How to KEEP JOBS
ROLLING This Winter
Get more building jobs today with Celo-Siding!

Ideal for all types of construction because it does 3 jobs...

Plenty of Celo-Siding AVAILABLE!

Completion of scores of military and housing projects using millions of square feet of Celo-Siding now enables us to provide this multiple-function building material for general wartime construction demands.

Celo-Siding is ideal for small factories, machine shops, farm buildings, and other essential building. It combines siding, sheathing and insulation in one quickly applied material and provides its own exterior finish. It is applied direct to studding, saving time, labor and critical lumber.

Celo-Siding is composed of cane fibre board, coated on all sides with an asphalt compound. An extra coating is applied on the weather surface, and mineral granules are pressed in to provide added durability and appearance.

Celo-Siding comes in buff or green. Units are \( \frac{3}{4} '' \) thick and \( 2' \times 8' \) or \( 4' \times 8' \) and \( 10' \). The \( 2' \times 8' \) size has T&G joints on long edges. The big board has square edges all around. Each is suitable for vertical or horizontal construction. All joints are to be sealed with caulking compound.

Talk with your local Celotex dealer about Celo-Siding or write for complete information to The Celotex Corporation, Dept. AB 11-43, Chicago 3, Illinois.

Typical House in Bill Holt FPHA Housing Project, Great Falls, Montana, showing walls constructed with Celo-Siding.

Laying house on farm in Minnesota, with walls constructed with multiple-function Celo-Siding.

Typical Celo-Siding wall construction for small factories, machine shops or warehouses.

The Celotex Corporation, Dept. AB 11-43, Chicago 3, Illinois

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

Name
Address
City
State

The Celotex Corporation, Dept. AB 11-43, Chicago 3, Illinois

Published monthly by Simmons-Boardman Publishing Corporation, 185 W. Adams St., Chicago 3, Ill. Subscriptions price: United States, Possessions, and Canada 3 year $2.00; 2 years, $1.50; foreign countries, 1 year, $4.00; 2 years, $7.00. Single copies, 25 cents. Entered as second-class matter Feb. 11, 1936, at the Post Office at Chicago, Illinois, under the act of March 3, 1879, with additional entry as second-class matter atMonte Morris, Illinois. Address communications to 185 W. Adams St., Chicago 3, Ill.
BECAUSE "nothing else will do"

Even though you haven’t been able to get it, you might suppose that aluminum paint has been supplied without question for Army and Navy uses. Not so! Before any aluminum pigment could be released, the WPB had to be convinced that no other paint would do the job.

The approved jobs have ranged from painting aircraft spark plugs for rust prevention to coating degaussing cables which protect ships from magnetic mines. Some of the uses are shown below.

We wish we could show you the glowing testimonials written on the requests for authorization we get for releasing Alcoa Albron Pigment. The reasons given are all good reasons why, as it becomes available, you’ll be using aluminum paint again.

WPB RELEASES ALUMINUM PAINT
A limited quantity of aluminum pigment, made from a war by-product, has been released for making aluminum paint "for industrial maintenance and essential civilian requirements". Get in touch with your paint supplier for details.

Barrage balloons for air raid defense, and blimps for submarine defense, are coated with aluminum paint to protect the fabric and reflect sun heat and, thus, reduce expansion and contraction of the gas inside.

The Navy employs aluminum paint on ammunition boxes and magazines, gun control parts, target designators, gun sight lamps, spare parts boxes, and other purposes connected with gunnery.

Bombers and fighter planes have aluminum paint on motors, running lights, landing gear struts, wheels, ailerons, radio antennae parts, instrument panels and other places.

Warships and transport vessels use aluminum paint on heated surfaces of all kinds. Alcoa Albron Pigment is also used in a caulking compound to waterproof metal-to-metal joints.

The surface of plywood trainer planes is painted with aluminum paint to provide lasting protection and prevent raising of the wood grain. It resists moisture and the action of sunlight.

In field hospitals, aluminum paint is found on the interior of instrument sterilizers because it resists heat and moisture. It is also used to protect other surgical equipment.

In addition to the other applications mentioned on bombers and fighters, aluminum paint is used on floor sections, benches, radiators and other parts of the interior of giant troop transport planes.

There are many applications for aluminum paint on panels, chassis, cabinets, and tubes for radio and other electronic devices used by the Army Signal Corps and other armed services.
Coal wears no uniform.

It goes off to the wars in the same garb in which it sees the light of day.

It needs no training, no fundamental change to ready it for its job — and it goes to work with equal readiness in small family grate or modern, super-efficient, monster industrial furnace.

And, for all its man-made difficulties, coal itself is doing its full part to help win the war.

It was on the job when the first bomb hit Pearl Harbor, and will still be there when the last fighting man steps off the train at his home station.

Today it develops more power — hauls more trains — warms more homes, offices and buildings — turns more wheels — generates more light and power than any other fuel — and does it at lower cost.

Though the armed forces and other war industries have drawn some 70,000 trained men from the mines, more coal was brought to the surface in 1942 than in any previous year.

Again in 1943, the first nine months of the year set a new record for coal production, topping any like period in history.

Coal is “public energy No. 1,” now as in the past — and those who produce it work shoulder to shoulder with other American industries in an honest effort to meet their every obligation as employers, as suppliers to the public — and as good citizens.
The ZOURI Store Fronts advertisement above is typical of those which are appearing regularly in 22 leading trade magazines—encouraging the merchants of America to plan their store fronts of tomorrow—today! But this involves you, too, Mr. Architect or Builder, for the merchants depend upon you for design and construction. So let’s all work together by planning now for post-war prosperity. When ZOURI store front construction is again available, you can be sure that it will be even finer and offer more possibilities for good design than ever before. ZOURI STORE FRONTS, NILES, MICHIGAN.
There is Toughness and Strength to Spare in This Full-Wall Size Panel

See the dramatic proof pictured above?

A 60-pound bag of sand was dropped again and again from a distance of 6 feet on to a Strong-Bilt Panel supported on 28 inch centers. Result: no harm to the panel.

Can you visualize what would have happened to boards made of a brittle or crumbly material? The fact is that Strong-Bilt Panels will withstand an impact up to 6 times that of boards with a mineral core, as verified by an independent testing laboratory.

This is the board which, after years of testing, has scored such an amazing success on great housing projects from coast to coast—the board which brought dry-built, full-wall construction to the front.

In full wall sizes, Strong-Bilt Panels have enabled leading builders of mass housing to reduce building time, provide efficient insulation, cut comparative costs, and produce crackproof walls of lasting beauty. Their use eliminates the 1,000 pounds of moisture which may be introduced into the building of an average six-room house.

In like manner, Upson Strong-Bilt Panels will enable you to build a better postwar home—faster, and with added dollar value whether you are building one or a thousand homes.

Booklets picturing advantages and methods applicable both to conventional and prefabricated construction will be sent on request. Write The Upson Company, Lockport, N. Y.
Letters

Likes 10-point program
Opelika, Ala.
To the Editor:
I am much impressed with your 10-point program to restore private enterprise and assure a million homes a year. Indeed I think you are right as to the lower rates of interest, long terms and smaller homes for the lower-bracket middle class folks. About all the homes formerly approved have run too high. We need more of the small, say $2500 to $3000.—N. B. JONES.

Editorial sniping?
Oak Lawn, Ill.
To the Editor:
I think that your magazine has many helpful articles and suggestions; however, I do not like your editorial sniping at the government. After all, it was the administration that jerked the building trade out of the doldrums.
—D. O. CHAPMAN, Builder.

Gets ideas
Margo, Sask., Canada
To the Editor:
I sure enjoy your magazine and get a lot of ideas from it. I built the poultry feeder described on page 53 of your August issue and several people saw it and want one like it.
I have a job to do repairing a church, and would be glad if you could recommend a book on this subject.—D. N. JOLLY, Building and Contracting.

Saves job helps
Peoria, Ill.
To the Editor:
As a steady reader I want to say you have a very helpful and interesting magazine.
I am saving the page of “Job Helps” as they are a real help, and always a source of ready information. If you have any information on preparing or trimming limestone blocks, also the state and place where different types may be obtained, I would appreciate this. As I hope to build my post-war home of limestone blocks I would appreciate any designs you may have along this line.—ALBERT G. MARX.

(Continued to page 80)
WHEN PEOPLE ASK YOU HOW TO GET MORE ROOM...

BROTHER
THIS IS THE ANSWER!

ANOTHER winter and with thousands of additional war workers in need of living quarters, the housing shortage becomes even more acute... Daughter, married to a draftee, comes home with her baby to live with her parents. Farmers need accommodations for extra workers. Everywhere you hear the cry, "Find us a place to live!"

Contractors are working miracles in converting unused space into comfortable rooms and apartments. And for speed, economy and best results, their choice is always the old standby, FIREPROOF GOLD BOND GYPSUM WALLBOARD!

TWO ROOMS FROM ONE. A partition of Gold Bond Gypsum Board is all that's needed to convert a large, barny room into two cozy bedrooms with income doubled. Dealers have Gold Bond... all you need!

INCOME APARTMENT. Many homes have unused attics. Many garages have second floors going to waste. Fireproof Gold Bond Board can quickly change this "slacker space" into a smart kitchenette apartment.

RECREATION ROOM
EXTRA LAVATORY
REMODELING

These typical jobs are "made-to-order" for Gold Bond Board. Unaffected by cellar dampness, the rock-like panels are especially recommended for basement rumpus rooms. For converting a clothes-press into an extra lavatory—for covering cracked plaster walls and ceilings, Gold Bond is best because it's so easy to apply and takes paint, paper or any decoration.

See Your Gold Bond Dealer

BUILD BETTER WITH Gold Bond
Everything— for walls & ceilings

More than 150 different products for MODERN CONSTRUCTION AND WAR PRODUCTION WALLBOARD... LATH... PLASTER... LIME METAL PRODUCTS... WALL PAINT INSULATION... SOUND CONTROL

NATIONAL GYPSUM COMPANY... EXECUTIVE OFFICES, BUFFALO, N.Y.
21 Plants from Canada to the Gulf... Sales offices in principal cities
Government Spending

The Great Issue—Government Spending

Probably the most important question before the American people as the war draws toward a close and in the post-war period will be that of government spending. It will be so important because, owing to the huge national debt, taxes will be much higher than before the war, anyway, because so much government spending is being promoted, and because the more government spending is done the more numerous and important will be its effects.

There is no example in history of any nation ever having been enriched by government spending. There are numerous examples of nations having been ruined by it. And every political or economic danger with which the American people are confronted is caused or increased by past, current and prospective unwise or excessive government spending.

No economist opposes government on real public works that are needed. Real public works do not afford a field for private capital, and government investment in them does not compete with private investment. Parks, streets, ordinary highways, sewerage systems, buildings used for government purposes are examples of public works which contribute to public convenience, health or pleasure, and increase the value of private property.

Housing built and owned by government; airports, waterways, highways for commercial transportation; plants such as T.V.A. for producing power, and numerous other so-called "public works," are not true public works. They subsidize competition with private investment unless their users are required to pay all costs of their use, and thereby undermine the value of private property with which they compete.

Government spending on them increases either taxes or government debts, and provides the politicians in power with means of controlling votes. Heavy taxes take their largest toll from the great middle class, which must be depended on to accumulate the bulk of the nation's capital and to provide most of the brains for so investing and using it as to increase national production, wealth, income and employment. Whether the money for excessive government spending is secured by taxing or increasing government debts, it tends to drive out private enterprise and establish socialism.

State and local government expenditures in 1940 were $9 3/4 billion, and probably will increase. Federal government expenditures after the war will be at least $20 billion if, as is advocated, they include $5 billion or more for real and so-called "public works." Whence is this $30 billion a year to come? Tax revenues of state and local governments in 1940 were about $8 billion; of the federal government, $5 billion; total, $13 billion. Are we to make total taxes after the war $17 billion a year more than in 1940, largely to enable the federal government to spend $5 billion a year on "public works"? Or are we, perhaps, to increase total taxes by $12 billion a year, and risk uncontrollable inflation by adding for "public works" $5 billion a year to a federal debt that will already be $250 to $350 billion?

All radicals and socialists promote huge government spending on so-called "public works." They are quite willing to undermine private enterprise. But many business men who profess devotion to private enterprise, in their own supposed selfish interest, also promote it. There is one infallible test that can be applied to every project. *Will it use the taxpayers' money in competition with any kind of privately-owned property or business?* If the answer must be affirmative, the project cannot be supported by any real believer in private enterprise.
They go forward—not back but forward—unless they're mistaken about the America that they have defended.

Ten million of them, more or less. They'll want jobs. It's said that more of them will find these jobs in the building and allied industries than in any other. There's responsibility for you!

Married or getting ready to marry, they'll want homes. What kind of homes? Homes that are easy and pleasant to look at, and easy and pleasant to live in. They'll be sort of counting on more value for their money. There's opportunity for you!

Certainly the recent past will make bathrooms and kitchens more important than ever to them. That's where our opportunity and our responsibility will lie, and we expect to do justice to both—when the time comes.

Meanwhile, you'll understand that the craftsmen who made Case products for you, are now busy making them for these boys, for the war. W. A. Case & Son Mfg. Co., Buffalo 3.

CASE PLUMBING FIXTURES
HOT WATER SYSTEMS

Give—all you can—to the National War Fund
Long before prefabrication methods obtained widespread attention, DeWalt Cutting Machines had been *custom-cutting* lumber with a precision and accuracy heretofore unknown. That is why experienced DeWalt engineers were called upon to help lay out production cutting lines for the urgent program of building training stations, cantonments, hospitals and other service buildings. In the vast building program that is to come in the peace-time tomorrow, DeWalt will still be on the job, *custom-cutting* with speed and precision, saving many man hours and increasing efficiency.
TO HELP YOU
HELP THE
FARMERS

...win the battle of Production!

With the season's harvesting problems behind him, the farmer now has the time to plan for the next round in the farm production battle.

This is your opportunity!

Now is his chance to make repairs to home and service buildings... and to expand his production plant. And he's encouraged to do so by Uncle Sam.

But he still faces the twin shortages of manpower and materials.

That's where you come in! You can show him how Certain-teed products can take the place of scarce building materials... how easy they are to handle, and how they save time and labor.

To help you help the farmer, Certain-teed has published this 20-page, illustrated handbook of available building materials and their uses. The first edition was gobbled up. The second edition is just off the press... available to Certain-teed Distributors in reasonable quantities.

Certain-teed

PRODUCTS CORPORATION

120 SOUTH LA SALLE ST., CHICAGO 3, ILL.
Watch your dog give himself a sun bath, luxuriously relaxed in its soothing, penetrating warmth. It's the Radiant Heat he likes—the same kind provided by a B & G Triple Duty System.

FOR GENUINE WINTER COMFORT THERE IS NO SUBSTITUTE FOR CONTROLLED RADIANT HEAT

No matter how well you build a house, it is no better than its heating system! Give your customers the kind they'll always thank you for—a B & G Triple Duty System. Give them heat which is controlled automatically—not by opening and closing the windows.

B & G Triple Duty Heating is a forced hot water system, which means that it provides radiant, sun-like warmth, sensitively controlled to avoid both over and under heating. Therefore it is a system of genuine comfort. A B & G Triple Duty System never delivers too much heat, hence fuel consumption and operating cost are held at rock bottom.

And last but not least, the owner has at his command a virtually inexhaustible supply of year-round domestic hot water—heated by the same boiler that heats the house. All told, this is the heating system that makes a house a home!

Ample hot water for kitchen, laundry and bath—24 hours a day—winter and summer.

B & G FLO-CONTROL VALVE
This Valve helps keep home temperature uniform and permits use of Indirect Water Heater in summer.

B & G BOOSTER
This is the heart of the B&G Triple Duty System—an electrically operated pump which mechanically circulates hot water through the pipes and radiators. The Booster is controlled by the room thermostat; delivers heat instantly when needed and shuts off the supply when the need for heat is satisfied.

B & G INDIRECT WATER HEATER
A money saver! Provides a means of using the house heating boiler to heat the domestic water at very low cost—in summer as well as winter.

B&G TRIPLE DUTY SYSTEM
Forced Hot Water Heating

BELL & GOSSELT CO. • MORTON GROVE, ILLINOIS
MEMO
FOR
POST WAR
PLANNING

Household operating and upkeep expenses come out of the same pocketbook as mortgage amortization payments. High-quality equipment, as supplied by General Electric, usually reduces monthly operating bills more than it increases monthly payments on the house...so actually it costs less to live better.

Remember, General Electric high-quality equipment will best serve the interests of your after-Victory clients or customers.

GENERAL ELECTRIC
Home Bureau Bridgeport, Conn.
When Uncle Sam says "Save Fuel" he asks every one of us to share in the vital job of conserving critical materials and keeping the home fires burning this winter.

We, who are concerned with the manufacture, installation, maintenance and servicing of heating equipment, are lining up 100% behind this great program. No one can play a bigger part in insuring more comfort and better health for America. No one is in a better position to enjoy the good will engendered by an important job well done.

U. S. Radiator and Pacific Steel Boiler Division stand ready, as always, to give you every possible support in this major wartime undertaking. Whenever we can help you, your customers or clients with essential equipment or sound advice, don't hesitate to call on us.
WASTED MONEY—A builder asked one of his ex-employees what he was doing with the big money he was making in a war plant. “Oh, I’m spending about half of it on liquor and women,” he replied airily. “The rest of it—well, the rest of it I’m just wasting.”

PLENTY OF DOUGH—Even though a good deal of the high earnings now enjoyed by many workers may be wasted, there is plenty of it going into bonds and other forms of savings. Numerous surveys show that post-war home improvement and home ownership will get a large share.

The most recent confirmation of this is a survey by the U. S. Chamber of Commerce. More than 1,500,000 families indicated they expected to buy or build homes within six months after victory, the value totaling more than $7,000,000,000. This was twice as much as they indicated they would spend for automobiles.

Some 23 per cent expected to spend $3,000 or less for a house; 27 per cent, $3,000 to $5,000; 18 per cent, $5,000 to $10,000; 12 per cent, more than $10,000, and 20 per cent had not determined the amount they would spend.

WORKING CLASS—Economists tell me that smart builders had better figure on building most of their post-war homes for the working classes and lower middle income groups. They confirm what seems pretty obvious, which is that these are the people that are going to come out of the war with higher incomes and a much better financial position. It is the persons in our middle class and the well-to-do who are getting the big squeeze.

Houses between $3,000 and $5,000 will have a tremendous post-war sale, so that’s the market to aim at.

BOOS FOR TEAR DROPS—Automotive engineers apparently feel the same way about industrial designers as builders do. At a recent meeting in New York, many of the “tear drop designs” and “air brush creations” of post-war models, which have been widely pictured by industrial designers, were greeted with cat calls and boos. The engineers feel that future development in automobiles will be a steady evolutionary process and that in the early stages of the post-war period, models will be quite similar to those of pre-war.

The same holds for post-war housing designs, and the lunatic fringe of dreamy-eyed architects and sensational industrial designers are doing this industry tremendous harm by portraying things that cannot happen in the near future and may take years to develop, if ever.

TAXES AND TOMATOES—Any builder of houses takes tremendous risks. Unless he can make a fairly good profit, he certainly will not risk his hard earned capital.

That, gentlemen, is one of the most disturbing facts about the future of our industry. As one builder told me, “You won’t risk breaking your neck to raise a thousand tomatoes if you know damn well that under the tax laws, you can only keep fifty.”

If private enterprise home building is to boom, adequate recognition will have to be made by the taxing authorities of the extraordinarily hazardous and up-and-down nature of the building business.

PLANNING NOW—As I talk to builders in widely separated parts of the country, I am constantly amazed by the extent of practical post-war home planning under way. This is a type of work that gets little publicity, and is completely open to new ideas in materials and equipment, but thus far says it looks as though, if the war were to end next month, manufacturers would be pretty badly “caught with their plans down.”

WAR BABIES—The other day several hundred young Navy boys in New York flocked to the marriage license bureau the same day they were graduated. Their sweethearts came from all parts of the country for the marriage ceremonies. That’s just one incident among thousands, all of which totals to the fact that the marriage rate is hitting new highs. Service men aren’t waiting until after the war to marry.

What this means to the building business is pretty plain: after the war we will have hundreds of thousands of service men hastening home to their wives (and babies) and they are going to want good, livable houses in a hurry.

DOROTHY ROSENMAN—I had an opportunity recently to hear the vigorous and intelligent head of the National Committee on Housing, Dorothy Rosenman, talk plainly and rather convincingly about public and private housing. She pointed out quite correctly that some building men spend more time talking about the “horrible monster” of post-war public housing than they do about plans to try to bring about a solution to some of the problems that are vitally in need of attention. Her committee is made up of believers in both public and private housing and gives an opportunity for an exchange of ideas that is highly beneficial.
"Wouldn't Part with UNI-POINT at Any Price."

Of course not; for by the unique principle of one-point cutting (saw always entering work at same point in table) production is increased as much as 200% on some jobs.

"Our UNI-POINT Saws Paid for Themselves in a Short Time."

Tremendous savings are effected in time, material, and labor by this wonder saw over inaccurate hand methods or one-operation-at-a-time machines.

"16 Hours a Day—Splendid Results."

Permanent accuracy is guaranteed the operator of a UNI-POINT, for all vital wearing parts are of hardened steel. Many UNI-POINTS are now working night and day, seven days a week on war work. They're built for hard, continuous service. No other radial saw has this built-in long life.

The price? No more for UNI-POINT, and look at what you get! Install one and see the difference. Send for details and prices of different UNI-POINT models. Quick deliveries still possible on AA priority.
Bothered by labor shortages?
Troubled by critical materials?

You'll find the two-in-one advantages of Flintkote Insulated Sidings more valuable than ever.

In one, easy-to-install siding, Flintkote provides both excellent insulation properties and one of the handsomest surfaces that ever made an old house look new.

These sturdy sidings are made on a base of thick Flintkote Insulation Board which is first treated with weather-proof asphalt to an extent that does not impair its insulation value. Then a heavy coating of asphalt and a surface of colorful, fire-proof mineral granules are added to complete these unusual products.

They have the fine appearance of wire cut brick.

The "brick" siding comes in Red, Buff or Tapestry Blend. This same type of siding is also available in a "stone" design in the middle-west. Master panels are approximately 43" x 14". Combination Soldier Course Panels, Corners and Trim pieces complete this Flintkote quality line.

Ask your Flintkote sales representative for full information on Flintkote Insulated Sidings today.

The Flintkote Company, 30 Rockefeller Plaza, New York 20, N. Y.
The old problem of heat conductivity gets a new answer in Saran tubing. In this thoroughly practical thermoplastic tubing, developed by Dow, an extremely low degree of heat transfer is attained. Tests show that the thermal conductivity of Saran, in relation to copper tubing, is 1 to 4,500—a difference of far-reaching importance in many installations.

Saran, the basic plastic material from which the tubing is made, is inherently a good heat insulator. As a result, costly heat losses are decreased and annoying moisture condensation definitely retarded. In addition, Saran’s high resistance to a wide range of chemicals prevents tubing corrosion, even under most severe service conditions.

Further information on Saran tubing, its uses and installation procedure, is available on request.

THE DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN
New York - Cleveland - Chicago - St. Louis - Houston - San Francisco
Las Angeles - Seattle

SARAN
DOW PLASTICS
ETHOCEL - STYRON

CHEMICALS INDISPENSABLE TO INDUSTRY AND VICTORY
No more “guess-timating”

Far-sighted builders have found a way to end “guess-timating”—that often costly method of estimating both markets and construction.

For with Homasote Precision-Built Construction—the modern system of engineered housing—a builder can produce machine-perfect homes, tailored to suit any need or taste, with the minimum of construction risk.

But that’s not all. There’s no more “guess-timating” in sales either. Homasote is developing new vast, eager markets for Precision-Built Homes through exhibits of quarter-scale models in key department stores. 70% of the prospective home-owners visiting these exhibits have expressed their desire to own a permanent, post-war home. By the thousands, they are placing their names on Homasote’s preferred list—joining Homasote’s Own-Your-Own Home Club.

This demand has been created by a system of construction that has been developed through intensive research and then proved in actual world-wide performance.

**Engineered housing**

For seven years and at a research outlay to date of more than $300,000, Homasote Company has been applying sound engineering principles to the problem of building a home. Homasote’s purpose: to help the builders who use Homasote Building and Insulating Board (and the dealers who distribute it) sell more and better houses, with assured profits.

Result of this thorough study is Homasote Precision-Built Construction—a system which:

1. enables the local builder to achieve for himself all the engineering economies of prefabrication;
2. produces a machine-perfect house at lower initial and operating costs; (one benefit of decentralized prefabrication is lower transportation expense);
3. is based on the use of Homasote Board—oldest and strongest building and insulating board on the market—and other standard materials readily available in the local area;
4. eliminates guesswork and the profit hazards of inexact estimating;
5. is adaptable to any style, any size of house.

**$36,000,000 experience**

The soundness of Homasote Precision-Built Construction has been proved in $6,000,000 worth of pre-war, private homes erected by independent builders all over the country—and in $30,000,000 worth of government war housing.

To the foresighted independent builder, Homasote Precision-Built Construction is the key to new post-emergency markets: low-cost housing projects constructed at a profit, large realty developments, machine-perfect homes in all price classes.

For more details, write

HOMASOTE COMPANY, Trenton, N.J.
 THESE DAYS, many home builders are filled with bright ideas about tomorrow.

At the drop of a pencil, they'll tell you:

"A building boom is on the way—sure thing!"

"Thousands of war workers, now in trailers, or temporary shanties, will be on the hunt for nice new homes... Thousands more now with the Fighting Forces will come back, marry 'the girl' and want to set her up in a modern house... Yes—two thirds of America is crying to be rebuilt the minute the war is over!"

That's true.

But the building industry won't boom after the war because of need alone—any more than it boomed before the war when the need was almost as great. It's up to the home-building industry to light the fuse.

RUBE GOLDBERG-ED IN 1661.

With fan (I) flapping across the table, and weight (A) clunking past diners' ears, and gears (C and D) and ratchet (F) screeching overhead, this air conditioner would more likely terrify timid guests than cool overheated ones. Even back in the 17th century, people dreamed and planned new gadgets for the home—most of which (needed or not) never got built.

But—how?

Architectural Forum says: "Arouse public opinion and guide the planners in gradually making each community into a better place for your wife, your children, your neighbors, and you."

And the editor suggests the way to do it is to reach "an informed group of active citizens in every community."

The most economical and effective way to reach this "informed group of active citizens" is through the pages of TIME—the first-choice magazine of community leaders—the magazine they turn to for information to help them think ahead and plan ahead and see the shape of things to come. The magazine they believe in and vote their favorite over all the others they read.

*From "Planning With You," a 16-page illustrated booklet about post-war building which TIME will be glad to send you on request.
The strength value of wood lies in its fibres. Sturdy fibres give wood its structural strength, its endurance. Many years ago a new method of utilizing wood fibres was discovered. Logs were put into machines that tore them to pieces — reducing them to wood fibres.

These fibres, the live, sturdy sinews of the tree, were then fabricated by a special process into large, strong, durable boards or panels called INSULITE. Insulite is also effective in insulation — it insulates as it builds.

The big boards of Insulite are quickly applied. Each board covering a large area — effectively saving man-hours. As in World War I in 1918, cantonments, barracks and defense projects have been built with Insulite in record time.

Insulite boards were packaged and shipped all over the world. Builders everywhere swung to Insulite, because of its many advantages. Used in frame structures, Insulite has four times the bracing strength of ordinary wood sheathing, horizontally applied.

Insulite provides an effective barrier against extremes of temperature, because it insulates as it builds. Today, in various countries, our fighting men are comfortably housed in huts constructed of Insulite.

In home construction too, Insulite has many advantages. Insulite provides, in one material, insulated, weatherproofed, windproofed, moistureproofed construction.

No matter what your building problem may be, Insulite can serve you. Remember, Insulite brings you the strength and permanence of Northwoods Trees, in a modern package.

Look for Insulite in the Red Package

THE ORIGINAL WOOD FIBRE STRUCTURAL INSULATING BOARD
EXPANDING
THE SCOPE OF STEEL

While new materials will play an important part in the post-war world, their promise for the future is no more inspiring than that of established materials for which new uses and new methods of application are being developed in war production.

Strip steel by Stran-Steel is a case in point. It is not a new material, yet under the stimulus of important military building assignments its scope has been greatly expanded. Stran-Steel engineering and experience make strip steel a more versatile, more economical material... well qualified to serve the building industry in the era that lies ahead.

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

UNIT OF NATIONAL STEEL CORPORATION
HERE’S FIVE MINUTES OF THE LATEST NEWS BROUGHT TO YOU BY JOHNS-MANVILLE

With the Largest Audience of Any Radio News
Program J-M Broadcasts are Building Good-Will for J-M Dealers and Contractors, Coast to Coast!

Five nights a week, at the best listening time of the entire 24 hours, the largest group of listeners to any news program pause to hear Bill Henry broadcast the news for Johns-Manville. And then Tony Marvin tells them interesting news about Johns-Manville, J-M products and the services of J-M dealers.

For almost two years this powerful J-M advertising campaign has been going on, month in and month out. It reaches men, women and children on farms and in cities—from Maine to California. As a result, surveys show that Johns-Manville products and the J-M name are better and more favorably known to the public today than ever before.

Today, this acceptance for the Johns-Manville name is an important merchandising and consumer-selling asset for everyone who handles J-M products. We believe it will be even more valuable in the post-war period.

Johns-Manville
Building Materials
To answer their questions on postwar homes

...WATCH WOODwork!

Right now these questions are going on in the minds of thousands of postwar home planners. Actual surveys show that they have definite ideas and desires on what they want their postwar homes to be.

You can give them the answers to many of these questions with doors, windows, frames and woodwork of Ponderosa Pine. Here's how:

MORE SPACE — People want more space—and more windows—in their postwar homes. Windows of Ponderosa Pine provide an answer to both needs. Such windows, available in a great variety of stock sizes, make it easy and economical to have the bays, corner windows and window groups which add so much to the feeling of spaciousness in a home.

WEATHER-TIGHTNESS — Precision-made for proper fit...easily weather-stripped...Ponderosa Pine windows help cut down air leakage...make possible the weather-tightness which the war has taught people to value. Remember, too, wood is a natural insulating material...and that storm windows of wood will be readily available in stock sizes.

DURABILITY — Wood has proved itself a durable building material—and modern toxic treatment can make windows, doors and woodwork of Ponderosa Pine even more lastingly satisfactory! Ponderosa Pine, too, takes and holds paint easily—a big advantage from the standpoint of maintenance.

BEAUTY — Stock windows, doors and frames of Ponderosa Pine express the beauty and charm of correct architectural design...and modern manufacturing methods make this charm available for any size or style of home for less.

SEND FOR THIS "IDEA BOOK"

This booklet—"The New Open House"—contains a wealth of ideas on planning postwar homes—is fully illustrated with photographs and diagrams. Send for your copy—it's free.

Ponderosa Pine Woodwork
Dept. YAB-1111 W. Washington Street
Chicago 2, Illinois

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

Name: ____________________________
Address: __________________________
City: ____________________________ State: __________

Here's how you—yes, YOU—can carry out a smashing "pincer movement" against the Axis. Swing in on one flank with increased production of war goods! Drive in on the other with redoubled purchases of War Bonds through your Pay-Roll Savings Plan!

You're an officer in both of these drives. Your personal leadership is equally vital to both. But have you followed the progress of your Pay-Roll Savings Plan as closely as you have your production?

Do you know about the new Treasury Department quotas for the current Pay-Roll Allotment Drive? Quotas running about 50% above the former figures? You see, these new quotas are based on the fact that the armed forces need more money than ever to win the war, while the average worker has more money than ever before to spend. Particularly so, on a family income basis—since in so many families several members are working, now.

Remember, the bond charts of today are the sales curves of tomorrow! Not only will these War Bonds implement our victory—they'll guard against inflation, and they'll furnish billions of dollars of purchasing power to help American business re-establish itself in the markets of peace.

So get this new family income plan working at once. Your local War Finance Committee will give you all the details of the new plan. Act today!

This advertisement prepared under the auspices of the War Advertising Council and the U. S. Treasury Department.

LET'S KEEP ON Backing the Attack!

This Space is a Contribution to America's All-Out War Effort by AMERICAN BUILDER
1905 The Electrical Age really began when American homeowners began to insist on Electric Lights in their new homes.

1925 Then came the mounting demand for Electric Refrigeration and homeowners insisted on additional outlets for refrigerators and other appliances...Apartment houses had to provide Electric Refrigerators.

1945 ELECTRIC RANGES WILL BE "MUSTS" after "V" day. To sell easily, the Houses of Tomorrow will have to be wired for Electric Ranges.

BEFORE THE WAR, the speed, safety, cleanliness and convenience of Electric Cookery was already well established. In 1940, 450,000 Electric Ranges were sold — in 1941, 780,000! The swing was on!

AFTER THE WAR, the increased demand is going to be huge! So plan now to wire the homes you're going to build for Electric Ranges. Built-in, the cost of such wiring is negligible — the selling power tremendous!

WIRE YOUR HOUSES FOR EASIER SALES

ELECTRIC RANGE SECTION, NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
Is it easier to bore a round hole, or to mortise a square one?

You're the winner when you use DEXTER-TUBULARS. You win in easier, faster installation, requiring far less time and expense.

You'll never be sorry, because in addition to all of these advantages, DEXTER-TUBULARS are backed with a Life Time Warranty — your guarantee, and the guarantee to your customers that their satisfactory service will perform perfectly for the life of the building in which they are used.

DEXTER-TUBULARS conform with WPB Regulations, including Hardware Order L-236. You are invited to write for full details. Let us send you the "Commander Line" Catalog illustrating DEXTER-TUBULAR Locks and Latches, and Cabinet Hardware that conform with Federal regulations.

Write today — no obligation.

Learn about the Dexter Bit-Guide — the tool that gives streamlined, factory production method to Dexter-Tubular installation. Simply clamp the Bit-Guide on the door — self-centering, no measuring — guides the boring straight and true. Ask your dealer for a demonstration and complete details.

DEXTER TUBULAR LOCKS and LATCHES

Manufactured by NATIONAL BRASS COMPANY
GRAND RAPIDS, MICHIGAN
Washington News Summary

$400,000,000 FHA Bill
Signed by President

New Wage Policy for Both Government and Privately-Financed Building Activities

The National War Labor Board has laid down a new wage set-up for use in cases involving workers in construction industries. A nine-man tripartite agency including three representing the public, three the labor side, and three from industry now make up a reconstituted Wage Adjustment Board. The WLBB gave this new board jurisdiction over labor disputes and over voluntary wage and salary adjustments in private construction as well as in construction done for or financed by the United States Government.

No employee or group of employees is entitled automatically to a full Little Steel formula increase, according to the wage policies specified, and that employees receiving relatively high wages should get a smaller percentage adjustment than those getting lower rates of pay. When the Little Steel formula is applied to the wage rates in any one craft, some or all of the 15% otherwise allowable should be withheld in cases where the allowance of the full amount might have an unstabilizing effect on conditions in the industry or area of the country.

The WLBB's announcement on the wage policy and the reconstitution of the Board is contained in its General Order No. 13. G. O. No. 13-A has been repealed.

A. F. of L. Committee Criticizes Lack of Attention to Housing in War Mobilization

In reviewing the war housing program, this committee of the A. F. of L. made suggestions as to the part labor should play in planning post-war work. The following paragraphs are quoted from the report to indicate how thoroughly the committee went into the war housing program to date.

"Provision of housing to the war workers, sufficient in quantity and comfort to meet the minimum needs ...

(Continued to page 70)

Help Promised Private Builders in the Way of Bath Tubs and Equipment

A large part of private war housing cannot be done without bath tubs because of the lack of financing for houses without this equipment. Due to constant pressure in Washington, favorable, quick action is indicated. A second request by NHA for the production of 163,000 cast iron bath tubs will be considered by top officials in FHA, NHA and WPB. Some opposition may be expected from the Army and Navy because they apparently don't consider such equipment necessary in war housing, but it is expected the authority for making these very much-needed tubs will be granted.

As for kitchen ranges, a quarterly production of 16,000 electric ranges has been approved. Gas ranges are available in some localities but a manpower shortage retards output. Electric refrigerators are becoming increasingly fewer. The type of motor is the same as that used in the production of bombers. The production of gas and kerosene refrigerators may be started to make up any shortage that may develop.

Keeping Up With Doings of Washington Boards Handling Building Items

As the war progresses and kinds of war housing gradually change, there comes the need for revision and policy-changing in the several boards having to do with building and building supplies.

The Office of Civilian Requirements of the War Production Board has announced the establishment of a Maintenance and Construction Section in the Wholesale and Trade Division. Its purpose will be to handle all problems relating to maintenance, repair, supplies, equipment and Construction requirements of wholesale and retail establishments.

It was explained that maintenance of operating facilities is of major importance in assuring proper distribution of consumer goods and that the job of the new section will be to determine essential operating requirements of both wholesale and retail establishments.

A realignment of WPB Divisions handling lumber, wood pulp, paper and paper products has been announced. The shift of the lumber division, as explained by Mr. Batcheller, was to set up a closer coordination of the production of pulp wood with other forest products. The new division is organized under the direction of Harold Boeschenstein. A separate paper division under Rex Hovey, and a paperbox division under G. G. Otto now handle their respective fields.

Two new lumber industry advisory committees of five men each have been announced by the Office of Price Administration. One committee represents the Western Red Cedar Industry and the other the Sitka Spruce Lumber Industry. OPA states that all the members of the committees are active in companies providing lumber and are well acquainted with the problems of the industry. It is expected they will further the good relationships between OPA and the entire lumber industry.

The War Production Board Executive Committee lately announced a statement of policy continuing the restrictions of construction of new facilities and reducing facilities under construction to the minimum necessary for the war program and for essential civilian needs.

WPB states that this is done in order to conserve to the utmost all resources for the production of war.

(Continued to page 70)
An Oasis in a Sea of Flame...

Sheetrock takes any form of decoration—Any finish that is sprayed, brushied or pasted on may be successfully applied on Sheetrock: or it may be purchased already decorated—ready to apply.

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

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

Wont War Or Buckle—Sheetrock is like a stone wall. It does not twist and pull out of shape with changes in temperature and humidity conditions.

"Fire-Sealed" Walls and Ceilings

Every 4 minutes of the night and day... destroying flames sweep some home away... along with it go the priceless possessions of a lifetime, and sometimes even life itself.

It is high time to call a halt to "tinder-box" walls and ceilings that may only add fuel to the flames. Sheetrock*, the fireproof wallboard, is made from mineral gypsum that cannot burn. It acts as a barrier to the spread of fire and provides a "fire-seal" to protect the building framework—"an oasis in a sea of flame."

Sheetrock makes enduring pre-cast walls and ceilings that take any form of decoration or texture, with joints concealed by Perf-A-Tape* joint system made a part of the decoration with beveled-edge Sheetrock.

You may buy the board already decorated in pastel shades or woodgrain effects. The job is completed as soon as the board is applied.

Twenty-five years have served to prove Sheetrock every step of the way in practical building application. Research and development have kept it well ahead of the times as a modern building material of beauty that saves time, labor and protects from fire.

Big cities and grass roots building

The reason why home building and small construction generally is so hard to regulate from Washington is that in its actual operation it is so largely a small town, grass roots business.

Washington officials, New York financiers and big city industrialists frequently make the same mistakes: they think of home building in terms of a few big cities and a relatively small handful of large firms.

Mass production complex wrong

Yet to those who have traveled the length and breadth of this land and have talked to thousands of builders, carpenter-contractors, material dealers, real estate men and others that take part in actual building, it is very apparent how wrong they are.

The effect of this big city, mass production complex is highly important to every builder because it has a strong bearing on legislation, material distribution, and finance.

If the policies of the home building industry are dictated by people who think of it in terms of big cities and mass housing, it will do great harm and seriously retard construction.

Cities rotten at core

The centers of the nation's biggest cities are rotten to the core. They are disintegrating and are losing population rapidly. This is because they do not offer the reasonable decencies of human life that Americans know are available in a country which possesses such vast resources in land and material wealth.

The remedy to this situation is not to appropriate billions of government funds to force people to continue to live in the dirt and grime of the city, but to make it possible for still more of them to move out to the country. Then tear down the old slums and turn them into parks and playgrounds.

Once we leave the big cities and consider the 93,700,000 people who live in towns of less than 100,000, or in rural areas, we find an entirely different concept of home construction and its problems. They make up more than 71 per cent of the population, and it is for them that the bulk of the new post-war housing must be built. The trend is definitely away from the big cities, and new highways, new forms of transportation will accelerate the post-war movement.

The war has shown the danger of life in big cities. Post-war plans for London show no intention to rebuild bombed slum areas, but rather to provide homes scattered around the surrounding countryside where another blitz will not do so much damage.

Biggest future in smaller towns

In the United States there are more than 16,700 towns, villages and communities scattered through some 3,000 counties. Of the 715,000 houses built in 1941, more than 66 per cent were built in towns of less than 50,000, or in rural non-farm areas. The small town percentage will be greater, not less, in the years ahead. It becomes clear that we must think in terms of widely decentralized types of operation with many thousands of small firms operating in equal numbers of small towns, urban communities and semi-rural areas.

Formulating post-war finance plans and in planning new construction materials and methods, these facts should be borne in mind. So diverse and scattered are the factors in this industry that it is often very difficult to get figures. Careful estimates indicate that in a normal year there are as many as 100,000 residential builders and general contractors to consider. There are 25,000 lumber and building material dealers, many of them engaged in direct construction. There are thousands of carpenter and mason builders, real estate men, architects and financing firms involved.

The United States Census reveals 113,898 men classified as construction proprietors, managers or officials.

It is true that there is a trend towards more efficient methods of operation that will simplify construction and lower costs, but this does not mean that the small builder and dealer is out, or that the small town, grass roots nature of this industry is going to be materially changed. What is needed is a better understanding of men and methods, and the removal of all restraints and restrictions that keep them from operating efficiently.

"My sincere congratulations on your November number. Please send me 100 copies immediately."—Frank W. Boykin, House Committee on Public Buildings and Grounds.

(Other comments on American Builder's 10-point Post-War Building Program will be found on page 80.)
HOW TO LAY ASPHALT ROOFING IN WINTER

STORAGE—Asphalt prepared roofings should never be stored outdoors or in any damp place before application. These roofings are waterproof when applied properly to a roof, but the non-weather side is usually covered with a very thin coating thru which moisture may pass to the saturated felt. The freezing of soaked material damages it. When the roofing is cold, the coating and saturation are relatively hard and brittle, so that any sudden bending causes cracking. If the outside temperature is below 40°F, the roofing should be stored in a warm place for 24 hours before application.

ON NEW WORK—In cold weather, while plaster is drying out, open a basement or first floor window and an attic window at opposite ends of the house. This will remove moisture-laden air. Otherwise the damper is likely to warp the roofboards and swell them out of shape, making the shingles uneven.

WEATHER CONDITIONS—Extremes of temperature should be avoided whenever possible. Application should be made during clear, mild weather. Asphalt-prepared roofings, particularly roll roofings, SHOULD NEVER BE APPLIED AT TEMPERATURES BELOW 40°F. Asphalt shingles are made more rigid than roll roofings and consideration should be given to that fact.

APPLICATION—Don't fasten the roofing until the curl is removed by allowing the sheets to lie flat in the sun or on a warm surface, or by rolling the sheets the reverse way. Roll roofings should be unrolled slowly and with extreme care. When it is necessary to fold shingles, as over a ridge or hip, they may require warming before they are bent. Don't beat the lap-cement over a fire. Should it thicken in cold weather, keep the cove in a warm place for 24 hours or place them in warm water before using until the material flows properly.

It is poor practice to walk on asphalt roofing at any time, but never during very cold weather.

HOW TO LAY BRICKWORK IN WINTER

WEATHER NO OBSTACLE—Brick masonry of good quality may be laid in cold weather if a few simple precautions are taken. For some classes of construction, such as summer resorts, winter is the only time that building can be undertaken.

MORTAR—Only Portland cement mortar should be used in freezing weather—bricks should be thoroughly dry. Ice should be on them when placed in the wall. Brick piles should be covered with tar paper.

ADMIXTURES—Salt or calcium chloride are sometimes added to the mortar to lower its freezing point, but these substances may cause efflorescence later on the face of the wall and SHOULD NOT BE USED where appearance is a factor.

HEATING MATERIALS—A fire or salamander kept going near the mortar mixing box is desirable. All materials including bricks, sand, water, and cement should be heated in extremely cold weather. In moderately cold weather only the mixing water and bricks will need to be heated to 140°F. Flues carrying heat thru piles of aggregate are alright in smaller work, provided that mortar near the flue is not used. A thermometer that is reliable should be used. No material should be used that is heated to over 165°F since it will "flash set" the cement mortar.

SCREENS—A space inclosed with tarpaulins and heated with salamanders provides greater comfort for the workmen and insurance against freezing after the work is placed. DO NOT USE COAL. use coke. Coal gas can be harmful to the workmen.

HOW TO AVOID INSULATING BOARD CRACKS

The relatively high expansivity of fiber insulating boards with variations in humidity has made paneling necessary to conceal unsightly joints. The National Bureau of Standards has developed several methods, of which the method described here is one, to eliminate the usual nailing. These attachment methods allow the entire surface of the wall to expand or contract as a unit, permitting the successful application of any decorative treatment normally applied to a plaster wall without restriction as to surface design because of the ultimate certainty of cracks appearing at the junction of the wall board units.

The furring strips occur on each stud and are made of pretrained fiberboard. The insulating boards are fastened to the furring strips with adhesive using temporary nailing to hold them until the adhesive sets.

It is essential to keep the boards unattached on the edges, which should be concealed with trim fitting snugly against the board but NOT FASTENED TO IT. Swedish putty works well as a crack filler for following pointing or papering.

Practical means of repairing the walls

On the following page is space for making notes on repairs to the walls.
How to Keep Jobs Rolling All Winter

Practical pointers on ways and means of avoiding cold weather delays on city and farm concrete jobs

WINTER work is important work, this year more than ever. It is important to go on making money, and it is important that a lot of remodeling and upkeep jobs keep rolling. This is especially so on farms because repair work and new work are essential for the storing and handling of farm production. While many items in the lumber list are hard to get, there are other materials that can be used, among them concrete.

With a few simple precautions, there is no reason why winter concreting can't keep apace with any form of construction during cold weather. Because heat hastens hardening and cold retards it, the closer the temperature gets to freezing, the more attention must be paid to drying concrete. Freezing weather won't hurt concrete that has had a chance to cure from 4 to 5 days, and sometimes even a shorter period if the drying condition has been ideal.

If you intend to pour concrete at 40 degrees or less, it is necessary to heat sand, pebbles and water before mixing. Because the cement is such a small portion of the mix, it does not need heating. Sand and pebbles should be heated separately so they won't become mixed and result in a badly proportioned concrete.

Any improvised heater, such as an old culvert pipe, steel boiler, or section of a smoke pipe in which a fire can be kept burning, will answer the purpose. Pile the sand and pebbles separately and rake them over occasionally to insure even heating. Water can be heated in a large kettle or boiler, or an old steel drum will serve the purpose. 150 degrees F. is as high as the heating should go. Above that temperature the aggregate may cause what is known as a "flash" set when coming into contact with the cement.

Trenches for foundations should be dug before freezing weather, and snow and ice should be removed from forms before concrete is poured. The temperature of the concrete should be at least 80 degrees when poured. Cover the top of the concrete with canvas, or straw or hay to give it protection. If manure is used, put it on top of a layer of building paper or roofing material, never directly on the concrete. Such protection should remain inplace for 4 or 5 days.

Be sure to examine the concrete carefully (Continued to page 85)
How to Save Downspouts by Painting Them Inside

SHEET metal downspouts are not replaceable these days so they're worth the best of care. Painting the inside is important to their long life, but difficult. Here is a simple way to do it, as pictured below. First, tie a weight to the end of a piece of stout cord a little more than twice as long as the downspout and drop half the cord through. Tie ball of rags, which serves as a plug at the bottom of the spout, at this mid-point.

Next, pour about a quart of red lead slowly down the pipe and put bucket under bottom of spout. Now pull the rope up through the pipe and after it has reached the top, back down and out through the bottom, spreading the paint on the interior surface. Allow bucket to remain under pipe to catch surplus paint draining out.

SIMPLE method of painting inside of downspouts pictured in five steps; needed are length of cord, a weight, a wad of rags and a can of red lead.

How to Build a "Garden Well" Fish Pond

FOR the home owner who is making the most of his yard as a recreation spot, this fish pond disguised as an old well becomes a center of interest. It is built of brick and lined with waterproof cement. If the wrought iron frame and pulley are unavailable even second hand, for the duration, a rustic wood frame can be rigged up instead. Aquatic plants float on the water, along with the wooden bucket. Whereas the one pictured here in the patio of the New Orleans home is used the year round, northern climates would require a pipe for winter drainage.

THIS decorative garden court well is really a novel fish pond.
**How to Remake Closets into Deluxe Storage Units with Non-Critical Materials**

ONE of the really quality jobs that can be done today, to the delight of every home owner, is dressing up closets with glass. Beyond the attractiveness added, there is a practical value in making these storage spaces dust-tight and easy to clean, and contents easy to see.

The linen closet, as detailed at the right, offers one of the best closets for this treatment. Space above the bottom drawers can be lined with a light-colored Carrara glass cemented in place. Shelves are 3/4-inch plate and the dust-stop door, also of plate, mounted in a light wood frame or, if it can be found, showcase metal framing. This latter feature can be omitted, but full value is obtained only by making the installation complete as shown. A flush lighting fixture in the ceiling adds sparkle to the interior and displays the contents.

A somewhat limited but similar treatment is possible in other closets in which the upper shelves can be of plate glass instead of hard-to-get plywood or 1-inch stock. Here again, items on such upper shelves are easily seen from below.

**How to Form Concrete Joist Pockets**

PROPER placing of precast concrete joists for slab floors is important. Below is joist pocket detail in section and plan. These are formed from 3/4-inch to 5/8-inch larger on all sides than joists or beams; forms are beveled and oiled for easy removal.

**How to Hang Storm Sash from Inside**

WITH handy men and husbands in the services or away from home, many builders will probably be called on by their customers for assistance and advice on getting storm sash put on this winter. Here is an easy way to do it: Put in small screw hooks at the four corners of the storm window and a strong screw eye in the middle of the top rail. To put on storm sash lower the upper sash and pass a length of clothes line out, down and back in below the raised lower sash and through the strong screw eye. Now the storm sash can be raised from below or eased out through the widely opened lower half of the window, with the projecting end supported and gradually raised by means of the clothes line. When the storm sash is fully outside the two bottom hooks are made fast to their eyes, the top of the storm window is hauled in snug and its hooks are fastened, the clothes line is removed and the job is done.
How to Build a Haymow Door

BUILDERS in rural areas who are busy keeping the nation's farm structures in top production shape are frequently called upon to install or rebuild a haymow door. This barn detail is important to tight storage, and putting a good one together is a specialized problem. At the right is detailed a stout, tight, hinged hay door that will give long, satisfactory service. It calls for 1 x 8 frame members on both sides of a panel of T & G flooring. Rails are beveled for drainage.

While this construction is recommended, it might be necessary to substitute on some of the lumber, or even use second-hand stock. The hardware should be obtainable although the offset hinges might have to be replaced with regular strap hinges heavy enough to carry a load according to size.

**ELEVATION and cross section of hinged door for a hay mow, detailed for use of track.**

How to Figure Wood

### Shingles and Nails for Each Square of Over-Roofing

<table>
<thead>
<tr>
<th>Shingles</th>
<th>Nails</th>
<th>Weight</th>
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<tbody>
<tr>
<td>16-inch shingles, 5 inch exposure</td>
<td>4</td>
<td>5d (1 3/4-inch)</td>
</tr>
<tr>
<td>18-inch shingles, 5 1/2 inch exposure</td>
<td>4</td>
<td>5d (1 3/4-inch)</td>
</tr>
<tr>
<td>24-inch shingles, 7 1/4 inch exposure</td>
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<td>6d (2-inch)</td>
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### Shingles and Nails for Each Square of Double-Coursing

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<tr>
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<td>5d (1 3/4-inch)</td>
</tr>
<tr>
<td>No. 2 16-inch shingles, undercourse</td>
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<td>3d (1 3/4-inch)</td>
</tr>
<tr>
<td>No. 1 18-inch shingles, 14 inch exposure</td>
<td>1-3/5</td>
<td>5d* (1 3/4-inch)</td>
</tr>
<tr>
<td>No. 2 18-inch shingles, undercourse</td>
<td>1-3/5</td>
<td>3d (1 3/4-inch)</td>
</tr>
<tr>
<td>No. 1 24-inch shingles, 16-inch exposure</td>
<td>15</td>
<td>5d* (1 3/4-inch)</td>
</tr>
<tr>
<td>No. 2 24-inch shingles, undercourse</td>
<td>15</td>
<td>3d (1 3/4-inch)</td>
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</tbody>
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(*Small Headed.)

How to Be a Local Expert on Fuel Conservation

All reports indicate that fuel conservation is going to be one of the big wartime jobs this winter. Builders can render a vital service to their communities and create numerous jobs by taking a lead in this work. All forms of publicity are now in full swing pointed to the homeowner. The following list gives complete coverage on 48 main points to check; with them, any builder can be an expert.

**Insulation of Walls and Ceilings**

1. Application of insulation to the ceiling of the top floor will save from 10 to 20 per cent of the yearly fuel costs.
2. Application of insulation to walls of a residence will save from 10 to 20 per cent of the yearly fuel cost.
3. Application of insulation to walls and top floor ceilings will result in an increase in the inside wall and ceiling surface temperatures. This will result in increased comfort and decreased fuel costs.
4. Application of storm windows and storm doors will result in a fuel saving of 10 to 25 per cent.
5. Application of storm windows will raise the inside window surface temperature and thus result in increased comfort and fuel savings.
6. Application of storm windows will permit the maintenance of higher relative humidities inside the structure without condensation of moisture and formation of frost on window surfaces.

**Storm Windows and Storm Doors**

7. The installation of weatherstripping to doors and windows will result in fuel savings of 5 to 10 per cent.
8. All windows and doors should be kept closed except to maintain a minimum of ventilation.
9. If heat is reduced or shut off entirely from bedrooms, storage rooms, etc., door cracks leading to these rooms should be plugged in order to prevent drafts of cold air from entering the remainder of the house.
10. All fireplace dampers should be tight fitting and maintained closed during heating season except when in use.
11. All doors leading from heated por-
How to Build a Lumber-Saving Utility Building

The drawing below shows construction details for a small building, this one being a two-room milk house, which uses a minimum amount of lumber. Sheathing for roof and side-walls is replaced with Stonewall asbestos cement board. Floor is concrete. Framing and millwork are only uses of lumber and these could be second-hand if new is unavailable.

How to Do It

Steam and Hot Water Heating Systems

15. For highest efficiency all steam and hot water piping should be quickly freed of air during operation and completely filled with steam or hot water.

16. Any steam or hot water pipes which are not actually used to aid in heating rooms should be well insulated.

17. Any radiators which are not in use either should be covered or the lines leading to them should be disconnected.

18. Any objects which shield radiators should be removed to obtain some increase in radiator efficiency.

19. Any collection of dirt between the sections or fins of radiators or con-vectors should be removed to obtain maximum radiator efficiency.

20. For maximum efficiency, radiators should not be covered with a coating of bronze or aluminum paint. The radiator efficiency may be improved as much as 10 per cent by the application of ordinary oil paints, preferably dark color.

21. Some fuel saving may result and some increase in radiator efficiency may be experienced if a surface of high reflectivity is placed behind each radiator. Much of the heat which normally would be absorbed by the surface of the wall back of the radiator would then be reflected into the room.

22. If a forced circulation hot water heating system is used, the motor bear-ings of the water pump should be oiled at least once each season.

23. Any insulation missing from the boiler covering should be replaced to reduce the loss of heat from the boiler to the basement.

24. All flue surfaces should be cleaned periodically, preferably with wire brushes and a vacuum cleaner.

(Continued to page 72)
JOBS YOU CAN SELL TODAY

—and ideas for your post-war portfolio

INFORMAL MODERN—For home owners who want a clean-cut treatment, here is a simple fireplace you can build that is almost rustic in its informality. Mantel is rough-sawn plank; the painted used brick of fireplace are continued in the outside wall; interior wall is of horizontal V-jointed boards. Note interesting hearth pattern.

CORNER FIREPLACES
—Left, California Modern treatment of a corner has an interesting fireplace design between built-in settees which allow full enjoyment of the fire by the whole family. At right opposite, another way to use a corner fireplace; this one can be used as a decoration if it is impossible to build a chimney, or on a porch can be used for broiling over charcoal.

Fireplaces Are Home Centers

COLONIAL CHARM—While simple in treatment, there are a number of good fireplace ideas in the illustration to the right. The built-up mantel moulding frames both the large opening and its adjoining wood locker, a handy provision for any fireplace. The nicely detailed book case at the left is carefully tied into the whole design.
BEAMS AND PANELING—Hand-hewn beams and knotty pine are carefully detailed in this Early American living room, with a simple fireplace the central feature. The twin bookcases and cupboards are well done. Hand-carved mantel decoration is a novel touch.

NEVER has it been truer than now that the fireplace is the center of the home, around which the family will gather on cold winter evenings. It is cheerful, warm, and saving of furnace fuel. If you will make a canvass of your customers, you will find many who have living room fireplaces not now being used because they are out of repair. If extensive rebuilding is necessary, a fireplace heating unit can be installed for greatly increased efficiency, where such units are still locally available.

Many fireplaces in use would, with new "faces," add much more attractiveness to the room. To give an up-to-date effect, a red brick facing may be painted white, or, to give a distinctly modern note, the brick may be covered over with mirror, and dark mantel woodwork painted to fit into the room's color scheme. Other fireplace ideas are given on these pages.
How to Figure Lengths of Framing for Precutting

In this second article on use of power saws for gang cutting operations, T. C. Combs tells how to compute exact lengths

INDOOR work, including development of plans, schedules and material lists, is as important to the construction of buildings using precut framing as the follow-through on the job. The most successful projects are built mentally and on paper before the first stake is driven. Precut framing is itself advance planning as well as a short cut in office work.

The first step is to determine what standard sizes of framing members are required. Stud length is the key dimension to simplified precut wall framing. Despite the fact that there are only two or three preferred ceiling heights for dwellings, neither the construction industry nor the lumber industry has thus far adopted a standard-length stud. But lacking official promulgation, the most used stud length is 7'-9". Here is why:

Most ceilings are 8'-0" (finish floor to finish ceiling). In fact, most building codes and housing laws establish a minimum 8'-0" ceiling. A 7'-9" stud provides this, with either S 2 E or S 4 S plate stock and with normal floor and ceiling coverings. It permits using the sole plate and top plate as nailing strips for 8'-0" wall coverings (or multiples of two and four feet).

The next most important dimension for simplification of wall framing is header framing height. Most doors are

![Header diagram](image)

FIG. 1: Standard wall framing members usually scheduled in a precutting operation; lengths are computed from conventional spacing.
The drawing (Fig. 1) illustrates the extent to which standard stud length and header framing height can simplify Precut Framing. Working to a standard not only reduces the number of different lengths required but also permits advance cutting of parts which can be held in stock and supplied on very short notice, ready to use. The dimensions indicated also show how lengths of vertical members, "standard" or not, can be scheduled. Key horizontal dimensions are controlled by stud spacing and widths of openings. A chart can be readily prepared for anyone's own standards. Lengths of wall framing members are computed by following Fig. 1. Lengths of members for the most widely used schedules will be listed in a later article.

Examples of computations to find exact lengths based on the various fixed measurements follow:

**Stud Length:** Finish ceiling height plus thicknesses of ceiling, finish floor and covering, minus the thicknesses of double top plate and single sole plate. Example: A 7'-9" stud, 15" plate stock, 34" ceiling and 25/32" flooring provide ceiling height of 8'-0'-11/32".

**Door Trimmer:** Door height, plus flooring thickness, plus rug clearance, plus head casing thickness, plus fitting clearance, minus thickness of sole plate. Example: For a 6'-8" door, 25/32" finish floor, 4%" rug clearance, 34" head casing and 4" fitting clearance for fitting, length of window trimmer is 4'-0'-11/16".

**Upper Cripple:** Stud length, minus length of door trimmer, minus header thickness. Example: For a 7'-9" stud, 6'-8'-11/16" door trimmer and 35%" header, length of upper cripple is 8'-11/16". Upper cripples for windows are usually the same length as for doors.

**Window Trimmer:** Window height, plus sill thickness, plus head casing thickness, plus fitting clearance. Example: For a 4'-0" window, 21%" sill, 34" head casing and 4" clearance for fitting, length of window trimmer is 47'-314".

**Lower Cripple:** Stud length, minus lengths of upper cripple and window trimmer, minus thicknesses of upper header and sill header. Example: For a 7'-9" stud, 8'-11/16" upper cripple, 4'-314" window trimmer, 35%" upper header and 15%" sill header, length of lower cripple is 2'-3'-9/16".

**Door Header or Window Header:** Width of window or door, plus thickness of side casings, plus fitting clearance, plus thickness of trimmers. Example: For a 3'-0" door, 2 side casings at 34" and 4" space on each side for fitting and 15%" trimmers (2) length of header is 3'-514".

In an alternate method of framing, headers run from nearest stud to nearest stud. With this, the 3'-0" door will occupy 3 stud spaces less one stud thickness and will require a header 3'-1034" long. With multiple windows, thicknesses of mullions, additional frames and fitting clearances are of course recognized.

Diagonal Brace (Cut in): The diagonal distance between studs along a line running from sole plate to top plate for the number of stud spaces occupied. Example: For a "run of six" stud spaces with 7'-9" studs 15%" thick, run is 9'-314" and rise is 9'-314".

Fire Block: For horizontal blocking, length is the distance between studs, i.e., 14'-314" for 15%" studs 16" c.-c. For herringbone blocking, a rise of 2'-314" between studs is typical.

The third article in this Precutting Series will explain how to organize a shop for most efficient production of framing members.

The American Builder, November 1943.

6'-8" and this normally also establishes the framing for windows, with window headers framed at 15%" sole plate, the practical length of sill trimmers is 6'-8"-11/16". No. 2 of Precutting Series. Next Month: How to Organize a Shop.

CLOSE UP of barracks for which all material was precut and no scrap was left. Notice the careful arrangement and patterned, numbered feet are按 each power.
How Simms of Portland Builds Better

Complies with latest priority regulations and finds war workers approve his privately financed and constructed small homes

Oregon home builders, confronted with the competition and confusion arising from the greatest concentration of public war housing in the nation, are nevertheless carrying on with a substantial program of new home construction both for rent and for sale. These private-enterprise building projects of the Pacific Northwest are carefully planned and located with an eye both to the present war-housing need and for the expected post-war market.

The necessary priorities are, of course, secured, the designs are drawn to conform to the present minimum standards and the bill of materials for all “critical” items is listed on the War Production Board’s Form PD-105-A, and officially approved before the orders are released.

Scanned thus from every angle, and okeyed, and then successfully constructed and placed on the market, and finally endorsed by the house-occupying public, these homes must be good! American Builder is happy to be able to publish, for the benefit of other builders, a series of these Standardized War Home Models as selected by the National Association of Home Builders from among the best current work of its members.

Prominent in the Portland, Ore., home building world is L. C. Simms, head of Franklin Homes, Inc., and president of the Portland Chapter of National Association of Home Builders. Long identified with quality construction in the larger-homes field, Simms has now turned wholeheartedly to the wartime job of creating small homes for war workers, and has carried over into this work many of his established ideas and practices, notably those pertaining to width of building site and variety of exterior design. By employing good architectural talent and exercising his own experience-trained judgment as to what the people want, some very satisfactory small home neighborhoods are being produced.

One of Mr. Simms’ current developments, illustrated here, is a group of 15 homes in southeast Portland built to sell at $5150 to $5350. These houses, standing on lots 52 by 95 feet, have 4½ and 5½ rooms with tub, bath, heat, and style, and are of course okeyed to give the best that Simms can get.

The OREGON builder packs plenty of livability and style into these war workers’ homes despite drastic war restrictions.
Third of American Builder's series of Standardized War Homes complete with PD-105-A Materials List

OPEN planning makes interiors seem large and ample in one of L. C. Simms' buyer and government-approved small war homes.

bath, full excavated basement, forced warm air central heat, electric kitchen range and electric refrigerator. Four different basic designs are used, each subject to numerous outside changes in roof lines, windows and entrances to give variety.

Thirteen of these houses were sold before completion, Simms reported recently to an American Builder editor. He also revealed plans for a new project, then being considered, that would provide a fairly large group of homes of somewhat smaller size but on larger lots, homes that could be offered at about $3500. This subdivision would have plots 75 by 100 feet—good rich soil, suitable for a real victory-garden appeal to the war worker in that area.

This would be important now, Mr. Simms believes, as part of the war food effort and also permanently in the post-war period because of the city's mild productive climate and the popularity of horticulture and gardening among Portlandites.

This subject of what the prospective home buyer of today wants has been much debated at the weekly dinner meetings of the Portland Home Builders Association. With a present membership of 110, this group meets every Monday night for an informal dinner and entertainment or enlightenment, by a guest speaker. However, it is the swapping of ideas among the members themselves that seems to hold the interest and bring out the attendance of Portland builders, according to President Simms.

This weekly open forum feature is billed as "What's on your mind?" and it brings out current problems and their solution in a very timely and helpful way. The
builders get to know each other on a friendly, co-operative basis and everyone is benefited.

Simms has been a leading spirit from the start among the home building contractors and operative builders in the Portland area. He has helped to make a strong, going concern of the local Home Builders Association, to affiliate it with the National Association, and to create close, harmonious relations with the Portland Real Estate Board and the strong local building money men. As a result, the Portland home builders are forging ahead, in line with and in spite of the government "directives" to carry out their programs. They are contesting at every turn the bureaucratic assumptions of authority that have proved such an insurmountable obstacle to needed and necessary home front building service in so many communities.

**APPROVED LIST OF MATERIALS FOR SIMMS 5-ROOM HOUSE**

Recorded on WPB Form PD-105-A by L. C. Simms, Portland, Ore.

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity per dwelling unit</th>
<th>Panel board, including enclosures &amp; fuses (No. of circuits, 6)</th>
<th>Lighting fixtures, exterior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fireplace dampers</td>
<td>No. 1</td>
<td>Fuses, cartridge, non-renewable (0 to 30 amp.) No. 6</td>
<td>Incandescent lamp-bulbs No. 10</td>
</tr>
<tr>
<td>Nails for quitters and downspouts</td>
<td>lbs. ½</td>
<td>(31 to 50 amp.) No. 4</td>
<td></td>
</tr>
<tr>
<td>Bolts &amp; screws for ditto</td>
<td>lbs. ½</td>
<td>Interior wiring</td>
<td></td>
</tr>
<tr>
<td>Flashings—steel sheets</td>
<td>lbs. 15</td>
<td>Covered neutral cable</td>
<td></td>
</tr>
<tr>
<td>LATH &amp; ACCESSORIES</td>
<td></td>
<td>30 lin. ft. of 14 gage copper wire lbs. 1</td>
<td></td>
</tr>
<tr>
<td>Corner &amp; joint reinforcing</td>
<td>lbs. 20</td>
<td>Insulated single conductors, 50 lin. ft. 8 gage lbs. 9</td>
<td></td>
</tr>
<tr>
<td>Corner beads, exterior angles</td>
<td>lbs. 20</td>
<td>Nonmetallic sheathed cable, 400 lin. ft. 2-wire, 12 and 14 gage lbs. 13</td>
<td></td>
</tr>
<tr>
<td>Nails &amp; staples (lath)</td>
<td>lbs. 10</td>
<td>Nonmetallic service cable, 15 lin. ft. 3-wire, 8 gage lbs. 2½</td>
<td></td>
</tr>
</tbody>
</table>

**BUILDERS & CABINET HARDWARE**

- Door hardware Cost $20.00
- Cabinet hardware Cost $5.00
- Window hardware Cost $10.00
- Garage hardware Cost $3.00
- Venetian blind hardware Sets 8
- Shade fixtures Sets 7
- Brackets for handrail No. 6
- Wire nails & staples lbs. 300

**ELECTRICAL**

- Service equipment, including enclosures (No. of circuits, 6) Sets 1
- Pull box & cabinet No. 1
- Plates, nonmetallic No. 8
- Receptacles No. 8
- Switches No. 5
- Conduit fittings lbs. 5
- Lighting fixtures, interior Cost $25.00

**PLUMBING & DRAINAGE**

- Bath tubs No. 1
- Lavatories No. 1
- Water closet with tank No. 1
- Laundry tray No. 1
- Cast iron soil pipe & fittings lbs. 300
- Drains lbs. 1
- Pipe, steel lbs. 180
- Pipe, fittings lbs. 20
- Caulking lead lbs. 40
- Flashing, ferrous sheet metal lbs. 5
- Hangers, supports & misc. iron lbs. 2
- Oakum lbs. 6
- Water supply pipe, steel or wrought iron lbs. 225
- Water supply pipe fittings steel or w. iron lbs. 25
- Valves, 2" or smaller lbs. 3
- Still cocks lbs. 2

(Continued to page 92)
Siding

attractive and popular which in war for Simms.

nr

War Housing Unit Built By L. C. Simms—Franklin Homes, Inc.
Portland, Oregon

FRONT ELEVATION

LEFT ELEVATION

RIGHT ELEVATION

Cedar Shingles

Siding

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Cedar Shingles

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SMART PEOPLE are planning Their Home NOW!

In a perfect, close-in Northwest suburb, 23 minutes from the "Loop," with pool transportation. In a home-loving community with friendly neighbors ... a beautiful community where the air is clean and healthful ... a thriving community of shopping centers, movie theatres, churches, schools and everything to meet your living needs.

Just $210

Mail Down Payment.

STARTS YOU

In a perfect, close-in Northwest suburb, 23 minutes from the "Loop," with pool transportation. In a home-loving community with friendly neighbors ... a beautiful community where the air is clean and healthful ... a thriving community of shopping centers, movie theatres, churches, schools and everything to meet your living needs.

NOW! Plan to Live in the IDEAL HOME COMMUNITY

Spacious homesites ... wide lawns ... safe streets ... all improvements, swimming, golf, etc. Only 23 minutes northwest of the Loop. 48 trains daily. Over 100 homes already up in this section.

MAIL COUPON TODAY

Box R.E.47, Chicago Herald-American

Please send full details of your unusual home community offer.

Name
Address

Buy WAR BONDS Today

for YOUR HOME of Tomorrow

Start now to make those dreams come true. Low monthly payments like rent make possible a home of your own instead of landlord's receipts. Live in a new home section of a real American community just 28 minutes northwest of the Loop. Excellent transportation—52 trains daily—low fares. Schools, shops, churches and all city conveniences.

ONLY $150

STARTS YOU

W H I L E local, state and national organizations and committees have been talking and making big plans for post-war homes, Chicago builders and developers have put into successful practice sales methods which will assure the public immediate and definite action on these post-war homes.

Old timers well remember the boom real estate days which followed the cessation of hostilities of World War I. Seemingly overnight, property values—both vacant and improved—zoomed to unheard of heights. Rentals rose, apartments became scarce, and the rush to the land was on. The public, failing to find apartments at any price, frantically looked for homes and failing in this search, looked for desirable sites upon which to build their own homes. A highly competitive consumer's market for choice lots was the result.

The demand for homes in the Chicago area during the past two years has been phenomenal. Priorities have satisfied but a scant percentage of the public. Prices on existing homes have risen accordingly and the ceiling is not yet in sight. Builders and developers with their fingers on the pulse of the home seeking public, aware of what will probably be the aftermath of this war, are utilizing the benefit of their years of practical experience by aiding and preparing the public now for their post-war homes and helping to avoid a short-lived boom later.

The metropolitan daily newspapers have been the
Post-War Sales

Practical copy suggestions for newspaper advertising that will assure a ready-made market for homes by selling home sites now.

have been fairly obvious as to what the final result would be.

Selling copy points out that vacant home sites are one of the very few commodities that have maintained a pre-war price balance. Once the war is over the thousands of home seekers will cause these prices to climb. Therefore, the far-sighted home seeker who purchased his lot before the rush will find that he made a smart investment. Then again, in many cases, his war bonds will aid materially in the building of his own home.

To those who plan to build a home, it is of prime importance to find the right home site. The person who invests in one now and builds immediately after the war will find the financing made easier, since most

(Continued to page 90)
Progressive Ideas Born of War Pressure Will
Foresee big post-war non-residential construction volume in spite of tremendous war program; lessons learned will help bring old plants up to date and save on new ones to be built.

UNDER the pressure of wartime necessity, architects, builders and engineers evolved tradition-breaking new methods for rapid construction and the utilization of different materials. This made possible the record conversion of existing industrial plants and the fast-paced creation of completely new buildings.

Much of the “know-how” gathered in this building race against time will constitute advancements in design and construction bound to figure importantly in the tremendous building and remodeling program of residential and industrial construction in the post-war period.

Ingenious devices to get around priorities and shortages may well establish the future hair-line margin of profit necessary to create a good product for less money.

While leaders in the field like Albert Kahn Associated Architects and Engineers, Inc., do not forecast a general trend in any one of the popular developments such as windowless plants or complete industrial air conditioning, they do see these progressive ideas utilized increasingly to meet specific needs.

This same organization, composed of 25 partner-associates and 450 other specialists, holds firmly in the belief that keen business competition at the termination of the war will sponsor extensive remodeling of plants and many new constructions. At that time manufacturers will be unable to get by with obsolete plants that are hindrances to the most economical manufacturing of any given product.

Successful manufacturing in the coming era will be heavily dependent upon the complete efficiency of the physical plant. Factories at that time must be carefully designed to meet exacting needs of the job to be done.

Running counter to a general assumption that the great number of buildings constructed during the war will find the country plant-poor after the war, wartime building is seen as a factor directly leading to post-war remodeling and further construction.

Many of the structures which admirably met the rush needs of the war producing period will be found hopelessly inadequate for the peacetime requirements of the same organization. In some instances, where the two groups of products are widely different, it may even be less expensive to scrap the original building and design a totally new plant.

The very limitations of time and critical materials responsible for challenging architects and engineers to achieve new construction feats in some cases led to the erection of buildings ideal for war production but ill-adapted to conversion later.

Facts on Commercial and Industrial Structures Bearing on Post-War Market

CONSTRUCTION of manufacturing buildings will average well over a billion dollars for the last four years. Non-war industries have not participated in this vast program.

OF ALMOST 250,000 filling stations by pre-war count, the majority will require either rebuilding or extensive repairs.

END OF WAR will find thousands of plants in need of reconversion, repairs and modernization. Many new plants required to bring facilities up to wartime standards of others.

MILLION AND A HALF retail stores offer big post-war market; expect two to four hundred thousand modernizations in first year of peace, with 90 to 100 million dollars spent on store fronts alone.
Specific examples of physical plant arrangements necessarily pitched to the full-tilt production of armaments and not desirable for a period when the plant is no longer employing three shifts a day and operating 100 per cent capacity every hour, are heating, materials handling and lighting controls.

In some recently-built plants a master switch controlling twenty or thirty circuits may have been a time-saving construction feature. In normal operation, individual switches might well be a means to significantly curtail overhead expenditure.

Makeshifts Not Suitable for Normal Operation

An even more striking example of a duration arrangement ill-suited to ordinary economy is an especially ingenious solution to a boiler need the Kahn organization evolved at one plant. Unable to get the desired equipment, the organization instituted a nationwide search for any boilers not in use. The yield was three totally different boilers from the standpoint of size, state of repair, antiquity and fuel. Under careful arrangement and reconditioning this diversified equipment was set up to do the big war job cut out for it. However, in a peacetime era, the utilization of this same make-shift equipment may be both wasteful and unnecessary.

"As the need for substitutions arose during the war, we strove to plumb all conceivable possibilites so that every forced change would equal or better initial methods and materials," states Louis Kahn, in pointing out the many war-born discoveries that probably will appear as post-war construction advancements.

Among the priority-dodges apt to play a role in the future are factory sash of wood rather than steel, and plastic types of flashing which have pinch-hit for copper and galvanized iron.

When wartime pressure for speed and economy dictated the use of concrete for one-story factories, the old concept that such building material was ill-suited for one-story factories was brushed aside and new types of concrete construction now proving to be preferable to structural steel in some types of plants were developed.

In the design and construction of the Dodge-Chicago plant, largest industrial structure in the world, the Kahn
organization was called upon to execute an even more ingenious plan. This huge building whose walls encompass the entire production job from foundry to final test cell, came under restrictions of materials. Designs and building contracts called for structural steel, but before the plant got underway a WPB ban eliminated any hope of getting this material. The revision of plans occasioned a few headaches and sleepless nights, but the building problem was solved by the development of an entirely new type of construction, low in cost, with a minimum of critical materials and without loss of operating efficiency.

The much-debated issue of whether the future bids fair to be an era of large self-contained plants or a period of less industrial concentration stimulates a wide variety of opinion. However, many foresee a greater distribution of industry throughout the country.

During the war, it is pointed out, plants have been scattered over a wide area including the agricultural south and midwest. Here new sources of labor in machine operation have been developed. After the war industry may find it expedient to build near this new supply of skilled workers.

Additional favorable factors for dispersed manufacturing are the wider availability of power, cheaper rentals, taxes and other non-production costs.

These cost factors are bound to be a primary issue for future management that must give careful thought to the location, construction and layout of plants if it is to cut costs to a minimum and so be able to exist in a period of keenly competitive business.

The coming exploitation of plastics, should it follow the pattern of development set by the automobile industry, would also indicate a period of many small plants in scattered sections from which parts are drawn for assembly in a home factory.

The cost factor will even dictate the rate of expansion of industrial air conditioning. The utilization of air conditioning will depend on its essentiality to manufacturing accuracy or its direct effect in justifying higher plant or office building rentals.

Similarly, no clear-cut future is indicated for windowless plants. Disbelieving in a general trend toward the elimination of windows, one Kahn specialist on windows relates the story of a war-built factory erected with high windows of special glass lacking the clarity of transparent panels. These windows were devised to conform completely with the blackout ideas then in vogue.

The plant was opened in midwinter, and the windows survived the cold weather period. But after the first balmy days of spring, the rate of window breakage stepped-up far above normal. Special vigilance revealed that when-
Wartime necessity has evolved the know-how for speedy and economical reconversion and construction of our commercial, industrial plant to peacetime operation.

ever a guard's back was turned, the bench hands would pick up a wrench or the nearest heavy object and hurl it through the windows. They wanted the feel of that outside air.

Yet only the day shift benefited, and since this plant worked a full 24 hours, it had two other shifts to whom the method of lighting was not important. It is logical to assume that if this particular plant is converted to civilian production after the war, and works only a day shift, the installation of regular windows may be desirable. Even the operators of some windowless plants are not sure the idea is right, and while this indecision remains, certainly no trend is indicated. Future structures will be designed according to the ideas of the operator as to specific function and needs of the individual plant.

Commercial Modernization Offers Big Post-War Market

Although specific trends in details of post-war plant construction and equipment cannot definitely be charted at the present time, the common denominator, the practical adaptation of factories to the work at hand, is clearly indicated. Industrial needs for meeting new civilian requirements and fulfilling the backlog of business point to great post-war activity.

Further, to sell the tremendous volume of consumer goods that such plants will turn out, several hundred thousand retail stores are expected to be modernized. In modernization of store fronts alone, from one to three hundred million dollars will be spent by retail merchants in the United States in the first year after the war ends, according to estimates collected by R. L. Clause, president of Pittsburgh Plate Glass Company. (Continued to page 94)
What Will War Do to Tomorrow's Home?

Some possible effects of war change and air-mindedness on housing seen by David Bareuther

While statesmen ponder the possibilities of making this a better world, builders have the opportunity to plan better villages, better suburbs, and better cities. What effects will this war have on the American home of the future? What will the post-war house look like? What will this rapidly changing world do to specifications for location, site, design, construction, equipment, decoration, costs?

These are questions the builders, bankers, architects, and material supply men are thinking about today. Some of these men are doing their thinking in fox holes and pup tents, in strange occupations in war industries, amid hurry-up defense housing projects, even in havens of temporary retirement. But wherever they are, they are quietly planning on the post-war house.

There is nothing visionary about their calculations, for these are practical men who have learned the hows of experience. They realize for instance, that the steady trend toward larger homesites before this war undoubtedly will continue relentlessly when peace is signed. In the past they produced virtually the same priced popular suburban dwelling over a period of years on 50-foot plots, 75-foot plots, quarter acres, third-acres, and finally on half-acres. They watched the expansion and improvement of transportation steadily open new horizons for their operations.

When such trains as the Zephyr and Hiawatha heralded a new era of rapidly "going places" these builders envisioned two-acre suburban plots far out from cities in picturesque woodlands with a half-acre landscaped in the center for economical upkeep, and they planned much the same house again to be sold together with two acres of land for the same price as before.

Today these men are watching aviation, keenly aware of the pronouncement that as many or more aviation-trained people will emerge from this war as were familiar with automobiles after the last war!

The Air Power of a Site

The present generation's air-mindedness unavoidably will be reflected in the location and site of the post-war home. If Mr. "X" Gunner, or "X" bombardier can fly 300 miles with the greatest of ease while Caspar Milqurey — (Continued to page 90)

ABOVE: Suggested plot plan of 5½-acre site for an aviator commuter not desiring to cultivate land: would allow maintaining three-quarters of an acre of landscaped grounds in the center of a private woodland park. Hangar is at edge of unobstructed setback from runways.

Subdivided for Returning Aviators

LEFT: Plan for 40 aviator commuters, a tract of 477 acres, 300 miles, or about an hour from metropolitan center, subdivided into 40 little farms averaging 10 acres each. Runway shoulders will provide service lanes for grounded traffic. Homes will be set back on each parcel.

BE READY FOR THE HOME BUILDING WAVE OF THE FUTURE
One of the Last
Before Priorities
Built by a Long
Island Builder
for His Own Use

FOR POST-WAR LIVING
IN THE COUNTRY

ON A HALF-ACRE PLOT IN THE COUNTRY, this house at Lawrence, L.I., built and owned by Lou Goldschmidt, builder and developer, illustrates a type of post-war design suitable for country property. All principal rooms face on a private lake in the heart of Sutton Park; two awninged screen porches take full advantage of the picturesque setting. The plan is arranged to eliminate a basement; utility room houses heating and laundry facilities. Extra bedroom space is available on the second floor. The view at top of the page shows "rear" facing roadway. Exterior is limestone and hand-split shakes with a variegated heavy Bangor slate roof. Edwin Kline was the architect.
THE fireplace side of the living-dining room in this Northwest home displays the mahogany wall finish to excellent advantage. Flanking cabinets are nicely detailed.

Post-war model for home builders who want to get away from the narrowness and monotony of present war-restricted housing.

The home of Charles P. Constantine, veteran Seattle advertising man, on Mercer Island, overlooking Lake Washington, is offered by American Builder's Plan-it-now Department. As a forward-looking design, a "view house" of great individuality and charm, it is complete in every detail, yet of moderate size and cost. It is a model, obviously, for many a post-war home building project which will be erected in protest to, or relief from, the small rooms and drab sameness of much of the present war housing.

This unusual small home was designed by Max A. Van House, architect, and built by D. J. McPhee for Mr. and Mrs. Constantine. It features a broad living-dining room, finished
Home With BIG Outlook—

THE living room and master bedroom face the rear in this home near Seattle so that picture windows take advantage of the view.

FIRST floor utility room, plenty of storage, excellent circulation provide modern livability in four rooms and part basement.

in Honduran mahogany and provided with immense picture windows overlooking the lake. A big mirror above the mantle, set at an angle, reflects the outdoor view. The floor is oak, plank type. Outside walls and roof are, of course, of red cedar shingles, a favorite building material with Mr. Constantine, since he has been identified for more than a quarter of a century with the advertising and promotion of Pacific Coast red cedar.
Title VI War Duplexes Show Low Rent

Within the attractive small homes pictured above, F. C. Tucker of Indianapolis accommodates two war workers' families. These units are really detached three-room apartments, two to a building. Each consists of a combination living room and dinette, bedroom, bath and kitchen. Storage space including bedroom closet is simply organized in the center; it contains the hot water heater with adjacent flue which also carries the space heater in the living room.

The project consisted of ten double units which meet the FHA requirements for Title VI Mortgage Insurance.

Included in Mr. Tucker's past building experience was the construction of a number of gasoline service stations for a group of major oil companies. When he started on his war housing career it was perfectly natural that he should draw upon his past to work out a substantial, compact rental unit.

His familiarity with concrete masonry construction and the availability of the required units within a short trucking distance of the project were factors in his choice of materials. Beyond these was the major necessity of saving such critical materials as steel, lumber and metal items. The exterior walls are concrete block with interior partitions in narrow units of the same material. Concrete floors were laid over cinders, topped with a moisture-proof membrane of double thickness, asphalted paper. These floors were finished smooth and marked off in a tile pattern; tenants could use whatever floor covering was desired.

Two elevations and half plans of foundation and first floor as shown at the right demonstrate how F. C. Tucker builds attractive, economical two-family units within 28x36 overall size. In these three-room apartment type accommodations, the kitchen is screened from living and dining portions by a stub wall with through hall to enlarge kitchen space. Plumbing is economically grouped.
F. C. Tucker of Indianapolis Builds
Substantial Two-Family Masonry
Homes to Rent to War Workers
at $27.50 a Month per 3-Room Unit

Possibilities

Mr. Tucker reports that while these units were an innovation in that area and were found to be very satisfactory for low rental housing purposes, he believes that more of them could be built to advantage in Indianapolis. It is quite possible that in the post-war market, housing of this type, constructed by private builders on a larger scale, will fill a definite need.

Asphalt Shingles
Galv. Iron Gutter
2"X6'-16" O.C.

Top Block Filled with Concrete

Conc. Blocks
Plaster
8'-0" Min.

Floor

Grade
4" Cinders Double Thickness Tar Paper

WALL SECTION

WALL section indicates sound masonry construction of these homes; critical materials reduced to minimum (wood gutters now for metal).
ABANDONED Birmingham garage which was made into duplex for war workers is shown above, as published in January American Builder. Sketch at right shows how talented young architect suggested it might have been done to give it architectural charm.

THE conflict between idealism, good taste and good architecture on the one hand and the practical mechanics and economics of remodeling jobs on the other was never better illustrated than in the sketches above.

Here are two remodeling jobs, pictured in the January American Builder. They represent the practical, economical building methods as practiced in the field by many successful builders. Often such jobs are done without benefit of architectural service; frequently they are located in areas where an architect is not available.

Pictured below each of the jobs is a drawing or sketch by J. Murray Hueber, fifth year architectural student at Syracuse University. Hueber thought the remodeling so bad he prepared these sketches to illustrate how much better they might have been. American Builder leaves it to its readers to decide whether he is right.

Questioned regarding the sketch of the remodeled garage, Bedford F. Seale who did the job said "Hueber has changed the front roof line of the building, which we estimated would have cost $500 to $700 more than we charged for the work—quite an important item."

“This would likely have killed the job for us, as it hung fire for several months while the woman owner sought to raise the necessary funds.

"Admittedly, Mr. Hueber's design on paper is most attractive. We did not change the roof line at all, merely recovered it."

This controversy puts the spotlight on two important building and architectural problems, namely, (1) although our colleges and universities are training thousands of young architects they do not seem to get out into the "grass roots" areas of the building business where their services can be put to work on the hundreds of thousands of small building and remodeling jobs. (2) Far too often the perfectly sound and desirable ideas of architects, both young and old, run up the cost of a project so much that it would be killed if their ideas were allowed to prevail.

Certain it is, that the present trend is toward a demand on the part of the public for more skilled, qualified architectural service, and a better quality of design.

The incident which led to preparation of the above sketches by young Hueber was a letter written by his father.
Have Been Better This Way"

**Idealistic young architect criticizes remodeling jobs.**

Builder replies: "It would have cost too much your way"

father Paul Hueber, registered architect of Syracuse, to American Builder, as follows:

"The articles on post-war housing in the American Builder were of such interest to me that I ordered five copies—two for leading realtors, one for the publisher of a local paper (who wanted the data in preparation for some editorial work) and two for the Department of Architecture at Syracuse University where my son is in the fifth year architecture.

"As you know, most students have 'gone modern' like the architectural magazines—a bit ahead of the public as your articles proved.

"I felt sure I'd win one round with my son with the help of the issue of your magazine. All went well until

the students hit page No. 62 and then No. 64—the only sour spots that really made some modern stuff look good.

"Anyhow, I lost round 'one.' Kindly have your art editor, or someone, be more careful and help us 'old' architects win a fight once in a while with our 'modern' sons."—Paul Hueber, registered architect.

American Builder replied to this letter to the effect that one remodeled garage actually made into two houses for war workers today is worth many pages of theoretical projects on paper that never get built. American Builder

A solution now being worked out by many builders and building firms is the addition of a qualified architect to the staff or a working arrangement with an independent local man. Many architects, however, refuse to consider an arrangement of this type.

(EDITOR'S NOTE: American Builder will welcome and publish letters from readers who wish to express their opinions on this subject.)
Parsonage Gets Needed Wartime Reconditioning

Dilapidated structure is salvaged with very little critical material. Religious purposes help make such jobs possible.

OLD Alabama parsonage had about reached the end of its habitable days; "before" plan at right shows inconvenient arrangement.

An outstanding remodeling job at a cost of less than $1,000 was recently done on the parsonage of the Presbyterian Church at Carbon Hill, Ala., by Contractor Joe Allen of that town—a job that might be done in many other towns in the country.

Very little critical material was used in the remodeling, this including some wiring for a number of electrical outlets placed in the various rooms. This was permitted under the head of necessary repairs of a dwelling and also for a religious institution.

The old house in its dilapidated condition was more or less a disgrace to the church. The roof leaked, the rambling porch was about to fall down and the general appearance of the house bad, although basically of sound construction.

The changes as decided upon by Contractor Allen in cooperation with the pastor, the Rev. D. A. McRight, included the complete elimination of the porch which extended around two sides of the house and the erection of a new one of more pleasing design across the living room front of the house. The circular front of the front bedroom was eliminated to give this room more space and to improve the exterior appearance of the house.

Removal of the bathroom constituted the chief improvement in the interior arrangement of the house. Its old location opening onto the living room was changed into a closet opening onto the back bedroom and the bath relocated into a small hall space between the two bedrooms. The exterior wall of the house was extended out about 3 feet in order to make more room for the bath and at the same time leave space for a hallway in which a circulating heater was placed. A flue for the heater was built. A fireplace not completed when photographed was built at the end of the living room.

As rooms in the old house were dark, this was remedied by installing double windows all the way around and in every room, including five windows in all for the living room. Old materials in the house were used as far as possible in the remodeling. For instance lumber in the porch columns was used to build new window casings. A closed-in back porch was built and new floors laid in two rooms.

As Contractor Allen has a war job with a mining company he did most of the work on his off days.

NEW front is neat and, when landscaped, will be attractive. Changes in plan indicate more closets, windows and better location for both

OLD Alabama parsonage had about reached the end of its habitable days; "before" plan at right shows inconvenient arrangement.
WE asked 200,000 home owners and prospective home owners to vote on their preferences in equipment for the home they plan to build after the war.

The main purpose of this survey was to aid Crane designers and engineers in developing a postwar line of plumbing and heating which would suit the tastes and desires of tomorrow's home owners.

However, the thousands of answers we received are so indicative of the thinking being done today by tomorrow's home owners, that we believe you would be interested in learning more about it.

Obviously, no survey can cover all the factors that influence final selection such as cost, desires of other members of the family, etc. The replies, however, do represent an interesting cross-section of public opinion and as such can be of great value to anyone interested in postwar design or construction.

You might like to check your thinking with this expressed opinion of America's future home market. You will find the actual percentages of the questions in this quiz at the bottom of this page.

The questions shown are only a few taken from the Crane Survey. A more complete digest of the results of this poll augmented with statistical data is presented in an interesting book which will be sent without charge to anyone desiring a copy.
Appraising Slums for Redevelopment

This important phase of slum clearance by private enterprise supplements last month's general article on this subject.

TO CLEAR blighted rural and urban areas for private redevelopment, a basis upon which slum buildings and land can be appraised must first be determined. The huge task of rebuilding blighted areas will depend upon the formulation now of a basis of appraising that will afford federal and municipal authorities some approximate idea as to the total cost of the acquisition of slum land.

As a general rule, the value of land is the sum of all the net land incomes that will probably accrue or be developed from the use of the land, discounted for the period of time that it is predicted will elapse before the incomes are to be received.

To obtain an income from urban land, it is usually necessary to erect a building upon it. But a single 25 ft. lot has very little value in a slum area because an owner could not erect a new building that would yield an economic return if he built in the middle of a slum area.

On the other hand, land, under old buildings which are producing an income has a value based on the net income remaining after taxes, return, and depreciation on the old improvements are deducted.

In view of the conditions in a slum it should be assumed that the economic life of these old structures will be very short under the best conditions, and that the existing net income will continue for just a limited time. Unless the land is thus devalued, the cost of assembling it will be prohibitive.

Unfortunately, extensive tracts of land probably cannot be acquired in blighted areas, even under powers of condemnation, at a cost that will be less than their economic value as part of a new large scale redevelopment.

The costs of blighted land are augmented by the further necessity of paying for old structures that are to be wrecked. An old building on a typical 25 x 100 foot lot with a net income of $50 a month might well cost $5,000 to acquire. This would be equal to paying a site price of $2 per square foot or $200 per front foot. For this reason it is seldom economically feasible to develop new communities of moderate density on land now densely occupied by old structures, because of the high cost of site acquisition.

Opposing this cost, however, is the economic question of whether we can afford to pay the price of allowing the streets, schools, sewer and water systems of these central areas to lie unused while tremendous sums are invested in new schools, streets, sewers, and added transportation facilities. To continue to expand our cities may mean complete loss of revenue from the blighted areas and probable bankruptcy of the central city.

Inasmuch as it is contemplated that the job of rebuilding the slums will be done chiefly by private enterprise after the task of assembling the land has been achieved with governmental assistance, the following six means whereby economics can be effected in acquired land, are suggested:

(1) Appropriate authorities can foreclose the liens of taxes delinquent for more than a reasonable period, say five years, and provide an entering wedge for the program of redevelopment.

(2) Cities can rigorously enforce all health and building laws requiring demolition (in lieu of moderniza-

(Continued to page 93)
The temperature is below freezing ... may stay there for many weeks. A much needed war-housing project must be finished in double-quick time. One answer to your problem is Atlas High-Early cement.

American builders time and time again have turned to Atlas High-Early to help them meet winter wartime construction schedules. It gains strength rapidly and produces serviceable concrete so quickly that often forms may be stripped in 24 hours instead of the customary 3 to 5 days.

This means savings in time, equipment, heating, and manpower. Forms can be re-used more quickly, placing schedules can move ahead faster, heating, protection and curing time can be slashed—often as much as 70%. You need no change in mix or in accepted methods of good concreting when you use Atlas High-Early. Handle it as you would normal cement with the assurance that its quick-hardening properties will help you speed the job. For further information and for experience records of other jobs, write Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York 17, New York.

SAVE TIME IN WARTIME WITH

Atlas High-Early Cement

A UNIVERSAL ATLAS PRODUCT
THE MILLION or more homes predicted annually for many years after the War are being planned now and the desire for Red Cedar Shingle roofs and double-coursed side walls is being created by our national advertising in Home Building and Farm periodicals.

A survey by architects and builders shows that post-war housing will give preference to the Cape Cod and modified Colonial designs, and this is where double-coursed Red Cedar Shingle side walls are ideally fitted because of their beauty, economy, and long life.

Fill in the coupon below for a set of blueprints of correct shingle application—have these handy in your files for ready reference.

**RED CEDAR SHINGLE BUREAU**
White Building, Seattle, Wash., Canadian Office, Vancouver, B. C.
BRIEFLY TOLD:

TSA's November 1 advertisement in Life Magazine, featuring "The Suburban Home" with semi-circular kitchen and living room, is bringing in a flood of inquiries which promises to beat the outstanding record of previous TSA ads.

New "Suburban Home" folder, now being distributed, includes detailed heating plan, floor plan, interesting notes by D. Allen Wright, architect. As a special feature, the Modern Kitchen Bureau of The Edison Electrical Institute has designed a modern arrangement for the semi-circular kitchen.

TSA dealers report an unusual amount of consumer interest in current Timken magazine and newspaper advertising. Aggressive dealers are compiling valuable lists of prospects planning to build new homes after Victory.

The next issue of Timken Heat! (Timken's magazine for dealers and their employees) will contain an authoritative article by Dr. W. V. Howard of the Oil & Gas Journal on "Exploration Methods and Their Probable Effect on Future Oil Reserves." Also a story on "Cleaning Oil Strainers" with complete information on the latest factory-approved methods.

We have received many appreciative messages from dealers on our policy of maintaining a full staff of service representatives in the field during this emergency—another Timken service to dealers.

Less than 1/2 of 1% of all Timken users have substituted coal for oil. An excellent testimonial to user satisfaction, when you consider the pressure put on to substitute coal for oil.

Timken dealers really appreciate the simplicity of the Timken Burner when they try to keep less reliable, more complicated burners in operation.

You hear it every day —
Can't get the oil burner started . . . can't get a service man . . . don't know what to do!

But you seldom hear this about Timken Silent Automatic.

First, Timken Silent Automatic burners are designed and built to require less service — and to be easy to service when something does go wrong.

Second, Timken Silent Automatic dealers and mechanics know how to fix burners so they STAY fixed . . . thanks to factory training manuals and schools, backed up by expert advice from factory field men, new printed service aids, and frequent factory mailings to Timken owners.

Right now, a new 16-page booklet is on its way to Timken owners all over the country, packed with suggestions on how to keep equipment in good condition and reduce the need for service.

This interest in users' welfare is earning for Timken and its dealers one of the best reputations in the industry. Supported by strong advertising campaigns in magazines and newspapers, and the finest of selling tools, this public acceptance will help to sell a powerful lot of new equipment after Victory.

There's a long record of success behind the Timken franchise. We'd like to tell you how you can profit from it.

After Victory, Timken will be ready with improved heating and air conditioning equipment and other new products for the home.

TIMKEN Silent Automatic

Quality Home Appliances—for Comfort, Convenience and Economy

Division of THE TIMKEN-DETROIT AXLE COMPANY, Detroit 32, Michigan
Wheels Grind Slowly—The Home Builders Emergency Committee was lately in session here. Problems involving labor, material and equipment shortages were discussed at length with the government officials responsible for their supply. Assurances of faster processing and a more satisfactory allocation of bathtub tubs, ranges, gypsum board and other items were given the four sub-committees who followed through after the two-day discussion period. A full week has now elapsed and we can find no tangible evidence of action although we are advised that many beneficial directives are in the making.

Cold Weather Ahead—Builders priorities and options of land expire daily. The patience of many mortgagors is being badly strained. Projects in some parts of the country have come to a standstill through lack of materials. Applications for mortgage commitments continue at a low level. In the meantime, agencies of government charged with the war housing program argue among themselves over matters insignificant in their proportionate relationship to the total supply of materials and manpower.

West Coast Muddle—Although many war production centers are listed as "hot spots," California, Washington and Oregon head the "must" list in WPB. The reason for this is obvious. Most materials of war are approaching their maximum plateau of production. On the other hand, the production of aircraft and ships must be greatly increased. A large part of this load is scheduled for West Coast plants and yards where the housing available is totally insufficient to meet the manpower recruitment schedule. Los Angeles, for example, may soon be assigned another 13,000 priority 12-20 private and 1,000 public. The over-all job of some 85,000 dwelling units for the entire West Coast area is critically endangered at this moment by red tape. For almost the first time in two years consistent demand for relief comes not only from the builders, but from plant managers and regional government officials.

Time To Demand—Hardly a day has passed in Washington since Pearl Harbor that some official of government has not met our plea for materials and equipment by saying, "Would you take these materials for housing at the expense of guns, tanks and guns for our boys at the front?" Our answer to this has always been, and will continue to be, that the very plants which must supply our boys with these things will fail to produce them unless sufficient and adequate housing is provided for the workers. Only recently has this fact become apparent to some key men in WPB and to some top officers in the Army and Navy. It is now clear that unless our priority ratings for all materials are adjusted to parity with the Army-Navy ratings, the entire program will bog down this winter. It is quite clear that the time has now arrived for those interested in war housing to stop requesting and start demanding!

Postwar Billions—Senator O'Mahoney of Wyoming proposes that chief reliance be placed on private capital in financing housing and other job producing projects during the postwar period. As the head of the sub-committee of the George Committee on Post War Economic Policy, he has filed a report dealing mainly with conditions on the West Coast. In fact, he has gone so far as to suggest that it might be well to re-appraise all federal programs involving contributions to the states and their local subdivisions for various public works. In this connection, he points out that "while the national credit has been under great strain, the fiscal condition of the states seems to be improving." According to the Census Bureau, many cities are reporting a budget surplus. A recent estimate indicates that this budget surplus for the states has reached the figure of $1,000,000,000.

Material given Senator O'Mahoney by the Federal Reserve Board indicates that there are ample reserves of private funds to stimulate jobs "which the nation will need to substitute a prosperous peace economy for the present war economy." It is believed that the money in the country today available for investment amounts to $77,500,000,000—twice as much as was available in 1939. In concluding his report, Senator O'Mahoney expresses the opinion that "the trend toward State Socialism can only be retarded by the substitution of private and local expenditure and investment in fields which are private and local."

Relief Maybe—The Home Builders Emergency Committee met here this week in executive session. Tuesday was spent in a forum session with government officials. The writer (Continued to page 68)
The time-saving advantages of Lehigh Early Strength Cement apply, often at reduced cost, to concrete construction of all types and for all purposes—public and private.

The Lehigh Service Department will gladly answer all questions on uses of Lehigh Cements.

**Lehigh Early Strength Cement** for service-strength concrete in a hurry

**Lehigh Portland Cement Company** • Allentown, Pa. • Chicago, Ill. • Spokane, Wash.
(Continued from page 66)

ten reports of sub-committees, without exception, reflected a far more sympathetic attitude on the part of some divisions of government than has ever existed in the past. Assurances of early relief in both materials and procedures were given. This optimistic statement must be modified with a word of warning. Lumber is the number one problem. Manpower and equipment in the woods is still woefully inadequate. The demand for boxing and crating is steadily increasing. OPA's price controls necessarily must be continuously adjusted. No early relief is in sight and builders today must

erly prepare for the additional load. By temporarily shifting personnel from less critical areas, FHA offices have been in a much better position to function effectively during peak periods. The four recently appointed assistant zone commissioners have been instrumental in ironing out problems in the field and many of their recommendations have resulted in improved conditions in the local offices.

Postwar Estimates—There is no question but that the postwar construction job will be immense. Expert economists and planners agreed that the home builders' contribution to the postwar employment program is one of really great importance. The best thinking of these experts is within the framework of a ten-year demand by the following groups: (a) the accumulated normal demand unfilled during the war years; (b) an unusual demand resulting from immense war earnings and savings; (c) the demand from migration to new areas; (d) the war veteran demand and (e) an unusual demand resulting from more economical construction methods. Estimates vary from as low as 800,000 units annually to 1,900,000 units as a yearly average. Whatever the number may be, it is apparent that even the most pessimistic estimates will not be reached unless the procedural and legislative groundwork is carefully laid well before the war ends.

Important Subject—A sub-committee of the Lanham Committee under the chairmanship of Congressman Manasco held its first hearings recently. In official language, it is charged with "studiying and providing for the orderly disposition of surplus lands, buildings, fixtures and facilities appurtenant thereto; as well as surplus war plants owned by the United States and by corporations owned or controlled by the United States, acquired or constructed for use in the prosecution of the war." Except for the problem of providing for future employment in the postwar period, there is probably no subject of greater importance than the proper disposition of the billions of dollars' worth of lands and facilities directly or indirectly owned by the government. No less than six bills have been recently introduced in the House dealing with this problem. The conclusions reached by the committee will be of far-reaching interest and importance.

Slum Rebuilding—Private builders are expressing interest in the Urban Land Institute plan as proposed in the Wagner Bill. The Wagner Bill a step in the rebuilding of slums' reclamation of the land encumbered with obsolete structures. Through an extension of federal credit to the

(Continued to page 70)
DESIGN FOR DAYLIGHT ENGINEERING

One glance at the exterior of this home tells you that it is designed with daylight engineering in mind. Before you step inside you know that the rooms will be bright and cheerful...that there will be a distinctive air of spaciousness that only a generous use of glass can provide.

Through use of corner windows and large window areas completely around the house this home employs many of the principles of daylight engineering. Add to this exterior design the use of decorative glass in the walls inside and the home becomes flooded with welcome daylight throughout. Panel mirrors, too, materially help stimulate the effect.

Daylight engineering is one of the most important "wants" of tomorrow's home builders. And it is the one convenience that is within the means of every home. For it costs no more to build with glass than it does with any other material. High-quality Libbey-Owens-Ford Glass and Blue Ridge Decorative Glass are available for every daylight engineering need. Libbey-Owens-Ford Glass Company, 25113 Nicholas Building, Toledo 3, Ohio.

Photograph by Maynard Parker
(Continued from page 68)

city governments, the land can be secured on a reasonable basis. In addition to using federal funds on a long-term, low interest rate plan, it will be the obligation of cities to plan good neighborhood layouts and protect new residential areas with proper zoning. Furthermore, the States will be expected to grant the cities certain necessary authority, and to expand their existing condemnation rights. The entire construction job will be up to private enterprise—no public funds will be used for this purpose. Having a common objective, the home builders and ULI should work shoulder to shoulder in supporting the Wagner Bill. The rehabilitation of slum and blighted areas must be considered an important part of postwar construction. Public consciousness is rapidly awakening to the seriousness of this problem in metropolitan areas in the country. It is now apparent that the private home building industry must devise ways and means to produce decent, sanitary shelter for this "ill-housed one-third." This means that an unprecedented volume of housing must be produced at steadily lower cost.

* * *

$400,000 FHA Bill
(Continued from page 29)

The increase in Title VI authorization will permit private builders to complete their share of NHA war housing as approximately 85% of all privately financed war housing requires Title VI insurance. Under this Title, private lending institutions are protected against loss. The extension of Title II, which enables the insuring of mortgages on existing houses, will let FHA continue normal operations in this important part of the home mortgage market. Title II embraces FHA's peacetime program and it is pointed out that refinancing and sale of old houses has a strong bearing on the new home market.

Title I extension assures a continued supply of consumer credit for home repairs and improvements, Mr. Ferguson pointed out. Currently, the Title I program is an important source of financing for the conversion of existing structures to provide additional housing units under local conversion quotas established by the National Housing Agency. Title I loans are widely used to finance essential repairs to existing houses and the installation of fuel conservation improvements. Insurance under this title may be a valuable instrument for quickly providing needed employment immediately after the war when homeowners will seek to finance repairs and improvements deferred during the wartime period of shortages.

* * *

Keeping Up With Washington
(Continued from page 29)

supplies and equipment. In accomplishing this result, the Board will in each case seek a minimum consumption of materials and manpower, together with maximum utilization of existing facilities and equipment.

To carry out this policy, a facilities committee was established and the former industrial and non-industrial committees were abandoned. The new committee will be headed by Donald M. Davis, with Roy W. Johnson, C. Ridgley Lee Jr. and Frank W. Heracting as deputy chairmen.

* * *

A.F. of L. Committee
(Continued from page 29)

of millions of war workers newly recruited to man strategic war production, has received the least attention in the mobilization of our country for war. Yet housing has been consistently the most important factor in recruitment of war workers to the essential jobs, and in the ability of these workers to keep up a sustained maximum contribution to war production. That lack of proper housing was one of the chief obstacles in the expansion of our war production became a glaring fact. Where in a single case seek a minimum consumption of materials and manpower, together with maximum utilization of existing facilities and equipment.

PHOTO, COURTESY RILCO LAMINATED PRODUCTS

Delivered on the Dot . . .
LAUCKS-GLUED ARCHES

ARCHES of wood and glue . . . by-passing critical materials . . . are delivered on time to hundreds of wartime construction jobs today.

Thus glue chemistry and practical gluing experience combine again to do an outstanding production job. Another example of the way I. F. Laucks, Inc., is helping many of the largest makers of laminated construction.

Whether you are making or specifying laminated arches and beams, boatcraft, aircraft, or housing, etc. Laucks—world's largest makers of waterproof and water resistant glues—can help you. For Laucks glue and Laucks service—wire, write or phone America's glue headquarters.

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

LAUCKS CONSTRUCTION GLUES
Consult LAUCKS—America's Glue Headquarters

American Builder, November 1943.

(Continued to page 72)
A Temlok Idea
that pays for itself

SHOW a prospect how his sunporch can earn money for him, and he's almost sure to be a customer. To begin with, Armstrong's Temlok De Luxe Board makes it easy, and inexpensive, to turn space like this into an extra bedroom. And this factory-finished insulating board makes a mighty comfortable home for a war worker, well worth the rental that pays for the job.

First, show your prospect what the finished job will look like. Use an attractive enlargement of the above sketch. We'll send you one free.

Second, show samples of Armstrong's Temlok De Luxe and explain how it builds, decorates, and insulates walls and ceilings in one simple operation—at one low cost.

Third, explain how easy it is to plan distinctive decorative effects, and how the cream-colored surface of Temlok De Luxe Board forms an ideal background for the furnishings he wishes to use in this spare room.

It's surprising how much profitable business you can pick up with this simple sales formula—extra business which is easily scheduled between other jobs. And it's business which you can handle easily, for Temlok De Luxe requires no unusual skill or special tools. Any competent workman can complete a Temlok remodeling job like this, working by himself.

Free Enlargements of this and other sketches, and samples of Temlok De Luxe, are yours for the asking. Write today to Armstrong Cork Company, Building Materials Division, 1611 Ross Street, Lancaster, Penna.

ARMSTRONG'S TEMLOK INSULATION
SHEATHING • LATH • BOARD A DE LUXE INTERIOR FINISH
Community half a million workers were brought in to take war jobs and provision of decent living quarters was not assured them, disruptive friction and mounting tension was bound to follow. This tension came to a breaking point in the summer of 1943. Race riots broke out in half a dozen communities with violence and bloodshed in Beaumont, Mobile, and Detroit. In every instance lack of housing and the resulting overcrowding were listed as the foremost cause of the disorders.

"Direct effect of the lack of housing on war production began to show even earlier. Abnormal rates of absenteeism and unprecedented labor turnover were attributed by both employers and public officials studying the problem to the lack of adequate housing. Shortages of housing and transportation have been established beyond dispute as the prime factors in the slackening of the pace in war production in many localities in the late summer of 1943."

** Temporal Price Measure Facilitates Shipment of Wall Board to West Coast

Because gypsum wall board, lath and sheathing is critically needed for the completion of government housing projects in California, Washington, Oregon, and Arizona, the Office of Price Administration has announced an upward adjustment in dealers' prices. The action provides for mid-west plants to ship to the west coast at f.o.b., plant prices plus full freight on orders by dealers holding WPB AA-3 priority ratings or higher. Dealers may add to their increased costs the dollar mark-up they get on normal purchases from west coast plants. It will be noted, however, that dealers must have at least the priority rating mentioned above.

** Prefabricated Housing Manufacturers Organize

The Prefabricated Housing Manufacturers Institute is the name given to a new association in the homebuilding field. The announcement states the activities will be dedicated to the advancement of health, happiness and security for increasing numbers of families by making available homes of greater quality, comfort and economy through the application of modern mass production methods.

It is stated the new Institute will be located in Washington under the direction of a general manager and staff.

** How To Be a Local Expert on Fuel Conservation

(Continued from page 37)

25. The air filters of a forced air heating system should be either cleaned or replaced at least once each year or oftener if necessary.

26. With both gravity and forced air heating systems all the joints in both the supply and return air ducts should be sealed with strips of asbestos or made tight in some other approved fashion. However, the entire duct work should not be covered with a layer of asbestos paper as the change in color and nature of the surface when covered with paper will increase instead of decrease the loss of heat from the ducts.

27. All supply and return air registers and grills in both gravity warm air and forced air heating systems should be open and unobstructed. In no case, should furniture, rugs, or other articles be allowed to prevent the free flow of air through these openings.

28. With a forced air heating system, additional heat is required if outdoor ventilation air is taken into the unit and distributed throughout the house. The most economical operation of the heating plant will be obtained when the introduction of outdoor air is entirely eliminated and all air passing through the heating unit is 100 per cent recirculated from the room.

(Continued to page 74)
Guard Your Future

Powerful and highly competitive interests have their eyes on post-war building. They would like to take over your business after the war. Today you need eyes and ears and a voice in Washington as you never needed them before.

Let the weekly Washington News Letter of the National Association of Home Builders be your eyes and ears in Washington. It will tell you about every happening that affects the building business, about legislative changes and how to interpret government directives. It will tell you what is going to happen, what has been planned and what you should do about it.

The National Association of Home Builders is your voice in Washington. It represents you when you need it. It sees that your interests are considered when decisions are made and when plans are prepared.

You can't afford to do this job alone yet you can't leave it undone. Neither can the "other fellow" do the job without your help. We are all in this business together. For the first time the nation's home builders have one big national association.

The Washington News Letter of the National Association of Home Builders is the biggest value for the least money that you can buy today. The industry needs it. You need it. It will help you stay in business. It will help you save money. You can prove its value without charge or obligation. Send the coupon below for the special Free Trial Offer to the National Association of Home Builders.

FRANK W. CORTRIGHT

The weekly Washington News Letter is edited and written in the shadow of the capitol dome by Frank W. Cortright, Executive Vice-President of the National Association of Home Builders.

This advertisement sponsored by Fritz B. Burns, president of the National Association of Home Builders of the United States.

Special

FREE TRIAL OFFER:

Act now. Send the coupon and you will receive without charge or obligation the next four issues of the Washington News Letter. Or, join now. You will receive the Washington News Letter for 58 weeks and full, active membership in the National Association of Home Builders to the end of 1944—all for $10.00. It is the biggest value you can buy today. You will find it the best $10.00 you ever spent.

USE THIS COUPON NOW

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

CHECK ONE

□ Please enroll my name as a Member of the National Association of Home Builders.
□ Send sample ( ) Send sample ( ) Send sample ( )
□ Payment of $10.00 entitles me to all membership privileges and weekly copies of the Washington Letter for the balance of this year and all of 1944.

Without charge or obligation please send me the next four issues of your Washington Letter and full information about the National Association of Home Builders.

Name ____________________________
Firm ______________________________
Street & No. _______________________
City and State _____________________
29. In gravity warm air heating systems all return air ducts should be insulated from any high temperature source of heat. If this is not done, the air returning to the furnace will be heated before reaching the furnace and this will reduce the ability of the system to circulate air by gravity.

30. If a cast iron furnace is used in conjunction with a gravity warm air heating system, the joints between the castings of the furnace should be reset and recemented every three or four years by a reputable heating contractor.

31. The motor and blower bearings of a forced air heating system should be oiled at least once each heating season.

32. The flues and heating surfaces of any air heating system should be cleaned of all soot periodically to maintain highest efficiency. A deposit of soot on such heating surfaces may reduce the overall efficiency of the heating plant as much as 5 per cent.

Domestic Hot Water

33. A hot water storage tank should be thoroughly insulated to reduce the loss of heat from the hot water in the tank to the surrounding air.

34. All leaky hot water faucets should be repaired to eliminate this waste of both water and heat.

35. If it is found necessary to allow water to run during cold weather to prevent freezing of piping, this defect in the piping system should be repaired. The application of insulation at the correct points will reduce the necessity of running the water.

36. The amount of fuel required for heating domestic hot water may be reduced by heating only during morning and evening hours and by lowering the heating water above a temperature of 140 F.

Maintenance of Correct Temperature Within the Heated Structure

37. Appreciable savings in fuel may be effected by the maintenance of the lowest practical temperatures within the heated structure. It is usually possible to maintain much lower temperatures during the night time hours than during the day time hours to effect even further savings.

38. Reduce or turn off completely all heat supplied to unoccupied spaces. If there is any danger of damage by freezing in such cases, maintain the temperature slightly above freezing at all times. In the case of radiators in unoccupied spaces, the simplest means of shutting them off without causing damage to the radiators or the piping is to cap them.

39. If a structure is to be unoccupied for several days, the temperature may be reduced to 45 or 50 F. It should be kept in mind that if the temperature is reduced much lower than this, there may be some damage by freezing of pipes in walls or of plumbing because the temperatures to which such pipes are exposed would be somewhere between the indoor temperature and the outdoor temperature.

40. Install thermostatic control, if possible, to prevent overheating and a consequent waste of fuel.

Combustion Efficiency

41. If automatic fuel is being used in the heating installation, the percentage of carbon dioxide in the flue gases should be checked by a reputable heating contractor in order to ascertain whether the fuel is being fired with maximum efficiency. In addition, the chimney draft and the stack temperature should also be checked. For best results, all of these determinations should be made by instruments as it is virtually impossible to determine the correct setting for firing a fuel by any other means.

42. All heating installations firing automatic fuel should be equipped with automatic draft regulators in the stack for maximum efficiency. Without such a device it is impossible to set any installation for maximum efficiency under all conditions as the stack draft will vary considerably with changes in outdoor temperature and wind velocity.

43. The fuel input to an automatic heating installation should be adjusted to the lowest practical value which will satisfy the heating requirements during the coldest weather conditions.

44. If the heating surface of a boiler or furnace is insufficient to satisfy maximum heating requirements and still maintain reasonable efficiency, it may be

(Continued from page 72)

(Continued to page 76)
What Improvements Will Come From These NEW Insulation Facts?

Two purposes are served by the recent extensive insulation tests made by the Wood Conversion Company with four identical test houses.

The first is the compiling of new facts about insulation—new findings on such important subjects as heat loss, insulation thickness and fuel saving.

A copy of the report on the Wood Conversion insulation tests as it appeared in the journal of the American Society of Heating and Ventilating Engineers is yours for the asking. Keep up to date on insulation—mail the coupon for your copy.

The second purpose is a substantial addition to the vast body of research which has made Balsam-Wool a leading insulation in the past... and which will make it outstanding in the postwar era. For the new findings are just another step in the Balsam-Wool program of constant improvement.

Wood Conversion Company
Dept. 119-11, First National Bank Bldg.
St. Paul, Minnesota

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

Name
Address
City
State
possible to increase the heating efficiency of the installation by the use of a fuel saver.

45. If hand-firing of coal is used in the heating installation, care should be taken that the methods of firing are those which will result in a minimum waste of fuel.

General

46. A minimum loss of heat through windows will result if all shades and drapes are fully drawn during the evening and night hours and if the shades are half drawn during the day hours. Drawing of shades and curtains will not only result in a reduction in heat loss through the windows but will also raise the average surface temperature of the room and thus result in a greater feeling of warmth to the occupants for the same temperature conditions within the room.

47. A considerable saving of fuel may result if all windows are kept closed during the night hours. From the standpoint of actual ventilation requirements, there is sufficient leakage of air from the outside of the house to the inside of the house to take care of any needs from a health standpoint. The necessity of opening windows in bedrooms during night hours is principally psychological.

48. Some rooms which are heated during normal times and which have very high heat losses may have the heat cut off for the duration of the war without any undue discomfort. For example, heated garages are a luxury, as the amount of fuel required to heat the average garage, even when attached to the house, is great in comparison with the advantages gained. Sunrooms are also unusually very difficult to heat because of the excessive glass areas. The heat supplied to such rooms may often be entirely disconnected or greatly reduced without any undue discomfort.

War Bonds Urged as Future Down Payments

POINTING out that the first thing in home ownership is financing and that the down payment is the first financing problem, Western Homes Foundation, Seattle, advises families to start digging the foundation of their future now with War Bonds. "War Bonds offer a golden opportunity to solve this problem between now and the end of the war," says W. C. Bell, Foundation Chairman. "For example, the purchase of a single $50 bond each month for the next two years would mean total cash savings of $900 at the end of that period, or an amount sufficient for a 20 per cent down payment on a home with a total cost of $4,500. Actual monthly outlay would of course be $37.50, the cost of a $50 bond.

"On the schedules in effect for the financing of home ownership before the war the monthly payment for a 20 year, 80 per cent loan on a $4,500 home would be $23.76. When the home is occupied, with monthly cost fixed over a long period, the family need not fear rents rising from inflation or other causes."

For POST-WAR BUILDING

A HUGE BACKLOG of civilian building needs is awaiting the conclusion of the war. Aberdeen Plywood will be available immediately—for the same machinery that produced it for war will produce it for peace, without retooling or plant conversion.

Aberdeen Plywood's uses in global war stretch all the way forward from the barracks to the fighting front. Many new uses, developed for war, are adaptable to peacetime building. Modern plant and adequate personnel trained in precision production make Aberdeen Plywood a name to remember.

ABERDEEN PLYWOOD
MANUFACTURERS OF HOT PRESS DOUGLAS FIR PLYWOOD
HOT PRESS
FOOT OF ALDER STREET
Aberdeen, Washington

American Builder, November 1943

The only time when opening of windows in a residence during winter months is fully justified is for elimination of odors.
PIONEERING in the manufacture of factory-built homes to meet the nation's emergency housing needs, Palace has developed a plan of free-standing housing whereby vacant lots in subdivisions already provided with public utilities can be quickly put to use.

Completely factory-built, factory-assembled and factory-equipped—with plumbing, heating and lighting equipment installed at the factory—Palace dwelling units are transported from factory to building site by motor truck, and are ready for occupancy practically upon arrival.

With one basic unit, as many as four variations in room arrangements can be supplied to meet the needs of each individual family. The units are provided either without bedrooms or with as many as four bedrooms, as desired—and with or without toilet, shower and bath.

Low in cost, yet conforming in every respect with the war housing requirements of the Federal government as to floor areas and building standards, Palace dwelling units offer the ideal solution to the problem of quickly supplying additional housing facilities in any section of a city where they may be needed.
Boiling chips of Western Pines in oil is a feature of the Bidwell-Stirling test to determine moisture content. To know this precise amount is often essential in our Research Laboratory experiments with Western Pines.

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

*WESTERN PINE ASSOCIATION*

Yeon Building, Portland (4) Oregon

*Idaho White Pine*  *Ponderosa Pine*  *Sugar Pine*

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**Wartime Products Help**

**New Portable DeWalt Radial Saw**

DeWALT Products Corporation, Lancaster, Penn., announce a new portable model radial cutting machine, built especially for cutting right on the spot, thus saving materials handling, cutting time, and relieving manpower for other jobs. It is ideal for use on the job or around the plant, since two men can easily carry it.

It will cross cut material 14" wide by 1", 12" x 3" with 12" saw, and rip from 0" to 26" wide. It will also miter, rip, bevel cut off, double miter, and bevel rip. With such tools as dado heads, shaper cutters, router bits, and others, this machine is actually a woodworking shop in itself.

**FLUORESCENT extension cord unit is streamlined.**

PORTABLE radial cutting machine may be used on job or around plant.

This new machine is available in 1½, 2 and 3 HP sizes. The direct drive motor is protected type, Formex Fiberglass insulated, and provided with sealed ball bearings that require no lubrication.

**Improved Fluorescent Unit**

Changes in design of P-7, the fluorescent extension cord unit with a multiplicity of uses, now permit lightning fast lamp change; ends have been rounded; rigid hanging hook is riveted to the end cap; the white Miracoat reflector provides maximum efficiency light output.

This unit, a product of Sylvania Electric Products, Inc., Ipswich, Mass., utilizes the small 6-watt fluorescent lamp which provides a very adequate amount of cool, glare-free illumination in those tight, hard-to-get-at places.
Builders Keep Busy

Prefabricated Shower Cabinet

A NEW wartime shower cabinet which can be erected in less than twenty minutes and is particularly suited for use in industrial plants, camps and cantonments, wartime housing, institutions, and for remodeling work, has been announced by the Fiat Metal Manufacturing Co., 1205 Roscoe St., Chicago. Known as the Fiat Volunteer, it requires only the permissible amount of critical materials, yet still offers the strength and rigidity essential to lasting construction.

Tension locking joint, front stiles, top trim and threshold are formed of rust-proofed steel. Wall panels are made of tempered, hard-pressed, treated fibre-board, and are finished with waterproof baked-on enamel. Receptor is of reinforced concrete, non-slip, leak-proof, and non-absorbent, occupies a 32" x 32" floor space and is 75" tall. All parts have been carefully formed to eliminate raw edges inside the cabinet.

Rubberless Building Wire

A NEW type building wire called Hazapak, whose insulations and protective coverings contain no critical materials, is being produced by The Hazard Insulated Wire Works Division of The Okonite Company, Wilkes-Barre, Pa. The copper conductor is insulated with a synthetic (cellulose-acetate butyrate) tape and further protected with a heavy layer of moisture-proof compacted Kraft paper.

Metal Cored Roofing Sheets

A NEW corrugated roofing with a steel core protected by an elastic, rubber-like material on the surfaces has been announced by Cheney Metal Products Co., Trenton, N.J. The covering is combined with the steel at high temperature to give a durable, gray-colored surface. Sheets come in 4, 5, 6, 8, 10 and 12-foot lengths, 26 and 27½ inch widths, 26 to 20 gauge inclusive. NEW roofing comes in 1¼" and 2½" corrugations.

Engineering Service

Inquire now about our competent engineering service on the installation of Grand Rapids Invisible Sash Balance in window assemblies especially suited to mass production of double hung window units for prefabricated homes in housing projects. This service will help you and help the nation's war effort, as well as prepare you with invaluable post-war planning knowledge.

GRAND RAPIDS HARDWARE CO.
GRAND RAPIDS • • • MICHIGAN
Building concrete lanes of housing project for Naval Ordnance Depot workers in Nebraska.

Footings and floors in place for concrete masonry homes near Ordnance Depot.

**War Construction Still Needs Concrete Men**

Expediting the war effort is still the first duty of concrete contractors and concrete products manufacturers.

Needs for war housing, war industry and military camp improvements are not yet satisfied.

Concrete contractors can help the war effort by calling on war industrial plant superintendents and military post engineers to show how their services can expedite essential repairs, extensions and new construction.

- Concrete construction for any of these vital purposes requires minimum use of scarce materials. Transportation is saved because the bulk of concrete materials is usually available within short hauling distance of any project.

Information sheets and “How to do it” booklets have been prepared to help contractors expedite concrete construction for war industrial plants, military posts and farms. These are available on request.

**PORTLAND CEMENT ASSOCIATION**

Dept. A11-3, 33 W. Grand Ave., Chicago 10, Ill.

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

**BUY MORE WAR BONDS**
When home owners post-war created individuals of this anti-post members and post-war enter- takers, they were:

D. C.

known as work of funds - for Senate.

D. C.

Post-war transi-to one more than ten thousand.

D. C.

Arnold of the number of press, I know you Defense can get to the rounds.

D. C.

matters they keep Con-

ich. We are back to the, a program.

Ohio

Pre-

binder.

The Name

HOPE'S Guarantees

1943

818

Until current stocks are exhausted, HOPE'S Steel Windows are available without priority certificate. After Victory, Hope's new developments, improved service and lower prices will bring the outstanding advantages of steel windows to broader markets.

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

BUY WAR BONDS

for Your Post-War Plans...

SMALL HOMES OR APARTMENTS

TRAVEN BAY MFG. CO.

(Affiliated with The Parsons Co.)

15000 Oakland Ave.

DETOIT, Mlch.

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

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

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

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

...another of Douglas Fir Plywood's hundreds of war uses!

Following close behind our soldiers on the fighting fronts are scores of demountable hospitals built of Douglas Fir Plywood by National Housing Company of Dallas, Texas. Because these sturdy, lightweight, easy-to-clean units can be quickly taken down, transported to a new location and re-erected, they are doing much to speed and facilitate the all-important work of the Medical Corps. It is service like this now that will make Douglas Fir Plywood more useful to you after Victory than ever before!

OTHER HOSPITAL USES:

The U-shaped ends of this hospital bed cradle are sawed from durable Douglas Fir Plywood.

TO HELP SPEED VICTORY

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

NEW WAR USE FOLDER gives a photographic review of many of the ways this Miracle Wood is serving our Armed Forces. Write for your free copy, Douglas Fir Plywood Association, Tacoma, Washington.

American Builder Expands Circulation Activity

PLANS for a vigorous expansion of American Builder circulation in the building industry commensurate with expected post-war expansion of building volume were laid at a meeting of American Builder circulation heads at Chicago last month.

Noting a sharp turn upwards in the magazine's circulation, officials in attendance expressed confidence that the end of the war will see the beginning of one of the most active building markets in history with more individuals in need of the type of information provided by American Builder.

Recent promotions in the circulation department have been announced which will materially strengthen and expand the activity of this important division. Herbert E. McCandless, former assistant to the president of Simmons-Boardman Publishing Corporation, has been elected vice-president in charge of circulation. Edward A. Sand has been appointed circulation manager of American Builder and William L. Taylor, field superintendent.

Appointment of McCandless as vice-president culminates twenty-three years of service with Simmons-Boardman. Sand joined the staff of American Builder two years ago, bringing a sound background of experience in direct mail advertising and magazine circulation selling. "Bill" Taylor also joined the staff of American Builder two years ago and has since traveled extensively building up circulation representatives and making friends and contacts for the publication in the field. A staff of ten field representatives of American Builder will serve this industry under the new circulation program and will be expanded as conditions require.

Home Builders to Meet at Cleveland

ARTIME housing for today, peacetime building for tomorrow, and the outlook for private builders in the post-war years to come, will be discussed by leaders in the nation's building and construction industry at the Home Builders' War Conference, sponsored by the National Association of Home Builders of the United States, to be held at Cleveland, Ohio, November 15-17, it was announced by Fritz B. Burns, Los Angeles, Calif., president of the National Association of Home Builders. The Hotel Cleveland will be the conference headquarters and present indications are that this will be the largest gathering of builders under one roof in the nation's history.

Outstanding authorities in the country's building industry and top ranking government housing officials from Washington, D.C., will be on the program. Principal speakers at
the Conference are: John B. Blandford, Administrator of the National Housing Agency, at Washington, D.C.; Earl S. Draper, Deputy Commissioner of the Federal Housing Administration, Washington, D.C., and Brigadier General S. C. Godfrey, the Air Engineer of the Army Air Forces, who recently returned to Washington headquarters, from a global flying tour of 45,000 miles made in 260 flying hours.

The program covering a wide range of topics will afford an opportunity for discussion of vital war, and post-war problems confronting all those in the field of building and construction and allied industries. Although attention will be focused on wartime problems, complex in character, the program will also cover many matters of interest to all builders. Some of the major topics for discussion will be the role to be played by private enterprise in the final clean-up of the war housing job begun in 1941; how private builders can meet the need which public housing intends to meet by using the taxpayer's money; WPB restrictions and the outlook for securing tubs, ranges, refrigerators and heaters; what will be built when L-41 is relaxed; the role of the private builder in meeting the challenge of the 10,000,000 postwar homes program and the legislation and procedure which the National Association of Home Builders must secure to enable private builders to have a full participation in such a program, will be among the questions discussed at the Conference.

Grove Leaves Hotpoint; Goes With M-H

W. A. ("Art") Grove, formerly director of advertising and sales promotion, Edison General Electric Appliance Company (Hotpoint), Chicago, has joined the firm of Addison Lewis and Associates, Minneapolis advertising agency, as account executive on Minneapolis-Honeywell regulators and other accounts. Before going with Hotpoint, Mr. Grove was connected with the Curtis Publishing Company, as advertising sales representative for the Saturday Evening Post in Chicago office territory. "Art" Grove is widely known throughout the home appliance industry because of his active participation in association and industry promotional activities. He has twice served as Chairman of the Plan Committee of the Modern Kitchen Bureau and for five years was Chairman of the Electric Range Advertising Committee of the National Electrical Manufacturers' Association. He is also a former director and vice-chairman of the Association of National Advertisers.

Urban Construction Now Planned to Go Ahead as Soon as War Bans are Lifted, Runs in Billions

DEFINITELY planned construction that is ready to be built as soon as war bans are lifted and materials are available apparently runs into several billion dollars according to the National Association of Real Estate Boards' 41st semi-annual survey of the real estate market.

In the 287 cities covered by the Association's survey, there is approximately $1 1/2 billion worth of construction definitely planned. Only building that is actually "on the boards" and ready to go as soon as the war is over was included in the report. Planned construction averaged $516 per person for the combined population of the reporting cities. If this average prevailed for the whole nation, it would indicate that there is a deferred backlog of construction running over $30 billions.

Long-delayed public works, some of which will take five years or more to complete, are the biggest single group of projects that are already well assured for immediate post-war construction. Sewer systems, streets and hospitals are frequently mentioned. Airports—commodious airports—are
tomorrow's kitchen for tomorrow's home owner

It's a far cry from the battlefront kitchen to the comforts of home, but America's men and women are always thinking of home—making mental comparisons between the products of the field kitchen and the food that mother used to serve.

Here at Bilt-Well, skilled designers and artisans are making ammunition boxes, barrack lockers and other war essentials while planning and designing the most livable homes for America when America's fighting forces return. May we tell you what Bilt-Well products are now available?

CARR, ADAMS & COLLIER CO.

Dubuque, Iowa
complete large-scale replanning and rebuilding can their
caracter be so radically changed as to fit them for satisfac-
tory modern home neighborhoods. Getting the land together
for such a project is the key to the problem. Since a bill is
now before Congress introduced by Senator Wagner at the
request of the Urban Land Institute to help cities get the land
assembled by private enterprise in accordance
with a comprehensive city plan, the Association asked each
city to estimate the size of local blighted areas that call for
such rebuilding. Reports from 117 of the cities with a combined
population of 26,613,722 persons estimated a total of
110,909 acres in older sections of these cities as ripe for such
rehabilitation. This is an average of four acres of blight for
every thousand citizens in the entire combined population
of the reporting cities.

How to Keep Jobs Rolling This Winter
(Continued from page 33)

before removing either protection or forms. A little hot
water poured on the concrete is a good way to test it.
If well hardened, the hot water will have no effect. On
the other hand, if the concrete is frozen, hot water will
soften it.
Calcium chloride in the concrete mix helps to hasten
quick setting and makes for early strength, all of which
is added protection in winter concreting. Calcium
chloride comes in 100-pound, moisture proof bags. Two
pounds of flakes added to the aggregate, or two pounds
dissolved in water added to the mixing water, per 100
pounds of cement, is the proportion recommended.
Early curing and early strength cement hardens as
much as 60 to 70 per cent faster than regular cement, so
this type is especially suitable for use in cold weather
work. It definitely needs protection while curing, but
allows forms to be removed quicker thus speeding up the
job.
Concrete floors for barns, poultry houses, milk houses
(Continued to page 86)
and other farm buildings can be readily laid in cold weather. They are easy to protect from severe temperatures by covering with tarpaulins or straw. All refuse must be cleaned out and the clean floor graded to required level. The soil should be compact. If the soil doesn’t have good drainage, a layer of cinders or broken stone should be leveled over it before the concrete is poured.

The mixture recommended for floors is 1 sack of cement, 2½ cu. ft. of sand, and 3 cu. ft. of pebbles or broken stone. This amount of mixtures takes about 5 gallons of water if the sand is moist. It is also recommended that such floors be laid in one course, or full-thickness at one time. Where forms are used, the lumber should be smooth and firmly held in place with stakes.

In cases where it is desired to put a concrete floor in a building in which livestock is housed, the floor can be laid in sections. The body heat from the animals will assist in tempering the atmosphere and less precautions against freezing will be necessary.

Watch Cold Temperatures Carefully

However, in any cold weather operation using concrete, it must be appreciated that concrete cures much slower in cold weather than in warm. For instance, standard concrete will reach a strength of 2500 lbs. per sq. in. in 6 days at a temperature of 70 degrees, but at a temperature of 40 degrees it will take 14 days to develop that strength. High early strength cement, while it cures much faster, also takes longer in cold weather. This type cures in two days at 70 degrees but takes about 5 days at 40 degrees.

Concreting in cold weather is entirely feasible with adequate protection, but care must be exercised to have extra precautions available if the weather suddenly turns down to freezing or below. When the work is inside a building, artificial heat can be used, such as oil or coke burning salamanders. If the work is outside, it must be thickly covered with layers of building paper and straw or hay.

The new second edition has been thoroughly revised.

The manuscript was carefully checked by a former contractor and ex-editor so that this book combines the practical outlook with the author’s trade teaching experience. The cardinal principles of modern residential construction are set forth simply and logically with the aid of many photographs and line drawings.

The Second Edition contains 90 revised pages with new illustrations and descriptions of new methods and materials.

The program of study as presented in this latest textbook for students of carpentry work involves class discussion, practical job work and related studies. This includes Architectural Drawing, Plan Reading, Carpentry Mathematics, Business English, Applied Science, Civics and First Aid.

280 pages, illustrated, 8½ x 11 inches. Cloth Bound, $3.00

BOOK DEPARTMENT
AMERICAN BUILDER AND BUILDING AGE
30 Church Street
New York, N. Y.
Other concrete jobs include driveways, walks, basement, porch steps, as well as making fence posts inside a building for use in the spring. The farmer has some time on his hands during late fall and winter months, and can be relied upon to help. Because his time put in on the job relieves the contractor from hiring a helper, the job will cost less and be a talking point in influencing the farmer to have jobs done at this time of year.

Because many farmers have been short-handed, most of their attention has been concentrated on farming. Buildings have been neglected, roofs have been allowed to deteriorate to the point of being in need of repairs, and doors left to sag. Many a tool or machinery shed leaks and side boards are loose and afford poor protection for articles stored in them.

Asphalt roll roofing and shingles are available generally, and late fall is the time to patch and fix things up for the winter. Roll roofing can be applied to the sides and roofs of sheds after they have been nailed and braced. Barn and house roofs can be patched, flashings repaired, and loose or rotted siding nailed down or replaced. In many instances new roofing may be indicated, especially over hay mows where dripping water can easily create instantaneous ignition in the hay.

Interior remodeling of houses in defense areas where there is a housing shortage offers inside winter work that can keep a lot of builders busy. Making extra rooms by building partitions, or finishing off attics with available wallboard will keep things rolling during winter months. This work is definitely necessary and priorities for materials needed, and the materials, are usually available.

Garages usually need repair work, especially the doors. They can be taken off, squared up and braced, painted, and relung so they will operate satisfactorily when snow and ice appear on the scene. The concrete floor and apron may need patching and protected from water getting in and freezing. All these things suggest other winter work that needs doing, and will help avoid idleness this winter.
CATALOGS AND HOW-

99—WELDING STAINLESS STEELS—A book of 64 pages and covers, beautifully and profusely illustrated by means of full-color perspective drawings and diagrams, has been issued by Allegheny Ludlum. Designed to interpret the techniques commercially employed in the welding of stainless steel by the accepted processes, it tells the welder what to do, how to do it, and the basic reasons why. It is an elementary, practical instruction manual for the student or beginner in stainless steel welding, and also a complete technical explanation helpful to production men, engineers, designers or metallurgists.

The book is divided into six chapters: Effects of Heat on Stainless Steels; Metallic Arc Welding; Atomic Hydrogen Welding; Oxygen-Acetylene Welding; Electrical Resistance Welding; and Welding Plumel Steels—Allegheny Ludlum Steel Corp., Brackenridge, Pa.

100—PRESSURE-TREATED WOOD—Uses of pressure-treated lumber in construction and in industry are discussed in a 26-page book, entitled, "Economical and Permanent Construction with Pressure-Treated Wood," just published by Koppers Co., Wood Preserving Div. This book is designed to serve as a guide in material selection for engineers, architects, contractors, builders and maintenance supervisors. Most of the book is taken up with illustrations of typical installations of preserved wood in the following fields: General construction, farm buildings, highways, industry, marine, oil, mining, railroads, and utilities.

A special section of the book explains the processes by which lumber is treated to protect it against decay, fire, acid, termites and marine borers. Another section deals with termite control. Still another suggests the engineering service the company offers in determining the proper treatment of lumber to assure permanence under severe conditions.—Koppers Co., Wood Preserving Div., Pittsburgh, Pa.

101—HOW TO OPERATE A PORTABLE GP DEWALT—A new "Instruction Book" issued by the DeWalt Company gives complete operating instructions, step by step, from the uncrating of the machine, through the many types of operations which are possible for this one machine, a price list of parts, aligning instructions, and ending with a list of 11 cautions to be followed by the users. Photographs or diagrams illustrate every step described in the text.—DeWalt Products Corp., Lancaster, Pa.

102—INDUSTRIAL MAINTENANCE PAINTS—The Valdura line of heavy duty industrial maintenance paints are listed in a new catalog issued by the American-Marietta Co. Fully illustrated, the catalog provides application suggestions, product descriptions and technical data in complete detail. Attractively printed in two colors, it is easily handled and filed. The maintenance man or purchasing agent can plan his paint requirements and know the characteristics of drying, coverage and application by using this ordering catalog.—American-Marietta Co., 43 E. Ohio St., Chicago 11, Ill.

103—COLEMAN SERVICEMAN'S HANDBOOK—A valuable little 24-page handbook has been published by The Coleman Lamp and Stove Co., and is now available to consumers as well as to this company's dealers, with a view to aiding consumers in getting as much service as possible from Coleman products, and aiding dealers in their efforts to stay in business for the duration and until restrictions are lifted on new products. Instructions are given for servicing Coleman irons, lamps and lanterns, camp stoves and auto trailer stoves, radiant heaters, gas ranges and stoves, gas plants and oil heaters.—The Coleman Lamp and Stove Co., Wichita, Kans.
TO-DO-IT INFORMATION

104—FANS AND BLOWERS FOR INDUSTRIAL INSTALLATIONS—A new 40-page catalog, No. 14-B, "Axial Flow Fans and Blowers," pictures and factually describes each fan and blower in the Hartzell line, and gives standard test code air deliveries for every size in which each fan is made. Of particular value to factory officials concerned with ventilation and cooling and drying of products are a number of pages devoted to formulae used in calculating air deliveries under various conditions. The catalog is arranged and indexed for quick reference.—Hartzell Propeller Fan Co., Piqua, Ohio.

105—PLYWOOD IN THE POST-WAR ERA—"In Service on All Fronts" is the title of a new 16-page booklet which emphasizes the many developments brought to the plywood industry by the war, and stresses the peacetime applications of these developments. This booklet includes more than 30 photographs illustrating the wartime uses of plywood, such as flat plywood products, molded, metal-faced, waterproof, and tubular plywood products. Several pages are devoted to aircraft parts, and another page shows recent developments in the boat building field. Plans for the peacetime use of plywood are given prominence and attention is directed to the research work which is now being done in the company's laboratories.—United States Plywood Corp., 616 W. 46th St., New York City.

106—PLUMBING FIXTURES AND FITTINGS—Kohler Co. has just issued a new 16-page catalog showing and describing its "Win-the-War" line of plumbing fixtures and fittings. These products, manufactured of non-critical materials, are in use not only in camps and bases but in factories, ships, hospitals and war housing. Bodies of fittings are made of cast iron with a plastic protective coating, and working parts are of brass for efficiency and durability; parts have been made interchangeable. The numbers of patterns and sizes have been reduced in factories, ships, hospitals and war housing. Bodies of fittings are made of cast iron with a plastic protective coating, and working parts are of brass for efficiency and durability; parts have been made interchangeable. The numbers of patterns and sizes have been reduced in order to conserve raw materials and to facilitate manufacture.—Kohler Co., Kohler, Wis.

107—CATERPILLAR TOOLS OF WAR—"War and Peace" is the title of a recently published booklet, presenting a word-and-picture story of how Caterpillar products of peace became tools of war almost overnight. Photographs and paintings are used to illustrate modern machinery at work on both peacetime and wartime operations. Also stressed is the fact that this same equipment will be able to switch back to peacetime work with the same speed.—Caterpillar Tractor Co., Peoria, Ill.

The pleasing appearance of this & Service Equipment is noteworthy. It combines & Type AC Thermag D. P. 35 Amp. Circuit Breaker for range circuit, and 4 S. P. Type AC Thermag Circuit Breakers for light and appliance branch circuits. (Cat. No. SE41-327—list price $11.00.)

The homes of the future will be better homes

Many will include the improved materials and equipment which will be available after the war. But they will be planned for "livability" above all else. The electrical distribution systems, as heretofore, will be a vital factor in this livability. Greater protection against the hazards from short circuits and harmful overloads will have the careful attention of builders and home owners.

Write for Bulletins 63 and 67 which describe these products in detail—wiring diagrams, specifications, etc. Than, for complete satisfaction, specify them for the buildings you will erect...Frank Adam Electric Co., Box 357, St. Louis (3), Mo.

The Permanent Successor To The Old-Fashioned Corrugated Iron Roof

CHENEY Corrugated Roofing is made from sheets of hot rolled pickled steel, and designed to withstand high temperatures and combined under pressure with steatite-cottonseed pitches and pulverized slate so that the steel core is completely protected with a very elastic rubber-like material that will not run at high temperatures or crack or peel at low temperatures. Cheney Corrugated Roofing will resist heat, cold, moisture, fire, smoke fumes and salt air. It weathers to a pleasing grey color and does not require painting.

The long life and low cost of Cheney Corrugated Roofing make it the ideal roofing material for Industrial and Farm use. Meets government specifications. Made in all standard sizes and gauges.

Distributors: Some territories still open—write us.

CHENEY METAL PRODUCTS CO., Trenton 5, N.J.
Keep busy with Tile-Tex

Low in first cost—easily and quickly installed. Tile-Tex falls well within the limitations placed on residential remodeling. For example, it costs less than $200 to install the average basement play room with Tile-Tex or to cover the floor of a residential kitchen. Tile-Tex is non-critical and highly practical for installation on concrete sub-floors at or below grade. Here's your opportunity to keep busy during this period of restricted construction. Tile-Tex is still available promptly in a good range of colors and sizes. Write today for our attractive, full color catalog, "Floors That Endure."

The Tile-Tex Company
Chicago Heights
Illinois

3½-S TILTING KWIK-MIX

End discharge
Air-cooled engine
Light weight
Welded construction

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

KWIK-MIX CONCRETE MIXER CO.
PORT WASHINGTON . . . WISCONSIN

What Will War Do to Tomorrow's Home?
(Continued from page 52)

toast is motoring 30 miles, the "Xs" are going to live about 10 times farther away from the city than Caspar with his old-time restrictions of a 50-mile suburban radius.

Furthermore, a 300 to 500-mile radius will not mean access to one metropolitan center alone. It will mean a location in Iowa that is as readily accessible to Chicago and Kansas City as it is to Omaha, St. Louis, St. Paul, and Milwaukee. It will mean a spot in upstate New York, perhaps, just as convenient to Montreal, Boston and Buffalo as it is to New York City.

In such locations land values are still within reason, which is important. The Civil Aeronautics Administration requires a runway at least 100 feet wide and 1,500 feet long for the average 4,000-pound civilian plane. That runway must be 200 feet wide and 2,500 feet long for planes weighing 15,000 pounds.

It is not only within the realm of possibility, but also economically expedient, that after this war a tract of 477 acres of desirable terrain in Iowa or New York State, for example, will be subdivided into 40 little farms averaging 10 acres each, for 40 airplane commuters!

Instead of streets and avenues winding through such communities, the farms will be served by surface transportation along the shoulders of great runways. These runways, forming a cross inside of a V, will cope with winds from every direction as well as serving the needs of the entire community. They can be 220 feet wide including their 60-foot shoulders, and 3,500 feet long—two-thirds of a mile, for maximum safety, as shown in the accompanying community plan.

Each homesite in this flyers' town, ranging from 8 to 12 acres, will have an unobstructed set-back of 200 feet from the runway proper in order to give planes an adequate safety margin 500 feet in width. This set-back border will be planted in lawns or fields to exclude trees or other hazards. The remainder of each farm will be unrestricted. The family not desiring to cultivate or tend that much land will be able to maintain a half-acre, or three-quarters of an acre of landscaped grounds in the center of a private woodland park.

Even aside from such far-flung influences, aviation is certain to have some effect on the design of the post-war home. The helicopter, capable of landing on a small flat roof, is now being introduced into submarine patrol by the British. Though still in the experimental stage it demands the attention of every foresighted builder and prudent real estate investor.

Industry, also as one result of aviation research, is ready with light metals and plastics that can do more to revolutionize construction than did Bessemer's well known discovery. This country controls three times more aluminum than iron. The annual production of both aluminum and magnesium is now being increased by 1000 per cent. Lighter, cheaper, more durable dwelling construction appears inevitable.

One of the primary tasks that will confront builders after this war—and this goes doubly for architects—will be to keep the public trust on a level keel under the stresses of violent influences

How Chicago Builders Are Creating Post-War Sales
(Continued from page 47)

mortgage and financial institutions, follow the FHA pattern of financing a lot, free and clear, thus enabling a person to secure a large enough loan to build his home without delay.

Many of these developments in the Chicago area were planned before the war. As a result relatively inexpensive utilities as well as other improvements were put in at pre-war labor costs. In many instances the purchaser can get
a home site now for less than the cost of the improvements alone.

Little wonder than that the Chicago builders and developers found a ready and willing consumer market, once they found the right approach.

One builder in particular had run countless advertisements on lots and received little or no response. His salesmen, when questioned, admitted that the public was not interested in lots, but in a post-war home. This set the builder to thinking. After all, the war had tied home building into a knot, and yet there were untold numbers of people who were anxiously awaiting the day when they could build a home of their own. Many of them had a vague idea of where they would like to have their homes, and a ready awareness of the prices that could be expected to prevail by the time they were ready to act. The desire was there and all that was needed was a definite plan which could be crystallized into action once building was resumed.

He changed his style of advertising and featured a home with suggestive copy. The copy pertinently advised the home seeker that now was the time to plan and prepare for his post-war home.

Very little mention was made of a lot, in fact, he (Continued to page 92)
dropped the word entirely and began talking about home sites. The salesmen were cautioned against the use of the word. Home site, specifically, was the language of the home seeker. It brought up visions of a home. This builder's organization, which had a five man sales staff early this year, has already grown to eighty men. Two of their original developments have been sold out and to date they have sold upwards of 1,000 home sites.

What made this and other organizations' efforts succeed was the common sense realization that the public was not interested in merely buying a lot for speculation. They pictured the advantages of home ownership and the fulfillment of this desire in their advertisements. They had architects prepare plans and draw up perspectives, thus visualizing to the prospective home owner the type of home which he could build after the war. In other words, they were not merely selling a piece of land—they were helping to make possible eventual home ownership.

To a growing number of buyers has come the realization that at last his own home is in the making.

L. C. Simms PD-105 List

(Continued from page 44)

<table>
<thead>
<tr>
<th>Quantity per dwelling Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic hot water heater and storage tank. wood burning, 30 gal. capacity. No. 1</td>
</tr>
<tr>
<td>HEATING: Output capacity of system, maximum net hourly Ditto per sq. ft. of dwelling area No. 1</td>
</tr>
<tr>
<td>Ditto per dwelling unit Bu. 51035</td>
</tr>
<tr>
<td>Total hourly heat loss of dwelling area per dwelling unit Bu. 51035</td>
</tr>
<tr>
<td>Dwelling area of structure Sq.-ft 800</td>
</tr>
<tr>
<td>Dwelling area of dwelling unit Btu. 800</td>
</tr>
<tr>
<td>Furnace, forced warm air including fan, blower and motor, output capacity 60,000 Btu, or less No. 1</td>
</tr>
<tr>
<td>Duct connections and fittings Ibs. 350</td>
</tr>
<tr>
<td>Hangers &amp; fastenings Ibs. 1</td>
</tr>
<tr>
<td>Registers, ferrous metal No. 6</td>
</tr>
<tr>
<td>Grilles, nonmetallic No. 2</td>
</tr>
<tr>
<td>Firing equipment sawdust burner No. 1</td>
</tr>
<tr>
<td>Smoke pipe with fittings Ibs. 20</td>
</tr>
<tr>
<td>HOUSEHOLD EQUIPMENT</td>
</tr>
<tr>
<td>Cooking range, electric over 2500 watts No. 1</td>
</tr>
<tr>
<td>Refrigerator, mechanical (subject to PD-427 approval) No. 1</td>
</tr>
<tr>
<td>WOOD Dimension lumber (2&quot; nominal or thicker) B.M. 8536</td>
</tr>
<tr>
<td>Board lumber B.M. 4162</td>
</tr>
<tr>
<td>SUMMARY OF CONTROLLED MATERIALS Total carbon steel 615.5 lbs.</td>
</tr>
<tr>
<td>Copper wire &amp; cable 25.25 lbs.</td>
</tr>
</tbody>
</table>

The results speak for themselves. This builder's organization, which had a five man sales staff early this year, has already grown to eighty men. Two of their original developments have been sold out and to date they have sold upwards of 1,000 home sites.

What made this and other organizations' efforts succeed was the common sense realization that the public was not interested in merely buying a lot for speculation. They pictured the advantages of home ownership and the fulfillment of this desire in their advertisements. They had architects prepare plans and draw up perspectives, thus visualizing to the prospective home owner the type of home which he could build after the war. In other words, they were not merely selling a piece of land—they were helping to make possible eventual home ownership.

To a growing number of buyers has come the realization that at last his own home is in the making.
Appraising Slums for Redevelopment
(Continued from page 62)

tion and rehabilitation) of all unfit or unsanitary structures. Under condemnation or any other form of acquisition it should not be necessary for the public to pay for a property a price which is predicated upon earnings produced in violation of fire or health regulations, or from earnings derived from use of the property contrary to law. Owners of such property should be required to provide proper conditions within their buildings or to board up the property. This would make the owners more willing to accept reasonable offers for their property. They could no longer support claims for valuations based on income derived in violation of the law.

(3) Incomes from blighted residential properties may all tend to be reduced by the building of new and better homes on the edge of the city and in suburban areas. This will start a filtering up process which will result in evacuation of the lowest level of housing. The abandoned properties can then be acquired at a lower valuation than is possible when they are occupied under the pressure of war conditions.

(4) In replanning blighted areas it is usually not feasible to abandon entirely the pattern of existing streets. It is entirely possible, however, to close sections of certain streets and make use of these portions of land to provide recreational or parking areas which would otherwise have to be acquired by purchase. It is estimated that frequently as much as 25% of the street area in present blighted areas could be utilized for parks or other purposes. The use of land occupied by these unnecessary streets would lower the average acquisition cost of the entire redevelopment project.

(5) The cost of acquiring land could be greatly reduced if the reversionary rights at the end of a period of time, say 10 years, were purchased instead of the right for immediate possession. Thus, suppose there is an old house on a lot 25 x 100 feet which on the basis of its income is valued at $6,000. Of this amount $5,000 might be attributed to the building and $1,000 to the land. If the building is over 50 years old, it can be assumed to have 10 years of economic life and that within 10 years the building will be worthless. The sole value then remaining will be in the land. The first value of which is $1,000. The owner could be compensated today for his reversionary rights in the land accruing 10 years hence as follows:

The present value of $1,000 due after 10 years, discounted at 6% would be $558. If a municipal or public body is purchasing the land, it is probable that the interest rate would be as low as 2 3/4%. Thus the total cost of this site at the end of 10 years, including interest at 2 3/4% would amount to $714. By buying the reversion, the land would ultimately cost the public for redevelopment, only about 29 cents a square foot instead of $2.40 a square foot, if the entire rights were acquired. The redevelopment corporation would not get the use of this property

(Continued to page 94)
Light weight is combined with perfect balance to make this powerful, fast-cutting saw safe and easy to use with either hand. It will cross-cut or rip rough or dressed lumber, make complicated miter cuts, pocket cuts, cut metal, cut and score stone, concrete, and tile with an abrasive wheel.

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

Back the Attack—Buy War Bonds

MALL TOOL COMPANY
7737 South Chicago Ave., Chicago 19, Illinois

- protection in the public interest

to increase the

durability of wood

storm sash

— to give them increased resistance against possible deterioration, laboratory science has developed minimum standards of toxic preservation—a treatment designed to supplement the natural, lasting qualities of wood products under the severe demands of modern construction.

NATIONAL DOOR MANUFACTURERS' ASSOCIATION
MCCORMICK BUILDING - CHICAGO, ILLINOIS

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FOR FURTHER INFORMATION SEE OUR CATALOG IN SWEETS

for 10 years, but since the purchase of the entire interest at once would involve a subsidy sufficient to make good the difference between the cost and the lower economic value, the total charge or subsidy assumed by the public would be minimized.

(6) The value for redevelopment projects could be absorbed by the difference between the interest rates on federal government obligations and the interest paid by private land development corporations. The federal government lends a municipal corporation $1,000,000 to buy a blighted area which has an economic resale or leasehold value of only $500,000 to a private redevelopment corporation. The municipal corporation, however, might have to pay only 2% interest on the $1,000,000 loan from the federal government or $20,000 a year, while it might lease the land to the private redevelopment company for 6% on a $500,000 valuation, or $30,000 a year which would be sufficient to pay the interest and amortize the principal of the government obligation on a long term basis.

It has been estimated that there may be as many as seven or eight million residential quarters in blighted areas today. The cost of rebuilding the slums in American cities may run to approximately $50,000,000,000 in that case. But until a method of appraising slum properties is developed that will apply fairly to all owners of property within the clearance area, the cost of redevelopment will not only be unknown, but will vary according to the resistance provided by groups of owners.

In this regard, it is essential that property in a slum clearance area be devalued in consideration of the surrounding and neighborhood conditions, and that "special favor" and "inside information" leading to speculative purchase of such property be given a swift kick in the pocketbook by the appraisers in charge.

Commercial and Industrial Building

(Continued from page 51)

Several research organizations have recently completed studies of retailing in the post-war period. Some analysts seem inclined to look for an increase in the number of retail stores after the war. But even if the number of retail stores goes no higher than the present figure of about a million and a half we certainly can expect that two to four thousand of these retailers will undertake modernization in the first year of peace. If only two hundred thousand store fronts are planned and installed in that first year of conversion to normal business, the total expenditure will run in the neighborhood of 90 to 100 million dollars.

There will be a psychological reaction to dimouts, blackouts and all the other necessary but depressing manifestations of war, it is believed.

Hence, the post-war store that is attractively bright and fresh-looking, both day and night, will be the one toward which war-weary shoppers will automatically turn. Anything about a store that is drab will carry with it a reminder of war days—and will be a deterrent to trade. Drabness which
American Builder, November 1943.

interest in good economic public relations on the part of household corporations that have sold from the 6% tax lease for 6% which would be principal interest.

A slum in the suburbs is a special case in the sense that its improvement is not a question of modernizing but of completely rebuilding it.

completed analysts of retail and stores and their million in the year of modernization a thousand dollars. The year of 1943 will show growth, black-market manifestations, light and heat toward anything in the order of years which might have remained hidden during wartime dimness will come to light and the store that cannot measure up to peacetime requirements will appear exaggeratedly dull by contrast to its neighbors.

The store front is the first thing a prospective shopper notices and it is the one feature which has suffered most through wartime restrictions in lighting and renovating. It is the store front therefore upon which most emphasis should be placed in restyling the establishment to meet peacetime needs.

Modernization of store fronts, however, is far more comprehensive in scope that a mere slicking up done with some paint, a little soap and water, and possibly a new plate glass window.

It involves, often enough, the complete redesign of the doors, entrance, facade and show windows. It must be made inviting in every detail if it is to perform its double function of displaying wares to advantage and of tempting the customer inside.

Foresee Wider Use of Glass

Many architects and industrial designers feel that this can best be accomplished through the more extensive use of glass. They are confident that its further use and acceptance will open up ever wider fields for its application.

In general an increase in street window display space is desirable. Most stores require ample room in order to display their wares to advantage without crowding. Furniture stores in particular could be cited as an example.

Although it is not always possible to increase the actual dimensions of the store window, an irregular design of the entrance can be made to produce the same results, at the same time presenting a pattern that is far more attractive to the eye.

Irregular setbacks, novel displays, convenient door locations, and decorative patterns in sidewalk and vestibule treatments are all important factors in the design of the post-war store.

Obviously, plate glass will be used for the window display. Besides this, plate glass can be used to advantage in the interiors of many shops for shelves, recesses and mirrors, while glass blocks provide counters that are practical and distinctive.

The interior should not be neglected, naturally. It would show poor judgment to dress up the store front and leave the inside much as it has been for years past. No customer will be tempted by a brightly attractive exterior and then thrust into a gloomy shop with which no effort had been made at modernization. The interior and exterior of the store should be kept in harmony, both pleasing, without clashing in design.

These are the problems which occupy the thoughts of wise American store owners, experts assert. The foresighted merchant is not sitting idly by, merely hoping that the war will end and permit him to resume his peacetime trade. He is thinking in terms of what that trade will be. He is conscious of what kind of store he must have in which to best offer his wares.
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