average of 2,400,000 men to work during the first part of the initial year ranging up to beyond 3,000,000 during the later part. This estimate includes both on and off site labor.

AA-1 Priority Rating?—It is becoming increasingly clear that the balance of the privately constructed war housing job cannot be done unless builders are given parity priority rating with Army, Navy and Maritime for certain materials and equipment. The NAHB office receives demands daily for relief from every part of the country. Tens of thousands of units approaching completion are being left in an incomplete state through lack of hardwood floorings, ranges, furnaces, hot water heaters, bath-tubs or refrigerators. The bottleneck is largely in the War Production Board. As a matter of fact, it can be said that the bottlenecks are in a number of WPB Industry Committees, Programming, Requirements, Facilities and Planning Divisions.

Have You Heard ?



IN 1925, ALL-TIME PEAK YEAR IN BUILDING, LESS THAN 900,000 DWELLING UNITS WERE BUILT. AUTHORITIES PREDICT CONSTRUCTION OF AT LEAST 1,000,000 UNITS ANNUALLY FOR TEN YEARS AFTER WAR.

"THREE CENTURIES HE GROWS, AND THREE HE STAYS SUPREME IN STATE; AND IN THREE MORE DECAYS!" THE POET DRYDEN THUS PRAISED THE LONGEVITY OF THE OAK TREE.



IN WASHINGTON, D.C. OVER 15,000 NEW DWELLING UNITS HAVE BRUCE STREAMLINE FLOORS. 2 1/2 MILLION FEET OF STREAMLINE WERE LAID IN THE TEMPORARY OFFICE BUILDINGS IN WASHINGTON.

AND AFTER THE WAR... Bruce Streamline

Flooring will be back, for you to lay in thousands of new and remodeled homes! Bruce wood technologists and chemists are working now on better hardwood flooring for the future. You may be assured that the outstanding floors of tomorrow —as those of today—will be products of E. L. Bruce Co.!



Factory-Finished
STREAMLINE HARDWOOD FLOORING

A PRODUCT OF E. L. BRUCE CO. MEMPHIS, TENN.

WASHINGTON NEWS—*(Continued from page 25)*

either incorporated into, or altered by, the new order.

The term construction, as covered by this order, means putting up or altering any sort of a structure, including a building, road, bridge, dam, sewer and similar jobs; also the installing of equipment and fixtures. You need not get permission under this order for construction which does not total more than the limits shown in the following list for all jobs begun in the same year. If a utility connection is required, it may be necessary to get War Production Board approval. If so, the approval

must be obtained before construction is started.

1. \$200 for a house including the entire residential property. 2. \$1000 for a farm including the house and all buildings. 3. \$1000 for a hotel or building housing six or more families. Less than 6 families in a building is considered a house. 4. \$200 for office, store, bank, garage, laundry, restaurant or like retail service places. 5. \$1000 for church, hospital, school, etc., or for a publicly owned building. 6. \$1000 for bridge, underpass, overpass, tunnel, dock, bus terminal or the like. 7. \$1000 for irrigation or drainage system serving more than one farm. 8. \$1000 for

building or group of buildings for warehouse or off-farm storage. 9. \$1000 for cemetery monuments or structures on same lot, or for all such structures in one cemetery.

In determining the cost of a construction job, "cost" means the cost of the whole job as estimated at the time of beginning, except that the cost of used materials or fixtures may be disregarded. This does not include fixtures and materials you may secure without buying them. They must be used. The cost of processing machinery or equipment need not be included, although the cost to install it is to be added in. The cost of labor is included, although labor not paid can be left out of the calculation. Contractors' fees are included although architects' and engineers' fees need not be.

Rent Control Pays Its Way

OWNERS of rental housing are receiving larger operating margins under rent control than in the pre-war years (1939 and 1940), surveys just concluded by the Office of Price Administration show. These conditions, favorable to landlords, revealed in studies covering 39 war production centers, have developed despite the fixing of rent ceilings which, according to estimates based on pre-rent-control trends, prevented more than \$1,000,000,000 from being added to the nation's 1943 rent bill.

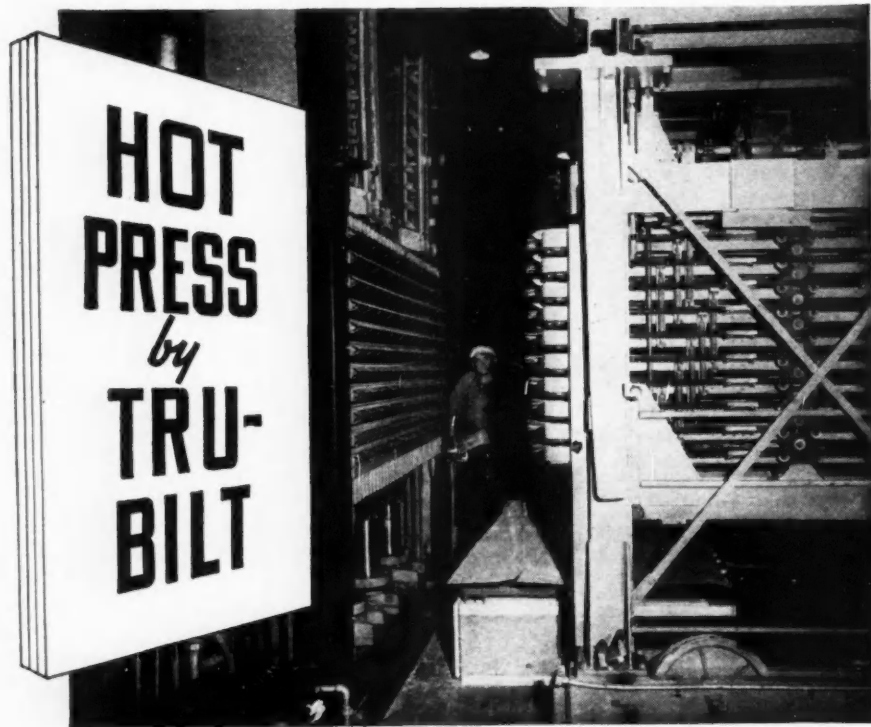
Actual figures taken from the books of landlords throughout the country show that the rate of net operating income for operators of apartment houses during six months of rent control was 34 per cent greater than in 1939, while the increase in net operating income for landlords of small structures was 36 per cent.

Three factors contributing to this favorable picture for owners are: 1. A rent increase of from 3 to 4 per cent from 1939-1940 levels before rents were frozen in 1941 and 1942; 2. Almost capacity occupancy of rental housing under war conditions as contrasted with a normal occupancy of 90 to 95 per cent; and 3. Declining over-all expenses resulting from decreases in competitive decoration and unnecessary services.

The population of the cities surveyed is more than 17,000,000, or over 13 per cent of the total national population. Nineteen of these industrial centers have "roll-back" maximum rent dates, or freeze dates in 1941. The remaining twenty have March 1, 1942, as their maximum rent date.

Plumbing, Heating Order

TO simplify restrictions on plumbing and heating emergency repairs the War Production Board has announced an amendment to Order P-84. The revised order makes it clear that all orders accompanied by an OPA rationing certificate are assigned an AA-5 rating. Previous restrictions were interpreted to apply



PURE phenolic resin glue plus our original and exclusive assembly line—in which the recognized superior Hot Press is minutely synchronized with other equipment of our own special design—scientifically assure the uniform superiority of TRU-BILT resin Bonded waterproof plywood. In sizes up to 72" x 144".

TRUE-BILT EXTERIOR offers:

Minimum of Warping Minimum of Checking
Minimum of Shrinkage Smoother Surface

A BINDER IMMUNE TO MOISTURE**WEST COAST PLYWOOD CO.**

ABERDEEN, WASHINGTON

Manufacturers of DOUGLAS FIR PLYWOOD

the AA-5 rating only to orders for rationed equipment which was to be used for replacement purposes.

List A of the order which names the items of equipment which are rationed by OPA Order 9A is brought up to date and the OPA regulation itself is designated as the only authoritative statement as to what items are rationed.

Persons wishing to obtain steel and wrought iron pipe and steel sheets for use in making repairs may no longer use the CMP symbol MRO (Maintenance, Repair and Operating supplies). Maximum permitted amounts of this material which may be purchased under CMP Regulation 4 have been increased sufficiently to meet requirements for maintenance and repair purposes.

Provisions requiring that replaced parts be turned in for salvage have been reworded to make it clear that replaced parts which can be repaired, other than on the job, should not be turned in for salvage.

The revised order makes it clear that the AA-5 rating may be used to obtain materials, equipment or parts needed to repair domestic cooking appliances, commercial cooking and food and plate warming equipment and commercial dishwashers as well as to repair or replace equipment defined by the order as plumbing equipment or heating equipment.

Details of the order concerning sales of low valued items were also clarified by the revised order.

New Law Protects Service Men's Homes from Foreclosure

It is now no longer legally necessary for a mortgage lender to begin foreclosure of the FHA mortgage loan of a man in service if it becomes delinquent. The bill (S. 755) which makes this possible has recently been signed by the President.

The previous provision assumed a serious aspect when it was realized that it meant that a man in the armed services with a delinquent FHA mortgage would have his property foreclosed too quickly. Life insurance companies and other institutional investors were keenly concerned since they held millions of dollars of FHA mortgages and did not want to be placed in the position of immediately foreclosing the loan of a man in service.

The bill also protects the investor in FHA loans in that the interest on the FHA debentures, which are received from a foreclosed property, will now begin to accrue once a loan becomes delinquent even though no action to foreclosure immediately is required as under present law.

Over-all Materials Limits To Be Controlled in 1944

Beginning with the first quarter of 1944, all allotments of controlled materials for construction and facili-

ties, save to certain specified military, naval and other programs, will be made from a central materials reserve to be established for this purpose by the Requirements Committee and administered by the Facilities Bureau according to WPB.

Within the reserve to be established, maximum quantities of controlled materials will be earmarked for each claimant agency, including firm allotments for approved programs and a modest allowance for miscellaneous non-programmed requirements. The central reserve will exceed the aggregate earmarked quantities of controlled materials by an amount calculated to satisfy

emergency requirements that might arise during the quarter.

Controlled materials earmarked for a claimant agency will not be transferred without that agency's approval and the Facilities Committee must approve in advance allotments from the non-earmarked portion of the reserve.

The new controls set for the first time an over-all limit on the amount of materials that will be available for construction and facilities. Previously, a claimant agency, once it had been allotted its quarterly share of controlled materials, could apply them as it wished to its approved programs. (Continued to page 70)



**Operate Garage Doors
by Barber-Colman RADIO CONTROL**

JUST press a button on the instrument panel of the car—and the garage door opens, or closes, from a radio impulse. The car can be standing still in the garage or moving down the driveway. Now this is no new gadget; it was played up in the feature sections 'way back in 1928. But it has been vastly improved and simplified since then, to the point where it is reliable, easy to install and service, and so lowered in cost that owners of even modest homes can afford it. Get our literature now, describing the operation and the safety and privacy features . . . so that you will be ready to specify "Barber-Colman RADIO CONTROL" for garage doors when the right time comes . . .



FACTORY-TRAINED SALES and SERVICE REPRESENTATIVES IN PRINCIPAL CITIES

BARBER-COLMAN COMPANY
104 MILL ST. • ROCKFORD, ILL.

Steel Warm-Air Furnaces Boosted in Price by OPA

To assure production of steel warm-air furnaces on which manufacturing costs have risen, the Office of Price Administration has authorized manufacturers to increase by nine per cent their maximum prices for these products.

The action means that the consumer will pay the dollar amount of the increase granted the manufacturer since jobbers and retailers are permitted to pass along the dollar amount of the increase in the cost to them.

Coal-fired, oil-fired and gas-fired steel warm-air furnaces are affected

by the action. A similar price increase was granted for the same reasons recently to producers and resellers of cast-iron warm-air furnaces.

Curtailement of production of the steel units for non-military purposes was ordered December 14, 1942, but was again permitted on July 28, 1943, to meet an anticipated shortage of 100,000 furnaces for war housing and civilian replacement.

Many manufacturers had converted their facilities to production of other war materials after the curtailment order. Higher costs for labor and raw materials which now prevail would result in financial loss to manufacturers if present ceilings,

reflecting October 1941 levels, were continued.

OPA's study of the industry's pricing problems showed that increased hourly wage rates, loss of experienced workers and the lengthening of the productive process due to a change in type of materials used, have contributed to the advance in labor costs since the former ceilings were set.

Substantial increases in raw materials costs also occurred. Formerly steel plates were purchased by the furnace manufacturers in carload lots from the mills, cut to size for each furnace. At present, due to the shortage of steel plates, producers are required by WPB to utilize mill accumulations or rejects, which are obtained from local warehouses at higher prices than formerly paid for direct mill shipments. Besides the higher prices, the cost increases are advanced by increased scrap losses and the increased labor cost involved in riveting or welding the smaller sheets into the sizes desired.

Upgrading Lumber Shipments Checked by New OPA Order

A control-tightening action designed to halt sales of Southern pine lumber at higher than ceiling prices through the illegal device of upgrading—has been announced by the Office of Price Administration.

Beginning November 15, shipments of Southern pine boards, either dimension or finish material, which are not grade-marked by a qualified inspection agency, and which contain more than 30 per cent of No. 1 common or higher grades, must be accompanied by inspection certificates.

The certificates must be issued by qualified inspection agencies or inspectors recognized and accepted as such by a Federal agency, such as the Central Procuring Agency, which buys lumber for military requirements. Without such a certificate, a shipment of lumber invoiced as No. 1 common or higher may not be sold at prices above those for No. 2 common.

"This certification is required to combat widespread violation of Southern pine price ceilings through the device of upgrading," OPA said. "The normal out-turn of No. 1 common and higher grades of lumber from a log of Southern pine ranges, by locality, from 5 to 30 per cent. However, some mills have been invoicing run-of-the-log shipments as containing from 50 to 60 per cent of No. 1 common and higher grades."

The ceiling price for No. 1 common shortleaf one-inch by 6-inch by 12-foot boards, for instance, is \$40 per 1,000 board feet, f.o.b. mill, compared with a ceiling price of \$37 per 1,000 board feet for No. 2 common boards of the same size. By upgrading a shipment, the higher No. 1 common price is obtained for lower quality material.

NOW A Star HAS BEEN ADDED.

FOR continued outstanding production of war materials . . . today a new star blazes in the Army-Navy "E" Flag at Laucks. Another official salute to the men and women of I. F. Laucks, Inc., for their work in creating vital glues and other materials of war.

I. F. LAUCKS, INC.*
SEATTLE

PORTSMOUTH, VA. LOCKPORT, N. Y.
LOS ANGELES CHICAGO
VANCOUVER, B.C. STANBRIDGE, QUE.

WORLD'S LARGEST MANUFACTURERS OF WATER RESISTANT AND WATERPROOF GLUES

CONSULT LAUCKS • AMERICA'S GLUE HEADQUARTERS

Privately Financed Housing Dropping Off But Still Big

A total of 18,065 new family units in 206 large-scale rental housing projects for war workers located in 25 States and the District of Columbia were completed or under construction as of September 30, 1943 under the war housing program of the Federal Housing Administration, Commissioner Abner H. Ferguson recently announced. They are financed by FHA-insured mortgages totaling \$72,729,600.

An indication of future activity in this field is given by the commitments made by the FHA to insure mortgages on 69 additional projects, already planned but yet to be started, to provide 4,153 new dwelling units and to be financed with FHA-insured mortgages amounting to \$18,483,500. These projects are part of the war housing quota assigned to private financing in the over-all program of the National Housing Agency, of which the FHA is an operating unit.

The projects are being financed by private lending institutions under the provisions of Section 608 of the National Housing Act. This section is an adaptation to war housing needs of the large-scale operations of the FHA in normal times under Section 207. The projects consist largely of the garden type of apartment house with yards, playgrounds, garages, and other facilities for the families occupying them.

* * *

BLANDFORD—

(Continued from page 44)

ernment funds for structures which will be demolished after the war, and to speed construction.

I hear whispers from time to time that a publicly financed housing program of a million houses a year is contemplated after the war. But I have never heard whispers identifying the factual foundation of that statement. It is definitely true that the NHA and its responsible officials are hopeful and confident that production of a million or more new houses a year can be attained once full production of peacetime goods is possible—provided all elements in the housing industry and the government join forces in a really concerted effort. *But it is also definitely true that the production and financing of this housing will be predominantly a job for private enterprise*, with the government standing ready to extend whatever technical or financial aid is desirable in order to reach full production of good housing.

The extent of federal financial aid will be determined, I believe, by how much of the total need and market for housing can be financed by private enterprise unaided. *But it should be obvious that direct public financing could be available for only a small part of a post-war housing program of the magni-*

tude that this nation needs and should have.

Our mutual experience under the war housing program has given further proof that fact rather than fancy is the only foundation upon which large affairs can be successfully conducted. There is no need to elaborate upon the many perplexing problems facing all of us during this war period—the many abrupt changes from peacetime practices demanded by war needs, the acute shortages of materials, and the unprecedented and unfamiliar operating difficulties encountered.

It is my firm belief that the fundamental decisions on *post-war* housing must originate with our communities

themselves. I believe our communities must decide how much and what kind of housing they need—acting in consultation with the local citizens who will live in the housing, the builders and workers who will produce it, and the lenders who will finance it.

If federal assistance is required—in planning or financing or any other phase—recommendations should be submitted to the Congress and to the federal agencies involved, in accordance with our democratic procedures. It will then be for the Congress to determine the nature and extent of federal assistance, and for the proper agencies to carry out that mandate with the maximum effectiveness at their command.



Work Faster ... at Lower Cost with this Low-Priced 14" Delta Band Saw

This is exactly the Band Saw you need for fast, accurate, safe cutting in the Cabinet Shop, Pattern Shop, Furniture Factory, or Maintenance Department. Ideal not only for wood sawing but also for special jobs like paper-cutting, slicing corrugated board, and many other useful applications. w-4

Note These

Important Features

- Heavy Table—solidly, accurately ground.
- Sturdy Castings — precision machined.
- Table swings smoothly, tilting 45° to right — 10° to left.
- Heavy Cast Iron Wheels — carried on "life-sealed" ball bearings.

PLUS many other advantages.

SEE YOUR DELTA DISTRIBUTOR

SEND TODAY — for New Delta Catalog showing complete line of low-cost wood-working equipment. It's FREE!

Mail This Coupon Now!

THE DELTA MANUFACTURING CO.
714N E. Vienna Ave., Milwaukee 1, Wis.

Send full particulars about the 14" Delta Band Saw, and a copy of the new Delta Catalog.

Name..... Position.....
 Company.....
 Address.....
 City..... (.....) State.....

LETTERS

(Continued from page 7)

owned and operated housing projects without first granting the opportunity for private builders to furnish facilities of equal value.

I shall continue to maintain this position and assure you that many of my colleagues in Washington are rapidly adopting a similar point of view.—GEORGE H. BENDER, Congressman-at-Large from Ohio, Washington, D. C.

Wrote his Congressman

To the Editor: As a director of the National Association of Home Build-

ers, I wish to express my gratitude to the *American Builder* for the fine advertisement in your October issue.

I have pretty well covered the magazine and would like to say that I feel it is the finest thing that has been published in a long, long time. The suggestions on page 95, "Congress Must Set Postwar Housing Policy," are very good. I am writing Representative Earl Wilson of Indiana commending him on his stand against the National Housing Agency. I recall reading in the April 1939 issue "Public Subsidies and Private Housing" and I still think it is a good idea.—J. B. HAVERSTICK, Montgomery County Builders Association, Inc., Dayton, Ohio.

Terminate NHA

To the Editor: The October issue of the *American Builder* was really one of the best. I hope you continue this constructive work with particular reference to a vigorous fight for the termination of the National Housing Agency and for the re-establishment of the right of private industry in the construction fields.—R. NEEDHAM BALL, Secretary, Louisiana Building Material Dealer Ass'n, Baton Rouge, La.

Makes better citizens

To the Editor: When this war is over we are going to need intelligent, thinking voters more than ever before. An individual making a down payment on a home, whether the purchase price is \$2,500 or \$25,000, immediately feels that he has become a permanent part of the community in which he lives. He realizes that he is now a direct taxpayer and that he must take an active part in the selection of local and national representatives in order to preserve his inalienable rights, particularly home ownership.

I have read the articles in *American Builder*, and I sincerely feel that you and your magazine are doing more to promote home ownership than any other periodical or organization. I am personally deeply grateful for the fine work you are doing which should and will promote better citizenship.

Your practical post-war planning suggestions are excellent.—JIM MARCH, March Construction Co., Inc., Tacoma, Wash.

* * *

Carolina War Model—

(Continued from page 39)

PD Number	Quantity
420—Bath tubs.....	21
420—Lavatories.....	21
420—Water closets.....	21
420—Sinks.....	21
431—Soil pipe, fittings, clean-outs, plugs, floor drains and ferrules.....	8,820 lb.
432—Screw pipe and fittings.....	294 lb.
4331—Lead pipe.....	126 lb.
4332—Solder nipples and ferrules.....	252 lb.
4333—Solder.....	42 lb.
434—Caulking lead.....	567 lb.
435—Flashing.....	105 lb.
436—Hangers, supports and miscellaneous iron.....	210 lb.
441—Water supply pipe, ferrous metal.....	2,205 lb.
442—Water supply pipe fittings.....	525 lb.
443—Valves: 1½" and smaller.....	105 lb.
444—Hangers, supports and miscellaneous iron.....	105 lb.
454—Direct fired water heater with storage tank.....	21
4621—Safety valves for h. w.....	21
521—Space heaters: 50,000 Btu.....	21
610—Ranges: Electric.....	21
620—Refrigerators: Electric.....	21

IT'S MARLITE.. AND THAT MEANS



BLURMITES ARE OUT-OF-LUCK!

Blurmites (mild acids and alkalis, most chemical fumes, oils, grease, disinfectants and dirt) are destructive little demons that play the devil with ordinary interior surfaces. But they play a losing game when they meddle with Marlite, because high-heat-bake finished Marlite—tested in pre-war and war-time installations—will take abuse without harm to its attractive surface.

Whenever you have interior wall and ceiling jobs, you want to be sure the installation will win continued user approval and satisfaction by giving long years of trouble-free service. A veritable

army of dealers, builders and users will tell you that Marlite has what it takes! In fact, for all types of post-war installations, easy-to-install and easy to clean Marlite offers practical realization of long-awaited advantages of design and application.

Right now war plant, hospital and other war construction offer real sales-making opportunities. What's more, these jobs carry priorities usually sufficient to insure quick deliveries. Send for complete product data! Remember, Marsh Engineers are ready to help with plans and specifications!



duty-ful
for creating beautiful interiors
Plastic-finished WALL PANELS

MARSH WALL PRODUCTS, INC.

123 Main Street,

Dover, Ohio

The Only One in the World

THIS Parsons Pureaire Kitchen will perform every kitchen duty, including refrigeration and storage. But it differs from kitchens of the past in two highly important ways:—

1—Pureaire takes up only 8 sq. ft. of floor space.

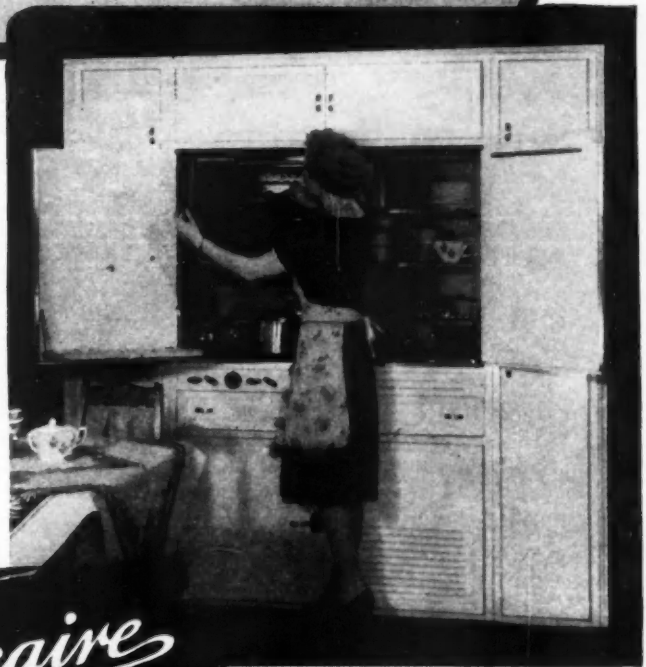
2—And Pureaire is the only home kitchen in the world that allows no heat or odor to escape into the room.

Ponder how this proved equipment—thousands in successful use—can revolutionize your post war plans for ultra-small homes, apartments and remodeling. But remember—none for sale till Victory.

TRAVERSE BAY MFG. CO.

(Affiliated with The Parsons Co.)

15000 Oakland • Detroit, Mich.

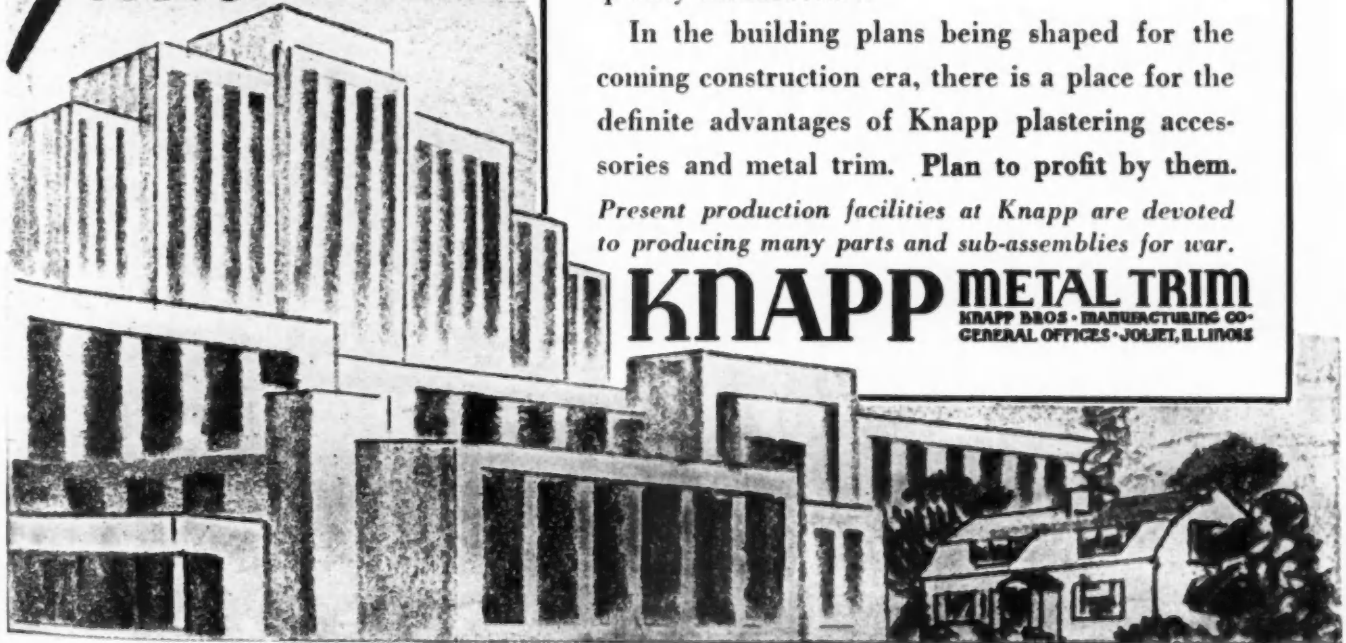


P A R S O N S

K I T C H E N S

FOR THE BETTER BUILDING OF

Tomorrow



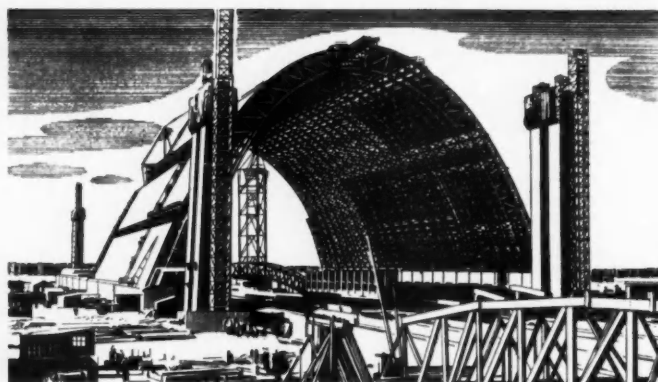
THE better structures of tomorrow will include products of proved quality and design. You will find Knapp Products among them, for they have become the standard of comparison through years of constantly sound design and quality manufacture.

In the building plans being shaped for the coming construction era, there is a place for the definite advantages of Knapp plastering accessories and metal trim. Plan to profit by them.

Present production facilities at Knapp are devoted to producing many parts and sub-assemblies for war.

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

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Flame-Proofing Permits WOOD To Invade New Postwar Markets


YOU'VE SEEN this blimp hangar in the news: "Largest Wood Structure in the World." Many like it are scattered along our coast lines, housing the blimps that are making things hot for Axis submarines. But did you know that these wood structures are safeguarded against another enemy, Fire?

MINALITH FIRE RETARDANT protects that wood. It will not catch fire. It will not spread fire. It ceases to glow soon after exposure to flame. Fire would be confined to local areas, therefore, and such flame-proofed structures would maintain their load-bearing strength without sudden collapse.

PRESSURE IMPREGNATION with Minalith* fire retardant makes ordinary wood flame-proof. American Lumber & Treating Company employs the same scientific methods, the same accurately controlled equipment, as is used in making Wolmanized Lumber*—the wood that's highly resistant to decay and termite attack.

FOR POSTWAR USE, we now offer you two types of treatment that enable you to retain all of the usual advantages of wood construction—lightness, ease of erection, strength, resilience. We add flame-proofing with Minalith fire retardant or resistance to decay and termites with Wolman Salts* preservative, according to your needs. We'll gladly give you more details on either treatment. Write American Lumber & Treating Company, 1645 McCormick Building, Chicago 4, Illinois.

*Registered Trade Marks

"Alloyed" FOR ENDURANCE 
WOLMANIZED LUMBER

Hawkins Joins Staff of American Builder

J. HAROLD HAWKINS, well-known building writer, editor, and author of "Your House: Its Upkeep and Rejuvenation," has joined the editorial staff of *American Builder* as assistant editor.

"Jim" Hawkins, as he is known throughout the industry, brings to his new association with *American Builder* a wide experience in the home building field. For several years he was feature writer for national magazines in the home and farm fields, and for 10 years was Architectural Editor of Ladies' Home Journal and of McCall's Magazine where he originated and successfully carried on the "Journal House-Pattern" activity and the "McCall Home of the Month" program. In the latter editorial enterprise, over 300 exhibition homes were built and inspected by millions of home buyers. Previous to this, Mr. Hawkins was in the retail lumber and home building business.



Announce New Pre-fit, Mortised Doors

KNOWN as "Tru-Sized" doors, this new product has been announced as the result of the combined efforts of the expert staff of engineers and wood craftsmen of the Wheeler Osgood Sales Corporation, Tacoma, Wash.

Tru-Sized doors, as the name implies, are a tailor-made product, designed to save installation time, and assure perfect fit and satisfaction on every job. They have been thoroughly tested and proven highly satisfactory on both large and small building projects. These doors eliminate planing, sawing and fitting on the job, and also avoid the hazard



INSTALLING pre-fit "Tru-Sized" door.

of marring, scratching and splitting of doors while preparing to hang them. They are made of old-growth Douglas Fir, are protected for shipping and handling by the application of scuffer strips of plywood on the bottom of each door stile. In addition to the pre-fitting, they can be ordered fully machined for standard locks and hinges.

* * *

Organize for Better Post-War Heating



THE first joint meeting of officers, directors and advisory council of Indoor Climate Institute saw the recent launching of an educational program on heating. Above are these men: seated, 1st V.P., T. A. Crawford, Timken; pres., Paul B. Zimmerman, Airtemp; Secy., R. E. Moore, Bell & Gossett. Standing, Treas., E. N. McDonnell, McDonnell & Miller; 2nd V.P., L. N. Hunter, National Radiator Company.

Speeding Our "Liberators" to Victory

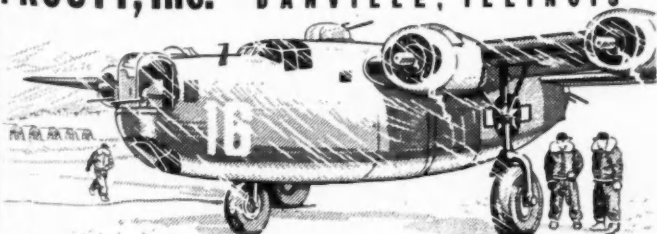


Allith HEAVY DOOR HARDWARE

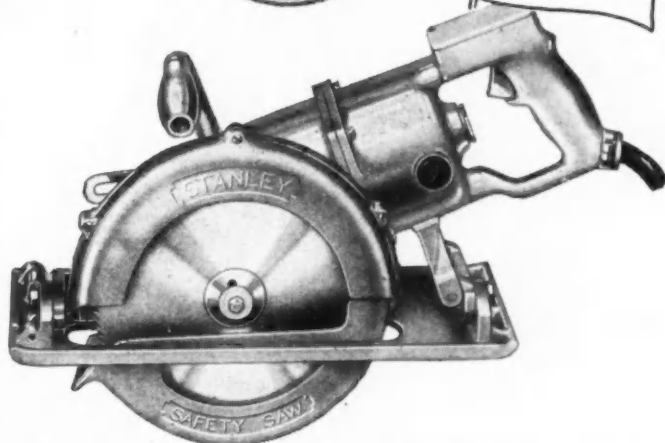
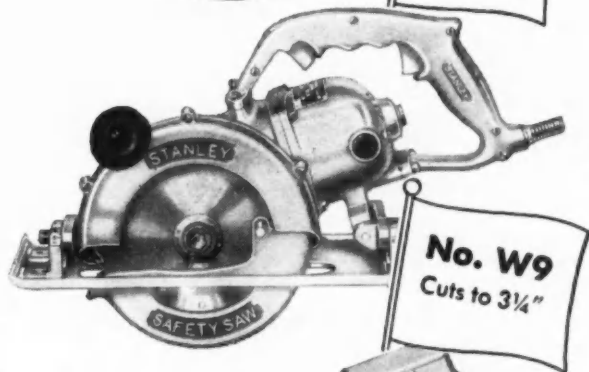
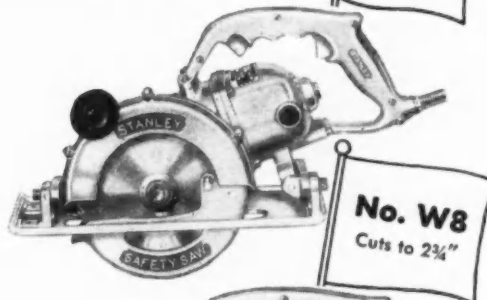
On mission after mission, our mighty Liberators brave blustery Aleutian weather to rain havoc on faltering Axis outposts. When they return to their well equipped bases, they are tucked safely behind hangar doors and protected from the elements while they are groomed for further advances.

Allith is geared 100% to war production, providing sturdy hardware for these huge doors. But we'll be ready to again take your orders . . . after Victory!

ALLITH-PROUTY, Inc. DANVILLE, ILLINOIS



OUT IN FRONT for FAST, ACCURATE SAWING



Stanley Safety Saws speed up building jobs from start to finish. Easy to handle, safe at all times, rugged and practical for close work and long service, they earn profits for you from the moment you put them to work.

Carpenters like their balanced design, their labor-saving speed, their continuous protection against injury. Stanley Safety Saws are available in cutting capacities up to 3 1/4" and may be equipped with all standard wood-cutting blades, as well as those for metal, tile or stone cutting. Write for complete information. Stanley Electric Tool Division, The Stanley Works, New Britain, Connecticut.



1843 **STANLEY** 1943

TRADE MARK

STANLEY SAFETY SAWS

TALK ABOUT FRACTIONS

Daily procedure at the Western Pine Association Research Laboratory calls for using scales that weigh to an accuracy of 1/280,000 part of an ounce. Precise, painstaking work like this is but one example of how our technicians study the characteristics of the Western Pines.



In these wartime days, as in the days of peace, the Western Pine Association Research Laboratory is constantly experimenting to determine new values, new uses, and to improve manufacturing procedures for the Western Pines.



WESTERN PINE ASSOCIATION

Yeon Building, Portland (4) Oregon

*Idaho White Pine *Ponderosa Pine *Sugar Pine

*THESE ARE THE WESTERN PINES

The Producers' Council, Inc. Sets 10-Point Program NOW

MEETING recently in New York, the Council, under the able leadership of Douglas Whitlock, President, outlined for itself a task for which it should be applauded by all builders and lumber dealers in America. The program features, first, continued active support to the war program.

Second, plans to expand the Council as a stronger central organization for the entire building-products manufacturing industry. Third, cooperation of all branches of the construction industry, and, fourth, acceleration of postwar preparations.

The Producers' Council has accepted as the over-all objective the providing and sustaining of a volume of construction and employment in the postwar period sufficient to support a national economy of maximum employment, production and consumption. The several activities include:

Postwar Committee—a council committee—composed of representatives both from members and non-member manufacturers and manufacturers' trade groups.

Liaison Representatives—from non-manufacturer associations—are freely invited to participate.

Working Committees—seven already provided—on Employment, Market Analysis, Technical Development, Marketing, Industry and Consumers' Relations, Finance, and Government Relations to Construction. (Organization Chart is available.)

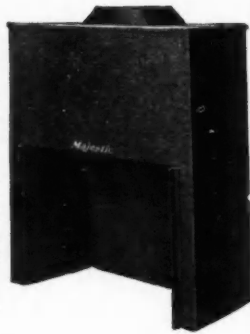
Postwar Studies—to permit concerted industry action—In preparation are complete analyses and forecasts of all types of postwar construction markets. On the basis of such analyses, are being prepared industry programs for realizing and sustaining these markets; e.g., a preliminary proposal for a rational housing program for the entire construction industry has already been set forth.

Coordination With Over-all Industry and Business—The

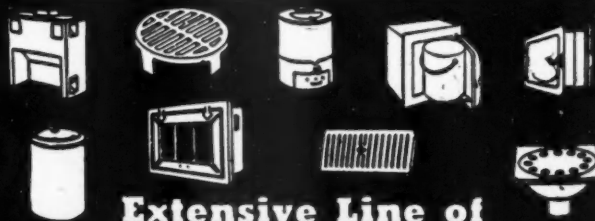
In Tomorrow's Homes FIREPLACES will HEAT

Heat-circulating fireplaces will be a "must" in tomorrow's homes! Perfected home insulation makes fireplace heating practical . . . where central heating is automatic, it cuts fuel bills almost directly in proportion to its use. And fuel-rationing has emphasized its importance!

Though heavily restricted for wartime building, the Majestic Master Circulator, with *Radiant Blades*, has nearly double the heat-radiating surfaces of the ordinary unit! Its advanced frame design, with insulation-sealing angles at sides in front, permits better, easier installation. Any type of mantel or exterior design can be built around the unit. Write for details on other features! The Majestic Co., 903 Erie St., Huntington, Ind.



Majestic CIRCULATOR FIREPLACES



Extensive Line of Quality Building Necessities

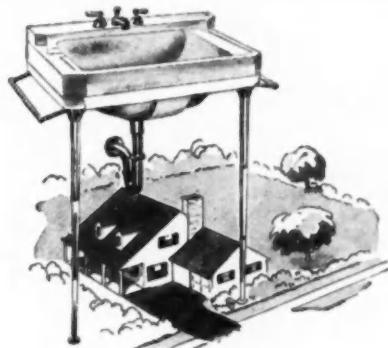
Council's program is the first to be integrated completely with the postwar programs of general business.

Integration With Other Branches of the Construction Industry—The Council has urged the bringing together of all branches of the construction industry—design, contracting, distributing, home building, financing, etc.,—as well as manufacturing—for concerted action on postwar problems through the Construction and Civic Development Department of the U. S. Chamber of Commerce.

Points Helpful to All

1. Continue Active Washington Office. Give all possible aid to war construction, war production and reconversion.
2. Stimulate Local Council Chapters. For greatest usefulness during the war and in the postwar.
3. Continue Publication of the Technical Bulletin on a flexible schedule adapted to changing conditions.
4. Utilize Fully Assistance of the Council's Advisory Board.
5. Collaborate With the American Institute of Architects on the program outlined by the special committee, and then expand relationships with other factors in the industry, such as engineers, contractors, home builders, dealers, etc.
6. Promote Dimensional Coordination and Modular Products. Encourage acceptance of proposed American Standard.
7. Broaden Activities of the Market Analysis Committee with respect both to present and postwar markets.
8. Accelerate the Council's Postwar Studies. Be prepared, whether the war ends quickly or is prolonged, to propose industry programs for maximum employment and quality construction.
9. Broaden the Base of the Council and of Manufacturers and Trade Groups for a still stronger central organization for the manufacturing wing of the industry.
10. Take the Lead in Bringing About Cooperation of All Branches of the Construction Industry on Common Problems.

**FROM
Wash-Bowls**



to War-Boats!



The peace-time products of your craftsmanship—and ours—must wait for a better day before we can all go ahead with them as we want to do. Meanwhile, there's work calling for the engineering and technical skills that have made the name Case a synonym for lifetime performance and good design in plumbing fixtures. We're doing this work, hastening in every way we can the end of war. Case plumbing fixtures, hot water systems and special metal products in hundreds of war and merchant ships, as well as in shore installations, are serving and safeguarding the health of our fighting men. W. A. Case & Son Mfg. Co., Buffalo 3. Founded 1853.

Case

**PLUMBING FIXTURES
HOT WATER SYSTEMS**

Mall Saws
TRADE MARK

**CUT DAYS
OFF WAR JOBS**

Model 85
Capacity 2 3/4"

and Cut Costs in EVERY Direction

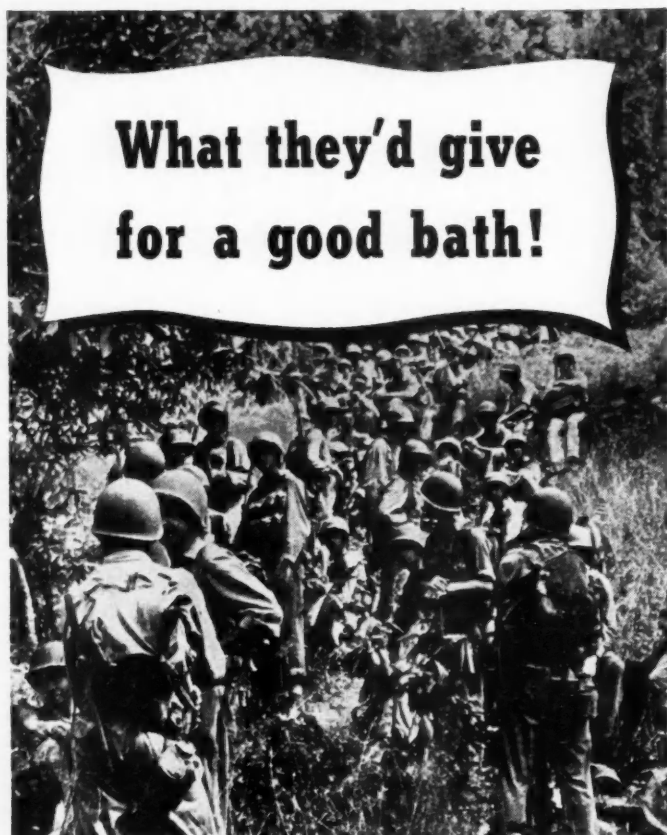
- ★ Squaring form boards to size above and below grade.
- ★ Making multiple cuts of like framing members.
- ★ Fitting interior trim.
- ★ Cutting openings for windows, doors, registers and ventilators.



A handy time and effort-saving tool for carpenters, builders, lumber dealers and others engaged in War Work. Three other models with 8", 9", and 12" blades and 2 1/2", 3", 4 1/2" cutting capacities also available for Victory Construction.

Literature and prices upon request.

MALL TOOL COMPANY
7737 South Chicago Avenue, Chicago 19, Ill.



AT THE end of their march these hot, dusty American troops will bathe in a jungle stream fenced off from crocodiles. How they would appreciate the luxury of a bathtub!

With Victory, they will join the millions of people in America who want to remodel their homes or build new ones. Millions of new bathtubs, lavatories and sinks will be needed.

This will give you many opportunities to equip your houses with *Formed* Iron Fixtures. These modernly designed products are light, though strong and substantial. The durable acid-resisting finish costs no more and is easy to keep clean and bright. Many of these fixtures are porcelain on ARMCO Ingot Iron, which gives you an added selling feature.

Formed Iron Fixtures are styled for modern living—designed to help you sell the houses you build. They will enable you to meet post-war housing needs with a full profit for you and lasting satisfaction for those you serve. The American Rolling Mill Company, 2541 Curtis Street, Middletown, Ohio.



**THE AMERICAN
ROLLING MILL
COMPANY**



Catalogs and How-to-do-it Information

108—REVERE'S PART IN BETTER LIVING—A series of booklets issued by Revere Copper and Brass to bring to the American public the concepts of noted architects and designers for the home of the future. Each booklet presents many daring designs for the homes of the future as well as for apartment homes, a neighborhood rehabilitation plan, a country club or leisure center, post-war Main Street, and a community center—all conceived by such well known men as William Lescaze, William Wilson Wurster, George Fred Keck, Norman Bel Geddes, Carl F. Boester, and Walter Dorwin Teague.—Revere Copper and Brass Incorporated, 230 Park Ave., New York.

HOW TO GET THE MOST OUT OF YOUR FARM WORKSHOP—This is the title of a valuable little 40-page handbook of the how-to-do-it type, offering ways of doing the necessary repairs, maintenance work and new construction so essential to the running of a well-ordered farm, through the efficient use of your own power tools. Instructions are given for using various power tools, and suggestions for the making of farm implements, buildings, and farm equipment, as well as remodeling ideas and the building of furniture. (Write direct to The Delta Mfg. Co., 600 E. Vienna Ave., Milwaukee 1, Wis. Price 25 cents.)

109—MAINTENANCE AND CARE OF CLAMSHELL BUCKETS—A 20-page booklet in color just released by Blaw-Knox. Now that it is difficult to buy new buckets, the maintenance problem is of first importance, and this booklet, liberally illustrated with photographs and diagrams of parts and assemblies, should prove especially timely to the trade.—Blaw-Knox Div., Blaw-Knox Co., Pittsburgh, Pa.

110—GLUE RECOMMENDATIONS FOR U. S. GOVERNMENT SPECIFICATIONS—New edition of a chart which was first published a year ago is twice as long as the original one; it illustrates the growing acceptance of glued wood as a war production material, and three new specifications denote official recognition of a new type of glue—non-acid, low temperature phenol-resin.—Casein Company of America, 350 Madison Ave., New York 17, N. Y.

111—PIPE AND TUBE BENDING HANDBOOK—An 80-page technical book which offers practical methods for bending pipe and tubes of copper, brass and related alloys. The use of filling materials, typical tube bending equipment and pipe bending operations are some of the other subjects discussed and illustrated.—Copper & Brass Research Assn., 420 Lexington Ave., New York 17, N. Y.

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American Builder,
105 W. Adams St., Chicago 3, Ill.

(December, 1943)

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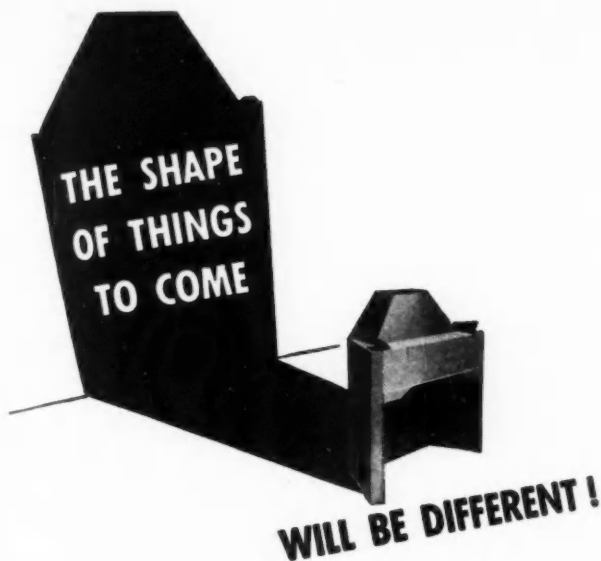
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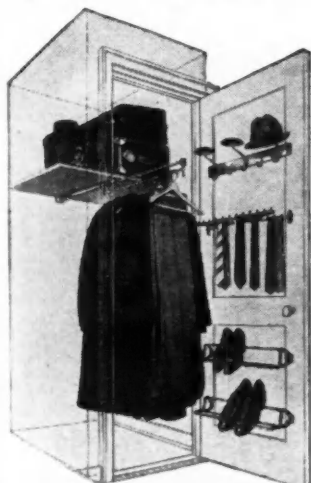
Bennett Fireplace Units . . . new in design and methods of production . . . will be *essential* to the efficient construction of the advanced homes of the future.

BENNETT FIREPLACE CO.
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Clothes Closet Fixtures

. . . will be absolutely a "must" in post-war housing, the obvious solution to neglected clothes closets, the demand for more closet space and truly useful, modern fixtures.

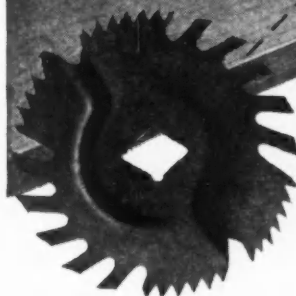


★ They keep all apparel in handy reach, closets neat and orderly. Fixtures for shoes, hats, ties, trousers, skirts, towels, suits, belts, gowns, coats. Tracks, slides and rollers for doors, drawers and shelves.

KAPE & VOGT MFG. CO.

Dept. M-12
Grand Rapids, Mich.

Photograph Courtesy Architectural Forum



Do you know your regular SKILSAW will do grooving in a single operation? Just replace the regular blade with this GROOVING BLADE (illustrated at left) and you're ready at once to groove for stairs, shelves, and weather stripping . . . to slot floors for

sliding doors . . . to speed up rabbeting, mortising and many other jobs.

It's wise right now to learn about *all* the different jobs you can do with SKILSAW. That's how you'll learn to cut costs on more operations . . . to save more time . . . to get yourself bigger, more profitable contracts in the days to come. Ask your distributor for a demonstration NOW!



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Sales and Service Branches in All Principal Cities

With this GROOVING BLADE . . . SKILSAW speeds all grooving, rabbeting, mortising.

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SINKS and TRAYS
available now in
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Flat Rim Sinks — 3 Popular Sizes
B-551—20" x 18", 24" x 18", 30" x 18"

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Two Compartment Sink
B-534—Size 32" x 18"

"PERMA-GLOSS"
Sink and Tray Combination
B-571—Size 42" x 20"

"PERMA-GLOSS"
Flat Rim Sink and Tray in Combination
B-574—Sink 20" x 18"; Tray 20" x 18"

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Perma-Gloss Sanitary Ware, is made from carefully selected clays . . . fired at a high temperature with a layer of vitreous china glaze. It is a homogeneous, durable body of uniform strength covered with a brilliant, lustrous surface that is acid and stain proof — not merely acid resistant. There's no paint or glaze to peel off — no iron to rust. Uniform wall thickness throughout assures a craze and dunt proof product with a body that will withstand thermal shocks.

Write now for full details.

General Ceramics Co.



SANITARY WARE DIVISION

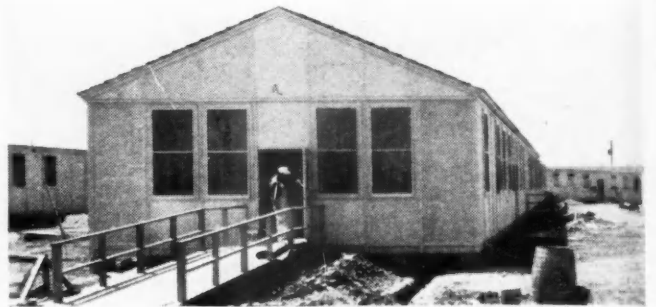
METUCHEN • NEW JERSEY

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Prefabrication—

(Continued from page 48)

only by the wartime advantages of this prefabrication system but with its peacetime possibilities. At peak production, two ward buildings were shipped each day to the building site and during one period 27 structures were erected in 24 days. All materials used were designed with consideration for the highest possible degree of fire resistance and the buildings—all of one-story construction and in most cases hundreds of feet long—are possibly the nearest to fireproof of any ever constructed of wood framing. Outer walls are made of two laminations of 1/8 inch sheets of asbestos cement over a core

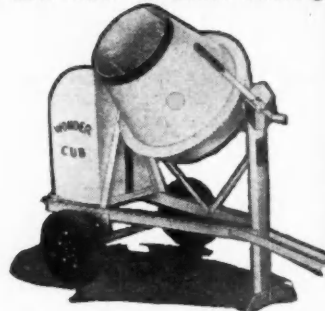


PUTTING the finishing touches on one of prefabricated hospitals.

of 25/32 in fibre insulating board completely sealed against moisture by a bitustatic treatment. Such walls have a high insulation factor and high fire, moisture and wear resistance, with a surface hard as stone. In a standard rain test which forces moisture through ordinary brick walls in eight to ten minutes, the moisture had penetrated only 1/8 inch into the core after five days. Exceptional strength is attributed to these walls and they include the newest earthquake protective



Light enough to handle . . . heavy enough to last. Backed by over 30 years of "know how" in Mixer building.



FAMOUS WONDER "CUB"
...a husky "wheelbarrow-full-per-batch" Mixer. Available on steel wheels or skids. Hand or power drive.



NEW WONDER 3...a half-bagger on any mix up to 1:2 1/2:4. Double V-Belt Drive. Available on steel wheels with efficient air-cooled engine or skid mounted for pulley or separate motor drive.

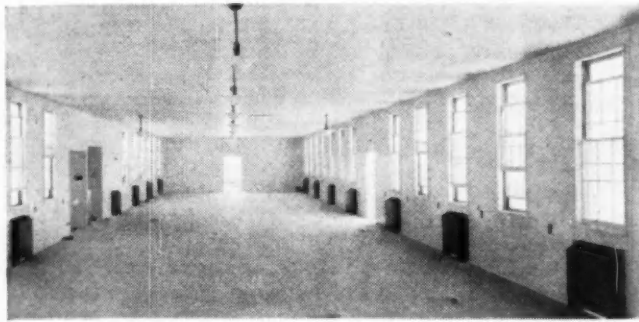
Get FREE Wonder Small Mixer Catalog.

CONSTRUCTION MACHINERY CO. WATERLOO IOWA

features developed on the Pacific Coast.

Shingles for roofing the hospital units, also prefabricated, are eight feet long, made of 90 lb. mineral surfaced roofing felt over fibre insulation. Inner walls of plaster board (gypsum panel board) are also fire-resistant, with laminated surfaces of a felt base material. Air space between the walls helps to create a K-factor lower than in most modern homes. All structural framing, and lumber parts are chemically treated—"flamortized"—to retard ordinary flames. Floors are of prefinished hardwood oak flooring, protected by a sub floor of fire-resistant one inch gypsum plank.

In a fire test made by Capt. Harold L. Jensen, Medical Commandant at one of the hospitals, he had the concentrated



INTERIOR of one of Navy ward buildings of panel construction.

flame of an acetylene blow torch applied for 45 minutes to a single section of an outer wall. Result was a spot about the size of an orange from which tiny cracks radiated. When the wall was cut open the core was found to be charred for a space the size of a silver dollar. The second layer of asbestos cement was in no way affected. In Southern California, on a hot day, thermometers inside the buildings, with all windows open, registered ten to fifteen degrees cooler than outside.

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Compare BATHE-RITE Shower Cabinet features! You'll quickly see obvious superiority in quality that works to your own and your customers' benefit . . . superiority proven in thousands of installations — building on a reputation already established through many years pioneering in prefabricated shower cabinets.

Some features are designed for the plumber and contractor — exclusive quick-assembly, time-and-labor-saving features, for instance. Others, like the STEEL-FRAMED construction, assure long-life service — and satisfied customers.

Check the many BATHE-RITE advantages when you're called on to supply modern bathing facilities in today's growing market. BATHE-RITE Shower Cabinets set today's standards, and comply with all government specifications. PROMPT DELIVERY — is another advantage in dealing with a thoroughly experienced, well financed organization.

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DIVISION

Milwaukee Stamping Company
828-S South 72nd Street
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Widen the Margin on That Close Bid

with the Walker-Turner RADIAL SAW

The Walker-Turner Radial Saw has allowed many builders greater latitude in making the close-margin bids demanded by war contracting—by effecting substantial savings in time, labor and costs. These savings will give them an "edge", as well, in highly-competitive post-war business.

This versatile machine performs a variety of operations, faster, more accurately—crosscutting, ripping, dadoing, shaping, routing, tenoning and mitering—on wood, metals, plastics, transite, tile and many other materials.

Several exclusive mechanical features are responsible for this outstanding performance. Send for literature, now, explaining them in detail. The Walker-Turner Radial Saw is promptly available for war work.

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DRILL PRESSES — HAND AND POWER FEED — RADIAL DRILLS
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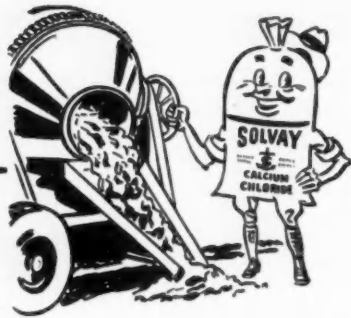
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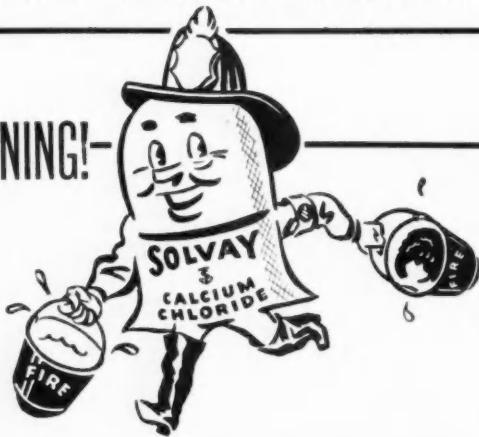
IN THIS WINTER'S CONCRETE

Get extra speed, extra safety, extra quality! Cold weather concreting operations call for extra speed . . . at the same time safety and quality must be maintained.

The addition of Solvay Calcium Chloride to winter concrete speeds up operations—provides extra safety and quality . . . saves on finishing, forms, protection costs and labor!

USE SOLVAY CALCIUM CHLORIDE WITH ALL PORTLAND CEMENTS

WARNING!



FROZEN or EVAPORATED WATER CAN'T PUT OUT A FIRE!

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→ **ADDED** to water in hand pumps, pails, barrels prevents freezing, evaporating, deteriorating or fouling!

EASY TO PREPARE! Harmless . . . Odorless . . . Colorless and Clean . . . Extremely Low in Cost. Send for complete information on the use of Solvay Calcium Chloride for winter concreting and approved low cost fire protection!

Write to Dept. 34-12

SOLVAY SALES CORPORATION

40 Rector Street

New York 6, N.Y.

Precutting vs. Prefab Forum

(Continued from page 44)

store displays, 62 per cent stated they wanted to buy a permanent home, he said. Of these, 25 per cent had cash for a full payment, 24 per cent had enough for a down payment, and 51 per cent were willing to save for the down payment. He visualized a \$50,000,000 a year department store home merchandising program, and predicted that 10 per cent of the post-war houses in the first five years will be prefabricated.

Following are extracts from Bohannon's description of his precutting methods at Rollingwood:

"Every lumber item of the house is pre-sawed. The lumber moves on rolls similar to those used on a production line, or shipping department. This necessitates accurate templates so set that there can be no variation or backing-up of sawdust. A specially designed trailer is used which is towed behind one-half-ton pick-up trucks to carry the pre-cut lumber to the building site.

"In the saw yard lumber is started down the line by a handler to the first power saw, which cuts eave end cut and rafter seat plumb cut and then rolled on to a second power saw which makes the jack cut for hip or valley. It is then rolled to an electric hand saw which makes the final cut in seat of rafter. From there the handler stacks the rafters in correct piles according to size. Saws are set so as to cut all one length or type of rafters for a whole project before being changed. In that manner 400 rafters can be cut per hour with 3 handlers and 3 saw men.

"Studs are cut in the same manner but with only one power saw making trim cut and length cut. The lumber is fed and taken away by the roller tables.

"Lumber is delivered to the job site by especially designed lumber trailers with rollers at both ends. These trailers are pulled by ½-ton pickup trucks. Thus all the lumber for a roof is picked up at the yard from segregated piles.

"The entire operation is set up with crews. As far as possible they operate in tandems, that is, houses are framed simultaneously in pairs and the framing crews,

B&T
Metal Trims
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CHROMEEDGE
TRADE MARK REG. U.S. PAT. OFF.
 B & T METALS CO. COLUMBUS, OHIO

Always right on the job . . . wherever floor and wall coverings are used

The B&T Metals Company
 COLUMBUS 16, OHIO

roofing crews, and shingle crews must keep up their schedule.

"As a matter of demonstration, we have built a completed house, including the brown coat of plaster, in seven hours. The foundation, however, was in place at the start of the work. We believe we have demonstrated conclusively that we can build a conventional house of equal size, with fewer total man hours, by our method than is possible by prefabrication off the site.

"Our site fabrication does not necessitate investment in a costly plant, whereas a factory requires a substantial capital outlay, extensive warehousing and storage of parts long in advance of final erection on the site. Our equipment is mobile and can be economically moved from one job to another.

"Plates are all marked from a master plate at the cutting yard, thus each part of the frame is erected just as a toy block set. The result is a rigid and accurate frame which produces a house as well built as any wood frame house can be. This method has a distinct advantage over whole wall segments fabricated in a yard, or factory built panels which become loose in handling and require the extra labor of loading, and unloading. Moreover larger trailers or truck beds are required."

Change Codes—Petersen

Portions of Arvid Petersen's remarks on his prefabrication methods follow:

"We decided that a builder could venture into the mass production of war housing by means of off-site prefabrication, only through an engineered process which would permit the fullest use of materials obtainable, regardless of their variety and adaptability under normal circumstances.

"We felt that any kind of interior finish must fit the

(Continued to page 84)

CHENEY METAL CORRUGATED ROOFING

The Permanent Successor to the old-fashioned corrugated iron roof

Now Available DISTRIBUTORS WRITE US!

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BOWSTRING, CRESCENT, SCISSORS PRATT AND HOWE WOOD ROOF TRUSSES



AMERICAN WOOD BOWSTRING TRUSSES

for factories, drill halls, hangars, garages, etc. Built on the job anywhere in the U. S. A. or fabricated in Chicago and shipped ready for erection.

FREE ESTIMATES

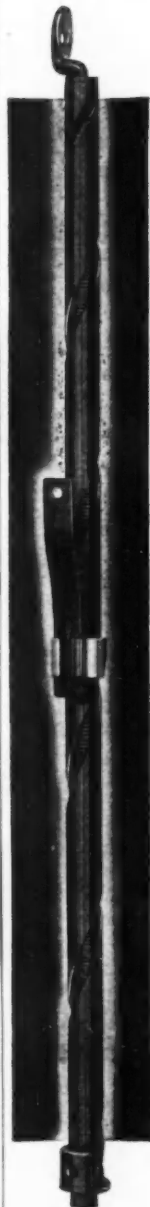
For free estimate give number of trusses needed, span, spacing between trusses, loading condition and location of job.

WRITE US TODAY

AMERICAN ROOF TRUSS COMPANY
Engineers and Constructors of Roof Trusses
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Speeds line installation of window assemblies including the mass production of prefabricated homes



- No tapes or cables or exposed tubes. Entire sash balance moves with sash. Always invisible regardless of window position. No interference with neat paint job. No screws or trim to remove for tension adjustment.
- Easily installed. Only 6 simple steps. Frames require no nailing. No cuts in sash, except full height rounded bottom groove in sash stiles.
- No odd sizes. The same size balance used for both upper and lower sash. Completely interchangeable. Ten sizes meet 95% of all residential requirements.
- Thoroughly proved and fully guaranteed. Amazingly durable, smooth, quiet, easy and dependable operation. Thousands of sets endorsed by contractors of government housing projects.

Engineering Service

To assist manufacturers of window assemblies and of prefabricated homes with the speedy installation of window sash and sash hardware on line production, Grand Rapids Hardware Company offers an engineering service right on the spot—in the person of one of its personnel especially trained in mass production schedules. This service is on a par with the excellence of the Grand Rapids Invincible Sash Balance, and will surely take the kinks out of any problem encountered in connection with the proper and rapid installation of satisfactory and enduring window assemblies. Manufacturers in or entering this field should investigate before completing their plans.

WRITE WIRE PHONE OR CALL

GRAND RAPIDS HARDWARE COMPANY
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SAMSON SPOT SASH CORD

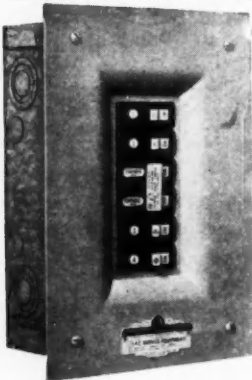
the most durable material for hanging windows

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WHERE THE NEED IS GREATEST
Samson Braided Cords Serve Best
Now and Always

SAMSON CORDAGE WORKS
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The pleasing appearance of this **FA** Service Equipment is noteworthy. It combines **FA** D. P. 35 Amp. AC Circuit Breaker for range circuit, and 4 S. P. AC Circuit Breakers for light and appliance branch circuits. (Cat. No. SE41-3L7F — list price \$11.00.)

If you can't build now—plan now!

When you dream of that new house — or commercial building, school, church or factory — choose its electrical equipment wisely. Select the Load Center, Service Equipment or Panelboard that is *safe* — that will serve you uninterrupted — that requires little or no attention — that is well designed and unobtrusive, as well as efficient.

FA **LOAD CENTERS SERVICE EQUIPMENT and PANELBOARDS**

meet those requirements perfectly. You can't buy better . . . In bulletins 63 and 67 you will find them fully described and illustrated — with a wealth of detail as to specifications, wiring, etc. Send for your copies . . . Frank Adam Electric Company, St. Louis, Mo.



(Continued from page 83)

structure; that any exterior wall treatment should be readily adaptable; that all standard mill work could be easily installed.

"Our finished process is as follows: In our unit, all wall sections, including gables, ladder joists and all stairs, are completely prefabricated; all other materials with the exception of roof boards and sub-floor boards are pre-cut. This takes care of the skeleton structure, and gives us the option of wet or dry interior walls; any type of trim available; and a wide selection in the matter of exterior wall treatment, as brick veneer, shingle, asbestos, wood siding.

"The cutting and fabricating is so accurate that no skilled labor is needed in the erecting process, this phase of the work requiring only one man familiar with the section assembly technique. However, the employment of unskilled labor to do this job is not in accord with the thought of organized labor, so the savings effected by an assembly time of 60 man hours per unit is more apparent than real.

"The entire unit is produced with only one-eighth inch tolerance. So while every bit of material is cut and assembled in jigs, it cannot be assembled on the site with any degree of efficiency, unless the foundation is exactly square, level and built precisely to measure. This of course requires a degree of precision field work which is not usual. It also requires a complete coordination of the flow of masonry supplies, electric material, plumbing, trimming, etc., with the necessary mechanics.

"There is no one simple magic construction plan which will take all of the bugs out of the home building business. For no construction plan will eliminate the restrictive walls and barricades, built up through a long period of years, and which now slow forward progress."

SAWS RAFTERS WITHOUT MARKING!



Here's the most practical contractor's saw on the market today—the Wallace No. 1 Radial Saw. With the exclusive Wallace Angulator, it cuts rafters complete with only **ONE** handling and *without marking.*

It's a real money-maker on framing work, saving \$75 to \$200 on average homes. Handles every kind of sawing operation, *and also does* first-class shaping, dadoing, ploughing, grooving, fluting, bevelling, routing, etc.

Don't delay—write today for bulletins on the Wallace No. 1 Radial Saw.

J. D. WALLACE & CO.
136 So. California Ave., Chicago, Ill.

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Also information on the following:

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WRITE TODAY THE SULLIVAN COMPANY, Memphis, Tennessee
Please send FREE Sample and bulletin, without obligation.

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CITY STATE

How to Save on War Housing

(Continued from page 60)

for the inside walls. The sheet rock was calcimined on the room side.

Shower cabinets were used on the job instead of bathtubs which were not available. The cabinets were built by the plumber on the job, being constructed of enameled asbestos board. The base is of three layers of asphalt and a 30-pound saturated felt under a 4-inch concrete slab.

Two floor plans with six different elevations were used on the project. The restricted size of the houses is in line with latest requirements. One of the plans calls for a house 30 by 30 feet in size and the other 28.6 by 26 feet in dimensions. The kitchen and dinette are combined in one room; plumbing fixtures are placed back to back with a consequent saving in piping and venting.

The contractor on this project was Sam F. Coleman, of Nashville, Tenn., who has erected some 5,000 houses under FHA specifications, most of them being in Tennessee and Alabama. H. C. Smith of Nashville was the superintendent on the job.

* * *

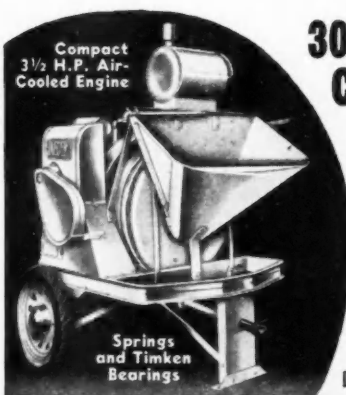
How to Do Industrial Reconditioning— A Big Job Going Begging

(Continued from page 59)

more applications of patching material, which is a combination of cement, sand and the bonding material, the whole making a non-shrink mix. Each application is water cured.

The entire surface of the building is then wire-brushed to remove surface accumulations. Finally a waterproof

(Continued to page 86)



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Springs and Timken Bearings

30% to 40% MORE CONCRETE with this MIXER!

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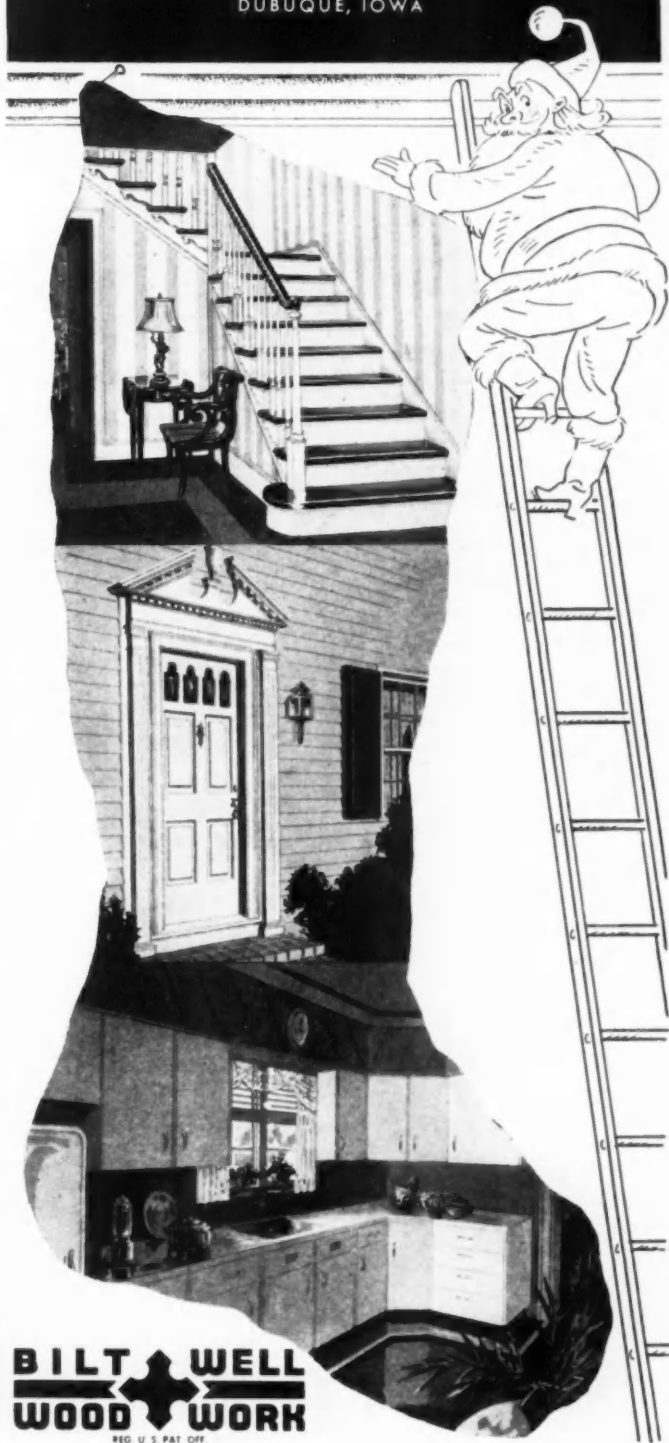
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Tim Tylac



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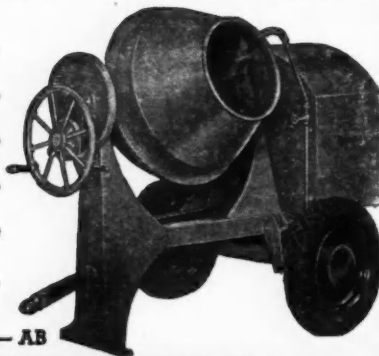


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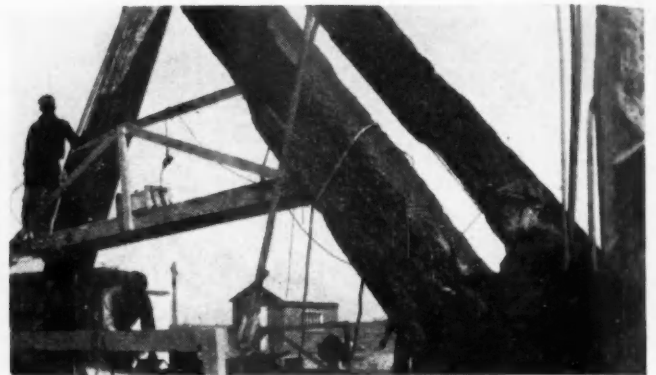
KWIK-MIX CONCRETE MIXER CO.
PORT WASHINGTON WISCONSIN

(Continued from page 85)

coat is added, its type depending on what the customer may select or the condition of the building requires.

If the original concrete finish is desired, a complete metallic bond coat is placed over the entire surface and oxidized, followed by two or more coats of cement and sand, with the proper proportion of bonding material in each. Succeeding coats are not applied until the previous applications have been water cured and set. A finish coat follows, conforming to the natural concrete appearance of the building.

In some cases a primer, followed by a heavy elastic,

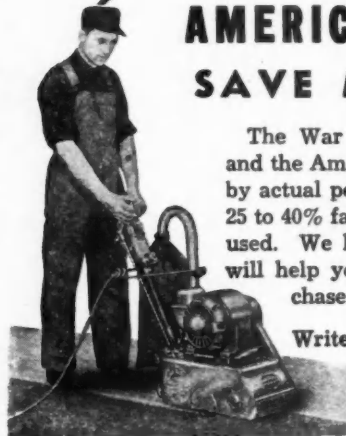


CONCRETE chipped from beam and metallic bonding coat applied.

waterproof coating is used. Some buildings never cease their movements of contraction and expansion, due to failure to allow for these stresses in original design. With such, the flexible mastic finish is desirable.

Brick buildings 20 to 30 years old also often benefit from reconditioning treatment. Symptoms of need are discoloring, mortar joints opening, and development of

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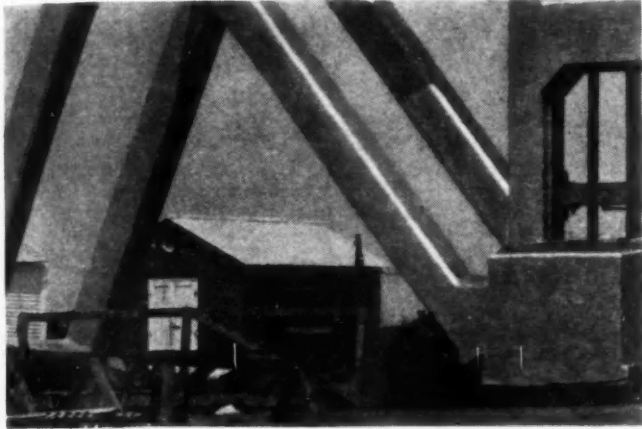


WITH QUICK-SET

THE AMERICAN FLURESIT CO.
639 ROCKDALE AVE., CINCINNATI, O.

leaks. Here the treatment is usually confined to calking the joints and covering the entire surface with a mastic waterproof coating.

Door and window sash are also reconditioned during a job. Window sash in older buildings are often found to have buckled and need realignment, having been set in rigidly without allowance for stress of expansion and contraction. Such a condition cannot arise in a properly designed modern building, where allowance for expansion and contraction is made in setting the sash. Believe it or



BEAM opposite after filling to original surface with patching.

not, inaccessible windows are frequently given their first washing since erection as part of the reconditioning work.

A considerable portion of the postwar job will lie in taking early preventive action when the first signs of disintegration of surface appear, thus maintaining structures by reconditioning so their lives are prolonged.

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SAVE MONEY
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Fig. 910



Fig. 900

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FASTENING
and HANGING DEVICES



So said a recent news item depicting the post-war world.

Well, maybe it will. Perhaps we have no imagination. But we find it difficult to think of post-war duck-hunting and wartime parachuting in the same breath.

Here, at Lawson, we are not making any bathroom cabinets. We are making Something-Elses—very different Something-Elses—for the use of our fighting men.

And we don't think we can adapt them to post-war bathroom use. (They just wouldn't fit in a bathroom—or in any other part of a house.)

We are not happy about not making cabinets. We hope you regret it, too. And you know that we will be back in the cabinet and other household furnishings business at the earliest possible date.

Meanwhile, even if we liked to carry water on both shoulders, we don't quite see how that can be done.



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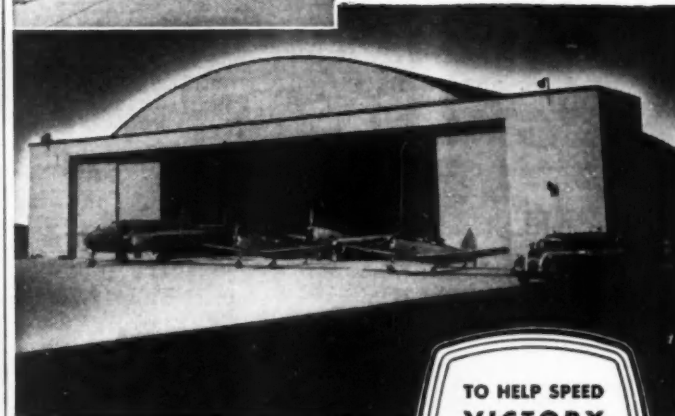
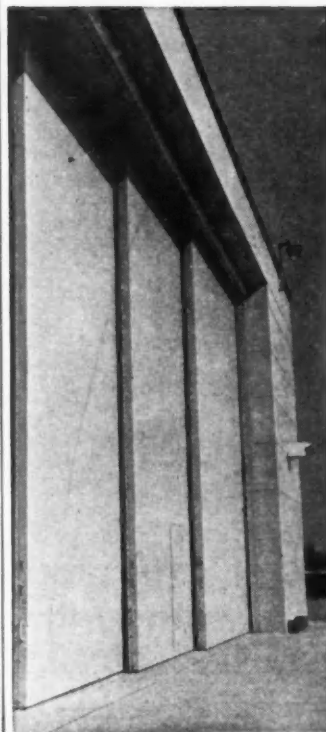
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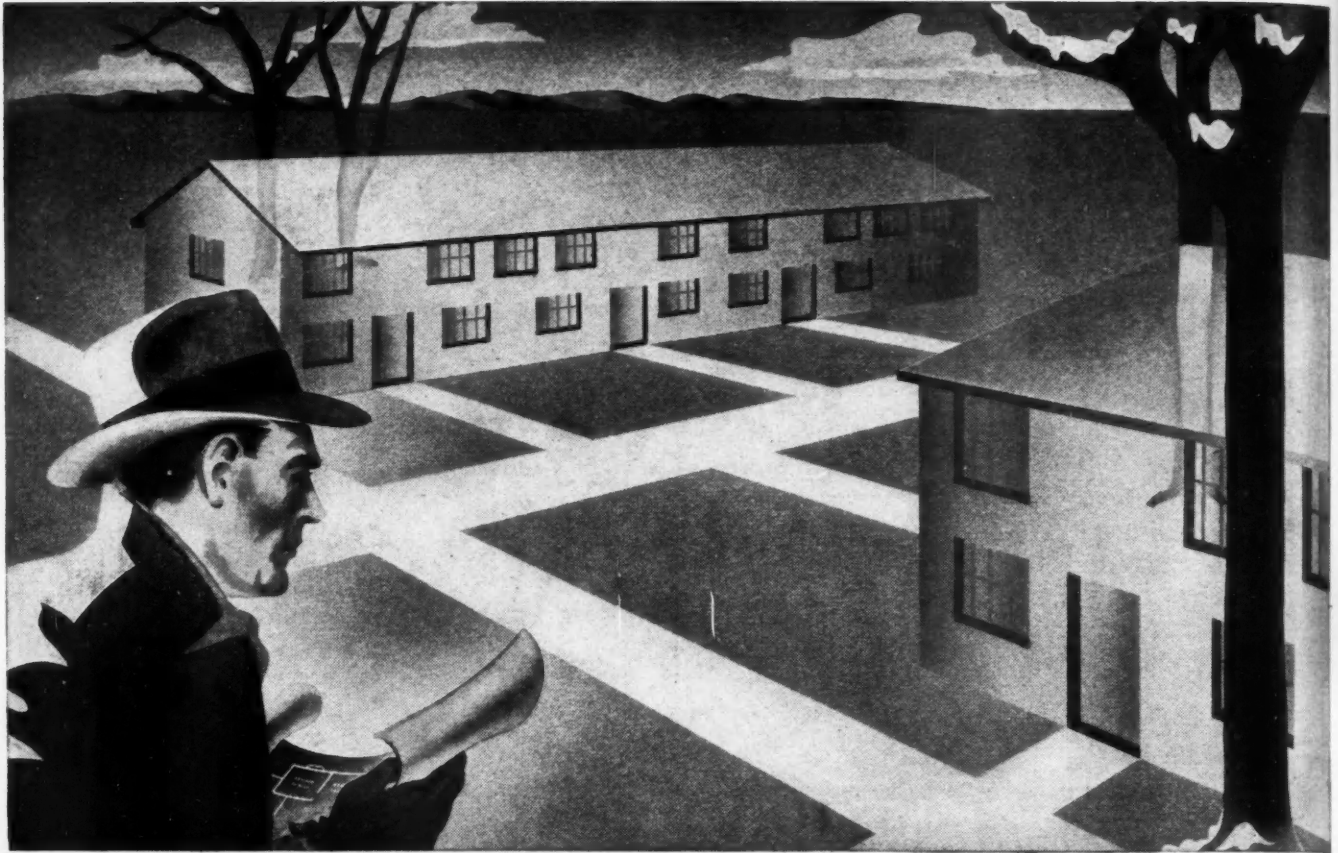
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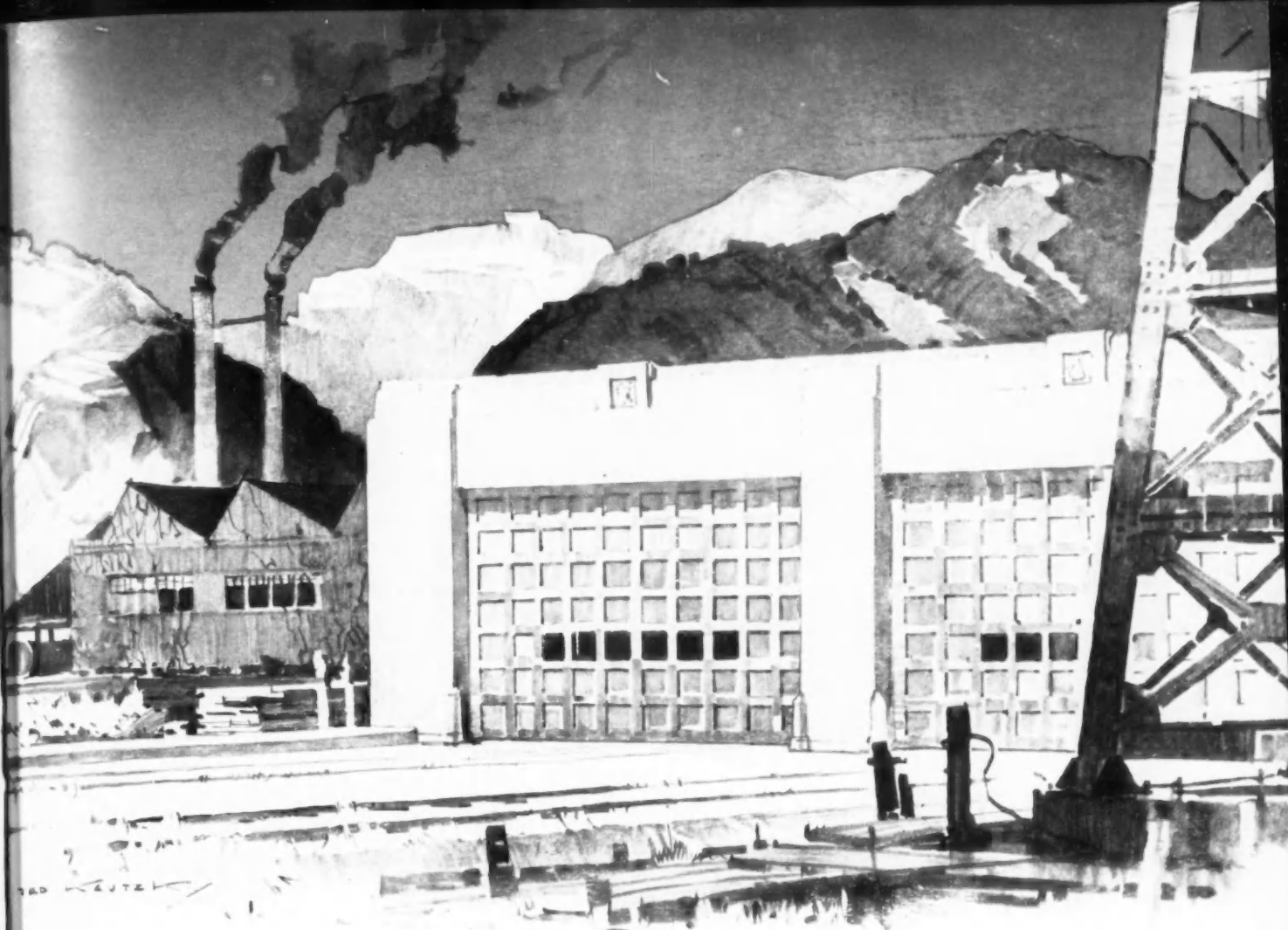


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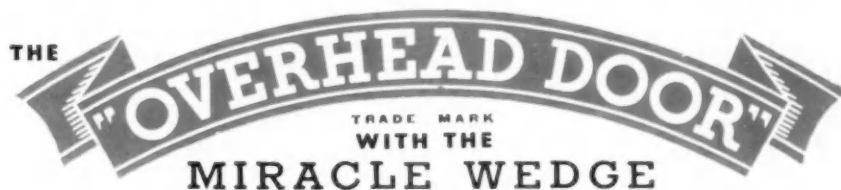
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