

AMERICAN BUILDER

JULY, 1944
PRICE 25 CENTS
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WORLD'S GREATEST
BUILDING PAPER

TECHNOLOGY

PAGE

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JULY 1944

Excitement Ahead in Building!



**LICK THE MATERIAL SHORTAGES
WITH THESE MULTIPLE-FUNCTION
CELOTEX BUILDING PRODUCTS**

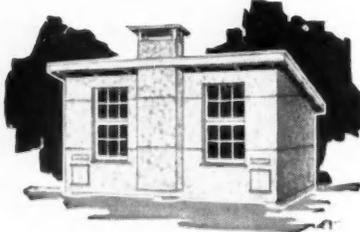
NOW AVAILABLE!

Stumped by material shortages? Missing out on profitable jobs? You needn't! You can keep as busy as ever by replacing hard-to-get materials with these newly developed, multiple-function Celotex products. *Available now!*
Best part—they often do a better job

than traditional materials, as proved in plenty of farm, factory and housing projects where they've been used.
So take a tip from us contractors who are keeping busy and maintaining profits! See your local Celotex dealer—and soon!

CELO-SIDING

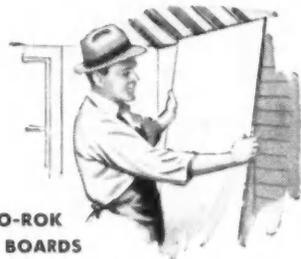
THE MULTIPLE-FUNCTION MATERIAL THAT DOES 3 JOBS



Ideal for farm buildings, factories, machine shops, warehouses and general buildings. Combines siding, sheathing and insulation in one weather-resistant, easily applied material. Applied direct to studding, Celotex Siding saves critical lumber, time and labor. Available in bufftone or green colors and in two thicknesses— $\frac{5}{8}$ " and $\frac{7}{8}$ ". Sizes: $\frac{5}{8}$ " and $\frac{7}{8}$ " in 4' x 8' with square edges; also $\frac{7}{8}$ " in 4' x 10' with square edges; and in 2' x 8' with T&G joints on long edges. Recommend $\frac{7}{8}$ " for greater strength and insulation value. Recommend $\frac{5}{8}$ " for lighter, lower cost construction.

CELO-ROK BRAND BOARDS

For Interior and Exterior Construction

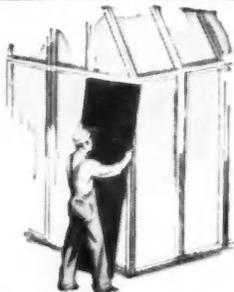


**CELO-ROK
WALL BOARDS**

These gypsum wall boards meet the rigid Celotex tests for quality. Available in $\frac{1}{4}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ " thicknesses for conventional interior wall construction. $\frac{3}{8}$ " and $\frac{1}{2}$ " have square, recessed or beveled edges. $\frac{1}{4}$ " thickness has square edge only.

ASPHALTED SHEATHING

A Celotex board for insulation with all surfaces and edges impregnated with asphalt for dependable sealing against moisture. A very useful board for farm buildings, industrial structures and for repair work. Available in $\frac{1}{2}$ -inch thickness, 4 feet wide and in lengths up to 12 feet. Large areas can be covered in a short time.



**CELO-ROK
WEATHER-PROOF SIDING**

A fire-resistant gypsum wall board. This one structural material will serve in place of both sheathing and siding. Both sides and all edges are treated with a weather-proof compound. Exterior side is finished in attractive green and requires no painting. Available in 1-inch and $\frac{1}{2}$ -inch thicknesses, 24 inches wide, in 6-, 8-, 9-, and 10-foot lengths.



**Now Is the Time to Insulate With
CELOTEX ROCK WOOL BATTS**

Home owners should insulate now for summer comfort and to save fuel next winter. Celotex Rock Wool Batts provide insulation of proved efficiency at moderate cost—but with fine profits for you. Urge prospects to insulate *now*—Celotex Rock Wool Batts are available. New, easier FHA financing on insulation jobs available to your prospects.



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

THE CELOTEX CORPORATION . . . Chicago 3, Illinois

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Time Saver!



Cuts At Any Angle Without Stopping Saw

MONARCH UNI-POINT RADIAL SAW

All cross-cut angle changes are made instantaneously without stopping the saw. A proved high speed, production, woodworking machine, offering the contractor, lumberman, industrial foreman and all wood-cutting operators a new cutting principle which assures far greater production per manhour.

One Point cutting with UNI-POINT means that the saw blade always enters the lumber at the same point in the table, regardless of whether it is set for a vertical, horizontal or compound miter cross-cut angle.

How does UNI-POINT save time? Here are only a few of many time-consuming, operator-motions which it eliminates:

1. No waiting for saw blade to stop. Simply pivot or tilt—snap lock—and start cutting.
2. No long arm to swing or adjust to different angle positions on your work table. UNI-POINT saw is always at same point.
3. No long arm to get in your way. UNI-POINT telescopes back out of the way after every cutting stroke.
4. No need to adjust stops or gauges for every change of cut. Such adjustments eliminated by one point cutting.
5. No need to reset material to conform with angle changes. That's UNI-POINT again—saving more time.
6. No need to replace a cut up guide fence cut up by different angles—because UNI-POINT always cuts at same point.
7. UNI-POINT design often permits combining two or more operations in one:—a tremendous time saver.

MONARCH UNI-POINT RADIAL SAWS enable one man, on most types of construction, to turn out 20% more work in a given time. On some operations savings of from 200 to 500% are possible. Typical examples: notching six 4" rafters at one stroke, cutting both angles at same time. Save more time by sending today for Catalog 60.



AMERICAN SAW MILL MACHINERY CO.

60 MAIN ST.

HACKETTSTOWN, N. J.

Established 1903

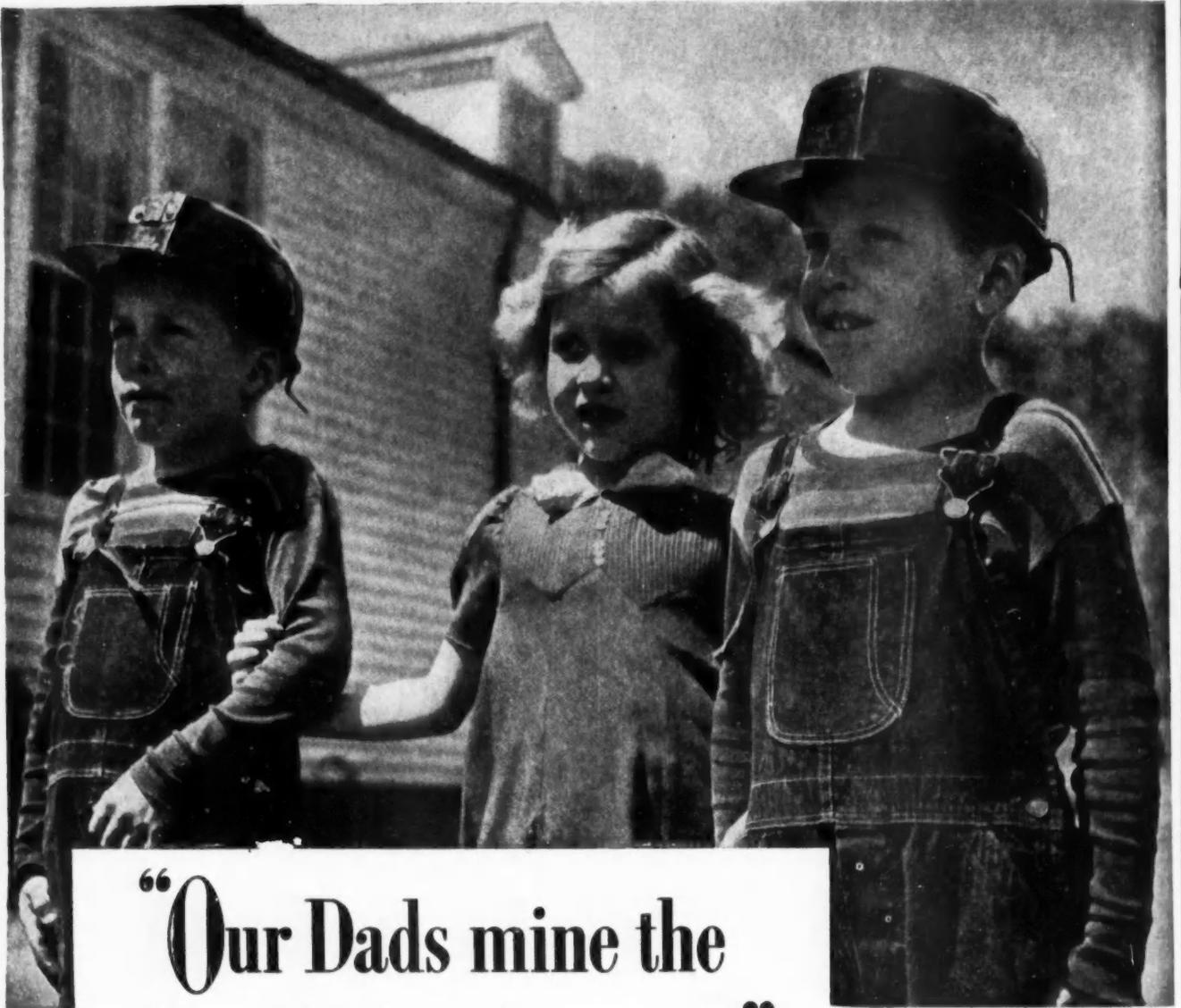
Radial Saws
Shapers

Saw Benches
Sanders

Band Saws
Mortisers

Jointers
Swing Saws

Planers
Lathes
Saw Mill Machinery



“Our Dads mine the best fuel in the world”

These young folks, dressed in hats like their Daddies', have good reason to take pride in the job their fathers are doing.

For their fathers bring from the ground America's No. 1 source of energy and power.

They bring forth the essential fuel needed for the production of steel—the prime power of the nation's railroad system—and the greatest source of electrical energy.

As you've probably guessed—the name of that fuel is bituminous coal.

And many advances have happened in coal mining, just as in other industries during recent years.

Today coal miners are paid better than the average wage of industry as a whole.

Their work is being constantly lightened and their

BUY MORE WAR BONDS

efforts made more productive by modernization. 90% of all bituminous coal produced from underground workings is electrically cut and transported, and over half of all coal is loaded by mechanical shovels.

This fact has made possible the increases in volume of coal mined which the war effort has required.

It is also an important reason why—despite manpower shortages—America's bituminous coal industry is supplying an all-time record volume of coal.

BITUMINOUS COAL
Institute

60 EAST 42nd STREET, NEW YORK 17, NEW YORK

Design 'em now and when building begins
See to it homes have weather built-in!



PEOPLE in all income groups want home air-conditioning after the war. The Gas industry plans to meet this demand with units that (1) Heat more efficiently in winter. (2) Cool the entire house in summer. (3) Provide ventilation all year 'round.

A CP Gas range in a kitchen new
Will make your house a dream come true!



WOMEN KNOW you've given them the most modern kitchen when they see . . . a Certified Performance Gas range that's famous for precision cooking . . . a silent Gas refrigerator . . . in a streamlined kitchen, scientifically planned for greatest convenience.

And just as important as all the rest
Gas for hot water . . . folks know it's best!

FOR YEARS, nothing has even come close to equalling the modern automatic Gas hot water system. People know that, upstairs and downstairs, it means "all the hot water they want, whenever they want it."



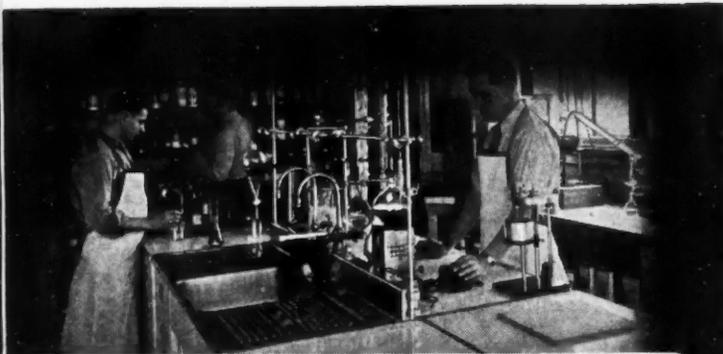
This is the house that Gas  runs!

TODAY, in the great laboratories of the Gas industry, technicians are working to make it possible for architects and builders to offer houses of greater comfort, convenience and economy after the war. People are now being told about these new developments, as well as about the established advantages of Gas, in wide national advertising. In designing the post-war homes you plan to offer, we suggest that you consult your local Gas company for complete information on Gas equipment and Gas service. AMERICAN GAS ASSOCIATION

GAS

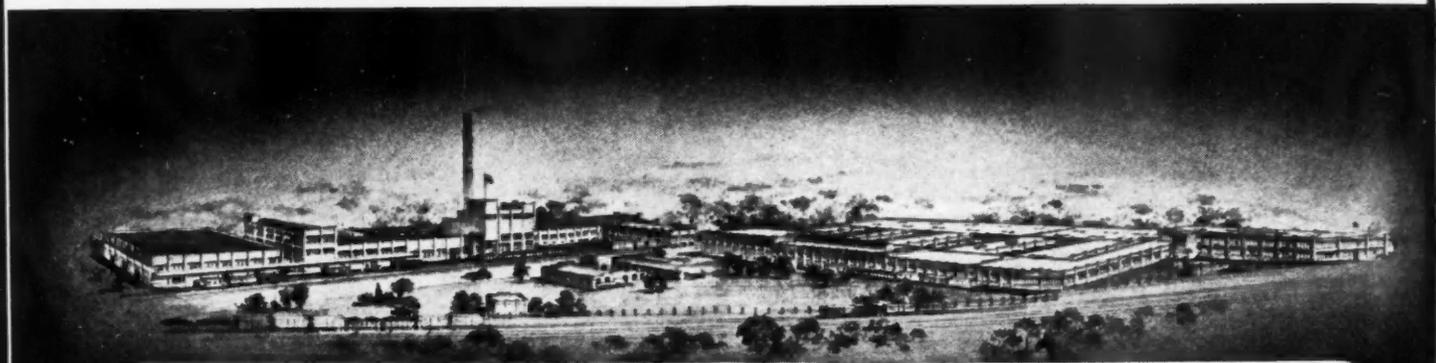
**THE MAGIC FLAME
 THAT WILL BRIGHTEN
 YOUR FUTURE**

These are our postwar plans . . .



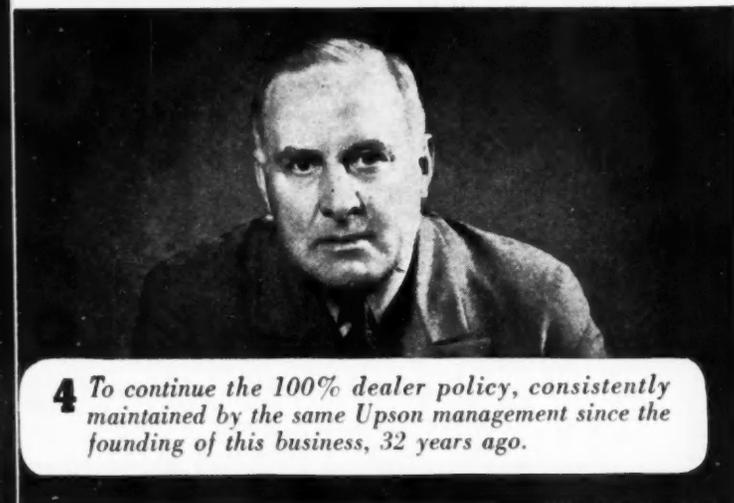
1 To expand the practical uses of Upson Panels through continued research and the development of still more improved techniques for the benefit of the industry.

2 To give every possible aid to the users of Upson Panels wherever their unique characteristics produce a better job than other materials can provide.



3 Needs of our armed forces come first, naturally. But when our war job is done, we plan to turn all our experience and facilities of our 23 acre plant

—largest of its kind in America—toward supplying maximum employment and efficient production of Upson Panels for the postwar building industry.



4 To continue the 100% dealer policy, consistently maintained by the same Upson management since the founding of this business, 32 years ago.



5 To develop still greater consumer preference and understanding of the advantages of Upson Panels through national advertising, already under way.

STRONG-BILT PANELS—approximately $\frac{3}{8}$ " thick—for new construction. **KUVER-KRAK PANELS**— $\frac{1}{4}$ " thick—for covering cracked plaster. **UPSON-PROCESSED BOARD**— $\frac{3}{16}$ " thick—for display and general utility uses. **DUBL-THIK FIBRE TILE**—for kitchen and bath.

THE UPSON COMPANY, Lockport, N. Y.

Upson Quality Products Are Easily Identified
By The Famous Blue-Center



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LETTERS

To the Editor

Needed in Iceland

To the Editor: Referring to an article in your esteemed paper, kindly put me in touch with the firm manufacturing "Thermopane" glass.—HJALMAR BLONDAL, Reykjavik, Iceland.

We can dream can't we?

To the Editor: Your November issue gave interesting details of a house built by Mr. Lou Goldschmidt of Lawrence, L.I. Of course until this war business is over we can't think much of a home, but we can dream can't we?

You will help me very much in plans for after war with further information.—ERIC L. DAWSON, Flight Lieutenant, R.C.A.F. Belleville, Ont., Canada.

Let's have more facts

To the Editor: It has been intimated to me that a plan is "in the brew" at Washington something like this!

A large building program for the lower income home owners is to be done by the government. Of course, private builders would not be able to build homes of this type in competition with the government, unless they had the same kind of financial set-up.

Now, outside of this program, the Federal scheme would be to prolong the system of priorities. These priorities are to be granted preferably to large builders who will conform to the regulations of NHA. Private building will be impossible without government approval and priorities for each case or project. Among these regulations will be prices determined by the government, wage scale, union employees and detailed regimentation and regulation.

We have been informed that the labor unions, especially the CIO, are backing this scheme one hundred per cent or more.

If such a plan is really being considered for the postwar program, it will have most serious results, especially to the middle class and smaller builder whose political affiliations are unsatisfactory.—D. M. GOODYEAR, Hamburg, N.Y.

Narrow lots a problem

To the Editor: I am interested in postwar development of small homes in the \$6,000 and \$7,000 class. However, I note that most all of the plans that you see in the various building magazines contemplate a wide, one-story house. These houses call for a fairly wide lot. In the older parts of many of the cities the lots are not wide enough to take such a house, and two lots are too much ground.

For instance, I own several lots of about forty feet in width. On this size lot the best thing that can be built is a two-story house, which we called a reception hall type of house, with hall, stairway, living room, dining room and kitchen on the first floor; three rooms and bath on the second floor, together with bath on the first floor. I would like to make the suggestion that a few plans along this line be shown in the *American Builder*.

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FOUNDED—1879

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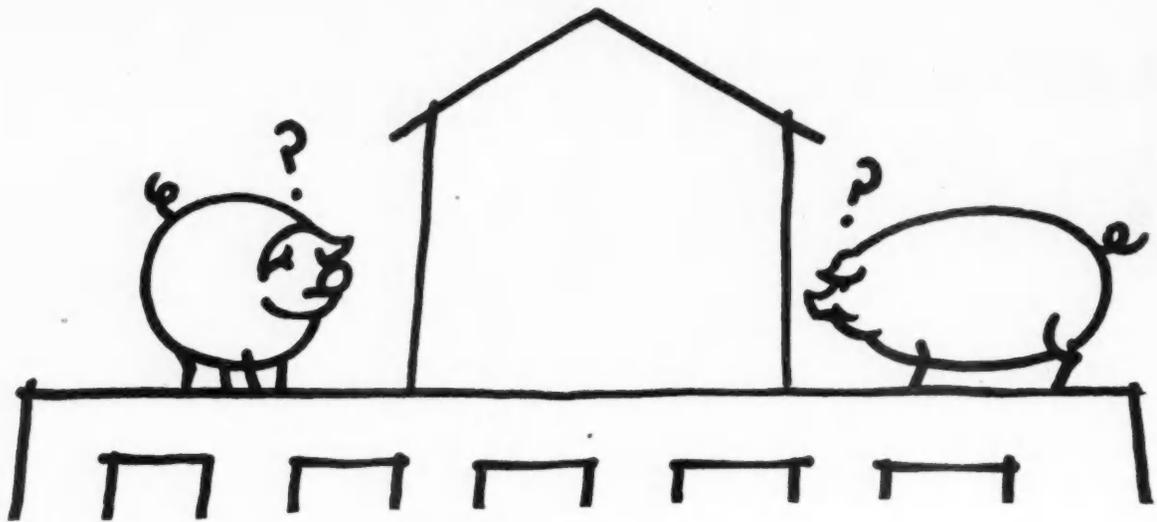
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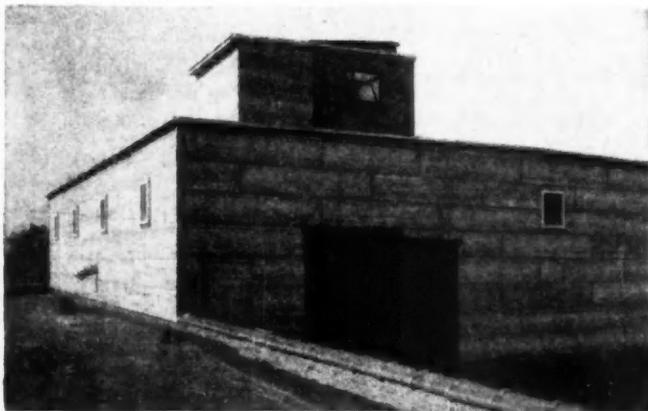
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PENTHOUSE FOR PIGS ?

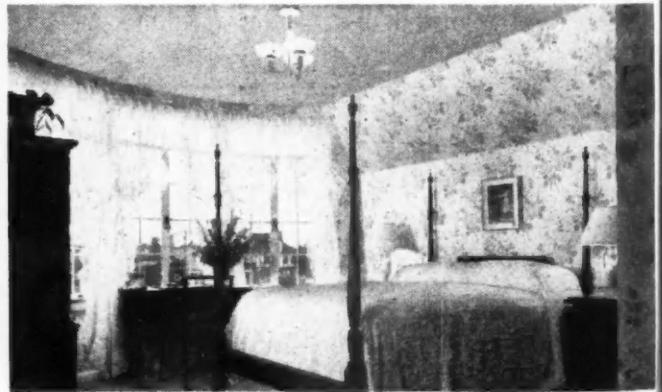
WE don't know exactly what they store in it. Maybe it *is* pigs! But when one large packing house needed additional storage space, they built a penthouse, shown below! Even with a high priority, however, they couldn't get lumber enough. But the job was finished in record time with Fireproof Gold Bond Gypsum Exterior Boards!



THIS PACKING HOUSE penthouse is only one of thousands of emergency jobs that have been built with Gold Bond Gypsum Boards. Jobs that never could have gone up without these National Gypsum developments. Gold Bond Gypsum Boards include several types of roof plank, a choice of exterior boards. They are ready at your dealer's for your next job.

It wasn't an accident that National Gypsum was ready with these wartime building boards—even before the lumber shortage developed. Practically speaking they are gypsum wallboard—but heavier, and treated to withstand the effects of weather. Another example of how National Gypsum stands for progress in gypsum board! Another example of Gold Bond leadership!

AFTER THE WAR, Gold Bond Gypsum Wallboard will still be in there pitching for you. Take remodeling jobs, for instance. Game rooms, attic bedrooms, extra bathrooms—all can be built better, quicker, as a result of National Gypsum's progress in gypsum boards that take any decoration!



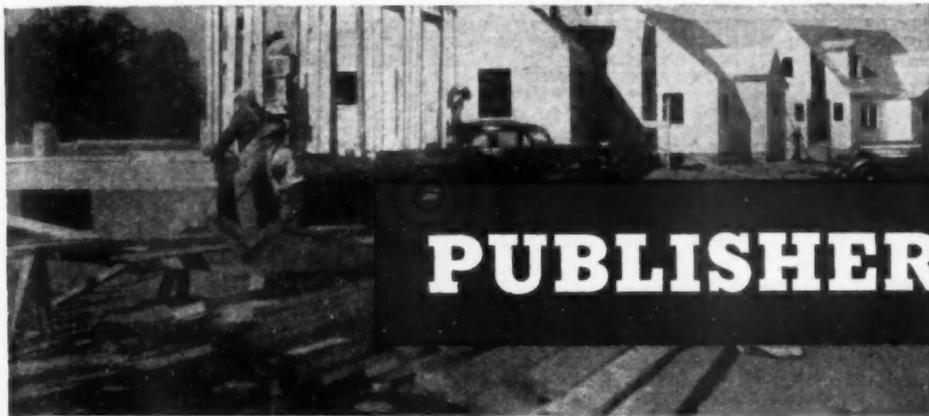
AVAILABLE NOW AT YOUR GOLD BOND DEALER'S



BUILD BETTER WITH GOLD BOND

Wallboard • Lath • Plaster • Lime • Metal Products • Wall Paint • Insulation • Sound Control

NATIONAL GYPSUM COMPANY • EXECUTIVE OFFICES • BUFFALO 2, N. Y.



PUBLISHER'S PAGE

Responsibility for Employment

BUSINESS continues to be told by planners that the crucial postwar test of private enterprise will be whether it provides "full employment." Probably after reconversion of certain large industries to a peacetime basis, general business will be good for at least five years. This will be due largely to expenditure of wartime savings, especially for consumers' goods and residential construction.

But private enterprise should not allow to pass unchallenged the assumption that it must assume sole responsibility for "full employment." Every business always has employed all the workers it has believed it could employ advantageously. But no business ever was or will be established and kept running to provide employment. Every business that ever existed was established by the investment of capital, and to make profits for those who invested the capital. Businesses that have made profits satisfactory to their owners have been kept running and providing employment. Businesses that have not made profits satisfactory to their owners have passed out of existence and ceased to provide employment.

The failure of many New Dealers, labor leaders and other persons of socialistic inclinations to recognize the indissoluble relationship between adequate profits and adequate employment is a serious menace to postwar employment. They seem to think that whatever profits business makes are subtracted from what labor would otherwise get, and that therefore the smaller profits are kept the larger employment and payrolls will be. No doubt at times some companies have made excessive profits. But there has never been and never can be adequate employment under the system of private enterprise except-

ing when business makes and expects satisfactory profits.

Losses or inadequate profits can be caused by many things, including incompetent management, excessive taxes and excessive labor costs. Any business that makes inadequate profits or losses due to incompetent management will succumb to competitors that are competently managed. But most or all of business can be made unprofitable by excessive taxes or excessive labor costs. When this occurs, both investment and employment are curtailed. Why? Because employment is provided not only (1) to produce goods for use and consumption by individuals and families, but also (2) by the investment of capital in the factories, mines and means of transportation required for production and transportation. Therefore, a large and continuous investment of capital is absolutely essential to the provision, maintenance and increase of employment. The great decline of employment in the recent depression, and every preceding depression, was principally due to decline in investment of capital. Capital is derived mainly from profits. It is invested *solely* to get profits. Hence in peacetime investment and employment invariably decrease or increase together when actual or prospective profits decrease or increase.

Private enterprise can and will provide adequate employment if afforded opportunity to make enough profits to cause enough investment. It *cannot* provide adequate employment unless policies of government and labor unions recognize the essential part that profits and investment play in providing employment.

Samuel O. Drumm,

"NO FLIES ON SAM!"

WHEN Sam comes home, sturdy, grinning—and toting a souvenir of grim, relentless days . . . you'll agree: *No flies on Sam!*

That's more than just an old slang phrase that came to life again. No flies on Sam or his brothers-in-arms . . . in Fortress Europe . . . the South Pacific . . . Alaska.

Because men in the armed forces were protected against disease-carrying insects by miles upon miles of LUMITE, the new plastic screen that defies the elements! Woven from Saran, it resists the effects of heat, cold, acid

fumes, salt air; is impervious to rust or corrosion . . . yet gives more light and lasts longer.

Sam—and millions like him—will come home, *sold*, through actual living proof, on LUMITE plastic screening. He'll expect—and *demand*—LUMITE efficiency and durability in his home . . . office . . . factory.

Here is *the* postwar product that is being sold to millions of potential future buyers *right now* . . . every hour of the day . . . across the globe. Here is a postwar market well worth investigating—and preparing for—today!

The new
plastic screen
cloth

LUMITE

Chicopee Manufacturing Corp., Sales Office: 40 Worth St., New York 13, N. Y.

World's Largest Makers of Plastic Screen Cloth

TESTED IN WAR READY FOR PEACE

- ★ Long-lasting . . . will not rust or corrode
- ★ Non-staining . . . no streaking of sills or sidewalls
- ★ Translucent . . . admits more daylight
- ★ Strong, resilient . . . no dents or bulges
- ★ Unaffected by fumes or salt air
- ★ Non-inflammable
- ★ Competitively priced

Memo to Building Contractors:
Include LUMITE New Plastic Window Screens in your postwar plans for home, factories, offices, schools! Write *now* for detailed information.



Are you double-talking or straight-thinking about the building-boom?

INDUSTRIAL building men in the know say: "Most postwar-building-boom talk is just double-talk!"

And, in a recent booklet, the staff of Architectural Forum sighs: "These are the days when anyone who discusses postwar markets has to get up in the stratosphere not to be a piker. The magazines have been full of fascinating ideas on houses, including such models as the disposable or Kleenex house, the all-glass or Gypsy Rose Lee house, the foxhole or World War III house, and the circular or Hamburger Heaven house, to say nothing of the fabulous factories some people have been dreaming about."

Buildings and booms never grow out of dreams. They grow out of an understanding of industrial needs and the formulation of plans that can work.

To make sure your down-to-earth plans show up in steel-and-stone plants, they must be *sold* to people who can help put them across: America's top industrial executives, plant owners and managers.

These are the businessmen that builders think of when they think of the readers of TIME.

For the readers of **TIME** are the top of the management market. Nearly half the businessmen who read **TIME** are executives or department heads, proprietors or partners.

And **TIME** is voted their first-choice magazine by the men who can directly do the most for building—by federal, state, and city planning commission members—by leading realtors in 60 cities—by architects—by members of the Mortgage Bank Association—by industrial research engineers.

What's more, advertising figures show that **TIME**, The Weekly Newsmagazine, is the medium in which business and industry prefer to tell their own product stories.

THE **TIME** **GATEWAY TO THE BUILDING MARKET**

BRIEFLY TOLD:

We have it from reliable sources that Timken burners are setting up marvelous records for economy under fuel oil rationing. The following excerpts from owners' letters not only bear this out but give you a good idea of the all-around satisfaction users get from Timken equipment—

★

Gentlemen:

This letter is to advise you of how well I am pleased with the dependability and economical operation of my Timken Wall-Flame Oil Burner.

When using hard fuel my heating cost was approximately \$85.00 per season but with the Timken Wall-Flame Burner the heating cost will average around \$60.00 per year.

F. J. T.
Flint, Mich.

★

Gentlemen:

I am enjoying my sixth winter of Automatic Oil house heating with a Timken Silent Automatic Oil Burner. I can't recommend it too highly for its economical and most perfect operation.

I have the rotor wall-flame system and last year when oil was hard to get, I burned 100 gallons less than my allotted ration, and also heated all the hot water I could use for a family of three persons.

P. T.
Upper Darby, Pa.

★

Gentlemen:

I can honestly say in two heating seasons I have saved at least 3200 gallons of fuel oil, a saving of \$248.00 and much more satisfaction and better and quicker heating results with a Timken Silent Automatic Oil Burner than with my previous burner. I am not condemning the . . . outfit, but it is almost unbelievable of so much difference. I was of the opinion you people would like this information and would be pleased to hear from you.

N. N. B.
Kent, Ohio

★

Gentlemen:

I never in all my life have had such perfect comfort with heat and at such low cost as I am having today with my Timken Silent Automatic.

L. J. A.
Chicago, Ill.

★

NOTE TO BUILDERS:

Timken will be ready shortly after Victory with new and improved heating and air conditioning equipment for every size and type of home. There will be other new Timken products for the home, too. Each will be built to the same standards of quality and economy so familiar to owners of the famous Timken Silent Automatic Wall-Flame Oil Burners and Oil-Burning Water Heaters.



PLAY HEADQUARTERS FOR YOUR POSTWAR HOME



The floor plan of this structure shows a living-dining room, a kitchen with ample room for long, handy preparation and built-in garage. Attractive living-dining room, 2 bedrooms, bath, kitchen with ample room for long, handy preparation and built-in garage.

FREE!

See how dealer shows the home and condition room to build the home in the years following. Each will be built to the standards of quality and economy in Timken Silent Automatic Wall-Flame Oil Burners and Oil-Burning Water Heaters.

New Timken Silent Automatic Heat

Timken Silent Automatic Heat is a new and improved heating and air conditioning equipment and has been put into production for every size and type of home of the future. Each will be built to the standards of quality and economy in Timken Silent Automatic Wall-Flame Oil Burners and Oil-Burning Water Heaters. Let us plan the most economical type of heating system for your postwar home. Write for your name on list.

TIMKEN Silent Automatic
Quality Home Appliances — for Comfort, Convenience and Economy
Division of THE TIMKEN-DETROIT AXLE COMPANY, Detroit 32, Michigan

One of a series of Timken Silent Automatic Advertisements appearing in National magazines and key city newspapers designed to stimulate building in the postwar era and encourage the use of high quality heating equipment.

Can a heating dealer help the builder?

You bet he can! First, he can work with the builder in planning the best heating system for each home.

Second, he can perform an invaluable service by furnishing only the highest quality of heating equipment and doing an A-1 installation job. This will insure client satisfaction for the builder, and lower total costs for the user.

But good heating dealers can go even farther than this. They can sell the public on the benefits and economy of installing quality equipment.

Timken Silent Automatic and Timken Silent Automatic dealers realize their responsibilities in regard to all three of these jobs.

Ads, like the above, stimulate thinking now when millions of people are planning postwar homes. They encourage more people to want to build homes . . . they stress the benefits of installing quality heating equipment.

Yes, the Timken dealer in your territory can help you. Let him work with you on heating for better all around client satisfaction.

TIMKEN Silent Automatic

Quality Home Appliances — for Comfort, Convenience and Economy
Division of THE TIMKEN-DETROIT AXLE COMPANY, Detroit 32, Michigan

AN EXPLOSION

started this
great industry



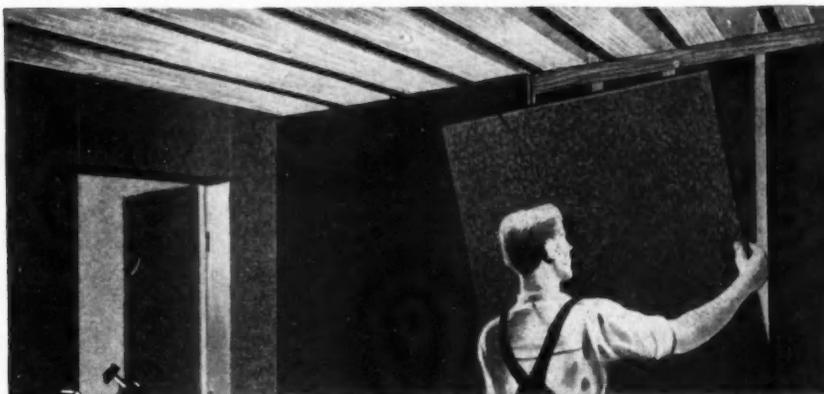
Eighteen years ago an explosion in a tiny factory founded a great industry. That explosion took place in a high-pressure steam "gun" which literally blew wood apart to separate its basic cellulose fiber and glue-like lignin. With varying heats and pressures, these elements were put back together. The result was Masonite* ligno-cellulose hardboards.



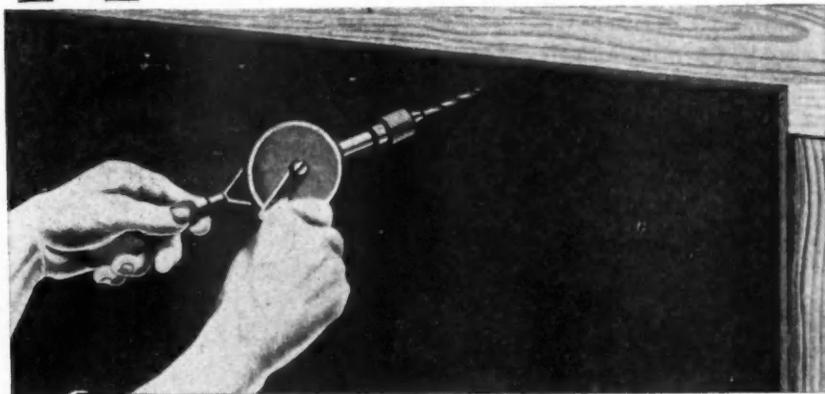
• Masonite Presdwoods and Masonite insulating materials are available for war-essential construction. Government Departments and Agencies are familiar with them. For full information regarding these versatile materials, write Masonite Corp., Dept. AB-7, 111 West Washington Street, Chicago 2, Illinois.

MASONITE PRESDWOODS

*TRADE-MARK REG. U. S. PAT. OFF.
COPYRIGHT 1944, MASONITE CORP.



The war jobs these Masonite Presdwoods* have tackled are hundreds. The peacetime jobs of Presdwoods will be even more numerous. Lovely wall paneling of these large, quick-and-easy-to-install hardboards will grace many of tomorrow's homes. Tomorrow's kitchens and bathrooms will gleam with highly finished, enamel-like surfaces made of Presdwoods.



To home and commercial buildings, Presdwoods bring the advantages of unusual workability. Cut or work them with ordinary wood-working tools. They have no tendency to chip, warp or split. They resist moisture. And their smooth, hard surface is splendid for almost every kind of finish.



for Superior
Structural Insulation

specify

COTTON

Modern construction methods require the most efficient materials available to builders—and processed cotton fiber, fully fire-proofed, with its superior insulating qualities, provides more efficiency per cubic foot than any other accepted type of insulation on the market today!

Pioneer in the manufacture of fire-resistant cotton, the Lockport Cotton Batting Company has perfected Lo-"K", the modern insulation method

that insures unexcelled performance at low cost.

Lo-"K" Cotton Insulation is made under government supervision, in strict accordance with Department of Agriculture specifications, and is highly endorsed for its flame-proof and insulating values. The low thermal conductivity or "k" value of this fine structural insulation guarantees all-weather protection for all types of buildings—residential, commercial, and industrial.

**INSULATION POINT VALUES
FOR MAXIMUM EFFICIENCY**

- Lo-"K" is light in weight, easy to handle
- Lo-"K" cuts labor costs, saves installation time
- Lo-"K" is flame-proof and moisture-resistant
- Lo-"K" is vermin-resistant and sanitary
- Lo-"K" will not cause skin irritation
- Lo-"K" is clean and white, will not cause smudging
- Lo-"K" resists rot and mildew
- Lo-"K" will not sag or settle
- Lo-"K" lasts indefinitely, pays for itself in fuel savings alone

**Lo-"K" IS AVAILABLE
NOW!**

Lo-"K" blanket-type insulation rolls are manufactured in one, two, and three-inch thicknesses in widths to suit standard framework construction. Rolls are available with a tough, waterproofed paper backing, providing an effective moisture barrier. Lo-"K" is stocked by your lumber or building material dealer.



**A PRODUCT OF LOCKPORT COTTON BATTING CO.
ESTABLISHED 1870**

*Free! Factual
Material about
the
NEW COTTON
INSULATION*

Lo-"K" Cotton Insulation Division—Dept. **AB-7**
LOCKPORT COTTON BATTING CO., Lockport, New York
Gentlemen: From the standpoint of a

BUILDER CONTRACTOR ARCHITECT DEALER
I am interested in full information about Lo-"K" Cotton Insulation.

NAME.....

ADDRESS.....

CITY.....ZONE.....STATE.....

Here's popular
ers. It's
approx
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come in-
door vi
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freezes
There
fenestra
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The wind
This wind
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NDOW

Fenestra... A RIGHT WINDOW FOR EVERY ROOM IN THE HOUSE



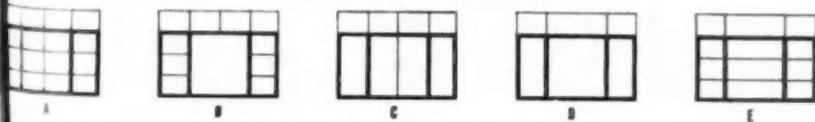
**An easy-to-open window—
even over the living room davenport**

Here's a window that will be popular with postwar home buyers. It's a big "picture" window (approximately 5'10" x 4'3"), with neat, narrow frame and muntins that allow more sunshine to come in—that permit a grand outdoor view. The two side vents open at a finger's touch to deflect breezes into the room.

There are many other types of Fenestra Steel Casement Windows—windows one to four lights

wide and two to five lights high—with swing leaves at left or right, or both. Yet, with all this variety, the Fenestra line for postwar has been simplified to make steel windows easier to use and easier to get.

Write us for full information. We are not making windows now, for we are busy on war work. But we think this information will be of help to you in planning your postwar houses.



The window illustrated in the picture above is a variation of Fenestra Type 4423. This window can be used in the standard type (A), or with muntins removed for various interesting treatments such as suggested in sketches B, C, D and E.

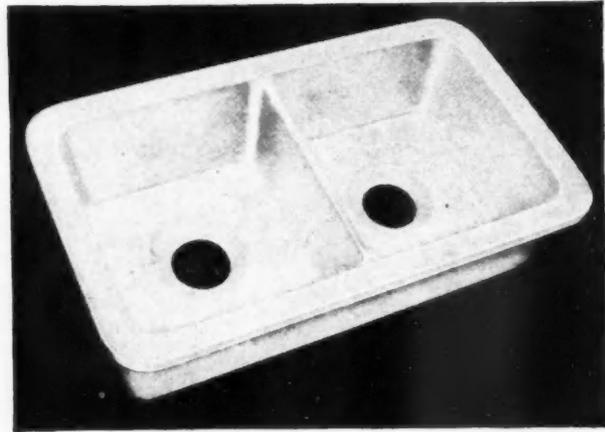
DETROIT STEEL PRODUCTS COMPANY
Now Chiefly Engaged in War Goods Manufacture
 Dept. AB-7, 2260 East Grand Blvd., Detroit 11, Mich.
 Pacific Coast Plant, Oakland, California

**SATISFY CUSTOMERS WITH
THESE FENESTRA ADVANTAGES**



"I need a two compartment sink"

You'll find that PERMA-GLOSS TWO COMPARTMENT SINKS have a big appeal to housewives. Here's why: they save time in average kitchens; they lighten work by saving footsteps; they provide a lasting clean appearance.



Wide consumer demand for this fast selling item makes it an unusual opportunity for domestic engineers and plumbing contractors.

Perma-Gloss Sanitary Ware is all-clay, high-fired, with a glaze of extreme hardness. It is acid-proof, craze and dunt proof, and withstands thermal shock. The beauty of its glaze will not be affected by any liquids used in kitchens, nor by cleansers. This glaze will shine as brightly after years of use, as it does on the day it is installed.

Perma-Gloss two compartment sinks are made in size 32" x 18" — depth 6½", with 2½" or 3½" center outlets. Built into table tops, work boards, or cabinets, they adhere to a ± 3/8" tolerance in over-all dimensions. Such accuracy in fabrication saves labor costs in installation and saves space. Perma-Gloss is of light weight . . . easy to install . . . inexpensive . . . and meets all government specifications. Extensively used in war housing. For further information, consult our distributor or write to



CARILLON CERAMICS

CORPORATION

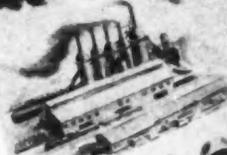
METUCHEN

NEW JERSEY

SANITARY WARE DIVISION OF GENERAL CERAMICS COMPANY



Share the profits of Peace . . .



Even while all of us are devoting all our efforts to winning the war, we must remember that in our post-war world, the profits of peace can not be measured in dollars alone—they must also be measured in decent living conditions for all, in a sense of shared responsibility for conditions in this post-war world, in the expectation of financial security through steady employment. All these profits will be conditioned by money and men working together. When money and men are working together, everyone has money when money and men are working together.

When money and men are working together, everyone has money when money and men are working together. When money and men are working together, everyone has money when money and men are working together.

Youngstown Pressed Steel is determined to do its part as soon as it has completed its war job.

**YOUNGSTOWN PRESSED STEEL DIVISION,
MULLINS MANUFACTURING CORPORATION
WARREN, OHIO**



Get the new YOUNGSTOWN booklet, "Get Acquainted with Your Kitchen Business" and start to plan for a YOUNGSTOWN kitchen today. The booklet is full of helpful ideas about the kitchen as it is built to a standard.

YOUNGSTOWN PRESSED STEEL DIVISION
MULLINS MFG. CORP. DEPT. AB-744, WARREN, OHIO

Please send me YPS booklet, "Get Acquainted with Your Kitchen Business"
I plan to build I plan to remodel

Name _____
Street _____
City _____ State _____

This advertisement will appear in:
THE LADIES' HOME JOURNAL
GOOD HOUSEKEEPING
BETTER HOMES & GARDENS
THE AMERICAN HOME
HOUSE BEAUTIFUL
THE PARENTS' MAGAZINE

Share the Profits of the YPS PEACETIME KITCHEN BUSINESS

YPS dealers will have the advantage of: Continuous national advertising, factory supervised training which gives them the "know how" to sell more kitchens with lower sales cost, dealer helps, displays, beautifully illustrated catalog, and other tools with which to interest prospects.



Please send me YPS booklet, "Get Acquainted with Your Kitchen Business."

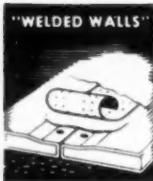
**YOUNGSTOWN PRESSED STEEL DIVISION
MULLINS MFG. CORP., Dept. AB-744, Warren, Ohio**

Name _____
Street _____
City _____ State _____

TAME WILD FLAME



SHEETROCK *Fireproof* WALL AND CEILING PANELS



Fire is a monster. Every minute—every hour, it seeks more homes to devour—Every day it stalks its prey—Tinderwall materials are tender morsels marked for the kill. But what may be deadly fire risks with some materials are dangers that can be overcome by using Sheetrock*, the fireproof wallboard... a product made from gypsum that cannot burn... the one mineral best qualified to "Tame Wild Flame."

With Sheetrock, a fire-armor is formed that protects the building framework and fights a "delaying-action"—

holds fire at bay until help arrives.

So when you build or remodel with Sheetrock, you specify greater safety and beauty too, because the surface of Sheetrock processed wall and ceiling panels will take any form of decoration or may be purchased already finished in pastel shades or wood grain effects.

Sweeping, unbroken surfaces are produced with joints welded and concealed by Perf-A-Tape*—or beveled edges matched to produce joints that form part of the decorative scheme.

Many advantages are all combined in one board and said in one word, "Sheetrock," the best known name in Gypsum Wallboard.

*Trademarks Reg. U. S. Pat. Off



UNITED STATES GYPSUM

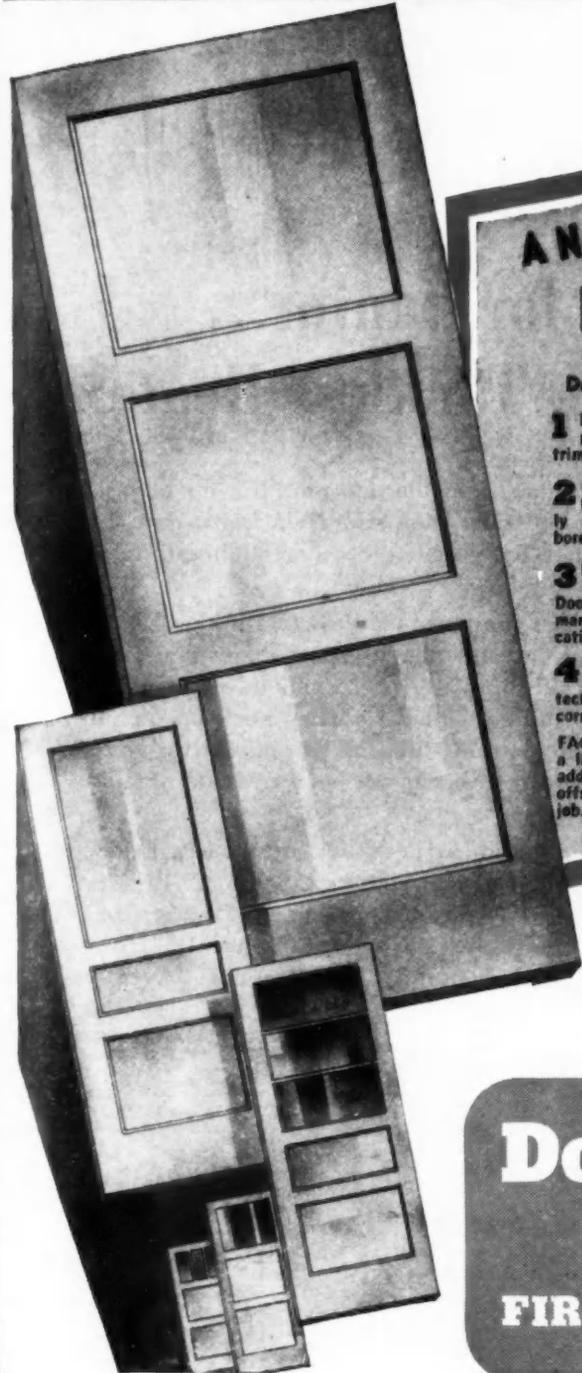
Manufacturers of Building and Industrial Products Since 1901

GYPSUM • LIME • STEEL • INSULATION • ROOFING • PAINT

*Build
Faster-
Better!*

Utilize these basic All-Purpose Douglas Fir Doors

*Build faster because of the new
FACTRI-FIT features. Build
better because of the inherent
strength, durability and beauty
of Douglas Fir Interior
Doors!*



A New Line!

FACTRI-FIT

Precision-Built Douglas Fir Doors

- 1** FACTRI-FIT doors are pre-fit at the mill, trimmed, ready to hang.
 - 2** FACTRI-FIT doors may be ordered completely machined — gamed, bored, and mortised.
 - 3** FACTRI-FIT doors (like all Douglas Fir Doors) are edge grade-marked for easy specification.
 - 4** FACTRI-FIT doors are scuff-stripped to protect the precision-cut corners in shipping.
- FACTRI-FIT features cost a little extra — but this added cost is more than offset by savings on the job.

Write for catalog showing the complete line of Douglas Fir Interior Doors, TRU-FIT Entrance Doors, and new specialty items.

Attractive 3-panel designs are available in the stock line of Douglas Fir Interior Doors — basic, all purpose designs, planned to give a door adaptable to all types of building.

You can rely on the Douglas Fir line for every door needed on the job—and get the full advantages of the new FACTRI-FIT features! Check the list at the left.

Available now only for essential building, Douglas Fir Doors will be ready again when war needs are over.

Douglas Fir DOORS

FIR DOOR INSTITUTE

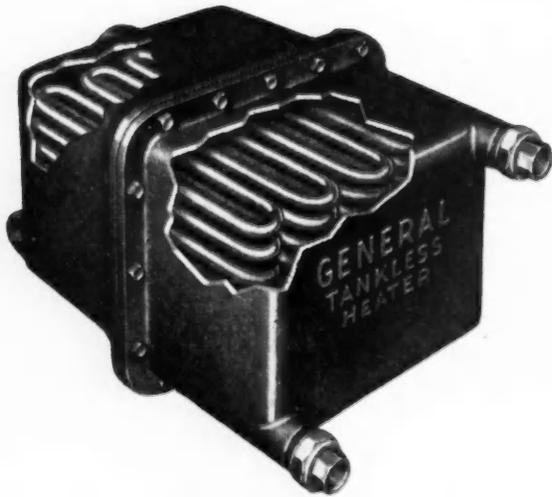
Tacoma 2, Washington

*Remember!
NATURE MAKES
DOUGLAS FIR
Durable!*

Durable Douglas Fir Doors are made from all-heart-wood, vertical-grain, soft, old-growth Douglas Fir.



There'll still be hot water for Junior... with a GENERAL Tankless Heater



(UNTIL VICTORY — a major part of our production is precision war work ... torpedo and bomb parts, fuse setters, special Navy water heaters.)

Whether there's a regular morning line-up, or just a demand for hot water from several sources at once, you assure constant hot water in the home by installing the *GENERAL* Tankless Heater.

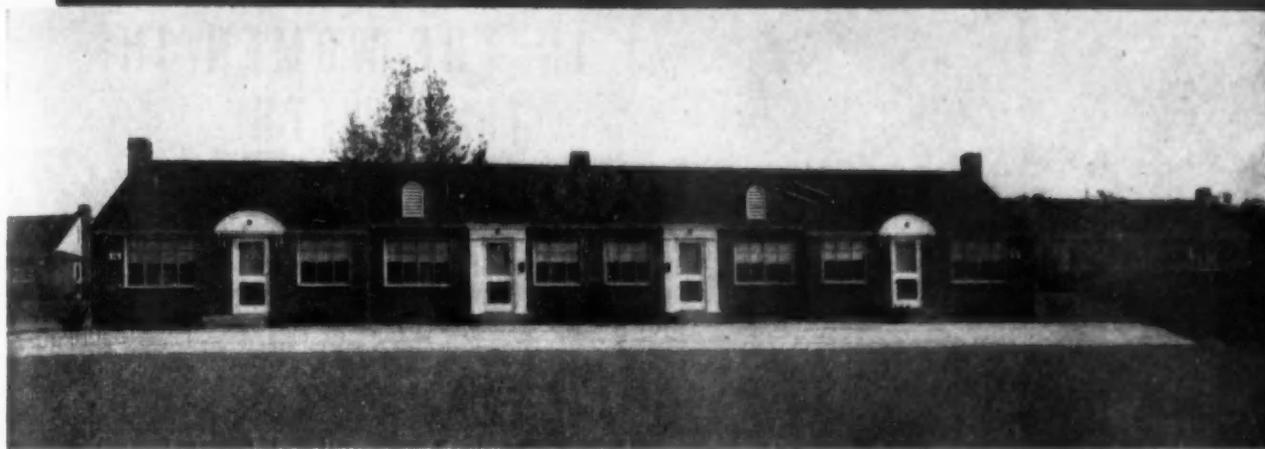
Compact, self-contained *GENERAL* Tankless Heaters cost less to install and take less space than storage tank systems . . . yet supply 3½ to 35 gallons of piping hot water every minute — all day! They hook up directly with any automatically-fired boiler and deliver a continuous supply of sediment-free hot water from seamless copper tubing.

To provide "unlimited hot water" the modern, money-saving way, you can count on the *GENERAL* Tankless Heater when you build your "homes of tomorrow". Write for complete Catalog 15. General Fittings Company, Department F, 123 Georgia Avenue, Providence 5, Rhode Island.

GENERAL

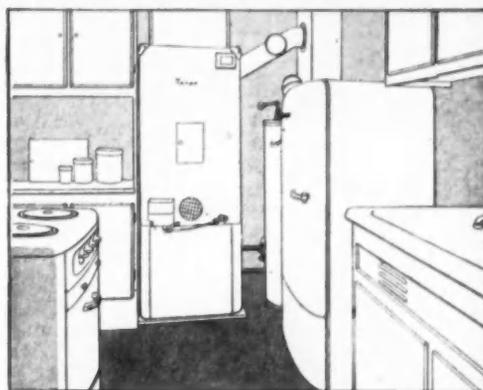
TANKLESS WATER HEATERS

Also Tank-Type Water Heaters • Thermostatic Mixing Valves
Water-hammer Silencers • Coil-heated Tanks
Live-Steam Heaters • Pipe Unions



23 BUILDINGS 100 APARTMENTS NORGE EQUIPPED

Additional evidence of the high regard in which Norge *products of experience* are held by successful architects and builders is found in Eau Claire, South Carolina, where each of 100 apartments owned by Colonial Village, Inc., is equipped with a Norge electric range, Norge Rollator refrigerator, Norge oil hot water heater and Norge oil furnace. Norge Division, Borg-Warner Corp., 670 East Woodbridge Street, Detroit 26, Michigan.



A Norge furnace and a Norge water heater fit snugly into the utility alcove of this compact kitchen. The 23 buildings comprising Colonial Village contain 100 apartment units which are occupied largely by Army personnel from nearby Fort Jackson. Architect: Charles W. Connelly. General contractor: F. N. Thompson.

"SEE NORGE BEFORE YOU BUY"

NORGE

HOUSEHOLD APPLIANCES

A B O R G - W A R N E R I N D U S T R Y

SEE NORGE BEFORE YOU RECOMMEND... MEANWHILE RECOMMEND MORE WAR BONDS



1900 The clean, care-free efficiency of electric lights won the women. Everyone wanted their new homes wired for electric lights.

W IN THE WOMEN IN
194V WITH
Electric Ranges!



1925 Electric refrigerators had become the housewives' pride and joy. More outlets for refrigerators and other appliances became a "must."



194V TO WIN WOMEN TO THE NEW HOMES you build, be sure to wire them for Electric Ranges, the "must" in the postwar American Kitchen.

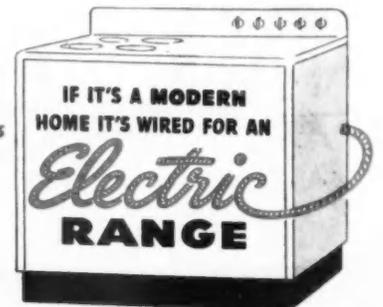
BEFORE THE WAR—the speed, safety, cleanliness and convenience of Electric Cookery had already won millions of women. In 1940, 450,000 Electric Ranges were sold—in 1941, 780,000... with over 3 million now in use!

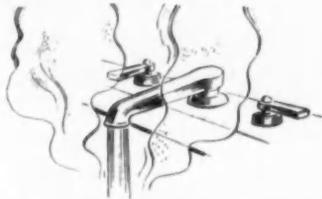
AFTER THE WAR—modern housewives will insist on electric cooking. So plan now to build in wiring for electric ranges. The added cost at the time of building is negligible... and its sales value will be tremendous.

For details on wiring costs and advantages, write for the booklet "WIRING AHEAD". Address:

ELECTRIC RANGE SECTION,
NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
155 East 44th Street, New York 17, New York

Wire your houses
FOR EASIER SALES





**POST-WAR HOMES
WILL SELL FASTER**

with *Electric*
WATER HEATERS



After-Victory homes will sell faster if they are equipped with modern, automatic electric water heaters! Study these advantages:

- SAFE—no flames, no fumes.
- CLEAN—no smoke, no soot.
- LOW COST hot water—*instantly*, day or night.
- NO FLUES or vents—that's why an electric water heater can be installed near principal hot water outlets; requires no lengthy hot water pipes.

Specify modern, electric water heaters and sell your houses easier!

**ELECTRIC WATER HEATER SECTION
NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION**
CLARK • GENERAL ELECTRIC • HOTPOINT • HOTSTREAM
• KELVINATOR • MONARCH • NORGE • PEMCO • REX •
• SELECTRIC • THERMOGRAY • THERMO-WATT •
UNIVERSAL • WESTINGHOUSE

**A House Wired For An
ELECTRIC RANGE Is Already**

wired
for an
Electric
WATER HEATER!



HOW SOON H2?—Since the invasion, the big question in builders' minds is how soon will the mysterious H2 housing program be permitted to start. Officials have described H2 as the "interim program within the framework of existing conditions under L-41," designed to permit building to relieve over-congestion. Such building would not be restricted to war communities or to war workers, but would be done to relieve hardship caused by over crowding wherever it occurs.

BEST ANSWER — Commissioner Fahey of Federal Home Loan Bank, has again warned against runaway prices on urban homes. He drew a parallel between present skyrocketing prices and the boom market of the twenties, which he said collapsed in "a tide of foreclosure."

In my opinion, the best antidote to inflation in home prices is the building of new homes. That is why it is so important for restrictions to be lifted at the earliest possible moment. It takes only a few new homes, put on the market at reasonable prices, to take the wind out of inflation of old home prices.

FHA'S RECORD—FHA mortgage activity reached its peak in 1941, when mortgages on 210,000 homes were insured. That same year the country as a whole produced 715,000 houses. So FHA actually insured about 30 per cent of the new houses built. This is a remarkable record, yet also indicates that there is plenty of room for non-FHA forms of financing. To hear some builders talk, you would gain the impression that FHA controlled 100 per cent of new home construction.

SIGNIFICANT CHANGE — It is perhaps significant that on the 10th Anniversary of FHA the U.S. Savings & Loan League's Postwar Program Committee came out with a forward looking, liberalized program for home financing. There is a new and aggressive attitude being displayed by Savings and Loan Associations which indicate that they are not going to let FHA run away with or dominate the postwar field.

Of particular interest to builders are the plans of savings and loan

people to finance operative builders under a blanket mortgage and to advance money for labor and material. Also to make multiple unit loans to encourage rental housing.

15 OUT OF 25—An *American Builder* editor recently made a canvass of 25 prominent residential builders in Buffalo on their postwar plans. Fifteen reported that they already have detailed plans already prepared and sites ready to receive the houses as soon as built.

POSTWAR CAPACITIES—One of the best studies indicating how rapidly construction can expand after the war that I have run across is a new 28-page pamphlet "Postwar Capacity and Characteristics of the Construction Industry," prepared in the Construction Division of the U.S. Bureau of Labor Statistics under the direction of Herman B. Byer. This study analyzes materials, construction labor, and equipment. It's available for only ten cents from the U. S. Government Printing Office.

BETTER EQUIPPED HOMES—Last month's article in *American Builder* by Howard Scaife of Edison General Electric Co., stirred a lot of interest among home builders planning better equipped postwar homes. It also stirred considerable conversation in distribution circles, for the statement that volume residential builders will be recognized as outlets for kitchen equipment in new homes was big news.

What this actually means is that the volume builder of homes will be able to provide a completely equipped kitchen with range, refrigerator, dishwasher—all purchased under one lump sum at the dealer price, and that it can all be financed under the long term home mortgage.

MORE BUILDING PAGES—Every builder, dealer, and building industry man should support his local real estate and home building newspaper section, in my opinion. Many newspapers have lively home building pages or sections and they are a great help in stimulating interest in new home building and in fixing up old homes. They should receive the support of local building people.

Every recent survey shows that post-war home owners will demand an upward-acting garage door.

The Crawford Door Company (maker of Craw-Fir-Dor hardware) will be ready for this enlarged market with a better product. Crawford today is gaining valuable experience by manufacturing precision airplane parts...and Crawford hardware is being further improved through constant research.

Every feature making for easy installation, long life and trouble free operation is being rigidly tested in the Crawford Door Company's engineering research department.

REMEMBER

—Craw-Fir-Dor is economical, dependable, easy to install. Architects, builders and customers approve Craw-Fir-Dor.

For special residential or industrial installations, write

CRAWFORD DOOR CO.
DETROIT, MICH.

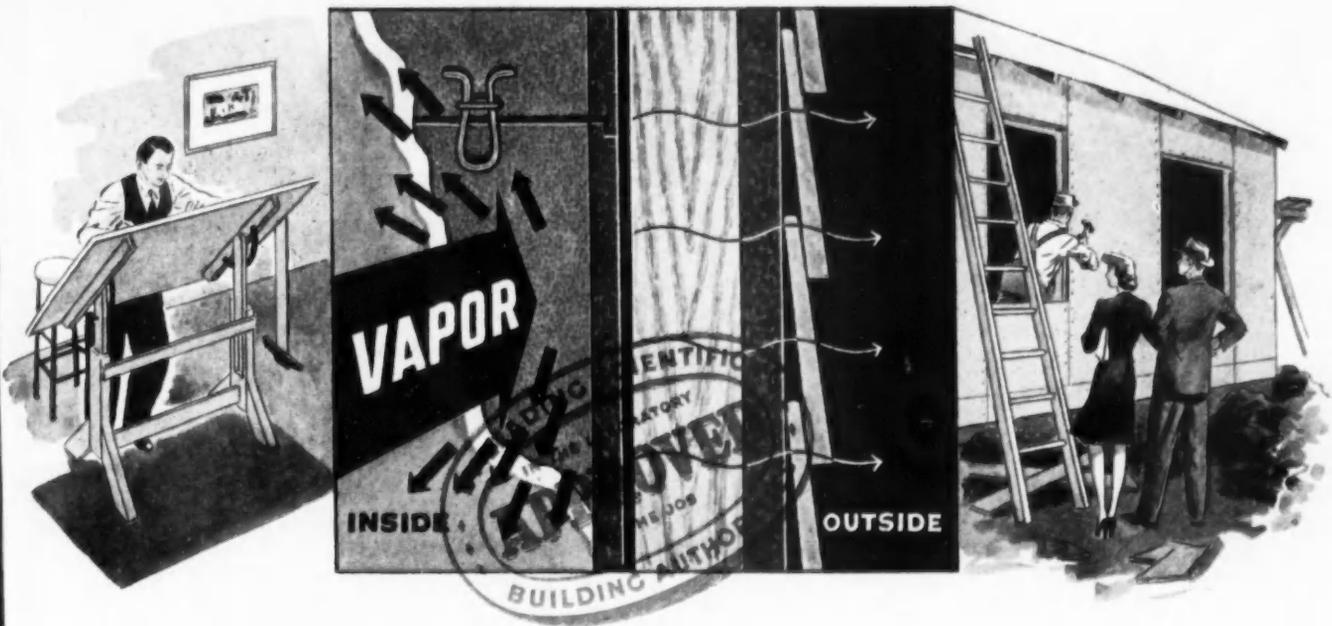
who make a complete line of sectional overhead-type doors.

Craw-Fir-Dor

SELF-ENERGIZING • ONE PIECE • OVERHEAD TYPE

GARAGE DOOR

FIR DOOR INSTITUTE
Tacoma 2, Washington



Here's a problem you must face "squarely" before building a modern home!

THE homes you build tomorrow will have new standards of heat control, and most of them will be air-conditioned.

The walls of those homes will have to be constructed to meet the problems these new factors create.

The walls of tomorrow's homes must have effective insulation. They must also be so constructed as to *reduce moisture condensation within the walls to a minimum.*

In the Approved Insulite Wall of Protection, you get these effective safeguards: *Double Insulation*, plus *Superior Bracing Strength*, plus *Protection Against Internal Moisture Condensation.*

The detail drawings to the right explain why. The blue print drawings below give details of construction.



OUTSIDE THE STUDS

- Insulite Bildrite Sheathing. The large boards provide a wind-proofed, weather-tight wall. Bildrite Sheathing has a bracing strength four times that of wood sheathing, horizontally applied.

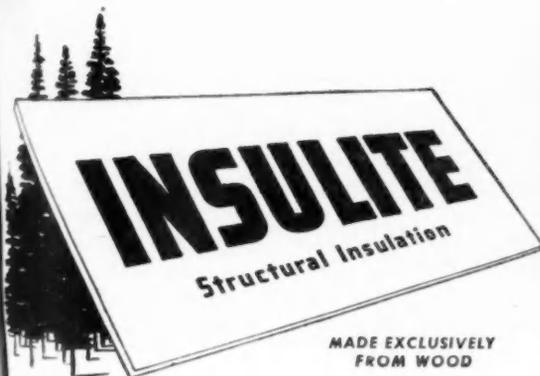
INSIDE THE STUDS

- Sealed "Lok-Joint" Lath, furnishes a *second* wall of insulation. The patented "Lok-Joint" provides a strong, rigid plastering surface, prevents joints from opening under trowel pressure.

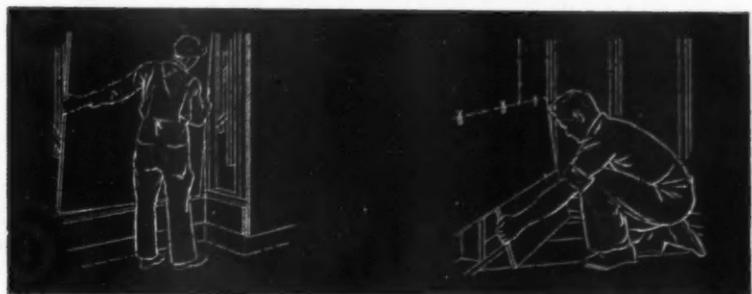
- How moisture condensation is minimized in the Approved Insulite Wall of Protection. Sealed "Lok-Joint" Lath, with asphalt barrier against the studs effectively retards vapor travel. Bildrite Sheathing, being permeable to vapor, permits what little vapor escapes to pass naturally towards the outside.



INSULITE
MINNEAPOLIS 2, MINNESOTA



MADE EXCLUSIVELY FROM WOOD



- Large 4 ft. boards are easily placed, fit snugly over studs. Bildrite is securely fastened by nailing according to markings. No open cracks or knotholes.

- Fasten next to last "Lok-Joint" Lath unit along top edge only. Insert bottom unit under "Loks" and slide in place. Nail securely after bottom unit is in place.

Thermopane

with the
BONDERMETIC SEAL



Imogene Wolcott Home. Carl Koch: Architect.

New L-O-F insulated windowpane makes Daylight Engineering thoroughly practical in every climate

You can now plan the windows for your postwar houses as large as you want them. Flood them with cheerful sunshine . . . provide rooms with exciting, clear views of outdoor beauty. You can now have these benefits of *Daylight Engineering* without worry about excessive heat losses. Rooms also can be kept cooler in summer.

Thermopane—the revolutionary new Libbey-Owens-Ford windowpane that insulates—makes this possible. Thermopane fits into a modified single sash, just like an ordinary single pane of glass.

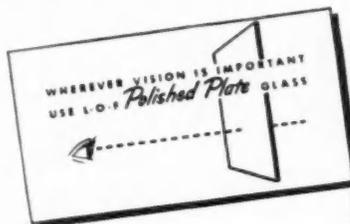
Thermopane comes in a wide range of sizes—from 8" x 8" up to 60" x 100". You can have it with various thickness of glass. For extreme conditions, Thermopane can be made with whatever number of panes of glass the need requires.

Here is an important forward step in house construction—a step that can give the houses you design, build or finance more comfort, more efficiency, and more appeal. Get the facts about Thermopane now. Write to Libbey-Owens-Ford Glass Company, 1274 Nicholas Bldg., Toledo 3, Ohio.

Copyright 1944, Libbey-Owens-Ford Glass Co.

4 important features of Thermopane

- ① **INSULATING AIR SPACE.** The layer of air inside the Thermopane units is scientifically cleaned, dried and hermetically-sealed at the factory. This sealed-in air gives Thermopane its high insulating efficiency.
- ② **BONDERMETIC SEAL.** This patented, weatherproof, metal-to-glass seal bonds the two panes of glass into one unit to prevent dirt and moisture from entering the air space.
- ③ **CLEAR VISION.** The dry air is sealed in with the patented bond to prevent frost or condensation from forming on the inner surfaces of the panes of glass.
- ④ **ONLY TWO SURFACES TO CLEAN.** The glass surfaces inside a unit are specially cleaned at the factory . . . and stay clean!



LIBBEY · OWENS · FORD

a Great Name in **GLASS**

WHEELER OSGOOD

Tru-sized DOORS

COME TO YOU
—ACCURATELY SIZED!
—READY TO HANG!



SAVE 55 Minutes on Every Door!

BECAUSE Edges, Top and Bottom
are Precision-Trimmed at the Factory

To help carpenters and builders do a BETTER job than ever before TRU-SIZED Doors are precision machined to exact book opening, and fit perfectly any jamb that is plumb and square. By ordering Tru-Sized Doors machined for locks and hinges—as much as 70 minutes can be saved on every door you install.

NO SAWING

NO PLANING

NO FITTING



BE WISE—
USE
Tru-Sized
AMERICA'S
MODERN
DOOR

MAIL COUPON TODAY !

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

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

Name.....

Firm.....

Address.....

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



WHAT DOES THIS SYMBOL MEAN

to our readers and advertisers?

What it is

The Associated Business Papers is a national association of business publications devoted to increasing their usefulness to their subscribers and helping advertisers get a bigger return on their investment.

How the reader benefits

Through the constant exchange of editorial and publishing ideas with fellow ABP members, each individual editor and publisher is able to give his readers the benefit of the best experience in publishing.

One interesting result of this cooperative affiliation has been a program, sponsored by ABP publishers, wherein they work with advertisers to help them make their messages more informative and useful to business magazine readers. *American Builder*, as an active participant, has interviewed many of its readers to find out from Builders and Dealers themselves what some of their *problems* are that are also *opportunities* for manufacturers who know something that will help.

How the advertiser benefits

The more helpful a business publication is to its readers—the more avid and constant its readership; hence, the more assurance the advertiser has that his message, *if as helpful and informative as the editorial pages*, will be read, understood and acted upon. Advertising can be *more interesting and useful* to readers because it can talk more specifically of *user benefits* than is generally possible in editorial material.

A number of our advertisers have expressed interest in applying specifically to the building field some of the "Tell All"* principles brought out in ABP's crusade to help advertisers get a bigger return on their investment.

To dig up material that might reveal angles of interest to advertisers, we employed a Field Reporter to call on Builders and Dealers. He is specially trained by ABP in the art of "drawing out" readers. His field reports are being passed along to manufacturers with the thought that this first-hand, up-to-the-minute picture of reader problems and viewpoints might reveal opportunities for them to step up the interest and usefulness of their advertising. We believe that those manufacturers of building materials and equipment who do this will get a greater value for their money and, of course, it will make *American Builder* more interesting and valuable to the readers.

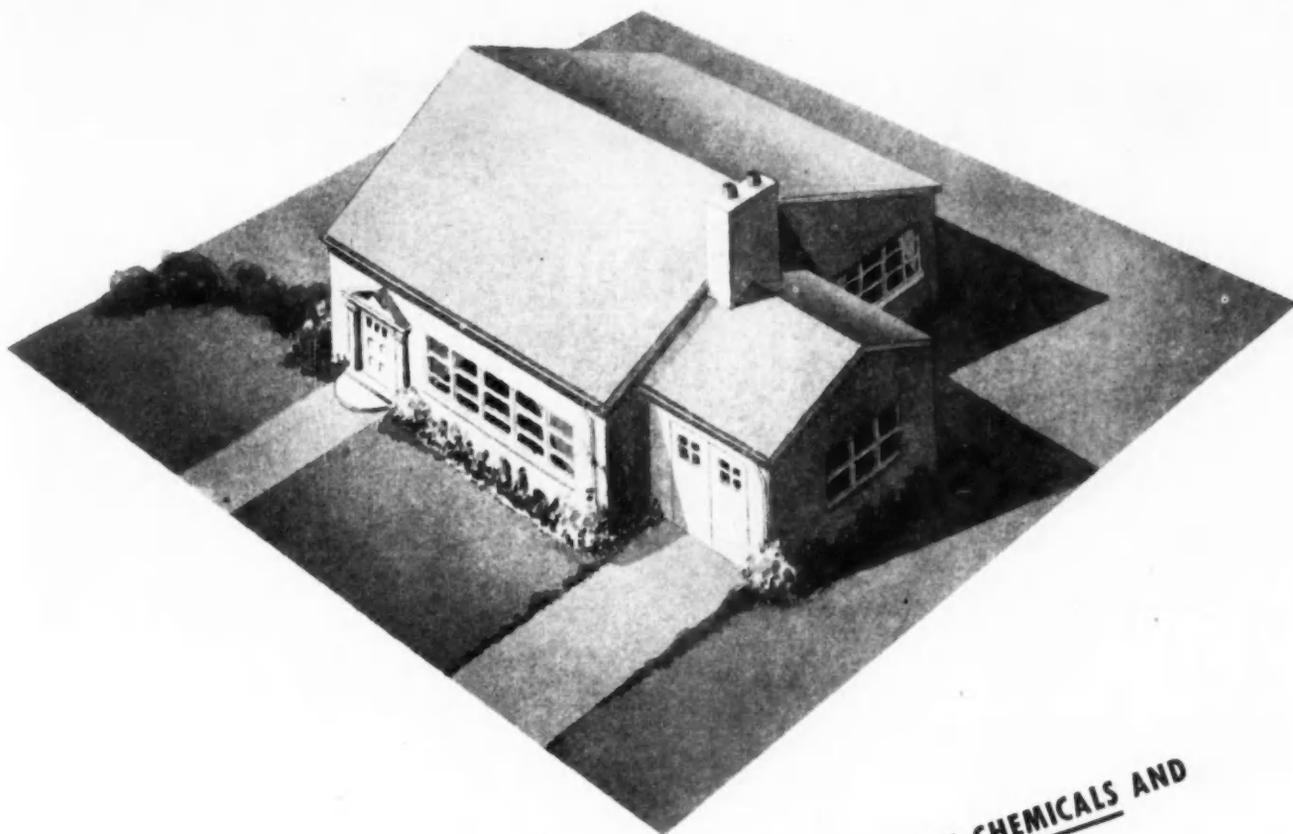
And what does American Builder get out of it?

These benefits of ABP membership help us build a better business publication for our special group of "fan" readers, hence a better vehicle for the messages of manufacturers who have something of interest to say to those same readers. It's a matter of record that fruitful advertising usually means more advertising. And that means more income with which to improve our publishing business.

*Definition of "Tell All" Advertising: Each and every advertisement should be given a specific and sufficient objective and should tell all that the business minded business paper reader must know before the advertisement can attain that objective.



Chicago 3, Illinois: 105 West Adams St.; New York 7, N. Y.: 30 Church St.; Cleveland 13, Ohio: Terminal Tower; Ann Arbor, Mich.: 1080 Stein Road; Washington 4, D.C.: 832 National Press Building; Seattle 1, Wash.: 1038 Henry Building; San Francisco 4, Calif.: 300 Montgomery St.; Los Angeles 14, Calif.: 530 West 6th St.; Dallas, Texas: P. O. Box 1898.



AND HOW CHEMICALS AND
GLUES WILL HELP YOU

what home buyers will want . . .

BEAUTY . . . convenience . . . durability . . . economy . . . those are the qualities home buyers will look for after the war as they did before.

And after the war you will be able to give them all four in greater measure than ever before . . . with the most "tried and true" building material . . . *wood!*

Wood has always been a favorite for its rich beauty and warm, friendly texture. Now, with the help of new and improved chemicals and glues it has been given added strength, greater resistance to rot, moisture, insects and fire and greater flexibility . . . so that now it can compete on equal terms with the most modern building materials for convenience, durability and economy.

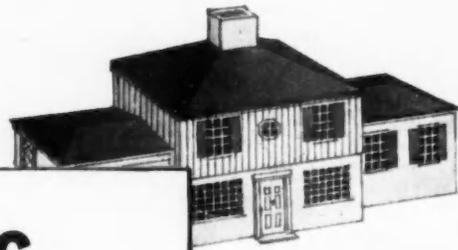
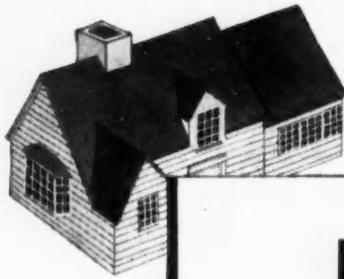
Both Monsanto Chemical Company, a major producer of chemicals and plastics, and I. F. Laucks, Inc., world's largest manufacturer of water-resistant and water-proof glues, have contributed much to this recent progress. Now that they have combined their resources, research and experience, you can look to them for still greater contributions to come.

GIVE IT TO THEM IN WOOD!

**MONSANTO
CHEMICAL COMPANY**
Organic Chemicals Division
1700 South Second Street
St. Louis 4, Missouri



I. F. LAUCKS, Inc.
America's Glue Headquarters
CHICAGO (2) — 6 N. Michigan
Avenue, SEATTLE (4) — 911 West-
ern Avenue, LOS ANGELES (1) —
859 E. 60th Street. *Factories:* Se-
attle, Los Angeles, Portsmouth, Va.,
Lockport, N. Y. *In Canada, address:*
I. F. Laucks, Ltd., Granville Island,
Vancouver, B. C., or Hercules-Laux-
Merritt Ltd., Stanbridge, Quebec.



PLUMBING FOR HOMES OF TOMORROW

FIXTURES NOW AVAILABLE—
WITHOUT PRIORITY



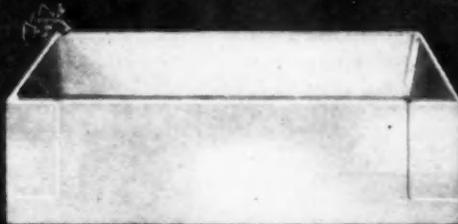
CE 19-563 COTTAGE sink. Made of acid-resisting Duracloy. Double basin. Heavily galvanized, swinging spout faucet. Size 42 x 20 x 6 in.



CE 754-V NORWICH lavatory. Made of vitreous china. Rectangular basin and built-in soap depression. Heavily galvanized trim.



CE 11-004 HAN-OVER closet. Made of vitreous china. Close coupled closet. Quiet, efficient whirlpool flushing action.



CE 3015L CONSERVATOR bathtub. Made of glistening, easy-to-clean Duracloy. For corner or recessed installation. Roomy, low in height. Length overall: 54"; width overall: 27".

NEVER before in the history of America has there been such an active interest in home ownership. Thousands of families right now are planning to buy or build a home when war conditions permit. These families are looking for quality and convenience in their home of tomorrow.

Experience shows that houses are frequently judged by the quality of the plumbing; and repeated surveys prove conclusively that the large majority of prospects for new homes regard the name Crane as standing for highest quality in plumbing fixtures.

Today, Crane Co. is aggressively stimulating the desire for home ownership among your prospects. Since the first of the year, thousands upon thousands of tomorrow's home owners have written to Crane for information on bathrooms and kitchens for their future homes.

The universal recognition of Crane as standing for high quality can be a strong selling factor in the homes you intend to build. You will find in the future, as many builders have found in the past, that sales can be made more easily—often at better prices, when the plumbing is by Crane.

CRANE

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

CRANE CO., GENERAL OFFICES:
836 SOUTH MICHIGAN AVENUE, CHICAGO
VALVES • FITTINGS • PIPE
PLUMBING • HEATING • PUMPS

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STOP FIRES... *right on the* *Drafting* *Board*

Life or death... Safety or disaster... These are the responsibilities of the man behind the plan. Why take unnecessary chances with materials that may burst into flame at the touch of a match?—*The time to control fire is right on the drafting board.*

Fire protection can be included in the specifications with gypsum plaster—for gypsum is one mineral that cannot burn. . . . It acts as a fire armor, and holds flame back when it seeks to attack structural members—checks the spread of flame for those priceless extra minutes when life and property hang in the balance. . . . And you don't sacrifice beauty, flexibility or decorative possibilities.

Viewed from any angle, *plaster does it better*—and the one product used on more walls and ceilings than any brand in the land is Red Top*. . . . *because Red Top does it best.*

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



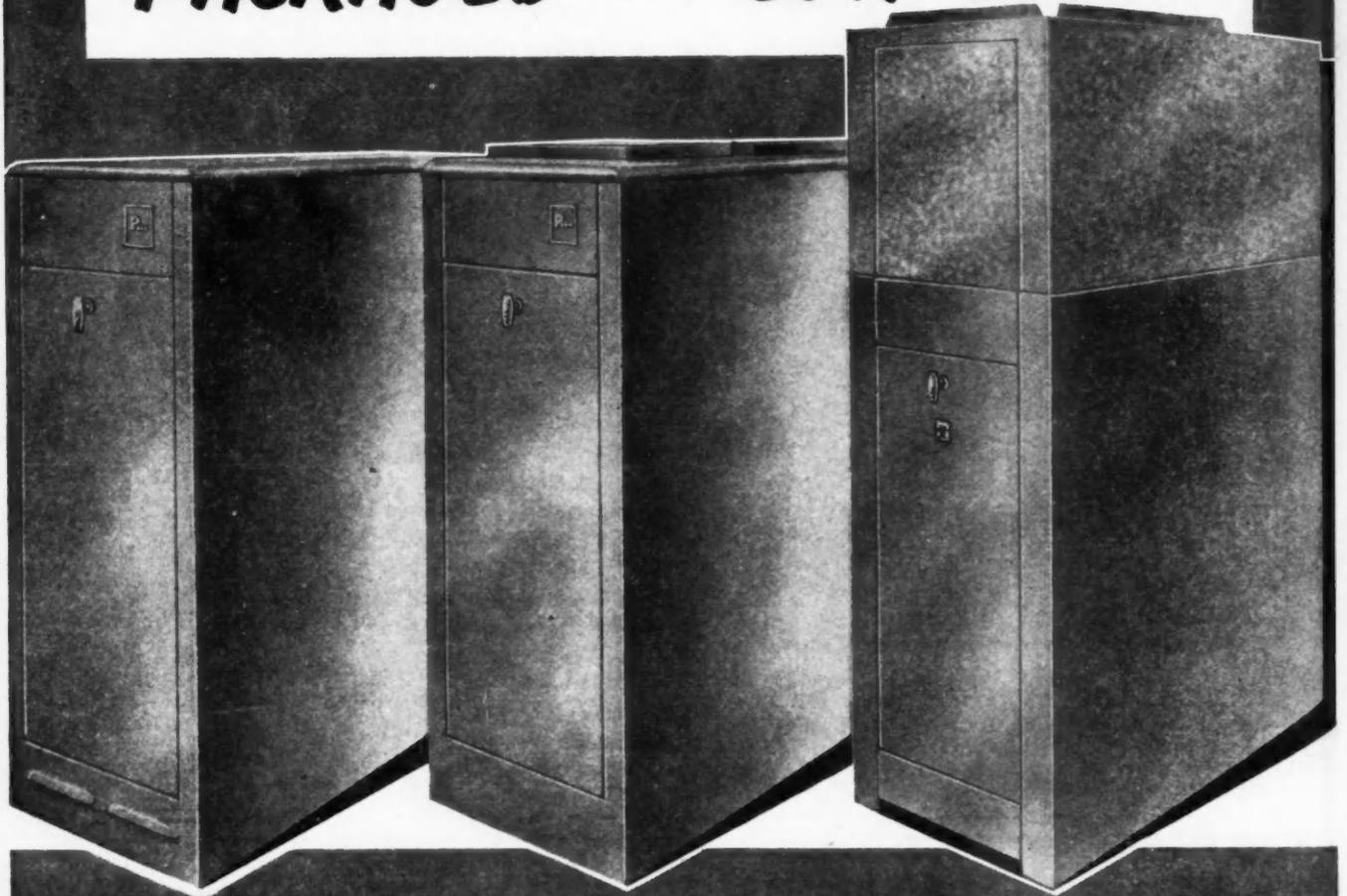
U&S UNITED STATES GYPSUM

Manufacturers of Building and Industrial Products since 1901

PLASTERS • LIMES • KEENE'S CEMENT • STUCCO • LATHS

ICES;
CAGO
PIPE
UMPS
ACTORS

All Penn Heating Units are **PACKAGED** for **LOW COST!**



PACKAGED by PENN describes our complete line of *prefabricated* oil or gas fired heating units because they are completely factory assembled and delivered to you ready for immediate connection and use.

95% of the cellar work you usually do has been eliminated by unit design and construction. The proper gun type burner, hearth, controls, fittings, switches, wiring—everything is factory mounted and tested. This factory engineering and coordination results in greater heating efficiency, saves you time, labor and installation headaches . . . cuts your cost considerably.

Builders who use heating units *Packaged by Penn* will have available a full line of modern low cost units that wilt competition with both price and performance. Less installation work and negligible fittings or parts inventories will mean more profitable installations.

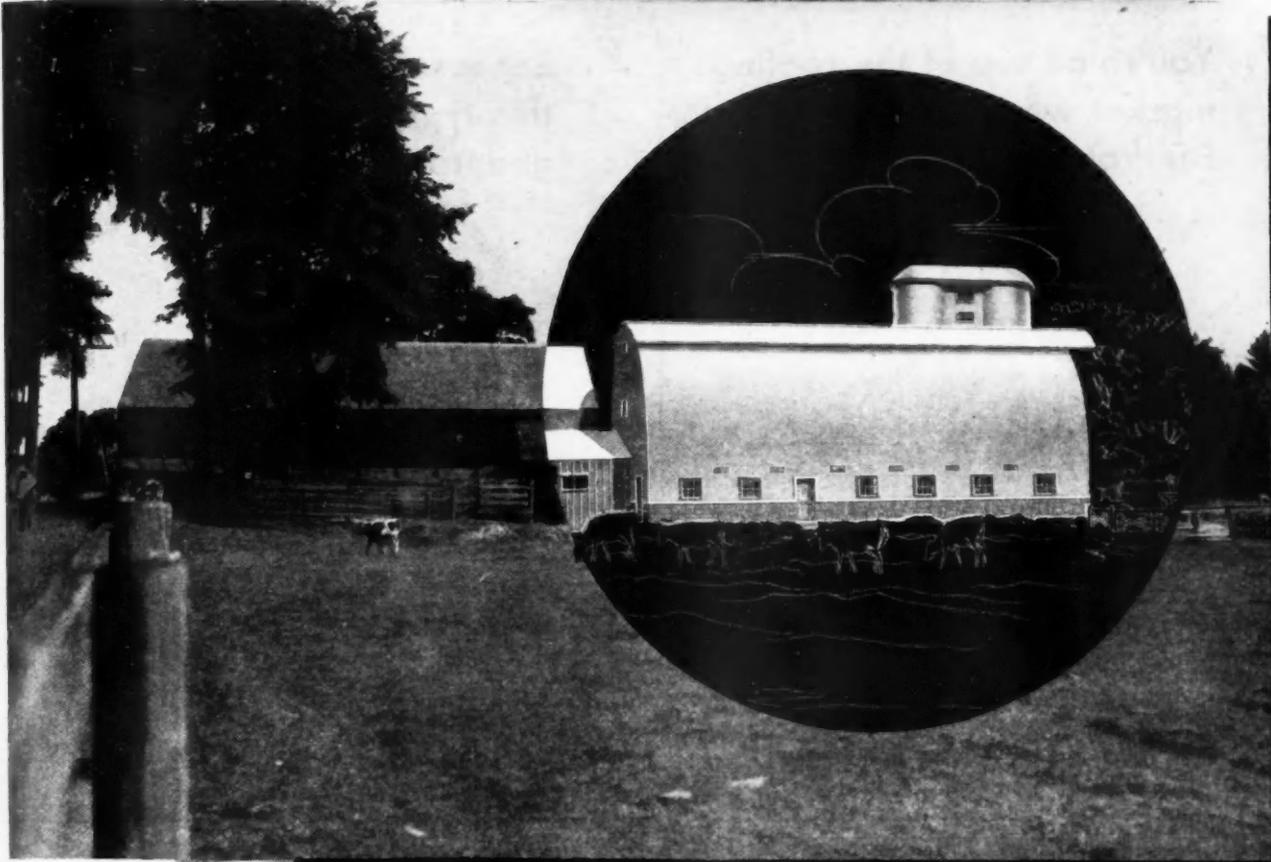
Get the complete story today so you will be ready with Penn when the present emergency is over and you start your post-war building program . . . and we again furnish the finest heating units *Packaged by Penn* for efficiency and low cost.

PACKAGED by PENN { BOILER BURNER UNITS
AIR CONDITIONER UNITS
PENNGUN WATER HEATERS
HYDRO-AIRE (SPLIT SYSTEMS)



BOILER and BURNER
MANUFACTURING CORP.
LANCASTER, PENNSYLVANIA

MODERNIZATION



Authorities agree that the aftermath of the war will witness an era of farm modernization and building unprecedented in history. The latest in building methods and materials will be utilized to attain a new high in profitable farming operations.

Stran-Steel light-gauge steel construction offers such desirable advantages as resistance to fire, termites, dry-rot, rodents; rigid framework which will not sag or warp; flexibility of building design and layout; ease of erection; speedy construction; savings in time, labor and materials.

Through wide experience in varied types of construction, and valuable know-how acquired in current volume production of military buildings, Stran-Steel is well qualified to serve in the forthcoming farm-building program.

STRAN STEEL

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



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

UNIT OF NATIONAL STEEL CORPORATION

OPPORTUNITY
The Extra-Protection of the Double-thick Butt!

1. You're on top of the roofing market when you feature Flintkote Thikbut Strips!



2. Because home-owners buy this type of shingle in greater quantities than any other!



3. Fact is — Flintkote Thikbut Strips give your customer virtually 2 shingles for the price of one!



Flintkote Thikbut Strips not only provide a standard, durable shingle, to begin with.

But on the tab, where the wear is greatest, Flintkote piles on an *extra* layer of stabilized asphalt coating, *plus* a second layer of colorful, fireproof mineral granules.

The result is double protection where the weather strikes... twice the value, twice the salability.

And they protect against fire, rot, and termites, besides.

In any one of their more than a dozen bright colors, Flintkote Thikbut Strips make a handsome roof, as well as one that is well-nigh invincible to weather attacks.

They make sense! And they make sales!

For all essential roof maintenance and repair, Flintkote Thikbut Strip Shingles are available to fill your needs.

THE FLINTKOTE COMPANY

30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

Atlanta • Boston • Chicago Heights • Detroit
 East Rutherford • Los Angeles • New Orleans • Waco

Figure on FLINTKOTE for 'Forty-Four!

The
 closet
 doors
 need
 Du



New
Dining Rooms
Will Need
STANLEY
HARDWARE

The 194X dining room – with its built-in corner closet, double-acting door to the kitchen, French doors to a patio and other conveniences – will need its share of Stanley Hardware.

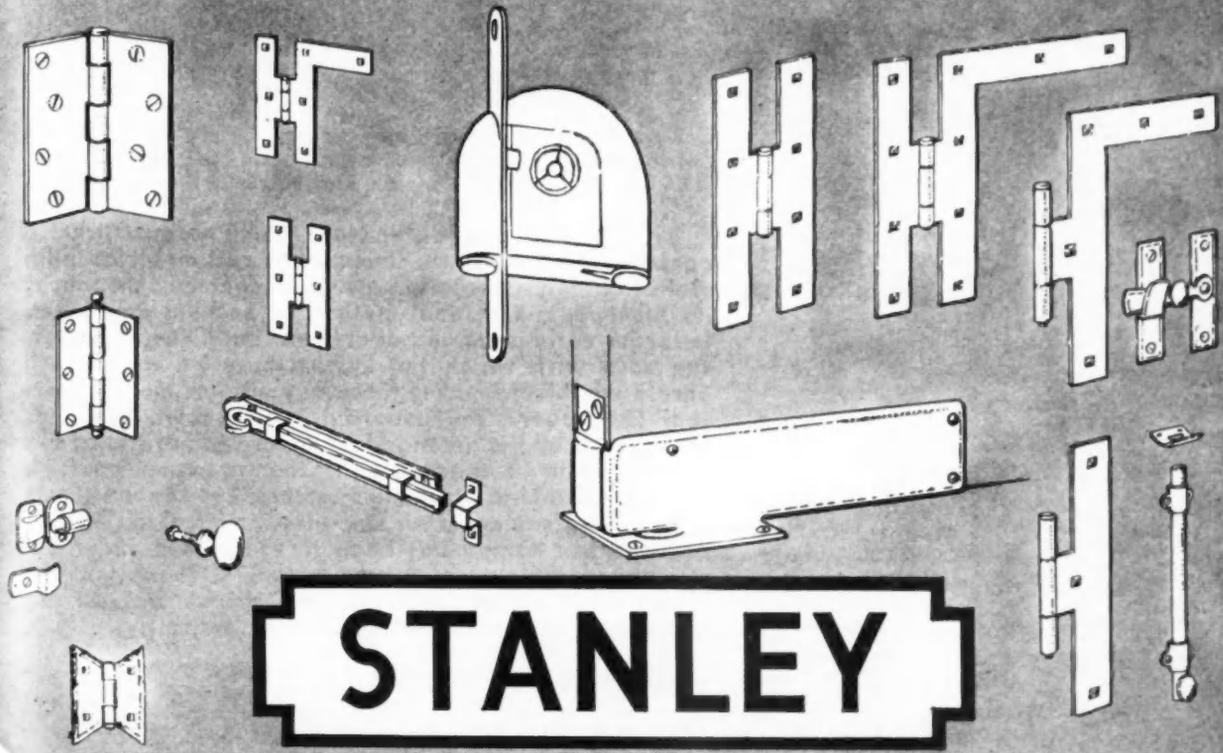
date interior designs, a complete line of Stanley items for doors, windows and built-in features will be ready for you in the days to come.

Durable, attractive, and in keeping with up-to-

THE STANLEY WORKS
 New Britain, Connecticut



TYPICAL STANLEY HARDWARE ITEMS FOR THE DINING ROOM



TRADE MARK

INSTALLED IN 1939 . . . GIVING PERFECT SATISFACTION



OWNER — Albert J. Bragg, Meadowcroft Lane, Greenwich, Conn.

ARCHITECT — W. Stanwood Phillips, New York, N. Y.

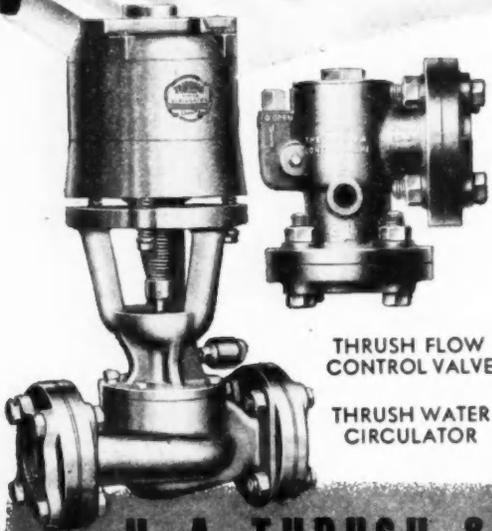
HEATING CONTRACTOR — J. W. Semple, Stamford, Conn.

Note three zones clearly shown in illustration at right.

THRUSH ZONE CONTROL

Forced Circulating

HOT WATER HEAT



THRUSH FLOW CONTROL VALVE

THRUSH WATER CIRCULATOR

FORCED Hot Water Heat which permits precise control of temperature, saves labor and material in installation and assures utmost fuel economy throughout its lifetime, is the ideal method of heating any home. In larger residences and apartment buildings, however, the ease with which the system may be zoned with Thrush equipment makes those advantages more important than ever. The beautiful home shown here has three zones and is arranged so lower temperatures can be carried in the garage and other areas without affecting comfort in the living quarters. The record shows a surprising saving of oil since its installation. What a boon Thrush Zoning has been to the owner under rationing! Home owners everywhere will thank you for telling them about Thrush Zone Control. Get all the facts now from your wholesaler or write Dept. G-7.

H. A. THRUSH & COMPANY . . . PERU, INDIANA

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★ BETTER WIRING FOR BETTER LIVING ★



Can too many watts spoil the cook?

WHAT'S cooking in the Bjones kitchen this morning? Well, practically nothing—as usual. (Mary's beginning to boil, but that's all).

Meanwhile, the entire family—including "Barkus," the Bjones bloodhound—is facing slow starvation.

Pretty soon, poor Bjonesy will have to skip his breakfast—and do a Dagwood down to the station to catch the 8:19 . . .

And all because Mary Bjones has to connect all her electrical appliances to a 3-way gimmick plugged into a single outlet!

Of course, it isn't Mary's fault—there just aren't enough electrical circuits to carry the load properly. Result: appliances don't get hot enough. Cooking slows down. First thing you know, the

breakfast and Mary's disposition are both spoiled.

We at Westinghouse think it's about time the Bjoneses—and the Smiths and the Browns—get a break. That's why we created the Better Homes Department . . . to help educate home owners on the urgent need for "better wiring for better living."

BETTER HOMES DEPARTMENT

Six Point Advisory Service

offers you free technical advice—on the selection and application of fixed electrical equipment in 194X homes—dimensions and clearances, for proper installation and easy access for servicing—placing of lighting outlets and contr is—location and size of wiring, water supply and drainage lines.

Refer your electrical problems to the Westinghouse Better Homes Department. Our housing specialists will give you authoritative information, promptly.



SEND FOR THIS FREE BOOK!

"Electrical Living in 194X" takes your prospects on a personally conducted tour through a completely electrified home. Tells them all about increased electrical loads in future homes—modern circuit protection—lighting and lighting controls—entrance equipment and distribution panels.

Get your free copy of this 64-page book now, by writing Better Homes Department (AB-74), Westinghouse Electric & Manufacturing Company, Pittsburgh 30, Pennsylvania.

Westinghouse

Plants in 25 Cities

Offices Everywhere

WESTINGHOUSE PRESENTS John Charles Thomas, Sunday 2:30, EWT, NBC.
"Top of the Evening", Mon. Wed. Fri. 10:15, EWT, Blue Network



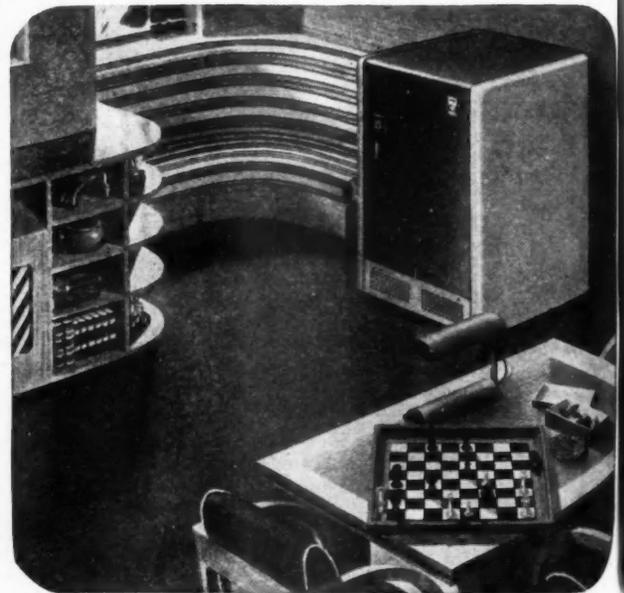
"Standard" DUO USE BATH

The "Standard" Duo-Use Bathroom plan points the way to more useful—more practical and more attractive bathrooms in the future. It gives the bathroom a wider horizon—making possible a bath and powder room in one. The door between the compartments provides privacy for each.

Both compartments can be in use at the same time. If there is an entrance from the hall, the doors to one bedroom and the bath section can be closed, making it a powder room.

Space permitting, the walls can be utilized for toilet and dress accessories cabinets. More versatile decorative schemes are also possible.

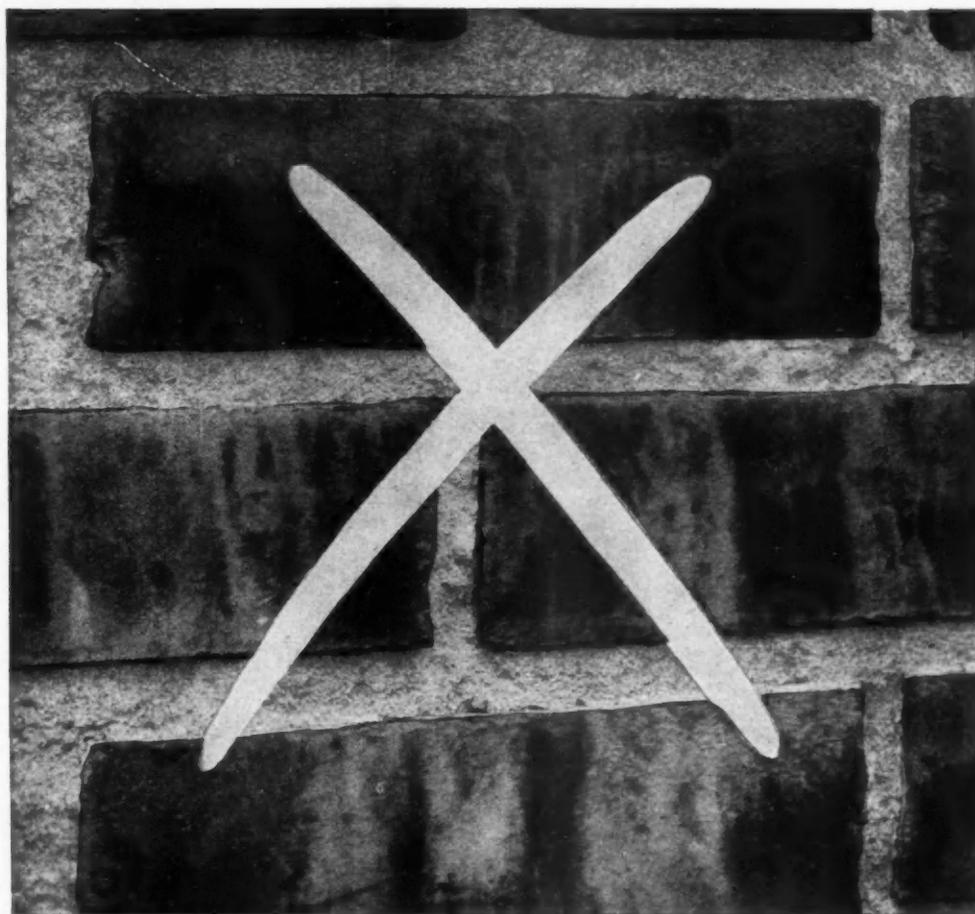
AMERICAN RADIATOR & Sanitary
New York CORPORATION Pittsburgh



Research and Design: Much thought is being given to Research and Design, to the end that post-war AMERICAN Heating Equipment and "Standard" Plumbing Fixtures will represent every known and

"Standard" Plumbing Fixtures and AMERICAN Heating Equipment currently available only under government regulations.

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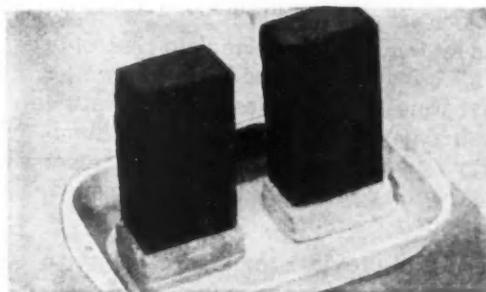
BRIXMENT Mortar Helps Prevent Efflorescence

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

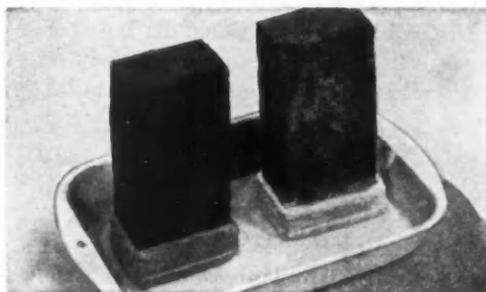
Efflorescence is caused by the presence of soluble salts in masonry materials. When reached by water, these salts dissolve, and are drawn by evaporation to the surface of the wall.

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

Bricklayers who have used Brixment mortar for years say they have far less efflorescence with Brixment than with any other mortar.



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

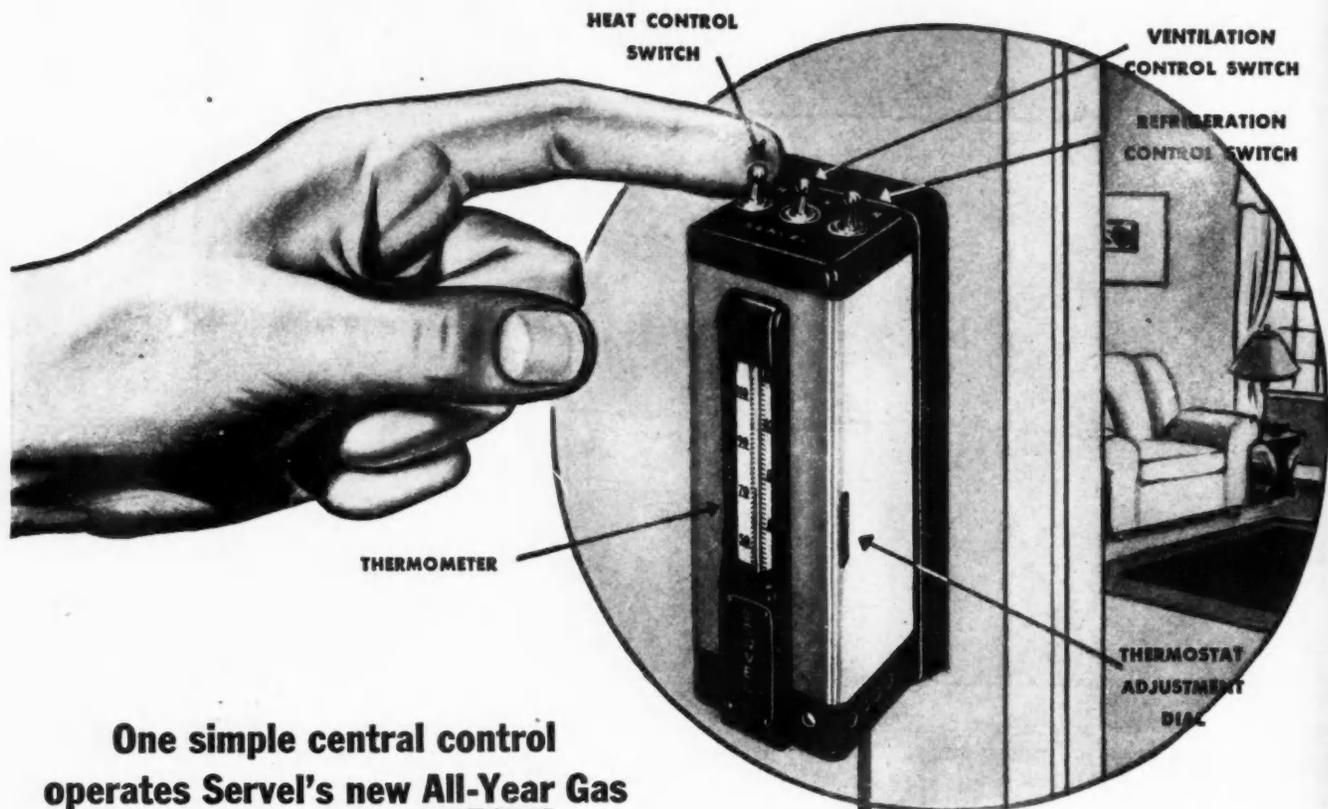


Keep about an inch of water in the pan. Even if soluble salts are present in the brick or sand, you will soon be convinced that Brixment mortar helps prevent efflorescence.

LOUISVILLE CEMENT COMPANY, Incorporated
General Offices: Louisville 2, Kentucky
Cement Manufacturers Since 1830

Summer Cooling... Winter Heating

...at the touch of a finger



One simple central control operates Servel's new All-Year Gas Air Conditioner

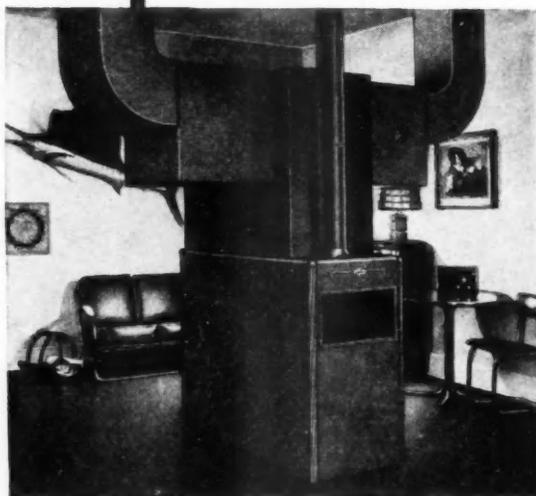
● Yes, in homes of tomorrow you'll be able to offer your clients year-round comfort at the flip of a switch, with Servel's New *All-Year Gas Air Conditioner*.

This new, simple system provides complete control of the basic elements affecting comfort and health. In winter you simply set the thermostat at the desired temperature and throw the heating control. Warmed, cleaned, humidified air is gently circulated through the home. In summer a touch of the refrigeration control sends cooled, cleaned, dehumidified air through the house.

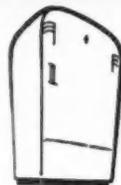
• Modulated step control provides required capacity to meet varying demands. In summer as in winter, Servel's "two step" modulation insures the proper air conditioning capacity to meet changing conditions. In between seasons, or whenever neither heating nor cooling may be desired, it is still possible to enjoy evenly circulated, cleaned air by turning on the ventilation switch.

The Servel *All-Year Gas Air Conditioner* has already been tested in more than 350 installations, and has won unqualified approval from satisfied users as "The next essential for the home of tomorrow." It will be available as soon as the war releases materials and production facilities. For information, write Servel, Inc., Evansville 20, Ind.

SERVEL GAS REFRIGERATORS are standard equipment in the nation's finest apartment houses



SERVEL



Inc.

*America's Leading Makers of
Modern Gas Appliances*



Ever stop to think about farms, Mr. Contractor?

THERE'S more to farming than just raising crops and livestock. Construction goes with farming. In normal times, farms contribute millions to America's total construction figure. Even with present wartime restrictions, it is estimated that farm construction will reach \$400,000,000 this year.

Today the farmer is urged to make repairs and improvements that will boost food production and prevent waste. Many existing farm structures need concrete repairs and improvements to increase their usefulness. Sanitary milk houses, concrete barn floors, rat-proof poultry houses, store-houses and concrete feeding floors are needed on thousands of farms.

Such construction contributes to the war effort. Much of it requires little or no scarce materials.

Through farm paper advertisements, Lehigh is

urging farmers to make needed repairs and improvements now. Contractors are finding many unexpected jobs by suggesting concrete improvements to farmers to increase production and to conserve food, feed and farm labor.

Consult the Lehigh Service Department on any farm construction problems.



LEHIGH EARLY STRENGTH CEMENT

for service-strength concrete in a hurry

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

Washington News Summary

"Public Expects The Impossible In Postwar Homes," Survey Of NAHB Proves This A Fact!

Retain Steve Hannagan to Counteract Misconception

WRITERS, advertisers and some publishers have seriously damaged postwar home building prospects with "well meaning but misguided promises," declares Frank W. Cortright, executive vice-president of National Association of Home Builders, in releasing a new and striking survey.

The nation-wide survey, sponsored by the National Association of Home Builders, revealed that the average family in the market for a postwar home expects six rooms and two baths in a house replete with mechanical wonders, glamorous new materials and revolutionary construction.

"A majority of the families questioned had an average annual income of \$3,027. They expect to pay only \$52 per month under the FHA plan of financing a new home, yet they believe it will have electronic controls which will reduce house-keeping to one of simply pushing buttons.

"One-third said they expect low-cost homes to have rooms built as complete units which could be removed or added as family needs dictate, and folding partitions and outside walls operated by push-button controls.

"Postwar homes will be much better in construction and more attractive and eye-appealing in design to provide increased value and greater livability. But the widely publicized 'magic house' definitely will not materialize in the form the public unfortunately has been led to expect," he said.

Cortright emphasized that such "magic home" conceptions were not based on the opinions of manufacturers and builders who have kept pace with all practical improvements likely to be available for the average home of the future.

NAHB is embarking on a vigorous nation-wide program to combat false ideas of the postwar home, and has employed the Steve Hannagan organization of New York City to assist in this work.

Bureau of Census Survey—

The third nationwide survey of consumer requirements, taken by the Bureau of the Census for the Office of Civilian Requirements, shows that a large percentage of families plan to use their savings for the buying or building of a new home before purchasing durable goods.

A forecast from a breakdown of the answers shows that 3,684,996 families are now planning definitely on a home after the war. Of these, 1,169,840 families plan to spend from \$5,000 to \$10,000 and over.

Realtors Pessimistic—A survey recently taken by the National Association of Real Estate Boards predicts that only 300,000 new homes will be built annually after the war.

Refutes Realtors—The Producers' Council promptly issued a statement taking exception to the low estimate of the postwar home building market made by the NAREB. The Council's research leads it to believe that the first year will see about 350,000 homes built. After that the Council expects an average of 970,000 new non-farm dwellings a year for the five following years.

(American Builder agrees with the findings of Producers' Council. Our own research closely parallels that of the latter.)

The Invasion and Lumber—

Although the demands of the armed services are rising with the invasion of Europe, employment in the industry is showing an alarming downward trend, Paul V. McNutt, chairman of the War Manpower Commission, says.

At the same time McNutt announces that a thousand workers from British Honduras will be brought to the United States to help relieve the shortage.

FPHA Pays More on Taxes—

New Commissioner Philip M. Klutznick of Federal Public Housing Authority announces that local communities will be paid 10 per cent of the shelter rents collected

in lieu of taxes from now on. Previously about 5 per cent has been paid. This is expected to increase payments to local taxing bodies by about \$715,000 annually.

Better water heaters—Provisions have been made to allow production of more durable and satisfactory direct-fired side arm and indirect water heaters, hot water storage tanks and range boilers, War Production Board says.

Indirect water heaters may now be made with brass terminal outlets and spacer plates. Copper coils were previously permitted for this type of water heater, but spacer plates, which are used to hold the submerged coil in place, and terminal outlets, which are used to connect the unit to a piping system, were not permitted to use brass. Steel tubing in both direct and indirect storage water heaters may now be replaced with copper tubing.

Market for repairs vast—Most of the 39 million dwelling units in the United States are in need of some repairs or improvements, according to a check list on "Home Repair and Modernization" released by the Department of Commerce.

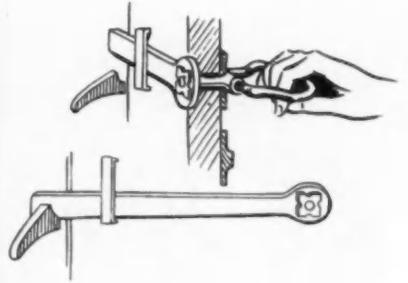
In a foreword to the booklet, Dr. Amos E. Taylor, Director of the Bureau of Foreign and Domestic Commerce, states that the average house is estimated to be made up of about 30,000 parts. Therefore it is important to check conditions carefully and systematically.

The check list is intended to help the owner go over all parts of the house, inside and out, and make a record of things that should be done to keep it in repair.

Upturn in construction—For the first time in 21 months, or since August, 1942, the volume of construction in the United States has shown an increase over the previous month, the WPB announces.

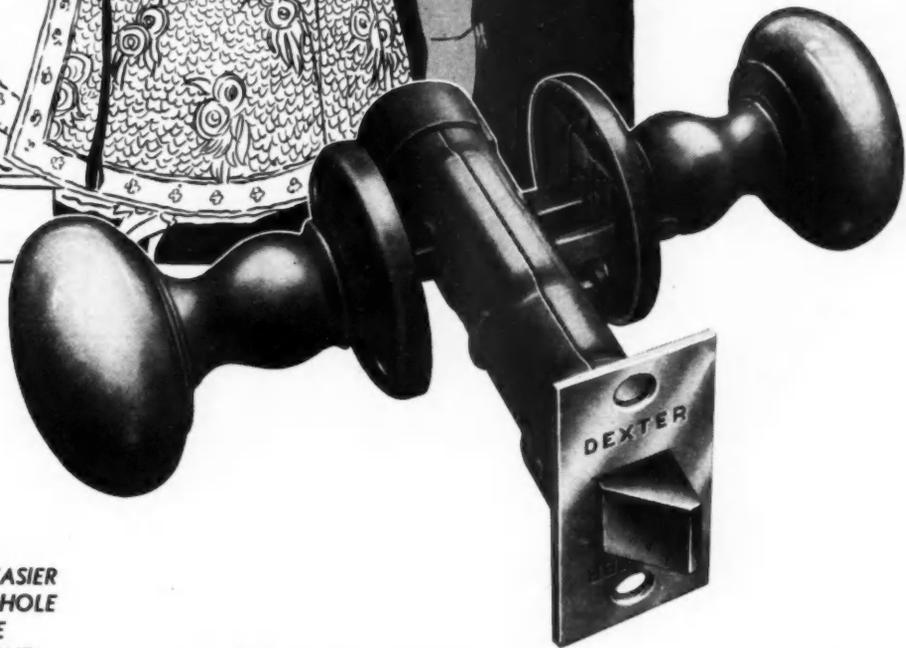
Metal windows again—Metal windows may again be manufactured to fill orders with ratings of AA-5 or better, WPB has ruled.

Brass plating soon—The Hardware Industry Advisory Committee has recommended the use again of brass plating of hardware. Chances look good.



Fine hardware for fine homes as well as satins and laces for ladies and gentlemen was a mark of the aristocrat of the 18th century when this knocker latch was in use.

To open the door the knocker was lifted, and turned which raised the latch bar on the back of the door, releasing the bar from the keeper.



EVEN I KNOW IT'S EASIER
TO DRILL A ROUND HOLE
THAN TO MORTISE
A SQUARE ONE

1944 War Housing Calls for DEXTER-TUBULARS



**DEXTER
TUBULAR
LOCKS and LATCHES**

Time was leisure during the 18th century days of gracious living. Today every minute counts, especially the minutes, (which often run into hours) of production and building costs. The time saved in installation of Dexter Tubulars; the ease and simplicity which the Dexter Bit Guide makes possible are advantages recognized by progressive builders. The proven performance of Dexter Tubulars is confirmed by their written, life-time warranty.

There is a Dexter dealer in your community. Ask him for complete information. Write for your copy of the Commander Line Catalog, showing hardware that conforms to WPB revised Order L-236.

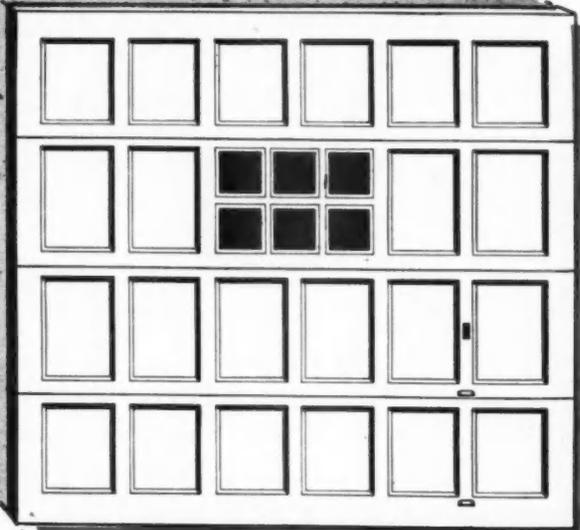
Manufactured by **NATIONAL BRASS COMPANY**
GRAND RAPIDS, MICHIGAN



This standard six-light muntin Crawford Door for residential garage application conforms pleasantly with a number of architectural styles. Sturdiness and ease of operation combine with good design to make it a leader in popularity.

... on the
**Post-War
 Building
 Boom . . .**

HERE'S OUR SLANT



We believe there is conclusive evidence that there *will* be a building boom. Residential construction has been cut to the bone since Pearl Harbor. What building has been done has been emergency housing—much of it temporary in nature. We know the money is ready and waiting and we know that the American desire to own homes is deep and basic. We also believe in being ready. Therefore, though almost our whole effort at present is in war work, we have been exploring new materials and methods so that we can rapidly reconvert to the manufacture of high quality, fine appearing, easy operating Crawford Doors when post-war building gets under way. If you, too, are thinking ahead why not get in touch with us *now* on *your* door needs.

Crawford Door Company, 401 St. Jean, Detroit 14, Mich.

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 Hand or Power Operated Doors

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AMERICAN BUILDER Editorial

FHA'S second decade

THE Federal Housing Administration is this month embarking on its second decade of service to the building industry and to private home ownership. Conditions now are vastly different than they were on June 27, 1934, when FHA set up shop, yet it is in a position today to render an even greater service in the decade ahead than in the decade just past.

The original objectives of FHA were the improvement of housing, stimulation of employment, and the opening of continuing outlets of mortgage credit through a system of mutual mortgage insurance. All of these purposes have been well served.

Want aggressive postwar program

Despite the difficulties of its wartime operations, FHA still stands in good esteem with the public, with building men and with Republicans and Democrats alike. *But it needs an aggressive leadership and an aggressive postwar program from here on out.*

Because of FHA's strong regard by building men, it is in a unique position to help this industry solve the perplexing problems of postwar. Because it enjoys the confidence of private builders and financial institutions, it can well afford to assume leadership in tackling these problems *before the war's end.*

A decade ago *American Builder* was vigorously campaigning for a reopening of the channels of credit so that building could get started. In February, 1934—just four months before FHA came into being—a special issue of *American Builder* was devoted entirely to the need for breaking the log jam of inadequate finance. This issue was sent to every member of Congress and to influential men and organizations throughout the country, and was a powerful factor in getting FHA established.

Now, a decade later, *American Builder* again—in common with hundreds of thousands of building industry men—feels that some new and aggressive program is required.

FHA cannot afford to coast along on its past achievements. The problems of the postwar housing and rehousing of the nation's citizens *are too great for the kind of coasting FHA has been doing in recent years.*

American Builder believes that with the right kind of financing setup, private enterprise can

provide decent, adequate housing for low income families at the same time it supplies the millions of thrifty middle-class wage earners who can afford and will want to buy homes of their own.

A courageous and forward-looking program should be charted to this end.

FHA's record will stand comparison with many private enterprise institutions. In its ten years it has insured mortgages on 606,000 new homes and 448,700 old properties, totaling 4.6 billion dollars in value.

Out of all these it has been forced to take title to only 4,056 as a result of foreclosures, and of these *it has sold 4,024*, with an infinitesimal loss. The mutual mortgage insurance fund of ten million dollars has increased to over 81 million dollars. FHA has stabilized mortgage procedure and has broken down geographical barriers to transfer of mortgage investments. These and many other accomplishments of FHA are detailed elsewhere in this issue.

Need low cost home title

There still remains much to be done. A new title should be established, dedicated to stimulating private construction of low cost homes—and we mean really low cost—both for sale and for rent.

The quality of personnel must be rebuilt, an experimental model home program prepared, provision made for aggressive and independent action. A change in name would be good to end confusion with the stigma of public housing.

There should be less centralized dictation from Washington and more sound working authority in the local and regional offices. At the same time there should be some form of appeal from local administrations that become inefficient, petty or dictatorial. It is not the purpose or duty of FHA to tell the builder how to place every window, door, or rose bush in his project.

Non-FHA institutions are now adopting an aggressive, liberalized program—thus serving notice that they do not plan to let FHA entirely dominate the postwar finance field. We hope that FHA and other types of institutions can function side by side. Because there will undoubtedly be an abundance of money to finance middle and higher priced homes, it is possible that FHA's greatest efforts should be directed towards very low cost homes, both for sale and rent. That is where the greatest need lies. That is FHA's golden opportunity for the decade ahead.

Will Two Call This



Official British photo

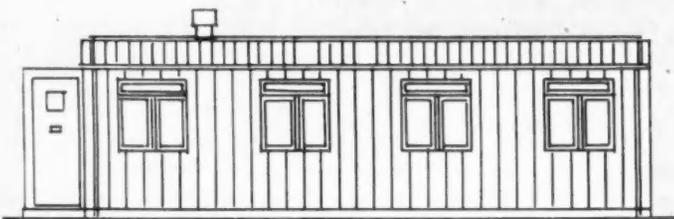
By Norman Crump

Financial Editor, "Sunday Times" (London)

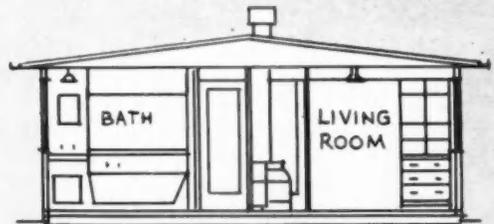
Churchill's Postwar Home Ready for Mass Production

The British government has perfected plans to turn out 500,000 of these prefabricated houses as soon as materials are available beyond the war effort. Postwar importance of housing and building jobs is fully realized as outlined. How soon will we have a building plan?

THAT HOUSING was one of Britain's most urgent needs was recently made clear by Winston Churchill. In outlining the Government's building programme, Mr. Churchill made three fundamental points. The first was that neither labor nor materials could be diverted to housing, if they were needed for essential war purposes. The second was that an emergency programme was needed, in advance of the main programme, in order to repair war-damaged houses and to make



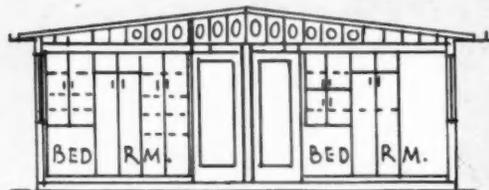
FRONT ELEVATION



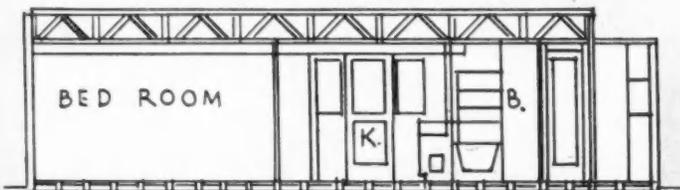
CROSS SECTION



CROSS SECTION



CROSS SECTION



LONGITUDINAL SECTION

CONSTRUCTION details of Britain's first emergency factory-made house, designed to last ten years. The model, at top of page, is now on exhibition and will be put in mass production as soon as materials are available, at an expected cost, without land, of £550 (about \$2200.)

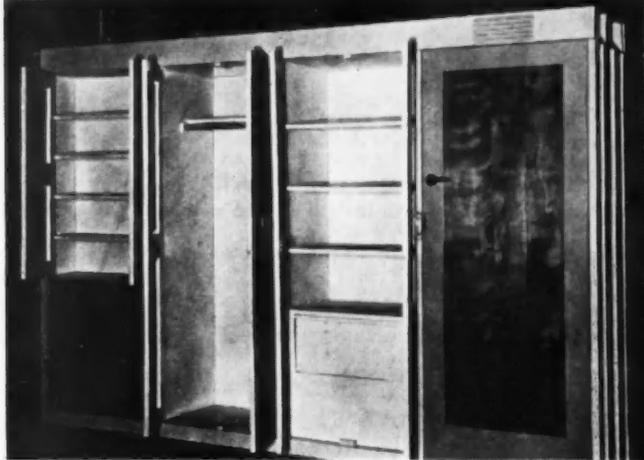
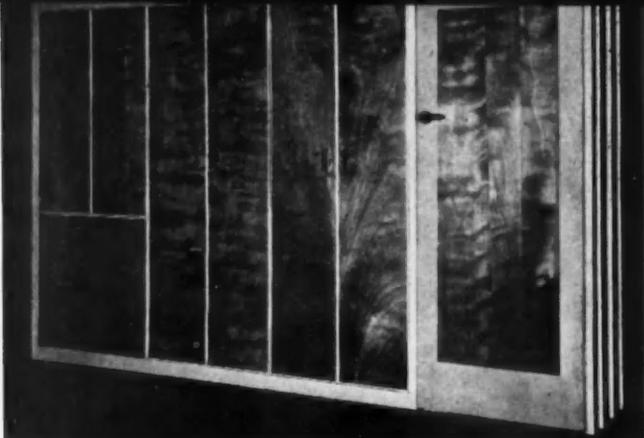
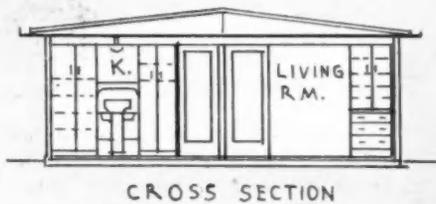
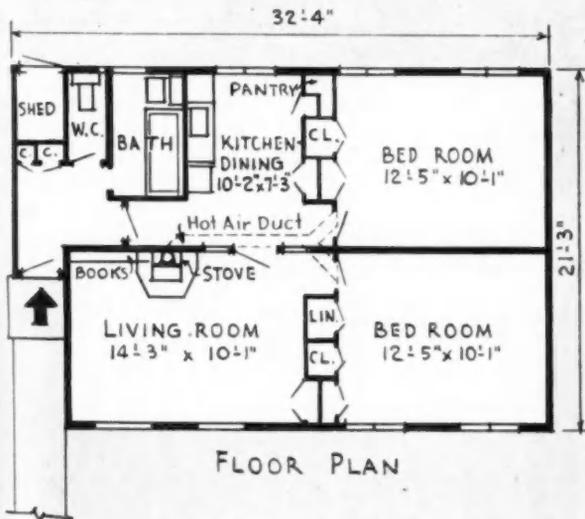
Million Britons "Victory Home"?

good the loss of accommodation arising out of the total destruction of many houses by enemy action. The third was that the building industry must not have imposed upon it a limited period of intense activity, followed by a sharp contraction of the trade.

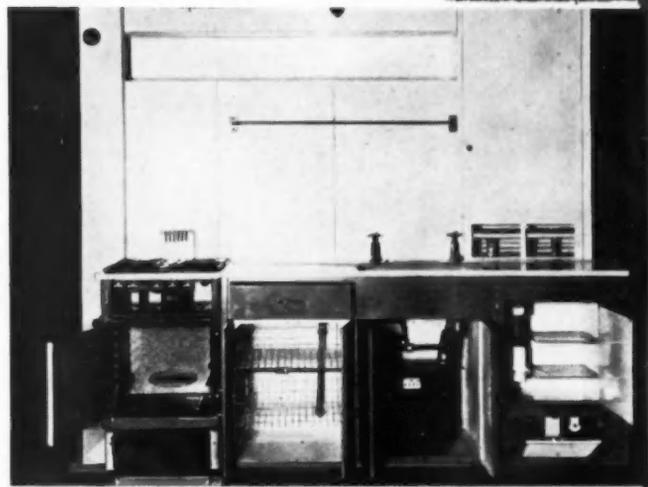
Within these essential limits, Mr. Churchill has sketched the Government's plans. To begin with, war-damaged houses are already being reconditioned, and it is hoped to break the back of this task during the current year.

Next, the Ministry of Works has already laid its plans for building 500,000 prefabricated or emergency houses of the type illustrated here. They were designed for families of four by C. J. Mole, A. W. Kenyon and Dr. R. E. S. Radling. Factories are being assigned to this job, materials are being earmarked as far as possible, and the most convenient sites will be chosen. An outstanding feature is the grouping of bath fixtures, gas or electric kitchenette, refrigerator, and built-in furniture such as chests of drawers, hanging cupboards and tables into three compact units forming the partitions between rooms. The accommodation consists of a living room of 145 square feet, two bedrooms each of 125 square feet, a kitchen, bathroom, lavatory and shed, all contained in an area of 616 square feet within the outer walls.

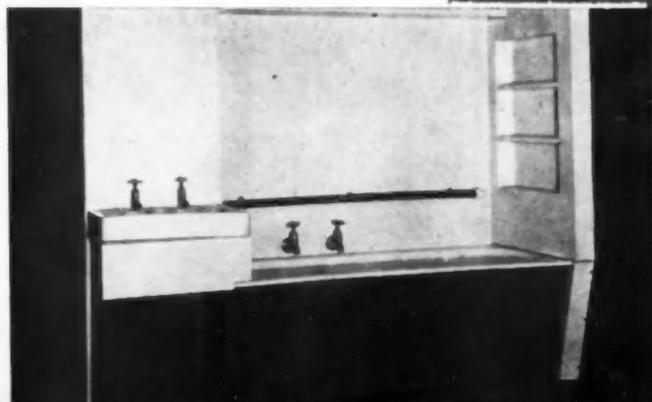
The prefabricated parts are erected on a concrete slab, tarred on top, after the necessary services and drains are laid. The floor sections are formed of sheet steel joists



NOTEWORTHY feature is use of three pre-fabricated units of built-in equipment which serve as partitions between rooms. Storage unit between bedroom and living room is closed and open.



ABOVE, kitchen side of mechanical equipment unit which has bath fixtures on other side (below); in British design, toilet is not in bathroom. Lavatory combined with "clothes hanging boiler."



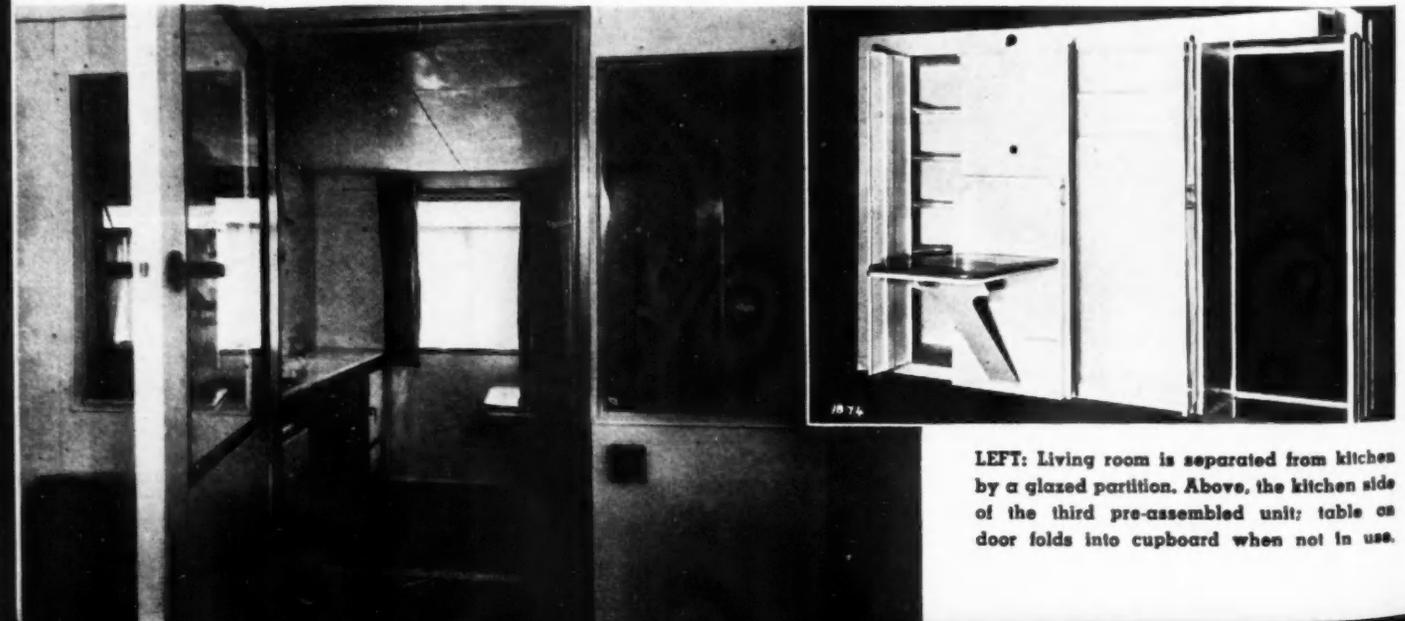
THREE CLEVER PREFABRICATED EQUIPMENT AND STORAGE UNITS ARE HEART OF BRITISH LOW COST HOUSE



LIVING ROOM of British prefabricated home planned as temporary units for bombed out families, has plywood walls, ceiling and steel sash. Heating unit is on opposite side.



OTHER END of living room showing how pre-assembled wardrobe and storage cupboard serves as partition; bedroom side of this unit illustrated on preceding page.



LEFT: Living room is separated from kitchen by a glazed partition. Above, the kitchen side of the third pre-assembled unit; table on door folds into cupboard when not in use.

to which a wood flooring is directly screwed and are bolted together above the concrete. The end and side walls, in panels of equal widths and containing steel windows, are next positioned, wedged and bolted to the panels and are set on a sheet steel sill at the floor level and between vertical and corner middle posts. The sections are tightened by means of steel wedges at the ends of three horizontal steel flats.

Special mastic seatings make the joints weatherproof. The sheet steel walls are swaged to provide stiffness and are coated inside with a woolly anti-drum material. In the kitchen, bathroom and lavatory the wall is lined with steel and elsewhere it is lined with plyboard. Within the external wall, aluminum foil on paper is mounted on a light timber frame which resists loss of heat.

The roof is pitched at $6\frac{1}{2}$ degrees and has pressed metal joists at the centers corresponding to the widths of the wall panels. The joists are pressed in angle form at the ceiling level and at the top, following the roof's rake. The steel ceiling is plain, but the steel roof is swaged to obtain rigidity. Capping is placed externally at the joints of each section, and adequate longitudinal steel bracings are introduced at the centre of the span. Aluminum foil, mounted on timber frames, is placed above the ceiling level.

The steel walls are bonderized, primed and painted; the roof is bonderized, primed, tarred and sanded, giving adequate protection against rust.

Mass production will keep down costs, and so enable these houses to be let at moderate rents. They will be publicly owned, and it will not rest with the individual tenant to

(Continued to page 98)

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A Realistic Approach to Rehousing Slum Families



By Melvin H. Baker

PRESIDENT
NATIONAL GYPSUM COMPANY

FORMER HEAD of Buffalo's C. of C.; now regional leader of C.E.D., Russian Relief and other worthy activities. He advocates better homes for all through private enterprise.

WE NEED a new point of view on the whole subject of cleaning the slum areas out of our cities.

Those who were in favor of public housing said it would eliminate slums and rehouse those unfortunate families who were obliged to live in them.

Billions of dollars have been spent. The slums are still with us and very few of the slum-dwellers are accommodated in the high-cost apartments built by the Federal government and some of our state governments.

Let us start all over again. Let us recognize that there are two separate problems here. One is to get the families now living in slums out of the slums. The other is to clear the slums, tear down the old run-down, unsanitary buildings and put the cleared land to its best use.

Let us consider the first problem first. This proposal deals only with the problem of rehousing those families who need financial assistance to live in homes better than those they can now find only in the slums.

This plan has only two points:—

1. *DISCONTINUE* the building of publicly-financed housing.
2. *PROVIDE NOW* for the rehousing immediately after the war of low income slum families in sani-

tary and livable old houses in sections of our cities which are classed above the level of slums, the type of houses in which millions of independent, self-supporting American families are now living.

In order to provide a working arrangement to accomplish this purpose with the least expense it is proposed that the states pass enabling legislation based on the following ten points:

1. Permit each city to create its own Rental Subsidy Board to be constituted of five members, to be paid for their time an amount to be determined by the legislature of each city.
2. The five Board members to be appointed in the following way:

- A. One by the governor of the state.
- B. One by the city's mayor and approved by the city's legislature.
- C. One to be selected by the local labor unions.
- D. One to be selected by the local Chamber of Commerce.
- E. One to be the head of the city's welfare agency.

3. The board shall be prohibited from building new housing but shall use suitable old houses to accommodate the families qualified for rental subsidy.

4. The board will be empowered to enter into agreements with owners of older houses to guarantee them an
(Continued to page 84)



FHA'S 10-Year Record

By Abner H. Ferguson

Commissioner, Federal Housing Administration

PIONEERING in the field of mortgage insurance, the Federal Housing Administration on June 27, 1944, completed its first ten-year period of operation. During this period FHA insurance has become a hallmark of sound investment quality that has made insured home mortgages salable securities throughout the nation. Within a period of ten years mortgages and loans advanced by private lending institutions and insured by the Administration have totaled seven and one-half billion dollars.

Safeguarded by mortgage insurance, about eight thousand lending institutions have been enabled to invest nearly six billion dollars in more than a million long-term amortized mortgage on residential properties.

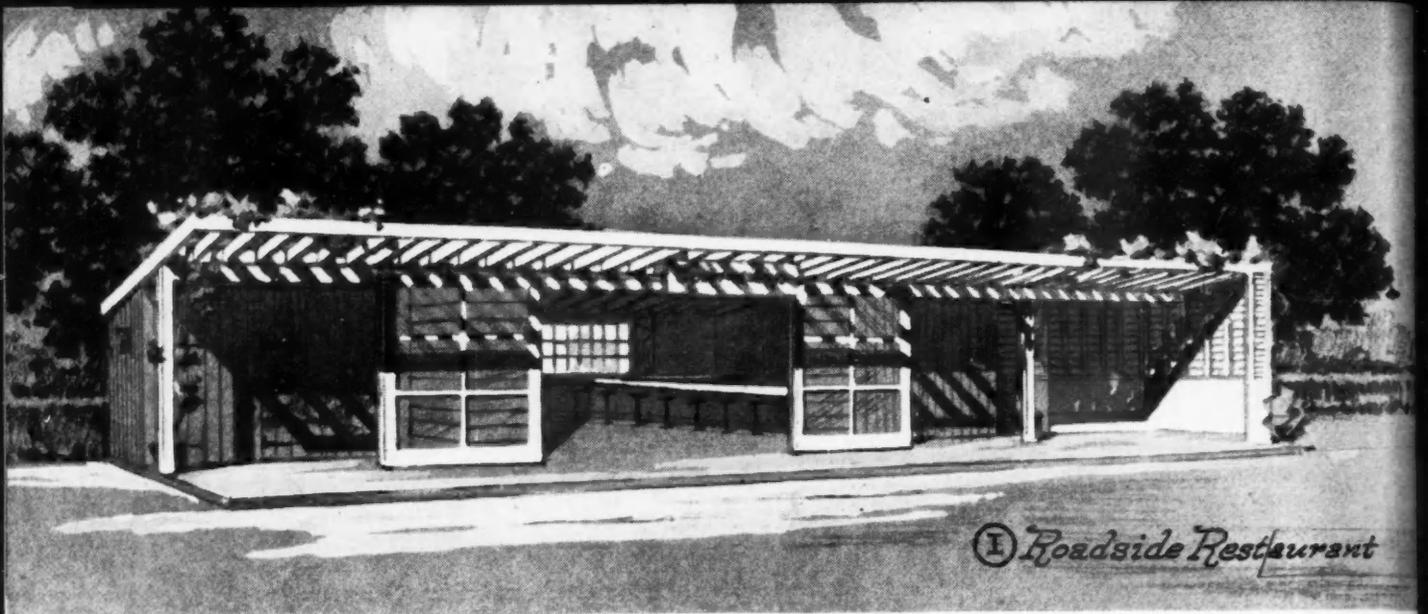
Uniform interest rates on mortgages and loans have been established on a national basis. The 80-percent—even 90-percent—insured mortgage has been brought within the range of conservative investment. The long-term single mortgage with small amortizing monthly payments has made home ownership available to many thousands of families previously denied this privilege.

Within a period of ten years FHA has achieved the accomplishment of paying its own way. After three years of

operation partial payments of administrative expenses were being paid from income. *Since the beginning of the fiscal year 1940-41, when income exceeded expenses by almost \$11,000,000, all administrative expenses have been paid from income received from mortgage insurance premiums, fees, and interest on investments.* During the ten-year period, FHA revenues have totaled \$153,000,000.

In 1934, when the FHA was established Federal funds of \$10,000,000 were set aside for the Mutual Mortgage Insurance Fund, and in 1941, an additional \$10,000,000 was authorized by Congress for the War Housing Insurance Fund. During a period of ten years accumulations from income have increased the net assets of the FHA mortgage insurance funds to over \$81,000,000.

To accomplish its purposes the National Housing Act was divided into three major parts termed Titles. Title I provided for the insurance of loans used for the repair, improvement and modernization of dwellings and certain other structures; Title II authorized the inauguration of a system for the insurance of mortgages on residential properties; and Title III provided for the chartering of national mortgage
(Continued to page 90)



MODERN roadside restaurant features refreshment terrace, big sliding glass doors, vertical siding, clever counter arrangement.

Wayside Stands With Lively Charm

You will find a big market in the post-war motor age for this well styled restaurant and the two roadside sales and display stands pictured on page 55.

These lively, attractive wayside structures will be in big demand when Americans once more take to the road. Three attractively styled, carefully thought-out structures are detailed in the blueprint opposite by Architects Henry Otis Chapman and Randolph Evans. Pictures of two of the stands are shown on page 55.

The Roadside Restaurant (I) has many clever features including the big sliding glass doors that permit service on the terrace. The curved counter, U shaped kitchen, and open rafter treatment are worth studying. Three ventilating fans are installed at rear which is lighted by a glass block panel.

The Highway Sales and Display Stand (II) has a truly

unusual charm with its vertical board exterior painted deep red and set off by white trim. Display stands are lighted by flood lights and the architects have provided a well thought-out parking arrangement.

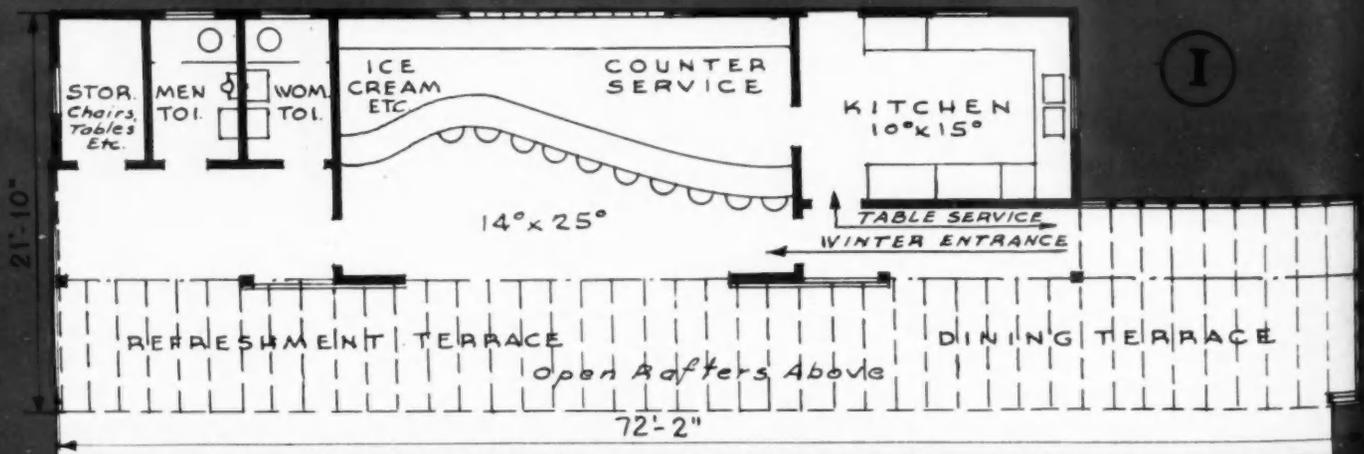
Wayside Vegetable Stand (III) is small but very cleverly executed with a big picture window in the shop portion and the ample, well-arranged display stand projecting out toward the highway. Here again provision is made for parking.

All three of these roadside structures have a freshness and charm that go well with smart postwar planning.

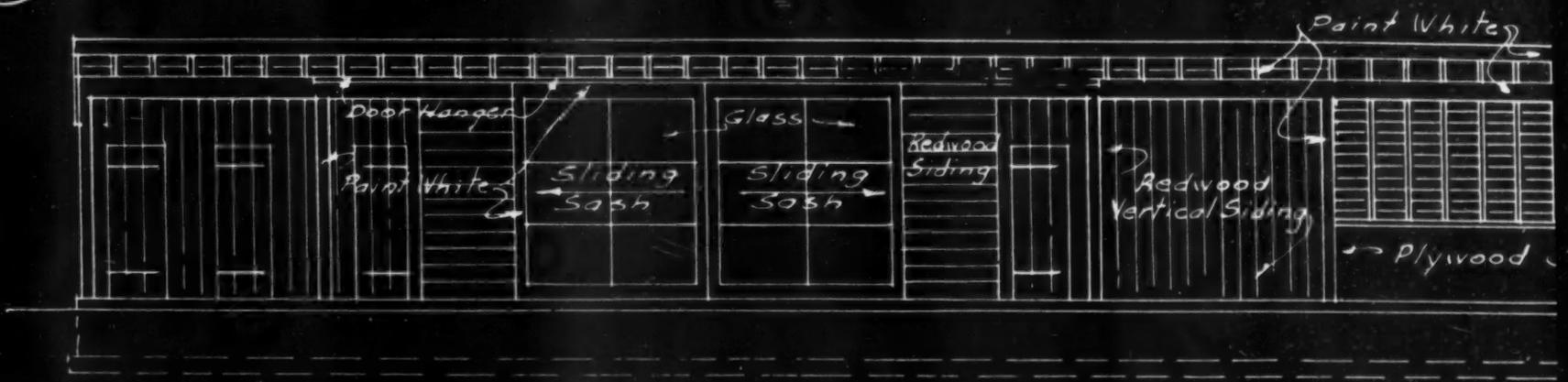
No. 7 of Blueprint Series—American Builder blueprints are presented each month as an educational feature to promote and stimulate sound postwar planning. Previously covered subjects include a rambling Colonial—private garages with architectural charm—postwar home for suburbs—a 6-house postwar community—country club cabins—a "sensible modern" for town or country.

50

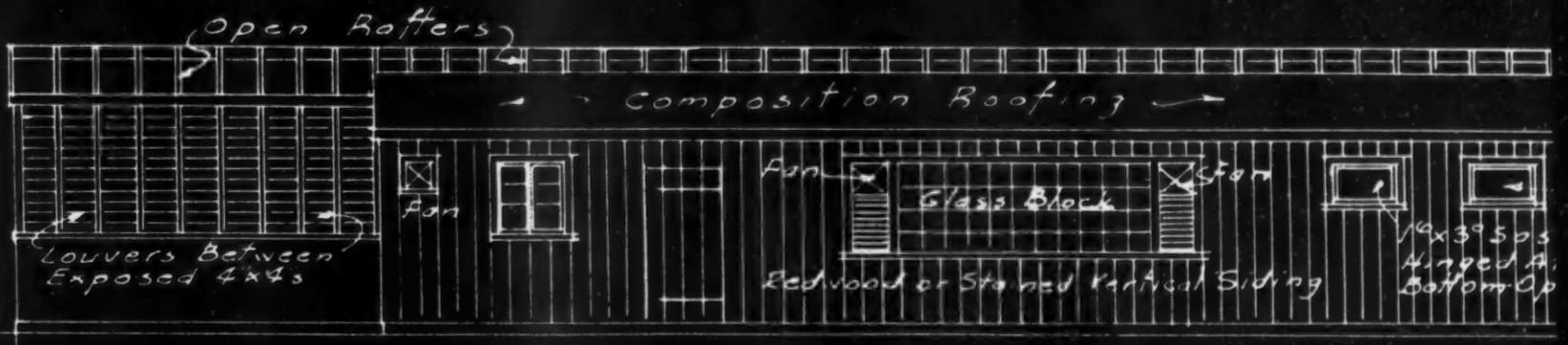
GLASS DOORS slide open so that customers can be served on the attractive open terrace. Full details on blueprint opposite.



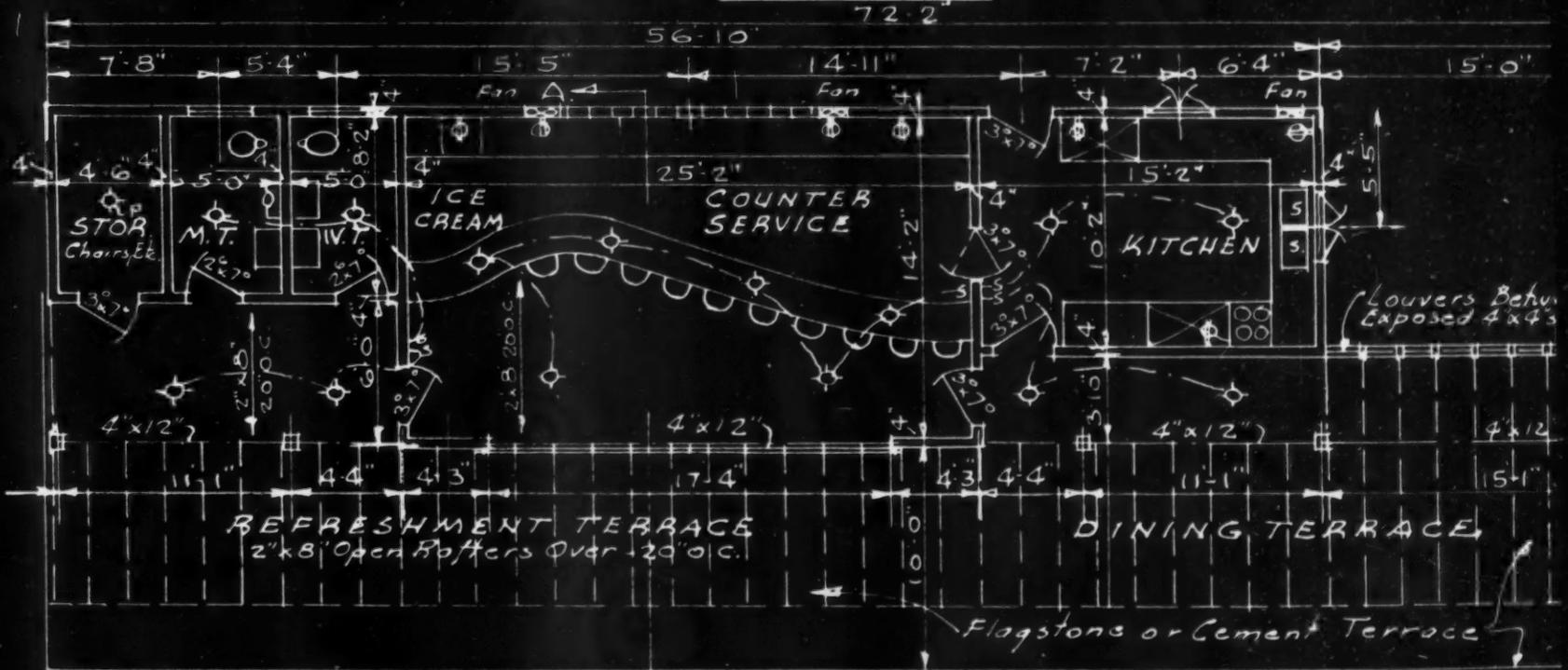
I ROADSIDE RESTAURANT



F R O N T

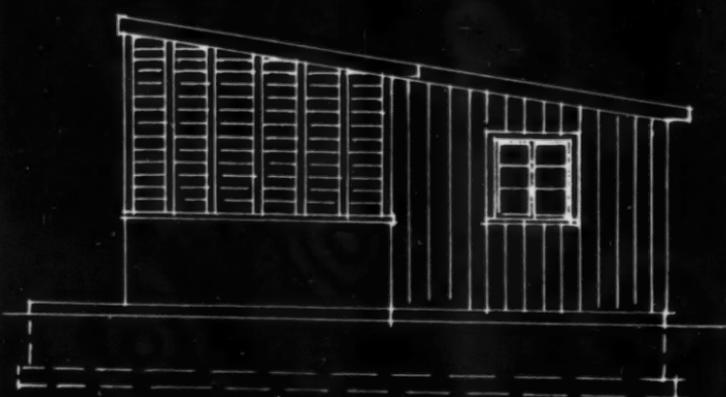


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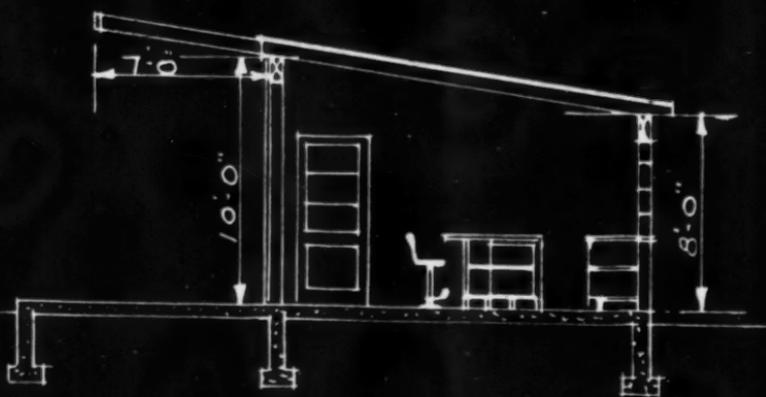
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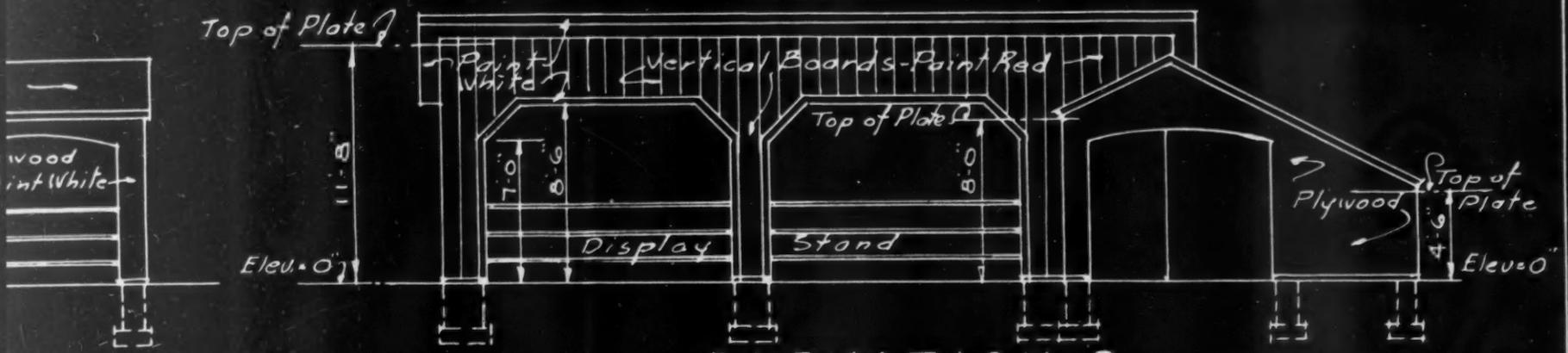


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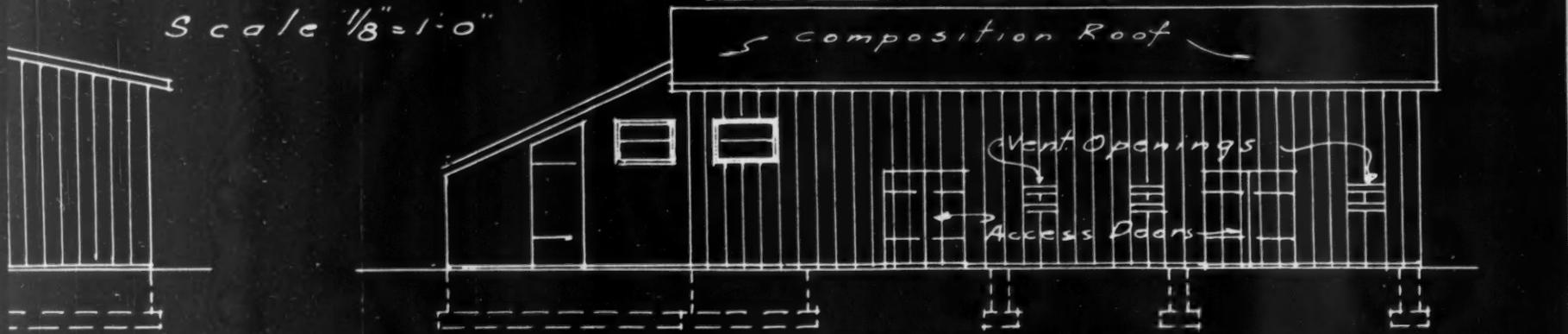
S E C T I O N A - A

DESIGN No. AB-7
AMERICAN BUILDER
POST-WAR BLUEPRINT SERIES
PREPARED BY
HENRY OTIS CHAPMAN · RANDOLPH EVANS
ARCHITECTS · NEW YORK, N.Y.
Simmons-Boardman Pub. Corp. 105 N. Adams St. Chicago.

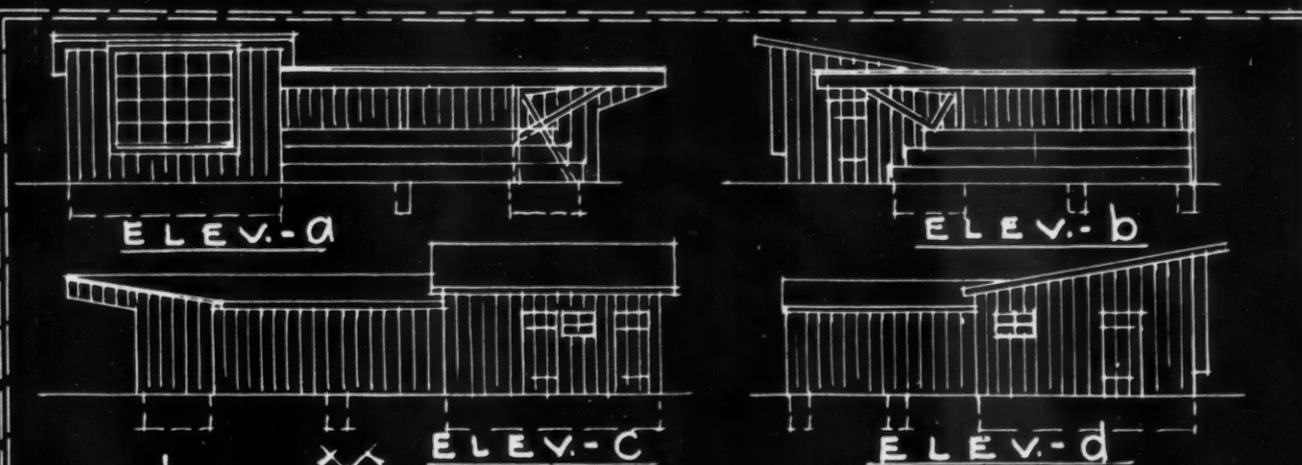
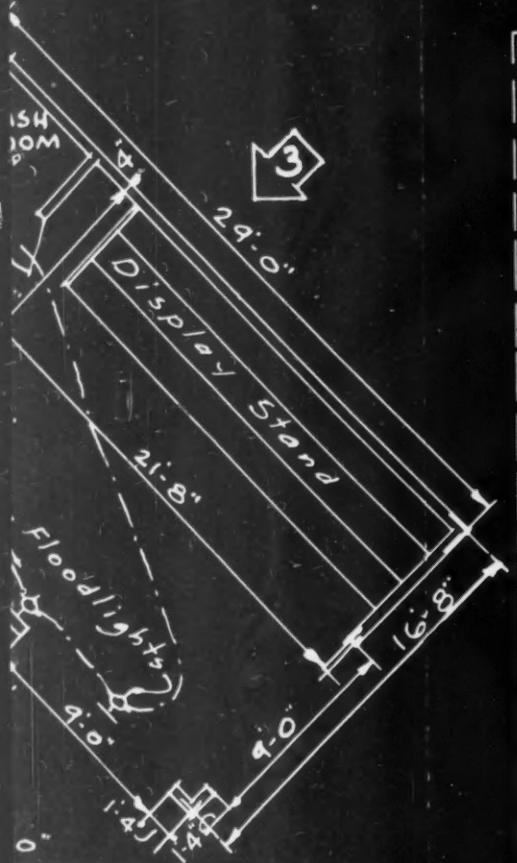


ELEVATION 2

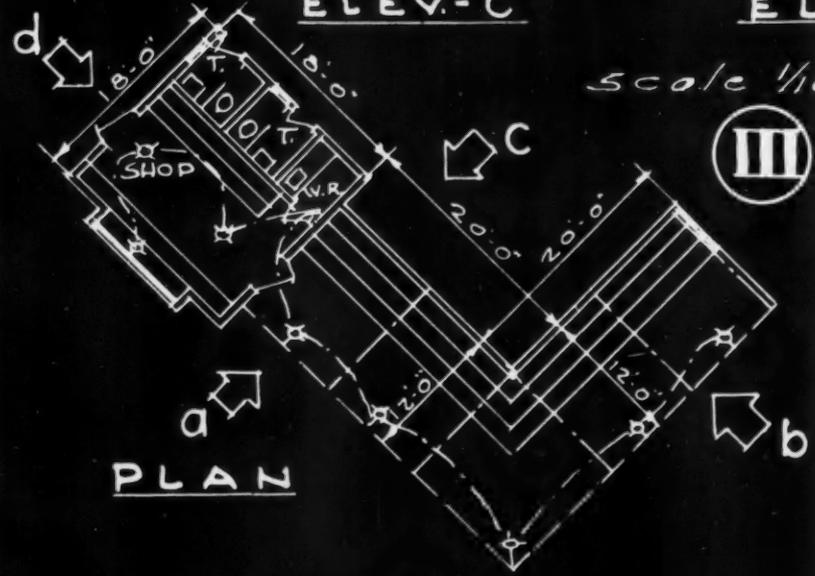
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ELEVATION 4

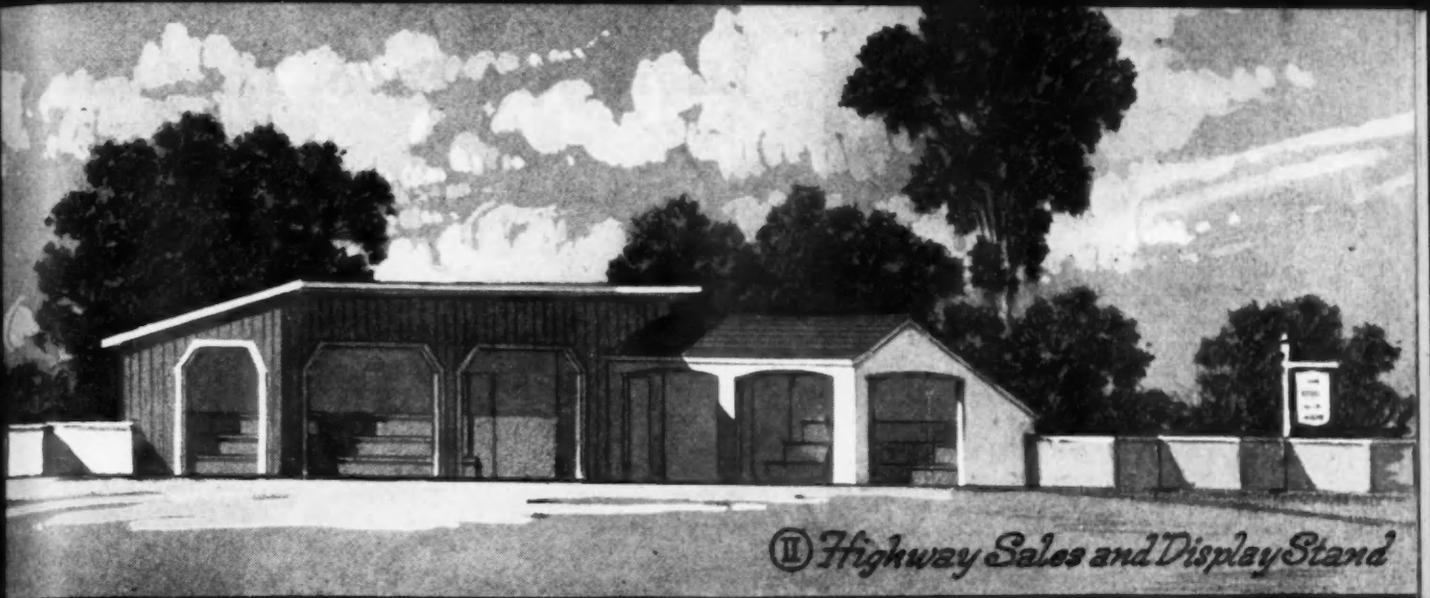


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WAYSIDE VEGETABLE STAND

3N No. AB-7
AN BUILDER
BLUEPRINT SERIES
PREPARED BY
VAN - RANDOLPH EVANS
NEW YORK, N.Y.
Pub. Corp. 105 W. Adams St., Chicago



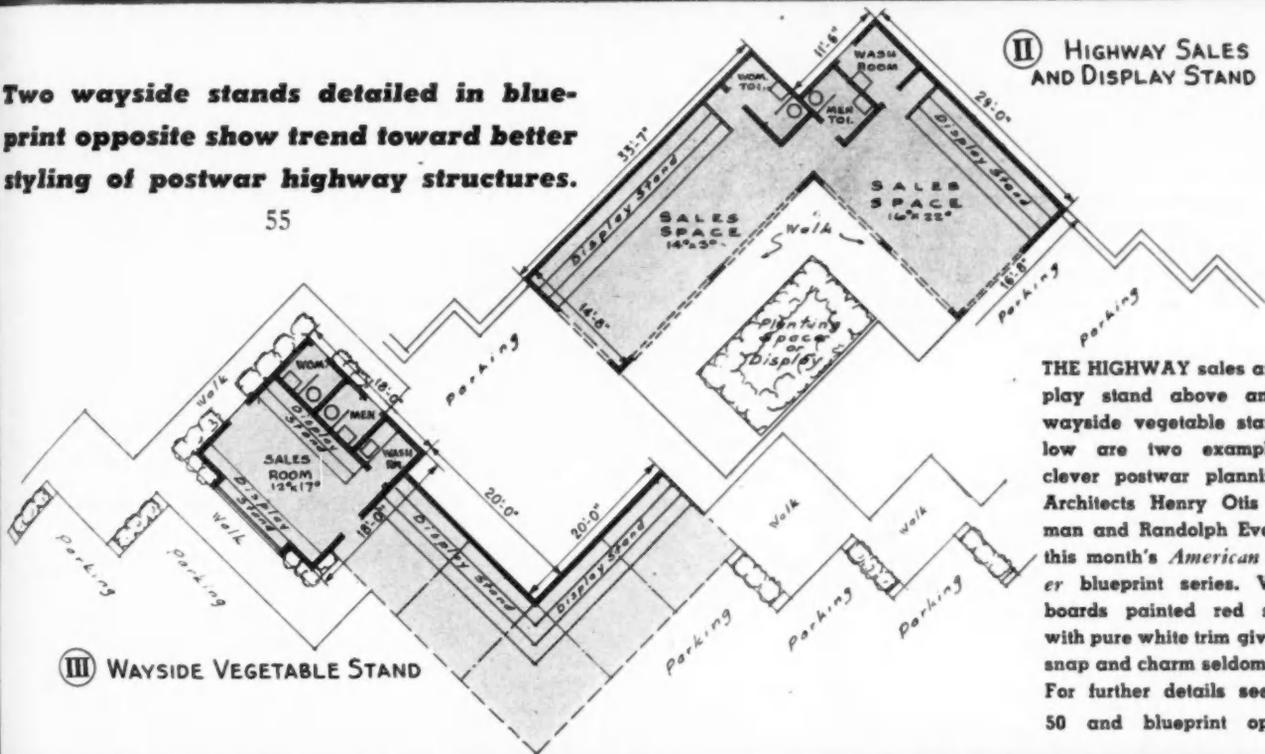
II Highway Sales and Display Stand

VERTICAL boards painted red give rustic charm to this carefully planned display and sales stand. Full details on blueprint insert.

Two wayside stands detailed in blueprint opposite show trend toward better styling of postwar highway structures.

55

II HIGHWAY SALES AND DISPLAY STAND



THE HIGHWAY sales and display stand above and the wayside vegetable stand below are two examples of clever postwar planning by Architects Henry Otis Chapman and Randolph Evans for this month's *American Builder* blueprint series. Vertical boards painted red set off with pure white trim give them snap and charm seldom found. For further details see page 50 and blueprint opposite.

III WAYSIDE VEGETABLE STAND

RUSTIC vegetable stand features big picture window, clever vegetable display arrangement, planned parking space.



III Wayside Vegetable Stand

PUBLIC

All Projects Shown Are in Washington, D.C.

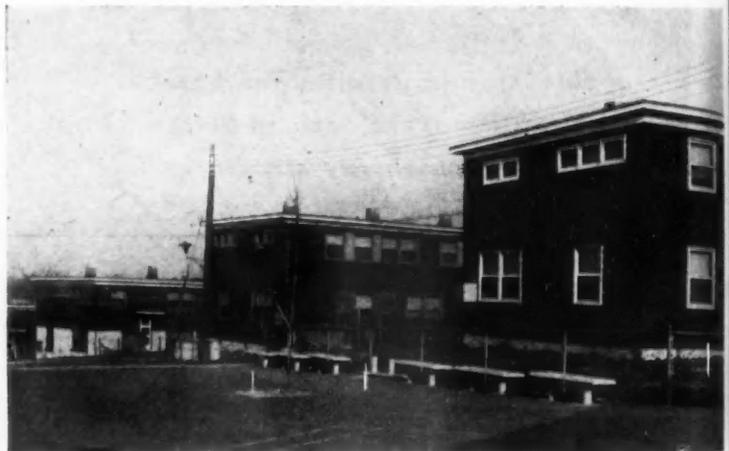
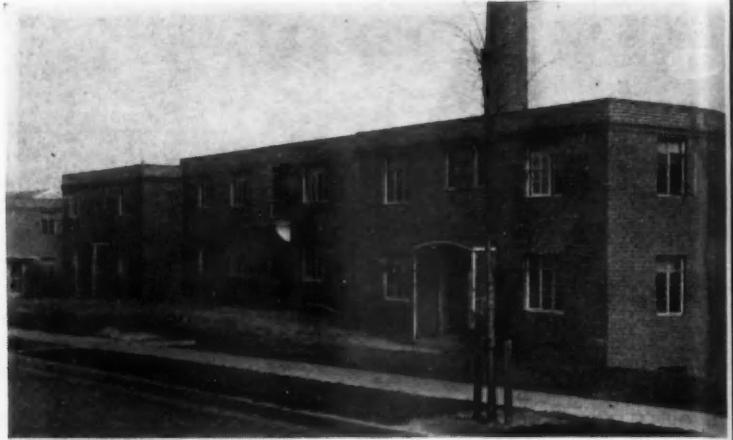
FORT DUPONT DWELLINGS, located on Ridge Road near Minnesota Avenue, S.E., were built in 1940 by the Alley Dwelling Authority, which was the predecessor of the National Capital Housing Authority, and cost \$4,724 per unit, including the cost of land.

FREDERICK DOUGLASS DWELLINGS for colored occupancy were completed in 1941 by the Alley Dwelling Authority. They are of permanent frame construction with part masonry, have individual space heating units, no tile baths or basements and cost \$4,511 per unit, including land.

PARKSIDE DWELLINGS for colored occupancy located on Kenilworth Avenue, N.E., were built by the National Capital Housing Authority and completed in 1943. They have individual space heating units, no tile baths or basements and cost \$5,376 per unit, including the cost of the land.

COMPARE the cost of public housing, above, with the cost of private housing in the like column on opposite page, exactly reproduced from The Bulletin of the Washington (D.C.) Taxpayers Association. To secure a copy see the box opposite page.

Here Are Facts That Show Pub



“WHEN someone recently remarked to a high official of the Budget Bureau that it costs the Government so much more than a private builder to erect a house, he replied: ‘It costs the Government more to do anything.’”

This is a direct quotation from the Taxpayers Bulletin of the Washington (D.C.) Taxpayers Association, a twenty-four page resume of the public housing program throughout the country and the particular situation in the District of Columbia.

“A real effort has been made to get all the facts and figures right, but the facts and figures on

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Public Housing Inefficiency



PRIVATE

All Projects Shown Are in Washington, D.C.

GREENWAY—MINNESOTA Avenue and East Capitol Street, S.E., completed by Cafritz Construction Company in 1941. It has tile baths and hallways, Stran steel and concrete laundry room in each building, recreation rooms and playgrounds. It cost \$2,778 per unit, including cost of land.

SUBURBAN GARDENS for colored, Deanwood, N.E., was completed by A. Lloyd Goode Construction Company in 1942. It has tile baths and central heating plant and cost \$3,949 per unit, including the cost of land.

FOUR-FAMILY FLATS built by Davey & Murphy in 1943 in the 3200 block of East Capitol Street. They have tile baths, weather stripped windows, and basements and cost \$3,335 per unit. This also included the cost of the land.

EVIDENCE that private builders erect comparable or better housing at less cost than Government. You can secure the bulletin from which these facts are taken. Write Washington Taxpayers Association, 1508 H Street, Washington, D. C.

public housing are confused, obscure and often contradictory," Rufus S. Lusk, President of the Association, says in a letter prefacing the bulletin. "The National Capital Housing Authority's figures vary from year to year," the bulletin states, and cites the following as proof of this point: "According to its annual reports, total development cost per unit of Fort Dupont Dwellings (shown at top, left) was \$4,779 in 1941, \$4,724 in 1942 and \$4,463 in 1943. In a newspaper release of December 1, 1943, the unit cost was given by John Ihlder, Executive Officer of the NCHA, as \$4,643."

New "US LOAN PLAN" Makes Its Bow

U. S. Savings and Loan proposes new, liberalized 15-point loan plan for builders, including no-payment construction money, blanket mortgages covering large building operations and multiple-unit loans for rental housing projects



CHAIRMAN Gardner W. Taylor, W. H. Brock and Walter B. Schleiter.

CLOSE to the date of the 10th anniversary of FHA, the Postwar Program Committee of the U. S. Savings & Loan League submitted to 3500 savings and loan institutions a brand new home loan mortgage plan for national adoption.

The idea behind the US Loan Plan is to create a great push forward for home ownership by making the construction of homes easier and by making their purchase and the payment therefore a mid-twentieth century type of credit transaction rather than a hang-over from the past two centuries. The program committee consists of outstanding mortgage men from 35 different cities scattered throughout the United States.

The Plan has 15 major features, as listed in the box below. From the builder's standpoint, the last three features are especially interesting. One, however, should please both builder and buyer, and that is the right to postpone the first mortgage payment on a house being

built until occupancy of the house by the buyer occurs.

The Postwar Committee spent a great deal of time and discussion and thought on the matter of loans to operative builders. It recognized that a higher and higher percentage of the homes in the United States are built by operative builders who sell the finished product, rather than building it to order for the particular owner-occupant. It considered the likelihood that this type of builder will play a greater role in the postwar period. The financing of such operative builders for a project involving \$100,000 or \$1,000,000 or more in cash was the knot which the savings and loan committeemen strove to untie in their US Loan Plan. They granted at the outset that the money ought to be advanced in the process of building. Temporary financing for the operative builder, as well as for the contractor on a single house, is unduly expensive and inconvenient. The Committee determined to

reduce this overhead cost. In short, the place where an operative builder should get his money from the start is a local lending institution.

The US Loan Plan contemplates the making of a blanket mortgage on the entire project if the builder so desires, and the disbursement of funds under that mortgage as the building proceeds. It provides likewise for the release of individual homes from the mortgage when each home is completed and sold. If the builder prefers, he may have an individual mortgage on each home.

Again, as in the case of the contractor on an individual house, no payment on the loan is required until the project is completed. Thus the operative builder would not have to use capital to make loan payments until he had had an opportunity to sell some or all of his properties, or to rent some in anticipation of sale.

One of the dilemmas which a family.
(Continued to page 85)

15 MAJOR FEATURES OF PROPOSED NEW US LOAN PLAN

1. Maximum percentage of loan to value, if requested.
2. Attractive interest rate with a minimum of three ½ per cent contractual reductions during life of loan; average rate, 5 per cent or lower.
3. Loan terms up to 12, 16, and 20 years.
4. Monthly payments with interest charged on unpaid balance only.
5. Budgeting of taxes and insurance on monthly basis.
6. Right of borrower to defer up to six monthly payments after three years when needed and requested.
7. Right of borrower to repay any part or all of principal at any time without penalty.
8. Right of borrower to lapse payments so long as loan is paid ahead of contract.
9. Assistance to borrower who finds it necessary to move.
10. Provision for additional advances for repairs, equipment, modernization and other purposes without the necessity or expense of refinancing.
11. Minimum title costs and service charges.
12. Promptness in loan commitment, loan closing and disbursement.
13. Advances for labor and material to build, with right of borrower to begin payments after the home is ready for occupancy, but in no event later than six months from the date of first advance, with interest to be charged only from the date of each advance.
14. Assistance to operative builders by making a blanket mortgage, advancing money for labor and material, and releasing homes as sold.
15. Multiple-unit loans to encourage the building of rental housing.

There's Excitement Ahead in Home Building

A quarter size model of a forward-looking type of design and a detailed floor plan has been shown to 300 prospects a day to our Bros. department store in Los Angeles. It is one of Home's house patterns.



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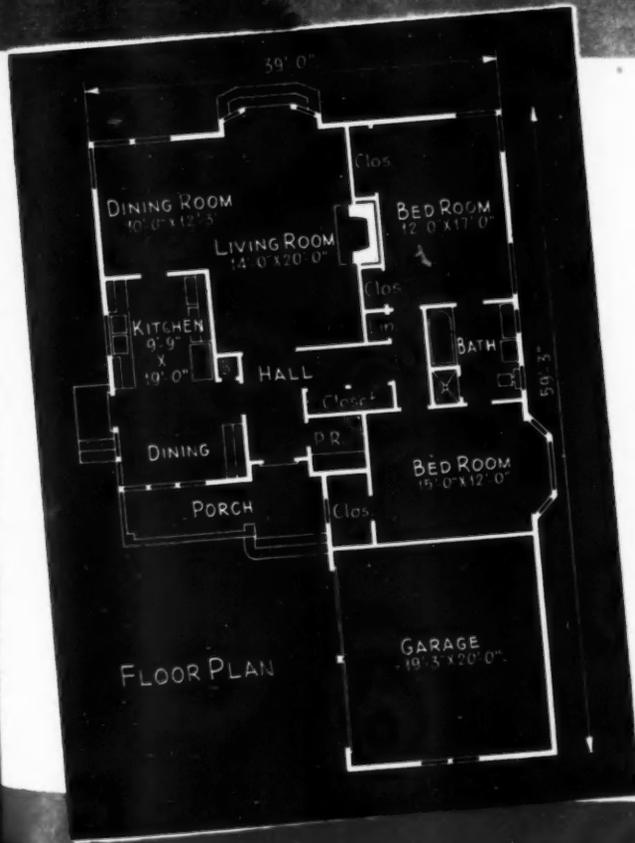
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**Check your past and present and be ready
for the Home Building Wave of the Future**

WHETHER you agree with the "evolutionists" or the "revolutionists" on the post-victory trends in building, definitely look for stimulating, advancing days in the industry. Provoked by the promises of stratospheric dreamers, forward-looking builders will be turning out the finest homes ever offered; these will combine wartime experience, technical and mechanical improvements and a modified, cleaner design approach. Stand-patters will find it hard to sell their out-of-date products.

All this because underneath the turbulent churning of wartime change, a new pattern will gradually form. Nothing will come of most of the attempts to radically alter normal practice. However, some ideas will get a foothold and grow if they help meet public demands for better, cheaper housing. Sales methods, distribution, construction, land development and design are all under fire today. *American Builder* has been keeping its readers forewarned of such changes ahead; this month's news of future possibilities is covered on following pages.

All Year Air Conditioning Ready for Postwar Homes!

358 Test jobs installed in all climates just as war struck. Double checked for bugs during war years. Corrected and ready for use the day Victory dawns.

By John E. McNamara

Associate Editor

Another READY TO GO

Exclusive Story by
AMERICAN BUILDER

THE EXCITING things ahead—not five or ten years from now—but the first day of Hitler's defeat—that's what AMERICAN BUILDER is telling and showing in these "Ready To Go" stories. Last month we showed how one builder is "ready to go."

This month we show how a manufacturer of all year gas air conditioning launched a nation-wide program of test installations just before the war, replaced parts that failed in use with parts that stand up. This testing, correcting and proving during the war will bring this essential of greater livability to postwar homes three years ahead of schedule. The day peace is won, Servel says, it too is "ready to go."

Clean appearance of a basement installation.

FROM WIDELY SEPARATED areas homes were selected in which test installations were made. Through this, all year air conditioning comes three years sooner.

"THERE is left but one possible source of new wealth to replace the wealth lost in the war. This source is the discovery of *new products to manufacture and sell.*"

This quotation from "Industrial Research" by F. Russell Bichowsky has been adopted by Louis Ruthenberg, President of Servel, Inc., to describe the postwar policy and aim of his company.

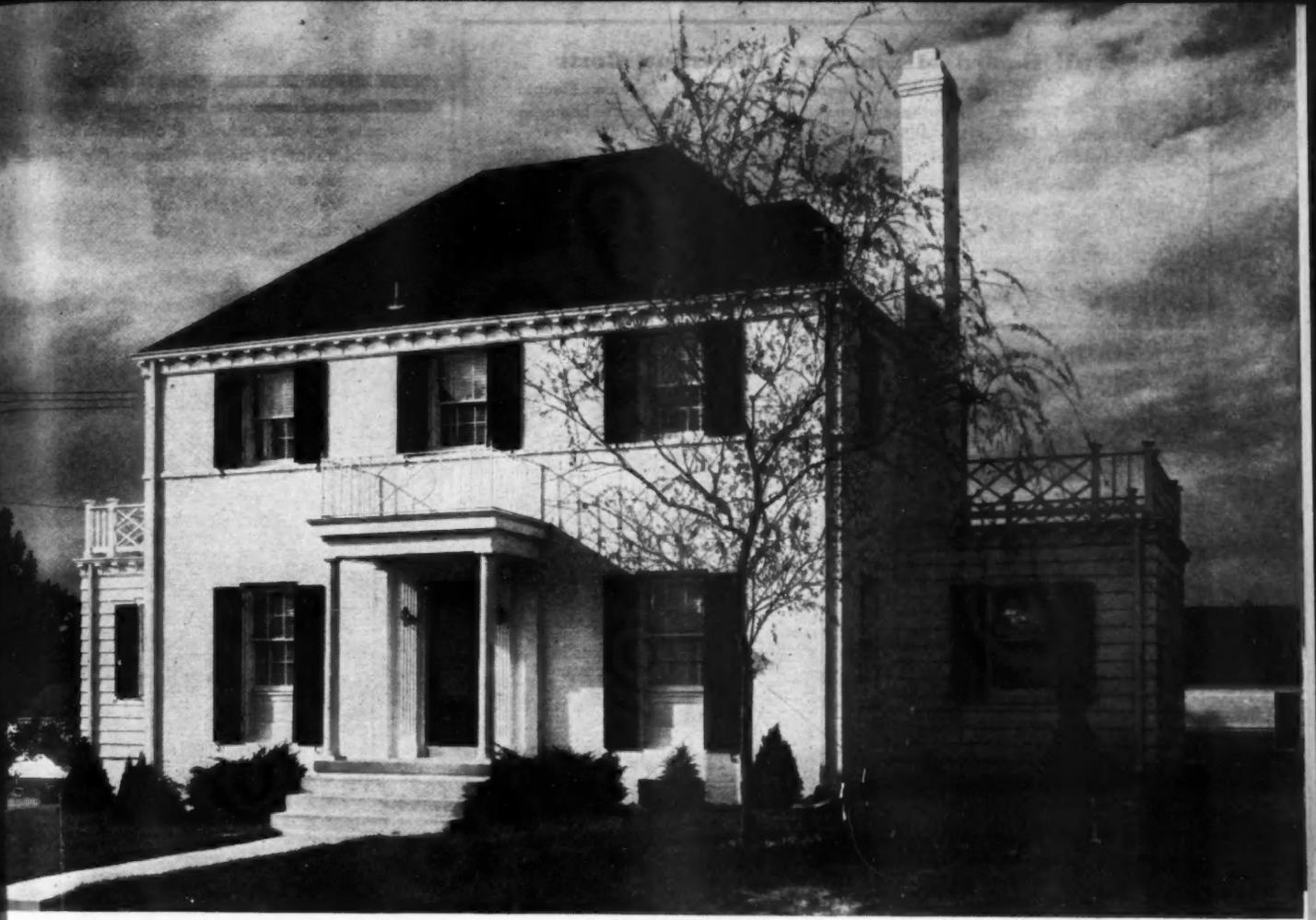
When war came, Servel had already under way plans and developments looking to the introduction on a major scale of at least one new product—all year gas air conditioning.

After several years of laboratory research, the first models were manufactured. Just before the war a program of test installations was undertaken throughout the country to double-check the units further in the practical proving ground of actual use.

Since the unit was designed to render six major services affecting the health and comfort of the families which would buy it, it was necessary to make these test installations in as many different climates as possible. For this reason 358 installations were made North, South, East and West—giving a cross-section view of its performance in every conceivable weather condition throughout the nation.

The six services which the unit is built to render are efficient *heating*, effective *cooling*, controlled *humidification*, positive *dehumidification*, selective *air circulation* and thorough *air cleaning*.

This all-year air conditioner was ready for market after extensive field tests just before the war. As soon as war struck, the company immediately directed its production exclusively to the war effort. The manufacture of these units was postponed until V day. Meanwhile the field tests have been continued during the war.



A TEST INSTALLATION home in Chevy Chase, Maryland. Windows are now forever sealed, barring dust, pollen and humidity.

Flaws which developed in use were corrected and permanent improvements were made.

This is the reason the company is now in a position to promote the sale of this unit immediately after the war as a "tried and proved product." Yes, this is why Servel is "ready to go."

Home builders will be quick to grasp the sales potential of such a product. We can hear them now, coining such phrases as: *Keep colds away from your kids! Sleep at home in the clear, clean, balmy air of the mountains! Drive drafts out of your lives! Take a seashore splash in your own bathtub. Expel that thick, sticky, muggy atmosphere from your home.*

Builders will want to know as soon as possible how

much this six-service air conditioning will cost to install in the postwar homes they are now planning. They will want to know also what the operating costs will be.

While specific operating costs are now available, as shown in the box on the next page, the exact cost of the unit has not yet been set for the postwar market. From our discussions with executives of the Servel organization, however, *American Builder* predicts that the costs will be low enough to permit all year air conditioning in homes selling for \$7500. Further reductions in manufacturing costs through increased production may make it practical later to add such luxury to houses selling at even lower prices.

(Continued on next page)

CENTRAL LOCATION of the air-conditioning unit works best. Registers are shown in red on the plan of this test house.



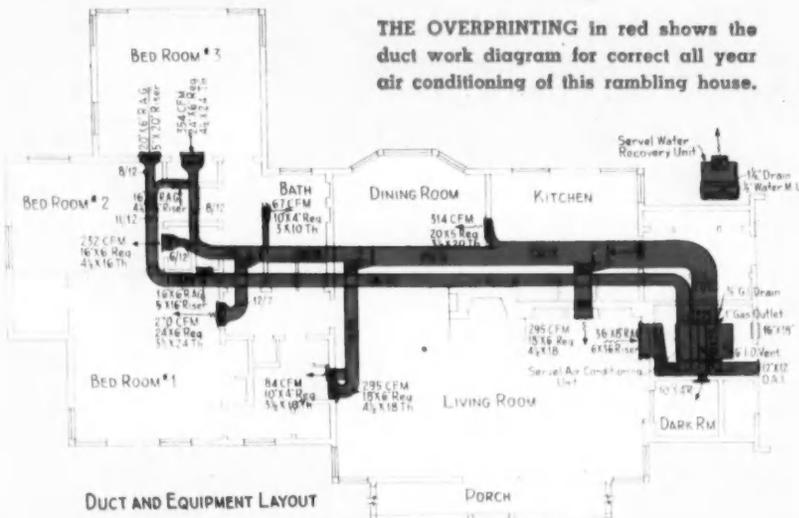
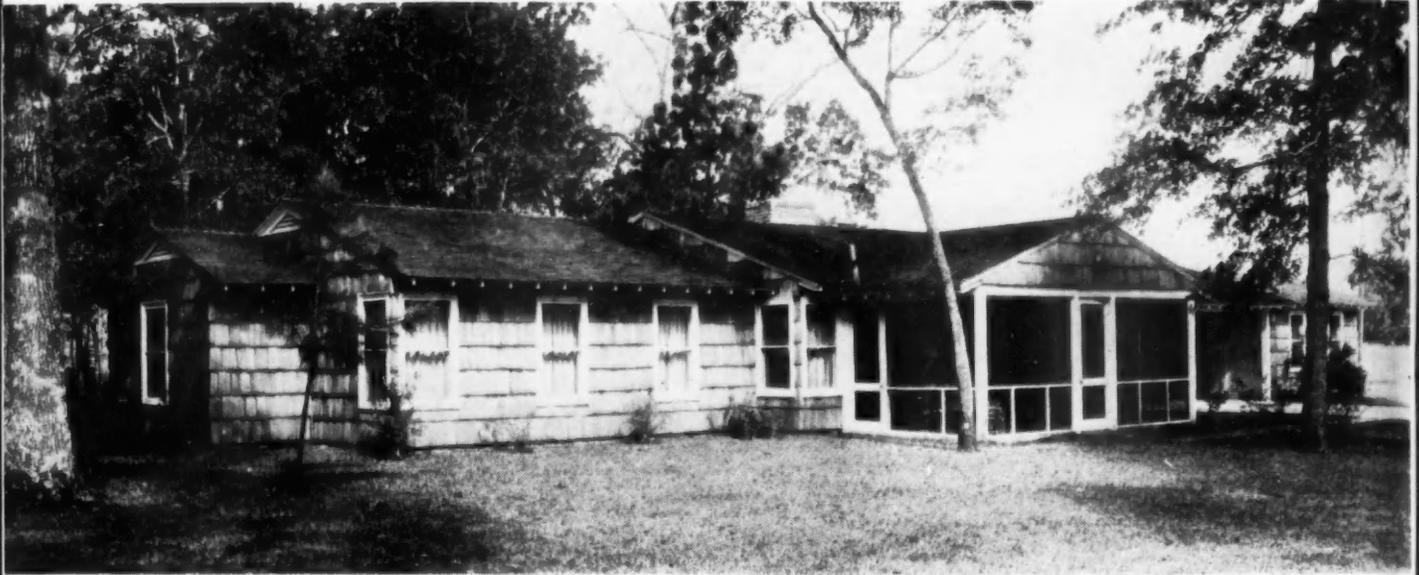
FIRST FLOOR PLAN

SECOND FLOOR PLAN

Full Record of Summer Operating Costs

Holding the thermostat at 74 degrees, the Public Service Electric and Gas Company kept these records in D. C. Hungerford's home in Madison, N. J., for the 1942 summer season of 95 days. The house, which is not shown here, has nine rooms, four baths, and spacious halls: Gas—87,370 cu. ft. @ 51c per MCF\$44.52
 Electric Conditioner 430.2 KWH @ 4½c = \$19.09 1041.9 KWH 46.88
 Cooling Tower 611.7 KWH @ 4½c = \$27.79
 Water—16,542 gallons @ 22½c thousand gallons 3.74
 Total Cost—(about \$1 a day)\$95.14

"EVEN UNDER EXTREME SUMMER CONDITIONS there has never been a time when the capacity was not sufficient to maintain inside temperature at 15 degrees below the outside temperature and to provide adequate humidity control," says Walter de Lima Meyers, owner of the rambling, woodsy, Houston, Texas, house shown below. The air conditioning was installed under the direction of the United Gas Corporation of Houston. See the plan below.

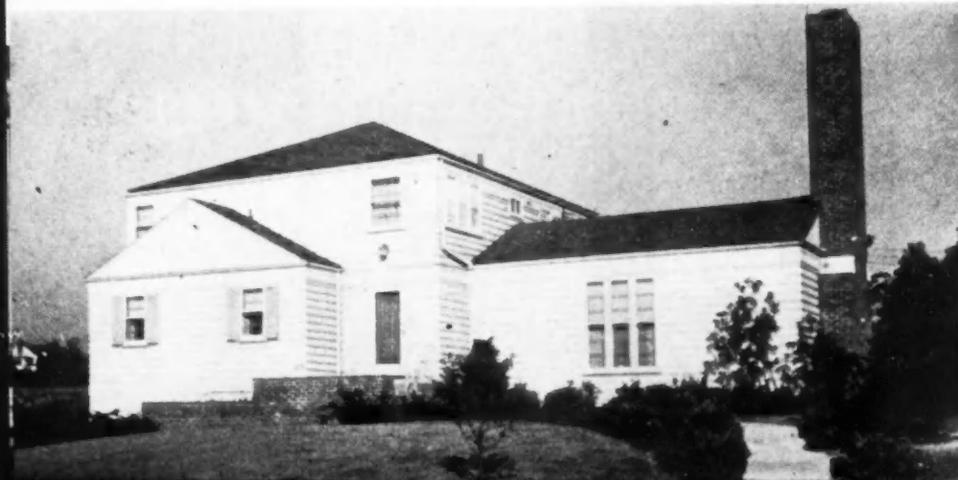


THE OVERPRINTING in red shows the duct work diagram for correct all year air conditioning of this rambling house.

Let us not forget the *build-up* the public has been given to expect the impossible in postwar homes. A home that provides *uniform*, dependable warmth in winter—mountain-resort coolness for summer sleeping—the *right* amount of moisture both to prevent colds and to bring relief from sticky, muggy conditions—a flow of *live air without drafts* for luxurious living—relief from, if not actual cure of, hay fever and catarrhal irritation through air cleaning—what is this if not a miracle of livability?

Could it not be that the so-called debunking of the miracle postwar home has already gone too far?

In the interest of full postwar employment, *American Builder* wishes with the Committee for Economic Development that many other companies are as far along as Servel in developing "new products to manufacture and sell" in 194X.



THE ROCHESTER GAS AND ELECTRIC COMPANY sold and supervised this installation for owner L. R. Weis, who says he would never again be without this all year air conditioning even though he lives as far north as Rochester, N. Y. "It seems almost incredible that we can have either cooling, heating or ventilating at will by merely operating a small switch on our Selectrol thermostat," declared Mr. Weis.

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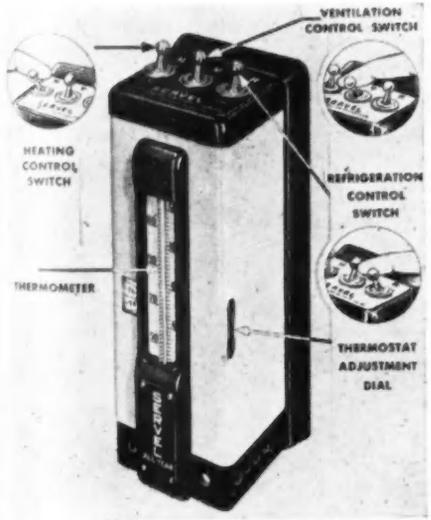
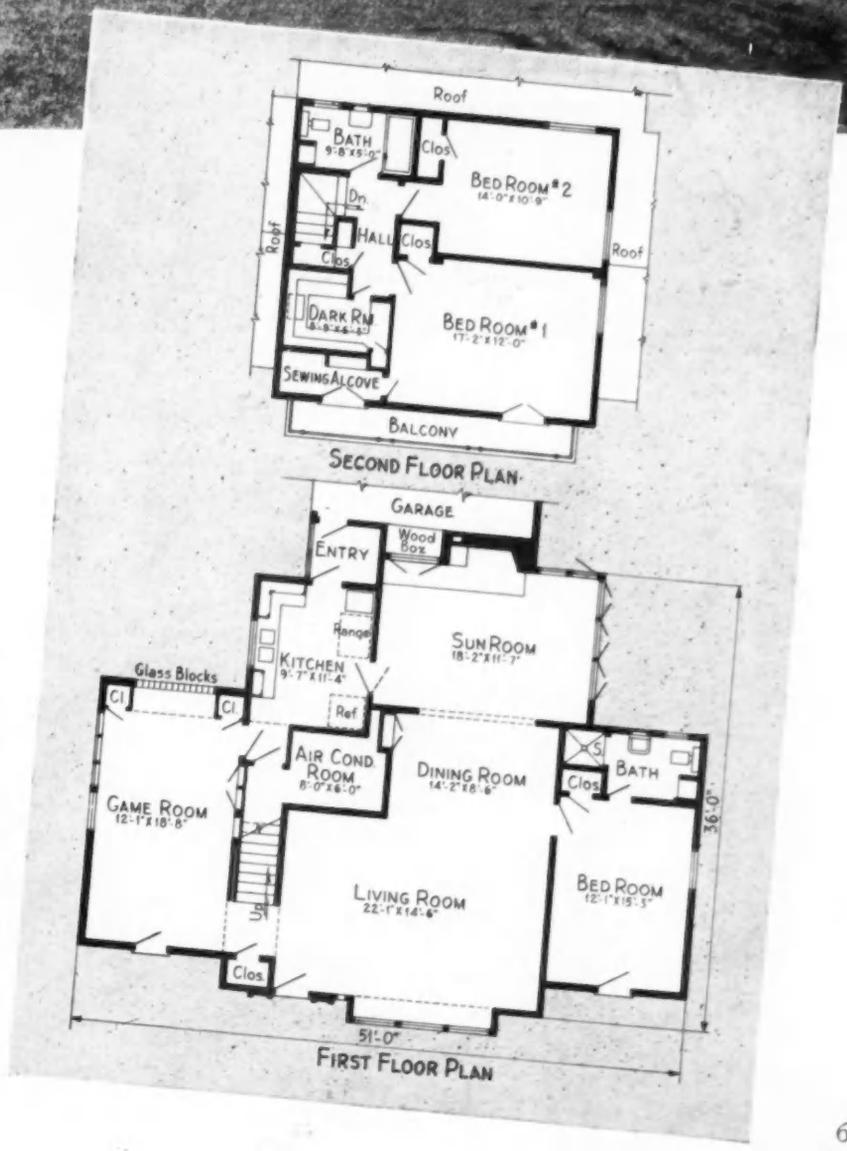
"MY WIFE has hay fever during certain seasons, and she has found relief by breathing this filtered air. The cooling, too, is fine in this warm, moist climate," says Architect Otto Woestemeyer, owner, Houston, Texas.

Specialized features abound in this test home—game room, sun room, sewing alcove and dark room presented some tricky problems for the air conditioning engineers.

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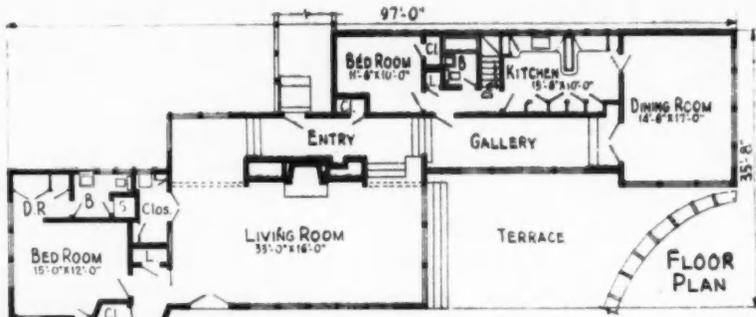
ELECTRIC
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Mr. Weis.



The Selectrol has three switches which permit heating, cooling or ventilation alone.

It's **EXCITING** to **Annex the Big Outdoors**

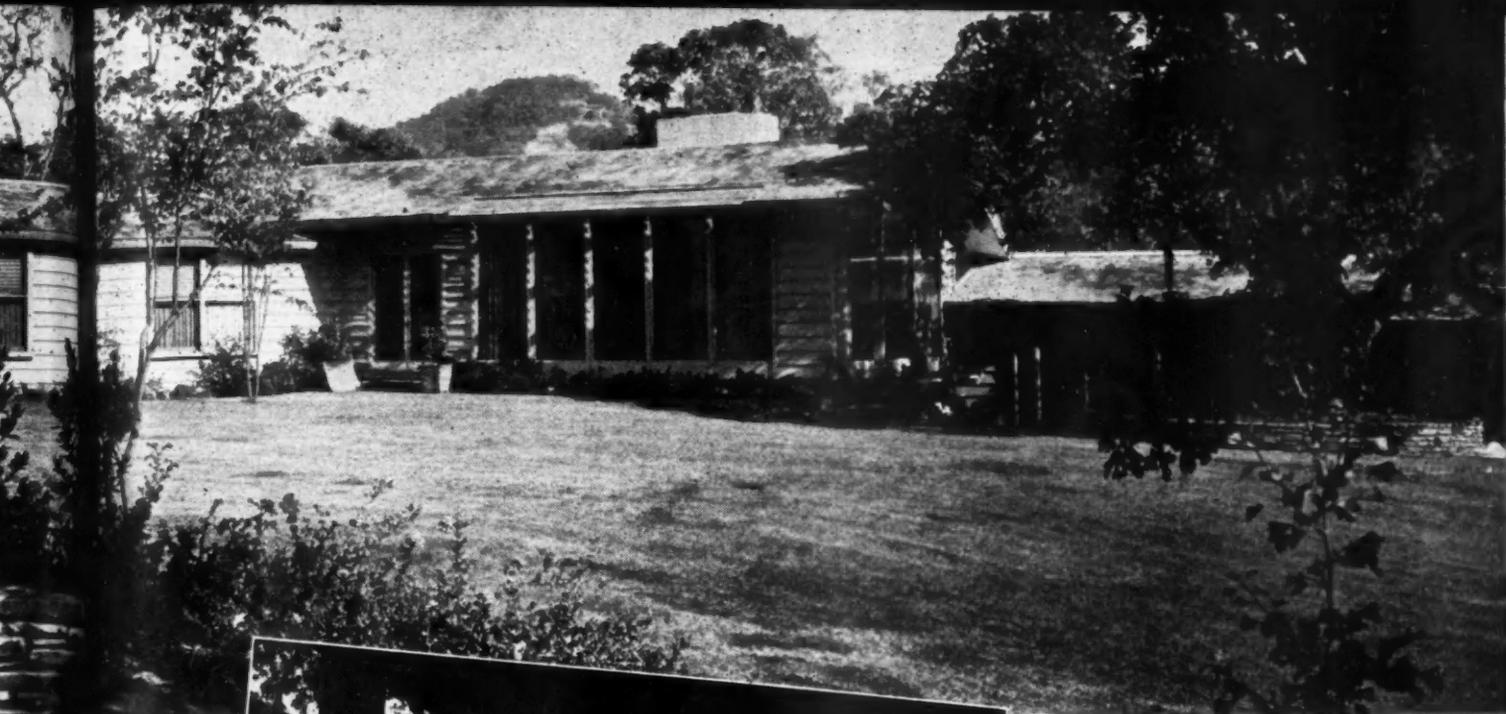
House for Mr. and Mrs. L. E. David near San Francisco uses glass walls and paved terraces in an interesting modern manner to extend the home living area and capture the scenic view



Gardner A. Dailey, A.I.A., and Associates, Architect and Engineer



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VIEW from the garden side, with bedroom wing left, living room center, and living room terrace right.



LIVABILITY sets the style in the modern home, as illustrated, left, in comfortable garden terrace reached through broad sliding glass doors from the gallery walk to the dining room. **BELOW** is pictured the living room, 15 by 30 feet, with its all-glass end, roof-slope ceiling and fireplace set in a plywood paneled wall.

LIVE OAK TREE and paved-terrace outdoor living room (opposite page) viewed through the intriguing glass panels which form the entire end of the big living room in this exciting David home, Marin County, California. Five similar glass panels in the wall adjacent, at right angle to this, open this room also to a restful sweep of lawn and sunshine. **FLOOR PLAN** (above) shows interesting arrangement of this wide-flung pre-war home pointing to a postwar trend.



War Construction Shows How to Cut Costs—Part II

IN THE HOME BUILDING operations of the Puget Sound Bridge & Dredging Company, on its current project of 415 two-bedroom and three-bedroom homes under construction south of Seattle, much advantage is being taken from this firm's experience in wartime construction. As pointed out last month, the essence of the plan is to do as much of the work as possible in power shops, temporarily erected on the development tract. There, protected from the weather and largely with power tools, the men follow definite cutting lists and prepare all of the necessary framing and case work, assemble the window frames, build up rough window openings, cut and thread pipe and put together plumbing assemblies—all to

fit the requirements of the standardized home designs, 40 of them, eight basic plans with five alternate elevations for each, being used on this project.

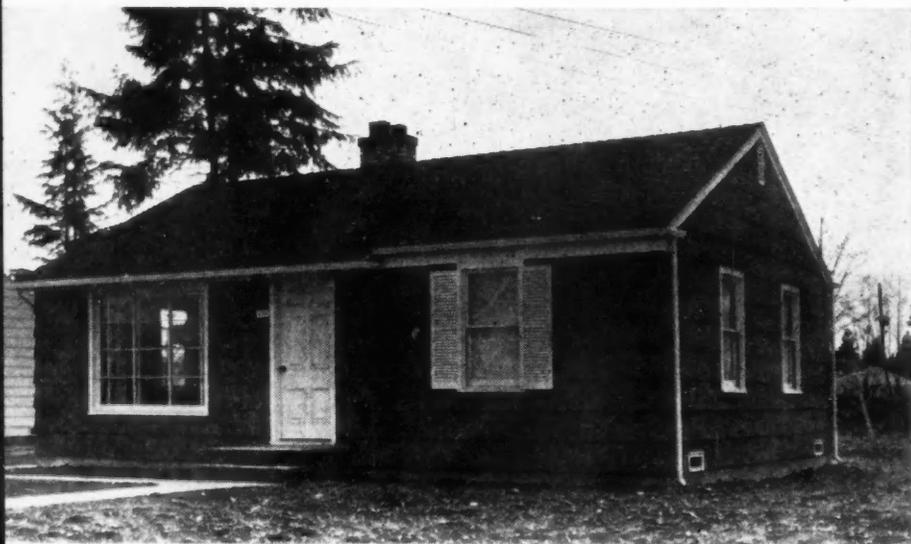
Several temporary shop buildings and warehouse sheds, 24 ft. wide by 80, 90, and 100 ft. long, were put up immediately after the tract was laid out and the streets graded. They became the headquarters for the building operation; and it was found that a great deal of economy resulted from the fact that all the proper parts for a house were ready in stock piles, in or adjacent to these shops, for the company trucks to pick up as needed for transport to the houses under construction.

A number of the shop operations for the precutting of roof framing, the con-

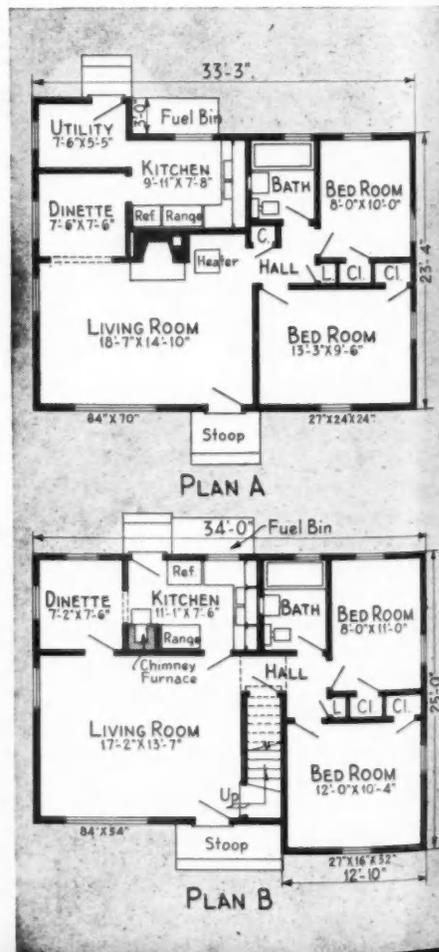
Last month's article on this war housing project near Seattle told how these houses were pre-cut; here are further interesting details about it.



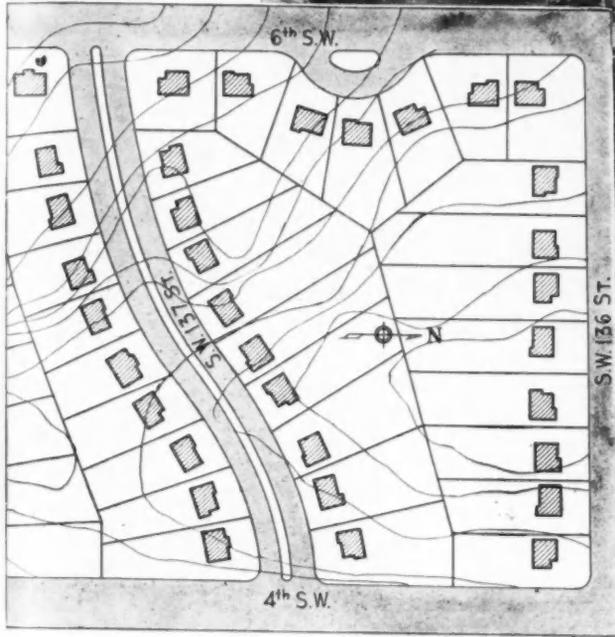
DETAILED cutting list for each house controls production at the power saws. Illustrated below are two of the eight basic designs planned by Architect Robert L. Graham.



EACH basic plan has five elevations; 415 2- and 3-bedroom homes are being built.



SIDEWALK gang spreads and smooths the ready-mixed concrete just delivered on this development by the Puget Sound Bridge & Dredging Company.



LEFT, part of development plot plan accurately spots each house design on its lot to assure curved streets of harmonious homes.

under construction keep all gangs busy. First comes the foundation. There are eight different types and a set of plywood forms for each. Two men will set up the forms in 1/2 day. Two truck loads of ready-mix concrete fill the forms.

Next, a crew sets the floor joists and sills and nails on the sub flooring. A third crew puts up the wall framing.

Fourth crew sheaths the walls outside; fifth erects rafters and applies roof boarding. The shinglers then come on to do their work. Next, a crew sets the window frames, inside door frames and

struction of kitchen cabinets and other items in the power-shop process were illustrated and described in detail in the first installment of article last month.

In the process of actual house erecting

the Puget Sound engineers have established an orderly program, with one gang of "specialists" following another until each house, right down the street, is finished. A sufficient number of houses



FRONT ELEVATION

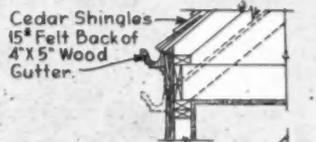


FRONT ELEVATION

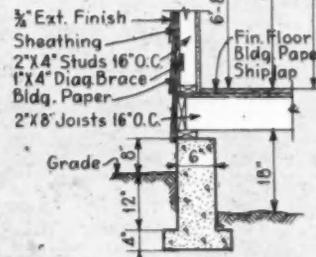
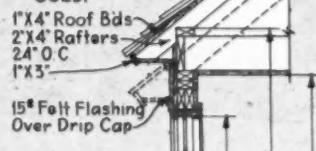


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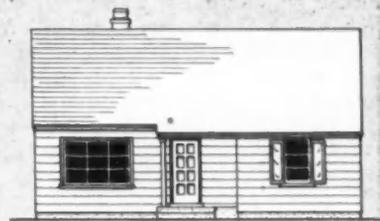
THREE OF ALTERNATE ELEVATIONS - PLAN A



ALTERNATE DETAIL WHEN GUTTER IS USED.



TYPICAL WALL SECTION



FRONT ELEVATION

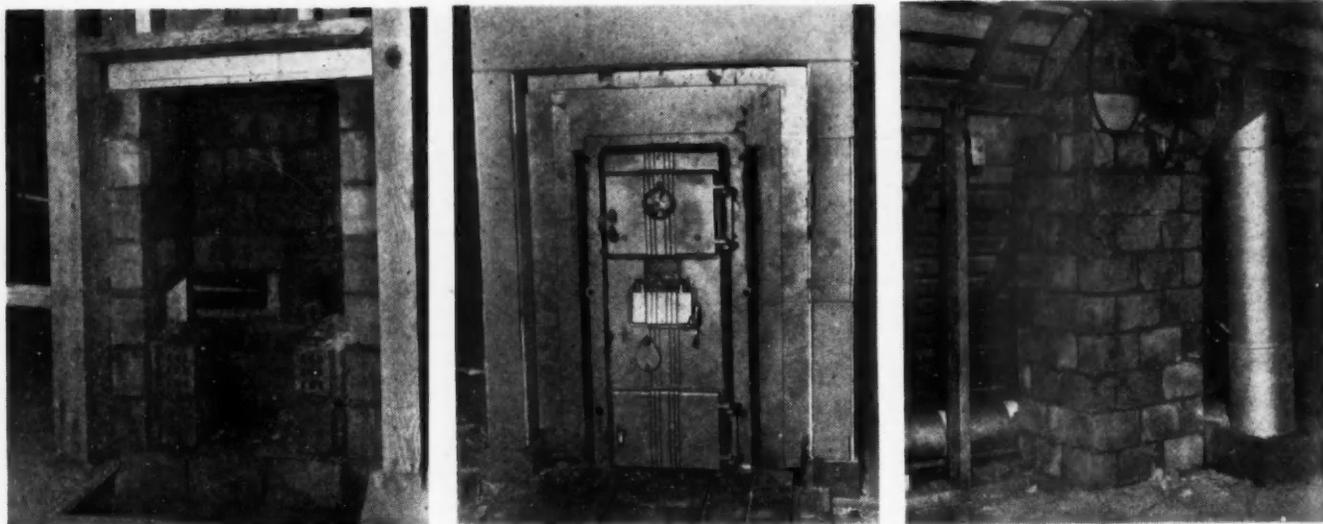


FRONT ELEVATION



FRONT ELEVATION

THREE OF ALTERNATE ELEVATIONS - PLAN B



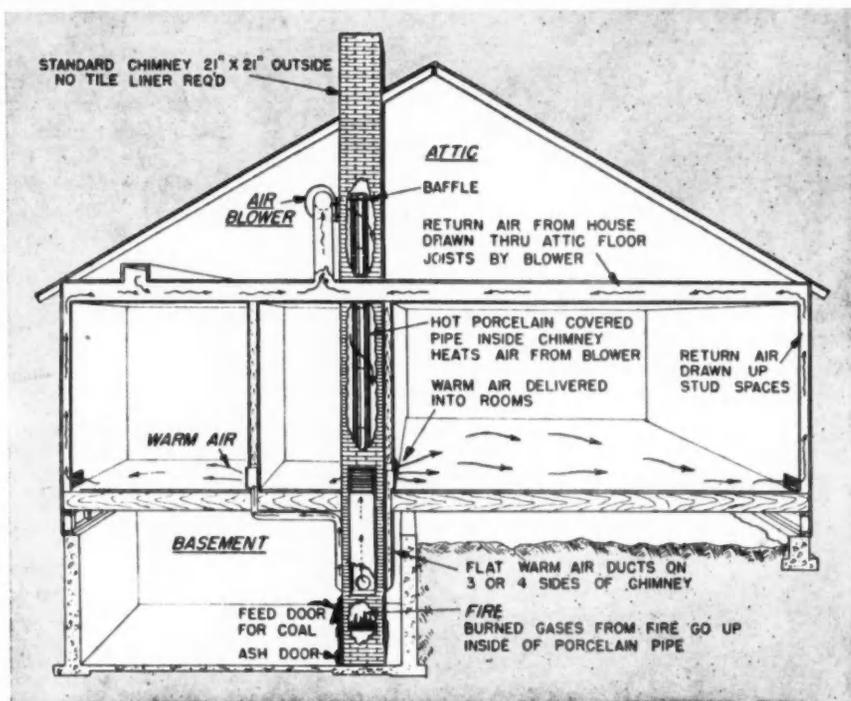
FLUE-MASTER Chimney Furnace as built into the kitchens of 200 of these homes (see plan, page 68).
ABOVE, LEFT TO RIGHT—brick and tile fire pot, cast iron furnace front, fan control in attic.

plaster grounds ready for inside finish. Then the siding is applied; and, as an illustration of the cost cutting advantages of this system where the men specialize and become extra adept at their particular work, the time required to side one of these houses has been reduced since the start of this job from 20 hours to 7 hours!

As the siding is going on another crew puts on the gyp-board lath and does the plastering.

Next come the inside finish experts, followed by the finish floor layers. The kitchen cabinets are brought in, the doors hung and finish hardware applied.

While these construction activities have been going on, the mechanical trades have been busy, with the rough plumbing going in early and the electric wiring after the roof is tight but before the plasterboard is applied. The masonry work for the chimney-type furnace is worked in as the foundation and rough framing are done; and the job is finally broom cleaned and turned over to the painters and decorators.



ABOVE: Diagram showing another installation of this heating system with firepot located in basement instead of the kitchen.



A very interesting development in house heating was encountered on this project of well-designed, low cost homes. Two hundred of them were being equipped with the Flue-Master Chimney Furnace perfected by M. L. Mueller, a well-known heating engineer. Although definitely a "war baby," using only 36 pounds of steel for the furnace front and grates, the rest of the construction being of brick and tile, this compact little heating plant is taking hold with operative builders in a way that indicates a substantial postwar market.

(Continued to page 94)

LEFT: Curtis glazed sash and bundled trim in heated stock shed on the job at Northwest Homes project built near Seattle, Wash.

Study Concrete Floors for War Houses

Substituting concrete floors for wood frame construction shows an increase of approximately 15 to 29 per cent. See the costs for different types.

THE MATERIALS Research Committee of the Metropolitan Chicago Home Builders Association, headed by Roy H. Davis, has just completed a study of costs on substituting concrete floors for wood floors.

The research was done with the co-operation of the Portland Cement Association, concrete product and aggregate manufacturers.

Prices were submitted by material dealers and concrete contractors. The committee then compiled the table of costs shown, and distributed it to the members as a guide.

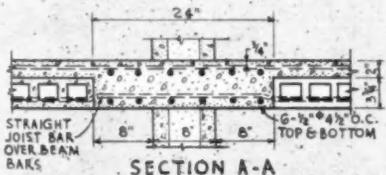
Though these costs were all made on a two-story, single-family home of a type commonly built in the Chicago area, the study is being continued on a typical one-floor plan.

Several very spirited luncheon meetings have been held by the Chicago home builders in connection with this research activity. As the study continues more meetings will be held. Representatives of manufacturers whose products are being studied attend these discussions.

Other home builders associations can secure this data by writing to the Metropolitan Chicago Home Builders Association, 221 N. LaSalle St., Chicago, Ill.

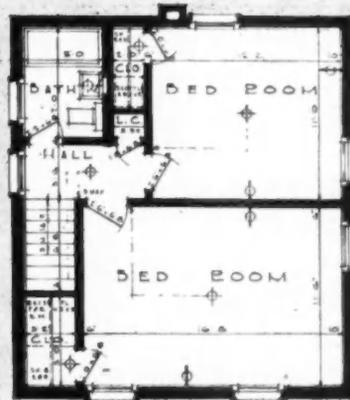
PLAN shown here is a typical Chicago Title VI design which was used for the study of costs of five methods of using concrete floors in place of scarce lumber. Framing plan shown was engineered by the Waylite Company for the builders committee. Note cross section and table below.

JOIST	WIDTH	REINFORCING	
		STRAIGHT	BENT
J-1	5 1/4"	1-3/8"	1-1/2"
J-2	10 1/2"	2-3/8"	2-1/2"
J-3	5 1/4"	1-1/8"	1-1/2"
J-4	5 1/4"	1-1/8"	1-1/2"

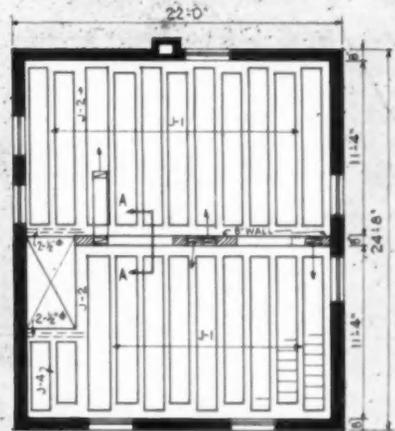


COSTS of five different methods of building concrete floors compared to wood frame, made by Chicago builders.

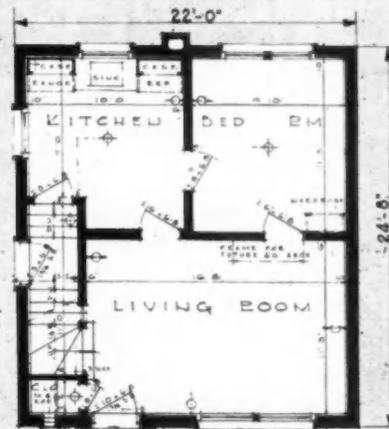
	Wood Frame	Concrete Joists		5" Slab Poured over joists	Monolithic Tile, Joist and Slab	
		Poured Slab	Precast Slab			
62-2x8-12' 1082 FBM Sub. Fl. @ 570.....	\$142					
Bridging.....	4					
Labor on Above.....	60					
Sol. Oak, 1210 FBM @ \$120.....	145					
Paper & Stripping.....	6					
Labor on Above.....	64					
Sanding & Finish @ 7.5c.....	68					
Plaster Cig. for 1st Story @ \$1.10 @ per yd.....	58					
Walls, etc.....	6					
Steel Joist, HI-Rib, etc., Trusses for Steel Co.....	\$245					
Erecting Same.....	23	\$ 23	\$ 23			
2 1/2" Concrete Slab.....	91	91				
Troweled surface @ 4c.....	36	36		\$ 36	\$ 36	
Met. Lath & Plast Cig. 1st Story @ \$2 per yd.....	100	100	100			
Asphalt Tile-Floor @ 17c.....	165	155	155	195	166	
Concrete Joist-4".....		135	135			
Forms & Shoring @ 15c.....		138		182	138	
Reinforcing steel, etc.....		40		71	67	
2 x 3 Cement Tile Slabs Erected.....			200			
Troweled Surface @ 5c.....			45			
Setting Reinf. Steel.....				30	30	
5" Poured Slab @ 21c.....				190		
Plaster Ceiling @ 3c.....				37	37	
4" Poured Jts. & 2" Slab.....					138	
Waylite Tile Units.....					67	
TOTAL COSTS	\$651	\$650	\$716	\$728	\$701	\$664
COST PER SQ. FT.61	.71	.79	.81	.77	.73



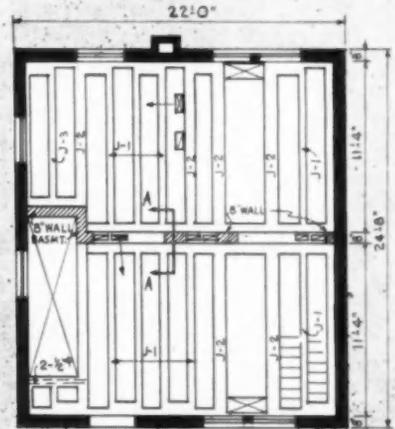
SECOND FLOOR



4"x2" C/M. TILE & JOISTS 21" O.C.

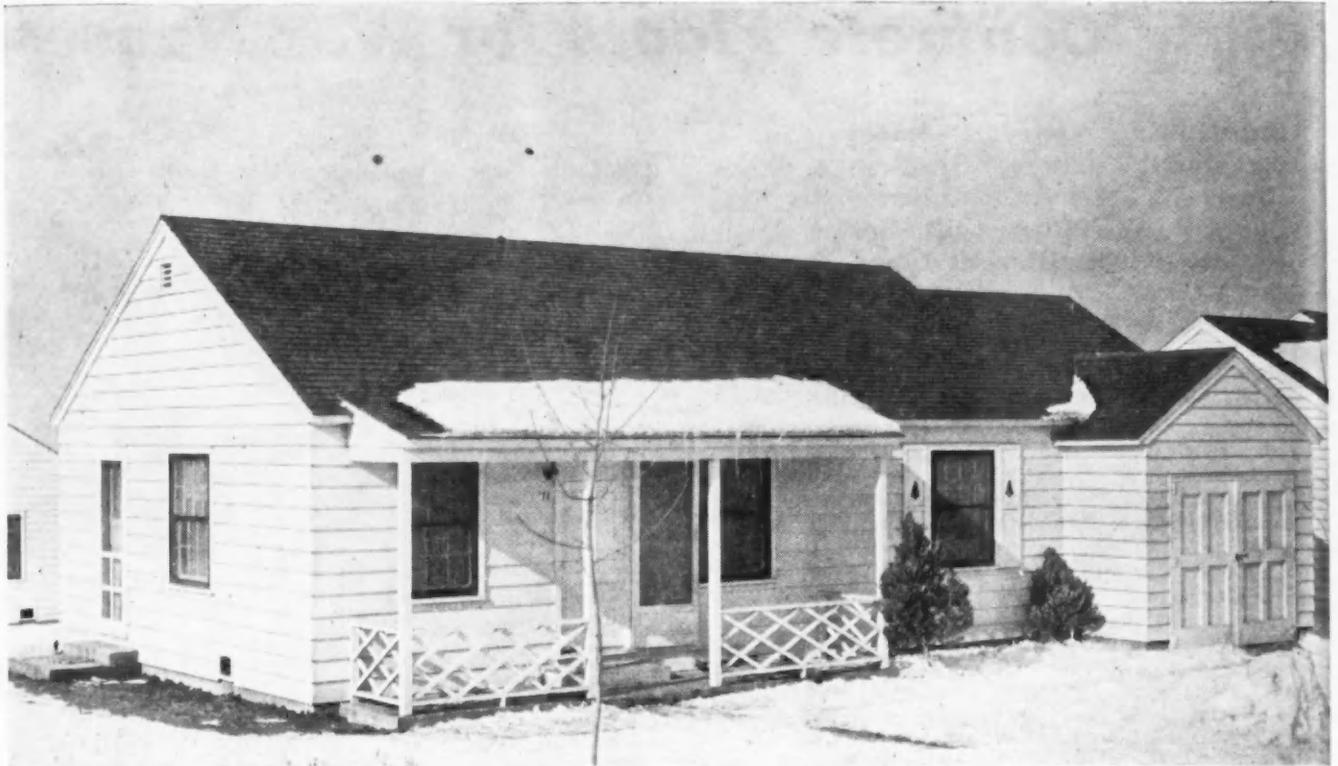


FIRST FLOOR



4"x2" C/M. TILE & JOISTS 21" O.C.

FRAMING PLANS



THREE BEDROOM MODEL has Western Colonial charm, well laid out rooms, plenty of buyer appeal.

SUNSET HEIGHTS—War Homes With Peace Appeal



PLAN and elevation by Architect Slack W. Winburn show good center hall arrangement for basic 36 x 24 ft. 3-bedroom house with economical bath, kitchen plumbing, attractive dining nook; attached garage has storage space at rear.

YOUNG DENVER builder goes to Ogden, Utah, to build fine war homes with good postwar ideas and qualities

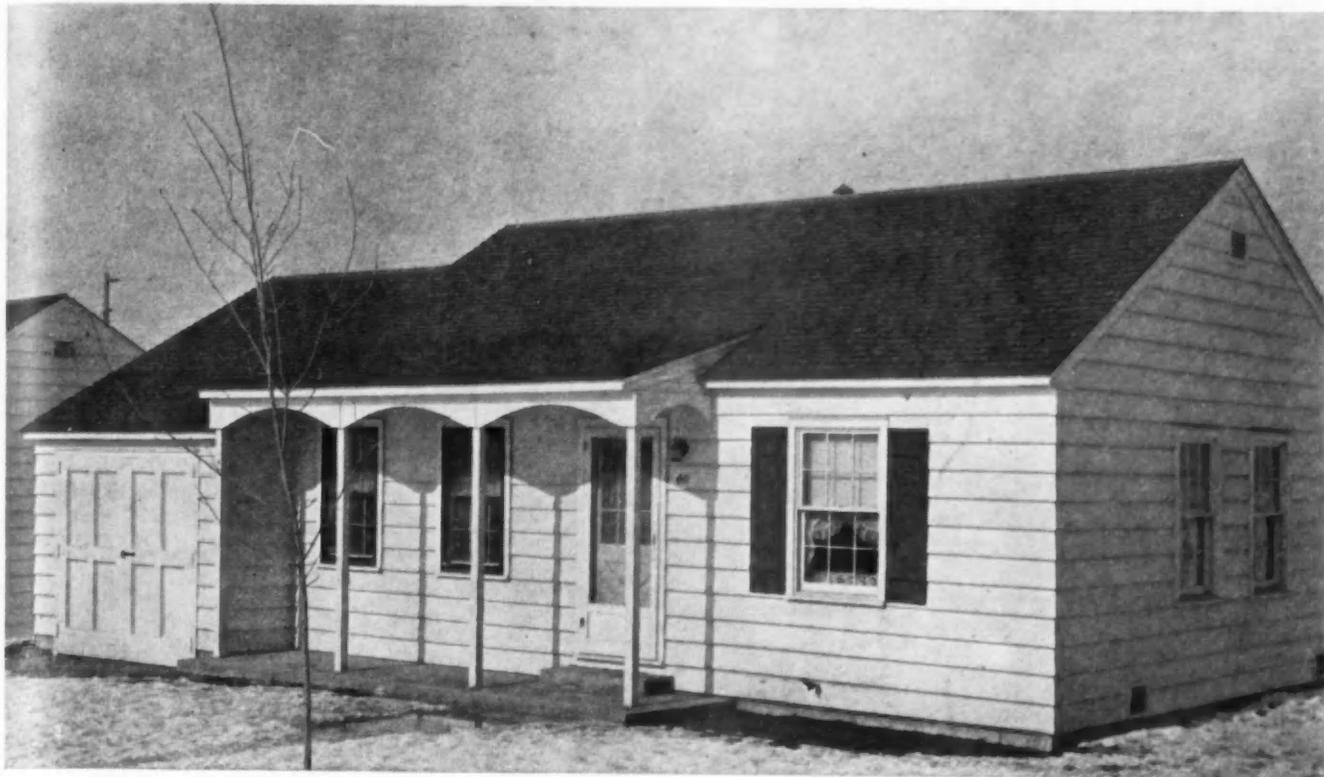
FRANKLIN BURNS, one of Denver's youngest and most successful builders, traveled to Ogden, Utah, to build Sunset Heights, a 77-house community for workers in the nearby Naval Supply Depot and Air Corps repair base.

The result is a thoroughly livable little community with attractively designed homes on wide lots and traffic-safe streets. The houses themselves have a Western Colonial charm and an excellence of plan that makes them good postwar candidates. Burns expects to build similar houses in Denver after the war.

Commuting between Denver and Ogden was no easy job, according to Burns, and the problems of building in a boom community like Ogden with its great shortages of men and material were manifold. The town's population increased from 45,000 to 80,000. The houses were completed late in 1943, and were in great demand, which is more than can be said of nearby public housing.

Although he is under 30, Franklin Burns has already built and sold large

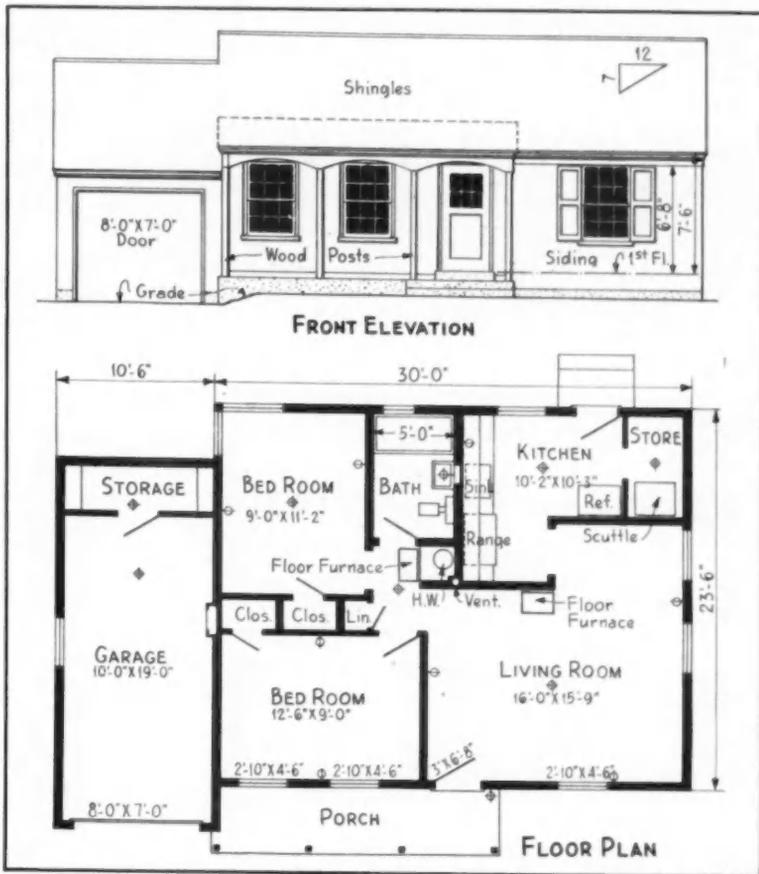
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TWO-BEDROOM war home built in Utah by Franklin Burns has attractive windows, good design, livable plan.



FRANKLIN BURNS (left), pictured on "Burns Lane" with superintendent and manager as job nears completion.



numbers of houses in Denver. He is regional vice-president of the National Association of Home Builders and is active in the Denver Association.

Accompanying plans of the two- and three-bedroom models built at Sunset Heights show careful architectural planning with good size rooms, good exposure, and attractive design. These are basementless houses heated by floor furnaces. The floors are thoroughly insulated. The quality of construction is indicated by the following specifications:

FLOOR INSULATION—two inch kimsul blanket by Kimberly-Clark; CEILING INSULATION—four inch Palco wool by Pacific Lumber Company; WALLS—U.S. Gypsum Co. Gyplath Sheathing and Sheetrock interior; WINDOWS—Curtis Silentite Colonial Windows; ROOFS—Red cedar shingles; FLOOR FURNACES—Pacific Furnace Company; RANGES—Detroit Jewel; REFRIGERATORS—Kelvinator; LUMBER—all accurately precut on site with power saws.

This was a project constructed at considerable personal sacrifice by the builder because of the urgent need.

30 x 23 FT. PLAN provides good size living room and two ample bedrooms. Kitchen dining area is well handled. Storage or utility room off kitchen is provided since there is no basement. Floors are well insulated, heat provided by oil floor furnace. Ample closets, storage space in garage, attractive porch are good features. One of 77 homes built in Ogden, Utah, by Franklin Burns under FHA Title VI for naval supply depot and air field workers.



Excellent Rental Units by Baltimore Builders Suitable for Postwar Use

By **PETER J. McKENNA**

Vice Pres. Mars Estates Inc.

Breakdown of 8-Family Units Costs per \$100 by John J. Kirchner, FHA

Concrete Footings.....\$.90	Bath Accessories..... .10
Masonry 14.00	Linoleum62
Concrete Floors..... .40	Ice Boxes..... 1.44
Rough Carpentry..... 10.30	Ranges84
Finish Flooring..... 3.87	Kitchen Cabinets..... .98
Finish Carpentry..... 1.83	Med. Cabinets26
Windows & Frames..... 3.50	Plumbing 12.95
Doors & Frames..... 3.64	Heating 9.05
Stairs41	Elect. Wiring..... 1.30
Ext. Millwork..... .60	Elect. Fixtures..... .26
Lathing & Plaster..... 9.30	Shades30
Insulation70	Screens61
Roofing 1.25	Utilities 7.25
Gutters & Spouts..... .46	Landscape 3.88
Painting 7.00	Bond76
Finish Hardware..... .65	Excavation59

MARS ESTATES Garden Apartments at Middle River, Maryland, are good examples of the results of wartime land planning and apartment building layout that will fit into postwar building of multiple-unit rental housing for either individual buildings or groups of them.

Anyone of the buildings erected elsewhere on its own plot of ground would make an excellent rental project in the cost bracket these are intended for, which is a rental of \$50 per month including electricity, steam heat, and hot and cold water. The 105 buildings of the project vary only as to exterior architectural details which avoid any feeling of structural monotony.

The project was authorized under section 608 of Title VI FHA, and built by Gustave M. Berne and the Robert James Construction Co., and an excellent job was done according to E. Lester Muller, State FHA Director, who had three inspectors on the job at all times.

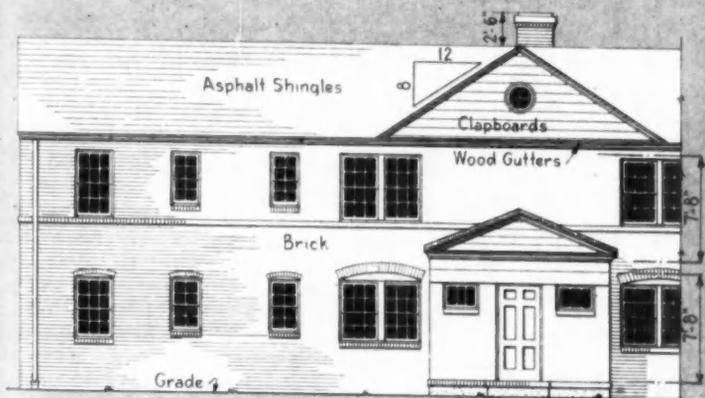
A study of the floor plans on the opposite page will show how both sides of the buildings have front entrances with private doorways leading into the eight apartments. One stairway leads to the four upstairs

(Continued to page 96)

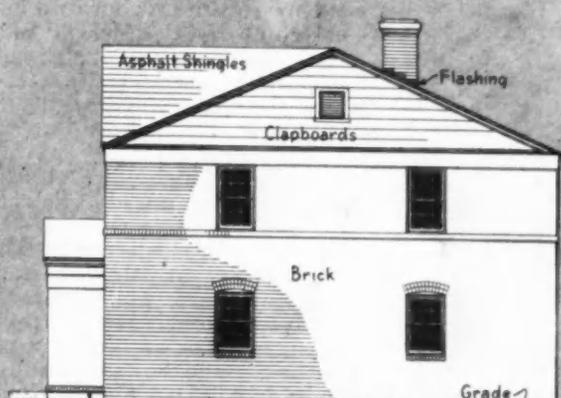


This is one of five groups arranged on curving streets that avoid all through-traffic and provide parking and safe play areas for children.

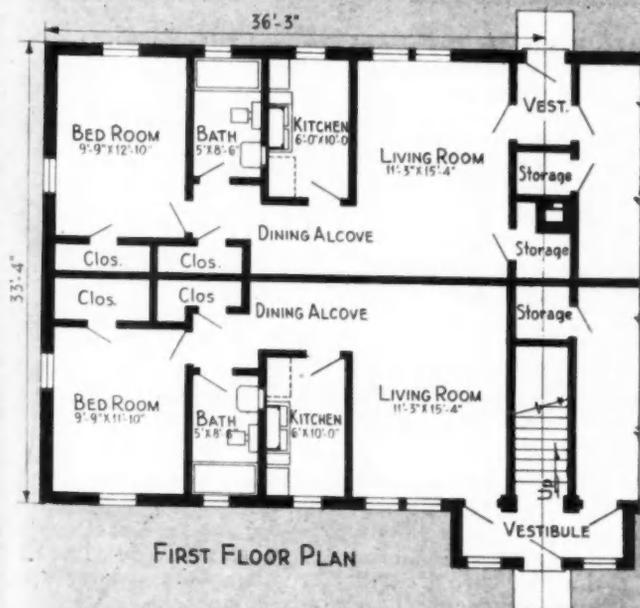
Cyril H. Hebrank, Architect, Baltimore
 W. H. Dowling, Asso. Archt., N. Y.—Albert E. Pohmer, Engineer, Baltimore.



FRONT ELEVATION



SIDE ELEVATION



FIRST FLOOR PLAN



SECOND FLOOR PLAN

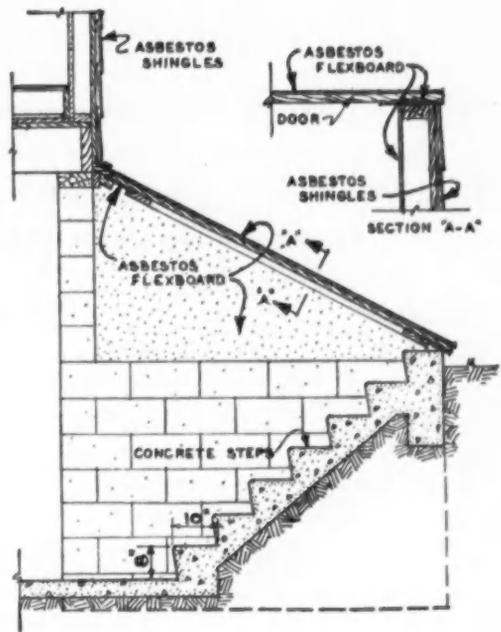
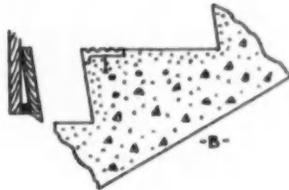


Roof

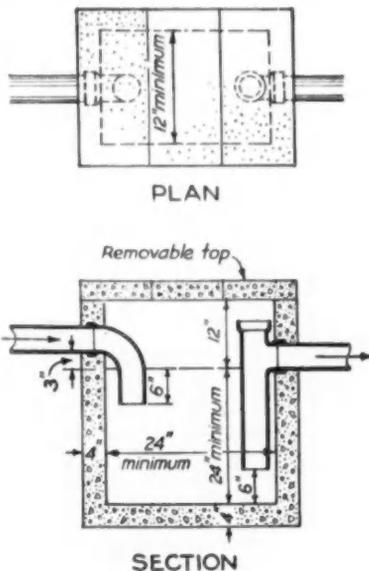
How to Build a Ratproof, Concrete Outside Cellarway

ONE of the most vulnerable parts of a frame house is the outside cellarway. It is almost always damp and, therefore, subject to rot and termites. Wood steps, sills and stringers are short-lived, and offer easy access to rodents. Replacements with concrete and other impervious materials should be in order, rather than repairs made with wood. Reinforcing rods should be placed crosswise the step slab and vary in size from 1/4 inch to 3/8 inch. The slab should be 4 inches thick up to 6 steps, and 5 or 6 inches from 7 to 11 steps for a normal-sized cellarway.

The wood cross forms for step risers, as shown in the small sketch below, can be made as indicated for an undercut riser face. The bottom edge of the riser boards are beveled to allow for troweling the surface of the tread back to the face of the riser while the forms are still in place. The method of making forms will vary with the conditions encountered. In general, hanging stringers are placed with substantial stakes at top and bottom, then blocks are nailed to the stringers for each tread and riser. The riser boards are then nailed to these blocks. A solid and well-anchored pier, as indicated in the drawing, should usually terminate the top of the stairs. Use asbestos board at both top of door and sides to rat-proof.



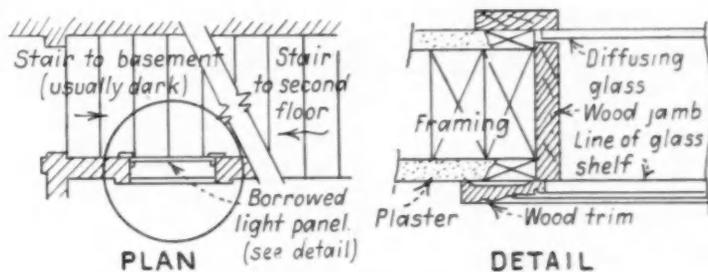
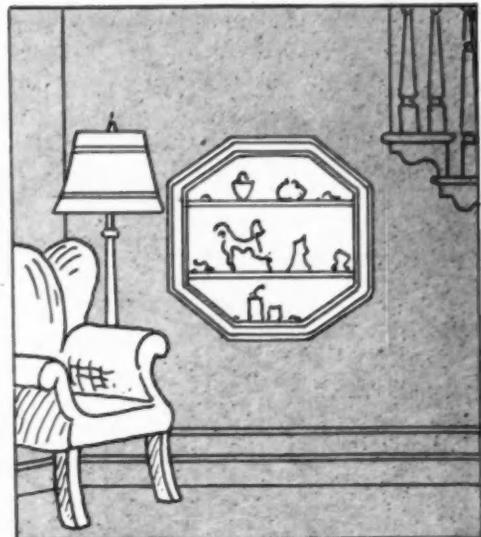
How to Build a Grease Trap for Cess Pool



A GREASE trap is often an important part of a private sewage disposal system. The plan and section shown above readily explain how one should be built. No trap should be less than 30 gallons capacity, and large enough to hold several times the amount of greasy water that may be discharged into it at one time. A good location is in the cellar or under the house where it is handy to get at and is safe from frost. If outdoors, be sure to insulate the trap from freezing.

How to Borrow Light for Basement Stairway

GETTING daylight into a dark cellar stairway and at the same time making a decorative feature in a front hall or living room can be done by cutting a six-sided hole in the wall and building a 6-sided frame to hold a sheet of diffusing glass and two clear glass shelves. There are no dimensions given because of the fact that different kinds of framing will be encountered, and the hole should fit securely between studding, or new studs framed-in to replace any that may be removed. Make a frame of molding.



Detail by Pittsburgh Plate Glass Co.

How to Build and Install a Modern Kitchen Cabinet

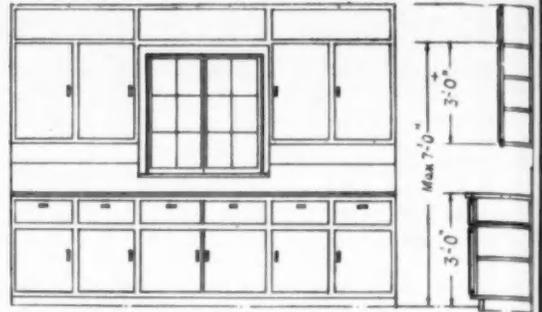
Here are more practical items in the how-to-do-it series which will help you in keeping busy this summer at remodeling and other jobs.

DURING the summer and fall months there will be thousands upon thousands of remodeling and conversion jobs done. Older houses will be made over into income-producing properties by rearranging rooms and adding kitchens and bath rooms. You may not be able to get the kind of millwork you need for a job, such as a kitchen cabinet, for instance, so here is how to build one yourself on the job.

The methods described in this article are based on data prepared by Mr. Leo P. McDonnell for the New York State Educational Department, which has published several excellent volumes, including subjects on the use of hand and portable power tools; concrete form construction; framing,

sheathing and insulation; and interior and exterior trim.

To build the base cabinet, first lay out a complete floor plan of the cabinet on the floor of the kitchen. Then lay out the back elevation on the back wall and the end elevations on the end walls. The front stile and rail framework may be laid out from the plan and assembled on the work bench. The stiles and rails may be $25/32$ in. thick by about $2\frac{3}{4}$ in. wide. This width may have to be altered to accommodate standard size cupboard doors. All connecting joints should be put together with half-lap or mortise and tenon joints. They should be glued, clamped and screwed together from the back of the frame. Figure 2 shows this framework.



STANDARD sizes are used to match millwork.

The full length of these stiles according to Fig. 1, would be 36 in. minus 1 in. for the counter shelf and 3 in. for the toe space, or 32 in.

Next, lay out the rails AB, CD and EF, Fig. 2, so that they are continuous the full length of the cabinet. Allow $\frac{1}{4}$ in. on each end so that the stiles and rails may be scribed to the

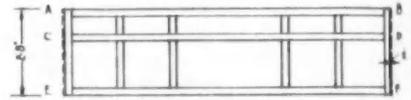


FIG. 2 ASSEMBLY OF FRONT FRAMES

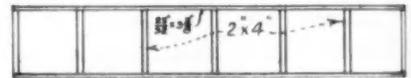


FIG. 3 ASSEMBLY OF PLATFORM

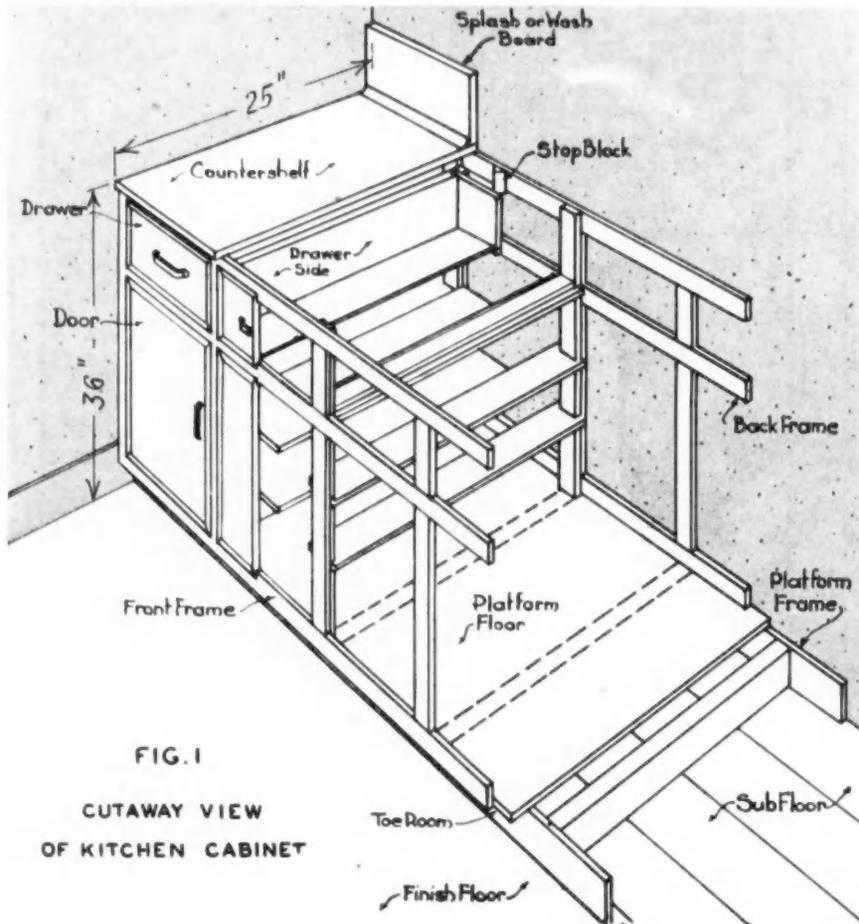


FIG. 1 CUTAWAY VIEW OF KITCHEN CABINET

walls. Locate the joints for the stiles on the rails. Now lay out the stiles to length AE and locate the position of the rails AB, CD and EF. Half-lap or mortise the joints. Assemble and square the front framework. Make a duplicate frame for the back of the cabinet.

The top of the bottom platform is 3 in. above the finished floor. Therefore it will be approximately 4 in. above the subfloor. Lay out and cut seven 2 x 4's to $19\frac{1}{2}$ in. long. Lay out and cut two pieces $25/32$ in. by $35\frac{5}{8}$ in.

CABINET

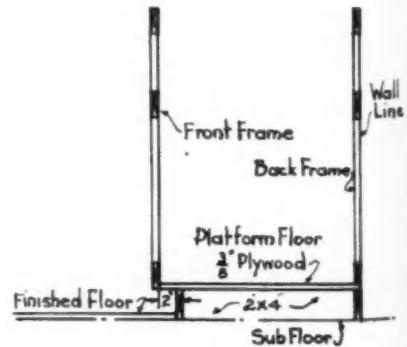


FIG. 4 ASSEMBLY OF FRAMES

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by the length of the front frame minus $\frac{1}{2}$ in. Mark the location of the centers of the stiles of the front framework on these pieces.

Now center the 2 x 4's on these marks and nail the front and back pieces to the ends of these 2 x 4's with 8d finishing nails. Keep all pieces flush with the top of the 2 x 4's. Square the frame and place it on the layout on the floor and against the back and end walls. Level it and toenail it to the floor.

Cover the platform with the shelving material. Plywood $\frac{1}{2}$ in. thick is ideal for the purpose. Allow this ma-

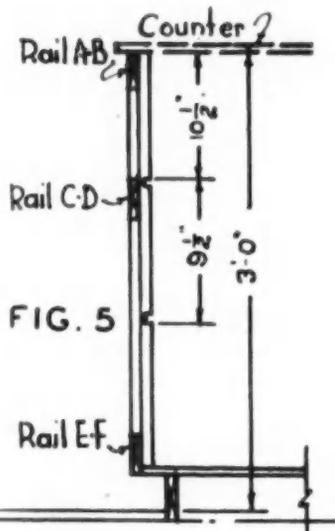


FIG. 5
LAYOUT OF DRAWER AND SHELF SUPPORTS

terial to project 2 in. over the front edge of the platform frame.

Rip the thickness of the platform floor off of the bottom rail of the back frame so that the tops of the front and back frames will be the same height.

Next, place the back framework on top of the platform and against the wall. Level and plumb it and nail it to the walls. Place the front frame in a similar manner but against the front edge and flush with the bottom side of the platform floor. Plumb and brace it to the back frame. See Fig. 4.

Lay out and cut twelve pieces of $\frac{25}{32}$ in. stock the same width as the front stiles and long enough to reach from the top of the platform floor to the top of the front framework. In this case, if $\frac{1}{2}$ in. plywood is used for the platform floor, the length will be approximately 31 in. Place one piece on top of the platform and against the front framework. On this piece mark the location of the top of the rail CD, and the bottom of the rail AB. Also make a mark $9\frac{1}{2}$ in. below the top of the rail CD. See Fig. 5.

Lay out a $\frac{25}{32}$ in. dado $\frac{3}{8}$ in. deep at these locations and as shown by the dado joints in Fig. 5. Mark the eleven remaining boards in the same

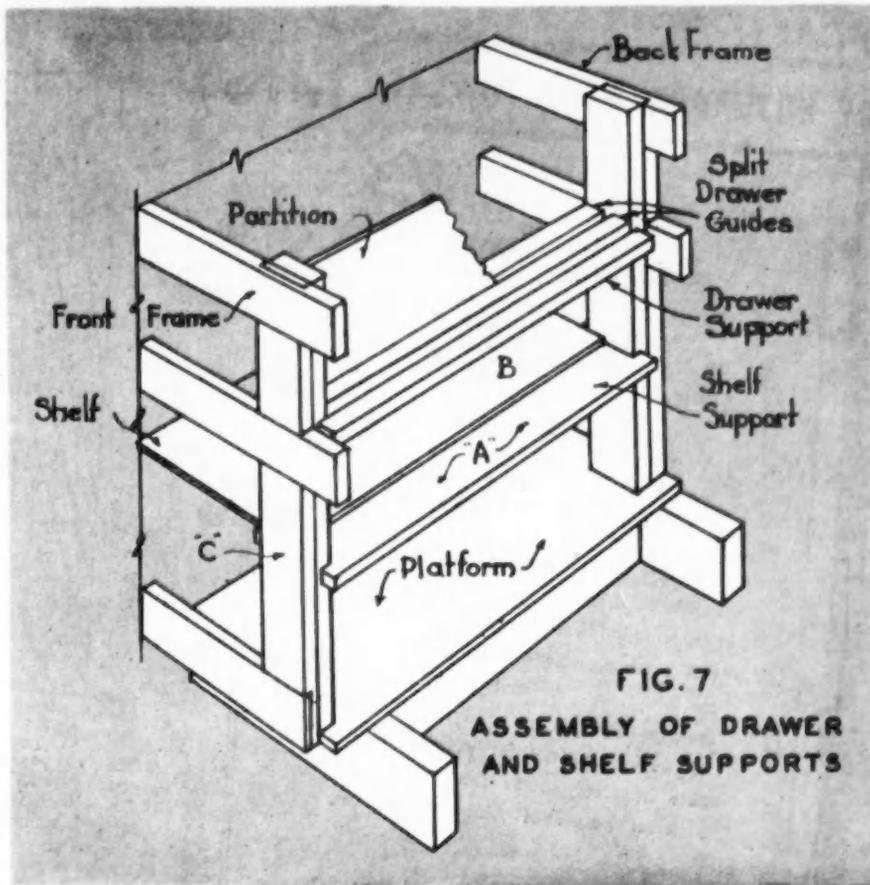


FIG. 7
ASSEMBLY OF DRAWER AND SHELF SUPPORTS

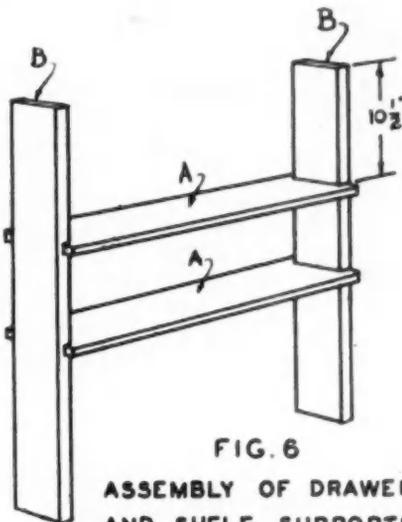


FIG. 6
ASSEMBLY OF DRAWER AND SHELF SUPPORTS

the upright B on the right hand side of the frame for the right end, and flush with the left hand side of the frame for the left end of the cabinet.

Screw the upright supports (B, Fig. 6) in place from the inside and opposite each upright in the front and back frames. See C, Fig. 7. Be sure that the upper surfaces of the drawer slides are square with the face of the front frame and also level.

Lay out, cut and fit the lower shelf as at B, Fig. 7. Fasten it to the top of the shelf support A.

Cut the required number of drawer guides from stock $\frac{25}{32}$ in. thick and as wide as the frame stiles as shown in Fig. 8. Fasten them temporarily with screws to the top of the drawer supports in both sides of the openings where drawers are to be fitted.

way and cut the dado joints. Square and cut twelve pieces of $\frac{25}{32}$ in. stock 2 in. wider than the dadoed pieces and long enough to reach from the front to the back frames. Allow for the dado cuts. The length in this case will be approximately $22\frac{3}{4}$ in.

Assemble four frames as shown in Fig. 6 by gluing and nailing the pieces A, A into the dado joints. Let the pieces project 1 in. on each side of the dadoed pieces. Lay out and assemble two more frames in a similar manner. One frame is for the right hand end of the cabinet and one for the left end. Assemble the drawer and shelf supports such as shown in A, Fig. 6. These should be flush with

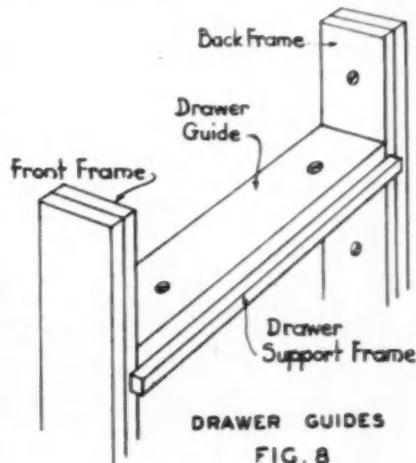


FIG. 8
DRAWER GUIDES

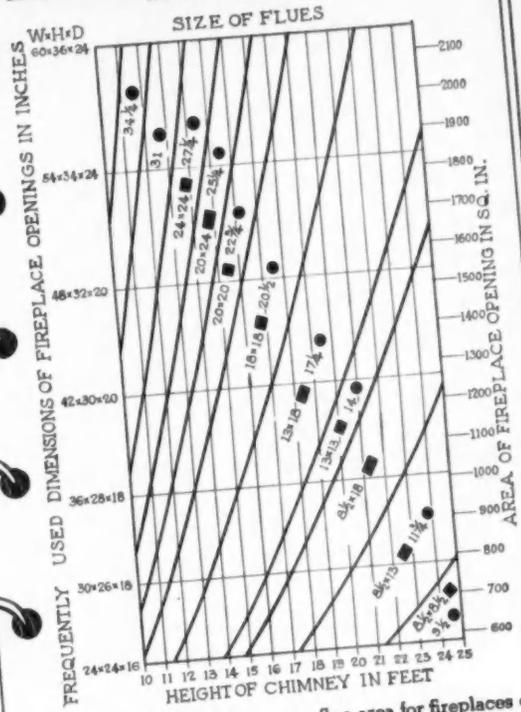
HANDY NOTEBOOK WORK SHEETS

American Builder JOB HELPS Prepared by Don Graf

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

HOW TO DETERMINE FIREPLACE FLUES

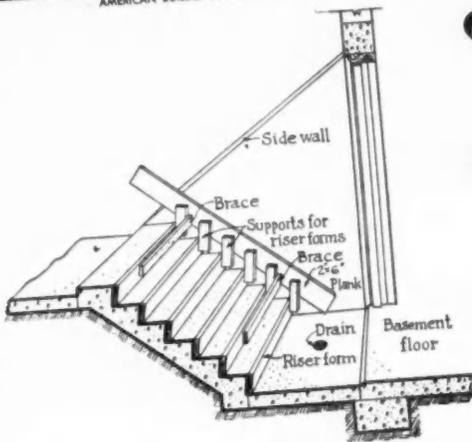
AMERICAN BUILDER FOR JULY 1944



This chart provides proper flue area for fireplaces of various heights since it is unsafe to use the old rule of 1/12th of the fireplace opening for the flue area on any chimney less than 25 feet high. The top of the chimney should, of course, be high enough from surrounding obstacles to prevent down drafts.

HOW TO BUILD BASEMENT STEPS

AMERICAN BUILDER FOR JULY 1944



Concrete steps can be built without reinforcement on undisturbed ground. The side wall of the stairway can be laid up or poured when the house foundation walls are constructed. First, short pieces of 2" x 4" walls should be nailed to the side planks so that when these planks are braced against the side walls or cheeks of the stair area, the bottom end of the short 2" x 4"s will clear the level of the treads by a couple of inches. After accurately placing the side planks with the short lengths of 2" x 4"s attached, these planks should be braced firmly against the side walls with 2" x 4"s or 4" x 4"s and wedges. Next the riser form boards are located and nailed to the short lengths of 2" x 4"s on the side plank.

The forms can be stripped 24 hours after the concrete is placed and the face of the risers finished to a smooth surface by rubbing with a wood float dipped in water and sand.

HOW TO DETERMINE ROOM SIZES

AMERICAN BUILDER FOR JULY 1944

Bungalows	2-Story Detached	Row Houses
17'-4" x 12'-5"	21'-4" x 13'-2"	16'-0" x 13'-6"
12'-4" x 10'-7"	13'-10" x 12'-0"	14'-1" x 11'-1"
8'-5" x 11'-3"	9'-1" x 11'-6"	8'-0" x 12'-0"
12'-7" x 10'-6"	16'-5" x 12'-8"	14'-0" x 11'-11"
11'-8" x 10'-5"	13'-5" x 11'-5"	12'-11" x 9'-10"
	12'-7" x 10'-0"	11'-6" x 8'-5"

LIVING ROOM

DINING ROOM

KITCHEN

BED ROOM #1

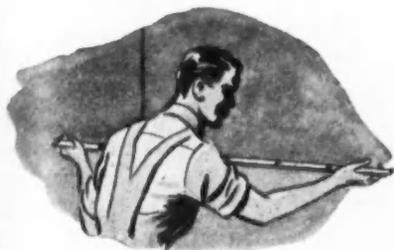
BED ROOM #2

BED ROOM #3

These room sizes resulted from a survey of houses costing from \$1950 to \$9850 in 31 cities by the Department of Commerce. Ceiling heights in the South should be 8'-0" minimum; in other regions 7'-6" minimum.

EVER "CLOCK" A MONOWALL INSTALLATION?

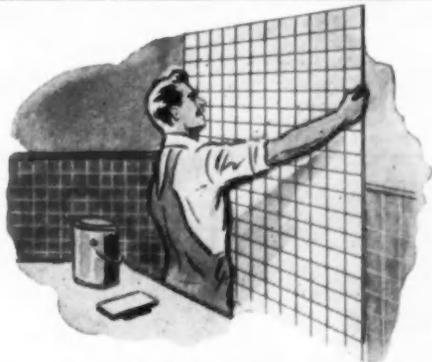
One Man - One Day - and the average home job is done!



8 A. M. Start. No special preparation needed. Monowall can be applied to almost any surface that's dry, firm, and reasonably smooth. The job is planned and measured before any of the boards are cut.



12 Noon. Large boards of Monowall (up to 4' x 12') speed the job. They're light, so one man can handle them easily. Fast-setting CM-50 Cement is spread on the backs of the boards with a notched trowel.



2 P. M. The end's in sight as the first wall area is covered with Armstrong's Monowall. Pre-measuring and fitting mean that actual application is accurate and fast. Special moldings conceal joints.



4 P. M. All finished, no muss or litter, and a mighty happy customer. Tough, gleaming Monowall has given her a truly modern kitchen, ready to use right now! Wiping with a damp cloth now and then will keep it looking new.

YOU'LL find Armstrong's Monowall a time-saving, labor-saving material for modernizing kitchens, bathrooms, and all kinds of commercial interiors. Unlike many substitute materials the quality of Monowall today is at least as high as before the war. Popular plain

colors and scored tile-designs suit almost any decorative scheme. Be sure you have full information and samples of Monowall. Write today to Armstrong Cork Company, Building Materials Division, 1607 Lincoln St., Lancaster, Pennsylvania.



ARMSTRONG'S MONOWALL

MADE BY THE MAKERS OF TEMLOK INSULATION—SHEATHING, LATH, DE LUXE INTERIOR FINISH

What's going to happen w



TUNE IN: "The G-E All-Girl Orchestra," Sunday 10 P.M., E.W.T., NBC-
 "The World Today" news, every weekday, 6:45 P.M., E.W.T., CBS.

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en when the Girls come home?

THERE ARE 18 million women in industry today. They live in a world of work-saving wonders. The mechanical arms, hands, and eyes of industry are part of their daily life.

They see manual work all but eliminated. Routine tasks taken over by wheels and levers. Drudgery done by machines—by efficient machines.

Isn't it probable that many of these women will also demand more and better labor-saving equipment in the homes they plan to buy after the war?

Electric ranges, dishwashers, washing machines, automatic heating, and other modern equipment offer the housewife an opportunity for more leisure and more comfort. Doesn't it seem likely, therefore, that the home buyer is going to insist upon some of this longed-for equipment built right into her new home?

Planning with an ear to the ground

Before the war many homes were built, financed, and sold with electrical appliances built right in.

It was the beginning of a trend. And the demand which caused that trend is now stronger than ever. Leading publications in the construction field predict that more and more homes will be offered to the prospective buyer *completely equipped* with range, refrigerator, dishwasher, etc.

Successful builders tell us that built-in labor-saving devices, adequate wiring, and sufficient outlets for the use of electrical appliances, increase consumer acceptance. This applies to houses under \$5000 as well as more expensive houses. It is well worth your consideration.

Will the buyer be willing to pay for this equipment?

It's only natural to step on the brakes hard where additional costs are concerned. What are the facts?

First, most electrical appliances have completely disappeared from the market during the war.

On top of this, savings have climbed to an all-time high of 84 billion dollars. Chances are they will continue to increase until the war ends.

This means two things. First a dammed-up buying urge in every section of the country. Second, the greatest buying power in history waiting to satisfy that urge.

Let's work this out together

We are laying our plans now to provide the equipment such a development will demand. And, of course, we're interested in exploring the problem from every point of view.

We'll be glad to have your questions and comments.

FOR VICTORY

Today, General Electric is working full speed to hasten the day of victory.

You can help, too, by buying War Bonds Now.



Everything Electrical for After-Victory Homes

GENERAL ELECTRIC

Home Bureau • Bridgeport, Conn.

SOLDIER OF CONSTRUCTION



Photo by Office of War Information

 Building the far-flung bases for land, sea and air fighters, mammoth production plants, sprawling shipyards . . . all the vast construction projects for war, and completing them in time, is one of the toughest jobs ever tackled. America's "soldiers of construction" have met the challenge, at a pace that smashes all previous records.

Give your present tools extra care—order new ones only for essential use. Stanley Tools, Division of The Stanley Works, New Britain, Connecticut.

STANLEY

TRADE MARK



STANLEY TOOLS

"The Tool-Box of the World"

Building News Review

By Frank W. Cortright

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



Fighting for Private Builders—

Warning that public housing is a "socialistic experiment" that will lead to a complete breakdown of the principles of American government, President Gerholz of the NAHB appeared before the McGehee Sub-Committee of the House District Committee and said: "If democracy is to survive, then all the organizations—industrial, social and political—must also be completely democratic. As the Federal Government takes over the functions of state and community through subsidy, the way is paved for a complete breaking down of the structure so carefully erected by our forefathers."

Public Housing Has Failed—

Gerholz pointed out that, although \$16 million has been spent by the local housing authority in Washington, only 60 families out of 4,000 which are receiving welfare rent assistance have been housed in projects of the National Capital Housing Authority.

Private Builders Are Ready—

In urging indorsement of the Tydings-Randolph private enterprise bill, Gerholz said: "This is the most important piece of legislation presented in the interest of housing the very low income group by private enterprise. For the first time a fully representative local agency is established with the power of eminent domain. Adequate safeguards are provided in the matter of competitive bidding and public hearings. They will have complete authority prescribing minimum standards of construction and maximum rentals to be charged.

Local taxes paid by these projects will make up whatever loss is sustained in the land acquisition cost. The welfare organization of the District will determine who among those occupying this housing require relief, and it will supply such relief in the same fashion as it supplies food, clothing or medical attention. The entire procedure is under the control of the community itself and is paid for by the community. The modest profit to private enterprise will be more than made up by private enterprise economies in construction and operation as contrasted with the cumbersome and expensive operation of any governmental agency."

Housing Low Income Group Costly—

The cost, Gerholz said, to rehouse the entire low income group in public housing throughout all America

would be prohibitive. "It has been estimated that the total cost of this would be between \$50 and \$100 billion dollars. Emerging from this war with a national debt of \$300 billion dollars, it seems improper to further increase this debt by such a vast amount. Without this increase, the annual cost of our national debt has been estimated at 7 billion dollars, 81% of which must be carried by individuals earning less than \$5,000 per year. When the American public—the American wage-earner—becomes conscious of the terrific load which he and his children must carry, there will be a revolt against a continuance of Federal expenditures for unlimited social benefits and political expediency," Gerholz said.

Housing Strife and Strikes—

"I have just received the following telegram from the Associated Home Builders of San Francisco: 'Federal Public Housing Authority found it necessary to increase rents in Vallejo housing units \$3 to \$5 per month. Vallejo tenants' union organized last year met Monday in protest. Langdon Post attended meeting and over 1,000 tenants were there. Post attempted to justify increase by showing cost of operation and tenants voted almost unanimously to ignore increase and challenged Post to throw them out. Meeting adjourned in near riot,' Gerholz concluded.

Practical Example Submitted—

To clinch their case in maintaining that private builders can reclaim slum areas at lower cost and more efficiently than Government agencies—two outstanding Washington builders this week submitted plans covering a practical example to the House District sub-committee. Detailed drawings and costs for reclaiming Logan Court, a notoriously blighted slum block of negro occupancy, proposed two-story residence structures of good design at lower basic cost and with but half the amount of land-acquisition subsidy required for Public Housing's comparable V Street houses. This particular plan combines new construction with rehabilitation of those existing, structurally-sound dwellings on the site.

Notable is the fact that this pilot plan provides a net gain to the community of real estate taxes amounting to \$6,650.00 annually, sufficient to repay in less than 19 years the initial cost of clearing this slum area. If this project were developed under existing

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public housing procedure, the necessary tax exemption subsidy would result in a net loss to the District of Columbia of more than a half million dollars during its alleged 60-year rental life.

Vigorous Public Housing lobby—Though it has often loudly deplored the activities of "special interest groups" in Washington, the National Public Housing Conference, spearhead of the public housing lobby, makes no secret that it is laying a barrage in preparation for an advance on the Congress. Among their announced objectives are:

An emasculating amendment to the Lanham Act which would nullify the provision requiring Congressional approval for converting war housing to low-rental purposes after the war, and an amendment to the United States Housing Act (the Act which created the United States Housing Authority). The latter would abolish present limitations on construction costs provided in the Act—\$4,000 a dwelling unit or \$1,000 a room except in cities of more than 500,000, where the limitations are \$5,000 a unit or \$1,250 a room.

Their substitute proposal would only prohibit "a cost greater than the average cost of comparative homes built by private enterprise under similar labor standards." Other schemes involve changes in financing procedure including Government assistance to mutual home ownership corporations in the form of direct loans or guaranteed yields on bonds.

Lumber Allotment Soon—Starting August first definite amounts of lumber will be allotted to the various claimant agencies including the NHA, the Maritime Commission, the War Department and the Navy. Previously the military services have taken all they needed and war housing had to get along with what was left over.

While this new plan will not attempt to short change the Army and the Navy, it will serve to bring about a better distribution of the existing supply. For one thing the establishment of quotas will tend to prevent the pyramiding of demand brought about by hand-to-mouth procurement methods. Also it will bring about better bookkeeping methods to enable the agencies to stay within their allotments. Finally, and of great importance to home builders, under the new plan NHA and FHA will be brought closer into the picture and the necessity of direct clearance with the WPB will be removed.

Outlook for Title VI—FHA officials are optimistic over the chances of getting Congress to lift the Title VI ceiling before the present insurance authority is exhausted, but it still looks like a close race. Present strategy contemplates quick action in the Senate without the delay required by committee hearings, and then speedy acquiescence by the House. Even so,

the amount will not exceed \$100 million for new war housing.

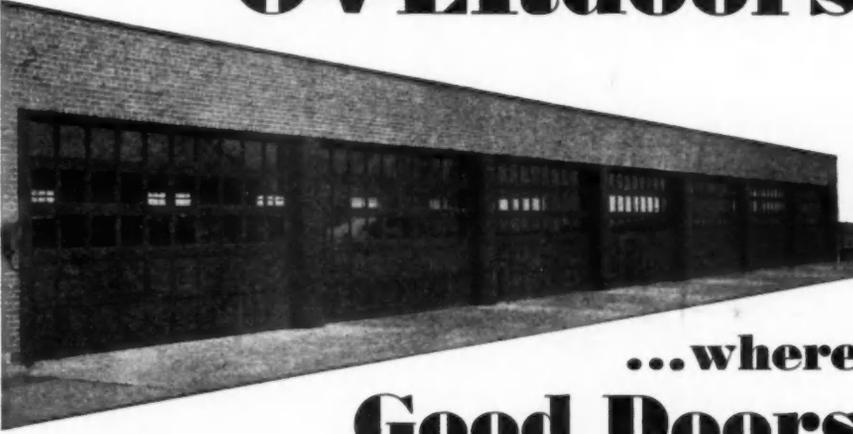
Homes for Veterans—Adjusted by the Conference Committee so as to provide a feasible home purchasing program, the omnibus veterans benefit bill has gone to the White House for the President's signature. There seems little doubt that he will approve the measure. In its final form, the title dealing with home purchasing offers a dual plan. The first section, which is considered largely unworkable, calls for a 50 per cent guarantee of equity or secondary loans by private lending institutions up to a maximum amount of \$2,000.

The second section, however, makes provision for a full guarantee of

equity loans covering the balance of payments on houses if the principal or first mortgage loan is secured under the FHA insurance system. There are some other stipulations, such as the requirement that the secondary loan be limited to \$2,000 or to 20 per cent of the purchase price of a house, but it seems clear that the latter proposal is entirely workable and will stimulate a considerable amount of activity. The fact that more than 15,000,000 men and women veterans will be eligible for the benefits of this provision make it immensely important to the postwar housing program.

What To Do With Ghost Towns?—The National Housing Agency must rapidly move into a new phase of ac-
(Continued to page 84)

Use Barcol OVERdoors

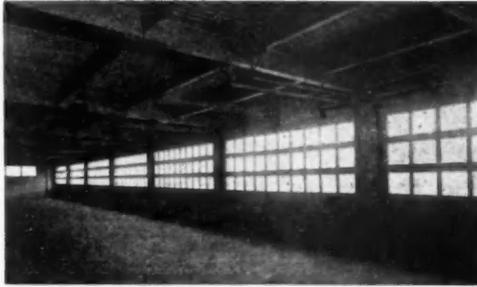


...where
**Good Doors
are Needed...**



OVERdoors
Electric Door Operators

Check the advantages of the 4 outstanding features of Barcol OVERdoors — 1. Weathertight, rattleproof closing without sticking or binding. 2. Self-latching, with spring bolts which engage automatically on closing. 3. "Twin Torsion" balance springs that are safe and quiet with a neat, compact appearance. 4. Continuous vertical track brackets that are more rigid, and conceal and protect the cables. *Other doors have some of these features, but no other door has all of them.*



The pictures show a truck fleet garage with seven doors approximately 18 feet wide and 10 feet high. Barcol OVERdoor quality and features mean long and trouble-free life under severe service conditions.

The Barcol OVERdoors on this fleet garage are chain-hoist operated. Note the neat, trim appearance of the overhead tracks and mechanism.

FACTORY-TRAINED SALES and SERVICE REPRESENTATIVES IN PRINCIPAL CITIES

BARBER-COLMAN COMPANY

704 MILL ST. • ROCKFORD, ILL.

(Continued from page 83)

tivity. Now that the production of war housing is largely completed, the disposition of some of it will require prompt and effective action. UAW-CIO, in addition to charging WPB with negligence in the Brewster incident, describes NHA's publicly constructed war housing for the Brewster Plant as "The most luxurious ghost town of World War II, built at a cost of \$5,000,000 in government funds."

They not only claim that a large part of the housing is vacant, but that NHA is still building additional temporary structures. The public, uninformed as to the basis of programming, will condemn NHA even in

those cases where the fault lies somewhere else. Obviously the answer lies not only in more careful programming, but in the rapid removal of temporary and demountable housing, and in the demolition or sale of unneeded permanent housing.

Joe Merrion Addresses Bankers—

Addressing the Annual Conference of the National Association of Mutual Savings Banks in New York City recently, NAHB's first Vice President Joe Merrion stressed the necessity of the closest co-operation between construction and finance.

TRU-BILT puts up a **SMOOTH FRONT!**



Use TRU-BILT EXTERIOR PLYWOOD for Smooth Appearance and Long Life



Yes, TRU-BILT is a smooth product—presents a splendid smooth surface for finishing. TRU-BILT is weather-resistant and waterproof. Here are some of the reasons for its superiority.

- 1** TRU-BILT is made for exterior use—to withstand dampness and changing humidity.
- 2** The TRU-BILT process controls moisture content—assures uniform resistance to weather conditions.
- 3** We use pure phenolic resin glue and a superior hot press manufacturing method.

For a smoother, finer job, use . . .

TRU-BILT

WEST COAST PLYWOOD CO.

ABERDEEN, WASHINGTON

Manufacturers of

HOT PRESSED—DOUGLAS FIR PLYWOOD

A Realistic Approach to Rehousing Slum Families

(Continued from page 49)

agreed rent per month when the houses meet the standard of sanitation and livability set up by the board.

The difference between what the tenants are able to pay and the regular rent shall be paid out of local welfare funds towards which most states pay a pro-rata share.

5. To avoid duplication of effort rents shall be collected by the local welfare workers who regularly visit those receiving public assistance. To prevent favoritism records of such partial rent payments shall be subject to review by the board.

6. As a family's income increases, it shall be required to pay an increased rental. When a family becomes able to pay the full rent, it will be dropped from the welfare roll and from then on deal directly with the property owner instead of the welfare department.

7. The houses shall not be designated as welfare-subsidized houses. They will be located on different streets in the older but not badly run-down sections of the city, not in blocks picked and segregated for this purpose.

8. The expenses for carrying on this operation shall be borne in the same way that other welfare costs are financed—out of local taxes and state welfare aid.

9. It is proposed that administrative costs be kept down to a minimum by delegating the operating details to the established welfare department.

10. The board will withhold from the amounts paid the owners for monthly rents a twelfth of the local taxes and keep the taxes always paid up to date.

By this process these two declared objectives of public housing will finally be attained:—

1. Those families who are unable on their own incomes to vacate slum dwellings will be removed to better districts and enjoy a higher plane of livability.
2. Clearing the slums, putting the land to its best use, and beautifying our cities will be speeded. The owners of this land will be more willing to sell at reasonable prices when they see their tenants vacating.

Likewise, these two evils which have grown up with public housing will be eliminated:—

1. The public housing practice of providing a rent subsidy to one group of Americans able to pay an economic rent while others are not so favored can be stopped.
2. The present growth of a vast bureaucracy, which seeks more and more public housing, can be arrested if not abolished, to the benefit of the sorely pressed taxpayers. The money saved in this direction can go to help pay up the cost of the war.

New U.S. Loan Plan

(Continued from page 58)

trying to be economical and financially sound in its living expenditures, faces is the building of a new home while it is paying rent on the place in which it now lives. It takes some months naturally to build a house. Money usually has to be borrowed from the mortgagee before building starts. This usually means that the family will start making monthly payments on the loan while it still has to pay rent on the place where it is living. The US Loan Plan for construction financing specifically provides that the mortgage lender will advance money for the construction, and that the first monthly payment shall not become due until the home is ready for occupancy, or not later than six months from the first advance.

Other features for home buyers in the US Loan Plan were not new, but had been tried already in a limited number of home financing institutions. Their incorporation with the new features of the proposal, however, into one composite plan produces a true consumer's type of loan.

Among these previously tried features are:

1. Maximum percentage of loan to value. This will mean 90 per cent loans under some circumstances.
2. Loan terms up to 12, 16 and 20 years.
3. Monthly payments with interest charged on unpaid balance only.
4. Budgeting of taxes and insurance on monthly basis.
5. Minimum title costs and service charges.
6. Promptness in loan commitment, loan closing and disbursement.

Aside from making the purchase of homes attractive to a widely expanded group of Americans, by offering them new conveniences, privileges and considerations in their financing, the US Loan Plan is written also for the assistance of the contractor, or operative builder, in his financing problems. When used for a construction loan, the new proposal looks toward maximum efficiency in financing the actual process of building, toward taking advantage of all the small conveniences which come naturally when a local lender is supplying the money.

The feature of promptness in loan commitment, loan closing and disbursement is a direct benefit to the contractor on a construction loan as well as to the home owner himself.

Savings and loan associations and co-operative banks, by the very local nature of their operations, are in a position to make commitments for funds without any of the delays of red tape which an outside financing agent would have to impose.

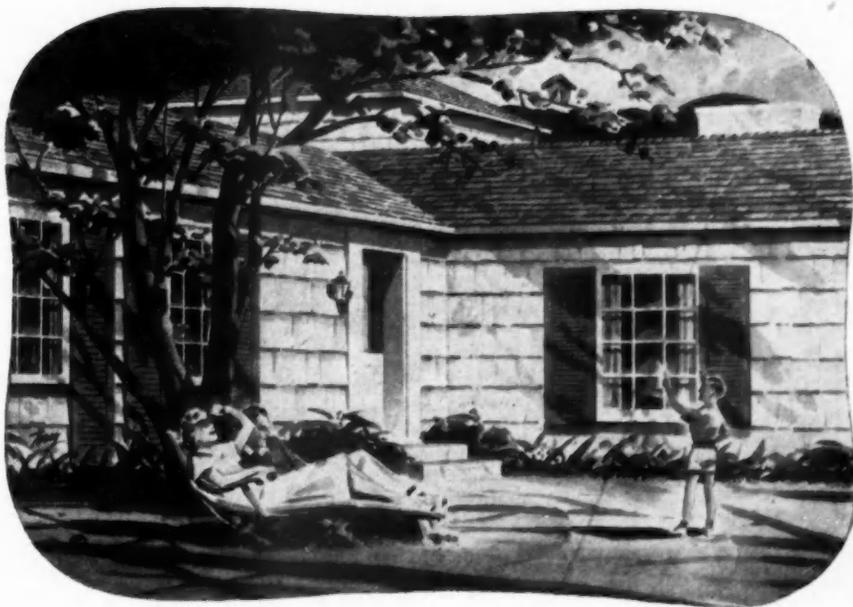
As the contractor builds the home for his customer he benefits by the Construction Loan Service incorporated in the US Loan Plan. This service means the obtaining of money to pay labor and material bills. This provision for the contractor is of the utmost importance in the private home building business.

As the Committee points out, if construction loan service is not available by institutions providing the permanent financing, then it is necessary for the builder with limited capital to finance the entire transaction by temporary borrowing, frequently at high expense, which cost has to be incorporated in his contract price. Without loan advances during the building process, discounts on material bills cannot be taken. The committee points out that these inexcusable wastes now involved in home building can be eliminated to the ultimate profit and convenience of the contractor.

Under the US Loan Plan, advances are to be made by the savings and loan institution during the progress of con-

struction, thus providing the funds with which the labor and materials going into the house are paid for. The contractor can assure the customer, for whom he is building, that although he is getting these advances to pay labor and material bills, neither he nor the owner is going to have to make any payments on the loan until the house is finished.

The proposed US Loan Plan, which is trademarked and protected by law, is well worth complete study and taking advantage of if it fits into your building operations. You can write to the headquarters of the U. S. Savings & Loan League, 221 N. La Salle St., Chicago, or ask your local Savings & Loan Association that is a member of the U. S. League.



TIME-TESTED MATERIALS Will Always Be Demanded

HOME DESIGNING may be improved, new gadgets and conveniences may appear, but the roof must protect and set off the home... exterior walls must be "homey" and weatherproof.

Time-tested Red Cedar Shingles provide the builder *always* with a roof that will "stand up" and Red Cedar Shingles double-coursed on sidewalls build a substantial exterior, both versatile and exceedingly attractive.

Let us send you a free set of working blue prints of all types of Red Cedar Shingle application. *Write . . .*

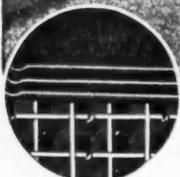
RED CEDAR SHINGLE BUREAU

White Building, Seattle 1, Wash.
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Red Cedar
SHINGLES

Plan with PAINÉ REZO Doors



U.S. Pat. 1,887,814

The exclusive interlocking grid core within the Rezo door provides constant air circulation adds extra strength and greater rigidity.

the air-cell flush door with the greatest experience behind it

Residential construction particularly multiplies the advantages to be found in Paine Rezo doors. In any home they become important decorative elements in themselves, add to the impression of spaciousness. Yet with beauty, they combine patented features in construction that mean no swelling or shrinking, nor future alignment troubles for the lifetime of the building. . . You can specify Paine Rezo doors with confidence, for Paine is no newcomer to flush door manufacture. Back of them is America's largest producer of flush type doors, with a record of nearly half a century of successful installations from coast to coast. Write today for an illustrated, factual bulletin.

Manufactured by the
PAINÉ LUMBER CO., Ltd. Oshkosh
ESTABLISHED 1853

Catalogs and How-to-do-it Information

44—WATERPROOF AND WATER-RESISTANT PLYWOOD are bound to be popular materials in home construction when the building industry again takes up its tools and sets to work in earnest on civilian housing. The United States Plywood Corporation and the Mengel Company have just put out a colorful and informative booklet about the new plywood products that have so definitely proved themselves in war uses such as aircraft and PT boats. It will pay you to know about the new developments and peacetime uses of modern plywood.

45—VERY INTERESTING AND INSTRUCTIVE information on the subject of America's forests and the future production of wood is contained in a 34-page booklet recently published by American Forest Products Industries, Inc. The booklet is well illustrated with photographs from all parts of the country. In these and following days, when almost anything from hangars to hosiery can be made out of wood, it is interesting to know what is being done to assure ourselves an adequate supply of this renewable natural resource.

46—IS WAR PRODUCTION EXHAUSTING OUR FORESTS?—The answer is contained in a little booklet just put out by the authority who should know if anyone does, and that is the National Lumber Manufacturers Association. Besides answering the question with facts and figures, the booklet contains other information about wood in general and dope on postwar building materials. The booklet is written by George T. Gerlinger, president of the association.

47—GOOD FOR THE LIFE OF THE BUILDING—is the statement made by the makers of Minwax Weathercap and calking compound to use with it. Important masonry joints, both in new construction and in rehabilitation work on buildings, such as copings, cornices, watertables, belt courses, window sills, and treads and risers of steps are adequately and permanently protected with this combination of calking and tiny soft lead strips. The Minwax Company, Inc., have just sent us a leaflet telling about installation methods and giving sizes of weathercap. It's good information to have.

48—LEAKING CONCRETE BASEMENT WALLS—and floors add up to about half of the house troubles around the country, and how to fix them and what to use is useful information to have on hand. The Tufcrete Company of Des Moines, have three leaflets and reference sheets available, which are packed full of exactly how to do the job, and just what kind of material to use to assure good results. Not only are the materials designed for repair work, but for new work as well.

SERVICE COUPON—CLIP and MAIL to CHICAGO

Readers Service Department,
American Builder,
105 W. Adams St., Chicago 3, Ill.

(July, 1944)

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

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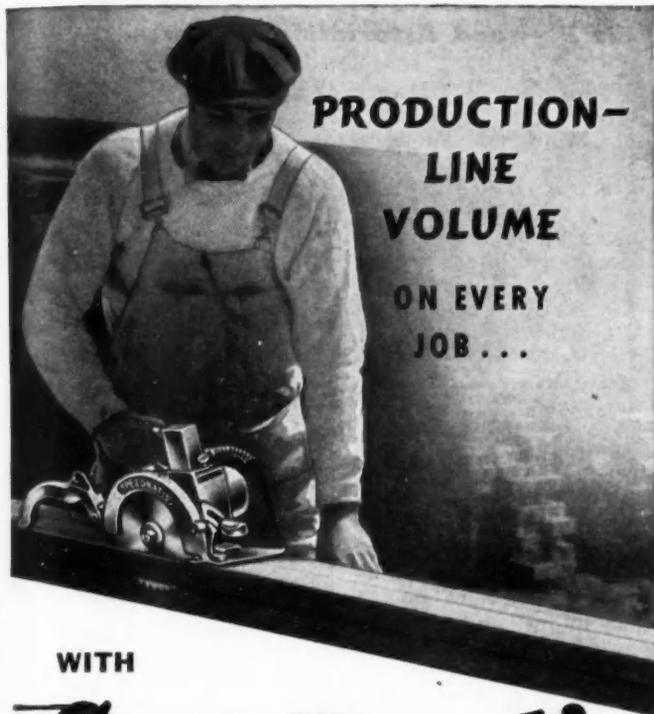
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OCCUPATION*

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

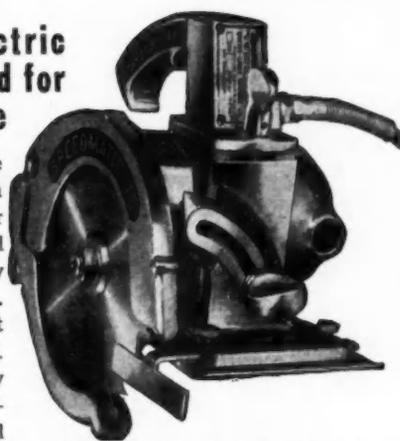


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LINE
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Speedmatic

**the portable electric
handsaw designed for
continuous use**



Do your sawing the efficient way. Plan the job so that your SPEEDMATIC will be kept cutting every minute of the day. It's built to take that kind of treatment. The extra-capacity motor with the efficient, non-jam helical gear drive, delivers to the blade all the power you'll need to keep going at top speed from morning till night. Pre-cutting boosts the production of every man on the job—and SPEEDMATIC is the saw to keep the cutting ahead of them.

Other SPEEDMATIC advantages: Perfect balance makes it the only truly one-hand saw, minimizing operator fatigue. The broad shoe sets it down securely and safely, even when tilted to cut at an angle. It's the easiest saw to use in vertical and other positions. Available in 7½", 8", 10¼" and 12" blade sizes.

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SISALKRAFT

... directly exposed to the elements for weeks at a time, is setting new records for toughness and waterproof qualities



PROTECTING deckloads of war supplies from wind-driven sleet, snow, salt water, ice and dirt, SISALKRAFT is successfully withstanding unprecedented abuse!

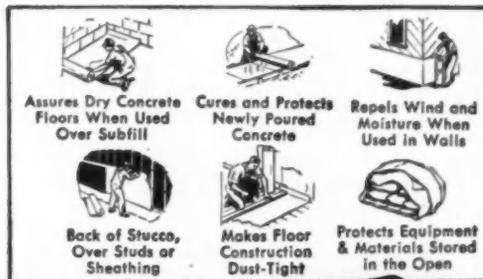
In a few weeks of such punishing war service, SISALKRAFT is withstanding more abuse than it would get in a lifetime of normal building use.

Never before has a building paper been so drastically tested and so conclusively proven to be weatherproof, windtight, tear-resistant and scuffproof!

Those properties that make SISALKRAFT so valuable in protecting war materials are the very same qualities so essential in its peacetime uses.

With this unmatched record of wartime achievement, SISALKRAFT will again be available for building construction, general job protection and other uses when the war ends.

In your postwar planning count on SISALKRAFT. Its war service record is convincing proof of its toughness, permanence and outstanding weatherproof qualities proved for nearly 25 years in the building field.

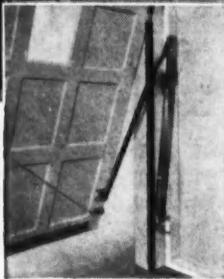


Manufacturers of SISALKRAFT, FIBREEN, SISAL-X, SISALTAPE AND COPPER-ARMORED SISALKRAFT

THIS PRE-WAR FAVORITE PROMISES TO BE A POST-WAR SENSATION



OVER-THE-TOP³ COMPLETE GARAGE DOOR UNITS



Heavy, heat treated, oil tempered steel springs give Frantz Door Units easy action. Simplicity of operating equipment assures quick installation and years of trouble-free service.

The Post-War garage door that is bound to fit right into your plans is a Pre-War creation. It's Frantz

"Over-the-Top" Door Unit No. 10, together with its companion sizes No. 7 and 21. Their popularity was sweeping the country when war restrictions came. "Over-the-Top" Door Units again will come prefitted, complete with hardware, and ready to install. They'll be made in three sizes to fit the majority of garage door openings. The two most popular sizes are shown above. The third is for openings 8' wide by 6'6" high. All will be attractive in appearance, easy to operate, simple to install, economical to own . . . will have many of the features which made Frantz the leader in overhead hardware for one-piece upward acting doors.

War production is taking our time today, but we can supply "Over-the-Top" Hardware for some types of installations. Write for full information.

FRANTZ
Guaranteed BUILDWARE

FRANTZ MANUFACTURING CO., STERLING, ILLINOIS

Fir Plywood Association Elects:

Thomas B. Malarkey, vice president of M & M Wood Working Co., as president of the association. Other officers elected are: Arnold Koutonen, president of Olympia Veneer Co., vice president; Herman E. Tenzler, president of Northwest Door Co., secretary; and J. P. Simpson, general manager of Buffelen Lumber & Mfg. Co., treasurer.



Tom B. Malarkey

Out of the recent annual meeting of Douglas Fir Plywood Manufacturers Assn., at Tacoma, came four significant developments:

1. Plywood manufacturers have acquired sizable stands of timber as sources of raw materials.
2. They have established a research foundation to develop new wood products.
3. Plywood advertising has been expanded to tell specifiers now that the material again will serve private builders once military demands lessen.
4. For the first time, the Association now is supported by every manufacturer in the 30-plant industry.

Gas Range Mgrs., Get Ready for Postwar

"SHE'LL be coming 'round the mountain—" is the message given by E. Carl Sorby, Vice President of the Geo. D. Roper Corp., in announcing a national drive for the use of CP (certified performance) gas cooking ranges in the millions of homes to be built and equipped during postwar years. A plan is being put into effect whereby consumers are urged to set aside from \$100 to \$150 in extra War Bonds to buy new CP gas ranges after the war.

LETTERS—

(Continued from page 7)

This will take care of a narrow lot, and some situations where people like to have an up and down stairs, and still have a small house.—D. W. MILLER, The Travelers Agency, Erie, Penna.

Eight years is a long time

To the Editor: About seven or eight years ago, you published a special edition devoted to details of moldings, frames, fixtures, and a great variety of other items encountered in the construction of buildings.

I treasured this very highly, took it home and locked it up so as to have it readily available when needed. One day one of my sons requested information of this nature and I handed it to him with the request that it be returned promptly. Some weeks later I asked for it but it could not be found even though we practically turned the house upside down.

I am writing to inquire whether a copy might be available at this time. If so, would you please send it to me, all charges collect.—J. M. KRAFFT, Kraft-Murphy Co., Washington, D.C.

Will build septic tanks

To the Editor: The information you published on septic tanks was greatly appreciated, and will prove very useful to me this summer, as I will be constructing one for my property.

(Continued to page 90)



50 YEARS OF SERVICE

1894



1944

TO THE BUILDING INDUSTRY



AND-IN TUNE WITH

TOMORROW!

Experience gained in peacetime and war production activities assure high standards of quality in NRC modern design heating equipment . . . for your current and post-war construction.

The NATIONAL RADIATOR Co.

227-O Central Avenue • Johnstown, Pa.

Better Product Features for Better Heating



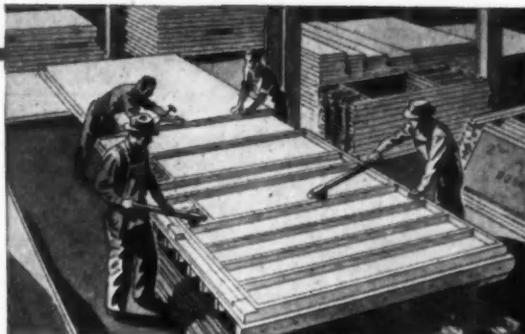
Commercial and Residential Heating Equipment

For "Outstanding Production Achievement"

PREFABRICATED? —OR PRECISION-BUILT?

Reg. U. S. Pat. Off.

There's a major difference for the builder to consider



PREFABRICATION started with the question—"How can we build a house with sectionalized, factory-built, standardized panels?" Precision-Built Construction started just the other way around—"How can we build sectionalized panels to execute any design?"

When you employ Precision-Building, your client gets the home he wants—any size, any style, any place, and for any climate. It looks no different from the same house conventionally built, yet your client gets all the benefits of mass production and engineering technique.

The basic difference between Prefabrication and Precision-Building is due to the difference between Prefabrication's "standard jig tables" and Homasote* Precision Tables. On each standard jig table, pre-cut materials are assembled into a standard panel of one design only. The table dictates the design. On a Precision Wall-Section Table, for example—any wall can be built, up to the total dimensions of the table. Nothing in the design needs to be standardized.

When you use Prefabrication, you build with standardized panels—usually in 4-foot widths. A logical simile is that you are building a house out of blocks. You can place the blocks anywhere you wish, but you cannot alter their original size or shape or design. When you use Precision-Building, you have no design limitations of any kind.

Homasote Precision-Built Construction—already proved by \$8,000,000 of private homes and \$30,000,000 of Government housing—will provide profits for hundreds of well-established, independent builders. Write for the details. *Trade Mark

ANY SIZE ANY TYPE ANYWHERE



HOMASOTE COMPANY
TRENTON, N. J.

(Continued from page 88)

My problem is now one of location. I would appreciate any information you are able to give me to help solve this problem to the best advantage of my neighbors and myself.

Thanking you for presenting such a splendid publication as the *American Builder*.—NORMAN W. BRENNAN, Toronto, Canada.

Job Helps Suggestion

To the Editor: Just a suggestion—why can't the "How-To-Do-It" items be printed on the same size sheets as the Job Helps by Don Graf, so they could be

kept in a loose leaf book just as the Job Helps. Think this over and see if you don't see it this way.

This to make a good magazine better.—ARTHUR KRAUCH, Albany 3, N.Y.

* * *

FHA's 10-Year Record

(Continued from page 49)

associations to assure liquidity of insured mortgages through a secondary market.

Modernization credit insurance under Title I was originally authorized by Congress as an economic recovery meas-

ure. It was and has been a property improvement program and not a borrowing program. It was intended as a quick starting mechanism to stimulate employment in industry and the building trades through the improvement and modernization of structures. FHA was authorized to insure without charge short-term installment loans made by qualified lending institutions.

When regulations governing the insurance of property improvement loans were issued in August, 1934, hardly more than one per cent of the banking institutions in the country were prepared to make personal loans based upon the borrower's character and income status. It was a form of credit unfamiliar to most lending agencies and of a type restricted by banking laws in many States. An immediate problem of the Administration was to obtain State enabling legislation that would permit financial institutions to participate in the program. By the end of 1935 fully 85 per cent of the Nation's financial institutions were making insured short-term loans under Title I.

During a period of ten years the FHA has insured under Title I, more than four and a half million property improvement loans, written for the face amount of \$1,800,000,000, of which 39,000 were new small homes construction loans totaling \$99,800,000.

During the ten-year period of operation, out of more than four and one-half million loans insured, defaulted notes acquired by the FHA have numbered only about 4 per cent of the total volume. The dollar amount of these defaulted loans represents approximately 2.7 per cent of the total. Recoveries in cash and property repossessed has reduced total claims paid to 1.5 per cent of the total amount of notes insured.

The average note insured has ranged from \$355 for finance companies to \$611 for savings and loan associations, the average for all institutions being \$400.

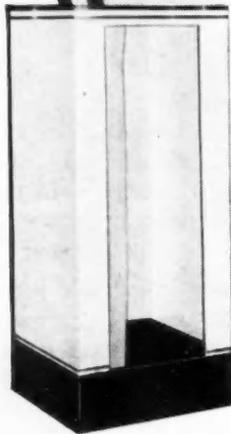
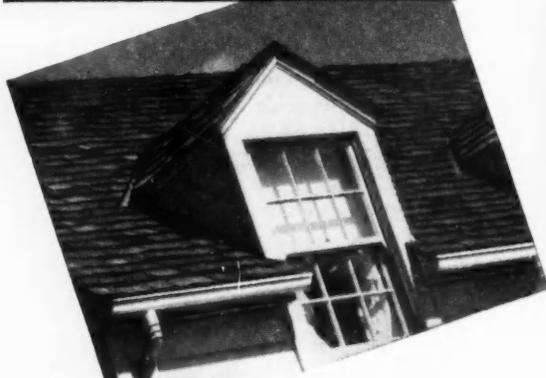
Title II of the National Housing Act was conceived as a permanent system of mutual mortgage insurance, in contrast with the original intention of utilizing the provisions of Title I as a temporary economic recovery measure. The purpose of the mortgage insurance system was to provide a stable, secure source of home mortgage credit.

From the beginning it was recognized that the success of the undertaking depended upon the judgment and integrity with which the mortgage insurance system was administered. The use of a systematic procedure by a staff having long experience in the valuation of residential real estate was viewed as fundamental. Equally essential was the development of a risk rating system to determine the eligibility of mortgages for insurance and to permit the classifying of mortgages according to the degree of risk involved.

Provision in the National Housing Act for the issuing of government guaranteed, interest bearing debentures for the payment of insurance claims was

(Continued to page 92)

**A METAL FEATURE
that will help
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PROSPECTS will be impressed with your sound planning when they learn that the roof-drainage system, exposed air ducts, furnace casing, and the shower cabinet in the house you have for sale — all are made of ARMCO Galvanized PAINTGRIP Sheets.

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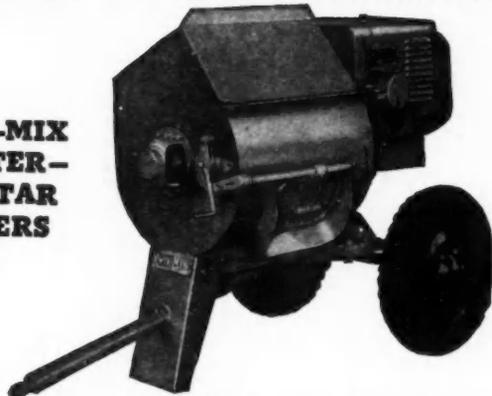


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KWIK-MIX 3½-S END DISCHARGE TILTER



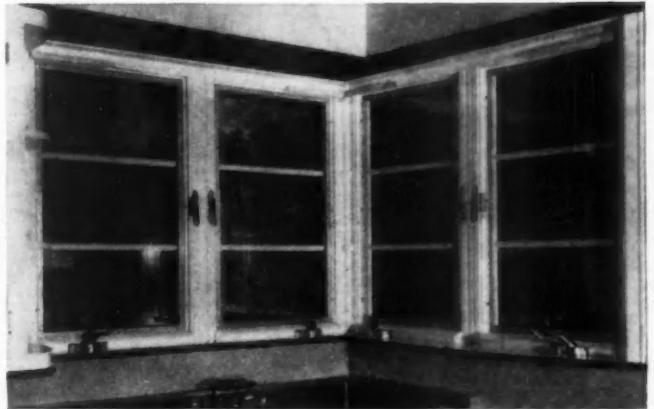
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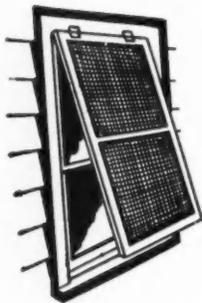


“Gentlemen . . .
these standards
will endure!”

There was nothing dramatic or spectacular about that meeting of the NDMA Advisory Committee in 1937. But the standards which the committee set up were designed to benefit generations of architects, builders and home owners. For these standards established, for the first time, minimum specifications for the toxic preservative treating of building woodwork . . . treatments which supplement the natural lasting qualities of wood products such as windows, doors, frames, screens and storm sash.

Ever since this country was founded, wood—warm, lasting, durable wood—has been a chosen building material. Today, the toxic preservative standards set up by the NDMA—based on the recommendations of leading technological authorities—provide public assurance that wood will continue to demonstrate its long life, its enduring value, in the homes of America.

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1. An efficient test for measuring effectiveness of toxic preservatives
2. Minimum standards governing the toxic preservative treating of woodwork products
3. A seal identifying products treated in conformity with NDMA Toxic Preservative Standards
4. Mill inspection of treating equipment and practices
5. Laboratory check-tests of preservative solutions
6. Educational effort in the public interest

NATIONAL DOOR MANUFACTURERS' ASSOCIATION
McCORMICK BUILDING · CHICAGO, ILLINOIS



(Continued from page 90)

new feature which permitted the FHA to hold repossessed properties for a favorable market.

The first major obstacle encountered were State laws which limited financing institutions to the making of 50 to 60 per cent loans for 3 to 5 years. As a result, the FHA could not operate effectively until a majority of the States could provide enabling legislation. At the end of 1935, enabling legislation had been passed which made Title II mortgage insuring operations possible in all but four States. The following year three of the four States followed suit.

During the past ten years up to 14,000 lending agencies and their branches, providing a total of 17,200 financing outlets, have participated in the FHA-insured mortgage plan.

From a start of 42,147 mortgages totaling approximately \$171,000,000 committed for insurance in 1935, the volume steadily increased until the record year of 1941. In that year 210,237 mortgages secured by one-to-four-family dwellings were committed for insurance for the aggregate amount of \$938,000,000.

The Act originally placed total liability at two billion dollars. Subsequent amendments have increased the authorized insurance liability to its present amount of four billion dollars with the provision that it can be increased by the President to five billion dollars.

During FHA's ten-year experience in the insuring of mortgages on one- to four-family dwellings, applications have been received for the insurance of mortgages on more than one and one-half million properties. During this period it has insured 1,055,000 mortgages for the total amount of \$4,600,000,000. These insurance operations have included mortgages on 606,250 new, and 448,750 existing properties. Through pre-payments, terminations and estimated amortization, on June 30, 1944, the number of mortgages on one-to four-family dwellings protected by FHA insurance has been reduced to 823,000 and the estimated net outstanding amount of the mortgages to \$3,115,000,000.

Excellent Recovery Record

Over a period of ten years, out of the 1,055,000 mortgages, insured mortgages have acquired only 5,500. Of the 4,056 small homes to which title was acquired by the FHA, 4,024 have been sold at prices which left charges against the Mutual Mortgage Insurance Fund of \$2,403,000. The total cost of properties sold by the Administration, however, has been more than offset by pre-payment premiums of \$3,700,000 by mortgagors who have pre-paid their mortgages in full prior to maturity.

To meet the particular needs of financing wartime housing, Congress amended the National Housing Act in March, 1941, by adding Title VI providing for the application to emergency housing of the techniques and insuring policies successfully developed by the FHA under peacetime conditions. These amendments recognized the increased risks involved and gave the Administration wide latitude in their acceptance. Further, in view of the risks involved, a separate War Housing Insurance Fund was established as a protection to the Mutual Mortgage Insurance Fund.

The War Housing Insurance Fund was started with an initial allocation from the Reconstruction Finance Corporation of \$5,000,000. The reserves in this Fund are constantly being increased by FHA income from insurance premiums, fees, and interest on investments.

Insurance authority under Title VI originally was limited to \$100,000,000, as the outstanding principal amount of mortgages. As the needs of the program have become apparent, Congress has progressively increased FHA's insurance authority until it now totals \$1,600,000,000.

Since March, 1941, through June 30, 1944, private lending agencies have advanced more than one billion dollars in mortgage loans insured by the FHA under Title VI. It is estimated that these loans have financed about 85 per cent of the nation's privately financed wartime emergency housing needs. During that period 236,000 mortgages on one- to four-family dwellings have been insured under Title VI for a total of \$1,038,000,000. In addition, some 322 mortgages

(Continued to page 94)



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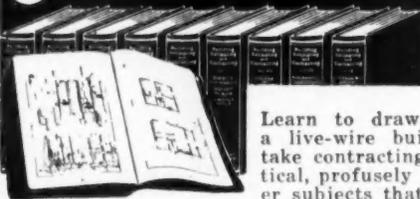
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(Continued from page 92)

to finance large-scale housing projects have been insured for \$121,000,000. Private industry, through the Title VI program, has produced approximately 330,000 dwelling units built specifically for occupation of workers in essential war work.

During the period of operation of Title VI, 1,550 financial institutions have originated mortgages on one-to-four-family dwellings totaling approximately \$1,500,000,000 for which FHA insurance commitments have been made. While all types of financial agencies have participated, originations have been largely concentrated among commercial banks, mortgage companies, insurance companies, and savings and loan associations. The largest holders of Title VI mortgages are insurance companies and commercial banks, who hold 35 per cent and 31 per cent, respectively, of the total volume.

During a period of ten years FHA's uniform underwriting procedures, sound appraisals, uniform interest rates, and standards of quality have broken down previous geographical barriers to the transfer of mortgage investments. As a result, an active secondary market has been possible and has been developed among the country's lending institutions. While the volume of insurance operations before the war steadily increased from year to year, mortgage transfers experienced a relatively more rapid increase. Previous to 1938 there was but little activity in the secondary market. During the five-year period of 1938-43 transfers averaged 450 million dollars annually. Transfers including resales amounted to \$2,800,000,000 as of June 30, 1944, representing purchases of insured mortgages on properties located in every State, Alaska, Hawaii, and Puerto Rico.

The establishing of a secondary market for residential mortgages within a period of ten years has been an important achievement. Within this period home mortgages have been placed on an investment status that permits their sale and purchase throughout the country without regard to geographical location or the boundary of any State. It is an accomplishment that has added to the soundness of mortgage lending business, added an element of safety to the funds of millions of small savers, and restored the confidence of lenders in the fundamental value of dwelling properties as security for insured mortgage loans.

History promises to repeat. Just as the Federal Housing Administration aided industrial recovery and stimulated employment at a critical period in 1934, this program will be prepared to go into action to facilitate the financing of deferred repairs, maintenance, and improvement of the Nation's houses after the war. There will be this difference. In 1934 a new idea had to be developed and made workable. When the war ends lending agencies and the FHA will merely have to set the wheels in motion once more.

* * *

War Construction Methods

(Continued from page 68)

The entire heating plant is inside the chimney, 21 inches square. Inside the brick chimney a heavy porcelain enameled smoke flue and heat exchanger extends up above the attic floor, where an automatic blower fan is located. The return cold air duct is brought in at the roof line and the air is blown around the flue pipe and combustion chamber to pick up all of the heat and make use of it in warming the home, instead of permitting it to escape unused up the chimney, as in so many heating jobs. Located centrally in the house plan, this arrangement consumes no floor space and requires very little piping for warm air ducts.

In the Northwest Homes Development this chimney furnace is used for the 200 basementless houses in the project. These are coal-burning models. Mr. Mueller, however, makes it clear that oil-burning or gas-burning models are available, and that installation can just as well be made in the houses with basements, by simply dropping the combustion chamber and furnace front to the basement floor and lengthening the inside chimney pipe or heat exchanger.

The thorough way in which this entire project was planned and studied is indicated by the large blueprinted plot plan prepared by Architect Robert L. Durham, of the firm Stuart

(Continued to page 96)

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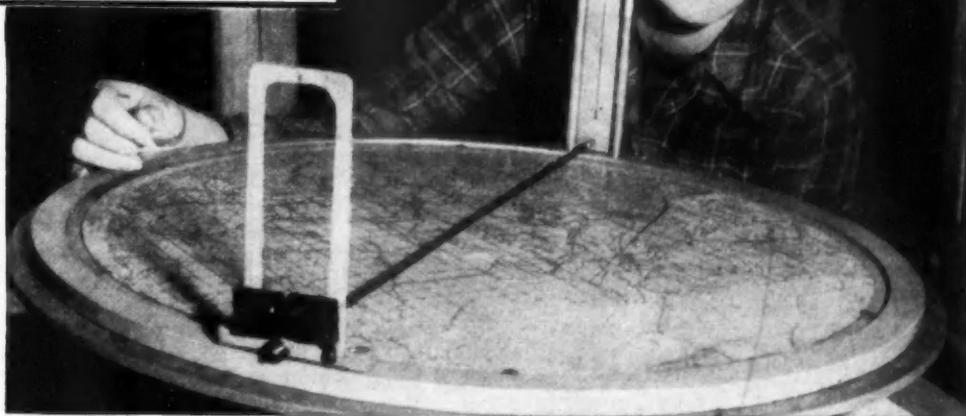
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*Idaho White Pine *Sugar Pine

*Ponderosa Pine

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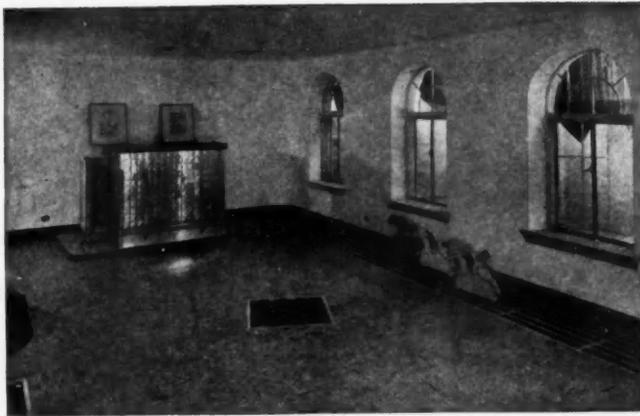


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(Continued from page 94)

& Durham. A part of this is reproduced on a preceding page. Note that the individual building lots are of slightly varying size and shape to conform to the curvature of the streets and to the gently rolling topography. Then note how carefully the position of each house on its particular site was studied, to give an harmonious overall effect and maximum privacy and side yard space to each home owner. Front elevations were drawn in on the plot plan (too small to reproduce) to show the variety of architectural planning and the contrast in appearance, without monotony, obtainable from the rather limited number of standardized plans used for this development. Each design has its distinguishing number and symbol; and this plot plan, carefully prepared in advance, was followed by the construction superintendent and the construction crews in their daily operations.

It has seemed to your *American Builder* reporter that this project with its careful advance planning and use of power-shop methods might prove a worthwhile model for others to study as the building industry emerges from war housing to the more ample and varied standards of postwar home building.

In all, it is an efficient, orderly procedure that is not only cutting costs but also building more quality into these houses. O. I. Hall, manager of the building department of the Puget Sound B. & D. organization and Vice-President of the Northwest Homes, its subsidiary to own and manage this new home project, phrased it this way, "We are building these homes to own rather than to sell. We expect to live with them a long time. There will be very little maintenance expense on houses built as these are. The savings we are making by our careful planning, scheduling and shop cutting are being built back into these houses to give them extra value."

Since this development is in a prime war industry area where many additional homes are needed, it has a high priority for lumber, plywood, wiring, piping and plumbing supplies and home equipment. The 2-bedroom houses conform to the 800 sq. foot limitation and the 3-bedroom houses that of 920 sq. feet. The streets and plots, however, are laid out on a more generous postwar scale; and as soon as the war limitations are relaxed houses of a larger room size will be added.

* * *

Excellent Rental Units—

(Continued from page 72)

apartments, while the pairs of downstairs apartments are reached separately.

The whole Mars Estate project consists of five separate groups of buildings, each group financed separately for more flexibility in placing the mortgages, which total \$3,000,000.

Some of the details of such a large project are interesting. For instance, all roof water is carried underground in a series of drains and sewers which called for the digging of 25 miles of trenches for sewers, drains and storm sewers. There are 3 miles of curbs and 8 miles of sidewalks. There are 35,000 square yards of concrete paving.

The entire plot is laid out to include adequate parking areas for cars, and drying yards with protective fencing around them. Play yards are provided for children, and playground equipment is part of the set up.

Good quality materials and equipment were used throughout the project, including Iron Fireman stokers, Marsh outdoor temperature controls, U.S. Radiator boilers, Taco water heaters and radiators, General Electric ranges, Kohler plumbing, Bruce hardwood flooring, U.S. Gypsum plaster and plaster base, Reynolds insulation, Oxford kitchen cabinets, Armstrong linoleum.

The buildings are unexcavated except for a fuel and utility room 16 feet by 24 feet in size and located where it is accessible from an outside stairway. Each building has its own steam heating plant with automatic feed and temperature controls. All in all, the entire project is an excellent example of good private wartime building because it is made up of attractive individual units, well placed on a plot of ground that is scientifically land-planned.

Keeping Up Appearances

with

MIAMI

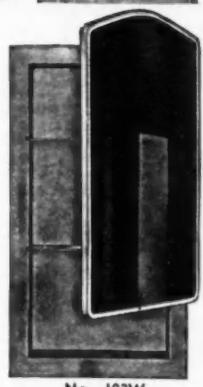
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Luxurious MIAMI Metal Bathroom Cabinets have been temporarily succeeded by these well-constructed units made of wood, with metal-framed mirrors (by permission of WPB).

These wood cabinets provide the well known MIAMI conveniences and have been specified in large numbers for maintenance jobs as well as for essential housing. They represent top values in new bathroom cabinets available under present conditions.

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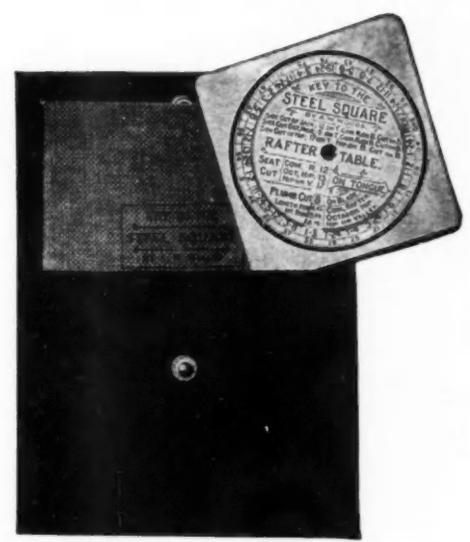
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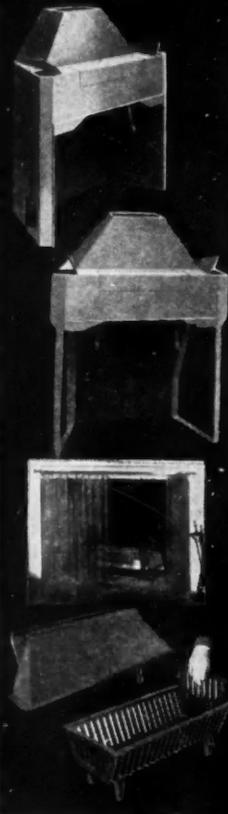
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and CONSTRUCTION SUPPLIES

British Housing—

(Continued from page 48)

keep them in being after they have served their purpose and after permanent dwellings are available.

Mr. Churchill said that this emergency program would make heavy demands upon the steel trade; five tons of sheet steel are required for each of these units. It should indeed absorb in great measure its overflow and expansion for war purposes. Thus one consequence should be that the iron and steel trades, which passed through times of depression during the inter-war years, should be relatively active in the years following the war. The problem of transforming the steel industry from war production to normal production is less serious than that of the engineering factories, where extensive re-tooling will be necessary. This fact both improves the postwar prospects of the steel trades, and also makes them all the more able to take on this new job of making prefabricated houses.

So much for the short-term and medium-term program. But Mr. Churchill did not neglect the long-term outlook. It was at this juncture that he laid down the condition that the building trade must not be subject to a sudden "splurge" of activity, followed by a period of idleness. He had great sympathy for all those at work in the trade. They are apt to be among the first taken for service in time of war, while in time of peace, as soon as one job is finished, they have no certainty that they will be able to find another.

Therefore the Government is laying down a 12-year building plan. During this interim period, prefabricated houses will help to fill the gap, but local authorities today have in their possession 200,000 sites for permanent houses, and it is hoped that within two years of Germany's defeat, some 200,000 to 300,000 permanent houses will either have been built, or will be under construction. Meanwhile one major object of the 12-year plan is to guarantee all building operatives steady employment for long periods, with extra reward for increased efforts of superior skill.

Building Plan Important in Employment

The achievement of this plan will greatly help to solve the wider problem of providing full employment. Out of the 1,500,000 workers in all trades, who were unemployed in 1938, 130,000 were in the building trades, while about another 30,000 were in the steel trades. Thus over one person in ten of all those unemployed was a worker whose services will be directly needed for the Government's housing problems. It is well known that employment begets employment, for when a man is brought back to work, he is able to spend more and consume more, and the trades supplying his needs benefit in their turn.

Mr. Churchill's final point was that houses cannot be built without land. Here he repeated the Government's 1941 declaration that all land needed for public purposes shall be taken at prices based on the standards of values of March 31, 1939. He said that this was a formidable decision of State policy. It imposes a definite ceiling on land values, and it means that anyone who buys land at a price above that ceiling does so at his own risk.

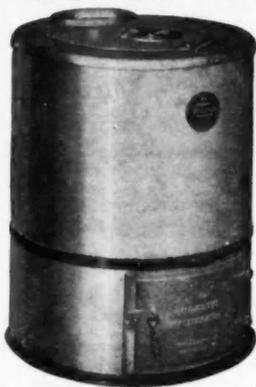
Mr. Churchill gave the assurance that ample land will be forthcoming both for temporary and permanent housing schemes. He also said that these schemes could not be delayed until complete plans on far wider issues have been devised, agreed, and accepted by the electorate. These housing plans were designed to meet an immediate need. The task which they involved was not as formidable as many of the war tasks which the Government has to handle, and the value of the land involved is only between one-twentieth and one-thirtieth of the cost of the houses to be built upon it.

Nevertheless the problem is not simple. One bit of land is not the same as another. People need houses near their work, or with adequate transport facilities to get from their jobs. They need shops, schools and other necessary adjuncts of life. The problem before the Government is to avoid delay on the one hand, but equally to avoid housing people in the wrong places.



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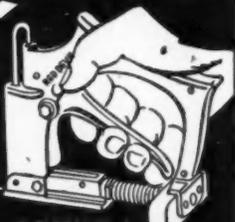
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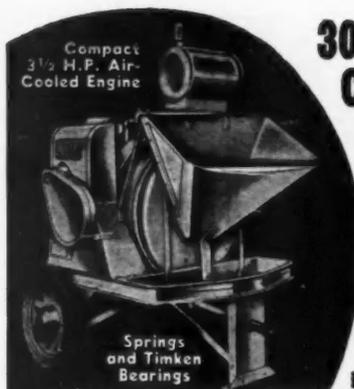
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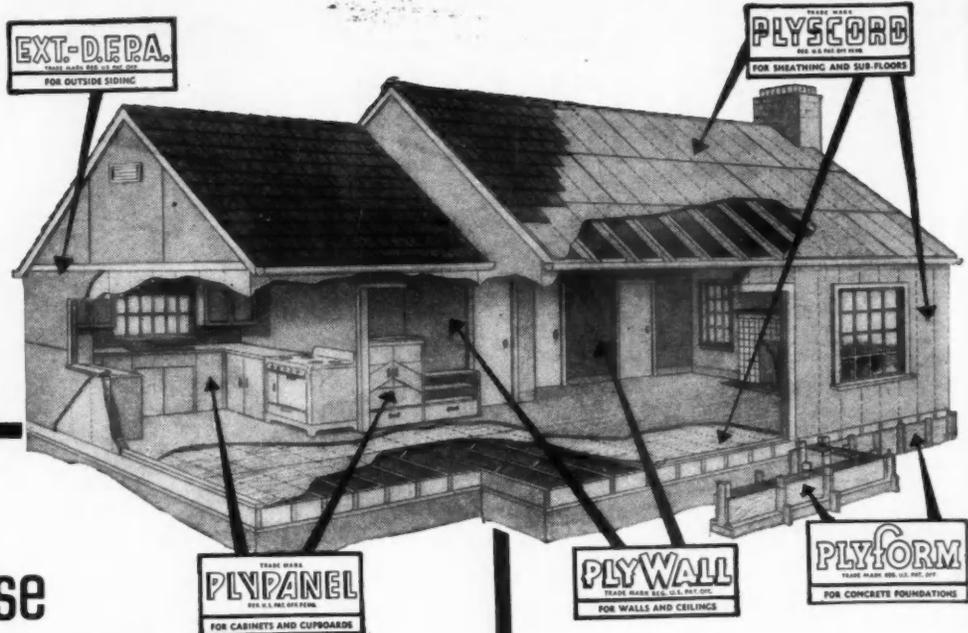
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Shown is a Dri-Bilt house with typical plywood grade uses designated by the proper grade mark.



How to use Douglas Fir Plywood* in Dri-Bilt Construction

What Dri-Bilt Construction Means

Dri-Bilt with Plywood is the name used to describe an improved type of construction that develops speed and economy and utilizes conventional materials stocked by lumber dealers throughout the country in normal times.

Dri-Bilt means dry-wall construction, i.e., the elimination of hundreds of gallons of water—and its attendant evils—during plastering operations in house building.

Advantages of Dri-Bilt Materials

1. Excessive moisture is eliminated, reducing danger of twisting of studs and joists.
2. Plywood walls are puncture-proof and crack-proof, thereby lowering maintenance costs.
3. Plywood walls may be given natural or light stain finishes for genuine wood paneling, or they may be felted and papered, covered with plastic finishes, bathroom tile, linoleum or painted.
4. Dri-Bilt methods save on building time operations often as much as 4 to 6 weeks, lowering finance charges, increasing turnover of builders' invested capital and allowing the client to move into a new home sooner.
5. Douglas fir plywood has a natural beauty and durability which gives the house long-time appearance value, making it a good "resale" investment as well as a completely satisfactory home.

Building Procedure with Douglas Fir Plywood

FRAME—Standard lumber framing with studs and joists 16 in. on center. Framing lumber should be kiln-dried to prevent later twisting of frames.

WALL SHEATHING (Under any finish siding)—The Plyscord grade 5/16 in. thick, is used over the studs.

SUB-FLOORS (Under any finish flooring)—Use 1/2 or 3/8-in. Plyscord.

ROOF SHEATHING (Under any finish roofing)—Use 5/16, 3/8, 1/2 or 3/8-in. Plyscord, depending on rafter spacing and anticipated snow loads.

NAILING—The 5/16 or 3/8-in. Plyscord is applied with 6d common nails spaced 6 in. apart at edges and 12 in. elsewhere. With 3/8-in. Plyscord, use 8d nails, similarly spaced. Exterior plywood should be applied with non-corrosive nails.

INTERIORS—Use 3/8 or 1/4-in. Plywall, the popular wallboard grade for most purposes, particularly for painted or papered walls.

EXTERIORS—Exterior type, usually in Sound 1 Side Grade, should be specified for outside walls of plywood panels or plywood siding. Thicknesses used should be 3/8-in. or greater.

Suggestions for Saving Time and Material

The standard panel widths of 48 in. as well as the popular 8-ft. length, are multiples of 16 in., the accepted spacing for studs and joists. Consequently edges of panels will naturally meet at centers of studs and joists when spacing is regular.

By spotting window and door openings between grid lines, i.e., within 4-ft. panels, only one panel instead of two need be cut. This permits all headers through the house to have same length, allowing quick economical cutting.

Multiple Unit Projects

Thousands of units of war housing, both government financed and privately financed, have been prefabricated recently using the basic Dri-Bilt with Plywood principles of construction. Details vary with each particular prefabricator or prefabrication system, but a majority use Douglas fir plywood as the basic element in the structural unit. Additional data on multiple unit construction or on prefabrication with Douglas fir plywood may be obtained from the Association.

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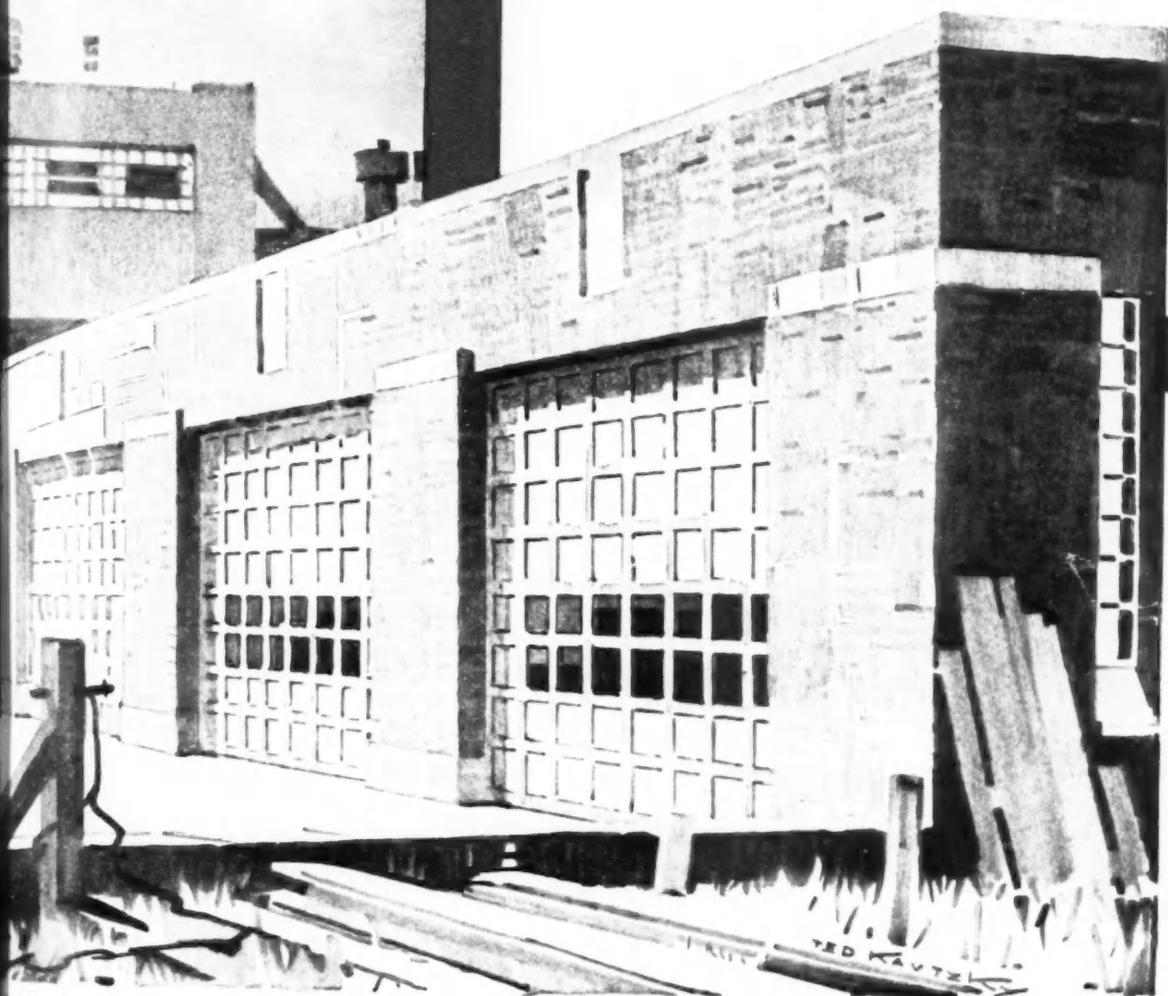
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