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 studs, Celo-Siding saves critical lumber, time and labor. Available in bufftone or green colors and in two thicknesses—5/16" and 7/16". Sizes: 5/16" in 4' x 8' with square edges; also 7/16" in 4' x 10' with square edges; and in 2' x 8' with T&G joints on long edges. Recommend 7/16" for greater strength and insulation value. Recommend 5/16" for lighter, lower cost construction.

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 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 BRAND BOARDS
For Interior and Exterior Construction

CELO-ROK WALL BOARDS

These gypsum wall boards meet the rigid Celotex tests for quality. Available in 1/4", 5/16", 1/2" thicknesses for conventional interior wall construction. 5/16" and 1/2" have square, recessed or beveled edges. 1/4" thickness has square edge only.

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 1 1/2-inch thicknesses, 24 inches wide, in 6-, 8-, 9-, and 10-foot lengths.

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 1/2-inch thickness, 4 feet wide and in lengths up to 12 feet. Large areas can be covered in a short time.

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.

The Celotex Corporation... Chicago 3, Illinois
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 man-hour.

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.
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 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.
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.

ACP 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
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 3/4” thick—for new construction.
KUVER-KRAK PANELS—1/4” thick—for covering cracked plaster.
UPSON-PROCESSED BOARD—1 1/16” 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
**LETTERS**

**To the Editor**

**Needed in Iceland**

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?**

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 hear me 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**

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. GOOD YEAR, Hamburg, N.Y.

**Narrow lots a problem**

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.

(Continued to page 88)
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!

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.
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 socialist 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 excepting 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 competence 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.

[Signature]
"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.
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 far 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 am not condemning the . . . out it, 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 can honestly say in two heating seasons I have saved at least 3200 gallons of fuel oil, a saving of $245.00 and much more satisfied with better and quicker heating results with a Timken Silent Automatic Oil Burner than with my previous burner. I am not condemning the . . . out it, but it is almost unbelievable . . .
I was of the opinion you people would like this information and would be pleased to hear from you.
L. J. A.
Chicago, Ill.

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

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.

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.

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

For Production "Well Done"

Division of THE TIMKEN-DETROIT AXLE COMPANY, Detroit 32, Michigan
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.

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.
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.

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 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 one 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
Newly Engaged in War Goods Manufacture
Pacific Coast Plant, Oakland, California
"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 6 1/2", with 2 1/2" or 3 1/2" 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, the American homeowners are buying more and more of the things they need to make their living easier, more pleasant. They are building, buying, and improving their homes. The Ladies' Home Journal, Good Housekeeping, Better Homes & Gardens, The American Home, House Beautiful, The Parents' Magazine, and many others are finding this is the soundest of all times to sell....

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."
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.

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!

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

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
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"

SEE NORGE BEFORE YOU RECOMMEND...MEANWHILE RECOMMEND MORE WAR BONDS
The clean, care-free efficiency of electric lights won the women. Everyone wanted their new homes wired for electric lights.

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

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

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

POSTWAR CAPACITIES—One of the best studies indicating how rapidly construction can expend 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.

BEETTER 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.

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.
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.
WHEELEER 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

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.

AMERICAN BUILDER
A SIMMONS BOARDMAN PUBLICATION

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.
PLUMBING FOR HOMES OF TOMORROW

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.
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.

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 will compete 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)
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.
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 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.

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

THE STANLEY WORKS
New Britain, Connecticut
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
HAT'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 shiny 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—placement of lighting outlets and contras—location and size of wiring, water supply and drainage lines.

Can too many watts spoil the cook?

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.

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.

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

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 Builder, July 1944.

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

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

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 Builder, July 1944.
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 than Brixment than with any other mortar.

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

Lehigh Early Strength Cement
for Service-Strength Concrete in a Hurry

HIGH PORTLAND CEMENT COMPANY
ALLENTOWN, PA. • CHICAGO, ILL. • SPOKANE, WASH.
"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 conveniences, and that it will be made of production steel plate, 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.

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.
Pre-emption has been and may yet be made by the government for the provisio n of war materials. The priority in satisfying the demands for hot rolled mill products is to keep production at the highest possible levels, it says.

“Now, without an outside demand, we must make to this job of making steels for industry the priority that we gave to the making of steel for military use,” the government says.

Most of the new mill products in the making today are steel, according to the home building and appliance manufacturers. Dr. W. E. Small, chief of the Bureau of Research and Domestic Economics, says that as much attention is paid to the time it takes to complete installations as to the quality of the materials used.

The government says that the materials used in the new houses should be of the same quality as those used in the old houses.

For instance, since the old houses were built, many new materials have been developed that are superior to the old ones.

Metal dies for the manufacture of metal parts have also been developed.

Hardwood mill products have been a mainstay of the furniture industry.
...on the Post-War Building Boom ...

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.

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.
Churchill's Postwar Home
Ready for Mass Production

The British government has perfected plans to turn out 800,000 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?

By Norman Crump
Financial Editor, "Sunday Times" (London)

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

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.
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.

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 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 plywood. 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 6½ 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 brackets 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)
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 up 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 sanitary 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 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 saleable securities throughout the nation. Within a period of 10 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 $10 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 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.
ROADSIDE RESTAURANT

FRONT

Open Rafter
Composition Roofing

Rear

722'

Floor Plan

Scale 1/8" = 1'-0"
AMERICAN BUILDER
POST-WAR BLUEPRINT SERIES
PREPARED BY
HENRY OTIS CHAPMAN • RANDOLPH EVANS
ARCHITECTS
NEW YORK, N.Y.

Simmons-Boardman Pub Corp
One Adams St Chicago
HIGHWAY SALES AND DISPLAY STAND
ELEVATION 2

Scale 1/8 = 1'-0"

Composition Roof

VEGETABLE STAND

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

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.
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.

"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 Federal Government 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
Greenway—Minnesota Avenue and East Capital Street, S.E., completed by Cafritz Construction Company in 1941. It has tile baths and hallways, 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.
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.

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 hangover 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 finds it necessary to

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 1/2 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.
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

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

From widely separated areas 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 such that before the war was won, Servel says, it is "ready to go." This month we show how one 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.

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."

"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 such that before the war was won, Servel says, it is "ready to go."

This month we show how one 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."

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. Mean-
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)
**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
  - 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.

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.
"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.
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.
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.

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.
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-

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.
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 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 ½ 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...
The construction of the Flue-Master Chimney Furnace, as built into the kitchens of 200 of these homes (see plan, page 88). 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)
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 cooperation 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.

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

<table>
<thead>
<tr>
<th>Method</th>
<th>Concrete Joists</th>
<th>Steel Joists</th>
<th>Precast Slabs</th>
<th>Flat Slab</th>
<th>Total Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$851</td>
<td>$850</td>
<td>$718</td>
<td>$724</td>
<td>$701</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

COST PER SQ. FT. | $.61 | $.71 | $.76 | $.81 | $.77 | $.79

American Builder, July 1944.
THREE BEDROOM MODEL has Western Colonial charm, well laid out rooms, plenty of buyer appeal.

SUNSET HEIGHTS—War Homes With Peace Appeal

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

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.
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 kimberly blanket by Kimberly-Clark; CEILING INSULATION—four inch Felt wool by Pacific Lumber Company; WALLS—U.S. Gypsum Co. Gyplath Sheathing and Sheetrock interior; WINDOWS—Curtis Silenite Colonial Windows; DOORS—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.
Excellent Rental Units by Baltimore Builders Suitable for Postwar Use

By PETER J. McKENNA
Vice Pres. Mars Estates Inc.

MARK 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
Many Smaller Jobs at Better Profits Are Good Business

Knowing how and doing all sorts of upkeep and repair jobs builds up a steady, profitable clientele

How to Estimate Brick Wall Costs

For 8-inch, common brick walls, figure 1232 bricks per 100 sq. ft. at $17 per M, or $209.44. Figure labor at $10 per M, or $12.32, and 20 cu. ft. of mortar at $3.20, or $6.40. The total cost at these figures is $39.66.

Now substitute your own local costs of brick per M and labor for laying per M, plus the mortar, and you can easily determine the cost per 100 sq. ft.

For a 4-inch face brick veneer wall, figure 616 brick at $30 per 100 sq. ft., or $184.80. Figure labor at $15 per M, $9.24, and 9 cu. ft. of mortar at $3.20, or $28.80. The total cost at these figures is $30.60. Now substitute your own local costs for brick and labor and mortar and you will have the cost for this type of wall.

How to Build an Outdoor Fireplace

OUTDOOR living is becoming more and more popular, and almost always there is a need for a real fireplace that is both good looking and practical. A concrete footing 16 inches wide and 12 inches deep across the back of the fireplace, poured at the same time a 4-inch slab, level with the top of the footing, for the entire area under the two fire pits and side walls, will give a solid foundation. Put a 6-inch cinder fill under the slab. Use cement blocks or stone, as indicated, and line the pits with fire brick. Put flagstone on top of the blocks and make recesses in both sides for the grills. Two pits are for alternate cooking and making live coals.

How to Apply Perforated Tape for Smooth Gypsum Board Joints

THIS type of gypsum board has recessed edges made especially for filling to produce a smoothly finished wall. The valleys are buttered with a plastic joint finisher. Then a strip of perforated tape is embedded in the plastic by forcing it through the holes. Next a thinner coat of plastic is applied and the joint is smoothed, and when dry, sandpapered. This produces a smooth surface that, when properly sized, will be a smooth base for any kind of decoration, including painting and papering. The edges of the wallboard are nailed at about six-inch intervals, as recommended by Celotex engineers.
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 roads should be placed crosswise the step slab and vary in size from \( \frac{3}{8} \) inch to \( \frac{3}{4} \) 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.
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; 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 1/4 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.

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. Then scribe the back rails to the back wall and the front rails to the same line. Locate the joints for the stiles on the rails. Now lay out the stile 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 1/2 in. long. Lay out and cut two pieces 25/32 in. by 3 1/4 in. Widths 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 1/4 in. on each end so that the stiles and rails may be scribed to the walls. Locate the joints for the stiles on the rails. Now lay out the stile 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 1/2 in. long. Lay out and cut two pieces 25/32 in. by 3 1/4 in.
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 \( \frac{3}{4} \) in. thick is ideal for the purpose. Allow this material 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 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 3/4 in. plywood is used for the platform floor, the length will be approximately 31 in. Place one piece at 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 1/4 in. below the top of the rail CD. See Fig. 5.

Lay out a 25/32 in. dado 3/4 in. deep at these locations and as shown by the dado joints in Fig. 5. Mark the seven remaining boards in the same way and cut the dado joints. Square and cut twelve pieces of 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 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 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 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.
HOW TO DETERMINE FIREPLACE FLUES

American Builder for July 1944

HOW TO DETERMINE FIREPLACE FLUES

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" 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 planks. 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

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

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.
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.

General Electric

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.
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 McGhee 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 government is established with the power of eminent domain. Adequate safeguards are provided in the matter of competitive biding 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 Cost-ly—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 the plan 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 unneeded social benefits and political expediency," Gerholz said.

Housing Strife and Strikes—We have just received the following telegram from the Associated Home Builders of San Francisco: "Fearing 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 out meeting adjourned in闹 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 submitted plans covering practical example to the House District sub-committee. Detailed drawings and costs for reclaiming Logan Court, a notoriously blighted slum block of negro occupancy, property two-story residence structures of government design at lower basic cost and with 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 plan provides a net gain to the community of real estate taxes amounting to $6,650.00 annually, sufficient to pay in less than 19 years the initial cost of clearing this slum area. If this project were developed under existing conditions, it would be prohibitive. "It has been estimated that the total cost of the plan 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 unneeded social benefits and political expediency," Gerholz said.

While attempting to supply the Navy with more housing, certain private builders can reclaim slum areas at lower cost and more efficiently than Government agencies. Two outstanding Washington builders 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, property two-story residence structures of government design at lower basic cost and with 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 plan provides a net gain to the community of real estate taxes amounting to $6,650.00 annually, sufficient to pay in less than 19 years the initial cost of clearing this slum area. If this project were developed under existing conditions, it would be prohibitive. "It has been estimated that the total cost of the plan 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 unneeded social benefits and political expediency," Gerholz said.

While attempting to supply the Navy with more housing, certain private builders can reclaim slum areas at lower cost and more efficiently than Government agencies. Two outstanding Washington builders 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, property two-story residence structures of government design at lower basic cost and with 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 plan provides a net gain to the community of real estate taxes amounting to $6,650.00 annually, sufficient to pay in less than 19 years the initial cost of clearing this slum area. If this project were developed under existing conditions, it would be prohibitive. "It has been estimated that the total cost of the plan 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 unneeded social benefits and political expediency," Gerholz said.
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, spearheaded by 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:

1. An emasculating amendment to the Lanham Act which would nullify the provision requiring Congressional approval for converting war housing to non-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 procedures including Government assistance to mutual home ownership corporations in the form of direct loans or guaranteed yields on bonds.

2. The National Housing Agency must be enabled to move rapidly into a new phase of activity. The fact that more than 15,000,000 men and women veterans will be eligible for the benefits of this provision makes it immensely important to the postwar housing program.

3. Home owners—adjusted by Veterans—by Figure I. 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. 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 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 makes 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...**

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 control. 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.

**Barber-Colman Company**

FACTORY-TRAINED SALES and SERVICE REPRESENTATIVES IN PRINCIPAL CITIES

**BARBER-COLMAN COMPANY**

(Electric Door Operators)

**Barber-Colman**
Rehousing Slum Families

A Realistic Approach to

(Continued from page 49)

agreed rent per month when the house meets the standard of sanitation and live-

ability 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, toward which most states pay a propor-

tionate 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 fees for carrying on the 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 by 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

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)

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 construction, 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 effective 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.
Canadian Office, Vancouver, B.C.
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.
American Builder, July 1944.

**PRODUCTION-LINE VOLUME ON EVERY JOB...**

**WITH**

**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. Precutting 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.

**FREE DEMONSTRATION**

Ask to see the SPEEDMATIC at work—then judge for yourself. There's no charge or obligation. Just phone your dealer or the local Porter-Cable representative (his name is in the classified 'phone book') or drop a post-card to us for full details.

**PORTER-CABLE MACHINE CO.**

1721-7 N. Salina St., Syracuse 8, N. Y.

**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.

**Assures Dry Concrete Cures and Protects Repels Wind Floors When Used Newly Poured Over Subfill Concrete Used in Walls**

Back of Stucco, Over Studs or Sheathing

**Makes Floor Construction Dust-Tight?**

**Repels Wind and Moisture When Used In Walls**

**Back of Streets, Over Studs or Sheathing**

**Protects Equipment & Materials Stored In the Open**

**Porter-Cable Machine**

Manufacturers of SISALKRAFT, FIBREEN, SISAL-Y, SISALTAPE AND COPPER-ARMORED SISALKRAFT
THIRD PRE-WAR FAVORITE PROMISES TO BE A POST-WAR SENSATION

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 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 6'4" 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 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. Tenzer, president of Northwest Door Co., secretary; and J. P. Simpson, general manager of Buffelen Lumber & Mfg. Co., treasurer.

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 Migrs., 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 range 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 I will prove very useful to me this summer, as I will be constructing one for my property.

(Continued to page 90)
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.
227-0 Central Avenue • Johnstown, Pa.

Better Product Features
for Better Heating
Commercial and Residential Heating Equipment

For "Outstanding Production Achievement!"

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
(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. BRENAN, 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 measure. 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 development 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 or income. 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 35 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 $29,000 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, default 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 of cash and property repossessed have 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 $6,000 for savings and loan associations, the average for all institutions being $407.

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 and to permit the classification 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)
**KWIK-MIX MIXERS**

Kwik-Mix convertible 10-S Dandies... side or end discharge... change can be made in the field to suit pouring conditions. Special features are: easily accessible drum drive shaft... flow-line discharge chute... simplified skip-flow shaker... enclosed reduction gear assembly in oil... multiple "V" belt drive. Other sizes are 7-S and 14-S Kwik-Mix Dandies.

**KWIK-MIX 10-S DANDIE**

Kwik-Mix 3½-S Concrete Mixers... side or end discharge... tilting or non-tilting... anti-friction bearings... spring mounting... high speed trailing... welded construction.

**KWIK-MIX 3½-S END DISCHARGE TILTER**

Kwik-Mix Non-Tilting 6-P Plaster or Mortar Mixer... fast discharge, 7 seconds... light weight, only 850 pounds... air cooled engine... V-belt and worm drive... low shoveling height. Also 4 wheel 10-P tilting model.

**KWIK-MIX CONCRETE MIXER CO.**

PORT WASHINGTON ... WISCONSIN

---

**Quality you DEPEND ON**

Qualitybilt woodwork offers you all the features that mean customer satisfaction. Consider quality in design, quality in workmanship and quality in materials, and this complete line will be your choice. Ask your Millwork Distributor for Qualitybilt.

**"UNIPAK" WOOD CASEMENTS**

Here is the traditional charm of casement windows combined with utmost practicability and satisfaction resulting from modern manufacturing. "Unipak" casements provide full ventilation — maximum insulation — weather stripping — efficient hardware — plus lifetime service. Supplied complete with screens and double glazing.

**DE LUXE KITCHEN UNITS**

No matter what type kitchen, "De Luxe" Stock Units made of wood will mean the best in beauty, convenience and economy. The flexibility of these functional units permits a sound solution to every kitchen problem. Our kitchen planning department is at your service.

**FARLEY & LOETSCHER MFG. CO.**

SASH - DOORS - BLINDS - FRAMES - CABINET WORK - INTERIOR TRIM

DUBUQUE - IOWA

Qualitybilt

WOODWORK

REGISTERED
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 plan 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 $717,000,000 committed for insurance in 1935, the volume steadily increased until the record year of 1941. In that year 210,237 mortgages were insured 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.

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 properties sold by the Administration, however, has been more than offset by pre-payment premiums of $3,700,000 by mortgagees 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 insurance 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 from page 90)
A beautiful, lustrous protection from the "Destructant Dragon"—symbol of stains, heat, moisture, cracking, crazing and chipping—so fatal to ordinary wall coverings.

Today—because of its durability, adaptability and ease of installation—TYLAC is in demand for innumerable war-time uses. Tomorrow—an even finer TYLAC will bring economical, permanent beauty to American homes.

Millions of people are planning to use their War Bond savings to build new homes or modernize present ones—when the war is won. They will demand the easy-to-install... easy-to-clean ... permanent beauty of TYLAC.

No Dealer in the wall products field will have a shorter lapse of time between "V-Day" and "See-Day" than the TYLAC Dealer.

TYLAC & COMPANY
MONTICELLO, ILLINOIS
MANUFACTURERS OF ENDURING-MODERN WALL COVERING

YOUR BEST NEW-BUILDING PLANS DESERVE Bathe-Rite SHOWER CABINETS

SHOWER FACILITIES will be on the "must" list of one out of three new-home builders! This known demand, plus taken-for-granted shower needs on public, commercial and institutional buildings, makes BATHE-RITE SHOWER CABINETS an important factor in your new-building plans.

So, for your own future benefits, and for the satisfaction of your clients, you’ll want to check the reasons why BATHE-RITE is the quality standard in modern prefabricated shower convenience. Their popularity has always been based on superior strength and durability, greater beauty of design, and a wealth of features that speeds up installation. This combination of advantages recommends BATHE-RITE Shower Cabinets for all your new-building plans.

Learn how Bathe-Rite Shower Cabinets can help you in designing bathing facilities. Write for bulletins, specifications and prices.

MILWAUKEE STAMPING COMPANY
828-S South 72nd Street
Milwaukee 14, Wisconsin
Structural, Reinforcing or other Bldg Steel
Shipped from Stock

Write for Stock List—
your guide to over 10,000
different kinds, shapes
and sizes of steel for quick
shipment from ten plants.

Joseph T. Ryerson & Son, Inc. Plants at Chicago, Milwaukee, St. Louis,
Cincinnati, Detroit, Cleveland, Buffalo, Boston, Philadelphia, Jersey City.

RYERSON

9 BIG BUILDING BOOKS
SHIPPED FREE
For Examination

Learn to draw plans, estimate, be a live-wire builder, do remodeling,
take contracting jobs. These 9 practical, profusely illustrated books cover
subjects that will help you to get more work and make more money.

Architectural design and drawing, estimating, steel square, roof
framing, construction, painting and decorating, heating, air-
conditioning, concrete forms and many other subjects.

BETTER JOBS—BETTER PAY
NOW AND AFTER WAR

Keep busy now at good pay, and be prepared for after-war building boom. Big opportunities are always for MEN WHO KNOW HOW. These books supply quick, easily understood training and handy, permanent reference information that helps solve building problems.

COUPON BRINGS NINE BOOKS FREE FOR EXAMINATION

AMERICAN TECHNICAL SOCIETY Vocational Publishers since 1896 Dept. GB33, Drexel at 58th Street, Chicago 37, Ill.

You may ship me the Up-To-Date edition of your nine big books,
"Building, Estimating, and Contracting" without any obligation to buy.
I will pay the delivery charges only, and if fully satisfied in ten days,
I will send you $2.00, and after that only 80c a month, until the total
price of only $2.98 is paid. I am not obligated in any way unless I
keep the books.

Name ___________________________________________
Address ___________________________________________
City __________________________ State ___________

(Continued from page 92)

to finance large-scale housing projects have been insured for
$121,000,000. Private industry, through the Title VI pro-
gram, has produced approximately 30,000 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 mortgage loans 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 mort-
gages 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 re-
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 it was
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
430 million dollars annually. Transfers of Title VI mort-
gages 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 establishment of a secondary market for residential
mortgages within a period of ten years has been an im-
portant 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 mort-
gage 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 em-
ployment at a critical period in 1934, this program will be
prepared to go into action to facilitate the financing of de-
ferred repairs, maintenance, and improvement of the Nation's
houses after the war. There will be this difference. In 1934
the 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 fur-
nace 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.

Throughout the war this efficient and economical project was planned
and studied is indicated by the large blueprint plot plan
prepared by Architect Robert L. Durham, of the firm Stuart
(Continued to page 96)
FIRE ruins forests. Among the three destroyers of forest values—fire, insects and disease, of which each takes its toll—fire is the most feared and costly.

Lumber companies spend millions of dollars each year in equipment and control to prevent forest fires. Public caution during the dangerous fire season is most helpful.

Selfishly and in the public interest, Western Pines* are protected from fire so this great natural resource may be utilized, not wasted. Wherever we are, let us all strive to Keep America Green.

*These are the Western Pines

WESTERN PINE ASSOCIATION
YEON BUILDING
PORTLAND 4, OREGON

-Idaho White Pine
-Sugar Pine
-Ponderosa Pine

New Materials Won’t STYMIE YOU WHEN YOU HAVE THIS WALKER-TURNER Radial Saw

Home Owners appreciate them
Homes of tomorrow, like those of today, will be equipped with

Illustrated to @

FEA TYPE AC THERMAG CIRCUIT BREAKER SERVICE EQUIPMENT and LOAD CENTERS

Home owners like them because they afford modern automatic protection and safety with ease of operation . . . and for their attractive pearl gray finish, natural brown Bakelite base units and ivory toned operating handles . . . Wide gutters and ample knockouts make them popular with contractors and builders. Quickly and easily installed, they afford real economy in labor costs . . . Approved by Underwriters’ Laboratories, Inc. Write for Bulletin 63—containing complete information . . .

Frank Adam Electric Co., Box 397, St. Louis (3), Mo.

New materials—now and in the post-war period—bring new problems of cutting, shaping and working. That’s why it’s important to have versatile Walker-Turner Radial Saws in your shop. These machines crosscut, rip, dado, shape, route, tenon and miter—on wood, metals, plastics and ceramics—much faster, much more, much more economically than hand labor.

The Walker-Turner Radial Saw rips 38” wide; travels 21½” on a sliding ram to make deep cuts with proportionately smaller blades (a 12” blade cuts 4% deep). “Slab cutting” method, patented geared motor, effect substantial savings in wheel and blade use. Write for literature. Walker-Turner Co., Inc., Plainfield, N. J.
& 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)

For SURE results in caulking and glazing count on

SONNEBORN CAULKING COMPOUNDS

Building Products Division
L. Sonneborn Sons, Inc.
88 Lexington Avenue
New York 16, N. Y.

American Builder, July 1944,
Keeping Up Appearances with MIAMI Bathroom Cabinets of Wood

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.

Write for descriptive folder to Dept. AB

MIAMI CABINET DIVISION
The Philip Carey Mfg. Company
Middletown, Ohio

The Key To The Steel Square
By the late Alfred W. Woods

This little movable celluloid disk has been in use for half a century. With this Key anyone can quickly find what figures to use on the common steel square for all rafter cuts. Many other problems can also be figured. In waterproof case, 4” x 3 3/4”. Postpaid $1.50.

Book Department

AMERICAN BUILDER and BUILDING AGE
30 Church Street
New York 7, N. Y.
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 raw 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 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 value of March 31, 1939. He said that this was a fundamental 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 be delayed until complete plans on far wider issues had 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 had 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 to 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 equal to avoid housing people in the wrong places.

(Continued on page 50)
Home Incinerators

Majestic Incinerators answer the rapidly growing demand for quick, easy, low-cost garbage disposal right in the home. Model No. 30, the portable unit at left, features ingenious draft design that burns wet or dry garbage quickly, similarly, without separate fuel! Majestic also makes gas, coal, and wood-fired incinerators for both portable and built-in installation. Write for details!

THE MAJESTIC CO.,
935 Erie St., Huntington, Ind.

Building Necessities

WOOD
Has Been Improved

For Homes To
Meet the New Competition

The public is demanding new and better ways and improved materials in everything . . . including homes. Treated wood gives builders a new sales appeal and gives home buyers a new and better value. Wood Treating Chemicals Company's line of wood preservatives has been developed and improved over the years to provide economy in application, certainty of purpose and the betterment of wood and wood products.

WOODTOX

is a time proven clean treatment of wood. Easily applied. Gives long lasting protection against decay, rot, termites, beetles and wood borers and makes wood moisture-repellent to aid in the control of swelling, shrinking, warping, checking and grain raising.

SEND FOR BULLETINS

For architects, builders, lumber dealers . . . these bulletins list standard wood treatment preparations giving full descriptions of purposes, application methods and prices . . . pointing the way to new sales appeal and better homes.

WOOD TREATING CHEMICALS CO.
5137 Southwest Avenue (10),
St. Louis, Missouri

Sales Agents for MONSANTO CHEMICAL CO.
Sapstain Control, Wood Preservatives and Moisture Repellents

Advertisements such as this are offering unbiased information on all types of insulation to home owners and prospective home owners who read Better Homes & Gardens, American Home, House & Garden, House Beautiful, and Small Homes Guide.

We will be happy to send you copies of "Insulation and Your Home" Please write.

Send for bulletin on form to:
NATIONAL MINERAL WOOL ASSOCIATION
Desk AB, 1270 Sixth Avenue
New York 20, N. Y.
ALPHABETICAL INDEX TO ADVERTISERS, JULY, 1944

Adam Electric Co., Frank 95
American Builder 28-97
American Floor Surfacing Machine Co., The 107
American Gas Association 5
American Radiator & Standard Sanitary Corporation 38
American Rolling Mill Company, The 90
American Saw Mill Machinery Co. 94
American Technical Society 79
Armstrong Cork Company 6
R. & T. Metals Co. 97
Barber-Colman Company 83
Barclay Manufacturing Co., Inc. 99
Bennett Ireland Inc. 98
Bituminous Coal Institute 4
Borg-Warner Corp. 21
Cary Mfg. Company, The Philip 97
Carillon Ceramics Corporation 16
Celotex Corporation, The 2
Cheney Metal Products Co. 101
Chicopee Manufacturing Corp. 10
Consolidated Machinery & Supply Co., Ltd. 98
Construction Machinery Co. 101
Crane Co. 30
Crawford Door Company 24-44
Detroit Steel Products Company 15
DeWalt Products Corporation 29
Douglas Fir Plywood Association 102
Farley & Loetcher Mfg. Co. 91
Fir Door Institute 19-24
Flintkote Company, The 34
Franz Mfg. Co. 88
General Electric Home Bureau 80-81
General Fittings Company 20
Great Lakes Steel Corporation 33
Homasete Company 89
Insulite 25
Jaeger Machine Co., The 101
Kwik-Mix Concrete Mixer Co. 91
Laucks, Inc., I. F. 29
Lehigh Portland Cement Company 41
Lubley-Owens-Ford Glass Co. 26
Lockport Cotton Batting Co. 14
Louisville Cement Company, Incorporated 39
Majestic Company 99
Mail Tool Company 97
Masonite Corporation 88
Miami Cabinet Division 97
Milwaukee Stamping Company 93
Monsanto Chemical Company 29
Mullins Mfg. Co. 17
National Brass Company 43
National Door Manufacturers' Assn. 92
National Electric Manufacturers Assn. 22-23
National Gypsum Company 8
National Manufacturing Company 22
National Mineral Wool Association 99
National Radiator Co., The 89
National Steel Corporation 13
Norge Division 21
Overhead Door Corporation 3rd Cover
Pacific Mutual Door Co. 100
Paine Co., The 101
Paine Lumber Co., Ltd. 86
Penn Boiler & Burner Manufacturing Corp. 83
Porter-Cable Machine Company 87
Red Cedar Shingle Bureau 85
Ryerson & Son, Inc., Joseph T. 94
Samson Cordage Works 101
Served, Inc. 49
Sargent Adornments, Inc. 101
Sisalcraft Co. 87
Smith, Inc., Landon F. 100
Snowborn Sons, Inc., W. 96
Stanley Tools 82
Stanley Works, The 84
Stereot Wheelbarrow Co. 101
Stran-Steel Division 13
Thrust & Co., H. A. 36
Time, Inc. 11
Timber-Detroit Axle Company, The 11
Tyale Company 93
United States Gypsum Co. 18-31
Upson Company, The 6
Walker-Turner Co., Inc. 95
West Coast Plywood Co. 84
Western Pine Association 95
Westinghouse Electric and Manufacturing Co. 17
Westwood Owing Sales Corporation 27
White Co., David 101
Wood Treating Chemicals Co. 99
Youngstown Pressed Steel Division 17

AMERICAN FLOOR SANDERS
SAVE MAN POWER

The War Program calls for SPEED, and the American floor sander by actual performance has proven itself 25 to 40% faster than machines formerly used. We have machines in stock.

Write today for circulars and prices.

THE AMERICAN FLOOR SURFACING MACHINE CO.
511 So. St. Clair St. Toledo, Ohio
American Builder, July 1944.

**SPOT CORD**

REG. U.S. PAT. OFF.

—the most durable material for hanging windows

SAMSON CORDAGE WORKS
BOSTON 10, MASS.

**INVENTORS!**

We seek specialized equipment, preferably patented, in Aircraft, Automotive, and Building Trade Fields; also established U.S. products for development and production by the associated companies of the Simmonds Group throughout the world.

SIMMONDS 30 Rockefeller Plaza New York 20, N.Y.

**S"UNIVERSAL" LEVEL TRANSIT**

For Greater Accuracy, Dependability and Precision

Especially designed for running levels and taking vertical angles on all survey and check-up operations. Patented Ball Bearing Race assures perfect adjustment under severest conditions. 15 power telescope light, easy to operate. Features of higher priced models. Write today for full information, prices and FREE booklet, "How to Lay Out Building Lots."

**SAVE MANPOWER!**

Only a minimum of effort is required to handle materials in Sterling Wheelbarrows. Perfectly balanced construction puts 80% of the load on the wheel, thus easing the task of the operator and making it possible for him to haul more loads daily.

**JAEGER 3\^S SPEEDLINE**

Don't Dig Foxholes IN MASONRY and CONCRETE For Anchors . . . Use

PAINE "Sudden Depth" DRILL BITS

+ CARBOLOY TIPPED

PAINE "Sudden Depth," Carboly Tipped Drill Bits assure a round, clean, accurate size hole—just large enough to accommodate an anchor. They eliminate fractured walls, noisy pounding and flying chips. They are 50 to 75% faster than hand star drills, quieter in operation and hold edge longer. Use in any rotary drill (slow speed). Available in 17 sizes from 3/16-in. through 1¼-in. diameter (graduated in 1/16-in. sizes) all having a maximum 1/8-in. shank.

Ask your Hardware Dealer or Write for Catalog.

THE PAINE CO. 2393 CARROLL AVE. CHICAGO 12, ILL.

**CHFNEY METAL PRODUCTS CO.**

When you need CONSTRUCTION EQUIPMENT

Think First of CONSTRUCTION MACHINERY CO.

Waterloo, IOWA

Mixers • Pumps • Hoists • Batching & Placing Equip. • Saws • Carts • Barrows
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 paint. 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 5/8-in. Plyscord.

ROOF SHEATHING (Under any finish roofing)—Use 5/16, 9/16, 3/4 or 1-in. Plyscord, depending on rafter spacing and anticipated snow loads.

NAILING—The 5/16 or 3/4-in. Plyscord is applied with 6d common nails spaced 6 in. apart at edges and 12 in. elsewhere. With 5/8-in. Plyscord, use 8d nails, similarly spaced. Exterior plywood should be applied with non-corrosive nails.

INTERIORS—Use 9/32 or 3/16-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 5/8-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.

Because of its many outstanding qualities, Douglas fir plywood today serves the war effort exclusively. When it is no longer so urgently needed it will again serve you—in countless new ways.

Douglas Fir Plywood Association
Tacoma Building, Tacoma 2, Washington
ADAPTABLE TO EVERY DEMAND

In wartime installations requiring perfect performance, the "OVERHEAD DOOR" has met every demand. This quality door, built as a complete unit to fit any size opening, provides lasting, uninterrupted service in any climate. When homes are built again, the "OVERHEAD DOOR" with the Miracle Wedge will also be available for residential use.

tracks and hardware of salt spray steel

The "OVERHEAD DOOR" with the Miracle Wedge

OVERHEAD DOOR CORPORATION • HARTFORD CITY, INDIANA, U.S.A.
PLAN to equip the homes you build with National No. 900 upward-acting Garage Door Sets. This convenience makes the home easier to sell and better to live in. National No. 900 upward-acting Garage Doors are sturdy and trouble-free. They are the answer to the demand for modern and convenient garages and give the home owner lasting satisfaction.

SEE IT AT YOUR DEALERS

NATIONAL MANUFACTURING CO. STERLING ILLINOIS