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JUNE, 1943

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BUILDER

A N D B U I L D I N G A G E

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BUILDING PAPER

AT Fred C. Trump's Talbot Park, Va., war housing job, carrying "50 pounds on the head and never a brick dropped" (see page 35).



"War-to-Peace" Plan
Stirs Industry Thinking
on Post-War Problems

**COMMERCIAL
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How to Frame 30'x24'
WPB-Approved House

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CELOTEX Triple-Sealed Roofing includes a complete range of colors, styles, and weights—plus the extra service assured by the famous Triple-Sealed manufacturing process. There's a world of selling power in the Celotex name, nationally advertised for 22 years to help you sell more roofing jobs.

Millions of Americans read about Celotex Triple-Sealed Roofing every

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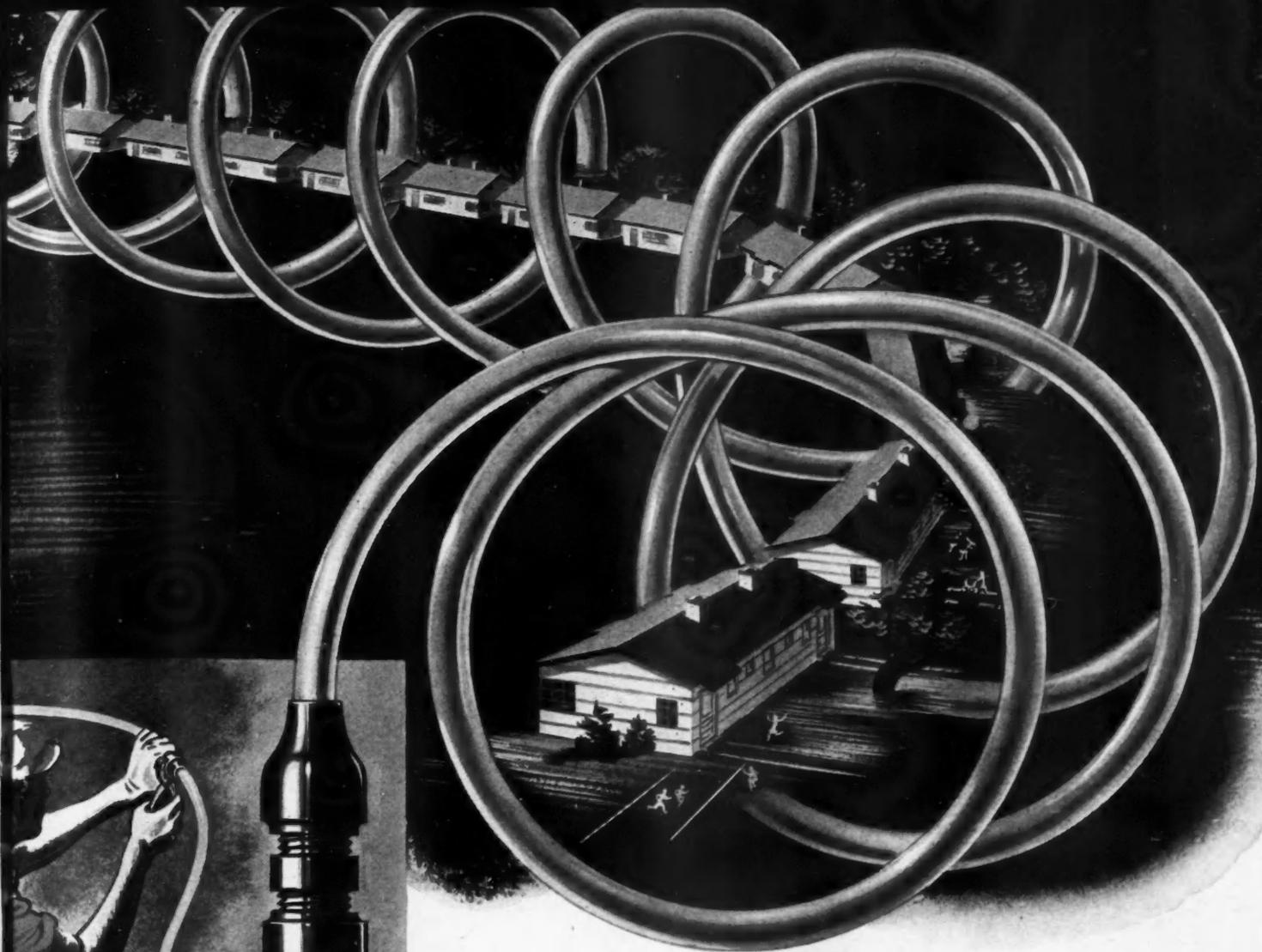
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 ARE BEING USED IN 1943 TO TELL
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1943.



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INSTALLED IN

15,000 WAR HOUSING UNITS!

SARAN TUBING AND FITTINGS EASILY AND QUICKLY INSTALLED

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

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

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

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WHICH HOUSES ARE PREFABRICATED?



Photographs: Rodney McCay Morgan

All of them are

Yet all of them were built *within the existing* construction industry.

Locally registered architects, exercising free and full flexibility, created them. They are not standardized in design.

Local contractors built them. Existing mortgage companies financed them. Local real estate operators sold them.

This *community of interests* safeguarded the home owner from the start, insured quicker erection and gave more home for the money.

These are homes people like to live in.

They are American Houses.



AMERICAN HOUSES, INC.

"THE HOUSE OF HOUSES"

570 LEXINGTON AVENUE, NEW YORK

THE HOUSE OF HOUSES

AN OPEN LETTER TO CONTRACTORS ON PREFABRICATION

AMERICAN HOUSES, INC.
570 LEXINGTON AVENUE
NEW YORK

ELDOFADO 5-6193-A

Dear Mr. Contractor:

Many of you have written us expressing concern about the growth of the so-called new industry, "Prefabrication" — and its possible effect upon your future business.

We in American Houses believe that you should have no fear. To our minds, there is a definite place in the prefabrication industry for the contractor.

The building industry is going through a refining process very similar to that which developed in the ferrous metals industry some years ago. The leaders of this industry realized that they could not take raw materials and produce steel in one operation. They placed between the manufacturers of iron and the users of ferrous metals a refining operation which was the steel mill.

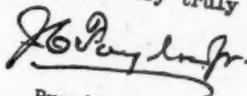
For many years you have been asked to use an increasing variety of materials to build structures that have become more and more complicated. As a result, you have been trying to do many operations at the site, which, from the viewpoint of economy, should have been done elsewhere. Frequently there was a wide variation between your estimate and the actual cost — for which you have been blamed, although the fault was not yours.

American Houses contends that if architects, the public, the mortgage companies, and the suppliers of raw materials are going to ask you to use glass, steel, wood, aluminum, rubber, copper, plastics, and a host of other materials in future building, the fabricating and fitting of many of these items must be done before they arrive at the site. This simplifies your job as a contractor.

Prefabrication is logical and necessary in the building industry. The contractor still has an important part to play in the building operation. There are many operations which you can perform better and more economically at the site than we can in our factories. The American Houses system is designed solely to help the building industry render a greater service more efficiently and more economically. American Houses products and parts are available any place in the United States, and we are ready at all times to cooperate with you.

You'll be interested in our new booklet, "Prefabrication Explained." Write for a copy.

Yours very truly



President,
American Houses, Inc.



THE HOUSE OF HOUSES

Thank you, John A. Stewart!

PROMINENT NEW ENGLAND BUILDER CREDITS DRY-BUILT
FULL-WALL STRONG-BILT PANELS WITH IMPORTANT SAVINGS

BBETTER than any words of ours, this letter from a repeat-user of *Strong-Bilt* Panels reports advantages now demonstrated on scores of projects in every section of the country.

Strong-Bilt Panels proved their worth in peace time construction. They have passed with flying colors the rigorous tests of wartime. And now they have earned their rightful leadership in the homes of tomorrow.

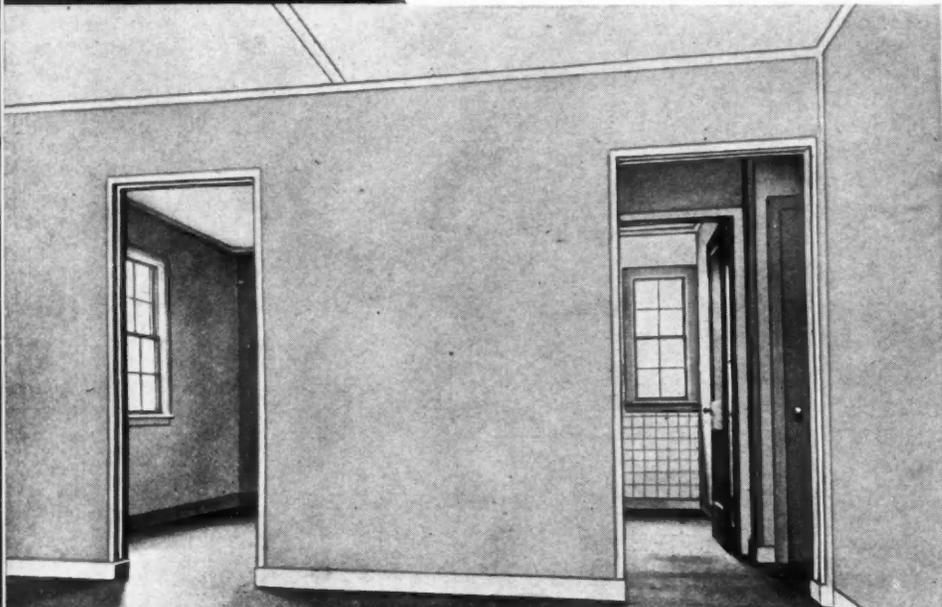
Booklets covering use in both conventional and prefabricated construction will be sent on request.

THE UPSON COMPANY LOCKPORT, NEW YORK

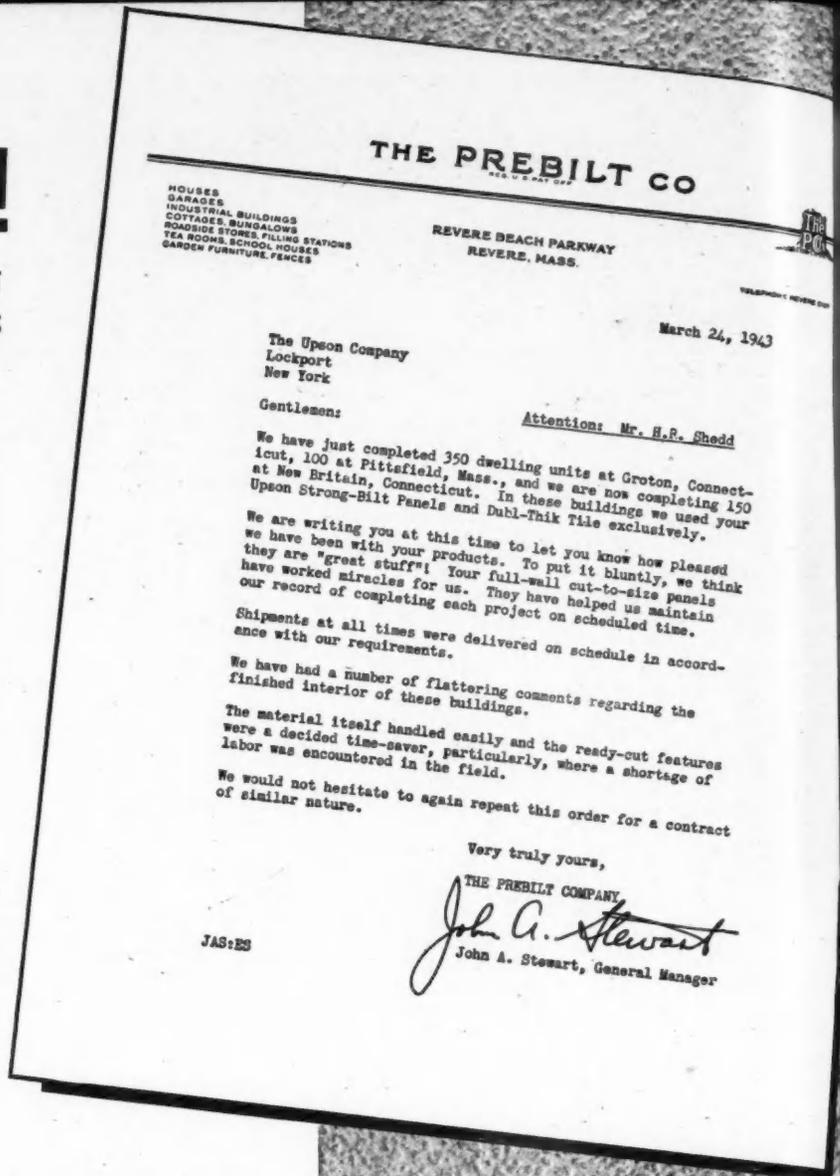


JOHN A. STEWART, General Manager of the Prebilt Company says: "Great stuff! Your full-wall, cut-to-size panels have worked miracles for us. They have helped us maintain our record of completing each project on scheduled time."

Upson Quality Products are easily identified
by the famous Blue-Center



Crackproof full-wall panels, are prezised at the factory to provide a painting surface which even artists acclaim. No joints to fill or tape. No nails to countersink. No nail holes to fill. No drying out period. Invisible Floating Fasteners anchor Upson Strong-Bilt Panels securely from the back.



THE PREBILT CO
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INDUSTRIAL BUILDINGS
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TEA ROOMS, SCHOOL HOUSES
GARDEN FURNITURE, FENCES

REVERE BEACH PARKWAY
REVERE, MASS.

March 24, 1943

The Upson Company
Lockport
New York

Gentlemen:

Attention: Mr. E.R. Shedd

We have just completed 350 dwelling units at Groton, Connecticut, 100 at Pittsfield, Mass., and we are now completing 150 Upson Strong-Bilt Panels and Dobl-Thik Tile exclusively.

We are writing you at this time to let you know how pleased we have been with your products. To put it bluntly, we think they are "great stuff"! Your full-wall cut-to-size panels have worked miracles for us. They have helped us maintain our record of completing each project on scheduled time.

Shipments at all times were delivered on schedule in accordance with our requirements.

We have had a number of flattering comments regarding the finished interior of these buildings.

The material itself handled easily and the ready-cut features were a decided time-saver, particularly, where a shortage of labor was encountered in the field.

We would not hesitate to again repeat this order for a contract of similar nature.

Very truly yours,

THE PREBILT COMPANY

John A. Stewart
John A. Stewart, General Manager

JAS:ES



UPSON
STRONG-BILT
PANELS

THE CRACKPROOF BEAUTY SURFACE
FOR WALLS AND CEILINGS

In short you copy doubt on and Yo that, America has a savin able tain

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AMERICAN BUILDER

AND BUILDING AGE

65 YEARS OF CONSTRUCTIVE LEADERSHIP

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You have already noticed that, with the March issue, American Builder reduced its trim size slightly. This step has resulted in a considerable saving in paper and will enable us to continue to maintain our standard of service.

65th Year Vol. 65, No. 6

Founded Jan. 1, 1879.

AMERICAN BUILDER and BUILDING AGE (Originally "Carpentry and Building"), with which are incorporated National Builder, Permanent Builder and the Builder's Journal, is published on the first day of each month by the

SIMMONS-BOARDMAN PUBLISHING CORPORATION, 105 West Adams Street, Chicago, Illinois
New York Office: 30 Church Street

WASHINGTON, D. C.
National Press Building

CLEVELAND, OHIO
Terminal Tower

SEATTLE, WASH.
1038 Henry Building

SAN FRANCISCO, CAL.
300 Montgomery Street

LOS ANGELES, CAL.
530 West Sixth Street

Samuel O. Dunn, Chairman of Board; Henry Lee, President; Robert H. Morris, J. S. Crane, Vice-Presidents; Roy V. Wright, Secretary; Elmer T. Howson, Assistant Secretary; John T. DeMott, Treasurer.

Subscription price in the United States and possessions and Canada, 1 year, \$2.00, 2 years, \$3.00; foreign countries, 1 year, \$4.00, 2 years, \$7.00. Single copies, 25 cents each. Address H. E. McCandless, Circulation Manager, 30 Church Street, New York, N. Y.

Field Staff: C. L. Conley, J. H. Free, Ralph L. Henry, Woodrow James, W. L. Taylor, Dick Whittington.

Member of the Associated Business Papers (A. B. P.) and of the Audit Bureau of Circulations (A. B. C.) PRINTED IN U. S. A.



TEMPORARY OFFICE

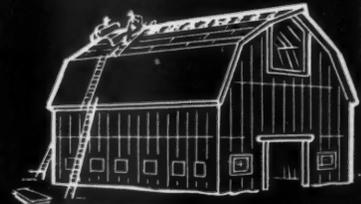


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WITH lumber and skilled labor at a premium today, you've got to have materials which are readily obtained, yet just as easy to use. Gold Bond Structural Gypsum Boards meet these

requirements. Handles, saws and nails like lumber. Comes in standard lengths, which simplifies construction and reduces labor on the job. All 3 types available through local Gold Bond Dealers.

GOLD BOND GYPSUM ROOF PLANK replaces metal and wood for roof decks. For either flat or pitched roofs it forms a strong base for the roofing material. It is fireproof and weather-resistant and will last for many years. The underside is natural cream color with high light reflection. Sizes: 2' x 6', 8', 9', 10' . . . 2", 1½", 1" thick.

GOLD BOND EXTERIOR BOARD is the second in this trio of versatile gypsum boards. These heavy-duty panels com-

plete the outside wall—sheathing and siding—in one operation. There are two types available. One has a durable overcoat of asphalt roofing. The other has a tough green-colored fibre covering.

Both types are weather-resistant, insuring long, satisfactory service. Sizes: 2' x 6', 8', 9', 10' . . . ½" and 1" thick.

GOLD BOND SOLID PARTITION PANELS meet the need for quickly erected plant and office partitions made from readily available material. New and simplified methods result in faster construction. Partitions are permanent for years of good service. Demountable, too, and if they are later removed, the panels are completely salvageable. Incidentally, they are a natural cream color, which can be left "as is" or papered or painted. Sizes: 4' x 6', 7', 8', 9', 10' . . . 1" thick. Also 1½", 1½" thicknesses in same lengths, 24" wide (or 48" wide).



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More than 150 different products for
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NATIONAL GYPSUM COMPANY . . EXECUTIVE OFFICES, BUFFALO, N. Y.

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

Publisher's Page

and Government Policies

WHILE business is planning for the post-war period, no effort should be spared to array public sentiment against government policies adverse to private enterprise. For how successful private enterprise *can* be in providing employment will depend largely on government policies.

The administration is building up a large "shelf of public works." Whether these shall be real public works is of vital importance. Real public works—streets, parks, flood control, school buildings, government buildings—do not compete with private enterprise. But many things now being called "public works" do. Government housing directly and unfairly competes with private building and ownership of housing. After private property and incomes are taxed to provide it, government housing usually pays little or almost no taxes. Even the threat of such government competition in any industry restricts private investment and employment in it. The more industries into which it is extended the more it will restrict them, and the more need for government spending to provide employment will be claimed.

Government labor policies have become unprecedentedly important. A labor union monopoly recently has closed the country's coal mines in the midst of war. If the employers had threatened to do this even in time of peace they would have been enjoined by a federal court; and if they had disobeyed the injunction they would have been prosecuted and punished. Why this inequality in government treatment of *labor* monopolies and *business* monopolies?

Experience has shown that, because of their greater economic and political power, labor monopolies are much more dangerous to the public than business monopolies. The prices any industry can accept depend principally on the labor costs it must pay. Unbalanced and inflexible working conditions and wages in different industries prevent the balanced and flexible prices required to enable different industries to exchange their products freely. Unemployment results; and thus another fallacious argument is afforded for large government spending to provide employment.

Advocates of private enterprise must, therefore, *during the war* oppose preparation for the beginning immediately after the war of huge government spending on everything that anybody calls "public works," and policies tending to strengthen labor monopolies. Government spending should be restricted to *real* public works for which there is public need and which will not compete with any private industry. Labor union monopolies should be subjected to as much control as business monopolies.

The public has been especially aroused against labor monopolies by the racketeering and bullying increasingly practiced by them in efforts to exploit everybody. Several states recently have passed laws to reduce the power of their dictatorial leaders. Public sentiment favors collective bargaining. But such bargaining is grossly abused when conducted by labor leaders who threaten and order strikes without affording any evidence that union members have voted for them—which often they have not. Labor leaders and their political backers talk much about "economic democracy." There is less democracy, and more dictatorship and monopoly, in most labor unions than there ever was in anything else in this country.

To provide full employment and production in peacetime we must have *free* private enterprise. There cannot long be worthwhile freedom of any kind for anybody under policies which heavily tax private enterprise to create government subsidized competition with it, and which help labor monopolies to bully and exploit it.

Samuel O. Drun,

NEW *PRE-DECORATED* SHEETROCK



WHEN THE BOARD IS ON THE JOB IS DONE

For Remodeling—Cracked, unsightly walls and ceilings can be quickly and easily resurfaced and redecorated.

Modern . . . Fireproof . . . Already Decorated—Here's modern beauty and fire protection . . . all in one board . . . all ready to apply . . . no waiting, no painting, no joint treatment.

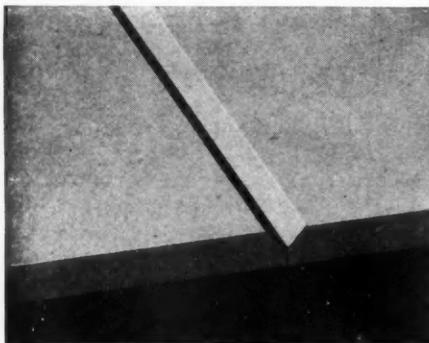
Meets Need for Speed—Saves critical materials and manpower . . . saves valuable time.

**ONE WALLBOARD DOES ALL THIS .
SURFACES AND DECORATES IN ONE OPERATION
NO PAINTING . . . NO JOINT FINISHING
UP TO *25% LOWER COST ON ACTUAL JOBS**

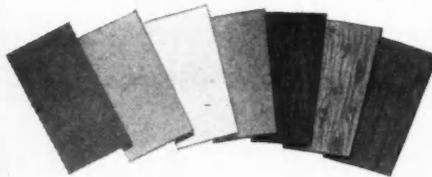
**CLEANABLE . . . FIREPROOF . . . AVAILABLE
*Over comparable standard methods of construction.**

For New Work—Completely decorated wall and ceiling surfaces are applied by one man in one simple operation.

Contractors Save Time and Money—J. J. Bollinger, of Oklahoma City, Oklahoma, reports saving of 2 to 3 weeks time on 500 unit FPHA war housing project at Ft. Worth, Texas. Building records were shattered by Contractor Frank Stepanek on Van Port building project, to house 10,000 war workers' families for Kaiser shipyards . . . and many more instances of savings on actual jobs.



Pre-Finished Beveled Edge—Same color as face of board is carried around neatly beveled edges.



Choice of 7 Finishes—Factory-finished in 4 pastel colors . . . or 3 wood grain effects . . . easily cleanable . . . matching nails blend into background and require no covering with paint or plaster.



Paneled Beauty—This is the finished result. Modern, fire resisting, enduring.

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

WALLBOARD • INSULATION • ROOFING • PAINT • LATH • PLASTER



Sunshine and fresh air for tomorrow's better living



**Beauty was the Trend
when War Struck America**

The homes you were building became increasingly more attractive and comfortable. Recent years saw tremendous strides! Ceco Steel Casements were finding their rightful place in this modern trend. Then war struck. Now home-building progress is "marking time" so that everyone can turn his full effort toward Victory. But necessarily there will follow post-war building of unprecedented proportions! America's war-expanded plants will produce modern equipment in abundance. You will get all of the Ceco Steel Windows you want . . . tomorrow . . . when America resumes its trend toward modern homes. That's *your* future . . . and ours!

Other Ceco Peacetime Products:

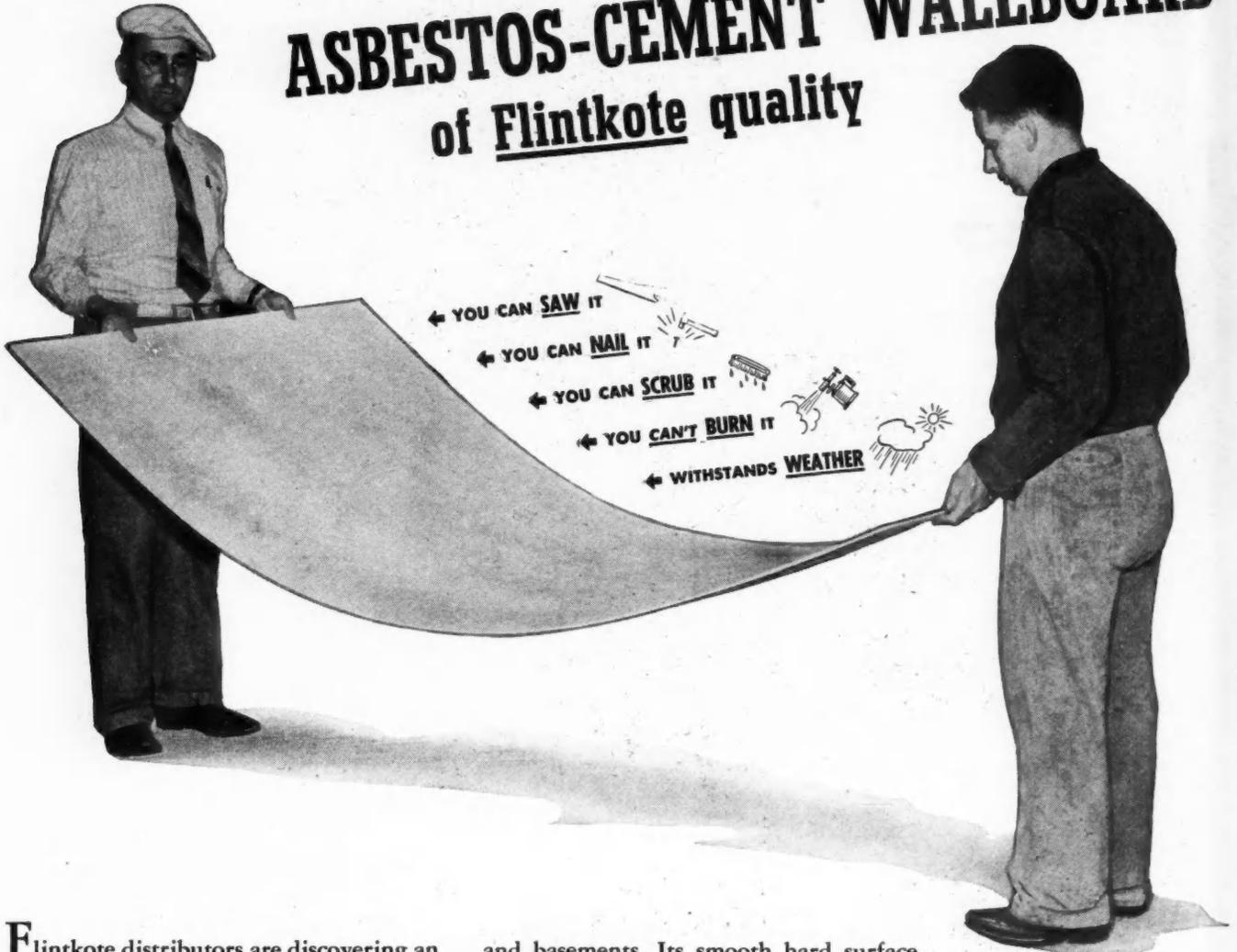
- Commercial, Industrial, Casement & Basement Windows
- Metal Lath & Accessories.....Welded Fabric
- Steel Joists & Roof Deck.....Column Clamps
- Metal Frame Screens.....Meyer Steelforms
- Adjustable Shores.....Concrete Reinforcing Bars

Ceco STEEL Windows

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

Announcing...

a new, improved ASBESTOS-CEMENT WALLBOARD of Flintkote quality



Flintkote distributors are discovering an amazing variety of uses for this versatile new Asbestos-Cement Wallboard which is now available *in quantity*.

The new wallboard comes in 4' x 8' sheets, either $\frac{3}{16}$ " or $\frac{1}{4}$ " thick. Though made of asbestos-cement that toughens with age and exposure, each flexible sheet can be readily sawed, nailed without drilling, and easily curved.

Forever proof against fire, rodents, termites or rotting, Flintkote Asbestos Wallboard makes ideal partitions, sidings, counters and lining for garages, closets

and basements. Its smooth hard surface needs no protective painting.

You'll be pleased to see how stoutly this new Flintkote product resists abuse. Then you'll understand why it's being used in so many different ways for maintenance and repair of industrial and farm structures.

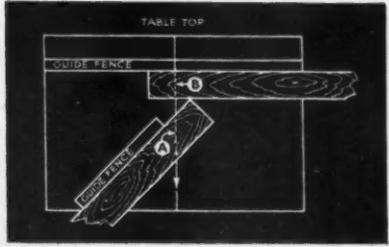
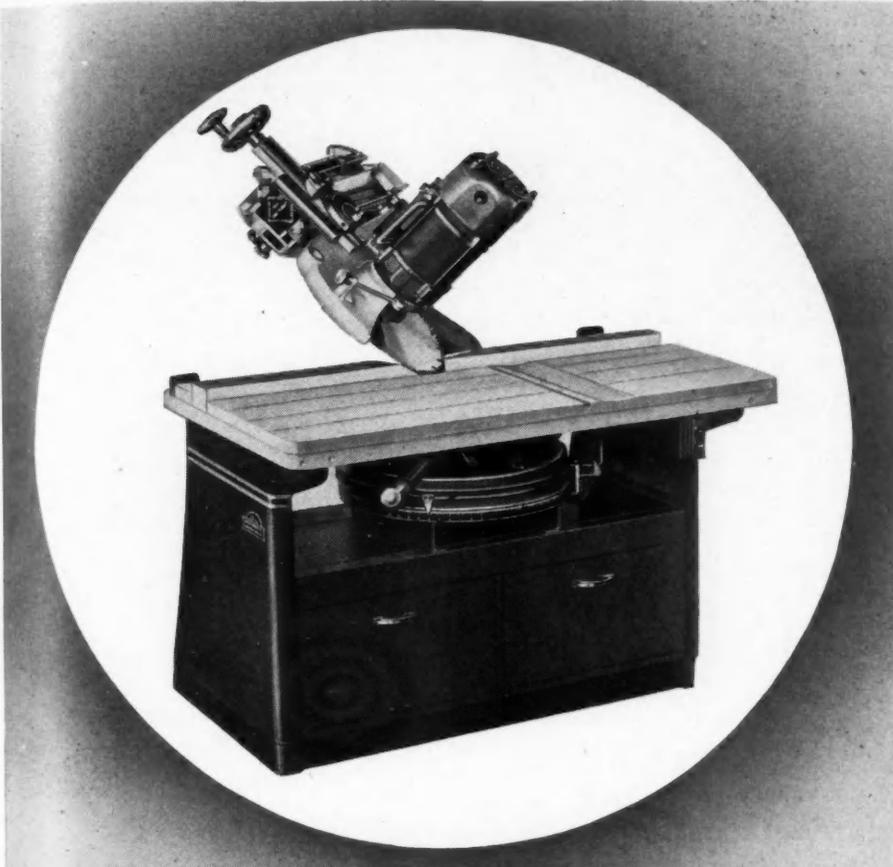
For complete information about the new Asbestos-Cement Wallboard, please phone or write to nearest Flintkote office. The Flintkote Company, 30 Rockefeller Plaza, New York. Branches: Atlanta, Boston, Chicago Heights, Detroit, East Rutherford, Los Angeles, New Orleans, Waco.

IMPORTANT NOTICE

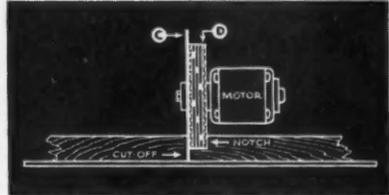
To provide an adequate supply of long-fibre asbestos required for war products, the War Production Board has amended Construction Conservation Order L-41 to permit Asbestos-Cement Sidings and Shingles to be sold without restriction for the protection of homes and other buildings, "... where any part of the existing siding or roofing, as the case may be, is in need of repainting or other maintenance and repair."

FLINTKOTE

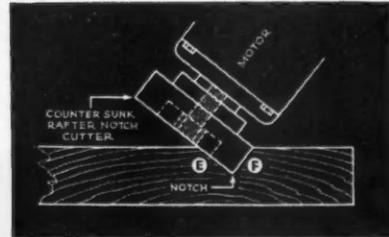
Building Materials



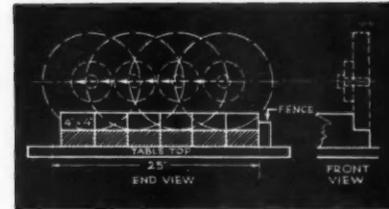
1 An angle cut (a), and a cross cut (b), with one stroke of saw—100% increase.



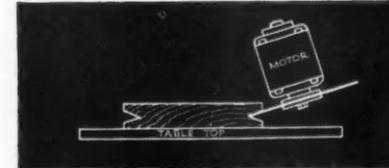
2 A cross cut saw (c), combined with a dado head (d), cut off and notch one end with one stroke of saw—100% increase.



3 Instead of cutting angle (e), then angle (f), use a countersunk dado or rafter notch cutter and cut both angles with one stroke of saw—100% increase.



4 Notch six 4" rafters with one stroke of saw—500% increase. Uni-Point has 25" cross cut capacity.



5 Whatever the job—Uni-Point can do it! Yes, the answer is multiple cutting, the Uni-Point way.

Take the UNI-POINT Short Cut to INCREASED PRODUCTION

More work per man hour is the goal of every plant superintendent and construction foreman today. We cannot increase the number of hours in a day, but Uni-Point Radial Saws enable one man, on most types of construction, to turn out 20% more work in a given time.

ONE POINT CUTTING* with Uni-Point offers the operator a mechanical simplicity that saves time. But, more than that, it provides adaptability to short cuts in production methods which can double or triple the output on some types of work and substantially increase it on every job.

Give a good machine to a good woodworker with good ideas, and here is what you get! (Note sketches at right.)

*Uni-Point is designed so that the saw blade always enters the material at the same point in the table regardless of whether it is set for a vertical, horizontal, or compound-miter cross cut angle.

Write for Catalog No. 60

We also manufacture "modern design" Saw Benches, Band Saws, Jointers, Planers, Lathes, Shapers, Mortisers, Sanders, Swing Saws. Also a complete line of Saw Mill machinery.



AMERICAN SAW MILL MACHINERY CO.
HACKETTSTOWN, NEW JERSEY

On and Off the Record

News, Views and Comments

BLANDFORD ON POST-WAR—

An adequate housing program would be "an invaluable instrument to bridge the transition from wartime to peacetime economy," NHA Administrator Blandford told the recent convention of the National Association of Housing Officials.

"We are re-examining existing procedures to be able to recommend to Congress the most effective federal machinery for assistance in the post-war housing program," he said. He held up a picture of public and private projects marching forward side by side.

Many private builders are studying this speech with the thought that *a lot depends on the nature of those recommendations.*

LICENSE LAWS NEEDED—

Builders are universally enthusiastic about the improvements state license laws have brought in their business. With building at a standstill, this might be a good time for other states to pass such laws, basing them on the tested experience of others. California was the leader in this work, and Michigan has an effective law which has done much to stabilize building, keep out the fly-by-night and the contract breaker.

CERAMIC STOVES—

The latest wrinkle in metal saving is the ceramic heater, such as has been used in many European countries for years. WPB has encouraged terra cotta manufacturers to manufacture these stoves which, under preliminary tests, showed a higher efficiency and longer heat retention than metal.

DOWNSPOUT PROBLEMS—

Although lumber is the scarcest of all materials, builders are still forbidden to use sheet metal for downspouts and eaves. According to one Detroit builder, he has to pay \$15 for scarce lumber, and an additional \$10 for scarce labor to do a job that could have gone ahead with sheet metal that is easily available for \$20.

F.D.R. ON HOUSING—

In words at least, President Roosevelt's recent message to Congress on housing was encouraging to private builders. He said the new program "allots to pri-

vate initiative as large a segment of the construction as it possibly can produce under war conditions and war risks." He expressed gratification that more than half of the new homes so far are being financed with private funds.

KANSAS LABOR LAW—Kansas has taken a long step forward with its new labor law which went into effect May 1st. This law clearly sets forth the rights of employers, employees, and the public.

Among other things, it guarantees the worker the right to *refrain* from joining a labor union. It protects him against excessive dues, insures regular elections of officers, requires the filing of the names of duly elected officials with the Secretary of State, and also the salaries, bonuses and other money paid. A complete copy of the constitution and by-laws, statement of receipts, disbursements, assets and liabilities must also be filed.

BABSON'S FORECAST—Roger Babson's recent statement that he expects the greatest building boom of history following the war is heartening. It can't come too soon for most! As a matter of fact, many feel that the European stage of the war may end sooner than expected, in which case L-41 might be relaxed and some private residential building permitted before the incident with Japan is closed. No one expects the Japanese war to be short or easy, but it is not likely that it will require the millions of men now under arms. Some of these may be brought back early, and jobs will be needed for them.

SOLDIERS RETURN—When the boys come marching back, what sort of a house will they be looking forward to? Will it be one of the flat roofed "machines for living" that the industrial designers have been working themselves into a lather over? I don't think so. It is more likely to be something that signifies home, sweet home—a nice little Colonial cottage with a picket fence around it. In short, the boys will want to come back to peace and quiet and comfort among familiar things.

END OF NHA—When the war ends, the National Housing Agency also ends—or rather, is *supposed* to end within six months thereafter. NHA is an emergency organization set up by executive order, but the Federal Housing Administration over which NHA now has control is a permanent body set up by Act of Congress. You may be sure Congress is going to have something to say about the future of FHA and of any other housing organization.

BUILDERS ON FARMS—A surprising number of builders are going after farm work—and doing a whale of a job. Even big city contractors are getting a substantial volume. The basic reason is that *with farm labor as scarce and expensive as it is, an experienced contractor can save the farmer real money.*

Builders with any doubts about where to start ought to get hold of the nearest county agent for leads.

WPB AND STORM WINDOWS—

The latest lumber freeze is going to raise Cain with builders who were planning to sell an increased volume of storm windows and doors in the coming months. Unless WPB changes its mind, it is going to be difficult to get lumber for storm doors and windows, thus curtailing one of the most effective ways to conserve fuel during the coming year.

RICH MAN'S DREAM—Post-war homes may well represent a rich man's dream come true for the average man. A prominent industrialist told me this the other day, and then told how he objected to wild-eyed publicity about freakish post-war home design. The building industry ought to stress "hominess" as well as better equipment, lower living costs, less work for the housewife, safety, long life, he said. He predicts the greatest industrial expansion the world has ever seen in the post-war period, expects great things from scientific and industrial developments for the home of the future. But they won't come overnight, he says, and they will be done within the orderly framework of the industry.



Placing 30" thermocouple in position



Engineer reading maximum and minimum outside temperatures for 24-hour period

Inside-and Outside *they found new facts about insulation*



Checking time elapsed for various stages of fire during test period

Now it can be told—the *whole* truth about insulation efficiency.

To find that truth, Wood Conversion Company built four identical test houses—installed elaborate testing devices—assigned a task force of engineers to 24-hour duty in checking and compiling data.

Out of these tests—the most elaborate ever conducted by any insulation manufacturer—have come new facts about insulation. New light on the important question of the proper insulation thickness. Important findings about attic and basement temperatures—fuel consumption and fuel savings. No effort was spared to make the tests authentic and unbiased.

To keep up to date on insulation, you should have a report of the Wood Conversion Company's insulation tests, as presented to the American Society of Heating and Ventilating Engineers. A copy is yours without obligation—mail the coupon.

Balsam-Wool

SEALED INSULATION

WOOD CONVERSION COMPANY
Dept. 119-6, First National Bank Bldg.
St. Paul, Minnesota

Please send me complete scientific data on the Wood Conversion Company insulation tests.

Name.....

Address.....

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



**HELP THE NATION . . .
HELP YOUR BUSINESS . . .
BY URGING PROPERTY OWNERS TO
MAKE REPAIRS PROMPTLY!**

You can increase your business and make a real contribution to the war effort, by inducing property owners to make repairs and replacements *promptly*. Building authorities warn against delay—urge prompt building repairs to conserve labor and materials, prevent property depreciation, and safeguard the nation's health and working energies.

In your selling, stress the importance of making repairs *at once*, before serious damage occurs—on the home, on farm buildings and industrial and commercial structures. Emphasize the savings in time, money, labor, and valuable materials. Push insulation, too . . . for keeping war workers cool and "fit" in summer, saving fuel in winter; and for dairy barns and poultry houses, to increase milk and egg production.

For all needed repairs and replacements, you'll serve your customers and your business by recommending CAREY Long-Life Products. CAREY built-in quality assures customer satisfaction. Write today for details. Address Dept. 10.



Carey

MONEY-SAVING PRODUCTS

ROCK WOOL INSULATION—keeps occupants of home cool and "fit" in summer . . . saves up to 30% of fuel in winter.

ASPHALT SHINGLES—provide nominal weather protection. Wide range of colors.

ASBESTOS-CEMENT SHINGLES—fireproof, weatherproof, long-lasting. Plain colors and beautiful Tri-Tone Blends.

ASBESTOS-CEMENT SIDING—will not rot, rust, decay, or wear away. Fireproof.

ROOF COATINGS—for metal or composition roofs. Protect metal surfaces against rust and weather. Durable, economical.

ASBESTOS-CEMENT WALLBOARD—widely used for lining and partitioning. Ideal for making extra rooms in congested, war production areas. Fireproof, rodent-proof.

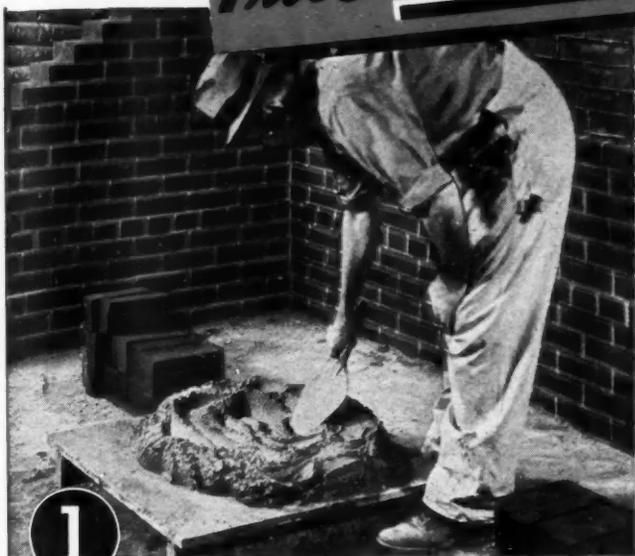
UTILIZIT SHEATHING—for lining barns, poultry houses, warehouses, garages, etc. Combines insulation and weather-proofing.

CORRUGATED ASBESTOS-CEMENT ROOFING and SIDING—provides durable, fire-safe, rust-proof protection for barns and other farm buildings. Saves painting. Minimizes maintenance.

Urge Your Customers to
"Make Repairs NOW . . . Invest the
Savings in U. S. War Bonds."

THE PHILIP CAREY MANUFACTURING COMPANY
Dependable Products Since 1873 • LOCKLAND, CINCINNATI, OHIO

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



1 Mix a batch of 1-3 Brixment mortar (above) and a batch of 50-50 cement-lime mortar made with the same proportion of sand (right). Get any competent bricklayer to test



2 them on the board—to spread them on the wall—to lay up a few brick with each of the two mortars. Then ask him which has the best workability.

BRIXMENT Assures More Economical Brickwork

Aside from the cost of the brick itself, the most expensive item in masonry construction is the bricklayer's time.

Therefore the most economical mortar you can buy is the one that enables the bricklayer to lay the most brick per day. You cannot afford to give your bricklayer any mortar which causes unnecessary work, such as constant retempering, stooping to the board to replace mortar that failed to stick when he threw up the head-joint, etc.

To secure economical brickwork, the mortar must

have excellent workability.

The plasticity of Brixment mortar is *ideal*. It approaches that of straight lime putty. It enables the bricklayer to do faster, neater brickwork, with the brick well bedded and the joints well filled.

This is the principal reason why Brixment reduces the cost of brickwork. But in addition, less labor and supervision are required in mixing. No soaking or slaking. No mortar is wasted. And Brixment mortar makes a neater job that costs less to clean down.

BRIXMENT

For Mortar and Stucco

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

U. S. GOVERNMENT URGES YOU TO Sell HOME INSULATION Now!

... and this display at your Johns-Manville dealer will make your selling job easier

LAST WINTER, J-M Home Insulation enabled thousands to keep comfortable on less fuel... but other thousands were cold because they put off insulating until the demand was greater than the supply. Next winter Johns-Manville predicts there will again be a shortage of J-M Insulation. We urge you to:

Persuade as many people as you can to insulate NOW.

J-M Super-Felt Batts are available today at no increase in price and at the same high quality as before the war. Our factories are producing to the utmost, but the immediate demand makes it impossible for us to build up a reserve sufficient to meet the demand that is bound to come with cold weather. Help the war effort, and

maintain your business by selling J-M Insulation aggressively this summer.

GOVERNMENT PUBLICITY CAMPAIGN WILL SUPPORT YOUR SELLING EFFORT

Realizing that the problem will be extremely serious by fall, the Government is urging millions to prepare their homes for winter *now*. 80 well-known radio shows will carry government messages promoting this idea. Prominent officials will issue statements for publication in the press, etc. Take advantage of this powerful support!

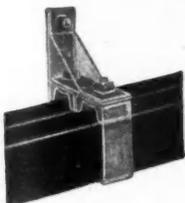
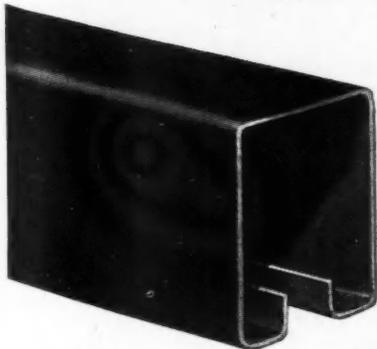
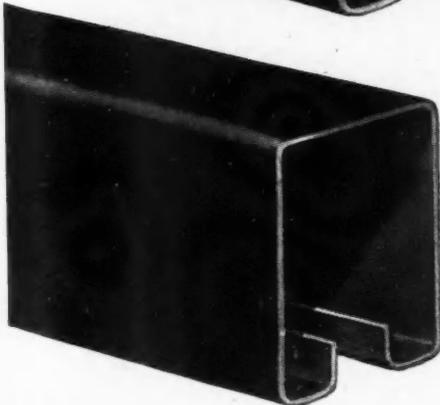
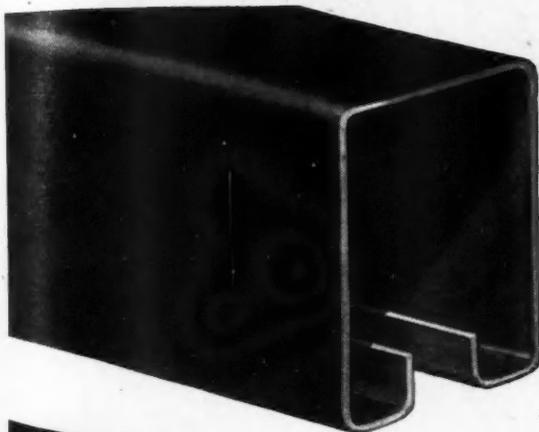
Get the facts about J-M Super-Felt Batts at once. Write Johns-Manville, 22 E. 40th St., New York.



JOHNS-MANVILLE Super-Felt **ROCK WOOL HOME INSULATION**

STANLEY HARDWARE

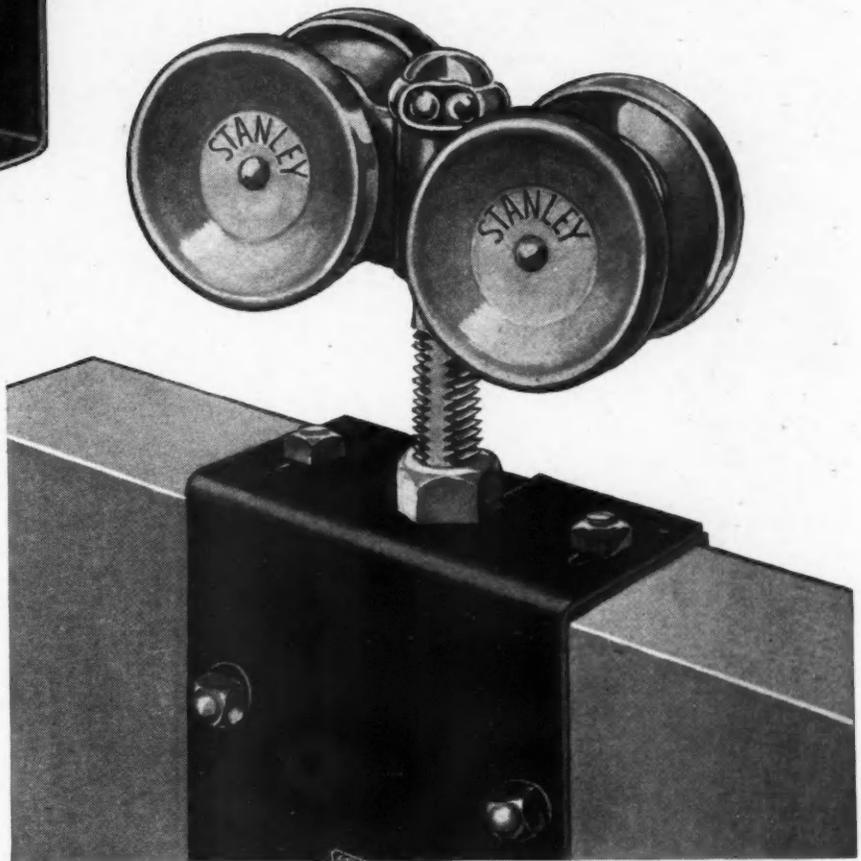
For Rolling or Sliding Doors



Stanley "Hold-Fast" Track Clamp No. X2651

Stanley Track Bracket No. X2650-C

Stanley Track becomes virtually a one-piece unit of any length when bound end-to-end with Stanley Track Brackets and Clamps.



3 SIZES TO MEET ALL NEEDS For Doors up to 1000 Pounds

Three sizes, X (16 ga.), Y (14 ga.), and W (13 ga.), of Stanley No. 2641 Track and No. 2650 Hangers, will handle all common sliding doors weighing up to 350, 700 and 1000 pounds, respectively.

Stanley Hangers have accurate two-way adjusting nut, ball bearing swivels and roller bearing wheels.

Stanley Track carries the hangers *inside*, protected from weather and dirt. Straight pieces are made "straight as a die." Curved pieces are supplied with 90° turns, others on order. Send for catalog. The Stanley Works, New Britain, Connecticut.

1843



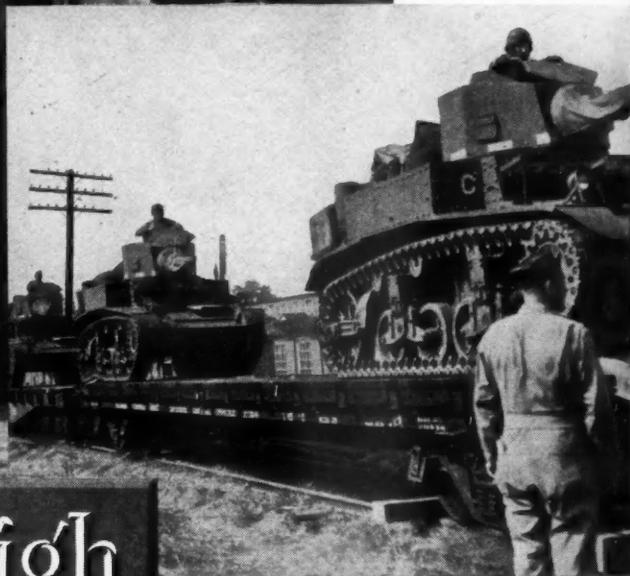
1943

TRADE MARK

LOOK FOR THIS TRADE MARK IN ANY PICTURE OF AMERICA AT WORK

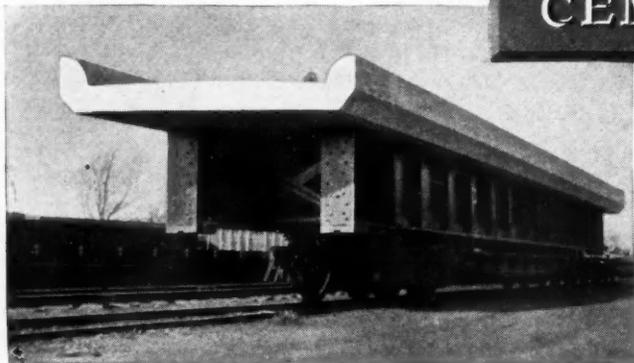


**CONCRETE HELPS THE "IRON HORSE"
IN THIS WAR OF MOVEMENT**



The railroads carry our fighting tanks.

**Lehigh
CEMENT**



Five complete track sections were constructed on flat cars, moved to the job, lifted and set into place. Lehigh Early Strength Cement made concrete for decks and aprons. Although poured in cold weather, concrete was ready to receive roadbed, ties and rails in 72 hours.

Never in America's history have our railroads been so busy on so big a job. This is truly a *war of movement* . . . on

Home Front and Fighting Front alike. Naturally, even the sturdy "Iron Horse" needs help from other Industries. Concrete, in many cases made with Lehigh Cements, was used to build bridges, culverts, loading platforms, piers, and freight sheds.

When installations were needed in a hurry, Lehigh Early Strength Cement often got the call . . . because it can provide denser, finer concrete in $\frac{1}{3}$ to $\frac{1}{5}$ of normal curing time. The Lehigh Service Department will supply you with full details and advice.

**LEHIGH EARLY STRENGTH CEMENT
FOR SERVICE-STRENGTH CONCRETE IN A HURRY**

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

But where did they go from here?

After Albert Robida got through dreaming up the whirligig castle-in-the-air over there at the right, Paris went right on building the same old stuffy, ill-ventilated, over-decorated homes and tolerating the worst slums in all Europe.

Will history repeat itself here in the United States after the war? Everywhere you go today you hear people talking about their beautiful ideas for when peace comes. It's all pretty wonderful and fantastic... and it's always fun to dream—but sound planning is more important.

We cannot all be millionaires and live in pent-houses on Park Avenue. America should, however, build many new and better homes—but unless we come out of the dream stage and start *doing* something about our housing problem, we'll still be dreaming 2, 3, 4 years after Hitler is all washed up.

And so TIME offers this—

PLAN FOR BUILDING POST-WAR BUILDING MARKETS

1. Get ready to make sales the minute peace comes.
2. Prepare to stimulate confidence in new techniques, materials, designs.
3. Interest both men and women, because they jointly decide when and how to build a house.
4. Stir up prospects for non-residential building.
5. Get the middlemen on your side.

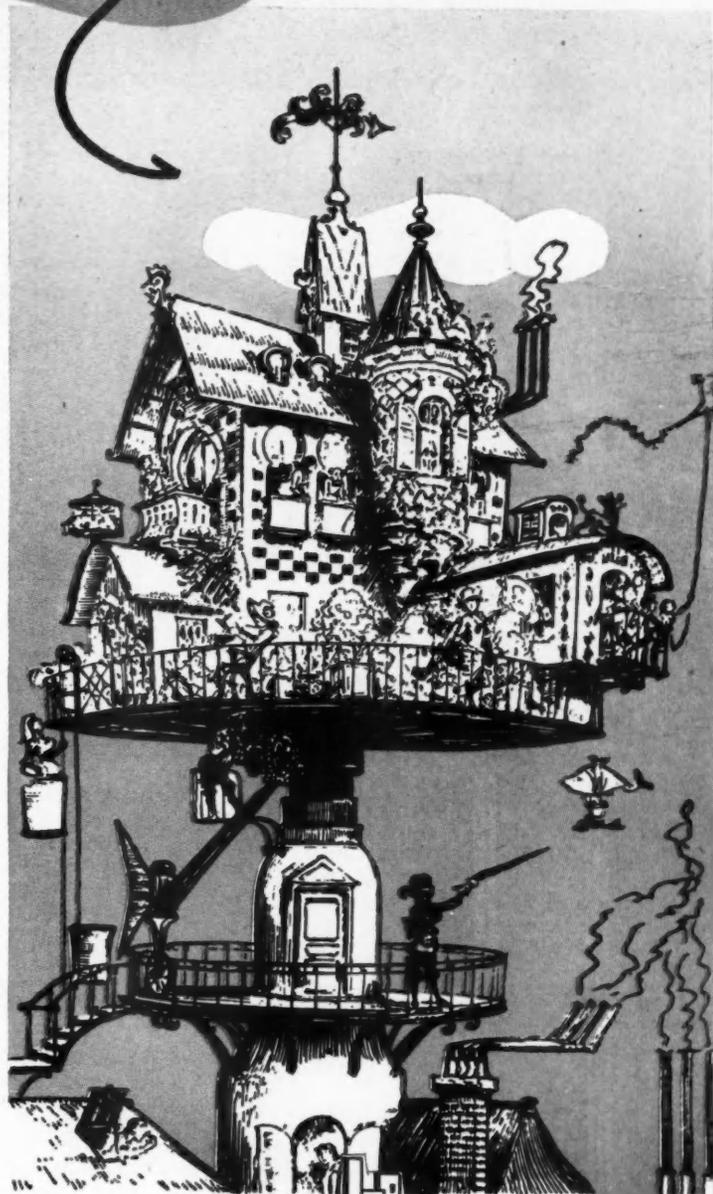
You can do all five of these jobs in one magazine, TIME. For through TIME:

You can tap the dammed-up post-war buying power of over a million TIME-reading families with 2½ times the income of the average U. S. family... you can get your new product known to America's most important people*—the men and women whose lead others follow.

You can stir up the house-building urge in both men and women readers (TIME is read by over 1,000,000 men and over 1,000,000 women—they prefer TIME 7 to 1 over all the other magazines they read that carry advertising)... you can reach not only home prospects, but the bankers and executives who decide yes or no on non-residential building (again and again they vote "TIME is our favorite magazine").

And in TIME you back up your trade-paper advertising with extra impressions on thousands and thousands of the top men in construction and finance.

FOLLOW THE SUN. What could be sweeter than a home 'way above the bustling city—a home you could wheel around to get the sun all day? Albert Robida dreamed up this elfin pent-house in 1882. Men have dreamed of wonderful snuggeries since time immemorial; but dreams and reality are aeons apart—thank goodness (in this instance)!



THE BETTMANN ARCHIVE



GATEWAY TO THE BUILDING MARKET

*These people include executives and editors, congressmen and college presidents, government officials, mayors, radio commentators and 34 other groups of leaders—all of whom have recently voted "TIME is America's most important magazine."

Letters

from Readers

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

Why wait until after war?

Kinzua, Ore.

To the Editor:

The opening gun of your campaign for private building is good. But why wait until after the war for the accomplishment of these objectives? It has made us heartsick to observe the jerry-buildings being financed and supported by our government.

If a program similar to the one you outline had been inaugurated a few years ago and private enterprise given encouragement and backing we would now have thousands of beautiful, livable homes, rather than a bunch of shacks, which supposedly are to be torn down after the war, at the same cost or less.

If we are to preserve our liberty we must become articulate as an industry and as individuals declaring our faith in, and our willingness to fight for the principles which have made us great.

This dastardly usurpation of the functions of private enterprise by wasteful, irresponsible, inefficient bureaucrats must be stamped out as quickly as is humanely possible. Obviously, the only way this can be done is through carefully organized and well directed educational programs. Magazines, such as yours, must necessarily carry the greater share of this burden.

We have great faith in your publication.—URSUS E. BROCK, Sales Manager, Kinzua Pine Mills Company.

Think the way we do

Springfield, O.

To the Editor:

All of this office enjoyed the article "Builders Speak on Post War." It surely makes us folks in Springfield feel good to find builders throughout the country thinking the same way we do—such as Ohio's former governor, Myers Y. Cooper, and real successful builders like David D. Bohannon, J. C. Taylor and Fritz B. Burns.

The idea expressed by L. H. Nelson of Olsen Construction Co. of Pittsburgh that some agency or organization sponsor a clinic to study new trends and developments is particularly timely. I think much

thought should be given to this idea.—CHARLES R. MALOWNEY, Malowney Real Estate Co., Inc.

Would change codes

Peoria, Ill.

To the Editor:

I find the *American Builder* of priceless interest even now when there "ain't" any business for the Operative Builder in a non-defense area.

I follow with great interest your articles on prefabrication and on the future trends in building. The great hope for the near future seems to me to be in the use of prefabricated structural, mechanical and electrical units rather than in over-all fabrication.

There are, however, two great fundamental difficulties. The first is local building codes. Many of these contain obsolete provisions which preclude the use even of prefabricated units, and much less will they permit general prefabrication. They should be changed. Unions and other "interests" will fight to the last ditch. I know because I was an alderman and also chairman of our City Planning Committee for years.

The second difficulty is the determined opposition of the AF of L; it will not permit use of prefabricated units unless they bear the AF of L union label.

I hope you will make some effort to help.—H. H. BRAUN, Braun Construction Co.

Post-war plan helps women

Whittier, Calif.

To the Editor:

Thank you for the May issue. The statement from the President of the National Association of Home Builders really hits the nail on the head, concerning houses in the future. I am glad to see that most Southern California builders are sane on the subject.

On your Private Enterprise Program on page 30—it's fine, but I don't think the builders realize how important they will be in making this a sane world after the war. Post war sag is important. Getting the women back into the home is another. They are needed now in the business

world, but later *no*. Taking it from the juvenile slant, it's serious now and will be more so later. The best way to get her back is to create a desire for a new home. She will be even more particular after working in war industries. With a plan such as yours she will have confidence in her builder and the financial burden will not be too steep.

This is just an ordinary housewife's idea, but anyone sitting by and really looking on can certainly see my point. Southern California needs this home program badly and my hope is that Congress will give it the support it needs. More power to the "Builder."—MRS. D. R. COLEGROVE.

Editor's note: Mrs. Colegrove is the wife of a successful home builder who is now in the Army.

33 years of AB

North Bend, Ore.

To the Editor:

A little over 33 years ago, I subscribed for the National Builder and when they burned out and merged with the *American Builder*, I subscribed for it. At that time I was staying with Mr. Eberhart and he got interested and kept the subscription intact without a miss, so between the two of us we have a record of 33 years or more.

Doesn't that rate us a congressional medal or at least a leather medal which would be more valuable at the present time?—CHARLES McMORRIS.

Covering vital topics

Grand Rapids, Mich.

To the Editor:

I truly approve your "Publisher's Page" as you are covering vital topics which all live Americans should welcome.

Your sensible and constructive analysis and suggestions should really be spread over two to four pages, during the duration, at least. The more such facts are spread, the stronger the pressure will become to wipe out the army of theorists and bureaucrats and put the government operations on an honorable basis.—LEON W. HALL.



Keystone Photo

..... until he gets home again

Before he joined the Marines he had a good job. He liked his work, had been promoted twice, knew the front office thought well of him, felt his chances for advancement were good. That was his groove in the good old U. S. A.

Then came Poland and Pearl Harbor. An Austrian paranoiac with a phoney name and an oriental nation of ritualistic savages had set out to murder their way to world supremacy. This boy answered, "Not without a fight, they won't," . . . said good-bye to his job, and joined up.

Today he's standing sentinel in the South Pacific; tomorrow he'll be shooting from a fox hole; next week, attacking from a landing barge . . . a far cry from the safety of his old job and all it meant to

him, but with his gun . . . and a grin . . . he's doing this job well, too.

What has our job to do with his? It has the obligation and responsibility to see that there is enough lumber to build ships to supply him; enough to package the fighting cargoes of those ships; enough to build plenty of sub-chasers and convoy escorts to protect those ships . . . in short, enough to deliver everything he needs to win.

That's the pattern cut out for the lumber industry. And, because it takes so much of all each manufacturer can produce, that's why there will be so little lumber for civilian use until we can bring him home again to take up his old job, right where he left off.



(Don't forget that the more War Bonds all of us buy, the sooner we'll get him home)

BRADLEY LUMBER COMPANY of ARKANSAS
WARREN, ARKANSAS

“As I See It...

there's PLENTY of roofing business for you RIGHT NOW!”

A sky-view of the homes and farms in your territory will show you a lot of roofing prospects... folks who need re-roofing *right now!* What's more, Certain-teed is making it easier than ever to land these jobs. Take advantage of all the promotion material Certain-teed has prepared for your business. Tie in with the Certain-teed campaign now running in the leading Farm and Home Magazines. That's what distributors everywhere are doing... *and it pays.*



AND HERE ARE NEW CERTAIN-TEED WAYS TO HELP YOU MAKE MONEY IN JUNE

YOUR OWN LOCAL ADS

Brand-new, down-to-earth ads that bring you more business now!



FOR YOUR FARM PROSPECTS
24-page book about available Certain-teed products and their farm uses; plus 6-page folder to bring the farmer to you.



LOCAL DIRECT MAIL PLAN
Sales letters and folders ready to mail to your best prospects!



COLORFUL POSTER
Folks stop, look, read and buy where this Poster is put up.

Certain-teed BUILDING PRODUCTS
120 S. LaSalle Street, Chicago, Ill.

Interest in POST-WAR PLANNING?



R. M. Marberry, advertising manager, shows Walter F. Rockwell, president, and T. A. Crawford, general sales manager, some early results of Timken's Post-War Planning Advertising. Right: First TSA Post ad appeared on March 6.

Timken Scoops the Field!

Revealing a part of Timken's post-war plans in 37 newspapers and the Saturday Evening Post early in March resulted in this flood of evidence of public interest.

Thousands of letters — "we want more data," "send us your booklet" — congratulatory messages, telephone calls to Timken Dealers and visits to Timken showrooms resulted from this preliminary announcement.

Yes, the public is interested in post-war products! The public has confidence in Timken Silent Automatic!

Timken Silent Automatic has earned this position of leadership by building solidly in pre-war times — better products, lower upkeep costs, freedom from mechanical troubles, lower

service costs, careful, conscientious planning with dealers, service training, sales training, full-color catalogs, mailing pieces, consistent newspaper and magazine advertising, and constant field sales and service contact.

Timken's post-war products will include improved automatic heating and air conditioning equipment, oil burning water heaters and other products for the home. All built with the same care and experience that have won and held leadership for Timken Silent Automatic.

Timken's post-war plans for dealer profits will be in tune with the times and in accordance with the steadfast Timken policy of providing substantial profits for strong, aggressive, progressive dealerships. Can you qualify? Write us today.



TIMKEN

Silent Automatic

Division of THE TIMKEN-DETROIT AXLE COMPANY, Detroit, Michigan



Here's the tool that gives streamlined, factory production method 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.

DEXTER TUBULAR LOCKS and LATCHES

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

TODAY—when every minute counts so much more than ever before—the time saved in the Dexter “Drill-Hole” installation is of double importance. War Housing jobs can be rushed to completion faster—costs are automatically lowered.

Important as are savings in installation **time** and **costs**, these advantages are equalled by the National Brass Lifetime Warranty. Confidence is instantly placed in Dexter rugged, dependable quality—knowing that sub-standards are avoided in these days of substitutions—protecting the good will of your name for tomorrow.

Let us send you a copy of “Commander Line” Catalog illustrating only items conforming with Federal regulations. Write—no obligation.

Washington News Summary

Need for Private Building Emphasized by President

L-41 Amendment Allows Use of Asbestos Roofing, Siding for Maintenance

Restrictions of conservation order L-41 no longer apply to certain re-roofing and re-siding jobs where asbestos roofing and siding material are used.

Supplementary conservation order L-41-d states, "conservation order L-41 as amended shall not apply to the re-siding of any structure with asbestos siding or the re-roofing of any structure with asbestos roofing material, where any part of the existing siding or roofing, as the case may be, is in need of repainting or other maintenance and repair; provided, however, that no rubber, metal other than fastenings, nor lumber restricted by the provisions of paragraph C, conservation order M-208, shall be used in such re-siding or re-roofing."

Unblocked Production

The order became effective April 16. This step was taken by WPB to unblock the production of asbestos fibre. In mining one ton of long fibre asbestos suitable for textile and other war product uses, many tons of shorter fibre must be produced. In the past this shorter fibre has always found its major outlet in the manufacture of asbestos-cement shingles and sidings. Because of the restriction imposed on asbestos-cement shingles and siding the utilization of short fibre asbestos was reduced and a critical shortage of long fibre was threatened.

Amendment to Order L-228 Excludes Some Asphalt Products Now Restricted

An amendment to limitation order L-228, effective May 17, excludes combination flashing material, pipe covering, felt or corrugated asphalt panel or sliding board, building or sheathing paper, prefabricated weatherproofed sheathing, prefabricated weatherproofed roof board and forty-inch plasterer's felt from the restrictions of the order.

The most important pat on the back for builders that has come out of Washington in over a year was contained in the President's letter to Congress asking for an increase of \$400,000,000 in the authorization contained in the Lanham Act, as amended.

Wrote the President: "It is a noteworthy fact in relation to the whole war effort that under the existing war housing program more than 3,000,000 workers in intense war production have been provided or are being provided with necessary shelter. In addition to placements in existing structures the present program embraces more than a million and a half units of construction, approximating twice the total volume of homes built in the United States in a better than normal building year. The size of this program, founded as it is, upon minimum absolute need, affords some measure of the disastrous impairment of war production that would confront us if war housing were not provided in sufficient volume and on time.

"... It is encouraging to know that more than half of the necessary war housing accommodations thus far projected is being provided through the more effective use of existing structures; that another substantial portion is being attained through the prudent and economical repair, enlargement or conversion of existing dwellings so that they may shelter additional war

(Continued to page 68)

New Model Building Code Recognizes Possibility of New Developments

Signs that some of the troubles builders have experienced with local building codes will be eliminated can be found in the recently recommended building code of the National Board of Fire Underwriters which serves as a model for building regulations in many cities throughout the country.

The code does not attempt to dictate choice of materials, assemblies or designs so long as a proper degree of safety and health is attained. One of the principle reasons for this latitude is that new building materials and construction methods are constantly being developed and rigid requirements might retard their use.

An outstanding addition to this 1943 recommended building code is an appendix in which the fire resistance rating in hours of duration is given for different forms of construction. This appendix covers walls and partitions, columns, beams, girders, trusses and floor and roof construction.

It was pointed out that small differences in quality of material, forms of construction, and dimensions of parts, may make large differences in fire resistance, and therefore care must be exercised in applying test ratings to constructions which differ from those actually tested.

PD-1A Applications

WPB has raised the dollar limit of PD-1A applications processed in the field from \$100 to \$500.

What to Do to Defer Employees

Employers, engaged in war production or activities essential to support of the war effort, should file with Selective Service Local Boards written evidence of their employment of registrants who maintain bonafide homes with children less than eighteen years of age, born on or before September 14, 1942. Selective Service form No. 42-B, which is available at local board offices, should be used for this purpose.

If this is done the local board will be advised of the registrants employment in an essential activity and the employer will receive notice of reopening of the registrants classification any time it is undertaken by the local board. The employer, after receiving such notification, will have opportunity to

submit additional evidence of the essentiality of necessary men in his employ.

Lumber dealers, or others whose type of business status may be in doubt, should first try to see the local area director and learn how their place of business can be declared a locally needed activity. If the dealer can convince the local area director that his business is a locally needed activity, and the director declares it to be such, the dealer will have obtained for his business and his employees the same status as a nationally designated essential activity. The problem of each dealer is an individual one and must be handled locally. It is essential to act promptly, however.

While the design and fabrication of strip steel framing systems remains a fundamental part of Stran-Steel's operations, the necessities of war have led this company into a still wider sphere of action. Present assignments for the armed forces involve designing and shipping complete buildings, ready for rapid erection on the site.

This is a military operation today, yet its peacetime significance is obvious. Stran-Steel can promise the post-war construction industry new economies of time, money and materials that follow naturally from wartime engineering developments.

Wartime Engineering Holds a Promise for the Future



STRAN STEEL

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

UNIT OF NATIONAL STEEL CORPORATION

Archaic codes must be changed

THERE IS one type of action concerning the present and post-war welfare of the building industry that can be started vigorously *now* without waiting for the end of the war. That is the wholesale revision of archaic building codes.

In connection with the hundreds of letters and comments which *American Builder* has been receiving on its "War to Peace" program for private enterprise building, the subject of building codes has repeatedly come up.

Many building industry men go so far as to say that archaic building codes may do more damage than any other single factor in regarding the post-war building program.

Good products kept off market

They point out that countless sound and worthy building products and materials designed to produce a better job or to lower construction costs are held off the market because of inflexible, archaic, or deliberately discriminatory codes.

With the end of the war, a host of new products will be clamoring for development, trial and use by the building industry. A period of unprecedented expansion and development in the industry is expected with new ideas, new methods and new materials playing an important part in reducing costs and providing better structures. It is highly important that building codes, no matter whom they protect, be studied, subjected to careful check, and revised to meet changing conditions. Manufacturers as well as users of building materials and equipment should have a chance to be heard in the formulation and revision of codes.

This is one activity that members of the building industry can work at right away, and they certainly should not wait until the end of the war.

It may be said that the subject of building codes is like the weather—people talk a lot about it but don't do much. Yet experience has shown that something *can* be done about codes—even in the big cities where political pressures are often responsible for some of the most discriminatory features.

Action on codes must start at home—it is a local problem. But because the manufacture and distribution of building materials and products is done on a national basis, there is also a place for nation-wide effort. If the national organizations

of the building industry would agree on a national code, suitably studied to fit various regional requirements, strong pressure could be brought in a number of ways to secure local adaptation. For example, financing institutions might agree not to finance any houses in a town which did not adopt the national code. The Federal Housing Administration might refuse to process mortgages in towns where building progress was stymied by archaic codes.

Building manufacturers, dealers, builders, prefabricators and all others interested in seeing this industry unhampered by unwise or unnecessary restrictions could unite on a program of publicity and education. The U. S. Bureau of Standards, National Board of Fire Underwriters, and the Building Officials Conference of America could work with private industry and government agencies.

Need flexibility with safety

It might be pointed out in this regard that the Pacific Coast Building Officials Conference has done a forward-looking job in code revision.

The objective in making code changes should be to provide reasonable flexibility and latitude so that new building materials and construction methods may be developed. Yet, a proper degree of safety and health protection must always be maintained. We must not, in the name of progress, pave the way for unsafe, shoddy or dangerous construction. Scientific progress of the industry is such, however, that many practices that might have been considered unsound a few years back are now possible through improved products or methods.

American Builder continues its "War to Peace" program for private building. Suggestions from all industry groups are being sought, will be published each month, culminating in a special issue in October.

"War to Peace Plan" Stirs Industry Thinking

Wide agreement on need for action now, but opinions differ on methods. Unified program must be developed by industry.

REACTIONS to *American Builder's* "war to peace" program for private building, published in the May issue, have been prompt, vigorous and voluminous, showing a widespread interest in post-war planning.

The scores of letters, comments, criticisms and ideas received by the editors reveal complete agreement on the need for prompt action to save private enterprise, but a wide difference of opinion as to the methods to be employed. Since it was the purpose of the article to bring out ideas from various industry groups, it was most successful.

The first and outstanding conclusion to be drawn is that the various factors and factions in this industry must get together on some unified program. They must compromise their differences. If they do not, they will "hang separately," with well organized Government agencies taking over control of construction.

Let us consider some of the points brought out in letters and comments on this proposal for a post-war private building program.

FINANCE TERMS—Residential builders and their associations favor extremely liberalized finance terms. They propose 25- or 30-year mortgages, a 5 per cent down payment, and lower interest rates. These terms undoubtedly would greatly reduce home ownership costs and expand the market.

On the other hand, the financial institutions that make the loans oppose any further reduction in interest rates or lengthening of the terms of the years. Many are still opposed to the FHA terms that were in effect in 1941.

This is a point where compromise is possible and prob-

able. Certainly every indication is that money will be available for investment in the post-war period in large quantities and on more liberal terms than ever before. It is possible that with an insured mortgage system in operation, interest rates may well be reduced considerably and the length of the loan increased.

FUTURE OF FHA AND NHA—While by far the majority of builders, dealers, manufacturers and financial institutions are enthusiastically in favor of a revitalized and expanded FHA to direct and encourage post-war building, there are some who feel that a new agency may have to be set up. They point out that the whole future of both the National Housing Agency and FHA will have to be reviewed.

Congress Will Support FHA

It is an interesting fact that NHA is a wartime agency established by executive order, and will expire within six months after the end of the war. FHA, on the other hand, is a permanent body set up by Act of Congress, and it is very apparent that Congress will take a strong and interested hand in its future status.

In fact, the attitude of Congress and its committees is such that they offer the strongest hope for the advocates of private enterprise building. If this industry can agree on a plan, plenty of support will be found in Congress.

FEAR OF BOOM ABUSES—Numerous letters from responsible, well informed building men say that in the endeavor to promote post-war building care must be taken to prevent boom time conditions that will repeat the abuses and mistakes of the past. Such a boom, they say, would be short-lived, would do so much harm that the entire private enterprise system would suffer.

The answer to this problem is that any financial plan set up should require higher standards of design, con-

"Homes for Veterans" Considered by NAHB

DISPLAYING a keen interest in the post-war problems of the home building industry, members of the National Association of Home Builders of the United States have under consideration a "Homes for Veterans" plan that would provide for the construction of a million homes in the two-year period following the war.

Fritz B. Burns, president, and Frank W. Cortright, executive vice-president, point out that the program is tentative and is now being considered and studied by members for possible action later on.

In brief, the National Housing Act would be amended by the addition of a new Title VII, applicable to returning war veterans. Features would include:

1. **General Provisions:** Veteran's down payment to be 4%. Amortization period 25 years. Low interest rate. House value up to \$6,000.

2. **Eligibility:** Honorable discharge from the armed services; married or with dependents requiring shelter; employment of at least two days a week within reasonable

commuting distance. In the event he is incapacitated or unemployed the joint income, including the dependents who will live with him, must amount to three times the monthly carrying charges of the property.

3. **Term Insurance:** A special term insurance plan shall be set up by the Government to insure payment of the balance of the debt in the event of the veteran's death, title to go to his beneficiaries.

4. **Authorization:** The bill would call for an authorization of two billion dollars, providing for some 500,000 to 600,000 homes. No special mortgage fund would be set up as was the case in Title VI.

5. **Subsistence Feature:** A subsistence feature would be of value in the western and southern states. Some means should be found to encourage construction on lots approaching a half-acre in size, sufficient to permit a small garden, or to supplement income by various means. This would also permit structural additions as the size of family and income increase.

6. **Group Support:** Support of many powerful groups can be expected. Among these are the American Legion, various farm groups, banking interests, the Chamber of Commerce. Such a Bill might well result in five billion dollars in construction, and be of inestimable value to our veterans, our economy and our industry.

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on POST-WAR Problems

struction, land planning and community protection.

LEASE-OPTION PLAN—Considerable opposition was expressed by many persons to the lease-option method of selling houses with little or no down payment. It was pointed out that many builders also do not want to build houses for rent. In answer to these claims, it can be shown that many successful building firms have been using the lease-option plan and like it, and that it does offer a way of selling houses to people of assured income who would not otherwise be able to live in a home of their own. Unless private enterprise is willing to erect houses for rent, a wide-open field is left for the public housers. *American Builder* feels that some system can be worked out that will permit private builders to construct rental housing and also permit them to sell houses to approved classes of buyers at with little or no down payment.

BUILDING CODES AND RESTRICTIONS—An important addition to any program for post-war action, comments from *American Builder* readers reveal, should be the removal of restrictive codes, union obstructions, and monopoly agreements that will retard post-war progress. The present period of inactivity in many branches of building would offer a good time to attack and remove the worst abuses, it is pointed out. This is action that does not need to wait for the end of the war.

SLUM CLEARANCE—From a number of quarters it is suggested that slum clearance should be given a place in any private enterprise program for post-war home building. It is said that unless private industry does something about bad housing conditions in cities, government action will undoubtedly be taken, and that already public housing advocates are preparing large plans for billions of dollars of work as soon as the war ends. The Urban Land Institute, which believes that private enterprise should play the major

(Continued to page 90)

5% DOWN-PAYMENT—25 YEAR FINANCING

	Cost of Property			
	\$2,000.00	\$3,000.00	\$4,000.00	\$5,000.00
Down-Payment—5%.....	\$ 100.00	\$ 150.00	\$ 200.00	\$ 250.00
Amount of Mortgage.....	1,900.00	2,850.00	3,800.00	4,750.00
Monthly Payment Int. and Amort. (4½% rate).....	10.56	15.84	21.13	26.40
Aver. FHA Prem. (2½% per annum).....	.48	.72	.95	1.20
Taxes (2½% per annum).....	4.17	6.25	8.33	10.42
Hazard Insur. Prem. (½% per annum on 80% of cost).....	.67	1.00	1.33	1.67
Total Monthly Payment...	\$ 15.88	\$ 23.81	\$ 31.74	\$ 39.69

5% DOWN-PAYMENT—30 YEAR FINANCING

	Cost of Property			
	\$2,000.00	\$3,000.00	\$4,000.00	\$5,000.00
Down-Payment—5%.....	\$ 100.00	\$ 150.00	\$ 200.00	\$ 250.00
Amount of Mortgage.....	1,900.00	2,850.00	3,800.00	4,750.00
Monthly Payment Int. and Amort. (4½% rate).....	9.63	14.44	19.26	24.07
Aver. FHA Prem. (½% per annum).....	.48	.72	.97	1.21
Taxes (2½% per annum).....	4.17	6.25	8.33	10.42
Hazard Insur. Prem. (½% per annum on 80% of cost).....	.67	1.00	1.33	1.67
Total Monthly Payment...	\$ 14.95	\$ 22.41	\$ 29.89	\$ 37.37

Comments from Industry Leaders and Congressmen

"I heartily commend *American Builder* for its forward-looking plan. No amount of government-sponsored building can afford a substitute for private initiative."—**DUNCAN SHAW**, President, Reading Hardware Corp., Reading, Pa.

"It is a fine thing to rally the building industry to invigorate private enterprise in the post-war period. We cannot rely too much on 'Government planning.' The patriotic and wise course is for private interests to do their own post-war planning in the true American way."—**STEPHEN A. DAY**, Congressman from Illinois.

"It is gratifying to see builders giving thought to the large problems that lie ahead; this cannot help but be constructive in the long run."—**EARLE S. DRAPER**, Deputy Commissioner, Federal Housing Administration.

"Your proposal is of great interest. Constructive use of capital will insure prosperity for everyone. Wealth in the hands of many makes for sound democracy, in the hands of a few breeds unsound political trends, such as Communism. I am particularly impressed with your emphasis on suppression of 'fantastic publicity regarding post-war houses.'"—**WILLIS H. CARRIER**, Chairman of the Board, Carrier Corp., Syracuse, N.Y.

"Your statements in the May issue are impregnated with common sense and practical suggestions to get private building going at the conclusion of the war."—**MYERS Y. COOPER**, Cincinnati.

"We certainly endorse the movement you have started, and offer our services. Higher building standards, better planned communities, more liberal financing should be stressed. Now is the time to act, otherwise we will have Government planning and most likely Government building."—**J. RAY JENKINS**, President, Kentucky Retail Lumber Dealers Assn.

"There can be no question as to the importance of planning and engineering now for private construction and development when the war is won. It will be absolutely essential to have some well organized program of employment on hand. It is most gratifying to know that such publications as *American Builder* are undertaking now to assist and encourage action by private enterprise."—**CARL HAYDEN**, U. S. Senator from Arizona.

"The article shows forward thinking. A program of systematic education should be started now. Investment in home ownership is sound. It is the stable way of getting workers to save for shelter and comfort for the future. Your plan seems very sound. It should not merely be started but should continue even during a building boom. A boom which would last only a short time would be dangerous. A steady, fairly normal building market should be possible."—**R. H. M. ROBINSON**, President, Insulite Co., Minneapolis.

"Your plan to bridge the gap from war to peace is an excellent one. The greatest job of post-war planning lies with private business and industry, and not with governmental agencies."—**JOE STARNES**, Congressman from Alabama.

"You are doing a lot of good and are giving everyone connected with building something to think about. There will be plenty of labor and a backlog of building, so that with FHA financing or a more liberal plan building can take up the slack when most needed."—**D. M. PEASLEE**, President, Peaslee Lumber & Coal Co., Laurens, Iowa.

(Continued to page 76)

"Glorify Progressive Builder"-- Roger Babson

ROGER W. BABSON, famed business analyst, predicts a building boom after the war, with ten million returning service men contributing to the tremendous demand for homes.

"Whether we like it or not," he says, "the thing which can do the most good would be to have everyone, from the President down to the humblest workman, join in a plan to glorify the progressive builder and business men. He alone can put people to work and reduce the debt."

Writing in a recent issue of the Real Estate Section of the New York Herald-Tribune, edited by Michael V. Casey, Babson says that money inflation alone is enough to cause such a boom. In addition, the nation will be at the peak of a twenty-year building cycle, there will be

low interest rates and foreclosures, and obsolescence due to the stoppage of building during the war.

Adding to all of the above factors deliberate Government stimulation of building to create jobs will perhaps give the greatest real estate boom the United States has ever witnessed, he says.

Alterations and repairs will come first in the upturn. This will be followed by one-family dwellings, then multi-family dwellings, then offices, factories, and other industrial work. Fifth in the order of improvement will be commercial and hotels, and last of all, public buildings.

"The best way to stave off Communism in the United States and Canada is to greatly increase our number of home owners. The conservation of a nation is directly

(Continued to page 90)

West Coast Meetings Endorse "War to Peace" Program

BELIEVING that local communities must take aggressive action to create a post-war program for private enterprise building, *American Builder* has been instrumental in calling meetings in many communities, and urges building men elsewhere to take similar steps.

On the West Coast, Bernard L. Johnson, western editor, has called a series of meetings in Seattle, Portland, Los Angeles, and San Francisco, that have revealed the keen interest these communities have in this subject.

The Seattle meeting, held May 6 at the Rainier Club, was attended by leading builders, lumbermen, mortgage companies, and public spirited citizens concerned with private enterprise. Colonel W. B. Greeley, secretary-treasurer of the West Coast Lumbermen's Association, led a round table discussion of plans for encouraging home ownership and private building. A majority of those present favored action by Congress to revitalize the Federal Housing Administration to encourage private post-war building. As the result of this meeting, a program may be carried on by the Seattle Chamber of Commerce.

The Portland meeting, held at the Arlington Club May 13, was attended by an important group including leading builders, realtors, lumbermen and manufacturers. The need for community action to preserve private enter-

prise and develop a post-war home building program was described by Johnson, and the meeting went on vigorous record as in favor of such a program. The following resolution was drafted by a committee consisting of Colonel Greeley; R. G. Barnett, vice president, Portland Gas Co., and member Post-War Planning Committee of the American Gas Assn.; L. C. Simms, president, Portland Home Builders Assn.; and Larry W. Bome, secretary, Portland Real Estate Board.

"Home building in the United States should be restored to free private enterprise.

"The private home building industry is the best-prepared instantly to take up the slack caused by cessation of war activity, and to prevent post-war unemployment and depression.

"The first step in planning a home building program for the immediate future, as well as for the post-war period, is to obtain a directive from Congress that will establish the policy of the United States as promoting and encouraging private home building. At the earliest possible time a program of private home building should replace the current socialized defense housing activity by federal agencies (as set forth in the joint statement of policy by the National Housing Agency and the War Production Board) for immediate war emergencies.

"This legislation should establish the permanency of the Federal Housing Administration as a federal mortgage insurance agency, stimulating private home building and private home ownership in lieu of all forms of federalized housing.

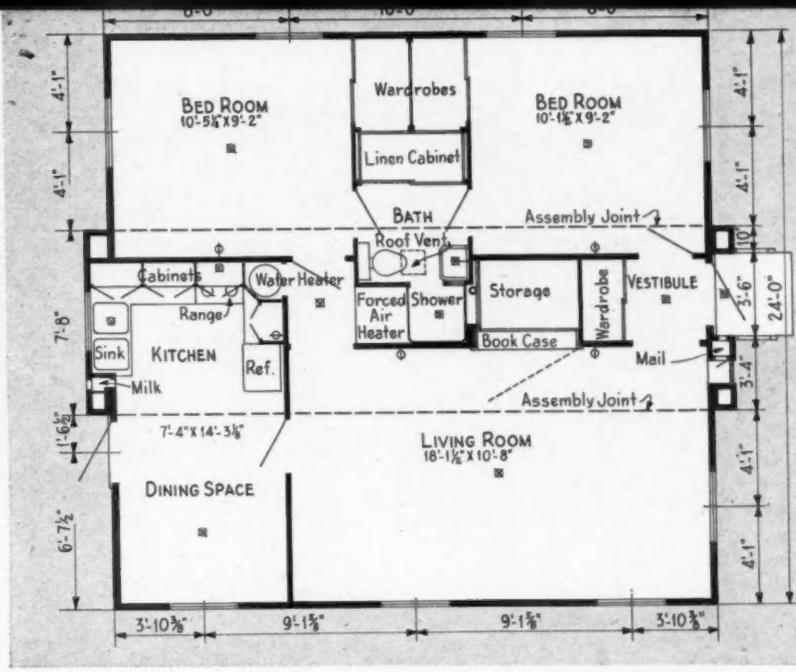
"Such action on the part of Congress is an essential step in recovering the American Way of Life!"



BUILDING INDUSTRY MEN in conference at Arlington Club, Portland, Ore., called by *American Builder*. A resolution demanding that "home building in the United States should be restored to free private enterprise" was adopted.



PRODUCTION LINE—Homes on wheels as seen in factory which has already built and sold more than \$15,000,000 of trailers and expansible homes to Government.



EXPANSIBLE HOUSE PLAN—Center section, 7' 8" wide. Houses all kitchen and bath facilities. Rooms on either side unfold on full length piano type hinges, producing a livable two-bedroom house as seen at the bottom of page.

Expansible Portable House

Factory makes 50 a day for war workers. Rolls to site.

IN the large factories of the Palace Travel Coach Corporation of Flint and Saginaw, Mich., more than \$15,000,000 worth of trailers and expansible home units have already been built for war housing and Government uses.

As a result of this war experience, interesting post-war possibilities are foreseen in a completely built home that can be transported to any site. President D. D. Arehart expects to build such houses, complete with furniture and equipment, with a low down payment, to returning soldiers and sailors.

The *American Builder* representative who went through the Palace plant was amazed at the extent and productive capacity. Literally acres of these novel type housing units were lined up



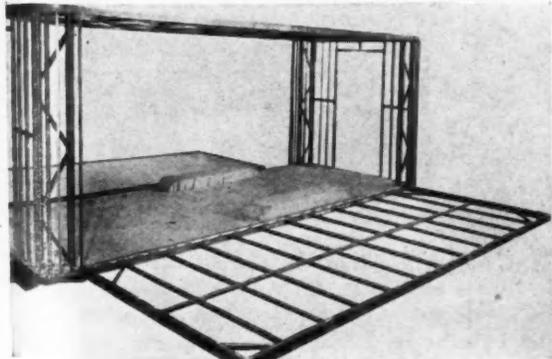
waiting for shipment to various parts of the country by trainload or by truck.

The core of the expansible portable house is a seven-foot-eight by twenty-six-foot transportable unit which contains the complete plumbing, heating and kitchen equipment. This is rolled to the site on wheels which can be removed. From either side of this central section two 8-foot wide additions unfold, producing a house

(Continued to page 94)

WITH side sections folded compactly against central unit, house is rolled to site.

AT the site, wheels are removed, side sections are unfolded to produce ready-to-live-in house of 24 by 26 ft. size, shown below.



SUBSTANTIAL frame showing hinged floor sections.

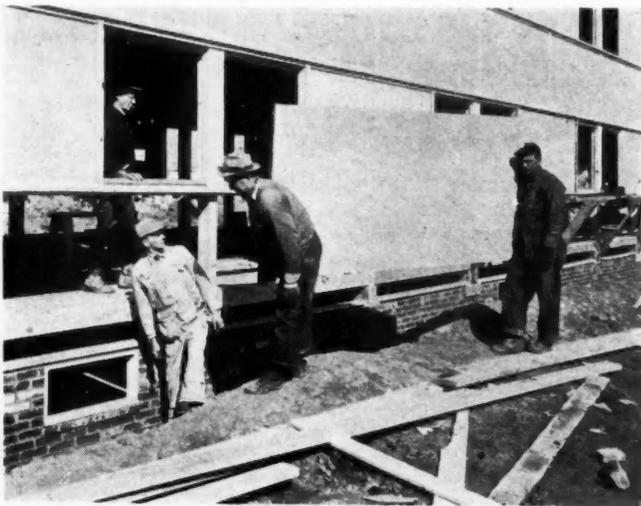




SOMEWHERE IN THE SOUTH PACIFIC—These Navy Seabees are stripped for action and hard at work putting up a Quonset Hut in a jungle clearing. The Seabees are composed of bluejackets and officers who construct camps and bases at advanced points. They also erect barracks, airfields, docks, gun emplacements, etc. (Official U. S. Navy Photographs.)

Building News Pictorial

Men on the Job at Home and Abroad



BUILDING AN ALL-GIRL CITY—Arlington Farms is being rushed to completion on the banks of the Potomac near Washington, D. C. This Public Buildings Administration project will house seven thousand "Government girls." To speed job, workmen above are placing completely pre-built Cemesto wall panel units.

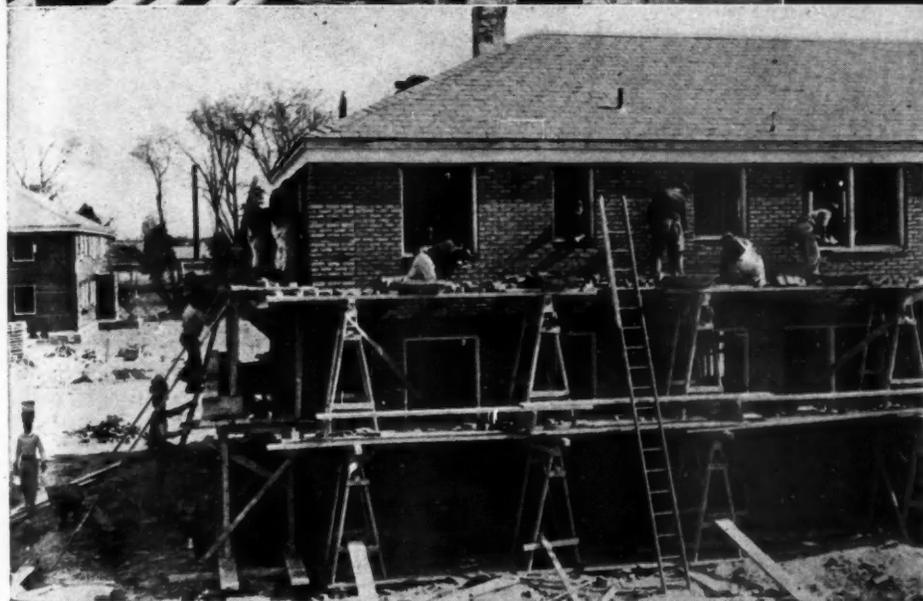
READY TO WORK AND FIGHT—Below, a member of the Navy Seabees arrives at his distant South-west Pacific base; he appears happy over the prospects of his job, which is to move into a desert island and transform it into a base for fighting men. He is trained in the handling of all weapons of modern land warfare and is always ready to drop a shovel and use a rifle if the need arises.



SHOT FROM A GUN—Workman above is demonstrating the new Colburn system of construction for low-cost fireproof housing. He is applying concrete to mesh over pan forms with new open hopper pneumatic gun developed by Construction Machinery Co.

CONTRACT FULFILLED BY ACE OF TRUMPS—

Seen below is part of the stock pile of materials on the job to go into one of Fred C. Trump's war housing projects; this one, Talbot Park Apartments, Norfolk, Va., will require 1500 radiators, 496 boilers. Trump, known as "Brooklyn's biggest builder," is rushing housing for Navy officers, pilots, and their families on some of his jobs and quarters for war workers in other locations. A new shopping center close to schools, churches and stores is part of the project. First unit for 296 families is scheduled for completion by first of July.



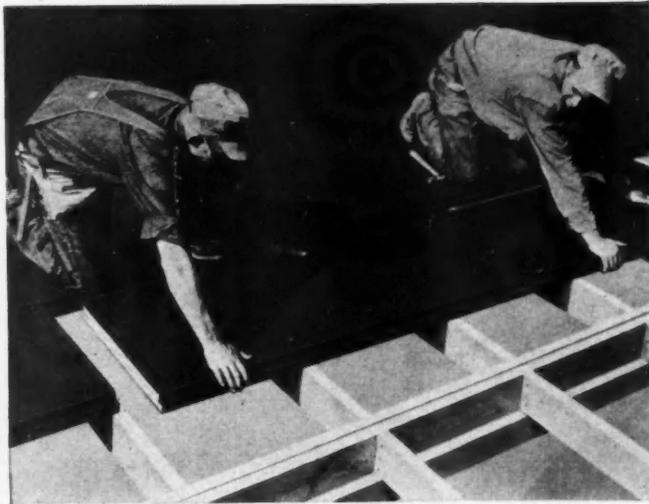
TRUMP HIMSELF—

Fred C. Trump is a war housing commuter these days, shuttling between his jobs at Norfolk, Va., Chester, Pa., and New York City. With 200 war homes recently finished (now sold), Trump, with the help of his partner, James Rosati, is rushing other contracts to completion. He will have accounted for 1200 family units in his first year of war housing construction. Of these, the ones still under construction are expected to be occupied by Labor Day. He now looks forward to building 2,000 more in his second year.

PLENTY OF ACTIVITY—Construction view at Trump's Talbot Park apartment project, built under Section 606, FHA, shows work being rushed; note colored brick carriers.

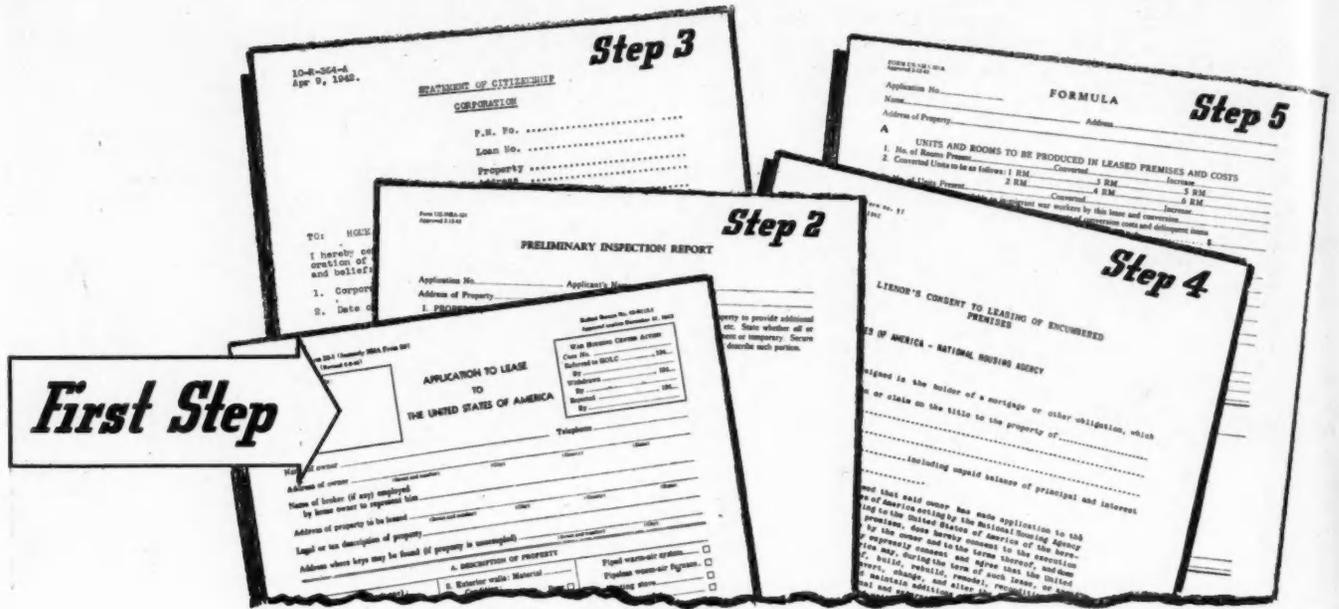


SAVING STEEL—Men on the job sheathing over 166-foot clear span trusses constructed of wood reinforced with timber connectors. Mold loft buildings such as the one above have been duplicated many times in shipyards on the Pacific, Atlantic and Gulf Coasts. Unobstructed floor is giant drawing board. (OWI Photo.)



SYNTHETIC LUMBER—These men are putting on a new gypsum roof plank which, when nailed to wood joists, is an excellent base for built-up roofing. It was developed by the National Gypsum Co., to help relieve the lumber situation, has saved much precious time in getting many war plants into production.

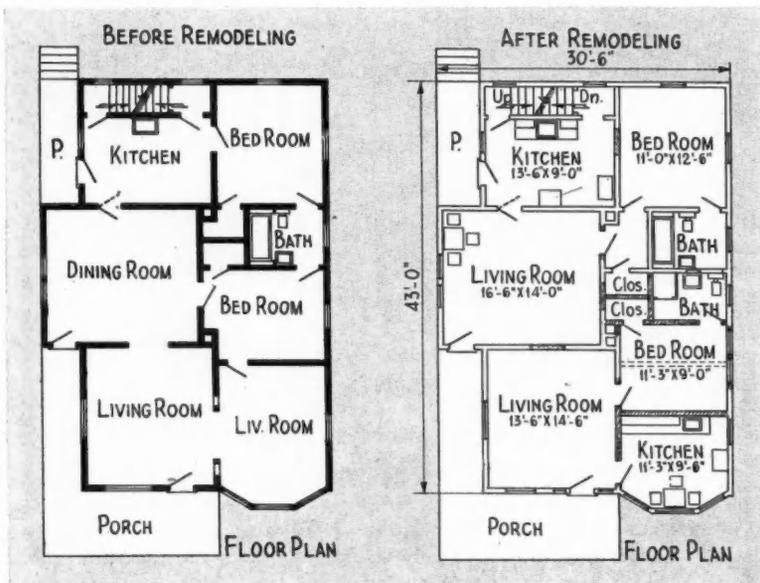
HOW TO CONVERT



First Step



There are houses like the one shown at left all over the country that can be converted into two war-worker apartments similar to the plan below.



CONVERSION of existing properties into additional living space for war workers is assuming the aspect of a business of large proportions as the war goes on. It is apparent from the message the President of the United States sent to Congress that the emphasis in the new housing program will be upon conversion.

An estimated in-migration of 1,100,000 war workers into areas of war production activity in 1944 will create one of the major housing problems to be solved during the balance of this year. It is not proposed to house even the majority of these workers with Federal funds. Almost two-thirds of them will be taken care of by remodeling existing structures.

Wherever builders are fortunate enough to live in an industrial area that has been allotted a housing quota, the conversion of old homes into apartments is therefore the big opportunity of the day. This is true whether the plan used is the Title 1 program under FHA or the HOLC Lease-Conversion plan.

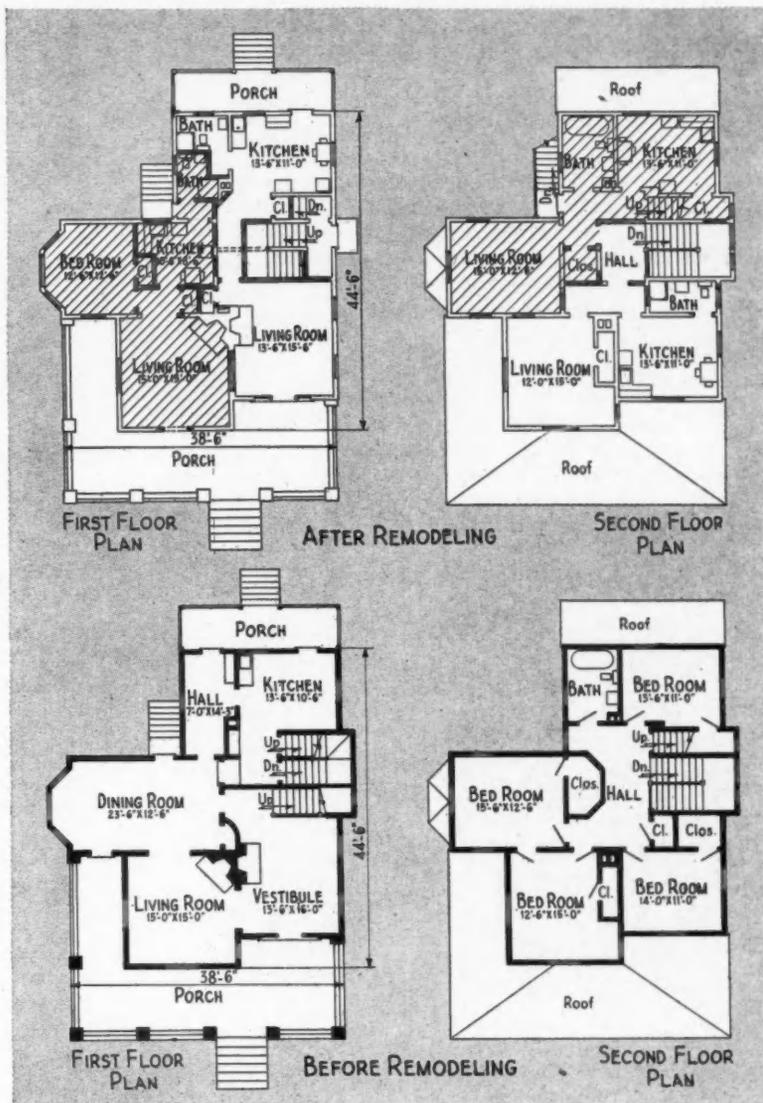
Over 3,000 private lending institutions are now actively participating in the FHA's Title 1 program. Under Title 1 property conversion loans are not restricted to residential properties. The conversion of parts of buildings, such as the upper floors of business establishments, may be undertaken, and in some instances entire buildings have been remodeled.

That property owners and builders are taking advantage of this business possibility is evidenced by the fact that 29,779 applications for priority assistance for privately financed conversion projects were received by FHA field offices during the eight months

OLD HOMES into Apartments with Uncle Sam as a Partner



THIS old house was practically a dead loss until HOLC Lease-Conversion put it back as income producing property in Wichita, Kansas, at cost of \$5200.

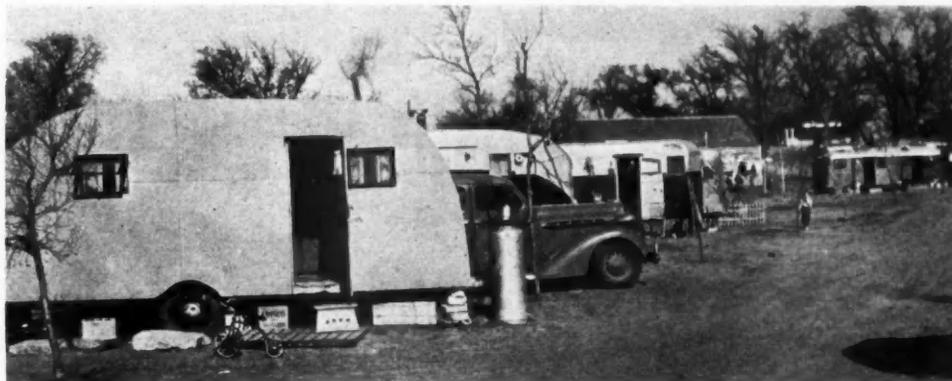


These floor plans indicate how four apartments were carved out of the old house shown in the photograph above. On HOLC Lease-Conversion plan, the builder doesn't have to worry about priorities and the Government sends the check. Note how plumbing was grouped to save material.

from June 1, 1942, through January 31, 1943. This figure is compared with the preceding eight months' period, September 1941 to May 1942, when only 6,412 applications were received. The increase of 364 per cent is gratifying to the government, but likewise should indicate that this is a lucrative business for builders.

Approved projects under the Title 1 program are eligible for AA-3 preference ratings and recent amendments to the Housing Act have liberalized the terms, extending the maximum time of repayment on all conversion loans made after May 26, 1942, from five years and thirty-two days to seven years and thirty-two days. The maximum amount of loan permissible for conversion projects under FHA Title 1 is limited to \$5000.

The HOLC Lease-Conversion plan is relatively new. Walter Henrion of the Henrion Construction Company, Wichita, Kansas, whose remodeling jobs are shown on these pages, makes this illuminating remark regarding HOLC Lease-Conversion work:
(Continued to page 92)



APARTMENTS such as those shown on these pages do away with unsightly trailer camps that haunt war centers. There is much more room and comfort for better morale in a converted apartment than in a trailer.

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How to Frame 30'x24' House and Stay Within WPB 5 Board Ft. Rule

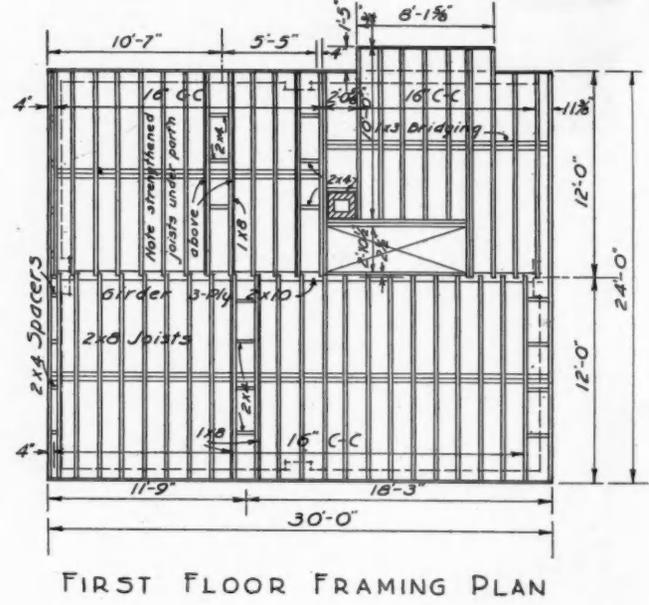
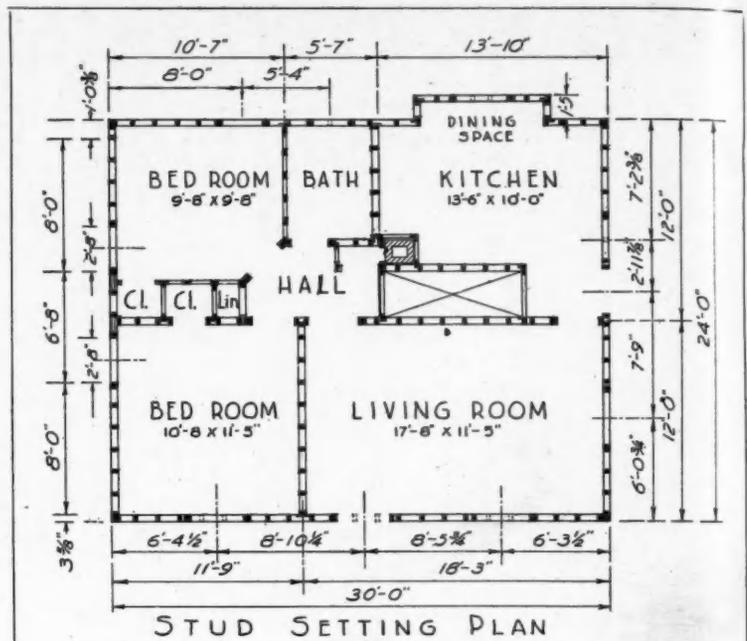
AN APPROVED method of framing the popular small story-and-a-half cottage to use only $4\frac{1}{2}$ board feet of 2-inch dimension lumber per square foot of floor area has been worked out by Robert Gerholz of Flint, Mich., chairman of the Emergency Committee of the National Association of Home Builders of the U. S. Gerholz is senior member of the well known home builder organization, Gerholz-Healy Co., which has been active in the Flint area for the past two decades and has several thousand well-built small homes to its credit.

Builders of all-wood houses have been having trouble staying within the "5-Bd. Ft. Rule" set up by the War Housing Construction Standards of Jan. 21, 1943. This rule requires that in a one-story house the dimension lum-
(Continued to page 94)

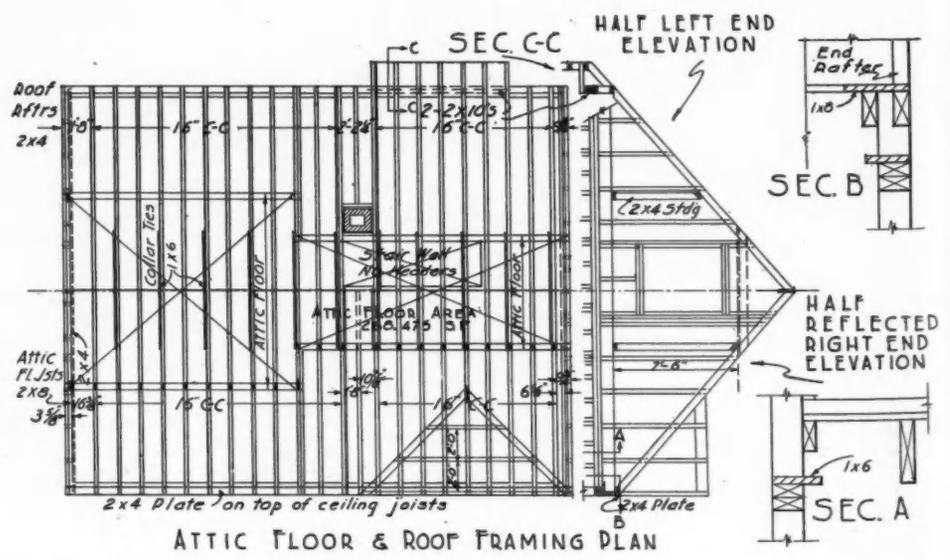


ABOVE: Sketch of story-and-a-half war housing unit built by Gerholz-Healy, Flint, Mich. WPB allows attic area having 5 feet or more clear head room to be added to first floor area in figuring total in this design.

RIGHT: Framing details as shown in stud setting plan, first floor framing plan and attic floor and roof framing plan stay within "five board feet" rule; list of this material is given at end of article.



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MORE CARS, SUPERHIGHWAYS WILL SET POST-WAR PATTERN FOR COMMERCIAL BUILDING

In the above drawing, the author presents a study of a possible post-war suburban shopping center, planned for the rebirth of "personal transportation"—use of the automobile. Note the ease of entering from high-speed highway, parking and reaching main store and specialty shops; plan can be duplicated on opposite side of 4-lane highway. Mr. Welch is a member of A.I.A. Post-War Architectural Planning Committee; of Planning Commission of City of Grand Rapids; of American Society of Planning Officials.

By Kenneth C. Welch

THE ABILITY of the human being to use his legs, plus his inventive genius as applied to other means of transporting himself, have been the dominating forces in determining the changing patterns of shopping centers in our cities. We developed "mass transportation"—first the horse car, then the electric street car, which in our larger communities we had to put underground or elevate to separate them from the walkers
(Continued to next page)

(Continued from preceding page)

and other forms of transportation. These, together with the steam railroad commuters services, have determined many an urban basic framework. The perfection of the internal combustion engine and its use in the automobile, private and public, has completely changed the entire picture. It is interesting to note the dying out of the street car in favor of the bus and the dying out of the elevated electric train and the birth of the elevated automobile road.

Let's analyze the factors in transportation that have so completely changed this picture. First we must consider the *distance-time factor*. We walk about four miles an hour, and our high speed mass transportation, and the automobile when it can be segregated from other forms of transportation, average ten to twelve times this speed.

The next factor is *space occupied* per person. We take up about three square feet when standing, a little more when sitting. Our mass transportation has kept this factor down fairly well, sometimes too well, but the private automobile has completely upset the apple cart. It consumes twenty to thirty times as much space per person.

This not only requires more thoroughfare area than we have ever had, but being a very



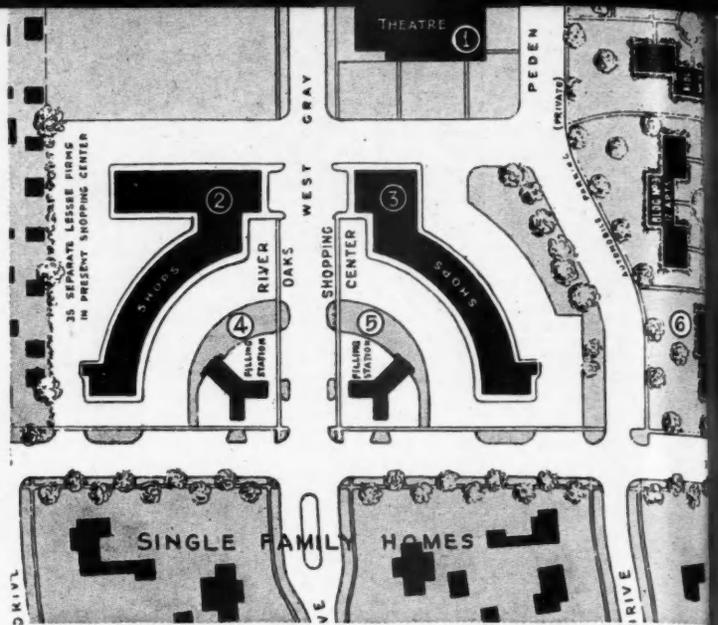
KENNETH C. WELCH, nationally known designer and planner of stores and shopping facilities, who outlines here what will be necessary to fit commercial building to more cars and superhighways.

individual affair we have to have a place to store it when we get back on our feet, which brings up what we call the "parking" problem.

Its freedom of action gives us almost as much personal liberty in our movements as does walking. Basically our love of liberty is one reason we are fighting this war. We can come and go as the spirit moves us, whereas all forms of mass transportation have required that we use a certain route, be picked up at a certain point and travel on a certain schedule. The automobile is ideal except that because of its space requirements and individualized operation, it does not fit our old urban land use idea.

What of the future? We have had our appetites whetted here and there with beautifully designed highways, not only joining communities but on occasion reaching down

(Continued to page 97)



PLAN of River Oaks shopping center in Houston, Tex. Aerial view shows

River Oaks Shopping

IN looking ahead to the post-war building market, a large volume of homes will necessarily mean many new stores and service structures to accommodate the home owners. Right now, the builder who specialized in commercial work or depended on it for part of his business has to be content with essential maintenance and repair, plus an occasional job needed for war purposes—for instance, the recent WPB action modifying restrictions on hotel work and its desire to get restaurant facilities in certain war production areas (see May *American Builder*).

But meanwhile the building of practically all types of stores and shops, as well as the restyling of old ones, throughout the nation awaits the post-war starting gun. To plan these structures now as part of new home projects already on the boards, and the separate jobs of re-

What Post-War Shopping Centers Will Need to Compete Successfully for Tomorrow's Business

Properly planned parking space: (1) for store customers who average one hour or less parking time; (2) for those using amusement and recreation facilities who need longer periods; (3) for employees requiring all-day parking; and (4) for loading and unloading commercial vehicles.

Locations where there is easy access to high-speed highways.

Customer protection from bad weather and sun, in form of wide projecting marquees under which shoppers can go from shop to shop.

Fronts to display merchandise more attractively and lead customers into the stores.

Grouping of small shops into complete centers having a unifying design flexible enough to allow tenant change without costly alteration.



the actual buildings keyed to the plan by number; the garden apartments in this development of Hugh Potter's seen at upper right.

Center Sets the Pace for Better Stores

placing and bringing war casualties up to date, these pages show examples of forward-looking pre-war commercial building which are in line with the trend of planning being done today.

The River Oaks shopping center, above, is an example of this better design of yesterday. It is part of Hugh Potter's ideal development in Houston, Tex., which was selected by the Urban Land Institute as the foremost example of sound community planning in this country and as a pattern for study by future community builders. Last month the garden apartment portion of River Oaks was described; this is located adjacent to the shopping center shown in the plan above.

How advanced this project was can be seen by comparing it with Kenneth Welch's post-war shopping center on

Commercial buildings of Houston development in line with post-war design trends; ample parking in this ideal project

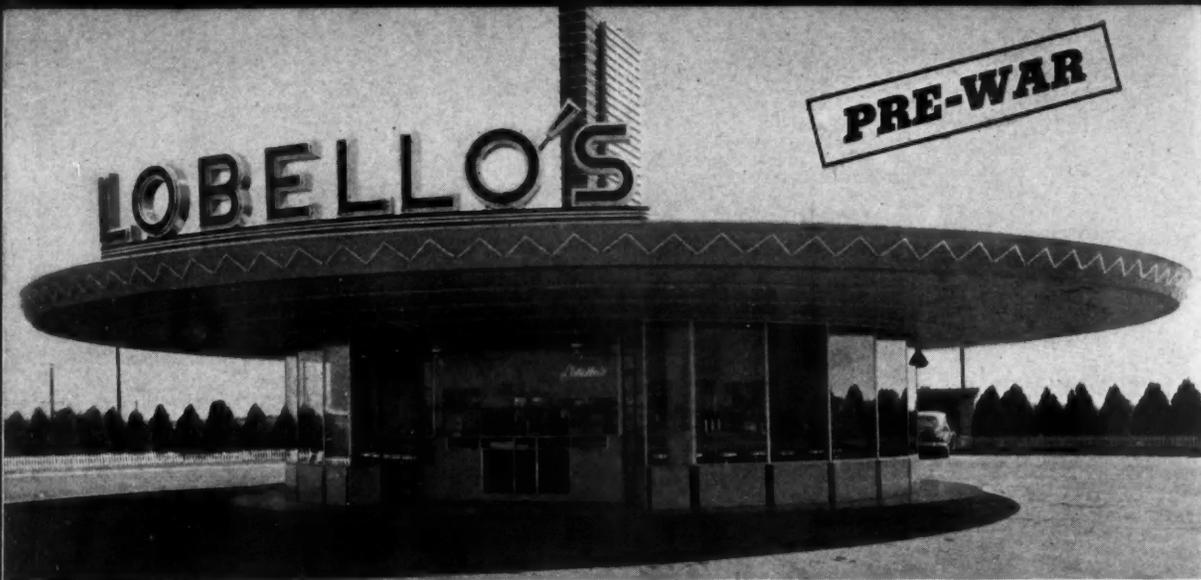
the second page preceding and with the details of the Kawneer competition on the next three pages. Notice the semi-circular pattern, ample parking and adjacent thoroughfares. In the close-up views of the structures, such details as good display, continuous marquee, clean-cut styling and handy grouping of the shops are apparent.

VIEW of one of the quadrant's shops as seen from one end shows the circular sweep of the projecting marquee. Large glass areas allow a view into the store which becomes a part of the display.



THERE are two filling stations, like the one at the right, at the intersection of the two main thoroughfares leading to the shopping center. Driveways protected from service building to the islands.





THIS view of Lobello's, Dallas, Tex., shows the flat circular concrete roof structure with 14-foot overhang. Joseph Feils, architect; Sam Lobello, Sr., builder.

Drive-In Restaurant

ONE of the reasons for the stream of customers served by the Lobello's shown above is the fact that space has been provided for the parking of 110 cars. Peak business served in one day is 2500 cars, and when you figure four occupants per car, you're seeing patronage.

The building is a flat top, one story, concrete and steel

structure forty feet in diameter with a 14-foot overhang that runs completely around the structure. Both interior and exterior walls are of tile, while the floor is terrazo and the ceiling stucco. The windows are long and wide, giving the occupants of parked cars access to a view of the activities going on inside. It is air conditioned and 2700 feet of neon tubing provide a unique lighting effect that can be seen equally well by motorists and those who arrive in the city by air. (Continued to page 96)

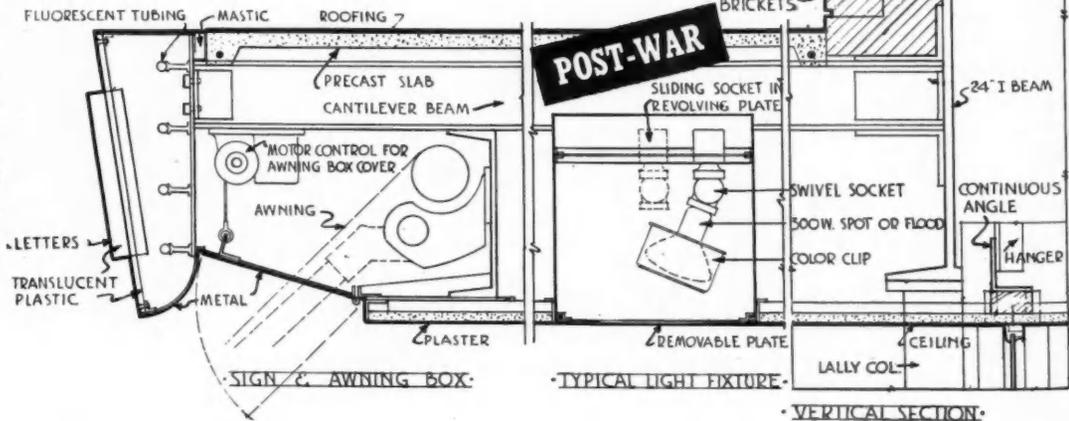
Kawneer Competition Shows Future Trends in Commercial Design

THE Kawneer "Store Fronts of Tomorrow Competition" held this year to encourage planning on this important phase of commercial building should offer a good indication of some of the new features that can be expected after the war. When building resumes, unquestionably many of the ideas that were novel yesterday, plus new techniques and materials which have since been developed, will be widely adapted. On the whole, the entries which were submitted as designs for a group of five stores, continued and expanded trends toward permanent awnings, projecting roof slabs or marquees; varied shape lobbies between the set-back fronts and lot lines; exterior island displays, recessed windows, large glass areas opened up to show store interior; few balanced elevations with center entrance. Some of the entries anticipated a larger use of plastics, metals and prefabricated parts; highlights from four such designs are presented here.

1 This entry featured a continuous awning box designed in conjunction with a continuous illuminated plastic sign panel. This panel forms a band of soft light across the entire front of the building and down the side street. The shop names are in plastic of contrasting color. (See detail below which shows only the cross section of projecting canopy, parapet and upper portion of store front.) The glass line sets back from the building line approximately 10' 6", and divides the display area into exterior and interior parts. All bulkheads, valances and obstructions have been omitted. Displays are illuminated by means of recessed light fixtures in the main ceiling.

DESIGNED by Percy Cashmore, White Plains, N.Y.

MATERIALS: Glass 1/4" polished plate and 3/8" Herculite; metal, colored stainless steel; sign, translucent plastic; fixtures, waterproof plywood; ceiling, acoustic plaster; facing, 1" x 6" clay bricks.



PLENTY of parking space is one of the features of this modern building, the Monarch Laundry, Dallas, Tex.; there are facilities for 35 customer automobiles, a worth while investment considering savings in delivery costs.



Laundry with Modern Customer Conveniences

ONE for the post-war book is the streamlined Monarch Laundry and Dry Cleaning plant shown above. Unique features are elimination of smoke stack and water tank. Structure is common brick painted white. Notice the large shaded window areas in the office portion of the building. For cold weather comfort, heat is radiated from

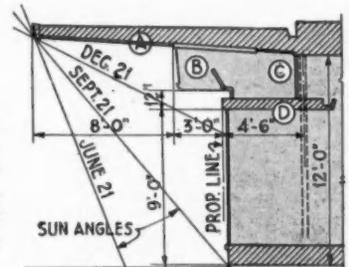
overhead units connected direct to laundry boilers; forced air serves as conditioning and ventilation to remove the excess humidity and steam with eight 42-inch fans being used for this purpose. W. Ralph Merrill, architect, Oklahoma City, designed this building; contractor was Watson Company, Dallas.

2 Permanent Awning and Prefabricated Ceiling Unit

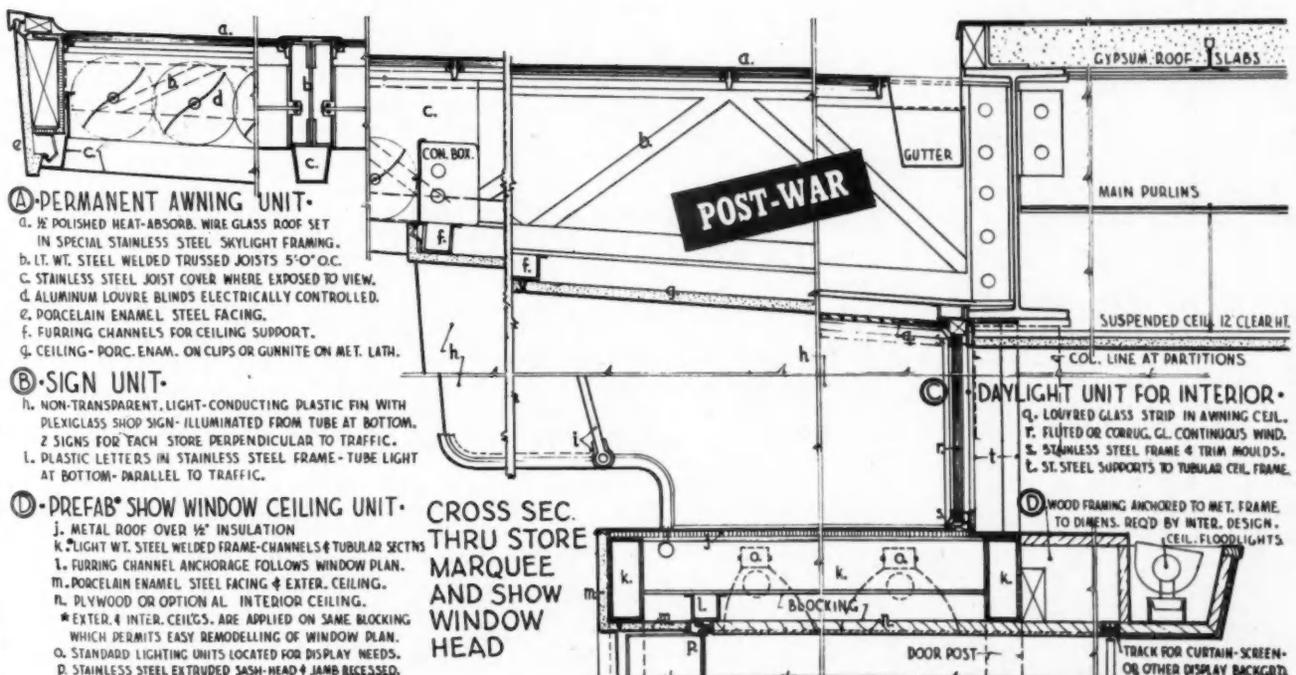
THE second entry in the Kawneer Competition to be presented was selected because of its forward-looking design feature, the controllable steel awning detailed below. This provides permanent, weatherproof protection without altering the appearance of the stores. This design

anticipates abundant facilities for manufacturing and fabricating light alloy steels and aluminum. The "prefabricated" show window ceiling is intended to eliminate all masonry work, substituting a fireproof structure produced by the store front manufacturer.

DESIGNED by William H. Scheick, Architect, Urbana, Ill.



CROSS section through store front.



A-PERMANENT AWNING UNIT-

- a. 1/2" POLISHED HEAT-ABSORB. WIRE GLASS ROOF SET IN SPECIAL STAINLESS STEEL SKYLIGHT FRAMING.
- b. LT. WT. STEEL WELDED TRUSSED JOISTS 5'-0" O.C.
- c. STAINLESS STEEL JOIST COVER WHERE EXPOSED TO VIEW.
- d. ALUMINUM LOUVRE BLINDS ELECTRICALLY CONTROLLED.
- e. PORCELAIN ENAMEL STEEL FACING.
- f. FURRING CHANNELS FOR CEILING SUPPORT.
- g. CEILING - PORC. ENAM. ON CLIPS OR GUNNITE ON MET. LATH.

B-SIGN UNIT-

- h. NON-TRANSPARENT, LIGHT-CONDUCTING PLASTIC FIN WITH PLEXIGLASS SHOP SIGN-ILLUMINATED FROM TUBE AT BOTTOM.
- i. 2 SIGNS FOR EACH STORE PERPENDICULAR TO TRAFFIC.
- j. PLASTIC LETTERS IN STAINLESS STEEL FRAME-TUBE LIGHT AT BOTTOM-PARALLEL TO TRAFFIC.

C-PREFAB* SHOW WINDOW CEILING UNIT-

- k. METAL ROOF OVER 1/2" INSULATION
- l. LIGHT WT. STEEL WELDED FRAME-CHANNELS & TUBULAR SECTNS
- m. FURRING CHANNEL ANCHORAGE FOLLOWS WINDOW PLAN.
- n. PORCELAIN ENAMEL STEEL FACING & EXTER. CEILING.
- o. PLYWOOD OR OPTION AL. INTERIOR CEILING.
- *EXTER. & INTER. CEILGS. ARE APPLIED ON SAME BLOCKING WHICH PERMITS EASY REMODELLING OF WINDOW PLAN.
- p. STANDARD LIGHTING UNITS LOCATED FOR DISPLAY NEEDS.
- q. STAINLESS STEEL EXTRUDED SASH-HEAD & JAMB ACCESSD.

CROSS SEC. THRU STORE MARQUEE AND SHOW WINDOW HEAD

- q. LOUVRED GLASS STRIP IN AWNING CEIL.
- r. FLUTED OR CORRUG. GL. CONTINUOUS WIND.
- s. STAINLESS STEEL FRAME & TRIM MOULDS.
- t. ST. STEEL SUPPORTS TO TUBULAR CEIL. FRAME.
- u. WOOD FRAMING ANCHORED TO MET. FRAME TO DIMENS. REQD BY INTER. DESIGN. CEIL. FLOODLIGHTS.

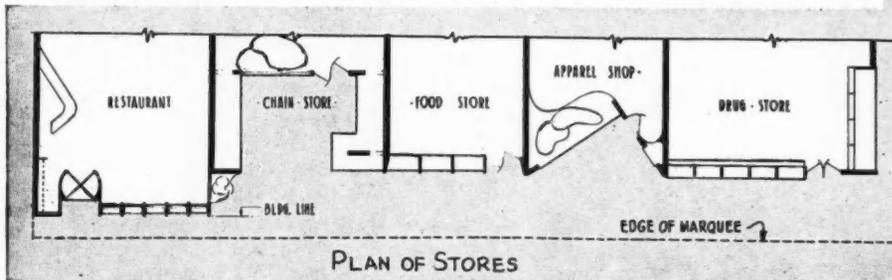
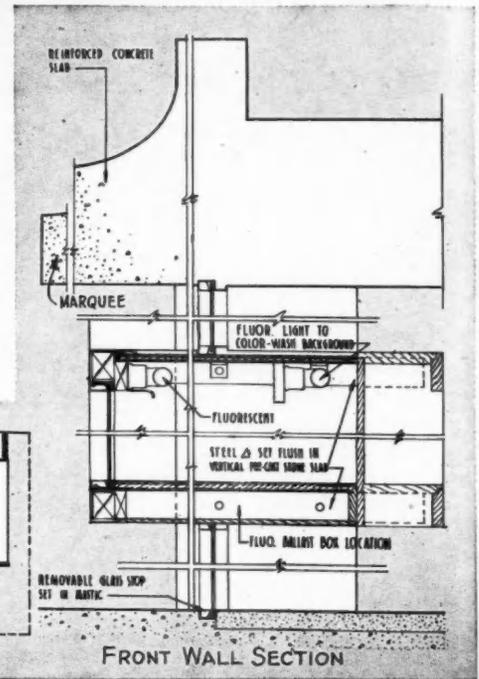
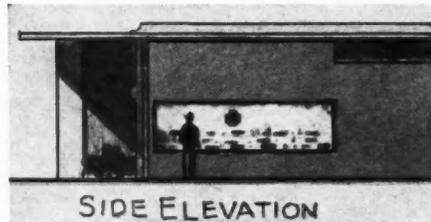
DETAIL of upper portion of cross section (above at right), showing mechanism of permanent awning and show window ceiling units.



THIS perspective shows the corner of the drug store in the five-shop plan below. It has a protecting marquee in the form of projecting reinforced concrete roof slab, that shelters the varied ic-bies. (See side elevation.) Window display units are set between the vertical pre-cast stone slabs and are fluorescent lighted as detailed below. The balance of the store front is glass, including the entrance doors. Designed by M. Righton Swicegood, New York City.

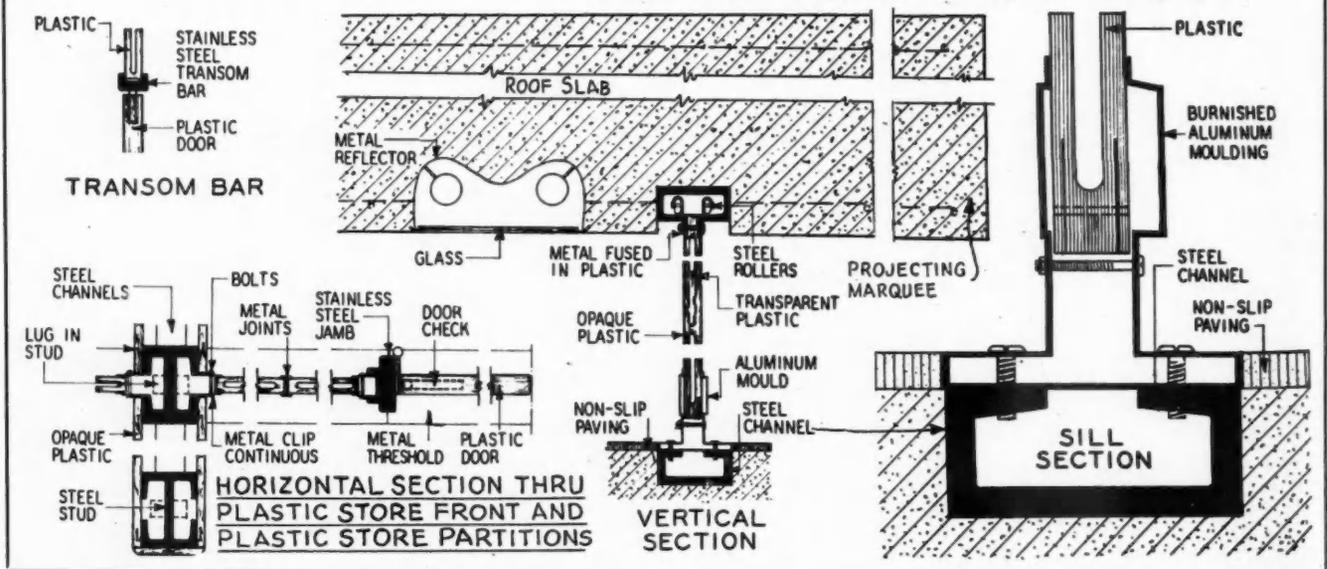
3 Store Front of Concrete, Steel and Glass

LESS revolutionary than some of the entries in the Kawneer Competition, but more in line with some of the pre-war store fronts, is this third design. It uses materials already on the market, and could be built immediately after the war; by contrast, fourth entry, below, calls for new forms in plastic.



4 Wall and Store Front Units to Be Prefabricated of Plastic

BENEATH the light-weight, widely supported concrete roof slab, transparent and opaque tempered plastic, air-sealed cellular units for store front and partitions are suspended from track and changed to suit the tenant; proposed by designers Donald E. Olsen and Alvin Fingado of Berkeley, Calif.



Shopping Center for the Post-war "Shelf"

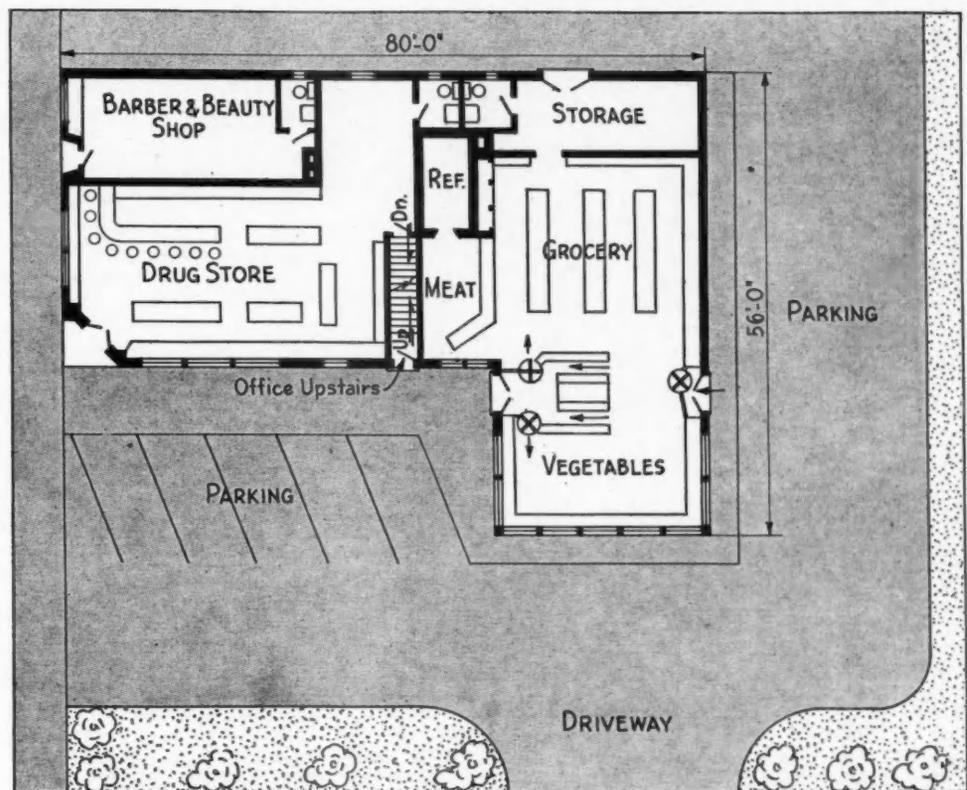
People need it, but Government says NO; commercial building for Seattle new homes community must wait till restrictions are relaxed

TYPICAL of many fast growing new developments of war workers' homes, the popular region south of the Seattle city limits, centering around 136th Street and First Avenue, needs a local shopping center; but so far local enterprise has not been able to break through the restrictive red tape to supply this home-front service. With some 500 good new permanent homes built and building in this general neighborhood, the nearest store for meats, groceries, drug supplies, etc., for these busy housewives, many of them also employed at the bomber plant, is three miles away.

Sensing the need for a modern community business center, one of the local home developers, O. Bardahl, a member of the Seattle Master Builders' Assn., undertook the project illustrated herewith by means of architect's sketch and plot plan. He had specifications prepared for a clean-cut, well-proportioned building of brick and glass in attractive Colonial design. Cost estimate, \$14,000; all construction materials on hand; no additional critical or priority materials required. The site selected was a prominent bus-stop corner, zoned for business. Ample parking space was allotted. Landscaping and general treatment were to be harmonious to the character of a good residential community.

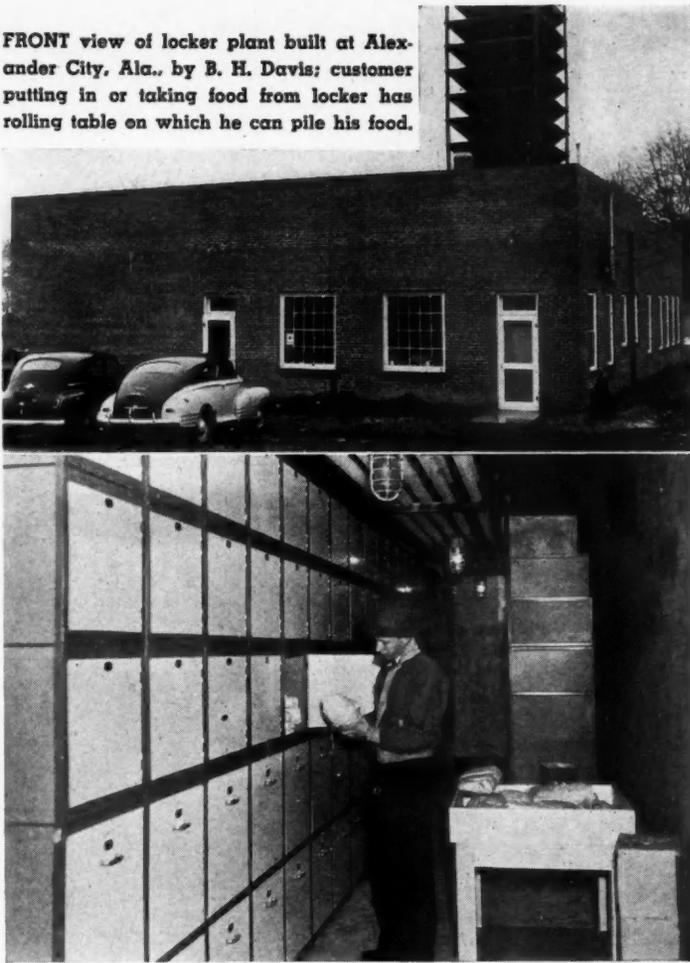
Bardahl has wrestled the bureaucrats all over the lot for this much needed piece of business construction, but has gotten nowhere. They have given him a lot of conversation, but it has all boiled down to "NO."

So this project is another on the post-war "shelf," to be taken down and carried through when the present emergency is past. Bardahl is not the type of builder to give up easily, especially on a community improvement as badly needed as is this shopping center.



PLAN and perspective of proposed Seattle shopping center designed for Developer O. Bardahl; note adequate parking area, office space on second floor.

FRONT view of locker plant built at Alexander City, Ala., by B. H. Davis; customer putting in or taking food from locker has rolling table on which he can pile his food.



Rural and Roadside Bu

FROZEN FOOD LOCKER PLANT

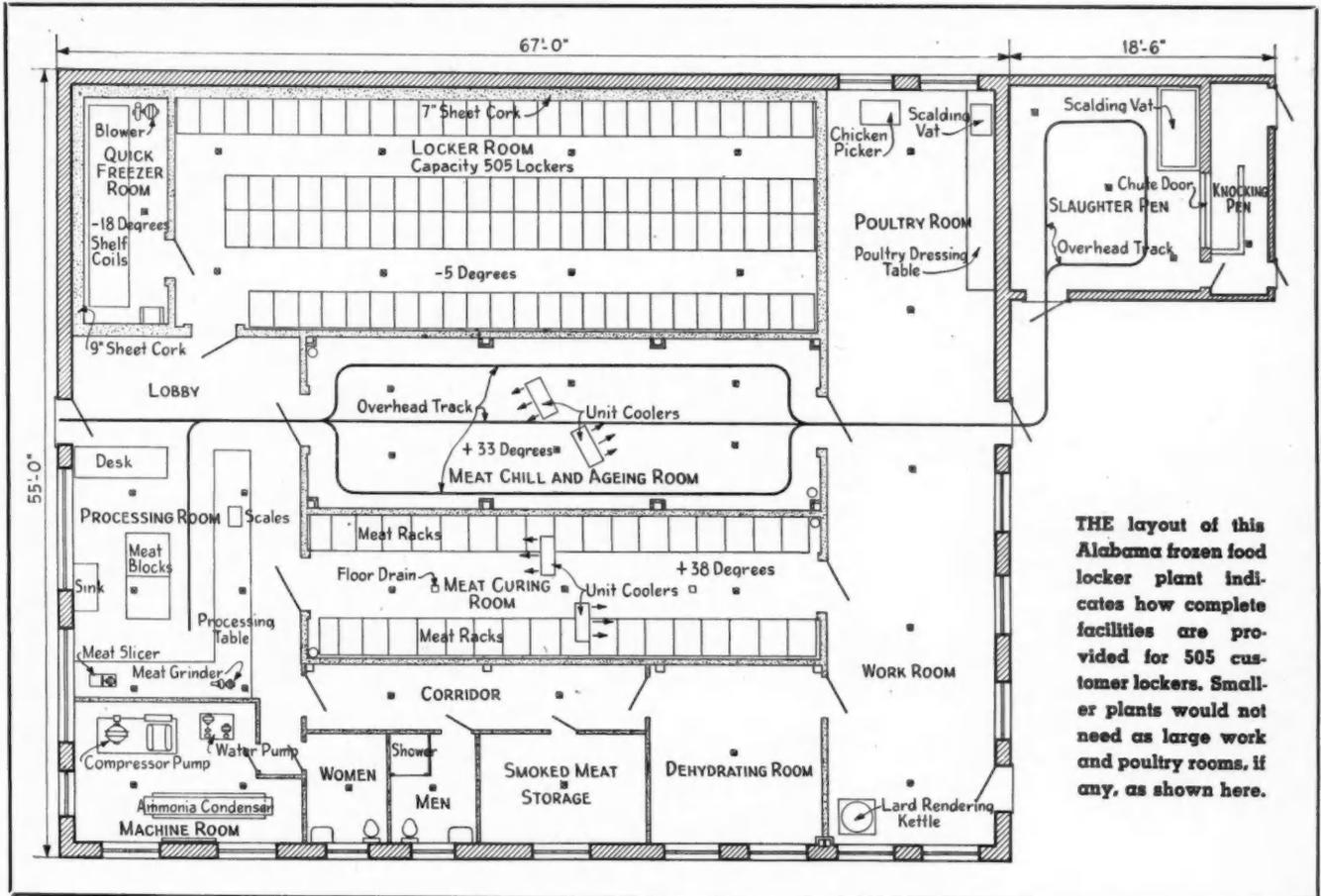
With war interrupting the swing to rural and suburban frozen food plants throughout the country, a revival of building is certain to see many more of these structures erected, others modernized and enlarged. This 500-locker food processing plant, recently erected at Alexander City, Ala., by H. B. Davis, contractor of that city, affords a study of the layout of the various storage and processing rooms as related to each other and the equipment of same for post-war market. It was designed by Stiles O. Lokey, consulting engineer of Birmingham, after a study of various other locker plants. The refrigeration equipment was installed by Rushton Equipment Company of Birmingham, agents for York Ice Machine Co.

The plant was built for Russell Mills, cotton textile manufacturers, and chiefly for its own employees. This is the first instance known where an industry has taken this step to encourage meat production by its employees, many of whom live on small acreage plots.

A brick building with 55 feet frontage and 67 feet depth was erected specially to house the plant, and hence was designed for that purpose with no windows being located on the side where the low temperature rooms are located.

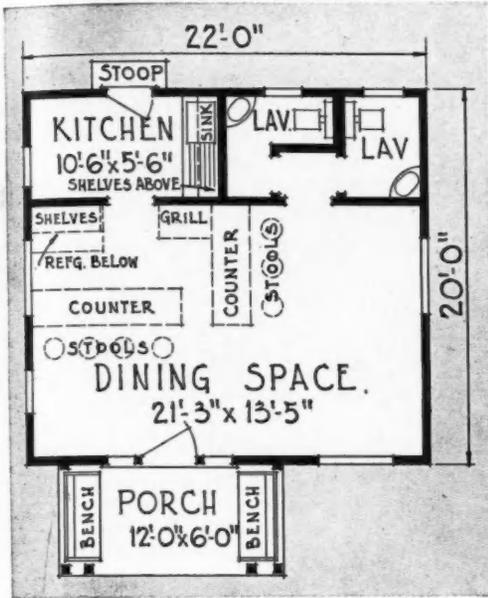
An examination of the floor plan will show that the plant is so located that pork and meat carcasses may be moved through the plant in orderly fashion from one department to the other without any backtracking. It will be noted also that more than the usual facilities are provided for the curing, smoking and storage of pork, a favorite meat in the South. Also space is provided for future addition of a dehydrating plant and a poultry processing room.

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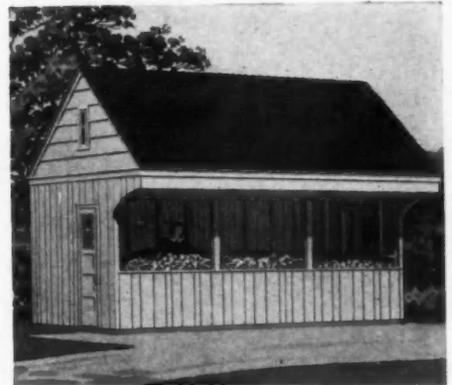
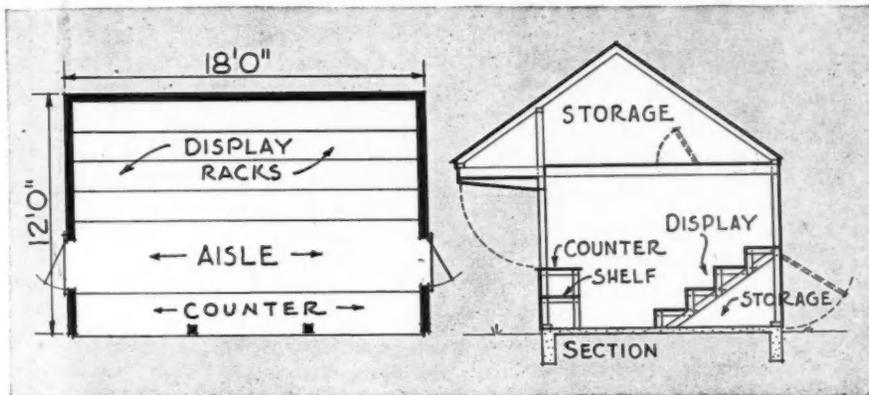


THE layout of this Alabama frozen food locker plant indicates how complete facilities are provided for 505 customer lockers. Smaller plants would not need as large work and poultry rooms, if any, as shown here.

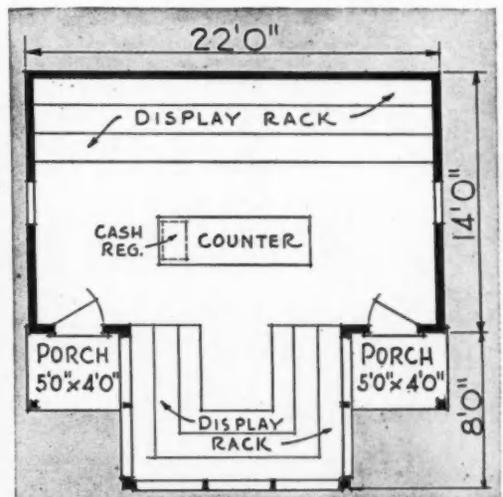
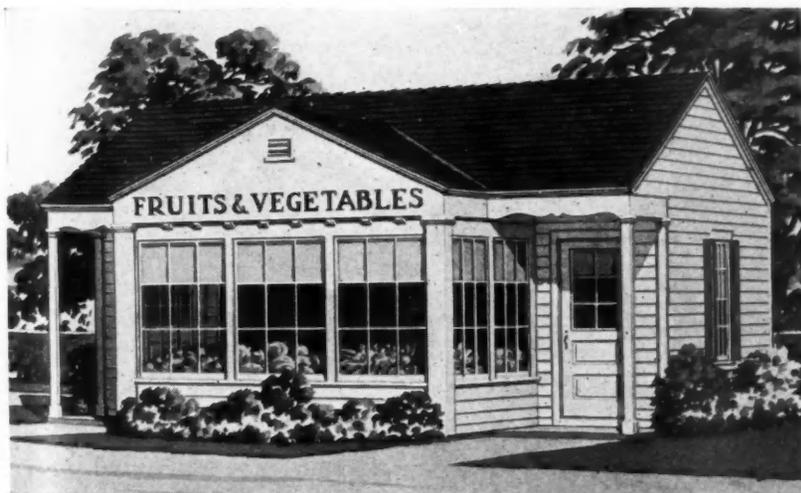
de Buildings Will Be Restyled, Many Built



ROADSIDE GRILL When America flocks back to the highways competition for roadside trade will be doubly keen; with new structures springing up, the older ones will be forced into remodeling, or restyling and rebuilding. Those that get the trade will not necessarily have to be large and ornate, but at least attractive and efficient like the compact Colonial grill that is shown above.



ROADSIDE STAND Although at present part of their trade is cut by driving restrictions, some close-in roadside stands need repair and rebuilding now, thousands more will have to be replaced after the war. Here is a low-cost and easy-to-build market that has ample facilities for small trade, including good storage. These designs were furnished by National Plan Service, Inc., Chicago.



ROADSIDE MARKET This more elaborate roadside market will attract trade because of its well planned window display, twin entrances and neat exterior. It could be rearranged for a small lunch room by replacing the racks with seats and counters.

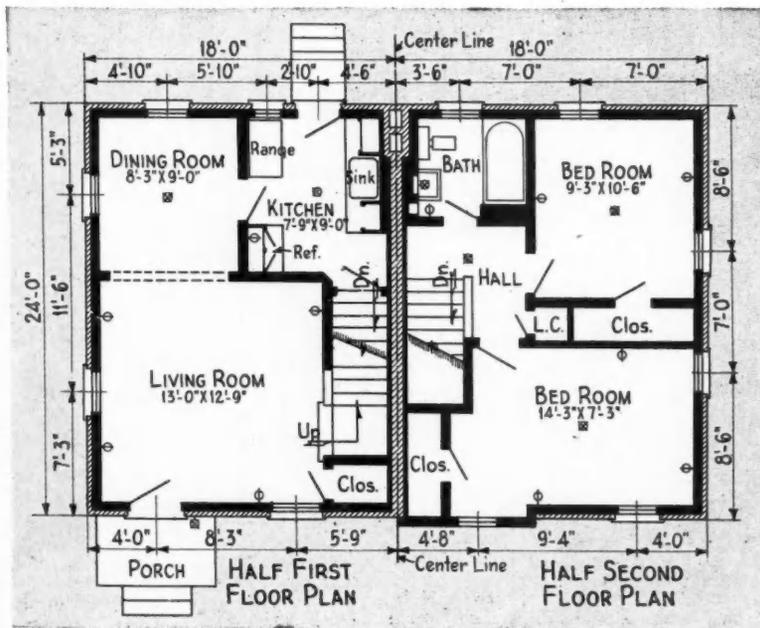
"More Homes For Families With Children"



TWO-STORY DUPLEXES under construction early in May by George W. Miller are shown above. An extremely livable home on broad frontage is provided and floor plans below show careful planning for convenience and use of space.

Continue building sound value houses close to schools, stores.

Brick duplexes popular—Here are one, one and a half, and two-story types being built by George W. Miller, whose program calls for 865 units to be completed by the end of August.



DETROIT builders have pledged themselves to provide real homes, not housing—for war worker families with children. They are severely critical of the tiny box-like housing projects being built with Government funds. The need for houses is so great in Detroit, however, that a considerable volume of both public and private is going ahead. But the private builders say they could do many times the volume of work they are permitted.

An outstanding advocate of a better class of homes for Detroit workers is George W. Miller. He believes that the worker with a good job, such as the tool maker, machinist and white collar man should be taken care of just as well as the lower income type.

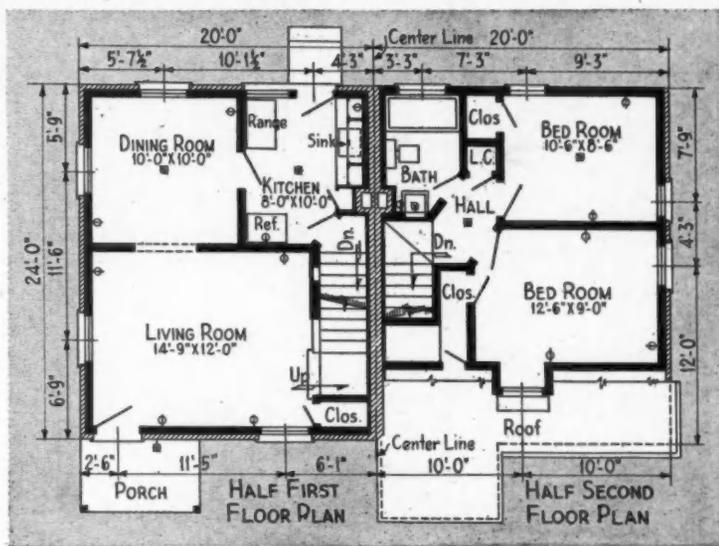
Miller has been building substantial brick houses that are a permanent improvement to the community. He puts them on improved lots, on paved streets close to bus lines, schools and stores.

At the same time he has cut down on the use of critical materials in a remarkable way so that when a comparison is made with public housing it becomes
(Continued to second page following)

"With Children"—Detroit Builders Pledge



GEORGE W. MILLER (left) and his brick story-and-a-half duplex of type being built and sold under FHA Title VI. He builds a quality house for tool and machine workers, better class artisans and white collar workers.

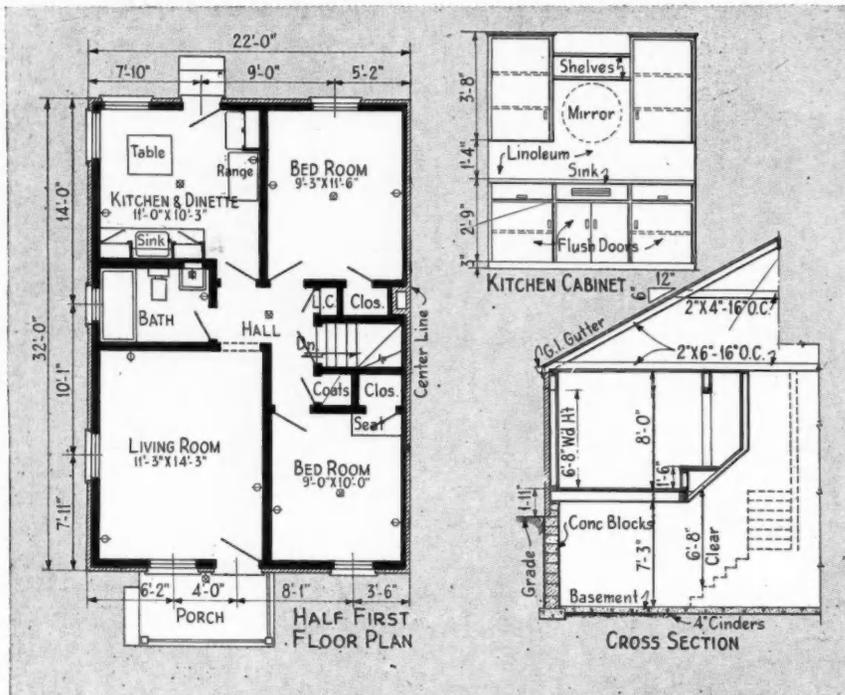


RIGHT: 1 1/2-story duplex plan featured by Miller, which provides attractive, livable home with minimum use of critical materials. **BELOW:** Row of Miller's Detroit 1 1/2-story duplexes showing variations in exterior achieved by treatment of entrances and gables in several combinations.





MILLER'S 1-story duplexes for Detroit war workers are placed on broad lots and well paved streets, close to transportation, stores and schools. They use a minimum of critical materials, provide for better living accommodations than that to be found in public housing.



ECONOMICAL, practical and livable floor plan of 1-story duplex shows how kitchen and bath plumbing saves material. Duplex is 44 feet long, 32 feet deep, has 8 foot ceiling.

apparent that he is providing better, more livable homes with a smaller overall outlay of critical materials. This is because no off-site or on-site use of scarce utility products is required.

Of special interest to builders in other cities are the 1-story, story-and-a-half and 2-story duplexes Miller is constructing and which are detailed on these pages. These have proved very economical to build and to own, and since they are being built under FHA Title VI, low upkeep and maintenance

costs are highly important.

Miller's program is by no means limited to duplexes: he is building a large number of single family units as well and has nine different projects, serving nine different industrial areas, all of them within easy reach of war work centers.

Miller's program for this year calls for the construction of 865 units (on which he already has priorities) in a six month's period ending in August. Early in May he had more than 500 houses under active construction.

WHILE BUILDING hundreds of sturdy, livable homes today, George W. Miller is actively thinking and planning for post-war. He will build both low cost and high-priced homes. Shown opposite are several of his latest pre-war models.

POST-WAR

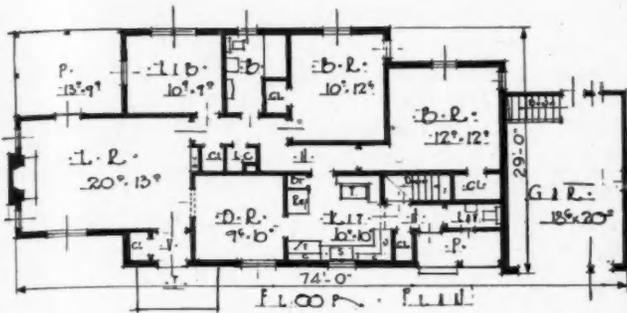
Thus Miller is demonstrating once more the ability of a private enterprise organization to construct needed war housing quickly, efficiently and at no cost to the Government. Still more important in Miller's opinion is the fact that these are the kinds of houses the American public wants and is entitled to, built in good communities already served by schools, stores and adequate transportation.

Of course building houses in large volume is nothing new in George Miller's experience. In the past twenty-five years he has built and sold over 7,000 houses with an overall value of some \$40,000,000. In the past two years he has constructed more than 1500 war houses worth some \$8,000,000.

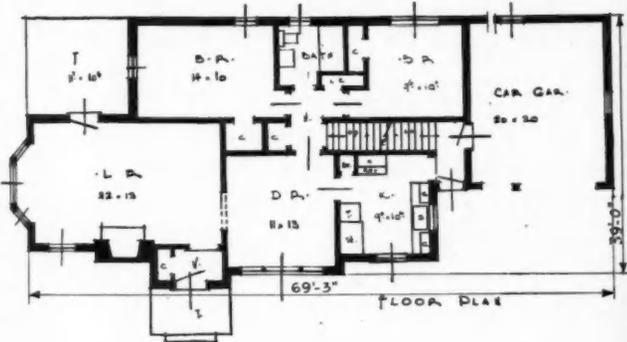
Detroit still has a large number of available lots for decent houses that can be built for war workers now and that will still be of permanent value after the war. They can be built without installing utilities, and the private builders of Detroit

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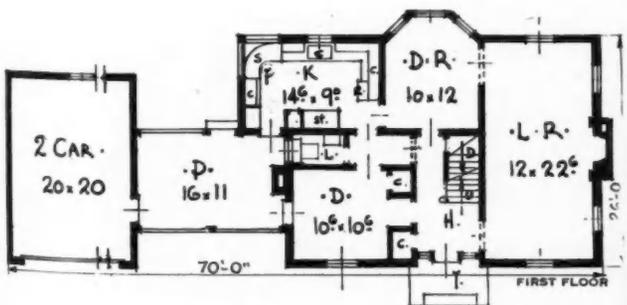
Looking ahead to post-war



Will build wide range—In his post-war building George W. Miller expects to serve the mass market, but also to build middle price and expensive customized homes. Although the low cost market will be important, there will still be a large demand for individual houses carefully planned for the site and for the particular needs of a family, he says. The house above is one of Miller's moderate priced pre-war models—a type that will form the starting place for post-war design. Plan is spacious and livable with well laid out living room and porch overlooking garden.

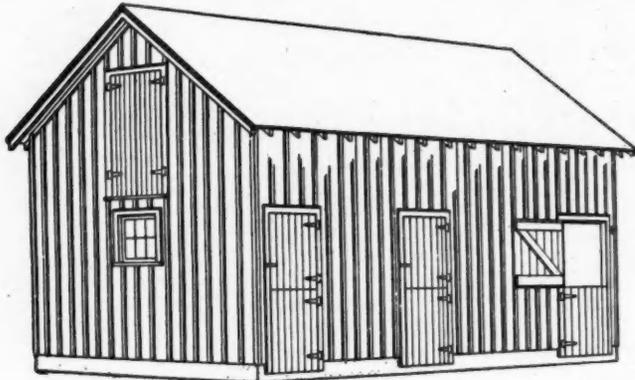


Early American popular—Desires, tastes and requirements will not change greatly between now and the end of the war, and that is why this pre-war early American country home built by Miller just before hostilities began may be said to point the way to post-war. It has a substantial, homey, livable look that the public likes. The floor plan is economical and practical, yet provides all the modern conveniences the average family can ask. Living room has splendid exposure with an attractive terrace. Two-car garage is connected through a handy rear service hall.



Ever popular—This is a Miller design for post-war living that is bound to be popular. It was built just before the war started and is of a style that was achieving wide popularity at that time. It has the delightful charm of a traditional Colonial, but the plan is modernized to provide improved sunlight and circulation. The large kitchen has everything a home owner could want. The overhead garage door has windows installed. There are two good sized bedrooms upstairs, large closets and a bath, placed over the dining room; porch is reached from kitchen or den.

FARM MARKET—A Red Hot



PERSPECTIVE

Here are three types of farm structures in great demand, for they are necessary in producing dairy products on small farms.

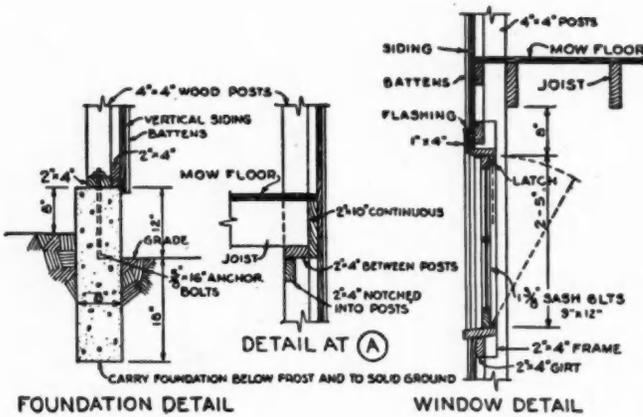
TODAY, hiring an expert builder is economically cheaper for the farmer than trying to use some of his scarce labor in building necessary farm structures.

Builders are getting this business because they can do the job quicker and, due to their skill, do a better job and thereby save the farmer money.

Builders who are doing this work say that one of the best ways to begin is to get in touch with the county agents, who usually know the farmers in the community very well.

The tremendous war task handed the farmers by our Government has recently been multiplied by the floods. City builders are in a position to get a large share of the farm business and to alleviate the farmers' problems.

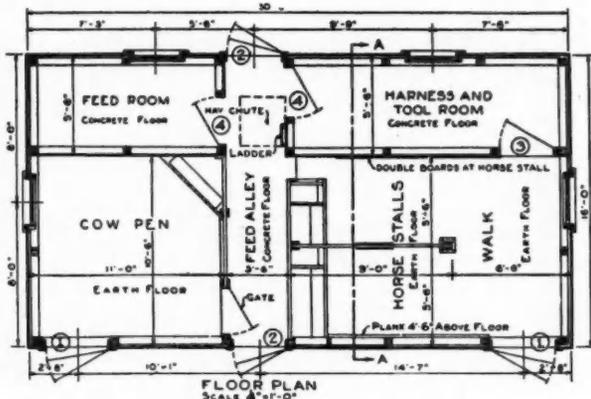
Farm buildings must be looked upon as labor savers for the farmer. Without them production will not reach the peak necessary to win the war.



FOUNDATION DETAIL

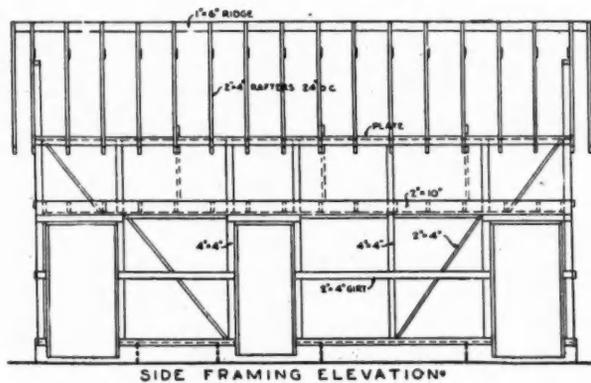
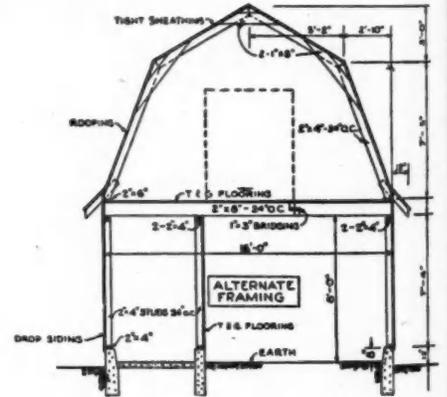
WINDOW DETAIL

Above is a perspective drawing of a small general barn particularly interesting today because of the increased need of properly housing cows to produce milk. Powdered milk and milk in other forms are a part of the solution to the problem of feeding the world to whip the Axis. At left are some of the foundation and window details of this barn and below is shown the floor plan, side framing elevation and two types of roofing and end framing possibilities. This is a small barn but the principles employed are employed upon larger structures.

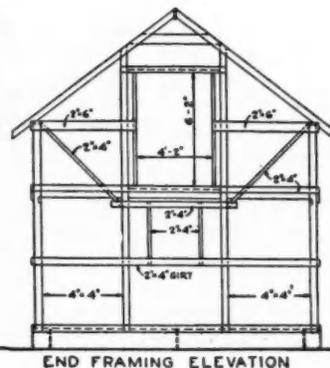


FLOOR PLAN
SCALE 1/4"=1'-0"

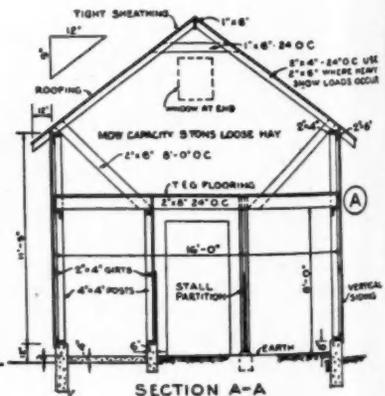
- DOOR SCHEDULE
- ① 3'-6" x 7'-4" DUTCH DOORS.
 - ② 3'-0" x 7'-4" " "
 - ③ 3'-0" x 6'-8" SINGLE DOOR.
 - ④ 2'-8" x 6'-8" " "



SIDE FRAMING ELEVATION*

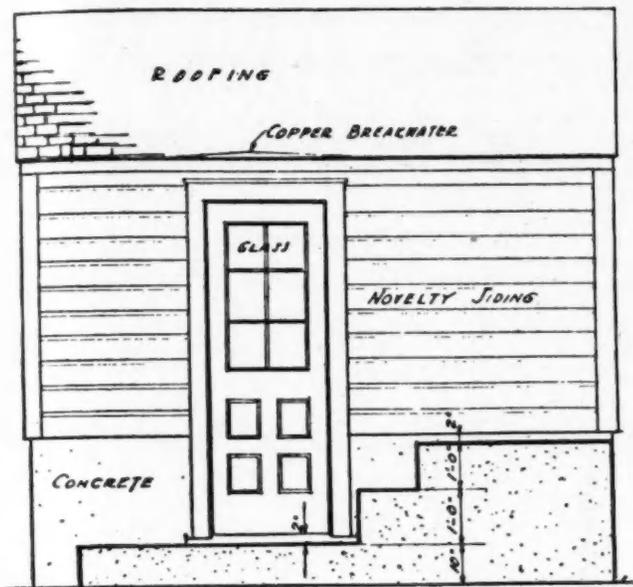


END FRAMING ELEVATION



SECTION A-A

Source of Jobs



SIDE ELEVATION

On the facing page is a series of plans and perspective drawings for a practical barn for a small farm.

To cut cost it may be desirable to use post and tier construction with vertical board siding. The large feed room shown is convenient on a small farm where separate buildings are not available for storage of chicken feed and other items. Full concrete foundations and sheath walls, covered with drop siding, add to permanence and appearance. A gambrel roof can be used in place of the gable roof shown. Both types of roof construction are indicated in plans. Mow capacity is four to five tons of loose hay. Also shown here are plans for a milkhouse.

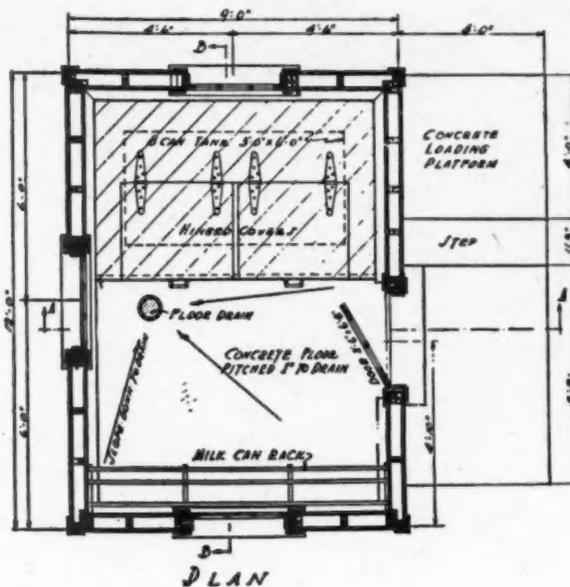
Milk House Plans

One of the primary needs of farmers today is housing for cows and a milk-house where milk may be properly cooled and kept. For a moderate sized milkhouse these plans are available.

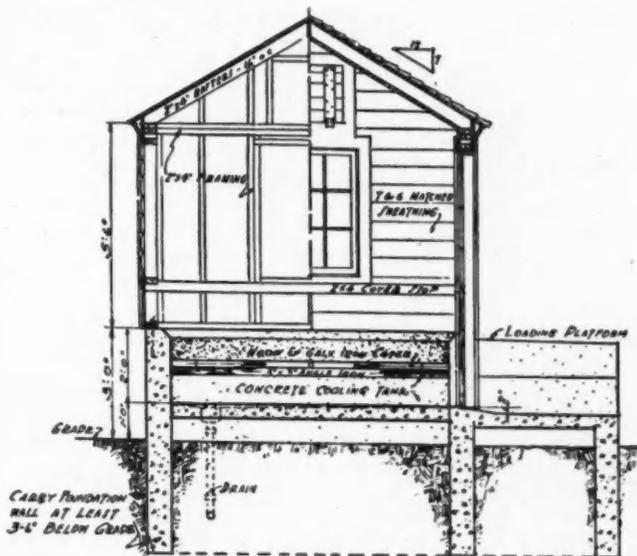
A perspective view of a milk can tank to be included in the milkhouse is shown on page 88. Most market milk regulations require quick cooling of milk and holding it at a low temperature. This insulated concrete tank is a type frequently built, but requires thorough waterproofing of the insulation. Where this is not practical a metal lining may be necessary. The tank can be built in any milkhouse and of different sizes to hold from two to twelve, five or ten gallon cans. Water, ice or mechanical equipment may be utilized for cooling. Local and state milk ordinances should be consulted before building cooling tanks. Though many farmers do not have cooling houses for milk storage, in most localities health regulations require them. Here is a field for the contractor or builder that is in line with the war effort.

Hog Production Buildings

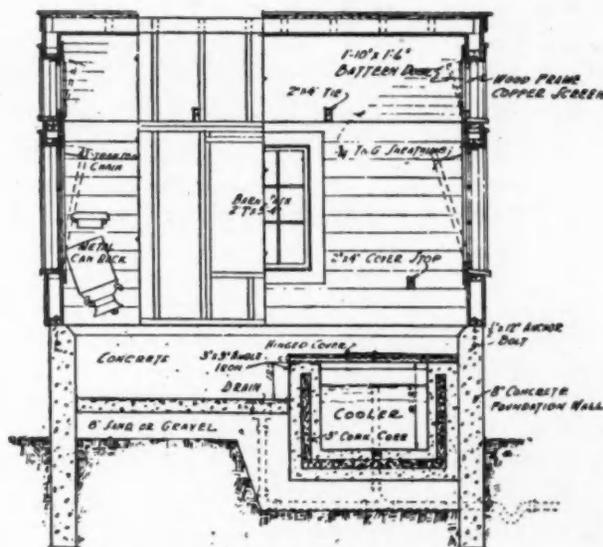
Next in importance to dairy products are pork and lard production, which also demand additional farm equip-
(Continued to page 88)



PLAN



SECTION ON LINE 'A-A'



SECTION ON LINE B-B

Above are shown the side elevation and plans of a milk house, one of the essential pieces of farm equipment under health regulations in most States.

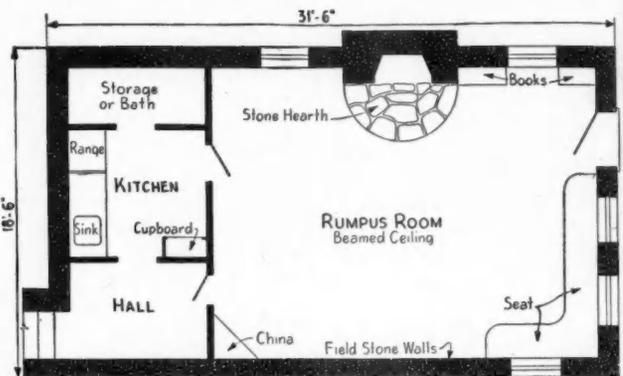


Seven Pointers Will Help You on Jobs To Be Done Today

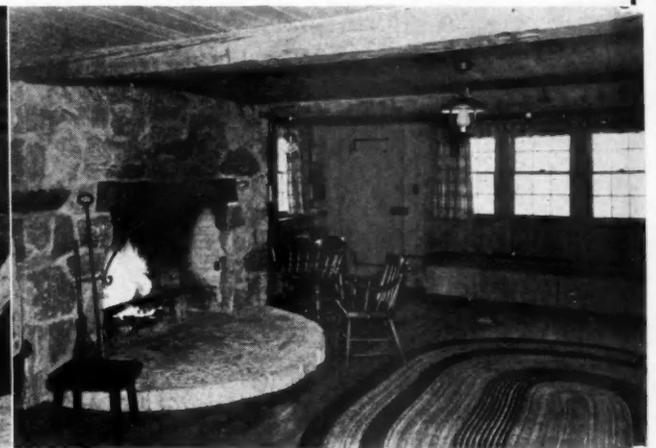
War housing, maintenance and craft items to be put to work

How to Use Space Under Garage for Worker Apartment; Rumpus Room Later

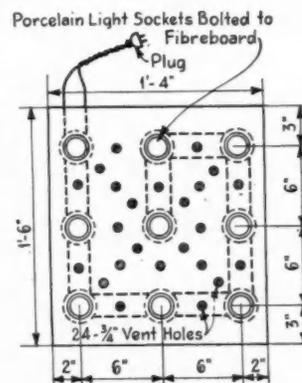
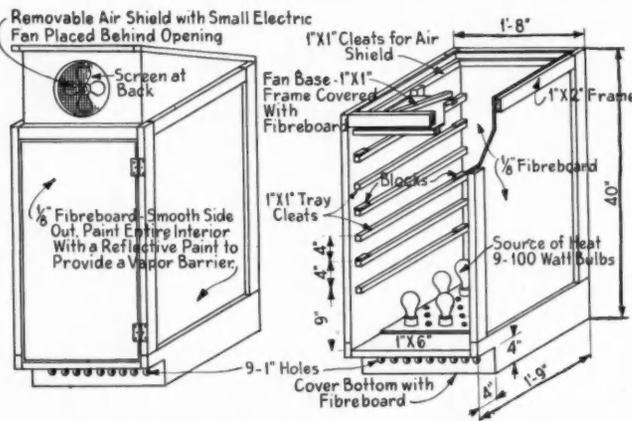
IN hilly communities, there can usually be found garages, barns, etc., of which the basement is partially above grade, such as was the case in this South Bend, Ind., garage. Here head-room was excavated between the sturdy stone foundation walls, a floor laid, and an attractive room created as shown in the views and floor plan. While such work can be done today only to make extra living quarters, jobs of this kind can be adapted to provide a compact apartment for war workers, and later on the same accommodations can be used as a recreation room or guest quarters away from the house. For the time being, the rumpus room could be furnished with a studio couch or bed, and bath equipment, including a shower, installed off the kitchen.



CONVERSION plan of basement space in hillside garage.



How to Build a Dehydrator to Dry Food at Home



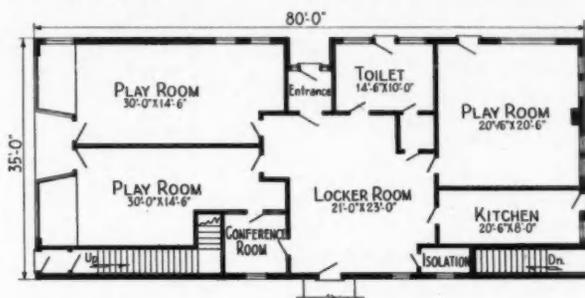
MANY of the food items grown in this year's Victory gardens can be dried successfully in a small home dryer, as detailed at the left. The electrical items may be found second-hand if new equipment cannot be bought. These include a small fan, sockets and wire. The balance of the dehydrator can be made out of whatever scrap is available. Housewives should be urged to get directions for proper use.

PLANS from "Prairie Lumberman" for building dehydrator.

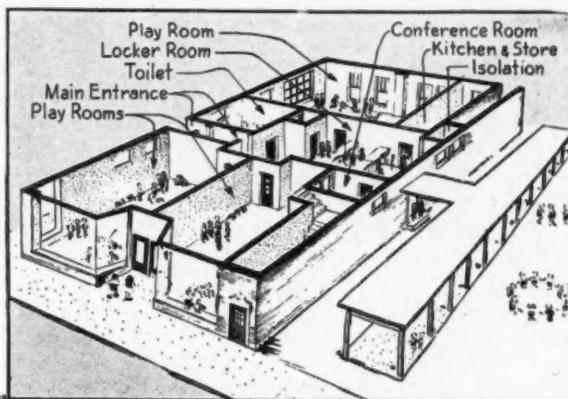
How to Convert Store Into Nursery School for War Workers' Children

WITH many mothers of young children answering the call to war work, most communities have a problem of caring for the young children from these families. The best answer seems to be children's centers where these youngsters can be cared for as groups. The plan and perspective below show such a

proposed center where care can be provided for 80 to 90 children; a vacant store plus about \$7500 worth of non-critical materials would be needed to do a job such as this. Perkins, Wheeler & Will, architects.



FLOOR plan and perspective sketch showing proposed conversion of vacant Chicago store into nursery.



How to Mix "War" Paint

TO conform with WPB restrictions on the amount of drying oils to be used in non-military painting, the following formulas are suggested for the use of white lead:

PAINTING NEW WOOD THREE COATS

	Primer	Body Coat	Finish Coat
Soft Paste			
White Lead*	100 lb.	100 lb.	100 lb.
Raw Linseed Oil	2½ gal.	1 gal.	2 gal.
Turpentine	2¼ gal.	1¾ gal.	5/8 gal.
Drier	1 pint	1 pint	1 pint
Gals. Paint	8⅞	6⅞	6

PAINTING NEW WOOD TWO COATS

	Primer and Body Coat		Finish Coat	
Soft Paste				
White Lead* 100 lb.	100 lb.	100 lb.	100 lb.	100 lb.
Raw Linseed Oil	1 gal.	2 gal.	1¼ gal.	2 gal.
Turpentine	½ gal.	5/8 gal.	2 gal.	5/8 gal.
Spar Varnish	¾ gal.	—	—	—
Drier	1 pint	1 pint	1 pint	1 pint
Gals. Paint	5⅞	6	6⅞	6

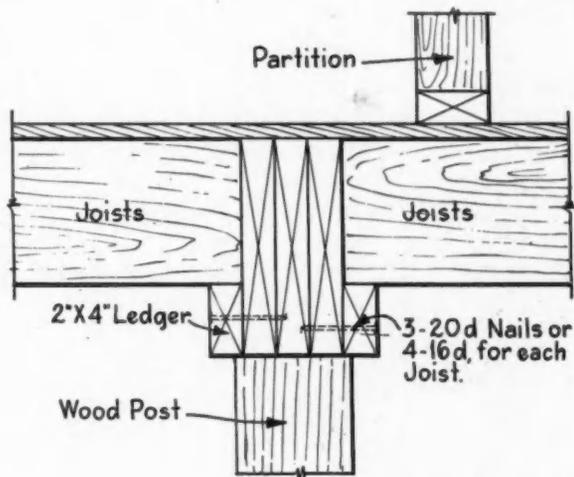
*For heavy paste white lead use one quart more of turpentine.

REPAINTING WOOD 2 COATS

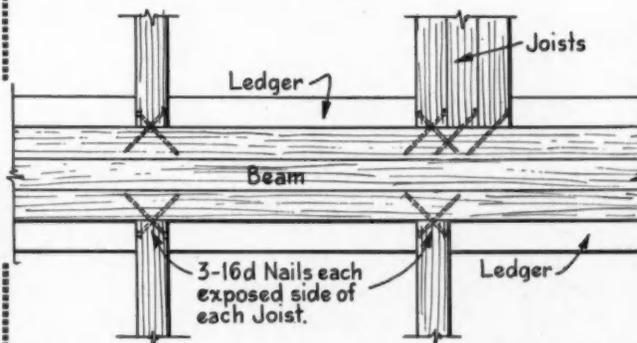
	Body Coat	Finish Coat
Soft Paste		
White Lead* 100 lb.	100 lb.	100 lb.
Raw Linseed Oil	1 gal.	2 gal.
Turpentine	½ gal.	5/8 gal.
Spar Varnish	¾ gal.	—
Drier	1 pint	1 pint
Gals. Paint	6⅞	6

How to Build Up Wood Beams and Attach Joists

WAR housing jobs are using wood beams where available, to replace steel structural members. The details below show FHA minimum requirements for proper nailing of joist support for one- and two-story buildings; ledger strips attached to three center members comprise this wood beam.



SECTION of built-up wood beam with ledger strips to support joists showing proper nailing to center members.



IN plan, joists setting on ledger strips of built-up beam should be toe-nailed to sides of beam with at least six nails.

How to Speed Up Drilling in Masonry

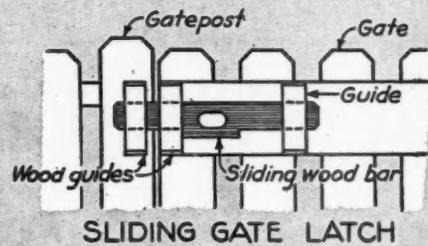
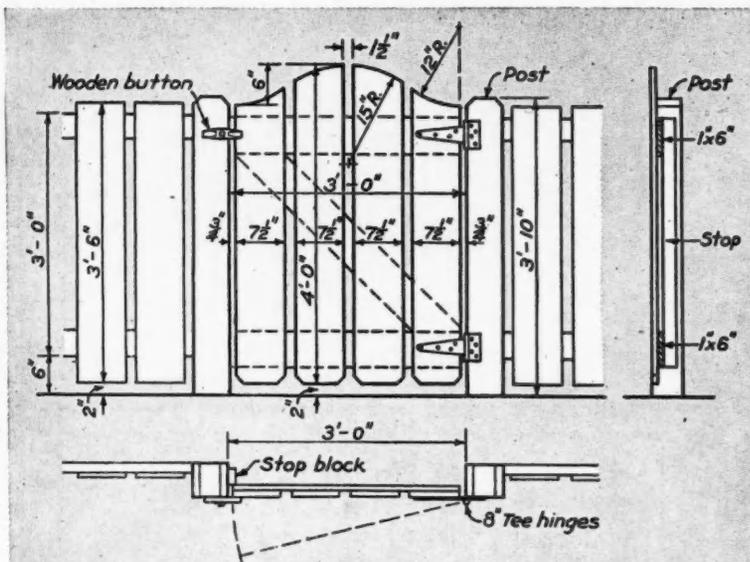
MANY of the conversion jobs, such as the one shown on the opposite page, where basement space is converted, require a large number of anchor holes drilled in masonry. Use of an electric drill will speed up work; illustrated here is workman with a Paine corboly tipped drill bit.



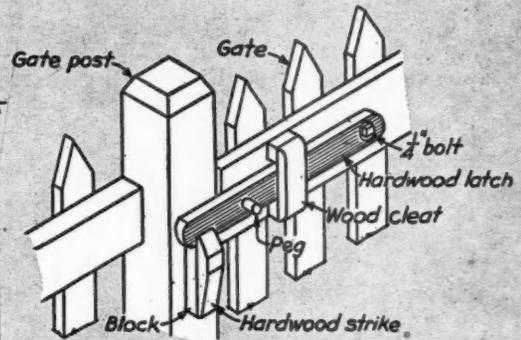
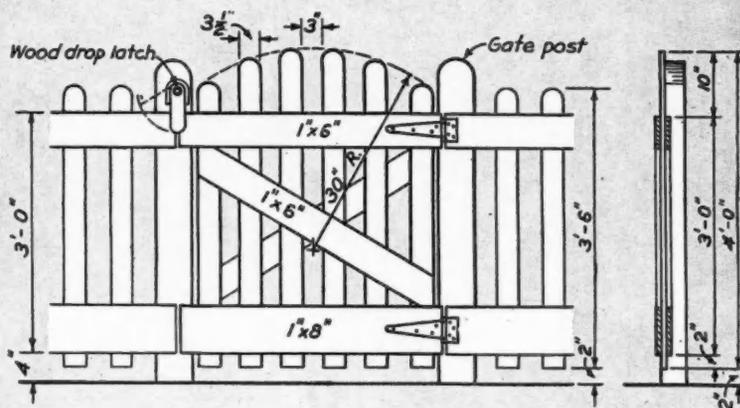
How to Build Fences and Gates with a Minimum of Metals

Working drawings show construction of three types of enclosures with critical material-saving details.

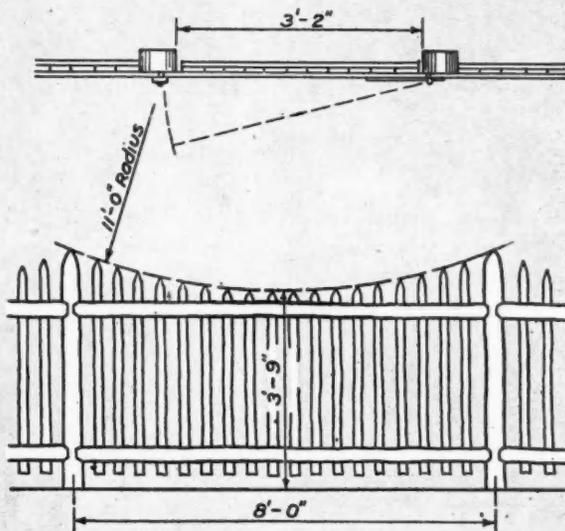
ENGINEERS of the Farm Structures Research Division, U. S. Department of Agriculture, have worked out a number of fence designs for farm or general use. These are particularly timely as they can be built of local timber or home-sawed lumber, and require only a small amount of metal for hardware, none for wire. Three of these fences are shown below. For long service the more durable kinds of wood should be used; posts can be treated against decay.



SLIDING GATE LATCH

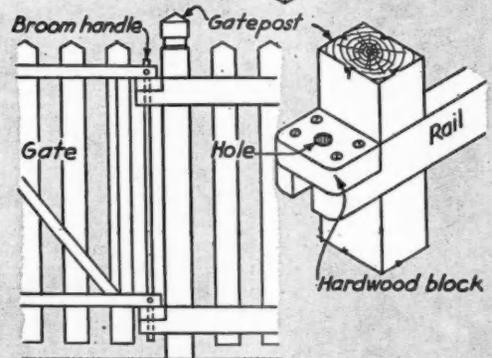
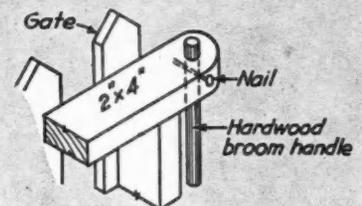


GRAVITY GATE LATCH



RUSTIC FENCE

Natural posts, rails, and limb pickets (cedar or chestnut preferred)

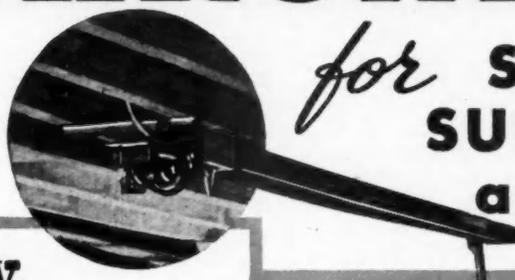


GATE HINGE



"SYNCHRONIZED"

for **SPEED
SURENESS
and SAFETY!**



Rō-Way
Electric Operators

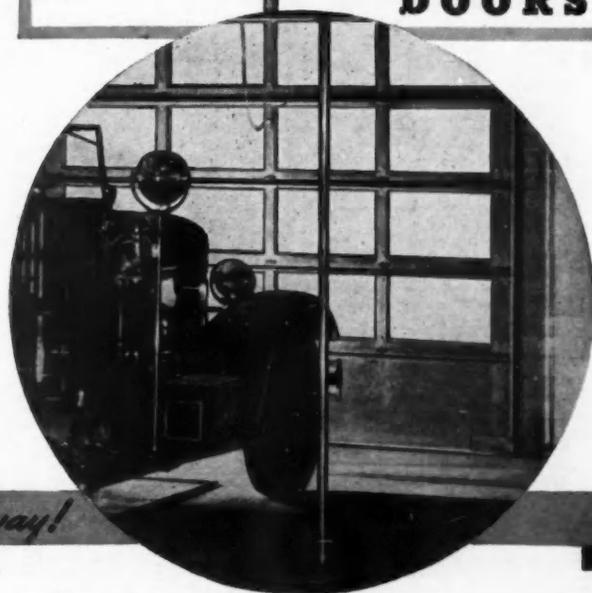
and

Rō-Way
OVERHEAD TYPE
DOORS

They are made for each other. Together they work as a unit—smoothly, surely and safely, whether the call is for "fire station" speed or to rush loads of vital war products to their destination. Ro-Way Doors with Electric Operators installed today in a great many plants engaged in war production are proving the extra value of this "synchronized" service. Just press the button and your Ro-Way Overhead Type Door, equipped with Ro-Way Electric Operator, will show you what we mean when we say they're "synchronized for speed, sureness and safety."

If you are not completely satisfied with the operation of the Doors in your plant, contact your local Ro-Way representative or write us direct.

ROWE MANUFACTURING CO.
766 Holton St. Galesburg, Ill., U. S. A.



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



No. 5.

How to Figure Painting Jobs Quickly

Tables on this and facing page, together with the tables given in the May issue on page 60, constitute a complete set of paint job estimating figures, including interior, exterior and old and new paint jobs.

"Make Ready": An allowance of 10% of the labor for interior work, and 25% for exterior work has been included in the labor cost figures to cover "make ready."

Compensation and Liability Insurance: A flat rate of *10% of the total labor including "make ready" time has

been added to cover compensation and liability insurance.

Labor Profit: On the total of labor and insurance *20% has been added for labor profit.

Labor Prices and Adjustment: *Labor is based on \$1.00 per hour. For labor adjustment either increase or decrease by percentage.

Material Prices: Material prices per gallon as given in the tables represent the *base prices which apply to first quality, branded prepared paints. To adjust material prices for each coat, divide cost of material per gallon by the square foot covering capacity for each coat.

(Continued to page 90)

Paint—(Interior)—Applied Over New or Old Work—Prices per 100 sq. ft.

*Labor Prices @ \$1.00 per hour include 10% "Make Ready", 10% compensation and liability insurance and 20% labor profit

Fin. No.	Product and Surface	One Coat					Two Coats					Three Coats							
		Gal. Pr.	Cov. S. F.	Mat. Pr.	Lab. Pr.	Tot. Pr.	Local Price	Cov. S. F.	Mat. Pr.	Lab. Pr.	Tot. Pr.	2 Ct. Price	Local Price	Cov. S. F.	Mat. Pr.	Lab. Pr.	Tot. Pr.	Ct. Price	Local Price
11	Semi-gloss			(1st coat primer \$ 2.50)					(Semi-gloss Paint \$ 3.25)					(Semi-gloss \$3.25)					
	Ins. Bd. Glaze	\$2.50	400	.63	\$1.05	\$1.68		500	.65	.97	\$1.62	\$3.30		600	.54	.97	\$1.51	\$4.81	
	Ins. Bd.	2.50	150	1.67	1.18	2.85		400	.82	1.05	1.87	4.72		400	.82	1.05	1.87	6.59	
	Std. Flexbd.	2.50	600	.42	1.05	1.47		600	.54	.97	1.51	2.98		600	.54	.97	1.51	4.49	
	Plaster	2.50	600	.42	1.05	1.47		600	.54	.97	1.51	2.98		600	.54	.97	1.51	4.49	
11	Semi-gloss			(Undercoat \$3.25)					(Semi-gloss \$3.25)					(Semi-gloss \$3.25)					
	Brick—concrete	3.25	200	1.63	1.45	3.08		250	1.30	1.45	2.75	5.83		300	1.30	1.18	2.48	8.31	
	Wood and Hard Bd.	3.25	600	.54	1.05	1.59		600	.54	.97	1.51	3.10		600	.54	.97	1.51	4.61	
	Doors and Trim	3.25	600	.54	1.31	1.85		600	.54	1.22	1.76	3.61		600	.54	1.22	1.76	5.37	
	Wds., Cab., Stairs	3.25	600	.54	1.47	2.01		600	.54	1.36	1.90	3.91		600	.54	1.36	1.90	5.81	
12	Gloss Finish			(Undercoat \$3.25)					(Gloss \$3.25)					(Gloss \$3.25)					
	Brick	3.25	200	1.63	1.45	3.08		250	1.30	1.45	2.75	5.83		300	1.30	1.18	1.48	7.31	
	Wood and Hard Bd.	3.25	600	.54	1.18	1.72		600	.54	.97	1.51	3.23		600	.54	1.05	1.59	4.82	
	Doors and Trim	3.25	600	.54	1.48	2.02		600	.54	1.22	1.76	3.78		600	.54	1.31	1.85	5.63	
	Wds., Cab., Stairs	3.25	600	.54	1.65	2.19		600	.54	1.36	1.90	4.09		600	.54	1.47	2.01	6.10	
13	Enamel Finish			(Undercoat \$3.25)					(Semi-gloss \$3.25)					(Enamel \$5.00)					
	Brick	5.00	200	1.63	1.45	3.08		250	1.30	1.45	2.75	5.83		300	1.67	1.45	3.12	8.95	
	Wood and Hard Bd.	5.00	600	.54	1.18	1.72		600	.54	.97	1.51	3.23		550	.90	1.22	2.12	5.35	
	Doors and Trim	5.00	600	.54	1.48	2.02		600	.54	1.22	1.76	3.78		550	.90	1.52	2.42	6.10	
	Wds., Cab., Stairs	5.00	600	.54	1.65	2.19		600	.54	1.36	1.90	4.09		550	.90	1.71	2.61	6.70	
13	Enamel Finish			(1st coat primer 2.50)					(Undercoat or semi-gloss \$3.25)					(Enamel \$5.00)					
	Ins. Bd. Glaze	2.50	150	.63	1.05	1.68		500	.65	.97	1.62	3.30		600	.83	1.51	2.34	5.64	
	Ins. Bd.	2.50	150	1.67	1.18	2.85		600	.82	1.05	1.87	4.72		400	1.25	1.05	2.30	7.02	
	Std. Flexbd.	2.50	600	.42	1.05	1.47		600	.54	.97	1.51	2.98		550	.90	1.22	2.12	5.10	
	Plaster	2.50	600	.42	1.05	1.47		600	.54	.97	1.51	2.98		550	.90	1.22	2.12	5.10	
14	Floor & Deck Enamel	3.50																	
	Wood Floors	3.50	500	.70	.97	1.67		550	.64	.97	1.61	3.28		600	.58	.97	1.55	4.83	
	Wood Stairs	3.50	500	.70	1.22	1.92		550	.64	1.22	1.86	3.78		600	.58	1.22	1.80	5.58	
	Concrete Floors	3.50	500	.70	.97	1.67		500	.70	.97	1.67	3.34		500	.70	.97	1.67	5.01	
	Concrete Steps	3.50	500	.70	1.45	2.15		500	.70	1.45	2.15	4.30		500	.70	1.45	2.15	6.45	
15	Zinc Sulphate			(3 lbs. per gallon water)															
	Concrete Floors	.60	500	.12	.50	.62		600	.10	.50	.60	1.22		600	.10	.50	.60	1.82	
	Plaster—New	.60	600	.10	.50	.60		650	.09	.50	.59	1.19		650	.09	.50	.59	1.78	
	Flexboard—New	.60	600	.10	.50	.60		650	.09	.50	.59	1.19		650	.09	.50	.59	1.78	
16	Kalsomine (One coat only req.)	.80	500	.16	.97	1.13		500	.21	1.45	1.61			500	.56	1.45	2.01		
17	Linoleum Varnish	4.00	700	.57	.97	1.54		750	.53	.97	1.50	3.04		800	.50	.97	1.47	4.51	
18	Lino. Paste Wax	.70lb.	250	.30	.97	1.27		300	.24	.97	1.21	2.48		350	.20	.97	1.17	3.65	
18	Lino. Liquid Wax	3.60	1200	.30	.74	1.04		1200	.30	.74	1.04	2.08		1200	.30	.74	1.04	3.12	
19	Metal Paint	3.50																	
	Pipes	3.50	520	.67	1.81	2.48		550	.62	1.81	2.43	4.91		600	.58	1.81	2.39	7.30	
	Radiators	3.50	520	.67	1.58	2.25		550	.62	1.58	2.20	4.45		600	.58	1.58	2.16	6.61	
	Misc. Metal	3.50	520	.67	1.05	1.72		550	.62	1.05	1.67	3.39		600	.58	1.05	1.63	5.02	
21	Aluminum Paint	5.50																	
	Pipes	5.50	600	.92	1.81	2.73		600	.92	1.81	2.73	5.46		650	.85	1.81	2.66	8.12	
	Radiators	5.50	600	.92	1.58	2.50		600	.92	1.58	2.50	5.00		650	.85	1.58	2.43	7.43	
	Miscellaneous	5.50	600	.92	1.05	1.97		600	.92	1.05	1.97	3.94		650	.85	1.05	1.90	5.84	

NOTE: Where two or more materials are applied in a single treatment, the base prices have been indicated on the horizontal lines, i. e., \$4.00 varnish, \$3.00 filler, 1st coat primer \$2.50, flat wall paint \$2.50.

PAINT—(Exterior) Applied Over New Work—*Prices per 100 sq. ft.

*Labor Prices @ \$1.00 per hour include 25% "Make Ready," 10% compensation and liability insurance and 20% labor profit

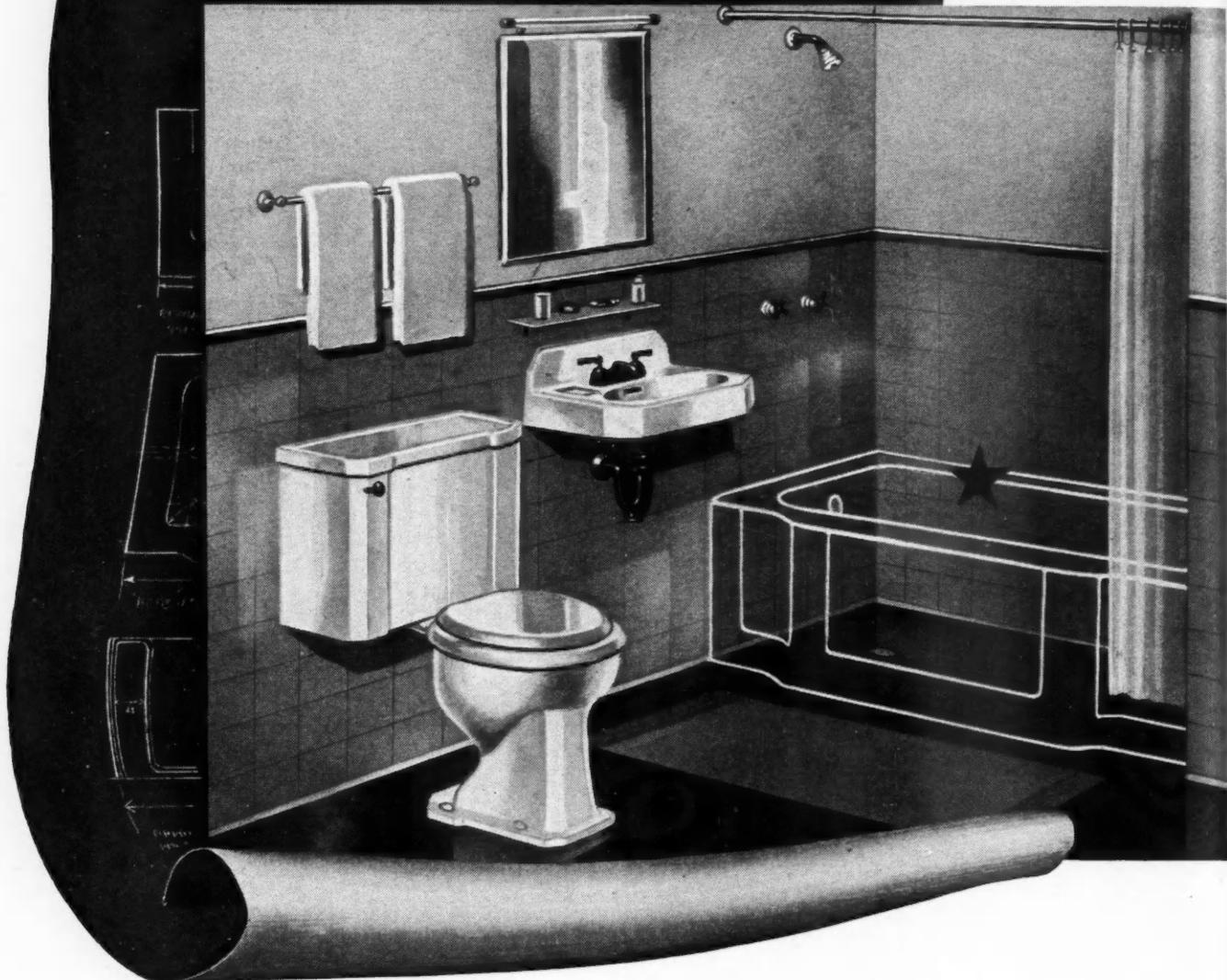
Type of Product and Surface	One Coat Work						Two Coat Work						Three Coat Work					
	Gal. Pr.	Cov. S. F.	Mat. Pr.	Lab. Pr.	Tot. Pr.	Local Price	Cov. S. F.	Mat. Pr.	Lab. Pr.	Tot. Pr.	2 Ct. Price	Local Price	Cov. S. F.	Mat. Pr.	Lab. Pr.	Tot. Pr.	3 Ct. Price	Local Price
Prepared Paint																		
Wood Siding.....	\$3.25	450	.72	\$1.17	\$1.89		550	.59	\$1.17	\$1.76	\$3.65		650	.50	\$1.17	\$1.67	\$5.32	
Std. Flexboard.....	3.25	450	.72	1.17	1.89		550	.59	1.17	1.76	3.65		650	.50	1.17	1.67	5.32	
Cornice.....	3.25	450	.72	1.76	2.48		550	.59	1.76	2.35	4.83		650	.50	1.76	2.26	7.09	
Trim and Porch.....	3.25	450	.72	1.42	2.14		550	.59	1.42	2.01	4.15		650	.50	1.42	1.92	6.07	
Wood Shingles.....	3.25	450	.72	1.42	2.14		550	.59	1.42	2.01	4.15		650	.50	1.17	1.67	5.82	
Doors.....	3.25	450	.72	1.46	2.18		550	.59	1.46	2.05	4.23		650	.50	1.46	1.96	6.19	
Windows.....	3.25	450	.72	1.64	2.36		550	.59	1.64	2.23	4.59		650	.50	1.64	2.14	6.73	
Masonry																		
Stucco.....	3.25	200	1.63	2.33	3.96		250	1.30	1.95	3.25	7.21		300	1.09	1.75	2.84	10.05	
Concrete.....	3.25	200	1.63	2.33	3.96		250	1.30	1.95	3.25	7.21		300	1.09	1.75	2.84	10.05	
Brickwork.....	3.25	200	1.63	2.33	3.96		250	1.30	1.95	3.25	7.21		300	1.09	1.75	2.84	10.05	
Stonework.....	3.25	200	1.63	2.33	3.96		250	1.30	1.95	3.25	7.21		300	1.09	1.75	2.84	10.05	
Shingle Stain																		
Shingle Walls.....	1.75	250	.70	1.42	2.12		300	.59	1.17	1.76	3.88		300	.59	1.17	1.76	5.64	
Shingle Roofs.....	1.75	200	.87	1.42	2.29		250	.74	1.17	1.91	4.20		300	.59	1.17	1.76	5.96	
Bungalow Siding.....	1.75	300	.59	1.42	2.01		350	.50	1.17	1.67	3.68		400	.44	1.17	1.61	5.29	
Trim and Trellis																		
Shutters.....	6.00	450	1.33	1.42	2.75		550	1.09	1.42	2.51	5.26		600	1.00	1.42	2.42	7.68	
Lattice.....	6.00	450	1.33	1.42	2.75		550	1.09	1.42	2.51	5.26		600	1.00	1.42	2.42	7.68	
Metal Paint																		
Roofs.....	4.50	550	.81	1.17	1.98		650	.70	1.17	1.87	3.85		650	.70	1.17	1.87	5.72	
Gutters.....	4.50	550	.81	1.42	2.23		650	.70	1.42	2.12	4.35		650	.70	1.42	2.12	6.47	
Leaders.....	4.50	550	.81	1.42	2.23		650	.70	1.42	2.12	4.35		650	.70	1.42	2.12	6.47	
Misc. Metal.....	4.50	550	.81	1.42	2.23		650	.70	1.42	2.12	4.35		650	.70	1.42	2.12	6.47	
Floor and Deck Enamel																		
Concrete Floors.....	3.50	500	.70	1.17	1.87		500	.70	1.17	1.87	3.74		500	.70	1.17	1.87	5.61	
Wood Floors.....	3.50	500	.70	1.17	1.87		500	.64	1.17	1.81	3.68		600	.58	1.17	1.75	5.43	
Porch Steps.....	3.50	500	.70	1.42	2.12		500	.70	1.42	2.12	4.24		500	.70	1.42	2.12	6.36	

PAINT—(Exterior) Applied Over Old Work—Prices per 100 sq. ft.

*Labor Prices @ \$1.00 per hour include 25% "Make Ready", 10% compensation and liability insurance and 20% labor profit

Type of Product and Surface	One Coat Work						Two Coat Work						Three Coat Work					
	Gal. Pr.	Cov. S. F.	Mat. Pr.	Lab. Pr.	Tot. Pr.	Local Price	Cov. S. F.	Mat. Pr.	Lab. Pr.	Tot. Pr.	2 Ct. Price	Local Price	Cov. S. F.	Mat. Pr.	Lab. Pr.	Tot. Pr.	3 Ct. Price	Local Price
Prepared Paint																		
Wood Siding.....	\$3.25	550	.59	\$1.17	\$1.76		650	.50	\$1.17	\$1.67	\$3.43		650	.50	\$1.17	\$1.67	\$5.11	
Cornice.....	3.25	550	.59	1.76	2.35		650	.50	1.76	2.26	4.61		650	.50	1.76	2.26	6.88	
Trim and Porch.....	3.25	550	.59	1.42	2.01		650	.50	1.42	1.92	3.93		650	.50	1.42	1.92	5.86	
Porch and Ceiling.....	3.25	550	.59	1.17	1.76		650	.50	1.17	1.67	3.43		650	.50	1.17	1.67	5.11	
Wood Shingles.....	3.25	550	.59	1.17	1.76		650	.50	1.17	1.67	3.43		650	.50	1.17	1.67	5.11	
Doors.....	3.25	550	.59	1.46	2.05		650	.50	1.46	1.96	4.01		650	.50	1.46	1.96	5.98	
Windows.....	3.25	550	.59	1.64	2.23		650	.50	1.64	2.14	4.37		650	.50	1.64	2.14	6.52	
Stucco.....	3.25	250	1.30	2.33	3.63		300	1.09	1.95	3.04	6.67		300	1.09	1.75	2.84	9.51	
Concrete.....	3.25	250	1.30	2.33	3.63		300	1.09	1.95	3.04	6.67		300	1.09	1.75	2.84	9.51	
Brickwork.....	3.25	250	1.30	2.33	3.63		300	1.09	1.95	3.04	6.67		300	1.09	1.75	2.84	9.51	
Stonework.....	3.25	250	1.30	2.33	3.63		300	1.09	1.95	3.04	6.67		300	1.09	1.75	2.84	9.51	
Shingle Stain																		
Wood Shgl. Wall.....	1.75	300	.58	1.17	1.75		300	.59	1.17	1.76	3.51		300	.59	1.17	1.76	5.27	
Wood Shgl. Roof.....	1.75	250	.70	1.17	1.87		250	.70	1.17	1.87	3.74		300	.59	1.17	1.76	5.50	
Bungalow Siding.....	1.75	350	.50	1.17	1.67		400	.44	1.17	1.61	3.28		450	.39	1.17	1.76	5.04	
Trim and Trellis																		
Shutters.....	6.00	550	1.09	1.42	2.51		600	1.00	1.42	2.42	4.93		600	1.00	1.42	2.42	7.35	
Blinds.....	6.00	550	1.09	1.42	2.51		600	1.00	1.42	2.42	4.93		600	1.00	1.42	2.42	7.35	
Lattice.....	6.00	550	1.09	1.76	2.85		600	1.00	1.76	2.76	5.61		600	1.00	1.76	2.76	8.37	
Metal Paint																		
Roofs.....	4.50	650	.70	1.17	1.87		650	.70	1.17	1.87	3.74		650	.70	1.17	1.87	5.61	
Gutters.....	4.50	650	.70	1.64	2.34		650	.70	1.64	2.34	4.68		650	.70	1.64	2.34	7.02	
Leaders.....	4.50	650	.70	1.64	2.34		650	.70	1.64	2.34	4.68		650	.70	1.64	2.34	7.02	
Misc. Metal Work.....	4.50	650	.70	1.42	2.12		650	.70	1.42	2.12	4.24		650	.70	1.42	2.12	6.36	
Floor Enamel																		
Concrete Floors.....	3.50	500	.70	1.17	1.87		500	.70	1.17	1.87	3.74		500	.70	1.17	1.87	5.61	
Wood Floors.....	3.50	550	.64	1.17	1.81		600	.58	1.17	1.75	3.56		600	.58	1.17	1.75	5.31	
Porch Steps.....	3.50	500	.70	1.42	2.12		500	.70	1.42	2.12	4.24		500	.40	1.42	2.12	6.36	

BLUEPRINT POST-WAR BATHTUBS NOW!



★ BATHROOMS planned *today* for bathtubs available *tomorrow* mean good-will and extra post-war business for you. Space provided for the prompt installation of bathtubs, *without the necessity of tearing down partitions or remodeling*, can easily prove a clincher in "selling" future tenants and prospective owners.

In installing lavatory, closet and shower, *save space for the bathtub that will be available . . .* when materials now going to war will again go into the making of this necessity, symbol of American standard of living.

Women especially demand bathtubs, for themselves and for bathing children. Invalids and older people favor bathtubs, for they must take things easy while bathing. Those who are well find the bathtub relaxing and satisfying.

A fundamental American demand, bathtubs are a *must* in tomorrow's homes. Prepare for the post-war era by taking that necessary stitch in time *now*. Write for folder, "What about the Bathtub?" Kohler Co. Established in 1873. Kohler, Wisconsin.

★ BUY UNITED STATES WAR BONDS ★

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PLUMBING FIXTURES AND FITTINGS • HEATING EQUIPMENT • ELECTRIC PLANTS



*Here's a
TEMLOK IDEA
you can sell*

SHOPS and stores with dingy, run-down interiors are extra good prospects for you today—prospects for profitable renovation jobs. There are dozens of them in your own city.

It's easy to get these jobs if you give your prospects an idea of just what Armstrong's Temlok De Luxe can do for their stores. As a starter, show them the sketch above. Better still, show them the beautifully lithographed reproduction, attractively mounted on a heavy mat, that we'll send you free of charge.

With this picture, and samples of Temlok De

Luxe, you can show your customers that they can have just the style of redecoration their stores need. The range of colors, and of panel, plank, and board sizes, permits almost unlimited scope in creating individual treatments.

Point out, also, that the low first-cost and labor-saving advantages of this material give the maximum square footage of remodeled walls and ceilings under today's limits on construction.

If your prospects use space heating or pay for central heating, or if they have air-conditioning equipment, be sure to show them the economies in heating and cooling cost they'll experience year after year. Temlok De Luxe is a highly efficient insulating material, not only saving your customers' money, but also making their stores more comfortable.

START NOW to get your share of this profitable, remodeling business. Write for your free reproduction of the picture above, and for samples of Temlok De Luxe. Armstrong Cork Company, Building Materials Division, 1606 Ross Street, Lancaster, Pennsylvania.

ARMSTRONG'S TEMLOK INSULATION

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War Housing Items

from the CAPITAL

By Frank W. Cortright

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



WAR HOUSING NEEDS. Coming to grips with the war housing needs for the next fiscal year, the House Public Buildings and Grounds Committee, chaired by Representative Fritz Lanham of Texas, launched a series of hearings on the proposed new program. Starting on May 18th, NHA Director Blandford presented initial testimony. The opening shot in the campaign was fired several days before when the President issued a message on the subject, outlining the needs that will have to be met.

PRESIDENT'S MESSAGE. Calling attention to the "disastrous impairment of war production" that would confront the country if sufficient war housing were not provided, the President proposed the steps that should be taken in expanding the program. Chief among these recommendations are an increased authorization of \$400,000,000 for public construction under the Lanham Act and a further expansion of the FHA's insurance authority under Title VI to take care of privately financed war housing. The FHA portion of the program will be dealt with separately, probably in July, due to the fact that a different committee handles this legislation.

NHA PROGRAM. Fortified with an array of figures, NHA Administrator Blandford pointed out that the immigrancy on which the estimates are based is expected to total 1,100,000 during the fiscal year from July 1, 1943, to June 30, 1944. Of these immigrants, 440,000 will be single workers and 660,000 will be workers with families. It is assumed that most of the single workers can be housed in units released by single selectees inducted into the armed services, plus some 70,000 dormitory units, mostly for women, included in the program. The 660,000 workers with families will require 500,000 dwelling accommodations on the theory of 1-1/3 war workers per unit.

WHO BUILDS THE HOUSING?

To supply these 500,000 accommodations 180,000 new units will be constructed, 90,000 temporary units by FPHA and 90,000 permanent units by private builders, 80,000 conversions, equally divided between public and private, are expected. 190,000 accommodations should become available through the induction of nearly four million men into the armed services. Therefore, totaling the figures above,

and adding 50,000 accommodations coming on the market through a natural process, the 500,000 units are secured.

DISPOSING OF WAR HOUSING.

In addition to increasing the authorization, Mr. Blandford has proposed an amendment clarifying the procedure for disposing of government war housing when the emergency ends. NHA wishes to use revenues derived from rent collections to meet the expense of disposing or removing temporary housing. The NAHB Emergency Committee is of the opinion that most of this temporary housing should be demolished within a definite period of time—probably 18 months after the termination of the emergency.

SELECTIVITY GRID SYSTEM.

This competitive method of determining eligibility has outlived its usefulness and is currently working unjustifiable hardships on builders in many areas. As reported May 3rd, FHA took the first step toward the elimination of this system on April 5, 1943, by issuing PR-171. Under this directive builders can qualify only

1. If they own or have a valid option on the land,
2. If their recent construction record both as to volume and character of workmanship is good, and
3. If evidence is presented indicating that they can arrange the necessary financing.

The NAHB Committee passed a resolution urging that FHA take the final step and rescind the Selectivity Grid System, amplifying their directive PR-171 with the following amendments:

1. That preference be given to applications of builders who have been building since April 9, 1941 (issuance date of L-41).
2. That less stress be given to project sites nearest to war plants, but that the human element be taken into consideration and sites approved within reasonable transportation distance of the plants (30 minutes to 45 minutes), where community facilities, stores, movies, etc., are available.
3. That a definite limit be placed on the number of applications accepted for a given quota, and a definite time limit established after the issuance of the quota within which processing must be started.
4. That a limit be placed on the

- number of amendments a builder might make to his application.
5. That minor discriminations be eliminated.
6. That quotas be issued in blocks large enough to allow economical and efficient operation.
7. Finally, working within this framework of standards, let seniority rule.

CERTIFYING IMMIGRANTS. After many months of discussion the final compliance procedure for housing has been definitely released by NHA. Either of two methods may be used.

1. Builders may make their own report of compliance on NHA Form 60-8. This is a one page form with spaces for information to be filled in by the worker, the employer, and the owner of the property. These forms may be secured in the near future from regional NHA Offices, or the local War Housing Centers (where they exist). When completed, a lease may be entered into and occupancy given to the immigrant tenant. Builders should promptly file this form with the local War Housing Center, or the Regional NHA Office (as indicated on the form), but it is not necessary to wait for approval by the government.
2. If the builder does not wish to take this responsibility, he can refer the prospective tenant to the local War Housing Center or to the Regional NHA Office for determination of eligibility. In this case the determination will be made and a referral card will be given to the prospective tenant as evidence of eligibility. Attached to the referral card is a return card which must be filled out by the owner after he has rented the property, and mailed to the address printed on the card.

Builders are requested to report on NHA card 60-9 when properties started prior to February 10, 1943, have been leased. In this way government agencies will be able to keep track of properties available, and much lost motion will be eliminated.

UNUSED PRIORITIES. Of 130,000 units that have not yet been started, it has developed that P-55's have been issued on approximately 65,000, leaving a balance of 65,000. Deducting from this balance local quotas of less than 50 units each, there remains a balance of 50,000 units uncertified by FHA. Analysis of these 50,000 priorities show that applications are in process for the greater part of them, and there now remain not more than 10-15% of this number in areas where special difficulties exist. A breakdown of this 10-15% indicate that with few exceptions these priorities are located in isolated areas where lumber shortage is acute, where land values are

(Continued to page 66)

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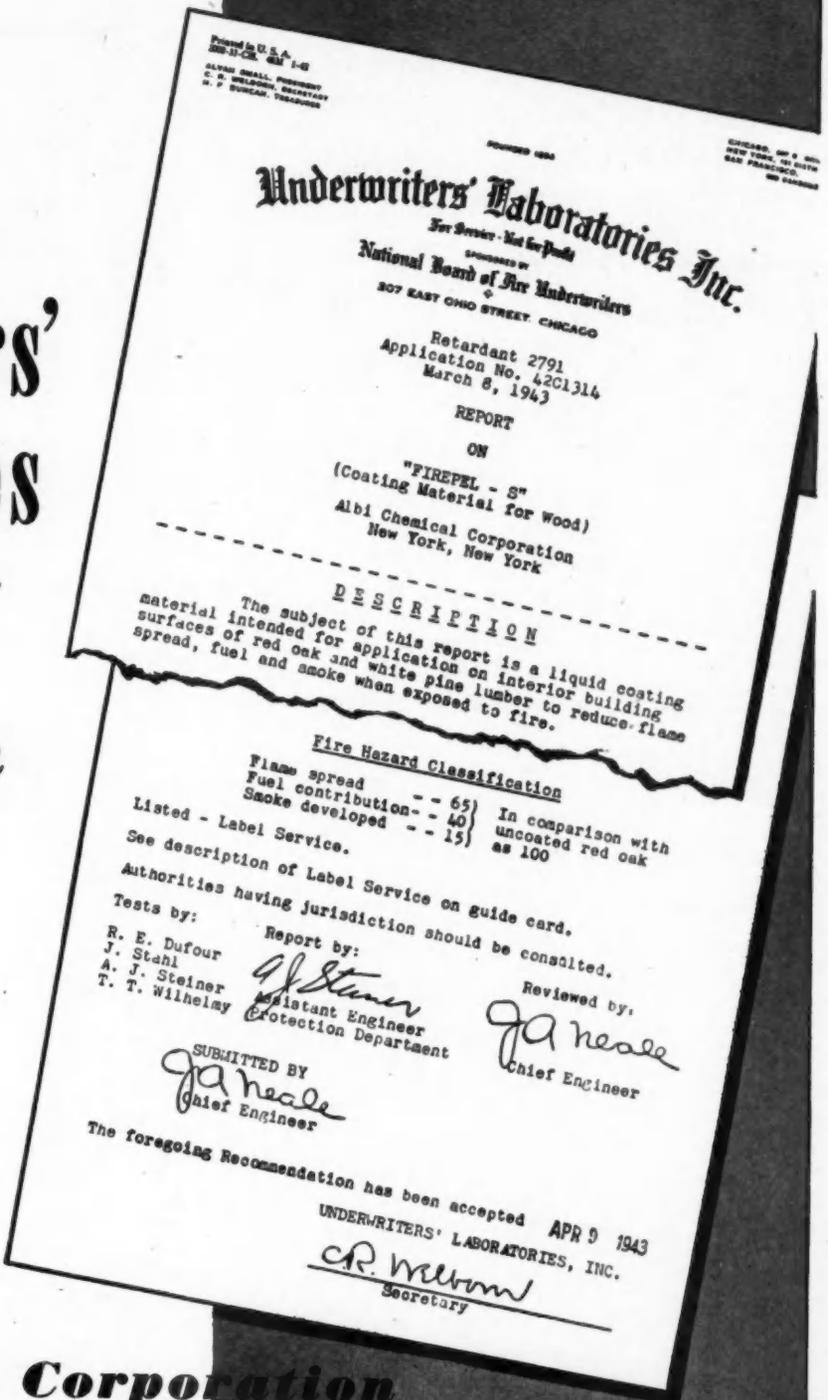
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Retardant 2791
Application No. 42CL314
March 8, 1943

REPORT

ON

"FIREPEL - S"
(Coating Material for Wood)
Albi Chemical Corporation
New York, New York

DESCRIPTION

The subject of this report is a liquid coating material intended for application on interior building surfaces of red oak and white pine lumber to reduce flame spread, fuel and smoke when exposed to fire.

Fire Hazard Classification

Flame spread - - - 65
Fuel contribution - - 40
Smoke developed - - 15
In comparison with uncoated red oak as 100

Listed - Label Service.
See description of Label Service on guide card.
Authorities having jurisdiction should be consulted.

Tests by:
R. E. Dufour
J. Stahl
A. J. Steiner
T. T. Wilhelm

Report by:
J. A. Neale
Assistant Engineer
Protection Department

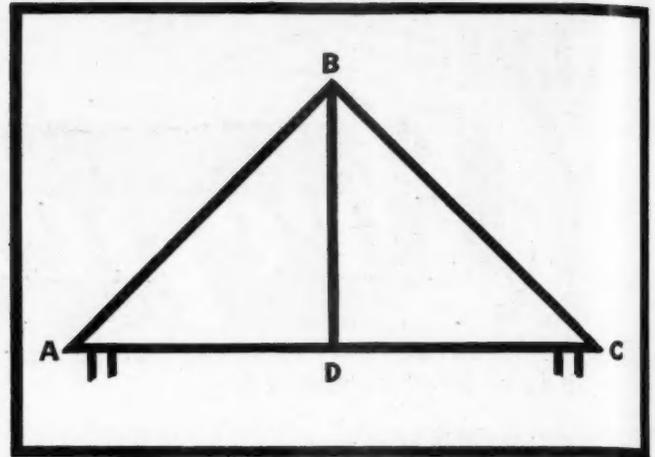
Reviewed by:
J. A. Neale
Chief Engineer

SUBMITTED BY
J. A. Neale
Chief Engineer

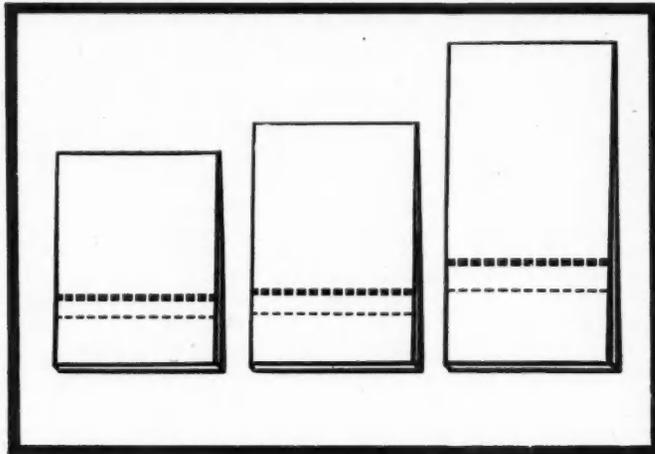
The foregoing Recommendation has been accepted APR 9 1943
UNDERWRITERS' LABORATORIES, INC.
C. P. Wilton
Secretary

A Two-Minute Lesson in How to Apply Shingles for Different Roof Slopes

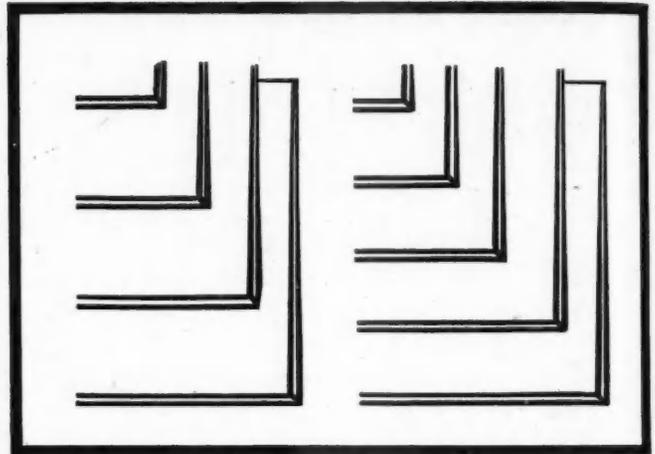
THE DEGREE of steepness or slope of a roof is known as the pitch. Red cedar shingles give excellent service on all sorts of roof pitches, but they should be applied in keeping with recommendations which have been derived from many years of study and observation. The problem is a simple one of first determining the pitch of the roof and then the weather exposure which should be given the shingles for this pitch.



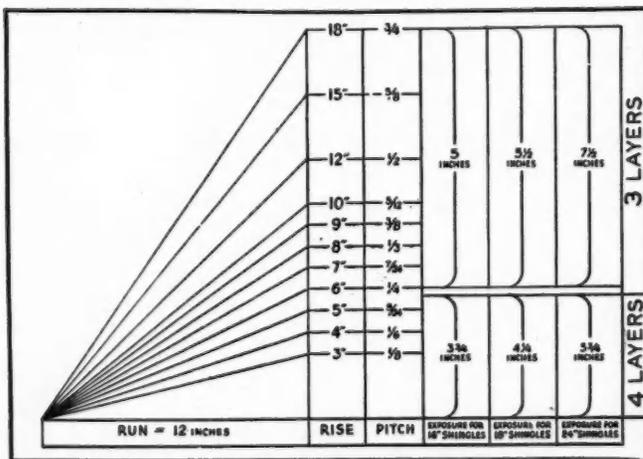
1. Roof pitches are computed in fractions, such as $\frac{1}{8}$, $\frac{1}{3}$, $\frac{1}{2}$ pitch. In this cross-section, the steepness of distances AB and BC constitutes pitch. Distance AC, extending from one eave-line to the other, is known as the span. One-half of this span, distance AD or DC, is called the run, and distance BD is called the rise. The relationship of the rise to the run obviously affects the slope of AB or BC; in fact, roof pitches are computed from the ratio of rise to run. Therefore, the first step is to determine length of the run (AD or DC) and the rise (BD).



2. Red cedar shingles are manufactured in three lengths—16-inch, 18-inch and 24-inch. The standard weather exposure (portion of shingle exposed to weather on roof) for 16-inch shingles is 5", for 18-inch shingles it is 5½", and for 24-inch shingles it is 7½". These standard exposures are recommended on all roofs of $\frac{1}{4}$ pitch and steeper (6" rise in 12" run). On flatter roof slopes, the weather exposure should be reduced to 3¾" for 16-inch shingles, 4¼" for 18-inch shingles, and 5¾" for 24-inch



3. When standard weather exposures are used, a three-ply roof covering is assured. In other words, no less than three layers of shingles will exist at every point of the roof. When the exposures are reduced for roofs flatter than $\frac{1}{4}$ pitch, a four-ply roof is provided, with four layers of shingles throughout. Four-ply roofs are recommended for these comparatively flat roofs in order to offset the slower run-off of rainwater from these slopes. The three-ply and four-ply roof applications are illustrated above.



4. This diagram shows at a glance the weather exposure to be used for various roof pitches. For example, if a roof has a rise of 8" in a run of 12", it can be seen that this is $\frac{1}{3}$ pitch and that an exposure of either 5", 5½" or 7½" should be employed, depending upon the length of the shingles used. Save this chart for future reference.

★ ★ ★

Send for your free copy of Federal Extension Bulletin No. 540, which covers in detail the many farm uses of red cedar shingles. It is filled with helpful information. Address:

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Red Cedar SHINGLES

RPM

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News DIGEST



LITTLETOWN, U. S. A., GOES BIG

BIG SWITCH TO BUILDING MATERIALS

Electric Distributor Ties up With Barrett

The almost total eclipse of electrical merchandise in the smoke of war posed a tough problem for a large electrical manufacturer's dealer organization in Texas. The distributor solved this problem by making a "big switch" from electrical goods to building materials.

Behind this move was the well grounded principle that a really good salesman can sell anything, but he must have something tangible to sell.

Today, Barrett building materials are stocked in the warehouses of this dealer organization in Louisiana, Oklahoma and Texas, serving electrical appliance outlets, hardware and refrigerator dealers and department stores. The salesmen are being educated to promote Barrett building materials through roofing schools, field training and sales promotion instruction by field representatives.

Sales are good, the men show interest in their work, and the manufacturer has the satisfaction of knowing that a fine group of dealers has been held together and is engaged in a profitable and expanding business.



"Corny" Cobb SAYS . . .
I've often wondered why all of them experts make so much fuss about how a feller should act when he's aimin' to sell somethin'.

Seems to me a salesman jest has to know what he's plannin' to sell, why a shingle or some paint is better than some other brand, and act natural, if he's gonna convince me to bankrupt the family teapot.

*Trade Mark Reg. U. S. Pat. Off.



Almost overnight tire and gasoline shortages have changed the buying habits of farmers and residents of small towns. Dealers in thousands of rural communities like this are busier than they have been in years.

BUYING TREND PRESENTS NEW SALES OPPORTUNITIES

Expanding war industries, travel restrictions and wide-awake dealers have combined to build small town sales to tremendous new volume. This commercial rebirth of the small rural community is one of the greatest changes in modern times.

The new buying power means a lot to building materials dealers. Farmers must protect their equipment with proper protective paint; home owners will buy shingles, paints and cements, and industrial plants can save transportation and get quick delivery from nearby sources.

This new market represents an unbeatable opportunity for building business through intelligent use of direct mail and personal calls, building business that will pay big dividends in immediate results today and in establishing friends for tomorrow.

Dealers can profit by stocking a complete line of building and maintenance materials and by providing prompt service to customers. Distributors can profit by educating the dealers in the merits of Barrett's asphalt shingles, roll roofings, building papers, rock wool insulation, built-up roofing and protective materials—a line of quality products which has no superior in the building field.

And all of Littletown will profit by maintaining the present trend to buying "at home."

This advertisement is a digest of the Barrett RPM News—eight pages of new and timely selling ideas. Mail the coupon for your free copy.

TREE DOCTOR USES ELASTIGUM

COOKIN' UP A ROOF

This "recipe" is from "A Complete Guide to Domestic Cookery", published in 1846.

"Take one measure of fine sand, two measures of wood ashes, sifted, three of slacked lime ground up with oil, lay on with a painter's brush, first coat thin and the second thick. It adheres strongly and resists the action of fire."

After a sleet storm in Richmond, Virginia, many broken limbs had to be sawed off damaged trees, leaving the butts exposed to insects and decay. An RPM reporter writes that sealing these wounds with Barrett Plastic Elastigum* provided protection against water and insects, and saved the day . . . Just one more reason why Barrett Plastic Elastigum is known as the "Waterproof Cement of a Thousand Uses."

PROMOTIONS PROMOTE PROFITS

Among the records of dealer promotions that have come to Barrett recently are two that deserve special notice.

One concerns a Barrett World's Fair Blotter, long out of date, which found its way into the hands of a milk retailer who looked up the Barrett dealer. A \$3,000 order for Insulated Brick Siding, Asbestos Siding, Roll Brick Siding and #16 Everlox Roofing Shingles resulted. It may have been an old blotter but it still had selling power.

Another Barrett dealer sent a cordial letter to 400 customers and obtained 47 new jobs as a result. Proof indeed that satisfied customers are the best source of new business.

Barrett's sales promotion program for 1943, full of valuable material for getting results like these, is available to all dealers.



NEW CONTAINERS AVOID SHORTAGES

Metal cans have gone to war but Barrett has substituted glass, kraft paper, fiber and wood in making its new containers for Everjet* Paint, Cattle Spray, Elastigum*, Carbosota* and other money-making Barrett repair and maintenance products. Dealers report that the new jars, cartons and barrels are entirely serviceable and fully as attractive as before.

THE BARRETT DIVISION
Allied Chemical & Dye Corporation AB-6-43
40 Rector Street, New York City
Please send me a free copy of the complete 8-page RPM News.
Name
Address
City
State

War Housing Items

(Continued from page 62)

so high as to make it impractical to build for the prescribed rent levels, or where projects have been programmed for colored tenancy thus creating a financing problem.

WHERE NO QUOTAS EXIST.

In the following states there were no unused quotas for which applications had not been received: Arkansas; California; Colorado (some additional quota could be used in some cities); District of Columbia; Georgia; Kansas; Maryland; Missouri; New Jersey; North Carolina; Oklahoma; Oregon; So. Carolina; Utah; Virginia (frozen by demand from private interests—

only public temporary will be programmed from now on); Washington; West Virginia; Wisconsin.

COST ADJUSTMENT BY FHA.

FHA's method of locally adjusting costs to present day levels are generally as follows: FHA Field Offices make a survey of local material and labor prices, and a general level of current costs is selected. An estimate of cost is worked out for the dwelling unit considered the most nearly representative of the dwelling units being built in that locality, based on the costs in the FHA Cost Data Handbook. Another estimate is made with the same quantities and hours of labor, using the prevailing current prices for that locality. By dividing the

amount of the second estimate (representing current prices) by the first estimate (Cost Data Handbook Prices) the "Locality Adjustment Percentage" is obtained. This percentage is used to raise the handbook price level up to the current local level of costs.

NEW LUMBER RESTRICTION.

Due to increased military requirements for boxing and crating lumber WPB has found it necessary to impose additional restrictions on the use of certain types of Western lumber. In the first place it should be explained that the lumber involved in the order is a type used extensively in millwork. Thus it would appear that unless some relief is extended the situation confronting builders will tend to become serious as fabricators exhaust their present stocks. Happily, this will not be the entire case. From official sources, we are given the assurance that lumber for interior trim, windows, and doors will be exempted from the order. No relief will be currently extended in respect to kitchen cabinets and outside trim.

FHA IN POST-WAR PERIOD.

In a recent address Commissioner Ferguson expressed the belief that FHA could operate in the post-war period as an effective check against inflation in three ways:

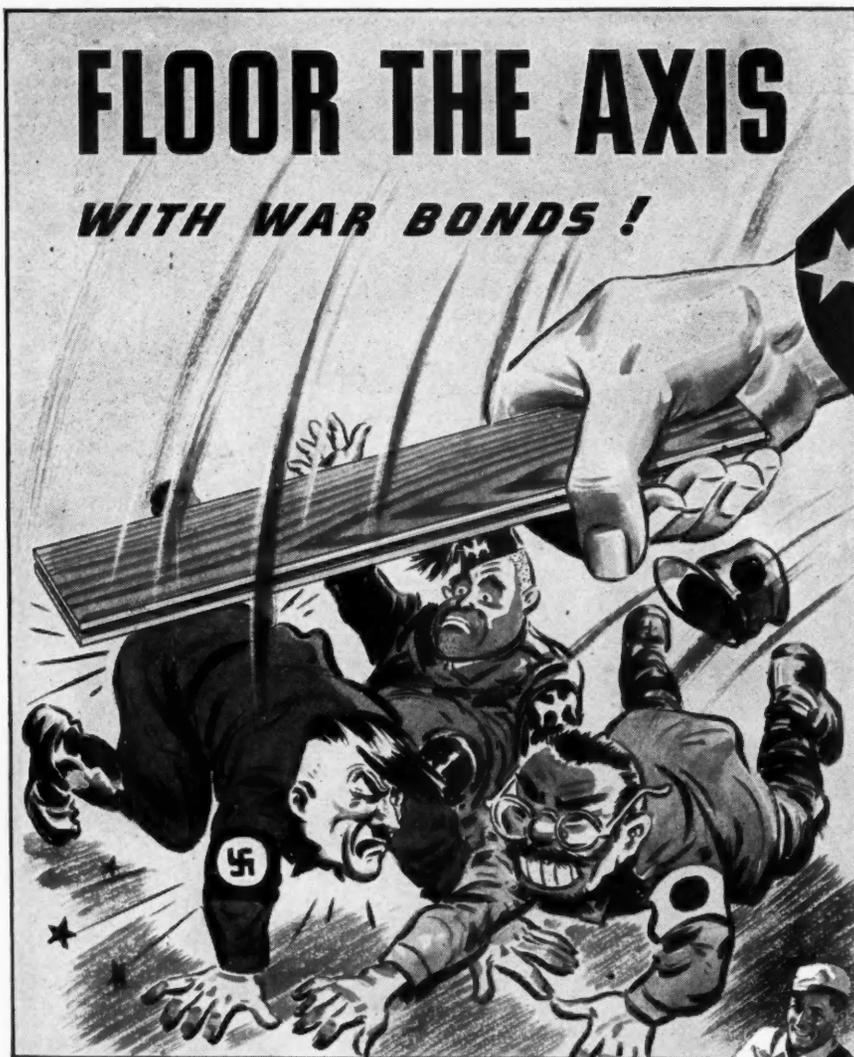
1. Meeting the "supply and demand" factor of inflation by making available to builders insured mortgage financing, enabling them to increase the supply of housing where and when it is most in demand.
2. Checking the inflation of real estate values by the application of FHA's uniform and controlled system of valuation.
3. Stemming the inflationary trend toward cheapening qualities through the operation of FHA's system of inspections and of minimum standards.

VAST HOME PROGRAM. Mr. Ferguson sees a vast home construction program with FHA insured mortgages, by private builders and private capital, as an important factor in the solution of the dual post-war problem of increased demand, due to the accumulated savings of war workers, and the unemployment created by demobilization and reconversion of war industries.

HOMES PUT MEN TO WORK.

In addition to supplying the demand for new homes, Mr. Ferguson pointed out that, "No other industry is so well equipped to furnish employment as quickly as the construction industry. Not only does it offer opportunities at the site, but it stimulates employment in the factories, in the mills, in the lumber camps, in the quarries and brick kilns, in the copper mines, on the railroads and in the ships that transport all the materials from the

(Continued to page 68)



...THEN YOU CAN **FLOOR** THOUSANDS
OF NEW HOMES WITH STREAMLINE!

BRUCE *Factory-Finished*
STREAMLINE HARDWOOD FLOORING
Trade-Mark Reg. U. S. Pat. Off.
A PRODUCT OF E. L. BRUCE CO., MEMPHIS, TENN.

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...and our kitchen has **PERMA-GLOSS!**



"Now here's one thing I really appreciate. It may look like an ordinary sink and tray to you, but I've used it for six months and, Mary, it's the honest-to-goodness answer to a housewife's prayer. It's easy to keep clean, it can't be scratched or marred and it won't stain! Why don't you tell Harry about Perma-Gloss!

"You can bet your next War Bond that I'm going to insist on Perma-Gloss in the kitchen and laundry of our new home!"

Today, Perma-Gloss sinks, through their installation in war housing units, dormitories and camps, are making thousands of new friends. These "for the duration" homes may be temporary, but daily contact with Perma-Gloss Sanitary Ware is making Mr. & Mrs. War Worker - your eventual customer - conscious of its all-around high qualities.

Perma-Gloss is light in weight—easy to install . . . is strong and durable . . . will not dunt or craze . . . is acid proof throughout - not merely acid resistant . . . has no enamel to peel or chip . . . no iron to rust . . . will withstand thermal shock . . . and is inexpensive.



For detailed information, send for our latest Perma-Gloss bulletin.

General Ceramics Co.



**SANITARY WARE DIVISION
METUCHEN
NEW JERSEY**

Ⓢ 8800

(Continued from page 66)

forest and mine to mill and factory, to the dealer and finally to the site of construction. No other one industry can so effectively keep as many allied industries going while we are getting over the immediate post-war hurdle. Important also is the fact that in financing the building industry, private capital is in large measure contributing to the preservation of private enterprise and through private enterprise offering widespread employment possibilities."

BATTLE OF WASHINGTON.

Mother's Day was not passed by unnoticed. All agencies of Government have done their part, and the great beating heart of Bureaucracy proudly

announces the following varied and fascinating rulings: "BABY CARRIAGE APPROVED BY WPB." Amended Order L-152 will permit construction of 900,000 baby carriages this year to meet the estimated need. (These statisticians!) 5,827 "twin types" will be built, and the balance will be in singles.

MARRIED-SINGLE CLASS. Not to be outdone, Selective Service jumps the gun for Mothers. First, they rule that "a man who married after December 8, 1941, shall be considered as a single man." Then "men married prior to this date whose wives are now pregnant, are to be inducted as childless men." My goodness—that leaves the child fatherless—or does it?

War-housing projects all over the map

MUELLER-EQUIPPED

for efficient heating

There's nothing "temporary" about the heating plants in these and many other wartime housing developments. They're Mueller *all-cast-iron* furnaces designed for the purpose—following the proved principles of return-flue radiator design—complete standard furnaces in every respect—compact, good-looking—high quality . . .

In this, the fourth major war in Mueller's 86-year history, Mueller is helping to hasten the day of victory with specialized war production work. Meanwhile, research and development pave the way for even greater acceptance of Mueller performance and the Mueller name in your post-war construction.

WG-42 (GRAVITY) coal-fired defense housing furnace. All cast iron. Also available with blower for forced air.



MUELLER *Milwaukee*
HEATING AND AIR CONDITIONING

① **WISCONSIN** — Milwaukee, 15 single homes on N. Idlewild Ave. Forrest W. Trumpf, builder. Roland C. Kurtz, Architect.

② **TENNESSEE** — Murfreesboro, 27 single homes. Murfreesboro Homes, Inc., builder.

③ **VIRGINIA** — Norfolk, 9 single homes. Johnson Co., builder.

④ **NEBRASKA** — Fremont, 32 single homes. Fremont Homes, Inc., builder.

Washington News— President's Letter

(Continued from page 27)

workers; that only about two-fifths of the need is being supplied by new construction; and that more than one-half of this new construction is being financed with private funds.

" . . . Certain recent and interesting reports of investigatory and congressional committees have emphasized in a most striking fashion the acute continuity of the need for even more war housing in specified critical areas. Generally speaking, proposals in Congress for the effective use of our manpower are linked with proposals for the adequate provision of war housing wherever needed.

" . . . Even after making every reasonable allowance for the use of local labor supply, including the training of new types of workers, the best estimates indicate an in-migration of 1,100,000 war workers into areas of war production activity during the fiscal year of 1944. These workers must be housed or they cannot do their job.

"It is not proposed to house even the majority of these workers with Federal funds. Almost two-thirds of them will be taken care of by placement in existing structures and a large part of the balance will be served by privately financed construction encouraged and insured by the Government . . . Likewise it is contemplated that recommendations for additional authorizations for private financing will be forthcoming to serve a large portion of the workers who will in-migrate during the fiscal year 1944. This further expansion of private financing will maintain and confirm in the war housing program the principles which point toward maximizing our utilization of existing resources and particularly the resources of small enterprise during the war. We are allocating to private initiative as large a segment of the war housing program as it possibly can produce under war conditions and war risks.

" . . . No expenditure of funds can be too large if that expenditure is necessary to win the war, or to win it with a greater economy in time and lives. But I cannot refrain from pointing out how small a fraction of the cost of the war is involved in all the appropriations of money and use of materials for war housing, particularly when measured against the contribution which the shelter of war workers is making toward the winning of the war. If the total outlays for war housing were regarded as parts of the cost of the plants in which the workers produce, or the cost of the munitions and war implements which they fabricate, these outlays would shrink to very minor proportions in this proper perspective. But the cost of the war effort in delay and blood and treasure if decent and sufficient shelter were not

(Continued to page 70)

Why Use An Anemometer To Design A Post-War Window?

YES, you're right—an anemometer is an instrument for measuring *wind velocity*. And that's a mighty important factor in designing tomorrow's windows.

For the windows of the post-war period **MUST** be weather-tight . . . must reduce wind infiltration and heat loss. That's a No. 1 requirement for thousands of families who have learned the lesson of heat conservation in wartime.

But making a window weather-tight is a complicated process. You can't do the job overnight. It requires years of research and field experience . . . inventiveness of the highest order.

All these advantages Curtis has. That is why the Curtis Silentite is today's closest approach to a truly weather-tight window.

The Curtis Silentite Window is factory-machined and pre-fit for extreme weather-tightness and ease of operation. It is made of wood—a natural non-conductor of heat and cold. It requires no heat-leaking cuts in its jamb for weights and pulleys—because Silentite has none. It has the most efficient weather-stripping known today.

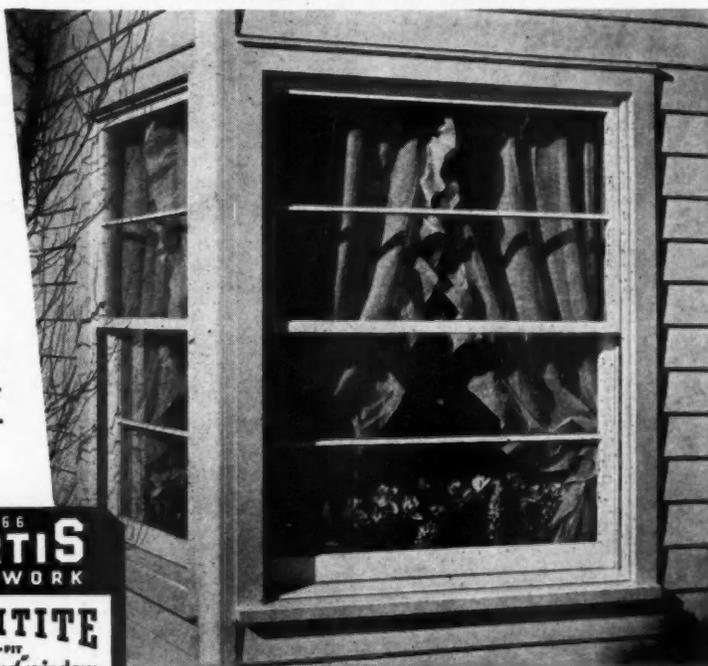
And note this: *the research which produced Silentite Windows, is still going on—without pause or hindrance.* That's the best possible assurance of Curtis leadership in producing the *weather-tight* windows of tomorrow.

If you are interested in knowing more about Silentite Windows, Mitertite Trim and other exclusive Curtis products for today's needs—or tomorrow's—write us.

Curtis Companies Service Bureau
Dept. AB-6, Curtis Bldg., Clinton, Iowa



Here is an example of the first basic window improvement in 300 years — the Curtis Silentite insulated window. It's a typical product of Curtis research — and an assurance of Curtis leadership in window and woodwork design for the post-war period.



TOMORROW'S WINDOWS WILL HAVE GREATER WEATHER-TIGHTNESS

(Continued from page 68)
provided for those who produce would be great beyond calculation."

For further information on the President's message and the effect of the \$400,000,000 increase in the Lanham Act on private building, see War Housing Items from the Capitol on page 62.

Freeze of Western Lumber Stops Stormsash Manufacture

Freezing virtually all the Western species of lumber used in the manufacture of millwork, Order L-290 became effective May 13. Ponderosa pine, Idaho white pine, sugar pine, lodge-

pole pine, Western white spruce and Engelmen Spruce were included in this freeze order.

While it is possible to secure this frozen lumber on Form PD-872 the sole basis upon which this lumber can be secured is on the essentiality of its use to the war effort. Some clarification as to just what is essential to the war effort must be made before it is clear how valuable Form PD-872 actually is.

While millwork, deemed to be essential to the war effort, will still be manufactured there is a wide-open question as to when storm sash will again be available. For at the present moment it appears that it is one of the items not likely to be manufactured before

there is a relaxation of the freeze order.

In view of the fact that the Government is continuing its drive for fuel conservation, because fuel will be as scarce this coming winter as it was last, there can be little question but what storm sash in quantity must be manufactured in time to be installed this coming fall.

There does not appear, however, much likelihood that storm sash will be manufactured before August or September.

A number of glass companies, vitally effected by this order curtailing storm sash, have been pointing out the results of the curtailment if something is not done to bring about earlier manufacture.

One company writes "Few laymen realize that unless corrective steps are taken there will not be enough storm windows and doors to go around in the coming months. The WPB have placed limitations on the type of lumber needed for storm windows and unless a release is granted by WPB it will be impossible for thousands of home owners to take this constructive step toward fuel conservation. We are suggesting that you write letters to your Senators and the WPB and Mr. Ickes, Fuel Coordinator, urging that lumber be released for this necessary construction."

There is no doubt but that WPB's issuance of this order to increase stocks available for crates and boxes, has definitely stepped on the plans of all government agencies that have anything to do with fuel conservation.

Builders to Make Sewage Connections

Builders are now authorized to make house and project connections to sewage facilities if they meet limits and costs set forth under the provisions of supplementary preference rating order P-141-A, and if their municipal authority addresses to WPB a letter of certification. This authorization became effective May 3.

Such a letter must certify that the project is authorized under L-41; that the cost of the material for the connections is less than \$1500 for underground construction or less than \$500 for other construction; and that the connection is built in accordance with the housing utilities standards. The letter in and of itself constitutes authorization to construct sewage connection facilities.

Rent Control Revision Asked by Realtors

Advance planning for the disposal of Federal property acquired for the war, Federal payments to localities in lieu of taxes to compensate withdrawal of property from local tax rolls, expanded home ownership and aggressive measures for improving OPA rent control were among proposals voted by the Board of Directors of the National Association of Real Estate

(Continued to page 72)



Why wear a raincoat?



Let's make a comparison between raincoats and waterproofing for buildings. Any contractor who went out in a pouring rain without a raincoat or other protection would be considered foolish. We wear raincoats of water repellent materials to keep us dry and save our clothes.

Buildings have to stand and take it when it rains. Unless we have provided an efficient waterproofing "raincoat," the water may come through the walls or basement floor, causing damage.

Give your building a "waterproofing raincoat"



Whether it's a home, commercial or industrial building, it can and should be waterproofed. You can give your buildings a permanent "raincoat" by using Medusa Waterproofed Gray Portland Cement in all concrete, mortar and plaster coats. This cement contains a waterproofing material that lines the pores of the concrete or mortar repelling all water at the surface. Write today for a copy of the book, "How To Make Good Waterproofed Concrete."

MEDUSA PORTLAND CEMENT CO.

1002 Midland Bldg. • Dept. C • Cleveland, Ohio
Also made by Medusa Products Co. of Canada, Ltd., Paris, Ontario

MEDUSA WATERPROOFED GRAY PORTLAND CEMENT



**IT'S
TOMORROW
NOW
ON**



New homes for American men and women who are building the aircraft, ships and other weapons for Victory are already being provided, at less cost than ever before, with some of the finest equipment and conveniences that American skill has ever devised. Those who *work* for Victory, as well as those who fight, deserve the highest standard of comfort and efficiency that private industry and government planning can provide. Many of these new homes are Case equipped. That means war workers *are* getting the best—in housing projects now under construction in such vital war centers as Seattle, Portland, Bremerton, Sacramento, Phoenix, Tucson and many others. These working men and women are entitled to it. W. A. Case & Son Mfg. Co., Buffalo.

CASE

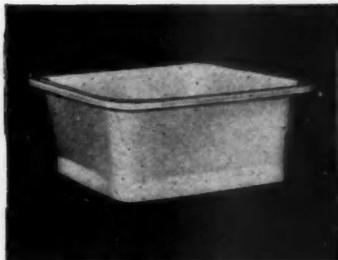
**VITREOUS CHINA PLUMBING FIXTURES
WELDED METAL PRODUCTS**



No. 1400 Siphon-Action Closet Combination



No. 912 Wall hung Lavatory with Back



No. 2400 Flat Rim Kitchen Sink



No. 2425 Flat Rim Laundry Tray

90 YEARS
1853
CASE
1943
OF SERVICE

(Continued from page 70)

Boards at their meeting in Chicago, May 7.

Gathering to work out war-created problems of real estate, the NAREB Directors called for Congressional approval of a pay-as-you-go tax bill and urged that war risk insurance premiums for 1943 be omitted. They also asserted that war risk insurance should be established on a mutual basis, with refund of unexpended premiums following the war.

Meeting in Chicago at the same time were the governing councils and directors of the National Association of Home Builders, the American Institute of Real Estate Appraisers, the National Institute of Real Estate Brokers, the Institute of Real Estate

Management, the Society of Industrial Realtors, the Secretaries Council and the Urban Land Institute.

New Priority Application For Plumbing, Heating Items

To expedite priority applications for new plumbing and heating equipment for civilian residential use, Form PD-851 has been issued by the plumbing and heating division of WPB.

This form can be obtained at WPB field offices and is to be filed by the occupant or owner of a private dwelling who desires priority assistance for the purchase of new plumbing, heating, domestic cooking equipment (except electrical), or material the sale of which is restricted by limitation order

L-79.

Instructions on the form indicate when it should be used and when it should not be used. Form PD-851 should not be used to obtain plumbing and heating equipment for repair or replacement of existing equipment which is worn out, damaged or destroyed. Repair or replacement procedure should be handled by the material suppliers who are assisted by order P-84. Form PD-851 should not be used to acquire any item which is rationed by OPA. The local rationing board should be consulted instead.

Restrictions Relaxed on Metal Doors, Frames, Shutters

On May 13, WPB relaxed slightly the restrictions on the manufacture of metal doors, door frames and shutters, through issuance of Limitation Order L-142 as amended.

The manufacture of these items to fill orders bearing a preference rating of AA-5 or better is permitted provided that 85 per cent of the material required was put into process prior to September 26, 1942, or was in the possession of the manufacturer on that date, and is heavier than 24 gauge.

Some New Heating Equipment Available for Rationing

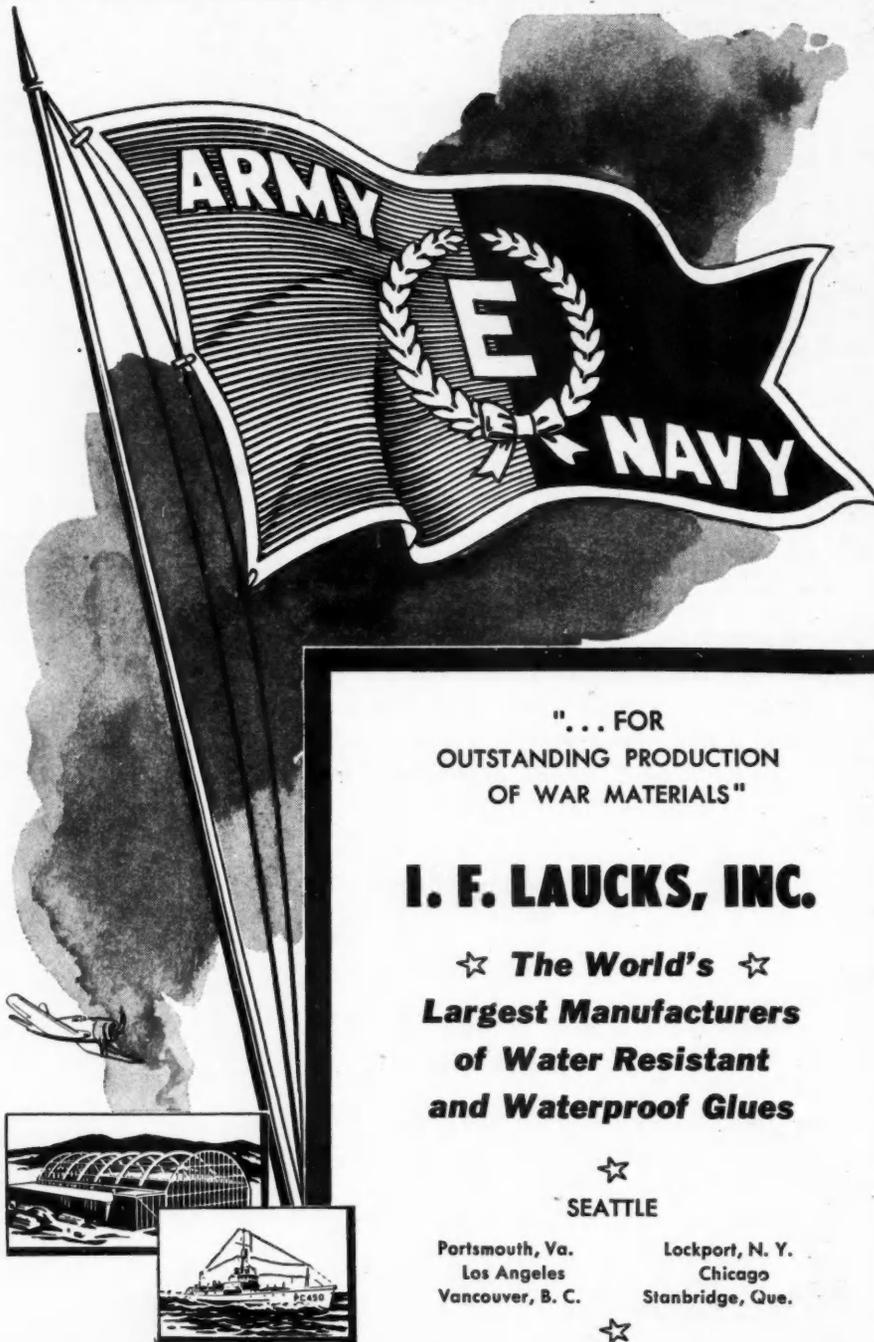
Extension of the authority to ration new heating equipment formerly covered in directive I-S has been granted to the OPA by WPB. Certain allotments of new heating and cooking stoves available for rationing will be allowed to OPA by WPB. The directive gives OPA authority to ration new domestic heating and cooking stoves, which includes heating stoves, space heaters, cooking stoves and ranges, combination heating and cooking stoves, laundry stoves, combination ranges and conversion burners designed to burn oil for domestic purposes.

123,500 War Housing Units Completed in First Quarter

Approximately 123,500 new war housing units were completed and made available for war workers during the first quarter of 1943, and 147,000 units placed under construction, according to National Housing Administrator John B. Blandford, Jr. This represented an increase of more than 25 percent over the last quarter of 1942 in number of completions and of more than 60 percent in the number of units started.

Lumber Freight Rates Affect Yard Prices, July 1

Distribution yards may continue until July 1 to sell softwood lumber at prices reflecting transportation rates in effect before May 15, 1943, although the 6 per cent general increase in freight rates granted the railroads last year has been rescinded as of the latter date.



"... FOR
OUTSTANDING PRODUCTION
OF WAR MATERIALS"

I. F. LAUCKS, INC.

☆ The World's ☆
Largest Manufacturers
of Water Resistant
and Waterproof Glues

☆
SEATTLE

Portsmouth, Va.	Lockport, N. Y.
Los Angeles	Chicago
Vancouver, B. C.	Stanbridge, Que.

☆

LAUCKS GLUES AND WOOD REPLACE STEEL FOR WAR!

PROTECTING "AMERICA'S BREADBASKET"



Texaco Roofing is already in there doing a big job . . . but there's still a big opportunity for sales in the Farm Market!

Nobody has to tell you what a big job the farmers and stockmen are doing . . . producing vital foods for Victory. Now more than ever they've got to keep up their equipment, barns, silos, sheds, their homes and other farm buildings . . . and build new ones.

That's where you come in. The farm market is big. It means business . . . for you.

Whether you're a dealer or buy through a Texaco Roofing Dealer you can operate more profitably with Texaco Asphalt Roofing. Millions know Texaco. That means easier selling.

A large network of nearby warehouses supplies Texaco

Roofing Dealers. That means convenient, quick, fresh stock . . . lower investment . . . minimum inventory . . . faster turnover.

And remember—*more than twice as much asphalt roofing is sold in the United States each year as all other types combined.* So sell the name that millions know—Texaco.

★ ★ ★

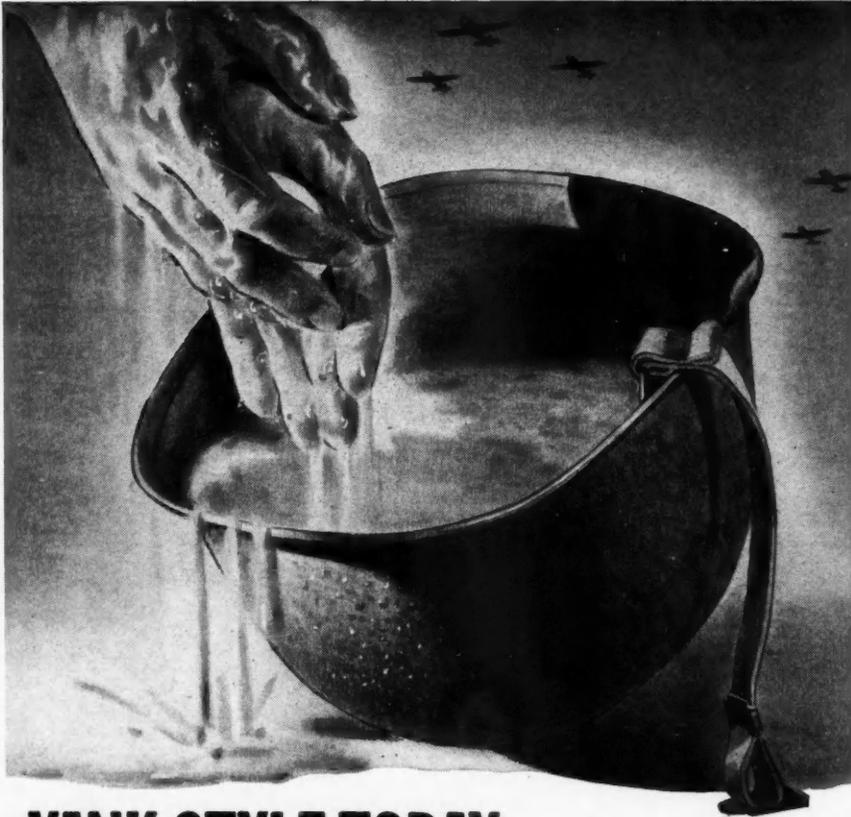
Texaco Asphalt Shingles and Roofing are available through Texaco Roofing Dealers supplied by a large network of Texaco warehouses—east of the Rockies. Drop in, write or 'phone your nearest Texaco Roofing Dealer, or write The Texas Company, 135 East 42nd Street, New York, N. Y.



TEXACO



SHINGLES and ROOFING



YANK STYLE TODAY—*but not tomorrow*

Today, Son, your "tin hat" in Tunisia must serve you in many ways. Yes, Yank style, even as a primitive wash bowl.

Tomorrow that experience will be just a segment of your memories. When you come home to America's modern way of life you can expect many new building products ready for your use. Improvements here? Lots of them!

Look for that newest improvement in hot water tanks, the Porcel-CLAD with its gleaming, sanitary, corrosion-proof, porcelain-enameled surfaces.

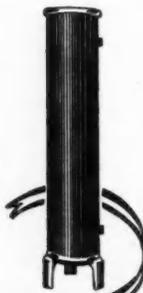
Yes, Porcel-CLAD is a *better* hot water tank and it is ready for you now,—proved and approved.

PORCELAIN STEELS, INC. • CLEVELAND, OHIO

Porcel-CLAD Hot Water Tanks, one-piece welded construction, conform to the National Bureau of Standards' Recommended Commercial Standard, TS-3488. War workers' houses, being constructed by FPHA in highly corrosive water areas today, have first call on our production.

Porcel-CLAD
PORCELAIN ENAMELED INSIDE AND OUT
HOT WATER TANKS

Only a limited quantity is available now for replacement purposes.



Builders' Association Puts Finger on Detroit's War Housing Sore Spot

THE following is a copy of a letter sent to Mr. Fritz G. Lanham, chairman of the Committee on Public Buildings and Grounds, House of Representatives, Congress of the U. S.:

May 17, 1943

Mr. Fritz Lanham, Chairman,
The Public Buildings and
Grounds Committee,
Congress of the United States,
Washington, D. C.

Dear Mr. Lanham:

The President is asking the Congress to appropriate an additional \$400,000,000 for publicly financed War Housing. In the interest of the WAR EFFORT, and the future economic welfare of the American citizen, who will have to foot the bill, we believe that this request should be examined with microscopic care. This communication is directed to you with the sole objective of assisting you and your Committee in making this examination; to provide some facts from the actual operating front, which might otherwise not come to the attention of your Committee.

We are convinced that little if any further funds for publicly financed War Housing would be needed at this time, if (a) the money already provided had been expended efficiently and in strict accordance with the provisions of the Lanham Act; (b) if the NHA had done an efficient overall job in the matter of facilitating and speeding privately financed war housing.

The Lanham Act specifically prohibited the programming of *any* publicly financed permanent War Housing in those areas served by a private building industry, which was able and willing to provide the full volume of permanent war housing needed.

In the Detroit Area there have been 3,200 permanent units scheduled, of which 2,500 were programmed by the NHA under Mr. Blandford's supervision. In our opinion, this act of the NHA constitutes a wilful and flagrant violation of the Lanham Act; for at no time has the local building industry been either unable or unwilling to provide the housing needed. In fact, as strong evidence to the contrary, the last allocation available to private builders was *oversubscribed two and one-half times*. If these facts are true—and their truth or falseness can readily be ascertained from Government Agency records—then the programming of these publicly financed permanent housing units in the Detroit district was a clear MISUSE of Public Funds; and we herewith challenge either the FPHA or the NHA to produce evidence to the contrary.

The NHA may contend, (a) that the private building industry has not absorbed all of the war housing units allocated; (b) that the private building industry has been unduly slow in producing those housing units which it has

(Continued to page 76)



DAYLIGHT ENGINEERING IN THE *PW* HOME

Daylight engineering is bound to play an important part in the planning of the postwar house. Through the proper use of larger window areas, decorative glass partitions in walls between rooms, and proper location of polished plate glass mirrors, an entirely new and desirable atmosphere can be created within the home. Gone will be the darkened corners, hallways, stairways and closets. Eyestrain conditions will be removed. Even the smallest rooms can be given a feeling of spaciousness never before enjoyed.

In addition to brightening the home, large window areas with southern exposure can be designed in a

way that the radiant heat of the winter sun is utilized to help heat the home. Double and triple glazing of these windows is most desirable. A remarkable new Libbey-Owens-Ford product, Thermopane, will make this type of glazing practical and easy to maintain.

Libbey-Owens-Ford quality glass for windows, partitions, mirrors, wainscoting and work surfaces is available in a wide variety of types, designs and colors. Be sure your records of L·O·F Glass are complete. Libbey-Owens-Ford Glass Company, 2563 Nicholas Building, Toledo, Ohio.



LIBBEY·OWENS·FORD

A GREAT NAME IN *Glass*



What do Field Ranges and Formed Iron Fixtures have in common?

- The same porcelain enameling iron once widely used for *formed* bathtubs, lavatories and sinks is now serving in Army field ranges where it takes the place of scarcer metals. Already *millions* of pounds of stainless steel have been saved for use in aircraft and other vital war equipment.

- Here at ARMCO wartime research is improving the qualities and methods of manufacture of many sheet metals, including porcelain enameling iron. These experiences indicate that post-war *Formed Iron Fixtures* will be even better products — newly designed for a new world.

- Builders will see tremendous strides in housing after the war — and *Formed Iron Plumbing Ware* will help give them greatly increased opportunities for service and profit. The American Rolling Mill Co., 1571 Curtis St., Middletown, O.



THE AMERICAN
ROLLING MILL COMPANY



(Continued from page 74)

received. Both of these contentions are superficially true; but the fact that they are true can be charged directly to the inefficiency of Government War Housing Agencies. Out of the depths of near despair, a Detroit builder recently exclaimed—"Why does it take six months to unravel the red tape in connection with getting priority and FHA mortgage insurance approval, before we can even start housing which the government has allocated and claims it vitally needs?"

The principal drag on the War Housing Program, to date, has been provided by an overloaded, inexperienced and incompetent War Housing Bureaucracy; a bureaucracy which has contributed little to the war effort, except form-and-regulation directed chaos and future tax bills. Had these War Housing Agencies had less money to spend in the past, it is our opinion that the net result would have been less governmentally supervised confusion within the building industry; smaller future surtaxes to pay for "dead horses"; and more war housing units.

The foregoing paragraph expresses merely an opinion; but we believe it is the only opinion which can be formed after a clear and unbiased analysis of the war housing record to date. And we wish to point to this fact: Both locally and nationally, builders have been unbiased; have been critical of the War Housing Program *only* because it was not getting the job DONE, and NOT because of fear of not "enjoying business as usual." For it is a matter of record that the builders of the nation have constantly stated that the war housing job should be done as rapidly as possible, so that the workers could be released for other essential war effort.

Therefore, we respectfully request you to weigh the opinions set forth herein, as well as the facts. We are sure that a complete examination of the entire war housing program to date will convince your Committee that any further appropriation at this time for publicly financed War Housing should be granted only after complete and indisputable proof of necessity has been presented. And that no matter what sum may be appropriated, that its expenditure be specifically regulated by the Lanham Committee.

We feel sure that your Committee will explore every bit of testimony submitted for or against this proposed appropriation, and that your final decision will reflect your sincere interest in the War Effort and the future welfare of the American People.

We are appending herewith a record of Public and Private war housing record to date.

Sincerely yours,

BUILDERS' ASSOCIATION,
W. J. Guinan.

* * *

Comments on "War-to-Peace" Plan

(Continued from page 31)

"Your eight-point program is well thought out—I am especially impressed by the statement, 'An end must be called to the fantastic publicity regarding the post-war home promising freakish and impossible things.' I firmly believe the American public wants to live in homes which are not bandboxes, designed to look like our traditional Colonial houses. Residential building is the biggest hope for the boys now fighting for freedom in Africa and the South Pacific."—R. K. AUSTIN, Congoleum-Nairn Inc., Kearny, N.J.

"It is my firm opinion that, unless private industry and private building interests lay their plans now, we will be confronted with a vast Government program. Private industry has demonstrated that, with the help of the FHA plan, it can do a good job of building, and can do so again when the war ends. Planning should not be delayed."—JOHN B. MILLER, Greensburg Lumber and Mill Co., Greensburg, Pa.

"Your plan offers one of the best outlets for post-war to stimulate business and still have a worth-while and self-liquidating project. The only regret is that it did not embody any year-round employment plan for the building trades. Wage rates for construction should be based on normal annual earnings. The home builder should not be required to pay abnormally high per day rates which, of course, include widespread idleness in the trade."—MIKE MONRONEY, Congressman from Oklahoma.

For Your
Post-War
Plans...

SMALL HOMES
OR APARTMENTS

TRAVERSE BAY MFG. CO.
(Affiliated with The Parsons Co.)
15000 Oakland Ave.
DETROIT, MICH.



THESE boys and girls who are going to enter the post-war market for millions of ultra-small homes are going to demand from you something new, different and better. Especially in detail and in space arrangement.

Let Parsons Pureaire Kitchen free you from obsolete convention to build the home or apartment house that will meet this new demand.

Whole subdivisions of Pureaire equipped ultra-small homes, and apartments everywhere, have proved Pureaire ability to meet every kitchen need. And no cooking odors! That's patented.

Investigate — right away! But remember—none for sale till after Victory.



The Name **HOPE'S** Guarantees
1818 1943



Hope's Steel Standard Holford Windows type 4316VC were selected by Gunnison Housing Corporation for their Prefabricated Homes as illustrated above.

HOPE'S WINDOWS MEN AND EQUIPMENT HAVE BEEN 100% OCCUPIED IN WAR PRODUCTION FOR MANY MONTHS NOW, BUT AFTER VICTORY WE WILL OFFER INTERESTING DEVELOPMENTS IN STEEL WINDOWS AND WILL SERVE OUR CUSTOMERS BETTER THAN EVER.

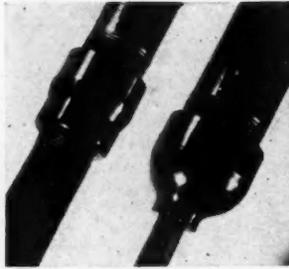
BUY U. S. WAR BONDS

HOPE'S WINDOWS INC., Jamestown, N. Y.

New Wartime Products Help Builders Do the Job

Plastic Pipe and Fittings

ONE practical solution to the problem of conserving critical metals is offered through the development of new plastic pipe and tubing. One of the leaders in this field is The Dow Chemical Co., Midland, Mich. Plastic pipe and tubing of its manufacture is now being marketed under the name of saran.



SARAN molded plastic pipe and fittings. This material can be threaded to take typical fittings, as shown in these reducer couplings, 1 to 2 inches in size.

Much research, developmental work, and testing under the actual operating conditions have gone into the manufacture of the new plastic pipe, tubing, and the required fittings. This practical thermoplastic pipe and tubing can fill many operating demands made on metal pipe. In addition, a number of valuable properties enable it to meet the requirements of unusual applications where metal piping could not qualify.

Commercial acids and alkalis do not affect saran pipe, and such "hard to hold" liquids as oil, gasoline and water can be transported with no apparent ill effects. Saran pipe is not recommended for exposure to severe freezing conditions, but it operates successfully at temperatures as high as 170° F. Toughness, durability, and extremely long life are inherent

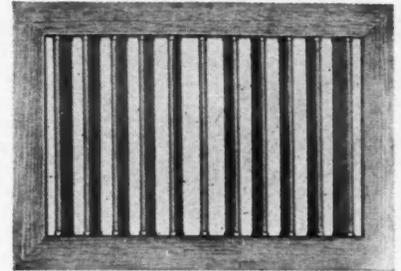
characteristics of this first practical thermoplastic pipe.

Either power or hand-driven standard pipe threading tools may be employed in threading saran pipe.

Non-Metallic Grille

STILL another product which has been designed for use in wartime installations and to save critical materials is a non-metallic grille now being made by Tuttle & Bailey, Inc., New Britain, Conn.

The adjustable deflection grille shown here offers flexibil-

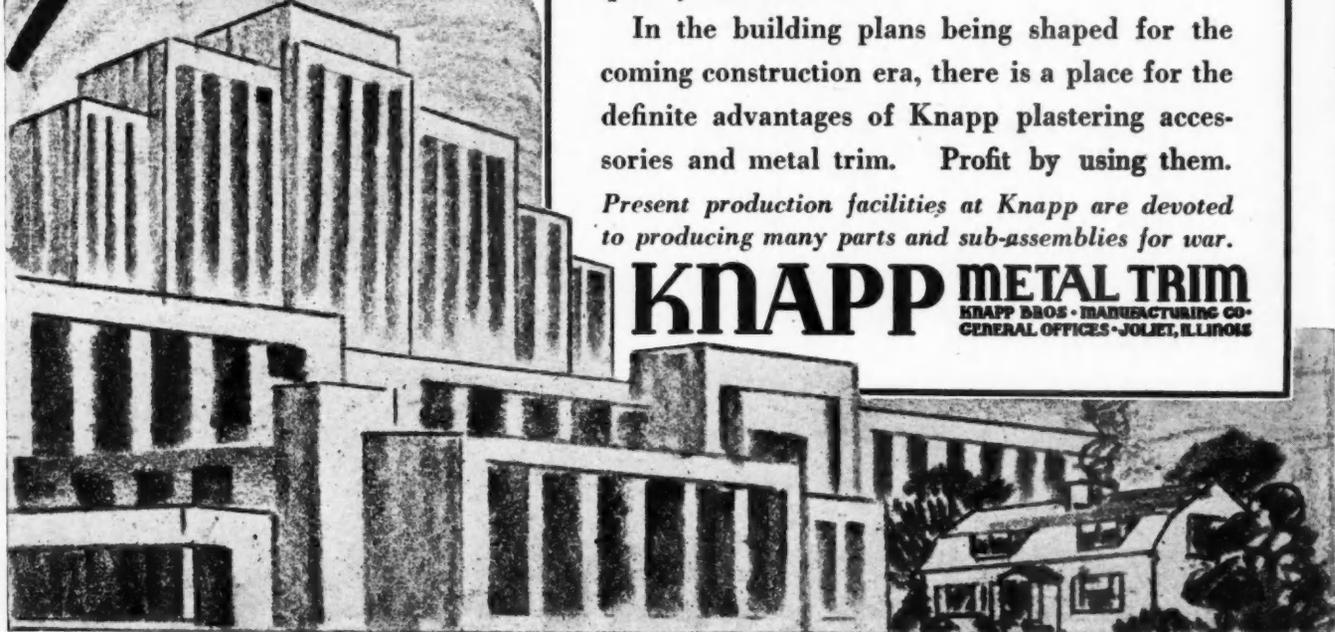


DEFLECTION grille with vertical rotating bars which are individually adjustable.

ity, since the vertical bars rotate through an arc of 90 degrees and are individually adjustable. Each bar is capped with steel, thus assuring permanent easy action and adding a neat finished appearance to the grille. Another feature of this, as well as other Tuttle & Bailey registers and grilles, is the flame-proof, fire-resistant prime coat finish offered as standard on all models; due to the wide spacing of the bars, the final coat can be easily and quickly applied.

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. Profit by using 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

Non-Metallic Cabinet Shower

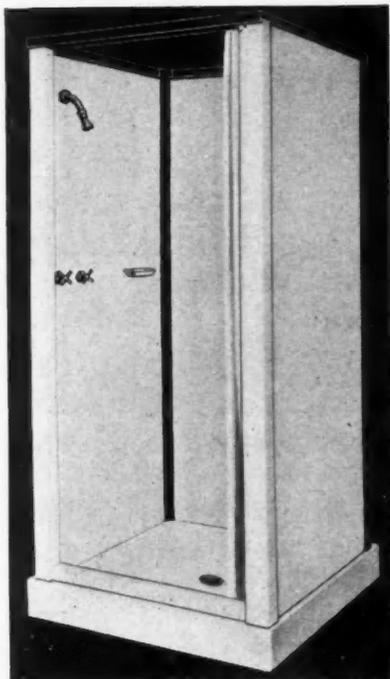
A NEW product which answers the need for vastly increased bathing facilities as well as the need to conserve critical materials is the Weisway V de luxe cabinet shower which contains less than one pound of metal. Accurately fabricated and designed for quick assembly at the job, the new non-metallic cabinet shower meets the need for bathing facilities in army posts, naval bases, officers' quarters, hospitals, nurses' homes, war plants, war housing, and remodeled homes in vital production centers.

The Weisway cabinet shower, a product of the Henry Weis Mfg. Co., Elkhart, Ind., is leakproof, sturdy, convenient, space- and time-saving, and simple to erect, thus saving manhours as well as materials.

One of its distinctive features is the plastex receptor which is processed under 3,000,000 pounds pressure. Compression strength and flexural strength of the receptor are said to be much greater than precast concrete. Important characteristics are even density, durability, and light weight. The standard color for the receptor is pastel green, but buff and coral, are available on special order.

The walls of the cabinet are 1/8-inch smooth, hard pressed fibre-board. The walls are finished inside and outside with two coats of white high-temperature baked enamel, each coat baked on separately.

Joining members, top frame and threshold are fabricated from selected close grained wood with a baked enamel finish. The wood is especially treated for the prevention of shrinking, swelling, warping, the treatment

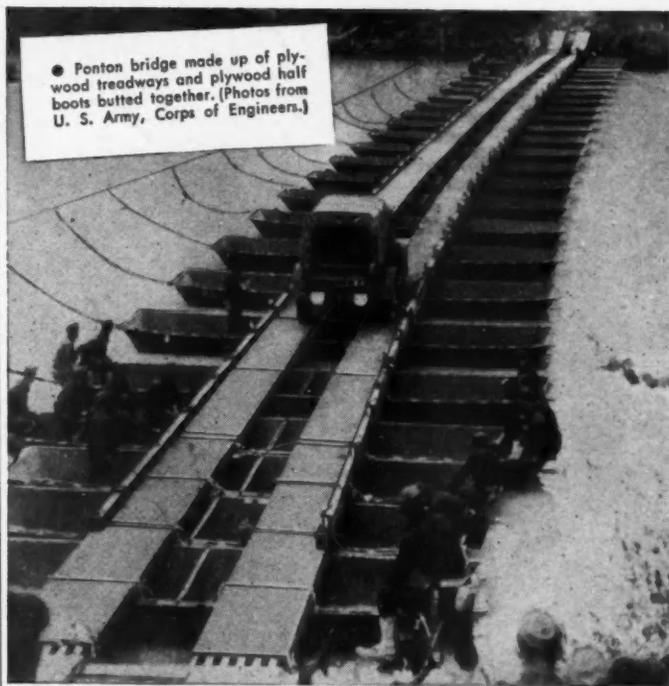


CABINET shower which uses less than a pound of critical metal in structure.

also protecting the wood against stain, vermin, and water absorption. Sidewalls are attached to the receptor with self-tapping screws. No screws are exposed on the exterior. Inside and outside corner members are pre-assembled at the factory.

Standard equipment for the cabinet includes a zinc-coated iron two-valve combination concealed type unit with shower head; cast drain with wrought strainer assembled integral with floor of receptor; soap dish; curtain rod integral with top frame; and sanforized white duck curtain with plastic hangers. An exposed type zinc-coated iron unit with head and gooseneck riser pipe may be substituted for concealed type shower.

The new V de luxe Weisway is 32 inches square and 75 inches high. Total shipping weight of walls and receptor is 200 pounds. A unit 30 inches square and 75 inches high is available to meet conditions where space is limited.



ASSAULT... with Douglas Fir Plywood

U. S. Army Engineers make extensive use of this Miracle Wood for Assault Boats and Emergency Bridges!



● Exterior-type Douglas Fir Plywood has definite advantages for the Army Engineers: It makes their assault equipment strong, durable and waterproof, yet keeps it lightweight for easy handling and transportation. For these reasons — and many others — Douglas Fir Plywood is serving virtually every branch of our armed forces and hundreds of war industries as well. And as a result of this extraordinary war experience, the Douglas Fir Plywood you buy after Victory will be more useful to you than ever before.

● Left above: Army Engineers build ferry for trucks and guns by using 10-passenger plywood assault boats. Left: two plywood assault boats transport jeep and soldiers across river.

TO HELP SPEED VICTORY
the Douglas Fir Plywood Industry is devoting its entire capacity to war production. We know this program has your approval.

SEND FOR WAR USE FOLDER

● Dozens of actual photographs show you how Douglas Fir Plywood is aiding the war effort. Write Douglas Fir Plywood Assn., Tacoma, Washington, for your free copy.

DOUGLAS FIR PLYWOOD

Real Lumber

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



Chooses

LAWSON CABINETS!

A few short weeks ago the new Hotel Statler in Washington, D.C., opened its doors—the newest and most modern hotel in America. Designed for tomorrow, it represents the ultimate in hotel planning.

The F. H. Lawson Company is proud to have been chosen to manufacture the bathroom cabinets for the Hotels Statler Company, Inc. One of the many unusual features of these specially designed cabinets is a completely new and novel lighting system.

When Victory is won, Lawson will again turn to the manufacturing of bathroom cabinets, and you can be sure that the finest cabinets obtainable will bear the name of Lawson.

The F. H. LAWSON COMPANY
BATHROOM CABINET DIVISION
CINCINNATI, OHIO



BUY WAR BONDS for Victory!

Plate Glass Shower and Bath

THE Pittsburgh Plate Glass Co., Pittsburgh, Pa., has developed something new in a combination shower and bath. Using almost no critical materials, but composed of four sheets of Carrara plate glass fabricated into a single unit, it was primarily for use in new or low-cost houses intended for war homes. However, its appearance and utility have been so pleasing that it will undoubtedly attain added popularity after the war.

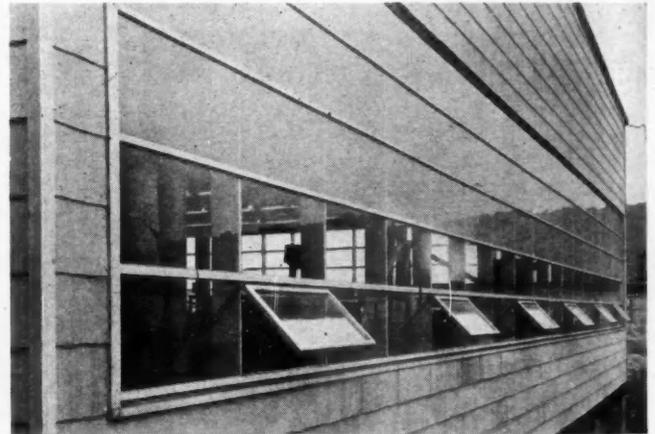
New construction has, in general, incorporated only a shower stall, but has left an offset or alcove for a tub when again possible to purchase one; the new Pittsburgh combination fits into that space. A flat bottom has been drilled for drain fitting; the side walls are a foot high; it is easy to clean; and may be had in a choice of colors.

Industrial Sash of Wood

A DEPARTURE from the conventional unit type of window sash is the Geyser bar window, a product of E. K. Geyser & Co., 200 Cedarhurst St., Pittsburgh.

Horizontal glass-receiving bars are carried in continuous unbroken lines across vertical members of sturdy proportions, the vertical members being ingeniously slotted to receive and engage the bars.

The system is simple and permits the designer wide latitude in general arrangement and in the type and quantity of ventilating panels. These panels are assembled in the shop, while the rest of the material is delivered in bar



INDUSTRIAL installation of Geyser bar window.

form for assembly at the job site; the expense of handling, shipping, storage and painting, is thus greatly reduced.

Glass panes from 30 to 44 inches wide by 17 to 24 inches high are used, and the absence of exterior vertical interruptions between the panes gives an effect of continuous ribbons of glass running the full length of an opening.

The system was first developed with aluminum in combination with steel. It was made available later entirely in aluminum. At present, the wood construction makes an excellent substitute for the metals now used exclusively for military purposes.

All-Purpose Cement

THE Floor Division of the Armstrong Cork Co., Lancaster, Pa., has introduced a new all-purpose water-proof-type cement, designed for use as an over-all adhesive for cementing resilient floor materials to on-grade concrete floors.

Known as Armstrong's No. S-220 Cement, this material makes it possible to obtain a firmer bond with the elimination of stretching or crawling of resilient floor materials after the installation has been completed, and can be satisfactorily used for all purposes for which rustproof and waterproof cements have been recommended. It is not necessary to use a primer in connection with this cement unless the concrete floor is unusually dirty.

Armstrong's expects to market this new cement in one-gallon (four to a carton) and five-gallon sizes.

Spiral Type Sash Balance

TO meet the demand for a concealed sash balance, the Caldwell Manufacturing Co., Rochester, N.Y., has developed a new vertical balance.

This is easily installed by driving one screw, fastening balance to the frame, and the sash is then in operation; both upper and lower balances are the same height. Since they have been pre-tensioned at the factory, there is little winding or adjusting at the job. If sash are extra wide or used one balance per sash, adjustment is easily made at the top of the sash without special tools or removal of balance.



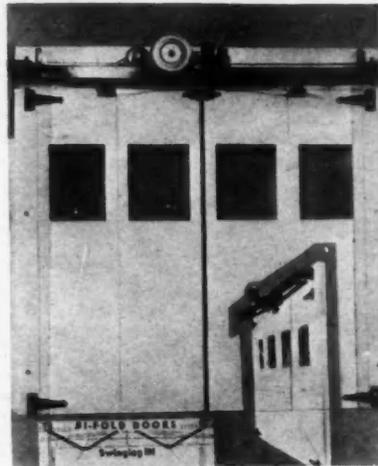
VERTICAL sash balance which is concealed in sash.

Automatic Door Assembled at Site

AN automatic door that will open quickly and afford savings in time and labor is the Presto-Matic door unit, manufactured by Clark Door Co., Inc., Newark, N. J. Each unit is assembled with electrical connections and tested at the factory for correct operation, after which it is packed in three sections and can be reassembled at the point of installation by fastening the side jambs to the head piece. Each side jamb has the operating leaves attached and the jamb is tenoned and fits into the mortise in the head piece and metal braces reinforce this joint. The head piece carries all operating mechanism, including all wiring, to the electric control assembly. Sufficient wiring is furnished to permit placement of the electric control unit at a convenient height.

Attaching the assembled unit to the opening is a simple operation requiring seven to ten bolts, depending on the type of construction at the door opening. When installed the Presto-Matic unit is ready for operation and will require only the services of a mechanic familiar with connecting electric wires to their designated terminals.

The door is so constructed that when in the opened position it will fold completely behind the opening. During operation, should any obstacle stop the door, a safety



GARAGE door which can be operated either manually or electrically.

feature is incorporated that will stop the operation without injury to doors, the person or obstruction.

When the doors are closed they are automatically locked. Various types of electrical control can be incorporated, the simplest type being electric push button, with variations; floor plate control enabling operation of the doors by the passage of trucks or pedestrian traffic over the floor plates, or pull cord control.

Standard size units are a combination of widths and heights of seven and eight feet. Design of doors and glass can be varied. Metal covered doors and doors for special requirements can also be supplied.

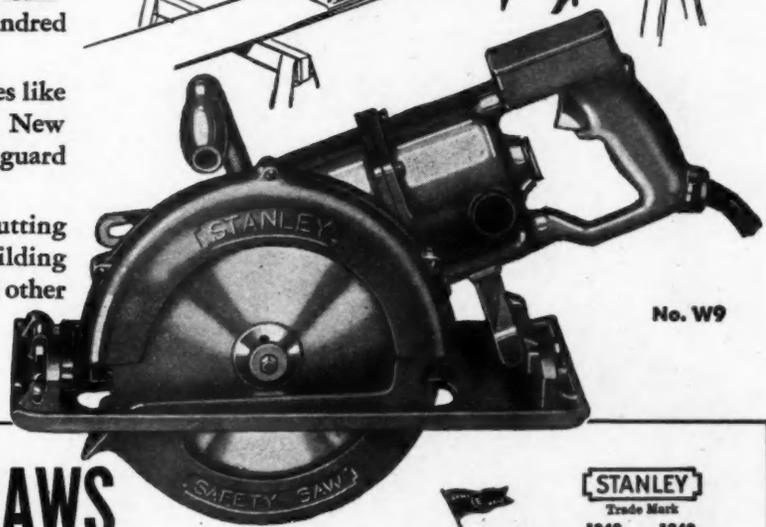
MOTORIZED YOUR MEN for Faster War Building

Like soldiers on the fighting fronts, "soldiers of construction" get the job done faster with *motorized* equipment. The Stanley W9 Electric Saw will save ninety per cent of the time required for hand sawing — man-hours badly needed for more important work.

The W9 rips or crosscuts 3 1/4" deep, bevel cuts to 2 1/4" at 45°, — ample capacity for builders' average needs. It packs plenty of power — saves time on framing, cement forms, platform trimming, and a hundred other jobs.

Balanced for use in any position, the W9 handles like a hand saw, can be used steadily without fatigue. New workmen quickly master it, and it's SAFE... the guard keeps the cutting edge covered at all times.

Other Stanley Electric Saws have 2 1/2" to 6" cutting capacities. If you are engaged in essential war building a nearby Stanley Distributor will supply these and other electric tools you need. Stanley Electric Tool Div., The Stanley Works, New Britain, Conn.



No. W9

STANLEY SAFETY SAWS

STANLEY ELECTRIC TOOL DIVISION, THE STANLEY WORKS, NEW BRITAIN, CONN.





Photo by Fred Dapprich

Prompt Efficient Service—as soon as Victory Permits—

Before our productive facilities were needed to turn out military equipment, it was our policy to serve the building industry *promptly* and, we believe, *efficiently*.

After Victory, that policy will again be in force—with these additional advantages:

New skills, enlarged and improved manufacturing facilities and broadened engineering experience will produce even *finer* Bennett products, at *greater* values, than ever before.

BENNETT FIREPLACE CO.

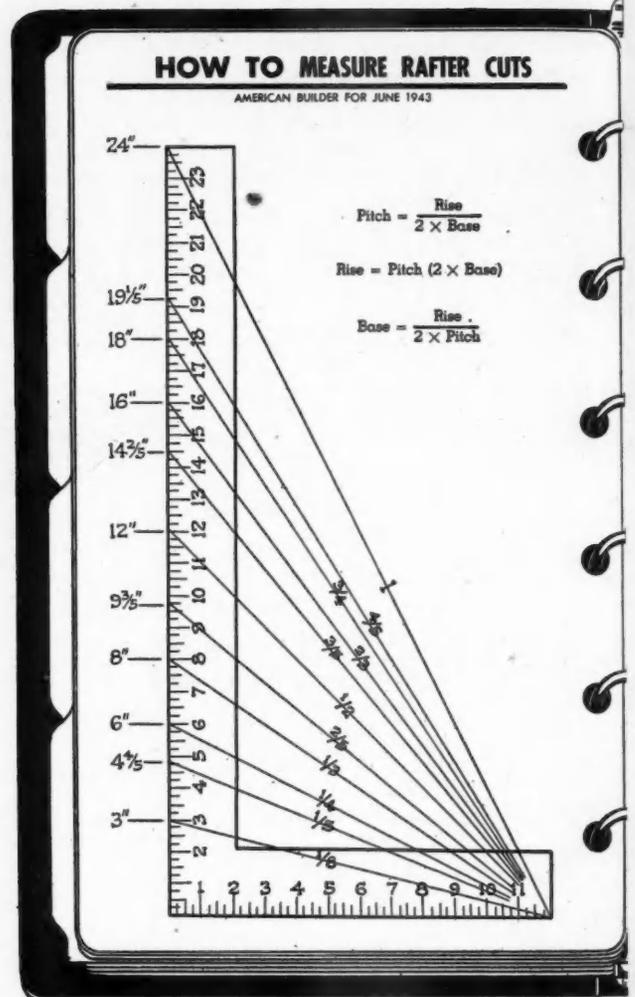
NORWICH, N. Y.

BENNETT
Guaranteed

FIREPLACE UNITS
FLEXSCREENS
CONSTRUCTION SUPPLIES



American Builder HANDY-BOOK



Short Cuts & Time Savers

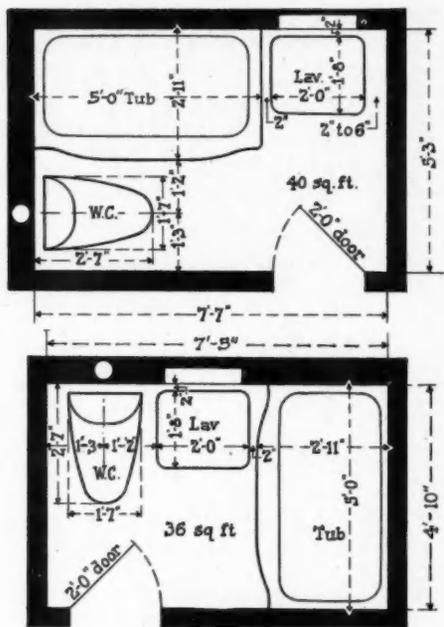
American Builder's Job Helps appear each month as part of an editorial series begun in the January issue. The purpose of this series of articles is to provide builders with practical "how-to-do-it" data for office or on the job.

Subjects covered in the series thus far are: *How to Find Volume of a Pile, How to Make a Secret Door, How to Estimate Roofing, How to Finish a Damp Cellar, How to Estimate Roll Siding, How to Find Slope of Valleys, How to Estimate Painting, How to Specify Backwards, How to Plan a Closet, How to Make a Batten Door, How to Estimate Cement in Mortar, How to Make a Safety Roadway Curb, How to Correct Family Hinges, How to Expose Wood Shingles, and How to Mix Oil-Saving Lead-Oil Paint.*

OF JOB HELPS

HOW TO PLAN MINIMUM BATHROOMS

AMERICAN BUILDER FOR JUNE 1943



Both in the planning of new low-cost housing for postwar as well as in the remodeling of existing dwelling units, these minimal bathroom layouts can be studied advantageously. Both make use of full size fixtures. Windows should not occur over any part of the tub. The smaller layout is more desirable for a tub shower. Note that there are several possible door arrangements other than the ones shown.

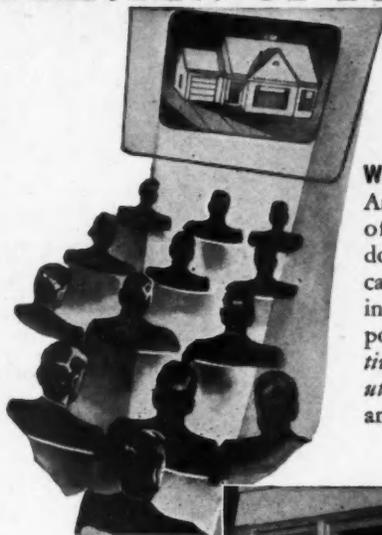
A Continuing Editorial Service

"Job Helps" is a continuing editorial service feature appearing in serial page form monthly. The information is arranged in convenient 3 x 5 notebook page size so that it may be filed or used on the job. The sheets are not for sale or available from any other source than the editorial pages of *American Builder*.

Additional Job Help sheets appear on the following pages.

Among numerous letters commenting on this "Job Helps" department have been requests from builders for notebooks in which to file the sheets. *American Builder* does not have notebooks for sale.

PREVIEW OF TOMORROW



WHAT will Mr. and Mrs. America want in their homes of tomorrow? Architects don't need to guess...they can know. For recent surveys indicate two major trends in postwar planning—more effective use of windows, and better utilization of space. For example—

NEW WINDOW IDEAS will make tomorrow's homes more beautiful, more useful. In the photograph here, a picture window and casement form an attractive bay. Wood windows help conserve heat because wood is a natural insulator. These windows are of Ponderosa Pine, toxic treated, durable.



DOUBLE-DUTY ROOMS—like combination study and bedroom here—are easily achieved with pre-assembled Ponderosa Pine windows. A sliding door separates the two parts. Pre-assembled stock windows of Ponderosa Pine assure weather-tight precision manufacture—plus low cost installation.



NO WASTED SPACE in the homes of 194X! In this nursery, for example, see how the Dutch doors of Ponderosa Pine permit a maximum of light and air to enter—adding livability and convenience to space that would otherwise be wasted.



Ponderosa Pine WOODWORK

111 West Washington Street • Chicago, Ill.

YOU'LL WANT THIS FREE BOOK—



Here is a book full of suggestions and ideas for meeting tomorrow's housing needs—the "New Open House." Its 32 illustrated pages will prove a source of inspiration. Your copy is free for the asking—just mail the coupon.

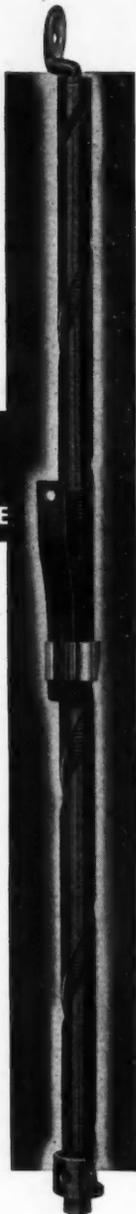
PONDEROSA PINE WOODWORK
Dept. YAB-6, 111 W. Washington Street
Chicago, Illinois

Please send me a free copy of "Open House."

Name

Address

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



Invisible

The Grand Rapids Invisible Sash Balance appeals to practical builders of both large and small projects because it is actually invisible, as well as being trouble-free and easy to install. The simple, illustrated installation instructions are printed on every package. Just a few sizes fit all windows, and being interchangeable fit both left and right sides on both the upper and lower sashes. No left over units or split packages to carry over to the next job.

The Grand Rapids Invisible Sash Balance is suitable for prefabricated houses with either single or double balance installations, and saves on production time and critical materials. Thousands of sets have been used in defense housing projects.

Send for Illustrated Catalog

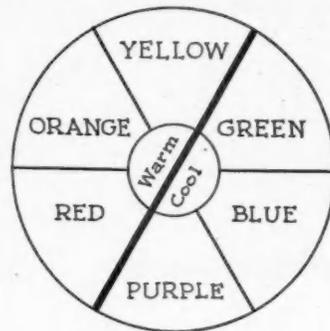
Deliveries of the Grand Rapids Invisible Balances are governed by government priorities. Send for Balance catalog for full information as well as for delivery information.

GRAND RAPIDS HARDWARE COMPANY
GRAND RAPIDS • MICHIGAN

American Builder HANDY-BOOK

HOW TO INVENT COLOR SCHEMES

AMERICAN BUILDER FOR JUNE 1943



Any given hue can vary in *intensity*, which means it is pure or is grayed with black, in various amounts.

Any given color can also vary in *value*, which means it is dark or light according to the amount of white that has been added to the pure hue.

To get *quiet, restful, color schemes*, take one hue and make up two containers of paint. Make one by adding white to lighten its value: make the other by graying the original paint with black to reduce its intensity. For accents the pure color may be used, or pure color may be used for trim in combination with either the grayed or lightened paint for walls.

To get *gay color schemes*, take any two colors that are opposite each other on the color wheel. Use one grayed and the other lightened the lighter color usually for walls. Never use two pure hues together except for very bold effects. Never use two grayed hues together except for very sombre effects.

Sunny rooms usually require the principal hue to be *cool*. North rooms often are done in *warm* hues.

NAHB Lists 1943 Objectives

THE 1943 objectives of the National Association of Home Builders of the United States as proposed by Fritz B. Burns, President are listed as follows:

1. Greater participation of the private home builder in the war effort.
2. Energetic pursuance of an active campaign for qualified members.
3. Cooperation between builders and government agencies to effect prompt and efficient use of private priorities, and the equitable distribution thereof amongst capable builders, in order to insure prompt action to facilitate the war effort and to keep active as many building organizations as possible so that private industry will be prepared to step into the post-war breach.
4. Sponsorship of a nation-wide counter-inflationary campaign for the purpose of encouraging the investment of war-time surpluses into residential lots. And, further, for the purpose of creating a post-war building backlog to give immediate stimulation to the building industry and to act as a

OF JOB HELPS

HOW TO PLAN ANIMAL SHELTERS

AMERICAN BUILDER FOR JUNE 1943

Bull pens	10 x 10 to 12 x 12 or 100 to 150 sq. ft.
Calf pens, 4-6 calves	8 x 10 to 10 x 10 or 75 to 100 sq. ft.
Maternity pens	10 x 10 or 100 sq. ft.
Box stalls, horse	10 x 10 to 10 x 12 or 100 to 120 sq. ft.
Brood sow pens	8' x 8'
Sheep (ewe) pens	4' x 4'
Pen barns	About 50 to 60 sq. ft. of floor space per cow.
Milking rooms	12' x 12' to 16' x 16' for each 4 milking stalls. (And 4 milking stalls for each 20 cows.)
Milking parlors	Length 7'-6" per cow x 10'-0" wide.
Cow stanchions	36", 42" and 48" widths.
Stanchions, heifer	36" wide.
Stanchions, calf pens	24" for calf pens.
Mangers	Bottom 1" above level of platform.
Manger widths	20, 24, 28 and 32 inches.
Toe hold	1" high and 16 to 18" from stanchion curb.
Horse stalls	5' wide by 9' to 10' long.
Bull yard	600 sq. ft. or more.
Stable heights	8'-0" to 8'-6"
Litter alleys	Wall alley 4'; drive alley 8'.
Cross alleys	3'-6" to 5' wide.
Feed alleys	Wall alley 3'-6" to 4'-6"; center alley 5' to 7'.
Gutters	16" wide x 8" deep on platform side.
Slope of litter alley	1/4" to the foot.
Slope of gutters or mangers	1" in 20'.
Hay and straw chutes	4'-0" x 4'-0" to 4'-6" x 4'-6"
Doors for hay fork	9'-0" to 10'-0" wide by 10'-0" to 12'-0" high.
Doors for hay slings	10'-0" to 12'-0" wide by 12'-0" to 15'-0" high.
Doors for mow floor drive	14' to 16' wide; 12' to 14' high.
Doors for straw carrier	5' wide x 10' high.
Doors for stock	3'-6" to 4' wide x 7' high.
Doors for basement drive	8' wide x 8' high.
Lighting	3 to 4 sq. ft. of glass per cow.
Ventilation	60 cu. ft. of air per cow per minute.

STANDARD STALL DIMENSIONS

Breeds	Width	Length of Platform		
		Small	Medium	Large
Holstein	3'-6" to 4'-0"	4'-10"	5'-2"	5'-8"
Shorthorn	3'-6" to 4'-0"	4'-8"	5'-0"	5'-6"
Ayrshire	3'-6" to 3'-8"	4'-6"	5'-0"	5'-6"
Guernsey	3'-4" to 3'-6"	4'-6"	4'-10"	5'-4"
Jersey	3'-4" to 3'-6"	4'-4"	4'-8"	5'-0"
Heifers	2'-9" to 3'-2"	3'-8"	3'-10"	4'-2"

preventive in the post-war sag.

5. The development of post-war housing, improved and bettered in plan, materials, and at a lowered cost, yet within the scope of public conception and desire.

6. A progressive attitude toward aggression by public housers.

7. Enactment of legislation to provide equally favorable financing for private housing and the same subsidies as public housing.

8. Enactment of legislation to permit the clearance of slum areas and the acquisition of land to be rebuilt by private industry.

9. Sponsorship of a national "Know Your Congressman" campaign amongst our members.

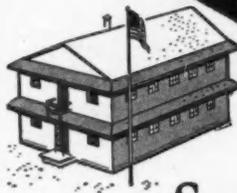
10. Enactment of legislation to provide for "Homes for Veterans" so that every returning soldier may own a part of the land he fought for.

11. The sponsorship of an aggressive campaign to permit war workers to buy homes rather than to foster inflation by the loose spending of wartime surpluses.

SKILSAW TOOLS

ARE BUILDING BASES, BARRACKS and AIRFIELDS

faster!



Speed means everything where America's fighters need bases or hangars or airplane runways . . . and that's why so many SKILSAW TOOLS are on those jobs! SKILSAW cuts form lumber faster for concrete installations and surfaced runways . . . saves precious minutes on every sawing job. SKILSAW DRILLS speed up all drilling, boring and reaming . . . get shops and buildings ready sooner!

SKILSAW TOOLS are lighter, more compact, more powerful. And—most important today—they're tougher to stand up longer under hardest use. Let your distributor demonstrate SKILSAW TOOLS on your present jobs. Phone him today!



SKILSAW, INC., 5031 Elston Ave., Chicago
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 Indianapolis • St. Louis • Kansas City • Atlanta • New Orleans
 Dallas • Los Angeles • Oakland • Portland • Seattle • Toronto, Canada

SKILSAW TOOLS
 PORTABLE ELECTRIC
 * MAKE AMERICA'S HANDS MORE PRODUCTIVE *

B

uilders are demonstrating how

CONCRETE

saves and serves

in war

construction

ALL over the country builders are demonstrating how the use of concrete on essential projects, large and small, saves critical materials, transportation and time.

TO INCREASE FOOD PRODUCTION. For farmers, toiling shorthanded to increase war food production, concrete feeding floors, barnyard paving, sanitary dairy barn floors, milk houses, ratproof storehouses and poultry houses can be built with little use of critical materials.

TO AID WAR INDUSTRIES. Concrete loading platforms, paved truck and storage yards and ramps, built with little or no steel, will help war industries to avoid shipping bottlenecks.

TO EXPEDITE WAR HOUSING. Use of concrete can speed the completion of badly needed war housing facilities and save hundreds of tons of nails, millions of board feet of scarce lumber and thousands of ton miles of transportation.

Concrete will save transportation on most projects because the bulk of concrete materials is generally available within easy hauling distance.

Helpful literature on a wide variety of uses of concrete will be mailed free on request.

PORTLAND CEMENT ASSOCIATION
Dept. A6-3, 33 W. Grand Ave., Chicago, Ill.

A national organization to improve and extend the uses of concrete
... through scientific research and engineering field work

BUY MORE WAR BONDS

CATALOGS AND HOW-

47—HOW TO INSULATE FARM BUILDINGS—The "how" and "why" of modern insulation of the farm are explained in a new folder just released by Universal Zonolite Insulation Co., which also points out that there is scarcely a farm building which cannot be made more profitable through proper insulation against heat and cold. Included in the folder are numerous charts and helpful suggestions for the use and installation of Zonolite granular fill, plaster and concrete. Among these are relative costs and insulating values, areas covered, materials needed, proper proportions for mixing, and illustrations showing how the product is applied. Also available are five guide sheets—how to insulate attics and sidewalls in farm homes; how to build a brooder house; how to build hog houses; how to build a laying house; and how to use Zonolite insulation for general farm purposes.—Universal Zonolite Insulation Co., 135 S. La Salle St., Chicago, Ill.

48—VICTORY CATALOG—By displaying its products on the front cover, which is attractively done in red, white and blue, the Paine Co. has hit a new high in time-saving for every mechanic who has a fastening or hanging job. In addition, a visible index makes every product page immediately available. This new Victory catalog, which presents the company's complete line of fastening and hanging devices, is 8½ x 11 inches in size.—The Paine Co., 2959 Carroll Ave., Chicago, Ill.

49—THE STORY OF PREFAB HOUSING—How strong, durable, livable homes can be built faster with Upson Strong-Bilt panels is described in a new 24-page catalog. It is profusely illustrated with large photographs showing, step by step, the various operations of a typical prefabricated project, beginning with the assembly plant where materials are assembled and fabricated, through the procedure followed when sections arrive at the site, are erected in place, and the buildings are roofed over. Typical interiors, in which Strong-Bilt walls and ceilings have been used, follow, with specifications of these panels presented on the last page.—The Upson Co., Lockport, N. Y.

50—HOW TO TREAT WOOD FOR PRESERVATION—An 8-page illustrated brochure entitled "Laucks Wood Preservatives" gives information on the increasing necessity for wood preservation, and what to do about it. The book is directed toward constructors of heavy laminated beams and arches, as well as manufacturers of sash, doors, plywood and other wood products, and explains Laucks' complete series of low-cost wood treatments for plant application. Among these are water-repellent toxic preservatives which meet the requirements of the National Door Manufacturers Assn. and the Western Pine Assn. The booklet describes methods of treatment for protecting wood from moisture and fungi decay, with a chart on the back page showing methods of application and needs for different types of preservatives, including water-repellent, toxic and toxic water-repellent solutions.—I. F. Laucks, Inc., Seattle, Wash.

51—COLD PROCESS APPLICATION—How to apply cold application roof is described in a folder issued by Abesto; instructions are given for the preparation of materials, the materials required are listed, and also their application. Other Abesto products described are Plastic for patching or caulking, toxic wood preserver, Fiberated roof coating, and sealer.—Abesto Manufacturing Co., Michigan City, Ind.

TO-DO-IT INFORMATION

52—PLANS FOR SMALLER FARM BUILDINGS—A new book of particular interest to the lumber dealer, just issued by the Southern Pine Association, contains plans for 48 farm structures. The plans cover a wide range of the smaller structures so essential in the present effort to raise more food, and many of them are of a type which can be fabricated in the dealer's yard of short lengths of lumber, or will provide him with information needed by his customers themselves to construct such buildings as brooder houses, farrowing houses, self-feeders, etc. Detail working drawings and material lists are presented for each structure. Copies of the book are available at 15 cents each.—Southern Pine Assn., Canal Bldg., New Orleans, La.

53—HOW TO INSTALL ARMSTRONG'S TEMLOK INSULATION—An 8-page folder gives complete instructions, illustrated with photographs, drawings and charts, for the application of Temseal insulating sheathing, Temlok insulating lath, Temlok De Luxe interior finish, and Temlok insulating board, both standard and de luxe.—Armstrong Cork Co., Building Materials Division, Lancaster, Pa.

54—PORTABLE DWELLING UNITS—The Palace factory-built and factory-equipped home is illustrated and described in a four-page folder. Floor plans show how it is possible to have five rooms and bath in 24 by 26 feet. Another interesting Palace catalog is entitled, "A Tour Through the Plant" and takes one on a pictorial trip through the Palace factory where the portable houses are built and assembled.—Palace Travel Coach Corporation, Flint, Mich.

55—BAR WINDOWS—The Geyser Bar system of fenestration is described in a 16-page catalog entitled, "Geyser Bar Windows, Aluminum and Wood." These windows differ from the usual type in that horizontals run continuously from jamb to jamb, unbroken by vertical bars; ventilating areas may then be arranged wherever needed. Architectural detail drawings of sections and ventilator types, as well as a table listing masonry opening widths, and photographs of actual installations, complete the catalog.—E. K. Geyser & Co., 200 Cedarhurst St., Pittsburgh, Pa.

SERVICE COUPON—CLIP and MAIL to CHICAGO

Readers Service Department, (June, 1943)
American Builder,
105 W. Adams St., Chicago, Ill.

Please send me additional information on the following product items, or the catalogs, listed in this department:

Numbers

Name

Street

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

OCCUPATION*

*Please note that occupation must be stated if full service is to be given.

CELLULOSE . . .

HEMICELLULOSE . . .

LIGNIN . . .

The chlorination process illustrated here is useful in segregating three of the principal components of Western Pines—cellulose, hemicellulose and lignin. Such a chemical breakdown furnishes clues for determining how Western Pines can serve even better for old and new uses.

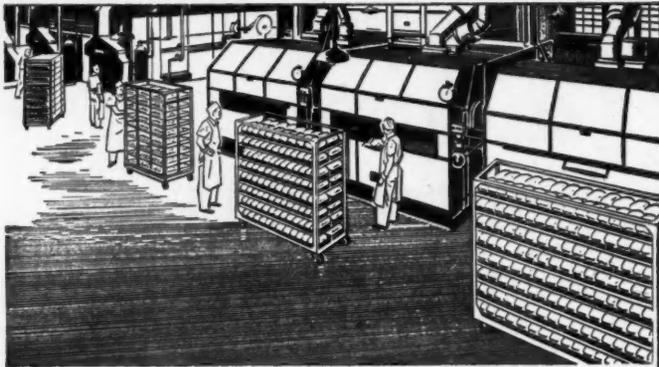


In these wartime days, as in the days of peace, the Western Pine Association Research Laboratory is constantly experimenting to determine new values, and to improve manufacturing procedures for the Western Pines.

WESTERN PINE ASSOCIATION
Yeon Building, Portland, Oregon

*Idaho White Pine *Ponderosa Pine *Sugar Pine

—THESE ARE THE WESTERN PINES—



WOOD Floors are Warm and Quiet—Easy to Work On

FLOATING FLOORS—used a lot in bakeries—have a hardwood surface over a treated wood subfloor. Sand between this and the concrete serves as a cushion. These floors stand up well under the wear and tear of service. The heavy pan trucks and racks roll more easily on them. The floors are warm and quiet, contributing to happier working conditions.

WOLMANIZED LUMBER* is used for many of these floors, as well as for roof structures, shipping platforms and the like. It provides resistance to decay and termite attack. So, although conditions favor these enemies of wood—high humidities, warmth and frequent wettings for cleaning—this construction has long life.

USE OF THIS long-lived lumber introduces no unusual problems. The speed with which hundreds of Army and Navy projects have been erected is evidence that Wolmanized Lumber goes up easily and fast. All of the advantages of working with wood are retained—low cost, light weight, strength, resilience, good insulating properties. It is clean, odorless and paintable.

ORDINARY WOOD, deeply impregnated with Wolman Salts* preservative by the vacuum-pressure method, becomes Wolmanized Lumber. Service records covering millions of feet, some of it in service over eighteen years, prove its lasting ability. The low upkeep costs that result certainly warrant your considering Wolmanized Lumber for postwar construction. American Lumber & Treating Company, 1645 McCormick Building, Chicago, Illinois.

*Registered Trade Mark

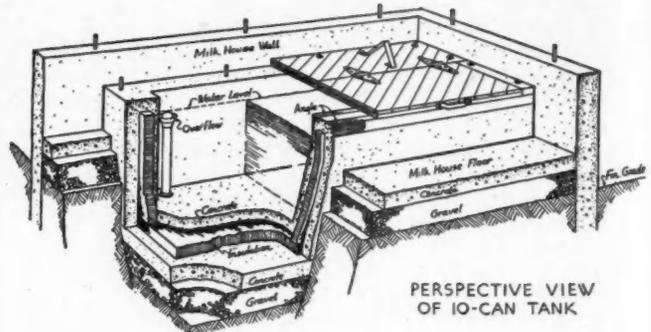
"Alloyed" FOR ENDURANCE
WOLMANIZED LUMBER



(Continued from page 53)
 ment. Illustrated on these pages is the framework of a hog house. Hog houses these days are made of lumber, when lumber is available. Frequently, however, lumber is not available for the covering and therefore cement asbestos board is used. Depending upon what your lumber dealer has available, the bill of materials given below is applicable. It may be necessary to substitute for metals included, or for the lumber.

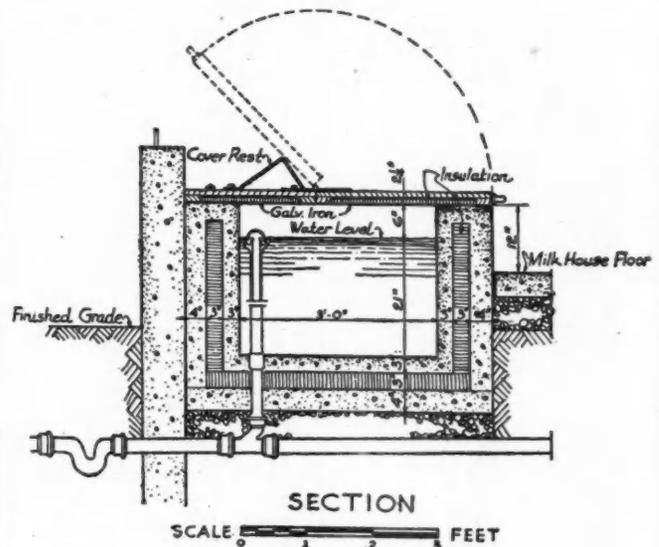
HOG HOUSE NOTES

1. Length may be increased to 7'-0" for large sows
2. Use door in front and back
3. Do not omit ventilators at ends—they are important
4. Measure width of 6 roof boards and allow 5¼" cracks for



PERSPECTIVE VIEW OF 10-CAN TANK

Above is a perspective view of a milk can tank designed to cool and keep milk until it is transported. This is one of the essential features of a milk house.



SECTION

SCALE 0 1 2 3 FEET

NUMBER OF 40-QT. CANS	TANK DIMENSIONS	
	INSIDE	OUTSIDE
2	24" x 36"	44" x 56"
4	36" x 36"	56" x 56"
6	54" x 36"	74" x 56"
8	72" x 36"	92" x 56"
10	90" x 36"	110" x 56"
12	108" x 36"	128" x 56"

Above is a section view with foot scale showing the construction of a milk can milk tank. At left are tank capacities for inside and outside dimensions of various sizes of tanks that are ordinarily built in farm milk houses.

TABLE SHOWING DIMENSIONS OF VARIOUS SIZE TANKS.

metal battens—make length of frame $3\frac{3}{4}$ " shorter than resulting dimensions
 5. Note 2" x 6" blocks supporting guard rail

BILL OF MATERIAL

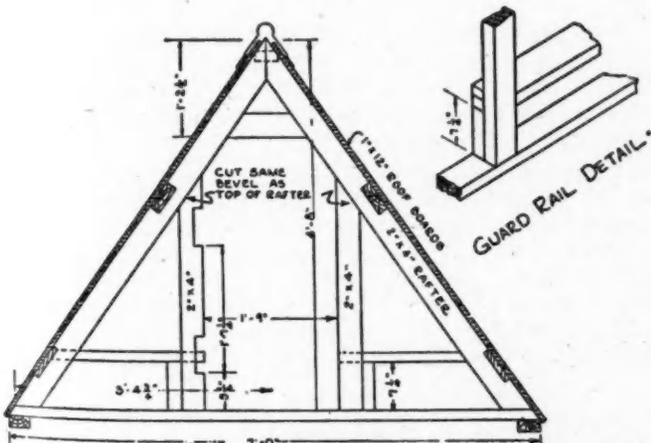
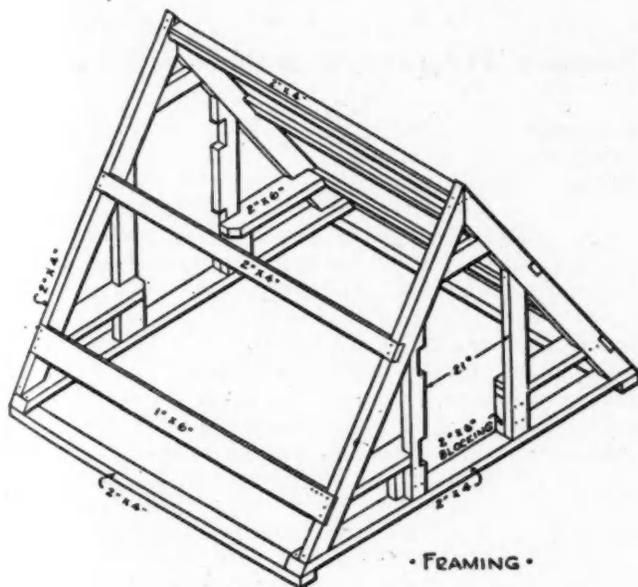
Lumber:

- 2-2" x 4" x 8'-0"
- 11-2" x 4" x 6'-0"
- 1-2" x 6" x 10'-0"
- 2-1" x 6" x 6'-0" Western White Pine
- 16-1" x 12" x 6'-0" Western White Pine Barn Boards
- 5-1" x 12" x 4'-0"

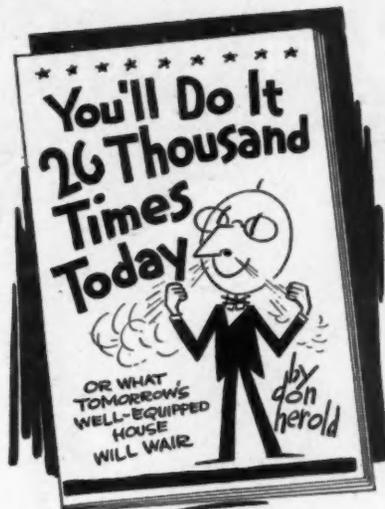
Hardware

Nails

- 2½ lbs. 16d common
- 2½ lbs. 8d common
- 1½ lbs. 6d common
- 1 lb. ¾" or 1" Galv. nails for battens
- 4-5" Heavy strap hinges with screws
- 6-6" Galv. iron ridge roll
- 12-6' Galv. Battens
- 1-8' Galv. Battens
- 2-6" Wrought steel hasps with staples for fastening doors
- 2-4" Steel hooks with 2 staples each for hooking door back to roof.



Framing details of hog house shown above are applicable to today's needs. Substitutions may be necessary for the metal and lumber indicated, however.



Free!

Your Copy of this Informative and Easy to Read Booklet About the Home of Tomorrow

Don Herold, one of America's foremost writers and cartoonists, discusses an important phase of tomorrow's new homes.

This booklet is now being mailed to thousands of prospective builders all over the U. S. who have requested it in response to national advertising.

Mr. Herold's entertaining and enlightening outline of future home ventilation is *must* reading for everyone with an interest in residential construction. Write today for your free copy.



Building for Uncle Sam today so that we can build for you tomorrow.

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Victor Electric Products, Inc.
 Dept. IB-334
 2950 Robertson Ave., Cincinnati, Ohio

Name _____

Address _____

City _____ State _____

Build This
Modern Fireplace

In Your Post-War Homes!



Yes, regardless of any changes in post-war homes—there will always be a fireplace.

More than 125,000 Heatilator Fireplaces now in use—under all conditions—are proving every claim we ever made for it.

This great success of Heatilator is adding a new talking point to the living room. It not only provides a smokeless fireplace, but one that circulates the heat.

HEATILATOR INC. 616 E. BRIGHTON AVE. SYRACUSE, N. Y.

HEATILATOR Fireplace

MAJESTIC COAL CHUTES

NEW VICTORY MODEL AVAILABLE WITHOUT PRIORITY—FOR ANY HOME OR BUILDING

MAJESTIC CHUTES ALSO BUILT FOR ALL PRIORITY NEEDS BY PERMISSION OF WAR PRODUCTION BOARD

AVAILABLE NOW

Now you can install coal chutes of genuine Majestic quality—in any home or building!

The War Production Board has not only permitted Majestic to supply its famous coal chutes to Army, Navy and industrial priority holders, but also to produce a special Victory Model chute available to anyone, without priority.

Add the protection, convenience and value of these popular items to your building specifications. Write for details today!

THE MAJESTIC COMPANY

889 Erie Street, Huntington, Indiana



BUILDING NECESSITIES

"War to Peace Plan"

(Continued from page 31)

role in rebuilding cities, has recently proposed a \$25,000,000,000 program in which the work would be done by private enterprise backed by public authority. Cities would be authorized by their state legislatures to acquire land in deteriorated areas by purchase and condemnation. After being cleared of the old structures, it would be turned over to private limited dividend corporations that would develop it in well planned, modern communities.

The Urban Land Institute proposes no grants or subsidies for the original purchase of the land, but suggests the use of federal credit over a long period of time, with low interest rates. The recent Maryland act which authorizes municipal land development commissions to acquire land for private redevelopment is cited as a progressive step in this type of operation.

SUMMARY—There is a widespread, active and vociferous interest in the development of a post-war private enterprise program for the building industry. A great many of the problems to be solved are local in nature and must be done by the organizing of local building, real estate and financing interests. However, national effort will be needed, and in this connection industry, after it has arrived at a definite program, will have to turn to Congress. *American Builder* will continue to present further ideas, proposals and suggestions for a post-war private enterprise program in the months ahead.

* * *

"Glorify Progressive Builder"—Babson

(Continued from page 32)

proportional to the percentage of home owners. This means that it is greatly to our advantage to encourage a building boom in private residences.

"A study of building cycles during the 112 years following 1830 shows that the United States has experienced six long building cycles, varying from thirteen to twenty-two years in duration. We are now in the last of these cycles. The peak was reached in 1925; the low in 1932-'33. Based upon available statistics another boom is due, and soon. There are many reasons for these so-called 'twenty-year cycles,' namely: the effect of depreciation and obsolescence, population waves, marriage rates, mortgage foreclosures and, of course, general business conditions.

"A further study of the building cycle shows that a real estate boom follows every major war. This is due partly to the fact that wars have been periods of extra severe building depressions. At such times all unnecessary construction is prohibited, which dams up a tremendous post-war demand for homes and other construction.

"To free such a residential boom from a later backfire, two things should be considered. First, labor unions should remove their hindrances to prefabricated houses. We should both reduce the cost and improve the comforts of small residential homes. Second, without restricting one's privilege of borrowing money, legislation could be passed providing that homes built during the immediate post-war period should be exempt from foreclosure or forced sales so long as occupied and maintained by the owner. Banks and others will collect a higher rate of interest on said loans to offset the increased risk; but this need require only actuarial 'insurance' compilations to arrive at a safe figure."

* * *

How To Figure Painting Jobs—

(Continued from page 58)

Blank columns for price adjustments are provided in the tables, and local prices should be entered in pencil to permit erasures for future price changes.

Caution: Use a workout sheet; place all items on it,

price them carefully. Remember that a three-coat job means three trips for the painter, and that the minimum charge on a small job must be adequate to enable the mechanic to charge at least 1/2 day and preferably a full day, otherwise any profits will disappear.

Estimating: The tables give *selling prices for 1, 2 or 3 coats per 100 sq. ft. By moving the decimal two points forward, the 100 sq. ft. figure becomes a price per sq. ft. Example: Varnish on wood 3 coat price 100 sq. ft. = \$4.82, 1 sq. ft. = .0482 or 4-4/5c.

Exterior Paint Labor Costs and *Selling Prices

Including "Make Ready," *Compensation Insurance and *Profit With Price Adjustments for Special Surfaces
Basis

*Labor at \$1.00 per Hour ÷ square feet production = costs per square foot.

Cost Schedule		Base Rates for Flat Work					Extra for Special Surfaces	
1	2	3	4	5	6	7	8	
Sq. Ft. Production per man hour	Sq. Ft. Less 25% "Make Ready" Allowance	Base Cost Price sq. ft.	Add 20% to Col. 3 Comp. Ins. sq. ft.	Add 20% to Col. 4 Lab. Profit sq. ft.	Add 25% to Col. 5 for dra. etc.	Add 40% to Col. 5 for wds. etc.	Add 50% to Col. 5 for corn. etc.	
100	75	.0133	.0146	.0175	.0218	.0246	.0264	
105	79	.0127	.0140	.0168	.0210	.0236	.0252	
110	82	.0122	.0134	.0161	.0201	.0226	.0242	
115	86	.0116	.0127	.0153	.0192	.0215	.0230	
120	90	.0111	.0121	.0145	.0181	.0203	.0218	
125	94	.0107	.0118	.0142	.0177	.0199	.0213	
130	97	.0103	.0113	.0136	.0170	.0190	.0204	
135	101	.0099	.0109	.0131	.0163	.0183	.0197	
140	105	.0095	.0105	.0126	.0157	.0176	.0189	
145	108	.0092	.0101	.0121	.0151	.0169	.0182	
150	112	.0088	.0097	.0117	.0146	.0164	.0176	
155	116	.0086	.0095	.0114	.0143	.0160	.0172	
160	120	.0083	.0092	.0110	.0138	.0154	.0166	
165	124	.0081	.0089	.0107	.0134	.0150	.0162	
170	127	.0079	.0087	.0105	.0131	.0147	.0159	
175	131	.0076	.0084	.0101	.0126	.0141	.0153	
180	135	.0074	.0081	.0097	.0121	.0136	.0148	
185	138	.0072	.0079	.0095	.0119	.0134	.0146	
190	142	.0070	.0077	.0093	.0116	.0131	.0143	
195	146	.0068	.0075	.0091	.0113	.0128	.0140	
200	150	.0067	.0074	.0089	.0111	.0126	.0138	
205	154	.0065	.0072	.0087	.0109	.0124	.0136	
210	157	.0064	.0070	.0085	.0107	.0122	.0134	
215	161	.0062	.0068	.0082	.0103	.0118	.0130	
220	165	.0061	.0067	.0080	.0100	.0115	.0127	
225	168	.0060	.0065	.0078	.0098	.0113	.0125	

*Any reference to base prices for material and labor of percentages added for labor profit, compensation insurance and sales commission, etc., are illustrative only and have been used in order to illustrate the method of estimating and are not intended to suggest in any way resale prices. All base prices for material and labor and percentages added for labor profit, compensation insurance and sales commission, etc., must be adjusted to meet your local conditions and the standards of your business practice.

* * *

More Homes for Detroit Families

(Continued from page 50)

are in a position to do the job quickly, efficiently and at low cost.

Detroit builders point out that large numbers of small unsightly public housing units are being built there, using one of the nation's scarcest products—plywood. They think it inconsistent for the public housing agency to build entire houses of plywood when this product is so scarce that private builders cannot even get a few pieces for cupboard doors (see page 74 for further facts).

Accompanying plans of the substantial brick duplexes being built by Miller are worthy of study. These houses have the same sound construction and adequate living facilities as his pre-war houses, although the use of critical materials has been greatly cut. They have full basements with 10 1/2-inch concrete block foundations, coal fired warm air heating, Celotex sheathing, mineral wool insulated ceilings, concrete steps, walks and porches, asphalt shingle roofs, unusually large and carefully placed windows. Considerable attention has been given to variations in the exterior, to avoid a monotonous appearance. As study of the plans will show, great ingenuity has

(Continued to page 92)



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.

These powerful, high speed electric saws assure accurate cuts, better fitting and a better building. Each model is perfectly balanced for safe one-hand use with greatest weight on long end of board. Easily and quickly adjusted for depth and bevel cuts.

Full details upon request.

MALL TOOL COMPANY

7737 South Chicago Avenue, Chicago, Ill.

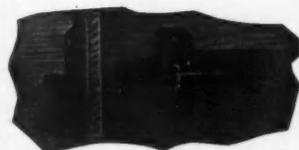
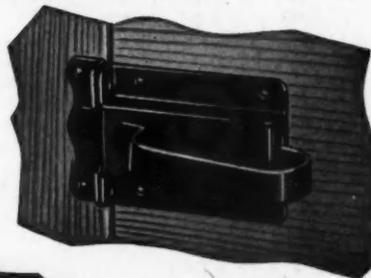
WAGNER

LATCHES THAT CAN BE LOCKED!

DANDY REVERSIBLE No. 847! FOR SWINGING DOORS—POPULAR PRICED.

Center screw covered by latch bar at all times.

Convenient padlock eye for security.



Furnished with back latch to protect door from damage, from wind, etc.

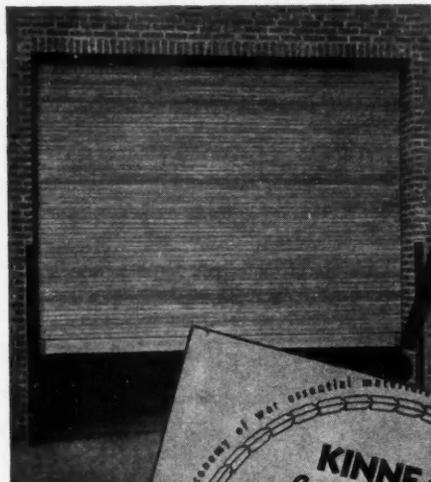
Here is a quickly installed, economical and efficient latch for swinging doors. Fits right or left hand doors without changing spring. Long latch bar permits space up to 5/8" between door and jamb.

WAGNER MANUFACTURING COMPANY
Dept. AB-643 Cedar Falls, Iowa

DATA YOU'LL WANT

— For Your Wartime Door Needs

An alternate that saves steel without sacrificing efficiency—the KINNEAR WOOD ROLLING DOOR. It incorporates, in wood construction, many of the same time-tested advantages that have made Kinnear Steel Rolling Doors industry's preference for almost a half century. Convenient, coiling upward operation. Space saving. Ruggedly built—any size. Easy to install. Specify it for your duration needs.



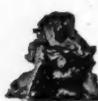
Offices and Agents in All Principal Cities

Write TODAY FOR BULLETIN 37

Gives complete specifications and shows how the wood-slat curtain is assembled for strength, weather protection and smooth coiling.

THE KINNEAR MFG. CO.
2200-50 Fields Ave.
COLUMBUS, OHIO





REG. U. S. PAT. OFF.

Samson Spot Sash Cord



REG. U. S. PAT. OFF.

By specifying and using Samson Spot Cord for hanging windows, with suitable weights and pulleys, you obtain perfect balance by a time-tested method. You also guard against the use of inferior unidentified cord.

Samson Cordage Works, Boston, Mass.

★

FREEDOM

Freedom is a government of, for and by the people. As Americans, we inherit it. As a Nation, we have earned it. Let's preserve it.

★

(Continued from page 91)

been displayed in grouping the kitchen and bathroom plumbing facilities to conserve critical materials. In the case of the 1-story duplex, kitchen and bath are back to back. In the case of the 1½ and 2-story duplexes, kitchens and baths of adjoining units are back to back. Also the bathrooms are placed directly above the kitchens.

Miller puts the duplexes on wide plots—the majority 100 feet wide and the minimum 75 feet wide. They are rented to people with salaries ranging from \$3000 to \$7500—an excellent class of war workers. Since they are built under Title VI the maximum mortgage is \$5400 and the rental \$50 a month.

On the subject of rent, Miller points out the injustice of the fact that although construction costs have gone up 35 per cent in the past two years, and the general price level at least 25 per cent, rent levels of Title VI houses have not been allowed to move from the \$50 originally set. Also the builders' maximum selling price of \$6000 has not been allowed to change, although there can be no question as to the fact that costs have gone up materially.

Labor is one of the Detroit builders' greatest headaches. It is more difficult to get good labor than materials. The amount the private builder can pay in overtime is limited by the fact that his overall cost is set by his FHA commitments. On the public housing projects, however, there is no such limitation on overtime pay.

In spite of all these difficulties Detroit builders are going ahead with the job of getting houses built that they feel will be a credit to them and their city.

* * *

How to Convert Old Homes

(Continued from page 37)

"I would rather do this conversion than new building. There are no priorities to worry about. All you have to do is do the work and when you are finished Uncle Sam sends you a check."

Walter Henrion was one of the first contractors to get started on the lease-conversion plan, for Wichita was one of the first towns to get under way with this work.

Wichita has taken great pride in handling its increased population problem without confusion. Although the population doubled within a space of two years it has had few trailer camps and has been able to house most of the in-migrant workers either in new homes or in the hundreds of attics and basement conversions which were completed before the HOLC got on the job.

The problem confronting HOLC was one of moving into Wichita to take over properties that in the main could not be economically handled by private financing agencies and property owners.

An example of this was a case of an old building near the downtown section of Wichita that could be converted into sixteen apartments but which would cost so much that there was very little in it for the owner. In this case the HOLC official told the owner that he knew he couldn't give him what the property was worth. For the HOLC must recapture one-seventh on the cost each year on the seven year lease. There is also a limit of \$2,500 per unit on expenditure per unit created, although the average expenditure for remodeling has been about \$1,600 a unit. The owner of the property to be converted into sixteen apartments was inclined to turn down the HOLC proposition, but decided to let the government official go ahead inasmuch as he would receive back a practically renewed property that would bring in a substantial income after the government had completely renovated and overhauled it.

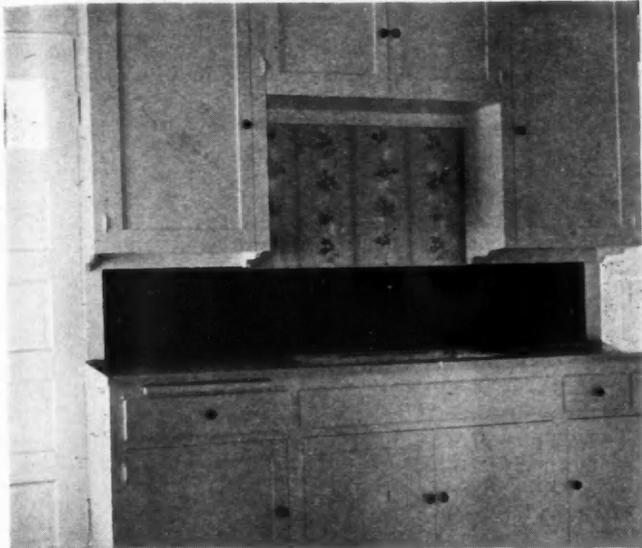
In handling an HOLC lease conversion project, there are five main steps.

First, NHA takes the owner's application. These are then screened, which means that the various property factors such as zoning and location are considered and the application is return to the HOLC which sends an inspector to the property. This inspector considers the tax on the property, which the government agency will have to pay, the insurance, mortgage, and property restrictions and then decides whether or

not the property itself will readily convert into apartments. This is step two, during which the inspector makes out the preliminary inspection report.

An architect then goes out and makes a plan for the units and writes specifications.

The conversion superintendent then considers cost, the major consideration being that the government is leasing the property for seven years, with a three year option to lease it further if desirable, and in this seven years the conversion superintendent decides whether one-seventh of the cost can be recaptured in rent each year. Of course the rent must also pay the taxes, insurance, mortgage and all charges. This



Typical kitchen in Wichita conversion job.

working out of the formula is tabulated here as step five, but it is worked out prior to the time when the lienor consents to leasing the premises.

An arrangement is worked out with the owner as to what should be paid for the property and this payment is made quarterly. Upon actually signing the lease, if the lease and the possession date are the same, the first three months' payment is made in advance, on the possession date. Steps three and four, as far as the owner is concerned, are the signing of a statement of citizenship corporation and signing the lienor's consent to leasing of encumbered premises to the National Housing Agency.

The last step taken by the HOLC is to obtain bids from their list of contractors on the job leased. The contractor makes his bid upon the plan furnished by the architect, taking into consideration the work that has to be done.

The Lease-Conversion plan actually saves the government money that otherwise would have to be spent on new building. On the other hand it creates no new property that might stand idle after the war. It, therefore, helps the town as well as the owner by creating a rentable property and of course is good war business for the builder or contractor.

Although about one-third of the applications are rejected the real problem found up to date is the job of selling the owner on leasing his property and having it converted. Of course he has nothing to say about the property if the government continues to hold it for seven years, and the government can hold it three years longer if it so desires. On the other hand, if the government does hold the property three years longer it must pay a higher rental because by that time the cost of remodeling has been earned. Furthermore, the government has the option of returning the property to the owner before the seven years are up, in which case the owner receives his property back without any indebtedness attached to it in any way and all the improvements that have been made by the government stand available to the owner.

It has been indicated that the HOLC officials working on this Lease-Conversion plan are interested in contacting more contractors and builders who would be interested in doing this work. The easiest way to obtain some of these jobs is to contact your local HOLC Lease-Conversion office.

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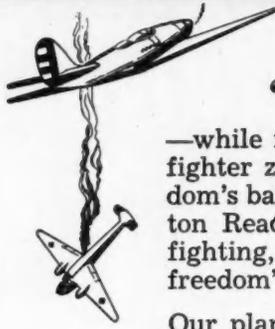
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Expansible Portable House

(Continued from page 33)

26 by 24 feet in size, with two bedrooms.

The extensions fold up neatly against the sides of the center section when it is necessary to transport the house from one location to another, or from the factory to a home site. Once on a foundation provided at the home site it becomes a modern five-room home through expansion. The extensions are unfolded into roof, floor, walls and partitions. Mouldings are applied and the house is ready for furnishing and occupancy.

The entirely new designs and methods for housing units have been developed as a result of ten years of research and experience in the trailer industry, and their value has been highlighted by the fact that trailer coaches produced under these methods have traveled the highways for years without structural failure.

A scientific method of insulation is employed in the unit's planning. The heating system changes the air in the home every three minutes. All windows, doors and ventilators of the house are screened.

Wiring and plumbing, as well as other equipment, are of standard residence type, connections of standard size being provided for sewer, water and electrical service.

The expansible portable house has been especially designed for immediate use in helping solve the war housing problem, but it has a number of features which are expected to project its adaptability beyond the war period. The fact that it can be easily transported will help considerably in post-war use.

The complete wartime Industrial Housing Service includes the above described house, single-family units, two-family units, utility toilet and laundry units, cafeteria, infirmary and community hall units.

* * *

How to Frame 30' x 24' House

(Continued from page 38)

ber used shall not exceed 5 board feet per square foot of floor area, and houses higher than 1 story, 4 board feet.

Now this is easily managed in localities where masonry walls can be used; but in those regions where masonry materials and labor are not available this WPB rule came as a great blow to many builders.

Gerholz and his Emergency Committee in Washington went to work on this obstacle to home building; they submitted facts and figures to the authorities to show that the story-and-a-half house (with useable living space in the attic) should be classified as a one-story house and that, with the addition of only a little extra lumber and critical materials to build the 1½-story style, 50 per cent more people could be sheltered than in the simple 1-story type.

WPB finally agreed to this classification and, according to the Association's Washington Letter, has issued the following order:

"A structure which provides in an attic useable floor area not in excess of 50 per cent of the area of the main floor, provided that the combined area does not exceed that permitted for a one-story structure, may be considered a one-story structure. Useable floor area of an attic is that portion having five feet or more of clear head room."

The question then arose as to the necessity of completing the attic area. After further study, WPB concluded that the useable upstairs floor area may be finished in the course of construction, or merely made available for finishing at a later date if so desired. Adding the useable attic floor space to the first floor area gives a figure sufficiently large to keep the framing lumber needed well within the 5 bd. ft. rule, provided careful thought is given to the framing system and details.

Much study has been given this matter by the FHA technical men and the experienced builders on the Emergency Committee. The accompanying plans and material list apply the framing method finally adopted and approved to one of the Gerholz-Healy popular home designs, which was published on page 28 of the February *American Builder*.

This is a house 24 by 30 feet; four main rooms, bath, hall and stairs in the main section and a big "future" bedroom and hall up under the roof, which is slightly less than half pitch. The attic floor area that can be figured into the total is about 268 square feet, this to be added to the first floor area of about 732 square feet, or 1000 square feet in all. The lumber bill shows 4,514 board feet of 2-inch dimension, which brings the job out at 4½ bd. ft. per sq. ft. floor area, or well within the WPB limit.

Perhaps the most interesting feature of this economy framing plan, as worked out and approved, is the strengthening of the 2x8 inch joists under the bearing partitions by nailing on a 1x8 joist strip. Two of these built-up 3x8's are used below each bearing partition, tied together with 2x4 leaders.

The complete piece-bill or lumber list for this house follows:

MATERIAL LIST 24 x 30—1½ STORY

List—1st Floor Framing

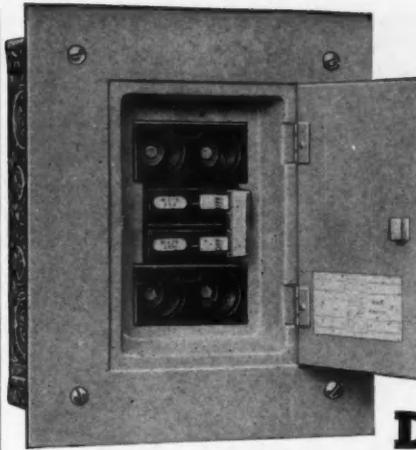
		bd. ft.
43 pcs.	2 x 8—12 joists.....	688
5 pcs.	2 x 8—10 joists.....	67
2 pcs.	2 x 8—14 joists.....	38
4 pcs.	2 x 8—1-6 headers.....	8
3 pcs.	2 x 8—9-0 headers.....	36
10 pcs.	2 x 4—1-4 headers.....	11
1 pc.	2 x 4—3-0 headers.....	2
11 pcs.	2 x 4—8" spacers.....	6
96 Lin. Ft.	2 x 10—16 girder.....	160
Total.....		1,016
60 Lin. Ft.	1 x 8—headers.....	40
5 pcs.	1 x 8—12 joist strips.....	40
140 Lin. Ft.	1 x 3—bridging.....	35
	sub floor.....	900
Total.....		1,015

List—2nd Floor and Roof Framing

41 pcs.	2 x 8—12 joists.....	656
6 pcs.	2 x 8—10 joists.....	80
4 pcs.	2 x 4—12 joists.....	32
46 pcs.	2 x 4—16 rafters.....	491
7 pcs.	2 x 4—3 rafters.....	14
4 pcs.	2 x 4—16 rafters, studs small gable.....	43
200 Lin. Ft.	2 x 4—studding main gables.....	134
24 pcs.	2 x 4—7 studding inside.....	112
22 pcs.	2 x 4—6 studding inside.....	88
120 Lin. Ft.	2 x 4—plates.....	80
2 pcs.	2 x 10—8 bay headers.....	27
Total.....		1,757
140 Lin. Ft.	1 x 3—bridging.....	35
60 Lin. Ft.	1 x 8—headers.....	40
60 Lin. Ft.	1 x 8—plates.....	40
48 Lin. Ft.	1 x 6—plates.....	24
40 Lin. Ft.	1 x 8—ridge.....	27
18 Lin. Ft.	1 x 4—valley.....	6
11 pcs.	1 x 6—7 roof ties.....	39
4 pcs.	1 x 4—16 rafter strips.....	22
220 Lin. Ft.	1 x 4—plates.....	40
	roof boards.....	1,200
	sub floor.....	300
Total.....		1,773

List—Studding, Plates and Headers—1st Floor

110 pcs.	2 x 4—8 outside studs.....	587
90 pcs.	2 x 4—8 inside studs.....	480
660 Lin. Ft.	2 x 4—plates.....	440
270 Lin. Ft.	headers and short studs.....	180
20 pcs.	2 x 2—8 studs.....	54
Total.....		1,741
6 pcs.	1 x 6—8 nailing strips.....	24
40 Lin. Ft.	1 x 6—nailing strips.....	20
6 pcs.	1 x 4—8 nailing strips.....	16
Total.....		60
Total all 2" dimension lumber.....		4,514 bd. ft.



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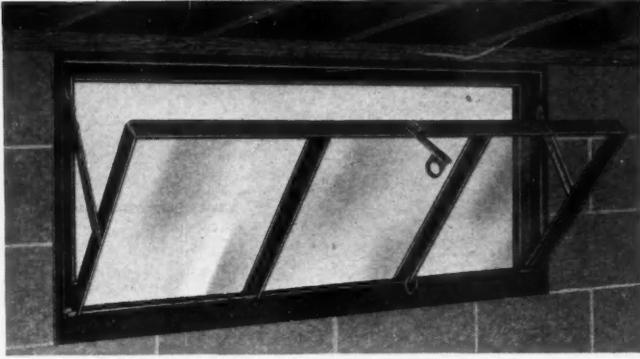
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DRIVE-IN RESTAURANT

(Continued from page 42)

Supports for the building are six reinforced concrete piers. These are the base for a 24" steel beam that follows the outer line of the main structure. The beam is so constructed that it creates a balance between the inner building and the outside canopy. Thickness of the canopy is 18" at the hub and tapers down to 8" at the outer rim. Eighty-six tons of steel was used in the pillars and framework and the roof required 126 yards of concrete. Architect was Joseph Feils of Los Angeles.

"You build 'em, Dad, and I'll run 'em" could well be the slogan of the father and son combination of the Dallas Lobellos—Sam, Sr. and Sam, Jr.

Today Sam, Jr., who himself is no amateur in the building business, having had over a year's experience with his father, operates one of the most glorified roadside sandwich and refreshment stands in the southwest. Located across the highway from Love field, Dallas, it is a busy spot at any time of day or night.

This is the third catering and refreshment stand built by Mr. Lobello, Sr. for his son. The first was a small stand built when the younger man decided back in 1938 that his talents for purveying food would earn him more fame and fortune than he would achieve in the building business. It has long since been disposed of because Sam, Jr., really hit the jack pot in the restaurant business and soon needed larger quarters to accommodate his growing patronage.

The stand shown in the picture is Unit No. 2. Since its construction they have built another still more imposing establishment, which is temporarily closed because of gas rationing.

Mr. Lobello, Sr. has been a Dallas builder for the past twenty years, having built an average of twenty-five houses per year in that busy southwestern city. His houses are as distinctive and attractive as the restaurant building suggests, special features being enormous fireplaces in \$6000.00 and \$7500.00 homes and attractive architectural embellishments. He is a believer in the value of giving people in the middle income brackets at least some of the features common to homes of much higher prices.

So far as building is concerned Mr. Lobello is inactive today, but is ready to get started on a new program just as soon as the government relaxes its present limitations on new construction.

And while he's waiting for that "V" day to come what do you suppose he's doing to keep himself busy? Why, of course, you've guessed it. Building all these restaurants for his energetic son has given him a lot of inside information on how a restaurant is run, so today he's the manager of a big cafeteria for one of the large war plants in Dallas.

Being a builder sure teaches a man a lot of angles on how to get along in this old world, doesn't it?

* * *

FROZEN FOOD PLANT

(Continued from page 46)

In normal course meat carcasses from the slaughtering pen are wheeled by means of an overhead track into the chill room where it is allowed to cure for several days. Then it is wheeled out of the other end of the room into the processing room where the meat is cut up. Such items as steaks and chops are then wrapped and identified as to owner's name and placed in the sharp freezer. After being quick frozen the meat is then placed in the customer's locker until desired.

Pork products such as hams and shoulders are put in line for the salt curing room, the smokehouse and then the meat storage room.

The locker room, 16.2 x 45.5 feet in size, has 400 all-steel lockers installed with room for 100 more. It is served by overhead coils in which the flow of ammonia is controlled, so as to provide an average temperature of 5 below zero. Provision is also made for automatic defrosting of the coils. This room is insulated with 7 inches of cork finished on the inside with "Korkseal" and a special aluminum paint.

The quick freeze room, approximately 6 by 12 feet in size opens onto the locker room for the greatest efficiency in opening and closing, and is insulated with 9 inches of cork

with the same interior finish as in the locker room. Shelf type coils and controls are such as to produce a temperature of 18 below zero. The room is also equipped with a blower which circulates air through freezing shelves and outside air may also be introduced during the defrosting period which is accomplished by hot ammonia gas. The ventilation keeps the air pure and free of objectionable odors.

The processing room with a small lobby adjoining it is equipped with tables, scales, meat grinders, hot and cold water, sinks, etc. The chill and aging room, 12 by 33 feet in size, is arranged with three sets of overhead rails and with track doors and both ends. A temperature of 32 to 34 degrees is maintained in this room by two unit type coolers. It is also equipped with a time clock, placed in the electric line, so as to cause defrosting of the coils between 2 and 4 A.M. daily.



LOCKER plant processing room; note refrigerating equipment.

Equipment in the machine room includes a York 4-cylinder, 7-ton V-type compressor, with an unloading device which permits it to operate at lowered capacity when the refrigerating load drops down. The ammonia condenser of the shell and tube type is of larger capacity than usually installed for this type job.

The cooling tower is located on the roof and is of sufficient size to cool the water within a few degrees of the wet bulb temperature.

The plant is equipped with such safety devices as relief valves, high pressure cut out and thermo relays. All lighting in the cold storage rooms are of the vapor proof type.

* * *

Post-War Commercial Building

(Continued from page 40)

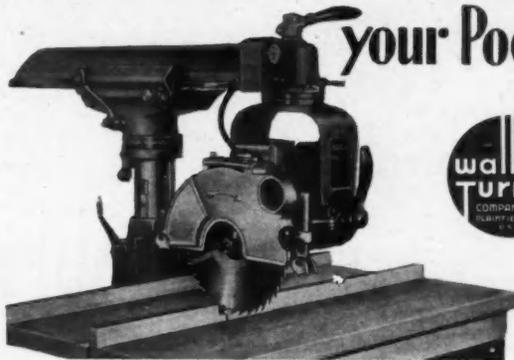
into or very close to, our congested central districts. With all respect to the air transportation of the future, we will have an increasing number of this type of thoroughfare, which will make the automobile just that much more desirable. The automobile will always be an adjunct to air transportation, just as walking is to the automobile. In other words, our troubles can be considerably aggravated after the war, which for some congested areas that have not planned for it, can be the straw that breaks the camel's back.

There are two major problems to be solved. First to revise and further regulate, according to plan, the traffic arteries so that we can safely combine the two forms of transportation—walking and the automobile. Second, we must provide ample storage space, with sufficient capacity, in the right place and at the right time.

We must recognize that the large metropolitan center has an entirely different problem from that of the medium size city, which in turn has a different problem from the smaller city. The larger the area served by a center, the higher become the land values in the center, and the more

(Continued to page 98)

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By Nelson L. Burbank

Author of House Construction Details

and E. M. Mitchell



This new book contains the projects that have appeared in the Shopcrafter's Corner of American Builder and Building Age within recent years. It also contains projects from Popular Homecraft and selected power wood-working booklets. There are some 150 projects ranging from bird houses to garden and indoor furniture of latest design.

All furniture projects have clean lines and balanced proportions and will take the modern light finishes. The variety is large enough to provide a choice for every room in the house. Commercial woods and veneers obtainable in wartime can be used. Large working drawings show construction details, photographs picture the finished articles and bills of materials are accompanied by step-by-step instructions.

142 pages, 150 projects, 8 1/2 x 11, cloth, \$2.00

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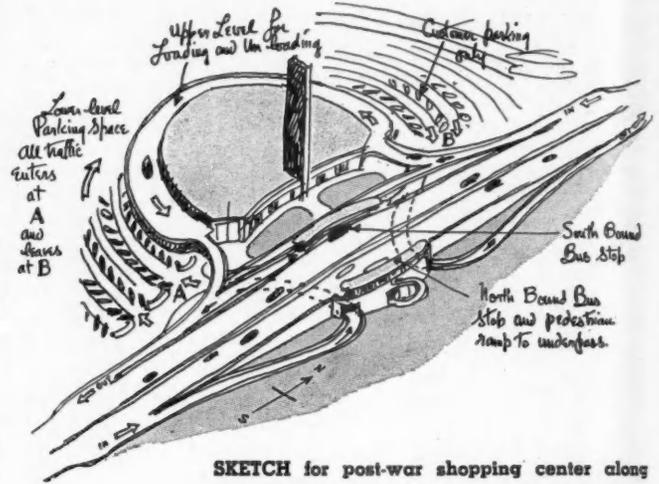
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(Continued from page 97)

difficult to properly readjust their use to this personalized transportation. Fortunately, the need in the larger centers is not as great. The higher rentals per area, the greater congestion, have forced the worker and his family to move farther out for living purposes if he has wanted to really raise a family and if he can afford it. He has become reconciled to using, in the majority of cases, the mass transportation that is available, and which in the



SKETCH for post-war shopping center along speed highway showing access and parking.

larger center has become quite efficient, considering the distances involved.

Now these central areas will always be a desirable location for retail business, because there will always be a high concentration of people (the apartment house dweller), many of whom do not have families, who prefer to live very close to the center. The large centers also always have their transients, and here the long distance transportation plays a part. There is also the appeal to the further out dweller of the large stocks and greater ease of comparative shopping for style merchandise in particular—always obtainable in the center. We must not forget the herd instinct either. These things can and will overcome the inconveniences which can exist compared with other locations.

Expansion of Shopping Areas a Problem

This brings up that American phenomenon, the large, centralized departmentalized store, a community institution, with a huge selection of merchandise and many interesting service features. It is the most potent retail traffic builder ever devised. This type of store will always prosper because of the prospective customers we have mentioned above, but one of their greatest opportunities for future expansion is in the outlying branch. This is especially true if they need additional area and their opportunity of expansion in the central district is limited, the mass transportation system is not of the best, and rebuilding the district to accommodate the new means of personalized transportation presents too many difficulties. There is often a fringe of uneconomically developed area which can be converted quite constructively to this purpose.

Such branches must be able to attain a certain minimum volume to be successful, and therefore would not be too successful in any but the largest metropolitan areas. They can be located to appeal to a given group type, and what is most important, they can be planned to completely and conveniently accommodate the automobile. If it were a "suburban type" store, it would be appealing to the customer whose quite necessary means of transportation is the automobile.

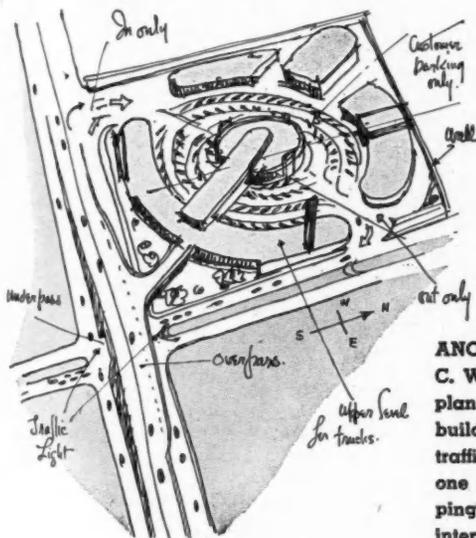
Many types of suburban branches have been constructed in outlying centers, but so many of them have completely ignored the automobile and have built in sections as relatively congested and as unprepared for the

automobile as the central district. They have been forced to halfway provide for some parking, but it is generally very much of a compromise.

How to Plan a Shopping Center

The accompanying theoretical preliminary studies of community shopping centers (also see larger drawing of center on first page of this article) show how a branch expansion of a large department store can be "centralized" in its own shopping center. You would eventually, even if not today, arrive at this center at fifty miles an hour on a limited access highway. You would de-accelerate to ten miles an hour, in a one way combination automobile and pedestrian area, reserved 100% for limited time shoppers. (The local worker would park under cover, in the corners out of the way.) The branch department store has surrounded itself, and shares the parking area, with a variety of convenience merchandise stores—food, drug, all the retailing that goes to make up a complete neighborhood shopping center. This group could take care of all the suburbanites' shopping requirements, except the comparative style items and perhaps some low productivity high average sale home furnishings items, better stocked in the larger central store. There could be some recreational features in harmony with the group.

The parking scheme is a drive-in, park-at-an-angle, drive-out again without backing type which would not only be the delight of the woman shopper, but would promote safety in the area devoted to the two forms of transportation—passenger cars and pedestrians. (Loading of trucks is on an upper level, or around the outside peri-



ANOTHER of Kenneth C. Welch's studies on planning commercial building to fit future traffic problems; this one shows how shopping center at busy intersection is handled for easy access.

meter—away from the shopper's parking.) The maximum distance from a parked car to a main store entrance is two hundred feet, the average is nearer seventy-five. The savings in delivery expense would pay good dividends. It is also designed to handle the Saturday before Christmas parking problem—assuming 90% of the shoppers would come by automobile, which means excellent freedom of movement even in a normal peak.

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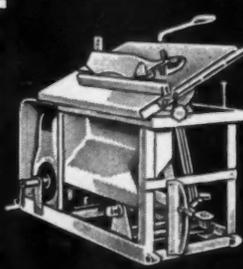
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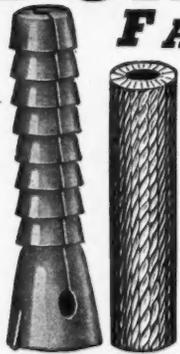
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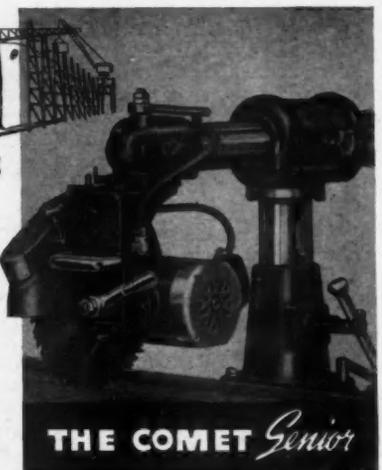
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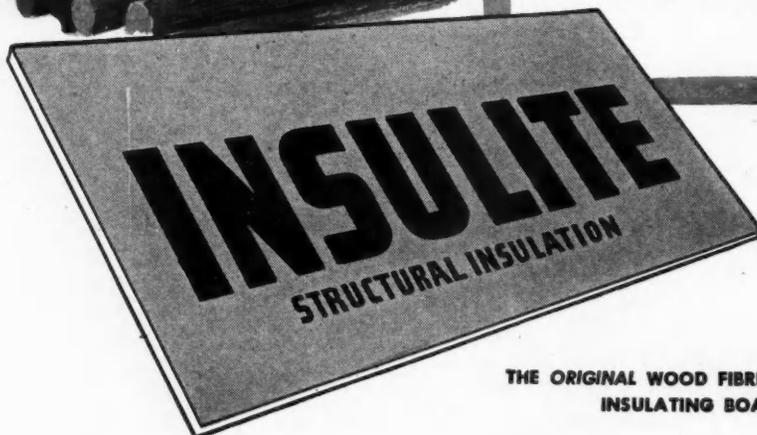
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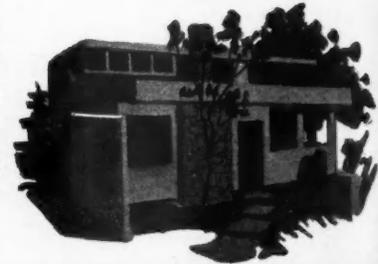
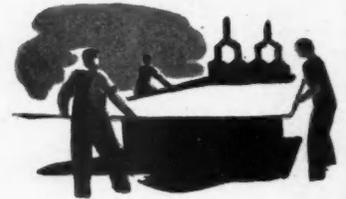
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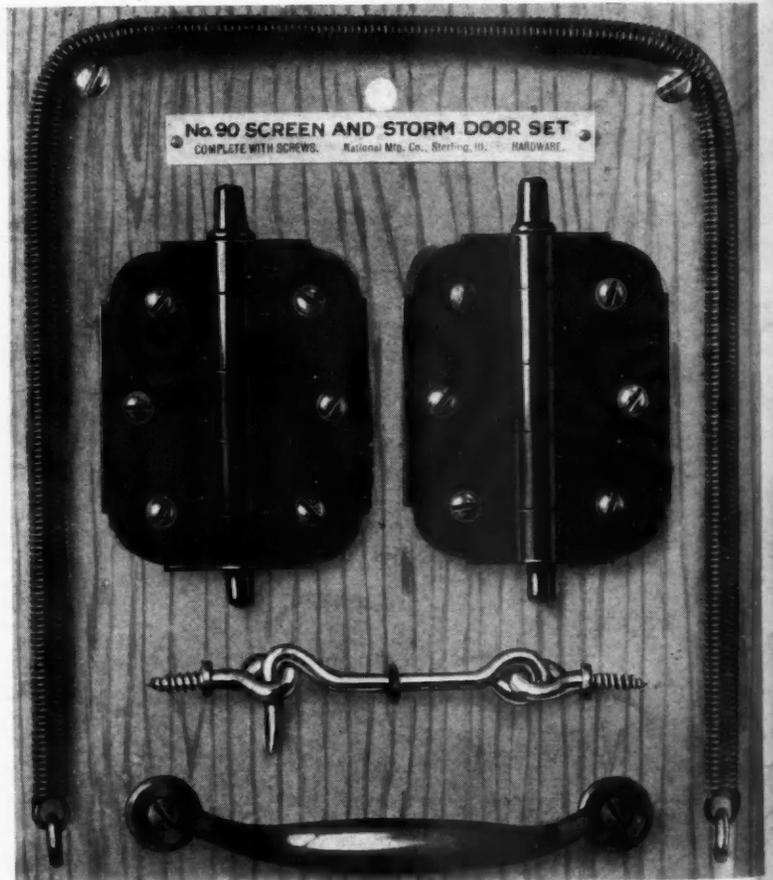
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