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# AMERICAN BUILDER

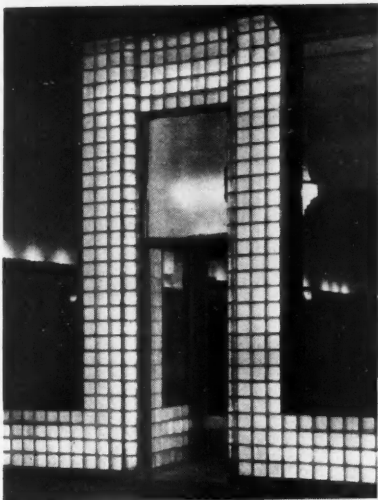
and Building Age

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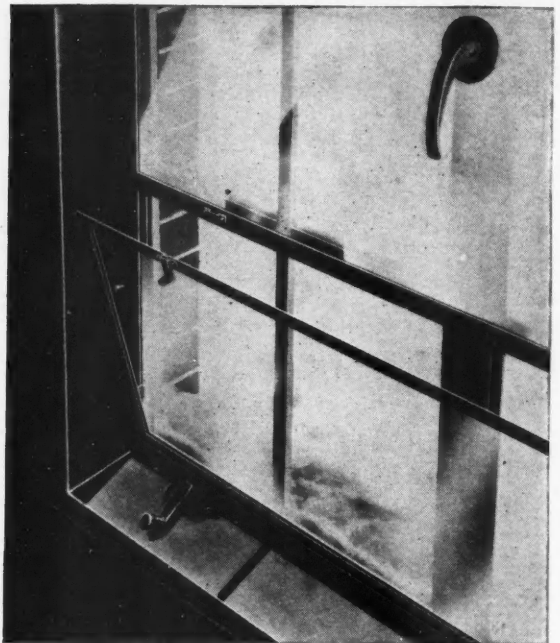
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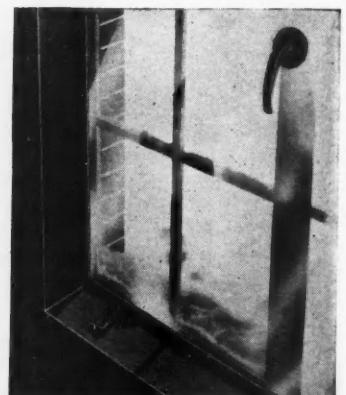
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BETTER WINDOWS THAT COST LESS

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## UNEMPLOYMENT— WHY DOES IT CONTINUE?

**W**HY there continues to be so much unemployment is a question of vital importance. Unless the things done attack the *real cause* they are more likely to protract unemployment than reduce it.

The *American Builder* is not concerned with politics; but it is concerned with, and tries to discuss, everything affecting *building*.

President Roosevelt said recently in a radio address: "While the total production of America is about back to the high point before the depression, only a little more than 80 per cent as many human beings are engaged in turning out that production. . . . It seems reasonable, therefore, that industry can contribute in great measure to the increase of employment if industry as a whole will undertake reasonable reductions of hours of work, while, at the same time, they keep the individual's pay envelope at least as large as it is today."

**T**HE *American Builder* throughout the depression has contended that a large increase of production in industry as a whole would restore employment, and that nothing else would. Is it a fact, then, that great unemployment continues after total production has been almost restored—that, therefore, stimulation of production is not all that is required to cause full re-employment?

Let us consider the facts about the building industry. Home-building has greatly increased; but contracts for residential construction in the first quarter of 1936 were still *only 27 per cent* as large as in the first quarter of 1929—\$136,275,000 in the first quarter of 1936, as compared with \$511,200,000 in the first quarter of 1929. Contracts for other building were *only 44 per cent* as large as in 1929—being \$601,000,000 in the first quarter of 1936, as compared with \$1,367,000,000 in the first quarter of 1929.

Thus, *total contracts* for building in the first quarter of this year were *only 40 per cent* as large as in the last year before the depression—\$737,275,000 in 1936, as compared with \$1,867,000,000 in 1929. In other words, total building has been running thus far in 1936 at an annual rate of about *four and a half billion dollars* less than in 1929.

**T**HESE figures demonstrate—

That production in the building industry is still at least *60 per cent* less than at the "high point before the depression"

That failure to restore production in the building industry is sufficient to explain the continued unemployment of *3,000,000 persons*

That, in order to restore production and employment in *industry as a whole*, it will be necessary to increase present production in *the building industry alone* at least 150 per cent.

**F**URTHER reductions of hours of work without reduction of employes' daily or weekly pay would *increase the cost of building*, which would *reduce the incentive of all private individuals and business concerns to invest in new buildings*.

Building of all kinds is increasing; unemployment in the building industry is declining. The way to stimulate these favorable trends is not to increase, but *reduce*, the cost of building, and thereby, not reduce, but *increase the incentive to invest private capital in building*.

*Samuel O. Drun,*  
CHAIRMAN

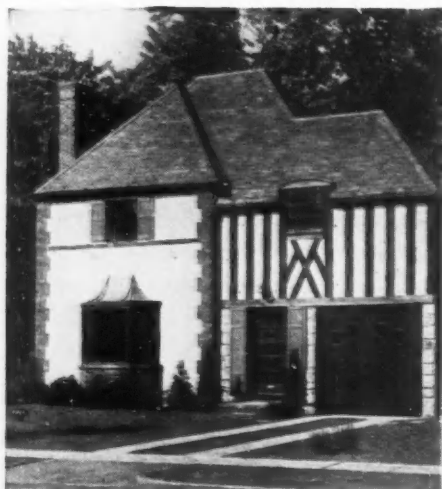
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*Mohawk Stucco made with Atlas White Portland Cement was used on each of the 80 houses in Mott Brothers Community, Surrey Lane, Hempstead, L. I. It was supplied by C. A. DeLevante, Inc., of Rockville Centre, L. I.*



## All the roads and foundations too...



**T**HERE are eighty modern houses in the beautiful development known as Mott Brothers Community at Hempstead, Long Island. Mott Brothers, who are the architects, builders and owners, not only used Mohawk Stucco made of Atlas White Portland Cement on each house but all the roads in the Community and the foundations of all houses were made with Atlas Portland Cement.

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## AMERICAN BUILDER AND BUILDING AGE

### KEEP ON PUSHING—

#### For "Title I" Modernizing & Repair Business

**C**ONGRESS has recognized the value to the nation and the building industry of the emergency provisions of Title I of the National Housing Act, under which building repairs and modernizing have been encouraged and loans for such work insured, by passing an amendment extending this section of the Act for another year, to April 1, 1937. The importance to the building industry of this action can be gauged in definite money terms. Since the inception of this program in the fall of 1934 up to April 11, 1936, loans for repairs and modernizing in the amount of \$341,923,219 have been insured by the Federal Housing Administration.

Five important changes in the regulations of the Modernization Credit Plan have been made necessary by the passage of the amendment. These changes are not of a nature which will materially restrict the full operation of the Modernization Credit Plan as it formerly functioned, particularly as far as the building industry is concerned.

**1.** THE first change is the elimination of all new construction on unimproved real property from consideration under the Modernization Credit Plan, and the exclusion of loans to tenants except those who are lessees. The Act now reads as follows:

"Insured modernization loans may be made only to owners of improved real property or to lessees of such real property who have a lease extending for a period of not less than six months beyond the maturity of the modernization credit loan."

**2.** THE Act specifically excludes from insurance loans or advances of credit in the amount of \$2,000 or less for the purchase and installation of equipment or machinery upon any type of improved real property. However, the bill does permit the insurance of loans or advances of credit for the purpose of making additions to real property. Therefore, items of machinery and equipment which become additions to the real property will be considered eligible, whereas those which do not become additions to the real property (i.e., a part of the structure) will be considered as ineligible. Under this interpretation heating, plumbing and wiring systems, including such items as furnaces, oil burners, stokers,

water heaters, etc., would be *eligible* for financing. However, movable equipment such as refrigerators, ranges, washing machines, ironers, etc., would *not be eligible*.

The same reasoning would apply in the commercial or industrial field as in the domestic field, except that on loans from \$2,000 to \$50,000 on Class A property it is not a requirement that the machinery or equipment become an addition to the property. In cases of this sort the old eligibility rulings still apply as a whole, with the definite provision that the equipment must be installed. Portable equipment is ineligible.

**3.** AFTER March 31, 1936, the insurance against loss to the lending agencies is reduced from 20 per cent to 10 per cent of the total amount of the loans made or credit advanced. Eligible loans which were made by insured institutions before April 1, and properly reported, are covered by the 20 per cent insurance reserve. This accumulated 20 per cent reserve can be used only on those loans made prior to April 1, 1936, and no part of this insurance reserve will be applicable to loans made under the amendment extending the active period of Title I. In other words, loans or advances of credit made after March 31, 1936, will be covered by a new reserve based on 10 per cent of the aggregate amount of the advances of credit made by the insured institutions since that time.

Twenty per cent was found to be a factor of safety far beyond what was necessary. Losses to date under the Modernization Credit Plan which have been paid by the Housing Administration are less than three-tenths of one per cent of the total volume of loans insured. Unpaid balances on delinquencies of thirty days or more, according to the latest available figures, are running slightly in excess of 2 per cent of the total insured loans outstanding. The 10 per cent insurance coverage, therefore, should be more than adequate to cover any loss which a financial institution exercising normal credit judgment and with a normal volume of loans should sustain.

**4.** THE fourth change is the reduction of the maximum liability which the Federal Housing Administrator

may incur for modernization credit insurance; it was reduced from \$200,000,000 to \$100,000,000. But that amount seems to be sufficient.

**5.** THE fifth change is that churches have been placed in Class A and can borrow up to \$50,000 instead of only up to \$2,000 as before.

A good many builders and lumber dealers who have been promoting garage construction under Title I rules have been worrying about the status of this activity under the new amendment. Frank Carnahan, secretary of the National Retail Lumber Dealers Association, writes that he has received complaints from some dealer members that their banks are under the impression that garages are not to be built under the new Title I. He states further, however, that he has received from FHA a legal opinion approving loans for garages and minor farm buildings.

This opinion reads:

CONSTRUCTION OF GARAGES ON PROPERTY ALREADY IMPROVED BY A HOUSE.

"The Act as amended effective April 1, 1936, authorizes the Administrator to insure loans for repairs, alterations, and additions upon improved real property. Where real property is already improved by a dwelling house, or other permanent major structure, loans for the addition upon the same real property of new appurtenant structures, *whether attached to the major structure or not*, will be eligible for insurance.

(Signed) Abner H. Ferguson, General Counsel, FHA."

**D**URING the week ended April 11, modernization credit loans in the amount of \$9,100,251 were reported for FHA insurance; 19,435 separate notes made up this substantial total—which means 19,435 modernizing and repair jobs for that one week, employing men, consuming building materials and equipment and rescuing valuable property from further depreciation and loss. This is worth while from every angle. Readers of this publication should not let the rising tide of new construction keep them from pushing forward this important remodeling work also.

Now that Title I is extended for another year, let's make it a BIG YEAR by going out aggressively for this business.

## Rural Builders "Get a Break"

**T**HE pressure of public opinion, voiced by numerous Congressmen and Senators while the amendment to Title I of the Housing Act was being debated, and expressed for the building industry by *American Builder* in two prominent editorials last October and November, entitled, "Why Not Broaden FHA Rules to Admit Homes on Low Cost Land?" and "Give the Rural Builders a Break," has finally made itself felt on the Housing Administration.

The regulations controlling the acceptance of home mortgages for insurance by FHA under Title II are now officially interpreted so as to encourage low cost home building on low cost land and to admit such property to FHA insurance.

On April 11 the welcome news was released from the Washington headquarters of FHA, with the further assurance that all state and district directors were being notified of the new attitude toward non-urban home building.

This release stated that, in order to clear up a misconception of the insurability of low priced houses of \$2,000 or less by the Federal Housing Administration, Arthur Walsh, Assistant Federal Housing Administrator, had issued a restatement of the Administration's policy. At the same time he announced that revised administrative rules will not require that mortgaged property be located within the corporate limits of any town or village.

**T**HE restatement of policy and the new ruling were dispatched, he said, to the 63 insuring offices throughout the country, reminding all field officials that the Federal Housing Administration *is as much concerned with the small borrower as it is with those borrowers in the higher brackets.*

Such homes are insurable, under the provisions of Title II of the National Housing Act, he pointed out. He directed attention to the Federal Housing Administration's Circular No. 2 on Property Standards to illustrate that the requirements listed *do not exclude* construction of low cost homes because of lack of heating facilities, when they are not required; lack of special lighting facilities such as electricity, or lack of municipal water or sewage disposal systems, under certain conditions. The circular states acceptance of drawings and specifications will be made in the simplest form which will permit processing, and that no undue or burdensome demands should be imposed upon borrowers.

In respect to the requirement on neighborhoods, Administrative Rules issued June 24, 1935, under Title II, provided that "the mortgaged property, if otherwise acceptable to the Administrator, may be located in any *urban* community where the housing standards meet the requirements of the Administrator for insurance of mortgages upon property in such community." The revised Rules will omit the word "urban," Mr. Walsh said.

Thus, it will not be necessary for the mortgaged property to be located within the corporate limits of any town or village. Since, to provide land for homes costing \$2,000 and less, it may be necessary to build in areas not acceptable for insurance when considering loans in the higher brackets, the insuring offices are instructed under this new ruling to accept, as eligible, loans in areas where locations meet the needs of this type of borrower.

Thus a very long step is taken toward the realization of genuine low cost housing for that great body of the people, numbering more than 34 million, who live in small towns and villages and in the country, not on farms.



## Rebuild Flooded Areas RIGHT

**THE THOUSANDS** of flood damaged homes and business structures throughout the nation are a challenge to the building industry. Many of them should be torn down and replaced by entirely new structures. Others should be extensively modernized and rebuilt. Still others require entire refinishing, redecorating and equipping. Builders must not permit these houses to remain as they are. It is an opportunity for much needed modernization.



No. 1—The owner of this building in Johnstown is rebuilding 5 new stores. No. 2—Swank's hardware store at Johnstown after the flood. The modernizing sign was completely inundated. No. 3—Flood water stood 4 feet deep on the second floor of this Hancock, Md., house so that the porch floated and later came crashing down. No. 4—A hencoop that went astray.

# Millions to be Spent for Flood

**American Builder Survey Shows Great Rebuilding Program Getting Under Way — Construction Lessons from the Flood Described**

By **JOSEPH B. MASON**

**T**HE unleashed forces of nature have destroyed and damaged thousands of homes, business properties and structures of all kinds in the past month. The full strength of the building industry is being called upon to repair, rebuild and modernize the damage caused by floods, storms and, more recently, tornadoes. The amount of rebuilding in the twenty states involved will total many millions of dollars. If the extensive modernizing which must unquestionably follow in the course of the next twelve months is included, the reconstruction program will exceed a half billion dollars.

This is one of the largest jobs put up to the building industry in history. How will building men meet this challenge of reconstruction? How can they rebuild to minimize future flood damage? Will the building industry permit thousands of flood damaged structures to go back into use without thorough rebuilding and modernizing? Personal inspection of the flood areas, backed by the willing cooperation of hundreds of *American*

*Builder* readers, permits us to suggest answers to these questions.

Certain it is that building industry men are busy as they have never been before in the badly stricken flood areas. I have talked with builders who have hardly taken time to sleep in the weeks since the flood. Every available skilled employee is at work. Jobs are rushed through, with dozens of others waiting to be done. Stocks in the hands of material men and dealers were practically depleted in a few short weeks, but replenishments have been going ahead rapidly.

It was an impressive spectacle to see the way building men in Pittsburgh, Johnstown, Wheeling, Hartford, Williamsport, and other badly hit towns went to work. Contracting firms that had been idling along were suddenly faced with the job of recruiting crews, not one crew but in many cases a dozen, to work night and day, emergency reconstruction and rebuilding being handled first. But the more important volume from the long-run point of view is the modernizing and rebuilding that will go ahead within the next year as a result of the flood. Hundreds of home owners, storekeepers and business men who have gone back into their structures, making the best of them for the time being, have indicated that just as soon as things get straightened around a bit they will carefully plan complete modernizing operations.

Many confusing and conflicting reports on flooded areas have been made because the flood occurred in so many and such widely different sections. In cities like Johnstown, Williamsport, Wheeling and Hartford, the damage was tremendous and there is no question about the great volume of rebuilding required. In many other





No. 5—This Williamsport, Md., garage was delivered free. No. 6—One of the several hundred store fronts on Johnstown's Main Street. No. 7—Contractor Ernest Miller of Williamsport points out how concrete pier was carried along with this building, which is resting a block from its original site. No. 8—Main Street in Johnstown two weeks after the flood.

## Repairs and Modernization

parts of the country there were floods which covered the first floors of houses or other buildings in low-lying sections but did not do very great structural damage. Even in these sections, however, lumber dealers report increased sales of flooring, paint, trim, waterproofing, cement and a wide range of building products.

In the badly stricken sections there were literally thousands of residential and business properties that must be rehabilitated and rebuilt in a manner involving extensive construction work. It is estimated that some 19,000 houses were injured by the flood in Allegheny County, Pa., alone. Of these, some 5,000 houses were injured in Pittsburgh and perhaps 1,000 of them will require major repairs, 600 are reported unfit for use. In the city of Johnstown some 2,000 residences were damaged, representing a conservative repair bill of \$2,000,000, figuring only \$100 per house.

One of the biggest immediate rebuilding markets was store fronts and shops. Contractors were called upon to install more store fronts and store interiors than have been handled in a decade. Several hundred new store fronts were required in Johnstown, and this figure is swelled to the thousands in other and larger cities where flood waters swept through the business sections, taking out plate glass fronts, washing away trim, fixtures and interior finish.

### Credit Conditions

The first and biggest problem in all of the stricken areas is credit. Conditions vary widely but on the whole credit for rebuilding has been available with reasonable ease where sound business conditions warrant it. Many small businesses have experienced difficulty and there

are, of course, thousands of home owners in the poorer sections who do not have money and cannot obtain it to fix up their damaged homes. The larger business houses have obtained bank loans and have gone ahead at once. The Reconstruction Finance Corporation has sent a number of representatives into the flood centers and it is reported that several hundred loans have been authorized. The RFC is restricted to loans on property only. It is expected a bill will be passed through Congress shortly liberalizing its flood loan provisions.

The Federal Housing Administration has made every effort to cooperate with private lending institutions to supply necessary credit for modernizing. In a letter to the *American Builder* Steward McDonald, Administrator, stated: "I have instructed all field offices in these districts to act as speedily as is humanly possible." Congress has already extended the modernizing provisions of the Housing Act, and a movement is on foot to liberalize the provisions of the Act still further for the benefit of flood sufferers.

### Lessons from the Flood

The matter of greatest interest to builders everywhere is the way buildings stood up under flood conditions. Buildings of all types suffered. It may be said with conviction, however, that well built structures withstood damage much better than others. The greatest damage was done to flimsy or poorly constructed buildings which were easily lifted from their foundations or easily undermined or washed away. The outstanding lesson of the flood is that if there is any danger from water, build

firmly and well, with deep foundations and with super structures firmly anchored to foundations.

The most widespread damage to the interiors of homes was the warping and twisting of floors, woodwork, stairs, trim, doors and windows, etc. Interior finish and plaster suffered greatly. The first job of people returning to their homes was the removal of from four inches to two feet of mud deposited over the floors and thickly caked. It is impossible to estimate the long-term damage to structures which were inundated but not washed away, and defects will keep coming up for many years.

### Flood Resisting Construction

Most builders, when asked about construction that would resist flood damage, said that nothing could resist the force of the worst outbreaks. Engineers and builders do point out, however, that through good construction much damage can be minimized. L. W. Smith, field engineer of the National Lumber Manufacturers Association, states that proper anchorage, and by that he means  $\frac{3}{4}$  inch bolts spaced 8 feet apart and securely embedded, is extremely important in order to resist the buoyancy of frame construction. Currents of flood water have a tendency not only to undermine the foundation but to push a frame building off its foundation. Strong foundations deeply embedded will tend to resist undermining. Proper anchorage to the foundation will resist great pressure. It is also important that studs be well fastened to the sills and thoroughly spiked to joists running across the sills. Diagonal sheathing is recommended and 1 by 4 inch braces notched into the studding at an angle of 45 degrees. Where water rises above the roof, damage will tend to be resisted if rafters are securely spiked to the top wall plates and collar beam bracing laid across from rafter to rafter at mid-height in the attic. Diagonal

braces securely nailed to the lower side of the rafters will greatly add to the stiffness of a roof, he points out.

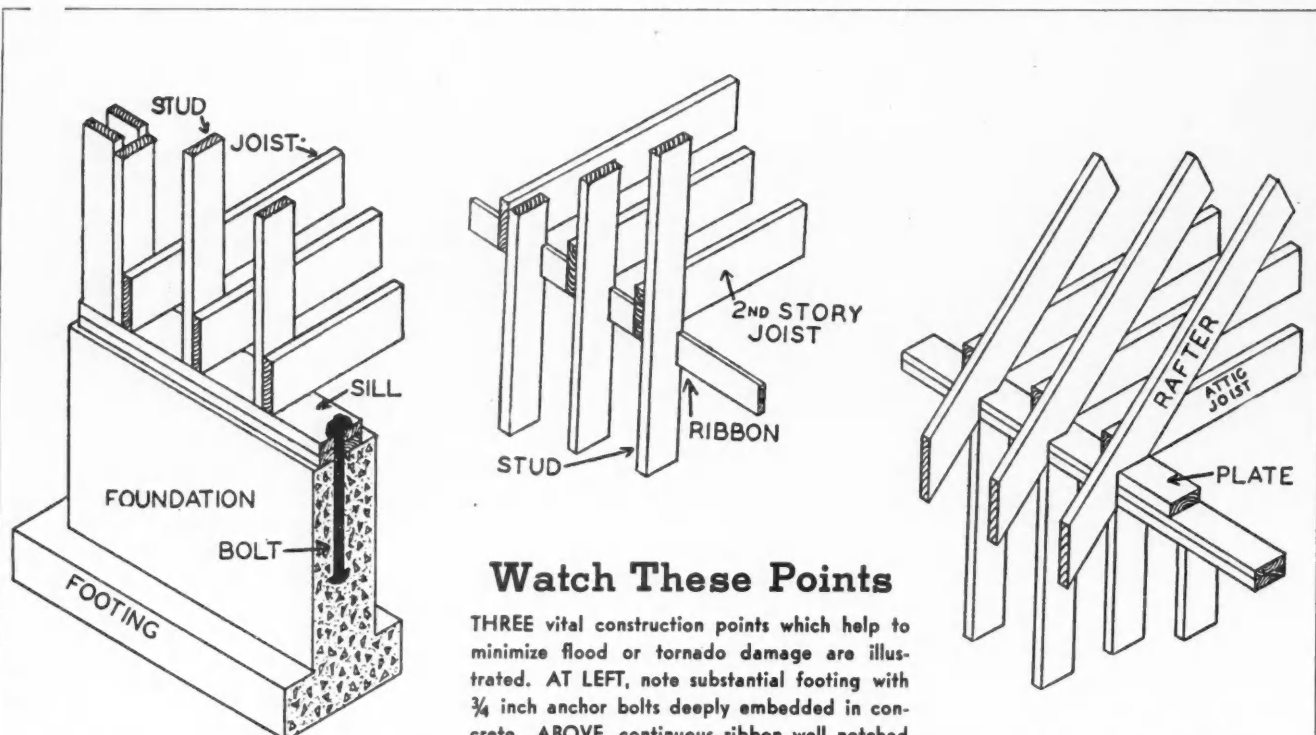
The value of sound construction was clearly demonstrated in many graphic ways. In Hancock, Md., the builder of a house in an exposed flood area not only bolted the structure firmly to the foundation but ran long tie bolts clear up to the second floor. This house was completely inundated but was not seriously damaged. On the other hand, in this and many other towns light frame structures of all kinds, such as sheds, garages, chicken coops, floated merrily away, and in many cases were found miles from their original location.

Builders in flood areas may well consider again the "15 Cardinal Points of Correct Frame Construction" recently recommended by the Southern Pine Association, or the recommended frame construction details of the National Lumber Manufacturer's Association and other competent authorities.

By building better homes on broad secure foundations, strongly built, strongly braced and anchored, much of the damage of future floods can be minimized. However, the real answer to this problem is a large scale plan of flood control and, what is of even greater importance, a comprehensive plan for moving whole localities from low-lying areas onto higher ground.

The building industry may well consider the possibilities of organizing large scale housing projects to get people out of areas where they should never have built in the first place.

In addition to the above, there are many opportunities for building men to do a good job of selling to people whose properties have been only slightly damaged; to point out how their homes and business buildings may be improved to resist future floods, and how they may be modernized now to make them more comfortable.



### Watch These Points

THREE vital construction points which help to minimize flood or tornado damage are illustrated. AT LEFT, note substantial footing with  $\frac{3}{4}$  inch anchor bolts deeply embedded in concrete. ABOVE, continuous ribbon well notched

into studs. Joists securely spiked to sides of each stud. AT RIGHT, roof rafters securely anchored to walls by spiking to 2-inch plates which are well spiked to wall plates. Engineers of the Southern Pine Association also recommend diagonal flooring and sheathing and 1 by 4 corner braces notched into studding at 45° angle.



*Randolph Evans, Architect; Photo by Gustav Anderson*

## HOMES FOR 1936 MARKET

THE detail above shows one of the attractive homes designed by Architect Randolph Evans for the Harmon National Realty Corp. of New York. The gable and chimney treatment gives a substantial appearance, and the entrance detail is effective.

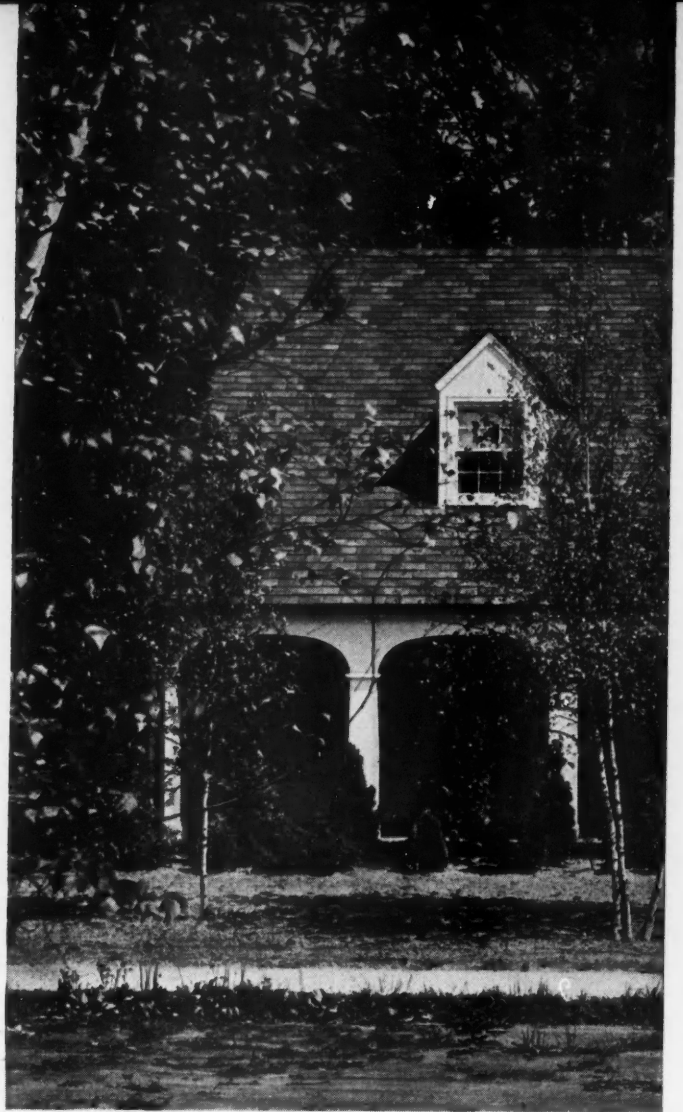
16 Pages of New Houses Selected for Their Outstanding Qualities—A Preview of the 1936 Home Market

## RAMBLING COLONIAL IN BRICK

**Maxmillian R. Johnke, Architect**

**T**HIS is a substantially-built brick house which has all of the appeal of the rambling Colonial. Proportions of the roof lines and the balancing of the porch wing with the garage wing are excellent. The cubage is 43,000 cu. ft. The exterior is of common brick, flush redwood boarding and Perfection cedar shingles. Roof is of black slate. Maid's room is located over the garage, which is handled in an interesting manner architecturally.

**THE PANELED** office illustrated below is from a house at Summit, N. J., designed by William Martin Pareis, architect. It shows a particularly skillful treatment of bookcases and wall paneling.

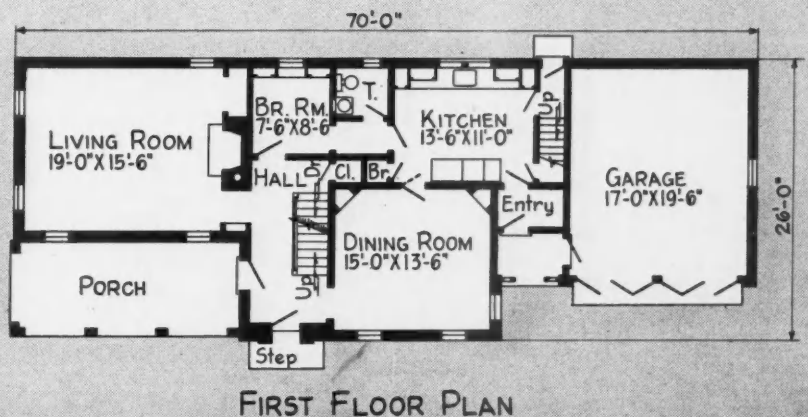
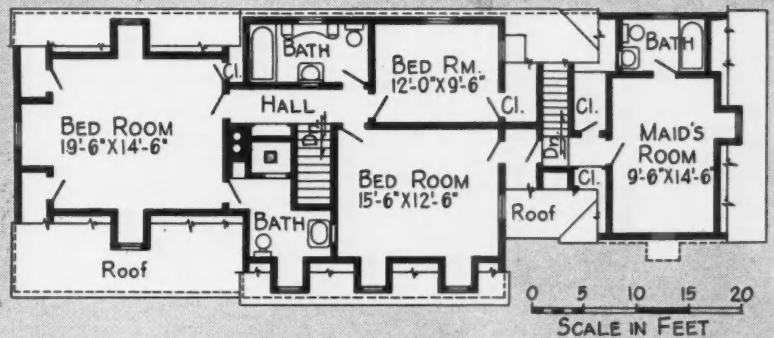




COST KEY is 2.652-192-1090-48-29-25

**E**QUIPMENT in this modern Colonial home, designed by Maximilian R. Johnke, Architect, includes Delco oil-burning air conditioning system, Standard bathtubs and fixtures, Kingsway glass shower door and medicine cabinets, Schlage interior and exterior hardware, Covert fireplace damper, Pennvernon glass, oak floors with Minwax stain, Colonial electric fixtures by Lightolier Co. Exterior doors and frames and garage doors by the Curtis Co.

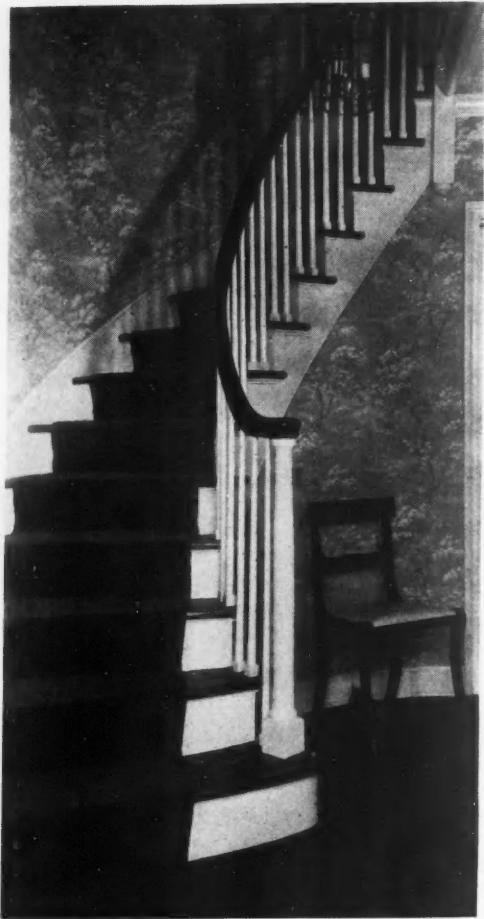
Floor plan at right shows many unusually fine features, including the large living room with windows on three sides, covered porch, spacious center hall, downstairs lavatory, rear stairs to maid's room.



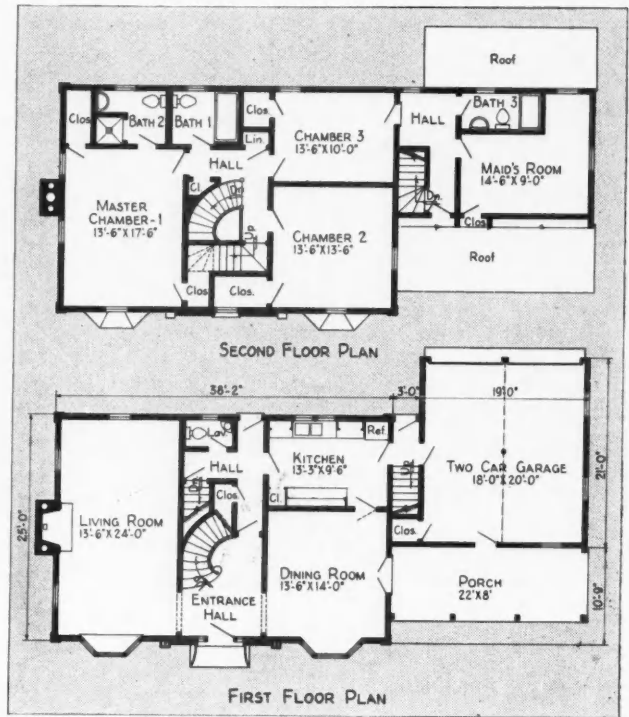
# IDEAL SUBURBAN HOME

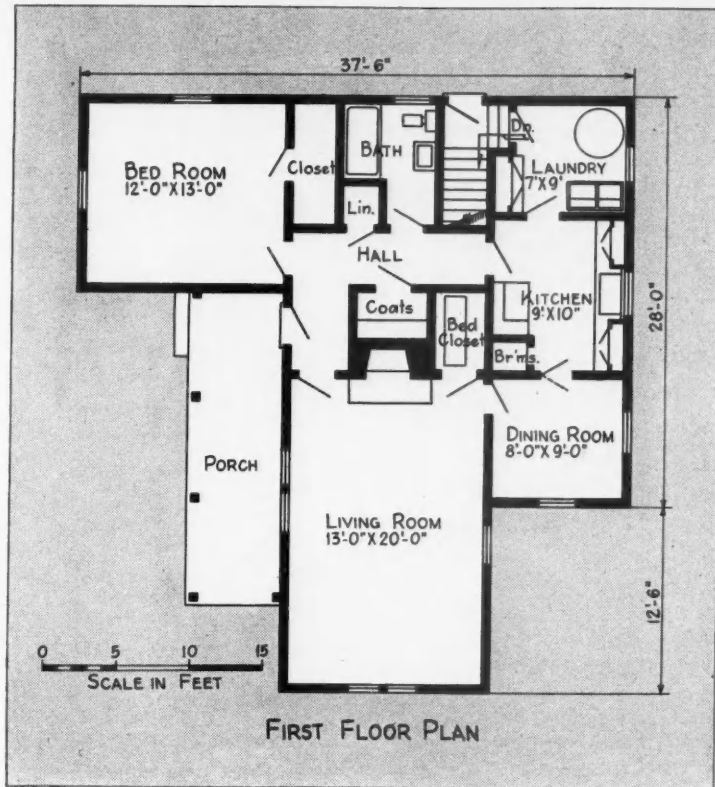
W. W. Drewry, Builder

D. Wentworth Wright, Architect



THIS LOVELY CIRCULAR STAIRWAY sets a high tone in the "Ideal Suburban Home" of Short Hills, N. J. Cost Key of this house is 3.022-183-992-44-32-22.





CINDER BLOCK WALLS,  
RIGID CONCRETE  
FLOOR, COST  
COMPLETE—\$5000

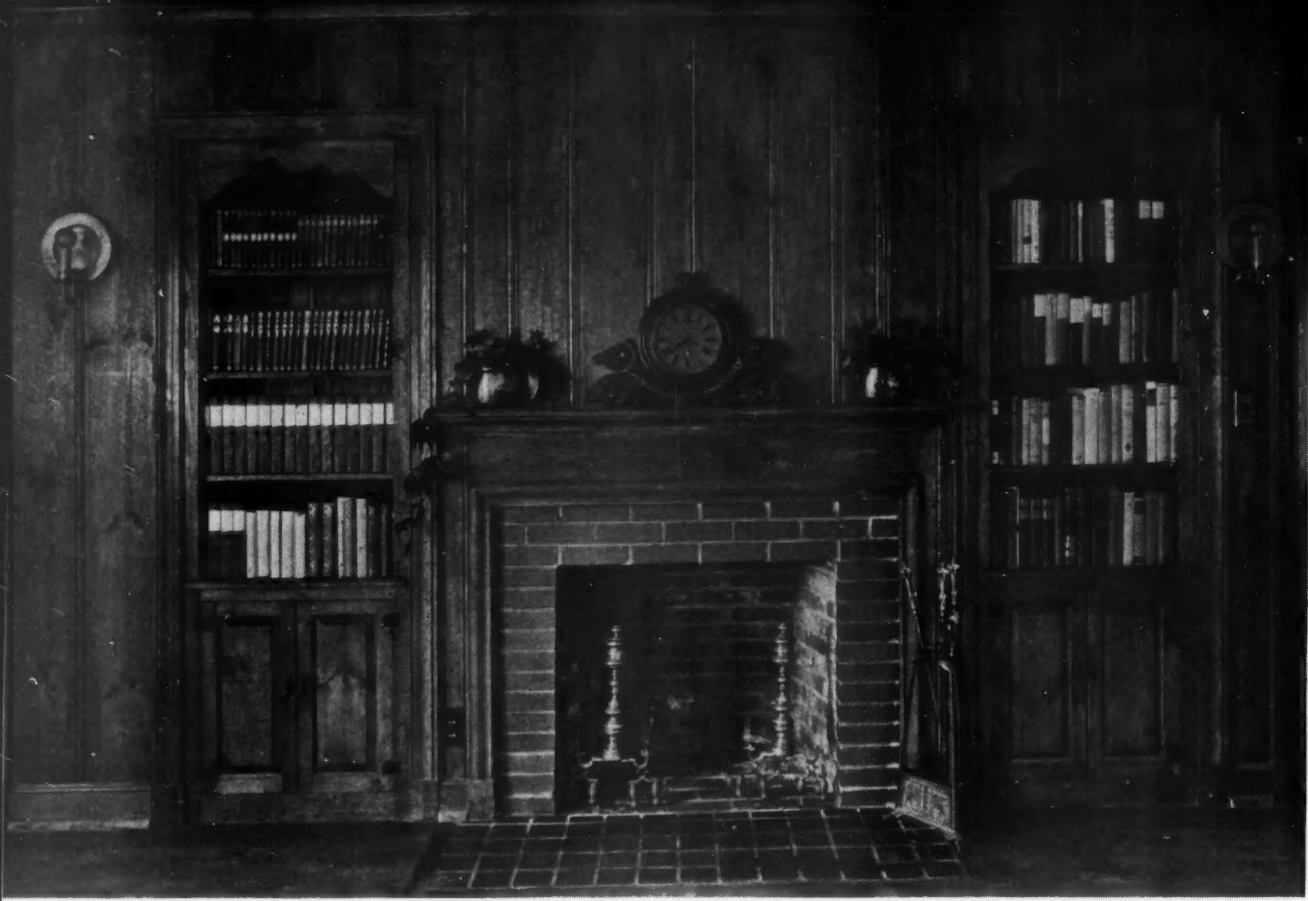
House at Plymouth, Mich.

Earl F. Confer, Detroit, Architect

THIS house of W. George Johnston, Hix Road, Plymouth, Mich., completed late last fall, is located on a 2-acre plot of ground. There is a basement under the entire house with exception of space under the bedroom. The cost, complete, was under \$5,000. First floor is concrete slab on precast concrete joists. Architect Earl F. Confer, 18970 Grand River Ave., Detroit, is now designing a house to be constructed in Franklin Hills, near Plymouth. Of similar floor size, it will be two stories, of modern architecture. It, also, will have cinder block walls, painted, and concrete floors and roof on precast joist.

COST KEY is 1.255-156-1022-44-16-15.





## EFFICIENT KITCHEN

**B**OTH the paneled living room shown above and the modern kitchen below are outstanding examples of good design in the Colonial house shown opposite. The kitchen below is a very efficient arrangement. The sink is of Monel Metal and the work area of Formica.







## UNUSUAL PLAN

ARCHITECT Reinhard M. Bischoff has produced a house with an unusual but highly satisfactory plan. The garage at rear, with a bedroom and bath included, is good. Total cubage is 27,500 cu. ft. Equipment includes a Home oil burner, Arco boiler, "Richwar" concealed radiators, Hoffman valves, Taco water heater, "Magic Chef" range, Truscon integral waterproofing.

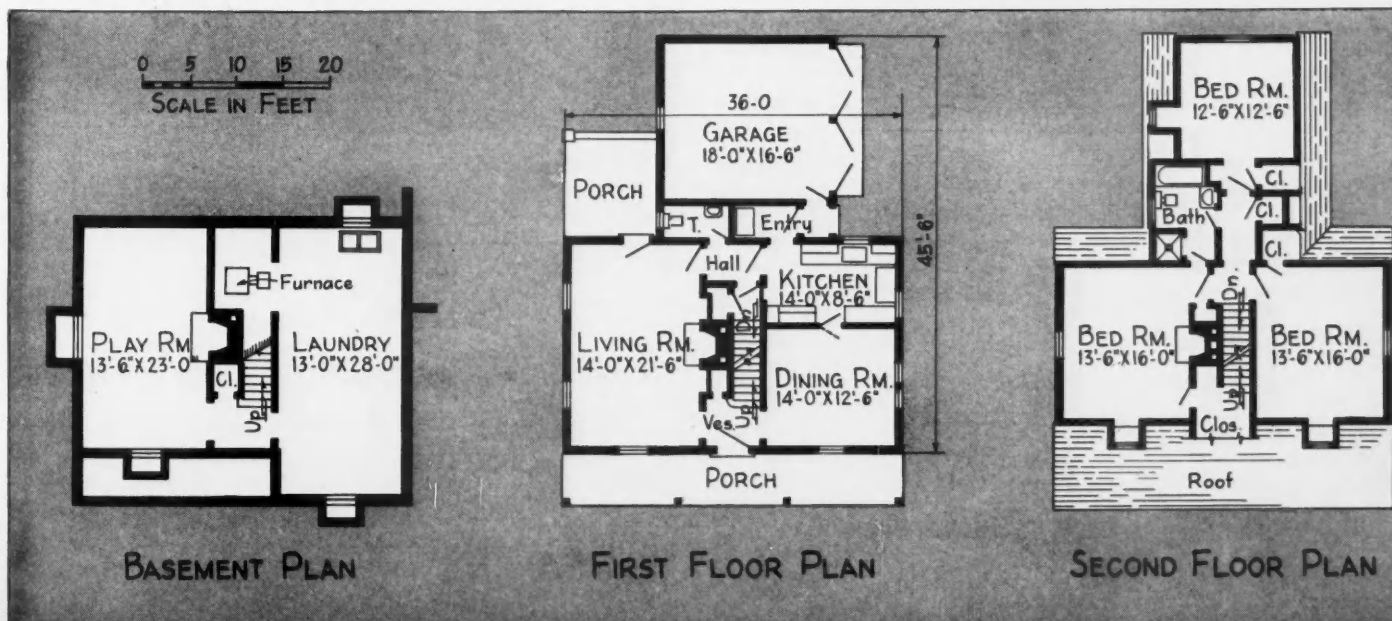
Home at Hempstead, Long Island.

57

COST KEY is 1.980-163-958-42-23-23.

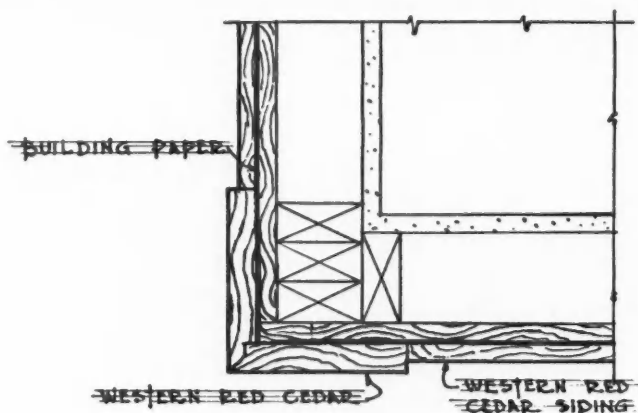


The covered porch is a pleasing feature.





ELEVATION OF PILASTER  
SCALE 1/4" = 1'-0"

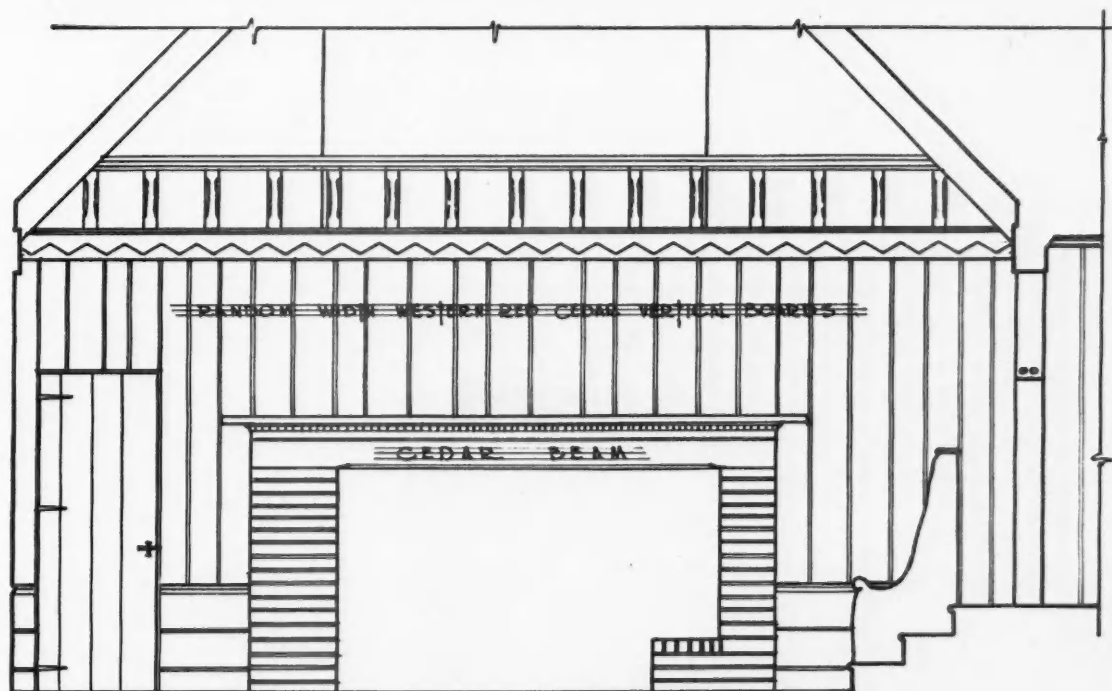
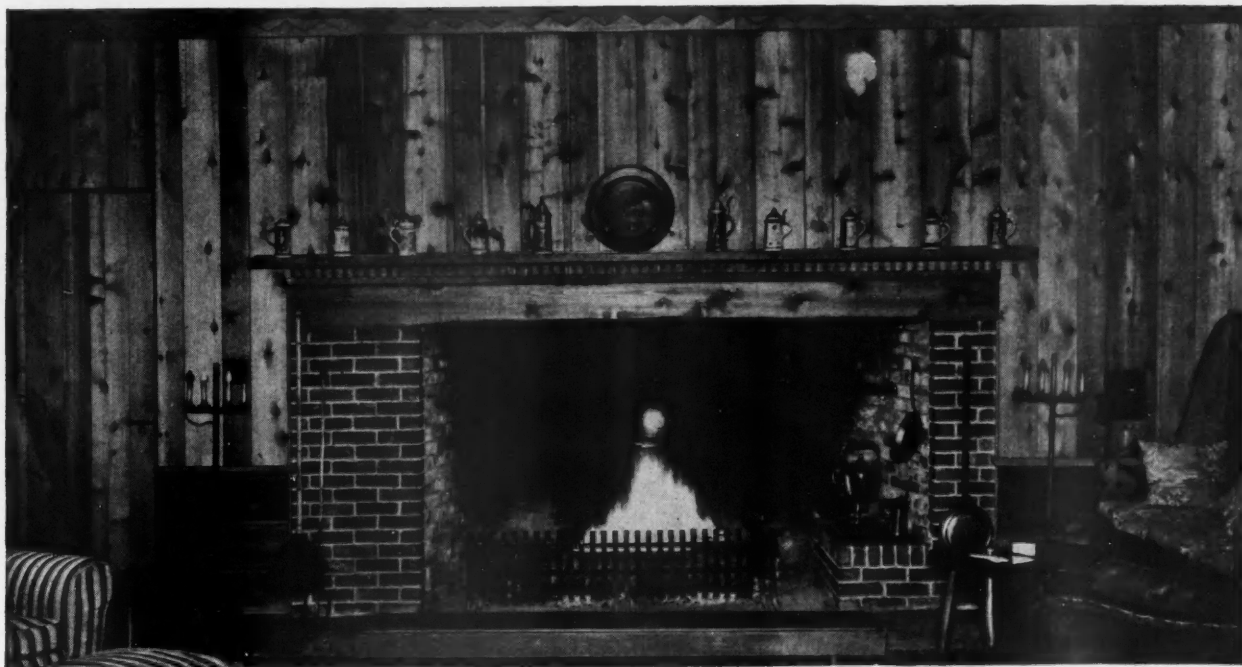


SEC. THRU PILASTER  
SCALE 1/2" = 1'-0"

RESIDENCE AT BROADMOOR  
SEATTLE • WASHINGTON  
GEORGE WELLINGTON STODDARD - ARCHITECT - A.I.A.

No. 3 of a Series  
of Architectural Details that help sell Homes.

COLONIAL PILASTER  
Construction of Ornamental  
Corner Boards Favored for  
Houses of Colonial Design



HOUSE ON BAINBRIDGE ISLAND

SCALE 1/4" = 1'-0"

GEORGE WELLINGTON STODDARD ARCHITECT A.I.A.

## KNOTTY WOOD FINISH

Random Width Knotty Red Cedar,  
Vertical Boards, with horizontal dado  
base and ric-rac heading mould.

Measured Drawings of correctly detailed  
house construction.



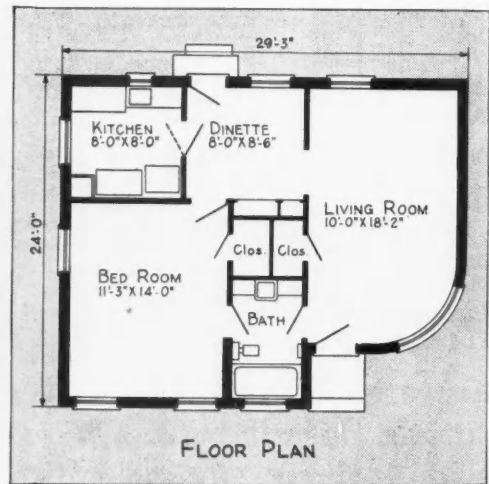
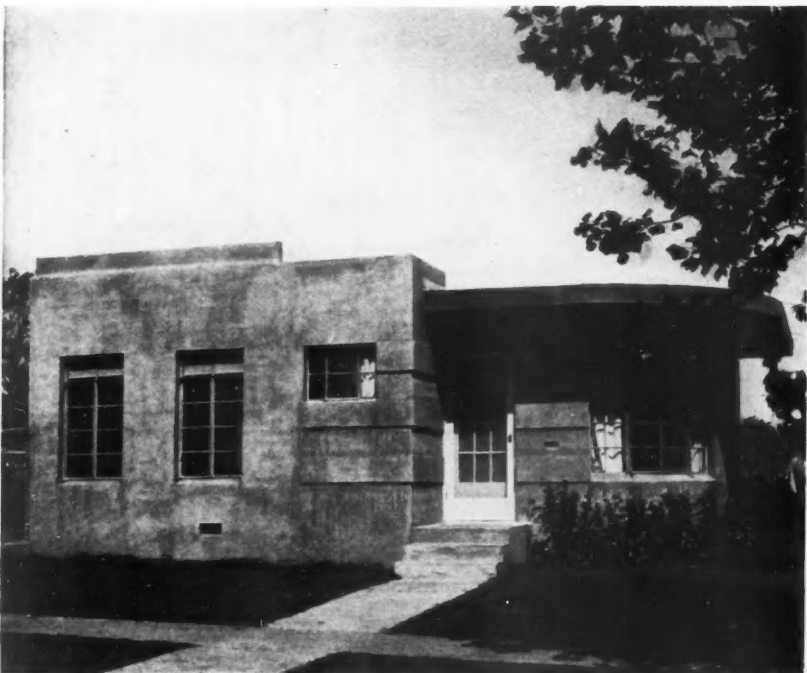
## "APARTMENT TYPE" SMALL HOME

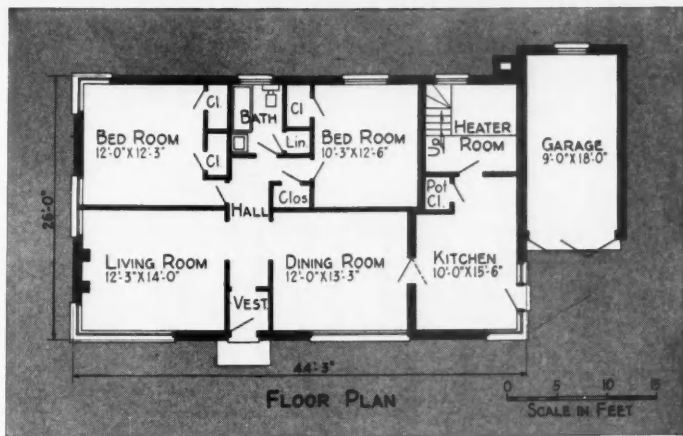
**C. M. Davis, Ft. Worth, Texas,  
Designer and Builder**

**H**ERE is one of several "apartment-type" houses designed and built at Ft. Worth, Tex., by C. M. Davis. Construction is concrete tile stuccoed. Built to sell at \$1,900. This is compact living in line with today's market and attitude.

60

COST KEY is .799-106-(646)-(28)-12-7.





## CORNER WINDOWS FEATURED

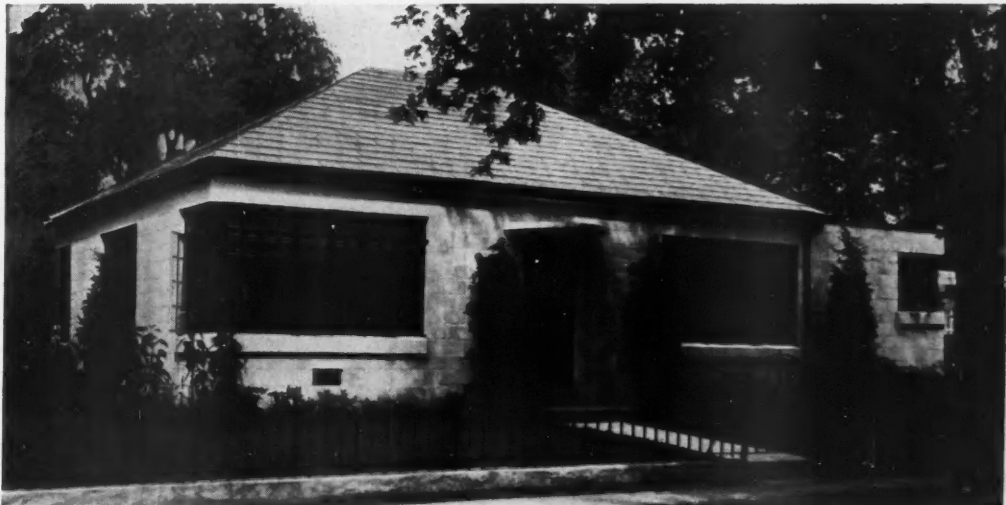
61

**C. F. Rosberg, New York City,  
Architect**

**S**MALL home of concrete ashlar, with concrete first floor, built for less than \$5,000. Concrete ashlar painted outside and inside with portland cement paint. No plaster on interior.

**COST KEY is 1.410-166-(1180)-(50)-16-19.**

**HOUSE** at Lynbrook, Long Island, with 5 rooms, bath, heater room, and attached garage, all of concrete block.



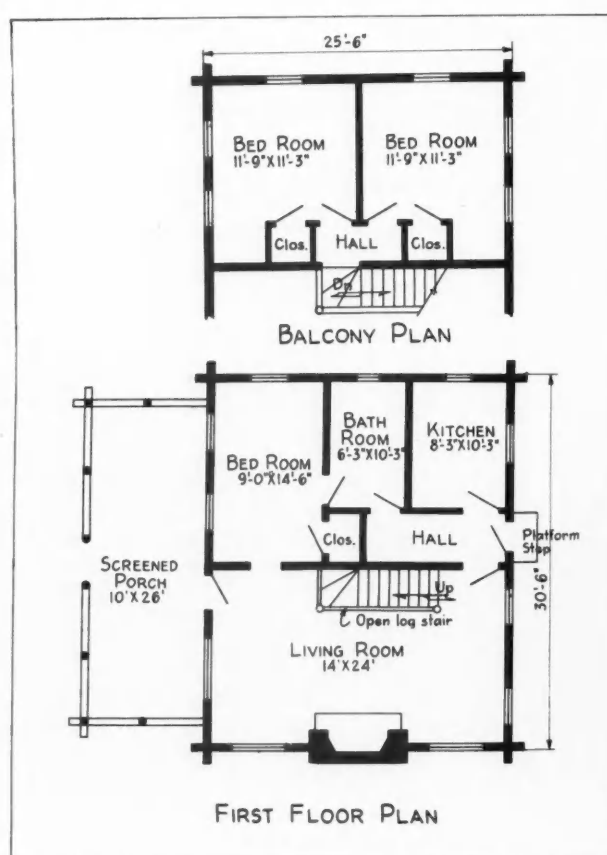


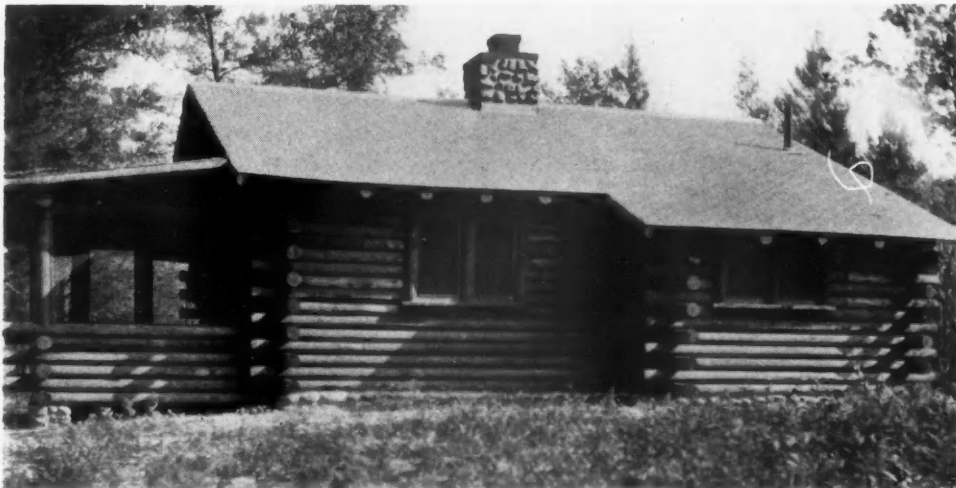
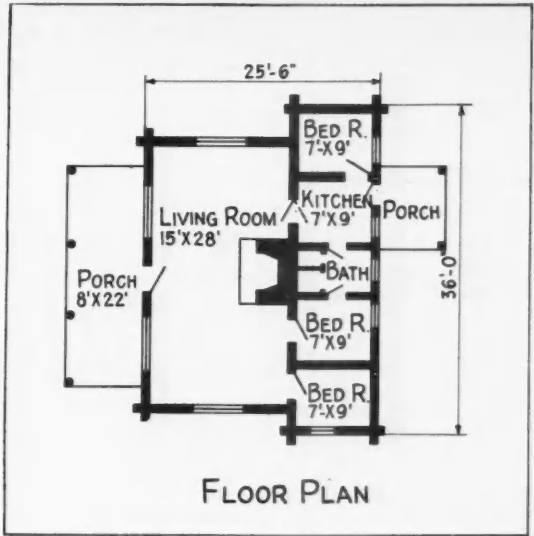
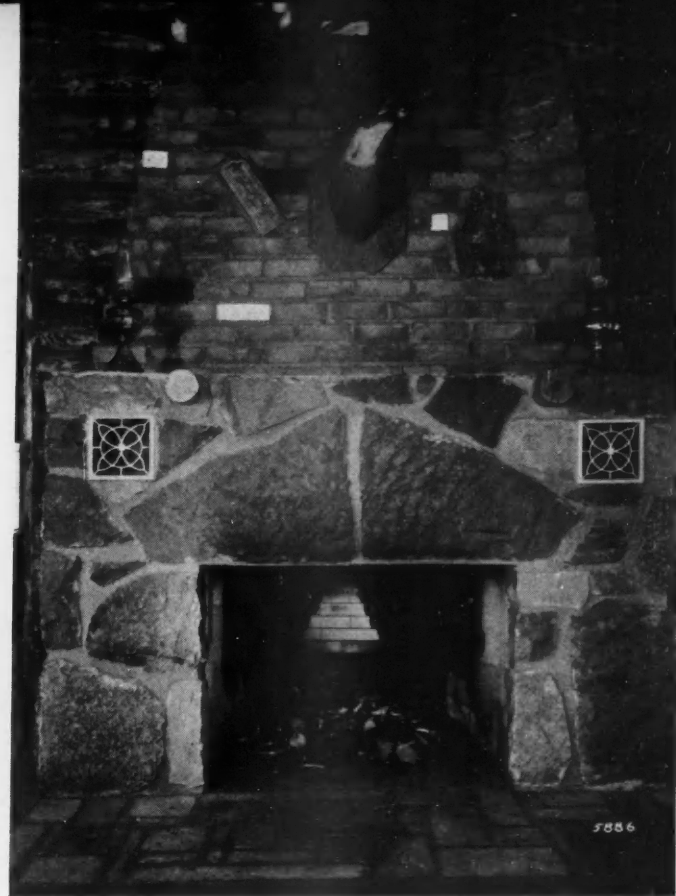
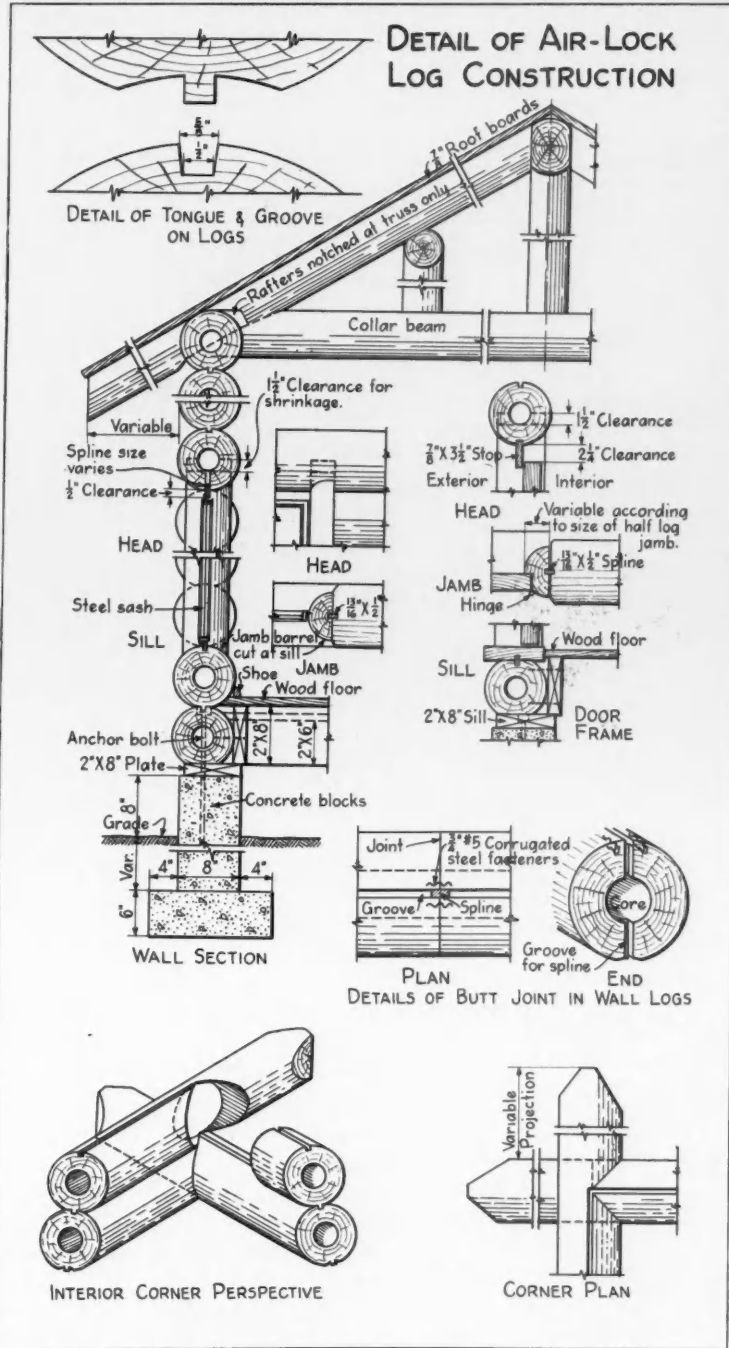
## RUSTIC CHARM WITH MILLED LOGS

As shown in these cabins, the method of National Log Construction Co., whereby heart is bored out and tongue and groove cut adds insulation and weather tightness.

WHEN the National Log Construction Co. of Grayling, Mich., was organized in 1932, the objective was to overcome certain disadvantages of using logs for construction purposes and still retain the natural beauty of real log cabins. The result was the development of Air-Lock Logs—which, when prepared at the factory, are first turned to size on lathes, the pithy heart bored out of the center, next dipped to control sap stain, and then allowed to season. Before shipping the logs are again turned to remove any warp that may have developed and to fix the diameter as required; tongue and groove cuts are made on the sides so that they fit like flooring; end cuts, gable mitres, crossovers and special cuts as required for each log are added. Details shown on opposite page.

The finished product is shipped ready for setting in place and has the advantages of eliminating cracking and twisting, providing greater insulation value and strength and removing the place where insects are most apt to feed—all due to the boring out of the heart; the milling of the logs gives tight joints without chinking, simplifies construction, and exposes the attractive grain. The cabin above built of Air-Lock Logs is located at North Lake, Mich.; plans appear at the right.





THE architectural department of the company undertakes to design cabins, houses and other buildings to meet individual requirements and furnishes construction drawings for erection in co-operation with local architects and builders. Also a number of stock designs have been prepared—one of these with floor plan appears on this page. The rustic stone fireplace shown above has a Bennett unit built in for heating purposes; fresh air is drawn in from the outside, warmed and circulated.

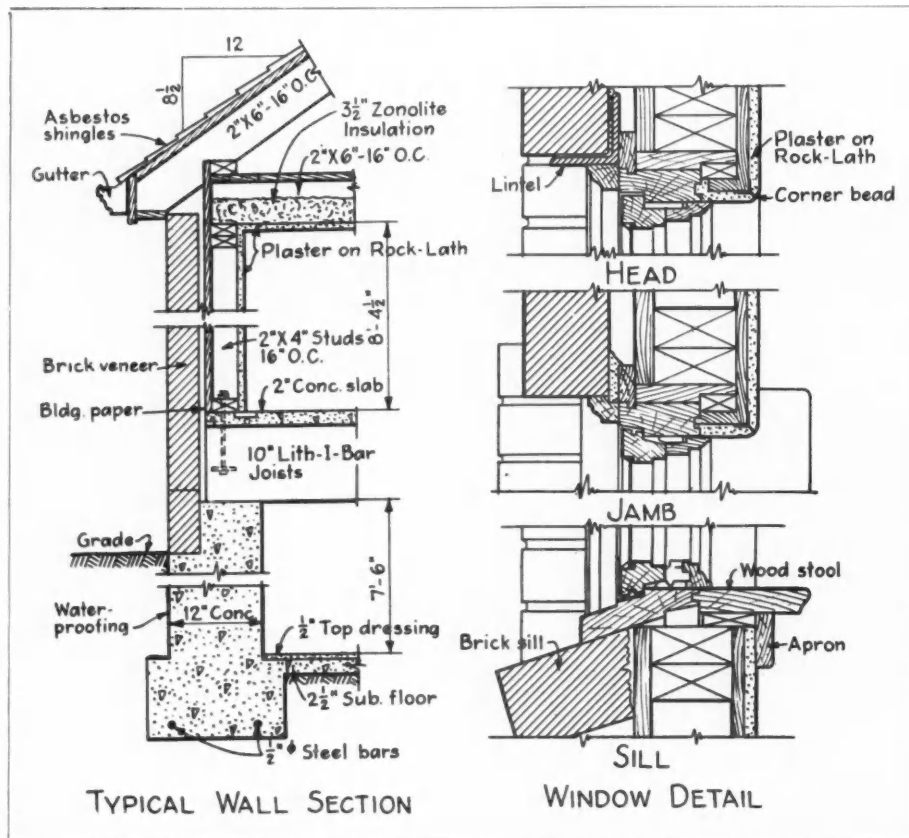


## IMPROVED MASONRY HOME

E. N. Saville and Peter C. Schram, Kalamazoo, Builders

A. DeDoes, Architect

COST KEY is 1.644-173-1624-67-21-25.



### SPECIFICATIONS

Face brick veneer, sheathing, wood studs and rock lath and plaster inside finish.

Precast concrete joists supporting 2-inch concrete slab first floor.

Poured concrete reinforced footings and foundation.

Insulation, 3 1/2-inch loose fill over ceiling plaster.

Roof, asbestos shingles, copper flashings.

Andersen casement windows complete with storm sash and screens.

Basement windows, steel.

Heating plant, Delco Conditionaire with oil burner.

Aero motor deep well pump.

Peerless water softener.

"Standard" plumbing fixtures.

Bathroom tiled.

Disappearing stairs to attic.

Nappanee kitchen cabinets.

Miami Venetian mirror medicine cabinet.

Kirsch Venetian blinds.

"Overhead" garage doors.

Frank Adam electric heater in bathroom.

Concrete floor carpeted over Ozite throughout except kitchen, linoleum, and bath, ceramic tile.

Bedrooms papered with washable paper.

Living room, dining room plastered with colored stucco.





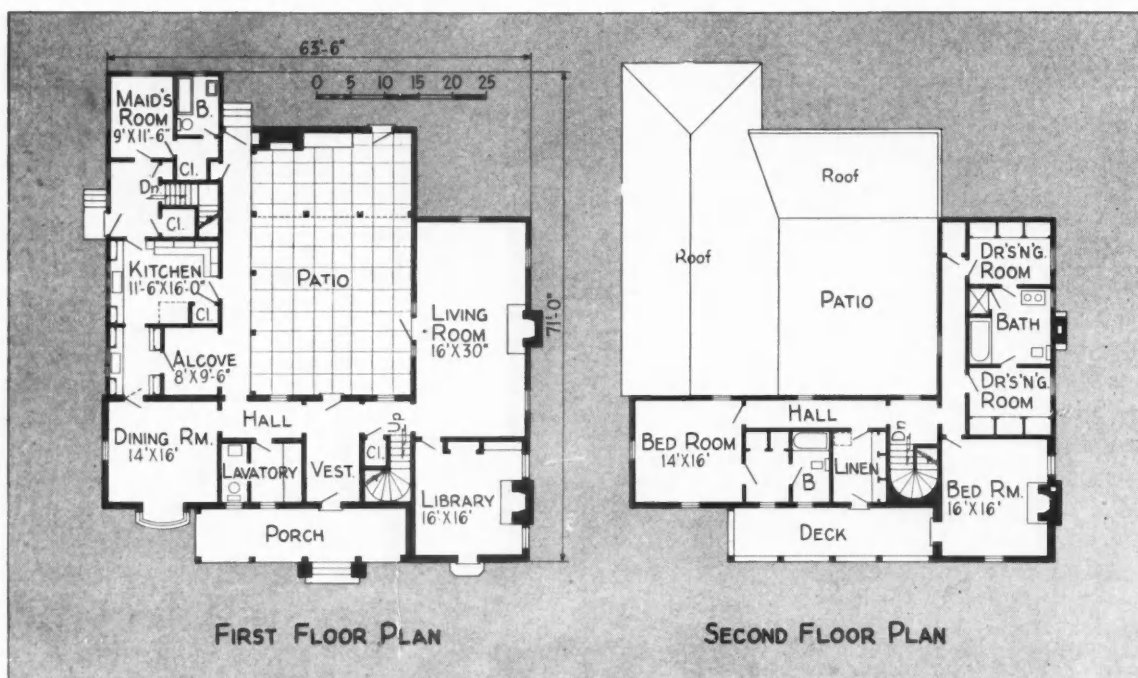


## THE EVER-CHARMING MONTEREY TYPE

**Gordon B. Kaufman,**  
Architect

**H**OUSE at Holmby Hills, California. Gordon B. Kaufman, architect. Front elevation is Graystone concrete tile, finished with portland cement paint. Sides and rear elevation, portland cement stucco. The interior arrangement is extremely interesting, with all rooms grouped around a walled patio.

66





tional type residences. We place no restrictions on the architects. We take their plans as they complete them and carefully figure in advance all the structural materials required. These materials are then cut to proper size in our own shop, the principal feature of which is a five horsepower, permanently mounted electric saw with extension tables.

The methods employed at first were, of course, experimental. We have developed these methods and, with increasing experience, find increasing efficiency. The procedure followed divides itself roughly into three parts, which I will describe in this and a succeeding article, which are: (1) Planning, (2) Fabrication, (3) Erection.

**PLANNING**—Planning consists of scheduling a complete list of all structural members and the selection of lumber sizes and lengths. It is assumed that the structural design has been carefully checked, although in the detailing of parts opportunities for savings frequently become apparent.

Three things determine the detailing of members. They

are: (1) ceiling and sill heights, (2) roof pitches, and (3) cornice details. Originally the lengths and cuts of rafters were figured trigonometrically; but the labor necessary to transpose decimals into inches and fractions, and the advisability of having all computations readily understandable by foremen and carpenters, eliminated this procedure. The most practical method found has been the accurate layout, on a scale of one inch to the foot, of as many cross sections as necessary, and the use of joist and rafter plans, with each member numbered. Generally one section is sufficient, but on large houses with complicated roofs, three or four are sometimes necessary.

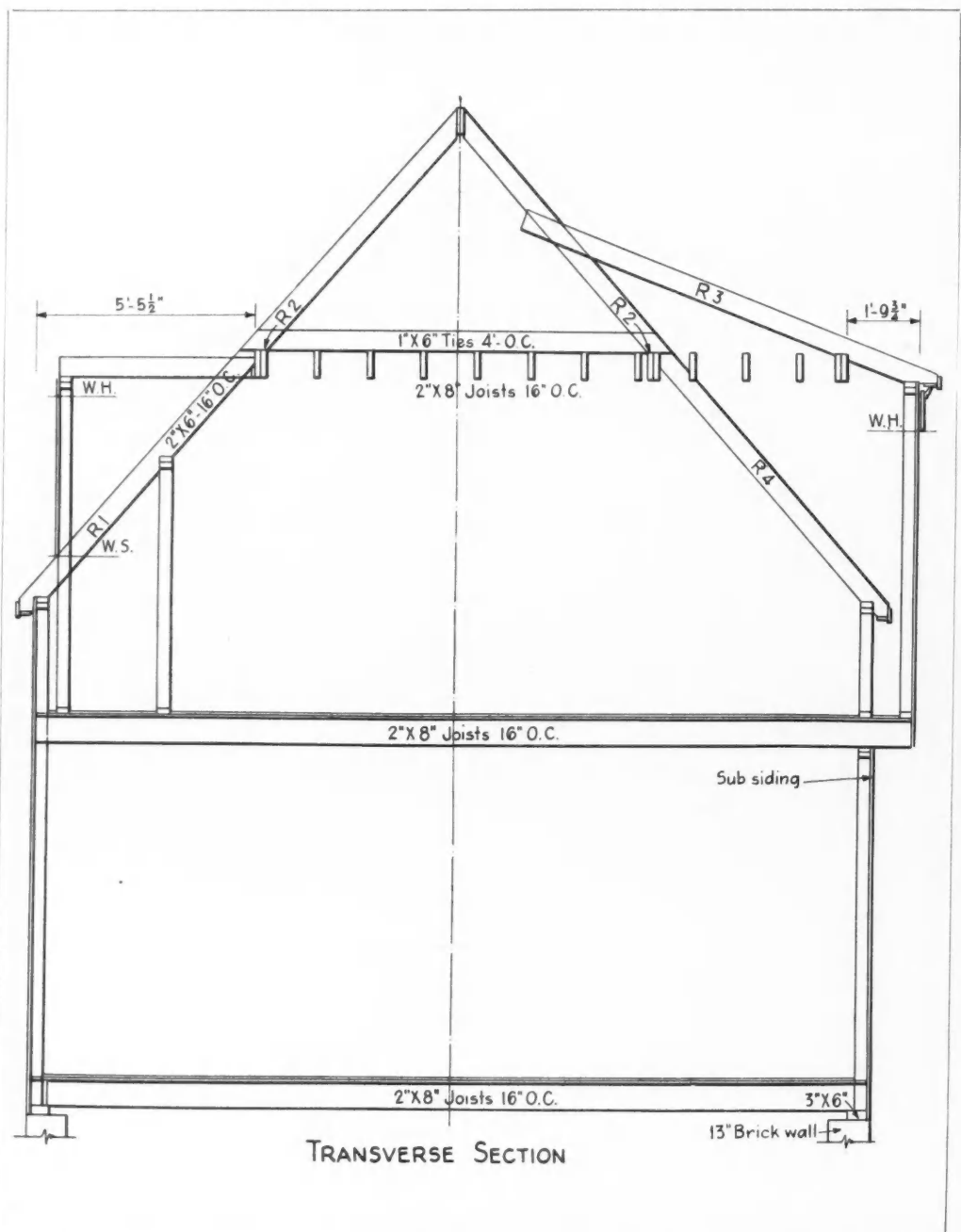
Joist plans are made as follows:

Openings are first located and the dimensions for clearances determined. The run of soil pipes is provided for. Since lath must be cut at the corners of a room, it is frequently possible to save one or two joists by starting the spacing at a double joist, if any occur in the span. In general, joist spacing is started at one wall and continued at the required spacing across the

#### No. 4 in a Series of Articles on Cost Cutting Methods.

**FIGURE 2**—Transverse section of house job which was specially drawn by Engineer Beattie to scale of 1-in. to the foot. In this special drawing he clearly shows the size and dimension of every member required, and then schedules it on a detail sheet for the use of the saw operator who cuts the required number of pieces.

**PLANNING** the job is the most important part of shop fabrication of house members. A full size drawing such as this, drawn by a man who knows practical construction, is very important. Each member is numbered, as for example, the rafter R 4. A schedule is then made up, noting the number and size, and turned over to the saw operator.



house. Figure 1 illustrates a joist layout. Where several openings occur the spacing of joists is indicated on a scale of one-half inch to the foot.

The lengths of the joists are determined from the house plans. Cuts in head and tail joists are figured exactly, since variations will multiply and cause irregular spacing.

The length of studs on first and second floors is generally uniform and requires no plans. It has been found practical to locate the studs at the job.

Figure 2 shows a cross section through the house. This section is accurately drawn to a scale of one inch to the foot. The procedure is as follows:

Starting at the second floor plate, the window sill and head are located. The frieze board is drawn in, and the soffit of the cornice. Next the cornice is drawn in. The bottom edge of the roof sheathing will intersect the top outer corner of the fascia board, so that the top edge of the rafter is drawn from that point upwards at the required pitch. Completion of the rafter will give the lengths of each cut except the purlin cut, which is readily located by spacing from the center line of the ridge.

Joists may now be indicated on the section. In the section shown, joists run in the opposite direction from the rafters, except the joists over dormers. The section shows the location of the joists which support the rafters, and remaining joists are spaced off on 16-inch centers.

The dimensions of these joists are determined from the house plan. Joists running with the rafters are scaled from the section and their number taken from the plan.

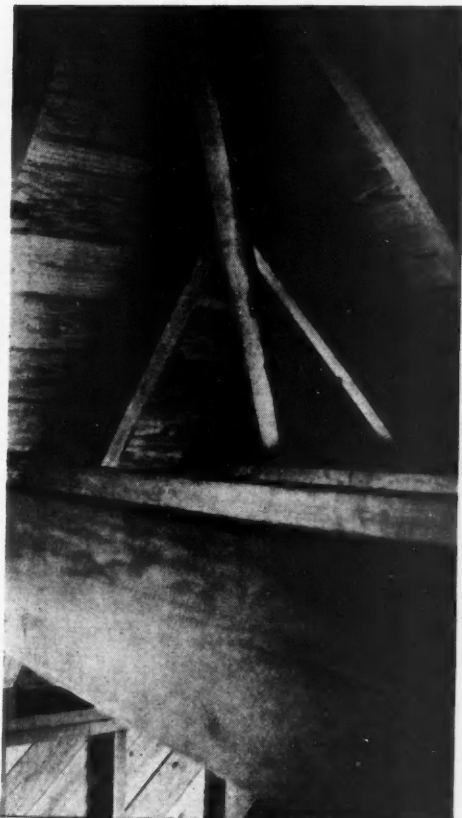
Rafter and joist plans are next prepared. No figures appear on these plans except the numbers of the members. The section shows the spacing of all rafters and joists which are in contract. Studs are not indicated on these

plans since their spacing is standard; and it is frequently necessary to move them slightly for the passage of plumbing or heating pipes.

Joists around openings, soil pipes, chimneys, etc., are accurately figured as to spacing and dimensions and the locations indicated on the spacing diagram.

All drawings and schedules are made by the writer. A layout including a list of members for one set of floor joists requires about two hours. A simple roof can be done in one hour, while the more complicated ones sometimes require five or six hours. A fair average for a complete house, including stud and header lists, would be ten hours. The writer does this work, superintends erection of all rough framing, and manages the lumber and supply business run in connection with the building operations, without help. The rest of the shop force consists of a saw operator and one laborer.

Following this plan, the next step is preparation of detail sheets or cutting schedules, which will be described in the next article, together with the fabrication and erection methods now being used on Miller-built homes.



ABOVE: The power saw in cutting position. The saw is permanently mounted with extension tables. It is a five horsepower, 16 in. combination rip and cut-off. AT LEFT is shown how accurately and tightly difficult hip cuts were made by the power shop fabrication method.

**Is prefabrication the answer to lower building costs? Engineer Beattie believes it is, and in this article describes the practical plan used by his firm. Another article by Mr. Beattie on this subject will appear in the June American Builder**

# Standardized Panels for House Framing\*

By JOHN F. CARTER

**S**TARTING at the time when the depression was at its worst, there came before the public eye an increasing number of ideas for the construction of residences which carried with them the uniform name of "pre-fabricated." Most of these prefabricated ideas were born of steel, with developments later including concrete, tile, composition boards, etc. Several energetic organizations grew from the opening publicity—until it appeared that all the residences in the coming years would be prefabricated of those, and other additional materials. Magazine, newspaper and even department store publicity told the story of these new machines in which people should live—efficient, modern, gripping in their newness, appealing to the instincts of the modernistic mind which cannot afford to be behind the times.

Yet, approaching the idea of prefabrication in quiet and thoughtful sanity, these wild promises and patterns laid by for a while, one cannot but agree to the general notion that lower cost and better construction might result.

For that reason, and to maintain its position as thoughtful of the industry, the Southern Pine Association, through its staff, has devoted study to the basic principles underlying prefabrication, and has kept the good and bad in lumber of mind as it labored to meet, when the proper time arrived, the selling points of lumber's competition in the residence field.

It is not far removed from the fact if competing materials argue that lumber is improperly constructed into residences or other buildings. This is too largely true, owing to the pressure and hurry of construction and the incompetence or carelessness of carpenters or other constructors. In the Sixteenth Century a dissertation was written by an Italian on the proper use of lumber, wherein he stated that the more triangles built into a structure the greater the strength. This is translated to mean plenty of bracing.

In the last 20 years there has been an increase in second growth lumber, and there has been a decided increase in the amount of sap lumber. This situation is not serious in itself, excepting that these characters of lumber are too often delivered to retailers in poorly dried condition, and so used.

The prefabrication of lumber for house construction is intended as a means of enforcing the use of properly dried lumber, and proper construction, even in the face of carelessness or incompetency of the contractor or builder, with an additional preference that lumber be treated against termite and decay.

Attention is called to the fact that there is nothing fundamentally new in unit panellization of prefabricated lumber. It seems not sufficient to educate the public in the correct uses of lumber—it seems a much easier attainment if lumber manufacturers equip themselves to deliver their product so that criticism of competing materials may be largely eliminated.

The practicability of prefabrication of units for construction of lumber-framed buildings was given its real test in CCC Camps. Several hundred buildings of vari-

ous lengths, but practically all of one width, were built in panel form, in units, for floors, roof and side-wall, at a score of mills in the South. One improvement succeeded another as thoughtful Army engineers, won to the principle of unit-construction, devoted their ingenuities to the subject.

Panels for CCC Camps were built on a five-foot basis as a general rule. Solid panels for side-walls and partitions, door panels and window panels with frames fitted into the forms were rapidly developed.

Gradually it was found that a knot acceptable in No. 2 grade was unacceptable if at a nailing point. Most nailing points thus affected are at the ends of pieces, and fabricators used care that knots would not appear at nailing points. As one improvement led to another, some Quartermaster offices required a semi-treatment, such as dipping, brushing or spraying creosote, or like material.

As some buildings had no ceilings, but were open to the rafters and roof panels, another refinement developed—that all roof sheathing in a single building be of uniform width. This produced a pleasing appearance from within. The use of ring connectors gave rigidity to roof construction.

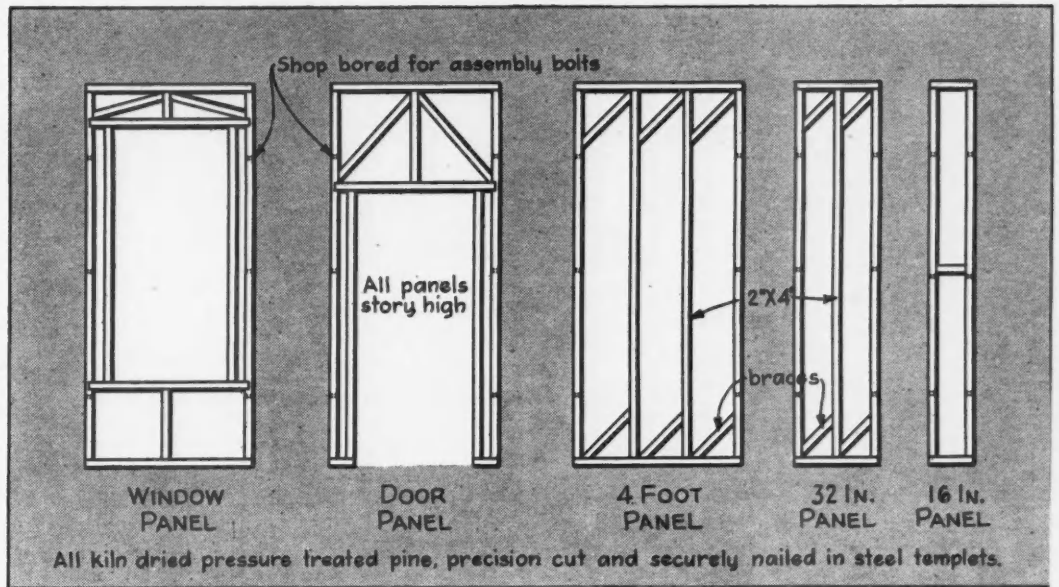
At this moment Army Engineers are engaged in re-designing CCC Camp buildings, and final drawings are in preparation. It is expected that several hundred camps will be built in the near future, and in the eight corps areas east of the Rockies it is thought that panelization and units, prefabricated at the mills, will be the rule. The new drawings continue on the five-foot panel basis; widths of buildings continue at 20 feet.

When a staff member of the Southern Pine Association began study of constructing wood-framed buildings easily and quickly at the job, there developed the idea of units, so that every acceptable feature in proper construction could be assured.

Fixed templets resulted. Two requirements were (a) that all lumber be cut to exact size and shape, and (b) that all pieces be held firmly in templets until securely nailed. Thus, templets should be constructed so that studs be properly spaced, that cripples, bridging, trussing and bracing be held securely in place, and that nails be carefully driven, resulting in uniformity of panels—all would be alike. Bolt holes for fastening panels would always be uniformly spaced.

This construction was not a change from recognized standard methods, but an enforcement of standard methods. Slipshod construction is eliminated. There are the same studs, bridging, cripples, joists, headers, rafters and plates at top and bottom as good construction with lumber requires. There is no unevenness, no misalignment. It cannot be expected that a carpenter will saw to exact fit, nor nail precisely, try though he may. But the prefabrication of those same pieces, within steel templets at the sawmill, produces the form of good construction which every architect desires, and every house-owner needs.

\*Report to Research Committee, Southern Pine Assn. at Annual Meeting, March 31, 1936; New Orleans.



THESE 5 Factory-built Framing Units will construct any house design dimensioned IN FEET (no inches).

It was apparent that one size of panel did not meet all requirements. The use of one size limited the design, and removed from the prospective home owner the expression of individuality. Hence, panels were developed on one-foot, two-foot and four-foot widths, and with two lengths, so that several ceiling heights might be effected.

All panels are braced at 45 degrees, tightly sheathed on one side if for exterior use. Window and door frames are built into four-foot panels, with the exception that small windows for bathrooms are built into the two-foot panel. Sub-flooring is nailed on floor panels and sheathing nailed to the roof panels, assuring a greater degree of constructed insulation than practiced at present.

Lath, whether wood or metal, or composition board, at the choice of the builder, is nailed to the interior faces of all panels on the residence job after erection of the frame. Flooring is standard, whether plain-end or end-matched, and is installed on the job. The same is true of siding. If the builder wishes a shingle exterior, he has but to nail the shingles to the sheathing; if a brick exterior, the brick mason does his work in the usual manner. Since the bathroom is generally designed for tile floor, the panels beneath the bathroom are slightly lower than floor panels in the remainder of the house, but the form of construction is not changed.

With few exceptions, any design of lumber-framed house which any architect may produce can be erected from standard panels. Special panels are the exception. There is but one rule the architect is asked to observe: that lengths and widths of rooms be even twelve-inch feet, and not in odd inches. That is, the change of a 10 foot 3 inch measurement to either 10 feet or 11 feet. The observance of this rule will permit almost any size, any type, any design of lumber-framed house to be erected from standard units.

Carelessly dried lumber destroys the value of prefabrication. All lumber should be kiln-dried to low moisture content when nailed into panels—otherwise there would continue those many ills which result from poorly dried lumber in residence construction.

All lumber intended for prefabrication should be pressure treated against termites and decay. It should be kiln-dried after treatment. If this be done, the criticisms of prefabricated lumber construction will have been met. Every piece of Southern Pine—Longleaf or

Shortleaf-dense or non-dense, close or coarse grain, virgin or sound growth, may be used safely and to the benefit of the home-owning public.

The same unit plan of prefabrication may be applied in garages, barns, farm buildings, summer cottages, etc.

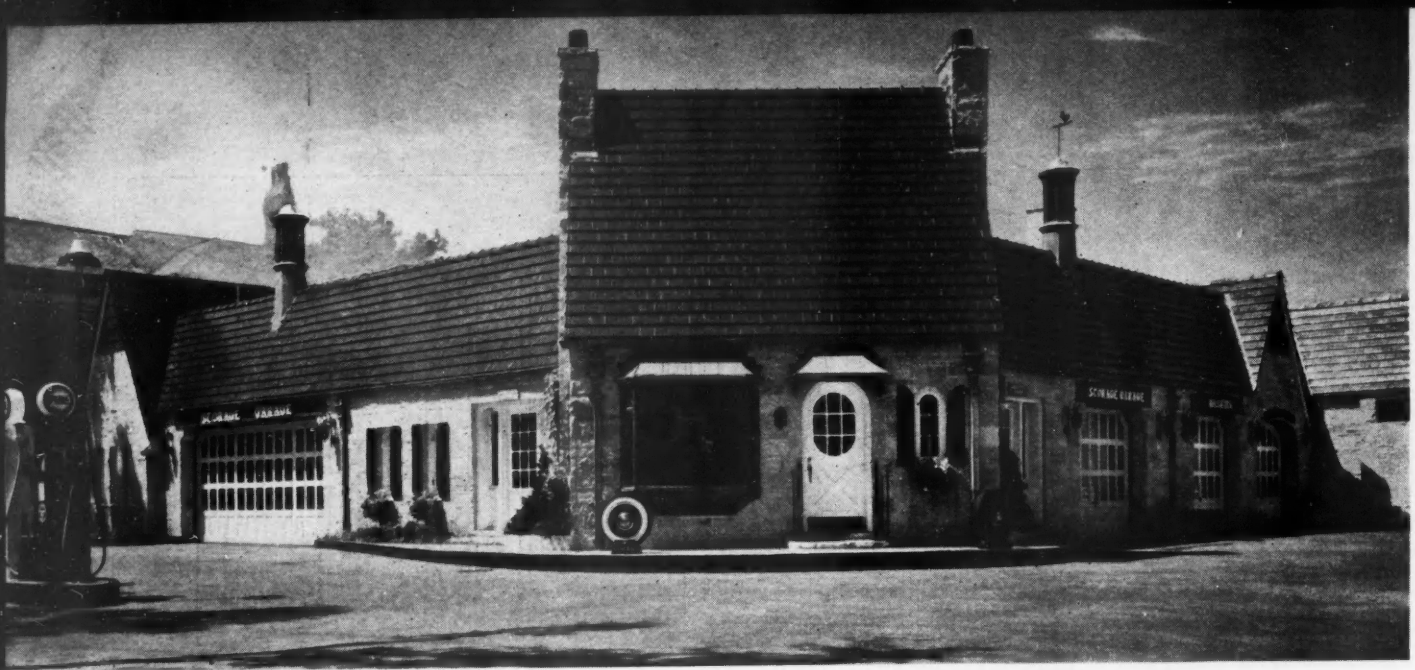
Since the only thing new about prefabrication of units for residence construction is an enforcement of principles of sound lumber construction, there is no educational campaign to be conducted. Competing materials have found it necessary to educate the public, to preach mass production along lines of automobile manufacture, special shaping of materials to produce units, and to propagandize that a house is merely a machine for shelter. Lumber, following the prefabricated idea herein discussed, and which has been so widely used already, by adhering to the sound principles of lumber-framed construction, has no resistance to meet.

If retailers of lumber and their contractor-customers believe in the long-known principles of sound and safe construction with lumber, they will also believe in this form of prefabrication when it has been explained to them.

As there are other materials used in houses, many of them in stock by lumber retailers, and as the lumber retailer is the channel through which house-building has passed for many years, it appears logical that the retailer of lumber be the channel through which will pass these prefabricated houses. The only change is that he does not carry panels in stock. The retailer would continue carrying stocks as usual—but, having sold a prefabricated house, he would order it in its entirety from the sawmill producing them. The sawmill would deliver lumber built into panels for quick, easy and sound construction. The retailer would find himself delivering panels from freight car to job, the foundation having already been built. The house would be erected almost overnight. With the frame-erected, the retailer would then move in with siding, flooring, interior lining, finish, etc. The same contractor who builds with lumber today would continue building. His fee, however, might be slightly restricted because his supervision is not needed to the same extent as in ordinary framing construction.

Not every Southern Pine manufacturer should consider prefabrication even though the demand be attractive. The mill should be equipped to pressure treat

(Continued to page 120)

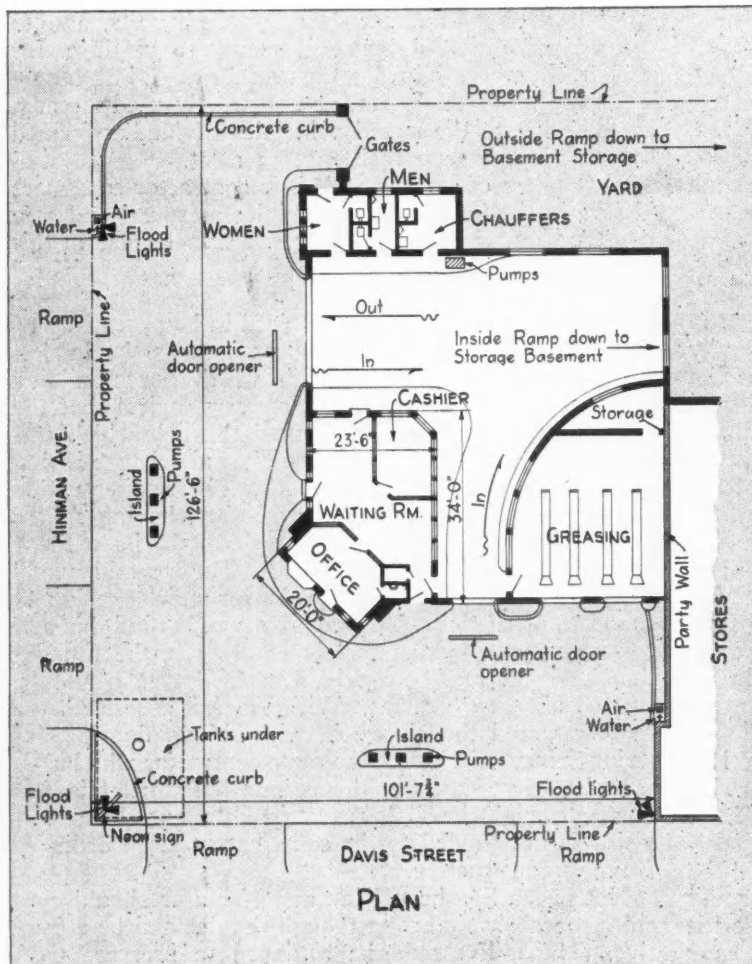


PURE Oil Station designed by Pure Oil Co. Architects, Chicago, and built by Regan Construction Co.

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## "Best" in Service Stations

Pure Oil Palace in Evanston, Ill. Is an Example of Fine Design and Construction Showing Trend To Better Building of This Type Structure



THERE are many things of which Evanston can be justly proud and now another prize has been added to the list of fine architectural examples of this Chicago suburb—the new Pure Oil service station recently completed on the corner of Hinman Avenue and Davis Street in the business section of that city.

This station is one of the finest in the country; the planning is complete, design most attractive and the location excellent. The property is approximately 200 by 125 feet with the service station covering the western portion of the lot on the corner and a group of stores facing Davis Street. An open yard in the rear occupies the remainder of the space.

And now for the surprise feature—a basement storage garage the size of the entire lot completely out of sight below grade, with ramps both inside the station and in the rear for access. (See illustration on opposite page.) Capacity is 125 cars and all necessary equipment for service is provided. The gas storage tanks are built into the front corner of this area and housed in a concrete vault 15 by 21 feet with walls 13 inches thick; dry sand was filled around the tanks after they were set in place. Entrance through a large man-hole set in the driveway above allows for any future changes which might be necessary.

The service station itself, as it is seen by the

LEFT: Plan of Evanston Pure Oil Station. Stores at right of main structure extend to side lot line; garage 125x200 feet is located under entire property with ramp access.



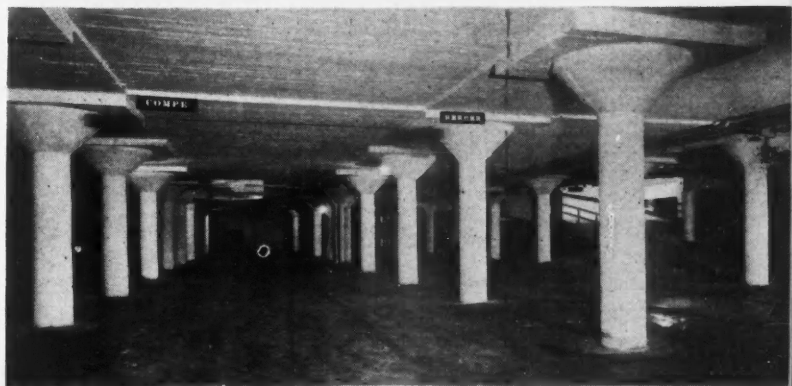
passerby, is a gem of architectural design. The style is English in character of a type which identifies the Pure Oil units and copyrighted by the company. Special quarried rubble stone gives a fine texture and coloring to the exterior walls, roof is of blue burned clay tile. Gutters, downspouts and roof cupolas lend an aged appearance due to the acid treated copper of which they were made. The detailing is particularly fine, each feature tying in with the superstructure to give complete unity of design. Note the close-up of the entrance on this page. Architects in the employ of the Pure Oil designed the structure.

Interesting equipment features include a flood lighting system placed at three points, an ornamental iron and neon sign at the corner, adequate and well placed air and water service and wide concrete drives giving easy access to the two islands of pumps.

The interior of the station is equally well planned, unusual and attractive as the exterior. A large customer's waiting room is paneled in knotty pine, the ceiling finished with rough hewn beams. Tile floor, colorful Early American furnishings and Colonial fixtures all add to the character of this room. Operating office with connecting wash room overlooks the front drives in all directions. A phone booth and cashier's room, from which all inside activities can be seen, complete this unit. Across one of the basement ramp drives are three toilet rooms and to the other side, space for greasing. The large service doors are electrically operated of the overhead type.

The Pure Oil Company in building this fine station planned a complete unit as service center of the community in harmony with the neighborhood both as to appearance and mechanical requirements. Regan Construction Company, Chicago, were the general contractors responsible for this splendid job.

This is the second article in a series on service station construction and design. Others will follow later.



RIGHT, Above: Close-up view showing fine design of all details. Overhead door electrically operated. Right, below: Basement garage with view of ramp leading to street level; painted brilliant white.



RIGHT: Customers' waiting room finished in knotty pine; rough hewn beams and Colonial furnishings add to the attractiveness.

# MODERNIZATION

"which makes buildings of all kinds more cheerful, more livable and more salable"

## New Concrete Veneering Unit, Six Bricks in One, Opens Big Market

**A**RNOLD BRANDERHORST and John Nyland, two aggressive contractors of Holland, Mich., went through the depression, daily looking for business. As there was no new construction to be had, they concentrated their efforts on repair and modernization work; and, in contacting their prospects, they came to a conclusion that there was a big market in resurfacing old frame and stucco construction. They found that if they could offer something permanent and colorful at a price that the average home owner could afford, sales could be made; because they could advance

JOHN Nyland and Arnold Branderhorst, enterprising remodeling contractors, photographed on the job; Holland, Mich.



the sales argument that the savings effected in the lower maintenance cost would pay for such a resurfacing over a period of time besides giving the owner a permanent, attractive exterior appearance for twenty years or more.

With this objective in mind, they came to the conclusion that brick veneering would give them the permanence and beauty sought; but the cost proved too high for most home owners. So how to cut this cost became the problem. Analyzing this they decided the biggest saving could be effected if they had a locally made material on which transportation costs and the various handling profits could be eliminated. So with this in mind, these men called on the Concrete Equipment Company of Holland, a concrete products machinery manufacturer of 30 years experience; and with the aid of the engineering department of this company began the development of a practical, time-saving short-cut in veneering.

The first idea was a 2 inch thick single cement brick veneering unit. That would cut the material cost in half but still effected little labor saving on the job. Then came a series of experiments of designing multiple size units; and everyone concerned soon came to the conclusion that the most practical size was a 6-brick unit. It proved to be easy to manufacture and most economical to lay. Its weight permitted handling with one hand. It required only one-sixth the mortar. Its three brick height required setting a line two-thirds less times and every time one unit was laid it covered almost a square foot of wall. Its machine-made accuracy made it possible for any workman to obtain a good appearing job. Along with this multiple unit, the equipment was designed to make a special "L" shaped corner unit which gives the appearance of regular size brick on all corners, windows sills, etc. There is also a provision for making single and half brick, which are used in fitting in around windows, door casings, etc., thereby eliminating the necessity of any cutting on the job.

When the equipment was completed, Mr. Branderhorst approached an owner of a two-family stucco apartment building that was in a particularly bad state. Something had to be done. Tenants were complaining of its appearance and its many leaks; and the owner already had under consideration several methods of resurfacing, but insisted on keeping this expenditure within \$1,000. The moment Mr. Branderhorst told him he could give

TO left: Workman sets six-brick unit in veneering old stucco building. Note how the window trim is built out with 2 inch extension

him a permanent masonry job for that figure, the first order for this new type of masonry overcoating was signed.

The building measured a total area of 3800 square feet. Up to this time, these two building contractors had had no experience on actual jobs, and when Branderhorst accepted this order at a price of \$980.00, he didn't contemplate any particular profit. He took it with the idea that this first job would give him good advertising as well as a working basis for arriving at his costs on future work. When the job was completed, however, these men found that selling the material on a basis of 10 cents per square foot they had a profit of \$140.60 on the material and a profit of \$193.00 on the construction, giving them a total of \$333.60 on this first job. Two more immediate orders had also been booked and a number of additional prospects lined up. These two additional jobs, one of 2280 square feet and the other 1800 square feet, netted them an additional \$445.71, or a total of \$779.31 on the three jobs totalling 7880 square feet.

Probably the most outstanding feature in this demonstration of the readiness of home owners to buy permanent surfacing was the fact that the first job not only sold two more and developed other prospects locally but brought prospects from other cities as far as sixty miles distance.

The second job that Mr. Branderhorst sold is on the same street as his first and these people watched the first one go up. About the time that one was finished, it was only a matter of giving them a price and waiting one day for their decision on their choice of color. Speaking of color, there is practically no limit, as the Concrete Equipment Company's Texcreting process was adopted for facing these units. This process consists of applying a plastic, specially prepared color material which fuses itself with the unit and becomes a part of it.

This Texcreting process is a time-proven method and has been used under all kinds of climatic conditions the world over for the past twelve years. The machine and process of making the six-bricks-in-one units that the manufacturer developed are very simple and allow a big

COST ANALYSIS ARENDSHORST HOUSE JOB			
3800 Sq. ft. @ 10c.....	\$380.00	Profit on material..	\$140.60
Foundation .....	41.00	Sold for	\$980.00
Labor .....	263.00		787.00
Mortar .....	18.00		
Wood Trim .....	36.00	\$193.00	Profit on Job
Steel, etc. ....	49.00	140.60	Profit on material
	\$787.00	\$333.60	Total profit



ABOVE: Workman laying corner brick for window sill. BELOW: Two-inch veneering tied to old clapboard wall with air space.

daily production with inexperienced labor. Allowing 50 cents per hour for labor, \$2.40 per barrel for cement, \$1.50 per ton for sand and \$2.00 per hundred for Texcreting material, the production cost is less than \$10.00 per 1000 for face brick.



BELOW: Attractive brick exterior given old stucco house, Holland, Mich., at a cost of \$533.00, using Brikrete veneering units. Arnold Branderhorst and John Nyland, contractors.



ABOVE: Machine developed for casting six-brick unit, corner unit, single brick and half brick at one operation.



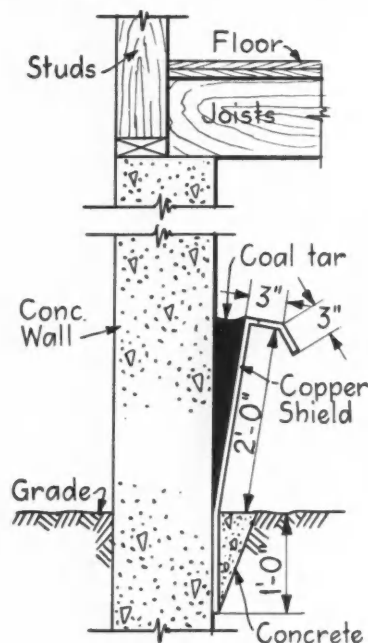
# Build Out Decay and Termites by Proper Construction

EVERY contractor, builder, dealer, architect, engineer, or other professional building man wants people to know that he does quality work. One way to develop his reputation is to know enough about termite-proof and decay-proof construction to discuss the subject effectively with clients. This knowledge will set him apart from competitors who are not so well informed.

The specifications on the right show how houses can be made completely resistant to attacks of termites and decay fungi. They also show when and where treated lumber should be used, and present a summarized opinion of leading wood-preservation authorities.

The habits of termites have been described so often that they need not be repeated here, except to say that they are rapidly becoming one of the country's most publicized insects. Every man in the building field is familiar with the effects of decay fungi, which are less spectacular than termites, but probably about six times as destructive. Their combined damage is estimated at well over one hundred million dollars a year.

A decay-proof, termite-proof house looks no different from the outside than one in which no protective meas-



**TERMITE shield** for unprotected existing building. To install, rest shield against wall with bottom edge in shallow trench. Fill trench with concrete. When concrete hardens, pull top of shield away from wall and fill space with coal-tar pitch.

ures have been applied; but the former is worth more, and will last much longer. Colored tile in a bath room, or venetian blinds in a living room might make more of an impression on a lady prospect than would "invisible" termite shields. On the other hand, a professional building man who can discuss decay-proof construction, and proper use of treated lumber with clients will make a lasting impression that will go a long way toward swinging business his way.

The building industry should use the same methods that automobile salesmen employ when they stress beau-

## Building Men Who Know How to Defeat Decay and Termite Hazards Have an Advantage Over Competitors

By **LYMAN M. FORBES**

### Specifications for Termite-Proof and Rot-Proof Construction

#### Preparation of Building Site

If building is to be erected on a wooded site, or on termite-infected soil, clean up and burn all old stumps, decayed wood, and rubbish. If termites are found in the ground, soil should be ploughed deep, then soaked (not merely sprayed) with a suitable soil poison. (*Consult owner first, because vegetation may be affected.*)

#### Foundations

Sides and top of foundation walls should be coated with rich cement mortar, carefully trowelled, even though metal shields are to be used. (*Some termites dissolve lime mortar. Others enter through air holes in poorly tamped concrete.*)

No exposed lumber should be left imbedded in or extending through foundation walls.

Cap foundation walls with copper or zinc shields (see illustration). Overlapping ends should be carefully soldered to form a continuous metal cover. Shields should extend three or four inches beyond each side of the wall, and the outer two inches should be bent downward at a 45-degree angle.

#### Basement

Lay concrete floor first. Form grooves for posts, girders, sleepers, and put them in place after the concrete has set. Do not set lumber in wet concrete. (*Imperfections in the concrete may otherwise go undiscovered, and invite termite attacks.*) Untreated lumber should be placed on concrete footings six inches above the floor.

Foundation posts, girders, sleepers, flooring, coal bins, partitions, and stairs should be of treated lumber.

In case there is no basement, or the ground is partially excavated for a heating plant, either raise foundation walls or excavate until there is 18 inches between the soil and bottom of floor joists, unless treated lumber is used for all under-framing.

Provide cross-ventilation beneath the building by placing vents (at least two feet square) in each 25 lineal feet of outside wall. Cover vent openings with non-corroding metal screening of mesh small enough to keep out rodents.

tiful upholstery, color, and prestige that ownership of the car will bring when talking to prospective feminine purchasers. When talking with men they describe the engine, sturdy construction of the car, long life, and mechanical details. The professional building man, by describing the precautions he takes against attacks of decay fungi and termites, can convince his prospective clients that *all* of his work is done with equal care and thoroughness.

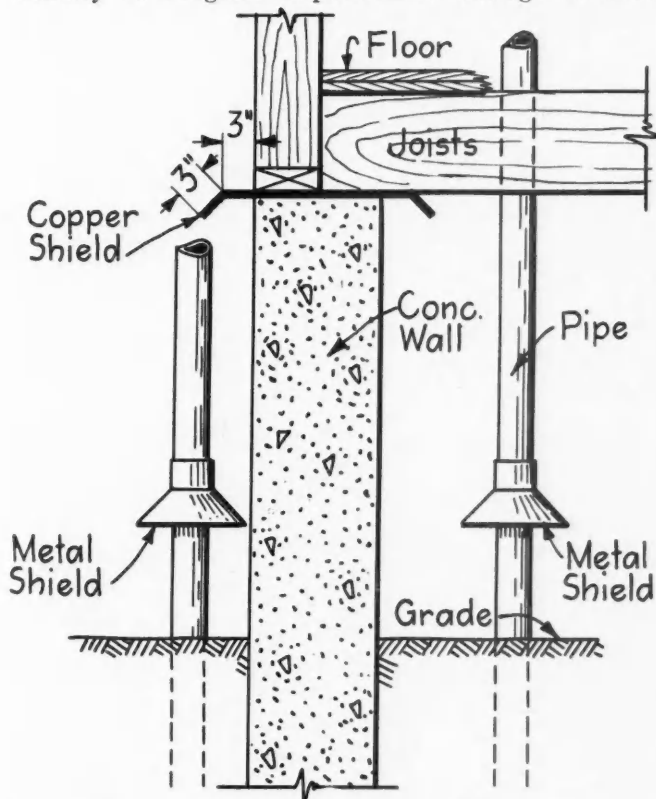
Those who want to know more about decay-proof and termite-proof construction should write for Government bulletins on wood-preservation, and for the literature of concerns that manufacture preservatives. A number of interesting booklets are available that tell about various uses of creosote, preservative salts and chemicals used in lumber-treating processes.

In this way the reader may compare different treating processes, and can decide for himself the kinds of treated lumber that best suit his needs.

The investigator will find differences of opinion among lumbermen regarding treated lumber. Some maintain that proper construction methods alone will make a house safe from termite attacks, even in the South where these insects are most active. They advocate the use of concrete foundation walls that raise under-framing 18 inches above ground. They also advocate shields between outside porches and the main structure.

Treated-lumber disciples, on the other hand, point out that whenever a metal shield becomes bent or broken it no longer protects against termites. Furthermore, shields provide no protection against decay, especially in buildings that stand on low or poorly drained sites where moisture can accumulate or be retained in lower parts of the structure.

The fact that the Lumber Industry used treated lumber in vulnerable parts of its demonstration house at the Century of Progress Exposition in Chicago indicates



SHOWING cross-section of a continuous metal shield on top of a foundation wall, and cone-shaped shield of non-corrosive metal that are securely soldered to all pipes that enter house. These safeguards turn back attacks of termites.

### Specifications (Continued)

Remove all chips, cuttings, shavings, and form lumber from beneath the building. Ground may be soaked with a soil poison, or covered with a layer of lime.

Another treatment for ground beneath the building (*to prevent termite shelter tubes rising to woodwork above*), is to lay a thin concrete floor on the soil. A bevel edge should be pressed into the slabs where they join the vertical wall. These triangular depressions should be sealed with *coal tar pitch*.

### Openings

Openings for window casings and cellar doors should be covered on all surfaces with rich cement mortar.

Exterior window and door frames should be at least six inches above the ground. All casings, sills, frames, within 18 inches of the ground should be of treated lumber.

### Plumbing

All pipes that enter the building should be provided with copper shields, as illustrated.

### Superstructure

If under-framing is untreated it should be at least 18 inches above the ground. Otherwise use treated lumber for foundation posts, girders, sills, first floor plates, joists, sub-floor, and the lowest three or four sheathing boards. Studs should be of treated lumber in case they extend below the sub-floor.

Outside porches, unless made of treated lumber, should rest on concrete slabs, and should be completely isolated from the main building by a shield of non-corrosive metal.

that the proposition must have merit. Wood preservatives unquestionably have demonstrated their value to railroads, state highway departments, utility companies, and large industrial users of lumber. These organizations have saved millions of dollars, have lengthened the life of expensive installations, and have been able to utilize species and grades of lumber that could not be used until treating processes added to their lives.

The general public has learned about these large users of treated lumber, and is becoming better acquainted with termite and decay problems. This spread of knowledge will help stimulate the use of treated lumber in residential construction. Much progress has already been made in that direction.

Costs are not high, because treated lumber need not be used throughout a house. Only vulnerable parts in the basement or close to the ground need be treated, including items such as foundation posts, girders, sills, first-floor plates, joists, and sub-floor. Treated studs are recommended if they extend below the sub-floor. In the basement, all sleepers, flooring, coal bins, partitions, and cellar stairs should be treated.

The use of treated lumber in vulnerable parts should not add more than 2 per cent to the cost of a superstructure. An added investment of \$50 to \$100 should take care of all treated-lumber requirements of many homes, and unquestionably adds more than its cost to value of the building. The old adage about "an ounce of prevention" fits particularly well. When a building is unnecessarily exposed to decay or termite damage its life may be shortened, its owners may be inconvenienced, or they may suffer loss of income.

# Higher Living Standards Encouraged by FHA Financing

By V. L. SHERMAN

Department of Mechanical Engineering  
Lewis Institute of Technology, Chicago

IT WOULD satisfy more than our curiosity were someone to determine how many discomforts, on the average, were endured by those home-owners of days gone by who dreaded fast approaching mortgage maturities and were hedging about their improvement expenditures and their running expenses. Four years, three years, two years, one year to go. Then what? Were the homes to become "run down" while money was saved against the time of need? Or was the owner nervy enough to invest money on improvement?

What a change there is from this state of feeling now that the Federal Housing Administration policy has taken hold. The feeling now is one of assurance instead of anxiety, and the make-up of the house will reflect the feeling of the owner. While he is anticipating a mental rest he will certainly go a step further and insist that he be emancipated from any state of discomfort. He will be highly interested in ways to secure comfort. He, and the thousands of others like him, are going to raise our living standards. They are going to feel independent enough, and rightly so, to move from the cities to the suburbs, and from the suburbs to the country. The probability of small country communities springing up, which shall have all the advantages now provided the suburbs, is not a small one. And the possibility of small "manors," entirely independent, is not so distant.

If we stop to think of how much equipment for the home has been improved, and how, with the spreading market, the prices have been reduced, then we will see that it is no longer the millionaire class which is able to build and maintain in the country. The writer knows that many feel as he does. After living a score of years in a pleasant suburb which has increased from 3,000 to 8,000 population he finds that it takes pretty strong local ties to make him stay in the suburb. With plenty of good roads and the never-failing automobile he would feel much more "independent" two, three or four miles out. In fact the present writer has seen the actual accomplishment frequently enough, and with such

pleasant results, that he is not betting on remaining in town.

With the healthy impetus of the F.H.A. plan it seems obvious that the population will spread out as it has never done before. This is going to be a strong factor in the improvement of living conditions. Those who are on the verge of home building, and who have any acquaintance with suburban or country living, are going to consider both strongly. Some of the older ones will insist on the country.

Perhaps all this harangue is the result of an afternoon's drive, but in a county where suburbs are not far between by automobile, there is a noticeable life in the small towns between, and in independent building. Distance has been cut by the paved roads and the automobile. Ideas of distance have changed. And the opportunities for those of moderate incomes have changed for the better.

The following is part of a typical letter which shows that there is an increasing interest in building methods. "I am remodeling my heating system. I am told it is more practical to have the hot air coming through at the top of the wall with the return taken off at the floors.

... " This question is asked repeatedly, and it will be asked until a good many homes are built with the warm air grilles ranged at the seven foot level. For the delivery of warm air in cold weather the higher the stack or riser the better the circulation. And wherever the air is positively circulated the more even mixtures will obtain if the warm air currents are directed without obstacle toward the outside walls. Last summer when a home was being built in the neighborhood my curiosity led me to investigate and take some pictures. One of these pictures, Figure 3, shows the living room under construction. A riser and opening for the grille are

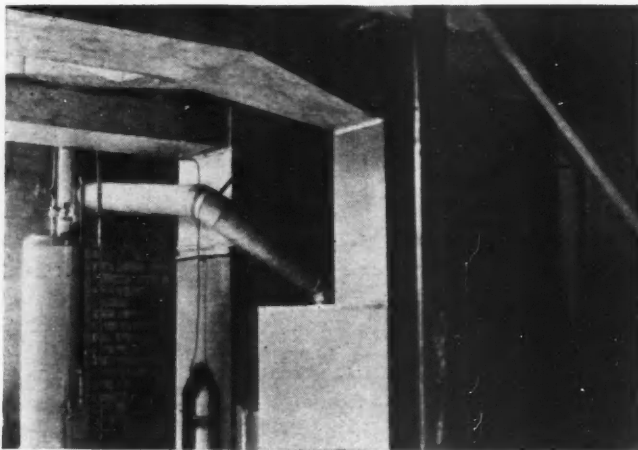


FIG. 1. Gas fired conditioner. Fan box and washer in rear. Home shown in Fig. 4.

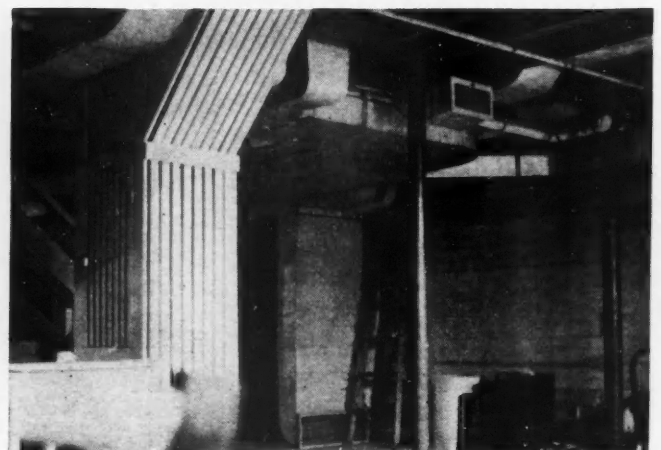
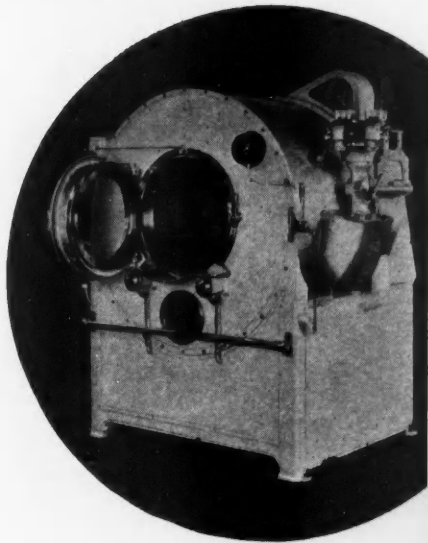
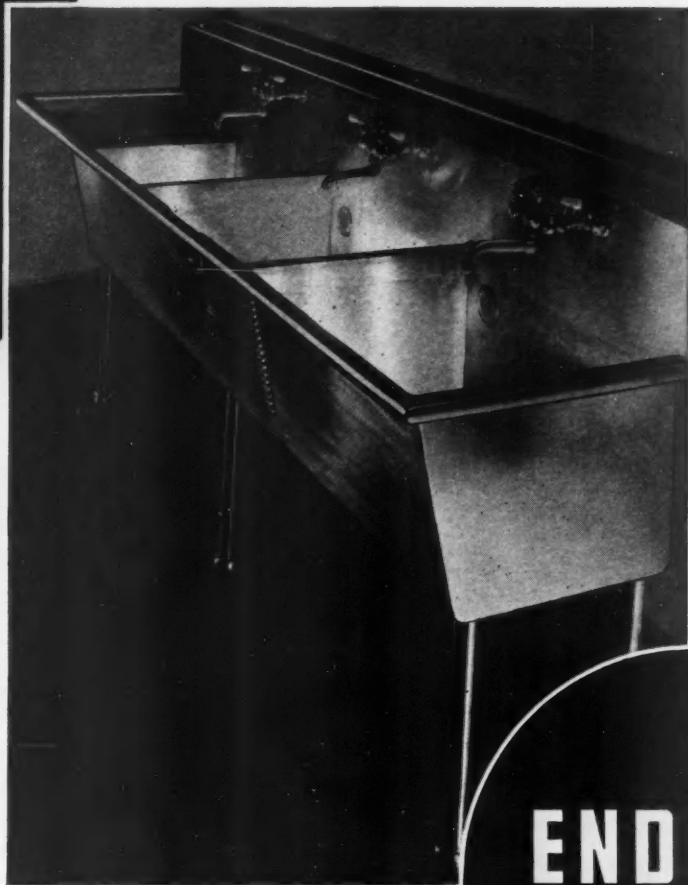


FIG. 2. Part of the basement layout the same house. Clothes chute in foreground.

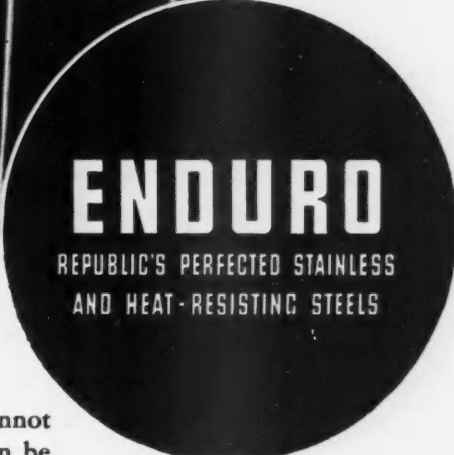


100-lb. capacity washer with inner (perforated) and outer shells of cylinder made of ENDURO Stainless Steel.

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## MECHANICAL EQUIPMENT FOR 20-YEAR FINANCED HOUSES

seen to the left of the right hand window. Since the living room has three full exposures there are three warm air grilles. Below the window is a return air duct.

When this picture was taken none of the conditioning equipment had been installed. A week or so ago, however, I met the general contractor, Mr. A. H. Eichenberger, of Glen Ellyn, Illinois, and asked him how the equipment was operating. (I give you his name because a word from him might be more convincing on the case in point than is mine.) It seemed to be operating well. The house had been very substantially built, well insulated throughout, and had been occupied all winter. Most of us will remember last winter for some time to come. I called on the owner who made me feel quite at home in the matter of taking a few more pictures. We went to the basement and looked over the plant. There was the gas-fired heater picking up the cleaned and humidified air from the fan compartment, all control connections in order and working. This is shown in Figure 1. There is also the hot water heater and the water softener. The latter does not show in the picture. In the amount of duct work there is a great relief from the spidery bunch of leaders which headed out across basement. In Figure 2 another section of the basement is shown. The clothes' chute is in the foreground, but beyond can be seen the arrangements for ducts and the basement delivery and return grilles. These nests of ducts certainly do not resemble the old type of hot air leaders.

Of course it is good to have photographs of a house under construction, but there is something even better to have photographs of the completed job. If you will look at Figure 3 and then compare it to Figure 4, which is the same wall and window as in Figure 3, it will be noticed how well the idea works out.

If it is possible the delivery grilles should be up on the walls and the return air along the baseboard. Both for winter heating and for summer cooling the operation is best. The floor level is no fit place to deliver air which is cooler than room air.

Then, again, there is the matter of insulation, which cannot be unduly stressed. I asked the owner what his bills had been for gas heat. The rates are nothing to cheer about, but the company has had to build along with the fast growing community and provide for an ever increasing consumption. From the fuel costs the owner gave me I would give special commendation to the insulation of the house and to the heating plant and layout. I was not a little envious because they were less than my own costs.

Another typical letter asks for various items of information. But it is from one of numbers who are interested in the newer ideas of air conditioning. "There are six in our family, four of whom have some

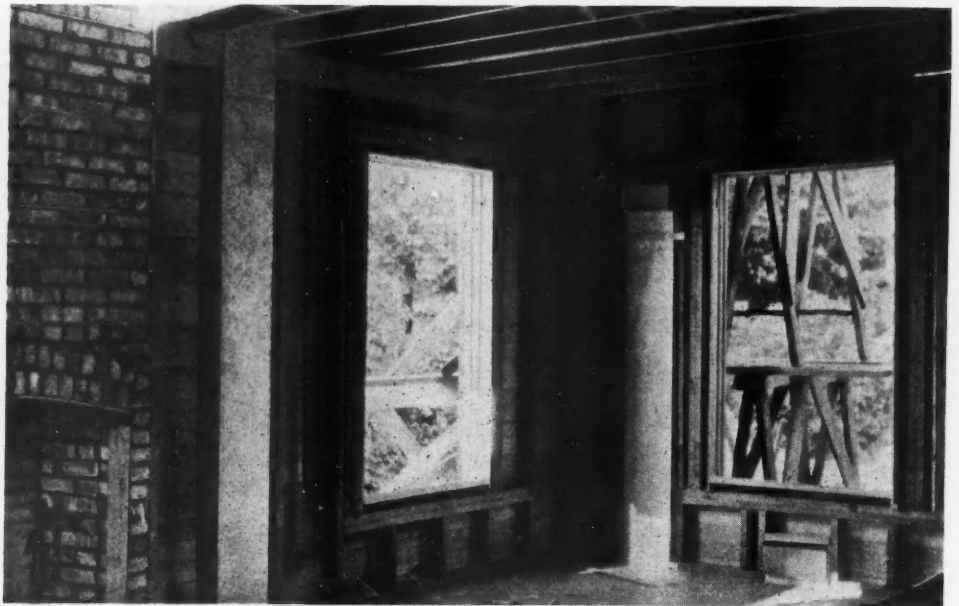


FIG. 3. Construction of living room as shown finished in Fig. 4.

form of hay-fever, so we would like an air filtering system. We expect to build a seven room house of brick on frame construction, using steel windows with



FIG. 4. Living room as it appears. A delightful room of east, south and west exposure.



# BILDRITE SHEATHING



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a time saving of at least one-third as compared with horizontal wood sheathing. Its patented integral asphalt treatment gives Bildrite Sheathing great resistance to moisture as well as a structural strength hitherto unknown to materials of this general classification. Architects are specifying it—builders are using Bildrite Sheathing in homes to add value far in excess of its cost.

[ BUILD RIGHT *with* INSULITE ]

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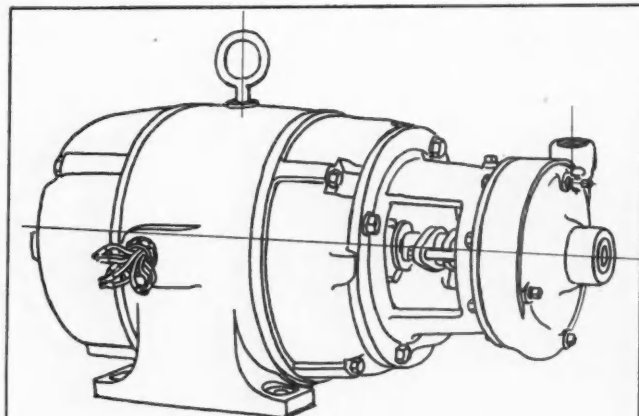
Name .....

Street Address .....

City and State .....

IT WILL PAY YOU TO SEE AN ARCHITECT WHEN YOU BUILD OR REMODEL

## HEATING—AIR CONDITIONING—PLUMBING AND WIRING



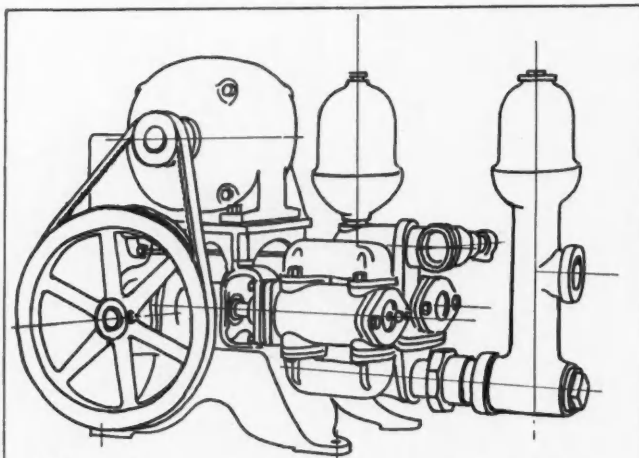
**FIG. 5.** CENTRIFUGAL TYPE PUMP. HEADS 37 FT. TO 138, WITH HORSEPOWER RATINGS BETWEEN  $\frac{3}{4}$  AND 5.

storm sash . . ." Although I never suffered from it, I have an intimate acquaintance with hay-fever and its asthmatic complications. Perhaps with the advent of cooling, filtering, and washing of house air during the summer months these thousands of sufferers will be permitted to carry on their work most of the time, and the localities of privileged immunity will lose some of their patronage to the home town.

Speaking of filtered air leads me to recall a remark of an acquaintance. He is in the business of marketing small motors. It seems that he was getting unusually large orders for certain sizes, and they all seemed destined for that part of the country which has been afflicted with dust storms during the past two years. He found that along with the motor went a husky little fan and an efficient air filter. When the householder found the atmosphere too thick for comfort he closed up the house and turned on the fan until the air cleared. He was thereby furnished with clean air and could breathe freely. When he found the outer air clear he opened up the house, cleaned out the filter, and was ready for the next time. The people who are now in the areas of the dust storms probably will soon know more than any of us in regard to clean air, and how to get it.

Then in the matter of motors and fans there is an ever increasing number of installations for attic circulation and the withdrawal of warm house air at night. If a house is moderately cool in the morning, not having an accumulated amount of heat from over several days, it will take some time for the house air to heat up. The walls, floors, ceilings, and furnishings will not have stored up heat. There is nothing more important to comfort than circulation. With proper circulation even temperatures are obtained. But it is more directly important at night when the body is quiet and (unless sleeping in a hammock), in direct contact with a substantial insulator in the way of a mattress. If the mattress is already overly warm, and the air around the would-be sleeper warm and rather stagnant, there is little chance for the dissipation of body heat.

Returning again to the comforts which may obtain in homes built altogether away from communities served by present utilities arrangements, I wish to call attention to the pumps shown in Figures 5 and 6. It might be remarked that both of these pumps are motor driven, and some might be unkind enough to say that they



**FIG. 6.** SHALLOW WELL PUMP. THERE ARE FOUR SUCTION AND FOUR DISCHARGE STROKES PER REVOLUTION TO PROVIDE AN EVEN FLOW 1000 GALLONS PER HOUR CAPACITY.

would need electric power to drive them. They both might have that from a little power plant right along side or further off, driven by a small gas or oil engine. The whole property could have its power, light, and heat from such a plant if necessary. But either of these pumps can be driven by a small air-cooled gas engine as easily as by motor.

The city dweller might learn a great deal from certain types of farmers. The farmer who is energetic and considers physical comforts of the family knows how to get them. He knows that returns increased when he considered the comfort and well being of his stock, and that his labors decreased. He found that when he could adapt the tractor to the work done by the horse that he did not have to feed and put it to bed at night. He found that he had been "feeding and putting to bed" a good many things besides horses.

There are many hard-driven farmers, but no more than there are hard-driven town folks. But the farmer is responsible for the comfort and well-being of many more animate beings than his city brother. And the hard driving farmer has, in the last few years, outdistanced most of us in the use of proper mechanical equipment for the home, and the farm. A great deal of the improvement along the line of these pumps, for instance, has been because of his desires. There is nothing left in the way of isolation except possibly short-wave sending and television, and no doubt he will be the first to grab those.

With the life of a single mortgage extended over twenty years, and with the market in mechanical equipment covering everything for the comfort of the home, it seems to me the newer trends in real estate will be toward the wider and pleasanter places.

"Air conditioning" implies complete control of the delivered air as to cleanliness, temperature, humidity, and motion. Winter conditioning provides for heating and humidifying. Summer conditioning provides for cooling and dehumidification.

if

this is the house you're about to build



and this family will live in the house



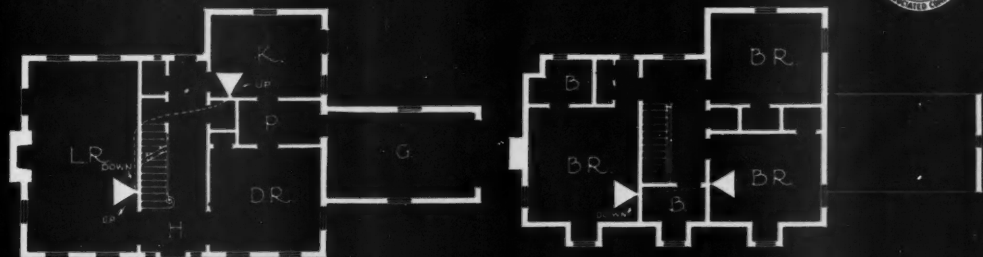
## WHAT SHOULD THE TELEPHONE ARRANGEMENTS BE?

HOUSE: To cost about \$10,000. Household: Young couple, her mother, pup. No children—yet. Income, \$5000, and going up. What telephone arrangements will you recommend?

Built-in conduit, of course, to prevent exposed wiring and provide protection against certain service interruptions. Four outlets, probably. One in the living room. One in the kitchen. One in the master bedroom. And one in the mother's bedroom—sitting room, for her use while the younger folks are entertaining.

All four outlets may not be immediately connected with telephone instruments, but each is located strategically for step-saving, time-saving service to a modern home. They're ready, when they're wanted. They represent the kind of plus-planning that clients appreciate.

Every residence project presents different problems. Telephone engineers are glad to help you develop efficient, economical conduit layouts. Just call the local Business Office. No charge.



FIRST FLOOR

SECOND FLOOR

LEGEND ◀ TELEPHONE OUTLET ——— CONDUIT

FOR FURTHER INFORMATION ON BELL SYSTEM TELEPHONE SERVICES AND EQUIPMENT. SEE SWEET'S CATALOGUE FILE.

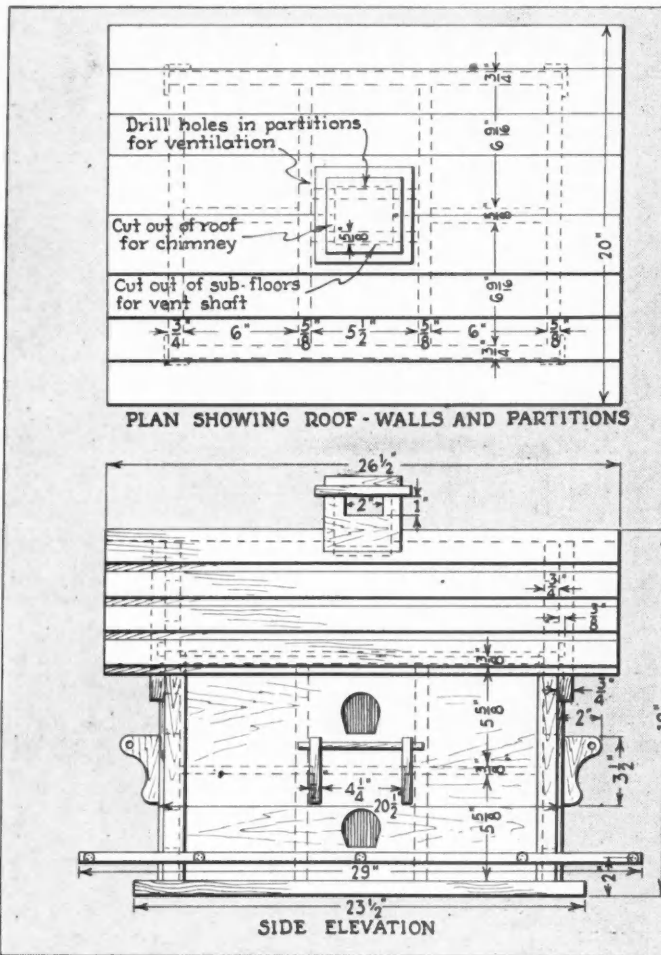
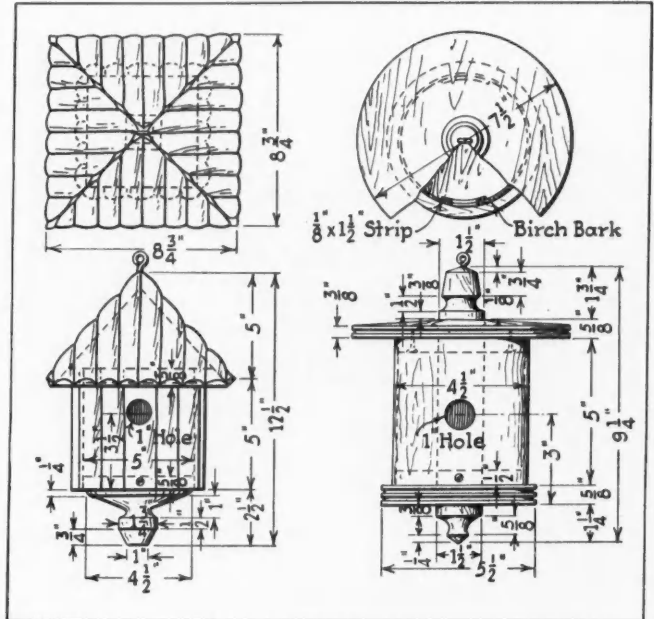
# SHOPCRAFTER'S Corner

## Things To Build for Profit or Pleasure

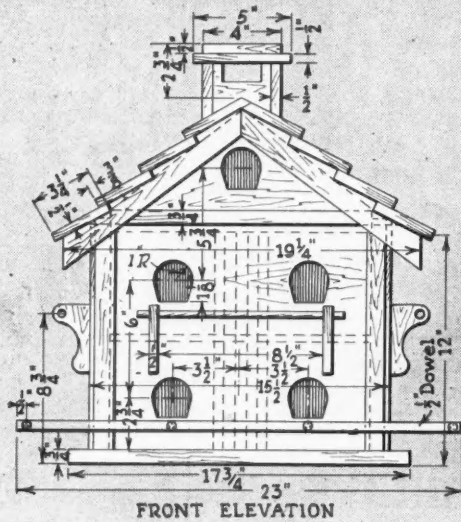
**B**IRD houses are interesting to most people particularly at this time of year because they attract and keep in the community hosts of interesting, entertaining and useful birds. However, these structures should not be built in a makeshift manner; a good plan is necessary for each type of house. Wrens are friendly little creatures but several important features should be remembered when constructing a wren house. An opening about  $\frac{7}{8}$ -inch in diameter is sufficient and no perch is required; this prevents sparrows from occupying the house. It should not be placed more than 12 or 15 feet from the ground and can be suspended from a wire so that cats cannot get to it. Two wren houses are shown at the right.

Martins are quite different as they are sociable and live in communities; the house plan below will accommodate 14 pairs. The openings are oval shaped of a size as shown; when the birds leave for the winter they should be closed to keep out sparrows. Any properly built house is arranged for easy cleaning; a top or bottom fastened with screws will allow this.

**RIGHT:** Two small wren houses which are well designed and easily built. **Below:** Drawings and material list for 14-compartment martin house; rustic material is most popular. Plans from E. F. Worst.

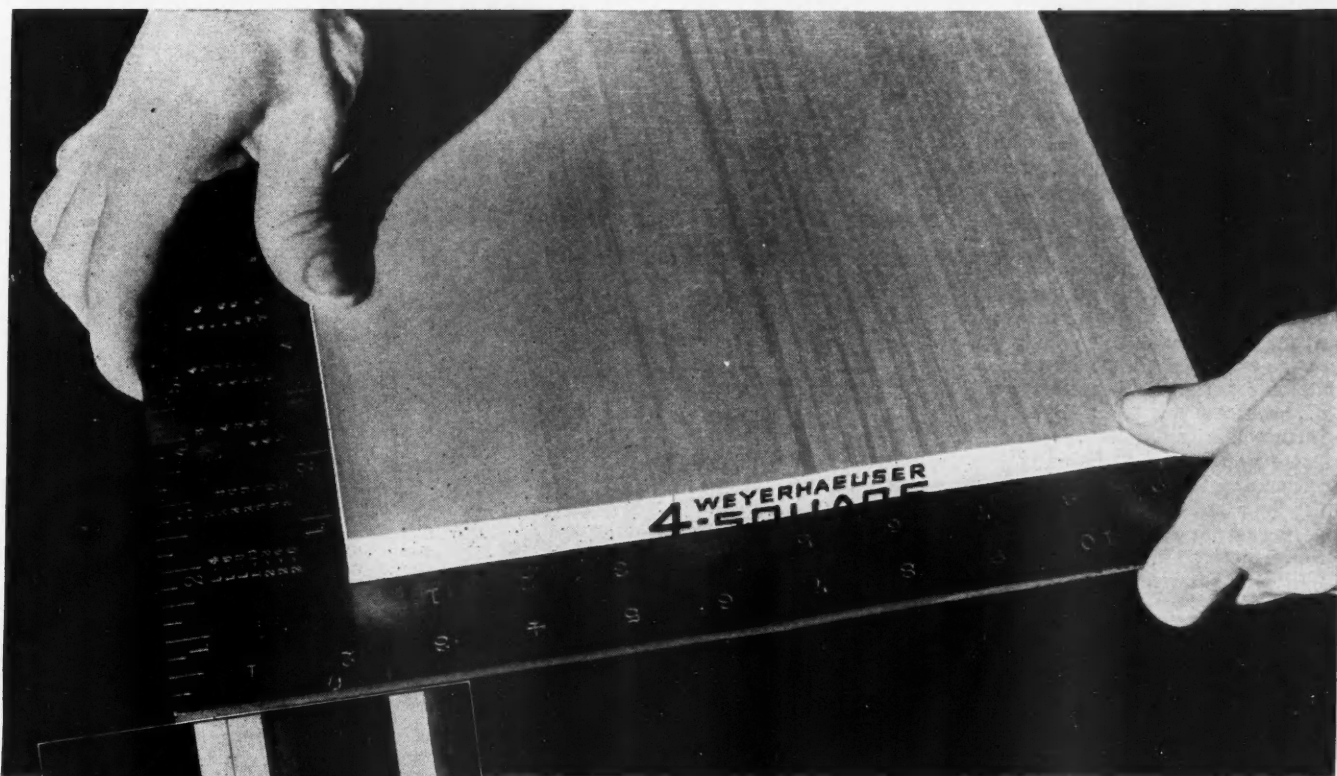


BILL OF MATERIAL									
No	Name	Length	Width	Thick	No	Name	Length	Width	Thick
8	Pieces Roof	26 1/2	4	1/2	2	Dowels Perches	11	1/4	0
4	"	12	1 1/2	3/4	2	"	8	1/4	0
2	"	16 1/2	3/4	3/8	2	"	29	1/2	0
2	" Sides	20 1/2	12	3/4	2	"	23	1/2	0
4	" Ends	15 1/2	9	3/4	10	"	4	1/2	0
2	" Floor	24	9	3/4	4	Pieces-Partitions	14	5 1/2	5/8
2	" Chimney	4	3	1/2	4	"	6	5 1/2	5/8
2	"	3	3	1/2	4	"	5 1/2	5 1/2	5/8
1	"	5	5	1/2	4	Sub-Floor	19	7	3/8
1	"	4	4	1/2	8	Trim	12	1 1/8	1/8
8	" Perches	3 1/2	2	1/2					

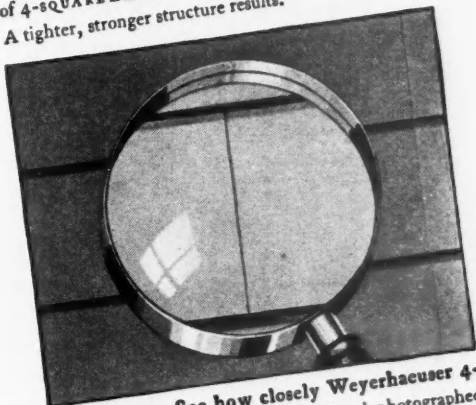


# It's ready to use!

that's why this **PRECISION LUMBER** lowers bids . . .  
speeds construction . . . and improves the job



**Full bearing of framing members—because every piece of 4-SQUARE Lumber has true, accurately squared ends. A tighter, stronger structure results.**



**Tight joints. See how closely Weyerhaeuser 4-SQUARE Lumber joins. Neither board photographed was trimmed.**

Time is wasted—building costs climb—when lumber is only *almost* square—just *approximately* the right length.

Weyerhaeuser 4-SQUARE Lumber ends this checking, squaring, trimming. Every piece comes to you precision cut—ready to use.

Both ends are smooth—both ends are micrometrically squared at the mill. Lengths are exact. Construction costs are cut. And a tighter, stronger structure results.

Weyerhaeuser offers 4-SQUARE Lumber at no premium over ordinary lumber. Contractors tell us it enables them to lower their bids—and deliver a better job.

See your nearest 4-SQUARE Lumber Dealer today. He'll be glad to show you the advantages offered by this improved, trade-marked lumber.

## WEYERHAEUSER 4-SQUARE LUMBER

WEYERHAEUSER SALES COMPANY  
SAINT PAUL, MINNESOTA

## NEW PRODUCTS

FOR INFORMATION ABOUT any new product write American Builder Information Exchange, 105 West Adams Street, Chicago, Ill.

### Special Speedmatic Floor Sander

THE Porter-Cable Machine Company, Syracuse, N. Y., has added to its line an eight-inch floor sander called the "Contractor Special Speedmatic." This machine is designed and built especially for floor and building contractors' use where power, speed and finish are required.

The new sander operates with a new type, specially built 1½ H.P. heavy duty, low voltage, A.C. motor that develops about 4 H.P. under load. New adjustable drum design includes hardened spiral relieved-type cams for assuring abrasive paper economy. The drum unit is arranged for quickly removing when recovering is necessary.

Other features include "V" belt drive and selective speed feature that delivers maximum production on all kinds of old or new floor work. An over-size vacuum fan, traveling at 5600 r.p.m., picks up dust on both backward and forward strokes of the machine. A hinged one-piece guard drops for belt change, and for motor removal that is accomplished without the use of any tools whatever. Ball bearings throughout require no further lubrication for the entire life of the machine.

A unique feature of this new machine is its double purpose vacuum system—a valve may be easily turned which shuts off the floor pick-up intake and opens a nozzle to which an ordinary vacuum cleaner hose may be attached for cleaning anything that has become dusty. This attachment is particularly useful on resurfacing jobs.



CONTRACTOR Special Speedmatic Floor Sander.

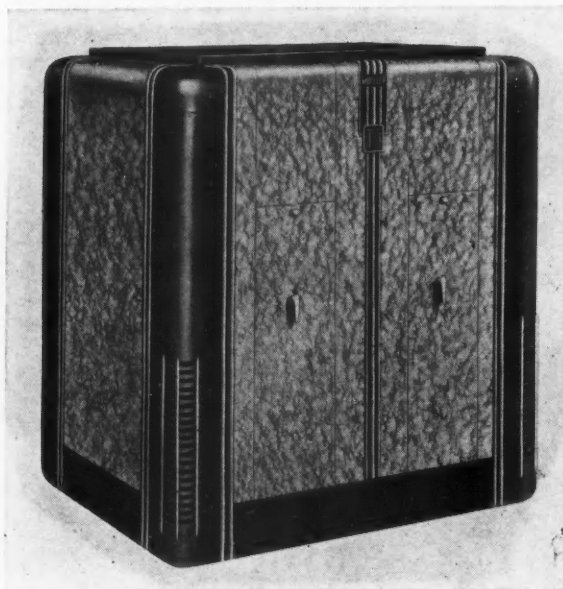
### Oil-Fired Air Conditioning Unit

THE Mueller oil-fired air conditioning unit now being manufactured by L. J. Mueller Furnace Co., Milwaukee, Wis., incorporates new features of furnace design in a direct-fired, forced air heating and air conditioning plant. The radiator is a fan scroll, the air passing over heating surface three times with velocity and impingement creating a greater rate of heat transfer.

The basic design of the new Mueller unit, covered by patent claims allowed and pending, offers increased efficiency and reduced fuel cost. Silent fan supplies sufficient volume of warm air to secure uniform temperatures, and is of large

enough capacity for the addition of complete cooling where desired. The pressure atomizing burner suits oil consumption to heat losses. It is available in capacities of 0.75 gal. per hour and up.

The unit heats, humidifies, filters and circulates the air, and if desired, cools and dehumidifies. Operation is automatic, both temperature and humidity controls being supplied. Ultra-modern in appearance, it requires no more space than an office desk. The casing, finished in green crinkle lacquer, with chromium trim, is completely insulated. Doors at the front of the unit provide access to burner, heating unit, fan and filters.



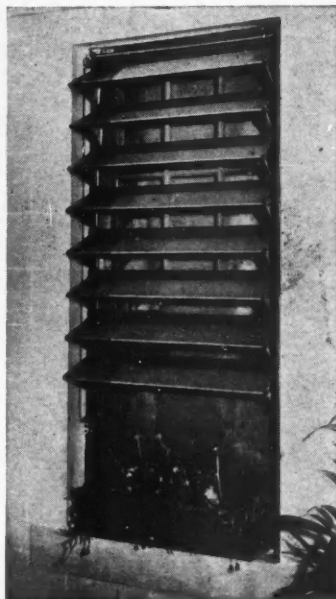
NEW Mueller conditioning unit of oil-burning type.

### Permanent Adjustable Metal Awnings

ADJUSTABLE awnings made of Anaconda copper or aluminum, a new development in this field, have been announced by the manufacturers, Bruns Metal-Lite Awnings, Inc., 52 Ralph Ave., Brooklyn, N. Y. As well as the durability of this product, the other principal features are given as neat and distinctive appearance; simple and compact form, easy and positive operation; better control of light and ventilation; moderate cost through size standardization; fire and windproof.

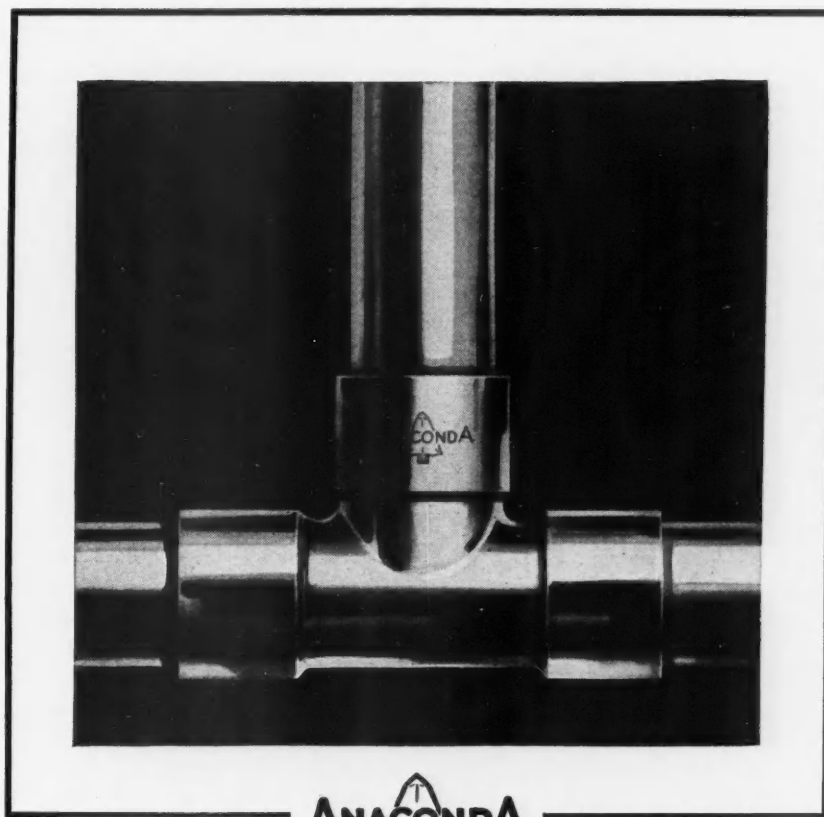
The patented operating device raises or lowers the louvers by means of a crank handle at the side of the window jamb. All working parts are of metal.

These Metal-Lite awnings, once installed, need never be taken down again, summer or winter. They will withstand any kind of weather—rain, sleet storms, sun, snow or ice have no effect on their surfaces. Standard sizes are furnished for 30 to 48 inch windows. Other sizes made to order. All awnings shipped in natural metal color or with special colors to order.



METAL-LITE awning partly extended; when entirely raised the metal louvers fit together compactly at window head.

# FOR HEATING LINES COPPER TUBES are "the last word"



**C**OPPER TUBES lead to greater efficiency in hot water heating systems...give longer and more reliable service. Permanently smooth inside surfaces reduce resistance to the flow...especially in forced circulation systems. And hot water conveyed through copper tubes loses only about one-half as much heat as when black iron is used. Faster flow and reduced heat losses mean quicker circulation; the maximum amount of heat is delivered to radiators in the least possible time.

The cost? Assembled with solder-type fittings,\* the cost of a copper tube installation is scarcely any more than that of rustable material.

Anaconda Copper Tubes and a complete range of Anaconda Solder-Type Fittings...trade-marked for easy identification...are hydraulically tested to insure soundness, and are produced to the close tolerances necessary for tight and strong soldered joints.

Where standard-size, rigid pipe is required, Anaconda Brass Pipe has long been the standard of quality. Two scientifically-determined alloys are carried in stock by leading supply houses... *Anaconda 67 Brass Pipe* for normally corrosive conditions, and *Anaconda 85 Red-Brass* for highly corrosive conditions.

3648B

\*Where temperature range does not exceed 180°F., soft solder made of 95% tin and 5% antimony is recommended. "Sil-Fos" brazing is suggested for higher temperature.

**THE AMERICAN BRASS COMPANY**

General Offices: Waterbury, Connecticut

*Offices and Agencies in Principal Cities*

# ANACONDA COPPER & BRASS

### Smooth Finish Insulating Board

A NEW smooth-finish insulating board, known as Temlok De Luxe, has been developed by the Armstrong Cork Products Company, of Lancaster, Pa. The "hairy" or coarse textured surface has been entirely eliminated in the new



WORKMAN applying Temlok De Luxe with special adhesive.

Armstrong board, the new smooth finish being obtained by an exclusive surface treatment and the full insulating value of the board is retained. Temlok De Luxe is available in standard size boards, 4 feet by 8 feet to 12 feet. In addition to the natural golden buff color of Temlok, the new board also is furnished in white, cream, ash, and walnut colors.

Additional features are the new light colors offering high light reflection value, valuable acoustical properties, original and pleasing decorative effects, and an attractive all-over finish ideal for use in connection with wood trim or wainscoting.

### Streamlined Automatic Oil Boiler

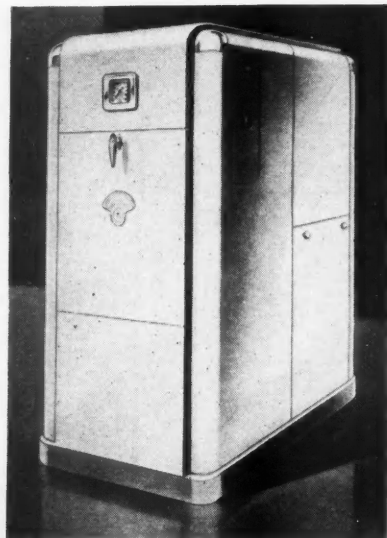
FITZGIBBONS BOILER COMPANY, INC., 570 Seventh Ave., New York City, has introduced its streamline styled 1936 Model of the Oil-Eighty Automatic Boiler.

Among the new features of this boiler are the following:

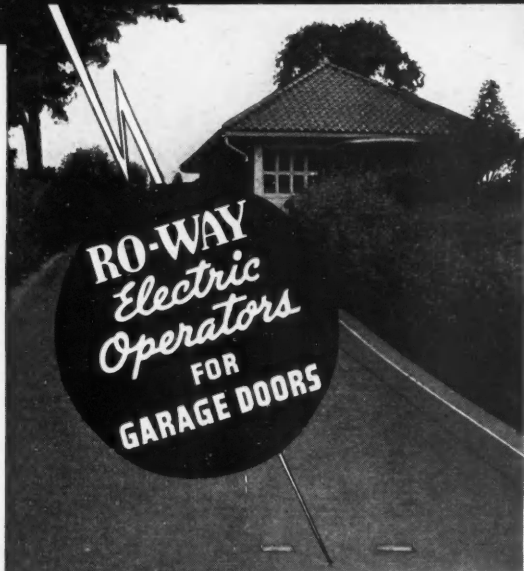
New jacket design stressing the modern trend to streamline styling; complete enclosure of the oil burner within the jacket; also complete enclosure of all burner controls within the jacket including low water cut-off (these controls are not furnished with the boiler); the Fitzgibbons Tanksaver, instantaneous domestic submerged hot water coil that provides year-round hot water supply without a storage tank.

Added to these are others, such as Combustrol, draft control, Thermalizer, gas control, safety door, Fitzgibbons steel boiler, large combustion chamber, small diameter tubes, and ease of cleaning.

FITZGIBBONS Oil-Eighty Model Automatic Boiler.

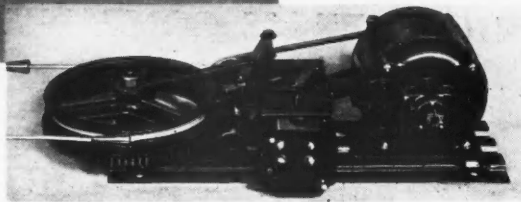


## RO-WAY Scores another Hit!



Above—Concealed driveway control operated by simple car-magnet enables owner to turn on garage lights and to open and close garage doors without leaving car.

At Right—Note the compact design of the Residential Ro-Way Electrical Control Unit.



### A New Electrical Achievement

A Garage door operator that not only gives "open-close-stop" control but instant reversal of direction.

Ro-Way offers a radically different and superior type of electrical control for operating overhead types of garage doors. A two-button station instantly changes the travel of the door no matter at what point of opening or closing it may be. The value of this safety factor is immediately apparent. The Ro-Way Line covers every type of operation from small residential installations to large commercial jobs. Choice of these types of control are offered: Button Switch; Ceiling Pull Switch; Toggle Switch; Constant Pressure Switch; Momentary Contact Switch; Key Operated Exterior Wall Switch; Key Operated Exterior Driveway Post Switch; Photo Cell; Floor Treads; Magnetic Automatic Driveway Control. Prices of all Ro-Way Electric Control Operators are surprisingly low.

### Ro-Way Doors are "Easier to Sell— and Easier to Install"

They require less headroom for installation, as little as 8 1/2 inches for residential garages. They require fewer alterations in old buildings. Some models have the exclusive Ro-Way "Seal-Tite" Molding Feature—the gravity operated mechanical hand that instantly frees the lower section of the door for easy opening and just as effectively seals it draft-tight in closing. 16 different types for every commercial and residence use are offered. All priced right. Write for Free Catalog Folder.

### ROWE MANUFACTURING CO.

733 Holton St., Galesburg, Ill., U. S. A.



★

# *Gar Wood*

## TEMPERED-AIRE

### - - - REVOLUTIONIZES DUCT INSTALLATIONS

★

No longer need architects and builders shoulder the entire responsibility for the proper functioning of duct systems for air-conditioning.

Tempered-Aire offers the only air-conditioning system which is engineered and built complete, from oil burner to ducts, by one manufacturer.

The revolutionary Tempered-Aire duct system brings factory methods to field installations. Every part is standardized and built to conform to standard building practice and measurements. This eliminates the need for complex "tailor-made" trunk lines and much other hand labor. It speeds building operations. It saves costly delays for contractors and sub-contractors.

The factory-welded pre-fabricated parts are stronger and better. Everything but the trunk lines is concealed between joists and studdings.

Best of all, this system works better. Uniform parts and simplified mathematical formulae insure that.

Combined with Tempered-Aire's traditional economy and efficiency, this system assures the greatest possible satisfaction to architects, builders and home owners.

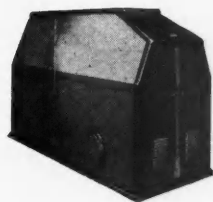
Write for complete information.



Even the trunks are standardized in the fully pre-fabricated Tempered-Aire duct system

★

*Air Conditioning Division*  
**GAR WOOD INDUSTRIES, INC.**  
7924 Riopelle St.    Detroit, Mich.



# ★ POPULAR ★ WITH CRAFTSMEN

Craftsmen are enthusiastic about Carter Electric Door Set because these tools do away with the tedious work of mortising for hinges and lock sets, fitting of doors and windows, etc. Every mortise is a perfect one making it easy to apply the hardware.



A door being fitted and beveled with a Carter Power Plane.

A mortise for a lock is being cut in 30 seconds with a Carter Lock Mortiser.

Mortises for butts being cut with a Carter Hinge Butt Router.

## CARTER HINGE BUTT ROUTER



Leaves a flat, finished surface for solid, perfect fit. Easily adjustable for depth of cut by turning motor in housing. Makes every door hang perfectly.

Universal Router with plenty of power

Cutter Turns at 18,000 r.p.m.

**R. L. CARTER DIVISION**  
*The Stanley Works*  
133 Elm Street    New Britain, Conn.

R. L. Carter Division  
The Stanley Works  
133 Elm St., New Britain, Conn.

- I would like to have you demonstrate the Carter Electric Door Set.
- Please send me all literature on these machines.

Name.....  
Address.....



Patrician Hardware is new in that it offers that touch of color needed to complete the decorative scheme in the home. Its plastic knob material, in delightful color tones in a setting of natural metal finishes, adds charm and attractiveness to your buildings—increases their saleability.

It is practical in that the knob material is not affected by moisture or perspiration. Patrician is available in black, ivory, pastel tints for bedroom or bath, bright Chinese Red or mahogany for library or lounge.

Offered in a complete line of pendant or sectional trim. See your builders' hardware dealer or write direct for full information.



Patrician Sectional Set No. 3652 with solid brass face and French shank, cast brass rose and key plate, lock No. 3126. Solid Plastic may be in ivory, black or other suitable tints or colors, which are interchangeable.

*Patrician*  
HARDWARE

Exclusively by  
LOCKWOOD HARDWARE MFG. CO.  
DIVISION OF INDEPENDENT LOCK COMPANY  
FITCHBURG, MASS.

### Electric Garage Door Operators

ELECTRIC garage door operators for residential or commercial purposes of roll-up, swing-up, or hinged types are being marketed by The Stanley Works, New Britain, Conn.

Stanley electric operators are built to meet each type of service according to the various requirements of the installation and are designed for the following types of doors: residential and low frequency commercial outward swinging double doors up to 8x8 feet; residential roll-up and swing-up doors



ELECTRIC operator controlling roll-up doors.

not over eight feet high, residential and low frequency commercial roll-up and swing-up doors up to 12x12 feet, commercial roll-up doors up to 12x12 feet, and heavy roll-up doors any size.

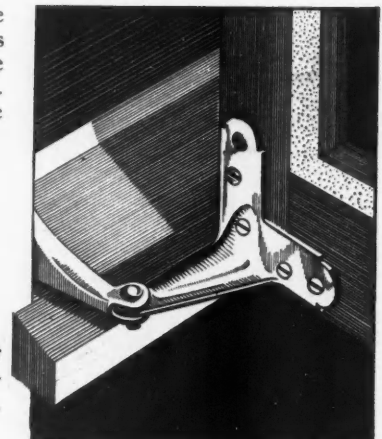
Stanley also supplies roll-up doors complete with hardware, or hardware for swing-up or hinged doors.

### Extension Hinges for Casements

NEW hinges for wood casement windows designed to extend the sash four inches away from the frame when the casement is opened are being manufactured by the Casement Hardware Company, 406 North Wood Street, Chicago. The object of this extension is to permit room for cleaning the outside surface of the glass from the inside of the room as easily as the inside is cleaned.

Another advantage is the fact that when the window is opened in the summer time and the greatest amount of ventilation is desired, the sash acts as a baffle for breezes, deflecting this air into the room on both sides of the window.

The hinge is made of steel and is designed to reinforce the corners of the sash. Twelve square inches of metal bearing surface give this added strength. It is the loose pin type with bronze bushings.



SHOWING sash attachment of extension hinges for easier window cleaning and ventilation control.



**A case of "Give-'em-the-air" and Get the Business**

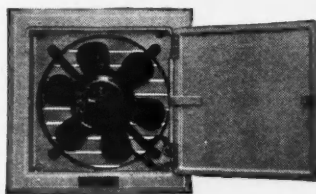
Due to their own experience and to constant educational publicity from many sources, people have become "ventilation-conscious." Nowadays the more desirable tenants and buyers are as much concerned about ventilation as they are about efficient heating, lighting and plumbing. Fortunately, you can "Give-'em-the-air"—rapid and complete air changes—quickly, easily, and at reasonable cost. Simply install Emerson Exhaust and Ventilating Fans in all the business buildings, offices, homes and apartments you erect or modernize. They're sales and lease-clinchers. They'll attract better tenants—justify higher rents and higher sales prices. They enable you to meet fully the public's demand and, at the same time, give you a *real competitive advantage!*

**Two-Speed, Ball Bearing EMERSON Exhaust Fans**

Emerson Exhaust Fans boast an enviable reputation for efficiency, for trouble-free performance and long life. Actually, they work like magic—in quickly and quietly clearing the air of offensive odors and excessive heat. Can be easily installed in old or new buildings — any type of construction. Used extensively in homes for summer (attic) ventilation.



**Complete Line of Kitchen Ventilators**



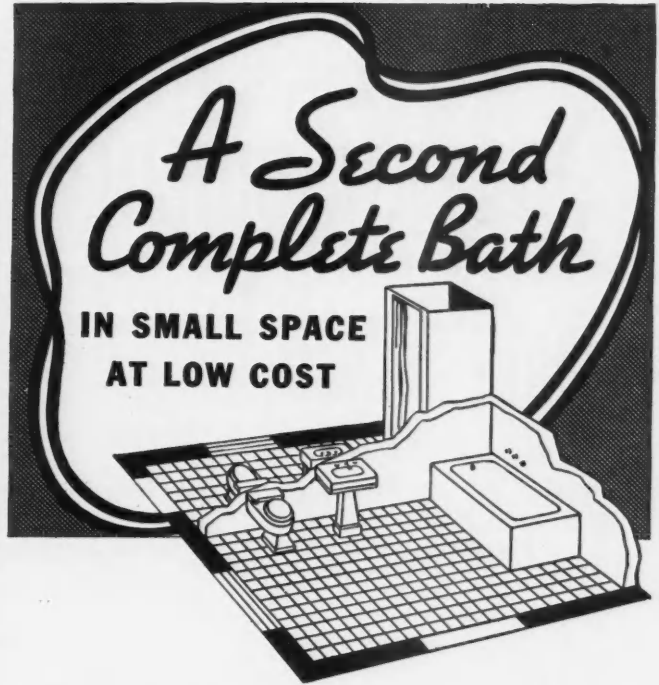
The 9 and 12-inch Emerson Ventilating Units are equipped with quiet, electrically reversible motors. By means of toggle-switch control, the direction of air movement of the fan is reversed—thus cooling breezes may be drawn in, or stagnant inside air, smoke, fumes, odors, heat or steam may be exhausted. Automatic starting and stopping of the fan is provided by door-switch in the wall box, which is adjustable to wall thickness. Easily installed in homes under construction or already completed.

Write for Folder 55-J "How to Select Emerson Exhaust and Ventilating Fan Equipment"

THE EMERSON ELECTRIC MFG. CO.  
ST. LOUIS • Branches—New York • Detroit • Chicago

**EMERSON ELECTRIC**

MOTORS - FANS - APPLIANCES  
Leaders in the Fan and Motor Industry Since 1890



**WEISWAY CABINET SHOWERS** provide the answer to the insistent demand for extra bathing facilities in homes of every size. The sketch above is suggestive of numerous ways in which Weisway Showers meet this demand—by enabling a complete extra bath in small space at low cost.

The V-P Weisway of gleaming vitreous porcelain enamel, is suitable for the master bath in the finest home. Other styles for homes of every size, including the simplest cottage. Each Weisway model affords complete bathing facilities, being fully equipped with shower head, valves and drain. Easily, quickly

installed, with no special treatment of walls or floor.

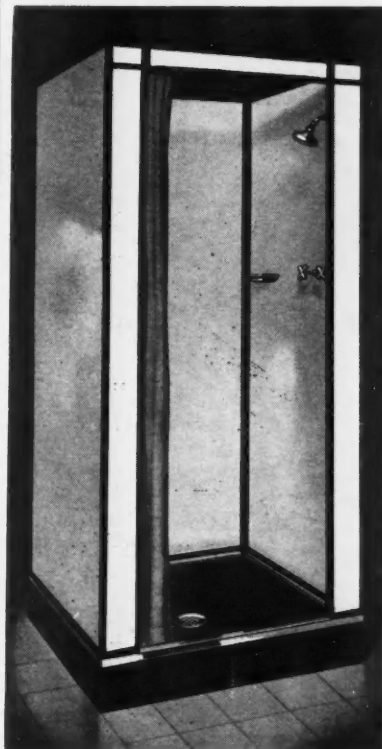
Guaranteed leakproof, Weisway cabinets are not affected by settling of structure or shrinkage of materials—durable, dependable, trouble-free. They are equally adaptable for new homes or modernizing.

**SAFE FOOT-GRIP, NO-SLIP FLOOR**

Vitreous porcelain receptor has exclusive floor which positively prevents slipping. Equally effective wet or dry. Non-absorbent, thoroughly sanitary.

Write now for details about the complete Weisway line— for homes of every size, as well as hotels, clubs, institutions, commercial buildings.

Weisway Cabinet Showers are nationally distributed through recognized plumbing supply channels.



HENRY WEIS MANUFACTURING CO., INC.  
ESTABLISHED 1876  
CABINET SHOWER DIVISION, 501 OAK ST., ELKHART, IND.

**Cabinet WEISWAY Showers**

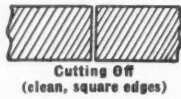
# You're A MODERN BUILDER

When You Can Do These Things With FIBRE BOARD

And you'll get the jobs and profits that a modern builder expects, if you invest the small amount required to buy these Stanley Fibre Board Cutting Tools.

They make it easy for you to do the decorative work in fibre board that enhances walls and ceilings. Easy, too, to make the many cuts illustrated for joining as well as ornamentation.

All of the above operations on Fibre Board can be done with the Fibre Board Cutter No. 193. Numbers 194 and 199 are excellent tools for cutting and beveling. See them all at your dealer's or write for descriptive circular.



Cutting Off (clean, square edges)



Beveling



Grooving from Beveled Edge



Grooving from Square Edge



Mitre Joints



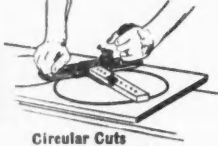
Mitre Joints with Groove



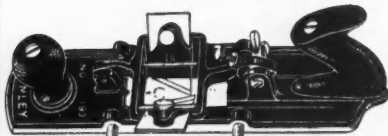
Cutting Off—both edges beveled (for beveled edge Battens)



Ship Lap Joints



Circular Cuts



Fibre Board Cutter No. 193



Holder for Honing Razor Blades No. 198



No. 199 Fibre Board Knife

Fibre Board Cutter No. 194



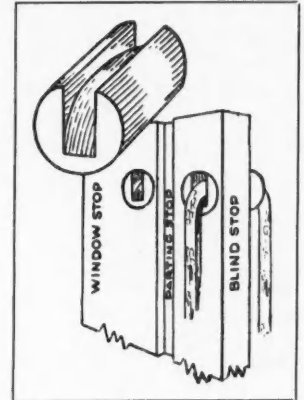
**STANLEY TOOLS**  
New Britain, Conn.

## Sash Cord Saddles

SMALL devices for carrying sash cord through window jambs and known as Sash Cord Saddles are being made by Honeycutt Mfg. Company, 2715 Oak St., Kansas City, Mo. These saddles are made of select birch; treated in oil; and thoroughly kiln dried to eliminate shrinkage. They use standard cord, either No. 7 or 8.

Quiet operation, ease of installation (requires boring 1-inch hole and driving saddle in), use of lighter weights, non-binding action, decreased wear on sash cord are listed as features of the product. Shipping weight is 3 pounds per hundred.

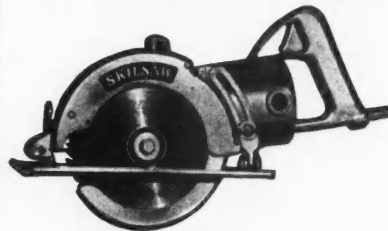
SASH Cord Saddles, showing enlarged unit and devices installed for operation.



## New Model Electric Hand-Saw

COMPACT design, greater cutting speed and better balance are listed as the principal features of a new electric hand-saw known as Model "77" recently placed on the market by Skilsaw, Inc., Chicago. It is 18 inches long, weighs 15 pounds, and is fitted with a 7 inch blade. Cuts 2 3/8 inches in wood; will cross-cut 2 inch rough lumber and bevel-cut 2 inch dressed lumber at 45 degrees. Advanced engineering permits unusually quick adjustments for both depth and bevel cutting. The blade has a free speed of 3600 R.P.M. and is protected by an automatic spring-operated telescopic guard that rotates on bearings.

Balance of frame and handle allows operation with the least strain on the hand of the user; the frame is made of a special die-cast aluminum alloy; all shafts are ball bearing mounted. A blower arrangement built into the upper guard keeps the line of cut free from sawdust.

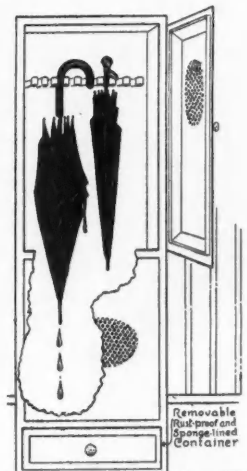


MODEL "77," new electric Skilsaw fitted with 7-inch blade.

## Household Umbrella Hangar

A PIECE of home equipment known as 'Brella Hangar is being manufactured by the Franklin Home Utility Co., 450 Seventh Ave., New York City. This is a built-in cabinet providing a handy, out of the way place for storing wet umbrellas so that dripping on floors and walls is eliminated and unsightly appearances avoided.

Durable steel construction with baked Duco finish, removable copper, sponge-lined drip catcher in base, chrome plated brass hinges, and crystal knobs assure lifetime service. The hangar is 43 1/2 inches high, 13 inches wide, requiring a wall opening 3 1/4 inches deep. Grilles provide ventilation. Ivory finish is standard; other colors and special sizes are furnished on order.

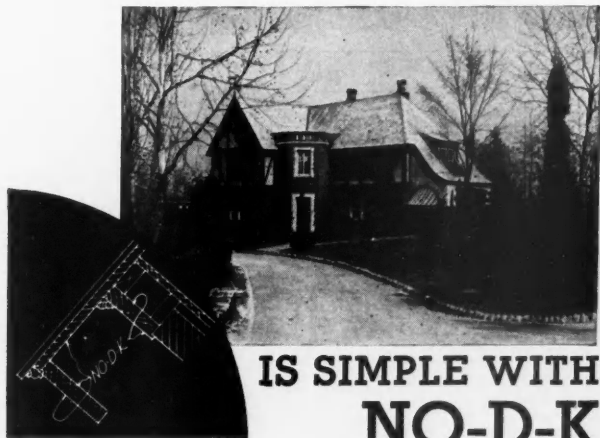


'BRELLA Hangar, a built-in cabinet for storing umbrellas showing drip drawer in base.

Protection against



**DECAY**



IS SIMPLE WITH  
**NO-D-K**

Exposed timbers of every new house can be made more secure from the ravages of decay and dry rot by a very simple treatment with Eastman NO-D-K Wood Preserver. The cost is small compared to repair bills due to rotted out subflooring or foundation timbers. NO-D-K may be applied with a brush or spray to the wood during the construction of the building. It has a penetrating action which readily follows the wood fibers and affords resistance to both fungi, which causes decay, and to boring insects, particularly termites. It is four times more toxic to decay and termites than ordinary coal tar creosote, yet it will not burn the skin of workmen.

### Low Cost Treatment

NO-D-K protection adds very little to the original cost of the building. One gallon of NO-D-K will cover 60 to 80 square feet with two coats. The retail price is approximately one-fourth the cost of good paint.

NO-D-K imparts a dark brown finish to wood. This makes it well suited for the treatment of half-timbered work. It will not crack, chip or peel off as it penetrates readily into the timbers. Due to the insolubility of NO-D-K, it is not readily leached, or soaked out of the wood by rain or exposure to the weather.

To better inform you as to the places open to attack from decay fungi as well as termites, we have prepared a preservation guide. Use the coupon below and it will be sent together with our 16-page booklet entitled "Preservation with NO-D-K."

NO-D-K is stocked by lumber yards, hardware and paint stores everywhere. If your local dealer does not stock NO-D-K, have him write us for complete information.

### PRESERVATION GUIDE FREE

Tennessee Eastman Corporation,  
Kingsport, Tennessee.

Send at once your preservation guide and booklet entitled "Preservation with NO-D-K."

Name .....

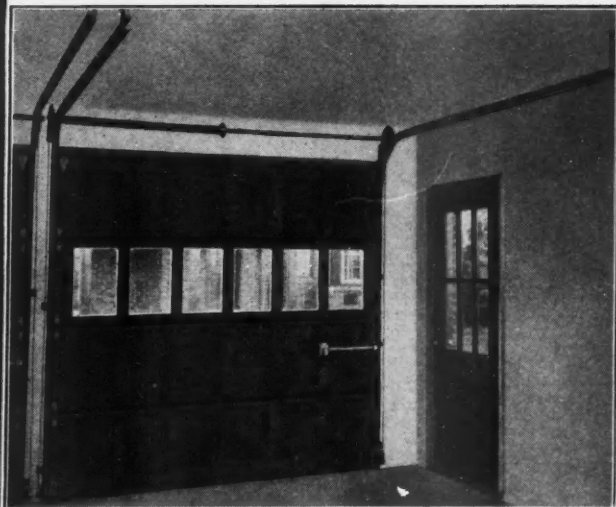
Address .....

City .....

## GOING OVER IN A BIG WAY

Contractors and Dealers Everywhere  
Quick to See the Advantages of the

### CRAWFORD COMPLETE LINE



### CRAWFORD SECTIONAL OVERHEAD TYPE DOOR

From coast to coast comes an enthusiastic response to our April advertisement. Thousands in the building field recognize the superior possibilities offered by the CRAWFORD COMPLETE LINE. You, too, should investigate at once. Find out more now about the New 1936 Crawford Sectional Door and its outstanding new features. Prepare to handle every new or modernization job with Crawford Sectional Doors for commercial or industrial use, High-lift Doors, Overhead-operating Hardware for one-piece doors, and Electrical Operators.

*Our Policy: 100% Dealer Protection*

### CRAWFORD OVERHEAD OPERATING HARDWARE

By Originators and Pioneers of this Equipment  
For converting Swinging or Sliding Doors, old or new, into the overhead type. Fits any standard size door. Easy to install. Unlimited field, rapid turnover, big profits.

*Consult Your Dealer or Mail Coupon*

AB-5-36

**CRAWFORD DOOR CO.** 7881 Conant Ave.  
Detroit, Mich.

I want to know more about the New Crawford Sectional Door. Send me literature and details; also full information about your complete line.

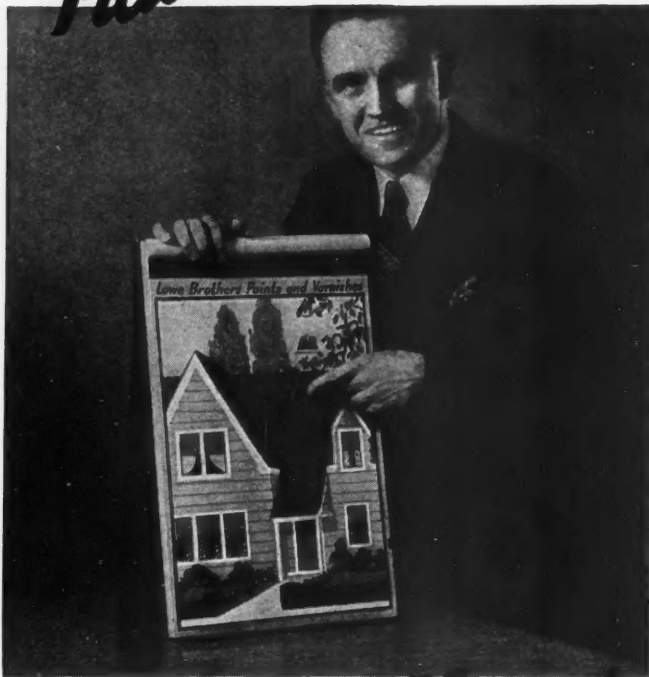
NAME .....

ADDRESS .....

Contractor

Dealer

# Show the Lowe Brothers Pictorial Color Chart



*-and get more Contracts!*

It is often helpful in securing contracts for new or remodeling jobs to show prospects interesting ideas on color schemes. And the Lowe Brothers Pictorial Color Chart is filled with *actual painted reproductions of color schemes* for every interior and exterior purpose. They make it easy for prospects to select with confidence the exact color effect they wish to secure.

You may borrow this contract-closing chart without cost or obligation from the local dealer in Lowe Brothers products. The same dealer will also furnish you, free, a Specification Book which will help you prepare practical and accurate bids.

And when submitting bids, explain to your prospects that Lowe Brothers paint contains approximately 90% film-forming solids as against many "cheap" paints which often contain as little as 37% film-forming solids—the rest being water and other evaporating liquids.

Your local dealer in Lowe Brothers products will help you gladly. See him today. The Lowe Brothers Company, Dayton, Ohio.

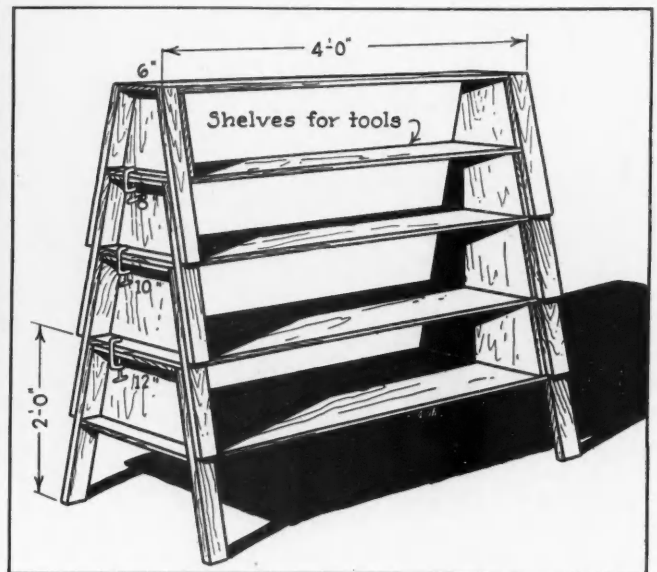
**Lowe Brothers**  
 PAINTS • VARNISHES  
*Quality Unsurpassed Since 1869*

## PRACTICAL JOB POINTERS

A READERS' 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.

### Sawhorses Stack Up Into Ladder

THE sketch I am sending shows my finishing ladder built up of sawhorses. The horse on the floor has a 12 inch by 4 foot surface top, the next horse a 10 inch by 4 foot top, and so on



HANDY ladder from sawhorses clamped together.

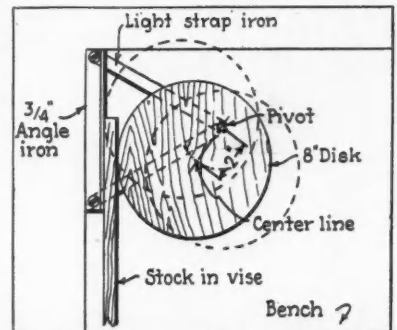
up to a 6 inch by 4 foot top. I find this built-up ladder handy in casing windows, also wide openings. I use a 3 inch screw clamp to hold horses so they will not tip.

When first coming on a job I use them as sawhorses. The sawhorse with the 12 inch by 4 foot top has a shelf which makes it handy to place tools on while hanging doors, and when used as a ladder it is the first step.—C. R. SCHULTZ, Carpenter, Menahga, Minn.

### Quick Acting Bench Clamp

I RAN onto an idea the other day for a bench clamp that was new to me, and I find it very useful. It might be new to some of the other fellows so I am sending it as a Pointer.

Take a short piece of 3/4- or 1-inch angle iron and bolt it to the top edge of the work bench. Cut an eight-inch, or larger, disk of hardwood and pivot it about two inches off center so that in swinging it will just pass the angle iron. This clamp is always ready and can be used on a pull with the drawing knife as well as pushing with the plane.—LEWIS DAVIDSON, Fayetteville, Ark.



USEFUL, self-adjusting bench clamp made from scrap pieces.

# Here's The Way to PAINT SECOND-HAND BRICK!

"Second-Hand" or "Used", when applied to most things, certainly doesn't raise their value any; but not so with brick. When properly handled, second-hand brick are a highly satisfactory and economical building material. However, ugly, yellow splotches will appear, and peeling starts in a hurry if the brick are incorrectly treated.

For perfect, low cost results use

## REARDON'S BONDEX WATERPROOF CEMENT PAINT

*Instructions:* First scrape or wire-brush all sooty, scorched, oily or old painted brick, then wash them thoroughly with a Tri-Sodium Phosphate-Water solution (1½ lbs. TSP to 1 gallon hot water) to cleanse any remaining from the pores and restore suction.

Before applying Reardon's BONDEX, wet the surface thoroughly and work on the shady side of the house to avoid the drying heat of the sun. The second coat of BONDEX finishes the job and should be applied within 24 hours after the first without additional wetting. The result—a perfectly bonded finish of modern beauty—weatherproof—waterproof—permanent. Remember, BONDEX waterproofs basements too.

Manufactured Only by

**THE REARDON COMPANY**

ST. LOUIS • CHICAGO • LOS ANGELES

Reardon's BONDEX is  
Nationally Advertised  
in  
**SATURDAY EVENING POST**  
and  
**BETTER HOMES AND GARDENS**



## SAMSON SPOT SASH CORD

When an architect wants to be sure that the most durable and economical material will be used for hanging windows, he specifies Samson Spot Sash Cord. He knows from long experience that it is the one cord he can always depend upon to be of the same high, uniform quality. He knows that it is made in only one grade positively protected against substitution by the Colored Spots—our trade-mark.

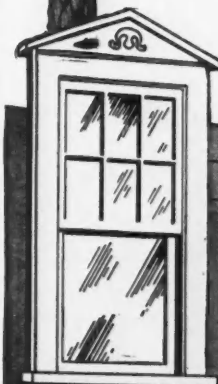
Architects everywhere hold Samson Spot Sash Cord in high esteem, because it merits their confidence with its longer service—often extending to more than twenty-five years. It has greater toughness than ordinary cord due to the great number of fine three-ply yarns in each strand—no cheap roving is used—no loaded center—it is all yarn. It resists wear longer over pulleys because its surface is firmer, smoother. It does not stretch. It is noiseless.

Specification data showing sizes and actual wear tests gladly sent upon request.



**SAMSON  
CORDAGE  
WORKS**  
91 Broad St.,  
BOSTON

*durability · efficiency  
· · · economy · · ·*





**S**URE, you could make your bricks on the job—but a builder would go broke trying it.

Windows, too, can still be fitted on the job, but now there's a better way, a way that saves time, gives you bigger profits, and cuts out complaints. It's this new Silentite Window, built by Curtis as a unit and fitted by Curtis at the factory.

All parts—sash, frame, trim, screen, storm sash—are machined and pre-fit to go together quickly and without costly fitting on the job. Profits go up when costs go down.

And what windows these are! They're dipped to prevent rot. They can't rattle or bind. There's no sash cord, no weights or pulleys to cause trouble. And they're insulated to make them five times as weather-tight as ordinary windows—to save as high as 25% on fuel bills.

Send today for full information on the first real improvement in double-hung sash in nearly 300 years. Get the facts on how easy it is to install Silentite, and the opinions of satisfied owners. The coupon will bring you full information.

- CURTIS BROS. & CO., CLINTON, IOWA  
 CURTIS & YALE CO., WAUSAU, WIS.  
 CURTIS SASH & DOOR CO., SIOUX CITY, IOWA  
 CURTIS DOOR & SASH CO., CHICAGO, ILL.  
 CURTIS-YALE-PURVIS CO., MINNEAPOLIS, MINN.  
 CURTIS COMPANIES INC., CLINTON, IOWA  
 CURTIS, TOWLE & PAINE CO., LINCOLN, NEB., TOPEKA, KAN.

Curtis Woodwork is available through the following distributors:  
 Allen A. Wilkinson Lumber Co., Indianapolis, Ind.  
 Rust Sash & Door Co., Kansas City, Mo.  
 Morrison-Merrill & Co., Salt Lake City, Utah  
 Hallack & Howard Lumber Co., Denver, Colo.  
 Campbell Coal Company, Atlanta, Ga.  
 Jacksonville Sash & Door Co., Jacksonville, Fla.



THE "INSULATED" WINDOW

Other Curtis products:  
 Exterior and Interior Doors • Frames • Trim • Entrances • Moldings  
 Panel Work • Kitchen Cabinets • Cabinet Work • Mantels  
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 Garage Doors • Miterite Door and Window Trim  
 "Curtis Woodwork in Walnut"

CURTIS COMPANIES SERVICE BUREAU  
 Dept. 505 Curtis Building, Clinton, Iowa  
 Please send me complete information on Curtis Silentite, the "insulated" window.

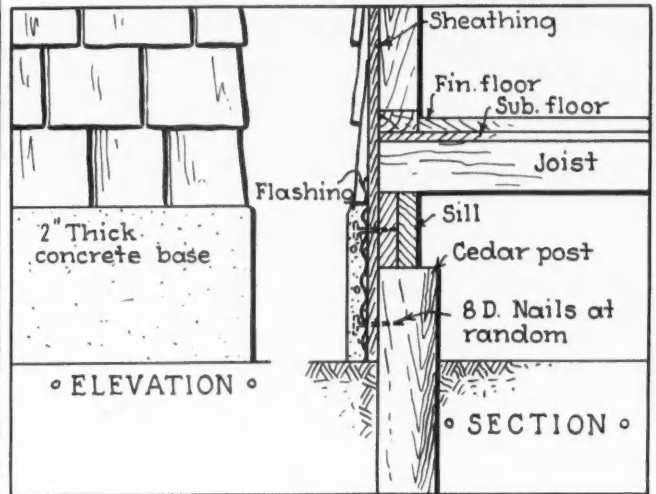
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 Address.....  
 City..... State.....

**Cement Slab Base Finish**

**T**HE general practice in building a frame house on wood posts is to use common boards to cover the space between the sill and the grade line. This method is unsightly and offers little insulation.

An economical, attractive, finished and air-tight method is shown herewith. The sheathing, which extends to the grade line, has nails driven into it at random, or can be covered with metal lath to anchor the two-inch thick concrete base. A form board is set two inches from the sheathing and ordinary foundation concrete mixture used. Working the concrete with a trowel or wooden paddle gives a smooth surface finish.

I have used this base on several new and old buildings without a single crack showing later. It gives the appearance of a solid foundation.—Wm. L. HAMMONS, Gary, Ind.



METHOD for covering base of buildings on posts.

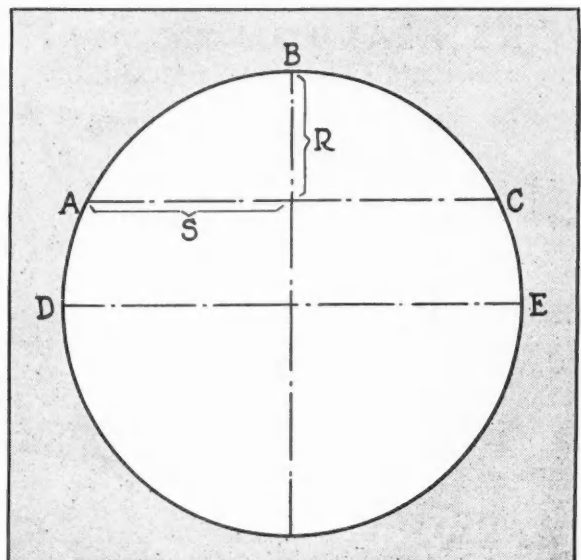
**Finding Radius of Arc**

**B**ECAUSE my father has been a subscriber of the *American Builder* for a long time, it has been my pleasure to read it. I saw in the "Practical Job Pointers" column some time ago a method for finding the radius of a given arc. This method was simple but required layout work and hence time and instruments.

The method I'm going to present is mathematical, one hundred per cent accurate, and simple. It requires no layout work. Let S be one-half the subtending chord of arc ABC. Let R be the rise of the arc. The diameter (DE) then equals R plus S squared divided by R.

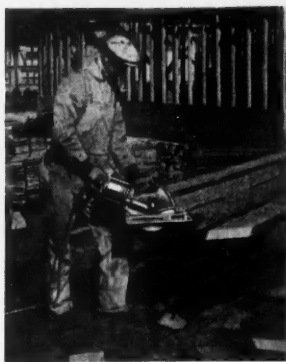
Example: Let R = 4, S = 6. Diameter =  $4 + \frac{6 \times 6}{4} = 13$ .

—KENNETH LEMKE, Carpenter Assistant, Clintonville, Wis.



SIMPLE figuring gives radius of an arc.



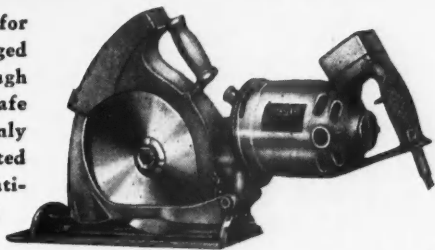


**Will Rip 6 Feet of 3" Oak in 1½ Minutes!**

## STANLEY ELECTRIC SAFETY SAW

**Universal Motor—Plugs In Light Socket On the Job**

Plenty of power for fast cutting; rugged enough to stand rough handling on the job. Safe . . . blade is exposed only when cutting . . . patented guard locks automatically when cut is finished.



Pictured, No. CC9 with bevel base, 9" blade—capacity 3". Will do all cutting on home construction including bevel cuts. Other sizes up to 16" blade—the largest portable electric saw made—cuts 6" deep.

Write for full information, or ask your dealer for free demonstration.

**STANLEY ELECTRIC TOOL DIVISION**  
*The Stanley Works*

133 Elm Street



New Britain, Conn.

### QUICK, LOW-COST DECORATION



You know there are hundreds of homes in your community in need of re-decoration. Owners have not re-painted simply because of cost.

MURAL-TONE gives you the appeal that makes people buy. "Enough paint for a room for the price of a few movie tickets."

It is something everyone can understand. Does it work? *It has . . . for dealers from coast-to-coast.*

Your explanation of MURAL-TONE'S low cost is so logical—the casein-lithopone paint in thick paste form. A gallon, thinned with water, yields a gallon and two-thirds of paint.

Dries in 40 minutes to a beautiful flat finish. An amazing paint and an amazing sales story for you.

You can make money with MURAL-TONE. Sweeping the country because it meets the demand for quick, low-cost decoration.

Please address: The Muralo Company, Inc., (Founded 1894), 568 Richmond Terrace, Staten Island, N. Y. . . . Branches: Atlanta, Boston, Chicago, San Francisco.

**SEND FOR FACTS TODAY!**



Another Reason ★They Are The First Choice of Most Builders

## INSTALLATION Goes Like CLOCK-WORK

This means a savings to you in time and labor. Kinnear Rol-Top Doors were designed by Engineers with 40 years' experience in installing many of the country's largest door installations. So the importance of simple, economical erection was fully realized. Every detail was designed with that thought. When Rol-Tops are shipped to the job—whether it's 2 or 100—you know your installation will run to schedule. And when you prefer, Kinnear can even relieve you of the installation. Their nation-wide organization of Trained Erectors make this possible. In Rol-Top you get the economies that are important to your profit . . . and the convenience, quality and durability that your customers want today.

Kinnear has Rolling Doors for every fire or service purpose—for old or new buildings. Besides Rol-Top in wood or steel, there's the famous Kinnear Steel Rolling Grilles. Send Today for Kinnear's complete catalog and prices on your present door needs.

**The KINNEAR MFG. CO.**  
1560 - 80 Fields Ave. Columbus, Ohio

Offices and Agents in All Principal Cities

A battery of 12 Kinnear Roll-Top Doors, 10'x11' 6" in size, as they were recently being installed on a Coca Cola Bottling Plant.



**KINNEAR**

★ **RÖL-TOP**

**DOORS**



## LET'S TALK ABOUT WINDOWS

Windows are not just a pane of glass or two. More than ever, windows enter into the decorative scheme of the home and they are carefully placed with proper regard to ventilation and light. An important window consideration on the part of architect and builder is the **kind of wood used in sash and frame.**

Home owners are fussy about windows. They expect them to fit snugly, yet open noiselessly and without effort. To get these results in fullest measure use Western Pines. These woods are easy to work. They have a soft, evenly grained texture. They cut accurately at any angle or to any pattern. Even finely moulded crossbars and intricate details show no tendency to split or sliver.

Suggest Western Pines for any job where a good softwood is needed—for bookshelves, linen closets, knotty paneling, wainscoting, exterior trim and siding, as well as window frames, doors, sash and screens. There's a suitable grade for each particular use in residential buildings.

Send for illustrated booklet "Western Pines." Address Dept. B-3 Western Pine Association, Yeon Building, Portland, Oregon.

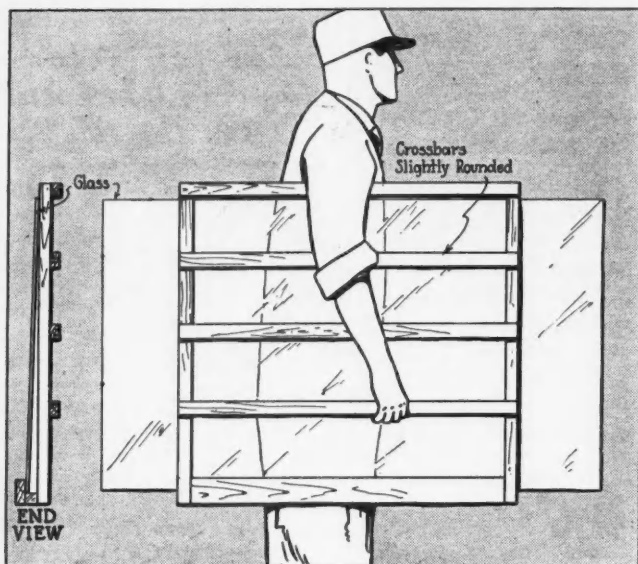
# WESTERN PINES

Idaho White Pine • Ponderosa Pine • Sugar Pine

### Frame for Carrying Glass

**T**HE enclosed sketch illustrates a device which will enable a workman to carry a pane of glass too wide to go under his arm, with no danger of cutting his hands or breaking the glass.

The crossbars at various heights permit one to take hold at the most convenient point. The cross bars could be rounded slightly to make them easier on the hands.—R. A. MOREY, Terre Haute, Ind.

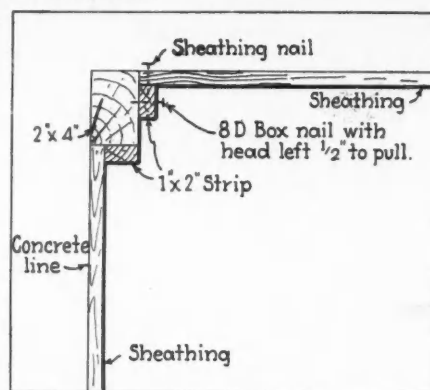


WORKMAN using glass-carrying frame.

### Corner Nailing of Concrete Forms

**I** WISH to offer a Pointer which I have found a great help in stripping concrete forms, where they are made up in corners. Instead of nailing a 2x4 in the corner and nailing the sheathing to it, I have found that by placing the 2x4 stud on concrete line and nailing a 1x2 inch strip  $\frac{3}{4}$  inch back from both edges, and then nailing the sheathing into the 1x2, time and lumber will be saved.

I am in the building business and have tried every way that I have ever heard of for making corners, and have found this to be the best, as these corners can be made up ahead of time so that the workmen don't have to stop their work to do that.—FLOYD E. MATTOX, Builder, Pomona, Calif.



**NAILING** concrete forms at corners for easy stripping.

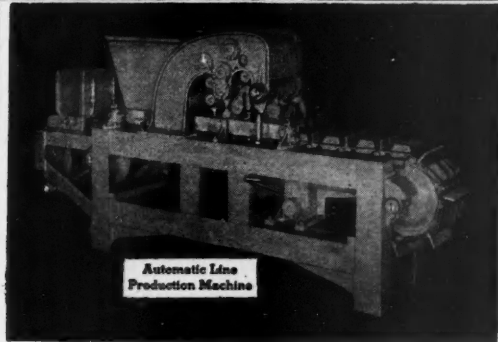
### Ink for Blueprint Corrections

**I** AM a regular reader of *American Builder* magazine and find it both useful and interesting. I wish to submit, for your consideration, the following idea for your "Practical Job Pointers" column.

Many times it is necessary to change or correct blueprints. This can be done very easily with a home made ink. To make this ink, dissolve enough bicarbonate of soda (baking soda) in water to make a solution of about the consistency of thick ink. To correct the figure, or whatever the case may be, simply use

(Continued to page 100)

# PROFIT FROM TO DAYS DEMAND for permanent low cost housing



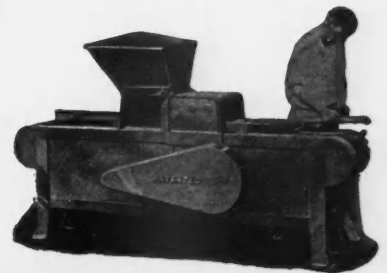
Automatic Lath Production Machine

DUNBRIK-DUNSTONE MANUFACTURERS HAVE SHOWN THE WAY. They have set a new high standard of value in permanent, low cost home building. They have actually proven that a beautiful ashlar DUNSTONE wall can be built for less than the cost of frame.

THEY ARE GETTING THE MAJOR SHARE of the business in their territories, for in actual building operations they have demonstrated DUNSTONE cuts cost at every step from foundation to roof.

LEARN HOW THIS MACHINE makes both Brick and DUNSTONE at unheard of low cost—How DUNSTONE builds more wall with less material—How hollow ashlar walls can now be built with from one-third to one-half less units.

HERE IS A NEW AND PROVEN OPPORTUNITY for you if you want to ride the crest of America's greatest building program. Send for "4 Keys to Success." It may mean independence for you.



## DUNTEX ROOF TILE MACHINE



LEARN HOW YOU CAN DOMINATE the vast roofing material market with DUNTEX roof tile unequalled in value, permanence, beauty and fire safety. Hundreds of both old and new buildings must be reroofed annually. With this machine your costs are low, investment moderate and selling prices offer attractive profits.

Send for "DUNTEX Survey & Manufacturer's Manual."

W. E. DUNN MFG. CO., 450 W. 24th St., Holland, Mich.

## All in a single compact unit

Complete AIR • Economical STEEL BOILER • Year 'round HOT WATER SUPPLY  
CONDITIONING • HEAT without a storage tank

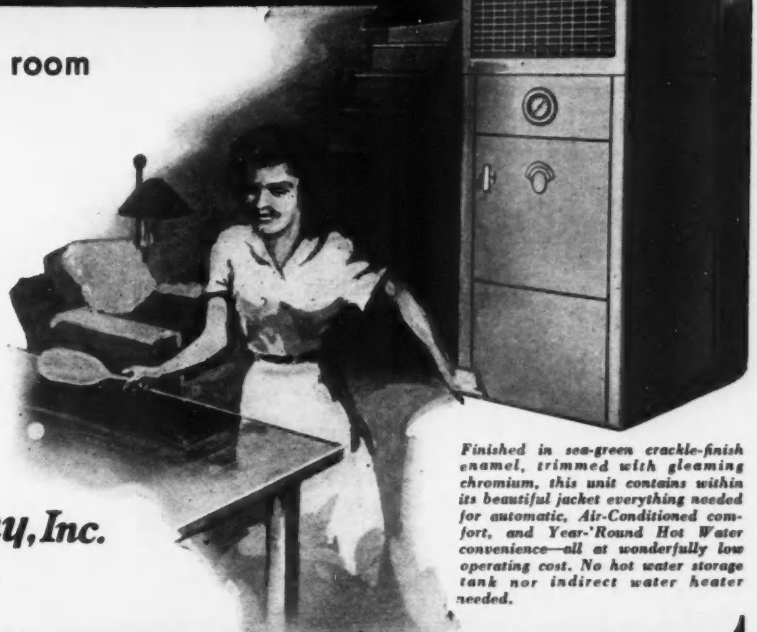
### A perfect set-up for the recreation room

In an attractive unit requiring the very minimum of space, the new Fitzgibbons Boiler-Air Conditioner provides three services essential to the modern home. This unit operates economically with any good oil burner. The burner, with its controls, is usually concealed and protected behind easily removable panels. Here at last, is the unit for which builders, architects and home owners have been waiting.

Get all the facts—write now for full details.

### Fitzgibbons Boiler Company, Inc.

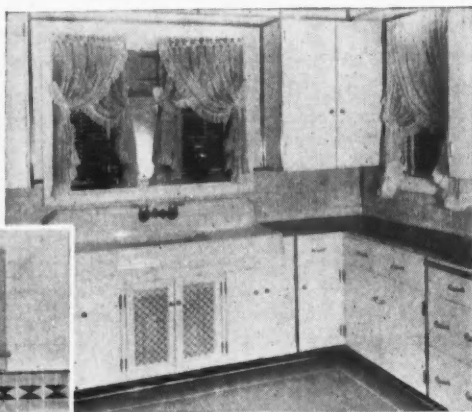
GENERAL OFFICES:  
ARCHITECTS BLDG., 101 PARK AVE., NEW YORK, N. Y.  
WORKS: OSWEGO, N. Y.  
BRANCHES AND REPRESENTATIVES IN PRINCIPAL CITIES



Finished in sea-green crackle-finish enamel, trimmed with gleaming chromium, this unit contains within its beautiful jacket everything needed for automatic, Air-Conditioned comfort, and Year-'Round Hot Water convenience—all at wonderfully low operating cost. No hot water storage tank nor indirect water heater needed.

## FITZGIBBONS BOILER-AIR CONDITIONER

# A MAJOR IMPROVEMENT AT A MINOR COST . . . GENUINE MASONITE TEMPRTILE



**N**EW or remodeled bathrooms, kitchens and shops with walls of MASONITE TEMPRTILE present the same spotless beauty that usually costs so much. But they actually save money for the builder—and owner.

Genuine MASONITE TEMPRTILE is a grainless hard board, permanently embossed with tile-like grooves. It is made of wood, without glue or artificial binder. You can cut it or saw it into any size and shape with ordinary tools. And it can be nailed or cemented into place . . . quickly . . . easily . . . by regular carpenter. PRESWOOD, custom-finished by other manufacturers, is available to care for de luxe installations.

This modern tiling material has a marble-smooth surface ideal for enameling. Your choice of color schemes can be carried out with standard applications by regular painter.

Genuine MASONITE TEMPRTILE pays for its cost many times over. It is moisture-resisting. Properly applied, it will not warp, chip, split or crack. It is easy to keep clean and will give years of service in any climate.

Where plans call for plain surfaces in combination with TEMPRTILE, Genuine MASONITE TEMPERED PRESWOOD affords the same economy, easy workability and eye-appealing results. It can also be used in its natural warm-brown color for any and every room. Mail the coupon below for free samples and further information.

**IT'S RIGHT!  
MASONITE**

MASONITE CORPORATION, Dept. AB-5  
111 W. Washington St., Chicago, Ill.

Please send me a free sample and tell me more about  MASONITE TEMPRTILE,  MASONITE TEMPERED PRESWOOD.

Name \_\_\_\_\_

Address \_\_\_\_\_

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

## Ink for Blueprint Corrections

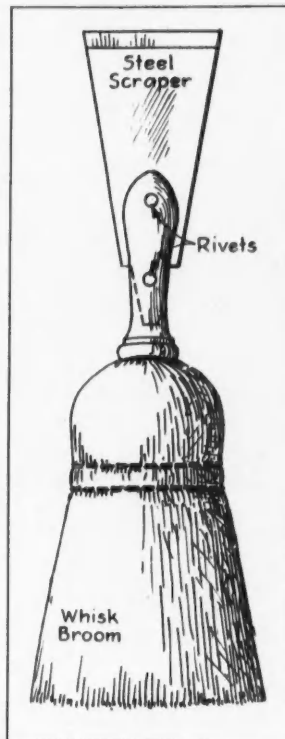
(Continued from page 98)

a clean pen and this solution. This can also be used to draw small drawings on developed blueprint paper, thus saving time and materials.—ROBERT HUBER, Buffalo, N. Y.

## Combination Whisk and Scraper

I AM sending in an idea for your "Practical Job Pointers" Department which I have found very handy. This combination of two tools in one is useful to carpenters and painters and can be made easily at small cost.

Buy a whisk broom with a wooden handle; make a saw cut in the handle deep enough to take the blade of a scraper. If necessary, another hole is drilled in the blade to allow it to be firmly riveted in the broom handle. This makes a good two-purpose tool.—WM. HARGREAVES, Vancouver, Can.

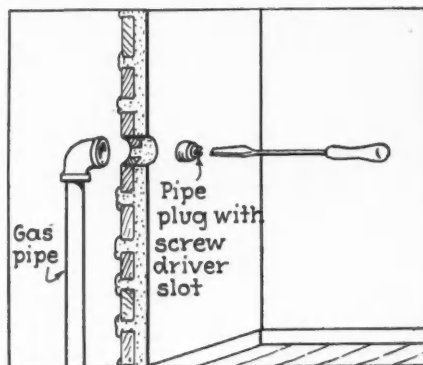


TWO-IN-ONE tool made of scraper blade riveted into handle of whisk broom.

## Removing Unsightly Gas Connections

I N THIS community, and all others where natural gas was once used for illumination before electricity became common, practically all homes which were built 25 or more years ago were piped for gas lights. When these houses were later wired, the customary practice was to cap these pipes and leave them protruding through walls or ceiling, and to this day a great many of these houses still have these pipe projections, which are very unsightly and a nuisance when repapering, as well.

They are easily eliminated. Take an ordinary pipe plug and saw a slot in the square wrench end with a hack saw, large enough to accommodate a large screw driver. Unscrew cap and nipple, insert plug on the screw driver into the elbow or tee on pipe and turn fast. Use a large screw driver on which a small pipe wrench may be used to tighten. Also coat threads of plug with white lead or the compound plumbers used for this purpose. If there is gas in the line, shut off until operation is complete. It is advisable to tie plug to screw driver in case it falls off before threads are caught, otherwise it would be lost in the partition. The hole may now be patched with plaster and papered over.—ERNEST GUSTAFSON, Builder, Kane, Pa.

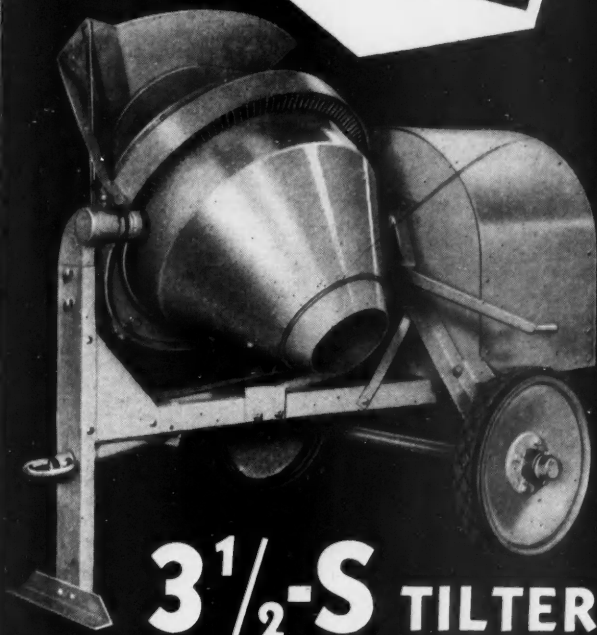


SLOTTED plug screwed into gas pipe behind wall to close off unused line.

**SMITH 3 1/2-S**

Same general design as the BIG SMITHS used on Boulder Dam Muscle Shoals Norris Dam, etc.

**NEW  
LOW  
PRICE**



**3 1/2-S TILTER**

**Handy 2-Wheel Trailer Mixer!**

with (1) Big wide feed chute (2) Famous "end-to-center" mixing action (3) Fast discharge thru short 40° arc—three EXCLUSIVE SMITH FEATURES. A much better machine with all advanced features, now available in the LOW PRICE FIELD. Mail coupon for literature

**SMITH  
MIXERS**

THE BOULDER DAM MIXERS

The T. L. Smith Co., 2849 N. 32d St., Milwaukee, Wis.  
Please send literature on the new Smith 3 1/2-S.

Name \_\_\_\_\_

Address \_\_\_\_\_

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**RIGID BRICKS—NAILED ON  
IN 3-IN-1 STRIPS**



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**SELLS ON SIGHT...**

**H**ERE'S A REAL SALES LEADER that sells on sight. This unique, rigid, asbestos-cement siding, reproducing the natural beauty of "wire-cut" brick has every sales appeal. It is rot-proof, age-enduring, termite-defying, fire-proof, and never requires painting or staining.

Over old clapboards, wood shingles, or stucco side walls, it eliminates up-keep expense, reduces fuel bills, and permanently beautifies exteriors.

In every community there is a tremendous potential market for this remarkable siding. Its popularity is increased by consistent Ruberoid advertising and the Ruberoid Finance Plan, which gives your customers as long as three years to pay, with no risk to you.

Use this newest Ruberoid-Eternit business-getter to capture more modernizing work, and for new construction as well. Mail the coupon for full facts.

Pat. Nos. 1,688,405 and 1,770,599

**RU-BER-OID**  
ROOFING AND BUILDING PRODUCTS

**INVESTIGATE**

THE RUBEROID CO. AB-5  
500 Fifth Ave., New York, N. Y.

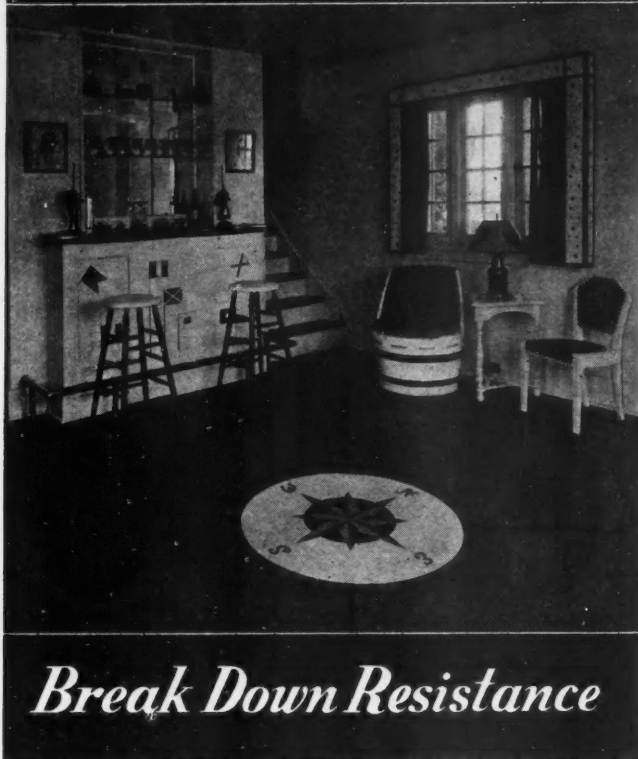
Please send me full facts about Eternit Brick-type Asbestos-Cement Sidings, and information about the Ruberoid Non-Recourse Finance Plan.

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**FLOORS LIKE THIS...**



Ruby and brown compass Linoset on field of blue Armstrong's Linoleum in plain colors for recreation room.

*Break Down Resistance*

**G**AY floors like the one above give any property an "edge" on competition. Prospects with appetites for "something different" are more likely to buy where there's a smart custom-built Armstrong's Linoleum Floor.

Yet the cost of making your floors a real aid to easier sales is trifling when you consider that homes with custom-built Armstrong Floors move faster and command better prices. Write now for a list of local Armstrong dealers who'll be glad to give you estimates. And if you want some smart, practical room ideas that will be especially helpful in new construction or modernizing, send *ten cents* now for "Floors That Keep Homes in Fashion" and "Gay Floors for Basement Playrooms." Armstrong Cork Products Company, Building Materials Division, 1218 State Street, Lancaster, Pennsylvania.



**Armstrong's**

**LINOLEUM AND RESILIENT TILE FLOORS**

LINOTILE ~ ACCOTILE ~ CORK TILE ~ RUBBER TILE  
LINOWALL ~ ACOUSTICAL CEILINGS

**NEWS of the MONTH**  
Building Activities and Meetings

**Flood and Tornado Relief Provided Under NHA Amendment**

**O**NE of the amendments of the recently enacted Title I NHA provides for relief of flood and storm sufferers by allowing lending institutions to make FHA insured loans necessary for the repair of damage which has been or may be caused by earthquake, conflagration, tornado, cyclone, hurricane, flood or other catastrophe in the years 1935 and 1936.

Lending institutions are insured against loss up to 10 per cent of all loans made for these purposes and, if the insurance reserve so created is not sufficient to pay the losses resulting from such loans, may apply any unused insurance reserve accumulated by them under their contracts of insurance in effect up to April 1, 1936, to such losses. For loans insured under the general provisions of Title I, a new insurance reserve must be built up from April 1, 1936.

This amendment provides for the restoration, rehabilitation, rebuilding and replacement of improvements on property damaged or destroyed by floods or other catastrophes occurring in the years 1935 and 1936. Such restoration or rehabilitation may be done with the proceeds of loans not in excess of \$2,000 for residential and farm property and not in excess of \$50,000 for industrial, commercial or institutional property.

New construction of property destroyed or damaged by these catastrophes is permitted, whether or not the new construction is on the same site occupied by the original structure, or on another site in the same locality. Replacement or repair of eligible equipment and machinery which had been installed in property destroyed or damaged by the catastrophes also is permitted. Operations under the amendment may continue until Jan. 1, 1937, but may be terminated by the President at any time prior to that date upon his determination that the emergency no longer exists.

**Construction Volume Growing Steadily**

**A**CCORDING to figures of F. W. Dodge Corporation covering the 37 eastern states March construction contracts totaled \$199,028,300 as compared with \$142,050,200 for February and only \$122,940,500 for March, 1935. Despite severe winter and harsh floods, these figures showed a total value 40 per cent higher than was reported for February and about 62 per cent ahead of the March, 1935, volume.

	March, 1936	March, 1935	Feb. 1936
Residential .....	\$ 55,270,600	\$ 32,209,400	\$ 31,175,500
Non-Residential ....	81,460,300	44,476,600	62,610,900
Public Works and Utilities .....	62,297,400	46,254,500	48,263,800
Total .....	\$199,028,300	\$122,940,500	\$142,050,200

Increases in construction were shown for residential and non-residential building as well as for heavy engineering types. Gains over last year were well distributed geographically, with each of the 13 major districts east of the Rockies participating, except the New Orleans Territory (Mississippi and Louisiana). Increases in construction as compared with February, 1936, totals were shown for each district except New England where flood conditions were severe, and in the New Orleans Territory.

For the first quarter of 1936 total contracts for all classes of construction in the 37 states as a whole amounted to \$545,871,300 as against only \$297,761,500 for the corresponding quarter of 1935.

**First Quarter Contract Totals by Classes—37 Eastern States**

	1936	1935	% Increase
Residential Building...	\$123,885,600	\$ 71,236,400	75
Non-Residential Bldg..	234,551,000	108,047,800	118
Public Works & Utils..	187,434,700	118,477,300	60
Total Construction..	\$545,871,300	\$297,761,500	83

## COLORFUL STONE HOMES



### Sell Easily and Quickly

The natural, softly glowing color of Golden Tone Ashlar Wall Facing endows homes with artistic distinction—individuality and charm—that makes them easier to market. Indeed, these natural stone homes are generally sold before completion. \* \* \* Costing only 5 to 6% more than ones constructed of lesser materials, they should readily bring 10 to 25% more.

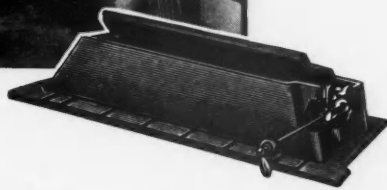
Ask for new Ashlar Wall Facing booklet AS. It illustrates many Briar Hill homes, pictures the stone in its own hospitable, warm colors and contains valuable building suggestions. We will gladly estimate the cost of your houses in this remarkable sandstone—without obligation, of course.

THE BRIAR HILL STONE CO., GLENMONT, O.



WRITE FOR FREE BOOKLET TODAY

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## Specify PEERLESS dampers

Peerless dome dampers assure perfect operation of wood or coal burning fireplaces. They eliminate unhealthy drafts and heat loss when the fireplace is not in use. Built of heavy stove plate cast iron. They will give lifetime service. You have three models to choose from—Rotary—Poker or Chain Control.

### OTHER PEERLESS PRODUCTS

Fireplace fixtures—ash dumps—coal windows—ash pit doors—garbage receivers, radiant gas heaters and Gas Conversion Burners.

Details and prices on request.

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1400 W. Ormsby Ave. Louisville, Ky.

This ONE Material  
Gives You FOUR  
Ways to Get Jobs

Capturing the prospect's interest is one of the biggest problems in selling any building material. Nu-Wood—the multiple-purpose wall and ceiling covering—gives you at least FOUR ways of doing this. You can sell it as better decoration—for no other material can match Nu-Wood's glowing, varied colors and unique surface texture. You can sell it as insulation—for Nu-Wood gives efficient protection from extremes of heat and cold. You can sell it as a noise-quieting material—because Nu-Wood makes rooms quieter. And you can sell it for acoustical correction in theatres, churches and public buildings.

Nu-Wood appeals to the prospect who wants more for his money. It literally sells on sight—once a customer has seen the beauty of Nu-Wood he is no longer satisfied with old-fashioned materials. And Nu-Wood, too, is priced for quick selling.

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Nu-Wood Tile on the ceiling and Nu-Wood Plank on walls transform a shabby interior into an interesting new one.

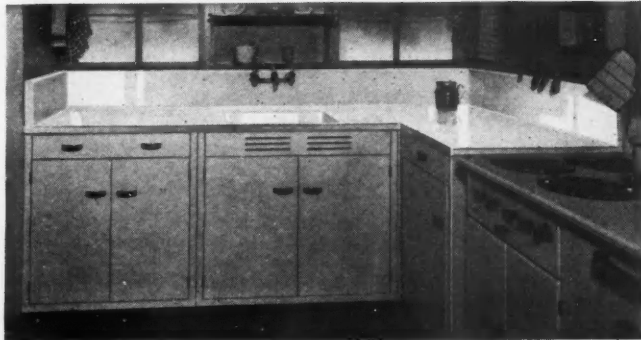
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Room 119, First National Bank Building,  
St. Paul, Minn.

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**NU-WOOD**  
MADE BY THE MAKERS OF BALSAM-WOOL

## FOR MODERN KITCHENS



## Veribrite SINKS

**ANY SHAPE TO FIT ANY SPACE  
ANY SIZE OR COLOR**

Veribrite Sink-Tops are of integral, one-piece construction. No joints to pull apart—no cracks to catch dirt or hold water. Smooth work areas, all at one level, are thus provided—bright modern colors—pastel shades to harmonize with any desired color scheme. The acid resisting porcelain enamel surfaces on heavy gauge Armco Iron lend distinction and will prove an added attraction to any kitchen.

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## Veribrite Products

Division of

**General Porcelain Enameling & Mfg. Co.**  
4137 West Parker Avenue Chicago, Illinois



**"I want a job  
in your shop!"**

● Put this **MONARCH VARIETY WOODWORKER** to work for you and save time . . . space . . . power . . . **MONEY**. Quality in every line and operation. Four men can use this machine at one time. A combined Rip and Cut-Off Saw Bench, with Boring Attachment, Hollow Chisel Mortiser and 8" Jointer. Electric

motor or gasoline engine, or supplied without power. Now's the time to "Modernize with Monarchs."

Complete catalog and prices on our full line of modern woodworking machinery, saw mills, etc., sent on request. Write and tell us your own requirements and situation.

## AMERICAN

SAW MILL MACHINERY CO.

Makers of Woodworking and Saw-Mill Machinery

60 MAIN STREET

HACKETTSTOWN, N. J.

## Prudential Becomes First Mortgage Assignee

THE Prudential Insurance Company, functioning in the newly established capacity of acceptable assignee, made its first purchase of FHA insured mortgages when it acquired over \$100,000 of these securities from the Franklin Mortgage and Guaranty Company at Newark. The Prudential is the first company to become a Federal Housing Administration acceptable assignee, and with this initial acquisition inaugurates the operation of a national organization for the purchase of Federal Housing Administration insured mortgages.

The operations of the Prudential as an acceptable assignee will be confined exclusively to purchasing insured mortgages from approved mortgagee. In this way the Prudential will perform a function similar to that contemplated for National Mortgage Associations, authorized under Title III of the National Housing Act, and will be an important factor in the maintenance of the broad and active market for Federal Housing Administration insured mortgages which is providing liquidity for insured mortgage investments to approved mortgagees throughout the country.

## Southern Pine Home at Texas Fair

AN ALL-SOUTHERN pine model home is being built on the grounds of the Texas Centennial Exposition at Dallas. It will be a five-room modern bungalow, featuring an attractive exterior and incorporating a unique application of Southern Pine in interior finish. The home is considered distinctly modern in design and arrangement, handsome in appearance, and in the moderate priced class of residences. Goodwin & Tatum, Dallas architects, have designed this home with the idea that it can be built almost anywhere in the United States at a cost ranging from \$4,500 to \$5,000.

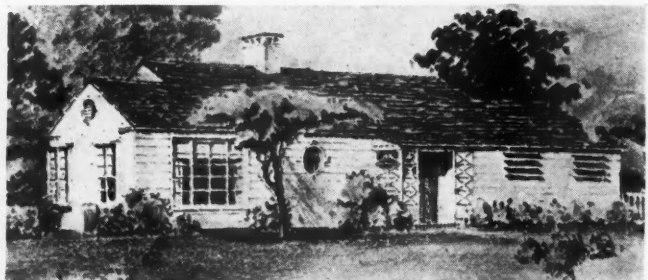
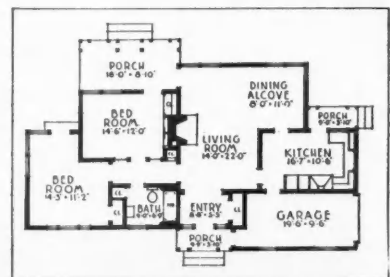
In addition to being built of officially grade-marked Southern pine, the Association's famous "fifteen cardinal points of correct frame construction" and approved methods of termite control are incorporated in its construction.

The over-all dimensions of the home are 37 x 59 feet. A feature of the design for this home is that it presents as attractive an appearance when viewed from the rear as from the front. Walls and ceilings are covered with Southern pine boards—shiplap, V-jointed, or moulded-joint—or panels. The doors are slab, and laminated Southern pine. The prevailing interior decorative tone will be the bright, pleasing, natural finish of the wood. The roof will be covered with cypress shingles.

All the rooms are of good size for a small home and contain numerous built-in features and provisions for all modern conveniences. The finished floors in all the rooms, excepting the kitchen and bath, are of B & Btr. edge-grain Southern

(Continued to page 106)

RIGHT: Plan of Southern pine model home being built at the Texas Centennial Exposition. Below: Perspective of this home designed by Goodwin and Tatum, Dallas architects.

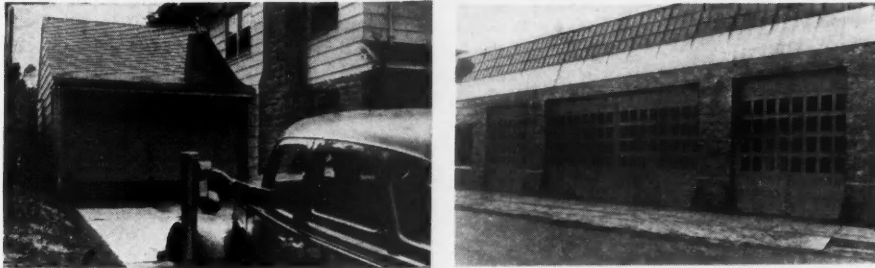




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FIGURE IT OUT YOURSELF**

THE **"OVERHEAD DOOR"**

FOR  
GARAGE—FACTORY—WAREHOUSE  
BACKED BY A NATION-WIDE SALES AND SERVICE



Everybody deserves a satisfactory garage door. A door that is backed by a NATION-WIDE SALES-SERVICE ORGANIZATION, that will give their many years of actual door experience in selecting the proper equipment for your particular requirements, and also, see to it that it is properly installed. The "OVERHEAD DOOR" is built with innumerable selective features which insure the user of LIFE-LONG SATISFACTION. **The door alone is worth the investment.**

A MILLION USERS THE BEST RECOMMENDATION

**OVERHEAD DOOR CORPORATION  
HARTFORD CITY, INDIANA U. S. A.**

**CLIP THIS COUPON and MAIL NOW!**

MADE IN ANY SIZE FOR ANY OPENING  
FROM A HANGAR TO A PRIVATE GARAGE

Please send me literature and full information regarding your product.  
I am interested in doors for the particular purpose as checked.

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*new* **PULLMAN**  
ADJUSTABLE  
SASH  
BALANCE

Adjusting Screw

*A brand new idea in Sash Balances.*

These new Pullman spring Sash Balances for double hung windows can be adjusted with an ordinary screw driver after installation, and without removing the Balance or SASH. Re-adjustment is possible at any time to permanently maintain a perfectly balanced window.

Quick installation, all pressed steel construction and non-breakable, entirely encased insuring free action of moving parts, elimination of costly box frame replaced by plain plank frame, gives you wider scope of design, narrow trim, simplicity and economy, no weight pockets, low tonnage. Used for government buildings and approved by Bureau of Standards at Washington.

*Write for catalog showing complete specifications and architectural details.*

**PULLMAN MFG. CORPORATION**  
51 Ford Street ROCHESTER, N. Y.

**NEW MACHINE**  
*for Contractors*

POWERFUL  
PROFITABLE

**CONTRACTOR SPECIAL  
Speedmatic 8 Floor Sander**

*This cannot be demonstrated in an advertisement but will gladly be demonstrated on any floor job you select*

Here is a brand new machine built to make you more money. Powered with a motor that develops four horse power, yet operates from ordinary house current—Bearings are lubricated for life at factory—Drum runs at selective speeds—Dust system serves double purpose—Modern streamlined design. A sander that does more and better work, therefore makes more and better profits for users.

**WRITE** For the sake of your own pocketbook see this before buying any sander. Ask for details without obligation.

*The* **PORTER-CABLE** SYRACUSE, N. Y.  
**MACHINE COMPANY**  
1721-5 North Salina Street Syracuse, New York

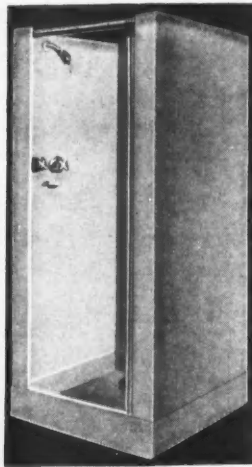
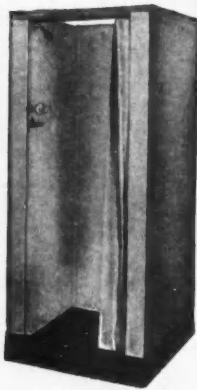
## The LOW Cost of Being MODERN!

Now, all buildings, new or remodeled, can enjoy finest shower facilities. For Bathe-Rite meets every price requirement and style preference. With a full selection of models offering striking beauty in finish and design—practical and exclusive features of sanitation—extra refinements for complete cleanliness. Quick and easy one man installation. It's the MODERN shower within everyone's reach. Distributed by leading plumbing wholesalers everywhere.

### Model D—Popular Price

Size 36"x36" and 32"x32"

—the ideal unit for residences, summer homes, clubs, hotels, camps, where economy is important. Standard Bathe-Rite fittings and features, at new low cost.



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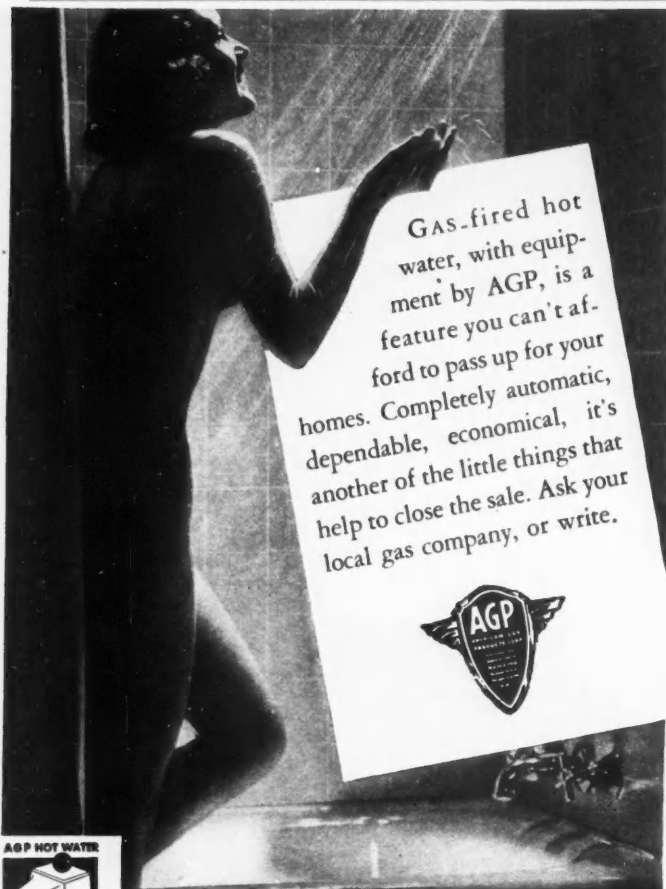
Size 36"x36" and 32"x32"

The medium priced, national favorite. Famous Firestone non-slip receptor, leak and waterproof. Instantly regulated, water saving shower head. Solid brass, chromium polished fittings. Baked enamel finish, 18 gauge galvanized walls, smooth inside surface easy to keep clean.

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**BATHE-RITE  
FERROMETAL  
SHOWER STALLS**

A letter or postcard to our factory will bring you complete information and specifications on MODERN shower stalls by mail. You'll find this helpful in making plans.



GAS-fired hot water, with equipment by AGP, is a feature you can't afford to pass up for your homes. Completely automatic, dependable, economical, it's another of the little things that help to close the sale. Ask your local gas company, or write.



**AMERICAN GAS PRODUCTS CORPORATION**

DIVISION OF AMERICAN RADIATOR & STANDARD SANITARY CORPORATION

40 WEST 40th STREET - NEW YORK, N.Y.

(Continued from page 104)

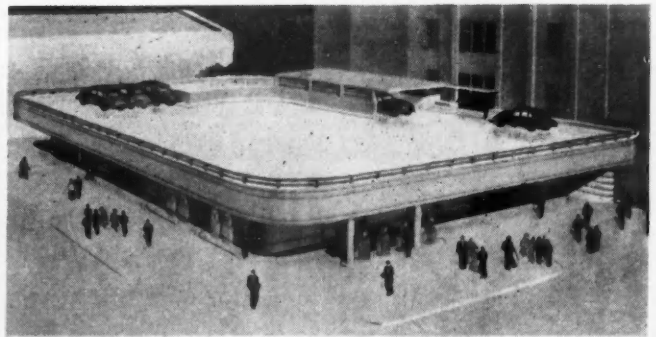
pine. The kitchen floor, which will be covered with linoleum, will be flat-grain Southern pine and the bathroom floor is of tile.

The front entry located in the center of the long-side of the home will have a handy coat closet and will be finished in knotty Southern pine boards. A commodious living room, 14 x 22 feet, has an inviting fireplace in the center on the left-hand side and the walls are covered with wide pine boards laid horizontally and in natural finish. A dining alcove, 8 x 11 feet, is located off the living room on the right-hand side, the finish and decorative scheme are the same as in main living room.

The All-Southern Pine Model Home will be furnished and kept open for the information and convenience of visitors to the Exposition and as a headquarters for visiting lumbermen and their families, with attendants to explain all the details of the construction and uses of Southern pine to those who may be interested in such information.

## Unique Parking and Service Station

GRAHAM, Anderson, Probst and White, Chicago, are the architects for a new type parking and service station to be completed Aug. 1 for Marshall Field's Evanston store. This unique structure will be a one-story steel and concrete building 113 x 160 feet with parking area for 50 cars on the roof and directly connected with the second floor of the store; a ramp leads up to the roof deck. The first floor has been leased to the Firestone Tire and Rubber Company as a service station. Total cost will be \$60,000.



ARCHITECT'S drawing of Marshall Field service station.

## Reports Successful Fireproofed Lumber

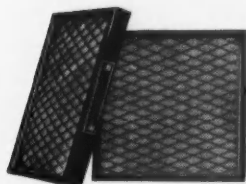
FOR centuries men have dreamed of fireproofed lumber. Leading scientists of former ages tried repeatedly to produce it, but without success. Fireproofed lumber is at last a reality, according to a detailed illustrated report issued by the Underwriters' Laboratories after completing a series of exacting fire tests.

"Practically noncombustible and noninflammable" is the evaluation of effectiveness of the fireproofed wood tested by the Laboratories. The material investigated and approved is fireproofed red oak and maple for flooring and interior trim, chemically impregnated by the Protexol Corporation, Kenilworth, New Jersey.

Workability of the test pieces was found to be equal in every way to untreated lumber. Ability of the fireproofed lumber to take paint, varnish, oil, or wax is not altered. Its appearance is unchanged, and weight is only slightly greater than untreated material. Some of the test panels used were scrubbed with cleaning compound, flushed with clean water, and dried every thirty minutes for a month before the "ordeal by fire" began. In all tests the merits of fireproofed lumber were demonstrated.

Actual fire conditions were created. Floors of fireproofed and of untreated lumber were placed in gas-fired furnaces and flames were applied to their surfaces, and to ends. Behavior was watched through test windows, and temperatures inside the furnace were recorded. Fireproofed floors were blackened and charred on the exposed surface, but were intact and otherwise sound, having successfully stood as a barrier against the fire and prevented its passage.

**"WHERE MAY  
DUST-STOP  
AIR FILTERS  
BE APPLIED?"**



● Builders, contractors, realtors, architects, manufacturers and installers of air-conditioning systems and equipment . . . all must know the story of CLEAN AIR through the application of DUST-STOP Air Filters. For detailed information on Dust-Stop superior features of construction and application, write

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303 MADISON AVENUE • TOLEDO, OHIO

**DUSTSTOP**

REPLACEMENT-TYPE

**AIR FILTERS**



**THE ANSWER IS  
SIMPLE . . . .  
GRAVITY WARM AIR SYSTEMS  
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AIR CONDITIONING SYSTEMS  
AND UNITS . . . . .  
COMBINED or "SPLIT" SYSTEMS**



**STUCCO SPRAYING  
100% PROFIT**

**NEW IMPROVED MACHINE** and Colorcrete waterproofed material renews old stucco, brick, block or any other masonry surfaces. Colorcrete, when applied with this machine in a plastic mortar-like mixture, fuses with any masonry material. It waterproofs and fills all cracks and checks and can be applied in any thickness desired in 30 colors, shades and textures. It is fully proven by over 12 years of actual use under all conditions and in every climate.

**HUNDREDS OF OLD BUILDINGS** everywhere need beautifying and preserving. Their owners are ready buyers when shown the attractive and permanent surfaces that Colorcrete will give their old buildings. In new construction the demand today is for low cost masonry which needs Colorcrete to give it beauty at low cost.

**COLORCRETE IS PROFITABLE** and easy to apply. The machine is simple. Operators report costs of 2c and up per sq. ft. and sell up to 7c. Some have paid for their equipment from first few jobs. Machine capacities up to 1,000 sq. ft. per hr.

**GET THE FACTS.** Colorcrete books tell the whole story. Learn of the immense market for Colorcrete in your community, its profit possibilities and how we help you start with a modest investment. Write today. It may mean business independence for you.

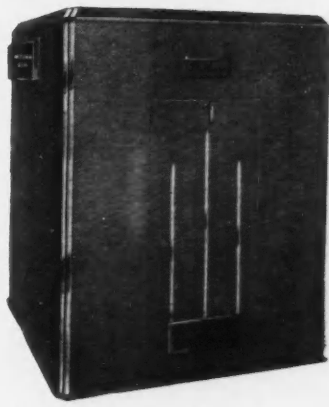
**COLORCRETE INDUSTRIES, INC.**  
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**Your Customers  
Want These Advanced Features**

Dailaire Heating and Air Conditioning systems provide all the advanced features your customers need and want.

Included in these are such outstanding advantages as — Heat resisting Armco Stainless steel dome — Larger radiators — Overhead blowers and preheated air.

This compact, efficient design and intelligent engineering of Dailaire systems now enable you to offer your customers greater home comfort, with all stages of air conditioning within one compact casing, at 20% to 40% saving in fuel costs.



The new Dailaire line for 1936 is an attractive line for the progressive builder, that combines quality, efficiency, attractive compact design, all in one and at prices that will surprise you. Before you decide on the system for your next house you will find it good business to investigate the outstanding value of Dailaire — Write for the facts.

**Dail Steel Products Co.**  
1500 Main St., Lansing, Mich.

This smart new Dailaire casing encloses oil or gas burner, blowers, washers and filters—Units are also available for coal, hand or stoker fired.

**Dailaire**  
Heating and Air Conditioning

**This SENSATIONAL  
MONEY-MAKING  
FLOOR-SANDER  
—SENT ON FREE TRIAL—**

WE WANT you to see the SPEED-O-LITE and compare it with every other floor sander on the market. We want you to check its fast cutting speed—its smooth economical performance—its perfect dust collecting operation. In 5 minutes you'll be convinced that the SPEED-O-LITE is the greatest value ever offered.

Put it to every test you can devise. Try it on the toughest job you can find. You'll be amazed at the ballroom finish this light weight machine (80 lbs.) leaves on every floor. You'll marvel at the way it works right up to the quarter-round and picks up all the dust and dirt.

What could be fairer? Mail the coupon NOW while this information is fresh in your mind and let us send you this miracle sander that operates from any convenient outlet.



**MAIL COUPON TODAY**

LINCOLN-SCHLUETER FLOOR MACHINERY CO.  
222 W. GRAND AVE. CHICAGO, ILL.

Send full details on your 5-day free trial SPEED-O-LITE offer. Also tell me how I can own it.  Interested in time payments.

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ADDRESS \_\_\_\_\_  
TOWN \_\_\_\_\_ STATE \_\_\_\_\_

536

**Running Water**

"We've had perfect service for years from our MYERS"



Thousands of satisfied owners, in all parts of the country, testify to the perfect performance of MYERS Water Systems.

**MYERS WATER SYSTEMS**

TODAY running water is taken for granted. Each home or business structure built beyond the city water mains, must have its individual water system. We have specialized in high class water service for sixty-six years. MYERS Self-Oiling Power Pumps and Water Systems will protect your reputation for selecting only sound construction units. Our line of electric and gasoline powered models meets every requirement. The local MYERS dealer can give you valuable assistance in working out individual problems. Keep our Catalog on file.

**THE F. E. MYERS & BRO. CO.**  
51 Fourth Street Ashland, Ohio  
"Pump Builders Since 1870"

Send free catalog and information on Water Systems . . .   
Power Pumps  Sump Pump  Name of nearest dealer

Name \_\_\_\_\_

Address \_\_\_\_\_



[W-22]

**Window Sales Show Better Market**

IN THE first two months of 1936 Fenestra steel window sales throughout the country increased 65 per cent over the same period in 1935, according to C. R. Raquet, vice president of the Detroit Steel Products Company of Detroit. This increase has been particularly noteworthy as the severely cold weather practically suspended building activities for about half of this period.

**Steel Buildings Adds Modern Designs**

STEEL Buildings, Inc., of Middletown, Ohio, one of the metal house companies with which Armco cooperates, has developed a series of flat-roofed homes. The company originally designed a series of homes with conventional pitched roofs. Steel Buildings will now offer both pitched and flat-roofed homes.

The new moderns were designed under the supervision of D. S. Betcone, president of Steel Buildings, Inc.

Based upon labor rates prevailing in the Chicago area, it is estimated that the house illustrated can be constructed for less than \$5,000; two other models, one with dining room and the second with an extra bedroom, are priced at \$5,500 and \$6,000, respectively.



ONE of new modern designs added to Steel Buildings' line.

**Analysis Shows Interesting Fire Facts**

SOME interesting facts are revealed in a report on fires in 149 cities, made by the National Board of Fire Underwriters, which has been analyzed by a national industrial association with the following results as to distribution of fires by type of building and number of each type:

Type of Building	No. of each type in cities	No. of fires in each type	Fires per 100 bldgs.
Reinforced Concrete	11,759	688	5.85
Fireproof	10,055	201	2.00
Ironclad	44,901	287	0.64
Concrete Block	53,278	284	0.53
Brick and Stone	496,489	15,043	3.03
Not Classified	61,726	1,522	2.47
Frame	1,945,001	30,057	1.55

Total Buildings	2,623,209
Total Fires in Bldgs.	48,082
Other Than Bldg. Fires.	37,557
Total Fires	85,639

It was noted that of the total number of building fires—48,082—only 925 extended beyond the building of origin; and of them, 823 got no further than the immediately adjoining building. Only 1.08 per cent of fires were exposure fires. It was remarked that out of a total of 2,623,209 buildings in the 149 cities 1,945,001 were of lumber construction. In 25 of these cities the proportion of frame buildings to those of other types was 10 to 1. In these cities there were only 1.28 fires per hundred buildings of all kinds. There were 10 cities in which the number of frame buildings was less than the number of those of brick and stone and in those cities the percentage of fires to the total number of buildings was 2.54.

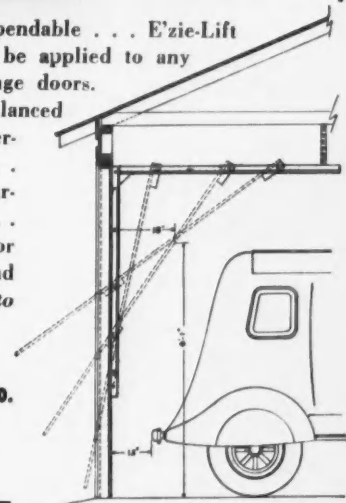
Take Off Your Hat To The MYERS



**WILLIS  
"E'ZIE-LIFT"**  
Garage Door  
Hardware  
FOR EITHER  
NEW OR OLD  
GARAGE  
DOORS

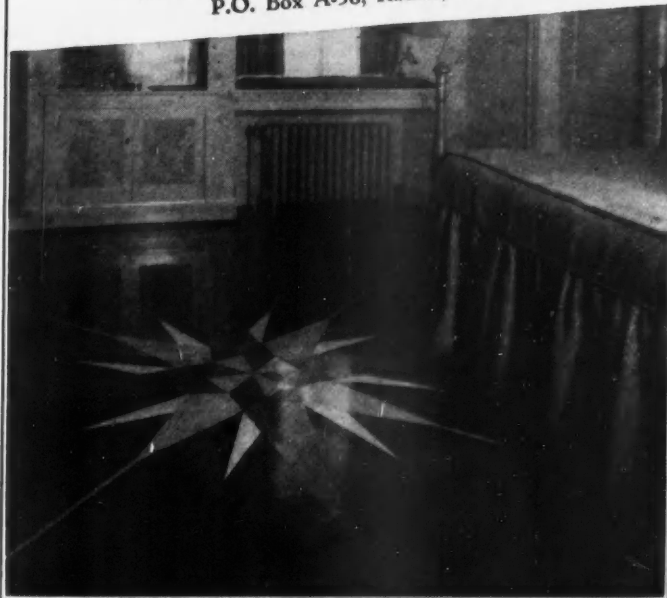
Economical, efficient, dependable . . . E'zie-Lift is a hardware that may be applied to any type of new or old garage doors. Result . . . a perfectly balanced door that a child can operate. Counter-balanced . . . no springs . . . ball bearing rollers and pulleys . . . no binding . . . allows door to rest snugly on floor and flush with sides. *Simple to install.*

Write for circular and prices  
**The Willis Manufacturing Co.**  
Galesburg, Illinois  
"Standard Products" for  
Almost Half a Century



TYPICAL HOME INSTALLATION OF  
**WRIGHT RUBBER TILE**

Get This Double Profit Business  
New or existing buildings are prospects for Wright Rubber Tile Floors. There is a profit in the sale and a profit in the installation. Our Instruction Booklet has been instrumental in starting many men in a profitable business. Write for a copy today.  
**WRIGHT RUBBER PRODUCTS CO.**  
P.O. Box A-36, Racine, Wis.



**CMC**

NEW TWO WHEELERS  
WITH  
PNEUMATIC  
TIRES  
AND  
TIMKEN  
BEARINGS

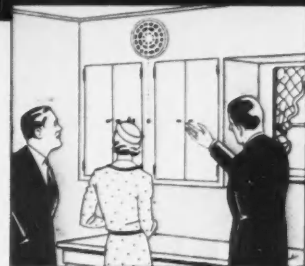


SEND FOR  
FREE  
BULLETIN  
ON THESE  
LATEST  
IMPROVED

7S and 10S machines or other MASTER and SILVER-STREAK Non-tilts from 3 1/2S to 28S, WONDER Tilters from half-bag to two-bag capacity, also CMC Hoists, Plaster and Mortar mixers, Pumps, Saw Rigs, BETTER BILT Wheelbarrows, Concrete and Material Carts with steel wheels or pneumatic tires. » » » »

CONSTRUCTION MACHINERY CO., WATERLOO, IOWA

Kitchens  
Sell Homes  
**VENTILATORS Sell KITCHENS**  
VICTOR'S 10" IN-BILT  
has "Everything"



● Feature Victor In-Bilt ventilated kitchens and "the woman" will close your deals. Stoves burn up oxygen—cause dead, sickly air! Victor Ventilators stop this—keep kitchens fresh and sweet, cool and comfortable—eliminate cooking odors and greasy fumes—cut decorating expense. And, only a Victor In-Bilt has every desirable ventilator feature: super-efficient operation, sturdy construction, smart styling, rust-proofed finish, automatic control, streamlined shutter, one-shot lubrication, round, adjustable wall sleeve providing quick, easy installation in walls of any type or thickness, concealed or exposed wiring, etc. Investigate now! Write today for new catalog showing Victor's complete line of ventilators and fans.

**DISTRIBUTORS**

If you now contact builders, contractors and architects, write today for full information on Victor's outstanding line of ventilators with features that lift them far above competition. Exclusive sales rights available in a few territories. Please state lines now handled and territory covered.

**VICTOR ELECTRIC PRODUCTS, INC.**  
706 Reading Road  
Cincinnati, Ohio



**HOW TO DO IT  
and  
WHAT TO USE**

A MANUAL ON THE USE OF ELECTRIC HAND SAWS IN HOUSE BUILDING SHOWING METHODS OF SAVING TIME AND MONEY ON CONSTRUCTION



**Speedmatic Saws**  
6" — 8" — 9"

You, too, are sure to make the savings shown in the Manual when you use a Speedmatic. It is built to stand the punishment of present day speed-am-up activity, and is guaranteed to give you many years of faithful, efficient and dependable service.

Be sure to get the Speedmatic details, gladly sent without obligation. Just ask us.

**Ask for your FREE copy**

of this Manual on the Use of Electric Hand Saws in House Building. It describes and illustrates many time and money saving methods every builder should have for reference.

Write today before supply is exhausted.

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*The* **PORTER-CABLE** SYRACUSE 2895  
**MACHINE COMPANY**  
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**FASTEST 1/2 BAG MIXER ON THE MARKET**



**JAEGER**

— the Trailer with Pneumatic Tires, Timken Bearings and High Speed "Dual Mix" Drum

Get New Catalog and Prices—Tilters, Non-Tilts, 3S to 56S Sizes—with or without Power Loaders.

**THE JAEGER MACHINE CO.**  
521 Dublin Ave., Columbus, Ohio

**Producers and A.I.A. Meet This Month**

THE 13th Annual Meeting of the Producers' Council and the 68th Convention of The American Institute of Architects will both be held May 5, 6 and 7 in the Chamberlain Hotel at Old Point Comfort, Va. After the first meeting, daytime sessions of A.I.A. will be held in Williamsburg, Va.

**Federal Home Loan Bank Advances Reach New High**

THE outstanding advances of the 12 Federal Home Loan Banks to their member private thrift and home financing institutions have registered an unbroken rise each month since April, 1935, reaching a new peak of \$103,537,644 on April 1, 1936. In the past 12 months such outstanding credits, made available to home owners and home builders through the 3,543 members of the bank system through the United States, have increased by more than 40 per cent, in spite of heavy repayments by members.

Each gain in the net advances by the Home Loan Banks reflects a gain nearly three times as great in the volume of home loans made by the member associations, as indicated by reports from these institutions covering their lending activity in 1934 and 1935, and due to the more active use of their own resources made possible for members through the accessibility of reserve credit from the Banks.

In 1935 member institutions of the Federal Home Loan Bank System made approximately 55 per cent of the estimated total of all mortgage loans for the construction of new homes made by all classes of private lending institutions in the United States.

Loans outstanding by Federal Home Loan Bank districts on April 1, 1936, were:

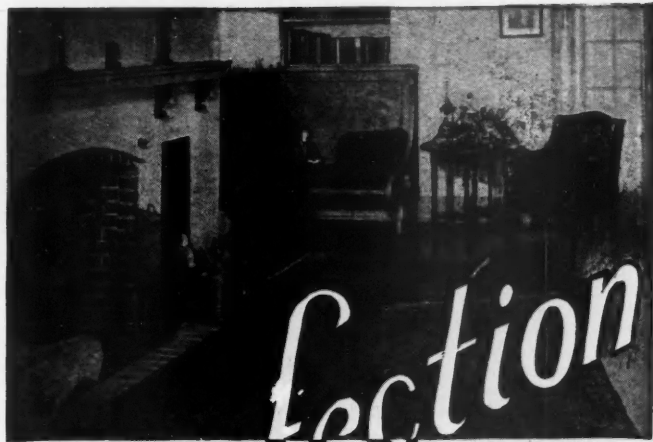
Boston .....	\$ 3,150,747.66
New York .....	15,209,580.99
Pittsburgh .....	11,731,789.06
Winston-Salem .....	7,152,954.22
Cincinnati .....	18,442,039.39
Indianapolis .....	4,399,890.63
Chicago .....	17,828,079.02
Des Moines .....	5,687,751.19
Little Rock .....	7,681,647.18
Topeka .....	5,073,443.97
Portland .....	2,829,517.97
Los Angeles .....	4,350,203.15
<b>Total .....</b>	<b>\$103,537,644.43</b>

**Peters Promoted by Truscon**

W. V. PETERS has been appointed manager of Truscon's steel window and door department. Mr. Peters started with Truscon 17 years ago as sash salesman in the Cleveland office. Since that time, he has been located in various parts of the country in several capacities and is well known to a large number of architects, engineers, contractors and dealers in the East and Midwest. Until his recent promotion he had been district sales manager of the Cleveland office for the last four years.



W. V. PETERS



# Perfection

## BRAND OAK FLOORS

In old homes or new, whether for renting or selling, "PERFECTION" BRAND Oak Floors give service and satisfaction. The greatest value for the money.

Take advantage of the new Housing Administration Act and sell good Oak Floors on your modernizing jobs.

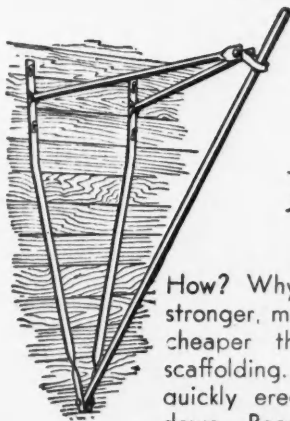
"PERFECTION" BRAND Oak Flooring as furnished by your local dealer is carefully manufactured from selected timber, scientifically seasoned and kiln dried, easily finished. Ask your dealer today to show you the "PERFECTION" BRAND.

Complete information is yours for the asking. Write us today. Sold only through retail lumber dealers.



**ARKANSAS OAK FLOORING CO.**  
PINE BLUFF ARKANSAS

## Reliable Scaffold Brackets



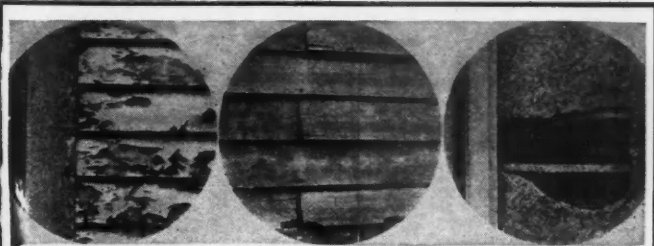
**SAVE  
YOU  
MONEY**

How? Why? Because they are stronger, more dependable and cheaper than costly wooden scaffolding. Because they are quickly erected, quickly taken down. Because you can use them on wood or stucco. No wonder they soon pay for themselves. Thousands of builders have used them for years.

Let us prove their value. Send for catalog—then ask us to ship first pair C.O.D. for your inspection and trial.

Reliable Jack Company, 1401 West Second St., Dayton, Ohio

**RELIABLE**  
SCAFFOLDING BRACKETS



Blistered Paint

Warped Siding

Cracked Stucco

**Houses Like These are Perfect Prospects for Modernization**

### The WEATHERBEST Way

Blistered paint, warped clapboards and cracked stucco cause constant worry, embarrassment and expense to many home owners.

You can readily sell a WEATHERBEST Stained Shingle overcoating to such owners because it will eliminate extensive maintenance trouble. It will modernize the exteriors with enduring beauty. And it will largely repay its cost through reduced painting expense and the fuel-saving insulation it provides.

**OUR PLAN HELPS YOU GET THIS BUSINESS**

SEND FOR IT!



WEATHERBEST CORPORATION  
178 Main St., N. Tonawanda, N. Y.

Send details of the new WEATHERBEST Selling Plan—without obligation.

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ADDRESS \_\_\_\_\_

## PORTABLE to the job for bigger PROFITS

WHETHER it is a small remodeling job or a big operation, the GM Portable DeWalt saves time and earns an extra profit for you. Cuts off, rips, bevels, miters. Change from one operation to another requires only a few minutes time. Rigid frame insures accurate work.

**De Walts Cut**  
Wood • Metal  
Stone • Brick



Write or send coupon for complete information!

**DEWALT PRODUCTS CORP.**

259 Fountain Ave., Lancaster, Pa.

Send me full information on DeWalt machines and how they will save me time and money on the job. I wish to use it for  
 wood,  brick,  metal,  stone.

Width \_\_\_\_\_, Thickness \_\_\_\_\_

My power is: Volts \_\_\_\_\_

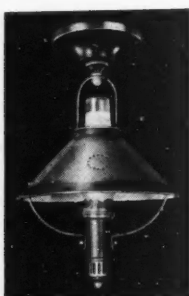
Phase \_\_\_\_\_ Cycles \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

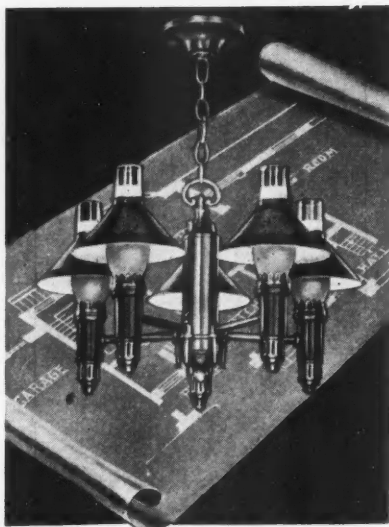
City \_\_\_\_\_ State \_\_\_\_\_

A Dallas Texas, contractor says: "Your machine has proven itself indispensable and has earned its original cost several times over."



## Sure dividends from GOOD LIGHTING

• One of the smallest investments in a home—decorative, efficient lighting—can produce the greatest satisfactions and returns. It helps make the house attractive for use, rental or sale. It is the invariable mark of quality, up-to-date construction. So plan your lighting as you plan your heating and plumbing.



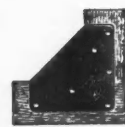
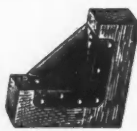
Send 10c for new booklet, "The Charm of a Well Lighted Home." It will help you make economical selections of beautiful, efficient lighting fixtures for every room in every type of house. Address Dept. MC.

**LIGHTOLIER**  
11 East 36th Street, New York  
1551-2 Merchandise Mart, Chicago

Now Is the Season!

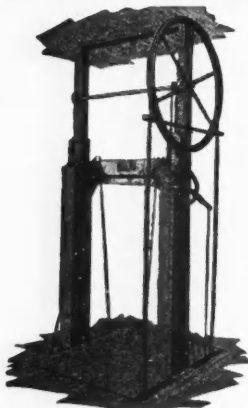
## KEES CORNER BRACE

Screen time is here! Old, wobbly frames need corner bracing. There's nothing better than KEES Metal Corner Brace. Ideal for new frames, too. Slips right into frame-corner. One size fits all board thickness. Nailed from front, back and inside. Closes and bevels the corner—dirt cannot collect. Four to the box—with nails.



**FREE SAMPLE!** Order from your Hardware or Lumber Dealer — or write for Free Samples, prices and complete details.

**F. D. KEES MFG. COMPANY**  
Beatrice Box 93 Nebraska



## KIMBALL HAND POWER ELEVATORS

A complete line of efficient Hand Power and Electric Elevators built to suit any requirement. Fitted for rapid installation in your building. These straight-line-drive machines are little giants of lifting power and are surprisingly nominal in costs.

**FREE Engineering Data**  
Give us your problems and let our engineers help you. Full descriptive literature on request.

**KIMBALL BROS. CO.**  
1200-92 Ninth Street Council Bluffs, Iowa

## LETTERS from Readers on All Subjects

Facts, opinions and advice  
welcomed here

### FHA and Flood Loans

Washington, D. C.

To the Editor:

The Federal Housing Administration will do everything within the limits of the Act creating it to offer its facilities to flood sufferers in flood areas.

I have instructed all field offices in these districts to act as speedily as is humanly possible in the matter of insuring loans for modernization and repairs made by those private lending institutions who hold a contract of insurance with us. The same holds true with our insurance of mortgages for new construction. In both cases our field offices will give flood sufferers applying for such insured loans and insured mortgages first preference.

I compliment the *American Builder* on its efforts along this line.

STEWART McDONALD, Administrator,  
Federal Housing Administration.

### Houses Should Be Bolted Down

New Orleans, La.

To the Editor:

We consider adequate foundations and footings with sills bolted every four feet sufficient to withstand average flood conditions. Where terrific forces, due to maximum run-offs are developed, such as in the recent flood, no practical residence construction can be expected to withstand them. In many instances, summer cottages were merely laid on foundations, and due to the height of the flood, simply floated away.

There is no doubt but that the widespread nature of the floods, affecting densely populated industrial sections, will occasion a greatly increased demand for lumber and other building materials. How rapidly this will develop depends on the speed of replacement. There was also severe damage done to building material stocks, and a volume of lumber was lost from retail lumber yards in some of the areas affected.

W. D. PARLOUR, Field Representative,  
Southern Pine Association.

### Flood Control

Washington, D. C.

To the Editor:

Studies on the subject of flood control have been in process over a long period of years. The retention dam method and the levee method have their advocates and each has proved successful under certain conditions. The usual high water and even the unusual have been protected against in many places but only the future will demonstrate whether or not they are sufficient to cope with the most extreme combination of circumstances, such as meteorologists reported in connection with the recent Pennsylvania disaster, that an extraordinary atmospheric condition prevailed in that a storm was held in a fixed position over the particular area for a length of time never before encountered.

Much consideration is now being given to the problem by the Congress and it is probable that considerable funds will be made available to alleviate against now known possibilities.

With reference to location of structures, many of our cities have been permitted to develop in directions where danger of floods were known to exist. Improved planning ordinances and zoning should have a future beneficial effect. Structures in a danger zone should be amply secured to a firm foundation and all frame structures should be fully braced to resist pressure of a current.

EDW. J. HARDING, Managing Director,  
The Associated General Contractors of America, Inc.



# MAKE BIG MONEY IN FLOOR SANDING

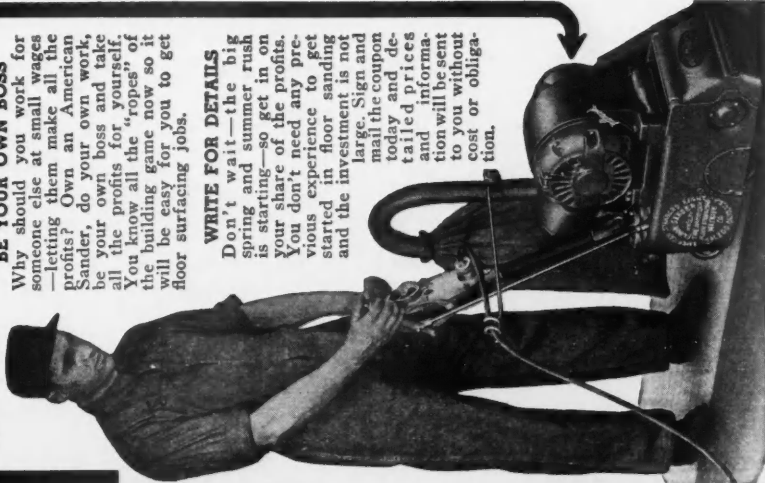
Yes, we say **BIG money!**—Here's a real opportunity for you to get into something for yourself—be a floor sander. Men who have been in the game less than six months have more work than they know what to do with. The American method of floor sanding is the only real way to do the job—because American sanding machines have a real reputation for making the biggest profits.

### BE YOUR OWN BOSS

Why should you work for someone else at small wages—letting them make all the profits? Own an American Sander, do your own work, be your own boss and take all the profits for yourself. You know all the "ropes" of the building game now so it will be easy for you to get floor surfacing jobs.

### WRITE FOR DETAILS

Don't wait—the big spring and summer rush is starting—so get in on your share of the profits. You don't need any previous experience to get started in floor sanding and the investment is not large. Sign and mail the coupon today and detailed prices and information will be sent to you without cost or obligation.



### Return COUPON Now

Gentlemen: Send without cost or obligation to me details and information on American Floor Surfacing Machines.

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

**AMERICAN  
FLOOR SURFACING MACHINE CO.**  
511 So. St. Clair St. Toledo, Ohio

## QUALITYBILT DISAPPEARING STAIRWAY

Saves Space, Saves Money

### SELLS HOMES

Hundreds of new and old homes are prospects for this modern stairway. Guaranteed construction—Highest grade material and workmanship. Strong—Safe—Egid. Easily installed, easily operated.

A REAL OPPORTUNITY FOR  
EXTRA PROFIT

Let us give you complete information. See your dealer or write us today. AB 536

**Farley & Loetscher Mfg. Co.**  
Dubuque, Iowa



## This FIREPLACE

- • • is easier to build
- • • • circulates heat



The Heatilator is a steel heating chamber hidden in the Fireplace—a correctly designed form for the masonry that insures **SMOKELESS** operation. Cold air is drawn from the floor into this heating chamber—warmed—then circulated to every corner of the room and to adjoining rooms.

Easier to build. Saves fuel in spring and fall. **NEW LOW PRICES** make cost but little more than ordinary construction. Write for details. Heatilator Co., 515 E. Brighton Ave., Syracuse, N. Y.



Heatilator Fireplace

## ACCURATE METAL WEATHER STRIP



### DON'T PASS THIS UP Make Money Installing Accurate

Line up with this 30 year leader. Precision built. Installations guaranteed for life of building. One job recommends another. See complete catalog in 1936 Sweet's. Write today for full details. It's your opportunity.

Jobbers Wanted. Valuable territory open  
**ACCURATE METAL WEATHER STRIP CO.**  
218 East 26th Street, New York

## IRON RAILING

of every description  
FOR INTERIOR AND  
EXTERIOR USE



Also  
Iron Fence, Gates, Iron and Wire window guards, Chain Link Wire Fence, etc.  
Send measurements showing your requirements and we will forward illustrations suitable for your enclosure.

### CINCINNATI IRON FENCE CO., INC.

3410 Spring Grove Ave. CINCINNATI OHIO

## EASY TO SELL EASY TO INSTALL

By now it's an accepted fact that the public **WANTS** garage doors that open over head. That's why you should recommend the equipment that offers the greatest possibilities for profit.

"Over-the-Top" door equipment hits the nail on the head. It is the **FIRST** and **ONLY** device that doesn't require special doors . . . that can be quickly applied to vertical doors, used or new. It is



the simplest mechanism . . . the easiest to install and operate . . . ever conceived.

For your own satisfaction, compare "Over-the-Top" door equipment with any of its varied imitations . . . see why builders are cashing in on its rapidly growing popularity. Write for complete information today.

**FRANTZ MANUFACTURING CO.**  
Sterling, Ill.

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

## Portable ONAN "Safty Saw"

Can Be Taken Out  
on Any Job



Here is a POWERFUL, PORTABLE, CARPENTER SAWING MACHINE. Will Cut Rafters, Studs, Stairhorses and Bridging; square long dimensions as fast as you can handle the lumber. For trimming sash, doors, screens, fitting casing and flooring.

**Cross Cuts, Rips, Miters, Dados**  
Furnished with either gasoline or electric power, or both. One man moves it anywhere, two men load it. Write for details.

**D. W. ONAN & SONS**

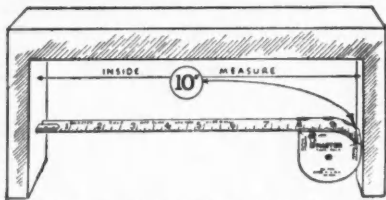
4452 Royalston Ave. Minneapolis, Minn.

## TRIMPAK

**F**INEST interior window and door trim. Shipped in all woods. Grade—**clear** (as Webster defines the word). Manufacture—perfect. Moisture content—8%. These three qualities are guaranteed. Shipped in cartons for your protection.

**TRIMPAK CORPORATION**  
44 Whitehall Street New York City

## MASTER INSIDE-MEASURE TAPE RULES



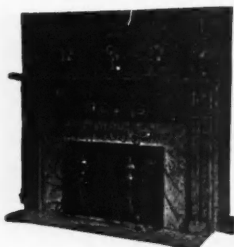
**NOW . .**

EACH MASTER Inside-Measure Rule is packed in a small (cowhide) leather case to protect it from dust, dirt and pocket-wear. A NEW FEATURE! 1. Get a rule that gives Direct Inside-Measure. 2. That can be locked

to hold measurements. 3. That can be used in the dark out-of-the-way places. BUY A MASTER! MASTER RULES FOR MASTER CRAFTSMEN.

Send for Circulars and Prices

**MASTER RULE MFG. CO., INC.**, Dept. 815 E. 136th St. CG New York, N.Y.



## COLONIAL HEAD THROAT AND DAMPER

Makes Your Fireplace Burn Right and Heat Right

For thirty years the accepted standard with builders, architects and home owners. Built in sections with steel reinforcing angle bar which anchors the facing and carries common brick backing.

With the Colonial Fireplace Damper and our plans you are sure of a fireplace that functions properly, conserves heat, and gives joy to the owner. Three styles—fits any fireplace opening.

### Everything for the Fireplace

Andirons, fire tools, screens, etc., of highest quality materials at lowest prices.

Write for folder which gives you proper fireplace dimensions and helpful suggestions that insure success.

### COLONIAL FIREPLACE COMPANY

Established 1906—fireplace experts for 30 years  
4601 W. Roosevelt Road Chicago, Illinois

## Letters Dept.

(Continued from page 112)

### Value of Flood Protection Demonstrated

Portsmouth, Ohio.

To the Editor:

We are happy to say that while we were in the center of the Ohio Valley Flood District, yet we were the one town that had no water within its business district and few homes. Portsmouth is a city whose inhabitants have been foresighted enough to spend the money for flood protection. Along the Ohio River we have a concrete wall which is built to keep out of the city a 62-foot stage of the river. Along the west side of the city where the Scioto River flows we have an earth embankment on the same level. When flood stage is reached by the rivers our sewers are shut off by flood gates so that there can be no back flow into the city through the sewers and the sewerage and surface waters which come into the rivers. In 1933 our flood wall kept out of the city a river stage of 60 feet, and this year we felt sure that the dream and the work done by a former engineer, the late Major J. I. Hudson, would prove strong enough to protect, and it did.

While business was slowed up somewhat because outside patrons could not come into the city, yet business went on almost as usual.

We are looking forward to an increased real estate business and we are sure that it will come sooner because of our flood protection.

From past experiences, before we had our flood protection, we believe that frame construction is the best for homes in flood districts. We say this because the brick constructions get so permeated with water that it takes months to dry them out and make them habitable again.

The citizens of Portsmouth are all happy that we escaped a flood.

WILLIAM C. HAZLEBECK, President,  
The Hazlebeck Co., Real Estate.

### Rebuilding on Higher Ground

Williamsport, Md.

To the Editor:

We have had some small increased business due to the flood and there will be an increase in the future. Most of the homes washed away were built on very low ground, and built very cheaply. They would probably have suffered to some extent even if built of brick or concrete.

Plans are being worked out at present to finance the rebuilding of some of these properties on higher ground, which seems to us the only insurance against flood damage in the future.

R. H. MILLER,  
G. A. Miller Lumber Co.

### "Business . . . in Full Swing"

Binghamton, N. Y.

To the Editor:

Greatly exaggerated stories of the effects of the flood on Binghamton and immediate area gave the impression of a community cut off from the rest of the world with all business at a standstill. A couple of days' handicap through difficulties of the municipal water system, plus a shorter period of electric power shortage were our principal business disturbances. Most business had resumed by the second morning following the Wednesday flood, and by Monday morning the entire Binghamton, Johnson City, Endicott area was in full swing. The complete loss in Binghamton was \$1,750,000 with a total Broome County loss of \$1,937,700. It would appear that adequate credit will be available for rebuilding and repairing of practically all damaged properties. The only exceptions may be some of those who suffered in the 1935 July flood who were again damaged to an extent that would wipe out their remaining equities in their homes because of the fact that loans made to rebuild following the July catastrophe have not yet been paid. The American Red Cross, however, has begun its rehabilitation programs and should be the answer to many such situations.

In the Binghamton area, homes suffered the most damage. Where factories were affected, the principal loss was in operation and expenses of cleaning up after the waters had receded. Loss here cannot be blamed in any way on construction methods

(Continued to page 116)



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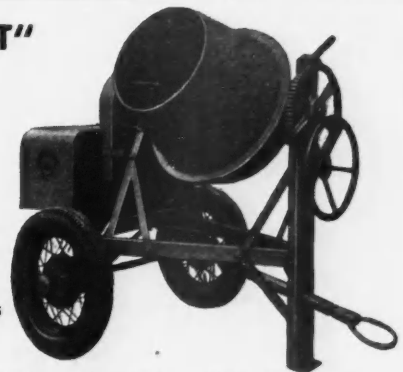
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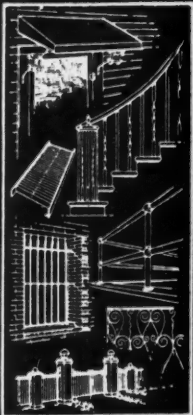


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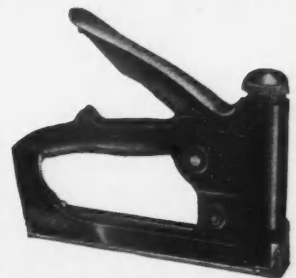
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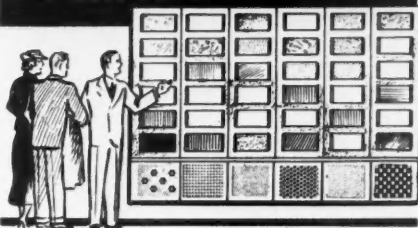
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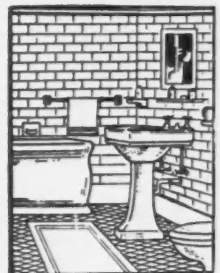
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## Letters Dept.

(Continued from page 114)

or materials. The problem is strictly one of control of velocity and height of streams and can probably be best made through a Federal controlled system starting at the headwaters of the streams that fit into the squat fan-shaped system of New York's Southern Tier. Within the community, there is at the present time a ten-point program of river diking, brook and creek diversion and bridge strengthening that is being considered. The entire local program if carried out will cost approximately \$2,000,000, while the United States Board of Army Engineers has already recommended to the Senate a \$33,087,000 program for the 16 counties most affected by the floods of last July and this March.

R. G. PRATT,  
Pratt Lumber Company, Inc.

## Charges Inconsistency

Mansfield, Mass.

To the Editor:

Carpentry in house construction must drop its inconsistency before it can ever attain a technical par with large construction projects in steel and masonry.

The January issue of the "Builder" has an article stressing rigid framing in wood; this month's has a fine example of squirrel cage framing on page 44. It seems the building inspector, at least, ordered the workman from under the flying trapeze. (I swear I can see it sway.)

The December issue contains a real contribution to progressive carpentry on pages 48-49, while this month's has an article on pages 70-71 identical with information contained in a copy of "Manual Training" published in 1867 for school purposes, which I possess. It is just as logical for the designer to make a schedule sheet of wood framing as of steel, and the carpenter can use the tape and protractor as well as the steel layout man, with resulting efficiency.

Speaking for myself, I could find more interest in the "Builder" largely through reproductions *direct* from working drawings of nationally known architects' and engineers' plans. Descriptive matter is not really necessary, except trade names of materials used. Details in modern house construction are what make it worth while to progressive carpenters who are, I am led to believe, the majority of readers.

I maintain that you owe to the older readers of "National Builder" and "Building Age" this policy above mentioned.

JOHN J. COONEY

## "Of Utmost Assistance"

North Tonawanda, N. Y.

To the Editor:

We received the February issue of the *American Builder* and must compliment you on the way your publication is gotten up. We think it is beautifully done and should be of utmost assistance to contractors and realtors.

WEATHERBEST CORPORATION,  
By H. E. Gosch, President.

## Looking for Lower Cost Home Plans

Asburn, Ga.

To the Editor:

Being in the building material business in a town of two thousand inhabitants, we are in a position to appreciate the interest which the *American Builder* is manifesting in architectural designs for small homes.

We have read your editorial comment in the February issue with much interest, and wish that it were possible in some way to add to the emphasis of your thoughts in this connection.

As you naturally might suppose, we are endeavoring to obtain plans for low cost houses, but our efforts have been fruitless in the \$2000 to \$2500 class.

If you could direct us to a source from which we might obtain such material, we would be indeed grateful.

We hope that you will continue your valued efforts in stimulating interest in this project.

THRASHER & THRASHER, Building Materials,  
By T. E. Thrasher.

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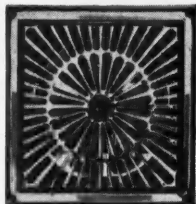
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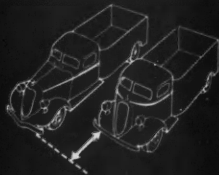
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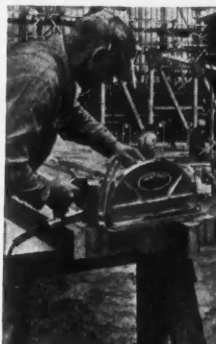
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The publications listed below may be obtained without charge either by using the coupon, listing the numbers desired and mailing to American Builder, 105 West Adams Street, Chicago, or by applying on your business stationery to the manufacturers direct, in which case kindly mention this publication. Either the titles or the numbers may be used in ordering. This list is an editorial feature for convenience of our readers.

## BUILDING MATERIALS

**300—Canvas Roofing**—Rot-proof Con-Ser-Tex canvas roofing and flooring for porch decks and similar flat surfaces with generous samples, specifications and detailed drawings are available for dealers, contractors, architects and property owners. Prepared canvas has proved its worth in ship building and marine circles as a deck material that will stand hard wear and remain watertight. Builders are selecting it also as the proper covering for porch and roof decks.—WILLIAM L. BARRELL CO., Inc., 40 Worth St., New York City.

**301—Cabot's Creosote Shingle Stains**—Invented in 1881 by Samuel Cabot, these shingle and wood stains change the whole trend of American domestic architecture. The properties of these stains, how to use them, and their importance for home remodeling and new construction are interestingly presented by SAMUEL CABOT INCORPORATED, 141 Milk St., Boston, Mass.

**302—Creo-Dipt Shingle Stains**—An impressive 16-page portfolio in full color illustrates various types of shingled homes with suggestions for color schemes available with Creo-Dipt shingle stains. A considerable amount of practical information regarding shingle overcoating and reroofing is contained, as well as recommendations for color schemes and staining.—CREO-DIPT CO., Inc., North Tonawanda, N. Y.

**303—Clay Roofing Tile**—A brochure in colors, 16 pages, showing various patterns, colors and textures of clay roofing tile, together with pictures of residential work, all in natural colors, is a new offering from LUDOWICELADON CO., 104 S. Michigan Ave., Chicago.

**304—Sanitas Cloth Wall Covering**—This is described in a new catalog, "Clean It Like Woodwork!" This is a book for decorators, builders, architects, property owners, contains samples of the actual Sanitas materials, illustrates decorative schemes and gives information on hanging.—THE STANDARD TEXTILE PRODUCTS CO., 320 Broadway, New York City.

**305—Stran-Steel House Framing**—Timely information on this rapidly growing standard building material is presented in the "Stran-Steel Reference Manual" prepared for architects, engineers and contractors. It is a handbook of 16 pages, illustrated with large,

clear photographs and diagrams which make clear all the essential connections, joints and other practical details. Suggested specifications and strength and span tables are included.—STRAN-STEEL CORP., 6100 McGraw Ave., Detroit, Mich.

**306—National "Plug-In" Strip**—An electric outfit every 6 inches along the baseboard is provided in any room wired with the continuous outlet strip developed by the Burgess Laboratories, and now manufactured and offered commercially by one of the largest producers of wiring supplies. A 12-page handbook presents all information. Another valuable reference work from the same source, 90 pages, fully illustrated, is entitled "Handbook for the Man on the Job."—NATIONAL ELECTRIC PRODUCTS CORP., Fulton Bldg., Pittsburgh, Pa.

**307—Bostwick "Truss-Wing" Corner Bead**—"Better Corners" is a booklet explaining how to give protection for exposed plaster corners and furnish a straight edge for the plaster. Information on Bostwick "Truss-Loop" metal lath also presented.—THE BOSTWICK STEEL LATH CO., Niles, Ohio.

**308—Sash Balance Information**—"Standard Specifications and Architectural Details for Unit Sash Balances" has been compiled by Frank B. Stevens, Jr., structural consultant, and issued as a handbook of 20 pages. Details for narrow mullion windows are particularly interesting. How to install Pullman sash balances is shown pictorially.—THE PULLMAN MFG. CO., Inc., Rochester, N. Y.

**309—Kompolite Plastic Marble Flooring**—A new 8-page bulletin entitled, "A Marble Floor That Cushions the Tread" has been prepared giving complete specifications and directions for laying, together with illustrations of many completed jobs.—KOMPOLITE CO., Inc., 28-44 Borden Ave., Long Island City, N. Y.

**310—Painting Concrete**—"How to Paint Concrete, Stucco, Masonry and Other Surfaces" is a 24-page illustrated handbook giving all information and specifications on the use of Medusa Portland Cement paint, Medusa floor coating and Medusa Lite.—MEDUSA PRODUCTS CO., Div. of Medusa Portland Cement Co., 1000 Midland Bldg., Cleveland, Ohio.

**311—Rubber Floors**—"Flexi-Flor Floors of Rubber," a snappy four-page circular in black, red and aluminum "offers you 6 new highs in floor value" and illustrates numerous successful installations of rubber floors and rubber wainscoting.—THE R-C-A RUBBER CO., Akron, Ohio.

**312—New Idea in Doors**—"Rezo, the New Standard of Value in Doors" illustrates the construction of this light weight, hollow door and presents several new style designs.—PAINE LUMBER CO., Ltd., Oshkosh, Wis.

**313—Molly Expansion Bolts and Screw Anchors**—How to attach fixtures solidly to wallboard, plaster board, lath and plaster, hollow tile, gypsum block, face tile, brick or concrete, is clearly shown in new circulars from the CROESANT MACHINE WORKS, Reading, Pa.

## HOME EQUIPMENT

**314—Water Softeners**—"Household Water Treatment" is fully cleared up in a new 16-page book presenting the complete line of household water treating equipment for removal of hardness, dirt, iron, bad taste and odor from water. All sizes of water softeners are available from small to large, from faucet softeners to large commercial installations.—THE PERMUTIT CO., 330 W. 42nd St., New York City.

**315—Miami Bathroom Cabinets**—Style and refinement in the dressing room and bathroom are embodied in the extensive line of Miami, Venetian and Carey cabinets and mirrors presented in a new 24-page portfolio with complete specifications with detailed dimensions.—MIAMI CABINET DIVISION, The Philip Carey Co., Middletown, Ohio.

**316—"Standard" Plumbing Fixtures**—"Planning Your Plumbing Wisely" is a booklet in full color, 32 pages and covers, giving many new ideas in bathroom design and equipment, including the Neo-Angle bathtub, "Standard" built-in baths, full assortment of lavatories, toilets, kitchen sinks and cabinets, and laundry tubs. Chromard faucets and fixtures are also illustrated, and there is a useful color chart showing the nine "Standard" plumbing fixture colors.—STANDARD SANITARY MFG CO., Pittsburgh, Pa.

**317—K-Venient Clothes Closet Fixtures**—Catalog and Price List No. 118 presents the current models of extension

garment carriers, adjustable shoe racks, tie racks, hat holders, trousers hangers, coat hangers and wardrobe door combinations now available through hardware dealers or from KNAPE & VOGT MFG. CO., Grand Rapids, Mich.

**318—Venetian Blind Hardware**—A profusely illustrated 16-page catalog completely describing Venetian blind hardware of the better type has been prepared by the FIWALE EQUIPMENT MFG. CO., Inc., 64 Reade St., New York City.

**319—Fiat Shower Bath Cabinets**—A new 12-page portfolio illustrating the line of shower bath cabinets, shower doors and glass enclosures all complete with specifications, sizes and details of construction and installation has been prepared and is now ready for distribution by FIAT METAL MANUFACTURING CO., Chicago, Ill.

**320—Steel Kitchen Cabinets**—“Build Your Way to Kitchen Happiness” is a 12-page lithographed portfolio showing many striking kitchen designs and presenting a practical planning service developed by the manufacturer of these sheet steel kitchen units. Sizes and specifications are given in this handbook.—ST. CHARLES MANUFACTURING CO., St. Charles, Ill.

#### HEATING AND AIR CONDITIONING

**321—Dowagiac Air Conditioner**—Bulletins Nos. 40, 50 and 60 present, respectively, the “Dowagiac Furnace for Oil-Burner Service,” “Year Around Balmy, Healthful Air with the Dowagiac Air Conditioner,” and “Health and Comfort for School Children” with the Dowagiac heating system for schools. Other bulletins give details of the Dowagiac jointless steel furnace, the Dowagiac Indian furnace, and the De Luxe cast iron furnace. All are well illustrated and give full mechanical specifications.—DOWAGIAC STEEL FURNACE CO., Dowagiac, Mich.

**323—Heating Data**—A 16-page handbook of reference data for architects, engineers, contractors and salesmen has been compiled by Gar Wood. The preface by Donald Luty, engineer, states that it contains the necessary data for layout, design, checking and installation of heating and oil burning equipment, much of the data being new and all in the most usable form for quick calculation.—GAR WOOD INDUSTRIES, Inc., Detroit, Mich.

**324—Mono-Flo System Hot Water Heating**—This system is clearly explained in a new loose-leaf portfolio on B & G triple duty fittings. This is one of the newest developments for the efficient operation of any type of two-pipe hot water system, or Mono-Flo one-pipe system, offering equal efficiency at greatly reduced cost. A proved equipment for domestic hot water supply also included—BELL & GOSSETT CO., 3000 Wallace St., Chicago, Ill.

#### CONTRACTOR'S EQUIPMENT

**325—Saw Mill and Woodworking Machinery**—“General Catalog No. 35” is a manual of 208 pages presenting a complete line of contractors' machinery, including contractors' variety woodworkers, combined rip and cut-off saws and hoists. Also an extensive line of woodworking machinery, such as planers and matchers, surfacers, jointers, shapers, tenoners, band and circular resaws, lathes, band saws, boring machines, swing saws, saw benches, mortisers and sanders. Saw mill machinery and equipment also included.—AMERICAN SAW MILL MACHINERY CO., Hackettstown, N. J.

**326—Portable Electric Tools**—“1936 Complete Catalog” presents full information on the B & D line of portable electric drills, bench grinders, saws, hammers, sanders, planers, screwdrivers, etc., each completely illustrated and with full specifications.—THE BLACK & DECKER MFG. CO., Towson, Md.

**327—“Reliable” Scaffold Brackets**—A new 6-page folder gives latest information regarding this perfected line of wall brackets, corner brackets and guard rail attachment brackets.—RELIABLE JACK CO., Dayton, Ohio.

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**328—Dairy Barn Equipment**—“Farm Buildings,” a 42-page booklet showing farm buildings designed and equipped by Hudson, including floor plans and construction details. A valuable reference book for builders, contractors, dealers and architects.—H. D. HUDSON MANUFACTURING CO., 589 E. Illinois St., Chicago, Ill.

**329—Wood and Steel Roof Trusses**—“Roof Truss Data” includes information regarding the American wood bowstring trusses, Waddington wood bowstring trusses, and Waddington wood crescent trusses. These are popular for garages, factories, schools, gymnasiums, grandstands, theaters, lumber and material sheds, churches, bowling alleys, hangars, etc.—AMERICAN ROOF TRUSS CO., 6851 Paxton, Chicago.

**330—Termites**—“Prevention of Termite Damage to Buildings” is an illustrated handbook of 18 pages telling all about termites and methods of preventing termite attack, including recommendations as to preparation of building site and construction of new buildings to prevent termite damage.—THE WOOD PRESERVING CORP., Pittsburgh.

**331—Precast Reinforced Tile Beams**—“Fireproof Floors of Hollow Tile for Any Building at Low Cost” is an 8-page portfolio presenting details of the special beam tile and method of tile floor construction perfected by the Clay Products Institute, Des Moines, Ia. Results of floor load tests, reinforcing and allowable spacing for beams and weights of reinforced tile floor are part of the data presented.—YANKEE HILL BRICK CO., Lincoln, Nebr.

**322—Farrenwall System of Brick Construction**—Information regarding this new hollow wall system of brick and tile construction which saves labor and material and provides flues for heating and air conditioning is available from the sales agents of the manufacturer.—WESTERN BRICK & SUPPLY CO., Lincoln, Nebr.

**333—Lurie Steel House**—A new portfolio of 16 pages and covers presents complete details and specifications of this standard method of light steel, metal lath and concrete stucco construction, sponsored by the Metal Lath Manufacturers Assn. Numerous designs with floor plans are included, illustrating dwellings, churches and schools. This is a cost-saving, quality construction in line with the times.—METAL LATH MANUFACTURERS ASSN., 208 S. La Salle St., Chicago, Ill.

**333A—Win-Dor Casement Operator**—“Things You Ought to Know About Casement Windows,” a thorough yet simply written 20-page booklet in color giving full information about wood and steel casement installation and their hardware best suited for operation and control of each type.—CASEMENT HARDWARE CO., 406 N. Wood St., Chicago, Ill.

American Builder,  
105 W. Adams St.,  
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(May, 1936)

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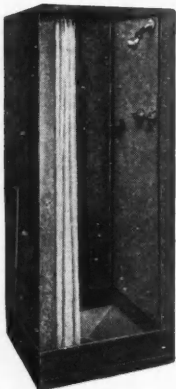
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West Coast Distributors

## Letters Dept.

(Continued from page 116)

### PWA—"Puzzle Wonder of the Age!"

Portland, Ore.

To the Editor:

I was pleased to note the publication of my article on roof framing in the February issue of the *American Builder*. However, there was an error in the printing of Fig. No. 2. Above the hip rafter the wording should have been, "Hip Rafter for Hip No. 1—13 spaces at 17x12", and below the hip rafter should have been, "Hip Rafter No. 2—11 spaces at 17x12". I also note that it gives my city as Portland, Me., while I am from Portland, Ore. For the present I am very busy in my own bailiwick with one of these Puzzle Wonder of the Age Contracts so will have to defer tackling the width of the U.S.A. for the present, at least. I might say further that the multitude that I have to keep satisfied in performing this Contract does cover a wide range of territory; in fact, I wouldn't be surprised to learn that some of them live as far away as Portland, Me.

There are the Architect and his Inspector, the School Board and their Inspector, the PWA and their Inspector, and the various Inspectors that inspect their Inspector, so you can see that poor little me has a job on my hands to keep the whole family good natured and without any balky horses in the team, and I can assure you that framing the roofs, etc., is about the easiest part of the whole works.

B. T. ALLYN, Building Contractor.

### Central West Wants Porches

Beatrice, Nebr.

To the Editor:

Accept my congratulations on your splendid March issue. I am glad to know that it is the largest since April, 1931.

We have to go back to 1930 to find months as good as we are enjoying now.

I offer one suggestion. That is, very few of your plans of residences show porches and sleeping porches. In most of the Central West, these are almost an absolute necessity. Sun rooms and terraces are not an acceptable substitute.

I realize that there is much more building farther east than there is in this part of the country, but we are confident that with one or two good crops and the better prices for farm products which have prevailed since March 4, 1932, we shall enjoy a revival of building in our part of the country also.

JOHN A. KEES,

F. D. Kees Manufacturing Co.

### STANDARDIZED PANELS

(Continued from page 71)

every piece of lumber properly, dry it thoroughly thereafter, and be equipped with steel templets and a trained personnel to correctly manufacture the units. The foreman or superintendent should be well versed in construction principles, else many errors will result.

For several reasons all manufacturers who determine upon prefabrication might well band themselves into a closely-knit group of interchange of manufacturing and merchandising information, and for producing a uniformly made product. It would be ideal if a retailer could order a prefabricated house from one of these manufacturers in the knowledge that it would conform precisely to the specifications laid down in a general treatise and that the product of one manufacturer would be the same as that of another, or that units could be as well obtained from one manufacturer as another for the same house.



# DEALER MARKETING SECTION

A Department of Management Ideas  
and Sales Helps for Retailers —

Distribution of this Section is to dealers only

## Hobbies

**R.E.S. Says:** During the past month we met two very interesting retail lumber dealers. Both had unusual hobbies—at least for lumbermen.

One was a collector of small house designs. The other made a specialty of planning and building lake cottages.

Good hobbies, we thought, for persons engaged in the selling of building material.

The dealer who was making a collection of small house designs had been at it for years. So had his wife. They were subscribers to practically every publication that had anything to do with home planning. Whenever they came across an attractive, well-planned small house they studied it and decided whether it was worthy of their collection. If it met with their approval they attempted to obtain additional information concerning it—photographs if possible and any other data that might prove valuable.

As a result they had built up a series of portfolios, each devoted to houses of a certain size or type. They were very impressive in appearance, well organized, and the pages were attractively laid out.

To our own way of thinking it is one of the most valuable collections of the kind in existence and it has been achieved through the efforts of a man and woman who are well-to-do. Under no circumstances do they wish to commercialize their efforts. It is a private collection and isn't even used to any great extent in connection with the dealer's own business due to the fact that he has such a wealth of material in his own office that he doesn't have to disturb the portfolios which he treasures so highly.

As we looked over the collection and realized how much pleasure it had given its owners we couldn't help but wonder why more lumbermen weren't interested in something of the sort.

If such a collection could be made available to the public by a progressive lumber dealer he would certainly have no competition for the home building business in his trading area.

It was particularly interesting to notice the change in home building that has taken place during the past 15 years—both in exteriors and in-



teriors—the latter particularly. According to the dealer and his wife the past 5 years have shown more changes in interiors than the preceding 10.

"Houses are really becoming tremendously interesting now that all the new things are coming onto the market to make them more livable, more attractive, more economical, and more efficient," said the dealer.

To our way of thinking it was a great hobby and we spent a most interesting evening looking through the collection and discussing its various phases.

The dealer who had made an intensive study of lake cottages had done it for commercial purposes.

"We go to a lake cottage for comfort," he said. "But the strange part of the whole proposition is that so few lake cottages are really comfortable. There isn't any reason why the roof should leak and the rain should beat in around the windows and doors. When you get right down to brass tacks there are just as many reasons why a lake home should be properly and carefully constructed as a town home.

"I became interested in lake cottages several years ago and found that most of them were pretty bad. Since that time we have been making improvements year after year until we now know how to build a summer home that is really worthwhile. This doesn't mean that it costs a

(Continued to page 124)

## DON'T MISS THIS ADDED VALUE

"THE man who makes a hobby of his business is unbeatable," R.E.S. says. Do you agree with him? — see this page and the next.

WHAT the flood water did to some lumber yards — American Builder was on the job with camera and notebook — see pages 125, 126.

CUBIC foot cost analyzed. Same "\$5,000 house" priced in 57 cities — valuable data here; see page 127.

EIGHT pages low cost homes and farm building plans. Put these to work

in your business — pages 128 to 135.

CAN you write ads that folks will read? "Poetical Peggy" Williams will help you—see page 136.

A. W. Holt finds some keen merchandisers in California. Merchandising ideas here for all—see page 138.

KEEP out of trouble by reading our Legal Department—page 148.

NEW catalog helps for dealers—page 152.

ADVERTISERS' index—page 154.

**R. E. S. SAYS***(Continued from page 123)*

lot more money but simply that we have put in a lot of features that make it attractive and add greatly to the comfort of those who are living in it."

On top of the desk were the plans of an attractive summer home that had been designed by a prominent Chicago architect. It was to be built in Wisconsin near one of the yards which are conducted by the man who knew about lake cottages.

When the Chicagoan came in with his plans it didn't take Mr. Lumber Dealer long to point out several very serious mistakes that had been made by the architect who unquestionably knew a lot about designing homes but very little about summer cottages.

The result was that the plans were discarded and Mr. Lumber Dealer sold a very fine job without competition from one of his own plans and incorporated features which delighted the builder to such an extent that he sent two of his friends to the dealer for similar information.

You know the old wheeze about the man who made a better mouse trap. It works the same way in summer cottages.

Try and think up two better hobbies for lumbermen than the two just mentioned. We have tried but have not succeeded very well. Perhaps you can.—R.E.S.

**COOPERATIVES**

**L**OTS of talk going on about the cooperative movement that is said to be sweeping the country. We heard many a Convention speaker say that it was a dire threat to the retail lumber dealer. Mebbe so but we doubt it, especially if the lumber dealer is up on his toes.

We have visited hundreds of cooperative lumber yards during our more or less varied career but we haven't come across more than half-a-dozen that were really threats to any one, let alone an up-and-coming lumber dealer. Price is the cooperative's only weapon, and progressive lumber dealers are setting up their business so that the price per M is becoming less and less of a factor. Installment selling is making it possible to sell the completed unit—not at a price of so much per M—not at the total price—but at so much per month which, of course, is the only language that John Q. Citizen can really understand.

What he wants to know is how much it is going to cost him per month to live in the house that he proposes to build, or, to enjoy the improvement that he wishes to make on the house he is already living in.

The dealer who can give him this information will rarely have any trouble in making the sale.

On the other hand, if Mr. Dealer is going to depend upon quoting a price per M to some chiseling buyer who is making the rounds in order to obtain the lowest price, it is very possible that the cooperative establishment will get the business due to the fact that "price" is right down the cooperative's alley.

Edward A. Filene, Boston department store magnate, puts it this way: "Instead of worrying over the rise of these consumer cooperatives, business men who keep abreast of business change will welcome them as reinforcements in the struggle against depression, and as insurance for the continuance of our capitalistic business system."

Mr. Filene who has some very revolutionary plans for consumer cooperatives continues: "Livery stables by the thousands went out of business when the motor car arrived, which was obviously tough on widows and orphans who owned livery stables. Doubtless something should

have been done for them; but nothing could be done without violating the basic principles of capitalism as well as the basic principles of common sense."

The "livery stable lumber yard" will have a tough time battling cooperatives with prices but the progressive lumber yard which has kept up with the times will scarcely know of their existence. The business that always survives is the one that is able to give the best service to the public. You can build up theoretical barriers 10 miles high to retard the onward sweep of progress but the final answer will be determined entirely by what you are able to do for the public.

We do a lot of talking about what we are going to do. We read innumerable resolutions that are passed decrying the existence of this change and that change. Men hope and pray for the good old times when remoteness was actual and a lumber dealer could operate his yard in just about any way he pleased in his own little trading area which was shut off from all other areas by the lack of efficient transportation.

How things have changed!

It is well not to be lulled to sleep by the idea that opposition to change can prevent its arrival. It has always taken place and it will continue to take place despite the valiant efforts of those who wish to continue in their own comfortable traditional way.

Cooperatives are coming as sure as shootin'. What they do to the lumber dealer will be determined entirely by himself. It seems logical to assume that he should get ready to do a fancy brand of high-grade merchandising and to make full use of creative selling on the installment plan.—R.E.S.

**IDEAL FINANCING SET-UP**

**A**GOOD many dealers are pretty owly about the fact that Congress took new construction out of Title 1 when it was revised and extended. They claim that repairing and remodeling on a 3-year term doesn't mean much of anything.

We disagree.

It is true that in certain cases new construction worked out exceedingly well under Title 1. But it is likewise true that in far too many instances it worked in just the opposite direction.

It was more than a year after passage of the original Title 1 Act before lumber dealers generally discovered that you could build a new home and have it financed under the Act, providing the cost did not exceed \$2,000.00.

This opened up a big market for dealers in those industrial areas where there were a large number of wage earners in the low income group—somewhere around \$100.00 per month.

Another important market existed in metropolitan areas more or less adjacent to a lake region where people built small homes and moved into them as soon as school was out. There were many such areas in the East and several throughout the Central part of the country.

Dealers who had made a study of small houses had been able to effect important savings in the construction of these small homes by working out ways and means of utilizing standard materials. They financed a large number of them and had few delinquencies. Dealers who had not made a study of this type of business promptly found themselves in trouble because many of the deals were handled through fly-by-night real estate agents and developers who worked out a scheme whereby the house and lot and other things were included in the loan which, of course, made it ineligible under the Act.

*(Continued to page 142)*



## 150-Foot Shed Floats Away

**Just one of many events affecting lumbermen in flood stricken sections. Some yards destroyed, others damaged. Dealers experience sharp increase in sales in many communities**

**T**HE recent floods did many things to the business of lumber dealers. Some it practically wiped out. For others it summarily removed everything that was not tied down. In probably the majority of cases the flood created a good increase in business for those who were still in a position to do business.

In all his ramblings about the flooded areas, the most interesting sight encountered by your *American Builder* correspondent was the 150-foot shed of the Cessna Lumber Company at Cumberland, Md., which started to float away.

It was two weeks after the day that 14 feet of silt-laden water poured through Cumberland that I came along with camera in hand to talk with Karl W. Radcliffe, president, and H. B. Rodruck, vice president of the Cessna Lumber Company. Their yard is located beside the tracks in the area close to the river and the



**KARL W. RADCLIFFE**, president of the Cessna Lumber Company, Cumberland, Md., says, "The flood didn't do us any good." However, he is aggressively making the best of the situation and has sold off most of his damaged and undamaged stock. Above is shown a view of the wreckage of the yard two weeks after the flood.

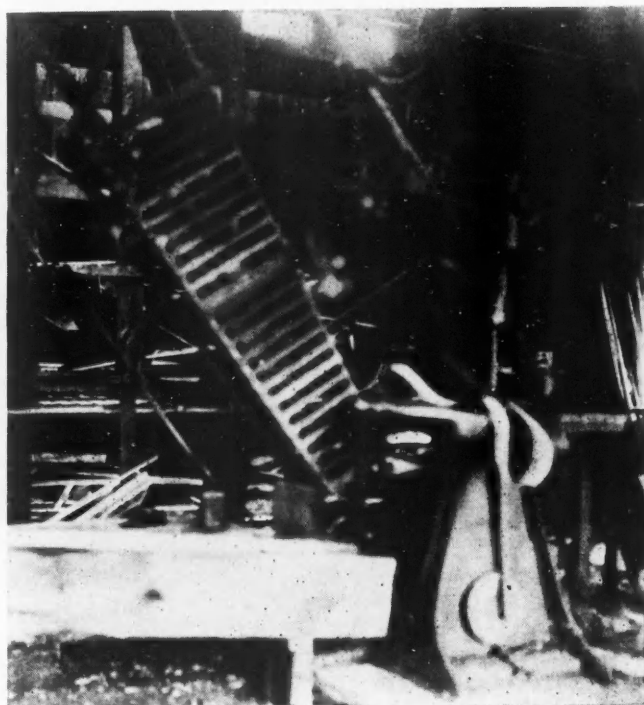


downtown section of Cumberland that received the brunt of the flood. The water went above the second-story windows of many buildings. In the Cessna yard it was 14 feet deep—far above any previous flood level. Large quantities of moldings and trim that were thought to have been stored above any possible flood level were inundated and destroyed.

The big shed shown in the accompanying pictures extended 150 feet along the spur tracks. It was full of framing material and rough lumber. To the horror and dismay of Rodruck and Radcliffe, the whole shed started to float away. One end moved approximately 50 feet when, by a quirk of fate, it jammed into a large brick and tile structure between it and the destruction below. It jammed into the structure and stayed, and the entire contents were saved. If it had gotten 10 feet farther along, it would have been carried completely away and its contents scattered for miles down the Potomac valley.

The Cessna yard, even after two weeks of incessant labor by the owners and the crew, and WPA workers, was still pretty much of a mess. The actual loss of lumber was not great as practically all of it was stored inside. Anything that was not was, of course, whirled away. However, the damage to such products as plaster, plaster board, moldings, many types of roofing and many other products, was very great. The bulk of the lumber dried out in good shape and was quickly sold off in the "building boom" following the flood. Radcliffe was quick to take advantage of the flood demand and advertised a big "flood sale." As a result, he sold off the bulk of his stock within a few days after the flood, at discounts of from 20 to 30 per cent. Not only was there a tremendous demand for lumber, roofing, flooring and trim for flood purposes, but farmers and property owners from the adjoining sections heard of the flood sale and came in and bought large amounts.

EVERYTHING in the Cessna Company yard that was not tied down floated away. Even the 150-foot shed, above, which was loaded full of framing material and rough lumber, started to float away and moved 50 feet when it butted into a brick structure. Fortunately it lodged in such a fashion that it did not go any further.



WORST hit of the Cessna yard was the planing mill. The above gives a slightly hazy picture of the interior two weeks after the flood. It will be many more weeks before this is back into operating condition.

# Cubic Foot Costs, New Homes

**T**HE Federal Home Loan Bank Board has recently inaugurated a Small House Building Costs Index which should be of great interest to the men of the building industry.

This index of costs is to be a permanent index to show the relative cost of home building in various communities from month to month. In January the Home Loan Bank Board published total costs and cubic foot costs of a typical small six-room house of 24,000 cubic foot volume, for 27 cities. This was followed in February with costs for 25 other cities. Additional cities will be added to this group later on to give a representative cross section of the United States.

The Board has set up this cost index to establish a basis of comparison, and points out strongly that the figures presented do not represent the total cost of construction. They represent only the basic structural finish and accessory elements that go into a house. In order to show the relationship between various communities, it was necessary to confine the figures to the basic structural elements alone, leaving out items that vary in different communities, such as lighting fixtures, refrigerators, water heaters, ranges, screens, weather-stripping, shades and other items.

Even though the index is confined to the basic structural elements alone, an extraordinarily wide variation in residential costs is shown. The costs are estimated by experienced estimators of the Reconditioning Division of the HOLC, and are figured on the average local material and labor costs in each city or town covered. This HOLC correspondent will figure the basic local cost each three months. A quantity estimate is made just as though the house were to be built. The cost is figured on the basis of the local labor and materials cost, to which is added a fixed amount for overhead items, such as public liability and workmen's compensation insurance,

## Federal Reserve Bank Index Shows Wide Variation in Residential Costs for Different Cities

and to this is added a builder's profit of 10 per cent.

The basic house of the Home Loan Bank Board is described as a detached home of 24,000 cubic foot volume, of good design, containing a living room, lavatory, dining room and kitchen on the first floor, and three bedrooms and bath on the second floor. There is an open attic which may be used for storage or may be finished into one or two usable rooms. The cellar or basement is without partitions and contains the heating plant and laundry facilities. The exterior treatment is assumed to be a combination of wideboard siding, with brick and stucco as features of design. A one-car attached garage is included. The plot is assumed to be approximately level and no unusual soil conditions have been taken into consideration. The materials and finish and workmanship specified are standard and such as are commonly employed in all parts of the country by reputable small-house builders. The structural design is sufficient to meet all reasonable requirements of a municipal building code.

The Home Loan Bank Board stresses the importance of this cost index as a measure of the movement of building costs, and it also is important in that it makes possible comparisons between the trends in different localities. Builders are cautioned against considering the cost figures given as total—they are not total costs but basic construction costs only. This index will be a continuing feature of the Home Loan Bank Board and should be of considerable interest to building men interested in the trend of costs.

Cost of building same typical house in 57 cities in January and February, 1936:

1st District:		2nd District:		3rd District:		4th District:		5th District:		6th District:		7th District:		8th District:		9th District:		10th District:		11th District:																																																																																																																																																																																				
Total Cost	Cost per Cubic Foot	Total Cost	Cost per Cubic Foot	Total Cost	Cost per Cubic Foot	Total Cost	Cost per Cubic Foot	Total Cost	Cost per Cubic Foot	Total Cost	Cost per Cubic Foot	Total Cost	Cost per Cubic Foot	Total Cost	Cost per Cubic Foot	Total Cost	Cost per Cubic Foot	Total Cost	Cost per Cubic Foot	Total Cost	Cost per Cubic Foot																																																																																																																																																																																			
Boston	\$5,861	\$0.244	Albany	5,340	.223	Baltimore	\$5,028	\$0.209	Des Moines	\$5,874	\$0.245	Chicago	6,361	.265	Birmingham	5,456	.227	Fargo	5,606	.234	Atlanta	5,367	.223	Columbia	4,337	.180	Indianapolis	5,889	.245	Kansas City, Mo.	5,328	.222	Springfield, Mo.	5,808	.242	Manchest	5,380	.224	Cumberland	6,033	.251	St. Louis	6,342	.264	Portland	4,813	.200	Montgomery	4,359	.181	St. Paul	5,330	.222	Springfield	5,963	.248	Providence	6,442	.268	Pensacola	5,095	.212	Sioux Falls	5,751	.240	Rutland	5,507	.229	Raleigh	5,056	.210	St. Louis	6,342	.264	White Plains	5,143	.214	Richmond	5,046	.210	St. Paul	5,330	.222	Atlantic City	5,922	.247	Roanoke	4,508	.187	Sioux Falls	5,751	.240	Binghamton	5,370	.224	Washington	4,977	.207	Springfield, Mo.	5,808	.242	Buffalo	5,490	.229	West Palm Beach	5,911	.246	Colorado Springs	5,972	.249	Camden	5,082	.212	Detroit	5,032	.210	Oklahoma City	5,756	.239	Newark	5,709	.238	Indianapolis	5,889	.245	Omaha	5,487	.228	Syracuse	5,500	.229	South Bend	5,737	.241	Wichita	5,386	.224	White Plains	5,143	.214	Chicago	6,361	.265	Boise	6,777	.282	Asheville	4,960	.206	Chicago	6,361	.265	Cheyenne	6,506	.271	Atlanta	5,367	.223	Oshkosh	5,703	.237	Great Falls	6,779	.282	Portland	5,267	.219	Asheville	4,960	.206	Springfield, Ill.	6,202	.258	Portland	5,267	.219	Asheville	4,960	.206	Springfield, Ill.	6,202	.258	Salt Lake City	5,980	.249	Atlanta	5,367	.223	Springfield, Ill.	6,202	.258	Salt Lake City	5,980	.249	Atlanta	5,367	.223	Seattle	5,315	.221

# STOCK PLANS

## Through Retail Lumber Dealers

The Low Cost Plans illustrated in this Department are available to Dealers at a moderate cost from the service agencies mentioned

*RETAIL DEALERS are offered this additional service of low cost home and farm building designs, illustrated here through the courtesy of well known associations and plan service agencies which are named, with address, in each instance, and from whom complete working plans, specifications, etc., can be immediately secured by dealers on request, the cost of such service being nominal.*

LOW cost home planning still holds the public eye with economic planners, New Dealers and industrialists vying with each other to work out some satisfactory way to provide mass housing at low cost. In the meantime, however, lumber dealers and practical builders in almost every community are going ahead planning and building neat little three-, four- and five-room detached homes that are costing their owners as little as \$1,200, and from that up to \$3,000 or \$4,000. Evidently the independent lumber dealer and his circle of experienced carpenters and contractors are able to do for their rural, village and suburban customers what the big planning experts are not able to accomplish where mass produc-

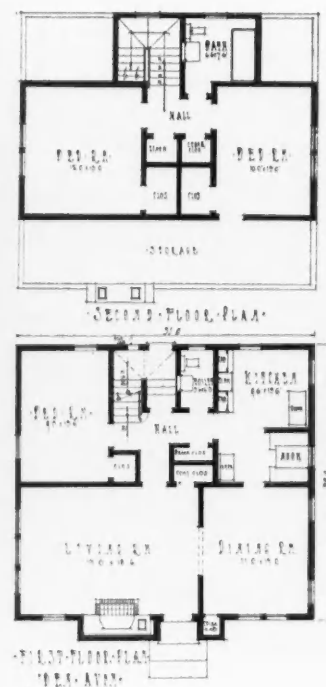
tion is balled up with endless red tape and costly supervision.

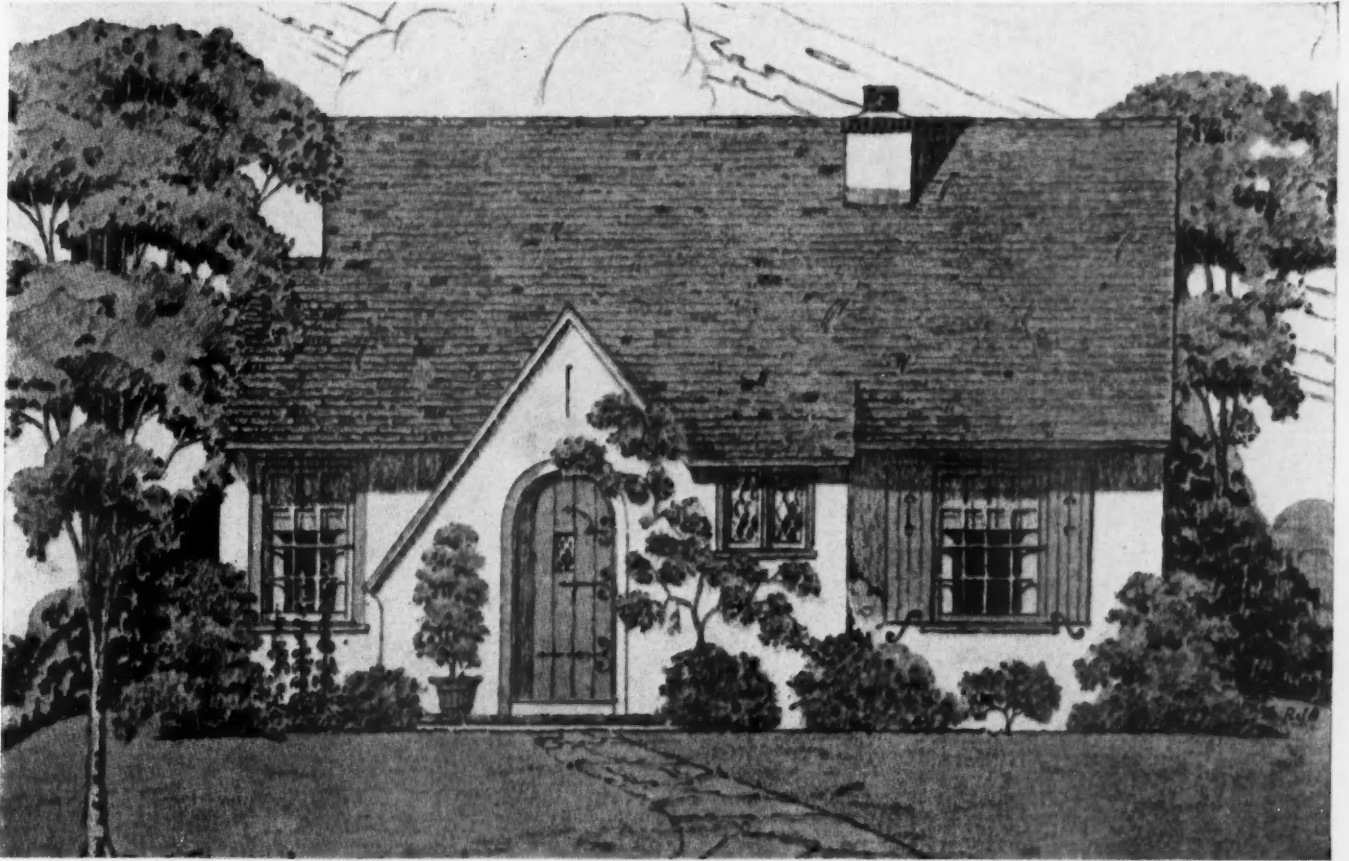
So *American Builder* is happy to continue to present each month in this department its selection of the best and most carefully worked out plans for small homes to make them not only good to look at but practical and inexpensive to build and to live in and pay for. A well designed, well constructed small home is after all the best old age and social security.

### "THE BEN AVON"

YOU cannot help admiring the pleasing lines, good proportions and inviting appearance of this neat little place. The deep recessed entrance is attractive and at the same time gives weather protection. With gray shingles, light brown shutters, white sash, straw colored shades and brown roof, the color scheme is perfect. The first floor has a bedroom and toilet, large living room and a rear hall that gives access to all parts of the house. The second floor has two additional bedrooms, a bathroom and storage space.

"THE Ben Avon" is an attractive shingled cottage 31 by 28 feet, designed by the architectural department of Brown-Blodgett Co., St. Paul, Minn. The "Ben Hova" is exactly the same design except that the width is 34 feet instead of 31 feet, making each of the six rooms just 18 inches wider. The Cost Key of Ben Avon as illustrated is 1.509-122-884-38-18-14.

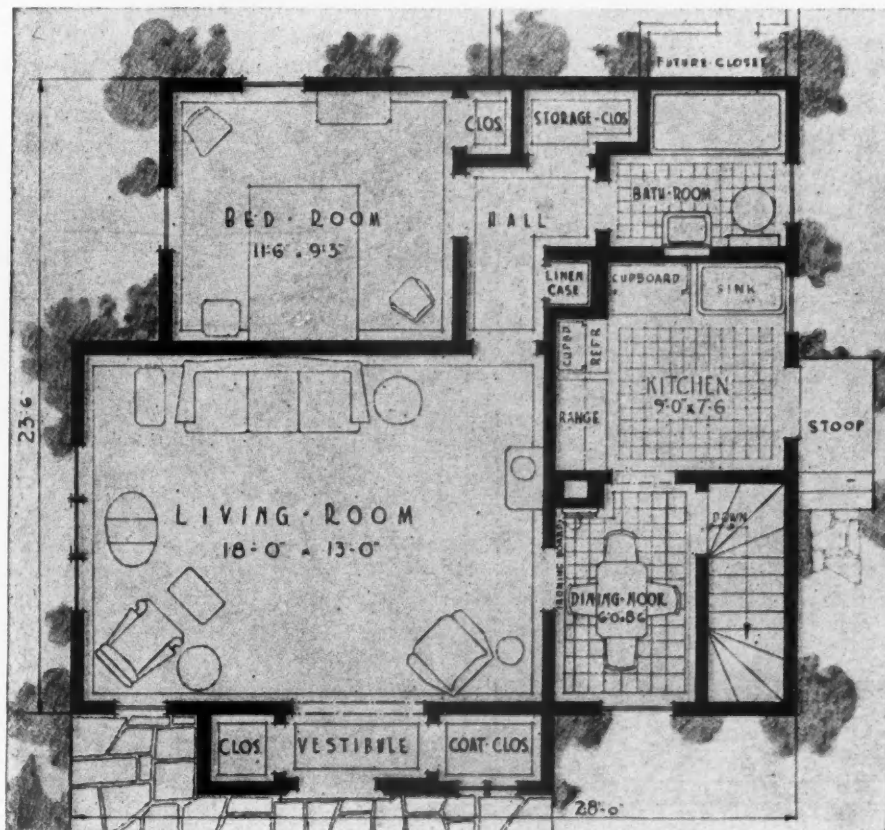




A CAREFULLY planned small home with large living room, ample bedroom and modern kitchen-dining nook combination. This is Plate No. 1, "Key Homes" from the architectural department of the Curtis Companies, Inc., Clinton, Iowa. Cost Key is .937-110-669-29-13-10.

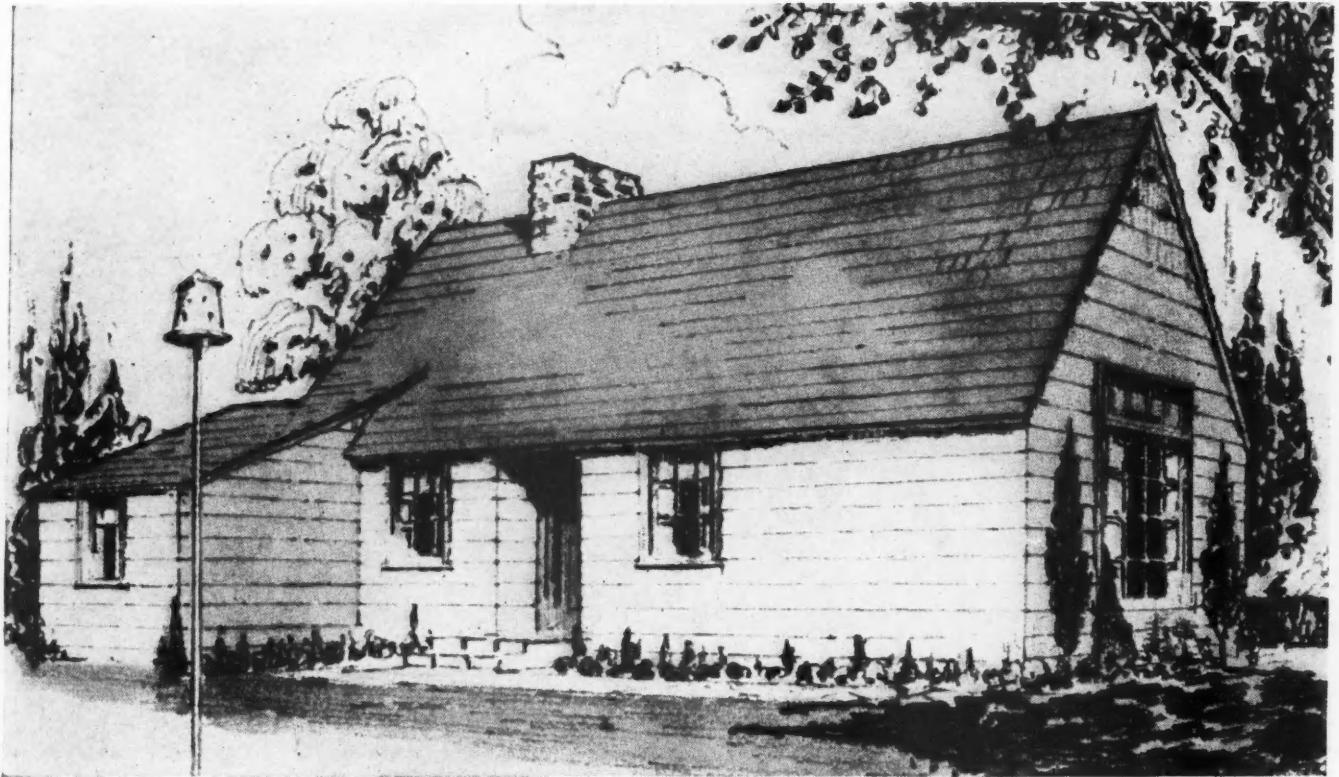
## CHARMING COTTAGE OF 4 ROOMS

## Quaint English Lines Style This Good Plan



REGARDLESS of the type of houses built next to it, this home will surely stand out. Taking a primary part of this prominence is the outstanding entrance with the slab circle head door. A most popular feature is the ample living room which is made to appear even larger than it is by the arched opening through the dinette. An extra bedroom is suggested at the back opening through the storage closet from the hall. This could be added later on without altering the original wall or roof.

This house could easily be turned into one of the popular new idea basementless houses by using the space indicated for cellar stairway as a utility room opening out of the kitchen. This, floored with concrete, could nicely accommodate the heating plant and fuel bin.

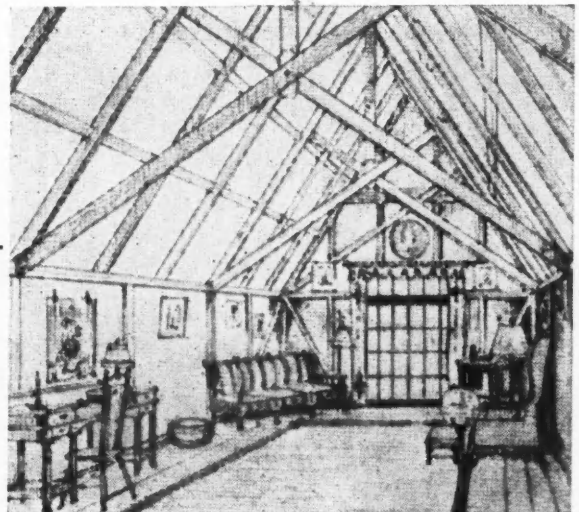
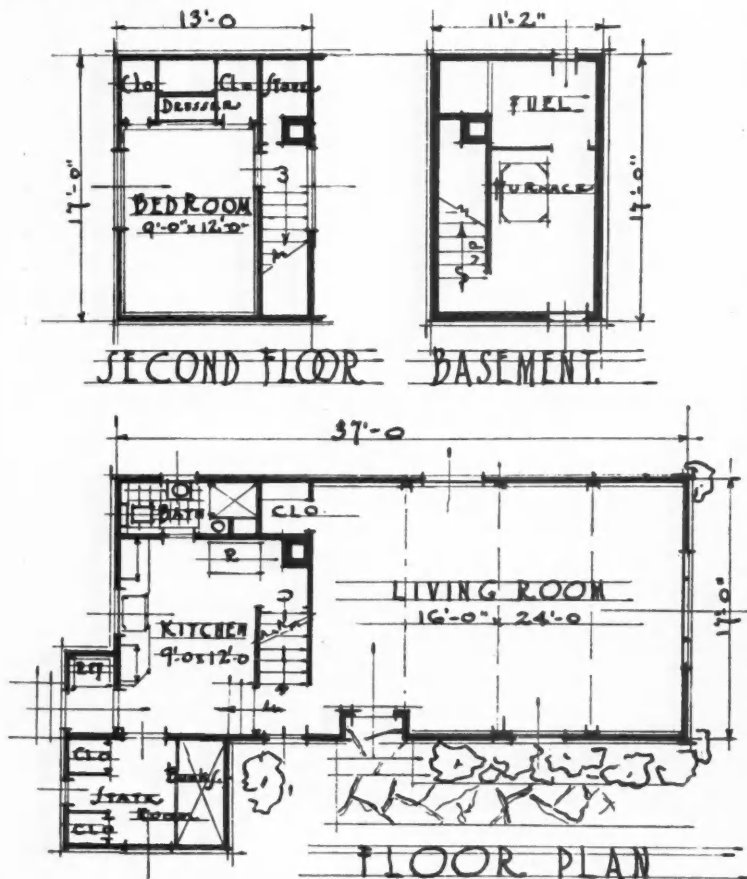


HOUSE No. 401 in the selection of the West Coast Lumbermen's Assn., 364 Stuart Bldg., Seattle, Wash., and illustrated in the pamphlet, "Four Low Cost Homes of Architectural Merit," was designed by H. E. Crawford and Arnett Woodroffe, architects. Cost Key is 1.033-128-(714)-(31)-14-13.

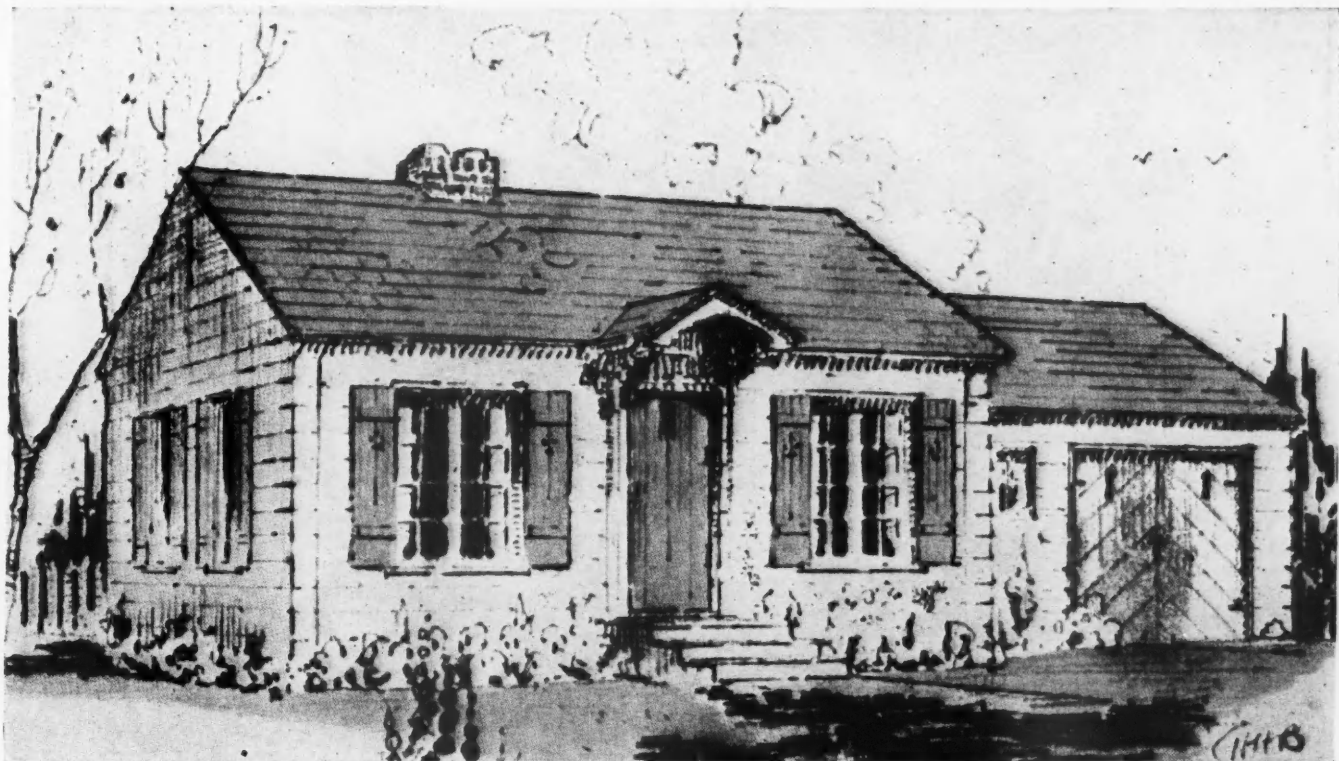
## \$2,000 HOME, STUDIO STYLE

### Well insulated Roof Gives High Ceiling Living Room

HERE is a new architectural style worked out by an architect for his own family. The design and method of construction grew out of his desire for a low cost house. The striking feature is the large living room, 16 by 24 feet, with ceiling open to the roof which is well insulated. The upper bedroom opens off the balcony while below are kitchen and bath, and an extra "state room" with built-in-bunk. Basement is excavated under rear of living room only.



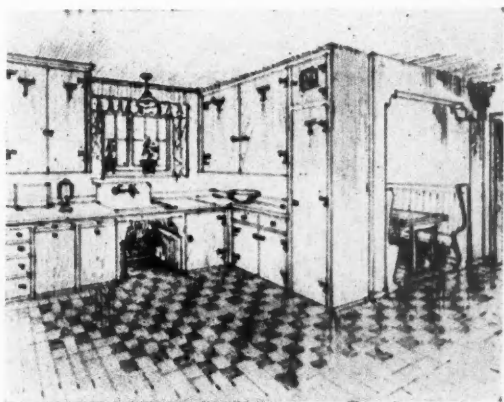




HOUSE No. 301 offered by the West Coast Lumbermen's Assn., 364 Stuart Bldg., Seattle, Wash., is one of the designs in the pamphlet, "Four Low Cost Homes of Architectural Merit" and was designed by H. H. Riley, architect. Cost Key is .876-130-(515)-(24)-13-10.

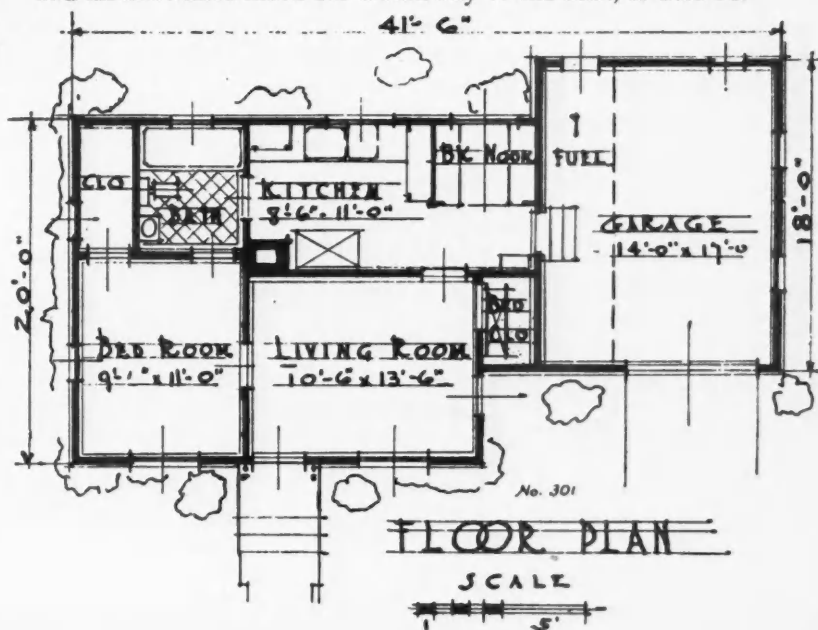
## WESTERN STYLE COLONIAL

Three Rooms, Bath and Attached Garage with Breakfast Nook and Bed Closet Solve Low Cost Problem

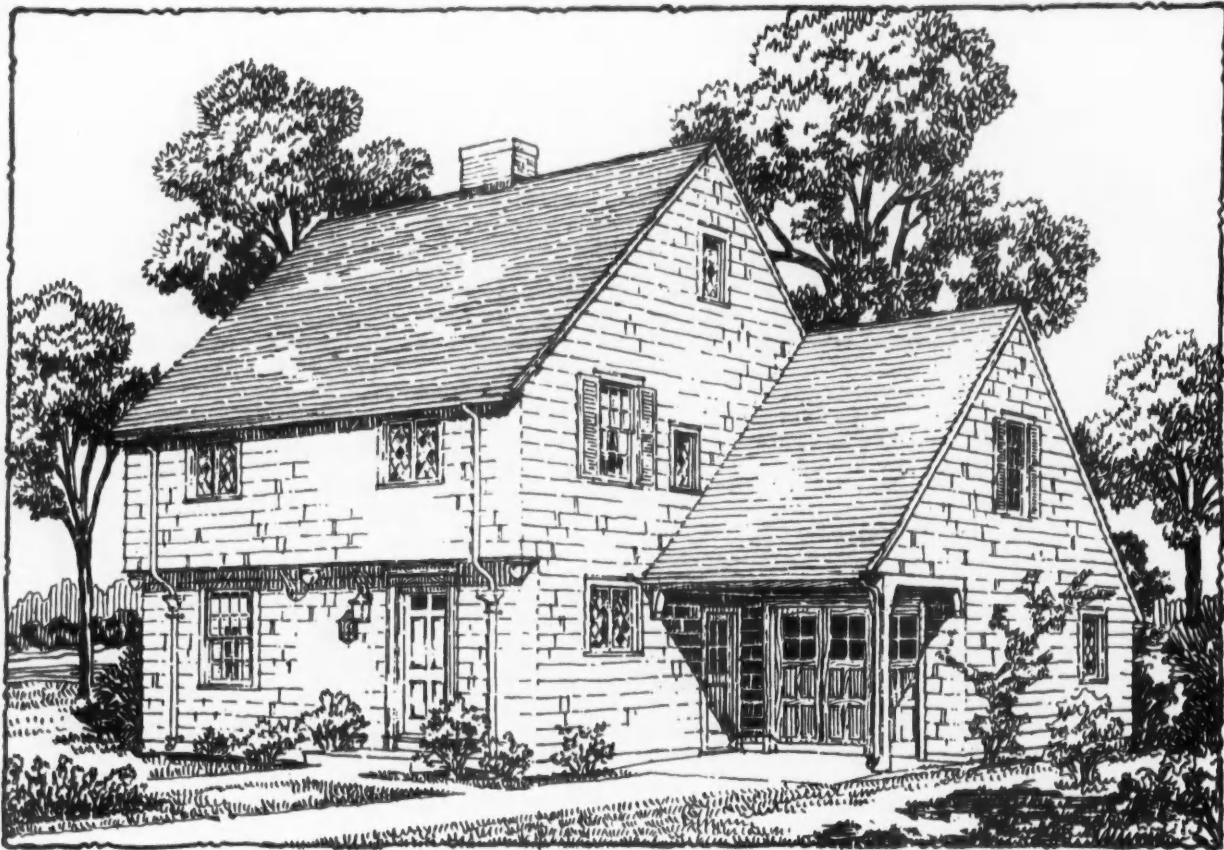


SKETCH showing attractive kitchen with built-in cases and breakfast nook.

OUT of the experience of an architect who designed and built many practical small homes was developed this unusual combination of low cost, pleasing architecture and modern feeling. This "simple Colonial" is offered as the lowest cost house of this group of low cost units. It is a home for two at a total cost not greater than the amount needed to buy a fairly good automobile, and it has a garage, bedroom, kitchen with nook, two closets, one large enough for a bed, and a bathroom. The bed closet in the living room may be eliminated and an allowance made for a stairway to the attic, if desired.



LOW cost and economy of operation were the first considerations in this plan and exterior design. It is intended for a home with suburban acreage for two people with the living room bed closet to care for guests. The garage is attached; entry is through the kitchen and, as the family grows, the garage may be converted into another room with basement, if required, underneath.



DESIGN No. 518 from the Architectural Dept. of the Northwestern Lumbermen's Assn., Minneapolis. Total cubic footage, main building and garage, 25,300 cubic feet. Cost Key is 1.688-124-676-30-24-16.

## LINES OF THE EARLY AMERICAN

Seven Rooms and Garage in This Northwestern Association Plan

A HOME for today modeled after the Early American dwelling of New England. The overhanging second story, large central chimney, diamond paned casements and low sweep of the garage roof in the rear are characteristics of this style. Garage may be left off without disturbing plan.

### MATERIALS AND EQUIPMENT

*Exterior Walls:* Frame, 18 inch shingles 8 inches to weather, insulation.

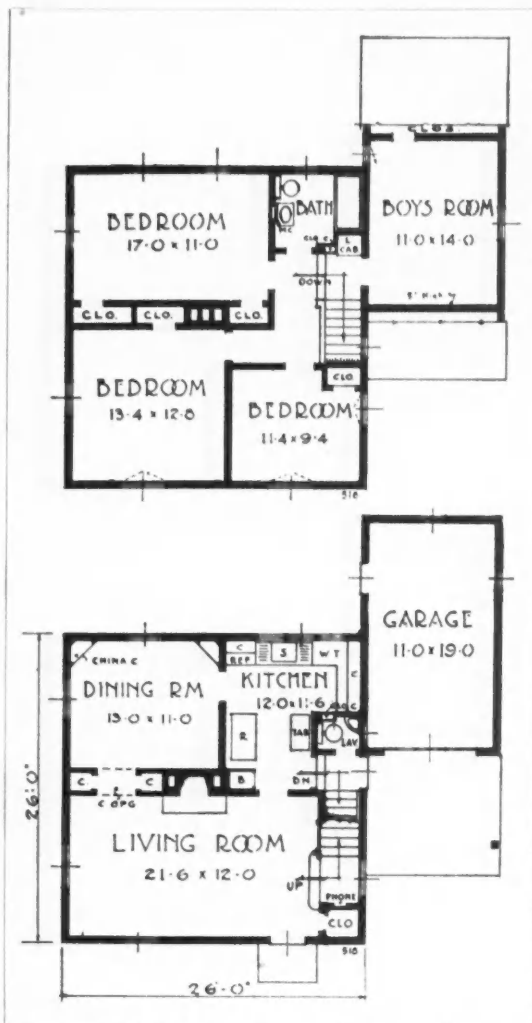
*Roof:* Stained cedar shingles.

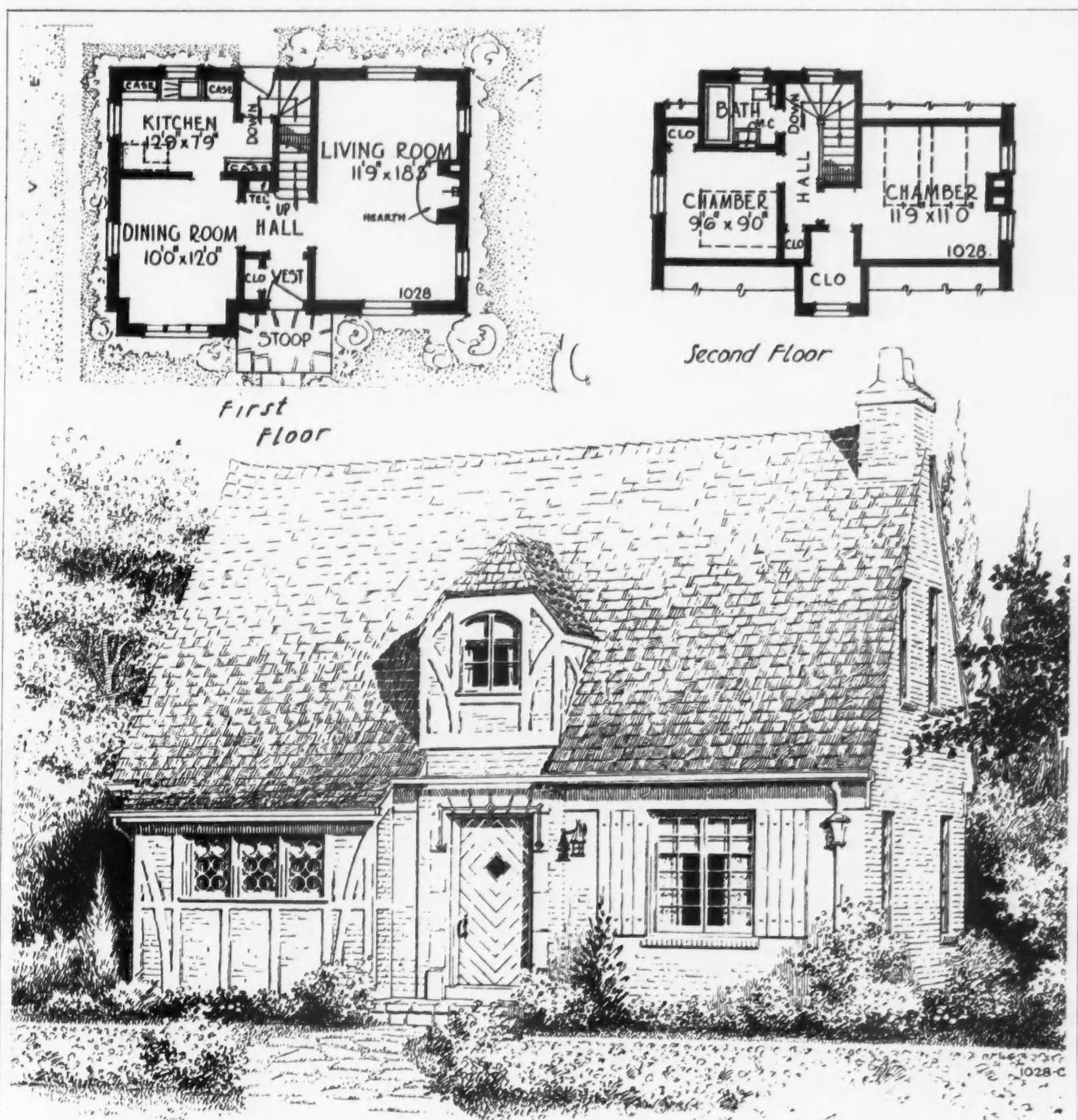
*Interior Finish and Walls:* Gumwood or birch stained like walnut in hall, living and dining rooms. Balance of trim enameled. Walls in main rooms textured plaster, balance smooth plaster painted.

*Floors:* Hardwood floors except in kitchen and bath. Linoleum or composition tile in kitchen. Tile floor in bath.

*Mechanical Equipment:* Pressure hot water heating system with air conditioning equipment or forced warm air with washer and filter. Five foot recessed tub with shower; sink, five foot size; laundry trays in basement. Number of electric outlets 80.

*Suggested Exterior Color Scheme:* White walls; red roof; brown stained rafter ends and shutters; olive green trim and sash.



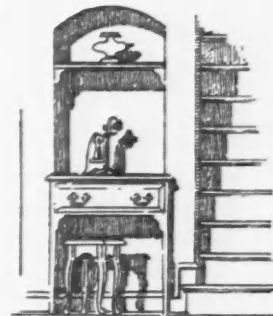


## A MODEL COTTAGE

*Simple and harmonious in line, this attractive two-story French cottage offers much in living comfort.*

### DIMENSIONS

*Size Of Main Building 30'0" x 20'0". Size Over All 31'6" x 26'0".  
 Ceiling Height 1st. Floor 8'6". Ceiling Height 2nd. Floor 8'0".  
 Ceiling Height Basement 7'0". Total Cubage 13400 Cu. Ft.*



*Telephone niche in hall.*

**OLD WORLD TRADITION**  
 5-Rooms in Quaint French Cottage

DESIGN No. 1028-C from the National Plan Service, Inc., Chicago. A little home of unusual artistic appeal, easy to build and inexpensive to own. Cost Key is 1.157-104-616-27-15-13.

## MODERN 4-ROOM SOLIDITY

Simple Lines in Good Taste to Assure a Long Life for This Concrete Home

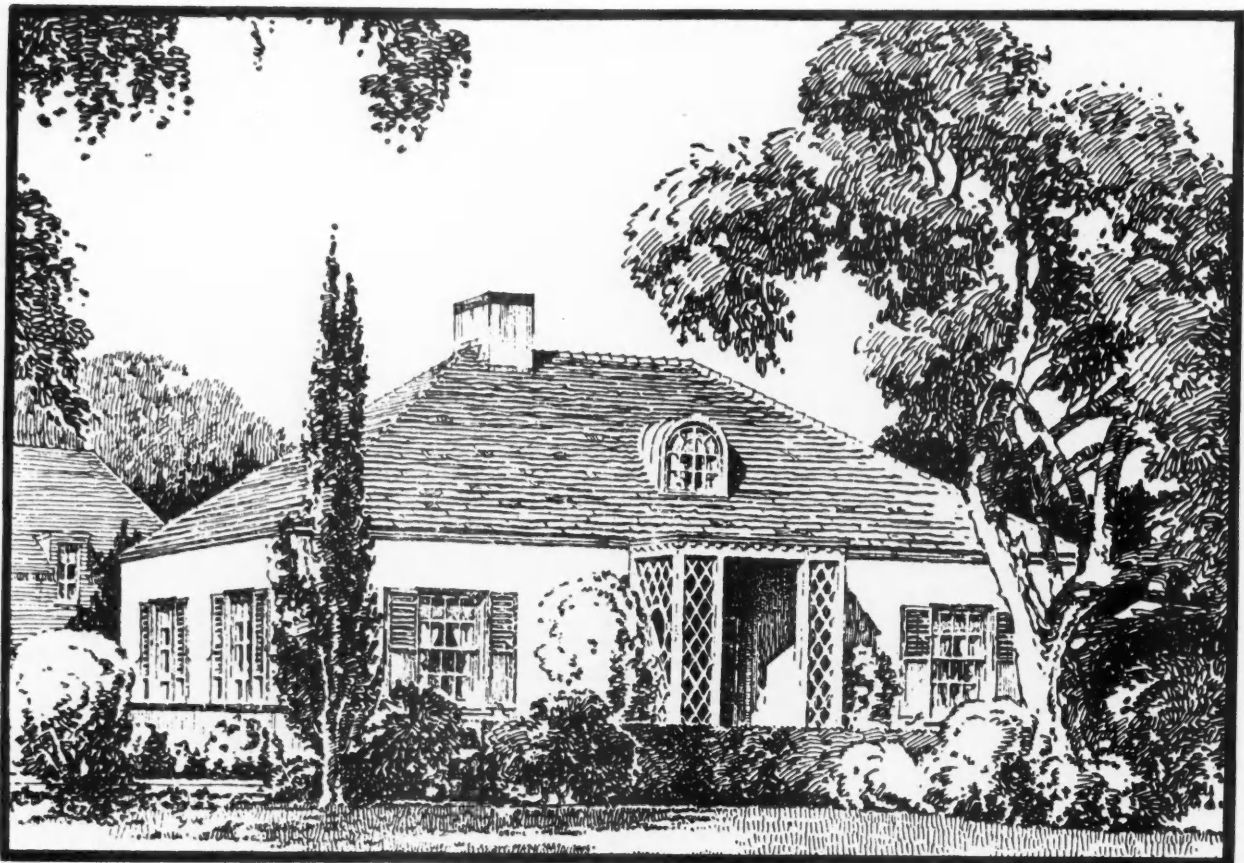
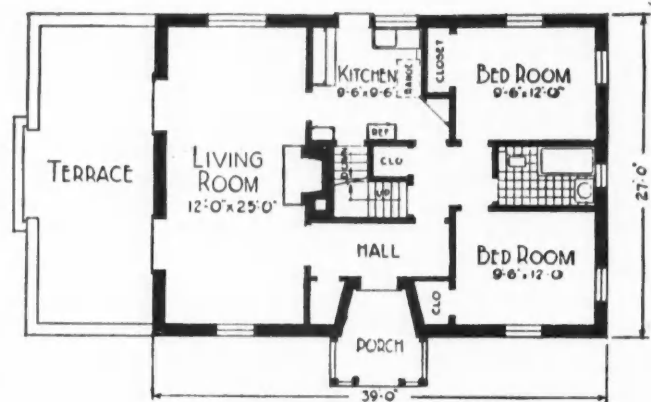
LET'S start out with a four-room cottage, typical of present day demands for the small family dwelling. The low walls, the hip roof tucked in closely around the cornice, the trellised entrance porch and well proportioned window shutters enhance the beauty of this little home and bespeak living comfort. Inside, the exceptionally large living room serves also as a dining room. Halls, bedrooms and kitchen complete a rectangle, making all rooms easily accessible. At the same time, it permits desired privacy for all retiring quarters.

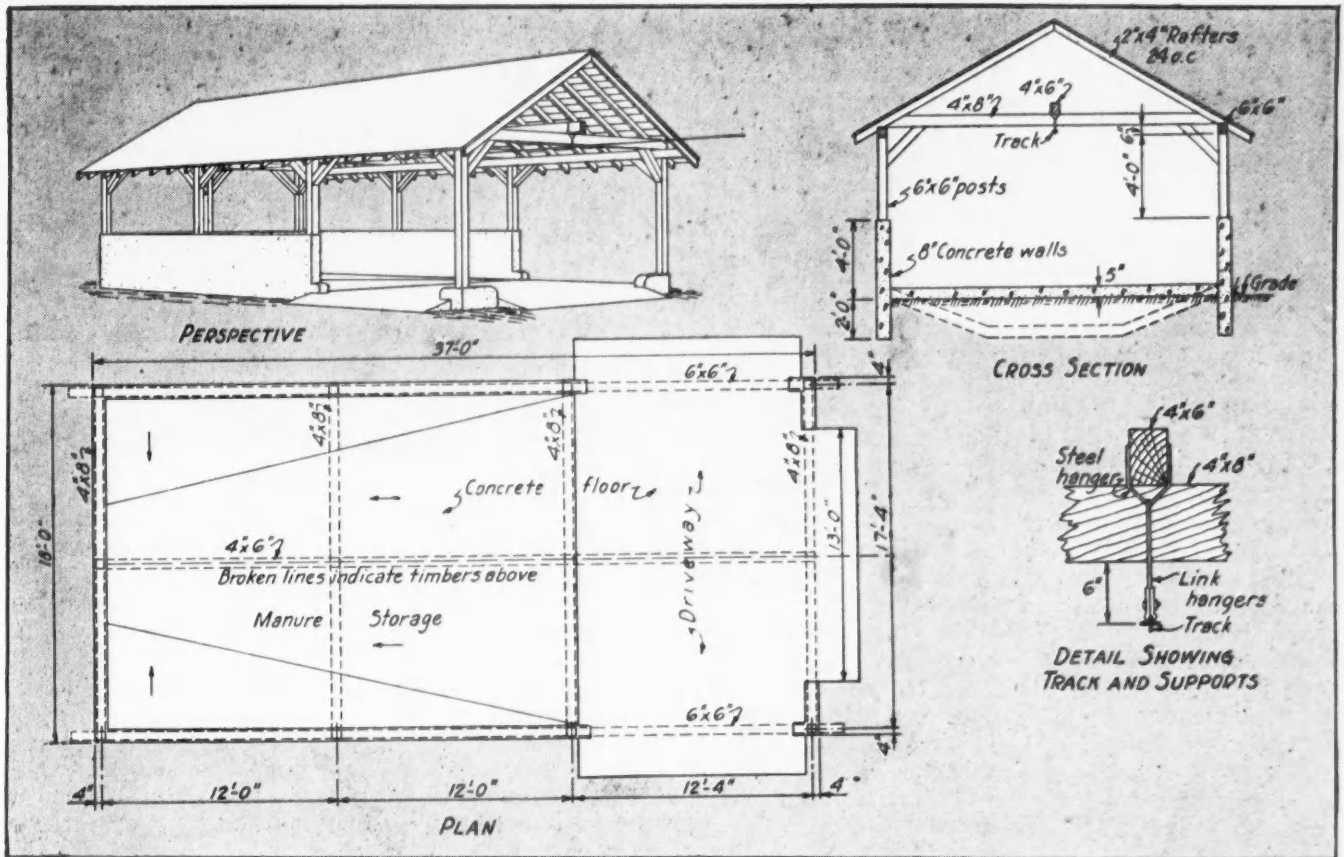
The walls of this cottage are concrete masonry with an exterior finish of portland cement stucco. A smooth stucco finish in a light color will emphasize the fine design. Among the colors suitable are buff, tan and light shades of blue or green, all of which may be had by adding mineral pigments to the stucco finish.

The roof, of course, is made of cement asbestos shingles laid in regular or random patterns. Such a roof is a practical guarantee against fires starting from chimney sparks or other inflammable material dropping on the roof.

Basement size for this home is optional. It may be full size, offering opportunities for storage space or a recreation and play room; or it may be a half basement large enough to house the heating plant and laundry. In any event, foundation, basement floor and first floor are of concrete to provide ample structural support and protection against termites and fires. First floor construction may either utilize the new, economical precast concrete joist and concrete slab, or any of a number of practical concrete floor systems.

SPACE is conserved in this floor plan by using one end of the long living room for dining purposes. Walls and floors of this house are of concrete. Designed by the Architects' Small House Service Bureau, Inc., Minneapolis (Design No. 4-K-21) for the Portland Cement Assn., Chicago. Cost Key is 1.160-132-1053-44-14-15.





CONCRETE manure pit for farm or country estate; Drawing No. B-2175 from the Portland Cement Assn., Chicago. This is reproduced from the Association's book, "Concrete Farm Buildings."

## MANURE PIT AND SHELTER

### Practical, Profit Saving Structure for Fertilizer

THE concrete manure pit is a necessary farm structure if stable wastes are to be handled so as to save their valuable plant food elements. Piled in the yard, rains wash soluble fertilizing elements such as potash and phosphorus out of the manure and exposure causes fermentation and loss of the valuable element, nitrogen.

Watertight concrete floors and walls of the concrete manure pit shown retain all of the liquids and make it possible to pile the manure deeply, thus retaining the soluble elements and reducing losses due to fermentation. A roof over the pit is desirable, otherwise too much rain water might collect in the manure. A driveway at one end of the pit provides space where the manure spreader may stand under cover while being loaded direct from the little carrier or where it can be housed when not in use. Concrete approaches are desirable for easy entrance and exit.

The value of manure saved by a concrete pit like that shown here will generally pay the cost of the pit in a year's time. Dimensions may easily be varied to meet requirements, capacity of various sized pits being given by the table to right:

#### DIMENSIONS FOR MANURE PITS FOR DAIRY HERDS OF VARIOUS SIZES

(Exclusive of Driveway)

No. of Cows	Length	Width	Average Depth
10	16 ft.	16 ft.	4 ft.
18	24 ft.	18 ft.	4 ft.
20	26 ft.	18 ft.	4 ft.
30	30 ft.	24 ft.	4 ft.
40	40 ft.	24 ft.	4 ft.

Space for storage of mineral fertilizer such as rock phosphate may be set aside for that purpose in the manure pit. In this location it is convenient for mixing in with the manure, a practice quite generally advocated by soils specialists. Generally, a concrete wall is built to separate the manure pit from the space used for mineral storage.

#### MATERIALS REQUIRED

(18 by 37 feet outside dimensions)

Drawing No. B-2175

**Foundations:** Estimate based on 1-2¼-4 mix. Foundation wall to extend 2 feet below ground. Requires 26 sacks cement, 2¾ yards sand and 4 yards pebbles.

**Floor and Approaches:** Estimate based on 1-2¼-3 mix. Requires 62 sacks cement, 5¼ yards sand and 7 yards pebbles.

**Wall:** 8 inches thick, 1-2¼-3 mix. Requires 43 sacks cement, 3¾ yards sand and 5 yards pebbles.

# How To Write Ads That Folks Will Read

A SENSE of humor makes the whole world kin. That humor strikes a responsive cord is most forcibly demonstrated by the programs that really last on the radio—the ones that have human interest, folksy stuff in them. These programs show that humor certainly has a definite place in human interest appeal; so why shouldn't we lumber dealers tune in on some of the response in the form of shekles that the tooth paste manufacturer and the manufacturer of gelatine or coffee, are enjoying? If a radio program can set the world to brushing its teeth, drinking a particular brand of coffee, switching from apple pie to gelatine or shelling out for a certain gasoline, why can't we building materials dealers start the world to pulling down old houses or modernizing them or building new ones?

Not that I, a small town lumber dealer, would presume to tell *you* how to run your own business!—for I know you could tell us a whole lot about real merchandising; but when in our battle against all sorts of odds a little

## Mrs. A. T. (Poetical Peggy) Williams of the Williams Lumber Co., Fayetteville, Tenn. Tells her Philosophy of Local Newspaper Advertising

humor helped put us over the top, lifted us out of and bodily through the depression; well, you can't toss that aside as unimportant.

The art of advertising is really a great form of art—the painter uses his brushes, the writer's tools are words. Or, to switch the metaphor (I'm a great metaphor switcher), his job is to make words do tricks, sit up and beg, play dead and at the same time amuse and build good will.

In reading this series of articles about the jingle advertising I have written to promote the Williams Lumber Company business through our local newspaper the question will be put to me, as it has been occasionally

before—does not this verse carry only a local appeal in a small town where you are well known?—and isn't the person behind its personality the dominating influence in the success of your firm's advertising?

My answer is a most emphatic NO.

I am just an average run-of-mine sort of person; and, when we began this type of advertising, I was known only in a small social and literary circle. But maybe I had a sense of humor, and the gift perhaps of being able to step out of my own shoes into the other fellow's and so to write stuff to fit the average viewpoint whether locally or abroad.

For instance, when we ran the little poem, "The Way It Started," featuring two fleas, I hoped that local folks would hop on it and find it amusing. In a few days after its appearance in our local newspaper, a letter came from a playwright whose name was in bright lights over the Belasco Theatre in New York a few years ago. She wrote, "I enjoyed your flea poem more than anything you have written and I read your column regularly. It is inspiring that a person's originality could turn the tide of a business from ebb to flow and do it in such a big way. Nonsense verses are a sure-fire way to attract attention. They are so easy to read.

### AS POETICAL PEGGY PUTS IT

#### RENTER'S BLUES

When the wife begins to pout  
Which she will, without a doubt  
And she's feelin' down and out  
YOU'D BETTER BUILD!

When she gets depressed and blue  
And she takes it out on you  
What you surely ought to do  
YOU'D BETTER BUILD!

At last she makes it hot  
And she'll do it, like as not  
Then she's got you on the spot  
YOU'D BETTER BUILD!

(After you've made up your mind as to the building, there'll be no question then as to where you'll buy your Materials. Of course, you'll buy them from Williams Lumber Co.)

We're proud of the nice, well selected stock we have to show you. There's everything you're needing—all materials for the foundation—Sand, Cement, Brick, Lime, as well as Framing, Roofing, plus everything else in building materials.

Of course we're glad to sell you weather boarding. We have a great quantity of it at a very reasonable price, but when vertical-grained Washington Cedar Shingles cost practically the same and will last at least forty years, naturally we're going to recommend them to be used as siding material or weather boarding.

#### FLOODS

(An idea borrowed from T. H. Alexander, some day I'll pay it back.)

When you're in an awful flood  
Home afloat on sea of mud  
And you expect to drift away  
Any time, or day, or hour  
Don't forget Old Mister Noah  
As he sits on t'other shore  
That this flood to Mister Noah's  
Just another little shower!

(Folks, when you see a big cloud rising and you know the old roof's going to leak, remember, like Mr. Noah, there are Others in the Same Boat, but the Wise Guy will Re-roof with a good Old American Asphalt Shingle Before the Next Rain Catches Him.)

New house plan books arriving every day. We keep them for your convenience and you're more'n welcome to them.

All Sorts of Brick for Mantels. All Sorts of Lumber for anything. All Sorts of Shingles—fact is, we're never out of Sorts.

Yours for Better Homes and

More of Them

Poetical Peggy

—of—

**Williams Lumber Co.**

These little rhymes all pack a good point, etc., etc." And—more bankable than praise—she ordered materials to repair a bunch of houses she owns in her home town, here in Fayetteville, Tenn.

The rest of the world (or a large part of it) is beginning to use humor in advertising; why not the lumber dealer?

I've kept all the poems I've written over a period of eight years; kept them in a scrap book, planning to assemble them in shape to offer the service to other dealers; and from the letters I have received from them a great number of dealers seem to be most cordial to the idea of using this type of advertising.

I'll say in passing that I take this work of writing these ads very seriously, this effort to entertain, build good will and help folks to chuck their troubles aside and smile, and furthermore, to learn where to go, when they're needing building materials! I repeat what I said in the March and April issues of *American Builder*—it isn't easy to get a temperamental muse in a good humor, then sentence her to a day of hard labor when she'd rather go on vacation. But it's so important to give my readers the surprising, the unexpected that it keeps me on my toes to sustain their interest and keep them traveling US-Ward.

Please let me say that I've not written these articles with any sense of conceit, not to flash an 18-karat sense of humor in the face of successful business men, but with a share-the-wealth sort of idea that we've used in our own retail lumber business here in Fayetteville, Tenn. It has helped us tremendously, so I'd be very much gratified to have you try it out yourself and be convinced by your increase in business that humor as well as verse has its place in the lumber dealer's scheme of things just like it has in the coffee manufacturer's and the gelatine manufacturer's. If humor can help sell gasoline, why not a house bill, a roof, or a bunch of 2x4's!

For instance, with the soldiers' bonus money to be spent in the next few months, why shouldn't we dealers be humping ourselves to make the fellow who will get the bonus read our ads, and become so home-minded or remodel-minded that we will get our share of that money to be spent, instead of, deeding it by our silence, dumbly to the other fellow—our gracious gift to the automobile dealer or to the radio dealer, while we take the leavings, if any.

When we sell material to build or remodel a fellow's home, we know, too, in all sincerity we are giving him full value plus for his money; for we throw in for good measure everlasting joy and pleasure; and don't forget it doesn't take gas to run a home! So, fellow dealers, I reiterate (it can't be emphasized too much) that lots and lots of people will buy the things they are put under pressure to buy, and nowadays the pressure is aplenty.\*

The Smiths are persuaded to start buying a car (or what have you) that they can't afford, and in order to keep up the payments on it, they begin to skimp on their food—think of it—but they do (plenty of them) and, of course, the old home can wait another year or two or three—it won't do any harm anyway; let it wait. The auto salesman beat Bill Jones, the lumber dealer, in putting on the pressure, so hip hooray for the new car, the electric refrigerator or whatever new gadget it may happen to be! Loyalties are so fickle and it is so easy to forget people, especially when one is put under pressure, that Lumberman Bill Jones or Rufus Roofer has just got to step out and stir himself if he is going to get his share, or any part of his share of the business. What is he going to do? Well, there are various things that he

(Continued to page 144)

## AS POETICAL PEGGY PUTS IT

### RENTERS

I once knew a foolish Renter  
Who was a goofy sort of gump  
He was such a blooming Fat-head  
He didn't know when he had Mumps!

Well, here I am after an absence  
of two weeks. Been down through  
Georgia, North and South Carolina,  
etc., and I had to get back to Fayetteville,  
Tennessee, to see real activity in  
Building, Repairing and Remodeling,  
and It Doesn't Take An Athlete to  
Jump At the Conclusion that there's  
more prosperity right here in the little  
old burg than in any of our neighbor  
states.

### TO A RAIN DROP

Sprinkle, sprinkle, little rain  
On the roof and window pane  
Down a fellow's back and neck  
Makes a fellow mad as heck!

But—

Little rain, I'm here to say  
Bought a Barrett Roof today  
So I'm high and dry you see  
Little rain, you can't get me!

(A Barrett guarantee is your protection  
against Rains and Sleets and  
Hails and Heat—all cuts in Shingles  
and Roll Roofing.)

Material for Sanitary Milk Barns.

A peachy Grade of Select Poplar  
Ceiling, along with all kinds of Building  
Materials.

### GOSSIPS

If kind hearts are gardens  
The fruits are kind deeds  
Some folks will raise, I'm thinking  
A bumper crop of weeds!

(Well, I'm telling you friends, you  
may not raise weeds, but if you wait  
to build you'll wait for a price advance  
and then you'll raise a lot of  
Cain!)

I'm inviting you down to look over  
our new House Plan Books if you plan  
to Build or Remodel. You're more'n  
welcome to them!

### MAN WANTS

Man wants but little here below!  
That's a lotta rot!  
You're asking me, I'm telling you  
He wants a little Lot  
And when he gets that little Lot  
He'll call us like as not  
And we'll send him the stuff to build  
Johnny-on-the-Spot!

Your Poetical Peggy

—of—

# Williams Lumber Co.

Telephone No. 49

# Some Keen Merchandisers Found in California

By A. W. HOLT

Director of Service Merchandising Council

**T**HE best music in the world—the hammering of hammers and the sawing of saws—starts at eight every morning everywhere I have gone the past two weeks in California. The builders are smiling again. Many I have talked with have been on relief and appreciate a job of their own more than ever.

Everywhere, too, I hear praises of FHA. Builders who do their own financing lose no time in announcing, "this home is being inspected by FHA—it's the best of construction." In this respect building now differs from a few years ago when many communities didn't care what was built or how, just so it was built up. With bridges in the Bay District and ample water supply assured the Southland from the Colorado River, everyone everywhere feels fine in California. The good old days are here again.

After a day in San Francisco, where every dealer I wanted to see happened to be out, I headed for Sacramento. Knowing I would have to travel some to catch up with Mr. Ira L. Brink, of the Diamond Match yards, I started phoning and learned he was heading for Livermore, the home of Max Baer. I guessed right and connected with him. He can get more places, work harder and longer than any general superintendent I know. He sets an example for his managers and he has as fine a bunch as anyone wants to meet. That combination accounts for the expansion of the Diamond Match string from a matter of 35 yards to 54 in the five tough years when so many were taking the count.

They had recently given Livermore a beautiful and efficient building material store in place of two dilapidated and obsolete small independents that did not even have running water in their yards. Although very busy, Mr. Brink showed me through the yard himself. There's a place for everything and everything in its place. Like all good merchandisers who know the value of displaying merchandise, all Diamond Match yards are placing their store in front so folks have to walk past tables as they do at Woolworths to get to the office in the rear. This also places the office more central in the yard, thereby facilitating waiting on customers.

Remembering the first lumberman I ever met in California back in '24, I headed for Auburn to see if Mr. E. T. Robie was still on the job. He was. And he seemed no older than when I first knew him. But his "merchan-

dising factory" has expanded until it now occupies most of two city blocks in which he handles everything for building even to a modern tin shop and the greatest array of plumbing I ever saw in a small city. He seems as proud of his stories as a kid with a new toy. And his son, Wendel, is following in his footsteps. They quote on the basis of so-much-for-what-you-will-need, the way folks want to buy unless they are shoppers. In my opinion, his control of their markets is a large factor in their success.

With many places to go and limited time to get there, I could only renew acquaintances as I traveled back through Sacramento to Lodi, Stockton, Modesto and Turlock. When I skidded to a stop at Atwater to see if my old friend, F. M. Smith, was still among the living, I was greeted with, "Have you got another roof gauge—mine is worn out." It was too; almost round; the most-worn-out one I have ever seen. I traded a new one for it and now have his as a souvenir. I found many changes as I traveled south through Merced, Madera, and Fresno. But the good merchandisers of five years ago were still there. As I half expected, F. Dean Prescott was out when I stopped at Fresno. That's frequently true of men who donate much of their time to promoting the interests of lumber dealers through association work.

In order to spend Sunday at the old home town of Oceanside, I had to pass up all visits I would have liked to make on that 200-mile drive. After an enjoyable visit with old former-Montanians, I drove toward San Diego Monday morning. At Solana Beach, my good friend, L. G. Larrick, gave me a jolt. He showed me some old shingles that proved that Slash Grain Shingles Wear Best. They were 6/2 Extra \*A\* shingles that had served 28 years on a half-pitch roof near the ocean. Perhaps sifting sands had helped "eat away" from half to almost all of the exposed part of edge grained shingles whereas very little of the slash grained shingles had been worn away. Seeing is believing and I have a sample from Mr. Larrick's collection as evidence. What's more, the blued nails that were used were practically perfect—no sign of rust, even beside the salt air that made the nicked



PART of the Sales and Display Facilities of the Peterson Lumber & Finance Co., San Diego, Calif.



# Now in all classified telephone directories!

(Serving towns of 10,000 and up)



**PITTSBURGH PAINTS** enables authorized dealers to cash-in on its national advertising

"I found your name in the classified telephone book—under Pittsburgh."

Customer after customer in the larger cities has said this to dealers selling One-Day Painting Products. Pittsburgh's advertising tells prospects to "Look under Paints in your classified telephone directory for your Pittsburgh Paint dealer."

This success in 517 classified books has led Pittsburgh to offer the same opportunity to its dealers in smaller cities too.



So in the next edition of your classified see that you are listed under the Pittsburgh trade mark, and at other classifications of your business.

Ask your local directory representative for full information. Call him up today.

niture in pla  
owners replaced a depressant  
with a delight, spared them-  
selves days of muss, and saved  
money too.

Have you a room that needs  
to be whisked out of depression?  
Look under "Paints" in your  
classified telephone directory for  
your Pittsburgh Paint dealer.

W...  
ized O... in...  
and keeps the paint...  
shades; 12 semi-gloss.

**PITTS**  
**PLATE GLA**  
Makers of Walth  
Enamel and Vacr  
Proof Paint e



J. HAROLD PETERSON, President Peterson Lumber & Finance Co., San Diego, demonstrates his home display panels, each with price to build, figured BY THE MONTH.

radiator of my car look copper clad a few years ago before chromium was used.

Driving into San Diego along U. S. Highway 101 everyone who passes Peterson Lumber and Finance Company's place of business cannot help but be impressed. Of the thousands of "lumberyards" I have seen, in almost every state, I consider this the most distinctive one. It isn't a rich man's plaything, either; because it's a money-maker.

#### World's Most Distinctive Lumberyard

The photograph showing only a part of this impressive layout tells much of the story so far as looks are concerned. As for merchandising methods, I got more new ideas in the hour I spent there than any hour anywhere else. Mr. J. Harold Peterson, its president, is constantly on the alert himself, besides keeping his associates on the lookout, for any idea that might be to the best interests of their customers and, therefore, as he puts it, "to our own best interests." Evidently he recognizes Mr. Customer as the real paymasters.

Their slogan, "The Home of Ideas," is prominently displayed in other places besides over the entrance. It has a real meaning too. Since the eye sees what the mind is slow to grasp, almost every kind of material and appliances is displayed as if in actual use. Anyone can visualize them in his own home.

Many of the methods and ideas employed are commonplace among good merchandisers of building materials. Among these is the mounting of popular plans on swinging panels with the PRICE PER MONTH given for each, as shown by Mr. Peterson in one of the views. Every dealer that has adopted this method of pricing has assured me that this means more to their customers than any cannot-afford-it total price. The down-payment and years-to-run are explained by salesmen after customers have indicated sufficient interest.

As to original ideas, how many dealers operate as "Lumber and Finance" firms? How many use a movie machine as an automatic salesman for folks who are waiting or viewing exhibits? How many have a "door store" almost a block long which displays special doors that are waiting for the rest of the home to be finished as well as samples of stock doors and a real garage door that responds to the touch of an electric button? No wonder folks automatically acquire the URGE to buy.

Everyone knows, or should know, that this is the age of installment selling. Many dealers have complained that FHA involves too much red-tape; so customers resent it. Not so with Peterson's. They have men who have studied its set-up, so know all details. They fill in the application forms as they ask simple questions. They make it easy to arrange financing. None of

the usual "here's a form—go and see Mr. Banker and then come back" stuff, which so many dealers call service.

Of the thousands of FHA loans made in California, Mr. Peterson saw to it that he made the first one. And this firm has continued making them ever since. Although they sell material only through contractors, thereby enjoying a good contractor patronage, they control the financing; and so get along in fine shape.

The "movie salesman" is started to work by pressing a button at the information desk when anyone starts viewing the exhibits of cabinets, appliances and other built-in features that every woman wants. Besides showing various views of the mill and other reasons why Peterson's can best serve them, it shows a few of the many homes they have sold to prominent San Diegoans.


The "door store" can be seen to the right in the photograph under the largest of many unforgettable signs. No bare wall spaces around this plant. Quoting Mr. Peterson:

"This was an ordinary door warehouse that did not store many more doors than we can store in here until we thought of this 'dowel hinge' and converted the walls into display windows. Now we order the front door first after a job is sold and then display it until needed to finish off a job. During that time we tell folks that this door is for such-and-such a job that we are furnishing."

The "dowel hinge" is nothing more than a half-inch hardwood dowel inserted into a hole which is drilled into the top and bottom of a door, about an inch from the edge, and serves as a pivot into the floor and ceiling of the rack. Simply sawing off the dowels makes the door ready for delivery. It's a great system. Flood lights show it off in great shape at night.

Another feature that impressed me is a shelter for customers' cars "out back." It is roofed with several kinds of tile and other roofing materials to facilitate selection.

(Continued to page 142)



**IS THERE A  
DIFFERENCE IN  
ROOFING SHEETS?  
YOU BET!**

**A** STEEL SHEET may look like a beauty in stock—and prove to be a failure on a customer's roof.

Good customers are too hard to get to risk losing them. Play safe. Handle the *best* steel sheets—American, Tennessee, or Columbia. Then you'll know you're selling your customers *lasting satisfaction* in sheet metal roofing and siding. American, Tennessee, and Columbia

sheets are always *full gauge*, with the full weight value that insures long life. Tough enough to resist years of severest weather attacks. Galvanizing is smooth and evenly coated.

These brands are available in all types—rust-resisting copper bearing, galvanized and black . . . plain, corrugated, or V-crimped. Your inquiry will bring prices and full information promptly.

**AMERICAN  
TENNESSEE • COLUMBIA  
Steel Sheets**

American Sheet and Tin Plate Co., Pittsburgh, Penn.  
Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.  
Export Distributors: UNITED STATES



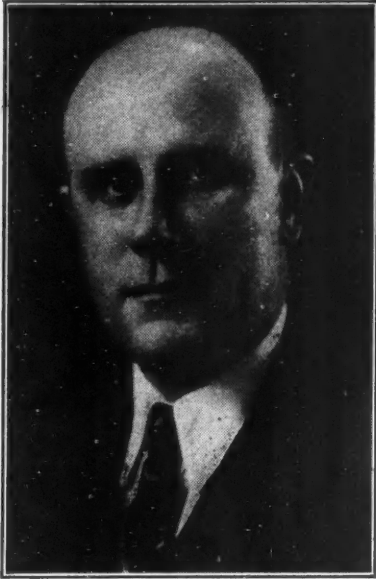
American Steel & Wire Company, Chicago, Ill.  
Columbia Steel Company, San Francisco, Calif.  
STEEL PRODUCTS CO., NEW YORK

**UNITED STATES STEEL**

## Hronek with Rock Island Sash and Door

**A**NNOUNCEMENT has been made that Milton L. Hronek, formerly vice-president and general manager of the Teachout Company of Cleveland, Ohio, has become vice-president and general sales manager of Rock Island Sash & Door Works.

For over twenty years Mr. Hronek had been with the Teachout Company in Cleveland and Buffalo, N. Y., in various capacities. His association with the sash and door business has given him a thorough and complete knowledge of all its phases as well as a sympathetic understanding and appreciation of the jobbers' problems. It is understood that the Rock Island concern plans to expand its distribution through additional jobbing accounts and that its sales territory is to be somewhat widened under Mr. Hronek's direction.



M. L. HRONEK

## Insulite Demonstrates New Products

**C**ONFIDENCE in the old axiom that "Seeing is believing" has prompted the Insulite Company to use visual demonstrations to introduce its new Bildrite Sheathing and "Termilite" process to lumber dealers, contractors and architects. The former is a rigid insulation board made in the same thickness as standard types of wood sheathing. The latter is described as an effective, permanent, non-hazardous treatment against termites and fungus growths that is now being used on Insulite products. They were introduced at sales conventions, said to be the most eventful in twenty-three years of the Company's history, recently concluded in Minneapolis, Chicago and New York.

A feature attraction of the meetings consisted of test panels showing Bildrite Sheathing in use on typical side-wall construction. Spectacular "pulling contests" were arranged in which a Bildrite test panel pulled directly against a test panel of equal size in which standard sidewall construction and bracing has been used. The ingenious arrangements of pullies used in this demonstration suggested the "team pulling contests" that are so popular at country fairs, and gave convincing visual proof of the amazing bracing strength claimed for the new product. Pull recorders were used to show the point at which standard test panels gave way.

Additional visual demonstrations are contemplated to show resistance of the "Termilite" process against termites and fungus growths, by introducing test chambers to show how they thrive on untreated materials but are killed off when they try to feed on "Termilite" treated Insulite.

\* \* \*

**A**N important feature of the "Termilite" process is that it provides no hazards when used in direct or indirect contact with humans or animals. The chemicals are fixed by the drying temperatures to which all Insulite products are subjected. They are uniformly distributed through all fibers in the products and are colorless, odorless and insoluble in water once they are fixed by the process. Effectiveness of the treatment is indicated by a report of Charles A. Kofoid, Ph. D., Sc. D., chairman of the Termite Investigation Committee, which concluded as follows: "Insulite treated by The Insulite Company's formula is termite resistant to the dry wood termite. Colonies confined in termite-treated Insulite died out quickly. Their protozoa are immediately affected and die prior to extinction of the colony."

## A. W. Holt in California

(Continued from page 140)

Any dealer visiting in California will only be beating himself if he fails to see this most distinctive of all lumberyards.

The fact that Peterson's is such an outstanding lumber store does not mean that it dominates San Diego. Three other firms that I visited vie with it when it comes to aggressive selling, any of which would be a credit to any community.

Take Whiting-Mead Co., for instance. Its plant occupies several blocks. At least I saw lumber and sheds everywhere. The store alone covers about half a block and its ceiling height permits displaying two complete homes as departments, one for electric light fixtures and the other for a model kitchen and other appliances. The first, the electric light "house"—is finished with the popular knotty pine with fireplace and other features. It also shows two of the dozens of display tables that suggest purchases to all who must travel along the aisles to get back to the offices in the rear and on the balcony. Many will buy going and coming.

Mr. Glen Miner, the big chief, reminded me of a dealer I know in Illinois who said, "You've got to live your job to really succeed." Although he was very busy his secretary said I could walk in unannounced until his next appointment. This further confirms my belief that the really big men are easy to meet. In the few minutes I saw him he said:

"In 1921 we bought a saloon 25'x60' on this sight and painted the signs. Piling lumber around it and a little of 'everything to build anything' inside, we started out. It's an out-of-the-way location but a liberal advertising budget brought buyers. Since then 1½ to 2 per cent of our sales went into advertising, most of which was newspaper space. This proved its value during the depression. Folks kept coming, so we continued to expand. Now we plan on another change so as to display affiliated materials in departments and have materials in the rear that take more time in selling, such as plumbing."

When I asked him what they were doing to provide cheap homes for the masses he said that they had sold many four-room modern homes of good FHA construction without garage or sidewalks for \$1,800.00. Like many dealers and builders I have visited, Mr. Miner stressed the value of FHA in promoting better use of lumber in California.

## R. E. S. Says

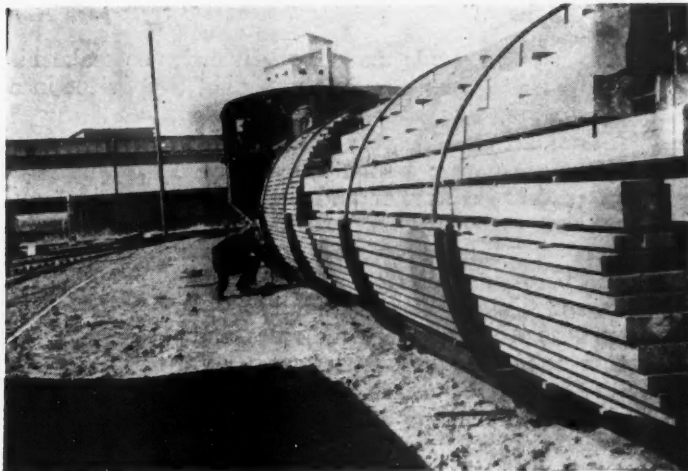
(Continued from page 124)

Due to the fact that an application for a Title 1 loan had very few "teeth" in it, it wasn't long before there was a fancy line of gypping going on and many an innocent dealer found himself in a mess because he was green at the whole business of installment selling and it was not a difficult matter for sharpsters to take advantage of his ignorance. Anyway, the Government Inspectors soon found out what was going on with the result that new construction was eventually blasted out of Title 1.

There isn't any question but what the experienced dealer could handle new construction under Title 1 and make it a safe and sane proposition.

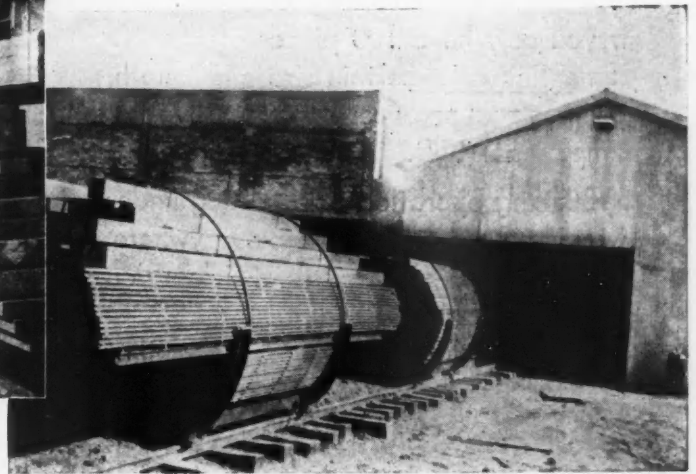
The trouble was that paying for a \$2,000.00 loan on a 5-year basis required the borrower to dig up \$41.00 per month which was too large a percentage of his income. As he invariably had a large family he found it difficult to get enough house to meet his needs. He couldn't complete it. It was necessary to skimp on construction

(Continued to page 144)



Capacity 1,250,000 Board Feet of WOLMANIZED Lumber  
per Month

Capacity 1,500,000 Board Feet of CREOSOTED Lumber  
per Month



*There's Profit for You in*  
**TREATED FROST PINE**

Treated FROST PINE is a one hundred per cent FROST product . . . manufactured by FROST and treated by FROST. ♦ ♦ ♦ For here at Shreveport, FROST now operates its own modern treating plant for the Wolmanizing and Creosoting of lumber and timber products on a large scale. ♦ ♦ ♦ Illustrated above is the accurate manner in which FROST "charges" are loaded for processing in the cylinders and drying in specially designed kilns . . . accuracy and workmanlike care which are your assurance of straight, flat stock that meets the most exacting specifications for treated material.

Wolmanized FROST PINE provides your customers with certified protection against termites and decay . . . a material that is clean, dry and odorless . . . a material which can be delivered, handled and painted exactly like untreated lumber.



*For further facts and quotations, call our nearest representative, or address:*

**FROST LUMBER INDUSTRIES, Inc.**  
SHREVEPORT, LOUISIANA

St. Louis, Missouri

New York City

## 100-200= -100=A B C

If you only have 100 pieces of **ESSCO** dimension of a certain size and length, you can't fill an order for 200. That's as simple as A B C.

Building operations are getting under way in your community and everywhere, like the good old days, and unless you have those bins stocked up with **ESSCO** lumber you will miss some sales that rightfully belong to you.

Mill stocks are becoming scarcer, orders have exceeded production for many weeks, more and more orders say "WIRE CAR NUMBER"—It is merely common sense and good business to see that your lumber supply is complete AND IN YOUR BINS—It takes weeks to get **ESSCO** from the tree to your yard—BUT we can ship you some **ESSCO** NOW in a few days—What the situation will be later on as to stock and prices we can only guess, but based on trustworthy reports and the appearance of our order file, STOCKS WILL BE BROKEN AND PRICES HIGHER.

OBEY THAT IMPULSE — ORDER **ESSCO** NOW.

**ESSCO SOUTHERN PINE**

**ESSCO KLAMATH SOFT PINE**

**ESSCO HARDWOODS**

**ESSCO WEST COAST WOODS**

**ESSCO OAK FLOORING**

**EXCHANGE SAWMILLS SALES CO.**

1111 R. A. LONG BUILDING,  
KANSAS CITY,  
MO.



## R. E. S. Says

(Continued from page 142)

and to use low-grade materials. In order to make his money go as far as possible he bought a poor lot in a poor location.

All in all it wasn't a very hot proposition.

If the term were a little longer so the monthly payments would be smaller and the borrower could build a complete house, it would work out very satisfactorily.

There seems to be a place for some sort of a financing set-up between repairing and remodeling on a 3-year basis and Title 2 on a 20-year basis—sort of a Junior Title 2 as it were where the rules and regulations are not as extensive and as strict as they are under Title 1. With that sort of an arrangement the progressive retail dealer would be set up in very good shape.—R.E.S.

### BUILDING BOOM?

**S**URE we are headed for a building boom some of these days! We are getting closer to it all the time. However, there are several things coming into the picture that will retard it considerably—but not stop it. One is the tendency to boost prices just the moment there is a little spurt of business.

The lumber and building material industry is hungry. That goes without saying. It has had a long hard siege when sales were few and far between.

Boosting prices before building activity really gets under way is an expensive luxury.

Probably nothing can be done about it but if the industry could hold prices in line, or at least keep them on a reasonable basis, it would be far more prosperous than when permitting them to soar to such a dizzy height that eventually there must be a collapse or at any rate a cessation of activities. It seems to be the way we do things in this country, so possibly we shouldn't get the least bit excited about it.

The strange thing about the whole proposition is that more people do not build homes at a time when prices are low and money is plentiful.

Next on the list as a retarding element will be the shortage of labor. In a dozen areas last summer where there was considerable building going on a cry went out for more workmen. Strange as it may seem, it was almost impossible to get them.

Take carpenters as an example. We haven't been raising a new crop for several years. This means that existing carpenters have grown older and slower. No new ones have come into the picture due to the fact that the sons of carpenters did not look kindly upon a business where employment seemed to be so uncertain and irregular. As a result they went their own way and forgot almost completely about the hammer and the saw.

The shortage of labor hasn't worried the building industry up to the present time but it will in the very near future.—R.E.S.

### How to Write Ads that Folks Will Read

(Continued from page 137)

might do but lumber dealers, my interest lies in telling you about a simple thing we have done which has worked almost magically in this little town of 4,000 population here in southern Tennessee—that is, advertising in the local newspaper!

That sounds very commonplace and it would be very commonplace if we had done our advertising in a commonplace way, which we have tried *not* to do. And that

(Continued to page 146)

# TOUGH RUBBER★ MEANS MORE MILES

## HAULING BUILDING SUPPLIES

*Now*

**IMPROVED HIGH PROFILE  
GOODYEARS GIVE EVEN  
LONGER TIRE LIFE**

Tough rubber? Yes! Improved High Profile Goodyear Truck Tires are built with chemically-toughened rubber in both body and tread. That means strength, durability—longer, more dependable, more economical tire service on your building supply trucks.

But that's only one reason why these Improved High Profile Goodyears will bring better tire performance to your job. Look at these features: Wider, flatter All-Weather tread with deeper non-skid design—more rubber on ground, better grip, better pull. Higher sidewalls—longer flexing zone generates less heat and provides greater area for more rapid diffusion of heat that is generated. Greater cubic volume—*more rubber, more air space, more miles of wear.*

You have to see these Improved High Profile Goodyear Truck Tires to appreciate them. Once you put them on your building supply trucks you'll know what we mean when we say—They're MONEY SAVERS.

*GOODYEAR K-RIMS make tire changing easy—give added strength and safety—save time and money.*

THE GOODYEAR TIRE & RUBBER CO., INC., AKRON, OHIO



### ★TOUGHENED RUBBER

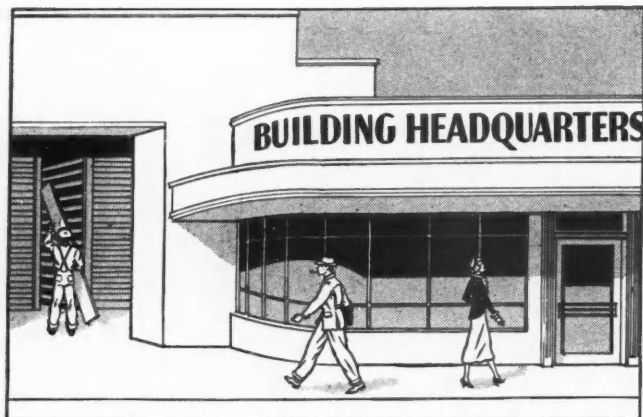
Rubber in both body and tread of Improved High Profile Goodyear Truck Tires is chemically-toughened to resist heat, for longer wear, for greater blow-out protection.

And because the inner plies of Goodyears are built with Supertwist Cord, Goodyear engineers are able to put into them a greater amount of chemical toughening.

In Goodyears there's blow-out protection in EVERY ply.

# GOOD YEAR TRUCK TIRES

money savers



## A Modern Front CALLS FOR Modern Methods

OLD-TIMERS wouldn't recognize today's "lumber and building supply yard." It is more like a building department store, run by a merchant rather than a supplier, and with a merchant's modern methods. It's been modernized with a handsome display store-front. It carries a much wider line of supplies.

To keep track of the activities in his many new departments, today's "building store" owner has adopted the system that is the standard in department store operation — a National Cash Register System. With it, he gets the vital information that he needs to make his business pay — information that gives him control of sales, the value of each department by itself, and a daily check on the results of the day's activity in all departments.

Have our representative suggest the National System which will prove profitable for you. You'll be under no obligation for his recommendations.

This National Cash Register can give you totals of business done in each of several departments, totals of different types of transactions, totals of each salesperson's individual sales. It prints a receipt, certifies both copies of a duplicate sales slip.



**The National Cash Register Co.**  
DAYTON, OHIO

Cash Registers • Typewriting-Bookkeeping Machines • Posting Machines  
• Bank-Bookkeeping Machines • Check-Writing and Signing Machines •  
Analysis Machines • Postage Meter Machines • Correct Posture Chairs

## How to Write Ads that Folks Will Read

(Continued from page 144)

is why my story is offered here so that any lumber dealer can try doing what we have been doing for nearly eight years, and reap as much. If we had put a business card in the paper or told the people that we sell 2x4's for 2.75 per bd. ft., we might as well have taken that advertising money and bet it on the latest horse race or pugilistic fight; the chances for gain would have been more in our favor.

Recently a Chicago department store ran an advertisement in just one Sunday paper, which is said to have brought 300,000 people into the store the next day! You can bet your boots that it was no ordinary ad, though; it had appeal, persuasion, pull in it. In advertising, the copy should be made not only attractive, but also, interesting, something that will enable the prospective customer to live more comfortably and happily and that you really want to sell to him—"It's-waiting-for-you, come-and-get-it sort of an idea." Make it look very alluring, irresistible to people, show the wonderful things it will do. Humanize your merchandise. The auto salesman does; and when the radio salesman gets through with him, the prospective customer can almost hear the music come over the air as he pictures a family group around the radio, and incidentally solving the where-is-my-wandering-boy-tonight problem. When a refrigerator salesman gets on to you, you can almost taste the frozen salads and desserts his particular kind of refrigerator turns out, when what he's offering is only food for thought.

### Avoid the Expected

In advertising you'll agree, I'm sure, that we should keep away from all ruts, all the conventional and hackneyed; and for Pete's sake, don't put into your ads the expected; keep them waiting for, looking forward to something different each week and something folksy. And that's where humor comes in. Some fellow who has an eye for such things will see an unusual ad, or poem and ask a dozen people, "Did you see that poem Bill Jones had in his advertisement this week?" Or he may cut it out and carry it around in his vest pocket to show to people. The next week twenty people will be watching for your ad, to see what you will pull next. The following week a hundred will be doing identically the same thing — ad infinitum.

And so, brother lumber dealers (if you'll claim kin with an humble lumberlady), I hope in these articles I have spread the gospel of advertising—advertising in an original way and advertising with humor! As I've said over and over again, our own business here was just one jump ahead of the undertaker when we began this kind of advertising. It took a heap of nerve to smash a time-honored tradition in lumber dealer advertising, but I was convinced then (and I hope I am succeeding in convincing you) that the old dull, matter of fact advertising had dug its own grave and crawled in and something new and different had to be done to take its place. Realizing this also, that the average busy lumber dealer either lacks the inclination to get something different, or the talent maybe, I'm offering for your adoption these little brain children of mine, sorter ill-bred brain brats, who show a disrespectful disregard for Old Man Meter, but if they're big enough to bring home the bacon and they're friendly and folks like them and they enable you to sell more building materials non-competitively, why not give them a chance?



# Here's the Sales Help You've Been Looking For—

*Places Complete Information  
About Products You Sell  
In the Hands of Your Best Prospects  
At the Time They Are Ready to Buy!*

## **Firms Whose Catalogs Are Distributed Through Home Owners' Catalogs**

Altman, B. & Co.  
American Blower Co.  
American Brass Co.  
American Lumber & Treating Co.  
Architectural Decorating Co.  
Barber-Colman Co. of Mass.  
Barrett Co., The  
Birge, Wm. H. & Sons  
Bryant Heater Co.  
Burnham Boiler Corp.  
Carey, Phillip, Co.  
Chamberlin Metal Weather Strip Co.  
Cincinnati Fly Screen Co.  
Cliff Boiler Company  
Crane Company  
Curtis Companies, Inc.  
Dant & Russell, Inc.  
Detroit Steel Products Co.  
Donley Brothers Company  
E. I. du Pont de Nemours & Co., Inc.  
Enterprise Boiler & Tank Works, Inc.  
Excel Metal Cabinet Co.  
Florida Louisiana Red Cypress Co.  
Fox Furnace Company  
Gar Wood Industries, Inc.  
General Kontrolar Co., Inc.  
Henry Furnace & Foundry Co.  
Huttig Manufacturing Co.  
Iron Fireman Mfg. Co.  
Johns-Manville Corp.  
Johnson Metal Products Co.  
Kerner Inclinerator Co.  
Libbey-Owens-Ford Glass Co.  
Lightoller Company  
Littlefield-Wyman Nurseries  
Majestic Company, The  
Masonite Corporation  
McCutcheon, James & Co.  
Nahigian Bros.  
New York Telephone Co.  
Northern Indiana Brass Co.  
Overhead Door Co., Inc.  
Pittsburgh Plate Glass Co.  
Roberts & Mander Stove Co.  
Rolascree Company  
Sisalkraft Company, The  
Streamline Pipe & Fittings Co.  
Truscon Steel Co.  
Waterman-Waterbury Co.  
Wayne Iron Works  
Weatherbest Corp.  
Webster, Warren & Co.  
Western Pine Association

Leading manufacturers of nationally known building products have adopted this powerful plan to help you close more sales to owners who expect to build homes for their own occupancy (or those who will extensively modernize their present homes). Their complete and profusely illustrated catalogs are bound into a big handsome volume—Home Owners' Catalogs—which is distributed exclusively to owner-builder prospects in 37 states East of the Rocky Mountains while plans are in the early stages of development. Many of these volumes are going to prospects right in your own territory every day.

If you handle the products of firms represented in Home Owners' Catalogs, you can tie in your own advertising, your own letters and direct mail, your own display room, *and your own selling* with this unique sales promotion plan. You can spend your full time and effort on active ready-to-buy prospects who have been discovered and verified by Dodge Reporters as planning to spend \$4000 or more for materials and equipment this year. You can be confident that owners, architects and contractors will approve products represented in Home Owners' Catalogs.

Ask for Home Owners' Catalogs when you make your sales calls. Use it for reference and notations. Remember that it will be used and referred to by your prospect during the life of the project—and kept long afterward. Dealers throughout the 37 eastern states are writing every day for supplies of application blanks, so that they can arrange to have Home Owners' Catalogs sent to their own special prospects. Clip the coupon and let us send you a supply without delay so that you, too, can cash in on this direct and easy plan for more sales and bigger profits.

# HOME OWNERS' CATALOGS

Published by F. W. Dodge Corporation, New York, N. Y.

If you have a customer who is planning to build a home for his own occupancy (or make alterations) to cost \$4,000 or more—East of the Rocky Mountains—you can arrange to have Home Owners' Catalogs

## **Sent with Your Compliments**

if he has not already received it. A supply of special application blanks will be sent if you

## **Use the Coupon**

F. W. Dodge Corporation  
119 West 40th Street, New York, N. Y.

AB536

Please send me a supply of application blanks for use in obtaining copies of Home Owners' Catalogs for my customers who are planning to build or modernize.

Name \_\_\_\_\_

Address \_\_\_\_\_

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

## LEGAL HELPS

for Lumber Dealers

### Watch Out for Statutory Restrictions in Selling Materials to Municipalities

LESLIE CHILDS

WHERE a lumber dealer furnishes materials to a municipality, such as a city, town, township, county, etc., he may well have a care in respect to seeing that all statutory requirements are complied with. This is true because, as a general rule, the purchases of municipalities are governed by statute, and a disregard of the provisions of the latter may bar the collection of such an account.

Of course statutes of this kind vary in their terms, but their common purpose is the protection of public funds from haphazard or improvident contracts by officials, and as a usual rule the courts strictly enforce their protective provisions. The importance of care here on a dealer's part is illustrated in a striking manner in the following recently decided case.

#### Lumber Company Furnishes Materials to Township

In this case county and municipal officers were by statute barred from purchasing supplies or entering into contracts for public work, unless an appropriation

therefor had been approved by the excise board and after the expiration of a certain protest period. The plaintiff, a lumber company, furnished a township certain bridge materials of the value of \$498.05, in disregard of this statute.

Plaintiff acted in entire good faith and the township used the materials, and subsequently the proper authorities approved the purchase at a time when there was ample money to pay therefor. However, when the plaintiff sought to collect payment was resisted on the sole ground that the contract of purchase was illegal when entered into.

Plaintiff thereupon filed the instant suit to enforce payment, and the defendants set up the failure to comply with the statute, as it has been outlined, as a bar to recovery. There was no dispute about the facts, and the trial court gave judgment for the defendants. The plaintiff appealed and the higher court in reviewing the record, and in affirming the judgment reasoned, in part, as follows:

#### The Language of the Court

"It is obvious that the purchase orders, upon which plaintiff predicated its cause of action, were made and entered into prior to the time an appropriation was made by the excise board and prior to the time the protest period expired. At the time the purchase orders were obtained, an estimate had been made by the township officers for the full amount contained in the purchase orders, and the excise board had made an allowance of 25 per cent. of the estimate, which was not sufficient to cover the entire amount contracted for. \*\*

"The purpose of [the statute] \*\*\* is that no contract shall be made and entered into prior to the time an

(Continued to page 150)

*"A thousand different brands on the market,*

*...but you CAN rely on*

### GLIDDEN for Highest Quality!"

• Suppose a Glidden salesman could get you and all your local competitors around a table.

Then suppose he'd say something like this—"Gentlemen, there are a thousand different brands of paint on the market—some good—some bad—some indifferent. I believe that the Glidden line is the best in Quality.

"And furthermore, I believe it is the best money-making line in the country. Glidden not only gives you Quality paints, varnishes, lacquers and enamels, but helps you sell them. We have a sales and merchandising plan that makes the Glidden dealer the outstanding paint merchant in his community. We can show you how to get big jobs, and steady repeat business. We are confident we can increase your sales."

You know some smart man around the table would get that Glidden proposition. Well, you can be that man—you can make the money in your town—if you write for details of the Glidden sales plan now!

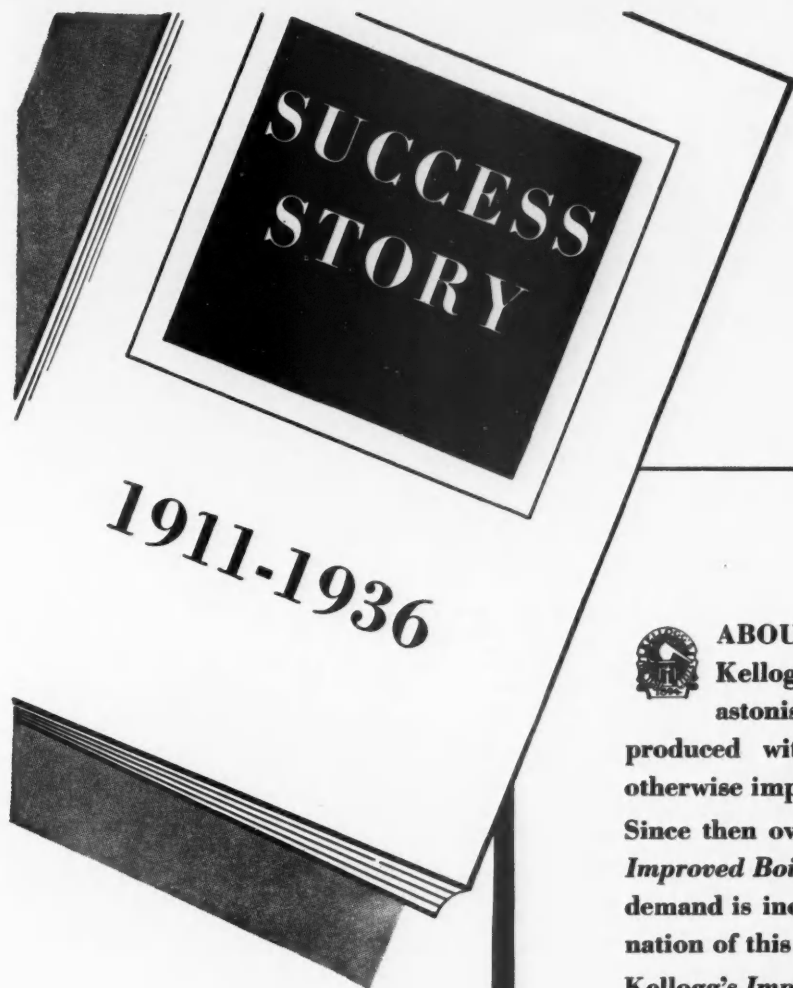
THE GLIDDEN COMPANY • National Headquarters, Cleveland, Ohio

# GLIDDEN PAINTS

Paints  
Varnishes

*Everywhere on Everything*

Lacquers  
Enamels



ABOUT twenty-five years ago, Spencer Kellogg and Sons, Inc., announced to an astonished trade that Boiled Oil could be produced without distorting, discoloring or otherwise impairing the original oil.

Since then over a million barrels of Kellogg's *Improved Boiled* have been consumed and the demand is increasing year by year. The explanation of this phenomenal success is simple.

Kellogg's *Improved Boiled* Linseed Oil is absolutely pure (99.8% pure raw linseed oil plus 2/10 of 1% metallic drier). It dries to a natural, tough, elastic film and amalgamates with subsequent coats to perfection. The brushing qualities are perfect. The oil is so pure that the chemical constants hardly deviate from those of Raw Oil.

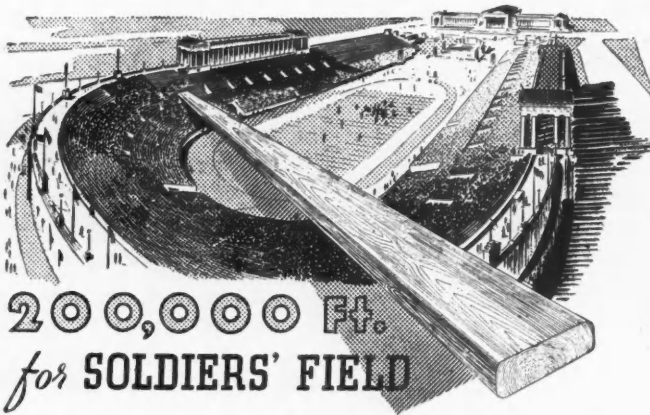
For general painting and lasting results, Kellogg's *Improved Boiled* Linseed Oil has no competitor.



SPENCER KELLOGG & SONS SALES CORP'N  
 Special Oils Department  
 98 Delaware Ave. Buffalo, New York

Paint material dealers have the advantage of warehouse service in 40 important cities, covering every market in the United States.

**KELLOGG'S *Improved Boiled***



**S**OLDIERS' Field at Chicago. Where row upon row of seats must withstand continuous exposure to either heat, cold, sun, rain or snow. A tough test for any wood.

Recently it was found necessary to replace a large portion of the seat planking at Soldiers' Field. This time Arrow Brand Tidewater Red Cypress was used—200,000 board feet of it. This true species of "The Wood Eternal" was specified because of the outstanding service it has given in other great stadia. A noteworthy tribute to the Florida Louisiana Red Cypress Company is the fact that most of the order was furnished by one of its member mills.

When you want Genuine Tidewater Red Cypress—cypress that is thoroughly seasoned, and trade and grade-marked—the Florida Louisiana Red Cypress Company is your most dependable source of supply. With millions of feet constantly available at its five member mills, prompt, efficient service is a matter of course.

**FLORIDA LOUISIANA RED CYPRESS CO.**  
JACKSONVILLE, FLORIDA

**EVERY HOME A PROSPECT**

FOR THIS NEW

*Lower  
Priced*  
**Majestic**

**UNDERGROUND  
GARBAGE RECEIVER**



Made in two popular sizes, priced to fit the purse of every home owner, the Majestic Series S creates a vast new market for underground garbage receivers. Durably built, maintaining Majestic reputation for dependability, this new model helps you cash in more fully on the movement for "outdoor living rooms."

**THE  
MAJESTIC  
CO.**  
HUNTINGTON,  
INDIANA

## Legal Department

(Continued from page 148)

appropriation has been made by the excise board for that particular and specific purpose, and so certified by the officer charged with keeping the appropriations and expenditure records of the county or municipality. \* \* \*

"It is stipulated in the record that the forty-day protest period provided for in [the statute] \* \* \* did not expire until \* \* \* more than two months after the purported purchase orders were executed. \* \* \* In view of the underlying reasons for the passage of such legislation, we hold that \* \* \* any debt \* \* \* incurred during such forty-day protest period which does not comply with [the statute] is illegal and unenforceable."

But, the plaintiff contended, even though the contract in question was not enforceable at the time it was made, the fact that the authorities subsequently appropriated the money therefor should entitle a recovery because of ratification. Further, plaintiff urged, that where goods had been furnished in good faith the mere fact that the statute had not been strictly followed should not prevent a recovery. In answering the above contentions the court, among other things, said:

"The plaintiff \* \* \* urges that even though such purchase orders at their inception be unenforceable, they are voidable rather than void, and that by subsequent appropriate action the board \* \* \* could ratify the purchase orders, and that they have so ratified such contracts. Numerous authorities have been cited in support of that contention, but none of them are in point, as they relate to cases prior to the enactment of the sections of the statutes, supra.

"It is urged that it is unjust to deny recovery to persons who in good faith have furnished valuable merchandise to municipal subdivisions of the state. But he who furnishes goods, wares, merchandise, or labor under contracts, express or implied, with municipal subdivisions of the state, must ascertain at his peril whether officials purporting to act for the municipal subdivision of the state have the power to bind such municipal subdivision. \* \* \* The judgment of the trial court is therefore affirmed." (53 P.2d.533)

### Conclusion

So ended the case with the plaintiff, lumber company, being denied any recovery whatever from the township for the materials furnished and used by the latter. The court taking the position that the failure to comply with the statutory requirements in dealing with the township rendered the contract unenforceable against the latter. And this despite the fact that all parties to the transaction acted in the utmost good faith, and apparently merely overlooked a strict compliance with the requirements.

The reasoning of the court in the foregoing case is fairly illustrative of that followed by the great weight of authority in applying statutes of this kind that govern the making of contracts with municipalities. In other words, the courts as a usual rule give full force and effect to the protective provisions of such laws, and in disregarding them a person acts entirely at his peril in respect to the validity of any contract entered into.

Further, the burden is upon one contracting under statutes of this character to see that the requirements are followed, and the fact that the contractor and the official or officials executing the contract overlooked such requirements will rarely alter the case. For, by the great weight of authority, such statutes mean what they say, and unless strictly followed may quite easily, as in the case reviewed, result in unexpected and substantial loss to anyone dealing with a municipality thereunder.



# Your OPPORTUNITY of the Year

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# NEW HELPS FOR DEALERS

Literature featuring new products  
and sales plans

The selected trade literature listed below may be obtained without charge by using the coupon, listing the numbers of the catalogs desired and mailing to American Builder, 105 W. Adams St., Chicago, or by writing on your dealer stationery to the manufacturers direct, in which case kindly mention this publication. This catalog and campaign review is an editorial feature for the convenience of our readers.—Editor, Dealer Marketing Section.

## DEALERS' HARDWARE REFERENCE BOOK

334—Corbin locks and builders' hardware are presented in a big, hard cover, cloth bound book of 594 pages, a veritable encyclopedia of builders' hardware design and information for the retail lumber dealer, more and more of whom are taking an interest in builders' hardware and finding that it is a logical and profitable department for them. The P. & F. Corbin line is, of course, very well known and highly esteemed by building contractors, architects and property owners. This big book on hand for reference will go a long way toward making the dealer's office headquarters for all up-to-date home building information.—P. & F. CORBIN CO., New Britain, Conn.

## INSULITE HOME PLANS

335—Insulite completes fourth homes folder. The fourth in this series dealing with proper residential construction and fuel economies through use of proper thicknesses of insulation has been making profits for retailers during the past severe fuel-consuming months. The same arguments, however, that counsel plenty of insulation for fuel saving in the winter time likewise speak up for coolness and comfort during hot weather. These Insulite folders carry attractive perspective sketch and dimensioned floor plan of a popular, low cost home, and then go fully into the construction details to show the value of well insulated construction.—THE INSULITE CO., Minneapolis, Minn.

## WALLBOARD CEILINGS WITHOUT VISIBLE JOINTS

336—Classic ceilings of Upson board are being promoted in a 20-page rotogravure book fully illustrating and describing the Upson relief ceilings without cracks or visible joints. This work is made possible through the use of Upson stabilized board applied as directed in the literature furnished retail lumber dealers for the use of their carpenters and contractors.—THE UPSON CO., Lockport, N. Y.

## TRUSCON STEEL WINDOWS

337—Retail lumber dealers are finding a complete Truscon line of steel sash a big boost to profits since they round out the line of other Truscon commodities in which dealers are keenly interested, such as metal lath, Clerespans joists, open truss joists, garage doors, basement sash, etc. Each of these items is well supported by effective promotional literature which retail lumber dealers are using to advantage.—TRUSCON STEEL CO., Youngstown, Ohio.

## COLOR CARD

338—A collection of spiral bound color cards has been prepared by the O'Brien Varnish Company for the convenient use of retail lumber dealers who more and more are taking an interest in paint and varnish sales, finding that there is good profit for them in these lines.—O'BRIEN VARNISH CO., South Bend, Ind.

## HYDRATED LIME

339—Exact information regarding the several popular brands of white finishing hydrated lime including Ohio, Hawk Spread, Woodville and Buckeye, is now available to retail lumber and supply dealers. Specifications outline recommended practice for white coat finish with hydrated lime and for mixing and applying Ohio Ritewall Hair Fibred Finishing Lime Plaster. Ohio Sanlime Sand Finish in various colors and Ohio Mastite Masonry Mortar for tight mortar joints are also leaders in this line.—THE OHIO HYDRATE & SUPPLY CO., Woodville, Ohio.

## THERMAX AND ABSORBEX

340—1936 Edition, Specifications and Technical Data on Thermax fireproofing insulation and Absorbex Acoustical Corrective are now available to retail lumber and supply dealers in the form of a 26-page reprint from 1936 Sweet's.—THERMAX DIV., Northwest Magnesite Co., 1913 Farmers Bank Bldg., Pittsburgh.

## THE DONLEY CATALOG

341—Full information regarding basement metal windows and coal doors, fireplace dampers and equipment and incinerators are contained in the new 34-page Donley catalog, "Helps for the Home Owner and Builder" now available for dealers' convenient reference and use. Much good information here on the extensive Donley line.—THE DONLEY BROS. CO., 13910 Miles Ave., Cleveland, Ohio.

## BRICK AND TILE

342—"Wall Cost and General Data Book of Brick and Tile" has been compiled by the Clay Products Institute and should be an extremely valuable document in the office of every retail lumber and supply dealer. This is a collection of multigraphed data sheets presenting estimating data that is not ordinarily available. With the growing use of brick and tile for farm buildings and residence structures, such information contains many profit opportunities for the wide awake dealer.—CLAY PRODUCTS INSTITUTE, Hubbell Bldg., Des Moines, Ia.

American Builder,  
105 W. Adams St.,  
Chicago, Ill.

(May, Dealer, 1936)

Please have the following Catalogs listed in this issue sent me—

Numbers.....

Name.....

Street.....

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

OCCUPATION\*.....

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