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# AMERICAN BUILDER

AND  
BUILDING  
AGE

THE WORLD'S GREATEST BUILDING PAPER

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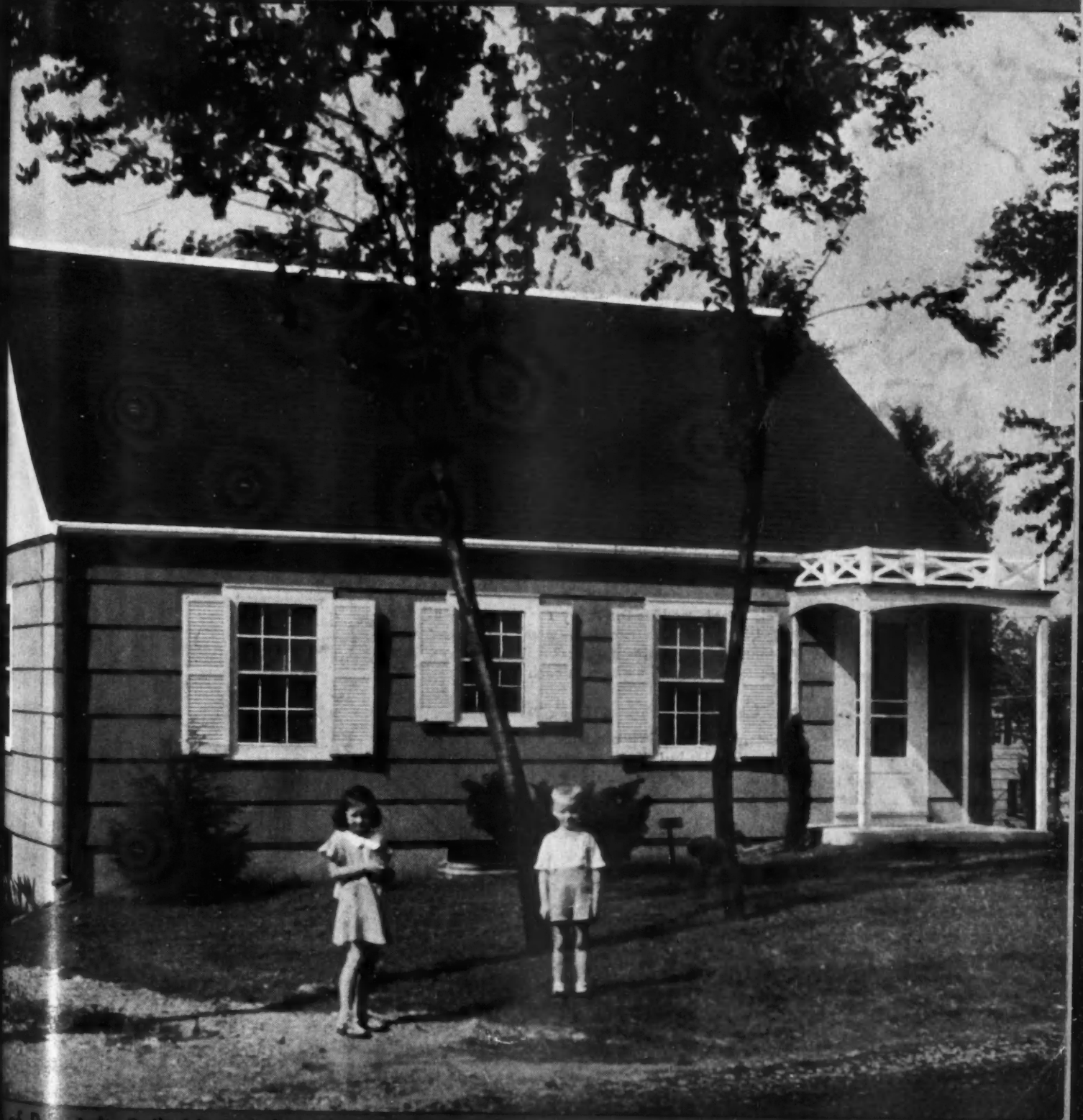
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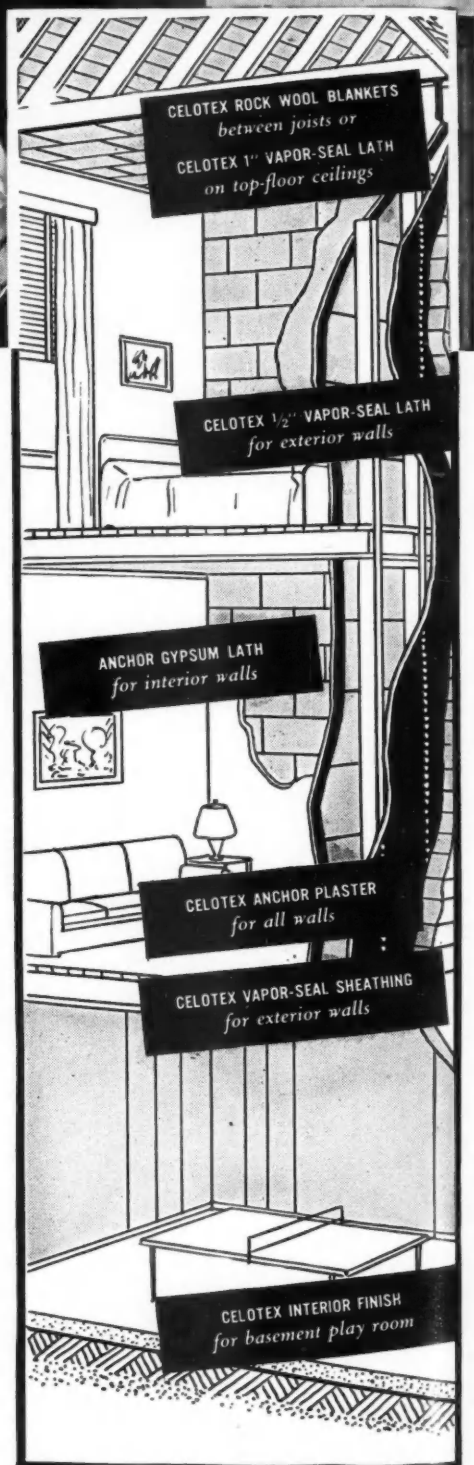
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(A Simmons-Boardman Publication)

# AMERICAN BUILDER

and Building Age

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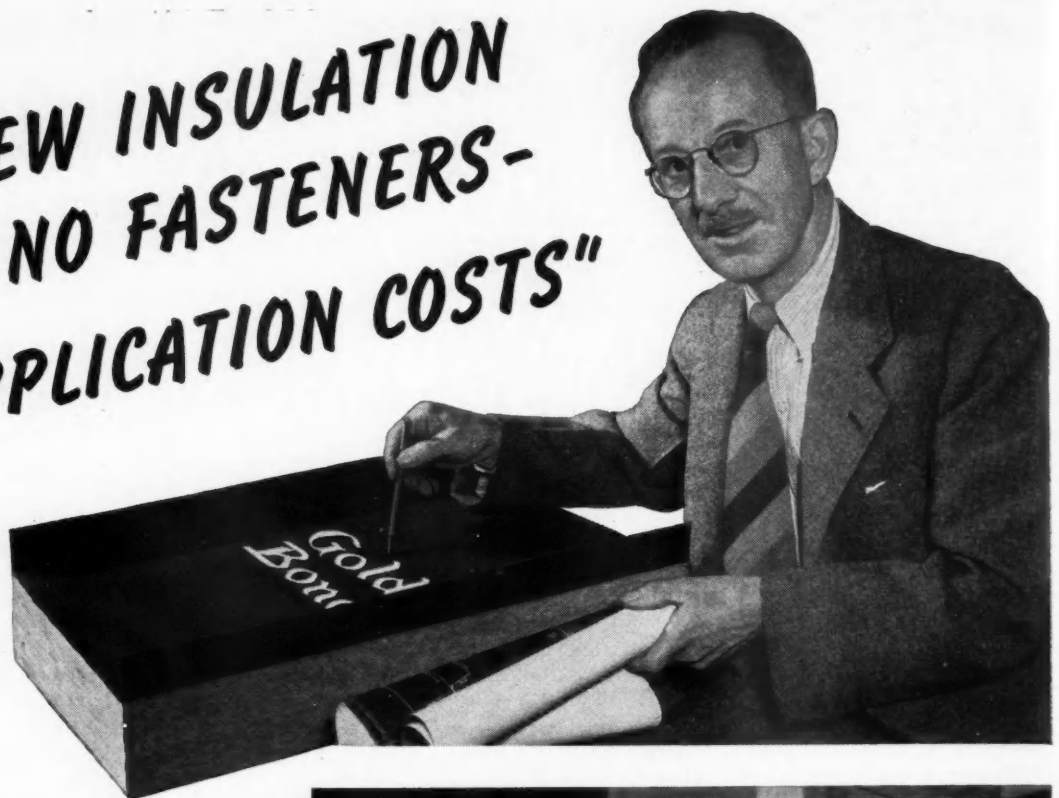
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# PUBLISHER'S PAGE

## Small Business and Defense

**T**HE DEFENSE EFFORT raises many important questions. One is: Why the broadcasting from Washington that "small business" will be unable to get materials, and, consequently, will be put out of business?

Take steel, most important of defense materials. This country can now produce at least 87,000,000 tons a year—as much as *all the rest of the world*. President Tower of the Iron and Steel Institute estimates 20,000,000 tons will be required in 1942 for our defense needs and aid to the British, and 3,000,000 tons for export to other countries, "leaving a *minimum* of 64,000,000 tons for domestic civilian uses"—as compared with a consumption in 1940 of only 55,000,000 tons for *both defense and civilian purposes*.

Plainly, as far ahead as anybody can see, the problem of steel will be, not one of production, but of *distribution*. And that goes for most kinds of materials—including enough of those used in building to make unnecessary serious restrictions on home-building.

**W**HY, then, the menace to small business? It is due to (1) *incompetency* of those in charge (for the government) of distributing materials, enough of which can be produced and transported, or (2) their *willingness to destroy small business*. As regards whether they are incompetent—or worse—let us ask a few questions:

If—as they claim—they have known all along what was occurring in Europe, why did they do nothing about defense while Hitler, from 1933 to 1940, was spending 60 to 75 billion dollars in arming Germany? If they were justified in those years in increasing federal expenditures 5 billion a year and the national debt 30 billion, for *civilian purposes instead of for defense*, why such a terrific rush now in providing for defense as to deprive small business of materials? If there is need now for such a terrific rush for defense, how justify the federal government in continuing to spend 5 billion a year more for purely *civilian* purposes than in 1933? Would not almost

every kind of small business be able to carry on throughout the defense effort if, first, government *civilian expenditures and use of materials* were reduced as they should be, and, second, all kinds of materials were distributed to big and small business in accordance with the nation's real needs, civilian as well as defense?

The correct answers make clear that the real danger to small business is that the federal government is being run during the defense effort by much the same men, in much the same way, and for much the same purposes as during the seven years before the defense effort. They care nothing for private enterprise—many of them hate it. They don't know or don't care what must be done to enable private business, large or small, to live, much less prosper. They believe in government spending all it can raise, whether in peace or war, because that is the best way to crush private property and private business with taxes, increase government ownership and management of property, and finally establish the totalitarian socialist state in which they expect to be even bigger shots than now under the New Deal.

**W**HAT to do, then? Well, small business isn't dead yet; it is still very powerful; and it ought to use its power in every available way to protect itself. It ought to organize as rapidly and strongly as possible, and both as individuals and in an organized way raise hell with its representatives, senators and everybody else in Washington until they adopt measures assuring small business its share of materials.

This country will still exist after the war. Whether it will be worth living in will depend on whether small business survives in full vigor; and sounder economic policies during the defense effort will not only maintain small business, but make the defense effort more successful.

*Samuel O. Dunn,*

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THESE days speed comes first, and speed costs money. But dollars still count. So, when you can save *both* time and money, it's worth looking into.

That is 'Incor's vital contribution to the Nation's defense program. In concrete frame construction, dependable 'Incor' high early strength means 24-hour stripping schedules—one form set does the work of two or three, cutting form requirements 50% or more. And the extra cost of 'Incor' is only a fraction of the cost of extra forms needed with ordinary cement to match fast 'Incor' schedules.

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# AMERICAN BUILDER

## AND BUILDING AGE

### Union Labor Control Needed

**I**F LABOR unions could or would accept responsibility and exercise self control, *public* control might not be necessary. Recent events clearly show, however, that most labor organizations are incapable of democratic self government and are unable to conduct their affairs intelligently either in their own interest or in the public interest. The nature of the management and control of labor unions is such that it puts the collecting of dues and the adding of new members above all other considerations, including welfare of the nation, the community or the industry. When, as frequently happens, an unscrupulous clique of near-racketeers gets in control, there is nothing that can be done to satisfy their demands, because they thrive on discontent.

The unions are now desperately trying to organize the small construction and residential building field. If they succeed, and continue their present practices and leadership, they will kill off private home building. For houses, particularly small low-cost houses, cannot stand the extra cost of inefficiency, delays, disputes and cost-raising restrictions that 100 per cent union control would certainly bring. In the case of many industries the high cost of unionization can be and is passed on to the public or to the government. But in the case of private small home construction the increased cost must be borne by the immediate purchaser, and beyond a certain point the public simply stops buying. That is what we mean when we say 100 per cent unionization under present union policies would kill private home building.

#### Democratic Controls Needed

The answer to the problem of union irresponsibility is *incorporation* plus *democratic control* to keep the unions out of racketeering hands. If contractors knew that they could deal with honest leaders truly representing a responsible majority of the workers and that any agreements they made would be lived up to, they might not be so reluctant to sign up.

As matters now stand, the unions have extraordinary powers and privileges of a public nature and are protected by public laws. If they accept this public status, they must also accept responsibility. They should be subject to public supervision, auditing of their finances and the conduct of their affairs. Because they have become public institutions endowed with great powers, it is the duty of the government to see that their control does not fall into the hands of some dictatorial group which uses them for its own ends and contrary to the general welfare.

*American Builder* believes that it would be comparatively simple to compel the unions to assume a rightful responsibility and democratic control. This should be done by law to insure the following:

1. Every union, local as well as state or national, should be required to incorporate as a responsible public body.
2. The secret ballot and democratic voting methods should be required so that the use of force, coercion and strong-arm methods to keep a small clique in power would not be possible.
3. Aliens and criminals should be barred as officials or business agents of a union.
4. A complete financial accounting should be made of all union funds and an audited statement made public at least twice a year.
5. Part of the dues collected from members should go into a fund to pay the cost of posting bond to insure the keeping of contracts entered into by the union.

Such requirements as these would go a long way to eliminate the irresponsible, short-sighted and destructive actions that have been far too common recently. When the unions accept public responsibility commensurate with their power and privilege, then home building employers will not have to be bludgeoned into doing business with them. The near-racketeers and criminal characters will disappear and the honest rank and file will have a chance to run their own affairs. When that happens, builders will be more disposed to deal with responsible labor.

#### Next Month—

#### HOME BUILDING DEFENSE ISSUE

**T**HE OCTOBER *American Builder* will present a special group of articles relating to the private-enterprise construction business, home building, and the present national defense and preparedness situation. These feature articles are based on the essential character of homes and home ownership for national security, and the importance of utilizing the full plant capacity, production, and manpower of this great far-flung, tax-paying industry to support America's armament effort.

Every building industry man who is finding his operations hampered or threatened by priorities, shortages, or the wildcatting of prices by broker speculators, will have a personal interest in these articles.

In this October issue *American Builder* is undertaking a program of public information concerning the important place of the private home building industry in today's "war economy" and how to employ the facilities of this industry most effectively, both at this time and in the immediate post-war period. In addition, an extensive portfolio of designs for defense industry homes and suggestions for converting old houses and the larger apartments into modern small family units will prove timely and helpful.

# Defense Calls for Home Repairs

FHA sponsors big drive for remodeling old homes, especially in "Defense Areas"; promotion materials offered

**"REPAIR** for Defense," a theme stressing property preservation and the remodeling of homes in defense areas, is the basic appeal of a new repair campaign to be launched this fall by the building industry, financial institutions, and the Federal Housing Administration.

To convert old homes into defense housing and to prepare the "home front" for its job as the bulwark of America's defense, articles and advertisements in newspapers and magazines, announcements over radio stations, window and transportation posters, local demonstrations, booklets, and other means of public education are being made ready.

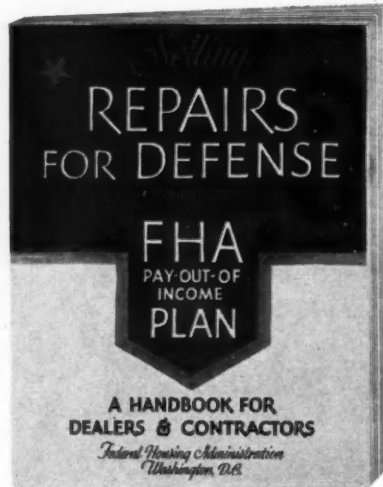
New provisions of FHA's property repair (Title I) plan back up the new drive with proper financing facilities. Federal Housing Administrator Abner H. Ferguson, commenting on the 1941 program, said: "This effort of the building and allied industries to do the big job of housing workers in our defense industries finds the machinery already organized and running efficiently—thanks to seven years' experience in a nationwide program of encouraging constructive home improvements."

The 1941 program, aimed at defense production areas, will encourage the conversion of old houses into multiple-family dwellings or rooming or boarding residences.

While the building industry is believed ready to construct as many new homes as required in such communities, it is realized that every available home already built should be utilized. Needed housing can be supplied quickly and economically from large well-located homes which are not being fully used. This is described as a sensible "short cut" to additional defense housing.

Organizers of the 1941 drive are also aware that there is no economy in allowing homes to go to pieces through neglect during the present period of emergency. The total value of homes in this country, it is estimated, is around 80 billion dollars. Even normal obsolescence amounts to about 2 billion dollars annually. With one-third of the homes in the United States between 25 and 50 years old, the wisdom of "a stitch in time" is obvious.

ENVELOPE size folder designed for the general public (FHA Form No. 810) explains to public how to repair homes on the FHA plan.



"GUIDE" or handbook for dealers and contractors available on direct request to FHA, Washington, D. C. It describes the "Repair for Defense" program and suggests ways to profit by FHA, Title I credit terms of "Pay Out of Income Plan."

Building construction leaders and FHA officials point out that the housing industry is one business which the present crisis finds prepared for effective national action. National emergencies and programs are nothing new to the home building business, which in 1934 was faced with starting an almost paralyzed industry on the job of doing billions of dollars in home repairs and new construction. Its success in organizing a national program to surmount that problem makes the building industry confident it can house defense workers and maintain America's housing equipment in adequate condition and quantity during the present emergency.

The new program will make strong use of the slogan, "Defense Calls for Home Repairs." Builders, contractors, financial institutions, material manufacturers, dealers, and others will cooperate to spread this theme from coast to coast through advertising.

The entire program is modeled after previous successful campaigns by the building industry.

All who participate will be entitled to educational material supplied by the Federal Housing Administration without charge. This material includes:

*A new emblem featuring the slogan "Repair for Defense" supplied by the FHA in mat form to newspapers for use in advertisements of building material dealers, contractors, lending institutions, etc. It is available in several sizes, ranging from 3/4 of an inch to 3 inches, and may be used as an attention-getting spot in almost any type of newspaper or direct mail advertisement.*

*Window sticker—featuring the same emblem, attractively printed in color. Approximately 12" x 12".*

*New window displays.* FHA has prepared a colorful streamer, poster and side pieces for featuring the new repair program in dealers' windows. Included in this material are a window streamer (68" x 16") and two vertical side pieces (60" x 16"). These items lend themselves to a variety of window displays and are attractively illustrated. They are colorfully printed in red, white, blue, and gray. A one-sheet poster printed in the same colors also will be supplied on request. The streamer features repairs; the poster is more specific: "Renovate for Roomers—Remodel for Tenants." This complete assortment is known as Window Display No. 6.

*Bill board poster—a colorful "24 sheet" bearing the slogan "Defense Calls for Home Repairs" may be obtained through FHA State or District offices.*

*A new series of newspaper advertisements featuring home repair and remodeling on the FHA Pay-out-of-Income Plan. Builders, contractors, lending institutions, dealers, and others may obtain proofs from their local papers, and FHA will supply copy themes and mats of illustrations to newspapers on request.*

*"Dealer Guide."* A manual of information on the new Title I provisions and how FHA repair loans may be





made and handled. This manual also outlines the new "Defense Calls for Home Repairs" program, describes the display and advertising material available, suggests ways to use it most effectively, etc. This "Handbook for Dealers and Contractors" is called "Selling Through the FHA Pay-out-of-Income Plan," and copies may be obtained on direct request to the Division of Education, Federal Housing Administration, Washington, D. C.

A new printed folder, "Remodeling Demanded by Defense Housing Program" (FHA Form No. 818). This folder, prepared for dealers and contractors, gives a picture of the present opportunities for repairing and remodeling larger houses into smaller living units, explains the financing available under new FHA terms, and suggests how the building industry may profit. It is supplied by FHA to manufacturers, dealers, builders, lending institutions, and others on request. Size 8½ x 11; 4 pages.

Folder, "Defense Calls for Home Repairs." A new version of the popular envelope-size pamphlet designed for the general public. FHA Form No. 810 suggests what to do to make a home rentable and up-to-date. Attractively printed in red and black. Available in limited quantities for direct mail or over-the-counter distribution.

Revised folder for dealers and general public. The FHA publication, "Improvements Eligible for Financing with FHA-Insured Loans" (Form FHA 145), has been revised and re-issued with the new Title I terms. This folder is designed primarily for dealers but may be used also for distribution to the general public. It answers specific questions as to what type of improvements may be made, terms available, etc. Manufacturers, dealers, and lending institutions may obtain a limited quantity of this publication for distribution. Size 3½ x 7½; 8 pages.

Motion Pictures—"We Americans," a Technicolor short starring Frank Craven, is an entertaining movie containing an explanation of how to pay for repairs on the FHA Plan. This film is available for regular showing in

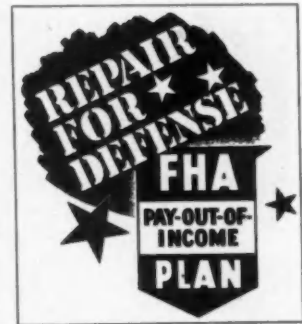
theatres, and local exhibitors should be consulted for dates of showing. Newspaper ad suggestions, designed for dealer "tie in" to the film, are available through local newspapers.

Car cards. Attractive colored cards featuring property repairs on the FHA Plan will be supplied by FHA for use in buses, street cars, suburban trains, subways, etc. These are designed as a background for local tie-in and are not available for dealer's use.

Folder, "Selling Home Building and Modernization Through Transportation Advertising." This illustrates and describes two FHA car cards and suggests how advertisers may use cards of their own in public vehicles to publicize the program. The folder is designed for transportation advertisers, advertising agencies, and transportation lines. Size 8½ x 11; 4 pages.

Radio dialogues. The FHA will supply a series of twelve 5-minute dramatic radio dialogues that may be sponsored by local advertisers interested in selling home repairs. These dialogues are available as electrical transcriptions, and arrangements for their use should be made with local radio stations. Many radio stations are cooperating with announcements and talks by FHA officials.

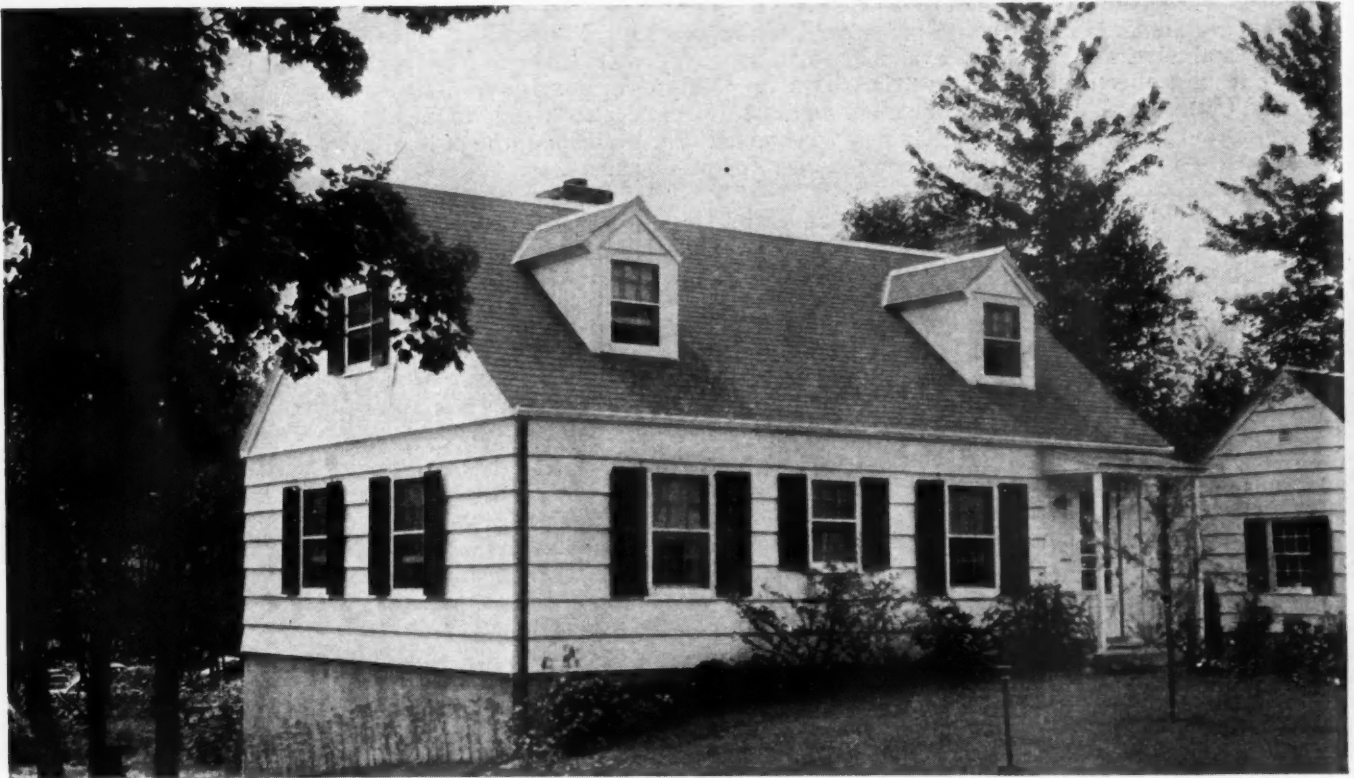
This 1941 program, in which thousands of business concerns are expected to cooperate, will continue through the fall season. Many items of tie-in material are available through local media such as newspapers, radio, etc. Requests for booklets, window display material, dealer helps, etc. should be addressed to the Division of Education, Federal Housing Administration, Washington, D. C.



THIS "Repair for Defense" emblem is available as a window sticker, size 8 x 7½".



WINDOW display material for dealer or contractor office. This window display No. 6 consists of top streamer, 16 x 86"; vertical side pieces, each 16 x 60" and center poster, 28 x 38". All colorfully printed in red, white, blue and gray.



WELL DESIGNED, 24' x 32' home at Fairfield, Conn., built by Forsell Brothers. Detailed plans on page 61.

## These Are the Kinds of "Defense Homes" that Will Still Be Good AFTER the Emergency

By Joseph B. Mason

### Small HOMES or Mass HOUSING?

**THIS ARTICLE** about a typical small home builder puts the spotlight on a glaring question—shall the American public live in privately built and owned small homes such as these, or shall they be "housed" in great mass-produced, Federally-financed housing projects?

Defense housing agencies have already allocated funds for 110,000 housing units, although officials persistently proclaim that they expect private builders and private capital to do this work.

**HOW MUCH MORE** public mass housing is needed? *American Builder* will explore this subject further in the October issue, and readers are urged to contribute their ideas, experience or opinion.

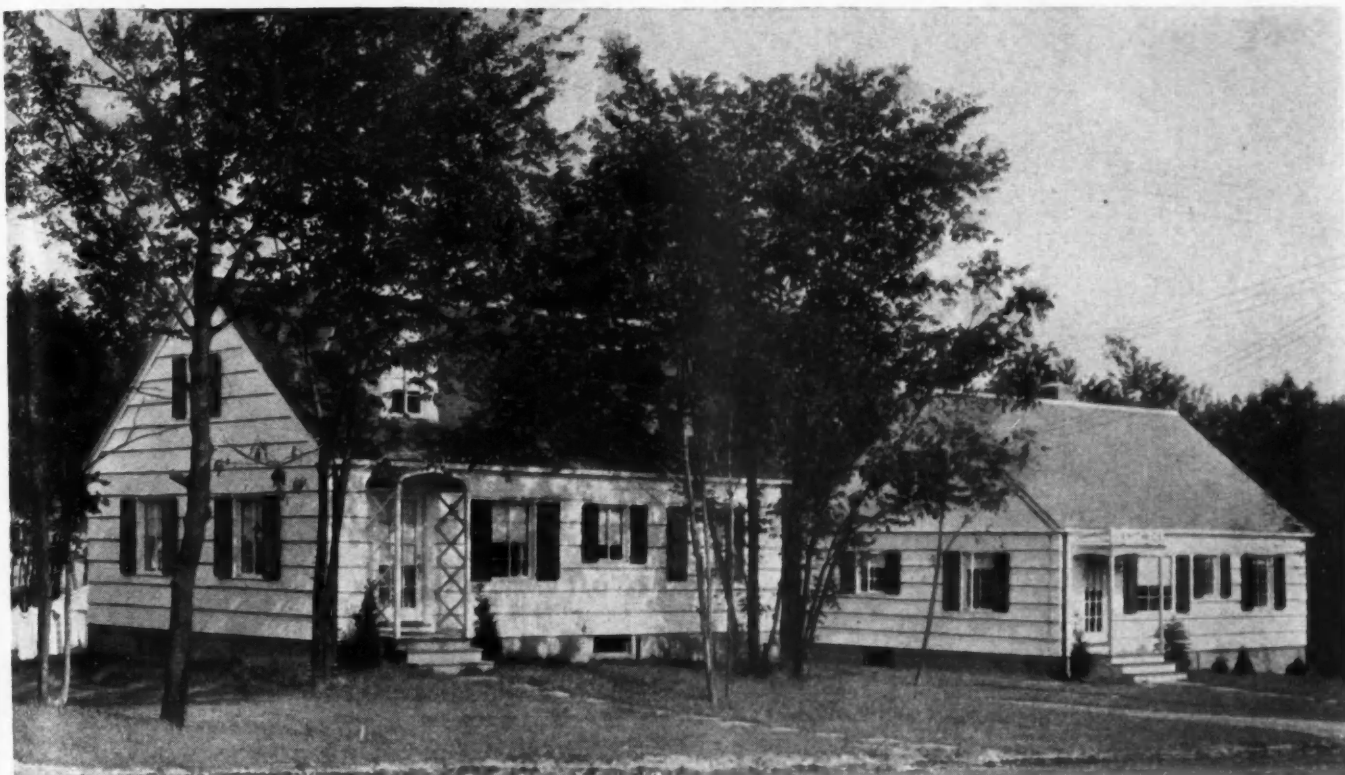
**I**N THE FIRST six months of this year 319,000 dwelling units of all kinds, except on farms, were built in the United States. Of that number 53,671, or 17 per cent, were financed with public funds. That is not a dangerously high percentage of publicly-financed home building yet—but the danger lies in that the figure is rapidly increasing. Government agencies have thus far been granted money for 110,000 defense housing units; and no one knows how many more are contemplated. If some of the fancy estimates of public housing enthusiasts in Washington are accepted, there may be a great many more.

Because the public housing projects are usually large ones, ranging anywhere from 100 to 1,000 homes in a batch, they make a great impression on a community—even a very large industrial center. Every time such a project is announced a score of small, privately operated and financed building firms drop out of that market, because of this competition.

So the red hot question that faces the building industry right now is whether the much needed new home building of the country is going to be provided in great masses of barrack-like, public-financed projects, or whether it is going to be provided by thousands of independent, experienced builders of small homes operating under the traditional American enterprise system.

It is well known by everyone, except the public housing theorists in Washington, New York and a few other large cities, that overhead and operating costs mount rap-

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A PLEASANT WOODED STREET in Forsell Brothers' Wheeler Park Terrace community, where defense workers become better citizens.

**How Forsell Brothers of Fairfield, Conn., build and sell small homes of lasting value in an area threatened by huge government-financed housing projects**

idly on large projects, and that these overhead costs rise faster than the so-called economies of direct mass buying.

More important than actual costs are the social, economic and political considerations involved. Defense workers and other American citizens who buy a small home of their own, putting down some of their own hard-earned money for it, become better citizens than the occupant of a government housing project who never saves anything and has no incentive to do so.

Although a large part of the current industrial development in connection with national defense is in large metropolitan centers, the people who work in these centers do not need to live in the smoky, noisy, immediate vicinity. They would prefer to live in nearby suburbs and residential communities easily reached by car, bus or trolley. It is in such communities that many thousands of experienced, capable private building firms are ready and able to function. These builders are well able to handle the nation's housing need in a way that will reduce after-war headaches. They are willing and able to build small homes that will still be good after the present emergency.

A good illustration of a typical small private home building firm operating in a defense area is Forsell Brothers of Fairfield, Conn. The 24' x 32' homes illustrated with this article are placed on large wooded plots in an attractive residential section, ideal for children and for a sound American home environment.

Wheeler Park Terrace, as Louis and Robert Forsell



LOUIS FORSELL, after 16 years in the building business, still believes the best homes are built by small organizations.

AT WHEELER PARK TERRACE buyers get the benefit of low overhead, and personal supervision of skilled workmen who have had a long association with the builder. Houses have quality materials purchased from local dealers who can be counted on to stand back of their products.



**HILLSIDE HOME AT Fairfield, Conn., has a standard 24' x 32' floor plan, as shown on opposite page, but variation in exterior that gives it breadth and charm. Double-coursed shingles with wide exposure contribute greatly to appearance.**

**BETTER CITIZENS** are created by privately built and owned small homes such as these. Sound construction and efficient heating plant assure low operating costs. Wide streets and wooded surroundings provide a good place for children to grow up.

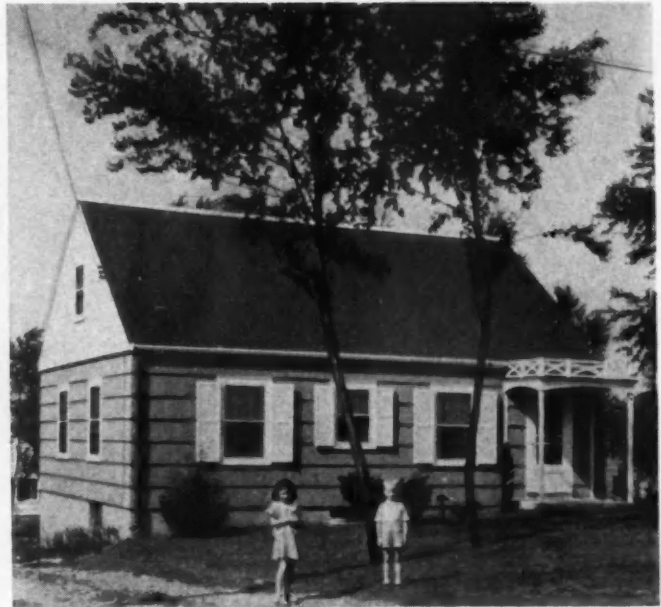


**ANOTHER Forsell** built small home on basic 24' x 32' plan with garage attached. Defense workers can buy homes of this type for from \$30 to \$35 a month, actually less than rent, and meanwhile are building up after-war security.

call their community, now has some 30 small homes, most of which have been built and sold in the past 18 months. Forsell Brothers, with a record of 16 years experience, believe in keeping their operations on a modest basis and, what is of paramount importance, keeping their overhead and expenses down. They build only as many houses as can be easily sold and that can be handled without an expensive expansion in their staff. They design, plan and lay out the houses themselves, co-operating closely with the local FHA officials. They buy their materials and products from local material firms who, because they are responsible members of the community, stand back

of their products and will be on hand to guarantee them. Most of their lumber, millwork and supplies are purchased from The Burrill Lumber Company of Bridgeport, a well known and highly reputable firm.

Because of their compact organization, Forsell Brothers are able to give close supervision and attention to every house they build. The buyer gets a very substantial, long-lived structure that is suited to his needs. They watch expenses closely, have developed numerous money saving ideas and methods and are constantly on the lookout to give their buyers a better house at a lower cost. This is the way successful private enterprise works, and



**ADDITIONAL VARIATIONS** in Forsell Brothers' basic plan give charm and colorful appeal. House at right has double-coursed shingles painted a soft gray with pleasing white trim and white ridge strip.

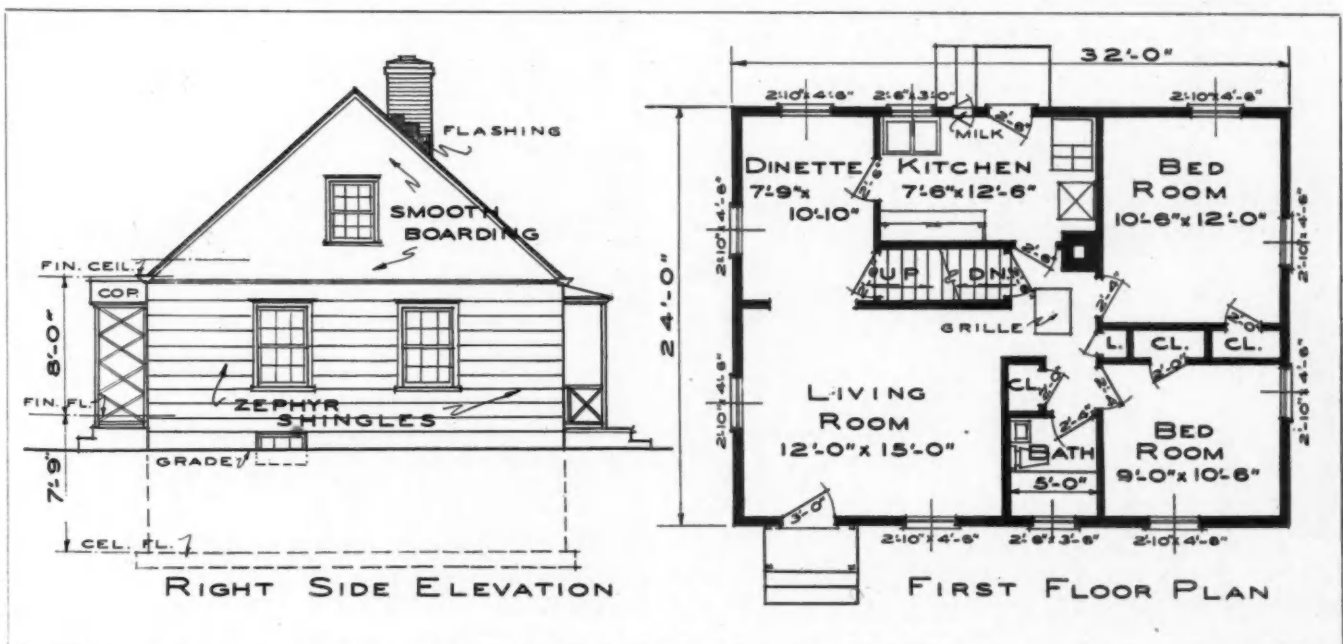
it is a healthy contrast to the devil-may-care, let-the-government-foot-the-bill attitude of publicly financed housing projects.

Although the Forsell-built houses are of quality materials and equipment throughout, they are easily within the price range of defense workers and are also within reach of the nearby industrial areas. Several of the recent purchasers, for example, are skilled machine tool workers in Bridgeport plants. The monthly carrying cost of the houses to buyers, including interest, amortization, taxes and insurance, is from \$30 to \$35. That's less than defense workers would have to pay for rent. Yet this monthly payment includes a definite saving each month of the amount that applied to principal.

The houses have 10-inch concrete foundations, well  
(Continued on page 131)

**SMALL Builders Do BIG Business**

**THREE-QUARTERS** of all urban single-family homes are built by firms who erect less than ten houses a year, a recent Dept. of Labor survey shows. The bulk of the nation's building is done by small builders with low overhead and low operating costs. While much of the current defense business is being done in large industrial areas, people prefer to live in nearby residential communities. The many thousands of small builders already operating in these communities are best fitted to handle defense housing.



**BASIC 32' x 24' FORSELL HOUSE** is economical to build and own, has fine proportions, attractive design. Space upstairs may be used for additional rooms as family requirements expand.



FAST WORK shown by private builders in erecting first group of FHA Title VI houses, at Bellmore, Long Island.

## “Down Payment to Suit”

**How veteran private builders are selling homes to airplane workers in defense area under new FHA Title VI plan, with low down payment or none at all**

**A**S Congress moves to increase the amount of mortgages FHA can insure under Title VI to \$300,000,000, private builders throughout the country are displaying great speed in getting houses built under this plan in defense areas.

Under Title VI private builders are able to build houses in defense areas and sell them with little or no down payment. The sales are not restricted at all to defense workers. The builder becomes the mortgagor on a group of houses and can rent or sell the houses, as he deems best.

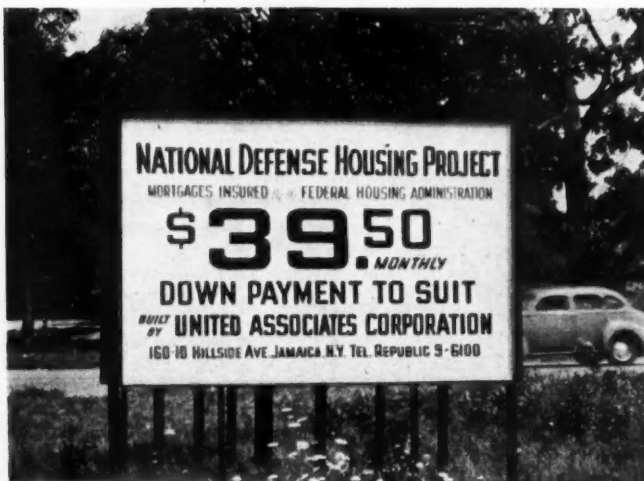
Furthermore, under Title VI the builder-mortgagor's 10 per cent equity may be created by the services he ren-

ders in originating the project, or by the profit which he expects to make.

Title VI offers a very strong inducement to private builders to build houses with FHA mortgages of \$4,000 or less in defense areas. When or if priorities on materials are issued, such builders will be in line. By July 26 applications had been made by builders for 24,722 mortgages amounting to \$90,600,750. On that date commitments had been issued by FHA on 18,506 mortgages totaling \$66,166,350. If Congress increases the amount that can be insured to \$300,000,000, as is expected, Title VI defense building by private firms will boom still further.

How does Title VI home building actually work in the field? To get a first-hand report an *American Builder* editor visited the first development under Title VI on Long Island, in which an initial group of 30 homes was nearing completion by United Associates, veteran Long Island builders who have erected more than 2,000 houses in the past 18 years.

Bellmore is a thriving little town near the great aviation industry that has sprung up at the east end of Long Island in the Farmingdale area.



PRIVATELY BUILT and financed under FHA Title VI, Bellmore homes are described as "National Defense Housing Project."



MAURICE KRULL, officer of United Associates, takes stand beside Title VI home, with Bellmore High School in background.

THIS 11" x 15" HANDBILL is posted in factories by United Associates to describe their new Title VI housing project in defense area near Long Island airplane plants. Handbill features "down payment to suit" with monthly payments of \$39.50. Wherever possible, buyers are switched to regular FHA Title II plan.

# NATIONAL DEFENSE HOUSING

A PROJECT built by **UNITED ASSOCIATES**  
at CAMP AVENUE and NEWBRIDGE ROAD, BELLMORE, LONG ISLAND



**A HOME FOR EVERY FAMILY**  
U. S. Govt. Backed  
F.H.A. Low-Cost Homes  
in Defense Areas

Directly  
OPPOSITE  
NEW NEPHAM  
HIGH SCHOOL

New Defense Housing  
Situated in Most Lush,  
Convenient Areas!

**\$4500**

**\$39.50** MONTHLY

**INSURED MORTGAGE SYSTEM**  
20 YEAR PLAN

**5 Rooms and Bath with Expansion Provisions  
for Two EXTRA Second Floor Rooms**

**NOTE THIS**  
DOWN PAYMENT TO SUIT

**NO CITY SALES TAX . . . . . NO ASSESSMENTS**

**TAKE ONE**

MOST of the Bellmore homes thus far have been sold on down payment of \$190, buyers agreeing to make balance of 10 per cent equity within 18 months. Mortgage will then be transferred to regular Title II plan with lower monthly payments on balance.

The town has good schools, good transportation and, as far as can now be told, a stable future. Thus, it met the requirements for Title VI houses, which are very similar to those for Title II.

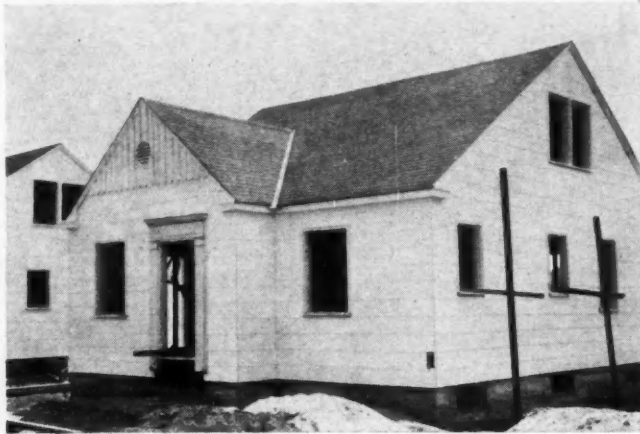
FHA issued a credit line of \$120,000 to United Associates for the construction of 30 houses under Title VI. The houses (fully detailed on page 64) can be rented or sold, or, as is actually being done, sold on a very small down payment.

On a \$4,500 house the builders try to get a down payment of \$190. They also try to persuade the buyer to make up the balance of his 10 per cent equity within 18 months. At that time, if he has built up his 10 per cent equity he may get a regular FHA Title II mortgage under which the monthly payments are much less. United Associates has a definite commitment from FHA that they will accept the buyer under Title II at that time.

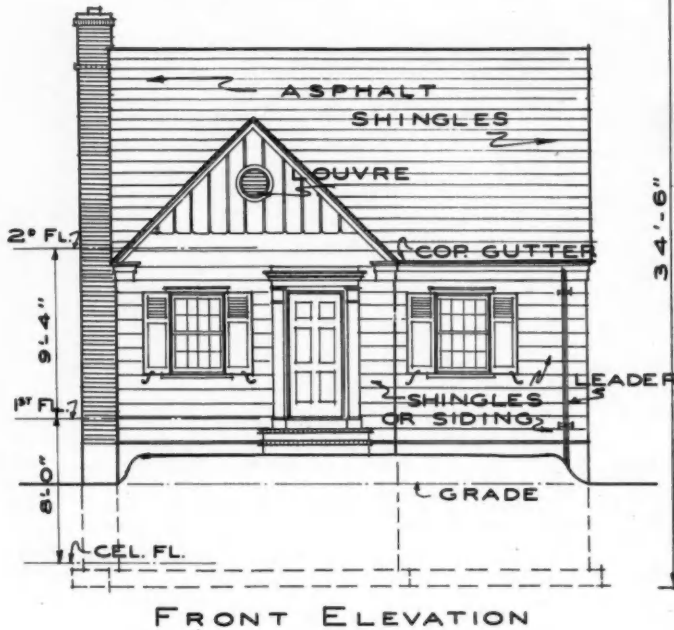
One point that was not made clear, however, was



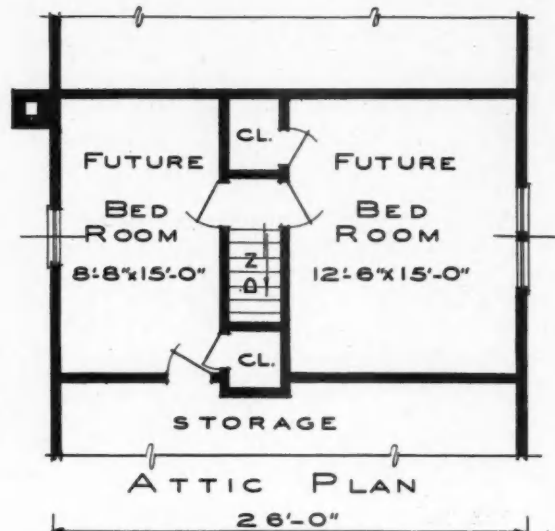
TITLE VI Bellmore houses under construction have 5-room 26' x 34' 6" plan as shown in drawing on the following page.



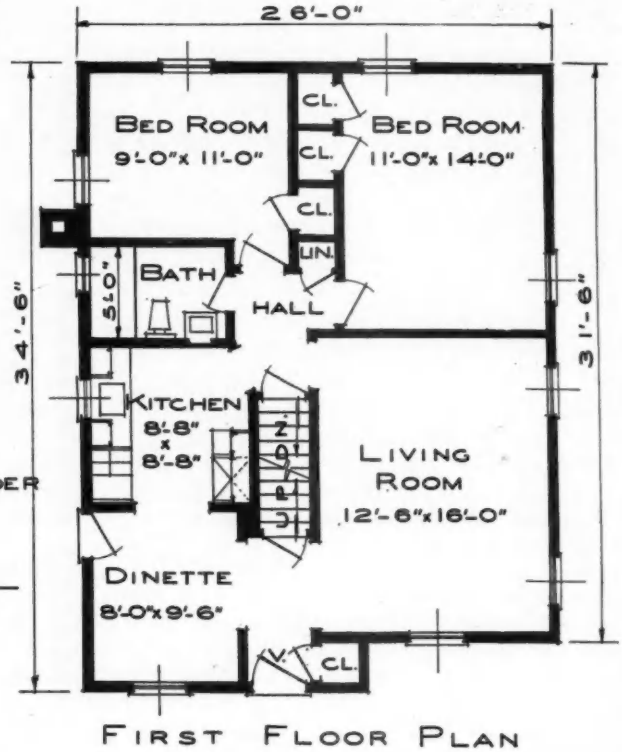
DETAILED PLANS of Title VI Bellmore houses show good arrangement of 26' x 34' 6" plan. Wide arched openings give foyer entrance spacious look. Rooms are large, well lighted. Joseph Unger, architect.



FRONT ELEVATION



ATTIC PLAN



FIRST FLOOR PLAN

whether FHA would accept such a buyer under Title II if his status had materially changed—that is, if he was out of a job.

United Associates have land either purchased or under option to permit building several hundred homes in this area. They are starting out with a group of 30, which is all they have been allotted under Title VI. Thus, they try to sell as many houses as possible under Title II. They have found a number of buyers who were attracted by the "down payment to suit" advertising who had enough money to make a Title II down payment, and in some cases, more than the required 10 per cent.

The Bellmore houses have a 26' x 34' 6" floor plan, five rooms with space for two additional bedrooms to be added upstairs later. They are substantially built with full 10" concrete basements, tile bath, 2 x 10 first floor joists, 2 x 8 second floor joists and rafters. They have an unusually attractive center hall entrance arrangement. The heating system consists of an American Radiator one-pipe steam system with coal burning boiler. Other materials and

equipment include full tile baths, Flintkote asbestos cement siding, asphalt roof shingles, Welbilt kitchen ranges, American cabinets, 7/8" oak floors, copper water tubing, copper leaders and gutters, Armstrong linoleum in kitchen, weatherstripped doors and windows, plots of 5,000 square feet or more.

United Associates have experienced some difficulty in getting materials and have made application to obtain priority assistance on future homes as soon as a system is set up by Federal authorities. The job was seriously delayed by the shortage of gypsum board and plaster caused by the strike of gypsum workers. The builders have the greatest confidence that they can sell these houses on the terms made possible under Title VI, as fast as they can build them. New homes are in demand in this region due not only to the influx of thousands of new workers to the airplane factory but also to a general improvement in business.

United Associates are confident that they are building  
(Continued to page 128)



## HOMES & NATIONAL DEFENSE

### Must America Choose Between Guns and Housing?

By *W. C. Bell*

Sec'y Western Lumbermen's Ass'n.  
Chairman Western Homes Foundation

**T**HIS IS a vitally important question, in view of the fact that tens of thousands of families who have needed new homes for years now have the money for the down payment required for new-home ownership, and the further fact of a shortage of about two and one-half million dwellings.

To be specific, the Army needs powder for its new guns. Construction of 24 powder plants is being rushed. They will be built of wood and take a billion feet of lumber, along with large quantities of cement, plumbing, heating and electrical equipment, and other building materials. And they will require a large body of building labor.

Many more examples of the kind might be cited. Defense housing, in defense industry centers, requires exactly the materials and labor used in normal home building. May this construction restrict, through defense priorities, new housing in non-defense industry centers?

There has been a great deal of public discussion on such questions, much of it recklessly irresponsible. The largest newspaper in the Midwest has advocated the suspension of FHA "for the duration," and has generally attacked private home-building in the name of national defense. There has been too much of such grandstand quarterbacking on this, a subject as technically complex as that of agriculture, or steel manufacture, in relation to the defense economy of 1941.

And it is a subject that extends far outside the field of economics.

Housing is a commodity. The home, however, is an institution spiritually on a par with the churches and schools of America. The home is the temple of American family life. Materially, the home is family shelter, requiring materials and labor for construction. In only this narrow sense of shelter is the home "housing."

Barracks are housing, and workers' dormitories are housing, but they are not homes; such shelter buildings do not represent what we are defending; while the family home, more than any other single thing, does represent the American values men have died to defend.

The nation may be compared to a great tree, with roots extending through states, counties, towns, neighborhoods, to our thirty million homes.

Lincoln's first strong measure for defense of the Union was the Homestead Act, signed by him in 1861 to provide tangible, material inspiration for each individual soldier of the North—the opportunity to secure a home of his own.

This distinction is of the utmost importance—as be-



tween shelter housing, the commodity, and the home, the basic unit of the American nation.

The advocates of severe restrictions on home building are best described in terms of the old line, "Fools rush in where angels fear to tread." What if building industry leaders were to advocate cessation of all newspaper publishing "for the duration," or the closure of all radio broadcasting stations? Home radio receiving sets require materials vitally essential to defense. Newspapers make vast demands upon forest industry, metals, machinery manufacture, transportation, skilled labor, and so on.

But are we to abandon such American institutions as the free press and free speech for the emergency? The question, like the question of stopping home building, could be seriously asked only by a recklessly irresponsible mind.

What are the supposedly dire necessities of national defense that offer any shadow of reason for drastic curtailment of home building?

#### **Restriction of Small-Home Building Would be an Economic Calamity**

In 1940, for the first year since 1928, enough new urban dwellings were built to supply new families with homes and to meet the annual need for replacement of dwellings passed out of use. The new non-farm units numbered 545,000. An exhaustive study published by the National Resources Committee in 1938 estimated annual requirements of 550,000 urban dwellings and 40,000 farm dwellings over the five-year period, 1940-44. The total annual requirement should be more than met in 1941.

(Continued to page 126)

VIEW of Mooney and Nelson apartments showing attractive design and individual apartments; this is as seen looking from the lower left hand corner in plan below.



**Courtney Stewart of Fort Lauderdale, Architect; Built by the Standard Construction Company**

## Color and Comfort in Florida Apartments

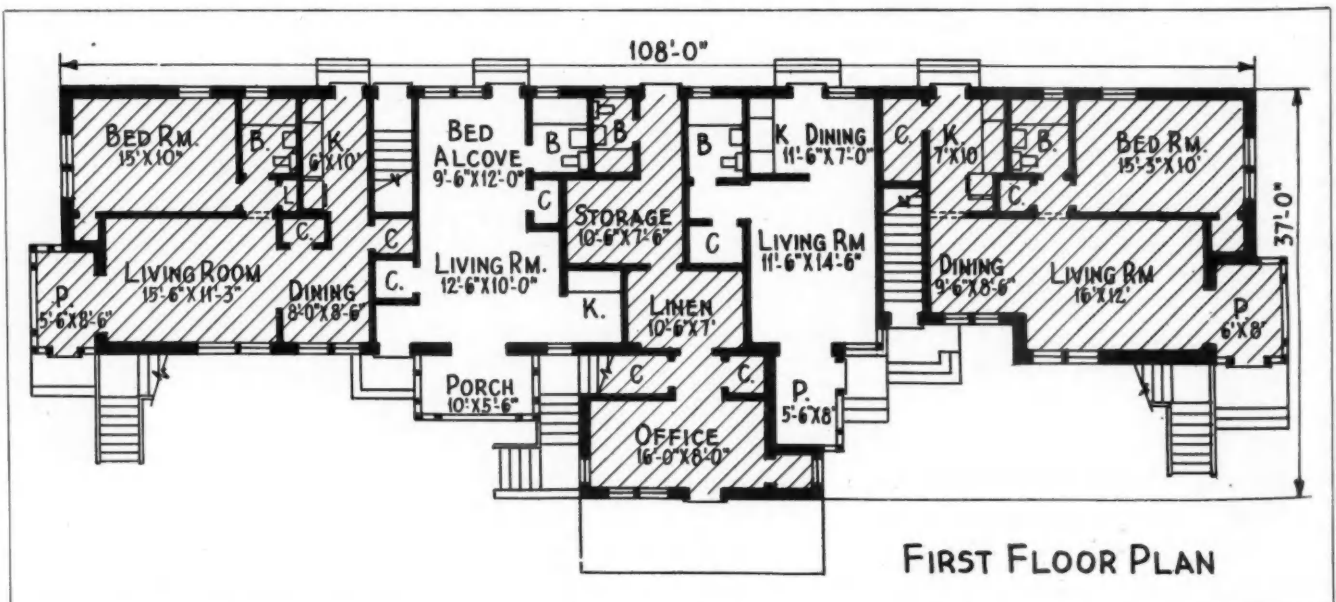
**Newest Mooney Point rental units feature individual porches; planned for expansion**

**A** RECENT addition to a group of rental accommodations called Mooney Point in Fort Lauderdale, Fla., has unearthed some very interesting planning and construction requirements and highlights in the successful operation of this type of dwelling unit. The Mooney and Nelson group of cottages and apartments has been expanded and developed over a period of years. The "cottages"—this term being somewhat of a misnomer—are of both the two-apartment type and the single detached units.

Most of these earlier accommodations were of two-bedroom size, and since there was an increasing demand for smaller places, the apartment type building illus-

trated on these pages was planned and built to fill this need. The planning of this structure is the work of Courtney Stewart, Fort Lauderdale architect. Standard Construction Company did the building of this newest unit.

The building was laid out to allow for future expansion, the plan shown below being just one section of the entire project. The rest of the building will be an L-shaped addition extending south and east from the present office (first floor plan) and trunk room and small bedroom (center, second floor plan as shown on the opposite page). The small room marked "trunks" will then become part of a bedroom and closet arrangement



**CLOSE-UP VIEW** of first and second floor porches, showing the fine detailing by Architect Stewart to combine modifications of several design styles into a new type of charming design simplicity. Note novel circular motif in balustrade at right.

in the new section. Just underneath this will be an arched passageway, 12 feet wide, and the entrance to the office will be from this passageway. The L-shaped addition will face the east, with the waterfront (east) end of it duplicating the east porch and stairway arrangement of the present building. The area between will then be a court which can be attractively landscaped and in which a fountain can be placed.

From the owners' experience with the cottages, they knew the value of private, screened porches which are a distinct "plus" in Florida, so they went to the additional expense of providing one with each apartment. They also insisted that these porches be so placed that none would be opposite or have a view into any of the rooms of another apartment. Even when their plan for a future addition to the building is carried out, the porches they have now will still be private.

As for the style of the exterior, the owners stated that they felt they gave the architect his hardest assignment, because they liked the "New Orleans" type of architecture, but also wanted a feeling of the "Bahamas" in it, and yet wanted it to be distinctly "Florida," and said that if they could have added some "Ranch House," they probably would have put that in, too. At any rate, they knew they wanted some wrought iron, some louvres, and graceful curves on the stairs instead of what so many Florida apartments have—straight, boxlike buildings and harsh, straight line stairs. The success with which the architect carried out the owners' wishes is clearly evident in the illustrations.

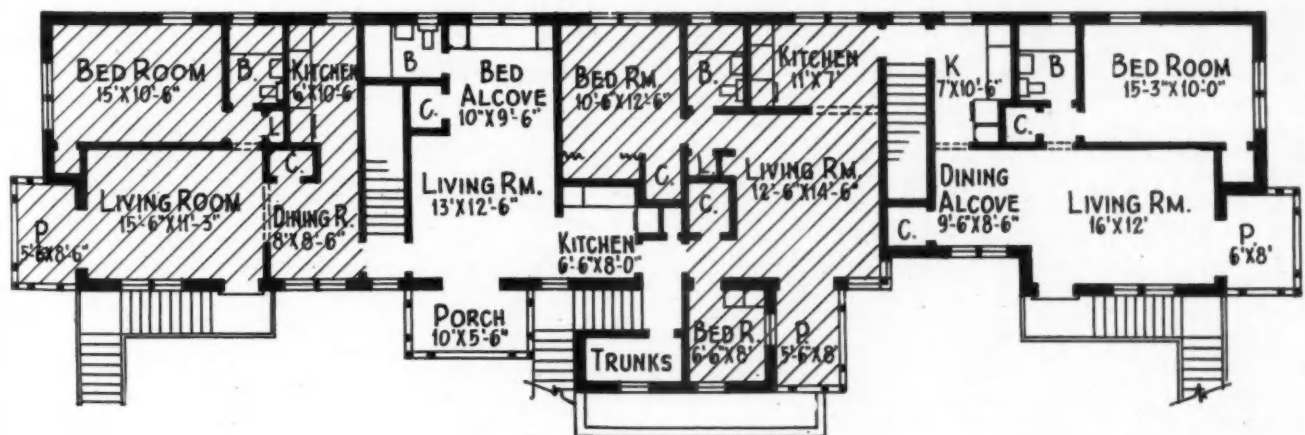
As for interiors, it was felt that color was desirable, and that this could best be carried out by furnishing the entire building in "Monterey" furniture. Harmonizing drapes, spreads, and colorful dishes complete the picture. The owners felt that, while many people go to Fort Lauderdale for the entire winter, there are many more who go for two or three weeks or so and are there in the vacation spirit. Gayety is in the air and a lot of color, inside and out, is in keeping with their mood.

The building contains four one-bedroom apartments, one apartment which has a regular bedroom plus an



extra "bunk room," and three "efficiency" apartments. The latter phrase describes an apartment which has a combination living room and bedroom, with kitchen or kitchenette, and bath. Some have studio couches for beds, but it was decided to give full comfort and provide twin beds instead of the studio couches, so in a sense the "efficiency apartments" are glorified hotel rooms plus kitchen facilities and, of course, the private porches.

The "bunk room" was merely an extra which came along as the plans developed. The room is small, allowing room for only one twin bed (or a double decker), but it makes an excellent layout for a family of three, giving the third person a private room instead of sleep-



**SECOND FLOOR PLAN**



THE office wing can be seen at the far left of this view of the Mooney and Nelson apartments at Fort Lauderdale, Fla. The flower pots attached to the wrought iron railing further add to the ornamental character of the concrete stairs to the second floor apartment.



THE apartments are colorfully furnished in a simple Monterey style. Trim and decoration have been kept as simple as possible. Floors are carpeted.

ing on a studio couch in the living room as is usually necessary.

The kitchens are all electric, and the equipment is of regular size instead of in assembled kitchenette form. Closet space is generous. Steam heat is provided by Clow Gasteam radiators. Baths are tiled, having tub and shower. Kitchens have linoleum, but other inside floors are Amhaco Broadfelt cemented to pine flooring; porch floors are tile. Plaster walls were done in a "texture" finish and left unpainted. Exterior stucco was painted in a very light coral tint. Adjacent to the building there is a car shelter with room for a car for each apartment, and along the sea wall at the cove, there is 150 feet of dock—enough space for three or four cabin cruisers.

against this error. In the center of our building, connected with the office, we have provided generous rooms for both linens and storage, as well as an extra bath.

"The building has had its second 'season,' and during the time since it was opened, the lawn and various plants and trees have had a fine chance to develop. The tall trees shown in the picture (cabbage palms) are original growth. We had to cut some down to make way for the building. The rest of the landscaping was moved in.

"We have lots of color, too, in the wrought iron tables, umbrellas and chairs on the lawn so, inside and out, we think we have provided a Florida apartment building which has, to an enviable degree, both comfort and color."



# 4-Room Apartment Included on First Floor

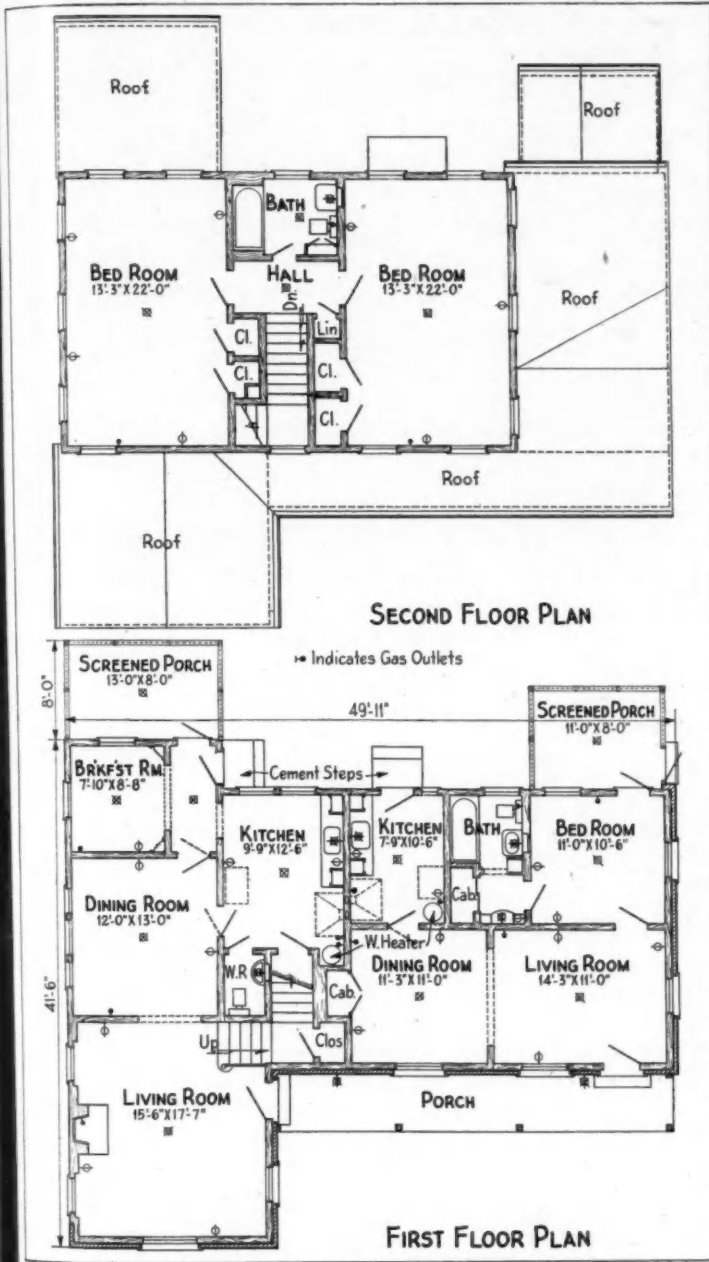
**F**ROM Texas comes this different version of a two-family dwelling which might be classified as a duplex, but from appearance it is another rambling type of home. The floor plan shows how a small four-room and bath apartment has been worked into first floor arrangement. The balance of the first floor contains the usual living room, dining room, kitchen being combination, and the two bedrooms and bath of this unit occupy the entire second floor.

This home is located in the fast-growing city of Houston, Texas. It was designed by Harvin Moore and built by Gus Barkow, both of that city. Overall dimensions, including the porches—private screened porches being provided for both families—are approximately 50 by 50 feet. The contents figure to slightly more than 26,000 cubic feet, and considering the extended nature of the plan and duplicate facilities, the cost was surprisingly reasonable.

Because of these various characteristics, this type of structure is adaptable to many needs. For instance, in defense areas such as Houston, a ready rental market will be found for such a small apartment and after the emergency there will undoubtedly be a continuing demand for this type of space as it offers the advantages of fine residential location as against the probably overbuilt areas which will contain nothing but four-room detached houses, decidedly less attractive.

The home shown here has a partial basement combined with reinforced concrete footings and beams. Exterior is brick veneer and siding. The low pitched roof has a built-up asphalt and gravel surfacing over wood roof sheathing. J-M rock wool was used to insulate the ceilings. Equipment includes Pennvernon glazed double-hung sash, gas-fired space heaters, Armco sheet metal work and Crane plumbing fixtures.

**THE residential structure shown below and built in Houston, Texas, by Gus Barkow, has a compact four-room and bath apartment rental unit worked into the first floor plan, as illustrated at the left. Harvin Moore, architect.**



# Lumber Panel Houses for \$1,119.00

King & Boozer Co., Anniston, Ala., is using the CCC camp pre-fab. housing method for Farm Security projects in southeast

By Robert Turner, Timber Engineering Co., Inc.

**E**CONOMICAL, prefabricated wood houses, erected at the rate of "a-house-an-hour" are playing an important part in a major, if little publicized, phase of the emergency activities by which America clears ship to ward off the Great Headache.

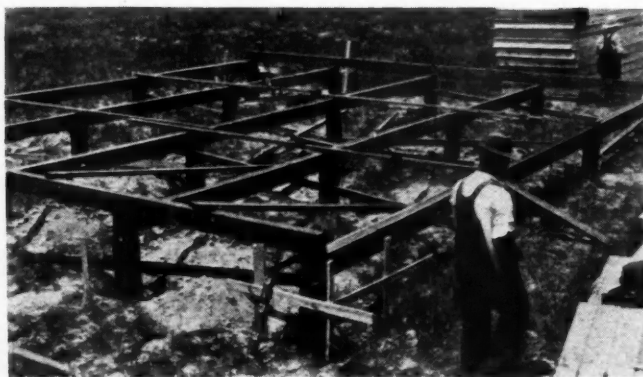
In all parts of the country, but particularly in the southeast and middle west, military and industrial defense projects are taking over land which last year was farmed by American families. More than a million-and-a-half acres have been acquired by the Army already, and acquisition of nearly 4½ million more is under way with funds authorized by Congress. About three-quarters of the total acreage is to be used for military cantonments, maneuver areas, bombing fields, and anti-aircraft ranges.

The most conservative estimate places the number of families thus far dispossessed by this conversion of land at 8,800. Nearly all of these families, uprooted from their homes, their livelihoods, and their way of life in an exodus without parallel in American history, have needed some help in finding new homes, in moving themselves and belongings, and in getting a toehold to start anew.

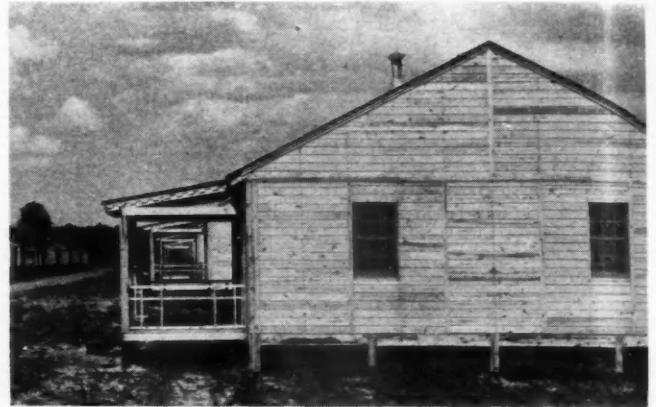
The Department of Agriculture, accustomed to dealing with farmers and their problems, naturally took up the job. Within the department, the Farm Security Administration, with personnel, trained by six years of experience in resettlement and housing work, already in the field in 25 new defense development areas, has been the principal relocation agency.

This imagination-staggering operation could have been carried out ruthlessly, but this country was never built on ruthlessness even in emergencies. These people were paid an equitable price for their properties, and many were able to take care of themselves immediately without recourse to government aid. However, many farms were heavily mortgaged, and settling the mortgage left little cash on which to start over in strange surroundings. Others were tenant farmers, and might not be able to make another arrangement quickly in the line of work at which they are most valuable. Others were hired hands, simply left without a job.

The Farm Security Administration is finding farm work for them, helping them relocate on farms elsewhere and get started. But the first and most urgent need is



SUB-STRUCTURE in place ready for floor. Panels, creosoted posts and built-up girders are used.



STANDARDIZED wood panel house, 25 x 30', costing \$1,119, as erected for Farm Security Administration in Caroline County, Va.

shelter for their families. That is where the speed and economy of prefabricated wood houses have met their test. Throughout the southeast, settlements of prefabricated wood houses are being rushed to completion in breathtaking time to care for the dispossessed farmers. In many cases these prefabricated houses are better than the homes the new tenants left, although they might not seem over-pretentious to urban eyes.

Let us look at one small facet of this many sided upheaval . . . Caroline County, Virginia. Here, some 110,000 acres . . . the solid northern third of the county . . . were purchased, displacing 846 families.

Many of these people . . . white folks and colored . . . are being uprooted from the land on which they were born. They are leaving behind the fields they tilled, the schools where they "l'arned," the churches in which they were married, the graveyards where lie their parents. They are leaving ruefully, but without complaint or dissent. The country needs their land, and that's that. The sons of many will move onto the land as they move off . . . in uniform.

At three sites near Bowling Green and Milford, Virginia, the King & Boozer Company has erected 75 houses, prefabricated at its Anniston, Alabama, plant, for the farm folk from Caroline County.

These demountable houses, 25 x 30 feet on the inside, are an adaptation of the design used to house 300,000 CCC boys at 1,500 locations during the past five years. Of panelized construction, the roof trusses jointed by Teco Split Ring Connectors, they are built of Southern pine mounted on creosoted wood posts with creosoted cross-bracing. With one exception of half-inch insulation board, which is used as insulation in the roof panels and as sheathing in wall panels, they are 100 per cent wood.

The floor plan is partitioned into a 12½ x 17½-foot living room, two connecting bedrooms, and a kitchen, each 12½ feet square. One bedroom has a good-sized closet, while another closet in a small entrance hall serves the second bedroom. The kitchen is equipped with a small pantry and broom closet. The living room and kitchen have three windows each, and the bedrooms, two with cross-ventilation.



INTERIOR view showing trussed roof construction and inside partitions. Prefabricated truss members are assembled with bolts and split-ring timber connectors.

Interior partitions are about eight feet high, covered on one side with T & G board. A piece of asbestos board on each side protects the partition between living room and kitchen from the stoves in either room, which are served by two metal chimneys.

As there is no ceiling, the trusses are exposed.

The floor is one thickness only.

A good-sized front porch and simple cornice add considerably to the exterior appearance. On the outside, the house receives two coats of white paint. The interior is left natural. The roof is covered with green roll composition roofing.

Each house has roughly an acre of ground, and each four houses are served by one well. Outdoor toilet facilities are designed after the Chic Sale model. The fabricator did not supply kitchen or lighting equipment, but electrical wiring was installed in the panels before the walls were up. Gerald King of King & Boozer states that his factory can turn out one of these houses, ready for shipment every 20 minutes.

The job of erecting the 75 houses was completed in an elapsed time of 15 days from the time unloading freight

cars at Bowling Green commenced. This is an average of five houses per eight-hour day, or one house every hour and 36 minutes, not including painting. That time can be reduced to a house-an-hour rate, Mr. King claims.

Prefabricated sections are trucked from freight cars to the site. Every piece is made to fit. Window sash, glass, and screens are inserted in the panels at the factory. Likewise, doors and screen doors are hung in place in their proper panels, ready to be used.

The houses were erected by assembly line methods. King & Boozer brought from Anniston a foreman, five experienced crew leaders, and 15 experienced helpers. The working crews were divided:

- Foundation (digging holes, etc.)—8 men
- Floor laying—8 men
- Erecting wall panels—8 men
- Roof panels—6 men
- Partitions—5 men
- Finishing carpenters—12 men
- Unskilled labor—73 men

In a trial against time, an extra crew was put on one house. Eight panels, representing the rear wall of one house and one panel on each end, were in place ready for bolting in seven minutes.

One complete house and privy sells for \$940 f.o.b. Anniston . . . \$1,050 erected at Bowling Green. Two coats of paint cost \$44, and one well for four houses \$100, or \$25 per house, making a total cost of \$1,119 per house erected, ready for occupancy.

The local Farm Security Administration inspector estimated that these houses, which are demountable, have a 97 per cent salvage value.

The King & Boozer Company has built 100 of the same type of house at Hinesville, Georgia; 75 at Milan, Tennessee, and 60 in Calhoun County, Alabama. Mr. King adds that a good many have also been sold to individuals for use as summer cottages.

Other areas where FSA is following a similar program in helping to relocate displaced farm families include: Anniston and Childersburg, Alabama; Spartanburg, Columbia, and Santee-Cooper, South Carolina, and Onslow County, North Carolina.



SETTING up the prefabricated wall panels after floor is in place. Panels are of southern pine drop-siding on 2 x 4's and are lined with insulation board. Panels are bolted together in assembly.

# Wedding Rings Mean Home Sales for Florida Builder

*J. Victor Martin*  
General Contractor  
2090 S. W. 11th Street  
TELEPHONE 42343  
MIAMI, FLORIDA

September 2nd, 1940

Mr. & Mrs. Richard Roe  
1 NE 1000 Street  
Miami, Florida

Dear Mr. & Mrs. Roe:

Please accept our sincere congratulations on your recent marriage. May we wish you years of happiness.


Now that you have taken the first great step towards a fuller life, we know that you will soon be thinking of the next step, that is, a home of your own.

We have just opened a large wooded improved tract in a delightful suburb on which we are erecting seventy homes. The down payment is small and the monthly payment is only \$18.00 or \$19.00 a month.

You will find attached hereto a prospectus of this development and we suggest that no matter how small the amount you have on hand, that you talk to us before renting. In addition to this, our organization is prepared to submit plans incorporating your own ideas on any location you desire.

Yours truly,  
*J. Victor Martin*  
J. VICTOR MARTIN, INC.  
BY *J. Victor Martin*

JVM/s  
encl.



Model Home At 1007 S. W. 41st Terrace

**60c a Day**  
INCLUDES TAXES, INSURANCE, INTEREST, PRINCIPAL

**TOTAL PRICE \$3,000\***

5000 DOWN  
**Apr. \$18 MONTH**

F. H. A. FINANCING  
FED. FUND INCLUDES FARMERS CREDIT

**NOW BUILDING 70 2-BEDROOM CBS BUNGALOWS ON 65 to 75-FOOT LOTS**

Located  
**NEAR BIRD & RED ROADS**

CITY TAXES      TILE BATHS  
LIGHTS            SOLAR - PORCH  
WATER            LANDSCAPED LOTS  
SIDEWALKS      HARDWOOD FLOORS  
PAVED STREETS   PORTS COCHERE

**MIAMI'S ONLY 5-STAR HOMES**

- \* Hurricane Proof
- \* Termitic Proof
- \* 65 to 75-Foot Lots
- \* Low Down Payment
- \* Completely Modern

**J. VICTOR MARTIN**  
BUILDER - DEVELOPER  
OPEN EVERY NIGHT FOR INSPECTION

**VALUE**

**DON'T FAIL TO INSPECT OUR MODEL HOME**  
Corner Bird & Red Roads

J. Victor Martin demonstrates that a broader market awaits the developer-builder who trims costs without cutting the quality and who then aggressively merchandises his product

ABOVE: Letters sent to newlyweds whose names appear in wedding announcements in daily papers. Right: Small sample newspaper ad in Builder Martin's sales campaign.

**S**OUTH Florida people have become decidedly "home-minded." During the past few years more and more of them have shown an urge to shift from "furnished apartments" to homes of their own. In a great number of instances the prospective purchaser's ability to adjust his income to the terms offered represents the difference between his desire for home ownership and its realization.

By competent construction methods and a shrewd choice of location, J. Victor Martin of Miami has put comfortable houses within the reach of more "budget buyers." In a short time he had built 30 of these houses and sold them faster than he could construct them.

But no matter how outstanding the value of his houses may be, Mr. Martin realized from the beginning that they could not be expected to sell themselves. He therefore went about the business of marketing them in a practical way. He has advertised consistently in local newspapers and in return received excellent publicity in the papers' readers columns.

As one of his approaches to the market, he prepared an attractive 8½" x 14" single-sheet prospectus, descriptive of his development. These, together with letters of congratulation (see reproduction above), were mailed to newly-married couples, whose wedding announcements appeared in the daily papers.

The development featured 5-room, concrete-block, stucco-finished homes. They sold on FHA terms of \$300 down and \$18 per month. Besides reducing principal, payments included insurance,

interest and taxes. Contributing to the low monthly installment setup is the reduction in real estate taxes due to the location of the development outside the city limits.

This does not mean, however, that its residents suffer any curtailment in convenience. They draw their water supply from Miami's municipal system, and bus transportation is available over two routes running over main traffic arteries, which adjoin this Martin development.

Pre-cast concrete septic tanks of 500 gal. capacity provide sewage disposal for each house. These drain by soil-seepage through 4" cement-and-sand pipe, spaced ½" apart. Tanks of this type often operate for as long as 15 years without the need for servicing.



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These homes better the requirements of FHA. Foundations are of reinforced concrete mixed "on the job." Rafters and floor-joists are No. 2 long-leaf yellow pine, while the rest of the framing lumber is short-leaf of the same grade. Sub-floors and roof-sheathing are constructed of cypress. The floors themselves are  $\frac{3}{4}$ " x  $1\frac{1}{2}$ " hardwood.

Above the sheathing, the roofs consist of two layers of 30 lb. felt, asphalt-wiped and surfaced with  $\frac{1}{2}$ " (pea size) native rock. This type of roof has demonstrated in South Florida its weather-resistant qualities. A solar water heater is included in the specifications.

Windows have steel sash set in wooden bucks and equipped with Getty bronze operators. All exterior openings are copper-screened. Specifications also include porches, front and rear, a porte cochere and landscaping. Originally pine-covered land, certain trees were retained in laying out the development. Subsequent landscaping was arranged to harmonize with this setting. The entire picture presented is in pleasing contrast to the tropical motif usually to be found in that area. Lots are 70' x 110'.

### Use Standard but Livable Plan

Built on standardized floor plan, the interiors of these homes have a large amount of livability. Living rooms are somewhat larger than those provided in the average "small home," permitting a broader option in the arrangement of furnishings—an advantage which "lady buyers" are quick to see.

USG Rocklath over wood furring strips forms the plaster base. The pigment in the finish plaster used is factory-mixed. Outlets for portable lamps are controlled by wall-switches.

Designed for "all electric" installations, kitchens have colored tile drainboards and splash aprons. Their Pullman-like efficiency is accented by an ample supply of cabinets and drawers for the storage of cooking utensils and packaged foods.

Other nationally known products used by Martin include Texaco roofing, Kohler fixtures, Lupton steel sash, Dexter hardware, and Armstrong linoleum.

As a 3-way economy, representing the saving of money and time, plus convenience, Martin set up on his development a small millwork plant, employing one man. Here he produced interior trim and inbuilt features, such as the kitchen cabinets mentioned. The concession of an inbuilt bookcase, not included in regular specifications and constructed on the premises at small cost, has been known to help with the closing of at least one sale.

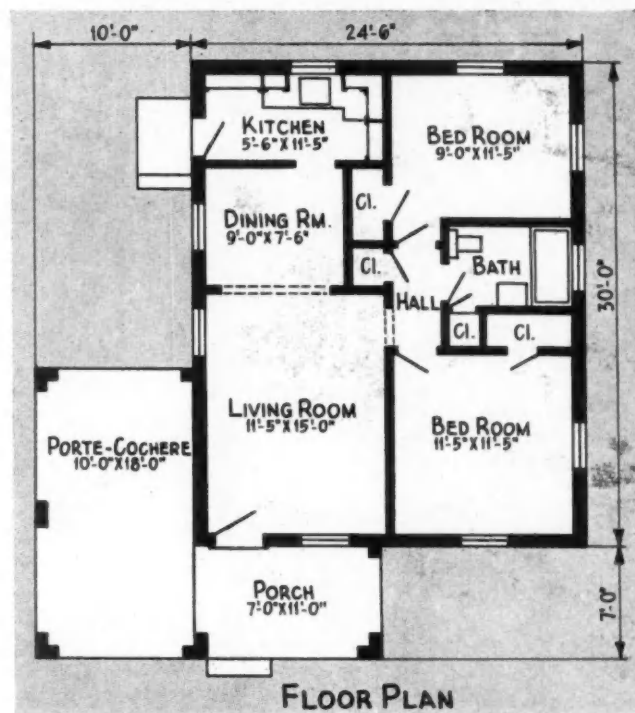
On these operations, and for the cutting of sub-flooring and rafters, a portable electric-powered Skilsaw was used to speed up the work.

Following the plan of more expensive houses, the living and working quarters of these homes form a separate section from the sleeping quarters, which include the bathroom. In the latter the modern fixtures, a tile floor and an inbuilt, combination linen closet and soiled-clothes hamper are features that catch the feminine eye.

Another sales help was worked out by this builder that has brought results. Since the managements of industrial plants usually regard home-ownership as an indication of permanency on the part of their employes, Martin's salesmen were able to arrange for permission to tack copies of the prospectus to several plant bulletin-boards.

As the result of his selling activities, Martin sold 12 houses during the first two weeks after his "model house" was opened to public inspection. Seventy more houses have since been built and sold on the location described in this article, which complete this development of Martin's. Since then, he has started on a new

(Continued to page 129)

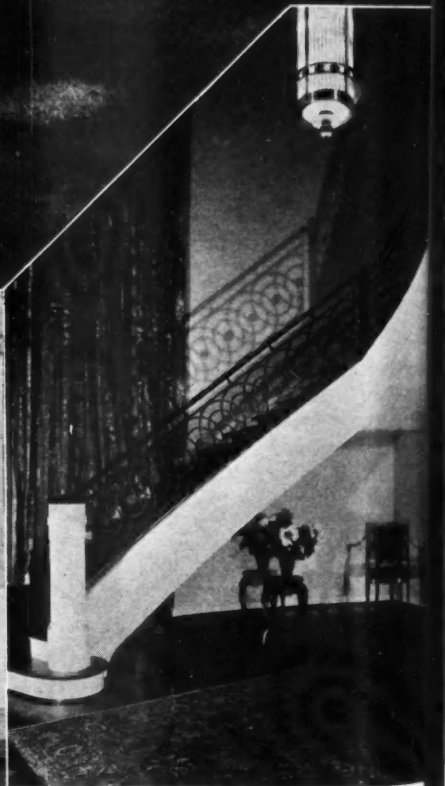
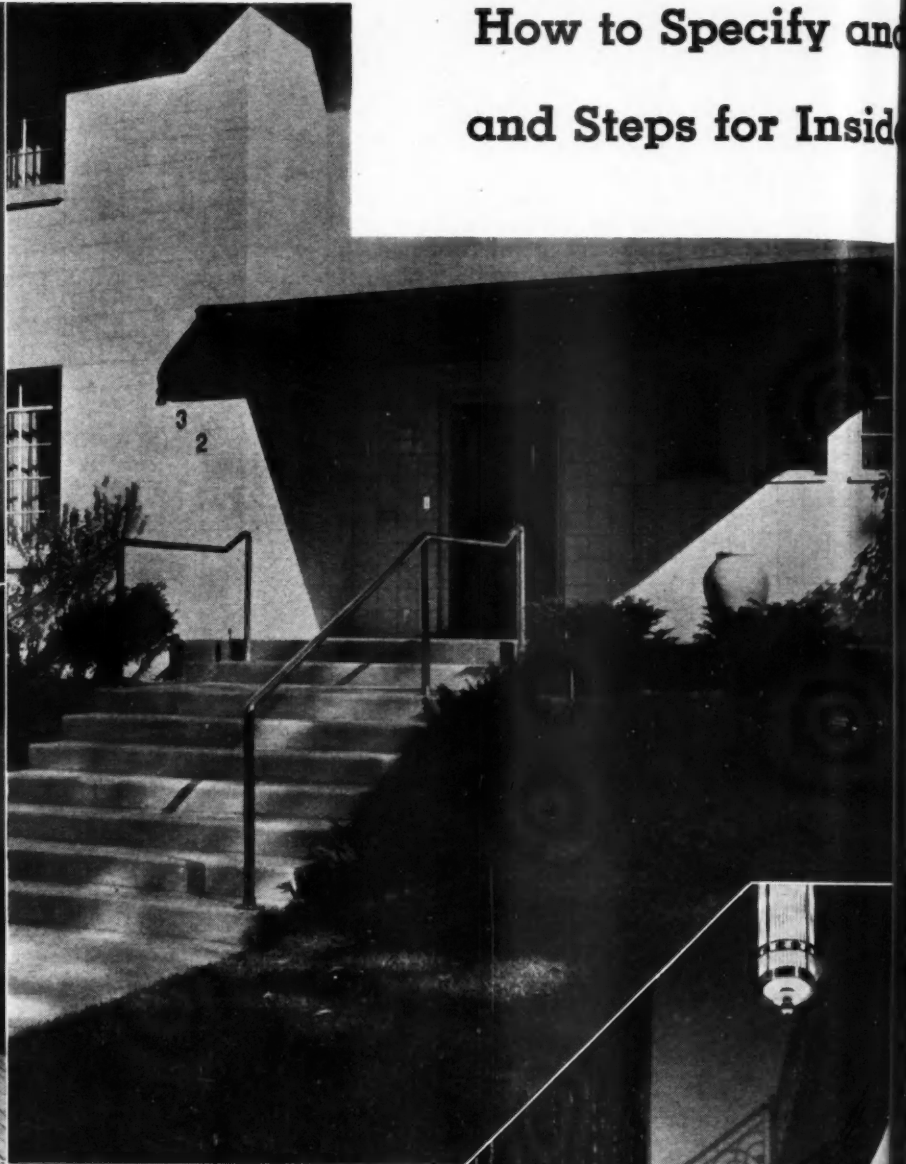
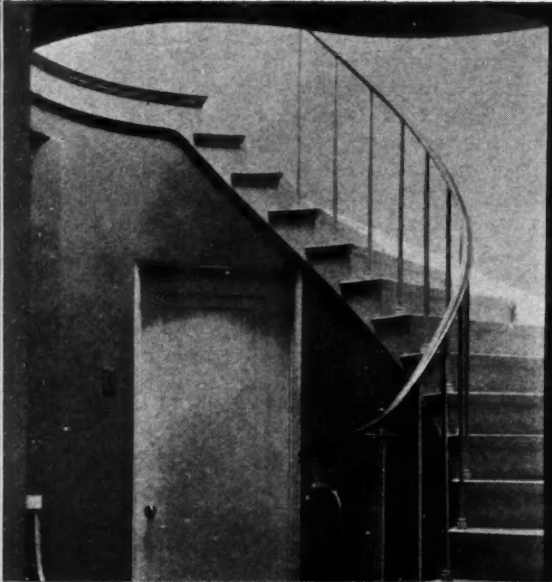


LEFT: Construction view of one of Martin's attractive small homes, showing masonry details.

RIGHT: The finished house. Features include latticed porte cochere, screened porch, solar water heating system, and a compact room arrangement as indicated in the plan directly above. The project is located on pine land; selected trees form basis for finished landscaping.



# How to Specify and Build and Steps for Inside or Outside



TOP OF PAGE: Pleasing winding stairway, terrazzo finish, and modern entrance steps. Center: Concrete outdoor stairway adds charm and distinction. Bottom: Sweeping curves make a graceful stairway and harmonize with masonry walls; carpeting covers concrete; modern rail finishes reinforced stairs.

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# Build Concrete Stairs

## Consider Outside Construction

CONCRETE stairs and steps provide safe, long-lived service in that part of the structure which is subjected to the most severe wear and tear and at the same time may also add to the charm and beauty of a home as they readily lend themselves to any architectural treatment whether used on the exterior or in the interior of the house. They may be given any of the coverings and finishes which are proving so popular for concrete residence floors; they may be painted, stained, finished plain or with a colored topping; they may be finished by grinding or given a terrazzo finish; they may be covered with carpeting, rubber mats, or with concrete or ceramic tile. The finish or covering selected on any particular flight of stairs or steps is a matter of individual preference in producing the desired effect, whether to match or to be in pleasing contrast to adjacent floor areas.

Several typical concrete stairs are shown on page opposite to give a hint as to their architectural possibilities in the hands of capable designers and suggested specifications follow with illustrated details.

### Suggested Specifications

#### I. General

1. The contractor shall provide all materials and equipment required to complete the work of this project in accordance with the plans and specifications. The work shall be properly coordinated with that of other trades. All local laws and ordinances applicable to this work shall be fully complied with.

#### II. Materials

*Cast-in-Place Stairs and Steps:* 1. Portland cement shall comply with the current A.S.T.M. specifications for this material.

2. Aggregate shall be clean, well graded from fine to coarse and shall otherwise conform to the current A.S.T.M. specifications for concrete aggregates. Where aggregates conforming to these specifications are not obtainable, aggregates that have been shown by test or actual service to produce concrete of the required strength, durability, watertightness and wearing quality may be used where approved by the architect. Maximum size of coarse aggregate shall be 1 in.

3. Steel bars or welded wire fabric used for reinforcement shall be clean, free from harmful rust and shall otherwise conform to the current A.S.T.M. specifications for these materials.

4. Coloring material shall be commercially pure mineral oxides which are guaranteed by the manufacturer to be suitable for concrete.

5. Ornamental ironwork shall be as specified or as approved by the architect.

THIS INFORMATION by the Portland Cement Assn., Chicago, is in condensed form for the assistance of architects and builders preparing specifications. Changes will be necessary to make them to apply to the particular job for which they are written. Accompanying illustrations are not a part of these specifications but show details of them.

6. Water shall be clean and fit to drink.

*Precast Concrete Stairs and Steps:* 7. Precast concrete stairs and steps shall be ..... (state materials and finish) as manufactured by..... They shall conform to shape and dimensions detailed on the plans. Where plans indicate the use of ornamental ironwork provision shall be made for attachment of same. Concrete for use in precast stairs and steps shall have a strength not less than 4,000 lb. per sq. in. at age of 28 days.

#### III. Concrete Mixes

*Cast-in-Place Stairs and Steps:* 1. Concrete shall be machine-mixed in the proportions of 1 volume of Portland cement,  $2\frac{1}{4}$  volumes of sand and 3 volumes of coarse aggregate (1:2 $\frac{1}{4}$ :3 mix). Not more than 6 gal. of water, including the moisture contained in the aggregate, shall be used per sack of cement.

*SUPPLEMENT—To be added to Paragraph 1, Section III above, where integral coloring is specified:*

A. Mineral oxide pigment shall be thoroughly mixed with Portland cement prior to mixing with water and aggregate. All the ingredients shall be carefully measured by weight and shall be of the same proportions as used in the sample panel approved by the architect for the color of the finished stairs or steps. Concrete shall be mixed to uniform color but in no case less than 2 minutes.

#### IV. Installation of Precast Concrete Stairs and Steps

1. Contractor shall install precast concrete stair and/or step units as detailed on plans. Stairs and steps shall be built on or into the supporting walls as shown on plans.

2. The ends projecting into or resting on supporting walls shall be set in a full bed of mortar. Mortar shall consist of 1 volume of Portland cement and 3 volumes of damp, loose sand to which may be added plasticising agents not to exceed 10 lb. per sack of cement.

Joints between risers and treads of adjoining units shall be pointed up with mortar and the mortar joints tooled flush with the faces of the risers.

#### V. Construction of Cast-In-Place Concrete Stairs and Steps

1. Concrete contractor shall build cast-in-place concrete stairs and/or steps as shown on plans. Forms shall be sufficiently tight to prevent leakage and shall be properly placed and tied together so as to maintain position and shape and insure safety to workmen. Forms shall be assembled in such manner as to facilitate their removal without damage to the concrete. Where ornamental ironwork is indicated on the plans, contractor shall make provisions for attachment of same.

2. Contractor shall furnish and install reinforcement of size and spacing shown on plans. The reinforcement shall be securely tied in position and care taken to prevent its displacement during construction operations.

3. The concrete shall be deposited in the forms beginning at the bottom and working upward. Concrete shall be carefully spaded or vibrated into place. Placing method shall be in such manner as to avoid segregation of the materials and to produce a dense, homogeneous concrete free from honeycomb. Concrete shall be brought to proper elevation and wood floated to the profile detailed on the plans. After the water sheen produced by floating has begun to disappear, the concrete shall be steel troweled to a smooth surface.

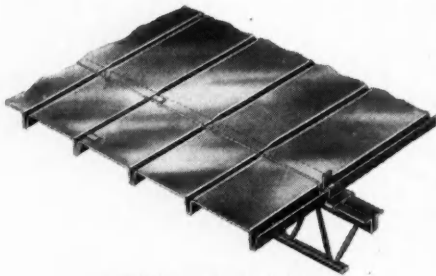
(Note: Well designed concrete mixtures of proper consistency should show a minimum of free water on the surface. Where excess water is found, however, it should be worked to a low point without actually causing a flow and removed. Failure to do this may result in dusting of the surface.)

# SERVICE TO READERS

EACH ITEM in this department is numbered for convenience of readers. Please use the coupon on page 82 for requesting further product information or new catalogs. Mail coupon to American Builder Reader Service, 105 W. Adams St., Chicago; or write direct to manufacturers at addresses given, mentioning your profession, occupation or business connection with building industry.

## WHAT'S NEW IN BUILDING MATERIALS

**AB674** Ceco steel roof deck is new in the line of steel building products by Ceco Steel Products Corp., Manufacturing Div., 5701 W. 26th St., Chicago. This deck is suitable for flat, pitched or arched roofs. Its claim to economy lies in its unusual strength and light weight, which permit wider purlin spacing



CECO steel roof deck

and reduce structural weight. Installation is simple, being done entirely from the upper side of the roof. The only tool required is a common hammer. Ends and sides of all plates interlock, providing a smooth, unbroken roof surface, yet allowing uniform expansion and contraction. Clips secure plates to each other and to supporting frame. Literature, diagrammatic drawings and complete specifications are ready.

**AB675** "Open House" is an illustrated portfolio of 32 pages devoted exclusively to stock styles and sizes of doors and windows. The photographs, sketches and architecturally correct plan and isometric drawings show how specific planning problems can be solved by means of stock woodwork items of Ponderosa pine. Detailed descriptions and illustrations are also presented of many available door and window types. The book is presented by a group of manufacturers under the association name, Ponderosa Pine Woodwork, 111 W. Washington St., Chicago.

**AB676** New prefabricated Vitrolite units backed up with plasterboard so that they can be nailed in place on bathroom and kitchen walls are illustrated, described and detailed in a new 4-page data sheet from Libbey-Owens-Ford Glass Co., Toledo, O.

**AB677** "Manual of Timber Connector Construction," a valuable handbook of 16 pages, has been prepared by the Timber Engineering Co., Washington, D. C. This gives design and

load data for trusses and other heavy timber construction utilizing the several types of Teco timber connectors. Bolted joints, as recommended, are detailed.

**AB678** The Barrett Co., New York City, presents an impressive manual of 70 pages, hard cover, fiber ring bound, under the title, "Reference Manual For Architects and Engineers." It covers Barrett specifications for built-up roofing, flashing, roof drainage, water-proofing and damp-proofing. Clearly drawn details and standard specifications make this a valuable reference guide.

**AB679** A new A.I.A. file of Pella casement details and data has been prepared by The Rolscreen Co., Pella, Ia. These details are printed on looseleaf pages for tracing into plans, thereby saving considerable drafting time. Details include Pella windows and various types of brick veneer, masonry and frame wall construction.

**AB680** Stanley Works, New Britain, Conn., has prepared a new catalog No. 61, "Stanley Hardware," a fiber ring bound handbook of 298 pages. A logical grouping of items makes reference to any part of this very extensive Stanley line extremely quick and easy. A section of particular interest covers the wide range of Stanley garage doors of various types.

**AB681** "Simplifying Lumber Specifications" is an interesting folder put out by Durable Woods Institute, 155 E. 44th St., New York City. Accompanying it is the "Certified Lumber Standards Chart," which specifies, in tabular form, the kinds and grades of various woods for the different parts of homes in three different price ranges, custom built homes, medium priced homes and low cost homes.

**AB682** "The Magic of Decorative Insulation" is an attractive, colorful brochure of 8 pages prepared by the Insulation Board Institute, 111 W. Washington St., Chicago. It presents some striking decorative schemes for the living room, dining room, attic bedroom or game room, and basement rumpus room. Insulation board for sheathing and as a plaster base is also featured. Prepared by this association of manufacturers, this book carries the best thought of the industry.

**AB683** The National Paint, Varnish and Lacquer Assn., Inc., Washington, D. C., is staging a big promotional campaign for this fall, using this slogan, "Paint Protects America." An interesting portfolio of proofs of advertising materials for local dealer use in this campaign is available.

**AB684** A plumbing fixture of growing popularity with home builders is the TN one-piece water closet made by W. A. Case & Son Mfg. Co., Buffalo, N. Y., and sold through master plumbers. It is made in vitreous china, white and a wide variety of colors. One of its outstanding features is the quietness



THE W. A. Case TN one-piece water closet

with which it operates, this result being achieved by its special internal design and construction, which utilizes a powerful, but quiet, centrifugal flushing action together with large bowl opening and water area. This fixture is all in one piece, has no elevated tank, is free-standing, may be used to advantage under windows, under stairs, installed in corners or in any place where a low ceiling is a factor. It is designed to meet the most recent trends in plumbing fixtures.

**AB685** "Weyerhaeuser News" is an impressive periodical recently launched by the Weyerhaeuser Sales Co., St. Paul, Minn. Issue No. 2, just received, carries 24 pages and covers and is devoted in a very broad way to forestry and the utilization of forestry products. Looks like a section out of "Fortune," it has that much quality.

Readers Service Department Continued to Page 78

**FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 82**

# DO THESE

*before You Buy any Garage Door!*

**LOOK**

Look at the refined lines of the Ro-Way Door.

**LISTEN**

Listen to its quiet operation.

**FEEL**

Feel the husky power of its "Tailor Made" Springs.

**EXAMINE**

Examine the mechanism that keeps the sheave wheels always true.

**UNDERSTAND**

Understand why the Ro-Way is so permanently free from sticking and binding.

**NOTICE**

Notice that Ro-Way uses the "Parkerizing and Painting Process" which best protects hardware parts from rust and corrosion.

**DISCOVER**

Discover the patented Ro-Way "Zip-Lock" feature which makes even rarely needed spring adjustments quick and easy.

**REMEMBER**

Remember that Ro-Way sales and installation service is nationwide and convenient to you.

**AND BE GLAD!**

—and be glad that you are not asked to pay one cent of extra cost for all that Ro-Way gives.

Whether you are in the market for Doors for Residential Garage, Commercial or Industrial use, don't take less than all that Ro-Way gives.

*Write for Special Folders and Prices*  
**ROWE MANUFACTURING CO.**  
733 Holton St. Galesburg, Ill., U. S. A.



Detached garage, with Ro-Way Overhead Type Door. Toledo, Ohio, residence of Ray Shaffner. Architect, Harold Spooner.



Attached garage, equipped with Ro-Way "Two-Car" Overhead Type Door. Architect, Aldrich & Aldrich, Galesburg, Ill.



Ro-Way Garage Doors especially designed for use in Modernistic Service Station.



Bus Station, Terre Haute, Ind., using 12 Ro-Way Doors. Miller & Yeager, Terre Haute, Ind., Architect.

## RO-WAY OVERHEAD TYPE DOORS

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

ROWE MANUFACTURING CO.,  
733 Holton St., Galesburg, Ill.

Gentlemen: Please send me Free Descriptive Folder and Price List on Ro-Way Overhead Type Doors.

Name.....  
Address.....  
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### WHAT'S NEW IN BUILDING MATERIALS

**AB686** The Cambridge Tile Mfg. Co., Cincinnati, under its trade name, "Suntile," is featuring Camline, a new real clay tile with well defined designs under the glaze. The individual units, each with soft flowing lines or floral designs may be set in such a way as to achieve a continuous all-over pattern of great warmth. Camline is offered in 13 different flow-tint color combinations in



UNUSUAL effects with new patterned tile.

each of its four patterns. For the lining of tub recess or shower stall, Camline forms unusual patterns in contrast to solid color walls and is fade-proof for life. Each unit with its individual design is  $4\frac{1}{4}$  by  $4\frac{1}{4}$ ". There is a fluted pattern, cactus, rose and rickrack. Literature in color is available.

**AB687** "Making America Strong" is a 16-page booklet in two colors prepared by the Metal Lath Mfrs. Assn., 208 S. LaSalle St., Chicago. It features the protection which reinforced-plaster work affords in homes, apartments and business buildings. An interesting tabulation is included showing current defense and armament projects where metal lath is rendering essential service. Free counsel is offered by Association engineers on building problems involving plaster.

**AB688** "Gypsum Sheathing" is a new 20-page brochure prepared by the Gypsum Assn., 211 W. Wacker Dr., Chicago. It presents convincing evidence, in pictorial form, of the way gypsum sheathing has been standing up in actual use, withstanding weather and time. Many buildings were dissected to furnish this field survey of performance.

**AB689** The Wood Conversion Co., St. Paul, Minn., has brought out a new consumer book on Nu-Wood interior finish. It is known as, "The Nu-Wood Color Harmonizer." It has a 6-page center section illustrating Nu-Wood interiors in full color. These pages are cut in such a manner that by interchanging the wall and ceiling sections 54 different interior treatments are possible. This book also has many pages of photographs showing all types of Nu-Wood jobs including churches, schools and retail business establishments.

**AB690** The Open Steel Flooring Institute, American Bank Bldg., Pittsburgh, has brought out a 16-page handbook on the many uses of open steel floor gratings. It is entitled, "New Ideas in Functional Floor Design." Details and technical data on riveted, welded and interlocked steel floor gratings are presented. Many illustrations show wide range of application of open steel flooring.

**AB691** The Superior fireplace circulator, developed by the Superior Fireplace Co., 1046 S. Olive St., Los Angeles, is a complete form (from hearth to flue) built with proper angles and dimensions around which any designed fireplace can be built. It consists of the firebox, smoke dome and built-in damper. This saves firebricks and labor required to construct the firebox and throat of the ordinary fireplace. The air chambers surround the firebox, smoke dome and throat.



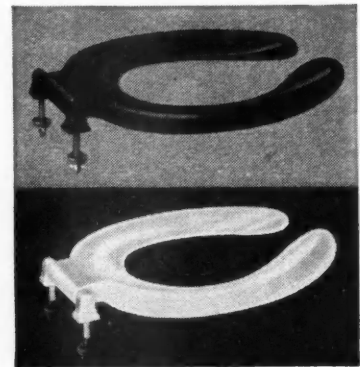
SUPERIOR circulator, large heat passages.

This adds approximately one-third more heating surface per size unit than other types of circulators. A Superior circulates a large volume of warm air and maintains a uniform temperature.

**AB692** The National Lumber Mfrs. Assn., Washington, D. C., has performed a valuable service by compiling and publishing a new 50-page directory, "Lumber Literature." It illustrates and lists all of the helpful booklets and literature on all species of American lumber as published by the several regional and species associations. For the most part these books on lumber and forest products are available for free distribution.

**AB693** Eastern Tricosal Co., Inc., 101 Park Ave., New York City, has issued a new 4-page data sheet giving specifications for Tricosal in admixture and waterproofing of concrete. It explains the use of Tricosal in concrete, mortar, and cement plaster.

**AB694** Standard Tank & Seat Co., Camden, N. J., announces the addition of Ebonite in white pyroxylin finish—a seat especially designed for public toilets, office buildings, institutions, industrial plants, gasoline stations, retail stores, etc. These seats are covered in seamless white pyroxylin finish over a solid, vul-



WHITE finish seat added to Stasco Ebonite line. Both have a hard rubber core.

canized hard rubber core. Both Stasco Ebonite black and white seats are available in open or closed front with or without cover for regular bowl, and open front less cover for elongated bowl.

**AB695** The third and fourth of four portfolios by eminent architects in the series, "Window Ideas for Small Houses," have been issued by Detroit Steel Products Co., Detroit, Mich. Like the other two already reviewed, these portfolios consists of five looseleaf art sheets, each carrying a home design and window detail by a well known architect.

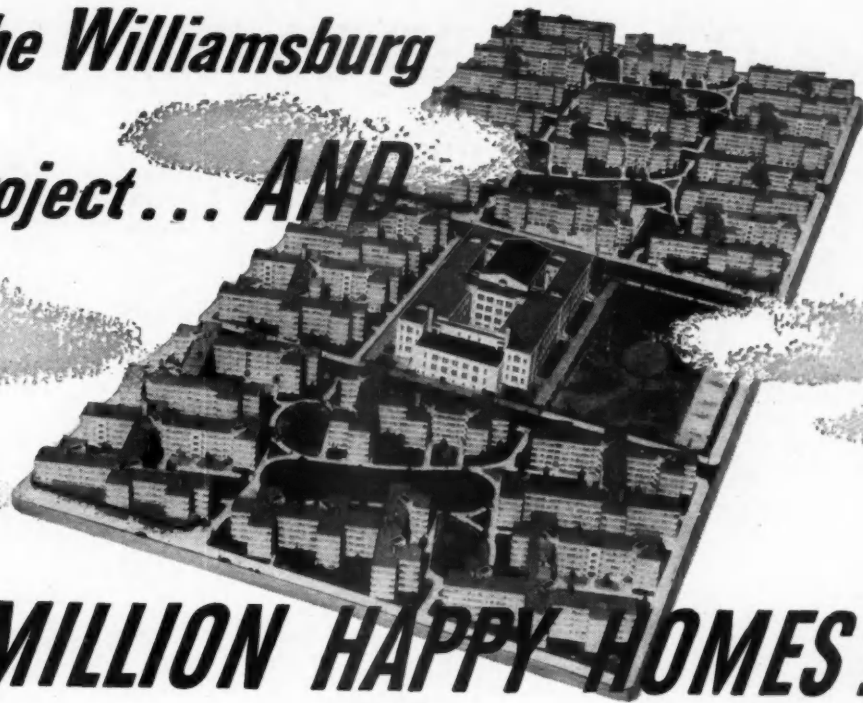
**AB696** X-Pandotite, an expanding cement for insulation and repairs, developed by the X-Pando Corp., Long Island City, N. Y., is described in two new folders bringing out the value of this material for pointing mortar and as an all-purpose expanding cement.

Readers Service Department Continued to Page 80

**FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 82**

# On top of the Williamsburg Housing Project... AND

# OVER A MILLION HAPPY HOMES...!



IT'S no idle claim to call Barrett . . . "The greatest name in roofing." Take a census of the country's outstanding buildings and you'll find them predominately Barrett-roofed. And on modest homes and farms the country wide, it's Barrett again!

Such widespread acceptance and use result from Barrett's record of performance—a record of trouble-free service, durability, and long-term economy that can't be beat.

This public confidence reflects back to

you — when you recommend a product with the unequalled reputation of Barrett Shingles! Barrett Shingles assure customer satisfaction—customer satisfaction assures sales that build. Cash in on the Barrett name and performance!

**BARRETT BROAD SHADOW SHINGLES**— achieve a distinctive deep shadow effect as a result of the double thickness of the shingle at the butt, plus the exclusive Barrett Shad-O Band\* built-in shadow feature. Costing no more than the average asphalt shingle, the Barrett Broad Shadow Shingle actually matches in effect and beauty much more expensive types of roofing.



\*Reg. U. S. Pat. Off.

THE BARRETT COMPANY, 40 Rector Street, New York, N. Y. • 2800 So. Sacramento Avenue, Chicago, Illinois • Birmingham, Alabama

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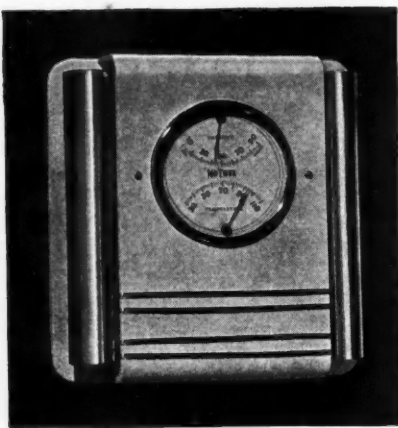
**EACH ITEM in this department is numbered for convenience of readers. Please use coupon on page 82 for requesting further product information or new catalogs. Mail coupon to American Builder Reader Service, 105 W. Adams St., Chicago; or write direct to these manufacturers mentioning your profession, occupation or connection with building industry.**

### EQUIPMENT ITEMS FOR MODERN BUILDINGS

**AB697** A new comprehensive catalog of 20 pages has been brought out by Knap & Vogt Mfg. Co., Grand Rapids, Mich., covering its wide line of K-Venice clothes closet fixtures. This is known as catalog No. 841. Catalog prices are shown at retail list and subject to the usual trade discount.

**AB698** "Comfort Cooling" is the title of a very impressive new General Electric catalog on attic ventilating fans, prepared by the Appliance and Merchandise Dept., General Electric Co., Bridgeport, Conn. Full details of the G-E home cooling unit are presented along with many helpful suggestions and detail construction drawings of suction chamber, air outlet openings, etc.

**AB699** NuTone Chimes, Inc., 3rd and Eggleston, Cincinnati, offers a new type of door chime, the NuTone Weatherman, as illustrated. In one combination it gives the temperature, the humidity, two musical notes to announce your guest, and one musical note for the



**NEW NuTone Weatherman combines door chime and weather instruments.**

grocery boy. New in the 1942 line, and a NuTone exclusive, this combination of a 2-door chime with guaranteed airguide thermometer and humidity gauge is as useful as it is attractive. The airguide instrument has guaranteed mechanism. Its dial is large and clear. The cover is of baked ivory. The tubes are finished in brass and there is additional brass decoration. Yet the whole thing is less than nine inches in both width and length.

**AB700** The Pyrofax Gas Div., Carbide and Carbon Chemical Corp., 30 E. 42nd St., New York City, has ready for distribution a set of Don Graf's "Pencil Points" data sheets which make clear all details of the proper installation of gas service for homes beyond the city mains.

**AB701** The Wasco copper fabric shower pan, developed by the Wasco Flashing Co., Cambridge, Mass., is detailed in a 4-page A.I.A. file data sheet. These copper fabric shower pans are shipped in one sheet ready for hand forming on the job and give permanent waterproof protection to any concrete molded-in-place shower stall. A companion data sheet gives details of copper fabric flashing of spandrel and through wall type. The Wasco copper fabric material is composed of light weight copper sheet protected on both sides by asphalt saturated fabric.

**AB702** "Matched Sets for Small Homes" is a beautiful new plumbing catalog from the Kohler Co., Kohler, Wis. It shows nine of the most popular Kohler matched sets in the low cost home price range. Spaces have been provided throughout the book for retail prices obtained from local master plumbers. Minimum floor plans for bathrooms and lavettes are included.

**AB703** The Ilg Electric Ventilating Co., Chicago, has issued a new 64-page catalog and data book on Universal blowers. Colorfully printed and profusely illustrated, the book features Ilg's four lines of direct-connected and belted blowers plus two lines of volume blowers. Distribution of the manual is being restricted; qualified architects, engineers and contractors may receive a copy by calling the nearest Ilg branch or by writing direct to the Ilg home office in Chicago.

**AB704** "Eljer Styled Plumbing" is the title of a new condensed catalog from the Eljer Co., Ford City, Pa. It is a well illustrated book of 24 pages, and covers bathroom, kitchen and laundry fixtures; also drinking fountains. A color chart shows the twelve colors available in the Eljer line.

**AB705** The R. L. Long (Sav-a-Space) sliding door, developed by the Ralph L. Long Co., San Diego, Cal., is featured in an interesting series of folders and detail drawings. These Sav-a-Space sliding doors operate in a regu-

lar 2 x 4 stud partition. The method of hanging and operating is very ingenious and is fully detailed in these pages.

**AB706** The Rittenhouse electric door chimes, developed by The A. E. Rittenhouse Co., Inc., Honeoye Falls, N. Y., are presented in a new data sheet portfolio, designated 1942 catalogue, volume No. 40. It is an 18 page collection presenting several smart style new models.

**AB707** Utility stairs of the Marco fold-away or disappearing type have been recently added to the line of The Marschke Co., 551 University Ave., St. Paul, Minn. They are used as a back stairway as shown in the accompanying photograph; also, as basement stairs, fire escapes, basements, flat roofs, storerooms, barns,



**NEW Marco Utility stairs.**

etc.; in fact, any place where a stair is needed and yet there is no room for a built-in stair. This stairway, as illustrated, swings up out of the way to leave the walk below free for use. Where this stair is built into a balcony, the cover above can be used as a floor to walk over. A sliding weight inside the cover takes care of the proper balance so that these stairs operate easily.

**AB708** Roll-O-Seal roller bearing windows, developed by Roll-O-Seal, Ltd., 1357 E. 16th St., Los Angeles, Cal., are illustrated and described in a new 4-page folder. This window is hailed as "an outstanding development in window construction important for architect, contractor and home builder." Details show how these windows are built and installed.

Readers Service Department Continued to Page 82

**FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 82**



**"EVERY ONE of 72 home buyers given a choice of heating systems decided on the JANITROL System,"** says Tom Edwards, Builder, of Haddon, N. J.



1. A section of homes built by Thomas R. Edwards, Emerald Hill Subdivision, Haddon, N. J.

One of the country's most interesting home projects is that of Thomas R. Edwards of Haddon, New Jersey. And one of the most interesting features of Mr. Edwards' sales methods is that of giving the buyer his choice of Heating Systems.

The Edwards' project, shown above, consists of well-built, Early American Style Homes, 6 rooms and bath, in the Emerald Hill Subdivision at Haddon, New Jersey.

"The people who purchased these homes," says Mr. Edwards, "are more than satisfied with their Janitrol fully automatic heating systems, with their average cost for heating last season being \$72.00."

"After using a few other heating systems we gave buyers their choice of heat. The fact they all chose Janitrol," says Mr. Edwards, "was due not only to the fully automatic heat with no furnace tending and no furnace dirt, but also to the clean, usable basement space Janitrol made possible." The Janitrol Units located in a small corner, leave main basement space free for playroom or workshop, with concealed ducts and risers carrying the heat.

In many cities leading builders have found that offering Janitrol heat helps to sell homes and helps to keep buyers satisfied.

Write or wire for information on Janitrol Gas-Fired Heating systems, Unit Heaters, Hanging Attic Furnaces, Forced Air Conditioners and other equipment for homes of all sizes, and for stores, warehouses, public buildings and factories. Explain your project. Let us assist you with heating layouts and quotations. Offices, dealers and engineering service are available in principal cities to serve the building industry.

**SURFACE COMBUSTION CORPORATION, TOLEDO, OHIO**  
Offices and Engineering Service in Principal Cities



2. One of Mr. Edwards' 6-room, Early American style homes.

3. Mr. Edwards inspecting the Janitrol installation. Ducts outside the heater closet are concealed between floor supports and in walls.



# JANITROL

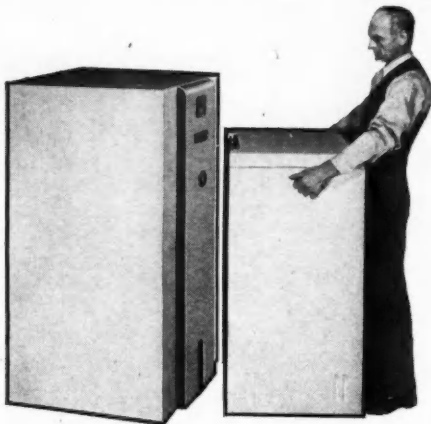
AIR CONDITIONERS - CONVERSION BURNERS - FINE HEATING - GRAVITY FURNACES

## SERVICE TO READERS

**EACH ITEM in this department is numbered for convenience of readers. Please use coupon on this page for requesting further product information or new catalogs. Mail coupon to American Builder Reader Service, 105 W. Adams St., Chicago; or write direct to these manufacturers mentioning your profession, occupation, or connection with building industry.**

### HEATING AND AIR CONDITIONING

**AB709** This Yello-Jacket boiler made by the Burnham Boiler Corp., Irvington, N. Y., has a unique fuel conversion feature. It is made for burning either coal or oil. It can be quickly and



**BURNHAM** coal burner is easily converted to burn oil.

easily converted from one to the other. For coal it is provided with the usual jacket. For oil, a removable extension to the jacket is furnished at a nominal cost. Aside from the conversion convenience of this feature, the fact of the extension being easily lifted off makes the oil burner easy to reach, at all points, for servicing.

**AB710** The Evans Products Co., Detroit, Mich., has developed an extremely interesting heating equipment for small homes, the Evanair Heat

Package. "Manual of Modern, Low-Cost Home Heating" has been prepared to explain this system to home builders and retail lumber dealers, who are acting as local distributors. It is a 16-page looseleaf portfolio and gives full particulars of the Evanair Package recommended with the Evanair oil fired furnaces.

**AB711** "Milcor Furnace Pipe and Forced Air Fittings" is a new catalog (No. 35-C) issued by Milcor Steel Co., Milwaukee, Wis. This presents an up-to-the-minute system of prefabricated pipe fittings and accessories. Heating material dealers and contractors will find it useful. Price list, specifications and illustrations on Lockjoint and Titelock gravity heating fittings are included.

**AB712** "Basic Ways to Heat the Small Home" presents an interesting study by McDonnell & Miller, Wrigley Bldg., Chicago. In a 4-page data sheet it illustrates a model low cost home and then shows heating layout for it in steam, hot water and warm air, showing both one and two pipe systems, gravity air circulation and forced air circulation. A companion piece in 4 pages presents the McDonnell No. 29 snap-action safety valve for hot water heating boilers.

**AB713** A new data sheet from the Taco Heaters, Inc., 342 Madison Ave., New York City, presents a new tankless Taco No. 12 for one bathroom jobs and a new type Taco tempering valve which offers automatic temperature control of domestic hot water.

**AB714** A new 16-page well illustrated catalog from the Locke Stove Co., Dept. AB, 1012 Baltimore Ave., Kansas City, Mo., features the Locke "Warm Morning" coal heater. The features of this new type coal heater, which provide heating comfort and economy, are well illustrated and demonstrated in this comprehensive catalog.

**AB715** A new warm air conditioning unit has been added to the Gilbarco line, developed by Gilbert & Barker Mfg. Co., Springfield, Mass. In two sizes it has a register output of 130,000 and 160,000 b.t.u. per hour respectively (162,500 and 200,000 b.t.u. per hour rating at the plenum). The units are of a new unified jacket design, having the openings for the warm air plenum and cold air hood at the same level at the top of the jacket. The design permits the location of the blower at



**NEW Gilbarco** warm air conditioner.

either the right or left of the heater, as determined by the duct work requirements. Complete interchangeability of heater and blower location is attained without the use of extra parts. Heating unit of heavy gauge, copper bearing steel welded gastight. Larger primary and secondary heating surface. Down draft flue travel.

**AB716** The Warco Moisturator, which stops dry air, is described in a new 4-page data sheet from W. A. Russell & Co., Bridgeport, Conn. The Moisturator is installed underneath a steam or hot water radiator and is automatically supplied with water for evaporation.

**AB717** The new Miller automatic power oil burner, developed for the small home field by The Miller Co., Meriden, Conn., is illustrated and described in a new series of catalogs, vigorously presented in two colors, red and black. One of these especially designed for dealers and operative builders, is entitled, "The Key to the Big, Profitable Market of Small Home Heating."

**AB718** The new Williams Oil-O-Matic Acousti-Case burner which is "hushed below a whisper" is illustrated and described in a new 12-page two color catalog. It shows the new Acousti-Case or cover which goes over the external oil burner to protect it, quiet it and to improve its appearance in basement recreation space—Williams Oil-O-Matic Heating Corp., Bloomington, Ill.

### CLIP AND MAIL TO CHICAGO

Reader Service Department

(Sept., 1941)

American Builder,

105 W. Adams St., Chicago, Ill.

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

Numbers.....

Name.....

Street.....

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

OCCUPATION\*.....

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

# TAKE THE SHADOWS OUT OF SHAVING--- ENHANCE BATHROOM BEAUTY AND UTILITY WITH MIAMI LIGHTED CABINETS



**MIAMI**—16 years ago—introduced the first electrically lighted cabinet—through the years has incorporated in MIAMI Cabinets all the efficiency and artistry of modern lighting. And MIAMI now offers—for the first time—a cabinet with lighted interior, which serves also as a night-light for the bathroom.

MIAMI has pioneered basic improvements in materials and design—added new features that widen usefulness . . . has glorified the cabinet with sparkling plate glass mirrors and chrome frames, with the lasting beauty of "Crystal Snow" finish—"The finish that will not retain a stain." No wonder MIAMI Cabinets are the most widely used cabinets in the world!

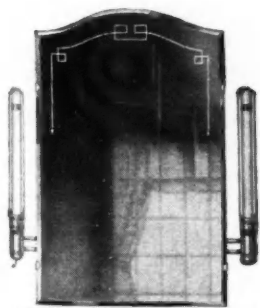
Build the eye appeal of your finer bathrooms around a MIAMI Cabinet or Ensemble. This is sound practice, for these matchless creations can do more to heighten the effect of bathroom beauty and luxury than any other detail of bathroom equipment.

There is a MIAMI Cabinet that is correct in equipment and cost for every bathroom. See the MIAMI Catalog in Sweet's, or write for specific information.

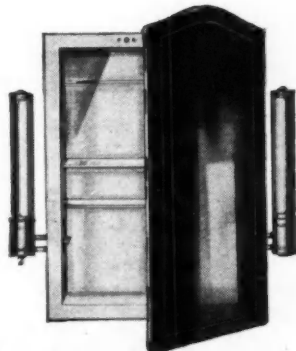


**WRITE FOR CATALOG**  
Address Dept. AB for  
catalog of Mirrors,  
Cabinets and Accessories.

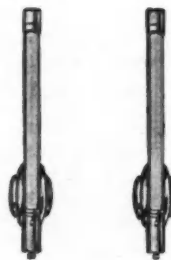
**MIAMI tubular lighted cabinets are completely wired at the factory—save cost of several electric outlets.**



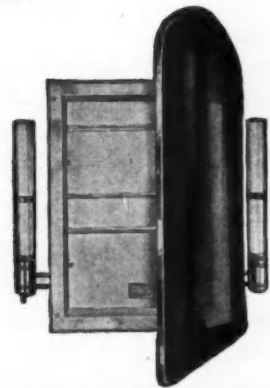
Miami-Carey Cabinet equipped with light bracket No. 7. Chromium-plated shield revolves in complete 360 degree circle.



Venetian type, chromium framed cabinet equipped with No. 5 tubular light brackets with revolving shields that direct light onto mirror or into room. Lighted interior. Open door—light switches on. Close door—light switches off. For night light, leave cabinet door open.



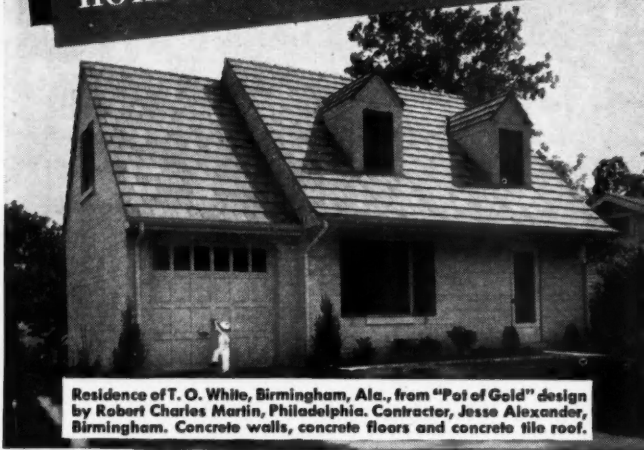
Fluorescent light fixtures are chromium plated. Completely wired at factory, ready to install.



Gothic top model with stainless-steel framed, mirror door. Equipped with tubular light brackets No. 6.

**MIAMI CABINET DIVISION**  
THE PHILIP CAREY MFG. COMPANY - MIDDLETOWN, OHIO

for "defense" homes, homes  
for men in service, low  
rental homes and private  
homes everywhere . . .



Residence of T. O. White, Birmingham, Ala., from "Pot of Gold" design by Robert Charles Martin, Philadelphia. Contractor, Jesse Alexander, Birmingham. Concrete walls, concrete floors and concrete tile roof.

## CONCRETE offers:

- ✓ True "low-cost housing"
- ✓ Speedy construction
- ✓ Good appearance
- ✓ Lifetime comfort

At very little more first cost than for temporary construction, you can quickly erect comfortable, attractive, lifetime homes of firesafe concrete. Concrete materials are easily available with minimum transportation. And trained concrete workmen are nearly everywhere available, too.

The low annual cost of concrete homes, their comfort and lasting good appearance, plus their high fire resistance, make them the superior investment for decades. Buyers will respect your judgment when you advocate concrete.

This year, build better, quicker, more beautifully with concrete. Write for booklet, "Suggested Designs for Small, Firesafe Concrete Homes," suitable for showing prospective owners; sent free in U. S. or Canada.

**PORTLAND CEMENT ASSOCIATION**  
Dept. A9-3, 33 W. Grand Ave., Chicago, Ill.

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

## ON & OFF the RECORD

Views and Comments

by *Structor*

**RIDICULOUS SURVEYS**—The public housers in Washington have been dashing about making endless surveys to show a purported vast need for more government-financed home building. If the dire shortages shown were true, the Federal government could spend from \$20 billions on up for mass housing, and still not do everything the public housers claim is needed.

Housing Co-ordinator C. F. Palmer and his staff need all the sane and sensible help they can get on what everyone knows is a difficult and tremendously complicated problem—the providing of defense houses where there is such a shortage as to interfere with defense production. They aren't helped, however, by quick, incomplete surveys by naive or inexperienced people with a social worker background. In my opinion, this is one place where FHA field men could be of great value to the defense housing policy makers. They have a practical knowledge of actual conditions. Furthermore, they know how the private building industry functions and would be able to recommend procedures that would get a maximum amount of homes of the right size built in the right places with the least ill effects to the community.

**ARE RENTS "TOO HIGH?"**—Congress recessed without passing the Price and Rent Control Bill, but it is a good guess that something of this kind will ultimately be passed. As far as rents are concerned, there's no question but that any attempts to fix the price of rents will do far more harm than good. It will aggravate the very problem that it is intended to correct, because it will discourage new building and will also encourage people to occupy more space than they otherwise would.

When rents go up, people "double up." Young folks stay at home instead of renting new quarters of their own. Young men and young women workers room together instead of taking separate rooms, and in general the same amount of housing takes care of a vastly increased number of individuals. But when the rent level is fixed, there is no further incentive to economize on space.

As a matter of fact, rents are not out of line. For the country as a whole, they have not increased nearly as much as food, furniture and most other items. The general rent level of the country is still so low that there is practically no incentive for investment building, because it is difficult to get enough rent even on a new project to cover the building cost plus taxes. High real estate taxes are, of course, the greatest contributing factor to ownership costs.

**DON'T TELL OPACS**—A Long Island bank recently announced that it would loan money at low interest rates to responsible builders for the immediate purchase of building materials, oil burners, tanks, electric fixtures, plumbing supplies, etc. The bank thought it had a good idea, as indeed it did, but unfortunately it was a little late.

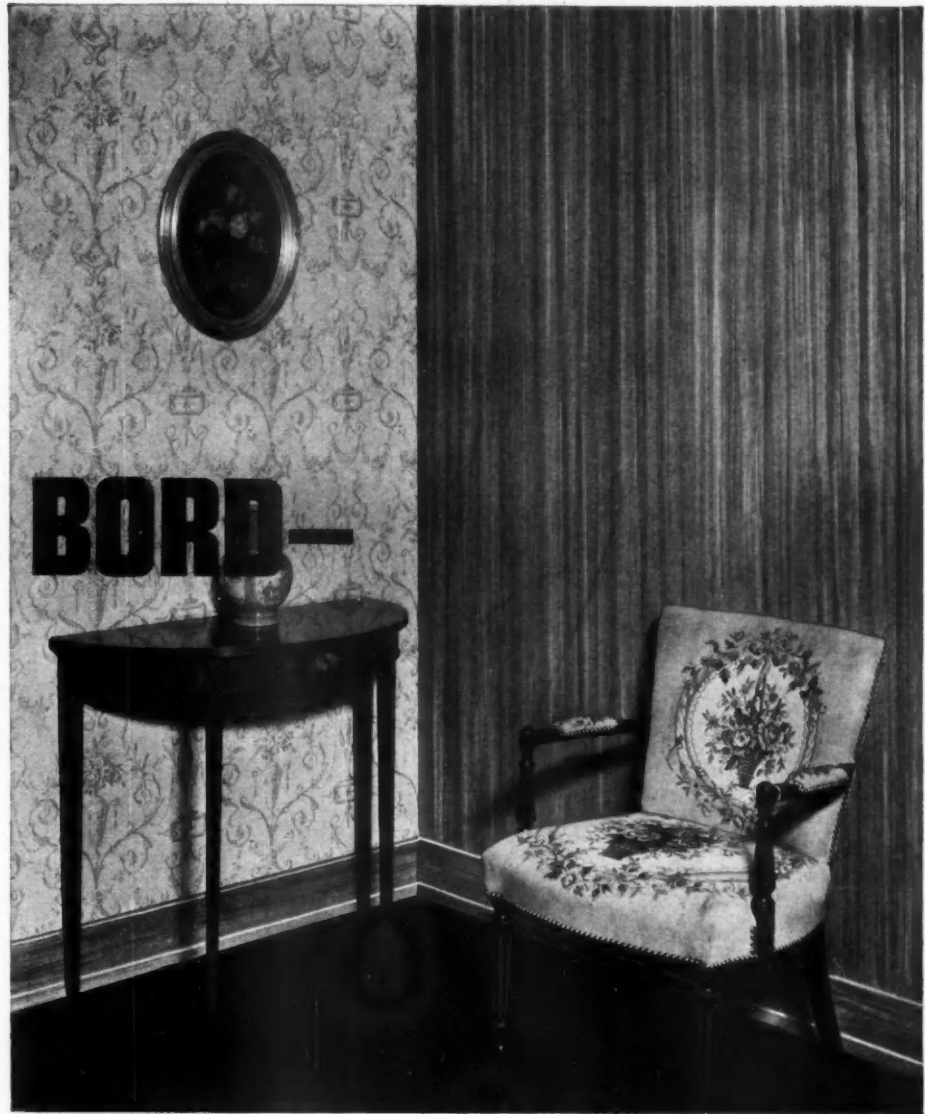
Stocks of such materials have already been pretty well reduced, and it is getting increasingly difficult to get what is needed for immediate construction, let alone stocking up. Thus far, the pinch has not seriously retarded construction. The basic problem boils down to a tug of war for steel and other essential metals between home building and the big metal-using industries, such as automobiles, washing machines, refrigerators.

If these types of products which are huge consumers of steel, copper and other vital materials, are curbed, there should be enough of these metals to permit needed home building to continue. The betting at present is that home construction and repairs—particularly in the low and moderate priced class—are considered so important that they will be allowed to get the essential materials needed. It won't be easy, but it will be done.

**FHA AND PRIORITIES**—Defense housing officials have rightly gone slow in setting up a priorities system. Last month Palmer and Stettinius issued a joint statement saying that

(Continued to page 86)

**MENDEL BORD—**  
**the ideal**  
**wall**  
**panel**  
*for*



**quicker, more decorative construction**

If you want *economical* walls that are to be papered or painted—if you want beautiful, *panelled interiors* with a fine, natural-wood finish—in either case, the material you need is Mengel Bord!

Mengel Bord is genuine, resin-bonded, *hardwood* panels, made in big 48" x 96" sheets. Where they're to be painted or covered with wall-paper, you can secure a No. 2 Gum grade that's ideal for the use—

—where you want a good stained (or natural) wood finish, the No. 1 Gum gives excellent results at very moderate cost—

—and where you want panelling of *exquisite beauty*, you can use DeLuxe Mengel Bord—and have your choice of Mahogany, Walnut, Gum, Birch or Oak faces!

Mengel Bord is available *now*, and may be purchased through *any* building materials dealer. Ask your usual supplier, or mail the coupon below!

-----

The Mengel Company, Incorporated  
 1124 Dumesnil Street, Louisville, Kentucky

Gentlemen: Please send me, at once, full information about Mengel Bord  . . . Also about Mengel Flush Doors, the outstanding doors on the market today .

Name \_\_\_\_\_

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City \_\_\_\_\_ State \_\_\_\_\_

## No Ugly Wall Stains with "Copper-Sealed" Window Frames

*For want of adequate flashing this could happen to any house. A heavy, driving rain—and overnight an ugly wet spot like this could permanently dampen the enthusiasm of the hottest prospect*

Such a condition is simple and inexpensive to guard against. For very little extra cost, "Electro-Sheet" Copper flashing around windows and doors will not only make them weather-tight, but gives you a strong-selling point as well.

"Electro-Sheet" is pure Anaconda Copper. Supplied in weights of 1, 2 and 3 ounces per square foot, it is tough, strong, rustproof, vermin-proof and impervious to air and moisture. When combined with building papers, fabrics and asphalt compounds, it is extremely flexible and easy to install. For concealed flashing it offers the advantages of sheet copper at a fraction of the cost.

*We make only plain "Electro-Sheet" Copper which is combined with paper, fabric and asphaltic compounds by other manufacturers. Samples of the finished products and names of manufacturers will be furnished on request.*

41100



## On & Off the Record

(Continued from page 84)

priority assistance would be given to builders in defense areas, but the machinery has been slow to be put into effect; which is probably just as well, since serious delays from shortages of materials have thus far been few in number.

It looks as though the FHA organization will be used in determining who gets priorities as far as private building in defense areas is concerned. This seems logical to me, since the FHA field men are closely in touch with local conditions in most areas and should be able to determine which jobs are most important in meeting a housing shortage.

Of course, there are lots of areas where FHA doesn't have adequate representation, and there are many builders who have never done business with FHA because they preferred other financing methods. Steps should be taken to see that these builders are given a fair chance to show their need for priority on materials.

**\$500 CREDIT FOR NEWLYWEDS**—Fred C. Trump of Brooklyn did a slick job of publicity last month for his Manhattan Beach development by tying in with a four-couple wedding, staged in a local theatre. This "mass" wedding was performed before an audience of some 3,000 people, and the happy couples were showered with gifts from various local merchants.

Fred Trump stole the show by handing each of the couples a certificate good for a \$500 payment on one of his new brick homes. Later he took the happy pairs out to Manhattan Beach,



A SMART piece of promotion.

gave them a little lecture on the advantages of home ownership, and particularly ownership of an economical Trump home, with its complete daylight basement apartment which they could rent out in case they run short of funds. The brides thought the Trump homes were "simply wonderful."

**RATIONING TITLE VI**—Demand for FHA commitments under Title VI has been so great that FHA is rationing the jobs. Some builders who feel they could build several hundred houses have been given commitments for only 20 or 30. They may get more when Congress increases Title VI loan potential to \$300,000,000, as now seems possible.

**GYP. SHORTAGE**—If striking gypsum workers wanted to throw a monkey wrench in home building of all kinds, including defense houses, they certainly succeeded. In many towns I visited during the past few weeks, there wasn't a foot of gypsum board to be had nor a sack of plaster. Builders were scouring the countryside in trucks, buying up small lots of gypsum products wherever they could find them in order to complete jobs.

**TROUBLE ON LONG ISLAND**—Long Island builders, in addition to being short of gypsum products, were having plenty of other union trouble. Most builders there have been largely open shop, with only a few trades unionized. They have resisted

complete unionization through thick and thin for many years; but now the heat is being turned on strong. The unions have tried many times, and finally got down to a fairly effective cutting off of the brick supply through the Teamsters' Union. They refused to deliver brick to any nonunion job, and it caused much trouble, although it didn't completely stop activity.

It's not wage demands that bother the Long Island builders but the difficulty they would face with having to deal with unscrupulous, racketeering unioners who would tie up work whenever they got a notion, regardless of any contract, and who would impose restrictions that would increase costs.

If the unions were run by really smart, honest men it would be a good thing to have a standard wage scale and working conditions such as they would assure; but the unions are run by anything but that type of man at present.

**JAIL FOR FHA CHEATERS**—Twenty-five men and seven women have been indicted by a Federal Grand Jury in Brooklyn for misusing FHA modernizing loans and instead putting the money into such things as a cosmetics business, food market, filling stations and a shoe store.

It seems that quite a system had been set up, and the indictment charged that \$250,000 had been diverted to illegal uses. An officer of a lumber and supply company signed certificates saying the money was to be used for repairs or modernization, and this was the understanding of the banks who loaned the money. It appears that a racketeering group had muscled in on FHA in this area, and it also appears that a number of people will go to jail as a result.

**WON'T PAY TRIBUTE**—I talked to a husky Big Swede carpenter-foreman on a 60-house development in a small suburb the other day, and found him particularly wrought up about current union activities. "Sure I used to be a member of the union," he said. "But I'm not any more. Why should I pay money to that racketeering bunch of ———? I'm a law abiding citizen." He couldn't understand how the government could permit the union to collect \$100 each from more than 100 members who had to join to get work on a government job. "Who got the \$10,000 and what has he done with it? That's what I want to know," he said.

**TIPSY HOUSE**—Walter Pleuthner, a Scarsdale, N. Y., architect got into some terrific complications recently with a model house he bought, cut into two sections and tried to move to another site. After a lot of figuring, he started out at dawn one morning with the first section on a big trailer. Things went all right until they rounded a sharp curve on a hill. At that point the house got tipsy, rolled off the trailer and landed on its side.

The house wasn't damaged, but it got Architect Pleuthner into all sorts of trouble with various people, including the



**NO HURRICANE;** just a bad spill.

Traffic Department, who objected to having a main highway blocked. Thousands of people who had inspected the house when it was known as the "Home for Better Living," sponsored by Westchester Lighting Company, were intrigued by the sight of the house, complete with shutters, slate roof and equipment, laying on its side by the road, where it stayed for several days.

(Continued to page 88)



**HERE IS WHAT YOU GET:**

- 1 Two roller bearings in each saw guide produce smooth saw action.
- 2 First quality back saw.
- 3 Positive saw guide stops and depth stop plates control depth of saw cut.
- 4 Adjustable spurs in back keep work from slipping.
- 5 Detachable legs of malleable iron are practically unbreakable.
- 6 Swivel lever and lift screw automatically raise front saw guide and saw out of kerf cuts when changing swivel position.
- 7 Swivel and uprights cast in one piece of malleable iron. Practically unbreakable.
- 8 Quadrant is graduated in degrees and is also numbered for sawing 3, 4, 5, 6, 8, 12, 24 sided figures. Double-locking, self-clamping swivel locks at any point of the quadrant.
- 9 Stock guides hold work tightly against the back.
- 10 Length stop for duplicate work.
- 11 Automatic saw guide catches hold saw above work while putting work in position.
- 12 Saw guides of malleable iron are practically unbreakable.

**MADE IN 3 SIZES:**

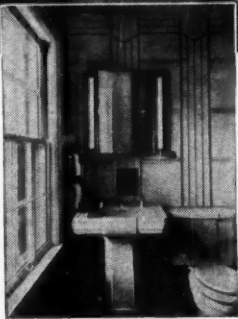
No.	Capacity 90°	Back Saw
2244	8 1/4 in.	24 x 4 in.
2246	8 1/4 in.	26 x 4 in.
2358	9 1/2 in.	28 x 5 in.

Write for Stanley Tool Catalog 34 which shows the full line of Stanley Tools.

**STANLEY TOOLS**

Division of The Stanley Works, 133 Elm St., New Britain, Conn.

**THE TOOL BOX OF THE WORLD**



- SMARTNESS
- PERMANENCE
- ECONOMY

This modern wall covering, with pre-decorated surface of remarkable beauty and permanence, offers endless combinations for individual expression that avoid the effect of "Copy-book" design.

There are four basic patterns—tile design, modern parallel scorings, or plain panels—sixteen different colors with numerous striping combinations for harmony or contrast.

TYLAC is easily and economically applied over any surface, old or new, flat or curved, and its long-life luster eliminates the necessity of future decoration. It will not chip, crack or craze, and is unharmed by hot water, oil, household acids or alcoholic beverages—safe for shower specifications.

TYLAC has won country-wide popularity for creating distinctive walls, equally appropriate for houses, stores, offices, lounges, hotels—any place where modern walls of permanent beauty and economy are appreciated.

Write for complete TYLAC literature and sales plan today.

**Miracle Walls**  
by **TYLAC**

TYLAC COMPANY, MONTICELLO, ILLINOIS

## On & Off the Record

(Continued from page 87)

**MOST OUTRAGEOUS STRIKE**—For ruthless, high-handed and borderline illegal tactics, there's hardly a union in the country that's worse than the Electricians' Local 3 in New York City. They have been often tried but never quite convicted. I predict that some of those babies will end up in jail before long. Last month Local 3 of the I. B. E. W. set a new high in disregard of public welfare by tying up all construction work and all important defense activity in New York because of an argument with one firm—the Consolidated Edison Company. In spite of their contracts with the New York Building Trades Employees' Association and the A. F. L.'s pledge not to strike on defense jobs, they brought building activity throughout the city to a standstill and also, as an added display of their supreme power, staged a half-hour blackout of the Times Square area at night.

Just to relate the simple facts of this strike is difficult because the whole matter sounds so fantastic. It doesn't seem possible that such a thing could happen in the world's largest city, where presumably an orderly government still exists.

But the facts are that Local 3 objected to the Consolidated Edison Company employing electricians of an independent electrical union in making intricate installations in its new Waterside plant on 39th Street. The independent union had been certified by the National Labor Relations Board, following an election, as the exclusive bargaining agency.

To try to force Consolidated Edison to discharge the 600 members of the independent union and employ members of Local 3 instead, the citywide strike was called. Numerous important construction and shipbuilding jobs were tied up, one of the most important being the Brooklyn Navy Yard.

After a few days, Local 3 made a "patriotic gesture" by graciously allowing most of the defense jobs to continue work. They made a big show about how patriotic they were in doing this, but New Yorkers who are now getting pretty well fed up with Local 3 hardly appreciated it. Local 3 tried to get all other A. F. L. building unions to walk out in sympathy, but they refused. It is obvious that the other unions are also pretty fed up with Local 3's actions.

Local 3 has done inestimable harm to the union cause. This is the same union that tied up World's Fair activity with outrageous demands, and that was most recently investigated by District Attorney Dewey on charges of collusion with electrical contractors to freeze out firms that wouldn't play ball. It is also being sued in Federal Court by a group of electrical manufacturers whose products Local 3 has consistently boycotted.

**SELLING AHEAD IN TODAY'S MARKET**—Many builders I talk to say their toughest problem right now is to judge how far to go in accepting advance orders. They have plenty of customers but they are afraid of rising prices. Most are playing pretty safe, not taking orders without all materials well in sight.

**SONS OF BUILDERS**—Still another interesting factor in the industry is that sons of successful builders of past eras are now beginning to be heard from. Most of them have had technical training. They think they can improve on a lot of the things their fathers did, and they may be right. They're bringing new ideas and new idealism in the industry.

**MORE ON ENGLISH BUILDERS**—It is interesting to hear what has happened to English builders during the war. Taylor-Woodrow, Ltd., of London, who has a branch home building firm on Long Island, is now devoting its time exclusively to demolition of bombed areas, reconstruction work and building airports, coastal defenses and other defense activities. This firm used to build 1,000 homes a year. Now it is plenty busy in war work. An interesting sidelight is that John Turner and William Noone, directors of the U. S. project, Green Park Estates on Long Island, are doing a lot of purchasing of American steam shovels, concrete mixers and debris removing equipment for shipment to the English firm. They have been purchasing and shipping large orders of such equipment and also trench diggers, graders and excavators and other American equipment for the use of the English firm in its important war work.



## REVIEW of the NEWS

Statistics, Associations, Agencies

### Residential Building for July Maintains High Level; 319,000 Units Reported for First Six Months

DESPITE priorities, rumors and fears, building continues at a high pace, residential construction for July amounting to \$205,049,000, the same as June, according to F. W. Dodge figures for 37 eastern states. Non-residential contracts for July amounted to \$220,612,000, an increase of \$20,000,000 over June. Total construction for July for the 37 eastern states was \$577,392,000, as compared to \$398,673,000 for July of last year.

Statistics for the four classes of construction are as follows:

	July, 1941	July, 1940	June, 1941
37 Eastern States			
Residential .....	\$205,049,000	\$140,430,000	\$205,634,000
Non-Residential .....	220,612,000	138,954,000	200,456,000
Public Works .....	101,074,000	85,681,000	99,631,000
Utilities .....	50,657,000	33,608,000	33,385,000
Total .....	*\$577,392,000	\$398,673,000	†\$539,106,000

\*July, 1941 includes \$241,000,000 of defense construction.

†June, 1941 includes \$162,000,000 of defense construction.

### Mortgage Bankers Survey Rentals

ANNUAL income of the average office building in the last 10 years has declined nearly three times as much as has been the decrease in operating costs, data compiled by the Mortgage Bankers Association of America shows. Annual income of the average building during this period has declined 35 per cent while operating costs have only shrunk about 13½ per cent, the data indicates.

However, according to Dean R. Hill, President, the investment future of office buildings looks brighter today than it has in 15 years. In many large American cities considerable surplus space has been eliminated through the demolition of older structures to make way for smaller "taxpayer" units or for converting the land into parking lots.

The office building and its future investment position is being given a place on the forthcoming Convention program of the Mortgage Bankers Association of America in New York October 1, 2 and 3, Mr. Hill said. Harry C. Peiker, associate superintendent of loans, Massachusetts Mutual Life Insurance Company of Springfield, Mass., will address the Convention on October 2 on office buildings as investments. This second day session will be in a Clinic devoted to conventional mortgage loans and will be conducted by Paul J. Vollmar, of The Western & Southern Life Insurance Company of Cincinnati, Mr. Hill said.

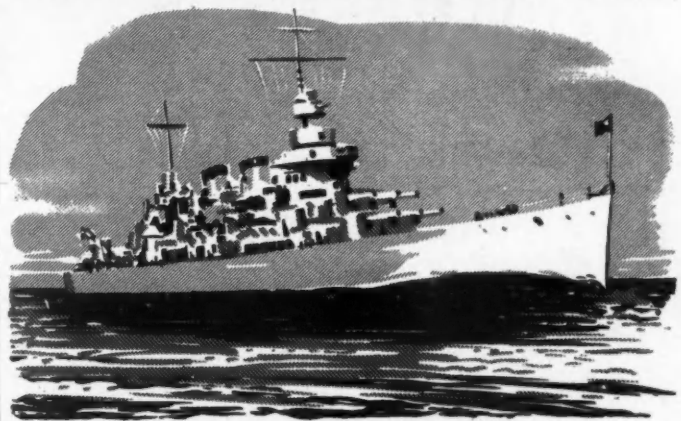
### Report Number of Dwellings Provided in Nonfarm Areas for the First Half of 1941

THERE were 319,000 dwelling units provided in nonfarm areas of the United States during the first half of 1941, an increase of 31 per cent over the corresponding period of 1940, as reported by the U. S. Department of Labor. The number of dwelling units constructed during the first half of this year was greater than during any similar period since 1929 and exceeded the number of dwelling units provided during each of the calendar years 1930 to 1937. It is estimated by the Bureau of Labor Statistics that the permit valuation of the new dwellings erected during the first six months of 1941 reached an aggregate of approximately \$1,116,000,000. The nonfarm area of the United States is defined by the Bureau of the Census as including all incorporated places, and all unincorporated places except farms.

Projects financed with public funds during the first half of the current year included 53,671 units, or 17 per cent of the nonfarm total, it was stated. Of this total, 39,982 units were designated for the use of families of defense workers and of officers and enlisted men. The total of all new defense housing units in the United

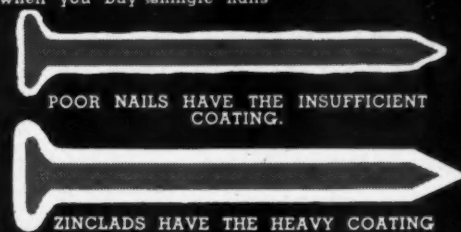
(Continued to page 90)

# SELF PROTECTION



Is greater in  
**MAZE ZINCLADS**  
DUE TO A HEAVIER ZINC COATING

Exaggerated comparison illustrating the reason we say — "Look to the thickness of the zinc coating when you buy shingle nails"

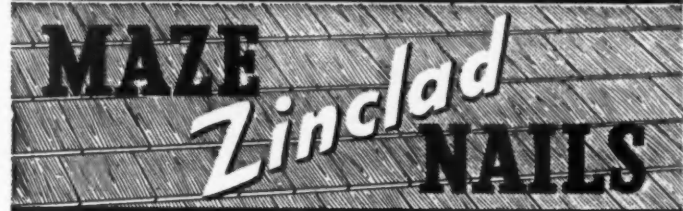


ZINC on a nail is protection against RUST; and the thicker the coating of zinc, the longer the nail will remain sound. Due to their definitely thicker zinc coating, Maze Zinclud Nails have in many cases doubled the life of a wood shingle roof. Yet, outwardly this famed Maze Zinclud can hardly be distinguished from a common galvanized shingle nail. So in order to guide buyers, we

produced the enlarged micro-photographs shown here. They compare cross sections of a Maze Zinclud with an insufficiently coated nail. The decidedly thicker Maze coating is effected by our ZINCLADING process—distinctly different from galvanizing.

Because they lengthen the life of a roof, you might expect Maze Zinclud Wood Shingle Nails to cost much more than a common shingle nail. Actually, they cost only 9c per square more. At such a small extra cost, is it worth the risk to use any nail other than Maze Zincluds?

W. H. MAZE COMPANY • PERU, ILLINOIS



**"For general adaptability  
and utility,  
Western Pines are superior  
to other woods"**

That's what David Teicholz and Kalman Klein, Vice President and President respectively of Lakeville Developers, Inc., New Hyde Park, L. I., New York say about Western Pines.



Messrs. Teicholz and Klein, developers of the Lakeville Estates at New Hyde Park, use Western Pines for sash, doors, interior and exterior trim, shutters, siding, porch work, paneling, mouldings, built-in fixtures, mantels, and stairs. These two successful building operators state that Western Pines give the most for the money because they work easily and economically, and are well liked by home owner prospects.

**The Western Pines will do your next job better. Try them**

**WESTERN PINE ASSOCIATION**

Yoon Building



Portland, Ore.

★ Idaho White Pine    ★ Ponderosa Pine    ★ Sugar Pine

**\*These are the Western Pines**

**NEWS—**

(Continued from page 89)

States paid for with public funds now stands at 63,767. The remaining 13,689 publicly financed projects during the first half of 1941 were in non-defense USHA projects. During the first six months of 1940, 21,416 units, approximately 9 per cent of the total number, were publicly financed. All of these were in USHA projects.

All city-size groups, and the rural nonfarm area as well, experienced increases in number of new dwelling units during the first half of the current year as compared with the corresponding period of last year. The largest percentage gains were shown in the smallest sized cities and the rural nonfarm area, the smallest, 18 per cent, in cities of over 500,000 population.

One-family dwellings comprised approximately 82 per cent of the first half 1941 nonfarm total, 2-family dwellings accounted for 6 per cent, and apartment houses for 12 per cent. During the first half of 1940, the composition of the new dwelling unit total was 78 per cent, 1-family; 7 per cent, 2-family; and 15 per cent, apartments.

Estimated Number of Dwelling Units Provided by New Housekeeping Construction in Non-farm Areas of the United States During the First 6 Months of 1941 and 1940 by Population Group and Type of Dwelling

Population group (1940 Census)	All types		1-family dwellings		2-family dwellings <sup>1</sup>		Multifamily dwellings <sup>2</sup>	
	First 6 months of—							
	1941	1940	1941	1940	1941	1940	1941	1940
Total nonfarm	318,808	242,749	261,889	189,562	18,176	16,230	38,943	38,967
Percentage change	+31.3	.....	+38.0	.....	+12.0	.....	+5.4	.....
Total urban	227,439	182,909	175,346	133,995	15,548	13,583	38,545	35,331
Cities of:								
500,000 and over	55,573	48,943	29,844	24,034	4,287	2,941	21,522	19,988
100,000 to 500,000	48,952	39,718	37,758	27,951	4,223	4,398	6,970	7,371
50,000 to 100,000	22,961	18,711	17,996	14,528	2,370	2,077	2,595	2,108
25,000 to 50,000	27,188	20,845	23,793	17,168	1,460	1,424	2,025	2,313
10,000 to 25,000	34,844	28,017	31,216	22,698	1,951	1,375	1,847	1,344
5,000 to 10,000	21,528	17,899	19,890	15,866	793	810	845	1,203
2,500 to 5,000	16,393	11,876	14,538	10,890	514	580	941	428
Rural nonfarm	91,369	60,740	86,343	56,467	2,628	2,647	2,398	1,828

<sup>1</sup>Includes 1- and 2-family dwellings with stores.  
<sup>2</sup>Includes multifamily dwellings with stores.

\* \* \*

**Airtemp Meetings Held Throughout Country for Builders and Dealers**

"CHRYSLER Airtemp's Contributions to Human Comfort" was the subject of a talk by Paul B. Zimmerman, Vice President and General Sales Manager of Airtemp, Dayton, O., at a series of luncheon meetings in key cities held for architects, engineers, builders and Chrysler Corporation's dealers, between August 8 and September 10. The luncheons coincided with all day meetings of Chrysler Airtemp's dealer organizations, when the Company's fall program was presented.



PAUL B. ZIMMERMAN



HENRY KNOWLTON

"The Five Star Features" of Airtemp's line of heating, cooling and combination summer and winter air conditioning equipment were presented by Allen P. Livar, Airtemp Chief Heating Engineer, and Minor Dow of the Company's Service Department. Henry Knowlton, Sales Promotion Manager of Airtemp, outlined marketing plans in connection with the Company's program for developing the market for year round air conditioning systems. Other features of the program were the showing of a special talking film "20th Century Air Castles," and the presentation of a dramatic skit "Airtemp's Aids to Sales."

## Delbert W. Smith Retires

Former "American Builder" Official Now Becomes a 100 Per Cent Business Farmer

**D**ELBERT W. SMITH, long associated with the *American Builder* as a member of its advertising sales staff, has resigned effective September 1 and will devote his entire time and attention to his farm operations and other personal business interests. In this he closes a period of noteworthy service of 35 years in the advertising and merchandising phases of the building industry.



**DELBERT W. SMITH**  
completes 35 years on *American Builder*

The value of his services to the publication was recognized in 1913 by his election to the vice presidency of the American Carpenter and Builder Company and, following the merger of the *American Builder* and the Simmons-Boardman interests, he was in 1931 likewise made a vice president of the American Builder Publishing Corp. In 1937 he was elected a member of the Board of Directors and vice president of the Simmons-Boardman Publishing Corp. During all this time he continued actively in contact with building industry sales and advertising managers throughout the central territory, where his long experience in the field, his keen merchandising mind and his likable personality made him always welcome.

### Raised on Historic Michigan Farm

Born and raised a farmer, Del acquired from his father, the late Sidney Smith, the old Governor Bingham farm in Livingston County, Mich., some 25 miles out of Detroit just off Grand River Avenue at New Hudson. On these broad acres, augmented by other purchases, he has been developing large apple orchards along with beef cattle and hog raising. These interests have become more and more substantial, requiring more of his time and attention.

The old farm house on this place has an interesting history and adds to the charm of this farm as an all year round home. It was built by the pioneer Michigan governor, Kingsley S. Bingham, more than 100 years ago, following orthodox early American architectural lines and framed throughout with heavy timbers of white oak, cut and hand hewn on the place. Last year Mr. Smith put through a very complete restoration and modernization of the old house. Modern heating and plumbing, added to the staunch old time construction, have produced a notable country home—an authentic landmark of historic interest setting off a well run business farm in a region favored by many Detroit industrialists for their farm estates.

Mr. Smith joined the old "American Carpenter and Builder" organization in the fall of 1906, fresh out of college. He was assigned the central territory, comprising Michigan, Indiana, Ohio, western Pennsylvania and western New York State, with headquarters successively at Canton, O., Detroit and Ann Arbor, Mich. This central territory, regarded by many as the heart of industrial America, has made many contributions to building industry progress. Throughout this period his sound merchandising and sales counsel has guided much of this development.



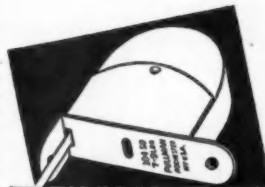
In a modern small home with 15 window openings, weights, chains and pulleys for double-hung windows weigh an average of 375 lbs. Pullman Balances for the same windows weigh 41 lbs. That 334 lbs. saving per house becomes significant when you multiply it by 600,000, the estimated number of dwelling units to be built within a year—a total of more than 200,000,000 pounds of iron and steel (and the men, machines and transportation facilities required to fabricate and ship it) saved for defense production.

**PULLMAN-BALANCED  
WINDOWS ARE BETTER,  
LOWER COST WINDOWS,  
TOO**

When you use Pullman-Balanced windows, you not only help America conserve steel. You're offering home-owners the up-to-the-minute best low cost construction. You offer modern narrow trim; you provide easy counter-balanced operation; you eliminate leaky weight boxes; you furnish a guarantee of faultless lifetime service.

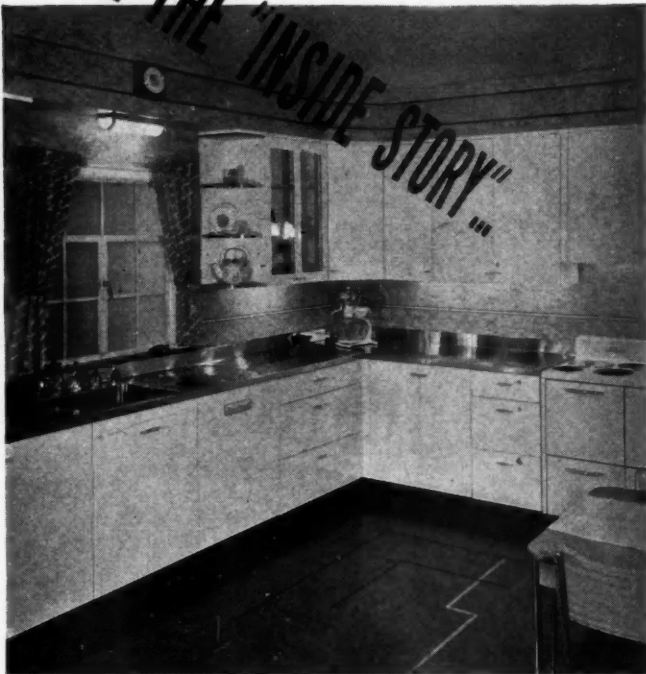
Take your customer to a dealer who features a Pullman-Balanced demonstration window unit.

You see and show—what is being furnished, why it will give best performance and service.



Specify Window Units with  
**PULLMAN** Sash Balances

TELL THE "INSIDE STORY"



WITH **TILE-TEX**

**I**F you are building homes to sell, you know how important it is to make the interior of the home attractive and appealing to women. It is an accepted fact that women control the purchase of most homes, and to women interiors are vitally important.

Here, in Tile-Text, is a material for both floors and walls that can be used to build modern, attractive interiors in the key rooms of today's home—the bathroom, the kitchen, and the basement playroom. And, in using Tile-Text, you make important savings against outmoded and conventional materials.

Tile-Text floors are low in first cost, easy to maintain, long-wearing, and eye-appealing. Kitchens, bathrooms, and recreation rooms are "natural" areas for this new, resilient flooring.

Tile-Text walls are currently the sensation of the residential home building industry. Low initial cost, speed of installation, attractive color styling—all of these factors are making it the choice of progressive builders seeking to satisfy the public taste for a wall treatment that meets all present day requirements.

There is an approved Tile-Text contractor near you who can show you Tile-Text products now in service—show you how little they cost—and demonstrate how they can help you sell new homes. Write today for his address and for free copies of the new Tile-Text booklets on floors and walls.

**THE Tile-Text Company** CHICAGO HEIGHTS ILLINOIS

The Tile-Text Company  
Chicago Heights, Illinois

Send me complete literature on the following:

- "Floors That Endure" by Tile-Text
- "Decorative Walls" by Tile-Text
- "Flexachrome," an Exclusive Tile-Text Product

Name.....

Address.....

A-9

**Additional "Defense Housing Areas" Proclaimed**

**P**RESIDENT ROOSEVELT on July 24 approved 19 new localities in addition to those previously named (as listed on pages 85, 86 and 87 of the August *American Builder*) in which homes may be financed under the liberalized insurance provision known as Title VI of the National Housing Act, upon the recommendation of C. F. Palmer, Coordinator of Defense Housing.

The housing which is expected to be made available through this legislation is intended to alleviate shortages of housing in defense areas. Workers whose earnings amount to \$1800 or \$3000 annually can, economically, buy or rent the moderately priced homes built under this title.

The Act permits 90 per cent mortgage insurance to operative builders on multi-unit developments in localities "in which the President finds that an acute shortage of housing exists or impedes which would impede national defense activities."

Title VI was designed to speed production of defense housing by private industry. This type of financing complements existing FHA facilities in the home financing field.

The following are the newly approved areas and the defense activities most important in each:

- |   |  |
|---|--|
| <b>ARKANSAS</b><br>Little Rock—(Camp Robinson; shell-loading)                       | <b>MICHIGAN</b><br>Lansing—(Airplane parts; ammunition components)   |
| <b>FLORIDA</b><br>Panama City—(Air Training School)<br>Valpariso—(Army Air Station) | <b>MISSISSIPPI</b><br>Columbus—(Air base)<br>Greenville—(Air base)   |
| <b>GEORGIA</b><br>Atlanta—(Airfield; Fort McPherson)                                | <b>OHIO</b><br>Toledo—(Airplane parts; tanks; shells)  |
| <b>INDIANA</b><br>Evansville—(Ammonia plant)  | <b>OKLAHOMA</b><br>Oklahoma City—(Air base)  |
| <b>IOWA</b><br>Des Moines—(Small arms ammunition)                                   | <b>OREGON</b><br>Astoria—(Naval air base; shipbuilding; army posts)  |
| <b>KENTUCKY</b><br>Henderson—(Ammonia plant)  | <b>TEXAS</b><br>Freeport—(Magnesium metal)<br>Vernon—(Air training school)<br>Victoria—(Air training school) |
| <b>LOUISIANA</b><br>Lake Charles—(Magnesium; air training school)                   | <b>ALASKA</b><br>Fairbanks—(Army air base)   |
| <b>MASSACHUSETTS</b><br>Lynn—(Airplane parts; electrical equipment)                 |  |

**Lumber Dealer Associations Issue Promotion Booklet**

"THE home is the temple of American family life. It represents the American values men have died to defend. At this time in the midst of the world crisis, prospective home owners need confidence. They need confidence in their country, in their opportunities, and in themselves. They must realize that although there is much talk of inflation, shortage of material, rising prices and emergency conditions, this is a favorable time to build."

This introduces the announcement of the Northeastern Retail Lumbermen's Association of a booklet entitled, "The Truth About 1941-42 Building Values," a very constructive piece of writing by Fred A. Hinrichsen of Davenport, Ia. It is a common sense guide for those who ask, "Shall I build?" It has been prepared after months of careful analysis of facts from authoritative sources. This booklet is being sent to the entire membership of the Northeastern Retail Lumbermen's Association for distribution, by them, to their prospective customers.

This booklet will serve two purposes: (a) It will assist salesmen to guide their prospect's thinking and shape their own sales story; (b) It will permit the prospect to sit down privately with all arguments and facts honestly and fairly presented.

Several other Associations of retail dealers, including those covering Ohio, Indiana, Arizona, the Carolinas and Utah are sending the same booklet to their dealers with the hope of circulating the true facts on home building to people in all parts of

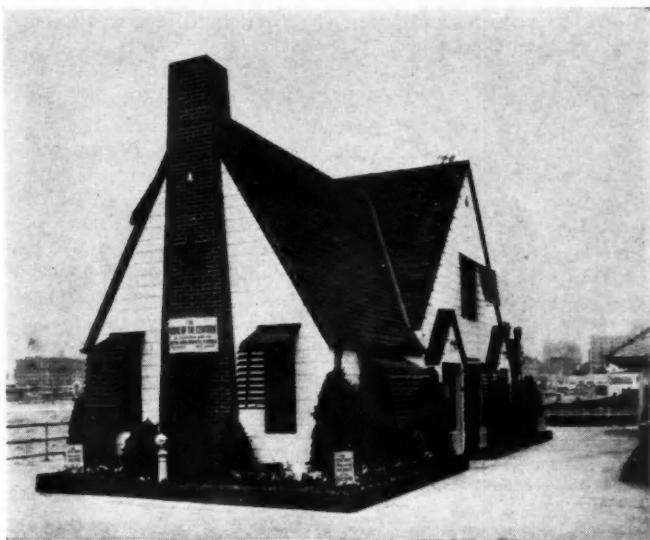
the country. This booklet makes a common-sense approach to the home building subject. It explains the reasons for building at this time in spite of the national emergency. It points out how total costs may go down even though material prices may go up. Among many subjects covered are the cost of building sites, the modern diversified methods of financing available, and the soundness of an investment in a low cost home.

### Ruberoid's New "Timbergrain" on Steel Pier Model Home

GREENTONE "Timbergrain" shingles now roof the "Home of the Century," currently in its sixth summer at the tip end of the Steel Pier at Atlantic City. These shingles are a new product of The Ruberoid Co., New York City.

"Timbergrain" is so named because of its realistic appearance of weathered wood-grain. It is available in four color blends, Greentone, Bluetone, Redwood and Slatetone.

Ruberoid uses a special process to produce these roofings. The shingle is surfaced with colored mineral granules in irregular areas to give an attractive two-tone color effect. Artistic texture, extra heavy butt, and shadow lines are distinguishing features.



"The Home of the Century" at Atlantic City, roofed with Ruberoid's new "Timbergrain" asphalt shingles.

### Building Labor Agreement Reached

SIDNEY HILLMAN, Associate Director General, Office of Production Management, announced on July 24 that the OPM had fully approved the new stabilization agreement between the AFL building and construction trades and the various government agencies, including the Army, Navy and Federal Works Administration which are concerned with defense construction projects of various kinds.

The terms of the memorandum of agreement which will directly affect more than 800,000 building trades workers follow:

1. *Uniform overtime rates.*

Where a single shift is worked, eight hours of continuous employment, except for lunch periods, shall constitute a day's work beginning on Monday and through Friday of each week. Where work is required in excess of eight hours on any one day or during the interval from 5:00 P.M. Friday to 7:00 A.M. Monday, or on holidays, such work shall be paid for at 1½ times the basic rate of wages.

2. *Uniform shifts.*

Where two or more shifts are worked, five days of 7½-hour shifts, from Sunday midnight to Friday midnight, shall constitute a regular week's work. The pay for a full shift period shall be a sum equivalent to eight times the basic hourly rate and for a period less than the full shift shall be the corresponding proportional amount which the time worked bears to the time allocated to the full shift period. Any time worked from Friday midnight to

(Continued to page 94)

IN BUILDING FOR DEFENSE

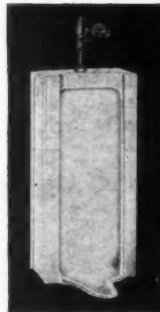
AMERICA  
CALLS ON

CASE

**IN HOMES**—the first line of the nation's welfare—people have confidence in the health-protection of Case plumbing fixtures. The glistening surfaces of their *twice-fired* vitreous china, and their efficient mechanism afford the maximum of cleanliness and lasting sanitation.

**IN PLANTS**, too, you can contribute most effectively to the country's health-defense by specifying Case fixtures. Clients recognize their unequalled cleanliness and resistance to acids and discoloration.

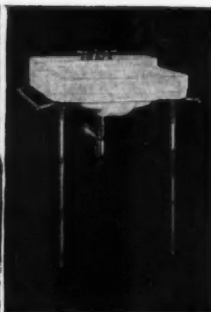
**IN PUBLIC BUILDINGS** of every type, Case quality fixtures are positive safeguards of the public health. On display in distributor's showrooms everywhere. Write to Dept. L-91, W. A. Case & Son Mfg. Co., Buffalo, N. Y.



The No. 2300 18" vitreous china stall Urinal.



The famous non-overflow one-piece T/N Water Closet. Atmospherically vented non-siphoning ballcock.



The WINSTON Lavatory has a shelf back and concealed front overflow.



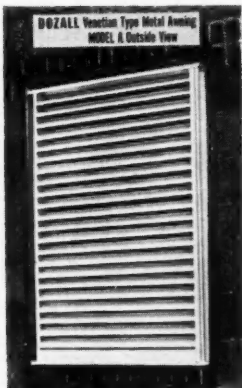
DISTINCTIVE PLUMBING FIXTURES



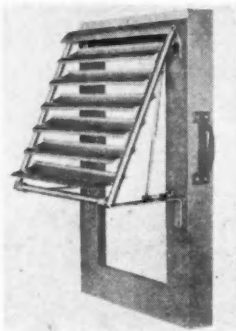
# DOZALL

Venetian-Type

## METAL AWNINGS



MODEL A—Outside view. Operates from inside. Hinged to swing back for window washing. Burglar-proof.



MODEL B—Outside view. Framework shown for demonstration only. Operates easily from inside window.

This new improved type of metal awning offers you unlimited opportunities in a new field of building equipment. Exclusive territories in every part of the U. S. are now being assigned to wide-awake jobbers on an attractive basis. Get full facts now!

### Virgin Market

A territory franchise may mean thousands of dollars in extra profits for you, because the market is practically untouched. Practically every old and new home and building is a live prospect for DOZALL Metal Awnings.

### Sales-Getting Features

Model A DOZALL gives permanent protection against sun, heat, cold, storms and burglars. Both models provide light-controlled vision and good ventilation. They give life-time service and need not be removed. No rattling or banging. Easy window washing. Any color combination.

### MAIL COUPON FOR DETAILS!

**INDUSTRIAL DIVISION  
CLEANERS SPECIALTIES, INC.**  
(Bill Glover's Company)  
5204 East 15th St., Kansas City, Missouri

Rush me full details about DOZALL Venetian-Type METAL AWNINGS—Your profit-producing proposition . . . the wide-open exclusive territories.

NAME.....  
ADDRESS.....  
CITY..... STATE.....

### NEWS— (Continued from page 93)

Sunday midnight or in excess of regular shift hours shall be paid for at 1½ times the basic rate of wages. Wherever found to be practicable, shifts should be rotated.

#### 3. No stoppage of work.

The Building and Construction Trades Department of the American Federation of Labor agrees that there shall be no stoppage of work on account of jurisdictional disputes, or for any other cause. All grievances and disputes shall be settled by conciliation and arbitration.

#### 4. Sub-contractors.

It shall be the policy of all Federal contracting agencies to require the utilization of specialty sub-contractors on those parts of the work which, under normal contracting practices, are performed by specialty sub-contractors subject, however, to the following:

(a) When a general contractor can demonstrate that specialty work has been customarily performed by his own organization and that his existing organization is competent to perform the work, he may be permitted to do so.

(b) Where the performance of specialty work by specialty sub-contractors will result in materially increased costs or inordinate delays, the requirement hereinbefore mentioned may be waived.

On negotiated contracts, the decision as to which parts of the work will be performed by subcontract will, insofar as may be practicable, be made at the time the contract is negotiated.

#### 5. Predetermination of Wages.

In predetermining the minimum wage which is to be paid to contractor's employees on the specific construction job, consideration shall be given to the rates prevailing in the area from which labor must be drawn to man the job and to new wage rates which have been negotiated and concluded through bona fide collective bargaining processes which will take effect at a future date.

Wage rates paid at the start of work on a project shall continue until the completion of the project, or not more than one year, and new agreements or new determinations of wages for work in the same area will become effective only on new jobs started or new contracts signed after the employer-employee agreement has been negotiated.

#### 6. Application of Agreement.

Any contract work done for or through any federal agency for defense purposes within the continental limits of the United States and the Panama Canal Zone shall be governed by this labor policy.

It is understood that the provisions of this agreement shall apply only to national defense projects.

#### 7. Apprentices.

It is agreed that the number of apprentices used shall be limited to the number agreed upon between the respective unions and contractors and approved by the Department of Labor in the case of those unions and employers associations that have established apprenticeship standards in conjunction with the Department of Labor and the number of apprentices in other cases shall conform to the usual practice prevailing between the unions and the employers associations of the respective trades.

#### 8. Board of Review.

There shall be constituted a Board consisting of a representative of the Government Agencies, a representative of the Building and Construction Trades Department of the A. F. of L. and a representative of the OPM. It shall be the function of this Board to interpret the provisions of this agreement, to adjust disputes arising hereunder, and the findings of the Board shall be binding on the parties to the agreement. In case of a dispute involving a specific Governmental Agency, that agency may designate a representative as a temporary member of the Board for the mediation of that dispute. The Board shall have no authority to encroach upon or to relieve any Governmental Agency of its legal authorities and/or responsibilities.

### Dr. C. D. Stone with Laucks

Dr. Clarence D. Stone, who has been assistant professor of Forestry at the University of Idaho for the past two years, has recently joined the staff of I. F. Laucks, Inc., Seattle, developers of the reziting system of wood preservation.

Dr. Stone, a member of the Society of American Forestry, has

had wide experience in problems of wood technology and will do research and development work for the Laucks company. His particular field of investigation will be the practical application of wood preservatives having fungicidal and dimensional control properties.

### Reforestation Gives Cash Crop to Mississippi's Farmers

**E**XERCISING leadership in a scientific reforestation program in Mississippi, Masonite Corporation, which manufactures wood fiber products at Laurel, has completed its fifth annual free distribution of pine seedlings to members of 4-H clubs and Future Farmers of America and to individual farmers in 12 counties in the southeastern part of the state. The company gave away a total of 1,500,000 seedlings and held, in connection with their distribution, 137 planting demonstrations attended by 2,164 persons.

The 1941 distribution brings to 5,500,000 the number of seedlings that Masonite Corporation has supplied since 1936 without cost to individuals for planting in the vicinity of its Laurel plant. The company plans to continue this activity indefinitely as one of the important phases of its co-operation with state agencies to foster a long range reforestation program in Mississippi.

One of the company's objectives is, of course, to provide an adequate supply of wood for its needs in future years. This goal is approached through a sustained educational program to make farmers realize that a profitable cash crop of second growth trees can be produced annually on land that formerly was regarded as useless and to teach them the importance of planting barren areas, of selective cutting, of systematic replacement planting, and of fire protection.

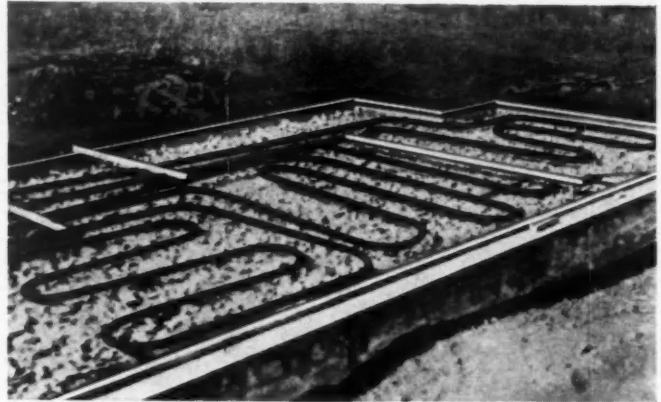
That Mississippi land owners are not slow to learn is proved by the fact that in recent years Masonite Corporation has been paying them more than a half million dollars annually for trees that previously had no commercial value.

As a parallel project and to provide a stimulating example, the company owns 120,000 acres of Mississippi timberland to which a practical forestry program is being applied under the direction of the Land, Timber and Wood Department of Masonite.

### Radiant Heating Gains

**M**ORE than three times as many installations this year as last is the record achieved for the new system of heating by concealed radiation, G. B. Cushing, sales promotion manager of the A. M. Byers Company, Pittsburgh, recently announced. Mr. Cushing attributed the rapid increase to better general understanding of the system and appreciation of its values.

Although radiant heating is fairly new in this country, it was employed with great success in the days of the Roman empire.

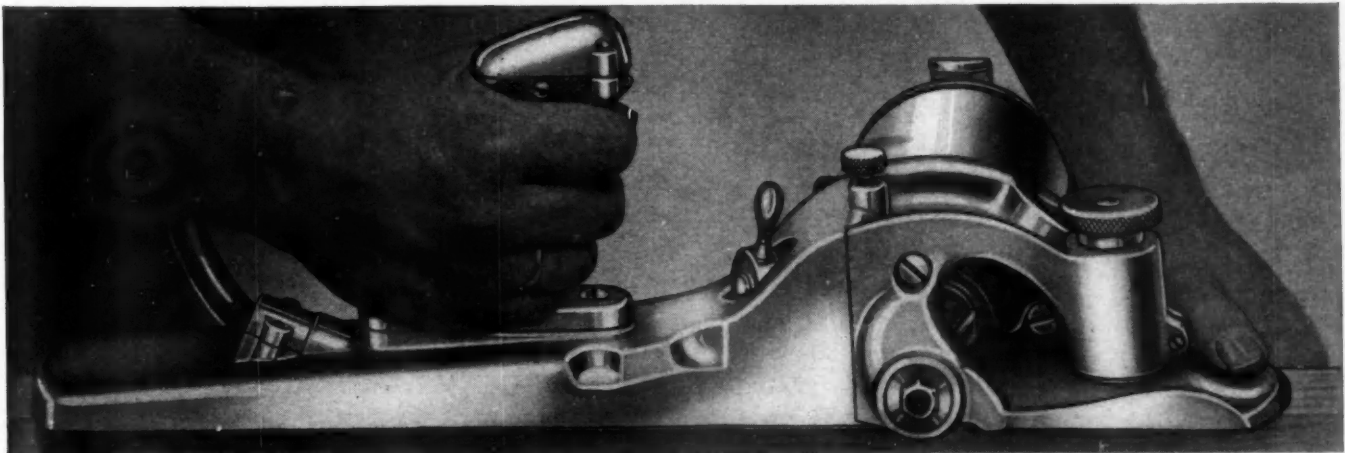


FLOOR heating coils of wrought iron laid on concrete slab.

The Roman method was crude but effective, consisting of a bonfire in the cellar passing heat up through hollow walls and out through a chimney in the middle of the roof, whereas the modern system involves the more scientific use of hot water pipes embedded in floors or ceilings, doing away with radiators or registers. By heating the surfaces of rooms in this manner, bodily heat loss is greatly reduced, thus making it possible for an occupant to be comfortable when temperatures are low.

Mr. Cushing said that the Byers Company has made booklets available for those who wish detailed information.

## THE 16-POUND "MILLWORK PLANT"



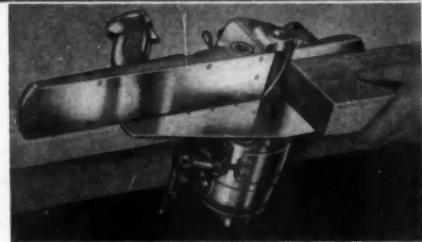
**"Hog it off" -- 3/16" at a stroke  
-- or plane a paper-thin  
shaving straight and true!**

The Carter J-5 is the most powerful portable electric plane on the market -- but that's only part of the story! With its 1 H.P., 18,000 R.P.M. motor it weighs only 16 pounds. And in addition to a satin-smooth planing job, up to 2 1/2" wide, it makes a good jointer, right on the job, when mounted in the bench bracket furnished with it. Bevel cuts to 45°.

Use it as a plane to fit doors, sash, screens, storm windows, transoms. Use it as a jointer for inside trim and similar work. The high-speed spiral cutter is quickly adjustable for depth, leaves a smooth, waveless surface with or against the grain.

Get this time-saver on the job with you right now! Send the coupon today for catalog, or for Carter representative to meet you at your convenience and demonstrate the tool. R. L. Carter Division, The Stanley Works, New Britain, Conn.

**SEND COUPON NOW FOR FULL FACTS!**



R. L. Carter Div., The Stanley Works,  
New Britain, Conn.

..... Have your representative demonstrate  
the J-5 Power Plane.

..... Send catalog on Carter Money-Making  
Tools.

Name.....

(Please print)

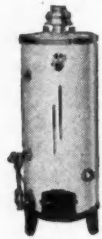
Address.....

# CARTER MONEY-MAKING TOOLS

# HOTSTREAM

The Most Complete Line

GAS • ELECTRIC • L. P. G.  
FUEL OIL • KEROSENE



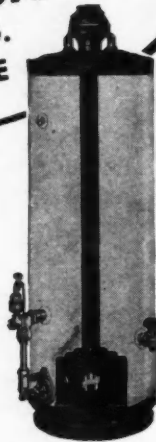
**Dixie**  
Medium priced automatic, regular gas and LPG



**American**  
Competitive priced automatic, regular gas and LPG



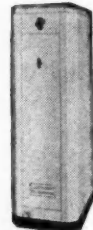
**Copper-Clad**  
Gas automatic with copper-lined steel tank



**Hotstream Feature De-Luxe**, "best-by-test" for regular gas and LPG



**Tabletop**  
Table-high cabinet—for gas, LPG and electricity



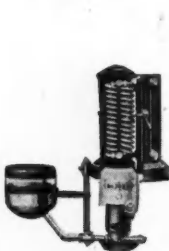
**Cabinet**  
Square cabinet-enclosed heater—gas or electric



**Electric**  
Heavy insulated round automatic—economical



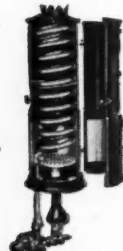
**Fuel Oil**  
Gravity feed automatic, cheapest to operate



**Kerosene**  
Wick or wickless burners, manually operated



**Modernistic Tank Heater**, insulated steel jacket—flash lighter



**Cast-Iron Jacket Side-arm tank heater**, single and double coil models



**Booster**  
For large-volume water or auxiliary house heating

**\*235** Styles and Sizes of water heaters at every price, for every fuel—all described in the Illustrated Price Catalog.

**THERE'S NO OTHER CATALOG LIKE IT!**  
**• GET YOUR NO. 41 NOW!**



**THE HOTSTREAM HEATER COMPANY**  
8007 GRAND AVENUE • CLEVELAND, OHIO

## Homes Purchased for Security

**B**ETWEEN January 1, 1940 and June 1, 1941, approximately 1,150,000 families in the United States secured themselves against rent rises in the changed national economy of the '40's by acquiring homes of their own. This is the estimate of the Home Building and Home Owning Committee of the United States Savings and Loan League which takes into consideration the new one-family homes built, the approximate number of those newly purchased in the period, and one half of the residential units created by the building of two-family homes.

Fernor S. Cannon, Indianapolis, chairman of the League committee, points out that these far-seeing families have obtained for themselves fixed shelter charges averaging between \$25 and \$30 a month for the next twelve to fifteen years. This monthly payment covers interest on the financing of the newly bought home, systematic reduction of the principal amount of the loan, and provision for taxes and hazard insurance in advance. In view of the fact that all home loans provided by savings, building and loan associations are made on a monthly amortized basis and those made by agencies which insure the bulk of their loans with the FHA now also follow this original savings and loan pattern, it is assumed that the great majority of those acquiring homes in the last year and a half have them on the monthly repayment plan.

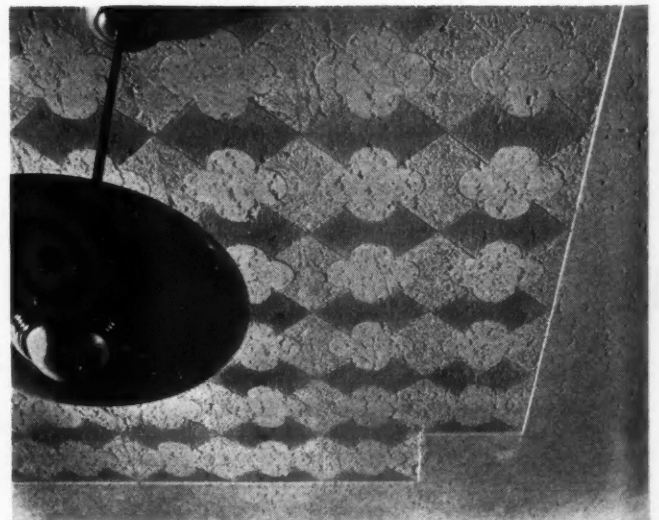
A significant step-up in one-family home production was already under way as a result of a combination of circumstances when the international situation took a turn for the worse in May a year ago and brought the United States square up against the necessity of going into a defense economy, Mr. Cannon said.

"From May 1940 the threat of the rising cost of living became more and more apparent to the general public so that the acquisition of homes increased its momentum," he recalled. "The rush to avoid normal rises in shelter costs will undoubtedly continue to be reflected in increased home building."

## USG Offers Motif'd Acoustone

**A** NEW decorative effect for acoustical ceilings is made possible through the latest development of the United States Gypsum Co., Chicago. This is called Motif'd Acoustone. It is produced by etching attractive patterns upon the sound-absorbing surfaces of Acoustone.

The distinguished effect obtained with Motif'd Acoustone results from the attractive patterns created by a difference in surface



**ACOUSTONE** units with decorative patterns.

texture of the etched and unetched areas rather than from garish colors. No painting is required unless a colorful ceiling is desired. In such cases, the Motif'd Acoustone may be painted without reducing its high acoustical properties.

The texture of Motif'd Acoustone and its soft warm colors, combined with high-lighted basic patterns that are available, give a distinguished effect that may be made to harmonize with any architectural scheme of a room or building. In addition to a selection of basic patterns that are available, architects and designers are given a free hand to create and design their own patterns for Motif'd Acoustone.



## Better Use of Stock Millwork Items Goal of New Promotional Effort

A GROUP of lumber and millwork manufacturers has launched a national campaign of advertising and publicity to promote the use of stock millwork items.

Ponderosa Pine Woodwork is the name adopted by a group of woodwork and lumber manufacturers associated for the sole purpose of furthering wider and better use of stock sizes and styles of doors, windows, frames and other woodwork of Ponderosa Pine.

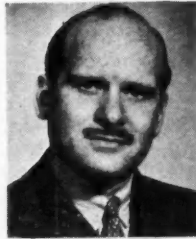
Promotional activities of Ponderosa Pine Woodwork include advertising, a news bulletin for wholesalers, dealer tie-up material, publicity and direct field contact with jobbers and retailers. Consumer advertisements are appearing in four national magazines—American Home, Better Homes & Gardens, House Beautiful, House & Garden. Builders and architects are reached through the pages of their respective trade papers, and a schedule of lumber paper advertising is being carried to assure adequate coverage of manufacturers, wholesalers, and dealers in all sections of the country. Dealer helps include mats of a number of different newspaper advertisements so that dealers may tie up with the entire program locally. Publicity material includes newspaper and magazine stories and interesting "idea" illustrations.

One important premise of the campaign is the fact—established by surveys—that people want features in their homes that require the use of more doors and windows. That is, people who are building, buying, or remodeling want more light and air, which means more windows. They want more convenience and better use of available space, which means more doors and better use of doors. The consumer advertisements illustrate how stock items of Ponderosa Pine can be used to obtain the desired features economically—in any size, style or price of home.

Present membership of Ponderosa Pine Woodwork includes:

Alexander-Yawkey Lumber Co.  
38 S. Dearborn St.  
Chicago, Ill.

The Long-Lake Lumber Co.  
Spokane, Washington



R. M. BODKIN

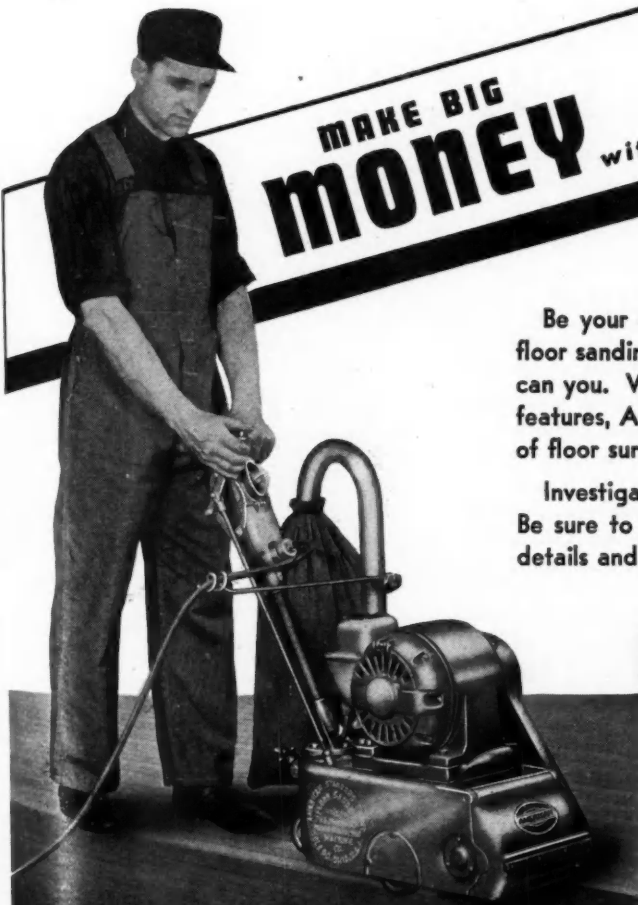
Anaconda Copper Mining Co.  
Bonner, Montana  
Andersen Corporation  
Bayport, Minn.  
Brooks-Scanlon Lumber Co.  
Bend, Oregon  
Carr, Adams & Collier Co.  
Dubuque, Iowa  
Cascade Lumber Company  
Yakima, Washington  
Curtis Companies, Inc.  
Clinton, Iowa  
Deer Park Lumber Co.  
Deer Park, Washington  
Edward Hines Lumber Company  
77 West Washington St.  
Chicago, Ill.  
Farley & Loetscher Mfg. Co.  
Dubuque, Iowa  
Huttig Manufacturing Co.  
Muscatine, Iowa  
Ideal Company  
Waco, Texas  
Keystone Frame & Mfg. Co.  
Spokane, Washington  
Kinzua Pine Mills,  
Kinzua, Oregon  
Lamm Lumber Company,  
Modoc Point, Oregon  
The Long-Bell Lumber Co.  
926 Grand Ave.  
Kansas City, Mo.

Missoula White Pine Sash Co.  
Missoula, Mont.  
Morgan Company  
Oshkosh, Wisconsin  
Mount Emily Lumber Co.  
LaGrande, Oregon  
J. Neils Lumber Company  
Klickitat, Washington  
Northern Sash & Door Co.  
Hawkins, Wisconsin  
Oregon Lumber Company  
Baker, Oregon  
Red River Lumber Co.  
807 Hennepin Ave.  
Minneapolis, Minn.  
Roach & Musser Co.  
Muscatine, Iowa  
Rock Island Sash & Door Works  
Rock Island, Ill.  
Shevlin Pine Sales Co.  
900 First National Soo Line Bldg.,  
Minneapolis, Minn.  
Spokane Pine Products Co.  
Spokane, Wash.  
Western Pine Mfg. Co.  
Spokane, Washington  
Weyerhaeuser Sales Company  
First National Bank Bldg.,  
St. Paul, Minn.  
White Pine Sash Company,  
Spokane, Washington

Mr. Robert M. Bodkin is General Manager. Mr. Bodkin's headquarters are in the Conway Building, 111 W. Washington Street, Chicago. His duties include supervision of all forms of promotion by the group.

## Woodwork Jobbers to Meet

THE SIXTH annual meeting of The National Assn. of Woodwork Jobbers will be held at the Edgewater Beach Hotel, Chicago, Sept. 23 and 24. A timely and worth-while program is being prepared and all interested members of the trade are invited to attend.



MAKE BIG MONEY with an **AMERICAN** FLOOR SANDER

Be your own boss and make big money with an American floor sanding machine. Hundreds of men are doing it and so can you. With the many outstanding time and money-saving features, American machines for years have been the favorite of floor surfacing men.

Investigate the wonderful possibilities of this work today. Be sure to sign and send in the coupon below for complete details and prices—no cost or obligation to you.

AMERICAN FLOOR SURFACING MACHINE COMPANY

511 SO. ST. CLAIR ST. TOLEDO, OHIO

Gentlemen:  
Send complete details and prices without cost.  
 I want to go into floor surfacing business.  
 I would use sander in my contracting business.

Name \_\_\_\_\_  
 Street \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_

### Home Builders School Postponed

**B**ECAUSE of activity in the home building field—a condition in which home builders over the country are currently “building against time” in a race with expected priorities—the Home Builders Institute of America announces that it has postponed the course in home building which it had scheduled to be given at Wharton School of Commerce, University of Pennsylvania, for two weeks opening August 18.

Further announcements will be made later as to the course, planned to cover the whole field of home production, in the development of which several staff heads of FHA had an important part, and whose faculty of 20 was scheduled to include many of the men now making the most active contribution to home building thought and to new home producing ideas.

### Court Sustains Rural Housing Program

**T**HE Supreme Court of South Carolina has handed down a decision upholding the public housing program in rural areas. This court decided that:

1. Housing for farm families and the elimination of rural slums is a public purpose.
2. Rural public low-rent houses are exempt from taxation under the State Constitution and the South Carolina Housing Authorities Law.
3. Rural housing does not discriminate in favor of farm families of low income.

The case involved Darlington County, S. C., which is one of the rural areas in which USHA rural housing demonstrations were started.

Since its formation in 1939, the Housing Authority of Darlington County has received funds for constructing 200 rural homes. Eleven of these are already occupied; 46 more are under construction. Built at an average cost of \$1,650, these houses will rent for approximately \$70 a year. Darlington has been assigned \$444,000 of the \$2,290,000 which has been earmarked for rural housing in South Carolina.

The USHA low-rent program for housing farm families now

calls for the construction of 8,375 homes. The total cost of these new houses will be \$17,083,889, of which USHA will provide 90 per cent in loans to county and regional housing authorities.

Under the rural housing program of the United States Housing Authority, loans and annual contributions are made to county or regional housing authorities to assist in providing homes for low-income farm families. For every new home-built in a rural area, an unfit house is supposed to be eliminated.

The decision by the South Carolina Supreme Court on the rural housing program rests on the same legal foundation as the line of decisions upholding the urban housing program. To date there have been 48 favorable decisions by the Supreme Courts of 28 states. All of these decisions have upheld local slum clearance and low-rent housing programs from almost every possible legal angle.

### Farm Building Boom Expected

**F**ARMERS in the United States will have the highest cash income in two decades in 1941, with estimated cash income of \$11,000,000,000, declares the research division of the Curtis Publishing Co. in a study on defense spending and agriculture. The increase will come from the 1941 farm program, buying for Britain, increased domestic food consumption, increased demand by the Army and Navy for cotton, wool, food and other agricultural products and increases in prices.

“Farm prosperity is due to a large extent to the increase in non-agricultural employment,” the study says. “This employment has increased 3,250,000 persons since May 1940—the largest 12 month increase on record. This increase does not take into account the 1,750,000 men in military force.

“Wage increases have also had their effect in increasing the demand for farm products. The purchasing power of factory wages is at record levels. Money income of industrial workers has increased more than the cost of living.”

The study also points out that the rural population which has had an advantage through higher relative purchasing power than the non-farm group, will further benefit with future increases in the cost of living being less burdensome than upon the non-farm group.





## How Sumpter Solves

### HIGH PRICES AND MATERIAL SHORTAGES

Are you hampered by delays, rising material prices, uncertain quality? Mr. W. A. Sumpter solved these problems by producing his own materials.

He makes DUNBRIK a lighter weight, lower cost brick of greater strength, lower absorption, and DUNSTONE a double and triple brick that enables him to build fire and vermin proof walls at cost level of frame. Many of today's largest Defense Projects are using millions of DUNBRIK and DUNSTONE.

You, too, can solve your problems and increase your building profit. We will equip you with a modern line production plant that can be operated with a small crew. You use local raw materials available in every locality, and make products in a range of over forty beautiful colors, shades and textures.

Modest investment starts you. Terms can be arranged, and your territory will be protected by franchise. Write or wire today for free books that tell the complete story.

W. E. DUNN MFG. CO.

450 W. 24th St.      Holland, Michigan





"Taking income against buying costs the farmer is doing much better than in 1929 for his costs of living and farm equipment have fallen 20 per cent while farm income is about at the 1929 level," the study says.

At the same time it is pointed out that increased income will be felt in all sections due to higher prices for wheat, cotton, tobacco, corn and hogs, beef and the increased purchases for Britain of dairy products, fruits and canned vegetables.

"The extent of farm prosperity is revealed in the recent upsurge of retail sales in rural areas," the report says. "According to a recent release by the Department of Commerce, rural retail sales reached an all-time high in April—an increase of 31 per cent from a year ago.

"The rural market today has exceptional sales opportunities," the report says, concluding "and the increased farm prosperity is only beginning."

This favorable economic condition on the farm, combined with the Department of Agriculture's new drive for more dairy products and meat products "to win the war," points unmistakably to an era of farm building activity. The great extent of farm building improvements made in the past 30 years is not generally known. The Bureau of Agricultural Economics at Washington has been getting together the figures. Here they are:

**PERMANENT FARM IMPROVEMENTS  
1910 - 1940  
Expenditures**

Year	Operators' dwellings Mil. dol.	Service buildings Mil. dol.	Total Mil. dol.
1910	185	250	435
1911	175	240	415
1912	190	260	450
1913	190	260	450
1914	190	260	450
1915	195	270	465
1916	245	335	580
1917	300	415	715
1918	310	425	735
1919	395	545	940
1920	355	510	865
1921	170	245	415
1922	202	293	495
1923	272	341	613
1924	259	324	583
1925	262	327	589
1926	254	317	571
1927	287	356	643
1928	278	347	625
1929	283	348	631
1930	199	232	431
1931	128	139	267
1932	69	71	140
1933	95	99	194
1934	105	114	219
1935	160	180	340
1936	166	192	358
1937	191	222	413
1938	167	197	364
1939 *1	195	230	425
1940 *1	211	257	468

Bureau of Agricultural Economics.

\*1 Preliminary.

**Saving Nearly 27,000,000 Tons of Coal  
Can Be Accomplished This Winter  
With Use of Storm Windows**

WITH industrial consumption of fuel increasing enormously and consequent shortage and higher prices resulting, lumber dealers have a great opportunity this fall to sell "window conditioning," formerly known to the trade as *storm sash*.

Home owners already anxiously seeking ways to combat currently rising costs all along the consumer front will be unusually receptive to the fact that the average family can cut its winter fuel bill by as much as 1½ tons of coal during a season.

That a tremendous market for storm windows is at the front door of lumber dealers is indicated by the fact that in 1940 there

(Continued to page 100)



## STEEL SASH "MERIT-METER"

POINT NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SWING BASIC FACTS USED ARE FROM 1940 SWISS CATALOG	From Any Jly. temp.	Weather from Any Jly. temp.	From Any Jly. temp.	All weathered windows not rated by any authority.	Weather from Any Jly. temp.	Weather from Any Jly. temp.	Weather from Any Jly. temp.	Weather from Any Jly. temp.	Weather from Any Jly. temp.	Weather from Any Jly. temp.	Weather from Any Jly. temp.	Weather from Any Jly. temp.	Weather from Any Jly. temp.	Weather from Any Jly. temp.	Weather from Any Jly. temp.	Weather from Any Jly. temp.	Weather from Any Jly. temp.	Weather from Any Jly. temp.	Weather from Any Jly. temp.	Weather from Any Jly. temp.
MESKER	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
SASH-A	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SASH-B	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SASH-C	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SASH-D	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SASH-E	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO



**Send for your Steel Sash Merit-Meter-and PROOF!**

Over a third more quality than its nearest competitor . . . that's MESKER'S *proved* claim. Check the Steel Sash "Merit Meter" yourself.

It enables you to compare steel window quality, point-by-point. Everyone concerned with steel windows should have a copy of it.

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Industrial Doors • Metal Screens • Detention Windows





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(GIVE STREET ADDRESS OR P. O. BOX NO.)

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Send for it now-

**NEWS—** (Continued from page 99)

were 27,333,424 occupied dwelling units in 39 states of the nation which needed storm sash and insulation, according to the Bureau of Census.

Although building material retailers, with the cooperation of Libbey-Owens-Ford Glass Co., have done a good job in educating the public on the merits of storm windows, it is estimated that only about 35 per cent of the residences have storm sash at present. This percentage is probably at least double what it was five years ago before this enterprising glass company started its window conditioning campaign, and many lending institutions began encouraging installation of storm sash.

A recent government information circular conservatively estimates that the average family uses five tons of coal or equivalent fuel a year. Accepting this figure, and basing the estimate on the 27,333,424 dwelling units not equipped with storm sash, as reported in the 1940 census, about 136,667,120 tons of fuel would be required annually to heat these homes.

Taking the conservative figure of 65 per cent as the number of dwellings needing storm sash which do not have them, a potential market of 17,766,725 home owners is visualized. With each using annually an average of five tons of coal, they would consume a good-sized mountain of 88,833,625 tons. If each of the unprotected houses had window conditioning, a saving of approximately 30 per cent, or 26,650,087 tons, would result. Since the majority of coal cars haul 50 tons, the foregoing quantity of fuel saved would release 533,002 cars for transportation of urgent orders. Translated into fuel oil, it is found that the saving is equivalent to 373,100 tanks cars.

Now, turning to storm sash, it is learned that there are an average of 1,800 24x48" units in a carload. A dozen such sash is needed for most houses, which means that one carload would window condition 150 dwellings.

With an average saving of 30 per cent in fuel when window and door openings are equipped with extra glazing, it follows that each family would save 1½ tons of coal. A carload of coal would be saved for other needs by every group of 33 houses having window conditioning. Forty-seven houses with double sash would divert a tank car of oil into other channels.

One carload of installed storm sash, then, will save 4½ cars



**STORM sash may be secured to match a permanent window like the one shown here, or with large panes of glass. While appearance and the comfort of his family are always considered, the saving in fuel consumption is the practical reason why every property owner wants double glazing.**

of coal, or 3.2 tank cars of oil.

Lumber dealers can without much effort work out interesting figures in their own communities for use in advertising and timely semi-patriotic promotional campaigns. Emphasis can be placed on the fact that heat is lost through a single thickness of glass 5 to 15 times faster than through adjacent walls, and that a test by Alfred J. Offner, Council member of the Society of Heating and Ventilating Engineers, in five different house types showed fuel savings with window conditioning ranging from \$23 to \$42 per year. However, if home owners are told that they can save for America and themselves approximately three out of every ten shovelful of coal, they will really perk up their ears!

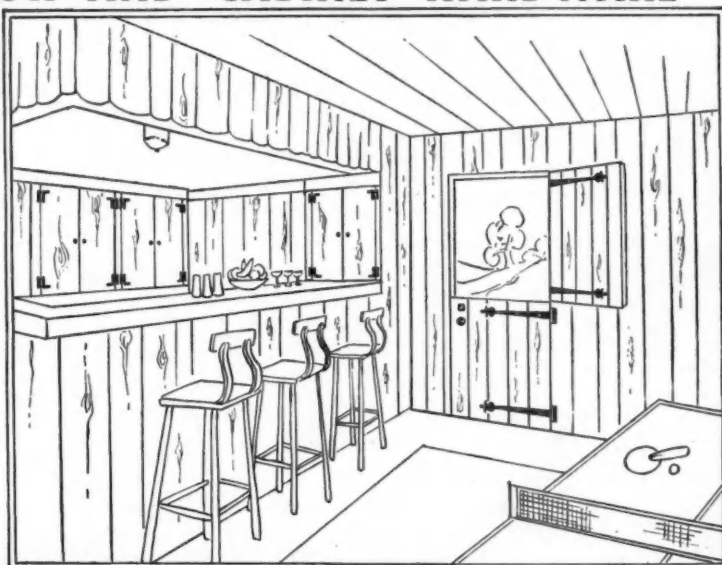
**MATCH YOUR HOMES—"INSIDE-OUT" with**

*McKinney* **INTERIOR AND CABINET HARDWARE**

**for Game Rooms and Dens**

- **Authentic Design**
- **Unifies Exterior with Interior**
- **Easily Applied—Saves Time**
- **Maintains Finish Permanently**

Sales are easier to make when you show your prospect a "follow through" of exterior and interior hardware. McKinney offers a wide variety of styles in every price range.



**McKINNEY MANUFACTURING COMPANY • PITTSBURGH, PA.**

**OVER 75 YEARS DESIGNING AND MANUFACTURING GOOD HARDWARE**

## PRODUCERS TELL US—

About Products, Personnel, Plants

### New Mouldings of Plastics

A NEW shape of moulding for trimming the edges of tables, counters and cabinets is being produced in the shatter-proof plastic "Tenite." The moulding is one of a number of similar Tenite strips used for architectural purposes in the construction and decoration of homes and offices.

The new shape is the first plastic trim for furniture that can be applied without the use of fasteners or an adhesive. It is being produced exclusively in the cellulose acetate butyrate formula of Tenite. Cut in cross section the piece resembles the letter T. The base of the T has an arrow head while the top curves down.

Forced into a groove cut in the wood, the flanged arrow portion of the strip prevents the plastic from loosening, just as the barb of a fish hook prevents it from being readily withdrawn. The curve of the top of the T tends to pull the inserted part out of the wood, thus increasing the grip of the plastic.

The strip is manufactured in two widths by the extrusion method, which forces heated plastic from a die much as toothpaste is squeezed from a tube. Tenite hardens when cool and can be cut in the desired lengths. Virtually indestructible, the moulding can be punched, nailed, stamped, drilled, or sawed without chipping or cracking. The resilience of the plastic and the unique shape of the moulding allow the trim to be formed with ease around square or round corners without the necessity of heating or otherwise softening the material.

Tenite moulding is produced in a variety of shapes. Concave, cove-shaped strips are made for installations along the back splash boards of sinks and along the wall edge of bathtubs. The moulding prevents water from leaking down between the installation and the wall. Nosing is being made for facing the edge of linoleum, plastic sheets and similar materials used to cover counters and tables. A flanged portion of the strip is inserted under the top surface of the table and a small L-shaped projection covers its edge. Other strips have larger L's that turn downward as well as upward and so trim the wood.

Strips used to cover seams in wallboard include a shape that resembles a large, squat T. The wide portion, is placed directly on the wall under the covering material. The wallboard is slid into the slots in the side of the T and held in place by the plastic. The seams are covered by the short protruding base of the T. Several different kinds of strips are shaped to cover the joints and corners of walls. Mouldings can be furnished in straight lengths up to 21 feet. Tenite extruded shapes are already in stock in building supply houses from coast to coast. The extruded shapes are manufactured by Extruded Plastics, Inc., Naugatuck, Conn., for the Julius Blum Company, New York City.

### Servel Offers Space Heater-Cooler

ANNOUNCEMENT comes from Servel, Inc., Evansville, Ind., of an important extension of its gas-burning refrigeration principle into the all-year-round air-conditioning field.

Introduction is now being made of a year-round domestic air conditioner providing heating in the winter and cooling in the summer by one simple gas operated unit. It is sold by gas utilities in various parts of the country.

This year-round conditioner is so flexible that it can heat or

(Continued to page 104)



PLASTIC moulding in variety of shapes.

# SPEED CONSTRUCTION WITH FACTORY-FINISHED WALLS AND CEILINGS



TOTS AND TEENS SHOP, Dallas, Texas, illustrates one of the almost unlimited decorative wall and ceiling effects easily achieved with time-saving Temlok De Luxe. Ceiling is of white panels for superior light-reflection; walls are of 10" wide planks in three colors—all erected with Armstrong's No. 514 Adhesive. Architect: F. J. Woerner, Dallas. General Contractor: W. H. King Construction Co.

WHEN everybody is clamoring for speed, and completion dates are close at hand—that's the time Armstrong's Temlok De Luxe wins the special praise of builders, architects, tenants, and building owners alike!

By replacing plaster in new construction, Temlok De Luxe saves the usual drying period—and you know what that can mean, especially in damp weather. Its smooth-textured surface and attractive pastel colors, applied at the factory, save further building time because painting or papering is eliminated.

Look at the outstanding extras offered by this versatile wall and ceiling finish. Temlok De Luxe is highly decorative—soft pastel shades and the panels, planks, and boards available can be combined in many interesting designs. It insulates efficiently—for fuel savings and year-round comfort. In addition, Temlok De Luxe has high light-reflection and helpful noise-quieting qualities.

Don't delay. Write today for samples and information about Temlok De Luxe (in Panels, Planks, and Boards)—Temseal Sheathing—Temlok Lath (Insulating Plaster Base). Address Armstrong Cork Company, Building Materials Division, 979 Concord Street, Lancaster, Pennsylvania.



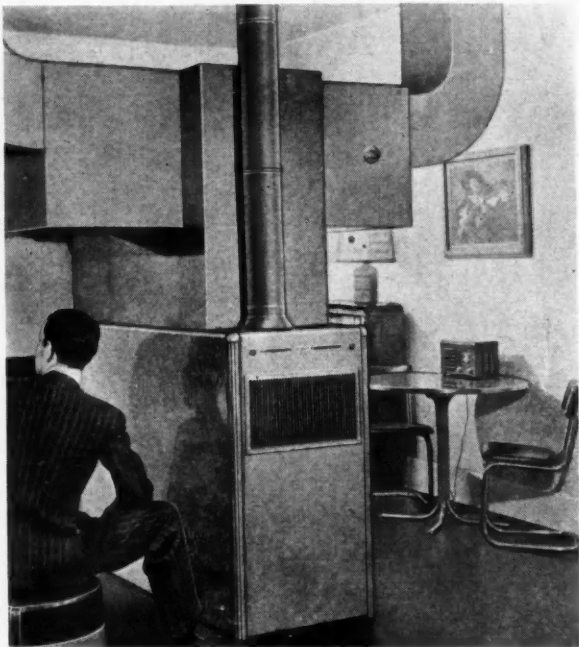
## ARMSTRONG'S TEMLOK INSULATION

De Luxe Interior Finishes • Lath • Sheathing • Hardboards • Monowall

**PRODUCTS—**(Continued from page 103)

cool in the same day to meet sudden weather changes. Credit for this versatility goes to the Servel Selectrol, a combination thermostat and unified control system, which by the flick of a switch automatically changes the unit from heating to cooling or vice versa. Even the circulating fan may be operated independently, if desired, from the Selectrol.

The conditioner performs six major functions: effective cooling, positive dehumidification, efficient heating, controlled



SERVEL "All-Year" air conditioner.

humidification, selective air circulation and thorough air cleaning.

Floor space requirements for the new unit are less than requirements for a conventional house furnace and far less than separate heating and air conditioning units.

John K. Knighton, manager of Servel's air conditioning and commercial refrigeration department, in describing the new conditioner at a recent gas industry convention said: "The year-round gas-operated domestic air conditioner has successfully passed its laboratory tests and is now giving satisfactory service in a series of sales tests and research.

"Co-operating with gas utilities throughout the country we have been able to install units in representative localities to get a cross analysis of their performance under weather extremes of all kinds. Conditioners have been placed in homes in New York, Washington, D. C., Indiana, California, Texas, Louisiana, Maryland, Virginia, Wisconsin, Missouri and several other states."

**Unusual "Display Kit" for Morton Bathroom Cabinets**

MUCH interest has been aroused by the new method being used to present bathroom cabinets, made by the Morton Manufacturing Company, Chicago. "Our new presentation enables the cabinet buyer to make the selection easier, quicker, and more satisfactorily," advises C. S. Motter, Morton's Vice President and Sales Manager.

Most people who are interested in buying a cabinet ask themselves the question: "How will this model look in my bathroom?" "Now, any Morton cabinet can be visualized on the wall, in relation to other bathroom fixtures," states Mr. Motter. "We've eliminated the confused state of mind which usually prevailed when the prospect's attention was divided among a group of different models. Using our new presentation method, the prospect views a Morton cabinet without the intrusion of other illustration and descriptive matter. Time and effort are saved, resulting in greater satisfaction after the cabinet has been installed."

The various elements used in the presentation referred to by

**WOMEN ARE KITCHEN-CONSCIOUS**

and the Beauty and Work-saving FEATURES OF YPS KITCHENS

Appeal to them . . .

Architects and Builders who use YPS KITCHENS have these definite Advantages:



1—YPS enameled steel cabinets harmonize perfectly with the modern range and refrigerator.

2—Warehouse stocks of YPS units from Coast to Coast make speedy delivery possible.

3—YPS mass production methods make retail prices reasonable.

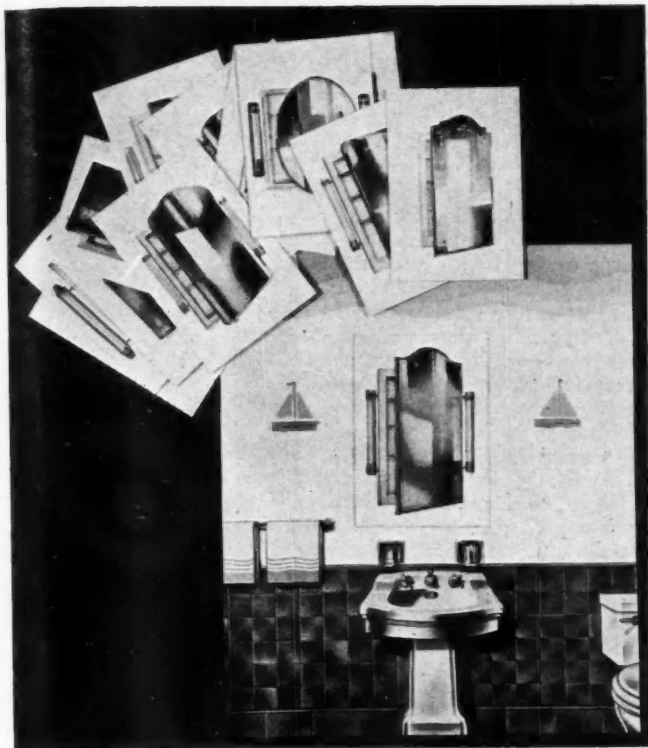
4—YPS Kitchens are Nationally Advertised in Ladies' Home Journal, Better Homes and Gardens, The American Home, House Beautiful, House and Garden, McCall's, Woman's Home Companion, and Parents Magazine.



Youngstown Pressed Steel Division, Dept. 109  
Mullins Manufacturing Corporation, Warren, Ohio.  
Please send me the Fall Edition of YPS Kitchen Catalog.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

Am  
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kitchen



NEW method of presenting bathroom cabinets.

Mr. Motter are combined in a single "Display Kit." On its face appear the following instructions: "Save time, effort and confusion by following Morton's easy 3-Step Presentation Plan. First, choose a cabinet from the illustrated folder. Second, select the corresponding picture card. Third, place the card on the bathroom wall illustration."

Each Morton cabinet is pictured on an individual card, with model number and specifications on the reverse side. To facilitate selection, the models of each line are grouped together in an envelope. On the back of the larger cellophane-coated picture of the bathroom wall are illustrated the eight outstanding features of Morton cabinets.

So that buyers may quickly locate the name and address of the nearest Morton representative, the complete listing is printed on the back of the "Display Kit," in alphabetical state arrangement.

### Fluorescent Lighting Built into Kitchen Cabinets

THE NEWEST advance in modern electric lighting—the fluorescent light—has been incorporated in steel kitchen cabinets of the St. Charles Manufacturing Co., St. Charles, Ill. All wall cabinets 21 inches or more wide can be equipped with this light, recessed in a specially designed bottom plate so that the fluorescent tube itself is not visible at normal eye level. At the snap of a toggle switch, a clear, white light is diffused over the working surface—sink, range, or cabinet top. A convenient outlet is provided for electrical appliances.



FLUORESCENT light built into underside of kitchen wall cabinet.

## MEET A NEW SOLDIER...

★...YOU'LL FIND HIM EVERYWHERE

He's in the Army . . . in the Navy . . . in the Air Force.

You'll find him rolling across the countryside in speedy new tanks. Or helping direct field maneuvers from Signal Corps' communication trailers. Or racing through the water in trim, swift fighting craft.

You'll find him in camps and shipyards, trucks and factory production lines, and munitions plants . . . in fact, wherever democracy's great line of defense extends. For "he" is the familiar little Masonite\* Man — symbol of Presdwood\* wood-fibre hardboards, "The Wonder Woods of a Thousand Uses."

Masonite Corporation places the needs of national defense first. Consequently, in some cases, normal consumer requirements cannot be met as readily as before.

Strong, durable and light in weight, Presdwoods are hard to wear out; they resist moisture, take extremes of temperature, and will not split, chip, splinter or crack when properly applied.

That's why they are used in floors and walls of barracks. In airplane dies. In shell cartons. In army trucks. In table tops at munitions plants. As concrete forms at naval bases. For cantonments in Canada and Australia. And in countless other ways.

\*Trade-mark registered U. S. Pat. Off. "Masonite" identifies all products marketed by Masonite Corporation. Copyright 1941, Masonite Corp.



## MASONITE PRESDWOOD PRODUCTS

MASONITE CORPORATION, Dept. AB-9  
111 W. Washington St., Chicago, Ill.

Please send me FREE sample and information about Masonite Tempered Presdwood.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

(If you live in Canada, write Masonite Company of Canada, Ltd., Gaiineau, Quebec.)

**OVER-THE-TOP<sup>®</sup>**  
**DOOR EQUIPMENT**

**EASILY APPLIED TO  
STANDARD, STOCK DOORS**



**OR**  
*Specially Built*  
**LARGE, HEAVY  
DOORS**



In addition to being adaptable to practically every type of vertical door, No. 78 "Over-the-Top" Door Equipment offers these other outstanding advantages: requires only 2 1/4" headroom \* friction brake prevents slamming \* extremely low cost installation \* equipped with automatic opener \* adjustable to various size and weight doors \* holds door inside building when open \* equipped with automobile-type, chrome-plated handle-lock. These features, plus low first cost, have made "Over-the-Top" the most popular equipment for "upward acting" doors. Write for further information.

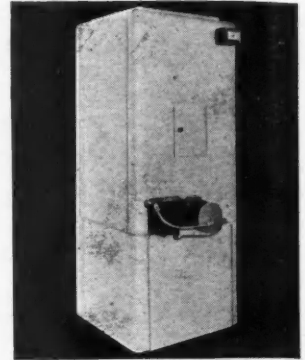
**FRANTZ MANUFACTURING CO.**  
Dept. A. B., Sterling, Ill.

**FRANTZ**  
*Guaranteed* **BUILDWARE**

**New Norge Oil Furnace  
for Defense Homes**

EVIDENCE of the rising importance of defense housing with its special heating problems is indicated in the announcement of the new Norge Model OD-70 oil-burning furnace, "designed especially for defense homes."

According to S. J. McCarthy, general sales manager of Norge Heating and Conditioning Division, Borg-Warner Corporation, Detroit, there are many territories in which defense homes can be equipped with modern oil heating, without any possibility of their being affected by rumored oil transportation shortages. Features that especially commend the Norge OD-70 for defense homes are its compactness, its economy in operation, its low first cost and its ease and speed of installation.



**NEW Norge Model OD-70 oil furnace**

Particularly important is the two-stage, mechanical draft, pressure vaporizing oil burner which eliminates unfavorable chimney conditions as a factor in combustion efficiency and assures clean, efficient fuel consumption under all conditions, including those which normally would be considered adverse.

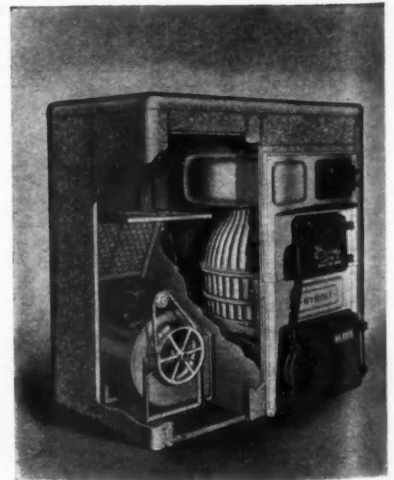
Model OD-70 is only 26" square and 67" high, and, being equipped for forced air circulation, is equally suited to basement or utility room installation. It develops 70,000 B.T.U. at the bonnet and delivers 800 C.F.M. Inlet is at the bottom or side, discharge at the top. It is completely factory wired and comes as a "package," ready to uncrate, set in position and connect to services. All controls are fully automatic. The cabinet is designed with all rounded corners and is handsomely finished in pearl gray enamel, baked on in infra-red light ovens.

**Dye-Crete For Concrete Floors**

THE WILBUR & Williams Co., Park Square Bldg., Boston, has developed a stain or paint for concrete floors which actually penetrates concrete so that, as the cement surface wears down, the color remains. This new coating is resistant to alcohol, grease, etc., producing a floor that is washable; at the same time the process hardens and preserves the surface. This new floor treatment is adaptable for basement rooms and for factory floors where a hard, smooth, attractive surface in color is desirable.

**New Rybolt Winter Air Conditioner**

THE RYBOLT Heater Co., Ashland, O., has recently placed on the market a new cast iron, coal fired winter air conditioner, Series 151. Basically this unit is the well known old Series 157, redesigned and clearly modernized with new features. One of these is a full height reversible blower cabinet which can be placed on either side of the unit. The illustration shows cut away view of this equipment; the cast iron furnace section is here shown to the right, with electric blower and dust stop air filter in a separate section to the left. Notice that the blower is of ample size to permit running at relatively low speed, thus insuring quiet operation. It has a top-mounted motor, supported on rubber cushion, eliminating vibration and mechanical noises. An automatic humidifier completes this air conditioner and is furnished as an extra. A Minneapolis-Honeywell switch automatically stops and starts blower.



**NEW Rybolt cast iron coal-fired winter air conditioner.**

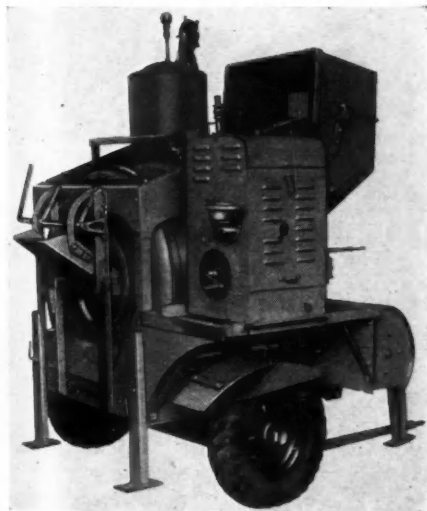
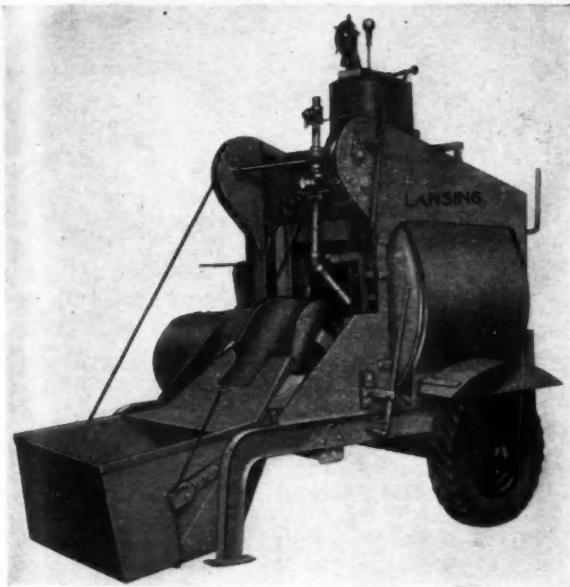
An automatic humidifier completes this air conditioner and is furnished as an extra. A Minneapolis-Honeywell switch automatically stops and starts blower.



### New Lansing Mixer

THE LANSING Co., Lansing, Mich., serving contractors with equipment since 1881, has brought out a new 2-wheel end discharge mixer illustrated herewith in two views; one showing the charging skip side, the other the discharge side. This new 7-S mixer has a large 48 inch drum equipped with 6 mixing blades and 6 discharge buckets. It has an 11 cu. ft. power loader made of 10 gauge steel and controlled by 1/2 inch diameter steel cables. The motor power is a 10-12 h.p. 4 cylinder air cooled LeRoi engine.

This is a portable rig for towing behind auto or truck, has pneumatic rubber-tired wheels equipped with roller bearings and is spring mounted. Over-all dimensions are 97 inches long, width, 84 inches, height, 96 inches. Length including towing pole is 13 feet.



TWO views of Lansing 7-S Mixer.

### Electric Eye Smoke Indicator Controls Combustion

REHTRON Corporation, Chicago, has designed two moderately priced photo-electric smoke indication and elimination control robots. The units are easily installed and adjusted and are applicable to any type and size boiler; stoker or hand-fired coal burning with any grade coal or oil burner fired. In the "Indicator-Signal" type there is an illuminated density meter which continuously indicates smoke density in breeching or stack and provides for an immediate bell and/or light signal when smoke exceeds the maximum allowable density, to warn fireman to take corrective measures necessary to avoid violation of Smoke Ordinance and prevent waste fuel. In the other an automatic control incorporates all features of indicator type, plus full automatic control for magnetic solenoid valve or blower motor supply-

(Continued to page 108)



WHICH FLOOR  
IS  
25 YEARS  
OLD?  
.. WHICH IS  
BRAND  
NEW?

(Photos by courtesy of G. H. Tennant Company, Minneapolis)

## Time Means Little to HERSHEY'S Acres of Maple Floors!

It's hard to tell which floor is which at the Hershey Chocolate Plant. For when Hershey's 25-year-old floors were reconditioned, they looked *brand new!*

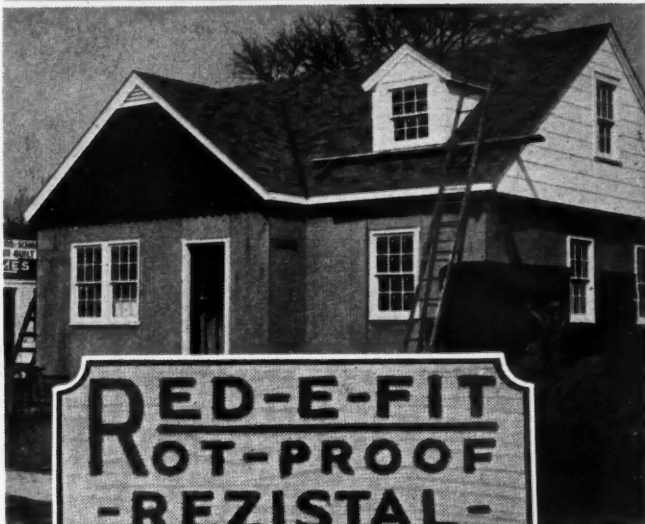
These photographs illustrate the "nine lives" of Hard Maple, under proper maintenance. The bottom floor is new — the top floor is 25 years old, reconditioned with a heavy-duty finish and since maintained with steel-wool buffing and dry cleaning. Gone are the marks of a quarter-century of trucking, scrubbing and other abuse!

With Hard Maple, there's always "a new floor underneath." It's one of many reasons bakeries everywhere recognize Hard Maple as the least expensive, most satisfactory floor for food plants. Ask your architect about MFMA Maple—in strips or blocks.

**MAPLE FLOORING MANUFACTURERS ASSOCIATION**  
1781 McCormick Building, Chicago, Illinois

Floor with  
**MFMA Maple**  
REG. U.S. PAT. OFF.  
(NORTHERN HARD)

# Ponderosa Pine WINDOWS



Trade  
Mark  
Reg.

Look for this trade mark electrically branded on each sash . . . it identifies the genuine soft textured kiln dried Western Ponderosa Pine Windows made by *Huttig*, of Muscatine, which are—

## GUARANTEED FOR 25 YEARS AGAINST ROT AND DECAY!

The special treatment (identified by the brand shown above) given *Huttig* Windows, prevents absorption of excessive moisture—protects against wet weather and high humidity . . . Prevents excessive swelling that causes "sticking" windows . . . Eliminates undue shrinkage and expansion . . . Prevents blue stain or black mould from developing . . . Protects against all types of decay, also termites. Painting cost is reduced because the "special" treat (See brand above) serves as a preliminary priming coat and gives full protection until regular paint coats are applied.

Ask your dealer for *Huttig*, of Muscatine, better wood windows.

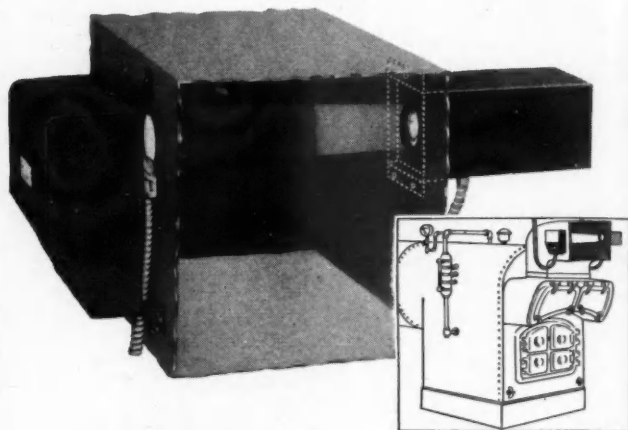


Get a **FREE** copy of "Open House." This 32-page book will help you sell homes with Ponderosa Pine woodwork.

**HUTTIG MFG. COMPANY**  
Muscatine Iowa

(Continued from page 109)

ing steam/air to over-fire jets. Adjustable time-delay on load circuit insures correct amount of steam/air to mix with unburned gases and supply oxygen deficiency which causes smoke to burn in the firebox. This installation may permit using a cheaper grade fuel without loss of boiler efficiency and is a positive guarantee against violation of Smoke Ordinance. Installations on both large and small boilers have shown an actual fuel saving as high as 20%, which means an annual saving of several times the cost of installation.



ELECTRIC EYE in smoke stack controls combustion.

### Kohler Offers "Triton" Bath Fitting

A NEW bath fitting, the Triton, which mixes the water to the desired temperature for both shower and tub with one handle, is announced by the Kohler Co., Kohler, Wis. Operation is simple! Turn the mixer handle until the temperature at the spout is suitable. For shower raise the knob on the spout and the water is diverted to the shower head. When the water is shut off the knob drops back to original position making unexpected wettings from the shower impossible.

Mixer has a hot water screw which can be set to a pre-determined maximum temperature. If hot and cold water supplies are kept constant, this device protects bather against scalding.



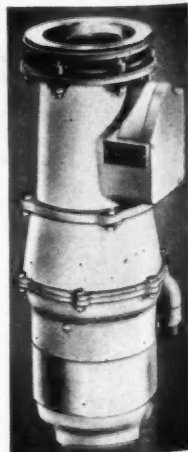
NEW bath fitting for both tub and shower, which protects against scalding.

### New G-E Disposall Offered

A NEW MODEL of the General Electric Disposall, more compact and yet of greater effective capacity than its predecessors, has been announced by the electric sink section of the General Electric Company, Bridgeport, Conn. Attached to the sink drain opening, the Disposall grinds and eliminates all food waste at the sink.

Rapid strides in the refinement of the Disposall have been made since the successful introduction of the new product several years ago. The new model, third of its line (called the FA-3), has been simplified and increased in efficiency.

Fewer parts, smaller dimensions but greater capacity of the shredding compartment, faster grinding, faster pumping away of the shredded waste, practical elimination of operating noise and permanent lubrication at the factory are among the results of the design improvements of the new model shown in the illustration at the right.



### New Milcor Louvre Ventilators

A COMPLETE Milcor Louvre Ventilator line is now built by the Milcor Steel Company, Milwaukee, Wis., around three basic models—a No. 100 Series of self-casing ventilators for masonry or new frame construction; a No. 200 Series for masonry walls only; and a No. 300 Series to be used with the conventional wood casing for either type of construction.

The No. 100 Series Milcor Louvre Ventilator has a set-back metal flange around the outside of the casing. This flange is nailed direct to the sheathing of a wood framed wall; then the brick veneer or finish siding butts over the flange, tight against the louvre casing. The No. 200 Series is of the box-like flangeless type for setting deep into a masonry wall. The No. 300 Series is the familiar type of Milcor Louvre Ventilator, with flange built flush around the front face for nailing.



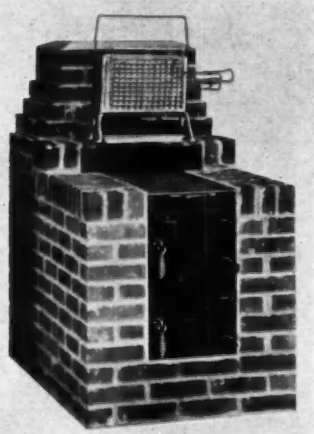
MILCOR ventilator

### Inexpensive Practical Outdoor Fireplace

THE fireplace shown in the illustration offers a very practical and economical unit, of a design suited for most any location or type of surroundings. It is built around a Majestic—Model OF28—fireplace unit made by the Majestic Company, Huntington, Ind. It provides the steel superstructure, a heavy bar-type top, grates and heavily constructed oven and grate doors. Grates are adjustable in height in order to be suited for use with charcoal or other types of fuel.

To complete the unit requires 20 fire brick, 319 face brick and 3 sacks of mortar. If the chimney had been extended to a 6-ft. height, 400 face brick would have been required.

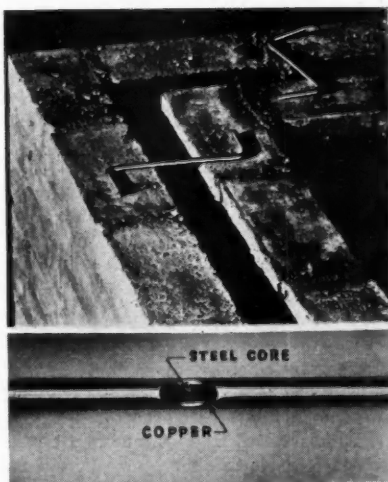
The unit shown in front of the chimney is a Majestic Broilaster grate for broiling steaks vertically, using charcoal.



### "Copperweld" Wall Ties for Cavity Walls

COPPERWELD Steel Company of Glassport, Pa. (Pittsburgh Industrial District) is now manufacturing, as standard items of production, high strength, non-rusting wall ties for hollow masonry walls. These ties, known as "Copperweld 204-30" Non-rusting Wall Ties, are made of .204" high strength Copperweld wire having a minimum breaking strength of 3934 pounds. Standard Copperweld ties, for 10" cavity brick walls, are 6" long overall with either 3" or 1 3/4" opposite right-angled anchor legs.

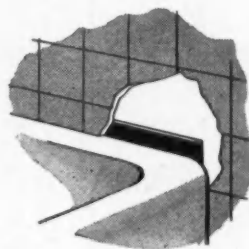
Copperweld wire used in these ties is wire with a steel core and a covering of pure copper.



## GET 5 BIG FEATURES IN FORMED IRON PLUMBING WARE

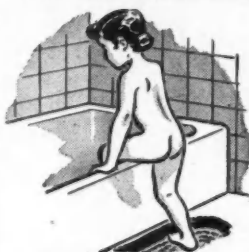
### 1 TILING-IN FLANGE

of bathtub extends upward from the porcelain enameled tub and behind the wall tile. It ends seepage of shower water to ceilings below.



### 2 LOW SIDES OF TUBS

make them easier to step in and out—especially for children. There is less chance of stumbling.



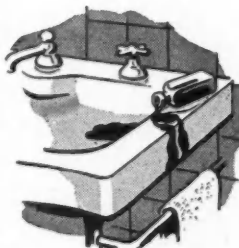
### 3 SAFE SHOWER BATHING

The wide, flat bottom provides more secure footing and reduces the hazard of slipping—an important cause of accidents.



### 4 ACID RESISTANCE

The porcelain enamel on Formed Iron lavatories, sinks and tubs is acid-resisting at no extra cost. An important talking point for prospective home-buyers.



### 5 ARMCO INGOT IRON Formed Iron Plumbing Ware

made of ARMCO Ingot Iron is privileged to carry the ARMCO label, familiar to your customers through 27 years of national advertising as the "world's standard enameling iron." For further details, write to The American Rolling Mill Company, 2511 Curtis Street, Middletown, Ohio.



**ARMCO**  
INGOT IRON



Yes, its welcome news to Builders and Home Owners that these fine Bilt-Well Entrances are available in many attractive designs. And, its welcome news that Bilt-Well Standardization and mass production insures the finest in materials and craftsmanship at prices well within every building budget.

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AN EXCHANGE of ideas and methods in building practice. For individual contributions, two dollars or a year's subscription to American Builder is paid when published; state occupation.

**Cooling Home by Well Water  
 Costs Only \$5 Per Month**

WELL water, wherever it is available at sufficiently low temperatures, provides an economical means of summer cooling, says the Plumbing and Heating Industries Bureau.

The chief advantage of well water as a cooling medium is its low cost, the Bureau points out, citing the case of a Chicago home which is being cooled with well water at a cost of only \$5 per month.

The well water cooling system in this home has been in operation for the last eight years. Water at a temperature of 46 degrees is pumped from a well 116 feet deep. The electric water pumping system has a capacity of 300 gallons per hour.

The equipment is very simple, consisting only of a blower-fan which draws the warm air from the rooms, blows it over coils through which the cold water circulates, and then forces the cooled air through ducts and grilles into the bedrooms and living rooms of the house. Pollen-eliminating filters are also a part of the system.

After the water has performed its cooling function, it is used for sprinkling the lawn.

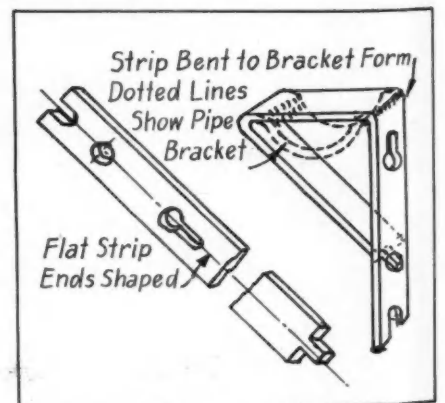
Before the well water cooling system was installed, the house was carefully insulated with heavy rock wool bats on the under side of the attic roof. Single panes of large windows were replaced with double-paned glass—the air space in between giving protection from the rays of the sun.

**Simple Home-made Brackets**

THE carpenter's or builder's shop has need for many brackets and the idea herewith is a simple one that fits into this need. These brackets are made from flat strip steel, notched out at one end, a tongue former on the other, a hole drilled for the tongue to enter, and an additional hole drilled for a screw. The strip is then bent to form a modified letter L, turned upside down. The length of steel needed is determined in advance by bending a piece of soft wire to the desired top width and wall-length, then cutting the strip to match this.

With the tongue in the hole, the more pressure on the top, the tighter the bracket holds its shape. With one screw above and one below it is well held to the wall, yet easily taken off for moving.

If the material to be supported is round, the top surface of the bracket can be given a dish-out shape so that receive this, as shown in the dotted lines. Other shapes can be made to suit the work needs. The strip steel should be of a heavy enough gauge so that once bent it will hold its shape forever, new brackets being cut and shaped when additional needs arise. — MORRIS A. HALL, White Plains, N.Y.



PATTERN for simple metal bracket.

## "Careyclad" May Relieve Shortage of Galvanized Sheets

FOR many years, The Philip Carey Manufacturing Co., Lockland, Cincinnati, has been producing a coating for metal known as "Car Cement." This has been used by practically all of the leading railroads in the country for rust and weatherproofing the under-frames, bottoms and ends of freight cars.

Made from virtually the same specification, Carey also produces a very high grade roof coating marketed under the trade name of "Careyclad," which is unusually good for protecting iron sheets, structural steel, metal buildings, bridges, heavy machinery, ornamental iron work, black iron sheets and duct work, sheet metal items, etc.

Extensive tests on the part of the Carey research division, both in the field and in the laboratory, indicate that Careyclad is not only equal to red lead coatings and lead coatings pigmented with carbon black, but in many cases is superior. In addition, it is much cheaper (approx. 1 gallon of Careyclad per square of smooth metal surface), its price is steadier, its supply ample. Prompt shipment of this metal coating can be made and its use releases some of the important priority materials for defense purposes.

## Two-Coat Painting Tested

DURABILITY of paint on the exterior of houses depends on the thickness of coating, whether the thickness is provided by two thick coats or by three thinner ones, according to a report by Dr. F. L. Browne of the Forest Products Laboratory, Madison, Wis., to the American Chemical Society, which will hold its 102nd national meeting in Atlantic City, N.J., September 8 to 12.

When modern paints of high opacity are used, the thickness of coating needed for good durability is much greater than that required merely to hide the wood, Dr. Browne says.

Two-coat painting where either one paint is used for both coats, or a combination of special primer and conventional prepared paint for the finish is employed, often gives rise to short-lived paint jobs because the necessity of building satisfactory film thickness has not been fully appreciated by paint manufacturers, painters, and paint users, he explains. Two-coat systems consisting of a special primer and a finish paint made for application in thick coats are less likely to be applied too sparingly.

Experimental data demonstrate a superiority of well-designed special primers over self-priming for painting such woods as Douglas fir and southern yellow pine, Dr. Browne adds, but they show also that primer and finish paint should be designed carefully for use together because a primer may give good results with some finish paints and prove incompatible with others.

"The two-coat system of house painting during the past decade has passed from a practice ignored or condemned by the industry to a recommendation made by a majority of paint manufacturers," Dr. Browne points out. "Some of them advocate it enthusiastically whereas others accept it in public but regard it in private with misgiving or disapproval.

"Much painting with two-coat systems has been thoroughly satisfactory and much of it has proved seriously lacking in durability. The successful work demonstrates that a substantial economy is realizable from the practice. The unsuccessful work demonstrates that the conditions necessary for satisfactory two-coat painting are not yet understood thoroughly by all manufacturers and users of paint.

"Accepted practice formerly required a minimum of three coats for initial painting and two coats for repainting. In the course of long experience and competition, paints and painting procedures were adjusted so that three coats would supply sufficient paint to ensure satisfactory results but would avoid any wasteful excess of paint.

"Serious rebellion against these standards began about 1920 when a boom in house construction following a long stagnant period found labor costs far higher than they had ever been before. To meet the demand for two-coat initial painting, painters had to invent a new technique of application in which the full amount of paint previously applied in three coats was put on in two by greatly reducing the spreading rate of both coats. The new technique was one of painting in thick coats. The economy was effected entirely in labor, not in material.

"The greatly diminished spreading rates, however, involved

(Continued to page 112)



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Progressive Building Material Dealers everywhere stock Barclay Tileboard!

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(Continued from page 111)

Time Saving...Labor Saving...Money Saving

# "TROUBLE SAVERS"



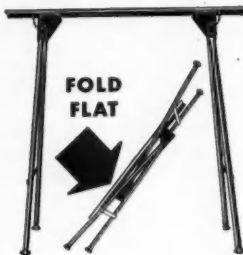
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the further requirement that the paint for both coats be unusually high in content of total pigment so that the consistency would be favorable for application in thick coats without running and sagging and without wrinkling during drying.

"We may call this technique of initial painting the two-coat system with self-priming. When done honestly by painters who had mastered the technique, it proved far more than a temporary expedient and compared favorably in durability with good three-coat work. When done incompetently, the shortcomings were usually apparent before the painter could escape responsibility for them. As a result the practice spread beyond the field of speculative building and gained wide acceptance."

Study of special primers overthrew the traditional theory that priming paint for wood should be low in content of pigment and high in content of volatile thinner to promote deep penetration into the wood, Dr. Browne says.

"Deep penetration, in fact, proved to be wasteful and even harmful because it consists of vehicle alone, separated from the paint film, and isolated in the cavities of wood cells beneath the painted surface. Useful penetration is limited to the filling with paint, that is, with pigment and vehicle together, of those wood cavities that open directly into the surface on which the paint is applied.

"When used according to the self-priming technique, ordinary house paints penetrate wastefully and can be improved by restraining undue penetration. One means of controlling penetration is the incorporation of bodied oil in the vehicle. Another means that seems to be less widely appreciated is formulation with a high level of pigmentation favoring application at low spreading rate—that is, in thick coatings.

### One-Coat Painting Next?

"The logical development of two-coat initial painting is one-coat repainting. So far there seems to be little commercial exploitation of the possibility on the part of paint manufacturers although one maker of a two-coat system recommends it to some of his customers but does not yet print it in his label directions. In practice much one-coat repainting has been done for many years. When repainting is done at reasonable intervals, before the old paint starts to crumble or flake seriously, one generous coat of highly pigmented paint such as is suitable for the finish paint of a two-coat system is sufficient."

In the series of exposure tests at the Forest Products Laboratory, the three-coat jobs with self-priming were materially more durable than the two-coat jobs, as was expected from the difference in the estimated thickness of the coatings, Dr. Browne says.

"It should be pointed out, however, that the two-coat jobs, even without the benefit of special primers with controlled penetration, held gloss uniformly just as long as the three-coat jobs or the two-coat jobs with special primers. Uneven gloss and spotted chalking are caused by inexcusably scanty application of paint and do not require special primers for their correction.

"The most durable coatings by far were those done in three-coat work with aluminum primer. This proved true with each of the eight finish paints. The average durability of fifty months is nine months greater than the next best average durability recorded and fifteen months greater than the durability with self-priming. Mica primer improved the durability of three-coat work by five months on the average, but flake lead impaired the durability slightly.

"Substitution of a suitable unpigmented priming oil for the priming coat of three-coat work may leave the durability practically unimpaired even though the film thickness is somewhat reduced. A slight saving in cost of material for the paint job might be effected in that way, but there is serious risk of early development of conspicuous alligatoring.

"The durability of the two-coat jobs with the different special primers varied greatly, from twenty-six to forty-one months. Five of nine special primers with controlled penetration made two-coat jobs equal or superior in durability to the three-coat jobs with self-priming, even though the estimated film thickness of the three-coat jobs was materially greater. Undoubtedly still better durability would have been obtained if these primers had been used for three-coat work or if the finish paints had been designed for and applied in thicker coats to build up the film thickness to that of the three-coat jobs with self-priming."



### Record Speed in Building Defense Machine Tool Plant

**A**NOTHER illustration of speed in national defense construction was shown by the formal dedication on July 28 of the new assembly plant of the Bullard Company of Bridgeport, Conn., makers of machine tools. According to J. A. Turner, president of the Turner Construction Company, general contractors, steel was delivered to the site on April 28. Despite the fact that there were many unusual and complicated construction problems involved, the Bullard Company was able to take possession of the plant on July 4 and on July 14 was actually shipping completed machines from the plant to aircraft

plants, arsenals and other defense industries.

Designed by A. D. Crosett, engineer of New York City, the structure measures 540 x 180 feet and rises to a one-story height of 60 feet above the grade floor, under which is a basement half the length of the building. Its more than three acres of production space are enclosed by structural steel framing, with exterior walls of protected metal and glass. The sides facing the sun are featured by the use of a special type of heat-absorbing, glare-eliminating glass. (See illustration of plant above.) It has a gypsum roof-deck.

Twenty-four hour a day production has necessitated the installation of an elaborate system of electric lighting and power distributing facilities. This has been supplemented by emergency equipment which can be employed if regular service is interrupted, thus insuring continuous operation at all times.

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**JOHN... THAT MUST MAKE YOU FEEL A LOT SAFER ABOUT DRIVING IN AT NIGHT**

**IT DOES, BUT THE MAIN THING I LIKE IS THE CONVENIENCE... IT SAVES ME A WHOLE OF A LOT OF TIME AND TROUBLE!**

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**SELECTIVE Control Means PRIVACY**

Each Radio Control installation has its own operating frequency. Other cars cannot open your garage... an important and exclusive feature

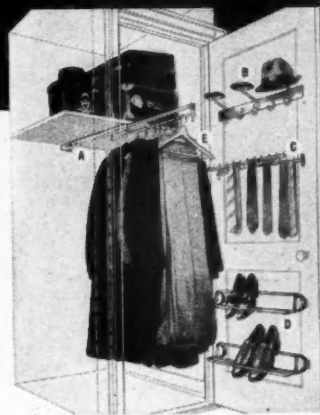
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New K-Venience catalog with space-saving closet plans and ideas.

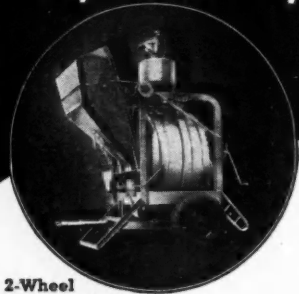
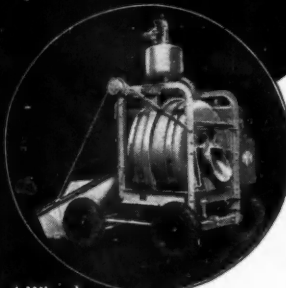
Shoe and tie racks, garment brackets, hat holders, trouser-skirt hangers, clothing carriers, extension closet rods, towel bars, umbrella and cane holders, many others. Write for Catalog!

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K-VENIENCE CLOSET FIXTURES

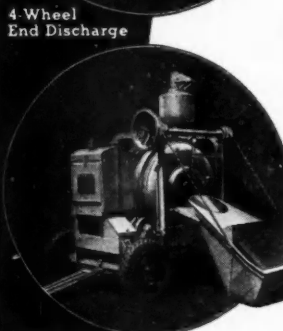
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# SMITH MIXERS

THE BOULDER DAM MIXERS

## Ingenious Extension for Pick-Up Trucks

**M**AKING a light pick-up truck serve as a conveyance for long pieces without attaching fender racks is a new feature of the service of Schuck & Son, Springfield, Ill. The extension device for the truck body was designed by members of the yard's staff and the construction of the entire assembly was handled by their own force.

As shown in three illustrations the rack consists of two pieces of 2 x 4 x 5 feet, one piece of 2 x 4 x 46 inches and two pieces of 2 x 2 x 24 inches. The long pieces are hinged to the side boards with 1/2" x 2" bolts, set in 20" from the end of the bed; 1/4" bolts are run edgewise through the 2 x 4s to prevent splitting at the end where they are fastened to the body. The 2 x 4 cross piece is 1/2" shorter than the inside of the body. Stakes are 2 x 2 x 24" high and are bolted to the 2 x 4s with 3/8" bolts set just in front of the cross brace. When the stakes are upright the cross piece steadies them.

There are several advantages from this appliance. It eliminates side racks, makes loading and unloading more convenient, leaves both cab doors unblocked when the truck is loaded and permits carrying pieces up to 16 feet in length on a small truck.

Mr. Schuck has suggested that anyone contemplating the same kind of improvement should weld a heavy washer to the outside of the body to prevent wearing of the bolt hole in the metal of the truck body. The changeover can be made without altering the outside of the truck or end gate and, as shown in the picture, the whole assembly can be folded up and laid in the truck bed when the extension is not in use.



VIEW of truck body extension lying in truck bed when not in use. Note its compactness and small amount of room occupied within truck bed.



EXTENSION is swung up and out over end of truck bed. Note clearance at lower end of frame. Frank Kingery, one of Schuck & Son's senior employees, demonstrates rig which he helped design and build.





NOTE how extension rests firmly on inside of truck body. Stakes have been pulled upright. C. W. H. Schuck is president of Schuck & Son and is fourth generation to head this business firm.

### Pointers on the Nailing of Dense Hardwoods\*

THE hardwoods include species having a wide range in hardness and in nailing characteristics. Most hardwoods, as a class, have a greater tendency to warp than softwoods, although there are some hardwoods of which the contrary is true. In general, the less dense hardwoods, such as basswood, buckeye, butternut, chestnut, cottonwood, aspen, cucumber magnolia, willow, and yellowpoplar, present no special nailing problems. The dense hardwoods, on the other hand, are more difficult to nail satisfactorily, not only because the nails are harder to drive, but also because of the tendency to split and the frequent presence of warp. The hardwoods that are difficult to nail include the ashes, gums, elms, oaks, maples, beeches, birches, hickories, pecans, and hackberry. These woods require a different nailing technic from that commonly used with construction lumber.

The problem of nailing the hardwoods has sometimes been solved, especially on the farm, by using the lumber green. This solves the nailing problem, for green lumber is softer and easier to nail than dry lumber and it has not seasoned sufficiently to warp. The use of green lumber, however, has well known drawbacks and cannot be recommended, especially where tightness of coverage is relatively important.

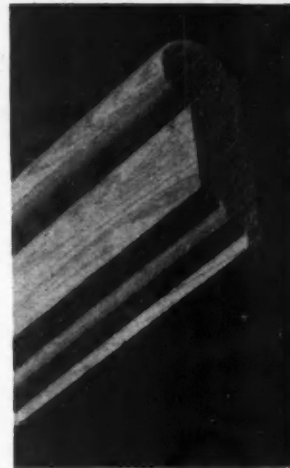
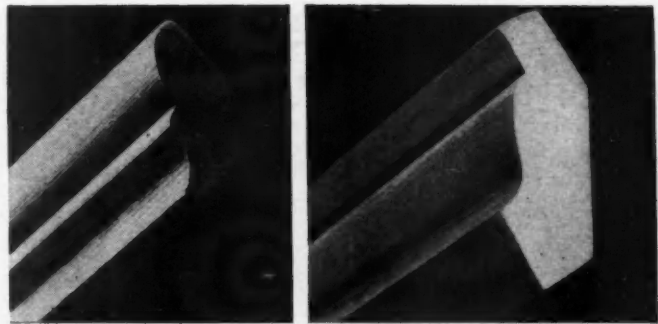
The nailing of dense hardwoods has also been solved, where the method is practicable, by the boring of holes in the boards to be nailed.

A skilled carpenter can nail dry boards of dense hardwoods to framing. The framing is usually softwood, but may occasionally, especially on the farm, be hardwood. When the framing is softwood a longer slender nail of the cooler or sinker type is used in order to get holding power to compensate for the smaller diameter or gauge he must use to reduce splitting. When the framing is dense hardwood a shorter nail of the fence type, but of the same diameter can be used because of the high nail-holding power of the dense hardwood. Regardless of the species used for framing the diameter of the nails used in nailing hardwood boards must be smaller than that used with softwoods because of the tendency of hardwoods to split in nailing.

The technic of nailing dense hardwoods also includes the "easing" in of the nails, setting them back as far from the end as practical, using blunt-pointed nails rather than long-tapered, sharp-pointed nails, placing warped boards so as to obtain the maximum bearing at the place of nailing, and using a wedge or shim with warped boards to furnish a temporary bearing under the nails, and waxing nail points so that they will drive easier.

Actual tests have demonstrated the soundness of most of the technic for nailing dense hardwoods that has been developed as the result of experience. Tests made to determine the tendency of wood to split showed that smaller nails are necessary with the dense hardwoods to prevent excessive splitting, and indicated the advantage in "easing" in the nails. The same tests also showed

\*As detailed in Technical Note No. 247 of Forest Products Laboratory, Madison, Wis.



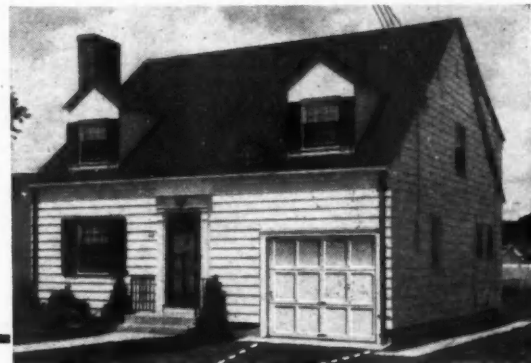
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"They attract prospects and they help to close sales."

"I always wind up with my prospect right in front of these Stanley 'Roll-Up' Doors. Usually the man tries his hand at rolling 'em up. Seems like that puts the finishing touches on my story because most of my sales are completed right here."

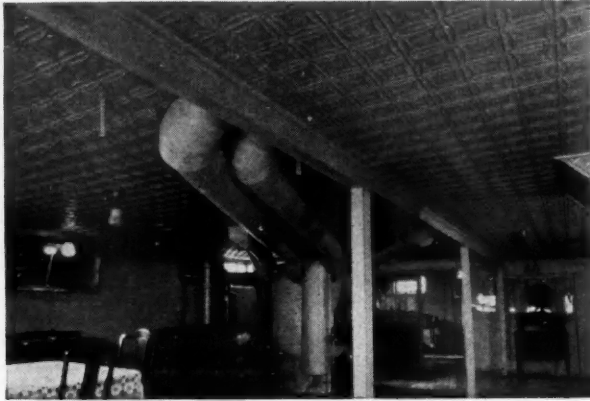
There is no better proof of a builder's quality construction than Stanley "Roll-Up" Doors. Try them on your next house, you'll find it pays. Your dealer can supply you. Write for folder. The Stanley Works, New Britain, Connecticut.

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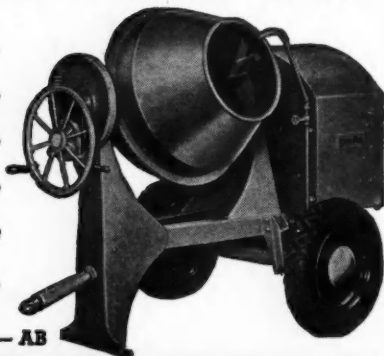


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**KWIK-MIX CONCRETE MIXER CO.**  
PORT WASHINGTON WISCONSIN

(Continued from page 115)

that the dense hardwoods require wider nailing margins. A study of the influence of the size and shape of nails on their holding power and tendency to split the wood lead to the conclusion that a nail with a blunted point will not split the wood so badly as a common nail, and in the denser woods is equal to common nails in holding.

Observations made on the job and in tests indicate that warping is probably responsible for more of the difficulties encountered in nailing dense hardwoods than is hardness. The force of a blow in nailing a warped board is largely absorbed by the spring of the board. Hence, some carpenters carry a small wedge for use in obtaining a firm nailing base with warped boards. Since the nail is at one angle to the warped board and at another to the framing member to which the board is being nailed, there is a prying action that tends to bend the nail even when hit squarely on the head. Bent nails tend to cause splits more than straight ones. Boards with only a slight cup often split when the board is pulled flat by driving the nail home. In contrast to the above observations, thoroughly dry hickory, beech, and white oak boards were nailed with little trouble when flat and firmly supported.

The use of beeswax to make nailing easier is an old practice. Carpenters frequently have a hole filled with beeswax in the end of the hammer handle for waxing the points of nails. A limited number of tests were made at the Forest Products Laboratory to determine the effect of wax on driving characteristics and holding power. It was found that even a small amount of beeswax on the points materially reduces the force required to drive nails, reduces the percentage of nails that bend in driving, and reduces the splitting. However, it also reduces the holding power. Nails with waxed points driven through hardwood into softwood framing when pulled shortly afterward had about three-fourths of the holding power of nails with no wax on them. Several hours after driving, nails with waxed points had only slightly lower holding power than did unwaxed nails, indicating that possibly over a long period of time the loss of holding power as a result of waxing may be small.

The tests on waxed nails indicate that the practice of waxing nail points is not a trade fallacy, or superstition, but has a definite value in making hardwoods easier to nail and that the benefits obtained from the use of wax outweigh the loss in holding power.

### New Method Saves Labor and Material in Installation of Hot Water Heating

THE challenge to the heating industry presented by the basement-less low-cost house has been met by the development of a new method of installation which offers substantial economies in material and labor, according to the Plumbing and Heating Industries Bureau.

The new method was developed in Chicago where 300 out of 400 houses in one subdivision are being heated with hot water. Some of the houses were built to sell for \$4,000. Ninety per cent are manually-fired.

Here is a brief summary of the distinctive features of the new method of installing hot water heating plants in low-cost houses.

The boiler is placed in a utility room. A single main is run from the boiler under the house to a convenient point underneath the approximate center of the house.

The end of the main is fitted with a manifold from which branch lines are run to the radiators. Similarly the return lines from the radiators enter a second manifold which is attached to a return main leading to the boiler.

The manifolds are prefabricated with connections for ten branch lines. There is an economy in piping as well as labor over the conventional method of installation which involves the running of longer supply and return mains. Circulation of the water is mechanically forced by a pump in the utility room.

Economies in piping are particularly important at this time when steel, copper, and iron are vital to national defense.

### New Ideas Liked

To the Editor:

We like your magazine a lot, especially job pointers and new building ideas.

Port Murray, N.J.

LAWRENCE BOLZ.

**LETTERS from Readers  
on All Subjects**  
*Facts, Opinion and Advice Welcomed Here*

**Approves "American Builder"  
Priority Efforts**

Huntington, Ind.

To the Editor:

It is a pleasure to compliment you on the effective activity you are engaged in, relative to the status of the building industry in relation to supply of materials essential to the operation of the industry.

For the most part the manufacturers of equipment with which to build homes and much of the equipment installed in the homes are not well represented through trade associations. In industries where trade associations do exist their personnel has been of inestimable value in properly presenting the problems of the industry they represent to government officials in order that adjustments incident to changes for defense needs may be equitably made. We look to you to supply this activity for the building industry and we are sure that the manufacturers of the materials necessary to the industry are all grateful for your help in keeping home building high up in defense needs.

A considerable proportion of our production is going for defense and naturally we are very busy, but we have a very real concern for the many hundreds of our dealers and your subscribers who would find their business practically non-existent if home building does not come in for some kind of priority or at least is not continued to be recognized as a vital defense need by those who direct the flow of raw materials. We believe that properly utilized there is enough raw material in this country to meet both home building and defense needs and we also believe that within the home building industry is enough ingenuity to adapt itself to many changes so that both home building and other defense work can proceed together.

The industry, however, must not be handicapped by useless rulings and what is worse, rumors of rulings intended to curtail home building.

THE MAJESTIC COMPANY,  
By: K. F. Triggs, Vice President.

**All Business Groups Should Help**

Chicago, Ill.

To the Editor:

I have just read with a great deal of interest your Building Outlook Letter (Washington Report on Priorities, Material Shortages, Labor, Rumors," page 50, August *American Builder*). Let me compliment you on the thorough and timely analysis you have made of this interesting problem.

It seems to me that the proper committees of the U. S. Chamber of Commerce, the American Institute of Architects, the Producers' Council, possibly the National Association of Real Estate Boards and the Associated General Contractors might be interested in giving widespread local newspaper publicity to the information contained in your bulletin.

W. D. M. ALLAN, Director of Promotion,  
Portland Cement Assn.

**Statism in Australia**

Sydney, Australia.

To the Editor:

Looking forward to, and reading thoroughly, every month the *American Builder*, has brought to me more than a passing interest in building affairs on your continent, which, in turn, motivates a comparative interest with our building movement.

Particularly have your editorials of recent months claimed my attention, your protests against official governmental drifts to socialism, state capitalism and other isms, variously defined but all of them the very negation of individual enterprise; and war time condition seems to tend at an ever increasing tempo

(Continued to page 118)



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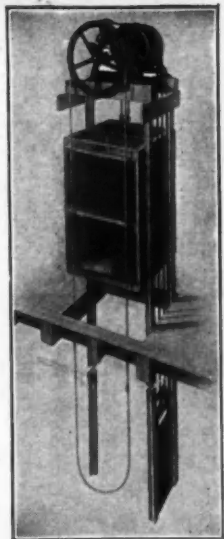
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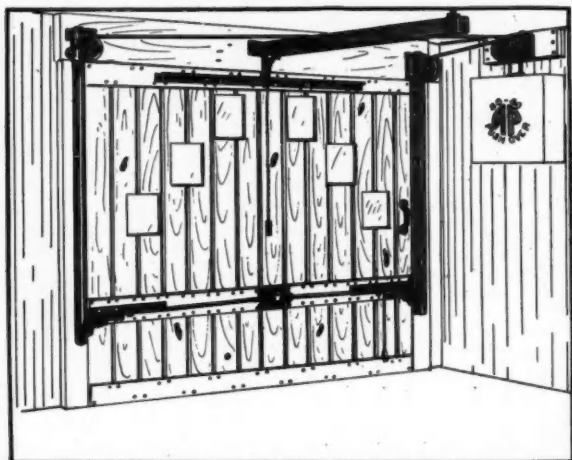
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**LETTERS—(Continued from page 117)**

the drift, until it seems inevitable that our next phase is un-abridged socialism.

Is it world wide? Because here, too, we seem to have precisely the same problems and the same tendencies!

From a merchandising point of view, it does look as if the small distributor has to "look out"—the future immediate years would seem to threaten him with annihilation! Government and quasi-governmental, government boards, government commissions with their group buying, manufacturers (with a government del-credere) even welcoming the direct delivery, all are problems here. Must be there and the multiplicity of dealers over there should surely welcome such a guidance from your authoritative paper on their behalf.

H. WRIGHT,  
Eastern Suburbs Lime & Cement Store Pty. Ltd.

**Progress for Neighborhood Redevelopment**

Chicago, Ill.

To the Editor:

As a member of the Chicago Building Congress you are doubtless pleased that the Neighborhood Redevelopment Corporation Bill has passed both houses of the Illinois legislature by large margins and that the governor has signed the Bill.

We should all feel proud of having had a hand in this enterprise, as it may mean much to Chicago, and especially to the building industry.

As soon as a test case has gone through the courts, it will be up to private capital to make the next move and provide a demonstration of how our city can be made a worthwhile place in which to live

The enactment of this law has shown what an organization like your Congress can do for the industry and the community. It behooves us to be on the lookout for similar constructive things we can accomplish as an organ of the industry.

Our minds should be active in considering suggestions which might be made to officials in Washington to minimize the penalties on our industry because of the demands on materials for defense.

ELMER C. JENSEN, President,  
Chicago Building Congress.

**Look Out for Tenants' Comfort!**

New York, N. Y.

TO THE EDITOR:

The attached, construction suggestions, to guard against unwise economic alteration of existing homes into multiple family dwellings, is submitted in connection with the forthcoming Federal Housing Program starting on September 5, in which they are going to give vigorous promotion to "Repair for Defense" ... "Rebuild for Roomers."

I have been through a great deal of this kind of construction in my own town and know that it is very important for people to be properly advised.

In connection with the plan to "Repair for Defense and Remodel for Roomers in Defense Areas" such remodelling should be made with full knowledge that tenants have to be satisfied and sufficient rentals must be charged to amortize the cost of remodeling. Of primary importance is the fact that tenants make greater demands for comfort than the owners of the old houses have been satisfied with.

1. The old houses which are converted into apartments or for roomers must be considered from the standpoint of their new use—there is no opportunity for the tenants to wander into the cooler lower portions of the house in the hot daytime. They are confined to remodelled quarters likely to be on the upper floor; and much rental loss will take place if tenants are uncomfortable. A home owner may put up with many discomforts that a tenant will not put up with. Now that the house becomes "income property" every device must be used to keep the tenant comfortable in his confined quarters. This generally requires full-thick insulation above the top floor ceiling.

2. Heating will, in many cases, be a problem of a larger furnace or insulation of walls and/or ceilings in order to make comfortable living quarters out of rooms heretofore used as bedrooms and probably low in radiation. It is customary to put less heat into

bedrooms than into living rooms. It must be remembered that such rooms now become living rooms as well as bedrooms and the tenant will demand reasonable comfort. If the present heating plant is on the edge of being sufficient there will be no need of installing a new plant if the walls and ceilings are insulated. Perhaps delivery on a new heating plant will be impossible.

3. In many instances it will be desirable to have sound-deadening between bathrooms and apartments, or between adjacent apartments. Considerable sound deadening can be accomplished by filling hollow partitions or floors with mineral wool.

Any house of sufficient size can be profitably remodelled to bring a good return, if it is in a suitable neighborhood and if the remodeled quarters are worth the rental that must be charged.

Fire hazards increase with the number of families occupying a single structure. These hazards can be greatly reduced by filling the walls, particularly around kitchenettes and stair-wells, with mineral wool.

WHARTON CLAY, Secy,  
National Mineral Wool Assn.

**Thank You Mr. Crain**

Houston, Texas.

To the Editor:

You gentlemen have done a fine job in creating and holding interest in the building industry; and you can rest assured, if we can be of any assistance to you at any time in carrying forward the worthy cause, we will be pleased to do so.

We are regular subscribers to your magazine and I take pleasure in going through each issue.

E. L. CRAIN, President,  
Garden Oaks Company.

**Cash Business from a Reader**

Montreal, Que.

To the Editor:

I want to thank you for your service of last month, in connection with my request to your "Reader Service Department" for trade literature offered. I may say out of the eleven folders and books I received from different firms, I made purchases from seven, four of which amounted to well over two hundred dollars each.

WILLIAM TANGUAY.

**Points Out Defense Possibilities in "Prefab" Idea**

St. Paul, Minn.

To the Editor:

Attached hereto is an explanation of a method of shop built units for small house construction presented for industry consideration. Built-up panels consist of outside and inside wall, ceiling and roof units, all to be built up in widths and heights to conform to most small type house designs. All materials used in their construction are to be standard sizes of lumber, millwork, insulation, plywood and lath or plaster base. Combinations of any of these standard size materials can be incorporated into the panels to suit local demand for various materials. FHA approval of construction has been obtained from Washington, D.C., office.

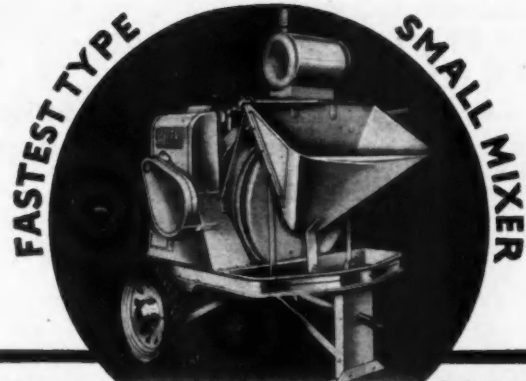
**Explanation of Manufacturing and Distribution**

An ordinary 30 x 20 Cape Cod designed house (type as shown in illustration) containing four rooms and bath can be erected by this method and show a saving to the house builder of from 75 to 100 hours in carpentry and lathing labor, covering the items of rough framing, installation of window and door frames, combination doors, storm sash and screens. A conservative estimated saving of 1200 board feet in the items of wood sheathing, framing lumber, plaster base and insulation per house develops.

A manufacturing plant with a steady outlet of 3 to 4 houses per week, serving a truck delivery radius (from plant to building site) over a 150 mile area, should show a minimum gross profit of \$200 per house, based upon the average type 4 to 6 room small house.

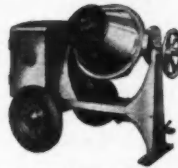
Such a manufacturing plant immediately adjacent to a material storage shed, where all materials going into each unit are unloaded from the railroad car onto storage racks, then from racks to work tables, then to truck for delivery to the building site, eliminates high priced labor charges for handling of materials over the conventional way.

(Continued to page 120)



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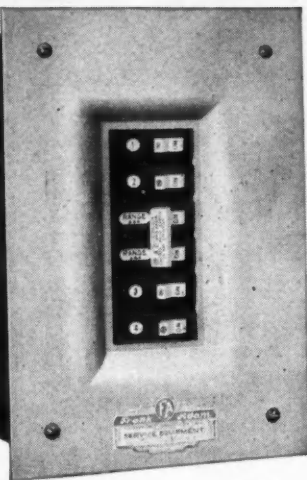
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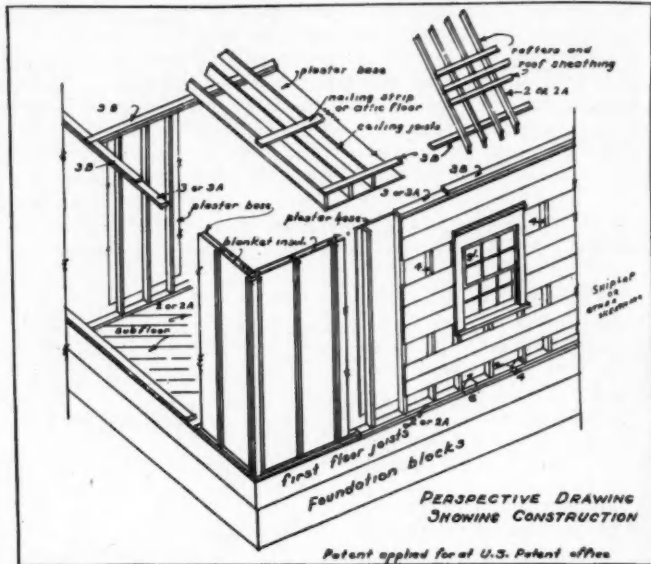
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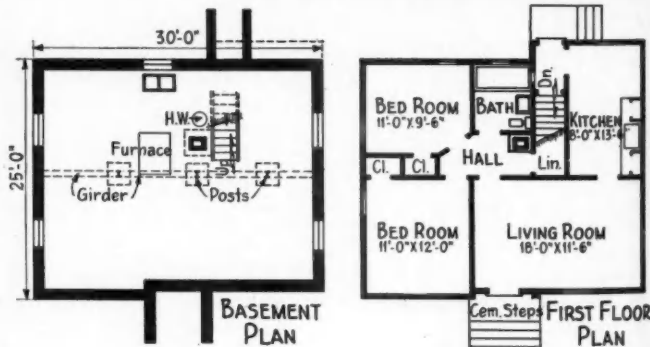
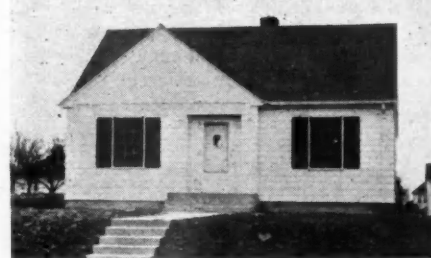
(Continued from page 119)

Jiggs on work tables designed for permanent use and permanently set lugs to receive studding, etc., for any width center desired for the placing of the studs or rafters eliminates labor in marking and measuring on the job, as well as measuring trimmers and cripples around door openings. Precision set-up eliminates many minor errors in measurements, etc., commonly committed in present piece-by-piece construction methods.

Manufacture of a two air space wall or rafter can be made up



ABOVE: Hoffman's panel construction. At right, typical small home of shop-built panels; plan below.



on the work tables for practically no additional labor cost and a saving in cost of studs develops by the use of 2 x 3 and 1 x 2 or 2 x 2 stock, producing a double insulated wall or roof much more desirable for heat and cold insulation in cheaply constructed temporary or rental housing units and for milk and chicken house construction. (See perspective drawing above.)

So-called slack building seasons can be utilized in a manufacturing plant in setting up units for stock-design garages, hen houses, milk houses, etc., and perhaps units for a merchantable designed small house for each dealer type of design to be adaptable for each individual dealer's locale, which would be sold by him subsequent to the slack season. The interior partition wall units can also be used for office or apartment house interior partitions.

Where defense housing is necessary quickly and where low cost and speed are paramount, these built-up units can be incorporated into these structures to advantage, particularly in speeding up any of these projects.

JOHN L. HOFFMAN.

## Pointers on Laying Out and Building an Individual Sewage Treatment and Disposal System

An Explanation of Septic Tank and Dry Well Units Planned for Domestic Use

By M. J. LA ROCK, S. A. WITZEL and L. F. WARRICK\*

**C**OMFORT and health result from an adequate, suitable and safe sewage treatment and disposal system. Such a system will help to protect the water supply, which is of equal importance to the health and comfort of farm or non-urban dwellers, such as those who have gone beyond the city sewage system. Some defense building has also been done in these areas.

A grease trap for the kitchen sink is an important part of the sewage disposal system. By collecting grease at a point close to the kitchen sink the sewer pipe will not become filled with hardened grease. The short run of pipe from the sink to the grease trap should be installed with cleanout plugs for easy cleaning.

The grease trap should be located just outside the house and near the kitchen sink. It should have a removable top for regular spring and fall cleaning or oftener as required. A heavy cover is desirable so that it cannot be removed by children.

Construction of the grease trap is not difficult. It may be made with two lengths of 30-inch x 30-inch clay or concrete tile or poured concrete. In the latter case it might be a square box approximately 30 inches square and 36 to 48 inches deep. Depth below outlet should be not less than 2 feet. Pipe connections are installed before pouring the concrete as shown in the plans.

Piping to and from the kitchen sink, as well as to all other fixtures, should be protected against freezing. Blanket insulation in waterproof paper may be used effectively by either wrapping around the pipes or by applying between the studding and between the pipes and outside sheathing. Where possible, place piping in inside walls.

Sewage is treated by the use of a proper and suitably constructed septic tank. The main function of the septic tank is to provide a settling chamber for the liquid waste, permitting the solid material to settle downward and the grease and scum, if such are present, to rise to the surface. The greatest good of a septic tank comes from the removal of the suspended solid material which if allowed to be discharged to the disposal system, such as a dry well or filter trench, would soon result in a plugged and overflowing disposal field. The liquid discharged from the septic tank is not a completely treated liquid. It is still in a condition whereby drinking water supplies can easily be contaminated by it and hence it is important to keep it at a safe distance from the well.

In the septic tank the solids are attacked and are broken down by bacteria which grow in the absence of air. The result is a breakdown of waste material into quite stable solids, liquids, and gases. The gas is removed by the ventilation from the dry well through the septic tank and up through the roof of the house by way of the house drainage system. The main house drain trap required under certain city conditions should not be used in a farm sewage system as it will prevent the circulation of air through the disposal system.

A septic tank of generous size is important from the standpoint of operation and maintenance. Cleanout of the sludge with a pump will be required at approximately five-year intervals. It is suggested that reasonable thought be applied as to what manner of material is allowed to be discharged to the septic tank. For example, past experience has shown that excess amounts of coffee grounds, concentrated milk and grease will eventually interfere with the proper operation of the tank. Under such conditions more frequent cleaning is necessary to avoid the discharge of the solids and grease to the disposal system where it usually does great damage through sealing of the percolating soil.

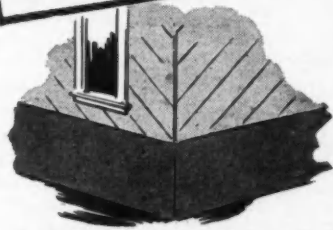
In order to provide a tank easy to construct, easy to clean, low in cost, and of ample capacity (about 840 gallons), the Wisconsin septic tank was developed and has proven to be very successful. It is nothing more than a rectangular tank with a sloping bottom 3 feet wide, 8 feet long, 6 feet 9 inches deep at the inlet end and 4 feet 9 inches deep at the outlet end. This type of septic tank is equipped

(Continued to page 122)

\*The information presented here was taken from more complete manuscript prepared by the authors for the Extension Service of the College of Agriculture of the University of Wisconsin, Madison.

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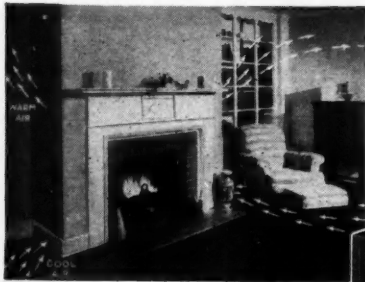
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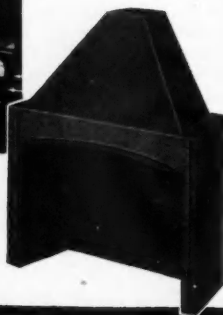
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 Owner



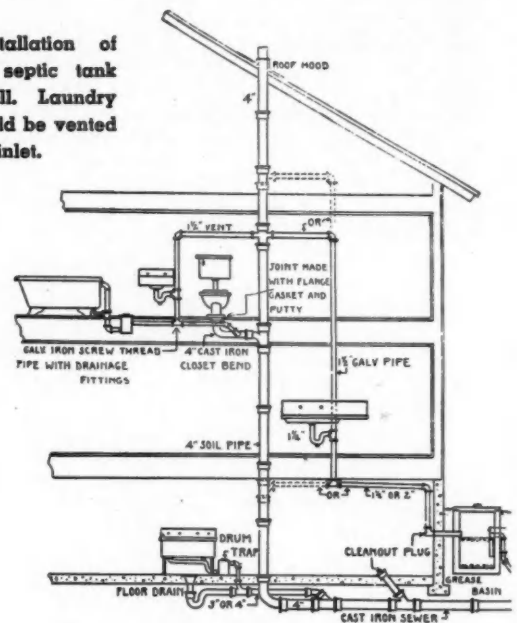
(Continued from page 121)

with a manhole, a removable top and a cleanout plug above the outlet and with sanitary T inlet and outlet. (See Fig. 1.)

The Wisconsin tank, with sides and bottom 6 inches thick and reinforced concrete slabs 4 inches thick for a top, requires for construction 4 cubic yards of concrete or 25 sacks of cement, 2 cubic yards of sand and 3 cubic yards of gravel for a 1:2-1/4:3 mix with 5 gallons of water per sack of cement when sand is medium moist. Eighteen 1/2-inch iron rods, 3 feet 10 inches long, are required to reinforce the slabs of the cover. The cast iron sanitary T's with the first length of cast iron pipe calked in place for the inlet and outlet of the tank can be secured through any plumbing shop. The concrete, sanitary T's, and reinforcing rods cost about \$30. Four-inch cast iron pipe costs about 25 cents a foot and 4-inch vitrified sewer tile about 13 cents a foot. The cost of gravel and labor is determined by local conditions.

The 4-foot x 4-foot slab top made up of four removable sections and the cast-in-place slab, 2 feet x 4 feet, with a capped 4-inch cast iron cleanout pipe at the outlet end, takes the place of one of the two manholes usually required for septic tanks and permits all but 20 inches of the septic tank to be covered with 1 1/2 feet or more of earth for frost protection. Two feet of earth covering is sufficient to prevent freezing for a tank that is used liberally during the winter.

**TYPICAL installation of grease trap, septic tank and dry well. Laundry tray trap should be vented above closet inlet.**



Location of the Septic Tank

A careful study of the site is necessary. The best location for the septic tank will depend on the following factors.

1. *Safe distance from well*; that is, at least 50 feet between well and tank. On most farms a distance of 100 feet or more can be maintained. The general downward slope should be from the well to the septic tank. The septic tank is water tight and the cast iron pipe with leaded joints provides tight connections from the fixtures in the house to the septic tank. Vitrified tile with asphalt sealed joints from the septic tank to the dry well will keep out tree roots and provide additional protection for the water supply.

2. *Close to house* to make a short sewer connection for low cost and easy cleaning, yet the minimum distance between house and tank should be 20 feet. Where the ground slopes away from the house, frequently considerable digging can be saved by going down the hill as much as 40 to 60 feet for the septic tank location. However, if the distance is too great, the additional cost of cast iron sewer pipe may be greater than the cost of making a deep excavation nearer to the house.

3. *Convenient sewer connections* to the house drainage system.

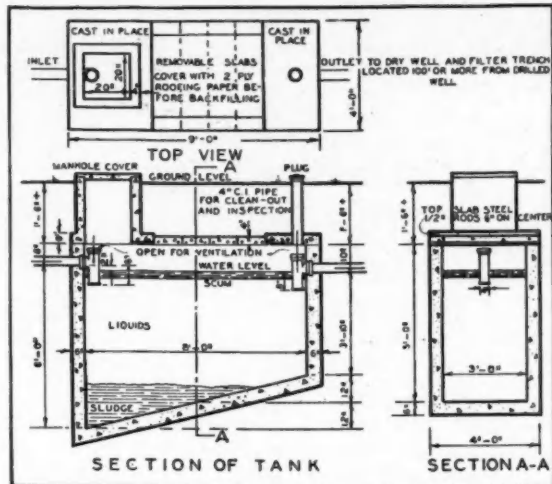
4. *Location on opposite side of the house* on which the well is located is most desirable, and if there is a choice of locations do not locate to the south or southwest of house.

5. *Depth is determined by lowest point to be drained.* For instance, a laundry in the basement calls for a basement floor drain. In this case the water level in the septic tank will be approximately 2 feet below the basement floor level. Where gravity flow is not possible due to a high water table or impervious soil and a laundry

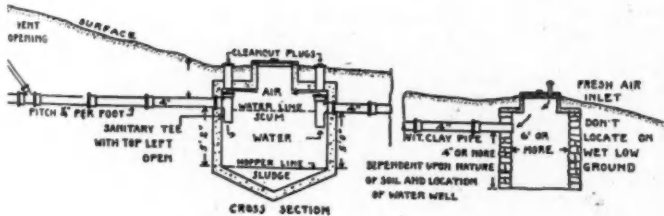
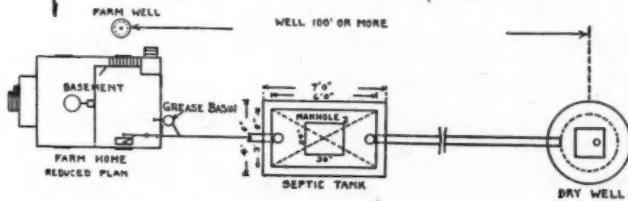


and basement drain are desired, an automatic electric sump pump with tight cover may be installed to pump the waste into the sewer line leading to the septic tank.

6. *Depth is determined by outlet.* On low flat sites where the ground water table rises to within a foot or even several feet of the surface of the ground in the spring, the filter trench type of disposal may have to be installed in addition to a dry well. In this case, the septic tank outlet must not be below the possible filter trench level. In extreme cases the lawn grade has been raised by using a terrace over that portion covering the septic tank and filter trench area.



CONSTRUCTION details of Wisconsin type septic tank.



7. Location under driveways, buildings, or sidewalks should be avoided.

8. Soil should be tested for seepage.

**The Dry Well**

Effluent from grease traps and septic tanks is most commonly disposed of by emptying it into a dry well. The dry well is made by digging a round hole 8 to 10 feet in diameter or a trench 5 feet wide by 25 feet long and 10 to 12 feet deep. This is lined with brick, concrete blocks, or loose stone, and it is covered with a concrete cover. A 4-inch vent is essential for the proper ventilation of the system as air moves in through this vent and travels through the septic tank and on through the soil pipe to the roof of the house. A covered opening in the top, 20 inches by 20 inches, for access to the dry well is required.

Successful private sewage disposal systems depend upon the character of the soil. Conditions can usually be determined by test borings to a depth of 10 to 12 feet and filling the opening with water. If the water does not recede rapidly, at least within 24 hours, the soil should be viewed as unfavorable. However, in most instances a dry well will be adequate and additional capacity can be secured by building a second dry well or by laying a tile absorption system radiating from the dry well.

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“Amerock” raised-joint, semi-invisible hinges permit doors to open completely without strain on hinges or screws. Sturdy 5-knuckle joints on all hinges guarantee sagless doors, smooth, quiet operation, and longer life.

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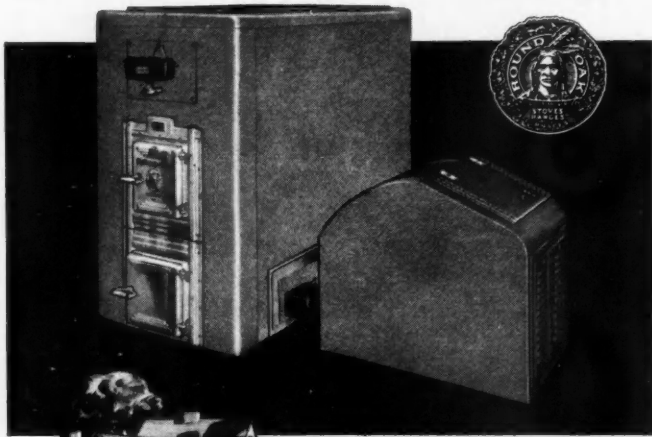
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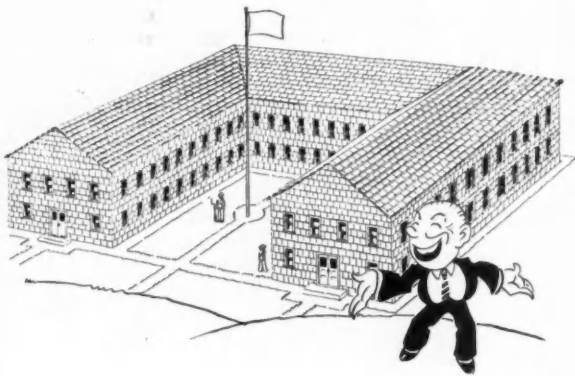
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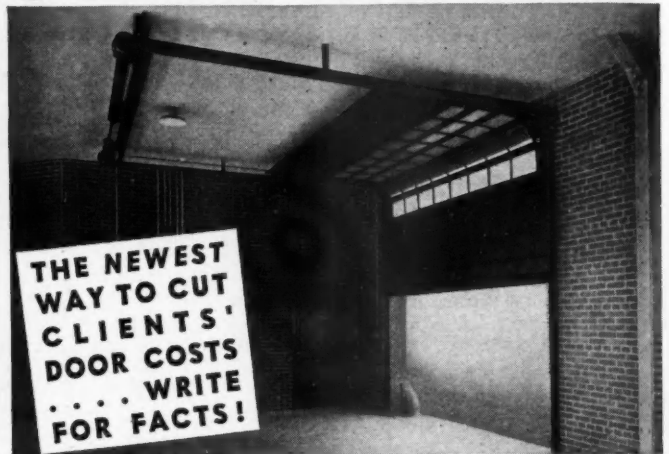


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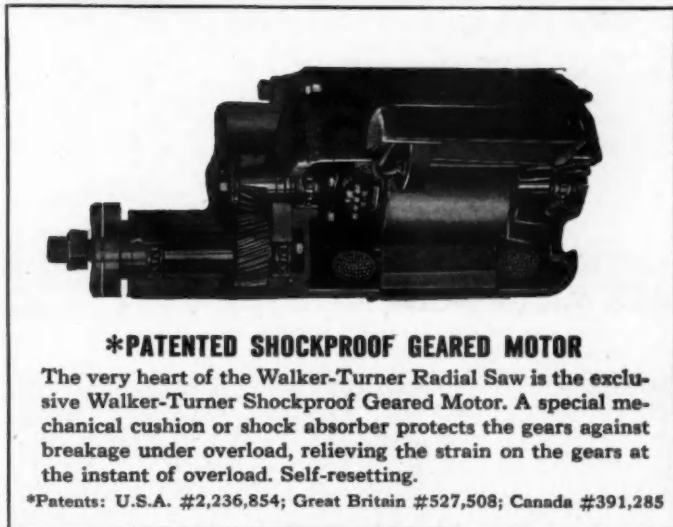
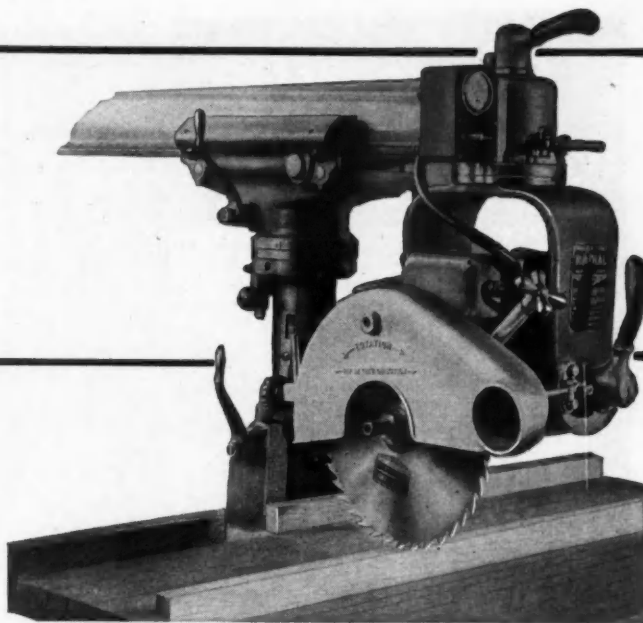


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**A World of Difference  
in a Radial Saw! . . .**

**WALKER-TURNER  
GEARED MOTOR  
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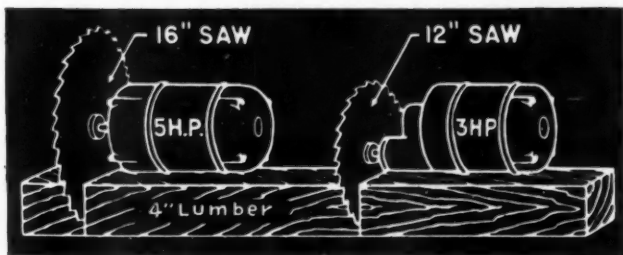
For more than three years we worked and studied to obtain one great mechanical advantage for a radial saw that has for many years been recognized as a vital need. This was the problem of getting the shaft down close to the work so that smaller saws, providing greater rim force, could be used. In the Walker-Turner Radial Saw we have succeeded beyond our most optimistic hopes. It is chiefly due to the Walker-Turner Miracle Motor—a shockproof geared motor of the most advanced design. As compared with the ordinary motor, having the saw blade direct-connected to the rotor shaft, the Miracle Motor can make equal cuts with much smaller blades and, therefore, with greater rim force. This is clearly illustrated in the drawing below.



**\*PATENTED SHOCKPROOF GEARED MOTOR**

The very heart of the Walker-Turner Radial Saw is the exclusive Walker-Turner Shockproof Geared Motor. A special mechanical cushion or shock absorber protects the gears against breakage under overload, relieving the strain on the gears at the instant of overload. Self-resetting.

\*Patents: U.S.A. #2,236,854; Great Britain #527,508; Canada #391,285



**WHY THE W-T GEARED MOTOR INCREASES RIM FORCE**

The rim force of a saw equals torque divided by radius. Therefore, the smaller the radius of the saw, the greater the rim force. As an illustration of the efficiency of the Walker-Turner Geared Motor, note that in the drawing a 12" blade on the W-T Motor will make a 4" cut, which requires a 16" saw on the ordinary motor. And while the 3 h.p. Walker-Turner Motor delivers a rim force of 15.8 lbs. in., the ordinary 5 h.p. motor delivers only 14.7 lbs. in.

There is also a very substantial saving in the cost of saw blades, dado heads and abrasive wheels, due to the smaller sizes regularly used in the Walker-Turner machine. It is really five machines in one. Besides doing all kinds of sawing (cross-cutting, ripping, mitering, etc.) it does accurate dadoing, shaping, routing and tenoning. It cuts wood, plastics, metals, ceramics and many other materials.

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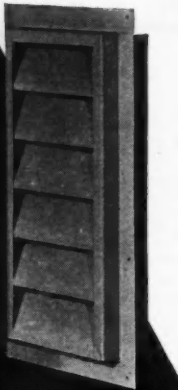
# How to Install DONLEY ATTIC LOUVERS



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Leave opening in back wall    Set ventilator in place    Lay up front wall—and that's all.



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## Homes and National Defense

(Continued from page 65)

However, a housing shortage has been accumulating since 1928. For the three years, 1932-1934, less than 20 per cent of the annual new dwelling needs were met. An estimated total shortage of 2,500,000 urban and farm dwelling units had become a great gap in America's No. 1 resource, our homes, at the end of 1940.

Blighted neighborhoods have been a steadily increasing, nationwide problem, in small towns as well as large. Over half of America's homes are more than 25 years old, and a fourth were built before 1895. In all older residential districts, decaying dwellings enforce decline in property values. Owners of better homes are reluctant to make more than absolutely necessary repairs, in the face of declining neighborhood values.

Recent Census Bureau estimates are that approximately 1,500,000 marriages took place in 1940, a new record. Provisional figures indicate a 1940 marriage rate of 11.8 per 1,000 population compared with a rate of 9.9 for 1939. The recent increase in the marriage rate is "whittling away part of the vast backlog of postponed marriages during depression years," according to the Census.

These new figures will cause a revision upward of new-home needs for the 1940-44 period, and will swell the figures on existing family dwelling shortages.

What does this situation signify in the light of practical economics?

The three great necessities of life are food, clothing, and shelter—or housing. There is a real national shortage in only the last necessity, an unsatisfied nation-wide demand in the housing field alone. Reporting a rise in rents for the past year in 62 per cent of U. S. cities, the National Association of Real Estate Boards at the same time reports an under-supply of single family houses in 57 per cent of the cities reporting and in 70 per cent of the cities in defense areas. The \$3,000-\$4,500 house has the lion's share of today's construction in 48 per cent of the cities reporting to the Board. This commonly means a home costing less than a dollar a day for mortgage principal, interest, taxes and insurance. The great demand is for the small low-cost home. Here is the heart of the housing shortage.

Average-income families do not want for food, clothing, automobiles and radios. But many of them do have to put up with obsolete housing, in wornout or dated dwellings.

The Labor Department's Index of Wholesale Prices for the week ending June 28 shows prices of farm products to have increased 28.2 points within the year, food prices 20.9 points, and textile products 17.6 points in the same period, while building materials rose but 9.5 points.

Building costs have been holding level in recent weeks. Home financing costs are as low as last year's, lower than costs of previous years. Most building materials are in sufficient supply for both defense and family requirements. Metal products may be an exception. But vast quantities of metal products are needed for the production and transportation of food and clothing. Why should housing be singled out from the industries producing necessities of life as one to be abolished "for the duration," except to meet defense needs?

Building labor is practically the only industrial labor in thousands of communities. Restrictions on home building in all but defense areas would throw most of these breadwinners out of employment and force them to migrate to defense industry centers and seek work at other trades—probably at common labor.

Such restriction, as proposed by ill-informed spokesmen, if imposed would result in nothing short of an economic calamity. It would, first, widen and deepen the already serious shortage in American homes; and, second, enforce unemployment in thousands of units of America's major small-town industry—home building and home modernization and repairs.

### Small-Home Building and Defense Priorities

The one reason advanced by the advocates of the suspension of FHA-insured loans on new small homes "for the duration" and other severe restrictions on private home building, is the supposition that stoppage of small-home building would release vast quantities of materials and labor essential to the defense effort. This may be properly called a *supposition*, as it has no basis in fact nor is it supported in statements by official or other recognized authorities.

First of these authorities, in knowledge, ability and position,



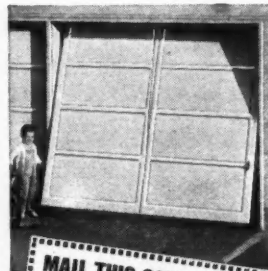
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is Defense Housing Coordinator Charles F. Palmer. He has recently declared, "We must see that essential defense housing gets material next in line after bombers. Defense housing is just as much material of war as planes, tanks and guns." Mr. Palmer has indicated that priorities may be denied ONLY on single dwellings costing more than \$6,000 and on multiples with units renting for more than \$50.00 per month, except when they "meet defense needs."

Mr. Palmer has also stated, "The trough of the depression created the greatest valley in the housing curve for over 50 years," and added that we haven't yet touched the deficit. He says further, "The defense housing problem is accentuated by this accumulated shortage. The \$598,000,000 we are already using (for direct government housing) isn't enough to lick it. . . . The vast preponderance is going into permanent homes. Over 88,000 of the 96,000 homes already allocated are in cities. Those homes will help those cities now. Local citizens must help see to it that those homes help those cities a long time."

**Private Industry Has First Responsibility**

Mr. Palmer places first responsibility for defense housing upon the existing building industry, upon established private enterprise in building.

This is in line with the responsibilities placed by OPM on established private enterprise in steel, automobiles, airplanes, for defense production.

In the latter industrial fields this proposition, as stated by the New York National City Bank recently, is generally accepted:

"Where the requirements are for defense, there is no controversy, but general cooperation in providing whatever productive capacity will be needed. Furthermore, civilian requirements also should be supplied as fully as the resources and energies of the country will permit, for the standard of living depends upon production."

It is also generally recognized that dislocation of basic industries must be avoided in application of priorities. Conversion of existing great automotive or steel plants into production of defense materials alone might mean the disruption of present organization and scrapping of present equipment for production machinery that would be useless when the emergency is over. Also vast amounts of the normal products of the automotive and steel industries are needed to supply other essential defense industries.

**Lumber a Basic Defense Material**

Lumber, for example, is a basic defense material. Logging tractors and trucks and heavy steel sawmill equipment are required to produce it. Most defense orders for lumber demand rush production and delivery of enormous quantities of *special lumber items*. Other items reside in each log, have been grown there by nature. When the defense-order items are cut from the log, other items not on order must be cut at the same time. Because of this inexorable fact every lumber manufacturing unit must find markets for these residue items in the channels of normal commercial trade—that is, through the retail lumber dealer who distributes building materials for local home and farm building.

Such evidence is cited to buttress the report of *American Builder* in its Building Outlook Letter of July 29, summarizing results of an investigation in Washington on possible limitations on home building. This report said, in part:

"There is no one in official Washington who wishes to restrict home building. No drastic limitation is expected at any time and certainly not for the balance of this year or the first half of next year. There will, however, be some restrictions on general building and the first steps likely to be taken will curtail non-defense, non-residential structures, such as theaters, lodge buildings, amusement structures. . . . Priorities on essential materials will become increasingly severe. . . however, there will be no serious shortage of the basic structural materials, *although delivery may*

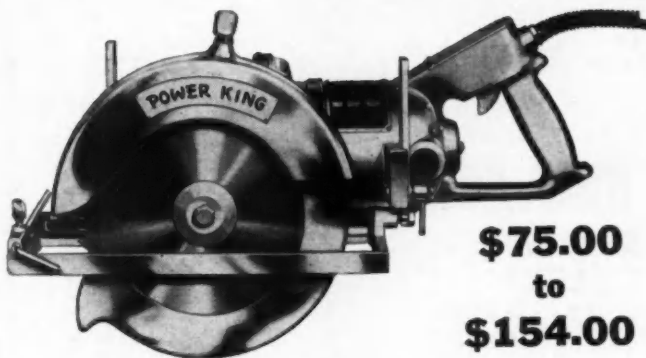
(Continued to page 128)

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**WAGNER MANUFACTURING COMPANY**  
DEPT. AB-941, CEDAR FALLS, IOWA

### Homes and National Defense

(Continued from page 127)

be slowed materially . . . but a pinch will come in metals—steel for heating plants, copper for wiring and metal for bathtubs . . . (but) it is pointed out that there are some practical substitutes for almost any product."

To sum up, the values of the home are fully appreciated in official Washington, in relation to both the institution of the family and the national economy. It is extremely improbable that those values will be put in serious jeopardy by way of priorities, suspension of FHA "for the duration," or other Government action in line with the new outburst of irresponsible attacks against home building and the building industry in the name of national defense.

Leon Henderson has recently stated that "no reduction is contemplated in (production of) trucks with capacities in excess of one ton because of the urgent need for such vehicles at the present time." We may expect a similar policy, for the same reason, on small home building.

\* \* \*

### Down Payment to Suit

(Continued from page 64)

a better house for defense workers at a lower price than any government agency could do it with public financing. Furthermore, the people who move into these homes become home owners and a considerable part of their monthly payments are going to building up an equity in the property. During the first five years under the Title VI plan the monthly payments are stepped up one-third more than under Title II, which builds up a reserve during the days when the buyers have good earning power and prepares them for the possible "rainy day" when the emergency is over.

Principal officials of United Associates who have been in business together continuously for 18 years are: Samuel A. Gogel, Maurice Krull, Martin Nadelman. Plans for the houses were drawn by Joseph Unger, architect, of 3901 Main St., Flushing.

#### Purpose of Title VI

FHA Administrator Ferguson has described the purpose of Title VI as "to encourage an additional volume of low-cost home construction by private capital in areas where defense activity has created an urgent need for additional housing."

Issuance of a loan to a builder-mortgagor may not be in excess of 90 per cent of the FHA valuation, and the insurable loan is limited to the builder's necessary costs in producing the completed property. According to A. J. DuBois, chief of the Valuation Section of FHA, "consideration must be given to the competence and financial ability to complete the proposed dwellings without resort to secondary financing and to manage successfully or sell the completed properties." The 10 per cent equity that normally would be required of a builder may be represented by his services or profit. The builder-mortgagor is free to rent or dispose of the properties as he sees fit.

Commenting on the qualifications of a home buyer under Title VI, DuBois says that "the same principles and methods of borrower analysis are applied as in Section 203, except that, in view of the urgent need Title VI is intended to supply, a mortgagor in a case under that Title will not be considered ineligible simply because there is some lack of assurance of continued earning stability if such lack is due solely to the fact that the source of the mortgagor's employment is identified with defense activities the duration of which is in itself uncertain." However, this would not be true if employment opportunities in the community would continue for only a short time.

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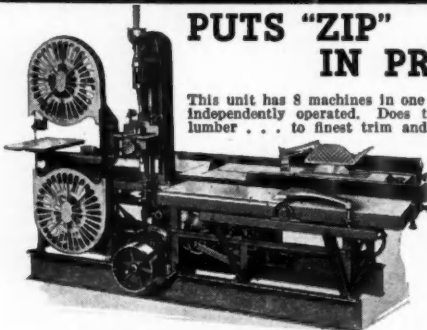
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### Wedding Rings Mean Home Sales—

(Continued from page 73)

project which, although offering a different type of house, promises equal success.

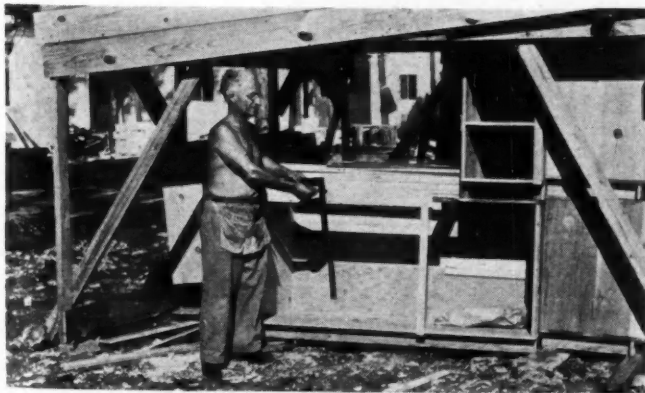
Martin practically was born into the home construction business. His father, C. H. Martin, operated as a building contractor in Chattanooga, Tenn., for over 20 years.

In addition to those in the development described, Victor Martin, himself, has built and sold in the Greater Miami area during the past two years approximately 125 homes ranging in price from \$5,000 to \$20,000.—Harrie H. Bierman.

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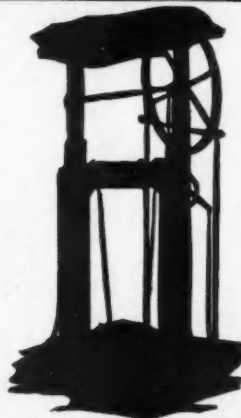
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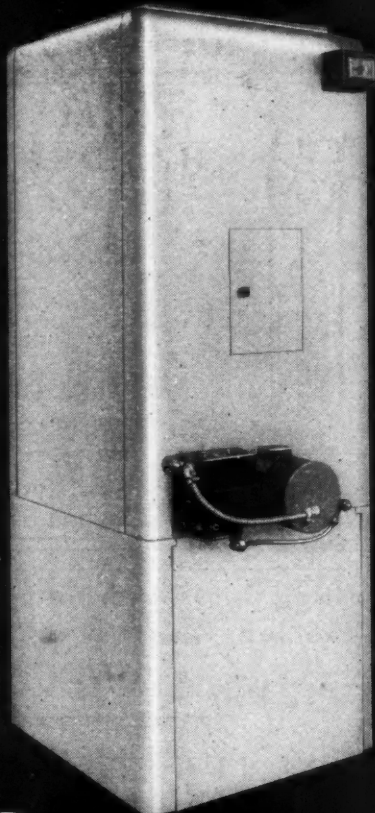
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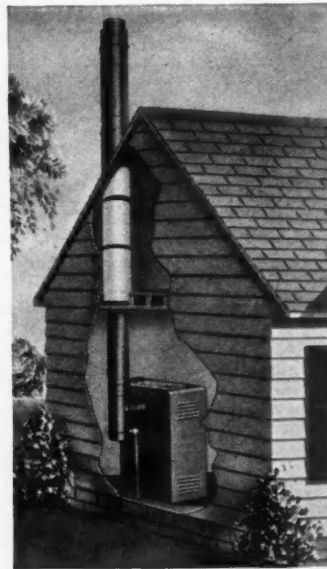
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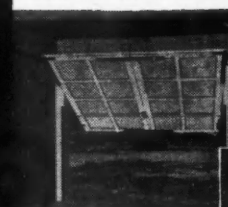
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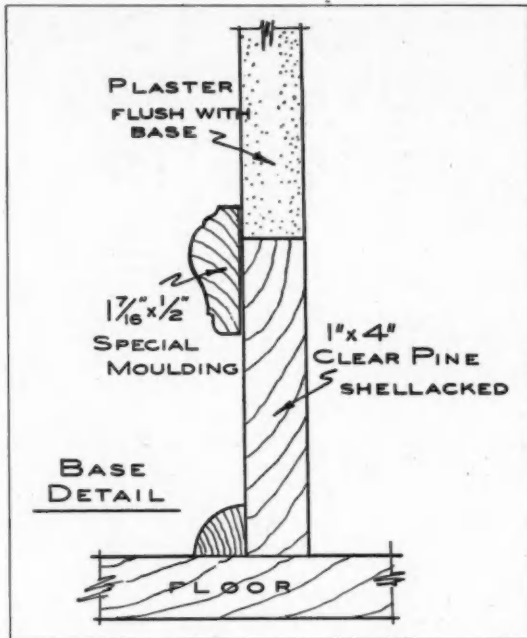
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**Good After the Emergency**

(Continued from page 61)

waterproofed; 2 x 10 floor joists of seasoned, grademarked and trademarked lumber; well weather-stripped doors and windows. Some of the products used include Johns-Manville asphalt roofs, U. S. Gypsum Co. plaster base and plaster, Norge warm-air heating plants, Crane plumbing fixtures, Parker cabinets, Yale & Towne hardware, 18-inch Certigrade red cedar shingle exteriors.

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