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TECHNOLOGY DEPT.

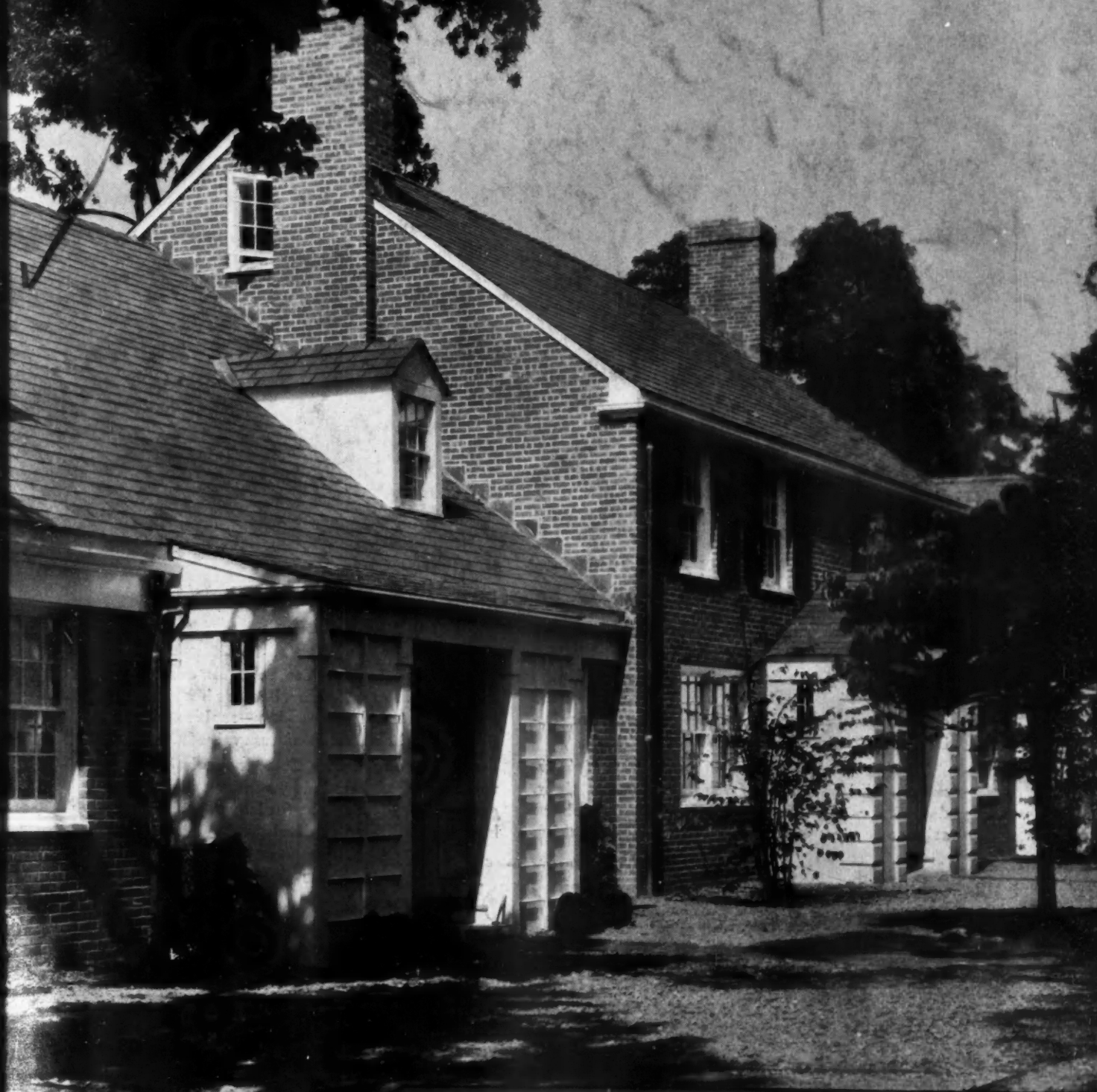
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AMERICAN BUILDER

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78
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93
96
96
98
93
96
8
3
73
7
61
91
96
74-79
92
4
10
59
92
72
87
64
95
19



View from Garage - Investment Development at Washington, D. C., Built by Arthur Flemming, Inc.

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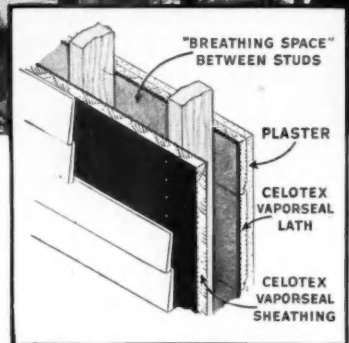
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(A Simmons-Boardman Publication)

AMERICAN BUILDER

and Building Age

CONTENTS FOR FEBRUARY, 1941

Publisher's Page—Socialism the Principal Enemy—by Samuel O. Dunn.....	55
Editorial—Best Defense Work for Builders Is to Build and Sell More Homes.....	57
Detroit Ideal Home Features Two Heating Systems.....	58
This Nationally Famous Annual Demonstration Project Features Quality Building Throughout	
Cottage Apartments to Rent.....	60
They Prove a Sound Form of Investment. New Planning and Construction Methods Employed	
They Live Like Millionaires.....	62
Georgian Colonial—7 Rooms, 3 Baths.....	64
Stone and Shingle Loft Home—32' 10" x 26' 10".....	65
Builds Community for Large Families Only.....	66
Westridge Construction Co. of St. Louis Promotes Country Home Development in Which Sales Are Restricted to Those Parents Having Four or More Children	
Colonial Cottage Type for the Country.....	68
Rustic Enough for the Country—with Convenience of City Living....	70
Houston Duplex Offers 3-Bedroom Units.....	72
Garage Modernized into Rent-Paying Modern Dwelling.....	74
Western Style Brought Up to Date.....	76
No Cross-Joints in New Style Tin Roofs—by C. H. Manion.....	78
Service to Readers Department.....	80
On and Off the Record.....	88
Practical Job Pointers.....	94
Ideas for Rustic Summer Homes and Cottages.....	96
Three Appealing Home Designs from Detroit Builders Assn. Show....	98
Low-Income California Families Purchase FHA Insured Homes without Down Payment.....	100
Pointers on the Proper Use of Wood.....	104
Letters from Readers.....	132
TruCost Department.....	134
Advertisers' Index.....	140



63rd Year Vol. 63, No. 2

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

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

WASHINGTON, D. C.
National Press Building
SEATTLE, WASH.
1038 Henry Building
SAN FRANCISCO, CAL.
550 Montgomery Street
LOS ANGELES, CAL.
530 West Sixth Street

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

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

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HOME OWNERS *SEE HOW* TO GET EVERYTHING THEY WANT IN A DOUBLE-HUNG WINDOW

Your customer, about to build a house, is starting an "experience of a lifetime." Everything must be precisely right. But since a normal knowledge of house building leaves most major factors unconsidered, your home-builder usually raises questions on things you consider relatively unimportant. Maybe it's windows; the housewife has had all she wants of sticking windows, of drafts of cold air and dirt. If you can show her how the windows you plan to use are smooth, easy-moving, how they're really air and dust tight, how they can be finished with modern narrow trim, you win her confidence.

A demonstration unit of a Pullman-balanced window answers every question your customer can raise, shows *what* the window will do, *how* it does it. Hundreds of building supply dealers say, "When we show them a Pullman-balanced window unit, we show that we handle and recommend the best." Ask your millwork dealer about weather-stripped window units Pullman-balanced—ask him to place a full-size Pullman window unit on permanent display so you can *show* your customers.

Pullman Balances are time-proved by a record of 54 years of service in schools, hospitals, office and public buildings. Guaranteed Balances built of the same design and workmanship standards are available to millwork manufacturers for use in window units for low-cost houses.

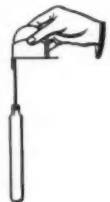
TAKE 30 SECONDS TO LEARN ABOUT WINDOW BALANCING



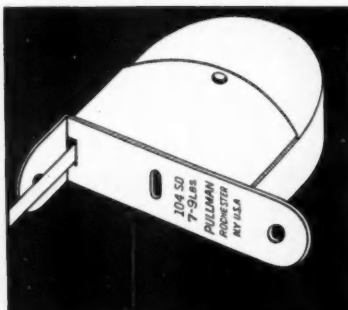
1 String a cord through a pulley. From each end suspend a five-pound weight. Move the weights up and down. Wherever you stop, the weights stay there. This is true counterbalancing.



2 Suspend a five-pound weight from a Pullman No. 5 Balance. Move the weight up and down. Wherever you stop, the weight stays there. This demonstrates the true balancing action of the Pullman Balance in supporting without friction an easy-moving sash.



3 Suspend the weight from any "sash-holder." It seeks a level, will not stay in any other position. Windows supported by such a device are not balanced, but are held by friction.



Specify Window Units with
PULLMAN Sash Balances

PUBLISHER'S PAGE

Socialism the Principal Enemy

ALMOST all Americans agree we should give Great Britain all help "short of war." Most say this should be done to "save democracy." But democracy in Germany made Hitler chancellor, and destroyed democratic government, by casting 10 million more votes for Hitler's candidates than for those of any other party. And democracy in France split that country wide open into classes, and made it an easy prey for Hitler.

The *objective* of the founders and developers of our institutions was not *democracy*, but *freedom*. Freedom from every foreign government—but also the greatest freedom of each citizen *from our own government* consistent with the equal freedom of other citizens. Freedom not only to speak, write and move about, but to *own, manage and make profits from property*. They favored democracy merely as the best means of maintaining freedom.

WHY, then, so much talk about *democracy*, and so little about *freedom*? Is it possibly because some of those propagandizing the loudest for democracy here and abroad want to use it to abolish freedom?

The following is from a dispatch from London that appeared in the "Chicago Tribune" on January 13: "Arthur Greenwood, powerful labor leader who has been named (British) minister for post-war construction * * * has told the press he is planning to extend state ownership to many industries, including coal; all forms of transportation, including railways, roads, canals and coastal shipping; agriculture, gasoline and oil, and production of iron, steel and building materials." What that means is that the radical leaders of Great Britain are trying, during the stress of war, to use democracy to *establish socialism*. They openly contend that the government cannot get enough working-class support to win the war unless it does establish socialism.

But socialism is absolutely incompatible with what always has been considered *freedom* in the United States, because it abolishes private freedom to own, manage

and profit from property. And nowhere has it ever been possible to establish and maintain socialism excepting by *dictatorship*. The socialist dictatorship of Russia is the most despotic and murderous in the world.

WHAT, then, are we in the United States aiming at? Merely to save democracy—or *both democracy and freedom*? If both, we must fight against socialism as much as nazism; for socialism—otherwise called "communism"—is even more inimical to freedom than nazism. And there is more danger of it in this country now because we are all aroused against nazism, while many are avowedly promoting socialism, and many more are promoting policies tending toward socialism without knowing it. Every policy promotes socialism which, by increasing government control, ownership or management of property, reduces private opportunity and initiative in its ownership and management.

The federal administration now in power has increased socialistic government control, ownership and management of property more *in time of peace* than all previous administrations combined; and it is now seeking more power to help Britain save democracy. We should not disregard the fact that *every increase in the power of government, however necessary, reduces the freedom of the citizen*.

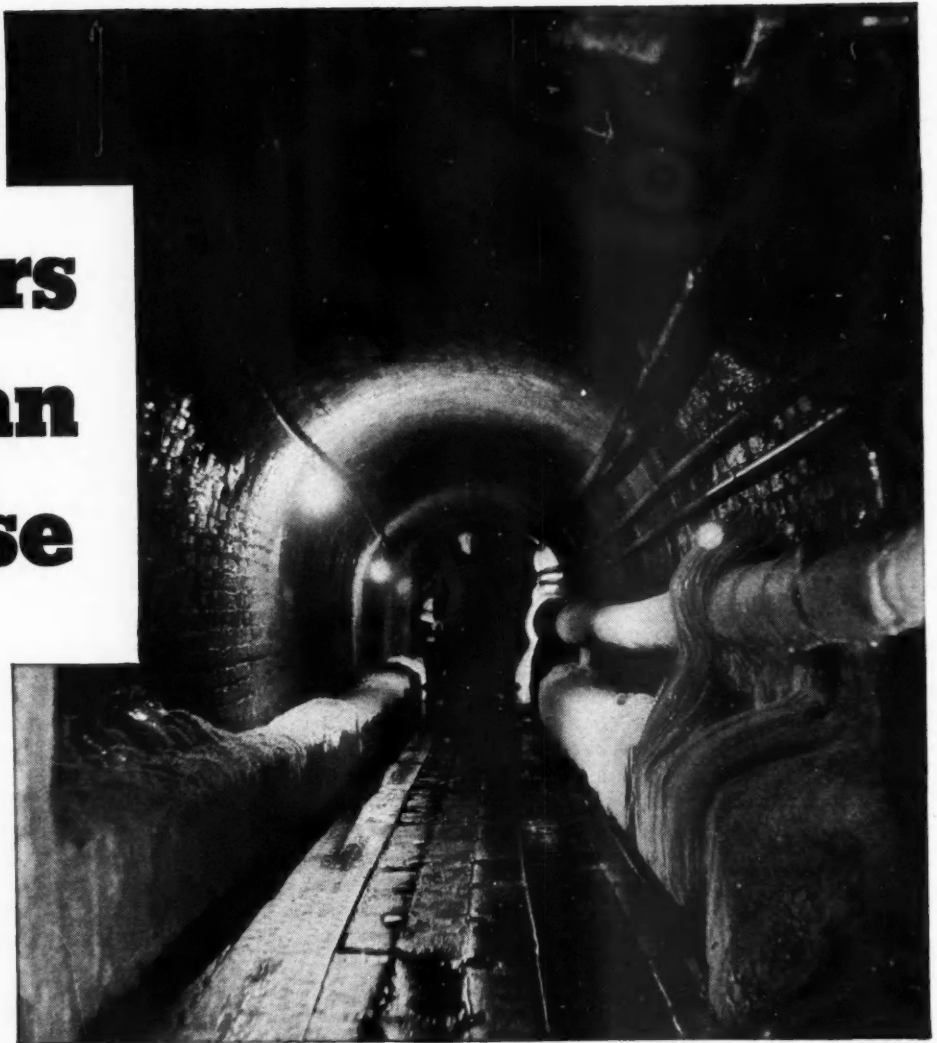
And we had better fight a great deal harder to protect our *freedom* as well as our *democracy* from socialists both at home and abroad as well as from nazis both at home and abroad. Otherwise we may awaken one fine morning to find we have lost both our democracy and our freedom—and not to the nazis, either.

Samuel O. Dunn,

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REFRIGERATOR TUNNEL MADE WATERTIGHT WITH 'INCOR' ...10 YEARS' SERVICE, NO MAINTENANCE EXPENSE

10 Years in an Ice House



PROVEN long-time durability is an all-important plus with 'Incor,' the first high early strength Portland cement. In May, 1930, the ceiling arch of this brick refrigerator tunnel of Kingan Packing Co., Indianapolis, was gunited with 'Incor' to prevent seepage of water which often contains salt. Concrete had to harden quickly—40-degree temperature had to be maintained. 'Incor' concrete produced a dry, watertight tunnel and better refrigeration conditions as well.

Recently, after thorough inspection, Kingan's maintenance engineer reported: " 'Incor' not only did a remarkable job in correcting a bad condition, but in ten years there has been no maintenance expense whatsoever."

Quality pays . . . insist on 'Incor'* 24-Hour Cement. Write for copy of "Watertight Concrete." Lone Star Cement Corporation, Room 2230, 342 Madison Avenue, New York.

*Reg. U. S. Pat. Off.



QUALITY PAYS . . . INSIST ON 'INCOR'
'Incor' 24-HOUR Cement means just what the name says—dependable 24-HOUR service strength. Plus long-time durability, proved by 13-year performance. Quality pays—because better cement makes better concrete.

LONE STAR CEMENT CORPORATION
MAKERS OF LONE STAR CEMENT . . . 'INCOR' 24-HOUR CEMENT

AMERICAN BUILDER

AND BUILDING AGE

Best Defense Work for Builders Is to Build and Sell More Homes

THE home building industry of the United States is today in a rather unique position. Whereas other industries are being asked to revise their operations so as to give more and more capacity to defense and war orders, the government is urging *builders* to surge ahead with homes and housing, for sale and for rent, for industrial workers and for the general public.

Lack of proper shelter was a "bottleneck" in 1917 and 1918, but there is little reason why it should be one today. Labor for home building is plentiful and materials for home building are plentiful; and neither is at all in competition with, or needed for, the nation's program for munitions, guns, planes or ships.

Private home building reached a total of 486,000 family units in 1940, the largest in 12 years; and present estimates forecast a further increase of 10 to 15 per cent for 1941. FHA records show that the boom in private home building has been most pronounced in those industrial centers where the defense orders are heaviest.

For instance, FHA insured mortgages on new home construction for the third quarter of 1940, as compared with the third quarter of 1939, were up 172 per cent in Hartford (munitions), 82 per cent in Richmond (ship building), 126 per cent in Indianapolis (airplane motors) and 68 per cent in Seattle (airplanes). An increase of 58 per cent for the total of the "key manufacturing centers" is noted by the Housing Administrator after making this analysis, leading him to conclude, "As during World War days, private industry is supplying the bulk of needed new homes."

Sound Investment Opportunities

Good small homes, built *new* either for sale or to rent, and reconditioned, modernized *old* homes and apartments offer today sound investment opportunities in practically every section of the United States. With present favorable building costs, mortgage terms and efficient personal transportation for the workers, *wide areas* are stimulated by our present industrial activity; and real homes in pleasant surroundings are being created; whereas in former times the defense workers would have been housed in shacks, rows and barracks right under the shadow of industry's smoke stacks.

So, the men of the building industry are called on today to serve patriotically by pushing their home building programs. Efficiency, intelligence and fair dealing are requisites.

Of particular interest in this connection is an official release from C. F. Palmer, Defense Housing Coordinator, issued from Washington on January 13. This statement reads:

"The Division of Co-ordination of National Defense Housing, now in the Office of Emergency Management of the Executive Office of the President, will further expedite adequate and prompt production of housing for the families of workers in defense industries and the enlisted personnel. This is necessary to keep pace with the speed-up of industry now taking place under the Office for Production Management.

"Under the President's inspiration the defense program is now occupying the efforts of the entire nation. The new office of Co-ordination of Defense Housing is to achieve the results which he and the country expect in providing shelter for the families of workers in our defense industries. In accomplishing such an objective this office will continue to complement, not supplant, the facilities of existing federal agencies in the housing field. In fact, the new organizational setup, under the President, should make even more effective this co-operative program.

"Up to the present time, through legislation initiated by the Co-ordinator, and with his advice, contracts have been awarded for the construction of 28,927 dwelling units, funds have been allocated for 49,276 units and, under the stimulus of the new program, it is estimated that during the present month allocations for 25,000 additional dwelling units will be made. All of this building is taking place in vital defense areas.

Private Industry Encouraged

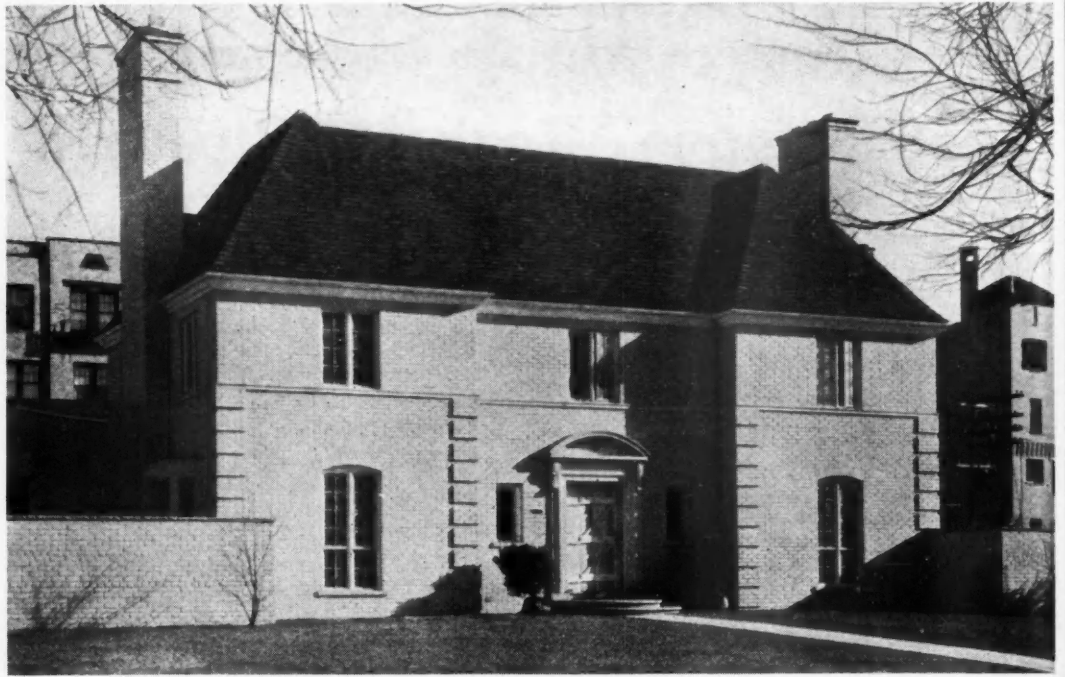
"Private industry will continue to be given the opportunity, and encouraged, to carry out its normal function where it is capable of supplying dwelling units commanding economic rentals and where the permanence of the need makes private investment practicable. The President's order particularly stipulates that the Co-ordinator shall 'facilitate the execution of approved housing programs through private industry or through appropriate governmental agencies and take steps to eliminate obstacles which impede the expeditious provision of defense housing.'

"Agencies of the government through which the Division of National Defense Housing Co-ordination will continue to operate include: The United States Housing Authority, the Federal Works Agency, the Federal Housing Administration, the Public Buildings Administration, the Defense Homes Corporation, the Farm Security Administration, the Federal Home Loan Bank Boards, the Army, the Navy and the Maritime Commission. All of these agencies have given their co-operation to the Defense Housing program which daily is gaining momentum. The new Division now established will make possible a greater amount of co-ordination in this effort, which in turn will produce larger results for the need which must be met.

"I wish to express my appreciation to these organizations for their wholehearted co-operation which has made possible the progress already attained. I am sure that in the knowledge of the emergency which faces us this same teamwork will prevail to the end that the families of workers in our defense industries and armed services will be adequately sheltered in time."



ABOVE: Walter Mast, with lifetime of fine residential building experience behind him, was chosen to erect the Detroit Ideal Home in 1939, 1940, and again this year; the front view of the current Builders Show model home is pictured at the right.



Detroit Ideal Home Features Two Heating Systems

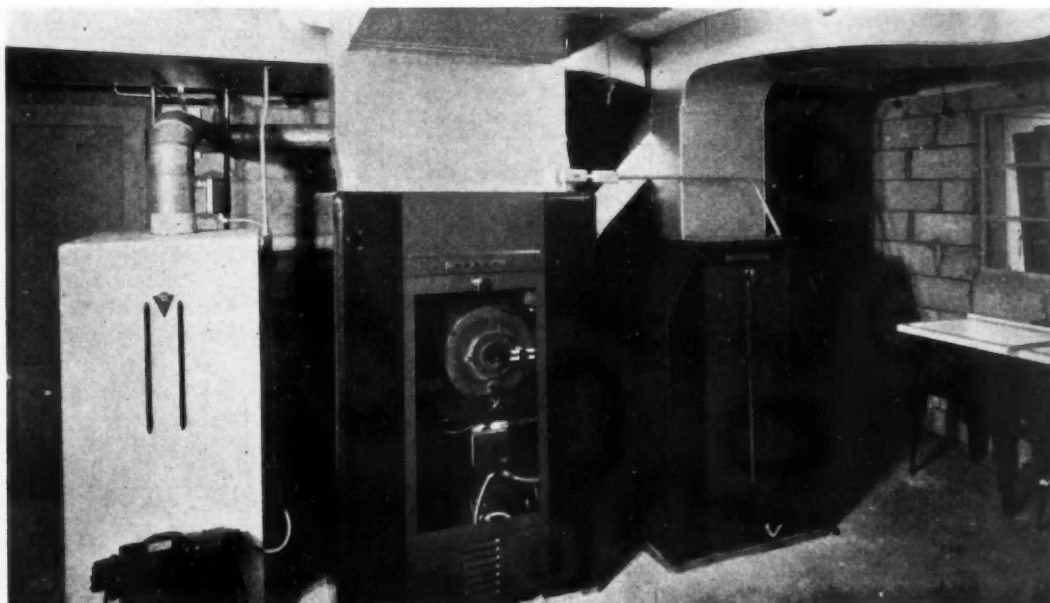
THE chief educational exhibit of the Detroit Builders Show is an Ideal Home erected each year in a different section of the city, completely landscaped, furnished, and opened to the public about two months prior to the opening of the Show, itself. The 1941 Home is the 19th Ideal Home which has been erected and exhibited by the Detroit Builders Show for the purpose of demonstrating the latest design, materials, equipment, and furnishings in the home building field.

This year's Home was designed by Earl W. Pellerin, built by Walter H. Mast, and completely decorated and furnished by the J. L. Hudson Company. Nearly fifty other prominent local and national building supply and equipment firms also contributed in furnishing materials and services for the Home.

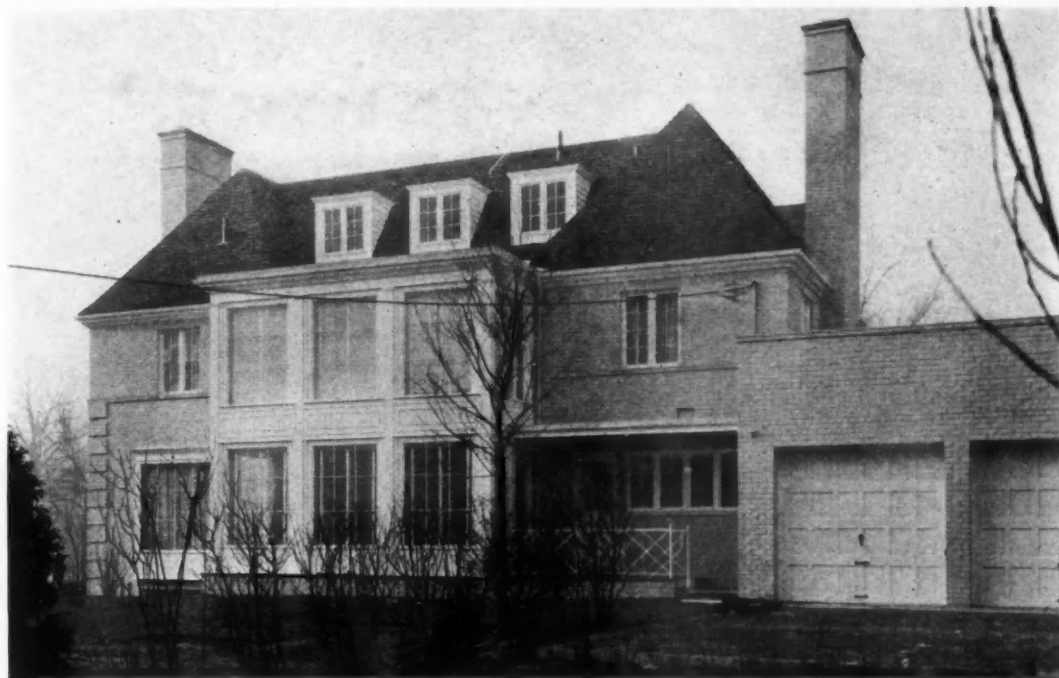
This Nationally Famous Annual Demonstration Project Features Quality Building Throughout

As one of the outstanding features which sets a new high for efficiency and economy in a field already notable for tremendous advances during the past few years, the Norge heating and warm-air conditioning installation in the 1941 Ideal Home will be of particular interest to all present and prospective home owners.

In what is believed to be an entirely new departure in



THE heating room view at the left illustrates the manner in which the two separate Norge oil-fired winter conditioning units were installed. The one on the right heats the porches; larger one in the center heats the balance of the house; the unit at the left is an oil-fired water heater. Tru-Cost figures for this and other designs will be found on pgs. 134 to 136.



ONE of the major design problems in the 1941 home was the planning of two large glazed porches (seen in the rear view at the left) and properly and economically heating them. Architect Earl W. Pellerin was awarded the designing; plans below.

Heating Systems

Walter Mast Again Selected as Builder for Third Time in Row; Earl W. Pellerin Was Architect

the expedient of closing porch registers, since the unit would then produce an excess of conditioned air which would have to be "spilled" in the basement through a complicated arrangement of drafts and checks. With spiral ramp economizers giving 17-foot flue gas travel, efficiency of heat transfer in the units assures operating economy; stack temperatures run in the low range of 290 to 325° F, with corresponding increase in effective heat available for use.

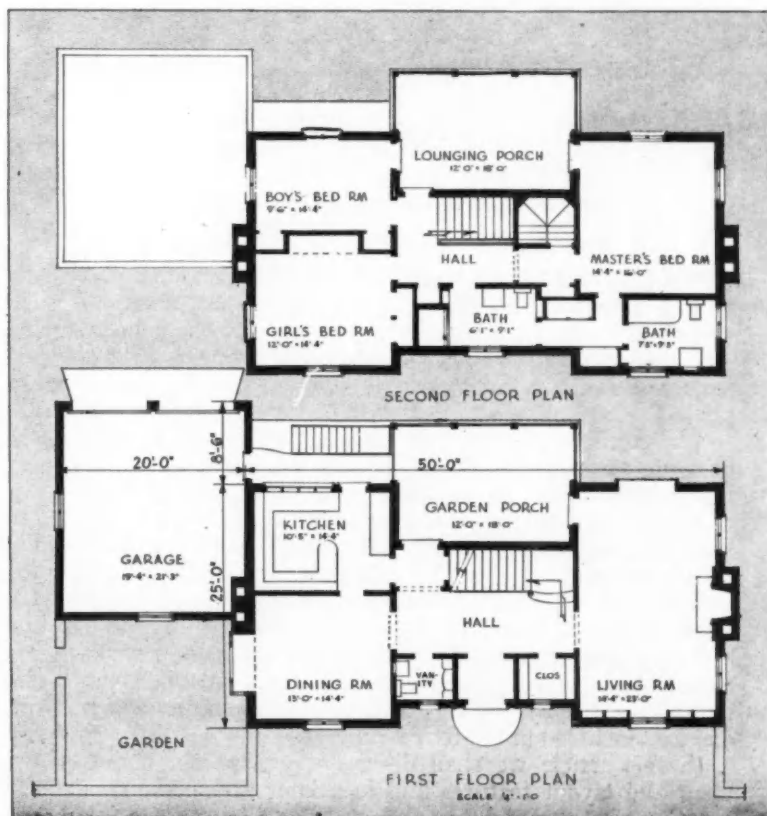
Equipment for the system was installed by contractor
(Continued to page 138)

heating practice for homes of this size, the installation employs two separate and independent Norge units. The larger of these is a Norge model 120 with a rated capacity of 120,000 B.T.U. per hour. It is employed to heat the entire house with the exception of the two large glass-enclosed porches at the rear.

The porches are heated through an entirely separate system of ducts from that employed for the house proper, and heat for the porch system is supplied by a Norge model 90, rated at 90,000 B.T.U. per hour. Both the model 120 and the model 90 are of the oil-fired pressure type and are virtually identical except in size and capacity.

Two separate thermostats are used to control operation of the units. Control for the house unit is from a mounting on the front wall of the house inside the first vestibule. The thermostat controlling the porch temperatures is located on the house wall of the downstairs porch. Balanced heat conditions which would be impossible with a single unit controlled by a single thermostat are thus assured.

Economy of operation is served in several ways: At times when it is not desired to heat the porches, the smaller unit may be shut off completely, or may be set to maintain only a relatively low porch temperature with corresponding fuel saving. Such efficiency would be impossible with a single unit even through





RIVER GLEN APARTMENT fits into high type residential area. This building holds eight 3½ and 4½-room duplexes.



TYPICAL living room with attractive stair detail.

ONE of the important developments of the past few years has been the growth and popularity of the cottage apartment as a form of investment. The prospect of housing shortages and rising rents has led many builders to interest themselves in this type of project.

The cottage apartment is flexible and can be a small or large project. The buildings are of a residential type that makes them fit into any kind of residential area.

A well planned project of this type illustrated with this article, and also on the front cover, is the River Glen apartments at Hastings, N.Y. They were built by Arthur Olson, Inc., for the Alro Realty Corp., of which Dr. Albert Shaw is president.

The project consists of four low-hung Colonial structures in a wooded glen overlooking the Hudson River. A total of twenty-one 3½ and 4½-room duplex apartments is included in the four buildings.

In this article we shall discuss the planning, investment and layout features and in a later article the con-

struction methods, which involve the use of shop-built plywood panels provided by American Houses, Inc.

Owner Shaw felt that the investment soundness of the project would be helped by retaining the wooded, countrylike residential character of the surroundings. The buildings were therefore grouped, as shown in the accompanying plot plan, to take advantage of the view of the river and to fit into the natural contour of the land without destroying the fine trees and natural beauty.

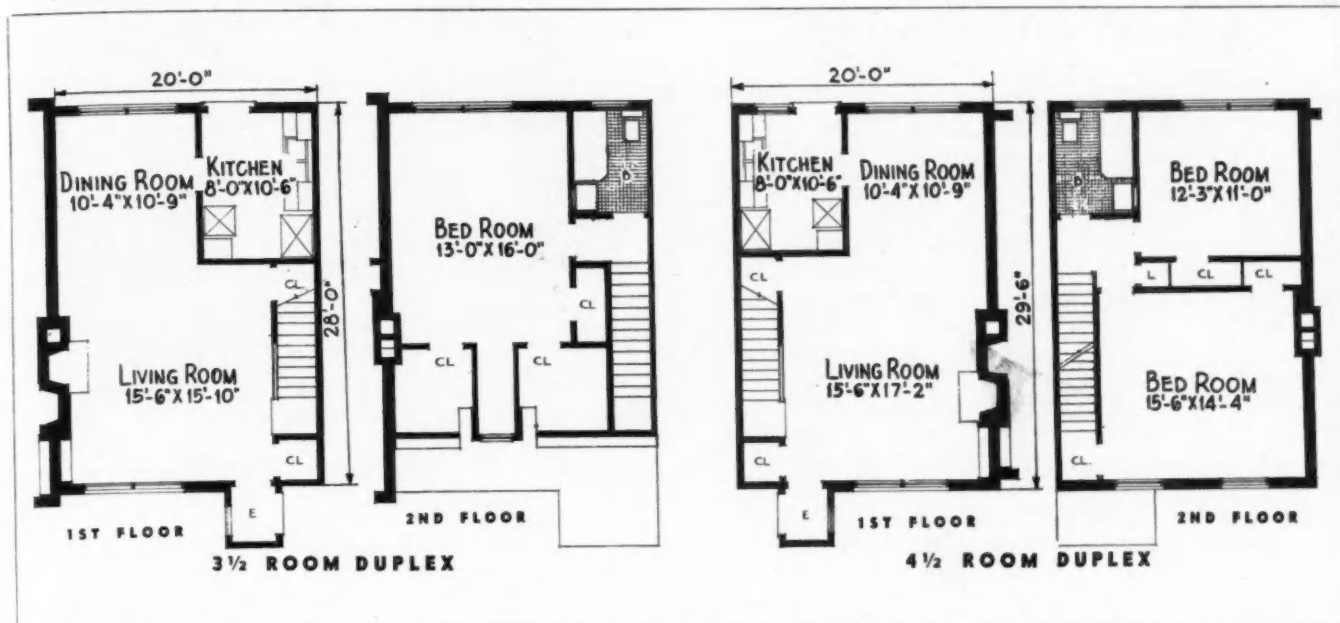
Architects Holden, McLaughlin & Associates of New York were commissioned to prepare simple standard floor plans that could be grouped together in four moderate-sized buildings. The result was the typical units illustrated.

The 3½-room duplexes, of which there are seven, have unusually spacious rooms, good storage and good exposure. Each has its own private entrance, which is handled in a most attractive way. The location of the 3½-room apartments is shown on the plot plan as Nos. 2, 3, 6, 7, 12, 16 and 19.

Cottage Apartments to Rent

They prove a sound form of investment.

New planning and construction methods employed. (First of two articles)



TYPICAL 3 1/2 and 4 1/2-room duplex apartments used in River Glen. Manner in which they are combined is shown on plot plan below.



EXTERIOR VIEW of apartments Nos. 20 and 21. Plot plan shows placement of River Glen duplex units. Nos. 2, 3, 6, 7, 12, 16 and 19 are 3 1/2-room units. Nos. 11, 17 and 18 are 4 1/2-room units. Nos. 1, 4, 5, 8, 9, 14 and 21 are same as 4 1/2-room plan above except being corner units, windows are at side; no fireplace.



The typical 4 1/2-room duplexes are also well laid out. The typical plan illustrated is an inside unit, shown on the plot plan as Nos. 11, 17 and 18. The same plan is used for the outside apartments numbered 1, 4, 5, 8, 9, 14 and 21 on the plot plan, except that these units being on the outside have additional windows on the side opposite the stairs, and the fireplace is omitted.

Although the actual floor area of the apartment units is small, the open plan in which the 15' 6" x 17' 2" living room and a 10' 4" x 10' 9" dining room merge into one gives a sense of unusual spaciousness.

The basic apartment unit plan illustrated can be arranged in a variety of ways and groupings in structures of various sizes. A project of very similar type but different exterior appearance was built at New Rochelle last year by Arthur Olson and American Houses, Inc.

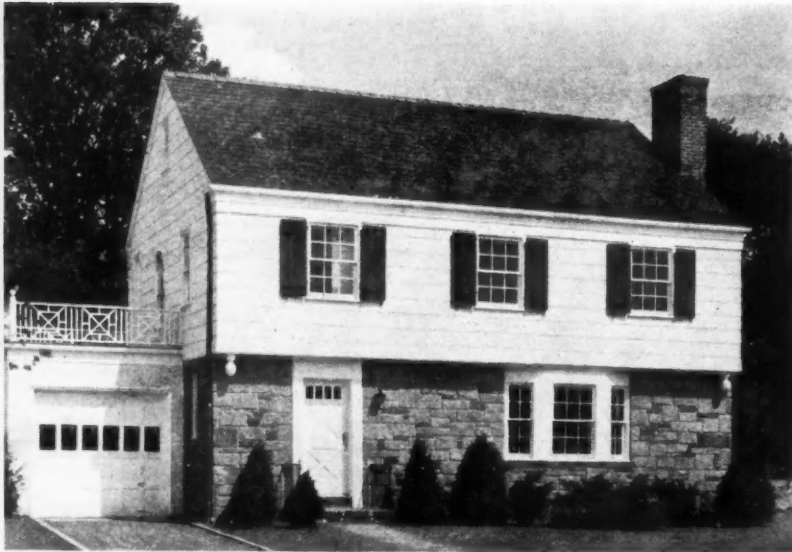
This plan had to be completely standardized in
(Continued to page 137)

They Live Like Millionaires

IT'S literally true that owners of Loft Estate Homes near Rockville Center, N.Y., live like millionaires. The development consists of the forty-acre private estate of George W. Loft, prominent millionaire candy manufacturer, and Mr. Loft still occupies the family mansion on the property.

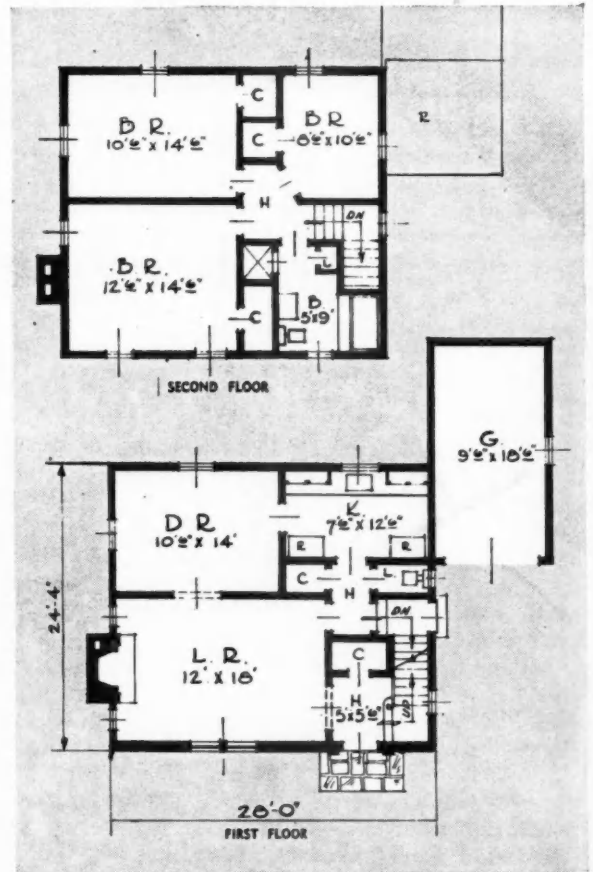
Taking a personal interest in the development, Loft went to great pains to retain the natural attractiveness of the estate. The residents of the 65 houses that have been built have access to an eight-acre private lake and to a clubhouse equipped with bowling alleys, billiard and ping pong tables, a completely equipped kitchen and bar. Loft turned over the construction work to Gust. Svenson who had been building quality homes on Long Island for 35 years.

Loft and Svenson have built substantial, well equipped homes, with prices starting at \$7,500. They are built both on speculation and contract. Standard materials and equipment



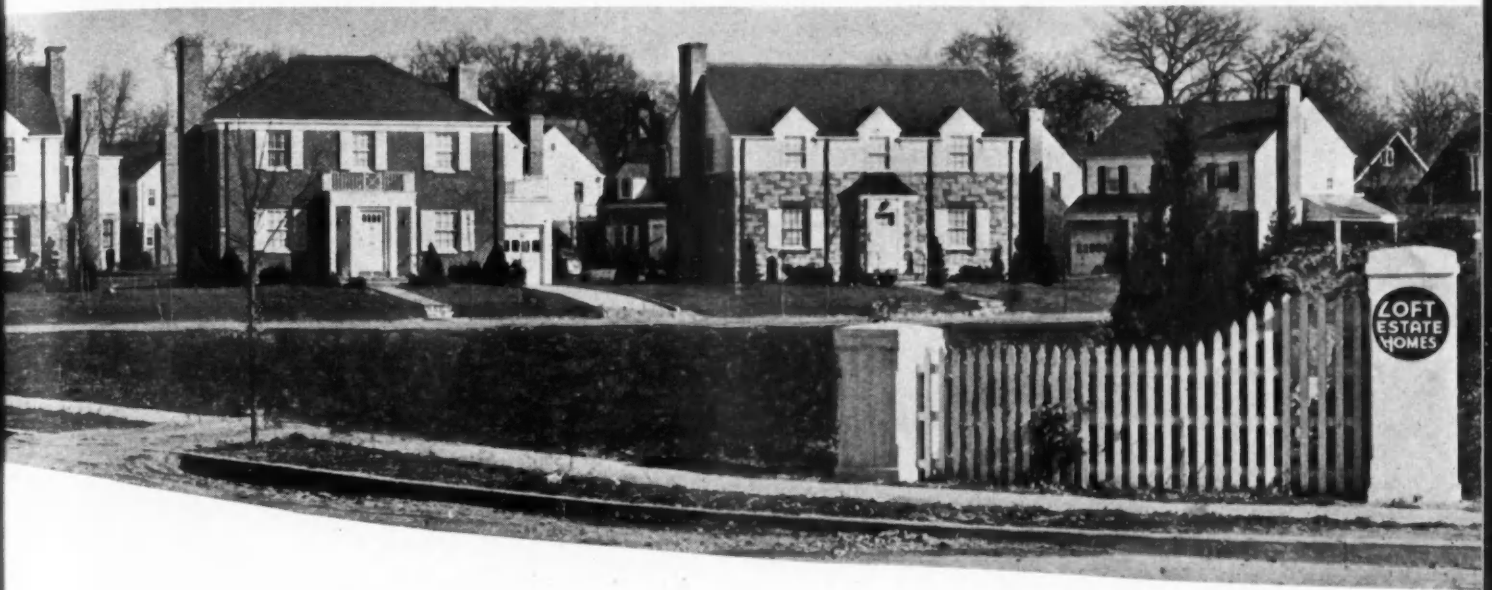
include blue stone flagged walks; water-proofed poured concrete foundations; steel girders; diagonal sheathing; No. 1 Bangor slate roofs; Chase copper flashing and leaders; Johns-Manville 4" insulation, walls and roof; Lightolier Colonial lighting fixtures; National white lead and oil paint; J-M asbestos cement shingles; Thatcher Oilmaster boilers with Bell & Gossett circulating system; Libbey-Owens-Ford glass and Owens-Illinois glass block; Mohawk stucco; U. S. G. Rocklath; Dexter hardware; Nairn linoleum; bronze window and door screens; Overhead garage doors; 1 3/4" Colonial doors.

Plans for the houses were drawn by Architect Walter D. Spelman of Rockville Center.



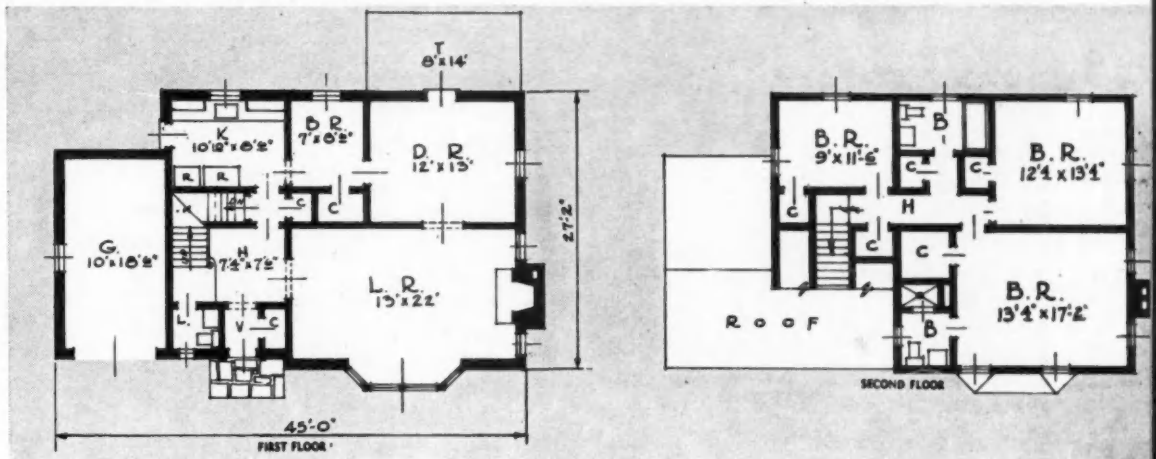
SUBSTANTIAL, well insulated Colonial homes like the above are being built by Loft. The two above designs have the same plan, which is a well laid out 24' x 28' house with a 12' x 18' living room. Walter D. Spelman, architect.

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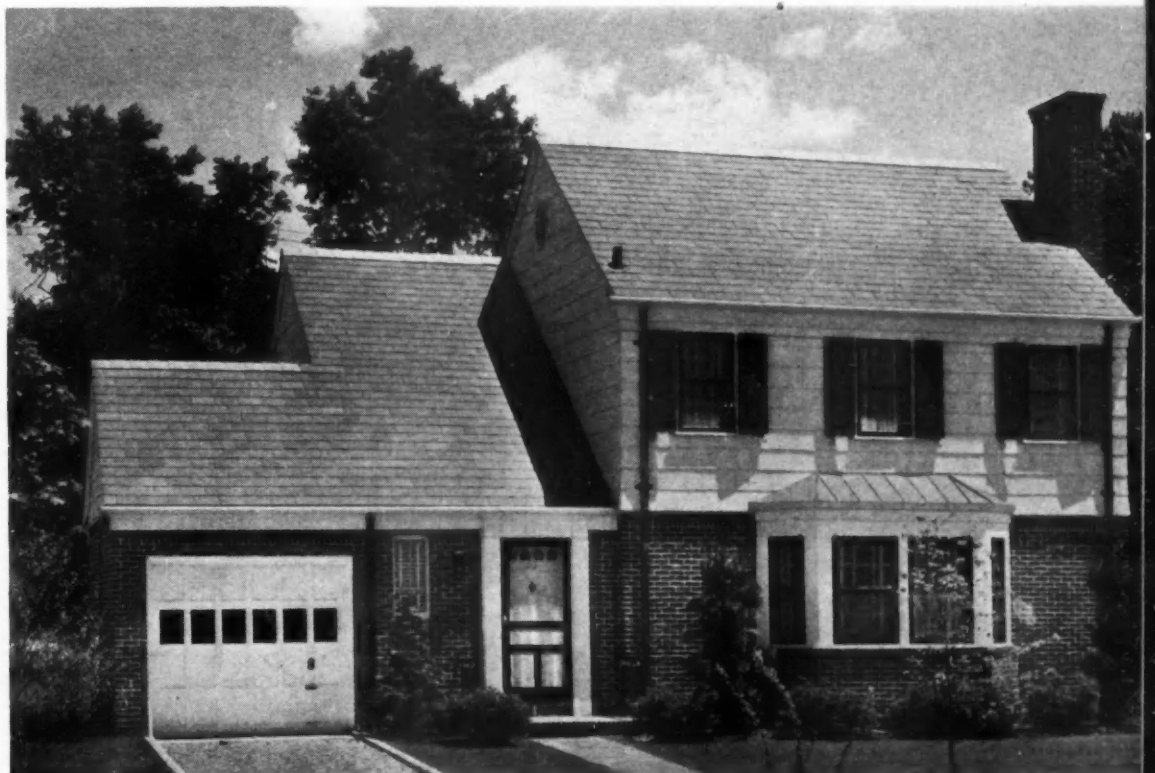


Photos by Devere Baker

PANORAMA VIEW of entrance to Loft Estates, where every home buyer shares use of an eight-acre lake, a well equipped clubhouse, and the natural beauties of the estate with its owner, George W. Loft, prominent millionaire candy manufacturer. Sixty-five houses have already been built. Two additional Loft designs are presented on pages 64 and 65.



FLOOR PLAN of Loft Estates house, at right, features 13' x 22' living room with attractive bay window, convenient lavatory off front hall, three bedrooms and two baths upstairs. House is 45' x 27' 2" in size, including the attached garage.



LOFT HOMES feature such permanent materials as Bangor slate roofs, brick and stone exteriors, 4-in. mineral wool insulation, copper pipe, white lead and oil paint, oil fired winter air conditioning systems.

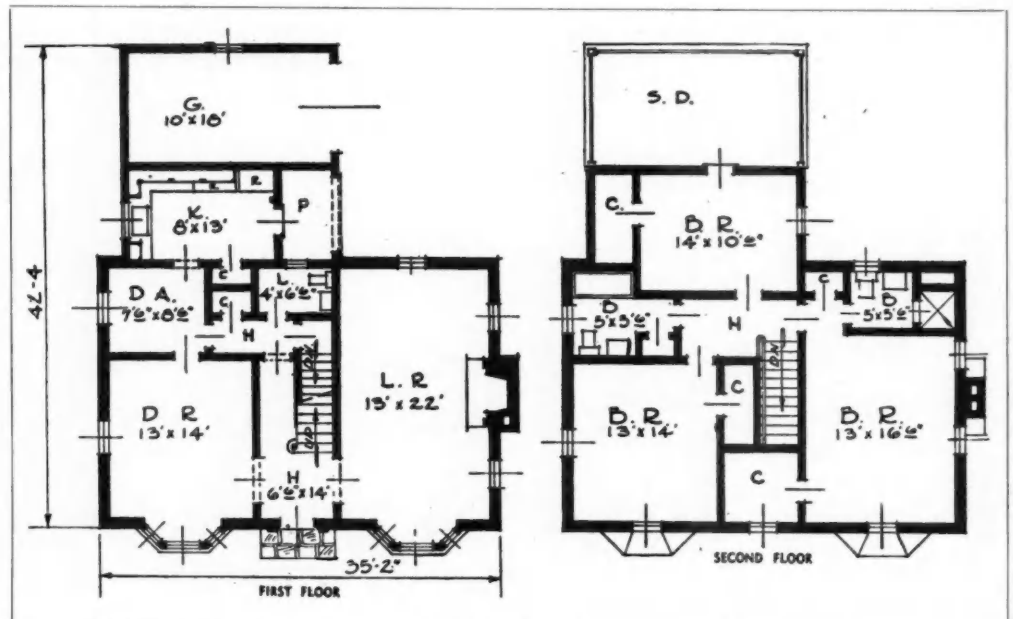


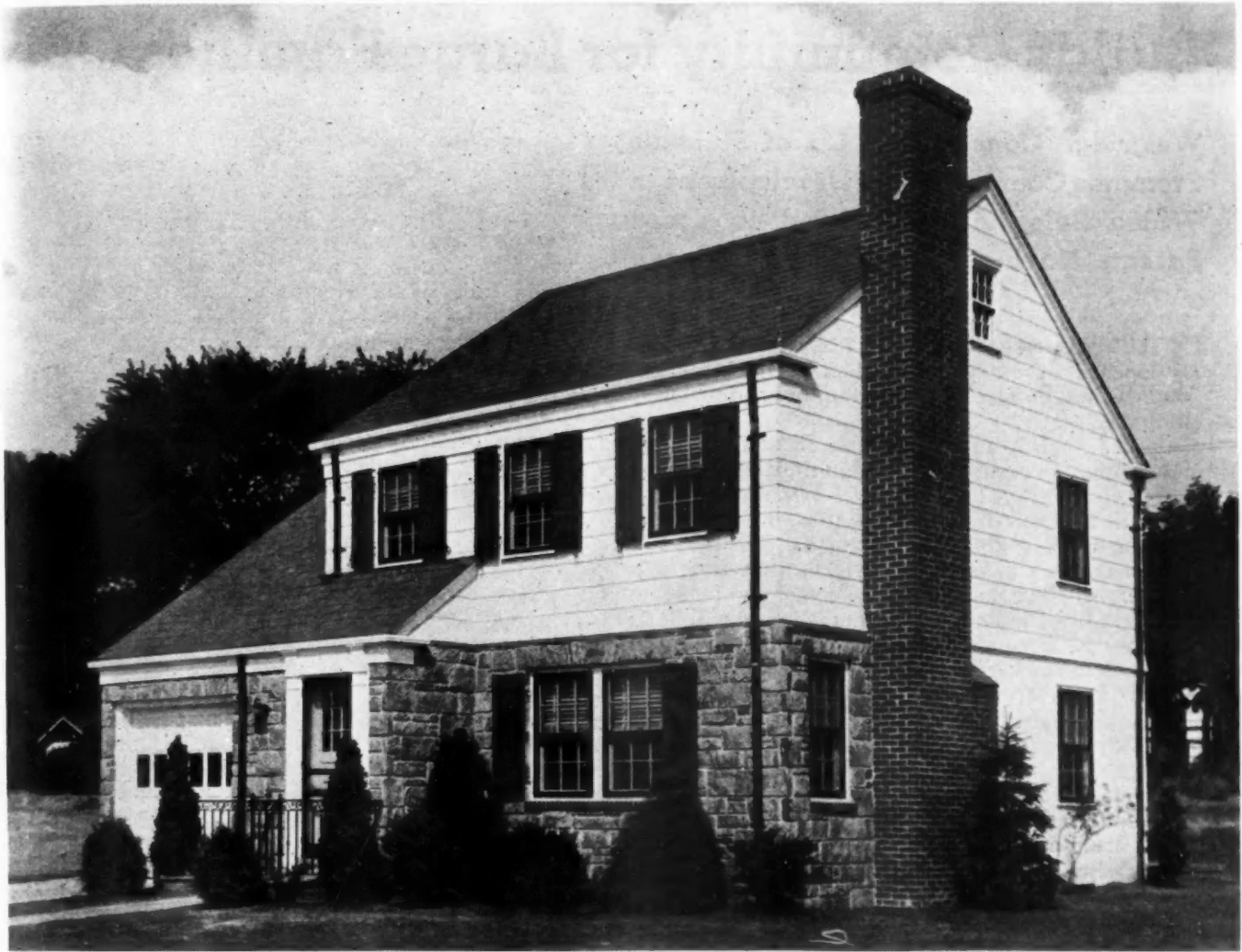
BUILT-UP CORNICE, bay windows with standing-seam copper roofs, and a wrought-iron entrance railing contribute to appeal of this Loft Estates home designed by Walter D. Spelman.

Georgian Colonial—7 Rooms, 3 Baths

FRAMED CERTIFICATE on an inside wall describes and guarantees the complete 4-in. mineral wool insulation used on side walls and second floor ceiling of this Loft home. House is 35' 2" x 42' 4", including garage and kitchen wing at rear.

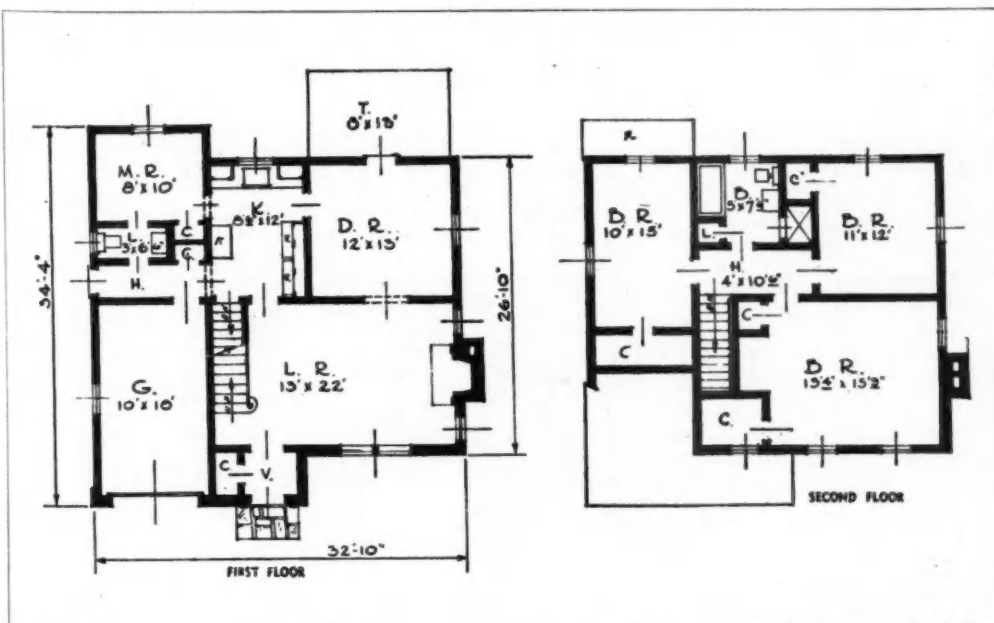
TWO BATHS, downstairs lavatory, a sun porch, and attached garage are features of the floor plan. The 13' x 22' living room is unusually well arranged, with exposure on three sides. The house is placed on a 6,000 sq. ft. landscaped plot.





THIS SUBSTANTIAL Loft home is one of 65 that have been built on the millionaire candy manufacturer's private estate. It has seven rooms, bath and lavatory; story appears on pages 62 and 63.

Stone and Shingle Loft Home—32' 10" x 26' 10"



AN UNUSUALLY LIVABLE floor plan is provided in this well laid out house, the main part of which is only 32' 10" x 26' 10". The built-in garage has a door leading to a back hall which leads to the rest of the house. The convenient lavatory also serves the maid's room off kitchen.

THE HOUSE is substantially constructed, with a slate roof, stone and asbestos cement shingle front. An attractive feature is the open terrace off the dining room.

Builds Community for Large Families Only!

Westridge Construction Co. of St. Louis Promotes Country Home Development in Which Sales Are Restricted to Those Parents Having Four or More Children

THE Westridge Construction Co. of St. Louis has opened a country development in which the sale of new houses is restricted to families of four or more children.

Opened on July 15 of last year, 35 of the 50 houses under construction had been sold in the first seven weeks in this community, located a mile west of Overland, a St. Louis suburb. Fifty more houses, or 100 in all, are planned for this home development.

To make this unusual subdivision attractive to parents, two small parks and a playground and two church sites have been laid out. A swimming pool will be built next spring. Free bus service is provided to public and parochial schools. On the day before the school term opened, a Westridge Construction Co. representative called at all of the houses occupied at the time and asked the mothers how many children they were entering, and to which school they wished to send their boys and girls. School facilities had been previously investigated, and the management satisfied that the local system could handle an influx of new pupils.

Advertised in the St. Louis metropolitan newspapers as a "Subdivision Dedicated to Large Families Only," this community of homes on one-half acre lots has attracted unusually large throngs. Many, of course, were "lookers," but a number of applicants were families with less than four children, or none at all, even though it was plainly stated on a big billboard at the subdivision entrance that "Sales of these Homes are Restricted to Families of Four or More Children."

A studio couch in the living room, or two beds in one of the bedrooms of these three-bedroom bungalows provide comfortable sleeping quarters for five or more children and the parents. All bungalows have four closets, one to each bedroom and the kitchen. The dining room is eliminated in favor of the third bedroom. The kitchen is large so that adequate space will be provided for serving the meals.

The Westridge Company is "flooded" with letters and "personal appeals" from mothers and even children of large families who anxiously ask for advice on how a home in this subdivision, known as Mary Ridge, can be financed. While the father has a steady job, the financing details of even these moderate priced homes are apparently a problem to many large families of moderate means.

ONE of the Westridge Construction Co. newspaper advertisements in which the novel sales approach is made to "large families only." A hundred houses are planned.

To sell these homes, the Westridge Company is offering a series of "options," without extra charges, providing certain owner preferences at moderate extra charges and producing a house of proven quality on a lot double the ordinary size offered at this and higher prices.

A major factor in the fast turnover of the homes at Mary Ridge is the oversize lots which are 80 feet wide and 240 feet deep. With one-half acre of ground, the home owner can plant a garden or fruit trees, or sell one-half of the lot at an estimated profit of seven to eight dollars a foot. A sewer system is also provided for the unimproved part of the one-half acre of ground, and the future buyer when building his house will only have a connecting charge to pay.

The series of "options" worked out without extra costs include choices of color of roof, color of tile in bathroom, wallpaper, exterior color trim and interior wood finish.

At an extra charge, home buyers may have linoleum in the kitchen, a smooth plaster, a bungalow exterior of wood siding in place of asbestos shingle, and the choice of a plaster interior in an asbestos shingle or a wood siding house.

In order to avoid duplication in outside appearances of adjacent homes, brick, asbestos shingle and wood siding bungalows are intermingled. Then there is a variation in roof colors, with slate green and slate blue offered for a selection.

The three-bedroom bungalows have a living room, large kitchen, complete bath and garage in basement. A steel sink cabinet is regular equipment in the kitchen. Bathroom floors are of tile.

For the five-room asbestos-shingle home, the buyer pays \$275 cash down, and monthly payments of \$22.36 including taxes, principal and interest, fire and tornado insurance. For the five-room brick bungalow, the price is \$250 cash down and payments of \$25.61 a month. The financing is managed by private building and loan associations.

The bungalows are delivered to the purchaser as a complete home, ready for occupancy, and include sodding and shrubbery, a "stepping stone" walk, crushed rock drive and screened doors and windows.

Mary Ridge has asphalt top streets, street lights, complete sewers, gas, water and electricity. There is a short

A Subdivision Dedicated to

LARGE FAMILIES ONLY!

(10.100 WEST ON ST. CHARLES ROCK ROAD)
"Sale of These Homes Are Restricted to Families of Four or More Children"



3-Bedroom
BRICK
Bungalow

\$3150

- 3 Bedrooms
- Living Room
- Lar. & K. L. H.
- Complete Bath
- Garage in Basement
- Home & Are Designed Especially for Large Families Only.
- Approx. 1/2 Acre of Ground With Each Home.

\$250 CASH DOWN

Compare This MONTHLY PAYMENT With Your Present Rental Principal and Interest... \$19.95
Approx. Monthly Taxes... \$4.65
Fire & Tornado Insurance, \$1.66

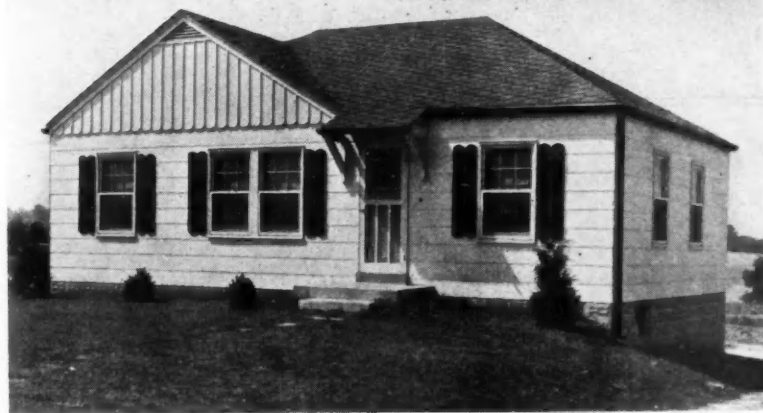
\$25.61 PER MO.

Including Taxes and Insurance

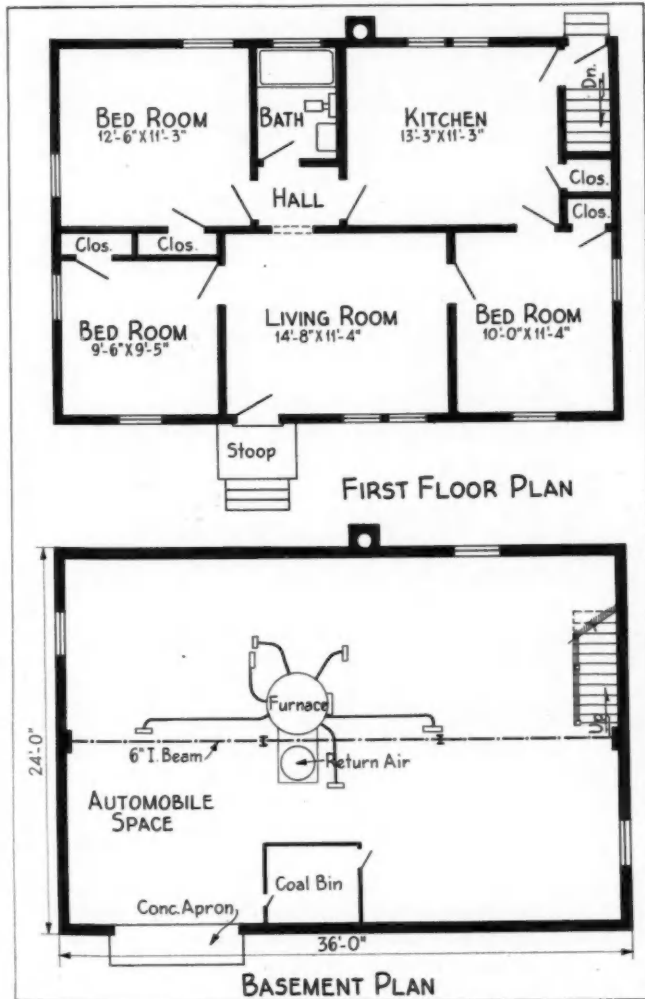
Macadam Streets—Complete Sewers—Gas—Water and Electric. SHORT WALK TO ONE CAR FARE ANYWHERE IN ST. LOUIS. Free School Bus to Public and Parochial Schools for 1940 and 1941. NOTE: We Reserve Right to Pass on Eligibility of Applicants. These homes will not be sold for speculation. LOCATION: East Side of St. Charles Rock Rd., 1 Mile West of Woodson Rd.

WESTRIDGE CONSTRUCTION CO

1 MILE WEST OF WOODSON ROAD ON ST. CHARLES ROAD



LEFT: Two typical Westridge homes near St. Louis are exterior variations of the basic plan shown below, and containing three bedrooms, large kitchen-dining room.



walk to a 1-car fare to anywhere in the metropolis of St. Louis. The St. Louis County highway department has accepted the streets and will maintain them. Mary Ridge residents have all city conveniences but pay the lower tax rate prevalent in the county.

The brick bungalows are of 9-inch brick and tile construction, with plaster, craftex finished inside. The asbestos shingle bungalows have asphalt paper, 1-inch sheathing under the shingle and 1/2-inch plaster or gypsum board on the inside of the studs. Walls are papered.

The floors have a 1-inch subfloor, asphalt paper and 13/16-inch No. 1 hardwood floor. All floors are oak except the linoleum in the bathroom, the joints of which are all cemented and taped. Floor joists are supported by a steel beam and two steel columns.

All bungalows have a full basement with a foundation of concrete block on a steel-reinforced concrete footing. The basement floor is finished in 3-inch concrete. A warm-air furnace and a gas hot water heater are installed in the basement.

The homes will not be sold for speculation. Credit ability and character of each applicant are passed upon by the management before he is referred to the finance association. Applicants are shown about the display homes only by a salaried representative of the Westridge Company.

In cutting costs, the Westridge Company, which is a division of the Ball Lumber and Supply Co. of Clayton, Mo., applies careful planning and specialization to subdivision operations.

Costs Estimated for Each Operation

An estimated cost for each and every operation is worked out at the Clayton headquarters, where a complete lumber yard, building materials' warehouse and offices are maintained. A cost control system is set up in an office in the new subdivision, where the construction superintendent can see how the cost on every operation is running at any time and compare it with the headquarters' estimates.

Contractors follow construction from one Ball Company development to the next one, and their crews have fairly steady work throughout the year except for the bad weather season. Materials and equipment are positively delivered "on time" to each house operation.

This large St. Louis house construction firm designs and supervises the building of all the homes. All details from the buying of land for a new subdivision to the advertising and selling of the finished houses are under the company's control.

The Ball Company, at one time exclusively engaged in the lumber and building materials' business, entered the house building industry in 1932 and has since built 2000 homes in the city of St. Louis and in St. Louis County.



GARAGE WING gives impressive length to this Westfield, N.J., house built by Roy Eido. Ray O. Peck, architect.

Colonial Cottage Type for the Country

ROY EIDO of Westfield, N.J., built this story-and-a-half Colonial cottage on a large wooded plot in Wychwood, from plans by Ray O. Peck. The design follows the current trend for country homes to "spread out." This effect is achieved by placing the garage, kitchen and breakfast nook in a low wing at the right. Plumbing lines were placed to permit the addition of extra rooms and a bath upstairs later on.

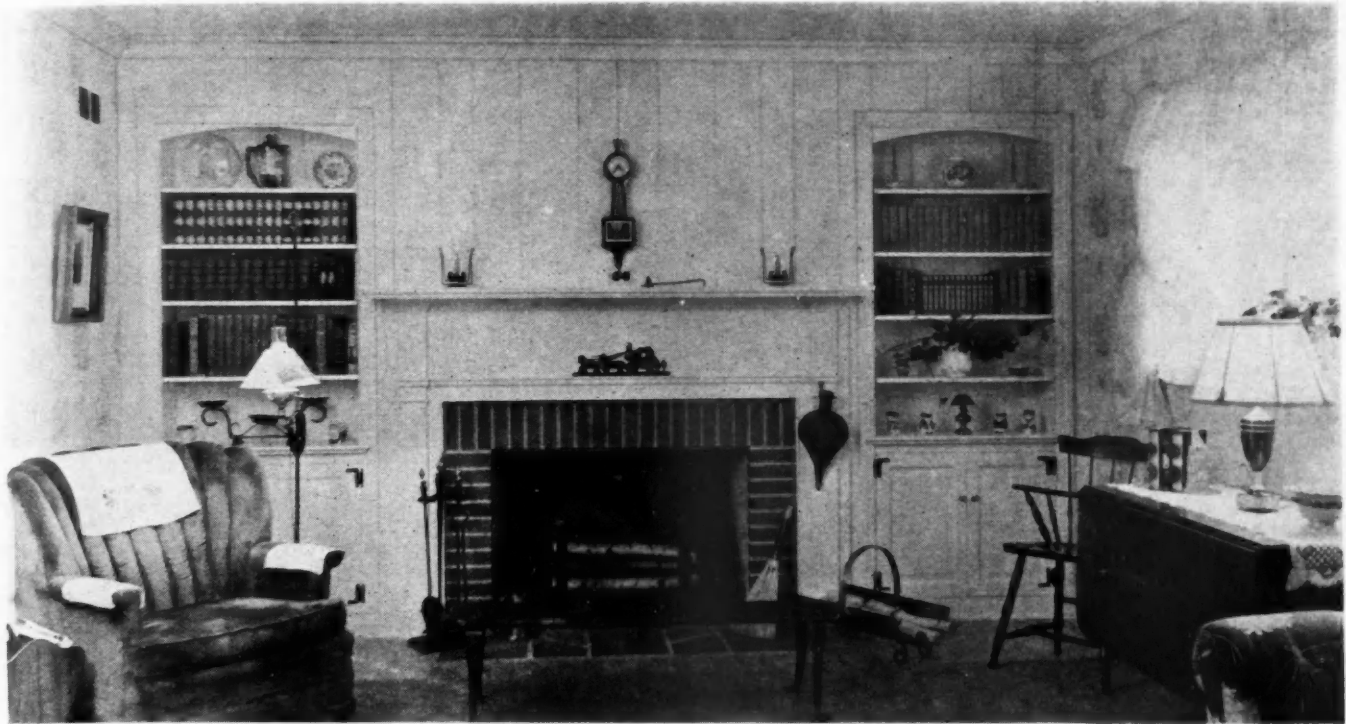
One of the most attractive features is the use of random-width pine boards across the fireplace end of

the living room and to line the enclosed stairway. The dining room bay window is also most attractive and is flanked by well designed stock china cabinets. Materials and equipment selected by Builder Eido include Curtis millwork and cabinets, Overhead garage doors, a Thatcher direct-fired winter air conditioning system, 4 in. U. S. G. mineral wool, Revere copper tubing, Standard Sanitary fixtures. Side walls and roof are covered with Certigrade red cedar shingles with Homasote panels in the gable ends, as seen in view above.

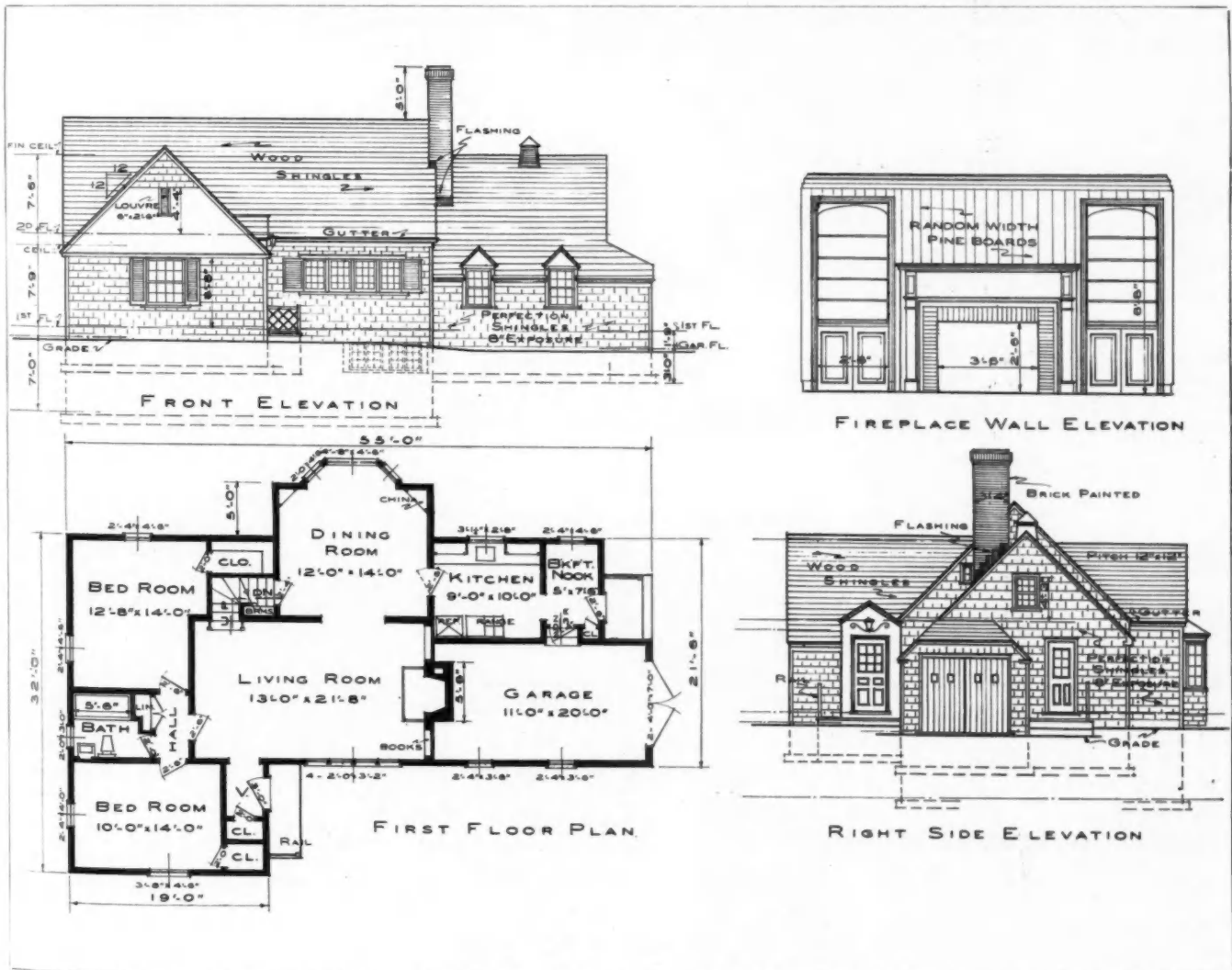


CHARMING BAY WINDOW, flanked by stock corner china cabinets, dominates the 12' x 14' dining room. Modern wallpaper and fixtures complete the effect.

SIMPLE, CLOSED STAIRWAY to second floor is paneled in vertical pine boards, random width; minimum amount of space is occupied by stairs.



END OF LIVING ROOM is attractively paneled in random-width pine boards; mantel and bookcases are of stock Colonial design.



PLANS AND ELEVATIONS of Wychwood house show unusual arrangement of rooms, with kitchen and garage in low wing at right. Over-all length is 55', and the cubage about 34,000. There is ample space upstairs for additional rooms and a bath.

THE front view of this attractive stone veneered country home near Bel Air, Md., conceals its true size.

Rustic Enough for the Country—

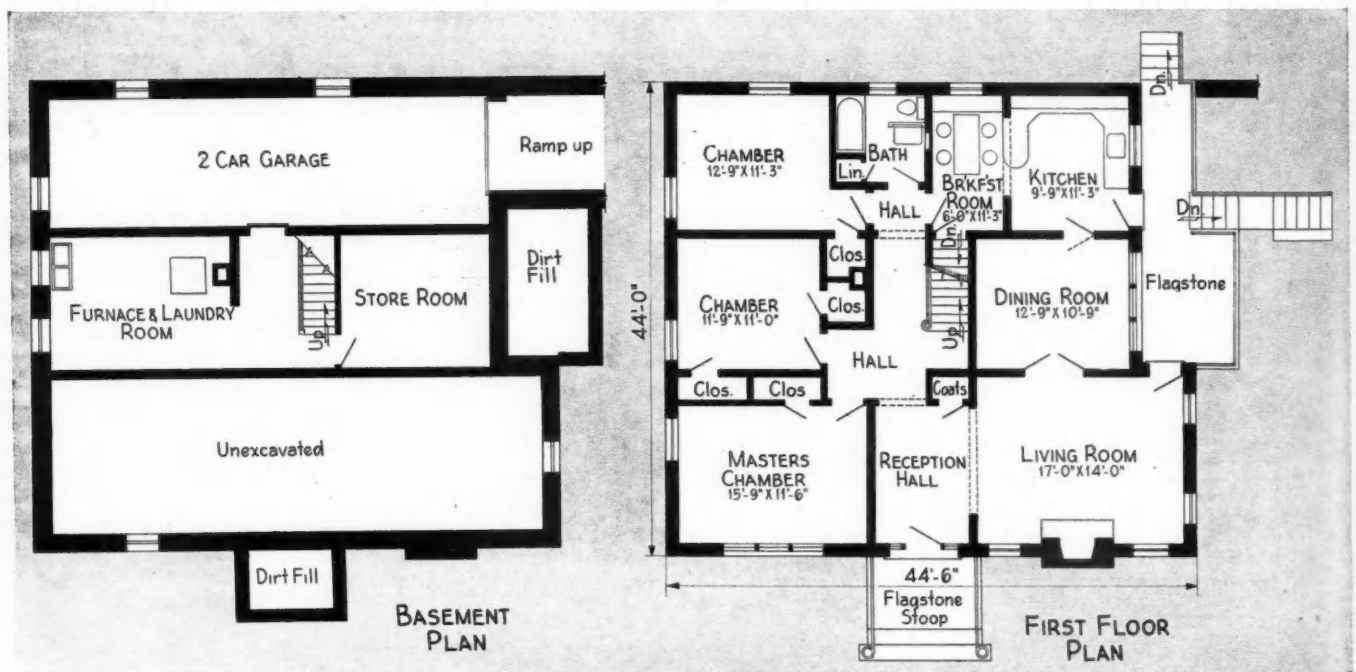


FAR different from the usual run of rural houses in both plan and exterior, this design may offer inspiration to builders looking for unique features that might be used in country housing now being planned for construction this spring or summer, for use either as vacation or year 'round homes.

This rustic and attractive home was designed for the Livezey Lumber Company, Aberdeen, Md., by Kendall Duff and built near Bel Air by H. Edward Coale to fit its wooded site perfectly. From the front it looks like a simple Cape Cod type arrangement done in colorful stone veneer with slate roof, but at the right side and rear, due to a drop-off in the property, its exposed 2½-story size can be appreciated.

As will be noticed in the plan, the basement provides for a two-car garage and space for utilities in the excavated portion. The six rooms on the first floor are arranged around the reception and stair halls. The bath is conveniently located at the rear, and a covered flagstone terrace overlooking the surrounding natural oak grove is accessible from both kitchen and living room. There are three bedrooms provided on the first floor and the stairway to additional space above is located in the center hall. The master bedroom can be provided with another adjacent closet, since the

THE side and rear view of this same home, designed by Kendall Duff and built by H. Edward Coale, shows how sloping site was used to advantage for living terrace overlooking fine view and two-car garage in basement.



THE ROOMS in this plan are grouped in an unusual but practical manner around the center stair hall for good circulation.

with Convenience of City Living

LIVING room carries out the rustic atmosphere with natural stone fireplace and knotty pine paneled walls.

center chamber, which is the smallest of the three, has two at present.

The breakfast room is equipped with a built-in bench and restaurant-type tubular chrome stools and table, as illustrated below. Walls are finished with Armstrong's Monowall tile board, the same material also being used in the streamlined kitchen. Living room has a cut stone fireplace and mantel, walls in knotty pine paneling similar to that used in the master bedroom and stair hall (below at right). The dining room and two smaller bedrooms, as well as the balance of the house, have dry-wall construction of Nu-Wood plank and board ceilings.

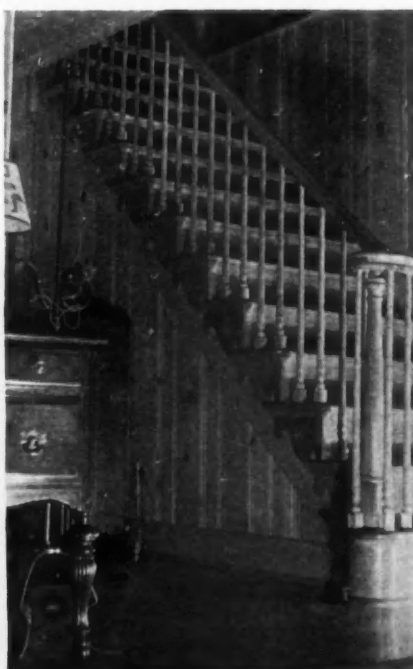
The floors throughout are oak except tile in the bath and linoleum in the kitchen and breakfast room.

Quality construction materials and equipment have been featured throughout and also include copper gutters, flashings and downspouts, oil-fired winter conditioning system, Standard plumbing fixtures, and well detailed millwork.

These points, together with a very livable floor plan, bring to this home the advantages of urban living while maintaining the uncrowded, attractive country setting. The over-all size is approximately 44 feet square, with cubic contents of 36,700 cubic feet.



THE dining room, like other rooms of the house, is finished with dry-wall type of construction; in this case, as illustrated at the right, Nu-Wood decorative plank applied vertically was the material selected for the walls.



ALTHOUGH the house otherwise has a harmonious rustic charm, kitchen and breakfast room are efficiently modern.



Houston Duplex Offers 3-Bedroom Units

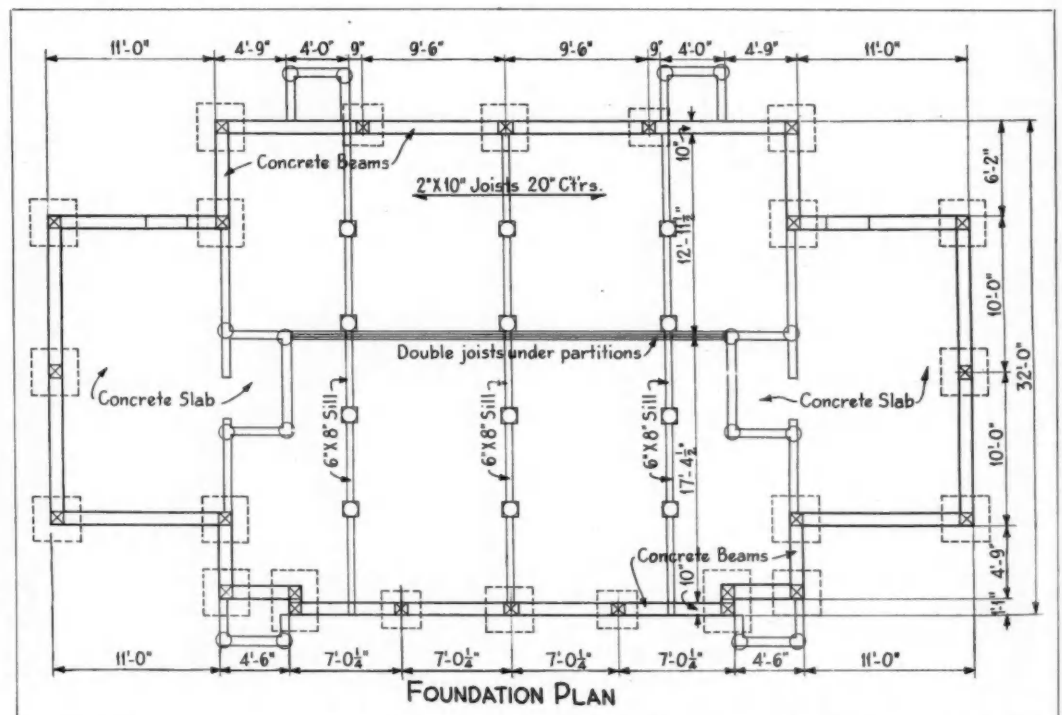
THIS moderate sized duplex design is of unusual interest because each unit has three bedrooms instead of two. This was achieved by Tom C. Rhodes, Houston architect, by attaching garages on both sides and putting an extra room above each to be used as den, maid's room or third bedroom.

Kelly & Kelly, Houston builders, erected this duplex; the convenience of the design and general attractiveness are indicated by its sale before completion.

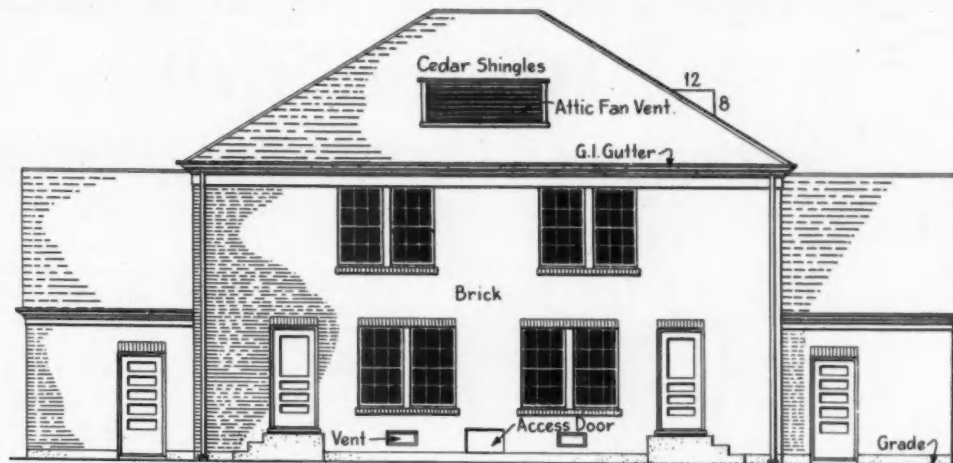
Since heating and cooling, with emphasis on the latter, are particularly important in that section of the

country, these problems were given careful consideration. Cross ventilation in all rooms where possible, plus the use of an attic ventilating fan, give maximum coolness in summer. For further comfort, two of the bedrooms have south or east exposures. Attaching the garages, each of which has its own drive, eliminated one of the problems frequently arising in duplex design—the embarrassment of one of the tenants when the other parks his car in a common drive which leads to rear garages. The overall dimensions are 60' x 32'; contents, 34,840 cu. ft.

THE foundation of this Houston, Tex., duplex (pictured above) uses a novel system of footings, piers and beams detailed at the right. There is no excavated basement space; heating is done with gas units.

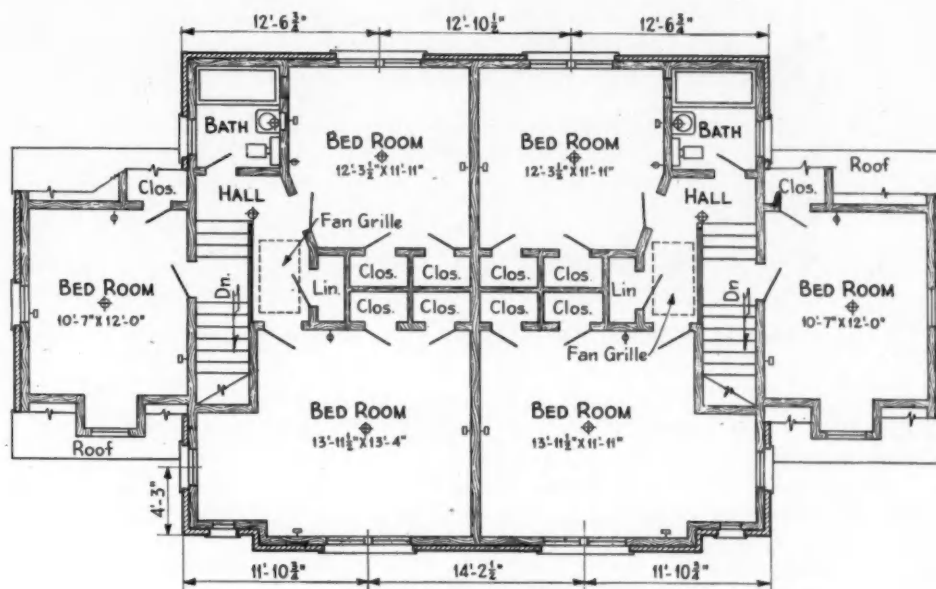


THE rear elevation of this Houston, Tex., duplex, built by Kelly & Kelly, shows the location of the vent for the attic fan. Front view is directly opposite; the construction is brick veneer with interior finish in Textone on Gold Bond plaster base. Roof is of cedar shingles on 2 x 6 rafters. Balsam-Wool is used above the ceiling.

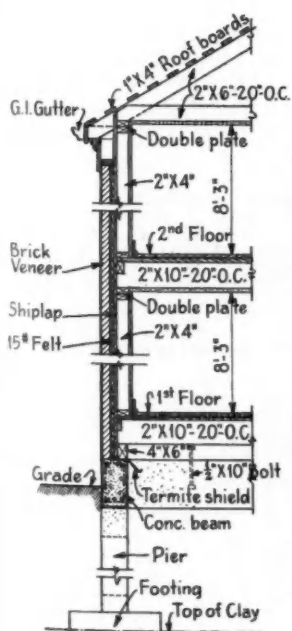


REAR ELEVATION

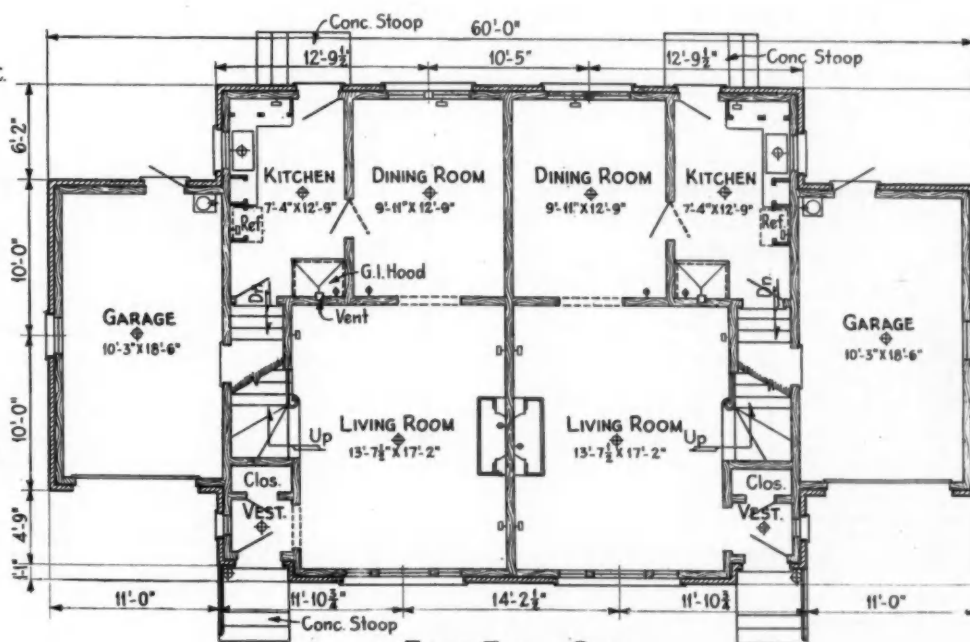
ONE of the outstanding features of the plan is the provision of ample closet space, there being seven in each unit. Oak floors are laid over 2 x 10 joists. Standard Sanitary fixtures are used throughout. Water heaters are located in the corners of the garages which are equipped with upward-acting garage doors.



SECOND FLOOR PLAN



WALL SECTION



FIRST FLOOR PLAN

Garage Modernized into Rent-Paying Modern Dwelling

Low cost, no structural changes. Benson Eschenbach, architect

By G. Harris Danzberger



BEFORE MODERNIZING, the old garage looked like this, a liability to its Chappaqua, N.Y., owners.

HERE is an unusual demonstration of skillful modernizing for profit.

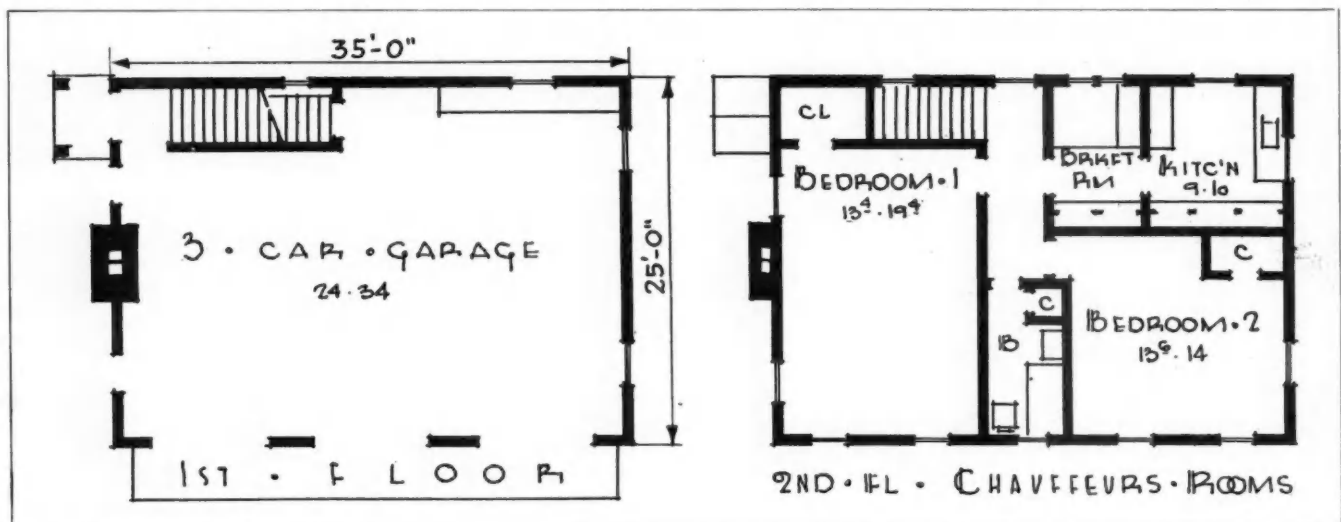
Architect Benson Eschenbach of Scarsdale, N. Y., was told not to make any major exterior or structural changes and to keep the cost under \$5,000.

Pictures show the result—a practically worthless structure transformed into a charming, livable, six-room and three-bath home. The contractor was W. Russell Keefe.

Economy was the watchword. Garage doors were removed and used again in a new garage and storage

space under the house. The garage door openings served admirably as bases on which to construct two bays, one off the living room and the other off the dining alcove, opening on a broad flagged terrace. The central garage door was walled in and a trellis constructed against it.

The casement windows in the original garage were removed, but they were not discarded. They were used for kitchen and bathroom windows. New double-hung sash supplanted the casements on the main rooms. An octagonal window took the place of the small casement



BEFORE MODERNIZING, the floor plan of the old 35' x 25' garage looked like this. Building was structurally sound but looked bad. Chauffeur's quarters upstairs were unused.



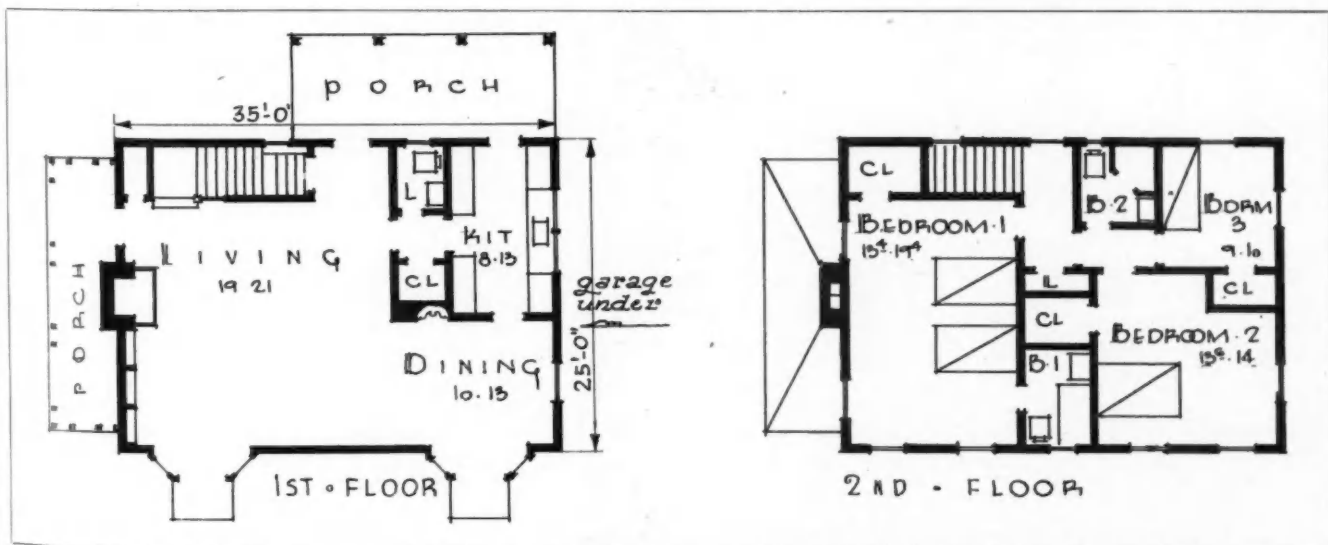
AFTER MODERNIZING, garage had been transformed into this charming six-room, three-bath home. No structural changes were involved.

in the center front. The entire exterior was then restuccoed in white. The added window blinds were painted a deep blue-green.

The interior renovation shows interesting treatment, too. Because of the projecting fireplace, built-in bookshelves were added to take up some of the depth. The supporting column in the garage was neatly concealed in a partition which includes a built-in china closet. The stairway was left largely as it was, except for the first landing. Part of the space the stairs formerly needed was transformed into a clothes closet. The small en-

trance porch was enlarged to almost the entire width of the residence, and a rear porch was added to serve the kitchen. A first-floor lavatory was installed, also, along with an unusually large closet opposite it.

Bedroom 1, with its accompanying bath in the original structure was retained, but bedroom 2 and its closets were changed. The old kitchen and breakfast room were transformed into a third bedroom and a second bath. The third bedroom, however, was kept within the walls of the former kitchen. The old breakfast room became the bath, part of former hall became the linen closet.



MODERNIZED FLOOR PLAN above shows how unusually spacious living quarters, three bedrooms and three baths were provided. French doors open on a broad terrace for outdoor living and dining.



THERE'S FRIENDLY APPEAL in the pleasant front porch and the red cedar shingle exterior. *Photos by Hiland Dale Holt.*

Western Style Brought Up To Date

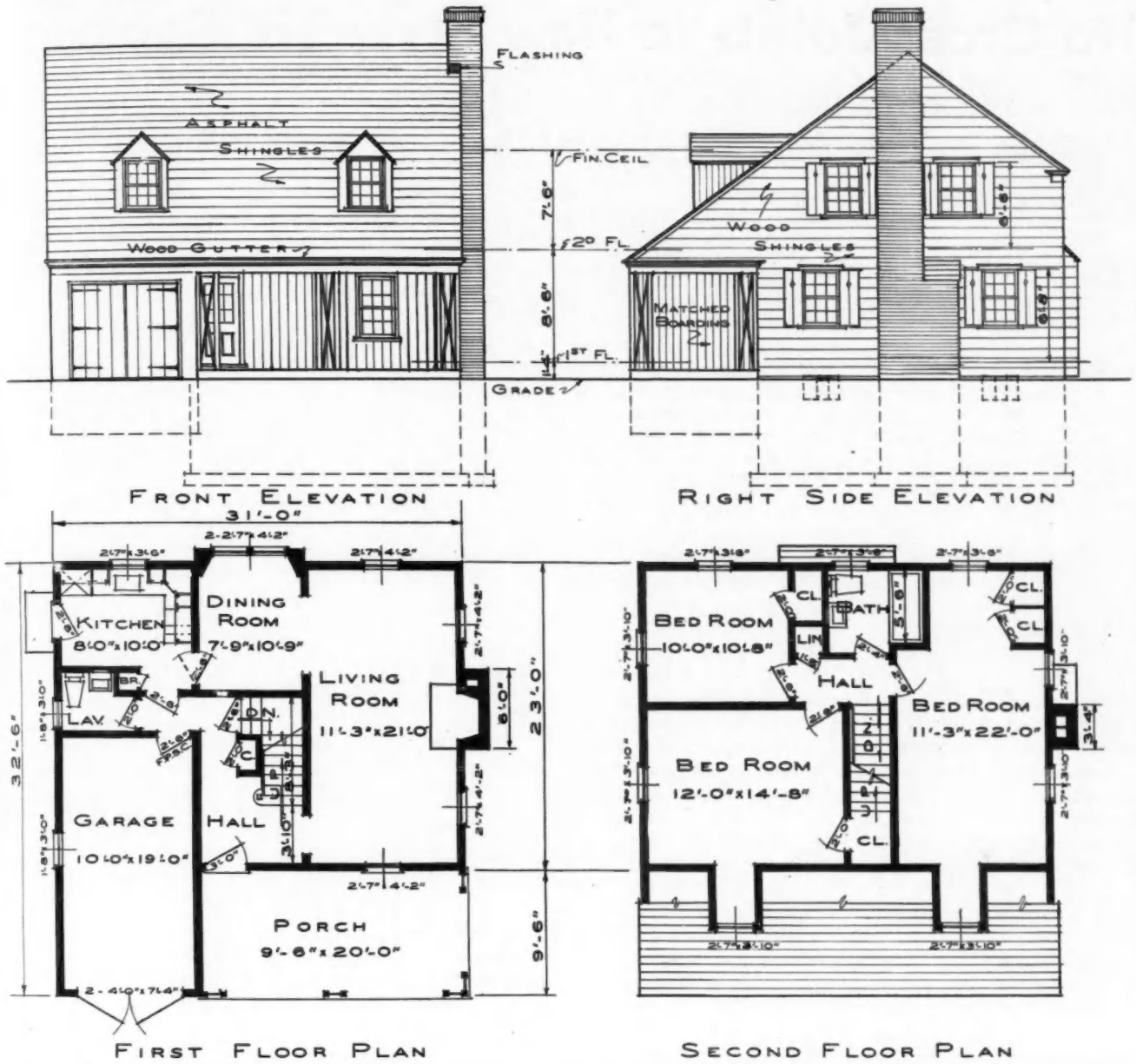


CHEERFUL FIREPLACE with simple pine mantel treatment.

Broad roof lines, homey porch and livable plan feature this new home built by George Wall of West Hartford, Conn. Harold Brown, architect

THIS West Hartford, Conn., home has a friendly, livable look that will appeal to many people. The broad roof sweep and pleasant front porch call to mind some of the houses of the Midwest that, as far as livability was concerned, proved very successful, but which are now widely out of date as to architectural style. This house is in good modern style with nice architectural details, such as the matched white boarding used across the front and the attractive porch columns. It was built by George Wall, well known in the Hartford territory for his substantial houses, and designed by Architect Harold Brown.

Study of the plans show that there is considerable livability in the 31' wide by 32' 6"



ALTHOUGH ONLY 31' x 32' 6", this Wall-built house has six good rooms, plus a built-in garage and 9' 6" x 20' porch. Entrance hall and lavatory arrangement is good. Fine bay window gives character to dining room.

long structure. Cubic contents are about 28,000. The built-in garage has a door leading to a cleverly arranged hall, which connects the front and rear of the house and leads to the downstairs lavatory. Another good feature is the 7' 9" x 10' 9" dining room, which has a fine bay window making it appear spacious.

Builder Wall has equipped the house with a G-E winter air conditioning system, U. S. G. insulation, red cedar shingle exterior, Armstrong linoleum in kitchen and bath and on walls of bathroom. Ceiling height of the second floor is 7' 6"—in keeping with the low ceiling tradition of the Hartford area.



No Cross-Joints in New Style Tin Roofs

Progress in Terne Plate Manufacture Brings Old-Time Favorite Back into General Use

By C. H. Manion

TERNE plate has been used as a roofing material for more than two centuries, through which period this alloy coated steel product has maintained a reputation for reliability. The combination of a steel base plate and terne coating (about one-fourth tin and three-fourths lead) provides strength and weather resistance, and retards fire; and it has made the so-called "tin roof" one of the most durable of coverings.

While it is true that the terne roof has not been "in vogue" for some years, at no time has its use been abandoned. There are sections of the country—districts in Pennsylvania, for example—where it has always been very much *the* roof. It has likewise retained popularity with many home owners and builders, and with an appreciable number of contractors and architects engaged in institutional building.

A renewed interest in terne roofing is now augmenting this long continuing reservoir of acceptance. Re-appraisal of its service qualities and dignified appearance may be a factor in this resurgence, but perhaps the major impetus stems from recent improvements in production practice, culminating in the replacement of small roofing sheets by continuous strips. This improvement has significance for the home owner and contractor because it results in more efficient construction, lower maintenance costs, and better appearance.

Most advances in the manufacture of terne roofing have resulted from refinements in the production of the base plate. Modern melting practice develops a much purer base plate; and careful processing under precision controls produces sheets that are more ductile, of greater tensile strength and toughness, and better able to take a

uniform coating of tin and lead. It was the improvement of the rolling mill in particular that stimulated alloy coated steel roofing manufacture, and opened up new opportunities and problems to producers trying to keep pace with sheet development. To begin with, the rolling mill permitted production of thin sheets in place of the old hammered plate. This made possible a light steel base for the terne metal and meant that a correspondingly lighter supporting structure could be used without sacrifice of roofing durability.

Not only better steel sheets but bigger ones became the objective, although the matter of coating the larger sheets uniformly with the terne metal was a difficult problem from the first. Originally, 7 by 10 inch sheets were the largest that could be coated—and incidentally, all standard terne plate made since has been in multiples of those earliest dimensions. The Welsh first made 14 by 20 inch plate and had brought the dimensions up to 28 by 20 when U. S. production of tin and terne plate began (about 1900).

The small size of the terne sheets necessitated a large number of cross seams on any roof, these seams usually being soldered at the factory to make rolls. These seams were the Achilles heel of terne roofing, since they multiplied the possibility of corrosion, which could spread underneath the protective coating. Moreover, they required occasional resoldering, which—aside from painting—was virtually the only maintenance expense.

The logical aim of the roofing manufacturer, therefore, was to produce larger sheets so as to reduce the number of cross seams. The difficulty of getting a uniform coating over any considerable length persisted for a long time, so that 28 by 20 inches was the maximum size sheet in use until the nineteen thirties. A few years ago, after a trying period of experimentation, the long terne roll (96 by 20 inches) was pioneered by Follansbee Brothers Company—predecessor to the present Follansbee Steel Corporation—one of the first U. S. producers of tin & terne plate. Furthermore, Follansbee began, about 1934, to explore the



A TERNE roof with standing seams adds to the sweeping effect of the design on this residence of medium size.

possibility of doing away with cross seams altogether.

By this time of course, the continuous process strip mill had made this practicable so far as the metal base was concerned. However, the big obstacles to the application of the alloy metal remained. Continuous pickling, a necessary preparatory process, was considered unfeasible, and continuous coating still impossible.

The answer apparently lay in a radically new pickling and coating procedure, and it was on this basis that Follansbee began to work toward a continuous terne and finally succeeded in producing its seamless roll roofing which sells in standard 50 and 100' foot lengths. For the pickling of the light gauge coils Follansbee designed and constructed entirely new equipment, which, together with corresponding new methods, is now patented and in operation. The coating machine and equipment, too, are of unusual design and many times longer than the ordinary alloy coating equipment.

Seamless roll roofing enhances the recognized qualities of the time-honored tin roof and adds new advantages. One of the most obvious benefits is the ease of construction and the economy of labor secured by having a standing seam roof without cross seams; and a similar advantage is gained in lining stop gutters and valleys. Also, the elimination of the seams does away with soldering, leaving painting as the only usual maintenance.

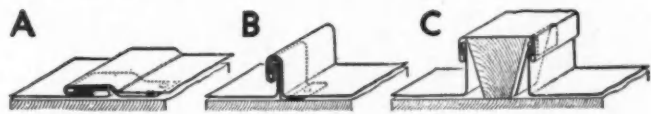
From the standpoint of appearance, the charm of the terne roof has always resulted principally from two features: the sweeping lines, broken only by the cross seams; and the ease with which the roofing could be painted to harmonize with the general color scheme of the building. The seamless roll makes painting easier and emphasizes the smoothness of the flowing lines between the standing seams.

The appeal of the improved product has been demonstrated by a recent marked increase in roofing terne sales, and in a revived interest on the part of builders. Apparently this type of roofing has been stimulated for homes of all sizes. A few months ago one of the biggest builders in Pennsylvania (Holt Construction Company) used a seamless terne roof on one of its model homes in the \$4500-\$5000 class.

Much sentimental interest is attached to the old tin roof. And now it looks as if this old reliable, in modern dress, will continue to contribute to our architecture for some time to come.



SOLDERING the cross seams on the old style terne roof was a considerable labor and maintenance expense, as indicated above. (Taylor Allderdice High School, Pittsburgh, Pa.) BELOW, a close-up of work on the Hooversen Heights school shows standing seam construction and illustrates the contrast between the former small sheets and the new long seamless strips.



THREE types of joints: A—Flat Seam. B—Standing Seam. C—Batten Seam.



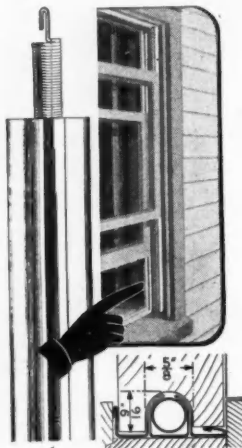
THIS seamless terne roof, painted an attractive, deep green, illustrates how the old tin roof has been dressed up to keep pace with modern home design and construction.

SERVICE TO READERS

EACH ITEM in this department is numbered for convenience of readers. Please use the coupon on page 86 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

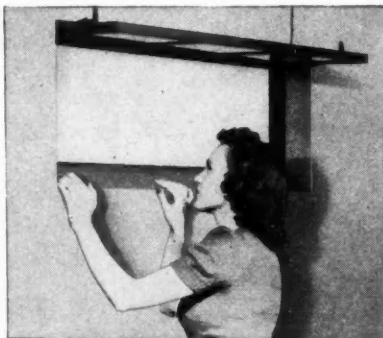
AB350 The Protex Weatherstrip Mfg. Co., Chicago, has a new combination unit of weatherstrip and spring sash balance named "Kingstrip," to be used with inexpensive, weightless plank frames. This new equipment may



"Kingstrip" balance and weatherstrip for D-H sash in plank frame.

also be used for old frames; simply covers up old pulley holes with new metal runway for both sash. "Kingstrip" consists of a double metal housing of aluminum alloy with enclosed spring of properly tempered rust proof metal.

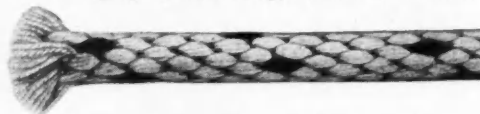
AB351 Gabriel Steel Co., Detroit, recommends top opening steel windows for basements, to provide better ventilation and eliminate draft.



Gabriel basement window.

Notice that this window has the exclusive Gabriel side-arm locking detail; also, the window has top or bottom opening, providing any desired amount of ventilation and draft control. Comes in eight popular sizes.

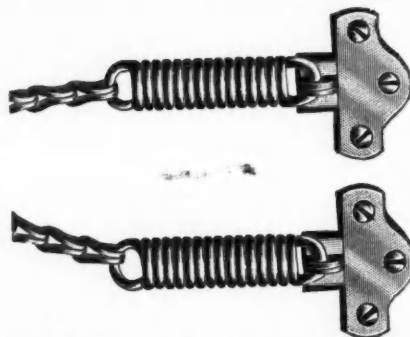
AB352 In the face of many experiments and developments in window hanging technique, during the past decade and more, the management of the Samson Cordage Works, Boston, Mass., still maintains that Samson spot sash cord with suitable weights and pulleys is the time-tested method of hanging double-hung windows. Samson



Samson Spot (trade mark) sash cord.

spot cord is made in one quality only and can be distinguished at a glance by the colored spots (trade mark). The Samson people warrant it to give satisfactory service when used with pulleys and weights as recommended.

AB353 The Shelby spring and chain door stop controls the swing of a garage door, protecting both the door and the automobile. A gust of wind cannot tear a door, so pro-



Spring chain stop for swinging garage doors.

tected, off its hinges. The springs in the chain form an excellent shock absorber and it is very simple to install. Once installed it performs a life time of useful service as all parts are heavily Cadmium plated against rust. The brackets are small and neat, yet strong; apply one to the inside top of door, the other to the head jamb with the door open to its desired full-open position. The two coil springs and connecting chain measure 23½ inches. This equipment is packed one in an envelope complete with screws and directions for installing, one dozen envelopes in a carton. Obtainable from The Shelby Spring Hinge Co., Shelby, O., through lumber and hardware dealers.

AB354 "Concrete Handbook of Permanent Farm Construction" is a new publication of 72 pages and covers from the Portland Cement Assn., 33 W. Grand Ave., Chicago. It is a revision of the earlier smaller book on this subject, "Permanent Farm Construction." It answers all questions on how to build miscellaneous farm structures of good concrete.

AB355 "Architects Handbook on Knapp Metal Trim" is a 12 page portfolio of architectural drawings showing recommended installations of Knapp sanitary metal trim for door and window openings, base, rails, picture moulds, corner beads, etc.—Knapp Bros. Manufacturing Co., Joliet, Ill.

AB356 "Handbook of Special Steels, Their Properties, Uses, Fabricators" is a spirally bound handbook of 124 pages from the Allegheny Ludlum Steel Corp., Pittsburgh. A chapter on stainless steels, including a complete list of Allegheny metal fabricators, is of particular interest to builders. Other chapters have to do with tool steels, with a list of tool manufacturers.

AB357 "Upson Dubl-Thik Fibre Tile" is a 6 page data sheet from The Upson Co., Lockport, N. Y., featuring the new tile-like panel material for kitchens and baths in old and new homes; also for rest rooms, hospitals, cafeterias, stores, etc. Booklet contains directions for applying and finishing these panels.

AB358 "You Are Assured of Better Products When You Specify Huttig Woodwork of Merit" is a 6 page, 3-color data sheet on the manufacturing facilities of the modern Huttig plant at Muscatine, Ia., making Red-E-Fit wood windows, waterproof glued doors and other woodwork of merit.

AB359 "Your Roofing Business" is an impressive brochure of 16 pages and covers by the Asphalt Roofing Industry Bureau, 2 W. 45th St., New York City. It stresses the merchandising features of asphalt roofings and answers many questions of how to assure quality and satisfaction. This booklet is being made available to all asphalt roofing manufacturers and they, rather than the Bureau, will fill requests from dealers and builders.

Readers Service Department Continued to Page 82

FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 86

See What Ro-Way offers you in OVERHEAD TYPE GARAGE DOORS for 1941



5 EXTRA VALUES AT NO EXTRA COST

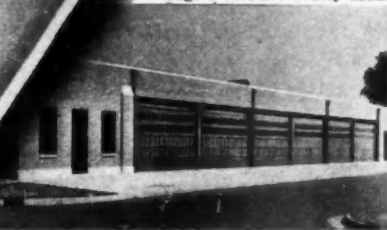
Be sure to investigate these Five Features that insure smoother operation and added years of service . . . "Crow's Foot" Outer Bearing Support . . . "Ro-To Live" Spring . . . "Zip-Lock" Adjustment . . . "Tailor Made" Springs . . . and Parkerized and Painted Hardware.

The Ro-Way Line for 1941 is unusually complete, starting with a popularly priced door for smaller Residence Garages, and offering similar outstanding values to meet every Residential, Industrial and Commercial Door requirement.

Authorized Ro-Way Overhead Type Door Representatives in all principal cities. Write for name of one near you, or ask for Free Ro-Way Door Folders, Prices and Complete Information.

ROWE MANUFACTURING CO.
715 Holton Street, Galesburg, Illinois, U. S. A.

Ro-Way Commercial Garage Doors are widely used.



Burlington Transportation Co. (subsidiary of C.B. & Q.R.R.) uses 13 Heavy Duty Ro-Way Doors in this new building.

Rowe Manufacturing Co.,
715 Holton St., Galesburg, Ill.

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

Name.....

Address.....

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

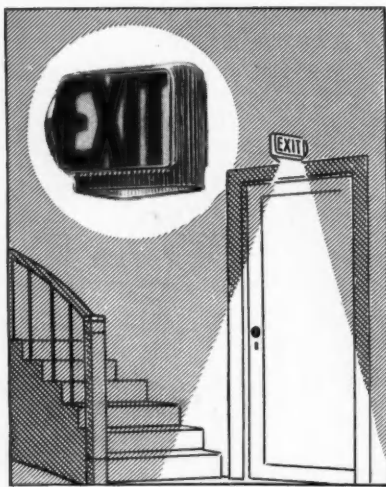
There's a Ro-Way for every Door way!

SERVICE TO READERS

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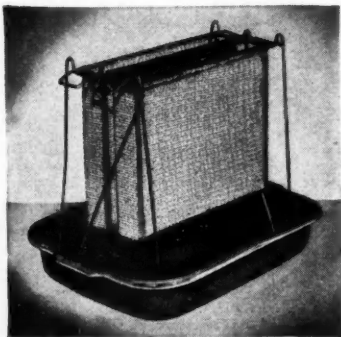
EQUIPMENT ITEMS FOR MODERN BUILDINGS

AB360 Kopp Glass, Inc., Swissvale, Pa., offers a modernistic exit globe quite different from the conventional type. The bottom is open so as to light the door or step below—a decided safety advantage. "Exit" is imprinted on both sides in either 3" or 4" letters on red, green or white glass. They fit standard wall brackets.



New design "Exit" globe lights downward.

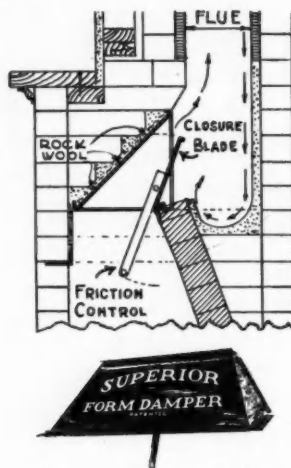
AB361 Many builders are already familiar with the use of Solvay calcium chloride in reducing humidity in basement rooms. The Solvay Sales Corp., New York City, has now de-



Solvay air dryer, size 12 x 12 inches, to keep basements dry.

veloped a simple inexpensive container for holding the calcium chloride and for catching the drippings as the material dissolves. Several builders and real estate promoters are making use of this equipment in the homes they are offering.

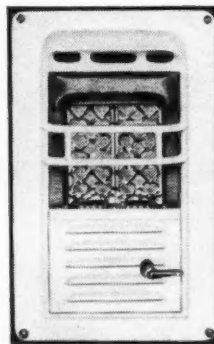
AB362 A damper should be a part of every fireplace. The chimney flue is a direct opening between the home and the outside, and must have a minimum area of 10 per cent of the fireplace opening to insure proper draft when the fire is first lighted. Without a damper to regulate the draft, cold floors would result. The damper renders another very



Section through fireplace with "Superior" damper.

valuable service. It can be entirely closed when the fireplace is not in use, thereby preventing loss of furnace heat. The "Superior" Form Damper, one of the important items of the line of the Superior Fireplace Co., Los Angeles, is a high form and a perfect guide which guarantees proper construction of the most important part of the fireplace, the throat.

No. 6A, Adams gas wall heater for bathrooms.



AB363 An attractive new, small size gas wall heater is offered by Adams Bros. Mfg. Co., Inc., Pittsburgh. The clean, smooth design of the heater frame is an appealing feature. Heater is equipped with the quick, safe, easy-to-light Adams Zipper burner.

AB364 "Your New Home and Your Pocketbook" is the alluring title of a most unusual book of 32 pages and covers by the Home Bureau, General Electric Co., Bridgeport, Conn. It is an illustrated primer of basic facts demonstrating that under present long term mortgage financing it can cost less to live better—that quality equipment pays for itself and more over a 20 year period.

AB365 "Representative Installations of Ingersoll Koolshade Sun Screen" is a new 12 page brochure illustrating and explaining this revolutionary advance in window protection—a quality insect screen that is also an efficient outside venetian blind.—Ingersoll Steel and Disc Div., Borg-Warner Corp., Chicago.

AB366 "Select Your Packaged Bathroom from 12 Winners" is a mighty useful booklet in color—16 pages—presenting a selection of bathroom fixtures all in colors and styles to match.—Eljer Co., Ford City, Pa.

AB367 "Majestic Building Necessities" is a big, new 32 page catalog from The Majestic Co., Huntington, Ind., presenting the Majestic garbage receivers and incinerators, package boxes, fireplace equipment, etc.

AB368 "Fisher Modern Plumbing Fixtures" is a new 72 page catalog from Fisher Brass, Inc., Marysville, O. Six sections include lavatory and shampoo fixtures, bath and shower fixtures, kitchen and sink fixtures.

AB369 Wilson sectionfold overhead garage doors are featured in a new 6 page folder giving recommended specifications and details of installation—The J. G. Wilson Corp., 1841 Broadway, New York City.

AB370 The new automatic water heater developed by Electrol, Inc., Clifton, N. J., is presented in a 4 page data sheet in 2 colors. This is an oil fired storage tank water heater costing only a few cents per day to operate. Dimensions and mechanical details are included.

AB371 "Adlake Windows" are attractively presented in a 6 page data sheet of this title. Presentation is appropriately in aluminum with blue and black for the architectural detail drawings. The Adlake windows are double hung aluminum windows.—The Adams & Westlake Co., Elkhart, Ind.

AB372 "1941 I-XL Deluxe Line of Sectional Kitchen Units" is an 8 page folder of architectural details featuring unit-styled kitchens. Standardized bases, wall cabinets, etc., combine to make compact, modern kitchens at reasonable cost.—The I-XL Furniture Co., Inc., Goshen, Ind.

Readers Service Department Continued to Page 84

FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 86

Why ARKANSAS SOFT PINE SATIN-LIKE INTERIOR TRIM

is free from bleeding and raised grain...

- ① Its easy-to-cut, extra soft texture contains little if any pitch.
- ② What may exist in its natural growth is neutralized during manufacture by curing in humidified air.
- ③ This curing is done in improved steam dry kilns by a seasoning process which retains the wood's natural "life" and soft texture.
- ④ With no pitch present in the finished material, there can be no bleeding through, or discoloration of, paint, enamel or stain.
- ⑤ Dried to correct moisture content (6% to 8%), natural shrinkage occurs before the stock is milled.
- ⑥ This means that "pull" between summer and winter wood (ring growth) is completed while the lumber is still in the rough. The planer then moulds the seasoned strips to pattern, and the finished surface *stays smooth and even.*
- ⑦ Priming coats are absorbed evenly over all the surface, becoming integral with the wood fibre.
- ⑧ Intermediate and final coats thus are applied to a uniform surface free from the hazard of bleeding or raised grain and providing a finished woodwork of enduring beauty.

These are dependable qualities in Arkansas Soft Pine which answer your question, "How will the trim look 5 years from now?" . . . or 25! Because Satin-Like Interior Trim has proven its freedom from these faults in more than 30 years' constant use in thousands of American homes.

Complete information, including grades to specify, stress tables, construction details, trim patterns, painting and finishing instructions, are covered in these FREE BOOKS. Write for your copies today.



Arkansas Soft Pine is trade and grade marked, and sold by retail dealers east of the Rockies.

ARKANSAS SOFT PINE BUREAU

214 BOYLE BUILDING

LITTLE ROCK, ARKANSAS



"This soft texture absorbs paint evenly and holds it . . . there's no bleeding later on."



FRAMING LUMBER, TOO

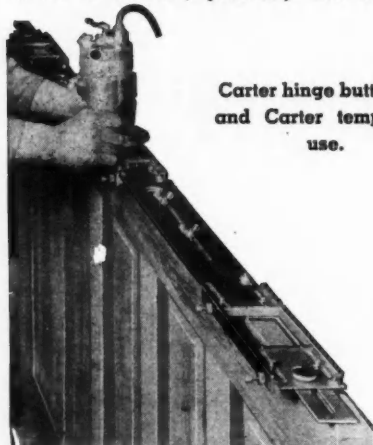
In dimension, sheathing, siding, window jamb and outside trim, the easy cutting, paint holding qualities of Arkansas Soft Pine insure your workmanship and reputation as a builder of better homes. Look for the Trade Mark stamped on the stock. It protects you against substitution.

SERVICE TO READERS

EACH ITEM in this department is numbered for convenience of readers. Please use the coupon on page 86 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.

NEW MODELS, POWER EQUIPMENT & TOOLS

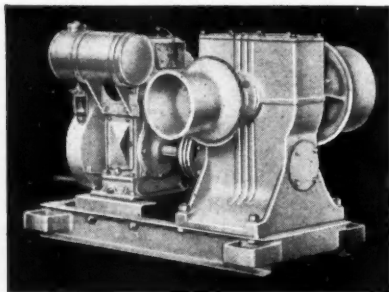
AB373 Use of the Carter Hinge Butt Router and one of the Carter Templets is illustrated (R. L. Carter Div., New Britain, Conn.). The router is used to cut out for butts. It leaves a smooth, perfectly flat surface



Carter hinge butt router and Carter templet in use.

which provides a solid foundation for the butt so that a snug fit is assured and the doors hang properly. By using this electric router the work of cutting out for butts is six times as fast as tedious hand methods. Carter templets are used wherever doors are to be hung and where accurate and uniform work is desired.

AB374 The new C.H. & E. Hitch-Hiker Hoist (C. H. & E. Mfg. Co., Milwaukee) is built on entirely new principle to provide a small hoist at



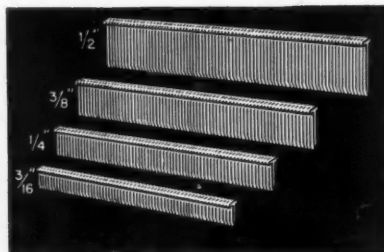
New C.H. & E. Hitch-Hiker hoist.

a low price. It consists of two winch heads driven through an enclosed worm gear drive by a 4 H.P. gasoline engine. The usual hoist clutches and brakes are eliminated to cut down weight and cost. The machine is operated by means of snubbing a rope around the winch head.

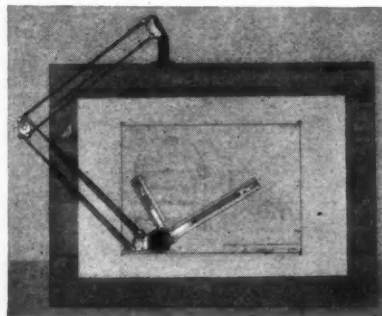
AB375 A one-hand automatic tack-er that drives "tacks" is announced by the A. L. Hansen Mfg. Co., 5059 Ravenswood Ave., Chicago. Known as the Model T-1, this Hansco tacker drives T-head Hansen tacks up to 1/2" lengths,



Model T-1 Hansco tacker that drives Hansen tacks up to 1/2" length. (Below) Tacks in strips of 100.



capable of driving into hard woods and through thin metal or tin. It will tack beading or wood strips around the edge of glass in windows or doors, and does other miscellaneous tacking jobs. Tacker weighs 1 1/2 lbs., is chromium plated and easily portable. Holds a strip of 100 tacks.



"Master-Drafto" drafting machine.

AB376 The Drafto Co., Cochran-ton, Pa., announces production of a new, low priced drafting machine, which takes a maximum size sheet 24 x 36 inches. The arms are constructed of seamless steel tubing, fitted with solid bearings. The scale blades are designed so that any

scale can be inserted. These scales will fit tightly into the blades without deviating from the necessary 90 degrees angle. For center mounting the machine on a drafting board or table, a cast aluminum bracket is used, containing a screw for leveling the scales parallel to the drafting surface.

AB377 A new catalog No. 42 is just off the press from Skilsaw, Inc., Chicago, entitled "Skilsaw Portable Electric Tools." It has 60 pages and covers and a supplementary price list of 4 pages. The complete Skilsaw line is illustrated including saws, drills, belt sanders, hand grinders, disc sanders, bench grinders, blowers and suction cleaners.

AB378 How to use a builders level—an interesting little booklet dealing with the care and use of builders levels; also how to lay out building lots with the aid of a modern builders level, has been prepared by David White Co., Inc., 315 W. Court St., Milwaukee. It presents much concentrated field experience from this old-time manufacturer of builders levels and transits.

AB379 "How to Choose a Slide Rule" has been prepared for Keuffel & Esser Co., Hoboken, N. J., by Don Herold. It is a brochure of 24 pages, 26 illustrations in 2 colors. In a somewhat humorous manner, it explains for the first time the difference between the various types of slide rules available. Written primarily for students in engineering colleges, this booklet contains slide rule information of interest to the entire construction field.

AB380 "Ways to Make Money with 1/2 yard—3/4 yard Bucyrus-Erie Power Shovels" is a 32 page pictorial portfolio showing how contractors everywhere are saving money by using these smaller power shovels. This is known as bulletin No. 2066, covers virtually every phase of excavating, grading and dirt moving with these speedy "little" power shovels.—Bucyrus-Erie Co., So. Milwaukee, Wis.

AB381 "Syntron Labor Saving Electric Tools and Concrete Vibrators" is a 16 page 2-color catalog illustrating the extensive Syntron line, and electric hammers, saws, drills, sanders, grinders, vibrators and tools and accessories to use with them.—Syntron Co., Homer City, Pa.

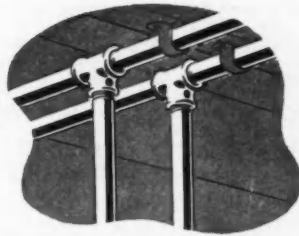
AB382 The Koehring 14-S "Dandie" concrete mixers are presented in a new 10 page 2-color bulletin K-166. Complete specifications and dimensioned drawings are included.—Koehring Co., Milwaukee.

AB383 The Reid - Way Corp., Cedar Rapids, Ia., has issued an attractive 4 page folder on a new model of the famous Reid-Way floor sander of "only one moving part." This is the Reid-Way "8," weighs 80 pounds.

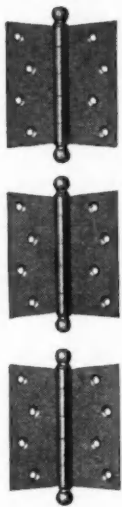
Readers Service Department Continued to Page 86

FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 86

Good Construction Calls For Brass Pipe



... And Three Butts on Every Door



**VISIBLE MARK OF
GOOD CONSTRUCTION**

Haven't you often wished your prospective buyer had some way of seeing the good construction features you include in your houses? So many of these are hidden the buyer can only depend upon the integrity of the builder to be sure they are present.

There's one visible mark of good construction which every one will recognize: Three Butts To A Door. You know that the third butt will hold the edge of the door in alignment, prevent warping, keep latch and lock clicking to a perfect fit.

Remember, thin doors are more apt to warp than thick doors. And it may cost you more to repair a single warped door than to put three butts on every door in the house! Be wise, use "Three Butts To A Door!" The Stanley Works, New Britain, Conn.

STANLEY

Trade Mark

REMEMBER... THREE BUTTS TO A DOOR



EXCLUSIVE Stanley Non-Rising Pin

JUST PUSH
IT DOWN

PIN SNAPS
INTO PLACE

This is the non-rising pin design that keeps pins from working up. Just push it down — pin snaps into place. It's exclusive, it's simple, it works every time. Be sure to get Stanley Butts for this feature. Write for Stanley Catalog No. 61 showing the complete line.

SERVICE TO READERS

EACH ITEM in this department is numbered for convenience of readers. Please use the coupon on this page for requesting further product information on 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 & AIR CONDITIONING PROGRESS

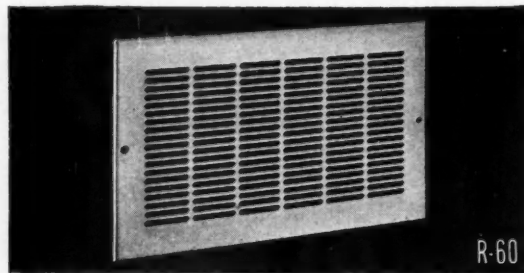
AB384 The H. C. Little Burner Co., San Rafael, Calif., announces a new Utility Unit winter air conditioner designed for first floor installation in closet or heat room of small homes without basements. This unit features very compact design, with measurements of only



H. C. Little offers a "little" one.

25" x 25" x 72" and a burner which operates on No. 3 oil. It is fully automatic, has electric ignition vaporizing burner and is listed by the Underwriters' Laboratories. The hourly BTU input of 105,000 and hourly output of 84,000 indicate a very high overall efficiency. The Utility Unit includes air filters and automatic humidifier as standard equipment.

AB385 A new item brought out by The Waterloo Register Co., Waterloo, Ia., is the 600 Series of registers and grilles. These are designed to meet the demand for competitive grilles specified in low cost housing projects. They are decorative, modern and economical and

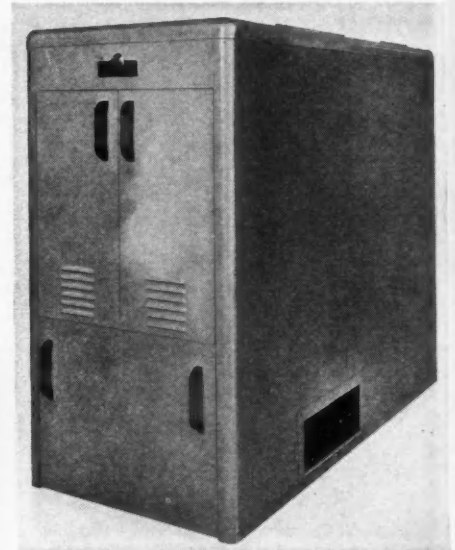


New Waterloo register for low cost homes.

have these special features: attractive design makes high side wall location possible without unsightly wall appearance, effective open area approximately 75 per cent, free area of grille core approximately 62 per cent; all supply registers, including baseboard type, are supplied with sponge rubber gaskets.

AB386 The Air-Ace line of winter air conditioning furnaces has been introduced by the Iron Fireman Mfg. Co., Portland, Ore., and Cleveland, O. Available in three sizes, the Air-Ace is adaptable for use with either an Iron Fireman bituminous or anthracite stoker, or with an Iron Fireman oil burner. It can

be used as a central warm air heating plant for residential or commercial establishments, or for industrial applications. The Air-Ace filters, warms, humidifies and circulates air. The heater is permanently gas-tight, made of heavy die-formed steel plates electrically welded; the "tear-drop" shaped radiators take advantage of expan-



New Iron Fireman "Air Ace" winter air conditioner.

sion of air to provide scrubbing action with reduced friction. A pan-type humidifier is used. The blower is a double-inlet, multi-blade type fan. Large filters are used. For use with a bituminous stoker, a special clinker receptacle is provided.

AB387 The Crane Basmor gas-fired package heating unit, "A Complete Heating Package," is described in a new 4-page folder from Bastian-Morley Co., Inc., LaPorte, Ind. The "package heating unit" is shipped completely assembled and comes in three sizes to handle from 415 to 739 feet of radiation.

AB388 Modine copper concealed radiation is featured in a new 2-color bulletin No. 241 from Modine Manufacturing Co., Racine, Wis. It presents 8 pages of useful information of special interest to the architect, contractor or laymen who is not too familiar with copper convector heating.

AB389 "Super Performance" automatic gas heat for homes with or without basements is demonstrated in an 8-page folder from the Coleman Lamp & Stove Co., Wichita, Kan., featuring Coleman floor furnaces which are now available in both gas-fired and oil-fired models. Economy in installation, maintenance and fuel costs is stressed.

AB390 Chrysler's new Airtemp gas-fired winter air conditioner is presented in one of a series of attractive 4-page data sheets from Airtemp Div., Chrysler Corp., Dayton, O. This gas-fired model is a complete heating "package" for the small home. Attractive in exterior appearance and well designed inside for automatic delivery of cleaned warmed air.

CLIP AND MAIL TO CHICAGO

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

(Feb. 1941)

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

Numbers.....

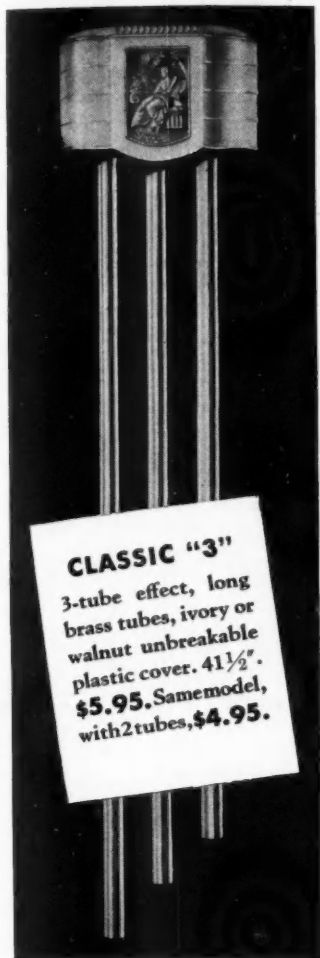
Name.....

Street.....

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

OCCUPATION*.....

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



CLASSIC "3"

3-tube effect, long brass tubes, ivory or walnut unbreakable plastic cover. 41½". \$5.95. Same model, with 2 tubes, \$4.95.

SEE THE NUTONE ADVERTISE-
MENT IN FEB. 24 LIFE. OTHER
ADVERTISEMENTS WILL FOL-
LOW ALL YEAR IN LIFE AND
OTHER POWERFUL MAGAZINES.



MT. VERNON

Authentic American Colonial shield of hammered brass. 3-tube effect of satin brass. All tarnish-proof. In special red, white and blue patriotic box. 11¾ in. high. \$4.95.

NOW..

Builders think of Door Chimes early in the game

..and smart ones think of

NUTONE

MODERN adjunct for any type of home—whether it costs little or much, whether it's speculative or planned and supervised by an architect! A beautiful electric 2-door NuTone Door Chime is an ideal substitute for old-fashioned doorbells.

These handsome Chimes are nationally advertised. They are department store promoted. And they come in sufficient variety to harmonize with any type of home selected. They are beautifully styled to be a decorative note on the wall, as well as a pleasure to the ear. Their resonance is remarkable. Even the least expensive NuTone models sound really *resonant* musical notes—two for the front door, one for the rear.

LEADING BUILDERS AND ARCHITECTS SPECIFY NUTONE

Many builders, knowing the appeal to women of some such "extra," add NuTone Door Chimes to speculative houses. Leading architects, quick to the advantage of planning for them at the start, specify these Chimes in the original plans. Of Life Magazine's 1940 houses, *over half* had NuTones!

Women see homes equipped with these Chimes. They read advertisements about them. They are conscious of department store promotions. Home owners *want* NuTones!

A few models are shown here. Others are priced \$1.95 to \$29.50. They are sold by leading electrical distributors from coast to coast. See your wholesaler or write for catalogue and further information.

NUTONE CHIMES, Inc.

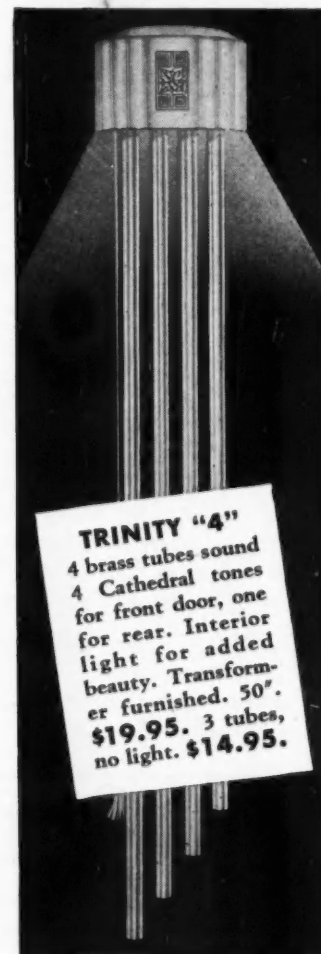
CINCINNATI, OHIO

NEW YORK, 1150 BROADWAY
CHICAGO, MERCHANDISE MART
LOS ANGELES, 837 TRACTION AVE.



NOTRE DAME

In a 3-tube effect with long brass tubes, ivory or walnut plastic cover reproducing Notre Dame Cathedral window. New, patented Repeat-a-Tone feature. 43½" high. \$8.95. The same with 2 tubes. \$7.95.

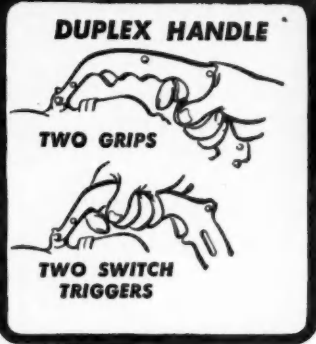


TRINITY "4"

4 brass tubes sound 4 Cathedral tones for front door, one for rear. Interior light for added beauty. Transformer furnished. 50". \$19.95. 3 tubes, no light. \$14.95.



**Handles Everything
Up To 2-3/4"**



STANLEY

W8 Electric Saw

Let this saw make fast work of the slow, tedious cutting on your building jobs! It has plenty of power to rip through lumber up to 2 3/4" - right on the job or on the bench.

Duplex handle, an exclusive Stanley feature, makes the W8 Saw easy to use in any position. Simple wing nut adjustment for depth of cut. Approved Stanley safety guard.

Try the Stanley W8 Safety Saw on your tough jobs! Ask your Stanley distributor for a demonstration, or write for literature. Stanley Electric Tool Division, The Stanley Works, 133 Elm St., New Britain, Connecticut.



STANLEY ELECTRIC TOOLS
"COST LESS PER YEAR"

On & OFF the RECORD
Views, News and Comment
—by *Structor*—

DEVIL'S CURBSTONE—Our friend Bill Brannigan has plenty of work this winter, and his skilled union workers ought to be making some real money at the \$12 he pays for an eight-hour day. **Not while union rules are the way they are, though.** Last week the weather was so bad they couldn't work three of the days, although some of them drove 15 miles in the hope that they could. The next day was a holiday—bright, clear and perfect. But under union rules, no one worked. Then it was Saturday—another perfect day, and Bill's customer came out and tore his hair because nothing was being done. Then came Sunday, a good day, but followed by rain Monday. So there the job sits, with everybody losing money. The men either won't work at all on a holiday or they demand time and a half, and Bill says the job won't support it. **If the men would work at the regular scale whenever the weather permits, they could make a good living wage this winter, but as it is, they aren't doing well and neither is Bill.**

That, my friends, is also what is wrong with the defense construction program, except that when the government is footing the bill the contractors aren't so reluctant about paying time and a half or double time, or what-are-you-asking?

The forty-hour week is a "devil's curbstone" for the building industry. It does not and should not apply to construction. Construction workers have never been overworked, nor can they be said to be "sweated." Their trouble is in getting enough work. Union officials ought to study the problems of the industry and devise ways to make more work rather than to set up pettifoggng restrictions that decrease work.

AFTER-WAR SECURITY—When people have good jobs and good pay—that's the time to sell them a home. That's the best way for them to build up after-war security. We have been interested in a series of advertisements to this effect being published in Canada by International Fibre Board Limited, of Gatineau, Quebec, makers of "Ten/Test" insulating board. These ads feature "after-war security," and carry such titles as: "Regular Job—Regular Pay—and I'm building a home of my own!"

"Working Today—Saving for Tomorrow—by building a home (Continued to page 90)



... and I'm building a home of my own!

YES! Thousands of us are getting back to work. And we're planning for the future. This time, we're going to put our money where it means after-war security.

There was never a better opportunity for the worker to earn his own home. A modern home, built to Government specifications. Easy to heat, economical to maintain. A home you can pay for by the month, just like you own your car.

That's what your Government offers you under the National Housing Act—the opportunity to enjoy the comfort and financial security of a home of your own. And, because the materials and workmanship in these homes must be approved by the Government, you're sure of getting the utmost value for every dollar.

When you build, be sure that your home is insulated with Ten/Test insulating board. Ten/Test means a home that's economical to heat. For Ten/Test cuts fuel costs up to 30%. Does it every year for the entire life of the home. When you buy Ten/Test, you have the same quality insulation which used to be available only as the more expensive homes.

Find out today how easy it is to have a home of your own. Stop paying rent, and put your savings into an investment which means lifelong security. Ask any Ten/Test dealer how you can do it. Or write to International Fibre Board Limited, Ottawa, Ontario, for full information.



3 Jobs in 1

Ten/Test does three jobs at one time: it insulates, it saves and it protects. In addition to your home's structural strength, there are many forms of insulations—plaster, concrete, etc.—but only TEN-TEST insulating board does all three of these things at one time. And, remember—Ten/Test is not an added material. It replaces less efficient materials.

Canadian advertisement on "After-War Security."

Highest Quality FLUSH DOORS -AT REALLY LOW PRICES!



During this past year, something *big* has happened in the building world! The Mengel Company, one of the world's very largest wood-working companies, has aggressively entered the building-materials industry. Backed by years of research—armed with important new patents and licenses—our tremendous plants are running night and day to make highest-quality, lowest-cost production really *come true* to the building industry!

MENDEL FLUSH DOORS

Mengel *Gum* Flush Doors list at little more than soft-wood panel doors—Birch at only slightly more—and *Mengel Mahogany Flush Doors* retail at the same price as Birch! But make no mistake about it—despite these low prices, Mengel Flush Doors are the finest on the market—built on the famed Johns-Manville patents and backed by this unique guarantee:

If any Mengel Flush Door warps in service, and does not straighten out within a reasonable time, it will be replaced free of charge, including the installation cost.

Get all the facts today! Ask your supplier, or mail the coupon below!

MENDEL FLUSH DOORS

MENDEL BORD . . . 1/4", 48" x 96" panels of hot-plate, resin-bonded, *hardwood* plywood—made in two types, Regular and DeLuxe. *Regular* is built with one-piece Gum faces, in No. 1 and No. 2 Grades. . . . *DeLuxe* is available with pieced faces of Gum, Birch, Mahogany, Walnut, Oak. . . . Both types *immediately available*—and sell at amazingly low prices. Mark coupon for details!

The Mengel Company, Incorporated
Louisville, Kentucky

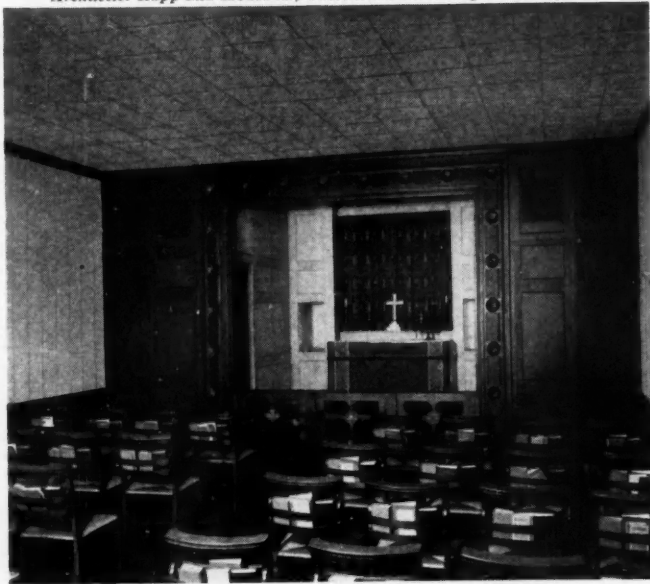
Gentlemen: Please send me full information and specifications on: Mengel Flush Doors Mengel Bord

Name _____

Street _____

City _____ State _____

CONSERVATIVE GOOD TASTE characterizes this attractive Episcopal Chapel in Cincinnati, Ohio. White Temlok De Luxe Planks 12" wide were used on the walls; 24" x 24" White Panels were used on the ceiling. Architects: Rapp and Meacham, Cincinnati. Erected by D. S. Cigolotti.



CATCH YOUR CUSTOMER'S EYE FOR ECONOMY

WITH
3 purpose TEMLOK DE LUXE

HERE'S a permanent wall and ceiling material that's bound to make a hit with your economy-minded customers—Armstrong's Temlok De Luxe! This truly modern interior finish is easy to sell because it offers three important advantages at one reasonable cost.

It decorates effectively. Attractive pastel shades, and panel, plank, and board sizes, permit a wide range of color combinations and designs. Temlok De Luxe *insulates efficiently*—saves heating and air conditioning costs and increases year-round comfort. It has high *light-reflection value*, and *absorbs unwanted sound*.

Temlok De Luxe is a real time saver, as well. It is quickly installed with either adhesives or with the new Tem-Clips which "float" the insulation against furring strips or joists. There's no waiting for new plaster to dry—no need to remove old plaster in remodeling work.

The name "Armstrong" is another strong selling point . . . your assurance of a high quality building product. For complete facts, see "Sweet's," or write now to Armstrong Cork Co., Building Materials Division, 979 Concord St., Lancaster, Pa.



ARMSTRONG'S TEMLOK INSULATION

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

On & OFF the RECORD Views, News and Comment

by *Structor*

(Continued from page 88)

for my family.

"I've Got a Steady Job Again—and I'm building a home of my own!

"John's Working—So is Jane—and they're building a home of their own!"

This is smart home promotion, both for the individual manufacturer and for the building industry. We see a real opportunity for American firms to do a similar job.

GOLF STORY—George B. Hatley of Washington, the builder whose "consensus house" we mentioned last month, is responsible for another good story. One of the first visitors to his new G-E equipped "American Way" model home opened last month was a lady whose husband was out playing golf. She thought the house was wonderful—hubby must see it. One of Hatley's salesmen drove her to the nearby course, where, after some argument, she persuaded him to come over and see the house. So he did, spikes and all. Still wearing the spikes, he bought the house, then went back to his foursome. Hatley believes it's some sort of a record.

PROF. ON PRICES—Our learned professor friend says that it is in just such times as these that "substitute" materials and methods get their start. A sharp rise in price always invites new competitors. There are some building products that are right now giving their new competitors a big break. When a builder once gets acquainted with a "substitute" he often never goes back to the old.

Smart firms, the professor continues, are relying on increased volume for profits—not a bigger markup, and at the same time they're broadening their market base permanently. Aluminum is a case in point, which, although greatly in demand right now has actually dropped several cents a pound in recent months. Why? With orders piled up as they are a price increase might have been easily justified. But that would have been inviting substitutes. Aluminum is in competition with a host of other products, including copper, and every reduction in price greatly broadens the base. There is a vast market for aluminum in the building field which will prove pretty valuable when the present flurry is over.

BOUQUET FOR PEGLER—He likes brickbats better than bouquets, but we want to say a few words regarding Westbrook Pegler's one-man battle against union rackets and racketeers. He's done more to acquaint the public with building union abuses than anybody we know. His latest target—the fees extracted from carpenters, electricians and other workmen anxious to get jobs on government cantonments—got a hand from building men. When an American citizen is in need of a job and the government needs his services badly, it's almost unbelievable that a group of self-appointed labor dictators can keep him from taking that job and can arbitrarily set a price anywhere from \$75 to \$300 that he must pay before they'll let him go to work.

PLASTERED—"Sure there's a lot of building activity in my town," the fellow said. "At all the parties I've been to, the

(Continued to page 92)

Agree or Disagree?—Say So

"On and Off the Record" is a column of opinion and personal comment. Readers of *American Builder* may agree or disagree with the views expressed—and if you do, SAY SO. Or if you wish to enlarge on any of these ideas, send your letters to *American Builder*, care of "On and Off the Record." A limited number of comments will be published.

When You Plan Restaurants—Here's An Idea



**LINOLEUM FLOORS HELP
ATTRACT MORE BUSINESS**

WHEN you specify Armstrong's Linoleum floors for commercial interiors, you can be sure your clients will hear plenty of business-building compliments because this colorful, resilient flooring accents cleanliness, beauty, and comfort. Cleaning cares vanish when Armstrong's Linoleum is installed. All its smooth surface needs is routine sweeping, occasional washing and waxing, to keep it fresh and new-looking for years. Scuffing feet and scraping furniture can't wear off the rich, through-to-the-back colors. Costly, troublesome refinishing is never necessary.

You have more than 200 bright colors and patterns to choose from in Armstrong's Linoleum—shades and styles to go with any interior scheme. Even designs like this one in Clark's Shakertown Restaurant can be installed at reasonable cost, without halting business.

Why not make sure of lasting satisfaction by recommending Armstrong's Linoleum floors for residential and commercial interiors? For more complete details and installation specifications, see *Sweet's* or write to Armstrong Cork Co., Floor Division, 1218 State St., Lancaster, Pa.



CLEANLINESS IS THE KEYNOTE in Clark's Shakertown Restaurant, Cleveland, Ohio. And the clean floor of Armstrong's Linoleum goes a long way toward making this possible. Here, 36" blocks of driftwood gray Jaspé linoleum are separated with 1" Linostrips of canary yellow and chartreuse. Border is evergreen. Linoleum is restful . . . helps keep waiters alert and good-natured.

ARMSTRONG'S FLOORS LINOLEUM

Rubber Tile - Linotile (Oil-Bonded) - Asphalt Tile - Cork Tile - Linowall Wall Covering



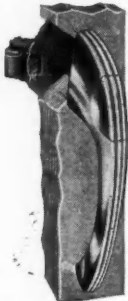
**AMEROCK
ANNOUNCES
NEW**

**Streamlux
DESIGN**

Capturing streamlined luxury in a graceful cabinet hardware design of unusual charm and dignity, Amerock introduces its new "Streamlux" design at prices surprisingly low. For example, No. ED405 "Streamlux" Door Pull shown full size above and No. ED400 Drawer Pull below retail at only 30c each. Illustrations 1/3 size.



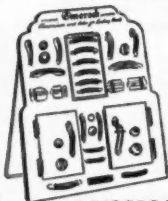
No. ED331 Knobs
25c each



No. ED340 Catch
55c each



No. ED400 Drawer Pull 30c each



**NEW Color-Selector
DEMONSTRATOR**

Amerock's new "Streamlux" cabinet hardware is displayed in full glory on the new No. 400 Color-Selector Demonstrator. Get yours on attractive Free Hardware Plan.

ASK YOUR DEALER!



Copyright 1941 by

**AMERICAN CABINET HARDWARE CORP.
ROCKFORD, ILLINOIS**

On & OFF the RECORD

Views, News and Comment

by *Structor*

(Continued from page 90)

women are painted and the men are plastered."

BUILDERS AND BEAUTY SHOPPES—Builders are benefiting by the changing world, and if you don't think that changes are taking place, take a look at some of the figures that have just been released by the U. S. Census Bureau on retail trade. Between 1929 and '39 the number of eating and drinking places increased from 134,293 to 305,331. That's a lot of store front business. Filling stations jumped from 121,513 to 241,856. Food stores jumped from 481,891 to 560,798—with big supermarkets on the increase. Drug stores decreased from 58,258 to 57,902—and a lot of them need modernizing. Beauty shoppes are booming.

SHOP BUILT HOUSES—Judging by our correspondence, building of houses in standardized sections in a local shop is a red hot subject, and many American Builder readers have written us for further information on it. A very helpful booklet has been produced by the National Bureau of Standards of the U. S. Department of Commerce, entitled, "Structural Properties of Prefabricated Wood-Frame Construction." This 26-page book gives the detailed construction methods used in building plywood wall sections and reports the results of tests made by the Bureau on them. A copy can be obtained direct from the U. S. Printing Office for 10 cents. Just write Superintendent of Documents, Washington, D. C., and ask for Report BMS47.

LESS STORK; MORE HOUSES—Those Census boys who have been prying into our innermost family secrets report that the average number of persons in a household has dropped to 3.8. That's why the trend is so strongly towards smaller houses. The funny thing about it is that the total number of families or, as they say, "private households," increased from 29,904,663 in 1930 to 34,772,673 in 1940. That's an increase of 16.3 per cent. Families are smaller, but there are more of them! It's an interesting fact that although the rate of increase of the total population of this land of ours has slowed down, the increase in the number of families is the greatest in history. That's why for the next decade we will need a great many more houses, and home building is expected to hit some new highs.

DEFENSE NOTE—The War Department has formally announced the awarding of a \$557,000 contract to Fruehauf Trailer Company of Detroit, Mich., for "Trailers and Dollies" (every war-baby may have one).

DEPARTMENT OF GADGETS—The most intriguing home device we've seen lately is Westinghouse Electric's new hot and cold air conditioner, which the young lady in the picture below



Blow hot—blow cold.

has beside her bed. Being alone, she's just turned the dial on "cold," and the refrigerating device throws out 6,000 cooling units an hour. A turn of the dial, however, can throw the refrigerating unit into reverse, and a stream of hot air will emerge at the rate of 7,500 heating units per hour. This is called "reverse cycle refrigeration," by the engineers, and is perfectly logical but too complicated for us to explain. The unit fits in a window, is plugged in like a radio and is known as Westinghouse Mobilair WB-06R. It's stimulating to live in an age when such gadgets as this and bomb sights are possible.

SONS-OF-AN-IRISHMAN—It's surprising how many builders are sons or grandsons of builders. We keep running across them all the time, and one of the more recent is Callan Brothers of Great Neck, N. Y. Patrick J. Callan, head of the firm, is the oldest son of a builder who came from Ireland 37 years ago, settled in Queens County and began to build houses. He was active there until 1932, when he died. Two other "sons-of-the-Irishman" are also interested in the business—Thomas J. Callan, an attorney, and Andrew Callan. Mrs. Annie Callan, the mother, although she's 70 years old, is still actively interested and can be seen daily on the job selecting decorations and checking on equipment from a woman's point of view. The Callans recently completed their 100-house Wyngate project at Great Neck, and are now doing a splendid job of quality work at their large Munsey Park Estates development where several hundred houses will be built on quarter-acre plots.

PLANING MILLS AND CONCRETE PRODUCTS—

We've always said the construction industry was second only to agriculture in size and importance, and every now and then some additional facts crop up to show how big and widespread it really is. For instance, the new Census of Manufacturers shows that there are 3,076 planing mills, exclusive of saw mills. They employ some 70,000 people and produced \$320,600,000 worth of products in 1939. We also note 2,040 concrete products plants with 20,000 employees and products worth \$130,400,000. These are largely local businesses, just like the 22,000 lumber yards and 100,000 + building firms. You can write it down as gospel truth that when home building prospers the nation prospers.

SPOILED CHILDREN—It's practically sacrilegious to criticize the American Institute of Architects, but we must say that we think the action of the A. I. A. and its president, Ed Bergstrom, in their attempt to create defense housing jobs for architects that aren't needed, looks like the antics of a bunch of spoiled children. The A. I. A., it seems, is going to petition Congress to see that more architects are employed on defense housing as well as other government work.

Well, the A. I. A. is behaving like any other craft union in this respect. Only fortunately there aren't as many architects as there are electricians, for example, so they haven't made much progress with the Army and Navy people to date.

What the A. I. A. seems to be asking is that every defense worker have a custom-made house nicely tailored by an A. I. A. architect and with a custom-made architect's fee.

No one questions the right or desirability of having as many "custom-made" homes as possible done by architects of high professional ability. But the mass market in low-priced homes, both private and public, calls for a different approach.

MAJOR ALLEN—Arthur E. Allen, one of whose houses was awarded a bronze plaque for "excellence in design and construction" by the Queens Chamber of Commerce, is now Major Allen of the U. S. Army. He was formerly an officer of the Reserve Corps, and last year was one of the first to return to duty. As a private architect Arthur Allen designed more houses than any other individual in the country, and we believe that as an executive officer in the Army he will get action where action is required in construction and procurement of construction materials for the Army.

Allen's architectural practice is being continued by his assistants at his office at 9004—161st St., Jamaica, L. I., and his builder customers are sticking by him "for the duration."

KNAPP METAL CASINGS

Neat and Durable



THE simplicity, beauty and long-lasting quality of Knapp Metal Casings fit them ideally into the building plans of today. They are clean-cut in appearance . . . fireproof . . . easily maintained.

Knapp Metal Casings have the dependable inherent quality of all Knapp Products. You will find a most complete variety of casing types and designs to suit every problem.

Write today for details.

Knapp Metal Casings are made by the manufacturers of Knapp Corner Beads

KNAPP METAL TRIM
 KNAPP BROS. MANUFACTURING CO.
 GENERAL OFFICES • JOLET, ILLINOIS

*Outselling All Others
by a Wide Margin*

The
**VENTO
CHAMPION**
Basement Window

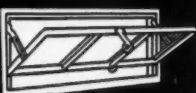
Smart builders everywhere are turning to the New VENTO CHAMPION basement window for the simple reason that it leads in features that capture the interest and enthusiasm of the prospective home buyer; leads in quality construction, weather-tightness, practical screening, ease of installation and many other features, and yet costs no more than any other first line window. If you aren't thoroughly familiar with this outstanding window by all means investigate it at once. Ask your dealer to show it to you or write for full particulars. It pays to use the best.

VENTO manufactures a complete line of windows for every type of building—all top-notch products—backed by a concern with an enviable reputation for dealer cooperation.

**VENTO STEEL PRODUCTS COMPANY
MUSKEGON, MICHIGAN**



Normal indirect ventilation provided by simply unlocking and pulling forward.



Any degree of ventilation may be obtained by slight downward pull on ventilator.



Ventilator is perfectly balanced and always works easily.



Window opens from either top or bottom. Ventilator may also be quickly and easily removed.



Heavy double channel, pressed steel frame. All welded construction. Furnished for either putty or puttyless glazing.

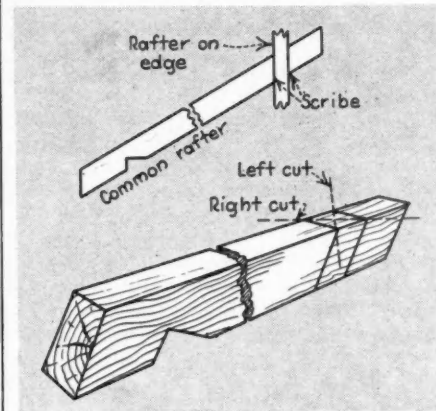
PRACTICAL JOB POINTERS

A READER'S EXCHANGE of tested ideas and methods, taken from their own building experience. Two dollars or a year's subscription to American Builder is paid for each item when published. State business connection or trade.

Cutting 45 Degree Roof Framing

IN MY experience I have found only a small per cent of carpenters that are good roof framers. The method to determine the side cut on jack rafters is usually given as the bevel taken from the run and length of the common rafter, which of course is accurate but rather unhandy. Of course, it is obvious that the side cut changes as quickly as the top cut on the common rafter with different pitches.

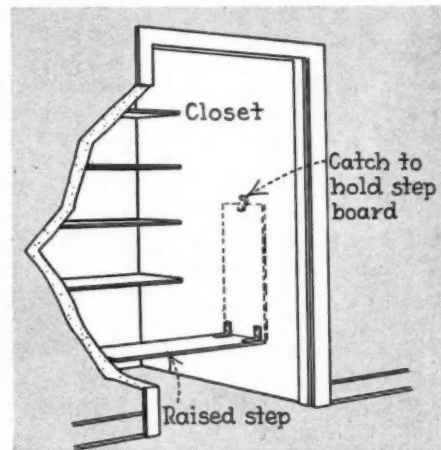
It is assumed that the length of the jack has been found; use the top cut of common rafter as pattern for plumb cut, lay on this mark a piece of rafter material on edge and scribe, from the intersection of these lines with the corner, square across jack; the diagonal of this triangle on jack is right or left cut, the small sketch at the left showing scribing.



This method may be used with success on any timber framing 45 degrees at any pitch.—ROY E. SMITH, Contractor and Builder, Seattle, Wash.

Step to Reach High Closet Shelves

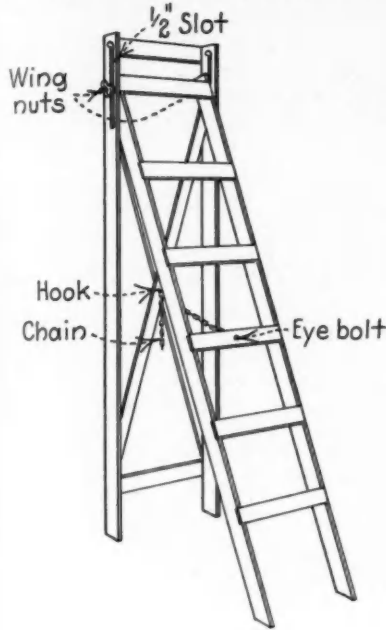
THE builder when constructing a new house, or the carpenter working around an old one, can make a big hit with short women by suggesting and building in this simple and very cheap device for making the upper shelves of all closets more usable. This is no more than a hinged board or shelf that when down forms a solid step across the open doorway on which short women can stand to reach those higher shelves. It is made of a width to fit the closet but its outer edge must clear the door when that is closed. A simple upright board nailed to the opposite side of the door frame forms the support for the free end. A turnbutton or spring catch holds the end of the step when in the raised position.—MORRIS A. HALL, White Plains, New York.



Easily Adjusted Trestles

HEREWITH is a sketch of a trestle which we think is an original idea as we have not seen another like it. This can be made any width and height that will be most suitable for one's

work. We found that a seven "footer" is the best for buildings having 9 to 14 foot ceilings, and we have used them to great advantage for outside work, such as sheathing and shingling low buildings. This trestle can be placed close to the wall, is easy to move and set up, and can be folded for transportation and storage. The part having the rungs can be pushed up and down in the slots to adjust the height of the plank. We made our trestles of fir but hardwood could be used, and in that way one could cut down the size of the material and still retain the



strength needed for safety. The chain can be adjusted for length needed by the use of the hook as illustrated.

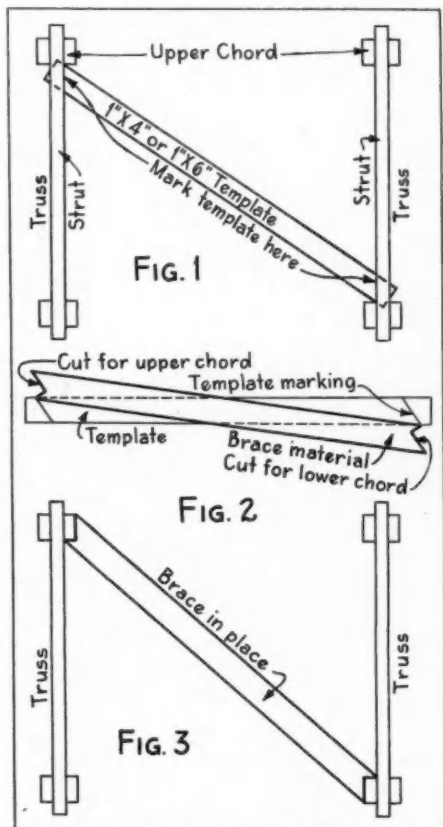
Following is the list of material to make one trestle; you need at least two:

- 2 pcs. 1x4x6' cross braces
 - 8 pcs. 1x4x4' rungs
 - 4 pcs. 2x4x7' legs
 - 2 1/2"x4" carriage bolts
 - 2 1/2" wing nuts
 - 2 large washers
 - 1 eye bolt
 - 1 hook bolt
 - About 40 No. 12 13/4" flatheaded screws
 - About 4' of light chain
- SLETTEDAHL BROS., Echo, Minn.

Easy Cutting of Truss Braces

THIS sketch shows an easy and fast way of making a brace template between two truss (wood) frames, which I developed through experience.

First, mark where the template cuts or passes the king post to get the exact distance and vertical position of king posts. Template must touch edge of truss collar on one end and edge of tie beam on the other (Fig. 1). The template is then superimposed on work or material to be used as brace. Square from markings (Fig. 2). The brace when finished fits perfectly between truss frames (Fig. 3).—LOPE PEREDO, Daet, Camarines Norte, P.I.



FIGS. 1, 2 and 3 at the right show how to make a truss template.

ARE THESE WHAT YOU'RE LOOKING FOR IN Cold Weather Concreting?

- 1 **REDUCED COSTS:** Solvay Calcium Chloride in the concrete mix shortens protection period—cuts cost of labor, heaters, fuel and canvas.
- 2 **QUICKER SET:** Actual time of initial and final set is reduced 2/3 when calcium chloride is used (Nat'l Bur. of Stds. test).
- 3 **HIGH EARLY STRENGTH** is increased remarkably. For example, calcium chloride increases 1-day strength of 40° F. concrete by 300% as compared to same concrete without calcium chloride . . . increases 3-day strength 117%, 7-day strength 75%.
- 4 **GREATER FINAL STRENGTH:** Nat'l Bur. of Stds. and P. C. A. tests show calcium chloride increases ultimate strength by from 7 to 12%.
- 5 **EXTRA PROTECTION:** Solvay Calcium Chloride in the mix provides extra protection against frozen concrete.
- 6 **DEPENDABLE CURING:** Provides uniform curing for all concrete, including paving, structural and products.
- 7 **DENSER CONCRETE:** Calcium chloride permits reduction in water-cement ratio . . . means fewer water voids, denser, more moisture resistant concrete.

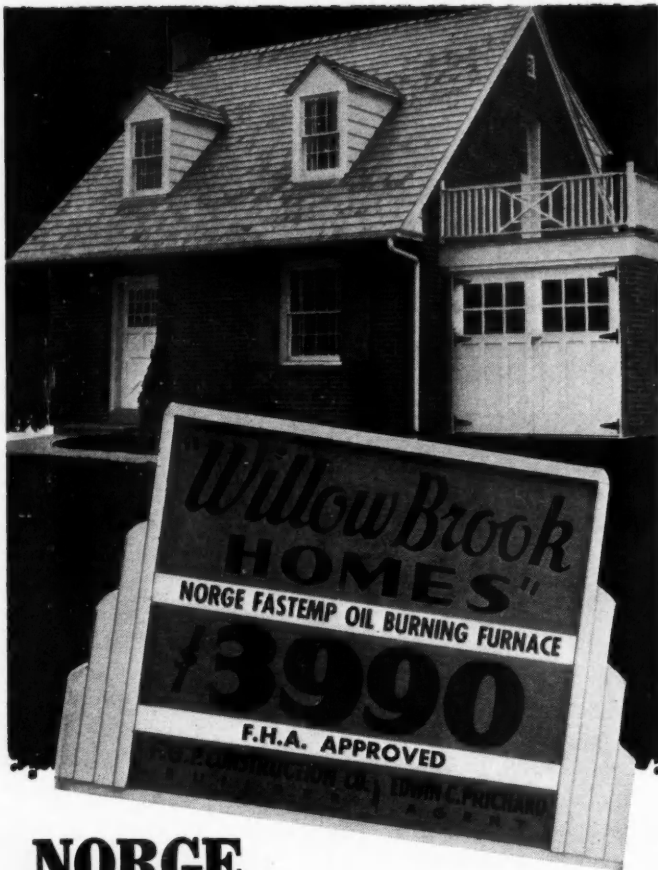
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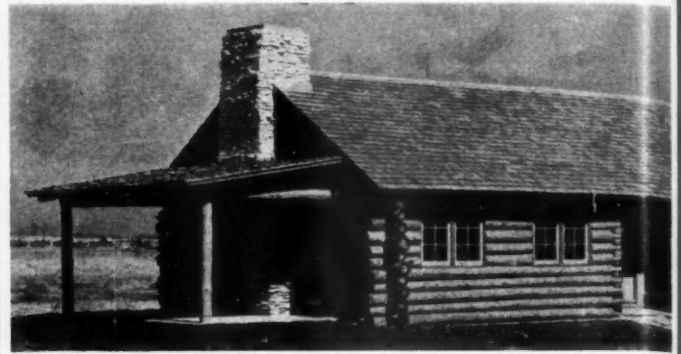
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WINTER AIR CONDITIONERS



Ideas for Rustic Summer Homes and Cottages

FEBRUARY being the month during which many summer home projects are planned, and also the time of year when the bulk of such sales are made for contract building of vacation homes, several ideas for charming rusticity are presented on this page.

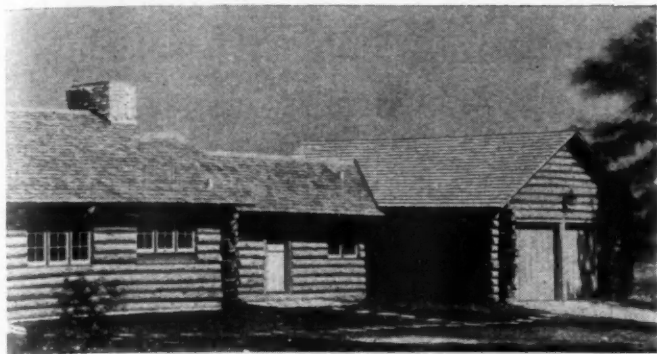
The real log home with shake roof shown above is a good sized structure which hugs the ground and looks like it might be transplanted from the pioneer days of the Middle West. However, it is planned for comfortable living and offers practically all modern conveniences within its rough exterior, even including a two-car garage with upward-acting doors. Note that the entrance is recessed to offer protection without cutting the simple lines of the roof. The two massive stone chimneys are in character.

The upper interior view at the right pictures the living room fireplace laid up of native stone with raised stone hearth and oversize opening to take four-foot logs. In keeping with this rustic fireplace and the log walls, the two-inch random width plank oak floor has been laid and pegged. Logs have been used for rafters and collars; windows are wood casements.

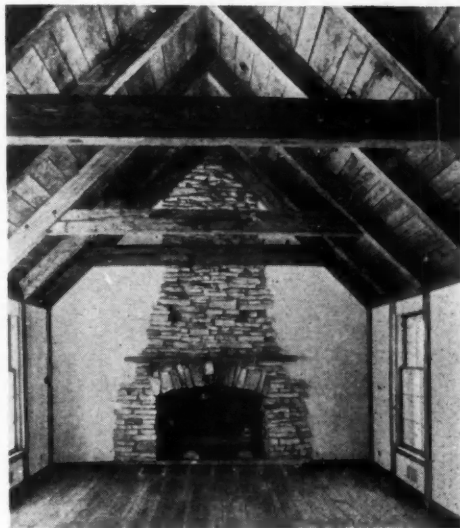
The unusual home below, although built for year 'round living, has many of the rustic features so much sought after in resort spots. It was planned by Edwin F. Bruno, architect, of Skokie, Ill. The roof first catches the eye—"Old English Thatch" in keeping with the stucco and timber exterior. The builder claims good insulation value for it, as well as old world attractiveness. Exterior walls are Nu-Wood on both sides of Hines Precision Lumber framing, covered on the outside with plywood, metal lath and portland cement white stucco, and plastered direct on the inside.

This house likewise has a rustic interior, as indicated in the living room view at the right. The rustic limestone fireplace is laid up to simulate dry-wall masonry with joints raked deeply. The massive beams are of rough-hewn oak, and again a plank oak floor was used. Both houses were built in Chicago area by Wyatt & Coons of Glenview, Ill.

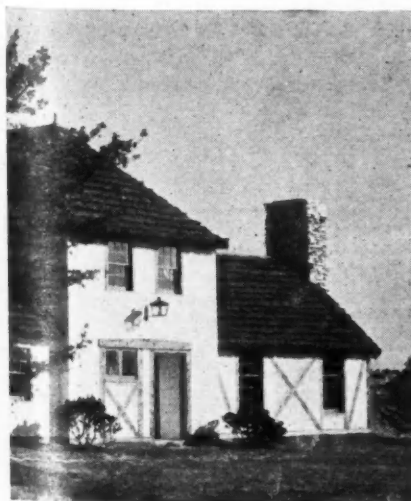




ABOVE at top of page: rambling real log cabin for modern country living also has rustic interior, as pictured directly above. Built by Wyatt & Coons, Glenview, Ill.



RIGHT: Heavy oiled oak beams, mammoth fireplace, oak plank floor and simulated interior timbering give character to this house shown below.



AS IF transplanted from the English countryside, this thatched roof house designed by Architect Edwin F. Bruno is modern in equipment and livability.

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Write for samples of folders prepared especially for distribution to building prospects. American Lumber & Treating Company, 1645 McCormick Building, Chicago, Illinois.

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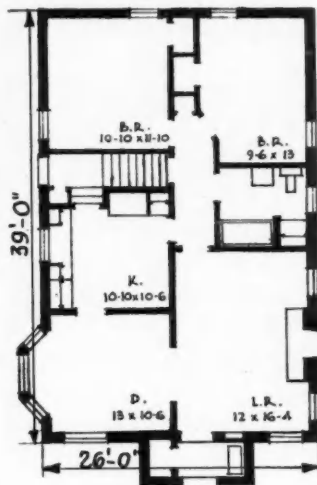


WOLMANIZED LUMBER

Three Appealing Home Designs From Detroit Builders Assn. Show

Compactness, Economy and Livability Featured

AS a final group of homes to be presented from the Home Builders Association of Metropolitan Detroit 1940 demonstration show, "Models on Parade," the three below are typical of the entire group of 32 as to size, style and general arrangement. Likewise they are typical of this class in Detroit. They were planned for lots ranging in width from 46 to 66 feet, the houses averaging about 26 feet wide.



The Bain house has five rooms arranged on the first floor, with unfinished space above for additional bedrooms. There is good circulation, with the rear bed-

THE five-room one-story plan at the left for the house shown below, as built by James K. Bain, offers numerous plus features including Briar Hill stone trim, natural fireplace, gas-fired winter conditioning, built-in vanity in tiled bathroom, and complete insulation.



THE Gustman-Adam Co. exhibit home in opposite column contains five rooms, as shown below. Extra value is offered in such items as large breakfast nook, colored tile in bath and around sink, Detroit Incinerator Co. gas unit, Corbin locks, Gasconaire conditioning, red cedar shingles, Bruce select oak floors, La Salle garbage door, Tontine shades, Curtis mantel and paneled wainscoting.

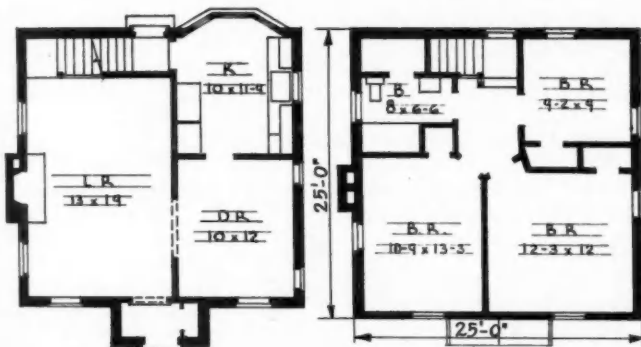


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room and bath accessible through the kitchen or through the living room. The connecting rear hall can also be reached by the grade entrance. Bath has recessed tub and built-in vanity.

The six-room Snell layout has a 100 per cent usable first floor area and an interesting closet arrangement on the second floor—particularly the storage space off the bath.

The Gustman-Adam model will find favor with small home enthusiasts who want five rooms with two large bedrooms. The breakfast nook is good sized, and the linen closet on the second floor is accessible from both the hall and the bathroom.



THE above house with floor plan offers an economical six-room arrangement by Builder Clare E. Snell. Highlights include Airtemp gas conditioner, breakfast bay, ventilating fan, and tiled sink and backsplash, basement toilet, Savutime hot water control, N.S.W. windows, natural marble faced fireplace, and complete insulation.



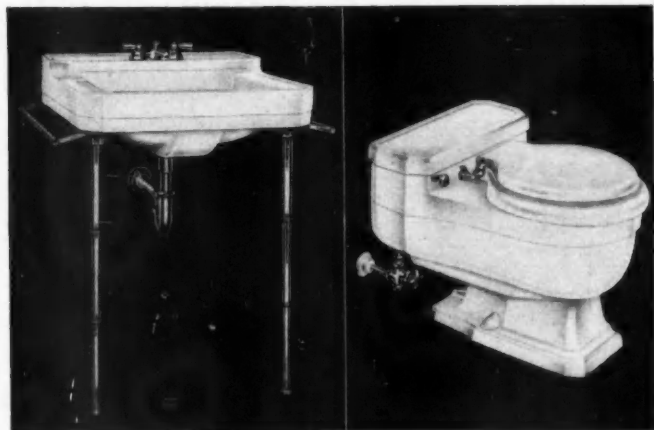
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when prospects ask this question...

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Neat, easily identified package impresses customers. Strong, fibre-board carton gives extra protection, assuring delivery of balances in perfect condition.

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with detail drawings of window installations, with and without weather stripping.

1941 SASH PULLEY CATALOG also available, illustrating and describing "GRAND RAPIDS" Narrow Trim, Standard, and Heavy Duty Sash Pulleys. Ask for Catalog No. 41-SL-2.

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Low-Income California Families Purchase FHA Insured Homes Without Down Payment

Own Labor Serves in Lieu of Cash Equity

A NOVEL plan for selling new homes to families of the lowest income brackets, a group hitherto unable to meet FHA requirements for cash down payments, is reported to be in successful operation in Watsonville and other California cities.

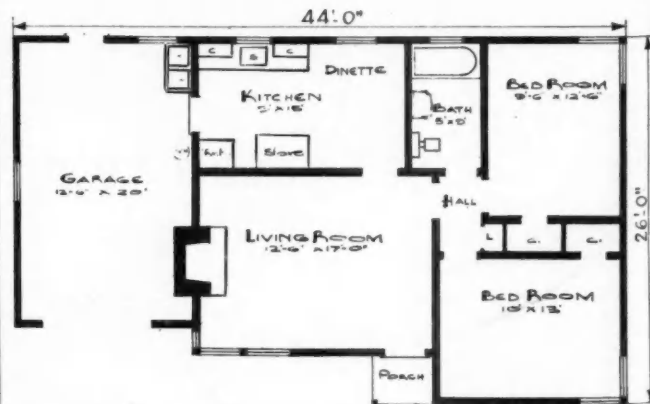
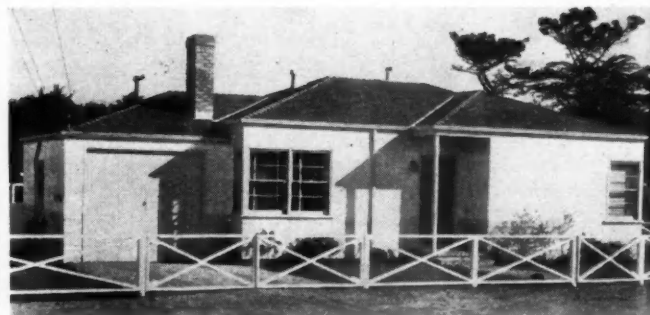
John and Tom Porter of the Central Supply Company and Edward Pfingst, a Watsonville insurance and real estate agent, worked out the program by which the cashless buyer may purchase house and lot by contributing his labor in lieu of cash.

So successful is the plan that the original 13 acres in Watsonville have been expanded to properties totaling 1,067 acres in that city on which 50 homes have already been built and some 35 more are under way. In addition, the Porter brothers have started another private venture of their own, "Pioneer Homes," which is now building houses under the same plan in San Jose, Stockton and Monterey.

Surprising feature of the plan is that it provides a better type of residential structure than most housing plans to the lowest income group. Heretofore the FHA has placed only 3.9 per cent of its loans with families earning between \$1,000 and \$1,500 a year. Yet the new housing scheme provides for the majority of its loans in this group and the classification below \$1,000.

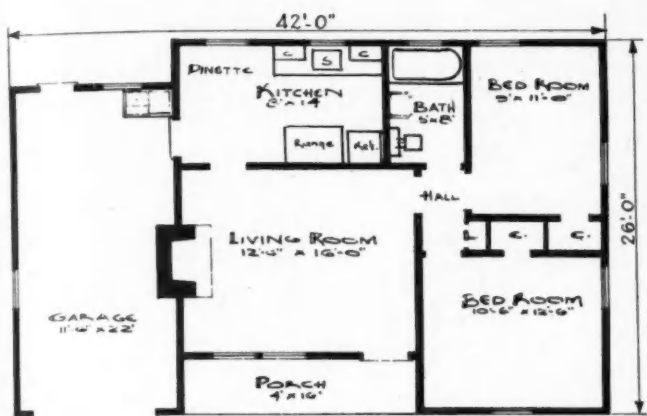
The Watsonville plan differs from other private housing ventures in that it provides the cashless buyer not with an unfinished shell but with a house complete in every detail. The site, which may range from a city lot to a 2-acre farm, is chosen by the buyer and the plans are selected from standardized blueprints, varying in cost from \$2,500 to \$3,600, presented in four separate loose-leaf volumes, according to the prospect's earning capacity. When the agreement has been signed the buyer is given a cost sheet of the construction, from which in lieu of cash he is asked to pick the labor subcontracts he wishes to handle.

No cash is required, but to fulfill Title Two, FHA loan



FIVE-room and garage home in Watsonville, Calif., development.

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ONE of the variations of the compact plan shown opposite.

regulations, the purchaser must contribute work equal to a minimum of ten per cent of the purchase price plus ineligible closing charges. The buyer is obliged to prove his ability to handle certain subcontracts, although even the unskilled laborer, by digging foundations, pouring concrete and handling lumber, can meet minimum requirements. With a slight amount of skill he can acquire additional equity.

For most unskilled laborers the available work is just enough to meet the down payment, but a buyer who is handy with tools or paint brush can establish a considerable equity. An example is the unskilled worker whose house costs \$2,774, lot \$350 and closing charges \$125—a total of \$3,249. To cover the down payment and overage he must do approximately \$375 worth of work. From the cost sheet he sees that he is entitled to \$41 for digging the septic tanks and drainage. The shovel contract amounts to \$14.85 additional. Other manual labor contracts, which vary according to the cost of the house, enable him to earn the minimum payment.

Local labor unions have contributed to the success of the scheme by ruling that a man is entitled to do work he is capable of to establish an equity in his own home. Skilled work, such as wiring, plumbing, framing and finish, is, of course, excepted, although provision is made for hiring the owner as a helper on part of the skilled work. If the buyer can handle a hammer or a saw, however, he may, in addition to the heavy labor, do the roof sheathing and shingles, rustic, lathing, wallboard and batts, base and shoe, and floor laying.

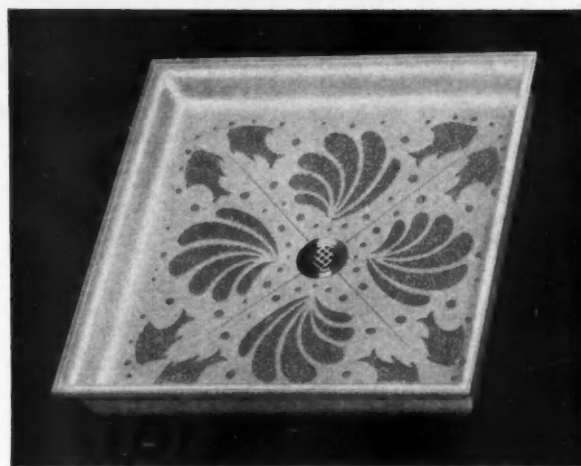
The present set-up has been worked out during two years of experimenting. Probably every mistake in the book was made in the original project, for which the first 45 applicants for home loans were accepted without financial investigation.

Strangely enough, only one of these original buyers was unable to keep up payments, although the majority were in the lowest income brackets. Later analysis showed that four of these buyers earned less than \$600 a year, 27 earned between \$600 and \$1,000 a year, 9 between \$1,000 and \$1,200 and only 5 over \$1,200. Of these 40 had payments of less than \$16 per month, 4 between \$16 and \$20 and only one over \$20.

The mistakes in the original program, which was set up under the old provisions of Title One, Class Three, were due not to accepting applicants of poor financial status but to lack of architectural and financial supervision. Under the previous lax FHA regulations for houses costing under \$2,500 owners

(Continued to page 102)

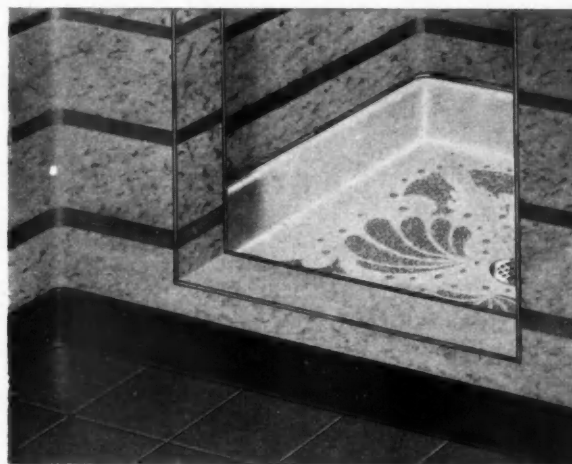
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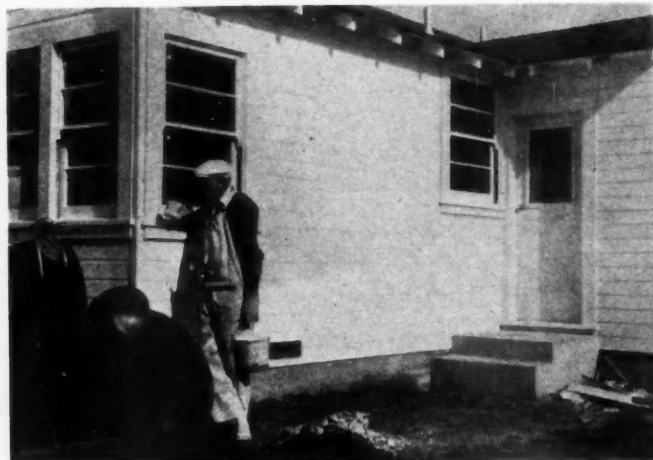
Name _____
 Address _____
 City _____ State _____

Low Income Family FHA Homes

(Continued from page 101)

attempted to do too much of the skilled labor themselves with resulting defects in construction. Another outcome was temporary privation when home builders, busy on their own construction, neglected their regular seasonal occupation.

Under the new program for obtaining Class Two loans only well-built homes of attractive architectural design are permitted. Nor is the buyer permitted by the Porters to do work he is unfit for or which would interfere with his own outside employment. After all the project is an altruistic one meant to better the worker's financial position by enabling him to employ spare time in building his own home.



ABOVE: Walter S. Miller, railroad switchman, helps meet down payment by painting his new Watsonville, Calif., home.

Announce Corrugated Enamel Sheathing

Available in Range of Colors

THE new Por-Ce-Lok sheets, which are now being produced on U.S.S. Vitrenamel steel by Porcelain Enamel Steels, Inc., Cleveland, Ohio, combine the advantages of formed roofing and siding with the corrosion resistance, clean smooth surface and color of porcelain enamel, and are particularly adaptable to industrial structures.

The diagram below illustrates the new type of lock joint developed for this sheathing, assuring weather-tightness without danger of chipped enamel. After forming the corrugations, the sheet is machine-punched along a longitudinal edge for fastening to the structure, cut as designated by the architectural layout, and then enameled. Recent developments in special porcelain enamels and



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The 1941 Edition of SWEET'S CATALOG FILE (for the Building Market) contains a comprehensive reference manual and catalog on Barcol OVERdoors and allied products, giving mechanical details and specifications of great value and usefulness to all Architects, Contractors, and Builders. You will find it extremely practical for reference with regard to closure problems on any type of structure, as it contains a wealth of detail drawings and other illustrations.



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WORKMEN fastening sheets to beam with rustproof bolts.

firing practice make it possible for two coats of porcelain enamel to provide the desired tough, flexible, weather-resistant glassy finish on all surfaces of the sheets, including edges and bolt holes.

These new sheets eliminate the need for either interior or exterior painting, as sheets are available finished in white porcelain enamel on one side to provide the desired high light reflection for interiors, and in royal blue, maroon, forest green, or fall brown on the exterior face. Other colors are available on special order.

Wide Range of Application

Stock sheets of Por-Ce-Lok cover 24 inches in width after interlocking and are available in standard lengths ranging from 5 to 10 feet. They may be applied on steel or wood framing, solid roof decks or side wall surfaces. Design is such that all attachments are concealed and all edges and holes are protected by a porcelain enamel coating, thus preventing possibility of corrosive attack on unprotected surfaces. Special enameled fittings are available for corners and sills as well as for cornices and gravel stops on flat roofs.



APPLYING side sheets with interlocking edge; note enameled sill.

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Bruce Streamline Flooring easily withstands ordinary wear and tear because it has a penetrating seal finish put on by special process at the factory. And as for beauty, home owners marvel at its warm richness—take pride in the modern "shadow pattern" effect of the wide beveled strips. Bruce Streamline costs no more than ordinary hardwood flooring finished after it's laid. The wider strips lay faster. Floors are ready for use the instant they're laid. Expedites the work of other trades.

Bruce Streamline Flooring comes in Red and White Oak, Maple and Beech. Three sizes: 25/32" x 3 1/4", 1/2" x 2 1/2" and 3/8" x 2". Prove for yourself its superiority. Mail coupon now for illustrated literature and free Scratch Test panel.



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Send for this scratch test panel. Half is finished the new "Bruce-Way" used on STREAMLINE Flooring—other half finished the ordinary surface way. Scrape a coin across both finishes. See how the ordinary surface finish scratches and chips away, while the "Bruce-Way" finish is unharmed.



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Pointers on the Proper Use of Wood

Suitability of Woods for Use in the Frame House

WISE selection of lumber for building a house yields high returns in ultimate savings and satisfaction.

Such selection calls for an understanding of what is required in the various building items. For instance, the actual service conditions for joists call for stiffness, dryness as delivered, ability to stay in place, and minimum tendency to shrink, but it is not uncommon for the builder to select such members largely on the basis of bending strength.

Detailed information based on actual tests on all of the strength and other physical properties of all the woods available for use in house construction is not at hand through any one source. The accumulated fund of information that is available, however, together with the observations and mature judgment of technical workers and builders affords a sound basis for selection of building lumber items. It is on such a combination of actual test data and practical judgment that the following recommendations are based:

Exterior Trim (House)

Usual requirements:

Medium decay resistance, good painting and weathering characteristics, easy-working qualities, maximum freedom from warp.

Woods combining usual requirements in a high degree:

Cedars, cypress, redwood. (Heartwood only. Adapted to blinds, rails, and balcony and porch trim, where decay hazard is high.) Eastern white pine, sugar pine, western white pine, yellow poplar. (Heartwood only. Adapted to ordinary trim where decay hazard is moderate or low.)

Woods for special architectural treatments:

American chestnut, white oak. (Heartwood only. Used with natural finish.)

Woods combining usual requirements in a good degree:

Hemlocks, ponderosa pine, spruces, white fir. (When drainage is good.)

Douglas-fir, western larch, southern yellow pine. (Special priming treatment advisable to improve paint-holding qualities.)

Grades used:

A, B, or B and Better finish is used in the best construction, C and D finish in more economical construction, and No. 1 or No. 2 boards where appearance is not important.

Flooring (House)

Living Room and Bedroom Flooring

Usual requirements:

High resistance to wear, attractive figure or color, minimum warp and shrinkage.

Woods combining usual requirements in a high degree:

Hard maple, red and white oak. (Most commonly used hardwoods.)

Ash (white), American beech, birch, walnut. (Not commonly used.)

Hickory, black locust, pecan. (Not commonly available. Hard to work and nail.)

Woods combining usual requirements in a good degree:

Cypress, Douglas-fir, western hemlock, western larch, redwood, southern yellow pine. (Vertical grain.)

Cherry sweetgum, American sycamore (quartered). (Not commonly available. Highly decorative and suitable where wear is light and maintenance good.)

Grades used:

In American beech, birch, and maple flooring the grade of Firsts is ordinarily used for the better class of homes and Seconds and sometimes Thirds in low-cost jobs. In oak the grade of Clear (either plain or quartered) is used in better class work and Selects and sometimes No. 1 Common in low-cost work. Other hardwoods are ordinarily used in the same grades as oak. When softwood flooring is used (without covering) in better class homes grade A or B and Better vertical grain is used. Grade D or C (vertical grain) is used in more economical and low-cost homes.



(Right) Mounted on the jamb, the Carter Templet guides the Router for perfect mortises that fit every time.

(Left) Reversed and mounted on the door, the Carter Templet means quick, easy mortising. With Carter Mortiser and Templet, one man can handle 75 or more doors and jambs in a single day.

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Exclusive depth adjustment. The $\frac{3}{8}$ h.p. motor turns at 18,000 r.p.m. - so fast that smooth work is assured.

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Kitchen Flooring (Uncovered)

Usual requirements:

Resistance to wear, fine texture, ability to withstand washing and wear without discoloring and slivering, minimum warp and shrinkage.

Woods combining usual requirements in a high degree:

American beech, birch, hard maple. (Fine textured.)

Woods combining usual requirements in a good degree:

Ash, red and white oak. (Open textured.)

Soft maple.

Woods combining requirements in a fair degree:

Cypress, Douglas-fir, western hemlock, western larch, redwood, southern yellow pine. (Vertical grain preferred.)

Elm, hackberry, American sycamore.

Grades used:

The flooring grades, Seconds in American beech, birch, and hard maple, and Selects in the oaks are used in high-priced houses. In more economical construction Thirds in American beech, birch, and hard maple, and No. 1 Common or No. 2 Common in the oaks are used. D (vertical grain) is the lowest grade of softwood that proves thoroughly satisfactory in high-class construction. A grade and B and Better grade (vertical grain) are used most extensively. No. 1 and No. 2 are serviceable in low-cost construction, but wear unevenly around knots.

Porch Flooring

Usual requirements:

Medium to good decay resistance, medium wear resistance, non-splintering, freedom from warping.

Woods combining usual requirements in a high degree:

Cypress, Douglas-fir (vertical grain), western larch (vertical grain), southern yellow pine (vertical grain), redwood, white oak. (If full drainage is not obtainable only the heartwood of cypress, redwood, and white oak can be given a high rating.)

Black locust, walnut. (Usually impractical except when cut from homegrown timber.)

Grades used:

Grades C to A are used in the better types of homes. No. 1 and No. 2 are used in lower cost homes and are serviceable, but wear unevenly around knots, and the maintenance of paint on the knots is difficult. The superior paint-holding qualities and uniform wearing surface of vertical grain make it preferred in all grades. Hardwoods, if used at all, should be of Select or No. 1 Common quality.

Framing (House)

Usual requirements:

High stiffness, good bending strength, good nail-holding power, hardness, freedom from pronounced warp. For this use dryness and size are more important factors than inherent properties of the different woods.

Woods combining usual requirements in a high degree:

Douglas-fir, western larch, southern yellow pine. (Extensively used.)

Ash, American beech, birch, maple, oak. (Sometimes used, but more difficult to obtain in straight pieces and harder to nail and saw than preceding group.)

Cypress, redwood. (Seldom used.)

Woods combining usual requirements in a good degree:

Eastern hemlock, western hemlock, eastern spruce, Sitka spruce, white fir. (Extensively used.)

Eastern white pine, ponderosa pine, sugar pine, western white pine. (Seldom used because of adaptability to more exacting uses. Low strength may be compensated for by the use of larger members.)

American chestnut, yellow poplar. (Seldom used.)

Woods combining requirements in a fair degree:

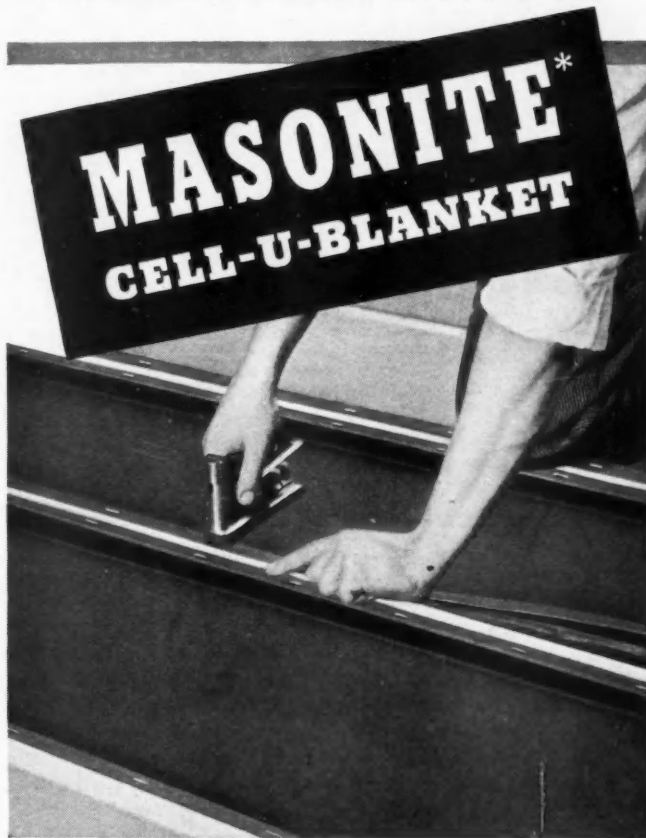
Elm, sweetgum, American sycamore, tupelo. (Seldom used.)

Grades used:

No. 1 Dimension is the usual softwood grade for all framing items in both high- and medium-class construction. No. 2 Dimension renders satisfactory service once it is in place, but is not so straight or easily fabricated as No. 1. No. 3 Dimension is serviceable for studs and joists in the more economical and low-cost homes, especially when warped pieces and short lengths resulting from cutting out defects can be used to advantage. When hardwoods are used for framing, sound square edge is used in the better types of construction and for such items as joists, rafters, and sills. Hardwood Common Dimension is used in the more economical type of buildings and for studding in all types.

(Continued to page 106)

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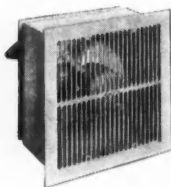
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Use of Wood— (Continued from page 105)

Interior Trim (House)
Interior Trim with Natural Finish

Usual requirements:

- Pleasing figure, hardness, freedom from warp.
- Woods combining usual requirements in a high degree: Ash, birch, cherry, American chestnut, oak, American sycamore (quartered), walnut.
- Woods adaptable to special selection and architectural treatment: Pecky cypress, etched or special-grain cypress, Douglas-fir, western larch, southern yellow pine, curly or bird's-eye maple. Knotty cedars, ponderosa pine, spruces, sugar pine, white pine. (Lack hardness of the preceding group.)
- Woods combining usual requirements in a good degree: Cypress, Douglas-fir, western hemlock, western larch, southern yellow pine, redwood, American beech, maple, sweetgum. (With conventional treatment.)

Grades used:

High-class hardwood interior trim is usually of A grade. The softwood grade A or B and Better is commonly used in a high-class construction. In the more economical types of construction C grade is serviceable. D grade requires special selection or some cutting to obtain clear material. Special grades of knotty pine, pecky cypress, and sound wormy oak and chestnut are available to meet special architectural requirements in some types of high-class construction.

Interior Trim with Paint Finish

Usual requirements:

- Fine and uniform texture, hardness, absence of discoloring pitch, freedom from warp and shrinkage.
- Woods combining usual requirements in a high degree: Birch, cherry, walnut, yellow poplar. Eastern white pine, ponderosa pine, sugar pine, western white pine. (Where liability to marring is negligible and special priming is used.)
- Woods combining usual requirements in a good degree: Hemlocks, redwood, spruce, white fir. American basswood, American beech, sweetgum, maple, tupelo. Cypress, Douglas-fir, western larch, southern yellow pine, ash, American chestnut, oak. (Used satisfactorily where requirements for smoothness of finish are not exacting.)

Grades used:

C is the lowest softwood grade commonly used for high-class paint and enamel finish. D can be used, but requires some selection or cutting. No. 1 is used for ordinary or rough-paint finishes. In cheaper and more economical homes No. 2 may be used for ordinary or rough-paint finishes. Smooth-paint finishes are difficult to obtain and maintain over knots in No. 1, No. 2, and No. 3 grades. The A trim grade in the hardwoods is used for exacting requirements of high-class paint and enamel finish in high-cost homes. The standard grade of Firsts and Seconds is also used, but requires some selection or cutting. No. 2 Common hardwoods are used for interior trim in the low-cost home, but in this class of home softwoods are generally used for the interior trim that is to be painted.

Lath (House)

Usual requirements:

- Low shrinkage, easy nailing, nondiscoloration of plaster.
- Woods combining usual requirements in a high degree: Jack pine, lodgepole pine, eastern white pine, sugar pine, ponderosa pine, western white pine, spruce, white fir, yellow poplar.
- Woods combining usual requirements in a fair degree: Cypress, Douglas-fir, hemlocks, western larch, southern yellow pine, American basswood.

Grades used:

Two grades of lath No. 1 and No. 2, are available in practically all softwoods and in a number of hardwoods. In high-class and in the standard or medium types of construction No. 1 lath is usually used. No. 2 lath meets the less exacting requirements of cottages and lower-cost homes.

Roof Boards (House)

Usual requirements:

- High stiffness, good nail holding, small tendency to warp, ease of working.

Woods combining usual requirements in a high degree:
 Douglas-fir, western larch, southern yellow pine. (Commonly used.) Cypress. (Not commonly used because of adaptability to more exacting uses.) Ash, American beech, birch, American chestnut, elm, hackberry, maple, oak, tupelo. (Seldom used because not readily available and hard to work.)

Woods combining usual requirements in a good degree:
 Hemlocks, ponderosa pine, spruces, white fir. (Commonly used.) Eastern white pine, sugar pine, western white pine, redwood, yellow poplar. (Seldom used because of adaptability to more exacting uses.)

Grades used:
 No. 2 boards are used extensively in higher type homes. In more economical construction both No. 2 and No. 3 are used. No. 3 is serviceable, but not so tight as No. 2. No. 4 and No. 5 are available in some species, but entail waste in cutting. When hardwoods are used No. 2 Common is adapted to the better class houses and No. 3 Common to the more economical.

Sash

Sash Used in a Dry Location (Low Decay Hazard)

Usual requirements:
 Moderate shrinkage, good paint qualities, freedom from warping, ease of working, screw-holding power.

Woods combining usual requirements in a high degree:
 Eastern white pine, ponderosa pine, sugar pine, western white pine. (Principal woods used for sash.)
 Cypress, redwood.

Woods combining usual requirements in a good degree:
 Douglas-fir, western larch, southern yellow pine. (Vertical grain. Use limited by milling and finishing characteristics.)

Sash Used in a Moist Location (High Decay Hazard)

Usual requirements:
 High decay resistance. Moderate shrinkage, good paint qualities, freedom from warping, ease of working, screw-holding power.

Woods combining usual requirements in a high degree:
 Eastern white pine, ponderosa pine, sugar pine, western white pine. (Principal woods used for sash. Require good preservative treatment.)
 Cypress, cedars, redwood, American chestnut. (Heartwood only or sapwood when treated.)

Woods combining usual requirements in a good degree:
 Douglas-fir, western larch, southern yellow pine. (Heartwood only.)
 White oak. (Harder to work and higher shrinkage than the softwoods.)

Grades used:
 Grades of lumber used for sash are primarily of interest to manufacturers rather than users.

Shelving (House)

Shelving with Natural or High-Class Paint Finish

Usual requirements:
 Stiffness, good finishing qualities, freedom from pitch and warp.

Woods combining usual requirements in a high degree:
 Ash, birch, maple, oak, walnut. (Suitable for natural finishes used principally to match interior trim.)
 Cypress, redwood, yellow poplar. (Suitable for high-class paint finishes, but use limited.)
 Eastern white pine, ponderosa pine, sugar pine, western white pine. (Principal woods used for high-class paint finishes.)

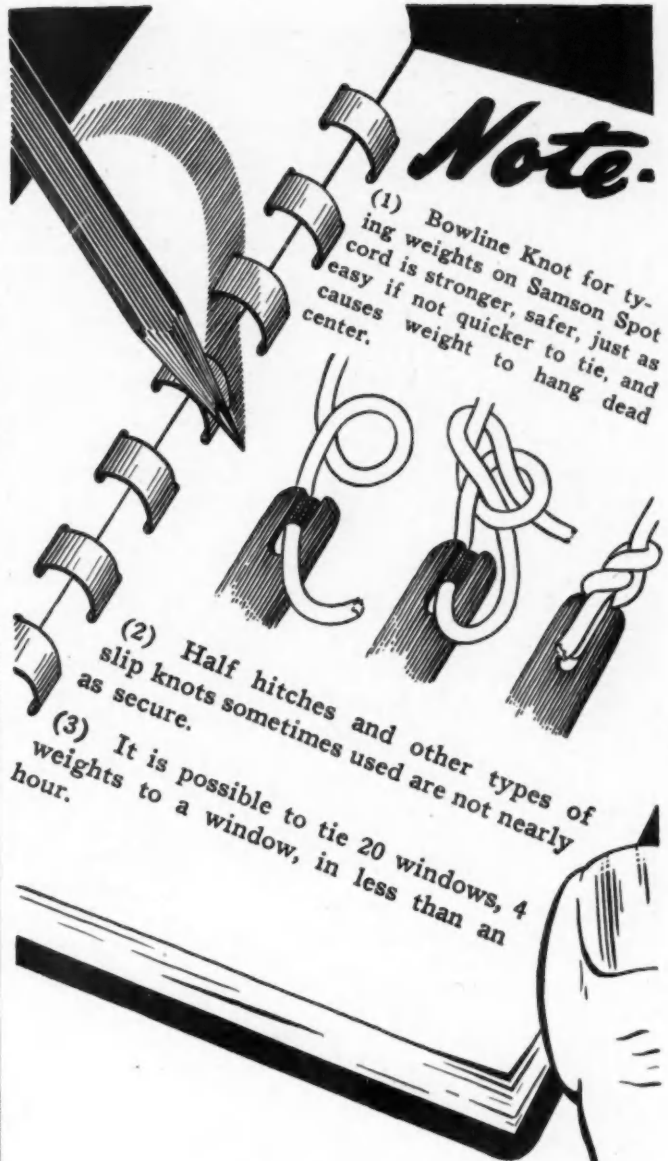
Woods combining usual requirements in a good degree:
 Douglas-fir, hemlocks, western larch, southern yellow pine, spruces, white fir, American basswood, American chestnut. (May be used with either natural or paint finishes.)

Shelving with Unfinished or Plain Paint Coating

Usual requirements:
 Stiffness, ease of working, freedom from pitch and warp.

Woods combining usual requirements in a good degree:
 Eastern white pine, ponderosa pine, sugar pine, western white pine. (Principal woods used.)
 Cypress, hemlocks, redwood, spruces, white fir, American basswood, American chestnut, yellow poplar.
 Douglas-fir, western larch, southern yellow pine. (Softwoods with high stiffness.)
 Birch, maple, oak. (Seldom used; difficult to work.)

(Continued to page 108)



Note.

(1) Bowline Knot for tying weights on Samson Spot cord is stronger, safer, just as easy if not quicker to tie, and causes weight to hang dead center.

(2) Half hitches and other types of slip knots sometimes used are not nearly as secure.

(3) It is possible to tie 20 windows, 4 weights to a window, in less than an hour.

The above is just a suggestion — just one builder's idea. Tie the knot as you think best but be sure to use Samson Spot Sash Cord — it gives dependable satisfaction. There is no more economical, more permanently trouble-free method of hanging double hung sash than with cord, weight and pulley. Samson Spot Sash Cord is generally specified by architects, recommended by dealers and preferred by builders. Identified by the Colored Spots, our trade-mark (Reg. U. S. Pat. Off.)

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SAMSON SPOT SASH CORD

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Use of Wood— (Continued from page 107)

Grades used:

The grade best adapted to use depends on the character of the shelving as well as on type of construction. C or a better grade is used for shelves that are to receive a high-class paint or enamel finish. D grade is serviceable, but may entail some waste. No. 1 and No. 2 are used for shelving that is unpainted or receives only a rough-paint finish. No. 3 is serviceable, especially when cut into short lengths, but may entail some waste. When hardwoods are used for shelving in closets or storerooms No. 1 or No. 2 Common is used. These two grades are suitable for higher class shelving where short-length or narrow, clear, cutting can be used to advantage.

Shingles (House)

Usual requirements:

High decay resistance, small tendency to curl or check, freedom from splitting in nailing.

Woods combining usual requirements in a high degree:

Cedars, cypress, redwood. (Principal shingle woods; heartwood, only, edge grain.)

Eastern white pine, ponderosa pine, sugar pine, western white pine. (Handmade shingles or shakes from locally grown timber; require good preservative treatment.)

American chestnut, white oak. (Hand-made shingles or shakes from locally grown timber; require care in nailing.)

Grades used:

In western red cedar, cypress and redwood No. 1 shingles (all heart, edge-grain clear stock) should be used for the longest life and greatest ultimate economy in dwelling roofs. Other all-heart, but not edge-grain grades, such as No. 2 in redwood and western red cedar and Bests in cypress, are frequently used to reduce the first cost. Other grades permitting sapwood and flat grain are available and are used where low initial cost is the determining factor.

Siding (House)

Usual requirements:

Good painting characteristics, easy working, freedom from warp.

Woods combining usual requirements in a high degree:

Cedars, cypress, eastern white pine, sugar pine, western white pine, redwood.

Woods combining usual requirements in a good degree:

Western hemlock, ponderosa pine, spruce, yellow poplar.

Woods combining usual requirements in a fair degree:

Douglas-fir, western larch, southern yellow pine.

Grades used:

Redwood and cypress are available in special siding grades of Clear Heart, and western red cedar and Port Orford white cedar in a siding grade of Clear. In other softwoods the B and Better siding is used in the highest class of construction. Siding in more economical types of construction is usually of C or D grade, but No. 1 and No. 2 are available in a number of species.

Stepping (Outdoor Use)

Usual requirements:

High decay resistance, nonsplintering, good bending strength and wear resistance, freedom from warping.

Woods combining usual requirements in a high degree:

Cypress, white oak (especially when quartersawn). (Heartwood only.)

Black locust, walnut. (Usually impractical except when cut from homegrown timber.)

Woods combining usual requirements in a good degree:

Douglas-fir, western larch, redwood, southern yellow pine. (Vertical-grain heartwood only.)

Woods combining usual requirements in a fair degree:

Cedar, Douglas-fir, western larch, southern yellow pine. (Flat grain.)

Grades used:

C or a higher grade of softwoods and Firsts and Seconds in hardwoods are used in high-class construction. In the less costly construction, No. 1 Common in hardwoods and as low as No. 2 grade in softwoods are used. No. 1 and No. 2 grades in softwoods are serviceable, but wear unevenly around knots. Dense No. 1 southern pine is sometimes used in better type homes.

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Subfloors (House)

Usual requirements:

Requirements are not exacting, but high stiffness, medium shrinkage and warp, and ease of working are desired.

Woods combining usual requirements in a high degree:

Douglas-fir, western larch, southern yellow pine. (Commonly used.)

Cypress, redwood, ash, yellow poplar. (Seldom used because of adaptability to more exacting uses.)

Woods combining usual requirements in a good degree:

Hemlocks, ponderosa pine, spruces, white fir. (Commonly used.)

Eastern white pine, sugar pine, western white pine. (Seldom used because of adaptability to more exacting uses.)

American beech, birch, American chestnut, elm, hackberry, maple, oak, tupelo. (Seldom used. Not readily available and hard to work.)

Grades used:

No. 2 boards are used extensively in higher type homes. In more economical construction both No. 2 and No. 3 are used. No. 3 is serviceable, but not so tight as No. 2. No. 4 and No. 5 are available in some species, but entail waste in cutting. When hardwoods are used, No. 2 Common is adapted to the better class houses and No. 3 Common to the more economical.

Wall Sheathing (House)

Usual requirements:

Easy working, easy nailing, moderate shrinkage. All woods can be used for sheathing with satisfactory results although some woods are less time-consuming to work than are others.

Woods combining usual requirements in a high degree:

Cedar, cypress, hemlocks, eastern white pine, ponderosa pine, sugar pine, western white pine, redwood, spruce, white fir, American basswood, American chestnut, yellow poplar.

Woods combining usual requirements in a good degree:

Douglas-fir, western larch, southern yellow pine, cottonwood.

Grades used:

No. 3 grade of softwoods makes a serviceable sheathing when covered with good building paper. No. 1 and No. 2 make a tighter coverage, but do not warrant omitting use of building paper. No. 4 and No. 5 are used in low-cost homes, but are not generally available. They both entail some waste in cutting. When a hardwood is used for sheathing, No. 2 Common is adapted to the better type homes, and No. 3 Common to the more economical.

The foregoing information is a part of U. S. Department of Agriculture Farmers' Bulletin 1756, "Selection of Lumber for Farm and Home Building," copies of which can be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., for 5c each, stamps not accepted.

Suitability of Woods for Use in Barns and Other Farm Structures

A KNOWLEDGE of the structural properties of various woods suitable for farm structures saves money and helps farm woodlot owners make better use of their timber for farm purposes.

A superficial selection of building material on the farm often results in needless waste. For instance, a farmer may assume that he wants a wood of high strength for barn siding when what he needs mainly is a wood having good painting and weathering qualities and ability to stay in place.

Detailed information based on actual tests on all of the strength and other physical properties of all the woods available for use on the farm are not at hand from any one source. The accumulated fund of information that is available, however, together with the observations and mature judgment of technical workers and builders affords a sound basis for the selection of building lumber items. It is on such a combination of actual test data and practical judgment that the following recommendations are based:

Joists, Rafters, Plates (Barn)

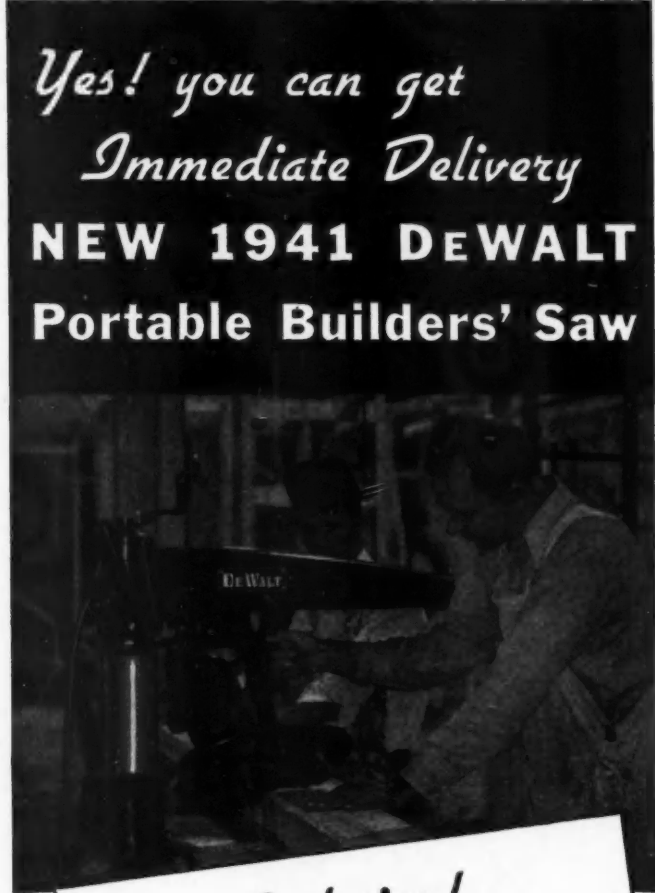
Usual requirements:

High bending strength, good nail-holding power, moderate shrinkage, and medium ease of working. Woods of moderate bending strength can be used with fully satisfactory results if lower strength is compensated for by the use of larger members.

Woods combining usual requirements in a high degree:

Douglas-fir, western larch, southern yellow pine.
Ash, American beech, birch, maple, oak. (Hard to nail and work.)

(Continued to page 110)



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Use of Wood—(Continued from page 109)

Woods combining usual requirements in a good degree:

Cypress, eastern hemlock, western hemlock, redwood, eastern spruce, Sitka spruce, white fir, elm, sweetgum, hackberry, American sycamore, tupelo, yellow poplar.

Woods combining requirements in a fair degree:

Cedar, eastern white pine, ponderosa pine, sugar pine, western white pine, Engelman spruce, American basswood, American chestnut, cottonwood. (Strength and stiffness equal to that of strongest species can be obtained by use of larger sizes.)

Grades used:

The No. 1 Timber or Dimension grade of most softwood species is used in large barns. Added strength and nail-holding power in large, high-class barns can be obtained by the use of the select merchantable grade of Douglas-fir or the Dense No. 1 grade of southern pine. The No. 2 Timber or Dimension grade of all softwood species is used in small and low-cost barns. The hardwood grades used are sound square edge for large barns and common timber for small barns.

Mangers (Barn)

Usual requirements:

Hardness, nonsplintering.

Woods combining usual requirements in a high degree:

Ash, American beech, birch, black locust, osage orange, rock elm, hickory, maple, oak, American elm, sweetgum, tupelo.

Woods combining usual requirements in a fair degree:

Cypress, Douglas-fir, western larch, southern yellow pine, redwood.

Grades used:

The hardwoods are used in No. 1 Common and No. 2 Common grades, the softwoods in No. 1 and No. 2. In the more economical type of work softwood grades as low as No. 4 and hardwood grades as low as No. 3 Common are sometimes used.

Roof Boards (Barn)

Usual requirements:

High stiffness, good nail-holding power, low shrinkage, medium decay resistance, freedom from splitting.

Woods combining usual requirements in a high degree:

Cypress, Douglas-fir, western larch, southern yellow pine, redwood.

Woods combining usual requirements in a good degree:

Eastern hemlock, western hemlock, eastern white pine, ponderosa pine, sugar pine, eastern spruce, Sitka spruce, white fir, American beech, birch, maple, red oak. (Render good service in barns having low decay hazard.)

American chestnut, elm, sweetgum, white oak, yellow poplar. (Sometimes available from locally grown timber.)

Grades used:

No. 1 and No. 2 grades are used in large, high-class barns. No. 2 is serviceable. No. 2 or No. 3 is used in small and low-cost barns. No. 3 may entail some waste in cutting.

Siding and Barn Boards (Barn)

Usual requirements:

Good painting or weathering qualities, freedom from warping or splitting, medium decay resistance. Medium bending strength in walls without foundation or interior lining.

Woods combining usual requirements in a high degree:

Cypress, redwood. (Heartwood only. Adapted to barns without foundation walls or interior lining.)

Northern white cedar, western red cedar, American chestnut. (Heartwood only. Require foundation wall or interior lining.)

Woods combining usual requirements in a good degree:

Eastern white pine, ponderosa pine, sugar pine, western white pine, yellow poplar. (Heartwood only. Require foundation wall or interior lining.)

Douglas-fir, western larch, southern yellow pine. (Heartwood only. When given special priming coats and protected against weathering by good paint maintenance. Adapted to barns without foundation walls or interior lining.)

Woods combining usual requirements in a fair degree:

Hemlocks, eastern spruce, Sitka spruce, white fir.

Grades used:

The grade of bevel siding used is generally higher than the grade used with drop siding or barn boards. When bevel siding is used it is usually in D to A grades. When drop siding is used it is usually in B and Better grade in the highest type barns, but No. 2 is serviceable and is used extensively in

more economical types of barns. Barn boards are customarily used in lower grades than are either bevel or drop siding. No. 1 is used in the highest type barns and No. 2 in the more economical type. No. 3 and No. 4 barn boards are also used, but entail some waste.

Sills on Foundation Walls (Barn)

Usual requirements:

Good nail-holding power, hardness, good decay resistance. High bending strength is important when piers or posts are used in lieu of walls.

Woods combining usual requirements in a high degree:

Cedars, cypress, American chestnut, redwood, white oak. (Heartwood has high decay resistance.)

Woods combining usual requirements in a good degree:

Douglas-fir, western larch, southern yellow pine, rock elm, yellow poplar. (High in strength and nail-holding. Heartwood has medium decay resistance.)

Woods combining requirements in a fair degree:

Eastern hemlock, western hemlock, eastern white pine, ponderosa pine, sugar pine, western white pine, spruce, white fir, ash, American beech, birch, American elm, maple, red oak, American sycamore. (Require good preservative treatment.)

Grades used:

Softwood sills in large barns are generally of the No. 1 Timber or No. 1 Dimension grade. No. 2 Dimension is used in small and low-cost barns. Both No. 1 and No. 2 Dimension grades have a high percentage of heartwood. All-heartwood pieces should be selected for sills, especially where foundation walls are low or where condensed moisture is liable to be absorbed by sills. Hardwood sills are usually of the sound square-edge grade in large barns and of the common-timber grade in small barns.

Stall Flooring (Barn)

Usual requirements:

High decay resistance, uniform hardness (nonsplintering).

Woods combining usual requirements in a high degree:

White oak (heartwood only). (Principal wood used. Adapted to use where horses are sharp-shod.)

Black locust, osage orange. (Not usually available. Adapted to use where horses are sharp-shod.)

Ash, American beech, birch, elms, blackgum, hickory, maple, red oak, tupelo. (Require thorough preservative treatment. adapted to use where horses are sharp-shod.)

Woods combining usual requirements in a good degree:

Cypress, Douglas-fir, western larch, southern yellow pine, redwood, sweetgum. (Heartwood only. Adapted to uses where the wear is light.)

Grades used:

The No. 2 Dimension softwood grade is used in all types of construction and is serviceable. No. 3 Dimension in softwoods is sometimes used and is serviceable when sound. The hardwood grades used for stall flooring are No. 1 and No. 2 Bridge Plank.

Stanchions and Stalls (Barn)

Usual requirements:

High bending strength, medium decay resistance, hardness.

Woods combining usual requirements in a high degree:

Rock elm, black locust, white oak, osage orange.

Woods combining usual requirements in a good degree:

Ash, American beech, birch, American elm, sweetgum, hickory, maple, red oak. (Best adapted to use where mechanical wear is more important than decay hazard.)

Woods combining requirements in a fair degree:

Cypress, Douglas-fir, western larch, southern yellow pine, redwood. (Best adapted to use where mechanical wear is less important than decay hazard.)

Grades used:

No. 1 and No. 2 Dimension is commonly used, although grades as low as No. 4 are used. Grades lower than No. 2 may contain some decay that will require culling or cutting of some pieces. The hardwood grade, sound square edge, is commonly used in the best construction and the common hardwood lumber in more economical construction. The common hardwood lumber may require some cutting.

Studding (Barn)

Usual requirements:

Good stiffness, good nail-holding power, medium freedom from

(Continued to page 112)

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Write for "The Complete Line" Folder

THE RYBOLT HEATER COMPANY
619 MILLER STREET . . . ASHLAND, OHIO

Use of Wood—(Continued from page 111)

warp, moderate ease of working. In some barns, especially dairy, preservative treated or good natural decay resistance is an added requirement.

Woods combining usual requirements in a high degree:

Douglas-fir, western larch, southern yellow pine.
Cypress, redwood. (Heartwood decay resistance is high.)

Woods combining usual requirements in a good degree:

Hemlocks, eastern white pine, ponderosa pine, sugar pine, western white pine, eastern spruce, Sitka spruce, white fir, American chestnut, yellow poplar.

Ash, American beech, birch, black locust, maple, oak. (Hard to nail and fabricate.)

Elms, sweetgum, hackberry, American sycamore. (Difficult to fabricate because of warped pieces.)

Grades used:

No. 1 Dimension is the principal softwood grade used for studding in high-class construction. No. 2 Dimension is serviceable, but is more difficult to fabricate because it contains more crooked pieces. No. 2 and No. 3 Dimensions are used in small, inexpensive barns. No. 3 entails some waste in cutting. Hardwoods in common dimension are used in all types of construction.

Concrete Forms

Usual requirements:

Good stiffness, good bending strength, resistance to warping and splitting incident to installation and re-use, ease of nailing and cutting. With compensations in size of material or in frequency of bracing, almost all woods can be used in ordinary construction for concrete forms.

Woods combining usual requirements in a high degree:

Cypress, Douglas-fir, western larch, southern yellow pine. (High strength and good re-use value.)

Western hemlock, eastern spruce, Sitka spruce. (Easy to cut and nail. Re-use high, but lack strength of preceding group.)

Woods combining usual requirements in a good degree:

Eastern white pine, eastern hemlock, ponderosa pine, western

white pine, redwood, white fir.

Woods combining usual requirements in a fair degree:

American basswood, American beech, birch, cottonwood, gum, maple, oak. (Difficult to assemble or have low re-use value.)

Grades used:

No. 1 and No. 2 grades of softwoods and No. 2 Common hardwoods are used in forms with minimum of bracing. Forms in which the spacing is close or the loads are small use No. 2 or No. 3 softwood grades or No. 3 Common hardwoods. No. 4 in softwoods is sometimes used for simple rough forms. The percentage of No. 4 material that can be re-used is smaller than with the better grades.

Fence Posts

Usual requirements:

High decay resistance, narrow sapwood ring, medium bending strength, high nail-holding power. Practically all species can be used if given a good preservative treatment.

Woods combining usual requirements in a high degree:

Black locust, osage orange. (Meet all requirements. Not readily available in all parts of the United States.)

American chestnut, white oak. (Sawed or split. Heartwood only. Generally available in the eastern states, but life shorter than preceding group.)

Cedars, cypress, juniper, redwood, catalpa. (Sawed or split. Heartwood only. Readily available, but do not hold nails so well as preceding groups.)

Woods combining usual requirements in a good degree:

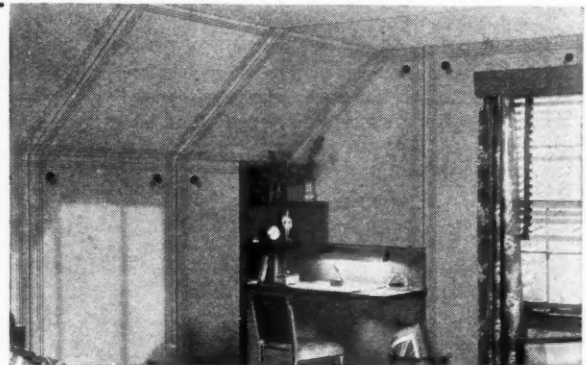
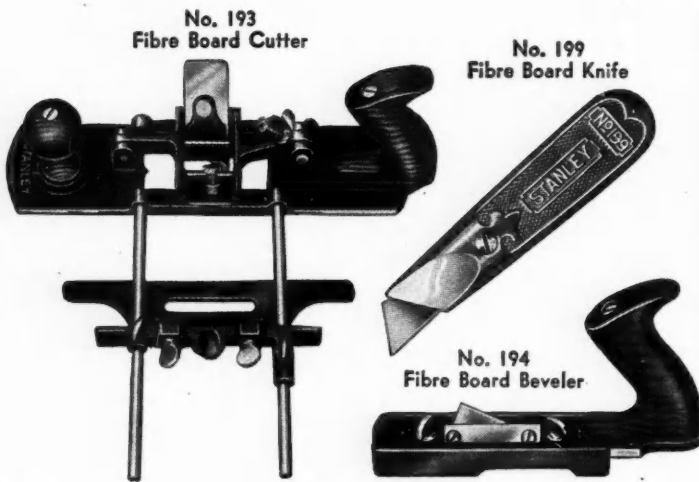
Douglas-fir, western larch, southern yellow pine, tamarack. (Sawed or split. Heartwood only.)

Woods requiring thorough preservative treatment for long service: American beech, birch, maple, red oak, elms. (Equal the best woods when given a good preservative treatment.)

Hemlocks, spruces, white fir, American basswood, cottonwood, sweetgum, tupelo, yellow poplar.

Grades used:

Fence posts are frequently round and have no standard grades. It is not practical to limit the amount of sapwood in round posts by rules or specifications.



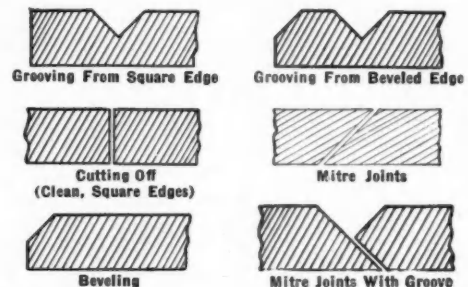
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STANLEY TOOLS

DIVISION OF THE STANLEY WORKS
NEW BRITAIN, CONN.



Gates and Fences (Exclusive of Posts)

Usual requirements:

Moderate bending strength, medium decay and weather resistance, high nail-holding power, freedom from warp.

Woods combining usual requirements in a high degree:

Cypress, Douglas-fir, western larch, southern yellow pine, redwood, white oak.

Woods combining usual requirements in a good degree:

Cedar, eastern white pine, ponderosa pine, sugar pine, western white pine, American chestnut, yellow poplar. (Small tendency to warp, weather well, but low in strength and nail-holding power.)

American beech, birch, sweetgum, maple, red oak, tupelo. (Strong, hard, high in nail-holding power, but have greater tendency to warp and do not weather so well as preceding group.)

Eastern hemlock, western hemlock, white fir, spruce. (Intermediate between preceding groups.)

Grades used:

The No. 1 or No. 2 softwood and No. 2 Common hardwood grades are used in better and more substantial gates and fences. In lighter and more economical gates and fences No. 2 or No. 3 Common hardwood are used. A softwood grade as low as No. 4 may be used, but entails some waste.

Scaffolding

Usual requirements:

High bending strength, high stiffness, high nail-holding power, medium weight.

Woods combining usual requirements in a high degree:

Douglas-fir, western larch, southern yellow pine, white ash.

Woods combining usual requirements in a good degree:

Cypress, redwood, spruces.

Birch, elm, maple, oak. (Hard to saw and nail.)

Woods combining usual requirements in a fair degree:

Sugar pine, ponderosa pine, western white pine.

Grades used:

Structural grades are usually required for scaffolding that must support loads under conditions which involve hazards to life or limb. Light scaffolding should be selected from softwood made of No. 1 Dimension or Better, and in hardwoods uprights can be selected from Common Dimension and planking from No. 1 Bridge Plank. Selection should eliminate all pieces with large or unsound knots and crossgrain. Some state building codes designate the grades to be used for scaffolding.

Silos, Tanks, and Vats

Usual requirements:

High decay resistance, low shrinkage.

Woods combining usual requirements in a high degree:

Cedars, cypress, redwood. (Heartwood only.)

American chestnut, white oak. (Quarter-sawn heartwood only.)

Woods combining usual requirements in a good degree:

Douglas-fir, western larch, southern yellow pine. (Heartwood only, edge grain.)

Grades used:

The requirements for silos, tanks, and vats are best met by grades prepared especially for their uses. Such special grades are sold as tank, tank and boat, or silo stock and are available in most of the softwoods well adapted to these uses. The clear-heart grades available in cypress and redwood are also used extensively where requirements are high. There are no special grades in hardwoods for silos, tanks, or vats. Hardwoods, when used, should be bought on special order calling for all-heart, tight stock.

Troughs (Feed) and Supports

Usual requirements:

Medium decay resistance, medium bending strength, nonsplintering, hardness.

Woods combining usual requirements in a high degree:

Cypress, redwood, American chestnut, white oak. (Adaptable to use where decay hazard is high.)

Douglas-fir, western larch, southern yellow pine. (Adaptable to uses that are subjected to rough treatment, but only moderate decay hazards.)

Grades used:

No. 1 or No. 2 boards are used in the softwoods for large long troughs. A softwood grade as low as No. 4 can sometimes be used to advantage in troughs in which the lumber is cut to

(Continued to page 114)

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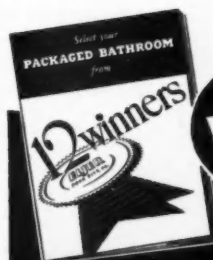
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 YEON BUILDING PORTLAND, OREGON



*IDAHO WHITE PINE *PONDEROSA PINE *SUGAR PINE

***These Are the Western Pines**



Use of Wood—(Continued from page 113)

short lengths. Of the hardwoods, the No. 2 Common grade is the most used. The No. 3 Common hardwood grade can sometimes be used if the material is cut to short lengths.

Windmill and Well Platforms

Usual requirements:

High decay resistance, good bending strength.

Woods combining usual requirements in a high degree:

Cypress, redwood, American chestnut, black locust, white oak. (Heartwood only.)

Woods combining usual requirements in a good degree:

Cedar, Douglas-fir, western larch, southern yellow pine, rock elm. (Heartwood only.)

Grades used:

No. 1 or No. 2 Dimension in softwoods and sound square in hardwoods are the grades ordinarily used.

The foregoing information is a part of U. S. Department of Agriculture Farmers' Bulletin 1756, "Selection of Lumber for Farm and Home Building," copies of which can be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., for 5c each, stamps not accepted.

* * *

How to Make a Laminated Diving Board

THE Forest Products Laboratory, Madison, Wis., has developed two types of laminated diving boards that have shown pleasing performance characteristics and long economical service under the severe moisture hazards and heavy service conditions found at public swimming places. One type, made with phenolic or other resin glue, requires no protection from moisture. The other, made with casein glue, requires that the joints be protected by rubber matting. Both boards, made from narrow strips of seasoned lumber, are intended as a substitute for comparatively costly one-piece boards made from selected wide and thick stock.

Experimental diving boards made with the waterproof resin glues showed no appreciable weakening of joints during the life of the boards. Synthetic-resin glues, however, require kiln equipment for setting the glue. Boards joined with these glues, therefore, can be made only by manufacturers with such equipment. Necessary details of the operations with synthetic resin glues can be obtained from the Forest Products Laboratory.

Good boards of the second type referred to above can be made with cold setting casein glue by any wood shop. One board of this type gave 5 years' service at a public beach where conditions limited the service of boards previously installed to less than 1 year, meanwhile performing to the satisfaction of professional divers as well as the general public. The instructions and drawings presented in this technical note give the essentials for construction of a similar board. Deserving of special attention are the suggestions for gluing, for protective matting, and for the fulcrum or tip.

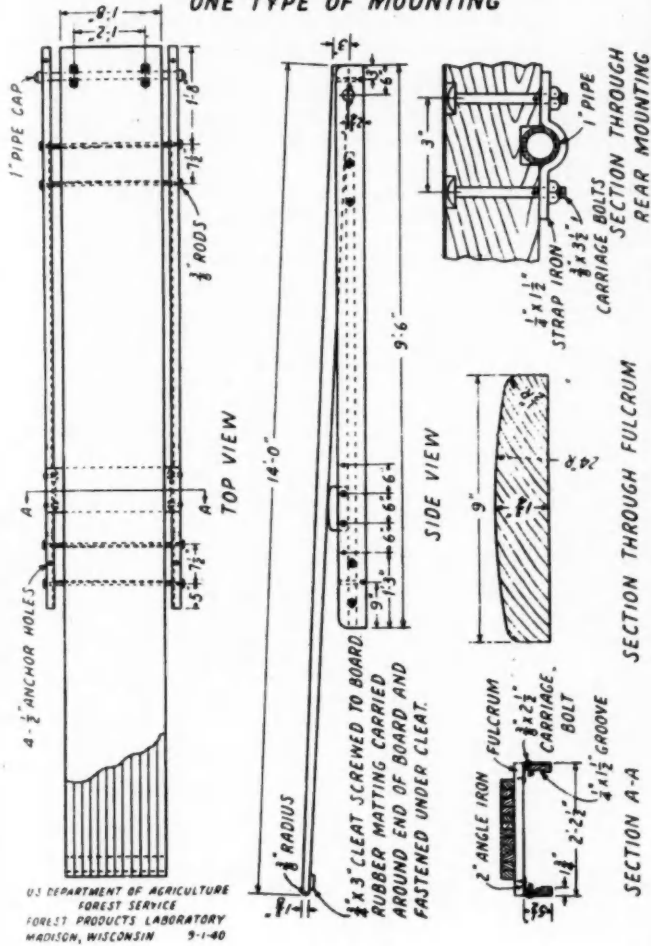
As indicated by the drawing, the laminations should be about nominal 2-inch or thicker stock and tapered in widths from 3 inches at the inshore end of the board to 1 3/8 inches at the outboard end. Suitable pieces can be conveniently cut by diagonal ripping of 2 by 6's. Bolts *should not* be used to hold the laminations together. If the gluing job is properly conducted and the protective covering properly used, bolts will not be needed and will, in fact, weaken the board.

Clamps should be applied on the edges of the board to hold the laminations together throughout the length of the board at a pressure of about 150 pounds per square inch while the glue is setting. Clamps should also be applied bearing on top and bottom surfaces to prevent bowing and misalignment of the laminations which would necessitate excessive dressing off of irregularities.

The matting, which covers the top surface, edges, and ends, should be casein-glued to the board. This matting should be a low-grade type of rubber matting, which characteristically has a high percentage of fiber and tar. That type of matting is preferable to matting made more nearly of pure rubber, as the better quality of mattings are hard to glue to the board and tend to separate from the board in large "blisters." The function of the matting is to keep moisture from the board and protect the glue joints from water. Failure to perform this function will result in opening of the glue joints and early failure of board. Rubber-covered boards have been used without further covering, but a more satisfactory service is obtained when the usual type of coco matting is applied over the rubber. The slipping hazard is much less on coco matting than on rubber.

Am
 1" PIPE CAP
 4-3" ANCHOR BOLTS
 U.S. DEPT. OF AGRICULTURE
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 The length using a line applied wood wider fulcrum location Sou the sy specie the 2 No tures of div given hold
 Gen Nail
 THR join The The The The althou dency lose m are dr recom

LAMINATED DIVING BOARD AND ONE TYPE OF MOUNTING



U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
FOREST PRODUCTS LABORATORY
MADISON, WISCONSIN 9-1-40

The broad, slightly rounded fulcrum contributes greatly to the length of service of the diving board. The common practice of using a 2-inch pipe crosswise of the board for a fulcrum, offers a line of bearing for the board which is practically a knife edge and applies concentrated shock loads to an extremely limited area of wood fiber. The broad fulcrum distributes this load over a much wider area and is a safeguard against failure of the board at the fulcrum. The entire board can be shifted with respect to the location of the fulcrum to suit the desire of users.

Southern yellow pine was used in the experimental boards, but the system of construction described above is applicable to other species. Small knots are permissible in the laminations except in the 2 feet of length on either side of the center of length.

No investigation has been made to determine whether the features developed for improving the service and lengthening the life of diving boards are patented. No assurance can, therefore, be given that others have not developed them independently and hold patents that cover them in whole or in part.

General Observations on the Nailing of Wood

THREE principal factors determine the efficiency of a nailed joint, namely:

- The wood.
- The nail.
- The conditions of use.

The harder woods hold nails better than the softer woods, although they are more difficult to nail and have a greater tendency to split. Wood that is green or not thoroughly dry may lose most of its nail-holding power when it dries after the nails are driven. This is one of the reasons why green wood is not recommended for building construction. The resistance to with-

(Continued to page 116)

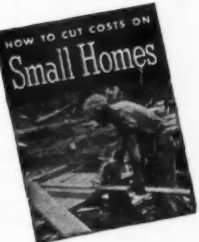
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Use of Wood— (Continued from page 115)

drawal is higher when nails are driven into the side grain than when driven into the end grain of the wood, and therefore side grain nailing is always to be preferred.

The common wire nail has attained by far the widest use of the many types developed. By varying the number and size, the kind of point, and the type of surface, the common nail can be adapted to cover a wide range both of everyday and of exacting uses.

The resistance to withdrawal of common nails increases directly with the depth to which driven and increases almost directly with the diameter or surface area; that is, if the diameter of a common nail is doubled the holding power is doubled, provided, of course, that splitting of the wood does not occur. The resistance of nails to side loads (lateral resistance) increases nearly 1½ times as fast as the diameter; that is, if the diameter of a common nail is doubled, the lateral resistance is nearly three times as great. The development of the maximum lateral resistance of a nail, requires a depth of penetration into the member receiving the point of from not less than one-half the length of the nail for dense hardwoods to two-thirds the length of the nail for the softer woods.

The softer woods are often preferred for construction purposes because of their greater ease of nailing—the lack of nail-holding power being compensated for by the use of additional or larger nails. For example, in tests of diagonally sheathed panels an increase of about 40 per cent in strength (resistance to racking forces) was obtained by nailing with three, rather than two 8d nails at each stud crossing. In tests of wall panels made of a soft pine, a 30 per cent increase in stiffness and 40 per cent increase in strength was obtained with horizontal sheathing by increasing the size of nails from 8d to 10d.

The nail-holding power of wood can be increased by changes in the surface condition of the nail. One of the common methods of surface treatment is the so-called "cement coating," which, if properly applied, may double the resistance to withdrawal in the softer woods, the increase dropping off for the denser woods, like hard maple, birch, or oak, to no advantage over the plain nail. All cement-coated nails on the market are not subjected to the

same treatment, so that nails may sometimes be obtained that will show only a slight initial advantage over the plain nail. The increase in holding power of cement-coated nails is not permanent, dropping off about one-half after a month or so for the softer woods. Because boxes are usually built for short-time service, cement-coated nails have been used extensively in their construction.

Sometimes in nailing it is found that the wood splits with the ordinary sharp-pointed nail. One way of preventing splitting is to use blunt-pointed nails. Blunt-pointed wire nails may be obtained on the market, or if only a small quantity is needed, the points of common nails can be blunted, a handful at a time, on a grindstone or emery wheel. While blunt-pointed nails have a smaller tendency to split wood than do sharp-pointed nails, too much blunting results in a loss of holding power. Another way to reduce splitting is to use nails of smaller diameter, increasing the number, if necessary, to give the required strength. For special purposes, holes may be bored that are of slightly smaller diameter than that of the nail to be used.

When used under conditions favorable to corrosion, a nail of special material or coating is desirable. One of the most common types is the zinc-coated nail. For the most effective holding, an even uniform coating is essential.

National Gypsum Adds New Lime Plant

THE acquisition of the plants and facilities of the Chemical Lime Company of Bellefonte, Pa., has been announced by the National Gypsum Company, Buffalo. This operation will be added to National's chain of seventeen mills engaged in the processing of a variety of items for the building trade.

The addition of the Bellefonte Lime Operation was the third major expansion of the National Gypsum Company last year, a new gypsum, plaster and wallboard mill in Bronx, N.Y., having been opened in June, and a paper mill at Newburgh, N.Y., having been acquired in November.

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Features of Concrete Conventions

SPEAKERS from all parts of the United States, representing every branch of the concrete industry, are included on the programs of the several conventions of concrete men to be held in Chicago Feb. 10, 11 and 12, in connection with the Concrete Industries Exposition.

To cover the many important subjects clamoring for attention during the three days available, and to give as many opportunities for discussion as possible to the thousands of concrete men expected to attend, a series of open forum sessions has been planned in addition to the more formal type of meetings. In these sessions, discussion leaders, selected in advance for their practical experience with the subject, will give a series of ten minute talks, each of which will be followed by five minutes of general discussion from the participating group. This method is expected to produce a wider range of views on each subject and to allow more men to take active part in the meetings.

Convention sessions will be held in the mornings, with the afternoons and early evenings left open for committee meetings and attendance at the Concrete Industries Exposition. More than sixty manufacturers of concrete industry equipment and materials will exhibit their products at this Show.

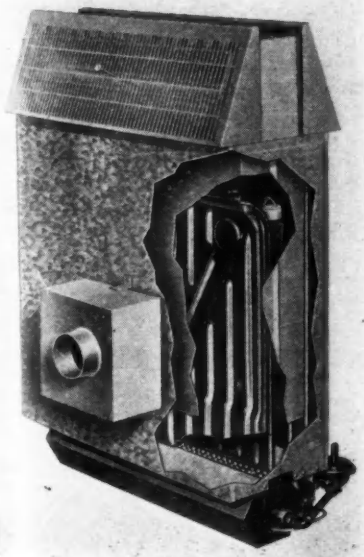
Included in these exhibits will be the various new models of concrete products machinery, bins and batchers, stationary, portable and truck types of mixers, pumps, vibrators, lift trucks, portable electric saws and other power tools, surface finishers, in fact practically every type of equipment used by concrete contractors, concrete products manufacturers, and ready-mixed concrete operators. In addition to machinery, a wide line of concrete forming devices and construction accessories and materials used in the production of modern concrete will be exhibited. Concrete men will find more to interest them at this Show than in any previous year as many exhibitors will show a wider line of equipment than ever before. This is mainly because it will be this year's only major exposition of construction equipment.

One Floor Furnace Heats Two Rooms

THE L. J. Mueller Furnace Company, Milwaukee, Wis., has just recently announced an addition to its Flor-Aire floor furnace line—the Dual Flor-Aire furnace. This unit is a self-contained recirculating type pipeless furnace, complete with dual register box and two wall grilles. The return air travels down into the furnace through the outer edge of the wall register, insulating the complete warm air stackhead—a protection against overheated walls. The specially designed burner occupies the entire space at the bottom of the heating section, providing uniform heat distribution throughout the section, and using air from beneath the floor for combustion, not from the space being heated.

The heating section is of baffled, ribbed design, assuring maximum heat absorption and transfer to the recirculated air. Unit is equipped with an adjustable damper which may be operated from either room. Heat may be directed to both rooms or either room. The burner box is of windproof design which protects against drafts or winds affecting burner flame or pilot. Operating controls are readily accessible through a small removable section of the steel grille; a Basco safety shut-off is available as extra equipment.

The unit is available in one size only with an AGA Input Rating of 33,000 BTU's per hour, and an Output Rating of 23,100. The unit measures 46½ inches in over-all height, and has an over-all width, including diverter, of 17½ inches.



CUTAWAY view of new dual floor furnace.



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Plan size 24' x 28', 2 bedrooms, living room, kitchen, closets

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This construction—tested by the Bureau of Standards and eligible for F. H. A. Insured Mortgage Loans—consists of 2" x 2" studs, 12" on centers, housed into 2" x 3" plates—with Homasote Big Sheets glued and nailed to both sides. Floors, ceilings and roofs are totally prefabricated and finished in the shop. Homasote is used as sub-flooring, as exterior and interior wall covering, for the ceilings, and also for the roof sheathing. The large sections, up to 8' x 16', provide such a tight, well-insulated house—in resistance to the elements and to air-infiltration—that only the smallest heating systems are required. Obviously, there is equal protection from Summer heat.

The house may be transported on one truck from the shop to the site; only

**Write for your
copy of this FREE
book of complete
construction details**

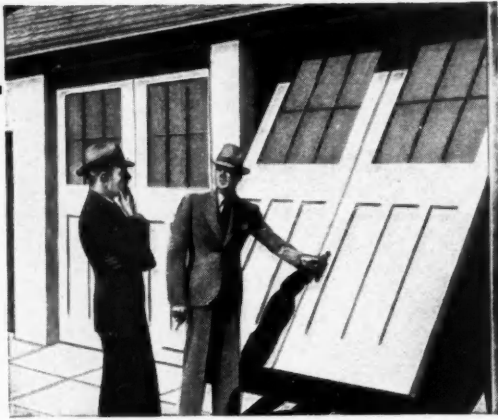
one day is needed for the complete erection and trimming out. Interior and exterior walls and ceilings and all trim are pre-finished. All finishes are both waterproof and weather-proof; the house may be erected under any weather conditions in which men can work.

The finished house looks like any other house, yet the interior walls—free from joints—are so durable they can be washed with soap or water, or scrubbed with a wire brush. With an occasional washing down, the sand finish exterior will not need refinishing for at least 25 years.

This is the fastest system of construction on the market today and the most economical. Yet this construction employs the soundest engineering techniques known to the building industry. You have complete flexibility of design. We invite you to write for the full details. **HOMASOTE COMPANY,** Trenton, New Jersey.



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Use the same doors you would use anyway - add \$20 to your cost for Stanley "Swing-Up" Hardware and you have an easy operating, fine appearing door that "floats" to a full open position.

Stanley "Swing-Up" Hardware can be applied to any pair of new or old stock doors, requires practically no headroom. Easy to install. Check right now with your dealer - take advantage of this sure fire \$20 selling feature. Would you like a descriptive folder? The Stanley Works, New Britain, Connecticut.

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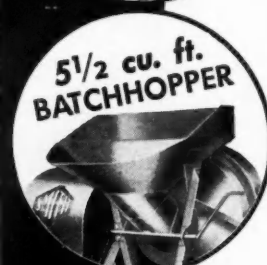
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Announce Dates for Southern Pine Meeting

THE 26th annual meeting of the Southern Pine Association, comprising lumber manufacturers from all southern states, will be held at the Roosevelt Hotel in New Orleans, Mar. 13 and 14, it has been announced.

Among the matters to be considered at this meeting are the continued co-operation of southern pine manufacturers with the government and defense industries in providing lumber for the National Defense Program, and plans for further assistance to government officials and industries engaged on war orders in procuring lumber needed for plant expansion and housing for industrial workers.

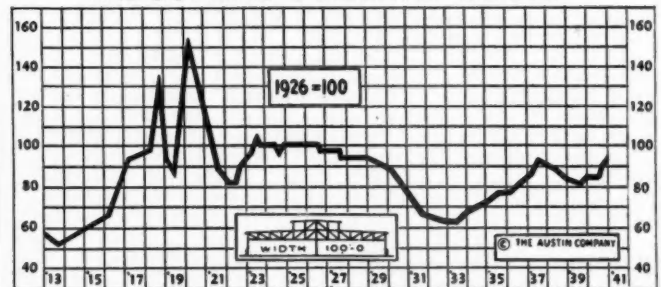
The SPA meeting will be held at the same time and place as the annual meeting of the Louisiana Building Material Dealers Association, dates for which are Mar. 12 and 13, so that the manufacturers and retailers may have opportunity to attend sessions of both conventions.

Secretaries of state and regional lumber dealer associations in southern pine consuming territory will be invited to participate in the SPA convention. One of the problems now confronting the manufacturers is that of maintaining adequate supply of lumber to fill the needs of retail yards and still promptly furnish the great quantities of lumber needed by the government for its defense construction projects. The manufacturers thus far have been able in almost all instances to fill dealers' orders promptly.

Factory Building Costs Continuing Increase

ACCORDING to the quarterly index compiled by The Austin Company, national organization of engineers and builders, factory building costs continued their upward trend during the final quarter of 1940 and now stand at a point 13.2 per cent above the level of a year ago. This index as shown here records the average cost of typical one-story steel frame monitor type plants since 1913 and, at 94, is up three points from the previous quarter.

INDUSTRIAL BUILDING COSTS



"We have not yet seen the peak of construction activity for the defense program," George A. Bryant, president of the company, pointed out in commenting on the trend, "so that the problems of getting delivery on materials and the upward trend in prices can be expected to continue through the year.

"In certain sections where construction activity traceable to the defense program has increased to three or four times the normal rate, the limited supply of locally-produced building materials has sent prices up anywhere from 25 to 75 per cent above what they were last spring.

"Because building activity hinges so much on the availability of fabricated structural steel, the premiums now being paid to get deliveries add further to the over-all costs reflected in this index. Another factor which accounts for part of the increase is the inevitable advance of labor costs as a result of overtime work on many jobs by most everyone from common laborers to professional engineers."

Stuart Sees Increased Home Activity

THE advance in the expansion of residential building experienced during the past year is expected to continue in 1941, and the operative, or merchant, builder will continue to be a vital factor in the sale of G-E equipment for homes, C. W. Stuart, manager of the General Electric Home Bureau at Bridgeport, Conn., has declared. Every sign indicates that American families want homes of their own, he said, and they believe that now is a good time

to have them built. To satisfy these demands naturally means additional sales of building equipment and materials.

Most forecasters predicted an expansion of about 10 per cent in 1940 home building over 1939, Stuart pointed out, but when the final figures are in, they will probably well exceed that predicted increase. Well over a half million new dwelling units are expected to be constructed. Increase in this activity in 1940 brought a like increase in General Electric's preoccupation with the builder market, resulting in several additions to the Home Bureau's field force. Most G-E specialty appliance and air conditioning distributors now have builder specialists in their organizations, spending their time exclusively with builders. The combined forces of the Home Bureau field men and the distributor specialists are expected to go far towards promoting the use of G-E equipment in the field.

"For many years people contemplating the building of a home considered only the two elements of land and building to be of any importance," Stuart said. "Today there is definitely a third element in operating equipment. This is not a group of gadgets but modern electrical equipment that provides economies, allows more leisure time through convenient and efficient operation, and helps smart builders to merchandise their product. The importance of electrically-operated equipment, plus the story of special services to builders, offered by the G-E Home Bureau since its inception has convinced many builders that they may increasingly rely upon the bureau experts for help. More than 50 per cent of all the houses in the country are erected by professional builders, and many of them do a large business as well in the contract-built home field.

"The expanded national defense program has provided much new work. This means more new incomes, and increased incomes for those already employed. It is hoped that this additional money will not be wasted on non-essentials, as in the past, but that it will be spent on properly-equipped homes. It is to lend active direction to that hope that we are expanding our efforts."

Announces Low-Cost Wallboard

A NEW type of presdwood material with a baked-on tile-like finish, impervious to moisture, stains and dirt, and called "Macolite," has been announced by Marsh Wall Products, Inc.,

Dover, Ohio. This new product, which is priced to bring pre-finished wall paneling within reach of most everyone, is not affected by acids, alkalis or non-abrasive cleaning compounds, and thereby insures an easy-to-clean surface that will retain a fresh appearance.

Macolite is available in both plain and tile design in large wall-size sheets (4 feet by 12 feet) which a carpenter can easily handle and cut to the desired size. It comes in five pastel shades—light ivory, light yellow, powder blue, light green and coral—as well as in black and white. The colors of mortar lines for tile-design sheets are gray, black, ivory and white. Other colors and designs will be supplied on special order.



BATH installation of new tile wallboard.

Red Cedar Shingle Bureau Elects Officers

AT THE 24th annual convention of the Red Cedar Shingle Bureau held in Seattle on Jan. 10, Paul R. Smith of the M. R. Smith Lumber & Shingle Company, Seattle, was elected president to succeed R. M. Ingram of the E. C. Miller Cedar Lumber Company, Aberdeen, who held that office for two years. Ralph Wayland of the Wayland Mill Company, Seattle, and H. V. Whittall of the Hunting-Merritt Shingle Company, Vancouver, B.C., were elected vice-presidents, and W. W. Woodbridge was re-elected secretary-manager.

The all-day sessions were attended by approximately 200 shingle manufacturers who heard addresses by three outstanding figures in the lumber and allied fields—W. H. Badeaux, secretary of the Iowa Lumbermen's Association, Frederick J. Woodbridge, member of the New York architectural firm of Evans, Moore & Woodbridge, and B. L. Johnson, editor of *American Builder*.

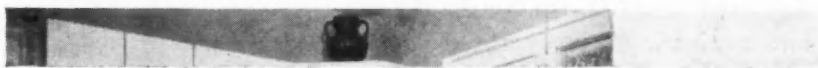
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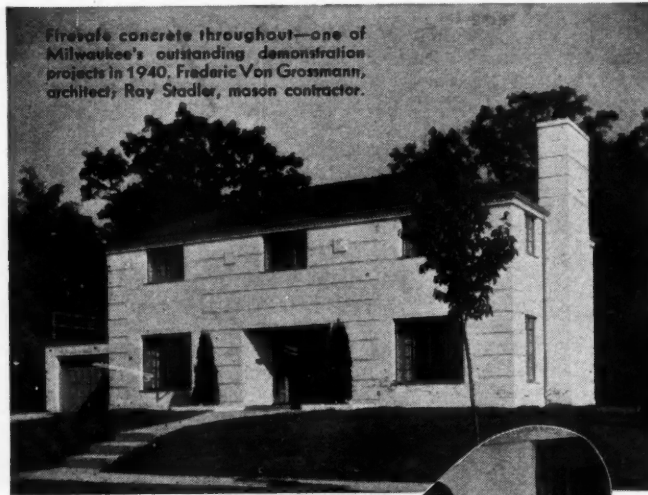
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Concrete is climbing fast in popularity among home buyers as this Association continues its national advertising of concrete homes. These ads are seen by your prospects. This is *your* opportunity! Why not establish yourself as a leader by featuring fire-safe concrete in the homes you build.

Write us for suggested specifications and construction details, free on request in U. S. or Canada.

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**First Half of January Leads Off
New Year With Substantial Gain**

First Fifteen Days Show Residential Building Up 46%

RESIDENTIAL building in 37 eastern states, for the first half of January, amounted to \$50,286,000, as compared to \$34,472,000 for the same period last year, according to F. W. Dodge figures. This represents a gain of more than 46 per cent.

Statistics for the four classes of construction are as follows:

	37 Eastern States Jan. 1-15, 1941	Jan. 1-15, 1940	December 1940
Residential	\$ 50,286,000	\$34,472,000	\$159,275,000
Non-Residential	48,847,000	26,737,000	182,618,000
Public Works.....	37,566,000	21,326,000	73,447,000
Utilities	6,715,000	11,608,000	40,849,000
Total	\$143,414,000	\$94,143,000	\$456,189,000

Building Permits for 1940 Up 23%

BUILDING permit valuations for the calendar year 1940 were 23 per cent higher than during 1939, Secretary of Labor Frances Perkins has reported. "The increase was brought about by gains of 12 per cent in the indicated expenditures for new residential building and 58 per cent in new non-residential building," she said. Permit valuations for additions, alterations and repairs were 2 per cent lower than in the preceding year.

**Permit Valuation of Total Building Construction in 125 Leading
Cities of the United States, Calendar Years 1939 and 1940.**

City and State	1940 Dollars	1939 Dollars
Akron, Ohio.....	6,217,213	3,287,644
Albany, N. Y.....	3,177,171	2,187,474
Allentown, Pa.....	1,314,455	2,604,050
Altoona, Pa.....	394,895	394,024
Atlanta, Ga.....	12,271,147	14,967,552
Baltimore, Md.....	27,041,673	16,795,103
Bayonne, N. J.....	446,690	833,826
Berkeley, Calif.....	4,427,647	3,132,845
Binghamton, N. Y.....	2,396,188	2,219,193
Birmingham, Ala.....	7,882,473	8,286,899
Boston, Mass.....	16,967,856	20,401,904
Bridgeport, Conn.....	5,041,098	6,260,404
Buffalo, N. Y.....	4,715,988	13,261,646
Cambridge, Mass.....	1,964,387	2,978,271
Camden, N. J.....	19,601,351	1,610,178
Canton, Ohio.....	2,847,843	1,676,550
Charlotte, N. C.....	4,581,553	5,699,014
Chattanooga, Tenn.....	3,222,750	5,205,986
Chicago, Ill.....	57,945,416	52,135,007
Cincinnati, Ohio.....	18,841,727	12,371,643
Cleveland, Ohio.....	25,630,150	20,666,973
Columbus, Ohio.....	12,646,537	11,522,854
Dallas, Texas.....	12,084,431	10,876,595
Dayton, Ohio.....	6,234,682	4,399,380
Denver, Colo.....	15,317,521	12,282,823
Des Moines, Iowa.....	5,290,168	6,028,418
Detroit, Mich.....	102,990,152	62,773,163
Duluth, Minn.....	2,620,986	1,933,983
East St. Louis, Ill.....	1,008,364	859,297
Elizabeth, N. J.....	3,246,903	3,547,566
El Paso, Texas.....	2,963,791	2,637,932
Erie, Pa.....	1,457,246	1,342,371
Evansville, Ind.....	1,731,416	1,859,290
Fall River, Mass.....	1,654,677	1,849,902
Flint, Mich.....	6,561,643	3,418,263
Fort Wayne, Ind.....	3,963,109	4,016,861
Fort Worth, Texas.....	4,887,258	7,303,596
Gary, Ind.....	5,785,990	2,741,042
Glendale, Calif.....	5,982,852	5,063,369
Grand Rapids, Mich.....	3,089,050	2,613,205
Harrisburg, Pa.....	2,329,109	3,430,603
Hartford, Conn.....	8,641,853	3,713,284
Honolulu, T. H.....	31,473,901	10,199,254
Houston, Texas.....	26,292,801	26,737,228
Huntington, W. Va.....	1,965,334	3,872,563
Indianapolis, Ind.....	11,505,397	11,233,375

Jacksonville, Fla.	\$10,186,383	\$ 7,373,473
Jersey City, N. J.	10,756,700	5,356,670
Kansas City, Kans.	1,134,430	3,681,303
Kansas City, Mo.	3,605,821	2,811,419
Knoxville, Tenn.	1,644,482	4,942,639
Lakewood, Ohio.	862,130	688,567
Lansing, Mich.	1,845,297	1,763,835
Lawrence, Mass.	1,663,644	819,665
Lincoln, Nebr.	2,726,254	2,895,658
Little Rock, Ark.	2,776,469	1,891,826
Long Beach, Calif.	24,421,821	12,065,665
Los Angeles, Calif.	90,978,685	75,636,947
Louisville, Ky.	5,130,370	8,769,624
Lowell, Mass.	635,638	2,424,978
Lynn, Mass.	1,573,340	1,059,205
Manchester, N. H.	1,204,072	1,199,690
Memphis, Tenn.	10,208,368	10,356,407
Miami, Fla.	15,422,859	16,364,641
Miami Beach, Fla.	16,240,535	11,395,665
Milwaukee, Wis.	11,171,210	10,449,349
Minneapolis, Minn.	15,827,760	18,717,325
Nashville, Tenn.	5,467,264	3,601,424
Newark, N. J.	5,798,850	9,543,889
New Bedford, Mass.	2,972,953	864,072
New Haven, Conn.	4,714,590	3,916,773
New Orleans, La.	18,322,658	19,229,516
New York City, N. Y.	249,016,302	247,084,627
Niagara Falls, N. Y.	2,369,839	1,731,379
Norfolk, Va.	23,482,397	5,891,586
Oakland, Calif.	20,429,155	11,364,052
Oklahoma City, Okla.	5,966,662	4,589,888
Omaha, Nebr.	5,593,502	5,454,529
Pasadena, Calif.	3,961,533	3,746,552
Paterson, N. J.	1,924,452	1,596,196
Pawtucket, R. I.	2,767,025	1,327,603
Peoria, Ill.	3,053,203	7,295,896
Philadelphia, Pa.	69,743,496	41,500,596
Pittsburgh, Pa.	11,863,145	18,685,137
Portland, Ore.	12,480,049	9,723,380
Providence, R. I.	3,817,100	3,535,505
Quincy, Mass.	16,653,259	2,284,045
Reading, Pa.	1,905,932	2,344,404
Richmond, Va.	5,239,796	7,761,536
Rochester, N. Y.	5,018,905	4,937,944
Rockford, Ill.	2,196,353	3,461,430
Sacramento, Calif.	8,809,141	7,004,544
Saginaw, Mich.	2,739,121	2,951,556
St. Joseph, Mo.	336,612	1,389,337
St. Louis, Mo.	34,001,538	13,873,771
St. Paul, Minn.	9,950,810	8,115,017
Salt Lake City, Utah	6,185,760	5,627,626
San Antonio, Texas.	14,208,992	8,584,426
San Diego, Calif.	50,401,706	11,014,923
San Francisco, Calif.	40,619,270	29,242,135
Schenectady, N. Y.	1,751,694	1,074,405
Scranton, Pa.	1,034,882	790,018
Seattle, Wash.	27,587,099	12,700,890
Shreveport, La.	4,813,941	6,090,236
Sioux City, Iowa	1,401,919	1,189,265
Somerville, Mass.	562,661	362,925
South Bend, Ind.	2,834,343	2,186,180
Spokane, Wash.	5,677,798	3,790,498
Springfield, Mass.	2,665,646	3,558,560
Syracuse, N. Y.	1,811,914	3,450,240
Tacoma, Wash.	3,334,730	2,280,420
Tampa, Fla.	4,074,250	2,766,566
Toledo, Ohio	4,671,309	6,076,621
Trenton, N. J.	1,272,166	4,700,515
Tulsa, Okla.	5,122,612	4,556,824
Utica, N. Y.	767,077	1,243,865
Washington, D. C.	64,049,843	71,436,886
Waterbury, Conn.	1,950,665	1,074,685
Wichita, Kans.	8,060,266	2,828,341
Wilkes-Barre, Pa.	995,437	933,751
Wilmington, Del.	6,350,901	4,443,680
Winston-Salem, N. C.	2,628,421	2,284,988
Worcester, Mass.	3,821,372	3,550,108
Yonkers, N. Y.	2,696,266	5,283,504
Youngstown, Ohio.	2,831,113	6,196,833



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National Home Builders Association Gets Under Way

A GENERAL organization meeting and conference of the National Home Builders Association will be held on Feb. 5, 6 and 7 at the Ambassador Hotel, Washington, D.C. Prominent guest speakers are preparing to discuss several subjects of interest to the building industry, including national legislation, public relations and defense housing.

Milton W. Morris, executive secretary of the Association, who is also secretary of the Associated Home Builders of San Francisco, Hearst Building, San Francisco, has issued a general invitation to operative home builders and contractors to attend these meetings, promising a chance for all to discuss their problems in a "Builders Open Forum" which will be a feature of one of the sessions. The organization of the National Association will also be completed at these meetings, according to Secretary Morris, and all builders and builders associations interested are urged to attend.

The initial move toward organizing home builders in a national way was made early in November when George W. Nixon, president of the Metropolitan Chicago Home Builders Association, addressed a letter to prominent operative builders and builder association men all over the country, inviting them to a conference in Philadelphia at the time of the annual meeting of the National Association of Real Estate Boards. This meeting, as reported in the December *American Builder*, developed considerable enthusiasm for a national association; and officers and directors were chosen as follows: George F. Nixon, president; Edward A. Kerr, vice president; Milton W. Morris, executive secretary; and directors: Albert Balch, Seattle, Wash.; Irvin A. Blietz, Wilmette, Ill.; Arthur L. Crow, Detroit, Mich.; William H. Evans, Los Angeles, Calif.; Carl Gellert, San Francisco, Calif.; George M. Gross, Long Island, N.Y.; Edward A. Kerr, Philadelphia, Pa.; Julian A. S. Meyer, Richmond, Va.; John Mc C. Mowbray, Baltimore, Md.; M. Clyde McCann, Pittsburgh, Pa.; John H. McClatchey, Philadelphia, Pa.; George F. Nixon, Chicago, Ill.; Hugh Potter, Houston, Tex.; Waverly Taylor, Washington, D.C.; and Charles S. Wanless, Springfield, Ill.

The Washington meetings, scheduled for Feb. 5-7, are the next step in the organization movement. Secretary Morris' letter to builders, inviting them to attend, reads, in part:

"It is our intention to perfect, as nearly as possible, the organization and its Constitution and By-Laws. We will, at that time, elect permanent officers for 1941 and select a convention date and place for the next meeting.

"Our legislative program with reference to home building activities and financing should be of extreme importance and interest to everyone engaged in the industry. You are cordially invited to attend and become acquainted with the leading home builders of America who will gather in the nation's capital for the purpose of discussing the important problems of home building."

New Lockwood Hardware Sales Manager

THE Lockwood Hardware Mfg. Co., Fitchburg, Mass., has announced the appointment of Adon H. Brownell as general sales manager of the company. He has manufactured, sold, and installed builders' hardware for more than thirty years, and is the author of "Taking the Mystery Out of Builders' Hardware," a series of magazine articles which was published in book form in 1940.

Mr. Brownell began his career in the hardware field as a protege of C. E. Dudley of Providence, R.I., and then became, successively, manager of the builders' hardware departments for J. Russell Co., of Holyoke, Mass., Fort Pitt Hardware Co., of Pittsburgh, The George Worthington Co. of Cleveland, and H. D. Taylor Co. of Buffalo. Following his start in the field with Dr. Dudley at Providence, he spent some two years working in the factory of the Russell & Erwin Mfg. Co. of New Britain, Conn., and later was for a time assistant sales manager of that company.



ADON H. BROWNELL

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for **WOOD**

Soil-Cement Bureau Formed by PCA

IN recognition of the fact that soil-cement mixtures have become of major importance in the construction field, particularly in their use for light-traffic roads, streets, at airports and roads at Army camps, the Portland Cement Association, whose headquarters are in Chicago, announces the creation of the Soil-Cement Bureau. The new bureau can thus give added service to highway, airport and military engineers on all details of soil-cement testing, construction, specifications and use.

Miles D. Catton, who has been in active charge of soil-cement development since the Association started research in this field seven years ago, has been named the manager of the new bureau. It will function in a manner comparable to the other general office bureaus, and will be responsible for direction of promotion, testing and supervision of construction of soil-cement mixtures in their various field uses.

Since the first project was started in South Carolina in 1935, soil-cement construction has found its way into all sections of this country and to many foreign countries. As of Jan. 1, 1941, 242 projects in 35 states were either built or under construction. The yardage involved in these projects is the equivalent of 700 miles of road 20 feet wide.

The most recent spectacular soil-cement project is found in Texas where the State Highway Department has built a continuous stretch of 46 miles through the famous King ranch.

Tests have been completed on many airport sites with some construction scheduled.

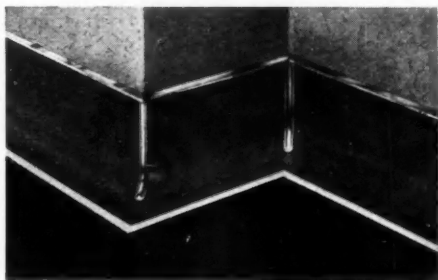


MILES D. CATTON

Metal Corners to Protect Linoleum

A NEAT and unobtrusive metal trim which will protect linoleum cove corners from damage and eliminate costly return trips necessitated by the opening of cove seams is being manufactured by Wilson Metal Products Company, Columbus, Ohio. These corners, which are made from extruded aluminum alloy and match exactly the finish of all shapes of Wilson metal trim, are available for use with 4, 4½ or 6 inch linoleum cove base.

These corners can be easily and quickly installed. After metal cap mold has been installed, the wide fastening flange of the protective corner is secured in place, the top butting tightly against cap mold. The linoleum cove is then placed in position and scribed downward on a line with wall corner from cap mold to top of cove stick. The scribe is finished in an outward curve to leave linoleum overlapping line for mitre cut. Mitre can then be scribed or cut through both thicknesses at once. After cement has been applied and linoleum put in place, the metal corner is bent down to the floor and secured with an escutcheon pin.



PROTECTS linoleum cove corners.

Code Revision Will Reduce Wiring Costs

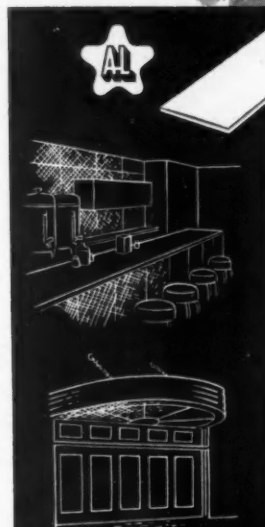
A REVISION in the 1940 National Electrical Code, suggested by USHA technicians, will result in an estimated savings of \$3,300 per 1,000 dwelling units in United States Housing Authority low-rent communities.

The old code required a sufficient number of electric receptacle outlets in every room "to provide that no point on the wall, as measured horizontally along the wall, will be more than 10 feet distant from such an outlet."

This requirement necessitated the installation of three electric receptacle outlets in bedrooms in USHA projects, where in many instances only two outlets were necessary.

Since the majority of bedrooms in USHA projects have perimeters only slightly greater than 40 feet, the National Fire Protection Association, which prepares the Code, revised it to permit local authorities to provide only two receptacle outlets in bedrooms.

FOR INTERIOR OR EXTERIOR LUDLITE BORD



HERE'S the way to get the great advantages of stainless steel on your jobs! Ludlite Bord is Allegheny Stainless in economical, easy-to-install panels, available in satin and pebbled finishes. Handles like ordinary wallboard—ideal for new work or modernizing, for inside or outside surfaces. ● Write for specification and data sheets. Address Dept. S-105.

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LUDLITE DIVISION - WATERVLIET, N.Y.

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Light Reflecting
ENAMEL

- NO BRUSH MARKS
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- DOES NOT CRACK, CHIP OR PEEL
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Master Painters consider CEMCOAT Light Reflecting Enamel *tops*, not just another white enamel. Excellent for residential, institutional and industrial walls, ceilings and woodwork. Has strong light reflecting power, a highly lustrous, porcelain-like surface, non-yellowing, does not chip, crack or peel and has been proven superior to the best known mill white and synthetic enamels when exposed to ultra-violet light and to chemical fumes.

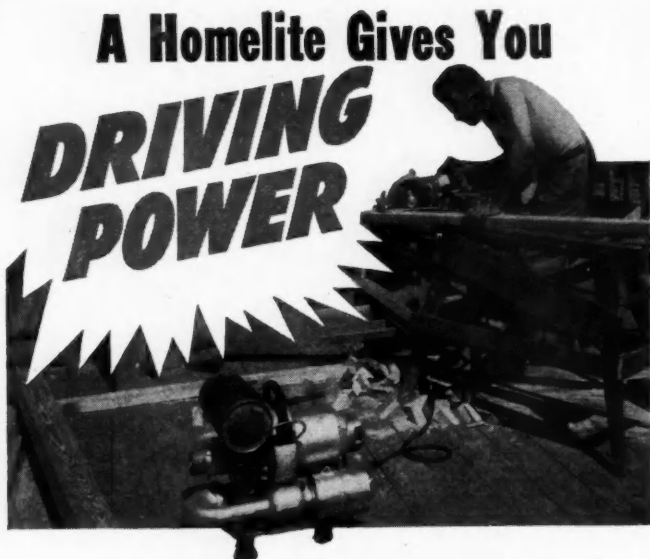
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A Homelite Gives You DRIVING POWER

Run your electric hand tools with a Homelite gasoline-engine-driven generator. You save power installation costs. You eliminate delays. You always have electric power where and when you need it—plenty of power—plenty of driving power. One of these 82 pound units gives you enough power to push several tools at a time right up to peak capacity without trouble. An automatic regulator keeps the voltage constantly at 110 regardless of load. Moreover the unit is built to take all kinds of hard work day in and day out.



With one of these portable generators you're not troubled with long hazardous cables that draw on your power. You're always sure of time-saving results.

Send for our free descriptive bulletin.

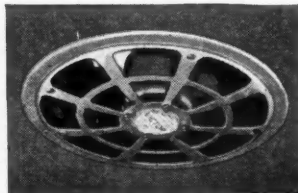
HOMELITE CORPORATION

2305 Riverdale Avenue, Port Chester, N. Y.

VICTOR In-Bilt SAYS:
"I SOLD THIS HOUSE"

In the kitchen, in the rathskellar, in every room where the quick, quiet removal of fume-laden air makes living more comfortable - Victor In-Bilt Ventilators make homes truly modern - add that "buy" appeal that sells.

The Victor In-Bilt is essential in modern homes, particularly in kitchens where fresh air is always needed to remove stale air, smoke, and fumes. The round sleeve can be adapted to any wall thickness. Builders like the easy-to-install 2-unit construction.



VICTOR VS 50-U

Here is a ceiling type ventilating fan that can be installed with air duct between floors. Two self-acting louvers open and close automatically.

Listed and approved by Underwriters' Laboratories
For further information on Victor In-Bilt, write for free catalog illustrating the complete line.
VICTOR ELECTRIC PRODUCTS, Inc.
Dept. 18-212
2950 ROBERTSON AVENUE - CINCINNATI, OHIO

SILENT PARTNER in HOME SALES

VICTOR In-Bilt VENTILATORS

New Crane Co. Plumbing Movie

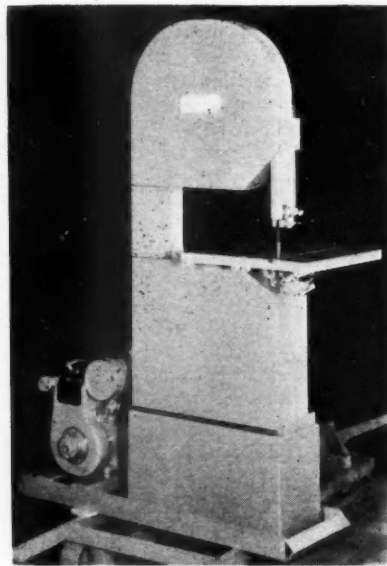
A GENERAL interest sound moving picture entitled, "The Making of American Homes," has recently been released by Crane Co. This picture is of about 30 minutes running time, and illustrates in a graphic and very interesting manner the importance of modern plumbing in making the American home the most attractive and comfortable in the world. Not only is the audience taken into the homes of two typical American families confronted by building and remodeling problems, but also the actual manufacture of fine plumbing fixtures is illustrated and described in an entertaining and understandable manner. The making of fixtures from vitreous china and porcelain enamel on cast iron is covered from raw materials to finished product, and the final sequences of the film are in full color. "The Making of American Homes" is available to interested groups on a loan basis at no charge other than the nominal shipping charges on the copies borrowed. It can be shown on any standard 16 MM sound projection machine, and will be found of unusual interest to school, club, church, civic and other groups of the general public as well as to architects and contractors in the building field.

Twenty Inch Bandsaw

A NEW 20-inch bandsaw has been added to its line by C. H. & E. Mfg. Co., Milwaukee, Wis. It has been designed to serve equally well as a stationary shop tool, as a portable individual unit on the construction job, or as an attachment on C. H. & E. saw rigs. This machine is built for heavy production work where durability and speed are important. It incorporates all the latest features of band-saw construction and is completely guarded to insure the safety of the operator.

The bandsaw can be furnished without power, with pulley for belt drive, or with electric motor or gasoline engine power. A clutch on the lower wheel shaft can be furnished. A sturdy sheet metal bracket is bolted to the side of the frame to support electric motors. When gasoline engine power is used, a welded steel skid is furnished which supports both engine and bandsaw.

Features of this saw are: The cast iron frame is built to give rigid support without excessive weight; the wheels are cast aluminum, spoke type, carefully balanced for smooth, true operation without vibration; both upper and lower wheels are carried in sealed ball bearings to minimize friction; the adjusting mechanism for the upper wheel is supported on a heavy compression spring and is set by means of a convenient handwheel; ball bearing roller guides are provided both above and below the table; the saw is carefully guarded at all points; the table is cast iron, heavily ribbed and accurately machined to give a true surface. It can be tilted 45 degrees to the right and 5 to the left.



NEW 20-inch band saw with gasoline engine.

Acquires Gypsteel Plank Business

It has been announced that the Certain-teed Products Corporation has purchased the Gypsteel Gypsum Plank business of American Cyanamid and Chemical Corporation, the change to become effective in February or early March of this year. The Gypsteel Plank line of fire-resistive floor and roof construction rounds out Certain-teed's line of building products, consisting of gypsum wallboards and lath, gypsum plasters, asphalt roofing, shingles and siding, insulation board and fibre wallboards.

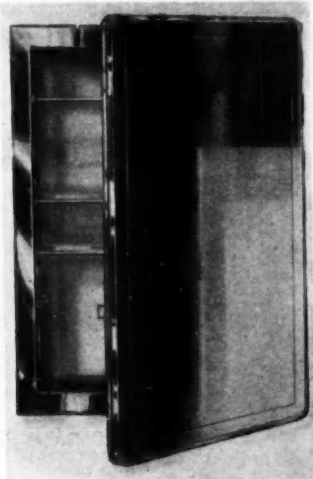
Certain-teed is to take over the machinery and equipment now in use at Cyanamid's Linden, N.J., plant. At Certain-teed's various plants, it is contemplated that Gypsteel Plank will be in production sometime in March; in the interim, American Cyanamid and Chemical Corporation will continue to provide the trade with Gypsum Plank. The Linden plant is not involved in the sale, and will be available for the manufacture of chemicals, Cyanamid's principal business.

All Stainless Steel Bathroom Cabinets

THE Miami Cabinet Division of The Philip Carey Company, Middletown, Ohio, has developed a new line of de luxe bathroom cabinets in stainless steel which offer the obvious advantages of a solid, rustless metal of pleasing appearance, without coating or plating to wear, peel or chip. Bodies of the cabinets are made of one-piece stainless steel, with all corners reinforced with heavy gauge stainless steel angles; shelf supports and door strikes are of the same metal. Door hinges and razor blade drops are of brass, chromium plated.

Special advantages of all stainless steel cabinets are: A permanent, smooth surface that is easy to keep clean and sanitary, unaffected by the corrosive action of salt air, therefore having a practical application to buildings in seacoast regions; spillage of medicine or other bathroom supplies, if promptly wiped off, will not injure or discolor the metal.

ALL stainless steel bathroom cabinet for deluxe installations.



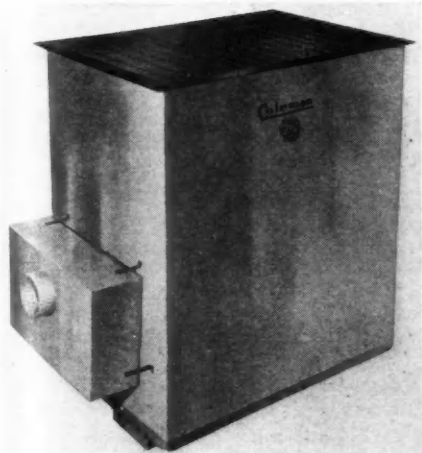
Gas and Oil Fired Floor Furnaces

A NEW line of Super Performance gas and oil fired floor furnaces has been announced by the Coleman Lamp and Stove Company, Wichita, Kans. These furnaces, while designed primarily for home heating, are also widely used for commercial heating purposes, such as offices, stores, shops, business buildings, school buildings, etc.

Some of their new and distinctive features are: A greatly increased warm air flow; a heating unit of this type is set below the floor with the register at floor level, so that the cool air is continually drawn off the floor into the warm air chambers; the streamlined construction of the Coleman furnace and the special patented U-shaped bottom accelerate the flow of air through the warm air chamber and speed up warm air circulation throughout the home. The double radiators are another new feature which, in addition to the large combustion chamber, give increased heating area for faster heating of the air.

In the gas unit shown here a new Powerhouse Burner gives increased burning efficiency. One particular feature of this burner is its new one-piece slotted burner head which produces 16 fan-shaped flames, with 32 burning surfaces, for contact with

the secondary air, thus insuring complete, perfect combustion. Each burner has a stainless steel gas tip which resists rust and corrosion and insures a full, free flow of gas at all times. Another feature of this burner is its new automatic safety pilot with double safety action.



FLOOR furnace for heating homes, offices, shops, etc.



GOOD BUSINESS CALLS FOR EDWARDS STEEL CEILINGS

Modern merchants prefer Edwards Steel Ceilings for permanent protection, beauty, cleanliness and economy. The installation shown above with plain flush panels and modernistic cornices and finished in semi-lustre paint distributes the light from fluorescent fixtures without shadows to every shelf and display case.

Write for Catalog 176 and send measurements of your next job for estimate.

THE EDWARDS MANUFACTURING CO.
542-562 Eggleston Avenue Cincinnati, Ohio

A NEW KIND OF CABINETRY*



* 3 kinds of cabinets but only ONE KITCHEN MAID
1. Cabinets of wood.
2. Cabinets of metal.
3. Kitchen Maid Cabinets of Composite Construction—wood, steel and newest compositions; each used where it serves best.

NOT ALL WOOD—
NOT ALL METAL—
BUT BOTH, AND MORE

YOU will find today's kitchens much easier to plan and build (and much more satisfactory to the home owners) when you work with Kitchen Maid Cabinetry. For this is an entirely new cabinetry of Composite Construction*... combining all the advantages of the best materials available. It's remarkably flexible... with standard units to fit perfectly in any arrangement. Beautiful and efficient, too; gives the most exacting housewife every feature her heart could desire. Get all the facts. Write today for full-color catalog and details.

The Kitchen Maid Corp., 512 Snowden Street, Andrews, Indiana.
Send new catalog and details on Standard Unit Kitchen Cabinetry.

Name _____
Address _____
 Architect Dealer
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**Write today for the
MONEY-MAKING
FACTS about
Porcelain Enamel**

Join the smart contractors who are cashing in on the modern trend to porcelain enamel store fronts. These fine-looking units are quickly and easily installed and are adaptable to new or modernization work. Your customers will like their wide range of colors, handsome appearance and low-cost upkeep! Take a minute now and fill out the coupon.

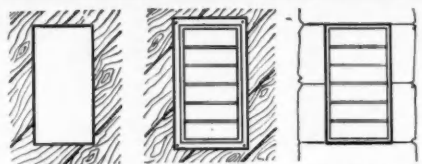


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421 Curtis Street, Middletown, Ohio
Without cost or obligation, tell me how I can make real money erecting porcelain enamel work.

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**ANOTHER WAY TO
Cut Costs
..use DONLEY
ATTIC VENTILATORS**



1. Cut opening in the sheathing 2. Nail steel vent in place 3. Butt the siding against ventilator—and that's all
(Installation in brick is just as easy)

Save money with these substantial, well made steel louver attic ventilators that are low in first cost, easy to install and make a neat appearance. Large free area permits smaller size ventilator for an equal amount of air flow.

Complete with bronze fly screen at back of louvers, made of 20 ga. steel electrically welded, finished with 2 coats of high grade paint. Made in 10 sizes, from 8 1/8" x 11 1/8" to 18" x 36".

For further information, see your local building material dealer or write direct for descriptive folder.

The DONLEY Brothers Co.
13910 MILES AVENUE • CLEVELAND, OHIO

Metal and Tile Cutter

A PORTABLE, motor-driven machine for cutting sheet metal up to 3/32" thickness, as well as tile and wood, has been announced by the Crescent Machine Company, Leetonia, Ohio. The machine proper is 18" long, 13" wide and 8" high, and aluminum castings keep the weight down to 71 pounds, including detachable legs. It is designed for use primarily by masons, tile setters and carpenters, and also in machine shops and wood-working shops.

The abrasive wheel is 8-1/16" in diameter, with a projection of 1 3/4" above the table for cutting tubing of any material up to 1 1/2" outside diameter. An 8" steel saw can be substituted for cutting boards up to 1 1/2" x 12" wide or ripping up to 6" wide.

This equipment is self-contained, being driven by a Westinghouse 1/3 H. P. motor and V-belt, and attaining speeds of 3500 R. P. M. The arbor is mounted on S K F ball bearings. The table is constructed with two brass tubes which are babbitted in the bottom and slide on steel rods; it is readily self-aligning when used for wide material, or can be locked for ripping purposes. A thermo guard prevents overheating.



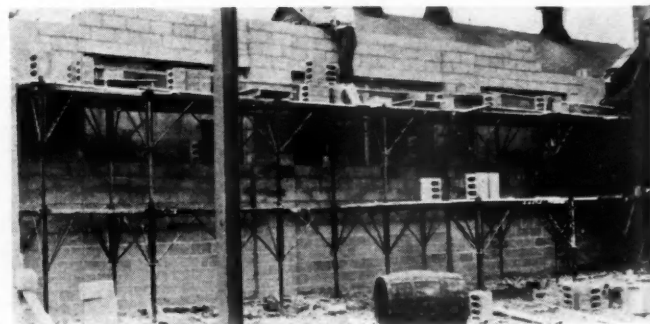
TILE and metal cutter can be handily carried on the job.

Safety Steel Scaffold

A NEW steel scaffold, named "Quik-Set Safety Scaffold," which is for use by building contractors, electricians, painters, decorators, and maintenance departments of private and public buildings, has been placed on the market by Mechanical Handling Systems, Inc., Detroit, Mich. Designed on simple, gravity-locking principles, this "Quik-Set" scaffold provides extreme interchangeability with a minimum number of separate units. No screws, bolts, or clamps are used, and no tools of any kind are required to erect or disassemble it.

The scaffold consists of square-section tubular steel brace and corner post units, of extremely rigid construction with electrically welded parts, so designed that the scaffold may be erected quickly. The design of the various units permits erection in straight line, in corners, around rectangular or circular constructions, either "inside" or "outside." Bridging over obstructions is easily accomplished with simple truss units.

In addition to the scaffold side and vertical units, steel floor sections are supplied which may be placed at any point in the scaffold. Also provided are detachable ladders, adjustment



TWO tiers of scaffolding in place on construction.

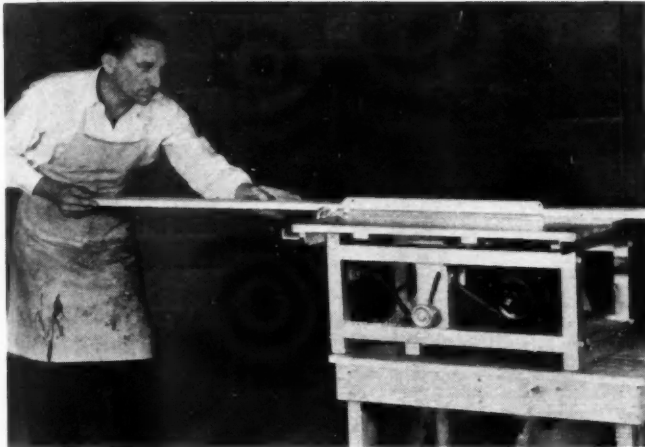
posts for erection on uneven surfaces, brackets for "catwalks" and for holding material, casters for use on interior work such as decorating, cleaning, and electrical work, and a simple, safe skiphoist for lifting materials to the proper level.

Portable Power Woodworker

THE Paxson Company, Dowagiac, Mich., is now manufacturing a low-cost portable Buildsaw woodworker with capacity for small residential building, shop work, or auxiliary cutting on larger construction jobs. The machine is available ready-to-run, also as a kit of parts to be assembled in slack or spare time. As the weight is only 65 lbs. less motor, one man can load the unit into the back or trunk of car or onto truck.

All moving parts of the woodworker subject to wear are of steel, with table top and frame of steel-tied wood construction; the 24 x 30 inch top accommodates standard size building lumber. With regular equipment the machine will rip, cut-off, mitre, groove, and dado. Motors from 1/2 to 1 h.p. are supplied.

Features include: SKF ball bearing arbor; Atkins 10" saw blade cutting to 3" depth; V-belt drive; steel mitre gauge and ripping fence with milled steel tracks. Saw guard is designed with spring counterbalance. A rigid screw type assembly raises and lowers saw. To facilitate angle or bevel cutting, a special tilting ripping fence is available.



PARTS for this woodworker are available or unit can be had assembled ready-to-run.

Lumber-Paint Group Continue Campaign

DEMONSTRATING how lumber and paint go hand in hand to give the home owner the most for his building dollar as well as the greatest satisfaction throughout the years, the 1941 exhibit of the Lead Industries Association, sponsors of the Lumber Products-Better Paint Campaign, stresses the economy and style obtainable with a home built of wood and decorated with paint.

A modern house front attractively styled with white lead and oil forms the background of the exhibit. An accompanying electric sign points out how the various elements of the house have been treated to give the utmost in style and protection. At the front of the booth a master painter will be in attendance to demonstrate the ease with which all species and grades of lumber may be decoratively styled with white lead paint. The decorator will be ready to answer all questions concerning paint and painting, and to give actual demonstrations to illustrate his answers.

Emphasis in the exhibit has been placed on the satisfaction of the home buyer, who today expects not only the long life and low upkeep cost provided by the lumber-built house, but also the ability of this lumber home to be styled easily and inexpensively with paint.

Lumber and paint make beautiful, comfortable, long-lasting homes at low construction costs. More than durability and low cost, however, lumber and paint have other advantages. With lumber construction the beauty of the home can be kept permanently fresh and youthful by the use of paint. Color schemes can be selected to give even the most modest home an air of complete individuality. And, whereas restyling homes that are

(Continued to page 128)

For an A-1 job, give me a

HEATILATOR Fireplace

every time . . . It is one fireplace you can be sure is going to work properly and it circulates heat.

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When A Mall Saw Gives You More Power • SPEED • Safety and Ease Of Operation

MODEL 85 Capacity 2 3/4"

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When experienced Builders who could pay more choose a MallSaw, it's convincing evidence that the MallSaw has the edge for construction and performance at a money-saving price. Before you buy a power saw, take advantage of our FREE Demonstration Offer and get the feel of this thrifty saw that is a match for every sawing job in house framing. In addition, it is readily adaptable for cutting metal, cutting and scoring stone, slate, concrete, etc., with an abrasive wheel. Don't Delay. Mail the Coupon Today and ask for a FREE Demonstration.

MALL TOOL COMPANY 7737 South Chicago Avenue Chicago, Illinois

Please send free folder on MALLSAWS, MALL RADIAL SAW ARM, MALL DOOR MORTISERS, DOOR PLANES and DRILLS. A241

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Safeguard NEW BUILDING WITH TECO TERMITE SHIELDS

Effective protection in areas where termites are a problem. TECO shields are stamped metal interfitting protectors with self sealing joints, used at foundation points of termite entry. Get data and details.

Request Literature
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Dept. H-2, 1337 Connecticut Avenue
Washington, D. C.

(Continued from page 127)
not designed for paint decoration is expensive, in many cases prohibitive, a brand new appearance can be given the paint-styled home at any time simply by a change of color scheme. Good paint and good lumber form the perfect team to give the home owner lasting satisfaction.



Special Lighting for Art Treasures

MASTERPIECES of famous artists in the Carnegie Institute's Gallery "A" in Pittsburgh (as above) are now seen indoors just as the artists painted them, and many people for the first time are seeing parts of famous paintings which heretofore were not discernible. This is the result of a new system of lighting specially designed for Carnegie Institute by Richard C. Engelken, well known lighting consultant, and manufactured by Westinghouse.

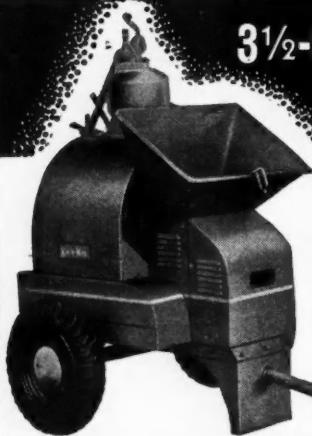
Because oldtime artists painted under natural sunlight, which differs from ordinary incandescent electric lighting, paintings viewed under artificial lights were never seen in their true colors, and details in dark spaces in the paintings were not discernible to the spectator. By means of a special combination of 220 incandescent and 206 fluorescent lamps and fixtures, the 112 foot long Gallery "A" is lighted with an illumination nearly identical to sunlight, and to the natural daylight by which most painters produced their works.

These illumination effects have been produced without making the visitor conscious of the lighting. For example, lighting on the paintings is approximately eight times as bright as in the center of the gallery. This creates light comparable to the most ideal condition for viewing a scene out of doors. This illumination is obtained from a completely luminous ceiling of heat-treated water-white glass, above which are mounted four con-



OVERHEAD view of improved lighting being installed in Carnegie gallery.

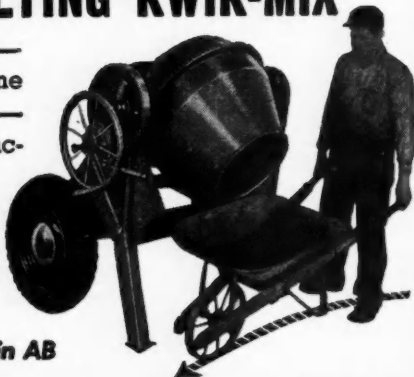
3 1/2-S NON-TILTING KWIK-MIX



Modern rubber tired roller drum drive—No ring gear—No countershaft—Less wear—Smooth running—Load while mixing—Increased production—End discharge.

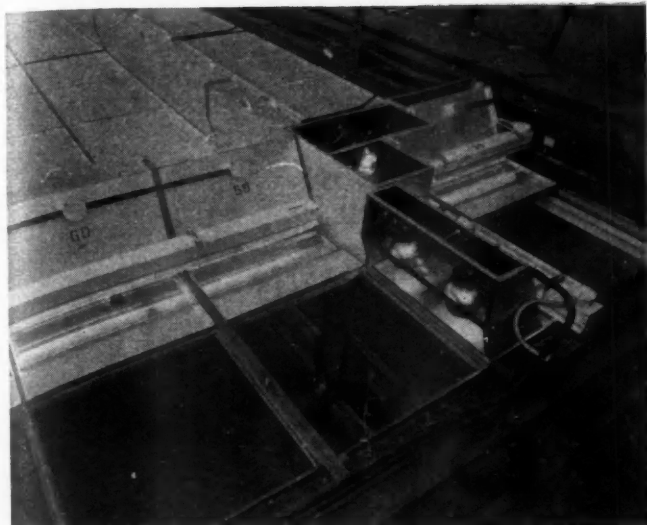
3 1/2-S TILTING KWIK-MIX

End discharge—Air-cooled engine—Light weight—Welded construction—Anti-friction bearings—Spring mounting—High speed trailing.



Write for Bulletin AB

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



CLOSE-UP of one of the units; gallery is seen through opening.

tinuous rows of fluorescent lighting units. The light from these lamps is mixed with that from the incandescent units, mounted above control lenses which form part of the glass ceiling, along the four walls of the gallery. To obtain correct color matching, the control lenses are treated to take advantage of the relatively small amount of blue and green emitted by the incandescent lamps.

Results of the new lighting are very pleasing. Each painting now shares equal prominence around the gallery. By adjusting lamp angles and lenses, dark paintings have been toned up, and the brilliant ones toned down. Under this light, many paintings were seen for the first time as the artists had painted them. For example, the figure in Whistler's portrait, "Sarasate," can now be seen wearing shoes. Under the old lighting, his legs and feet were invisible in the blackness of the background.

New Style Book Takes Guesswork Out of Color Selection

THE Lowe Brothers Company, Dayton, Ohio, has announced publication of The Stylizer, a unique color selector which is considered to be the first of its kind to recommend harmonious wall and ceiling combinations based on the predominant color of existing furnishings, and in its operation to show the predominating room colors as well as the wall and ceiling colors. This new book, designed for use by dealers, painters, architects, interior decorators and consumers, is said to take all the guesswork out of the selection of correct color combinations for walls and ceiling, once the basic color of the furnishings, such as floor covering, draperies or furniture has been determined. Its combinations are the recommendations of experts in home decoration.

The Stylizer is a leather-bound portfolio (19½ x 13½ inches over-all) containing two identical spiral-bound sections of actual color sheets, one on either side. Each section embraces three horizontal divisions of color sheets grouped functionally according to relative positions in an actual room. The upper division represents ceiling colors, and the center division contains wall colors. The lower division, which is the key to the use of the book, comprises 20 rug-like swatches and 4 Varnish Finish sheets, any one of which may be used to represent the predominating color already existent in the room.

One section of the book presents a large number of wall and ceiling color combinations, both in semi-gloss and flat finishes, built around the predominating color. These suggested combinations may be set up in the color sheet divisions together with the predominating color and thus form a composite representation in actual color of just how the room will look when painted. Additional colors, for touches of color in accessories, are also suggested to complete the entire color scheme, along with pertinent remarks touching on each color combination recommended.

This fool-proof procedure of selecting color combinations
(Continued to page 130)

LATE COOL SPELL - COAL ALL GONE!



So the home owner is faced with buying more fuel, or using an auxiliary heater to "take the chill off." The built-in

— ELECTRIC — EQUIKHETER

is ideal for this purpose. Flush with the wall — attractively finished in chromium (in other finishes to order), it is an ornament as well as a producer of comfort.

Heats the Room While Other Heaters Heat Up Themselves!

The EQUIKHETER is fully hot the minute the switch is turned on. It draws the cold air in at the floor level — heats it immediately — and forces it out at the top to circulate quickly throughout the room.

In New Construction and in Modernization

the EQUIKHETER should be included in the plans for bathroom — bedroom — children's playrooms.

There is a Wholesaler Near You

who will make quick delivery from stock—in either 1,000, 1,250 or 1,500 watt sizes. Write us for his name—and for descriptive circular.

Frank Adam
ELECTRIC COMPANY
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90 NEW TRIMS
ADDED TO A
FAMOUS LINE!

NEW TRIMS FOR
WALLBOARD
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BEAUTIFUL NEW
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HARDWARE

INGENIOUS
NEW "GRIPPER"
RUG BINDING

NEW TRIMS
FOR EASIER
SINK MOUNTING

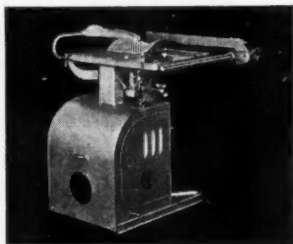
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Today

Your most complete source of metal trims for floor and wall covering installations. Nearly 600 types, designs, sizes. Trims for every interior use — in aluminum, brass, white metal, stainless steel, rubber. Also wood cove, tools, accessories. Valuable supplement of architectural drawings, detailed instructions. Get details on Metal Trims trademarked—

CHROMEDGE
THE B & T FLOOR COMPANY
COLUMBUS OHIO

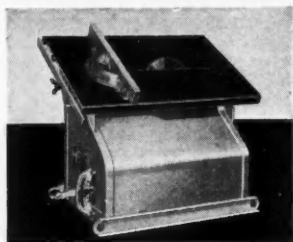
CMC KOSTKUTTER POWER SAWS!

NEW SPEED—NEW ACCURACY!
Take Work Shop Advantages Right to the Job



KOST KUTTER JRI

A precision tool. Built to fill the long felt need among builders for a 10" precision circular saw. Speeds up work. Has 20 x 27" tilting table—powerful 3.6 H.P. 4-cycle engine—many new conveniences.



KOST KUTTER SRI

Unequaled for accurate high speed sawing. Big 30" x 48" tilt top table. All steel welded streamlined—saw dust proofed construction. Powerful 6 H.P. air cooled engine or electric motor. 14" saw. Also available, the big CMC Power Sawyer with 18" blade.

Get latest CMC catalog. See the newest CMC Mixers all sizes—for concrete, plaster, mortar and bituminous. Also CMC'S great new line of pumps, hoists, batching and placing equipment—carts and barrows. Write

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- COMPLETE FIREPLACE EQUIPMENT
- SEMI-STEEL CASTINGS
- INCINERATORS

THE MAJESTIC COMPANY

798 ERIE STREET HUNTINGTON, INDIANA

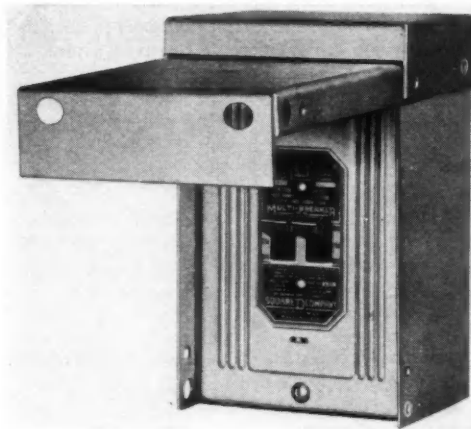
(Continued from page 129)

assures a color plan that not only harmonizes with existing furnishings, but also closely adheres to today's trends in home decoration. All the color combinations recommended have been carefully worked out by experts in the field of color styling. A special introductory section on Color Styling alone also provides informative suggestions on how to make paint work to best advantage in all types of rooms.

Customers as well as dealers, painters, architects and decorators have welcomed this new simplified way of selecting interior color combinations. The Stylizer is not only easy to use and instructive, but quickly and infallibly recommends color schemes for walls and ceiling that correctly harmonize with existing furnishings. The easel-back cover of the Stylizer further provides a convenient means for displaying it to customers and other users.

Raintight Enclosure for Multi-Breakers

THE Square D Company, Detroit, Mich., is now manufacturing a raintight enclosure for the 25-ampere frame type MO Multi-breaker; it is a galvanized steel hood and can be used to enclose any standard surface type MO Multi-breaker. Outside dimensions are 7" high, 4½" wide and 3⅞" deep. The cover is removable for easy wiring, and may be padlocked. The raintight hood and the surface type MO Multi-breaker are furnished as separate units.



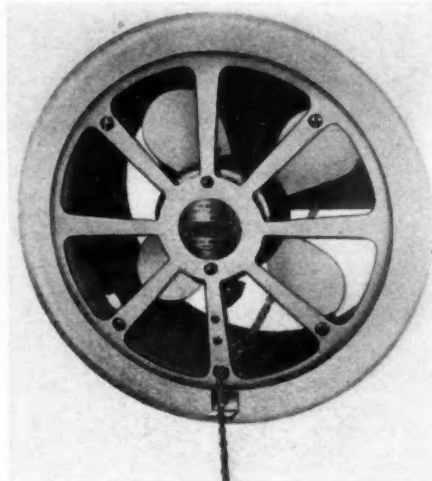
RAINTIGHT hood of enclosure raised to show Multi-breaker.

Ventilator for Low Cost Homes

THE "Challenger" is the name of a recent addition to the line of Victor circulating fans, motors, and In-Bilt ventilators manufactured by Victor Electric Products, Inc., Cincinnati, Ohio. This ventilator brings the benefits of air renovation to the vast market of low cost homes since it is priced low enough to be within easy reach of even the most inexpensive homes.

Like all Victor models, the Challenger is automatic in operation, powered by Victor motors, with ornamental grille finished in Ivory, with Silchrome fan blades, and weather-tight shutters.

It attains a speed of 200 R.P.M., has a capacity of 425 C.F.M., and is guaranteed for one year against electrical, mechanical, and manufacturing defects.



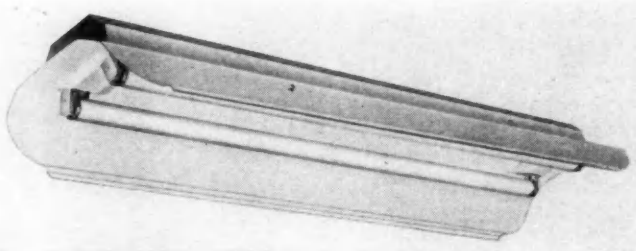
AUTOMATIC operation is one of the features of ventilating fan.

Industrial Fluorescent Lamp Luminaire

A NEW open end twin-lamp fluorescent luminaire, utilizing 40-watt, 48-inch Mazda Type F white or daylight fluorescent lamps, and designed especially for general or supplementary lighting of low bay industrial areas, is now being manufactured by the Westinghouse Electric & Manufacturing Company. This unit, the type FPR, is available only in the spread distribution style for operation on 110-125, 199-216, and 220-250 volts, 60 cycle AC.

The luminaire consists of a hood, reflector, lamp holders, starting device, and ballast equipment. The hood is fabricated sheet steel and carries the hinged porcelain enameled steel reflector which provides high overall efficiency with a light cut-off of 72½ degrees from the vertical. The lamp starter is completely self-contained in an aluminum housing which plugs into a socket located in the fixture hood; thus it may be replaced for maintenance just as easily as the lamps themselves. A glow switch and condenser are standard equipment in the starter and minimize radio interference.

The luminaire is arranged for rigid or flexible conduit, or chain suspension mounting; Levolier switches may be installed if desired. Standard units are shipped completely wired, are finished with a smooth silver-grey baked enamel, and are marked approved by the National Board of Fire Underwriters.



NEW industrial fluorescent lighting fixture with two lamps.

Bench Bath

THE Kohler Co., Kohler, Wis., is making a Bench Bath, the distinguishing feature of which is the rim at the front which widens to 6 inches at the center to provide a convenient place to sit. It can be used for any size or type of bathroom in a recess, or with a built-up stub end as a corner installation.

Other safety and convenience features are the low sides, and the flat, wide bottom. The tub is easy to clean, being made of rigid cast iron, in one piece, and finished in super-hard, pure white enamel. It is available with several types of fittings, right or left outlet, in 4½, 5 and 5½ foot lengths. The height is 16", width at center 33", and width at ends, 31".

The Cosmopolitan Bench Bath, which matches other Kohler fixtures, is shown here with the Hampton enameled cast iron shelf lavatory on metal legs with wall-free towel bars, and the Wellworth close-coupled reverse trap closet.



BENCH bath shown with toilet and lavatory grouping.

new improved sash balance and weather-strip

- Above drawing shows improved beveled edges of spring housing.
- Fits any window old or new. Spring tensions for all sizes of sash.
- Simple installation. Requires only grooving of sash; provides metallic runway.
- Eliminates box frames, pulleys, weights, cord and painting.

MAKES ANY WINDOW A modern WINDOW

Here is a "two-in-one" feature that helps sell houses and saves you money besides. Combines weather-stripping and balance, making any double-hung window easy to operate and weather-tight.

SAVES UP TO \$1.00 PER WINDOW

Use economical plank frames for new sash or cover up old pulley holes on old jambs with Master No-Draft Sash Balance and have a modern sash installation at low initial cost and minimum maintenance expense.

Send coupon today for complete information. It will pay you to learn about this unit.

MASTER METAL STRIP SERVICE, Inc.,
1720 N. Kilbourn Ave., Chicago, Ill.

Gentlemen: Please send me information on the Master No-Draft Sash Balance.

Name

Address

Save **50%** OR MORE OF FINAL COSTS ON

WOOD FLOOR FINISHING

With **LIGNOPHOL**

LIGNOPHOL COSTS LESS THAN 1 CENT PER SQUARE FOOT Applied in one application with a long handled brush—reducing labor to the minimum.

LIGNOPHOL BEAUTIFIES YOUR FLOORS! LIGNOPHOL LEAVES NOTHING TO WEAR OFF!

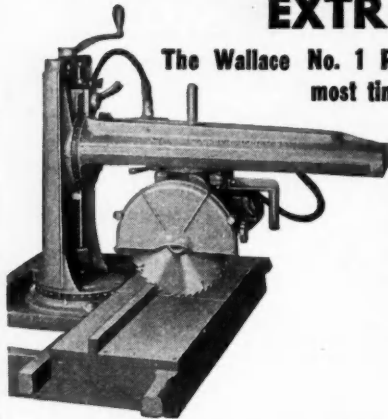
Shellac and varnish, surface treatments, wear off! Do as thousands of contractors are doing: Enjoy more profits, attain greater job satisfaction and save 50% or more by using LIGNOPHOL to preserve and finish your floors.

FIND OUT MORE ABOUT LIGNOPHOL

MAIL THIS COUPON TODAY!

Dept. B 2
L. SONNEBORN SONS, INC., 88 LEXINGTON AVENUE, N. Y. C.
Your Name _____
Address _____
City _____ State _____

FOR EXTRA PROFITS— EXTRA ACCURACY— EXTRA SPEED!



The Wallace No. 1 Radial Saw saves the most time on:

- X-CUTTING
- MITERING
- RIPPING
- DADOING
- ROUTING
- SHAPING
- FLUTING
- GROOVING
- CUTTING TILE

Safe, speedy, accurate in operation. Cuts up to 4" material. Saws rafters on a production basis, without marking! Also studs, joists, sheathing, cripples, flooring, wedges, etc.

After framing is up, machine is used for making and fitting cabinet work and trim.

Saves from \$75 to \$200 on small residential contracts,—proportionately more on heavy construction.

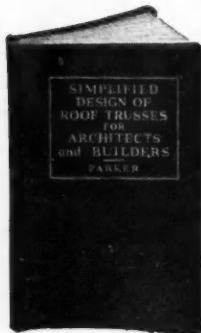
If you want to speed up your work,—make more money,—write today for bulletins on the Wallace No. 1 Radial Saw.

J. D. WALLACE & CO.

136 S. California Ave.

Chicago, Ill.

— This book makes it easy —



SIMPLIFIED DESIGN OF ROOF TRUSSES

for Architects and
Builders

By **HARRY PARKER**

Author of "Simplified Engineering for Architects and Builders"

Now for the first time there is available to architects, builders and engineers a brief book containing a complete, thorough and relatively simple treatment of the essential principles and methods of designing the most common types of roof trusses. The stresses in truss members are developed by means of graphical analysis. Beginning with simple systems of forces, the theory of graphic statics is evolved, showing the application of the fundamental principles in constructing stress diagrams for various types of trusses and loading. In addition to graphical analyses are tables of coefficients of stresses for the most usual trusses. Published in January.

195 pages

5 by 7³/₄

\$2.75

Send for a copy on ten days' approval

JOHN WILEY & SONS, INC., 440-4th AVE., NEW YORK

LETTERS from Readers on All Subjects

Facts, opinions and advice
welcomed here

Novel Billboard Scheme; Finds It Pays

Oklahoma City, Okla.

To the Editor:

Many building contractors have realized that billboard advertising offers opportunities for increased home sales but the expense of this medium has held them back. W. P. Atkinson of Oklahoma City conquered the problem and has boards bringing him results by co-operating with an Oklahoma City home loan firm as shown in the picture above. Atkinson has found that personalizing himself in his advertising has engendered more confidence in his ability which has made him the topnotch Oklahoma City building contractor as advertised by the statement on the board illustrated here, "sold more new homes this year than any other Oklahoma City builder" referring to 1940.

ERNEST W. FAIR.



Novel co-operative billboard brings results in Oklahoma City.

Uncle Sam Needs Technical Men

Washington, D.C.

To the Editor:

Engineering draftsmen in various optional fields are urgently needed by the United States Government. A civil service examination held last fall failed to produce enough eligibles to meet the demand of the national defense program. The United States Civil Service Commission has, therefore, reannounced the examination and will accept applications until Dec. 31, 1941. The salaries of the positions range from \$1,620 to \$2,600 a year less a 3½ per cent retirement deduction.

Optional branches in which applicants may qualify are: Architectural, civil, electrical, heating and ventilating, lithographic, mechanical, plumbing, radio, structural, topographic, and general—which includes any other branch except aeronautical, ordnance, or ship. The Commission is already accepting applications for engineering draftsmen positions in these three optional branches under previously announced examinations. High school education except for substituted drafting experience is required. Applicants must also show paid drafting room experience, or completion of a drafting course in a school specializing in drafting, or college engineering or architectural study; in addition they must show drafting experience in the optional branch chosen. Completion of study in engineering or architecture in a school above high school grade may be substituted for a part of the drafting training or experience.

Competitors will not be required to take a written test, but will be rated on their education and experience as shown in their applications, and on corroborative evidence.

Further information and application forms may be obtained from the Secretary of the Board of U. S. Civil Service Examiners at any first- or second-class post office, or from the U. S. Civil Service Commission, Washington, D.C.

U. S. CIVIL SERVICE COMMISSION.

Proposals Bear Fruit

Buffalo, N.Y.

To the Editor:

You might be interested to know that we have word from the Housing Coordinator's Office that the proposals presented in the article you carried in your January issue (page 35) have been incorporated into new FHA legislation soon to be proposed.

CERTIFIED HOMES BUREAU

By John E. McNamara, Executive-Director.

More on Government and Business

Shaker Heights, O.

To the Editor:

The writer has been a subscriber to your publication for years. I wish to take exception to your various editorials pertaining to politics. The recent election clearly indicated the present administration as satisfactory. It has been definitely proved that the press was out to get Roosevelt, and 90 per cent of the publications of the nation were determined to defeat him. Why? You know the answer better than I. Let us devote the *American Builder* to building subjects, and join the President and Defense Committee to build an impregnable America.

The writer has voted for Wilson, Harding, Coolidge, Hoover, and helped elect the Governor of Ohio twice.

J. E. SCHELL,
Integrity Building and Maintenance Co.

Another Vote for Readers' Service

Bluffton, Ind.

To the Editor:

Just a word to let you know how much we appreciate your Readers' Service Department. This is a big help toward keeping small town contractors up to date in the building world.

OSCAR K. ARNOLD & SONS, Gen. Contrs.

Where to Put the "TruCost" Figures

Newburgh, N. Y.

To the Editor:

I would like to suggest that, for the convenience of your subscribers who wish to make use of the plans, you print the *TruCost* figures on the same page with the plans. This will make it more convenient for the subscriber who wants to file this information away, as then he will have all of the information on one sheet instead of having to clip the plans from one sheet and attach to it a small clipping from another sheet giving the *TruCost* figures. Not only is this quite an annoyance but it is difficult to keep such information in order in letter files.

H. A. DANIEL, President
Atlas Roofing Company.

ANSWER:

Thank you for your letter commenting on our arrangement of plans and their *TruCost* figures. We agree with you that the present arrangement is somewhat inconvenient, still there is not proper space on the design pages to print the *TruCost* figures also and have it look right. However, we are working on this problem and hope to reach a better solution soon.—EDITOR.

Newburgh, N. Y.

REPLY:

Yours received stating that you have given some thought to arranging your design pages to put the *TruCost* figures on the same page. If this does not work out because of insufficient space we would suggest that the figures be put on the other side of the sheet, that is, on the following page. The balance of that page could be filled with advertising or with short articles. Certainly it would work to the great convenience of your subscribers who wish to file these *TruCost* plans and figures. Who wants to have to cut out the illustration and then cut a clipping out of another page to bring the information together with the illustration?

Even if this is done it will make it quite inconvenient to file and to keep it in good condition. Frequently we decide not to save information which we would like to keep because it is scattered over several sheets. We feel that there must be many others like us.

H. A. DANIEL, President
Atlas Roofing Company.

STOP! SAVE!

drafts and leaks on fuel bills
CAULK ALL JOINTS WITH PECORA

PECORA-protected houses require less fuel, maintain more uniform temperatures, are less subject to drafts and moisture leaks. For 33 years, no other product has rendered better service. Pecora Caulking Compound is available in bulk, or in non-refillable metal cartridges for the handy Pecora High Pressure Caulking Gun illustrated. Start using Pecora for your own satisfaction.



With 3 Nozzles and 4 Cartridges of approx. 1 qt. each
This Gun Shipped Express \$6.50
Collect for Terms: 2% disc. net cash with order. To approved credit 2% 10 days, 5% 30 days. P.O. Philadelphia, Pa.

WRITE FOR BOOKLETS

Pecora Paint Company, Inc.

Member of Producers' Council, Inc.
Established 1862 by Smith Bowen

Fourth St. & Reading R. R. Philadelphia

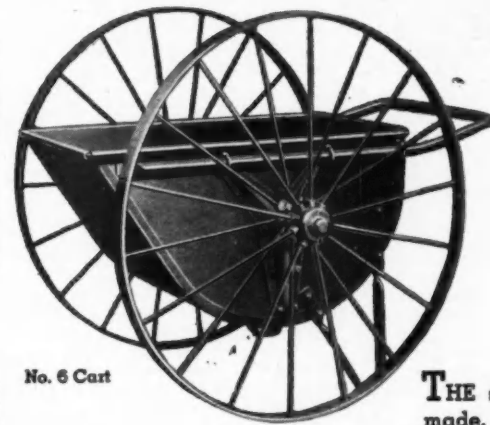


ALSO MORTAR STAINS • SASH PUTTIES • ROOF COATING
• PECOMASTICS FOR STRUCTURAL GLASS INSTALLATION

Sterling

CONCRETE CARTS

PLAIN OR ROLLER BEARINGS



No. 6 Cart

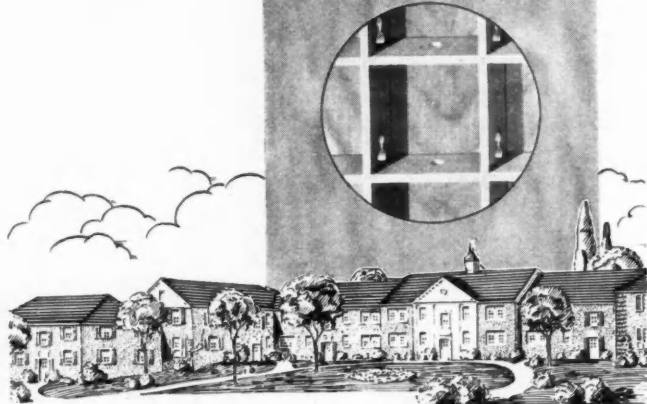
Easily dumped
Easily wheeled

STERLING
WHEELBARROW
COMPANY
MILWAUKEE, WIS.

THE strongest Cart made. Tray is 12 Gauge—6 Cubic Feet Capacity. Wheels 42 Inches Diameter. Flat or Oval Tires. Trunnion Axles.

It's

NEW LONDONER HOLLOW-CORE FLUSH DOORS

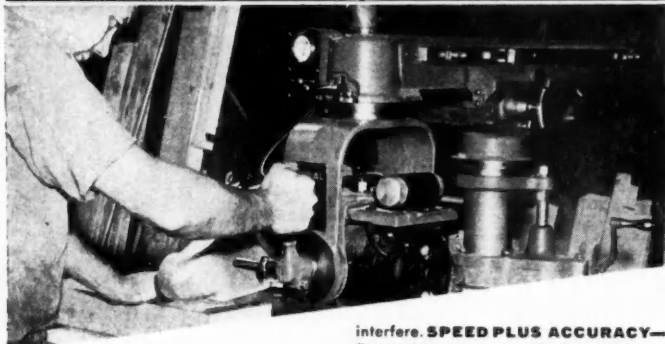


"Climatized" describes the built-in weather-resisting qualities of New Londoner Hollow-Core Flush Doors. Built by the resin-bonding hot plate process, moisture absorption has been reduced to an absolute minimum, eliminating sagging, warping, shrinking and swelling.

In the homes and buildings you build, make sure your doors will always be in working order. Specify New Londoner Hollow-Core flush doors throughout. Ask your building materials dealer for New Londoners — the door that is "climatized."

AMERICAN PLYWOOD CORPORATION
NEW LONDON, WISCONSIN

Only the WALKER-TURNER RADIAL SAW gives you ALL THIS!



EXCLUSIVE SHOCKPROOF GEARED MOTOR (Patents applied for) gets shaft close to the work, thus increases rim force. You get 6 H. P. performance with 3 H. P. motor. Walker-Turner geared motors are unconditionally guaranteed against gear breakage. **POWER** — Shockproof geared motor provides more power. With 1½ H. P. motor you can rip three feet of 2½" oak in 7 seconds. **FINGER-TOUCH CONTROL** — plus easy change-over to other positions enables operator to turn out greater variety of work, faster **FULL VISION** — Sliding ram permits operator to see the work-piece at all times. No over-hanging arm to

interfere. **SPEED PLUS ACCURACY** — Tapered latches automatically provide accurate settings, enable operator to use his time to produce. **VERSATILITY** — The Walker-Turner Radial cuts metal sheets, tubes, rods, moldings, plastics, bakelite, transite, lucite, etc.; rip, crosscut, dado, rout, tenon. Uses limited only by ingenuity of operator. **LOW PRICE** — Because Walker-Turner builds production machines by production methods, we are enabled to deliver the Walker-Turner Radial Saw complete with motor at **\$289.50** the amazingly low price of **FOR FURTHER INFORMATION** write Walker-Turner Co., 1021 Berckman Street, Plainfield, N. J.

WALKER-TURNER MACHINE TOOLS
FOR METAL, WOOD AND PLASTICS

"TruCost" Estimating Figures for Home Designs in this Issue



The Editors have prepared a 28 PAGE EXPLANATION of American Builder's "TruCost" system of quick, accurate estimating and offer it to anyone interested at 25 cents per copy. Please enclose payment when ordering. Address American Builder, 30 Church St., New York City.

Page 59, February: Mast. Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls 150 lin. ft.; Trench Walls, 126 lin. ft.; Basement Floor, 1125 sq. ft.; Garage Floor, 450 sq. ft.; Excavation per ft. deep, 48 cu. yds.; Outside Walls, 32.00 sqs.; First Floor, 11.25 sqs.; Second Floor, with fin. flg., 11.25 sqs.; Ceiling, 30.00 sqs.; Roof Pitch, 12" rise per ft. run; Roof, 20.00 sqs.; Hips and Valleys, 200 lin. ft.; Cornice, C & F, 200 lin. ft.; Cornice, 6", 150 lin. ft.; Partitions, 300 lin. ft.; Inside Finish OS Walls, 320 lin. ft.; Front and OS French Doors, 7 opps.; Rear and Grade Doors, 2 opps.; Garage Door 8 ft. wide, 2; Inside Doors and Cased Opps., 25 opps.; Windows and Casements, 36 opps.; Chimney, 70 lin. ft.; Main Stairs, 1; Porch Floor, 4.00 sqs.; Porch Ceilings, 3.90 sqs.; Porch Beam, 16 lin. ft.; Garage and Porch Roof, 7.50 sqs.; Porch Cornice, 40 lin. ft.

Page 62, February: Spelman, Archt.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 105 lin. ft.; Trench Walls, 50 lin. ft.; Basement Floor, 600 sq. ft.; Garage Floor, 176 sq. ft.; Excavation per ft. deep, 30 cu. yds.; Outside Walls, 23.00 sqs.; First Floor, 6.70 sqs.; Second Floor, with fin. flg., 6.70 sqs.; Ceiling, 15.00 sqs.; Roof Pitch, 10" rise per ft. run; Roof, 8.90 sqs.; Cornice, C & F, 120 lin. ft.; Partitions, 170 lin. ft.; Inside Finish OS Walls, 200 lin. ft.; Front and OS French Doors, 2 opps.; Rear and Grade Doors, 1 opp.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opps., 18 opps.; Windows and Casements, 24 opps.; Gable Sash and Louvers, 2 opps.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, .24 sqs.; Garage Deck Post and Newels, 6; Deck Roof, 2.00 sqs.; Deck Cornice, 50 lin. ft.; Deck Rail, 50 lin. ft.

Page 63, February: Spelman, Archt.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 126 lin. ft.; Trench Walls, 52 lin. ft.; Basement Floor, 900 sq. ft.; Garage Floor, 186 sq. ft.; Excavation per ft. deep, 38 cu. yds.; Outside Walls, 24.00 sqs.; First Floor, 9.00 sqs.; Second Floor, with fin. flg., 8.20 sqs.; Ceiling, 19.00 sqs.; Roof Pitch, 8" rise per ft. run; Roof, 13.00 sqs.; Cornice, C & F, 200 lin. ft.; Partitions, 300 lin. ft.; Inside Finish OS Walls, 260 lin. ft.; Front and OS French Doors, 2 opps.; Rear and Grade Doors, 1 opp.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opps., 23 opps.; Windows and Casements, 26 opps.; Gable Sash and Louvers, 2 opps.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, .24 sqs.

Page 64, February: Spelman, Archt.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 132 lin. ft.; Trench Walls, 60 lin. ft.; Basement Floor, 886 sq. ft.; Garage Floor, 180 sq. ft.; Excavation per ft. deep, 37 cu. yds.; Outside Walls, 24.00 sqs.; First Floor, 8.86 sqs.; Second Floor, with fin. flg., 8.86 sqs.; Ceiling, 19.50 sqs.; Roof Pitch, 8" rise per ft. run; Roof, 13.00 sqs.; Hips and Valleys, 32 lin. ft.; Cornice, C & F, 200 lin. ft.; Partitions, 260 lin. ft.; Inside Finish OS Walls, 264 lin. ft.; Front and OS French Doors, 1 opp.; Rear and Balcony Doors, 2 opps.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opps. 20 opps.; Windows and Casements, 22 opps.; Gable Sash and Louvers, 1 opp.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, .60 sqs.; Porch Ceilings, .40 sqs.; Porch Beam, 10 lin. ft.; Balcony Post and Newels, 4; Garage Roof, 2.20 sqs.; Garage Cornice, 42 lin. ft.; Porch and Deck Rail, 40 lin. ft.

Page 65, February: Spelman, Archt.

"TRUCOST" ESTIMATING FIGURES FOR THIS

HOUSE: Basement Walls, 126 lin. ft.; Trench Walls, 46 lin. ft.; Basement Floor, 755 sq. ft.; Garage Floor, 180 sq. ft.; Excavation per ft. deep, 40 cu. yds.; Outside Walls, 26.90 sqs.; First Floor, 7.40 sqs.; Second Floor, with fin. fig., 7.50 sqs.; Ceiling, 16.70 sqs.; Roof Pitch, 10" rise per ft. run; Roof, 13.60 sqs.; Cornice, C & F, 110 lin. ft.; Cornice, 6", 82 lin. ft.; Partitions, 220 lin. ft.; Inside Finish OS Walls, 234 lin. ft.; Front and OS French Doors, 2 opps.; Rear and Grade Doors, 1 opp.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opps., 23 opps.; Windows and Casements, 23 opps.; Gable Sash and Louvers, 2 opps.; Chimney, 38 lin. ft.; Main Stairs, 1; Porch Floor, 1.20 sqs.

Page 67, February: Westridge Constr. Co., Bldrs.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 120 lin. ft.; Trench Walls, 20 lin. ft.; Basement Floor, 850 sq. ft.; Excavation per ft. deep, 36 cu. yds.; Outside Walls, 13.25 sqs.; First Floor, 8.50 sqs.; Ceiling, 8.50 sqs.; Roof Pitch, 7" rise per ft. run; Roof, 12.00 sqs.; Hips and Valleys, 80 lin. ft.; Cornice, C & F, 126 lin. ft.; Partitions, 140 lin. ft.; Inside Finish OS Walls, 120 lin. ft.; Front and OS French Doors, 1 opp.; Rear and Grade Doors, 1 opp.; Inside Doors and Cased Opps., 12 opps.; Windows and Casements, 14 opps.; Gable Sash and Louvers, 1 opp.; Chimney, 26 lin. ft.; Porch Floor, .25 sqs.; Porch Ceilings, .12 sqs.; Porch Beam, 10 lin. ft.; Porch Roof, .18 sqs.; Porch Cornice, 12 lin. ft.

Page 69, February: Peck, Archt.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 130 lin. ft.; Trench Walls, 100 lin. ft.; Basement Floor, 800 sq. ft.; Garage Floor, 220 sq. ft.; Excavation per ft. deep, 32 cu. yds.; Outside Walls, 22.00 sqs.; First Floor, 12.00 sqs.; Second Floor, without fin. fig., 6.00 sqs.; Ceiling, 14.50 sqs.; Roof Pitch, 12" rise per ft. run; Roof, 20.00 sqs.; Hips and Valleys, 80 lin. ft.; Cornice, C & F, 260 lin. ft.; Partitions, 150 lin. ft.; Inside Finish OS Walls, 164 lin. ft.; Front and OS French Doors, 1 opp.; Rear and Grade Doors, 1 opp.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opps., 16 opps.; Windows and Casements, 20 opps.; Gable Sash and Louvers, 4 opps.; Chimney, 32 lin. ft.; Main Stairs, 1; Porch Floor, .50 sqs.

Page 70, February: Duff, Designer

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Foundation and Basement Walls, 260 lin. ft.; Trench Walls, 50 lin. ft.; Basement Floor, 440 sq. ft.; Garage Floor, 440 sq. ft.; Excavation per ft. deep, 36 cu. yds.; Outside Walls, 26.00 sqs.; First Floor, 18.75 sqs.; Second Floor, without fin. fig., 15.00 sqs.; Ceiling, 27.00 sqs.; Roof Pitch, 10" per ft. run; Roof, 17.00 sqs.; Hips and Valleys, 48 lin. ft.; Cornice, C & F, 175 lin. ft.; Partitions, 250 lin. ft.; Inside Finish OS Walls, 176 lin. ft.; Front and OS French Doors, 2 opps.; Rear and Grade Doors, 1 opp.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opps., 19 opps.; Windows and Casements, 31 opps.; Gable Sash and Louvers, 1 opp.; Chimney, 26 lin. ft.; Main Stairs, 1; Porch Floor, 1.75 sqs.; Porch Ceilings, 1.36 sqs.; Porch Beam, 32 lin. ft.; Porch and Balcony Post and Newels, 4; Porch Roof, 1.36 sqs.; Porch Cornice, 32 lin. ft.; Porch and Deck Rail, 68 lin. ft.

Page 75, February: Eschenbach, Archt.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 124 lin. ft.; Trench Walls, 68 lin. ft.; Basement Floor, 875 sq. ft.; Excavation per ft. deep, 37 cu. yds.; Outside Walls, 20.00 sqs.; First Floor, 5.50 sqs.; Second Floor, with fin. fig., 5.50 sqs.; Ceiling, 13.00 sqs.; Roof Pitch, 7" rise per ft. run; Roof, 12.00 sqs.; Cornice, C & F, 134 lin. ft.; Cornice, 8", 72 lin. ft.; Partitions, 200 lin. ft.; Inside Finish OS Walls, 240 lin. ft.; Front and OS French Doors, 4 opps.; Rear and Grade Doors, 1 opp.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opps., 18 opps.; Windows and Casements, 26 opps.; Gable Sash and Louvers, 1 opp.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, 3.00 sqs.; Porch Ceilings, 1.32 sqs.; Porch Beam, 34 lin. ft.; Porch and Balcony Post and Newels, 18; Porch Roof, 1.40 sqs.; Porch Cornice, 34 lin. ft.

Page 77, February: Wall, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 108 lin. ft.; Trench Walls, 70 lin. ft.; Basement Floor, 590 sq. ft.; Garage Floor, 190 sq. ft.; Excavation

(Continued to page 136)

DRY LUMBER
Gives You
3-WAY
BETTER MEASURE
For Your Money!

It Saves You 3/4% Shrinkage in Volume (Size) for Each 1% Of Moisture Lost!

It Saves You From Paying Market Price Plus Freight On Shrinkage Of As Much As 2% in Size!

Its Greater Strength Saves You The Trouble For Uneven Floors—Cracked Plaster And Stuck Doors!

From long experience (61 years) ESSCO Mills have developed lumber drying to a point so near the point of "Moisture Equilibrium" that shrinkage in storage or use will be imperceptible, whether kiln or air dried. It is the care taken in selection and production and the length of drying time that determines low moisture content, rather than the method.

ESSCO

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TruCost Figures

(Continued from page 135)

per ft. deep, 28 cu. yds.; Outside Walls, 17.60 sqs.; First Floor, 6.10 sqs.; Second Floor, with fin. flg., 7.40 sqs.; Ceiling, 15.00 sqs.; Roof Pitch, 9" rise per ft. run; Roof, 13.60 sqs.; Hips and Valleys, 28 lin. ft.; Cornice, C & F, 186 lin. ft.; Partitions, 170 lin. ft.; Inside Finish OS Walls, 214 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Oppgs., 18 oppgs.; Windows and Casements, 23 oppgs.; Gable Sash and Louvers, 1 opg.; Chimney, 36 lin. ft.; Main Stairs, 1; Porch Floor, 2.00 sqs.; Porch Ceilings, 1.80 sqs.; Porch Beam, 30 lin. ft.; Porch and Balcony Post and Newels, 8; Porch Rail, 80 lin. ft.

Page 98, February: Bain, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 138 lin. ft.; Trench Walls, 32 lin. ft.; Basement Floor, 975 sq. ft.; Excavation per ft. deep, 42 cu. yds.; Outside Walls, 21.50 sqs.; First Floor, 9.75 sqs.; Second Floor, without fin. flg., 8.00 sqs.; Ceiling, 9.75 sqs.; Roof Pitch, 12" rise per ft. run; Roof, 15.50 sqs.; Hips and Valleys, 40 lin. ft.; Cornice, C & F, 200 lin. ft.; Partitions, 135 lin. ft.; Inside Finish OS Walls, 138 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Oppgs., 15 oppgs.; Windows and Casements, 19 oppgs.; Gable Sash and Louvers, 3 oppgs.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, 1.00 sqs.

Page 98, February: Gustman-Adam Co., Bldrs.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 92 lin. ft.; Trench Walls, 40 lin. ft.; Basement Floor, 432 sq. ft.; Excavation per ft. deep, 23 cu. yds.; Outside Walls, 21.30 sqs.; First Floor, 6.20 sqs.; Second Floor, with fin. flg., 5.20 sqs.; Ceiling, 11.40 sqs.; Roof Pitch, 8" rise per ft. run; Roof, 7.80 sqs.; Cornice, C & F, 82 lin. ft.; Cornice, 4", 70 lin. ft.; Partitions, 115 lin. ft.; Inside Finish OS Walls, 172 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Oppgs., 14 oppgs.; Windows and Casements, 20 oppgs.; Gable Sash and Louvers, 1 opg.; Chimney, 34 lin. ft.; Main Stairs, 1; Stoop Floor, .18 sqs.

Page 99, February: Snell, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls 100 lin. ft.; Trench Walls, 20 lin. ft.; Basement Floor, 510 sq. ft.; Excavation per ft. deep, 26 cu. yds.; Outside Walls, 21.75 sqs.; First Floor, 6.25 sqs.; Second Floor, with fin. flg., 6.25 sqs.; Ceiling, 12.50 sqs.; Roof Pitch, 8" rise per ft. run; Roof, 8.10 sqs.; Cornice, C & F, 72 lin. ft.; Cornice, 6", 72 lin. ft.; Partitions, 130 lin. ft.; Inside Finish OS Walls, 190 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Oppgs., 13 oppgs.; Windows and Casements, 23 oppgs.; Gable Sash and Louvers, 1 opg.; Chimney, 36 lin. ft.; Main Stairs, 1; Porch Floor, .30 sqs.

Page 100, February: Pioneer Homes, Bldrs.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 160 lin. ft.; Garage Floor, 250 sq. ft.; Excavation per ft. deep, 46 cu. yds.; Outside Walls, 13.50 sqs.; First Floor, 7.48 sqs.; Ceiling, 10.00 sqs.; Roof Pitch, 6" rise per ft. run; Roof, 17.00 sqs.; Hips and Valley, 100 lin. ft.; Cornice, C & F, 142 lin. ft.; Partitions, 108 lin. ft.; Inside Finish OS Walls, 110 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Oppgs., 9 oppgs.; Windows and Casements, 12 oppgs.; Gable Sash and Louvers, 1 opg.; Chimney, 24 lin. ft.; Porch Floor, 20 sqs.; Porch Ceilings, 18 sqs.; Porch Beam, 9 lin. ft.; Porch and Balcony Post and Newels, 1.

Page 101, February: Pioneer Homes, Bldrs.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 159 lin. ft.; Garage Floor, 253 sq. ft.; Excavation per ft. deep, 44 cu. yds.; Outside Walls, 16.20 sqs.; First Floor, 7.16 sqs.; Ceiling, 9.69 sqs.; Roof Pitch, 6" rise per ft. run; Roof, 13.26 sqs.; Cornice, C & F, 66 lin. ft.; Cornice, 12", 84 lin. ft.; Partitions, 104 lin. ft.; Inside Finish OS Walls, 108 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Oppgs., 9 oppgs.; Windows and Casements, 11 oppgs.; Gable Sash

and Louvers, 2 opls.; Chimney, 24 lin. ft.; Porch Floor, .64 sqs.; Porch Ceilings, .64 sqs.; Porch Beam, 16 lin. ft.

Rainbault Heads G-E Conditioning

THE General Electric Company has announced that Rainbault has been named manager of the air conditioning and commercial refrigeration department, it was announced by H. L. Andrews, vice president. Formerly manager of the company's electric clock section in Bridgeport, Conn., Mr. Rainbault succeeds Stuart M. Crocker, who was recently named a vice president concerned with customer relations. Mr. Rainbault's headquarters will be in Bloomfield, N.J.

A native of Kansas City, Mo., Mr. Rainbault joined the General Electric Company in 1930 as New York district manager of radio sales. He had previously served as radio sales manager for the Federal Telephone and Telegraph Company in Buffalo, N.Y. In 1931 he was transferred to electric clock sales activities and he had been manager of G-E clock sales since Jan. 1, 1932.

Mr. Andrews is in charge of both the G-E appliance and merchandise department in Bridgeport and the air conditioning and commercial refrigeration department in Bloomfield.

Cottage Apartments to Rent

(Continued from page 61)

order to fit in with the American Houses' system of shop-built plywood panel construction, which will be described in another article.

River Glen illustrates in an interesting fashion the investment possibilities of the cottage apartment. The land comprises 4 2/3 acres of the 15-acre estate on which Dr. Shaw and his family have lived for the past 43 years. The planning and active management of the project has been in the hands of Albert Shaw, Jr. The investment in buildings and garages amounted to \$100,000. The total investment, including a fair appraisal of land worth, driveways, landscaping, etc., would be approximately \$140,000. A mortgage for part of that sum has been placed on the buildings by the Mutual Benefit Life Insurance Company.

The gross annual rentals estimated at the initial apartment scales will amount to approximately \$22,000 if fully rented. It is apparent that after the payment of interest, upkeep, heating, taxes and maintenance costs, and making safe allowance for vacancies, there should be an ample income to insure a good return on the investment.

The layout of the buildings is such that there are no public halls to be kept clean—each owner has his own private front and back entrance. Each of the four buildings is equipped with its own heating plant consisting of a Fitzgibbons steel tubular boiler with Hoffman oil burners and Sunrad recessed radiators by American Radiator Co. The system is one-pipe steam. There is basement area under about 25 per cent of each building, providing space for the heating plant and for storage.

An interesting feature of the apartment equipment is the installation of two Blackstone automatic home laundry machines which are available to the tenants. Thus a housewife can go into the laundry room, deposit a quarter in the slot of the machine, put in the laundry, and in a short time have it automatically washed, rinsed and dried.

The buildings were erected with a considerable degree of speed, which is partly explainable by the use of shop-built wall panels but largely due to the elimination of plaster with its attendant delays. Foundations were started July 1, and the first tenants moved in October 1—a good record for a project of this size.



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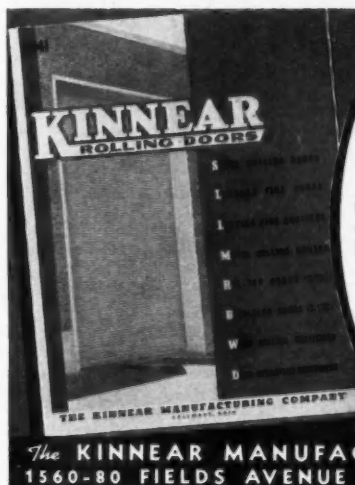
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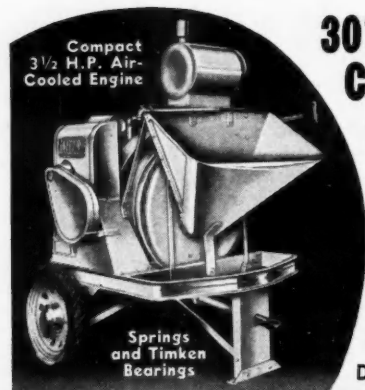
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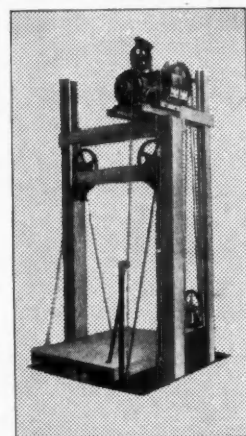
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ANOTHER view of double heating system showing carefully planned and installed duct work.

Detroit Ideal Home—

(Continued from page 59)

Del Loeffler. Duct-work and registers were supplied by the Detroit Safety Furnace Company. A greater portion of the duct-work is concealed in the basement ceiling, giving an unusually clean appearance to the installation.

The exterior of the Home, French Provincial in design, is of brick painted gray with white trim and black roof. An attached two-car garage of the same material and color as the home is on the north side with an access to the house provided by a covered walk.

The first floor contains a vestibule; wide hall; spacious living room, 14'4" x 23', with windows on three sides; dining room, 13' x 14'4"; an all-electric ideal kitchen; and a very unusual glass-enclosed garden porch which measures 12' x 18'. This floor also includes an attractively decorated vanity room located on one side of the vestibule and a large coat closet and telephone room on the other side, each with outside light.

The second floor contains a master bedroom, 14'4" x 16'; a boy's bedroom; and a girl's bedroom, all three having cross ventilation; two baths; and a second floor glass-enclosed lounging porch directly above the garden porch. This latter room can be used for a wide variety of purposes such as a den, a children's playroom, additional bedroom, or any other use which happens to suit the desires of the owners.

A stairway has been provided for access to the third floor on which maid's quarters and bath can be finished off in the future at a minimum of expense. Thus, although the house, strictly speaking, is a three-bedroom home, it can easily be arranged to suit the requirements of a family desiring four, five, or even six bedrooms.

A feature of all the Detroit Builders Show Ideal Homes is their modern kitchens which always include the latest types of time-saving and work-saving equipment, and

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this 1941 Home is no exception. It has a "U" shaped kitchen with an attractive, handy snack-counter and electrical equipment which includes an automatic dishwasher, a waste disposal unit in the sink, electric range and refrigerator, and all-steel cabinets.

In furnishing this home, the J. L. Hudson Company has carried out the idea that the home was already occupied by an imaginary family of four, and has provided ample equipment and facilities for each member of the family to enjoy his or her own hobbies and vocations. The basement especially, which is termed a "lower level," illustrates this general theme. For example, the mother of this family has a room on this lower level for garden tools, equipped with a sink and even a potting bench. This room, with its running water, can also be transformed into a most complete darkroom for the camera enthusiast.

A large and strikingly furnished music room is also found on this lower level. It has a special acoustical ceiling to permit playing the radio or phonograph recordings without disturbing the occupants on the first and second floors, and an asphalt tile floor which is ideal for dancing.

This 1941 Ideal Home is located on Pontchartrain Drive in Palmer Woods, one of the most beautiful residential sections of Detroit on the north side of the city and practically adjacent to the exclusive Detroit Golf Club property. The site for the Home is a 100' x 150' lot which was arranged through the co-operation of the Hannan Real Estate Exchange, Detroit realtors, who handle this subdivision which is owned by the Merrill Palmer School. The lot was attractively landscaped with bushes and large trees and completely sodded by the Monroe Nursery.

The Builders Show Home completely fulfills its purpose of providing Detroit home lovers, at one time and place, with a practical demonstration of the latest and finest materials, equipment, and furnishings in the home building field. If the experience of past years is a guide to the attendance at the Home this year, more than a quarter of a million people will have taken advantage of this opportunity to inspect this truly Ideal Home by the date that it is closed to the public, late in February.



THE front entrance of the 1941 Detroit Ideal Home presents one of the many fine details designed by Architect Pellerin.

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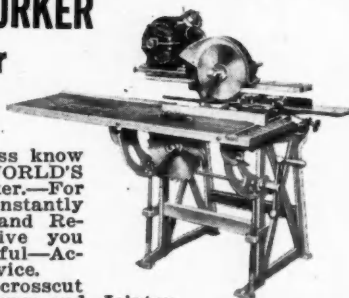
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INDEX TO ADVERTISERS

FEBRUARY, 1941

A

Adam Electric Company, Frank.....129
 Allegheny Ludlum Steel Corp.....123
 American Builder Book Dept.....32-33-42-136
 American Cabinet Hardware Corp.....92
 American Floor Surfacing Machine Company, The.....97
 American Home, The.....38-39
 American Lumber & Treating Company.....98
 American Plywood Corporation.....134
 American Rolling Mill Co., The.....126
 American Telephone & Telegraph Co.....108
 Andersen Corporation.....9
 Arkansas Soft Pine Bureau.....83
 Armstrong Cork Company.....42-45-90-91

B

B & T Floor Company, The.....129
 Barber Asphalt Corporation.....41
 Barber-Colman Company.....102
 Barrett Company, The.....43
 Better Homes & Gardens.....34
 Borg-Warner Corporation.....96
 Bradley Lumber Company of Arkansas.....15
 Breinig Brothers.....140
 Bruce Co., E. L.....103
 Brush-Punnett, Inc.....137

C

Carey Company, The Philip.....18-46
 Carnegie-Illinois Steel Corporation.....48
 Carr, Adams & Collier Company.....26
 Carter Division, R. L.....104
 Case & Son Mfg. Co., W. A.....99
 Celotex Corporation, The.....2
 Certain-Teed Products Corporation.....136
 Chevrolet Motor Division.....4
 Chicago Technical College.....140
 Cincinnati Iron Fence Co., Inc.....141
 Coleman Lamp and Stove Co., The.....19
 Colorcrete Industries, Inc.....141
 Columbia Steel Company.....48
 Concrete Equipment Co.....136
 Congoleum-Nairn, Inc.....22
 Construction Machinery Company.....130
 Crane Co.....8

D

Detroit Steel Products Company.....3
 De Walt Products Corporation.....109
 Donley Brothers Co., The.....126
 Douglas Fir Plywood Association.....23
 Dunn Mfg. Co., W. E.....25

E

Edwards Manufacturing Co., The.....125
 Eljer Co.....113
 Exchange Sawmills Sales Co.....135

F

Farley & Loetscher Mfg. Company.....141
 Ferst, Ltd., M. A.....139
 Flintkote Co., The.....138
 Frantz Manufacturing Co.....110

G

General Electric Company.....40
 General Electric Home Bureau.....27
 General Motors Sales Corporation.....4
 Grand Rapids Hardware Co.....100

H

Heatilator Company.....127
 Henry Furnace & Foundry Co., The.....138
 Homasote Company.....117
 Homelite Corp.....124
 House of the Month Service.....141

I

Ilg Electric Ventilating Co.....106

J

Jaeger Machine Co., The.....138
 Johns-Manville.....44

K

Kawneer Company, The.....5
 Kees Manufacturing Co., F. D.....137
 Kimball Bros. Co.....138
 Kimball Manufacturing Company, Inc.....137