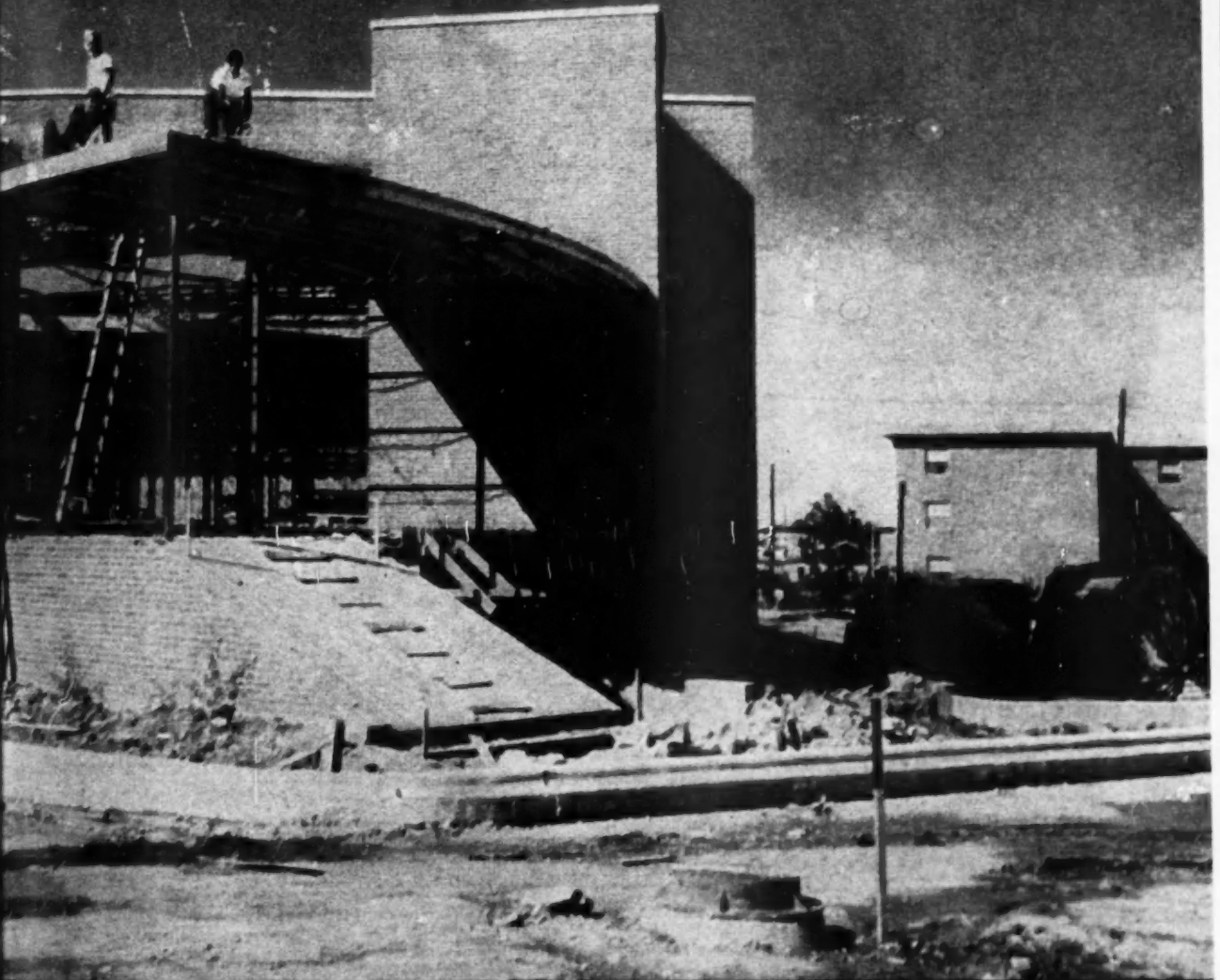


# AMERICAN BUILDER

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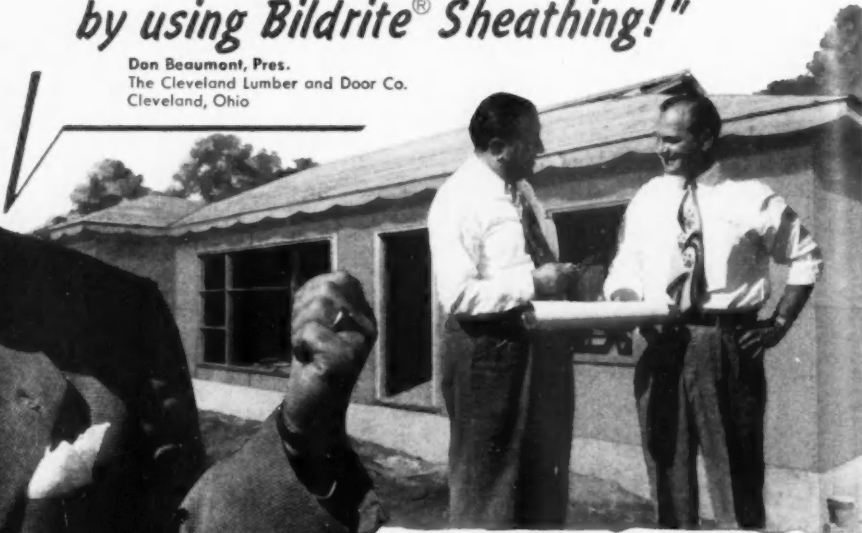
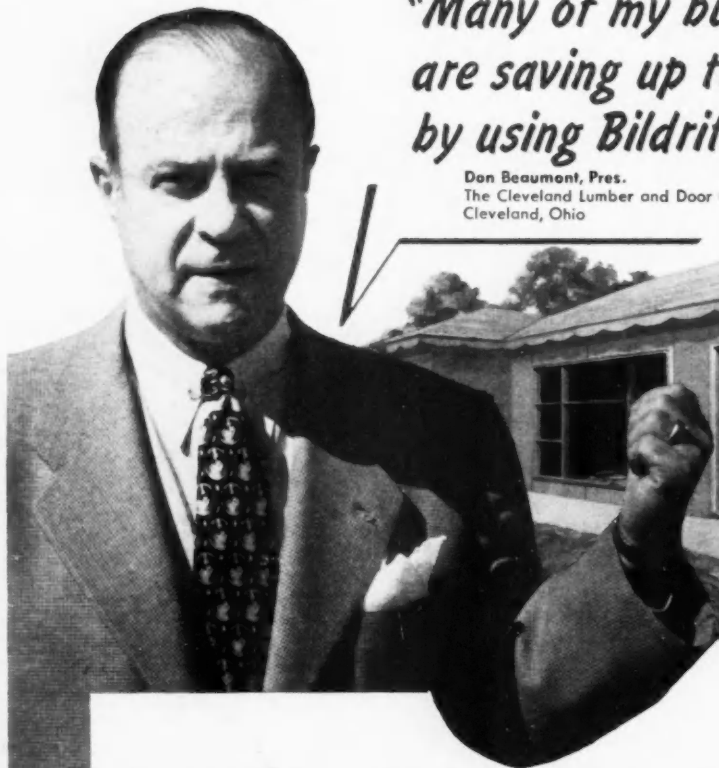
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## Let's Control National Home Week

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W. C. Rodd, ARCHITECTURAL CONSULTANT, Walter T. Anicka.

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## Let's Control National Home Week

**A**MERICAN BUILDER frequently has pointed with pride to the acceptance, growth and popularity of National Home Week, brain child of this magazine's editor. Now, it becomes necessary to point to it with something akin to alarm for two reasons.

The first of these was the decision this year of one of the large chapters of NAHB to skip National Home Week in favor of a Home Show. There is no question that the Association was right in operating a Home Show, and right in operating it at the time of National Home Week. That part of the decision was influenced by sound reasons. But, it is possible that in failing to promote both a Home Show and National Home Week at the same time, as the Chicago Metropolitan Home Builders Association did, the Association in question has surrendered its control over the Week. A newspaper which has cooperated with the Association in the past picked up National Home Week, and ran it as an editorial promotion. That was smart journalism.

But, National Home Week is the particular and special merchandising and public relations program of the home building industry, and it can be most effective only when it is under industry control. While the newspaper left nothing to be desired in the manner in which it conducted its local observance of National Home Week, it is not difficult to imagine the kind of disastrous exploitation that can characterize the Week, once the home building industry loses control of its operation.

The second contributing cause to a feeling of alarm was the manner in which a special piece of literature was used by one Association which did celebrate the Week. In the particular city in question the manufacturers whose products were being featured in the

demonstration homes were asked to cooperate with advertising in the special newspaper supplement issued for National Home Week. This is a common and accepted practice, and one in which the cooperating manufacturers recognize value to themselves. The manufacturers did cooperate in this city, as they do in every city. But, when one of them visited a demonstration house in which his products were used, and which he had advertised, he found advertising from a non-cooperating competitor being distributed. It will take a lot of selling to get him back next year, and there may be others who were affected in the same way. Home builders themselves do not, and probably cannot, purchase enough advertising to justify the special National Home Week supplements in the metropolitan dailies. These supplements are invaluable in promoting National Home Week, and everything it stands for. And since they are made possible largely by the producers of building products, every Association should exercise every precaution to insure fair treatment to the group of manufacturers whose cooperation is so vital.

It is to be hoped that in 1952 nothing will induce any segment of the industry to relinquish its control of National Home Week. Experience in Chicago indicates that the impact of a Home Show and National Home Week running concurrently is far greater than either operated alone. But National Home Week still stands as the greatest merchandising program the industry has. Care should be taken in every step of planning to insure its continuance on its present high plane of service to the public, the home builders, the distributors of building products—and to the manufacturers whose advertising dollars play a very important role.

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# AB Washington News Letter

## For the Light Construction Industry

A new service for American Builder readers. The latest Washington developments affecting the light construction industry assembled by special Washington correspondent and sent by wire to be printed and bound in your American Builder at the last minute before it is mailed. A regular monthly feature.

Washington, October 22, 1951.

- ▶ **PREDICTIONS ON NEXT YEAR'S NEW HOME STARTS** are beginning to circulate in Washington. Defense Mobilizer Charles E. Wilson started it. In his latest report to President Truman, Mr. Wilson said home building in 1952 should be "near" the 1946-49 average — which would be in the neighborhood of 850,000 units.
- ▶ **HHFA ADMINISTRATOR FOLEY** goes along with this figure. He says a goal of 800,000 to 850,000 starts is a "safe target" for 1952, barring a major change in the mobilization picture. H. E. Riley of the Bureau of Labor Statistics thinks it will be between 800,000 and 900,000 with steel supply being the key.
- ▶ **PESSIMISM IS PRESENT, TOO.** Eric Johnston, the Economic Stabilizer, has gone on record in favor of tighter controls over all construction. He feels that tight controls on home and commercial building are "vital" in the inflation fight. Should his views prevail it would no doubt mean a big cut in 1952 home building.
- ▶ **MR. WILSON'S REPORT** on mobilization had other things to say about housing. It estimated 1951 starts at "about 1 million units." The mobilization chief said commercial and non-defense construction has been hit hardest so far, with some types receiving only 11 per cent of the structural steel requested.
- ▶ **SHORTAGES OF MATERIALS**, rather than tight mortgage money, may well be the determining factor in volume in the building industry in 1952. Continued expansion of the defense program is cutting deeper into steel, copper and aluminum. Manly Fleischmann, chief of Defense Production Administration, sees little hope of improvement until "well into the fall of next year."
- ▶ **ALLOCATIONS of metals for housing** in the first quarter of 1952 are 83,700 tons of steel; 5,798,000 pounds of copper and copper base alloys; and 250,000 pounds of aluminum. This compares with allocations in the present (fourth) quarter of 180,000 tons of steel, 17,457,000 pounds of copper and base alloys, and 500,000 pounds of aluminum. The cutback is substantial, to say the least.
- ▶ **MR. FLEISCHMANN SAYS** the 1952 first quarter allotment for the building industry is "not far off" the amount required to provide 800,000 starts on an annual basis. First reaction to builder spokesman was to disagree. They said twice as much steel and three times as much copper would be needed to maintain production at 800,000 in 1952. An HHFA spokesman suggested it is impossible to estimate starts based on metal allocations because there is no way of telling how much metal will be used to complete jobs already started.
- ▶ **ANOTHER LIMITING FACTOR** on future home building will be shortages of supporting products. Mr. Fleischmann agrees there is "not a precise balance" between steel allocated for component parts and that allocated for building. He feels that the availability of items such as plumbing fixtures, for example, may be the real limiting factor on housing starts in the months ahead. Builders go along on that point. They say that even if self-certification proves workable as hoped, construction can still be pinched if that part of the system supplying manufacturer's needs doesn't work.
- ▶ **CONSTRUCTION APPLICATIONS** requiring NPA approval face an even bleaker prospect. During the fourth quarter the agency has turned down 2,196 applications, mostly commercial, and this situation is very likely to be worse in 1952's first quarter.
- ▶ **AN INDUSTRY REPRESENTATIVE** on the top policy level in DPA is needed, some building and construction men argue. They cite the widespread but loosely connected nature of the construction industry, and say it makes too easy a target for the controllers. Without a top-level spokesman to advise DPA on construction, there is fear the industry will be subjected to more than its share of shortages. Mr. Fleischmann talks of having to place some industries on a "break-even" basis, but construction men insist it won't work for builders. Any move to establish this top-level job in DPA would have the support of many "B" product manufacturers — who say they already are having trouble "cashing" DO ratings for necessary materials.
- ▶ **MORTGAGE MONEY** remains a prime issue, even in the face of substantially reduced construction materials. Mortgage bankers say they expect a continuing shortage of

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mortgage money in 1952. Other outlets, such as government bonds, are competing effectively for investment firm funds.

▶ THE \$200,000,000 AUTHORIZED FNMA under the Defense Housing Act — for making advance commitments to purchase mortgages on critical area housing, Wherry Act housing and disaster housing — has been apportioned as follows: \$125,000,000 for programmed defense housing in critical areas; \$50,000,000 for Wherry Act housing; and \$25,000,000 for housing in disaster areas. Under the act, commitments must be made by December 31, 1951.

▶ FNMA HAS SET ASIDE an additional \$200,000,000 of its uncommitted funds to be available for the purchase of mortgages covering critical-area and Wherry Act housing. This fund is for the purchase of mortgages on critical housing programmed on or after September 1 but prior to November 1, and Wherry Act housing on which the FHA commitment to insure was issued between September 1 and November 1.

▶ FUNDS TO ADMINISTER THE DEFENSE HOUSING ACT were trimmed by Congress. Main complaint of legislators was that HHFA did not formulate in advance a program for carrying out various provisions of the new law. HHFA, on the other hand, said it could not formulate programs without money.

▶ SO THE HOUSE MADE CUTS. Public Housing construction funds were reduced to \$25,000,000 from the \$50,000,000 requested. Defense community and facilities and services, to be handled jointly by HHFA and the Federal Security Agency, received only \$8,700,000 of a requested \$40,000,000. A 20 per cent cut was made in requests for funds to administer the new Title IX, National Housing Act.

▶ THIS TITLE IX MONEY has been a bottleneck in getting housing projects under way in critical defense areas. Title IX allows FHA to insure mortgages of approved housing projects in these areas, but builders could not go ahead until FHA obtained funds to administer this new provision.

▶ A CONGRESSIONAL INVESTIGATION into FHA and VA mortgage-loan policies throughout the country is in the wind. The House passed 284 to 15 a resolution authorizing the study, and assigned the job to the Banking and Currency Committee. It's expected the investigation will get under way before January 1, while Congress is home.

▶ CLOSEST LOOK by the committee will be into FHA and VA's "inspection service." Many congressmen think the agencies have insured or guaranteed loans on housing which is "defective with respect to construction, drainage, sanitary conditions, and other features."

▶ TAX ON SAVINGS AND LOAN ASSOCIATIONS and savings banks is included in the new revenue bill. Passed first by the Senate and accepted by the House, this provision permits savings banks and loan associations to make tax free allocations to reserves until such reserves equal 12 per cent of accounts or deposits. After that regular corporate tax rates will apply. An estimated 16 per cent of all savings and loan associations, representing 13 per cent of all assets, are in the "over 12 per cent" classification. Main fear of the associations is not the immediate impact of this tax but that the new provision will serve as precedent in future tax laws.

▶ MILITARY CONSTRUCTION will be a big item in the months ahead. Congress has passed the huge \$5.8 billion military construction bill, covering a wide range of defense projects both in this country and overseas.

▶ NEW HOME STARTS in September are estimated at 91,000 by the Bureau of Labor Statistics. This compares with 85,000 starts in August, and is further indication that 1951's total may become second highest on record. BLS has also revised its estimate for the month of June, raising it from 130,000 to 132,500. The bureau has gone on record in forecasting that 1951 will be "another 1,000,000 unit year."

▶ CRITICAL DEFENSE HOUSING AREAS are growing in number. Forty-three had been declared by Defense Mobilizer Wilson as this issue went to press, with others "in the works." Housing officials are reluctant to estimate how high the number may run. But they note that in World War II, under the Lanham Act, about 400 communities were declared critical.

▶ CREATION OF A HOUSING AGENCY within the Department of Defense reflects that department's concern over housing around military installations. Called the Armed Forces Housing Agency, it is headed by a civilian assistant to the Secretary of Defense. The agency represents all three services, and its duty is to keep a finger on family housing around military posts, both in this country and overseas.

▶ A SENATE REPORT on "Substandard Housing and Rent Gouging of Military Personnel" touched off this action by the Defense Department.

▶ CREDIT CONTROLS affecting loans for farm houses made by the Farmers Home Administration, Department of Agriculture, have been changed to bring them in line with the Defense Housing Act. In the past two years this agency has extended construction credit to almost 9,000 farm owners and approximately \$41,000,000 has been loaned.

# TRENDS

## in the Building Field

### Fourth Quarter Commercial Construction Cut

**T**HE National Production Authority has denied applications for more than \$500 million of construction in the fourth quarter of this year because of the shortage of controlled materials.

Rejections include 2,196 projects, most of them of commercial types. They include grocery and retail stores, office and bank buildings, hotels, gas stations, garages, laundries, churches and warehouses.

Applicants for construction authorization who were turned down in the fourth quarter are urged to re-file for allotments in subsequent quarters. Applications for construction permits in the first quarter of next year are due immediately.

**RESIDENTIAL BUILDING**, spurred by some relaxation of credit controls, rose to 91,000 dwelling units in September as compared with 85,000 in August. During the first nine months of this year, a total of 852,000 non-farm dwelling units have been started, 23 per cent under the corresponding months of 1950. However, the outlook is for another million unit year, the third such year in history.

The Government expects construction of 800,000 to 850,000 new homes next year, according to Housing Administrator Foley. He assures that we will be permitted

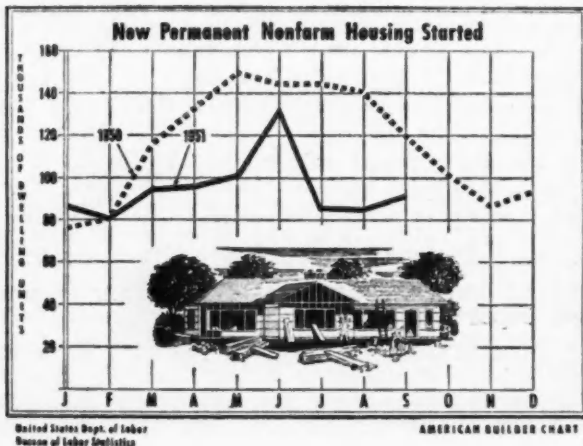
to maintain a reasonably large housing production unless some compelling factor forces a different general approach.

**DOLLAR VOLUME** of residential and commercial construction currently shows a drop from peak volume last year. Industrial, farm and public construction all show increases.

**PRICES** of building materials show varying trends. Those made of less critical materials show substantial decreases. This includes lumber, flooring, doors, windows, asphalt shingles and gypsum board. Those which have increased in price include paint, plumbing and heating equipment, and nails.

**WAGES** of construction labor are up. Average hourly earnings have increased nine per cent since last year. In August the average hourly earnings in construction were \$2.18 per hour, compared with \$1.97 a year ago.

**LUMBER DEALER** retail sales are off from last year's high volume. Latest official figures show retail sales of \$688 million for July compared to \$745 million a year ago, a decrease of eight per cent. This fall lower prices of lumber items and decreased residential and commercial building will cause further substantial decreases in retail sales.



### THE SCORE BOARD

#### Per Cent Change Compared With Last Year

	Up %	Down %
<b>Dwelling Units Started</b>		
Month of September		24.5
First 9 Months		23.4
<b>Dollar Volume of Construction (September)</b>		
Private Dwelling Units		33
Private Residential Alterations		5
Private Industrial	100	
Private Commercial		17
Private Farm	13	
Public Construction	28	
<b>Total Construction</b>	1	
<b>Price Changes (September)</b>		
Common Brick	2	
Cement	2	
Dimension Lumber		3
Flooring		19
Doors		11
Windows		7
Paint	10	
Bathtubs	10	
Furnaces	8	
Asphalt Shingles		5
Gypsum Board		4
Window Glass	12	
Nails	13	
Insulation Board	1	
<b>Average Hourly Earnings</b>		
Construction Labor (August)	9	
(July)		8



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It has something to do with  
the building business



## MODULAR COORDINATION for the small homes builder

The *American Builder* has asked Lee Frankl\* to write a series of articles on Modular Coordination, with particular emphasis on the construction of small homes.

The contractors who build 5 to 15 houses a year, and who are responsible for a large percentage of America's small homes, have lagged behind in the use of efficient construction methods. Their existence could be threatened by pre-fabricators and large-scale operative builders. These small contractors are necessary to the construction industry, but economics demand the greatest efficiency from the small business man (the small contractor, in this case) to insure his success. It is believed this efficiency can be attained through the design and construction of small homes based on Modular Coordination. Modular Coordination is a tool which can make the small builder's operation more efficient, more profitable and increase his yearly production.

More and more well-designed buildings are coming off the architect's 'drafting' boards each year. Government, educational and private institutions have greatly increased their efforts in the development of Modular Coordination as a basic element of the science of shelter.

Building materials manufacturers have made many more products available in modular sizes.

To point up this industry-wide effort, Mr. Frankl will report on modular developments each month to *American Builder* readers, so that they can more quickly make use of such information.

You are invited to use these pages as a forum to discuss modular construction. The objectives of the forum to be:

1. How to eliminate material waste—a must of particular importance during the present crisis.
2. How to develop a more efficient, more profitable and healthier home construction industry.
3. How the home buyer can get the best house for the money he can afford to spend.

These articles will tell the story of Modular Coordination through all its phases—construction, history, building products design, and research. The *American Builder* believes the information will be of practical value to the small homes builder.

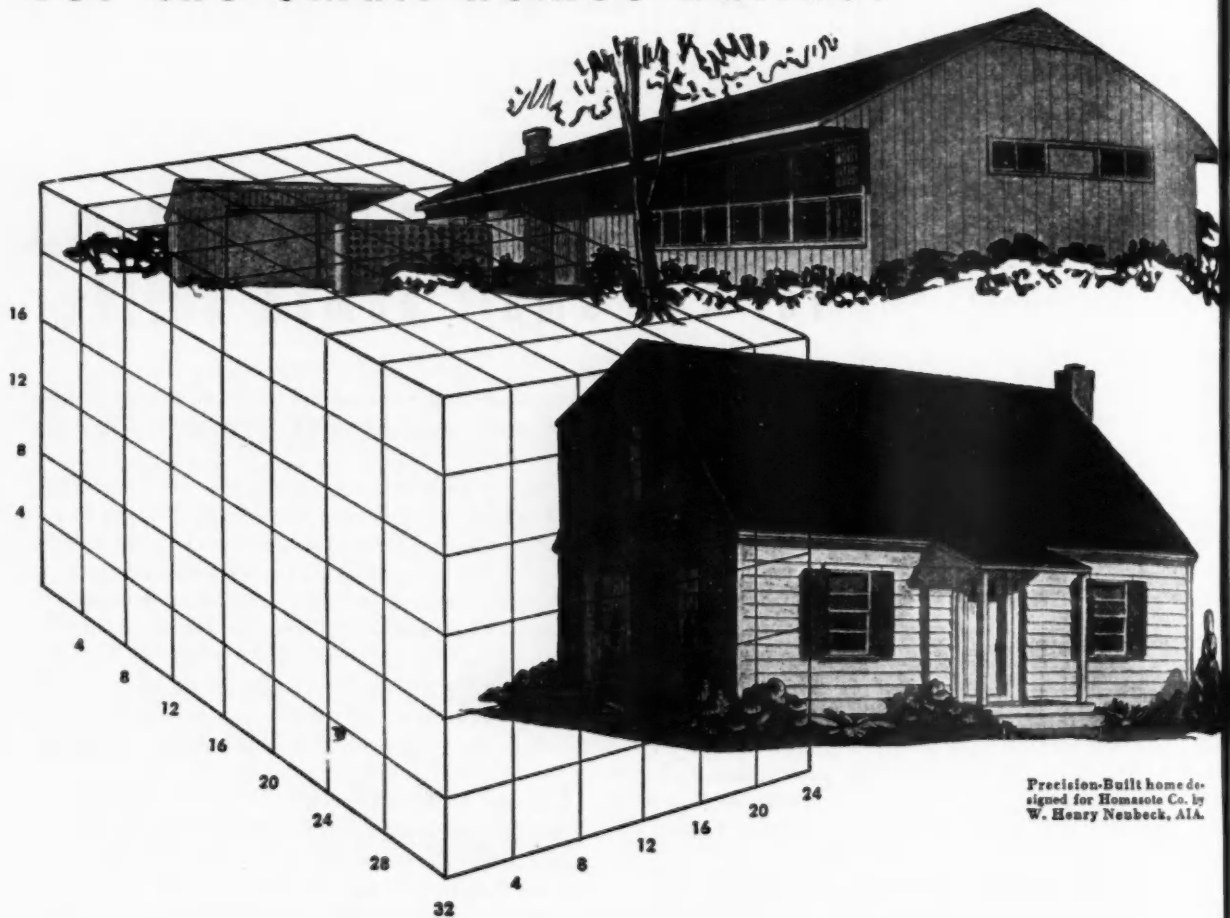
\* Mr. Frankl is the author of several books on modular construction: SMALL HOUSE CARPENTRY, INTERIOR-EXTERIOR FINISH for the SMALL HOUSE and THE MASONRY HOUSE. His most recent book, HOW TO EXPAND AND IMPROVE YOUR HOME, was published this year by the *American Builder*.

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# MODULAR CONSTRUCTION

## for the small homes builder

Unit plan house based on Small Homes Council research project sponsored by Lumber Dealers' Research Council.



Precision-Built home designed for Homasote Co. by W. Henry Neubeck, AIA.

### PART 1

One builder's profitable use of Modular Coordination; an interview by Lee Frankl, our Modular Coordination reporter.

I asked Leroy James, a small homes contractor in Urbana, Illinois, what Modular Coordination means to him.

Mr. James said, "*More profits—more and better house for the money—better relations with the home owner and the architect.*"

So began one of many discussions I had with a number of building contractors during a 2500-mile trip to get this question answered for *American Builder* readers.

I tried to find out what builders, architects and manufacturers are doing with Modular Coordination. I did not find many small homes contractors sufficiently informed on Modular Coordination, but the enthusiasm of those using it was unlimited. It was almost a new religion to them.

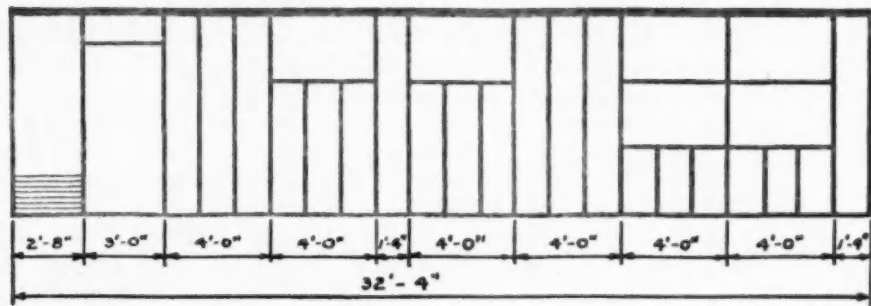
In order to contribute to the growing fund of knowledge about

the use of modular construction in building, it is necessary to explain the methods used by this small group of enthusiastic contractors.

To do this, I have selected the two houses illustrated above. One is based on the Unit Plan developed by the Small Homes Council of the University of Illinois, as a research project sponsored by the Lumber Dealers Research Council. The second house was developed by the Homasote Company.

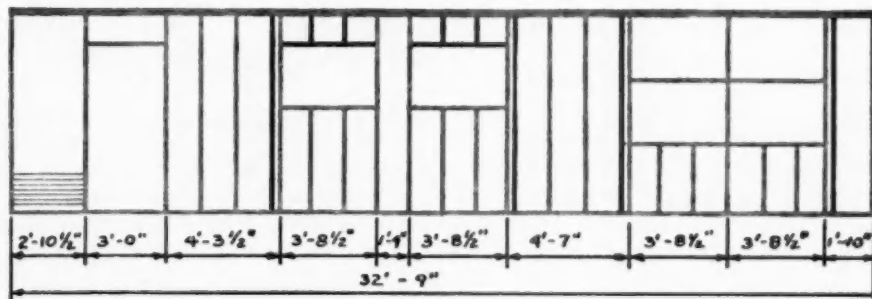
The plans for these houses will be published soon in the *American Builder*. They will be completely

## modular wall



Modular wall framing is easy to lay out. Dimensions are checked quickly. Modular windows fit 16" stud spacing.

## nonmodular wall



Nonmodular framing with nonmodular windows. Note fractions and additional studs. Layout and checking dimensions are more complicated.

detailed so that you may follow the step-by-step construction methods used by the builders with whom I've talked.

To get back to Leroy James. I then asked him to explain how he built a better house for less money, while satisfying both the home owner and the architect.

James: "A modular house allows me to use modular construction."

Frankl: "What do you mean by modular construction?"

James: "It is a method which takes advantage of known sizes of building materials. This helps to eliminate a great deal of costly cutting and fitting."

Frankl: "By modular construction do you mean that which is also called 'engineered construction,' 'modular control,' or 'assembly line methods'?"

James: "Yes, but this does not imply factory pre-cutting and assembling. I do pre-cut and pre-assemble a single modular house on

the building site, and do it more economically and efficiently than by conventional methods."

Frankl: "How does this improve your relations with the home owner or architect?"

James: "It takes the guesswork out of estimating, and construction time by standardizing all construction operations on the site. This saves time and material, and improves the quality of the work. I am bidding lower now, than when I worked without modular construction methods. The architect has fewer supervisory problems, and the home owner gets a better house in less time."

Frankl: "Can you give me some example of how modular construction methods work for you?"

James: "Let us take a modular exterior wall framing detail with modular window and door openings. Now, compare this with a nonmodular wall with nonmodular details. The same wall as above,

but 5" longer, using nonmodular openings.

"In the modular plan, notice the even measurements—very simple to add up and check. All the dimensions are in multiples of 4", most of them 4'-0". Now, look at the nonmodular wall. Estimating the materials requires more time, checking and rechecking. The chances for making errors in estimating are greater. Also, the chances of error in layout are greater. Notice too, that odd studs and cripples are not necessary. "If modular doors and windows are specified, and manufacturer A cannot deliver them because of shortages, I can substitute manufacturer B's doors and windows of the same size. If the doors and windows are nonmodular, I would probably have to chop up the framing to fit the new door and window sizes.

"Most of the sheet materials—gypsum board, fiberboard, plywood

panels, and asbestos-cement board—are also interchangeable. If shortages occur in one material, substitutions can be made, and construction is not held up.”

Frankl: “You mentioned standardizing construction methods earlier. The Levitts and other large-scale operative builders, pre-cut all of their materials, as do the manufacturers of pre-fabs and pre-panelized houses. What relation is there between your operation and theirs?”

James: “We do use similar methods, but I use these methods when I build a single house, and save money. When I build more than one house, the savings increase. Let’s go back to the modular framed wall, illustrated above. After the subfloor is laid, I assemble the wall framing sections in a jig on this floor. It is easier to align and space all the members for nailing. Nailing directly through the top and bottom plates is simpler and faster than toenailing.

“The sheathing is applied at the same time. Then the wall is tipped into position and braced. Each wall, around the perimeter of the house, is assembled, sheathed, tipped into place and braced.

“I have built a house using conventional methods, and then built the same house with modular methods. This method of framing and sheathing saved 18 per cent in labor time.

“I also jig all roof trusses. All like trusses built in the jig are exactly the same. This makes sheathing and roof finishing an easier job. Here too, my costs showed a saving

of 25 percent over the conventional methods of roof construction.

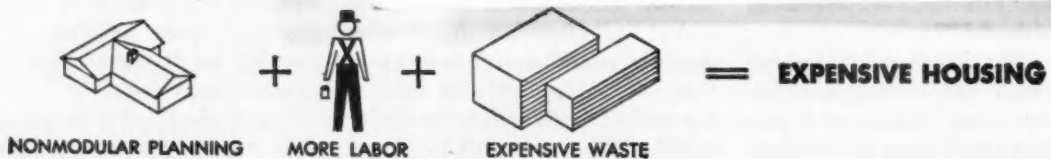
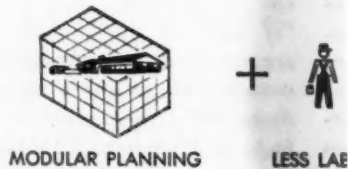
“I have built approximately 40 houses using these methods. My square foot costs for like exterior framing and sheathing are con-

changes on the plans, than making construction changes on the job.

There is no mystery or sleight-of-hand in modular construction. There are—unfortunately—no dramatic effects to catch the im-

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**BUILD CHIMNEYS  
THE HARD WAY**

# AGES SSING

A FEW OF THE MANY BUILDERS  
CUTTING COSTS WITH  
VAN-PACKER CHIMNEYS



Robert Bartlett Bldg. Corp.



H. B. Layne, Contractor



Strausman Construction Co.



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Private Homes, Inc.

**CORPORATION**  
209 SOUTH LASALLE ST.  
CHICAGO 4, ILLINOIS

Also Manufactured and Distributed in Canada by C. A. McRobert and Son, Ltd., St. Laurent, Quebec.

panels, and asbestos-cement board—are also interchangeable. If shortages occur in one material, substitutions can be made, and construction is not held up.”

Frankl: “You mentioned standardizing construction methods earlier. The Levitts and other large-scale operative builders, pre-cut all of their materials, as do the manufacturers of pre-fabs and pre-panelized houses. What relation is there between your operation and theirs?”

James: “We do use similar methods, but I use these methods when I build a single house, and save money. When I build more than one house, the savings increase. Let’s go back to the modular framed wall, illustrated above.

After the subfloor is laid, I assemble the wall framing sections in a jig on this floor. It is easier to align and space all the members for nailing. Nailing directly through the top and bottom plates is simpler and faster than toenailing.

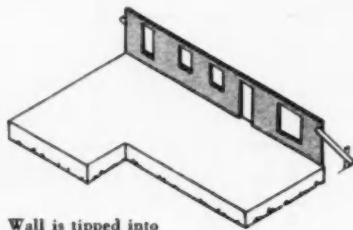
“The sheathing is applied at the same time. Then the wall is tipped into position and braced. Each wall, around the perimeter of the house, is assembled, sheathed, tipped into place and braced.

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“I also jig all roof trusses. All like trusses built in the jig are exactly the same. This makes sheathing and roof finishing an easier job. Here too, my costs showed a saving

of 25 percent over the conventional methods of roof construction.

“I have built approximately 40 houses using these methods. My square foot costs for like exterior framing and sheathing are constant, job after job. This is most important to me as a general contractor. The major part of my job is carpentry. This phase of the work must be profitable if my contracting business is to be successful.”



Wall is tipped into position and braced.

James: “I would like to make one more point that might be of interest to other small homes contractors. By the use of on-the-site assembly methods, I can compete with the panelized pre-fabber. Some assemble their framing in 4’ x 8’ sections. These panels are then bolted together wherever two panels meet. A double stud is used at each joining. At least 25 percent more framing lumber is necessary. The more framing lumber used, the higher the material and labor costs.”

The major factor in Mr. James’ operation is his ability to control costs on the job, by getting each day’s work completed as planned. He finds it less costly to spend time at the drafting board completing details, and making corrections or

changes on the plans, than making construction changes on the job.

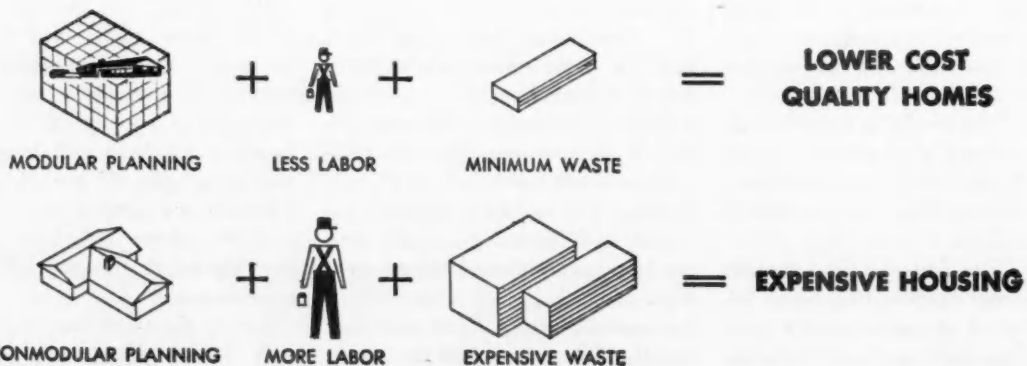
There is no mystery or sleight-of-hand in modular construction. There are—unfortunately—no dramatic effects to catch the imagination of builders and architects. It is simply a matter of planning so that each part of the house is built in a little less time, at less cost, and with a minimum of waste. This added efficiency does result in better construction, which adds to the reputation of the builder who employs these methods.

The *American Builder* is convinced that Modular Coordination for the designer, and engineered construction methods for the builder are the major promises for more and better homes for Americans in the years ahead. It would help Modular Coordination to be more generally accepted if all building materials were modular now. We know that more and more modular materials are being manufactured each year. Meantime, enough modular materials are available to make their use economical for the builder now.

An increased demand from builders should result in additional modular building products.

Future articles will discuss the architectural approach, manufacturers’ problems and the findings of agencies, research centers and trade associations that are working along the same lines.

To sum up, the purpose of these articles is more profitable housing for the builder, which at the same time means lower cost and better built housing for Americans.



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**HOW DO I ORDER**—For exact quotation, take the H-L measurements shown in chimney diagram at left. State quantity of chimneys needed.

**WHERE DO I BUY IT**—See your lumber dealer, heating contractor or write direct to address below. You can count on prompt delivery.

**HOW DO I INSTALL IT**  
Install and level chimney base in floor or ceiling. Cement sections together. Cement sections together. Fit—apply draw bands. Fit housing to exact roof pitch. Set rain cap. You are all done in 3 man-hours or less.

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H. B. Layne, Contractor



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# Contractor H. H. Auch Reports...

• "We are happy to report . . . that the David White Universal Level Transit has our whole-hearted approval."



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**BUILDERS**

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TELEPHONE  
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Mr. E. G. Locke, Sales Manager,  
David White Company,  
315 W. Court Street,  
Milwaukee 12, Wisconsin.

Dear Mr. Locke:

It is with pleasure that I write you regarding the performance of our new David White Universal Level Transit, Serial #66114.

The ease and speed with which it is set up and the accuracy of the readings taken most certainly belie its actual cost. The level has been on our largest job since it arrived and the Superintendent of the job prefers to use this David White in preference to a . . . which requires such mere "set up" time; and hence, for the ordinary shots is not near as popular on the job. We are happy to report to you that this David White Universal Transit Level has our wholehearted approval.

Very truly yours,  
GEO. W. AUCH COMPANY  
*H. H. Auch*

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The David White "Universal" Level Transit is the most practical, complete builder's instrument on the market. Now available in a new improved model—complete with internal focusing, coated optics—guarded vertical arc—in fact every feature to assure you lifetime durability and accuracy. Write for name of our nearest dealer.



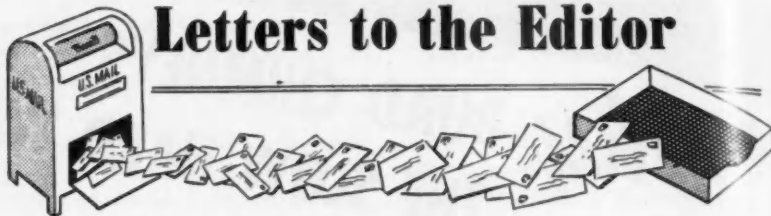
Model No. 3000  
Price \$185.00\*  
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311 W. Court St., Milwaukee 12, Wis.



## Letters to the Editor

### Interpretive Facts on CMP Aluminum Restrictions

Sir: The interpretation of the National Production Authority Construction Order, M-4A, of August 3, 1951, has caused much confusion in the building industry. It should be made clear that M-4A, Section 7, applies only to aluminum in the "controlled material" forms and does not limit or control the use of Class B Aluminum Products for industrial, commercial, or residential construction. Aluminum nails, aluminum roll valley and flashing shingles, aluminum screens, aluminum doors, and many other aluminum items, defined as class B products may be used in new construction, repair, maintenance, or replacement.

Edward C. Manix  
General Sales Manager  
Nichols Wire & Aluminum Co.

Sir: You are no doubt aware of the confusion existing in the minds of prospective home owners, contractors, jobbers and retail building material outlets as to the exact status of aluminum when used as a building product under recent National Production Authority regulations.

Government regulations have created this confusion. The regulations are: CMP Regulation No. 6 and NPA Regulation M-4A. To the layman and through press releases, the impression has been given that aluminum is restricted severely or banned in the construction field.

We believe the *American Builder* offers an excellent medium to clarify this situation. It should be made clear that NPA Regulation M-4A, Section 7, applies only to aluminum in the "Controlled Material" form. This regulation does not limit or control the use of Class B Aluminum products for industrial, commercial, or residential construction. Aluminum roofing, siding, flashing, windows, insulation and nails are class B products and as such may be used in new construction or for repair and maintenance work.

Likewise, CMP Regulation 6 is designed to restrict the amount of aluminum in the "controlled material" form that may be used in construction. B Products here again are permitted.

Each manufacturer of aluminum B products, such as: roofing, siding, gutters, etc., receives permission from NPA to produce limited quantities of these items in each calendar quarter. While these production schedules have been limited, there is no restriction upon the end user if he can obtain these products from his normal sources of supply.

We trust the above explanation of the existing Government regulations applying to the aluminum building products will enable you to clear up the great amount of confusion now existing in the building industry.

H. E. Hicks, Market Manager  
Building Products Division  
Reynolds Metals Company

### Worthwhile

Sir: Thanks for your note and the copies of *American Builder* containing "Housing Activities of the Federal Government."

The idea we discussed has developed into something I believe will prove very worthwhile and constructive, and, I think, thanks are owing to you and your publication for this piece of enterprise. Certainly it should lead to greater public benefit from the aids to housing that are available.

I appreciate your continuing interest.

Raymond M. Foley  
Administrator  
Housing and Home Finance Agency  
Washington, D.C.

Thank you. The article appears to be filling a need in all branches of the industry.—The Editor.

### Send Us

Sir: We believe that the 24-page insert on the Housing and Home Finance Agency is an excellent presentation and that it will receive approbation from your other readers.

We would like to have up to 500 copies of the reprint of the insert, and we would appreciate your letting us know what your quantity price per hundred for this number would be so that we can prepare the necessary requisition for purchase. These would

(Continued on page 46)

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**1** **ANCHOR WINDOW** — Pella Windows are completely assembled when they arrive. Just set the unit in the opening and anchor it firmly at the head and sill. Flange screws are furnished for this purpose.



**2** **ATTACH OUTSIDE FINS** — Next, attach metal fins at jambs. The grooved edge of the fin fits over the edge of the steel frame. The flat surface of the fin is nailed to the sheathing. Exterior trim can now be applied.

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USE**

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Without obligation, send me "PELLA CASEMENT Installation Instructions in Full Size Casement Details No. 1050M."

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**3** **ATTACH INSIDE FINS** — To complete the installation, apply the inside metal fins at head, sill and jambs. Fins fit under the lip of the steel frame and are nailed to the studding. This insures a tight weatherseal all the way around the window.

**ALSO MAKERS OF FAMOUS PELLA ROLSCREENS AND VENETIAN BLINDS**

46

## Letters . . .

(Continued from page 44)

be primarily for internal or direct office use, since we intend to list the reprint along with our other housing references and refer all quantity requests for it to your office.

Jack H. Bryan  
Director of Information  
Housing and Home Finance Agency

Reprints will be available. The charge will be 25 cents per copy in quantities up to and including 99. For quantities in excess of 100 the price is 20 cents each.—The Editor.

### Wonderful Job

Sir: I can't resist the opportunity of telling you what a wonderful job you did in your September issue of the *American Builder* on the "Manual of Housing Activities of the Federal Government." I consider it one of the best articles that I have read in any trade publication in many, many months. I want to congratulate you on doing such a thorough job. I am sure it will be well received by the industry.

Hunter M. Gaines, Secretary  
Michigan Retail Lumber Dealers Assn.

Thank you very much for your letter, with your enthusiastic endorsement of the article entitled "Manual of Housing Activities of the Federal Government." It is most heartening to get such an appraisal of the work, from such a respected critic.—The Editor.

### Strangers At Home

Sir: Unfortunately, too many of the public are strangers in their homes, too many are unaware of what lies behind the wall paper, under the rug or below the external paint. They have little appreciation of the brains, the skill and the effort that went into the construction. There is a job to be done telling the American householder how well off he is. And the *American Builder* is now doing the job, too, through the medium of National Home Week. For that, our hat off to you again.

Rawson G. Lizars, President  
Certain-teed Products Corporation

National Home Week is doing more each year. Merchandising aids and construction details have proved to be a very successful part of the demonstrations. See our special issue soon for a complete National Home Week roundup.—The Editor.

(Letters continue on page 48)

AMERICAN BUILDER

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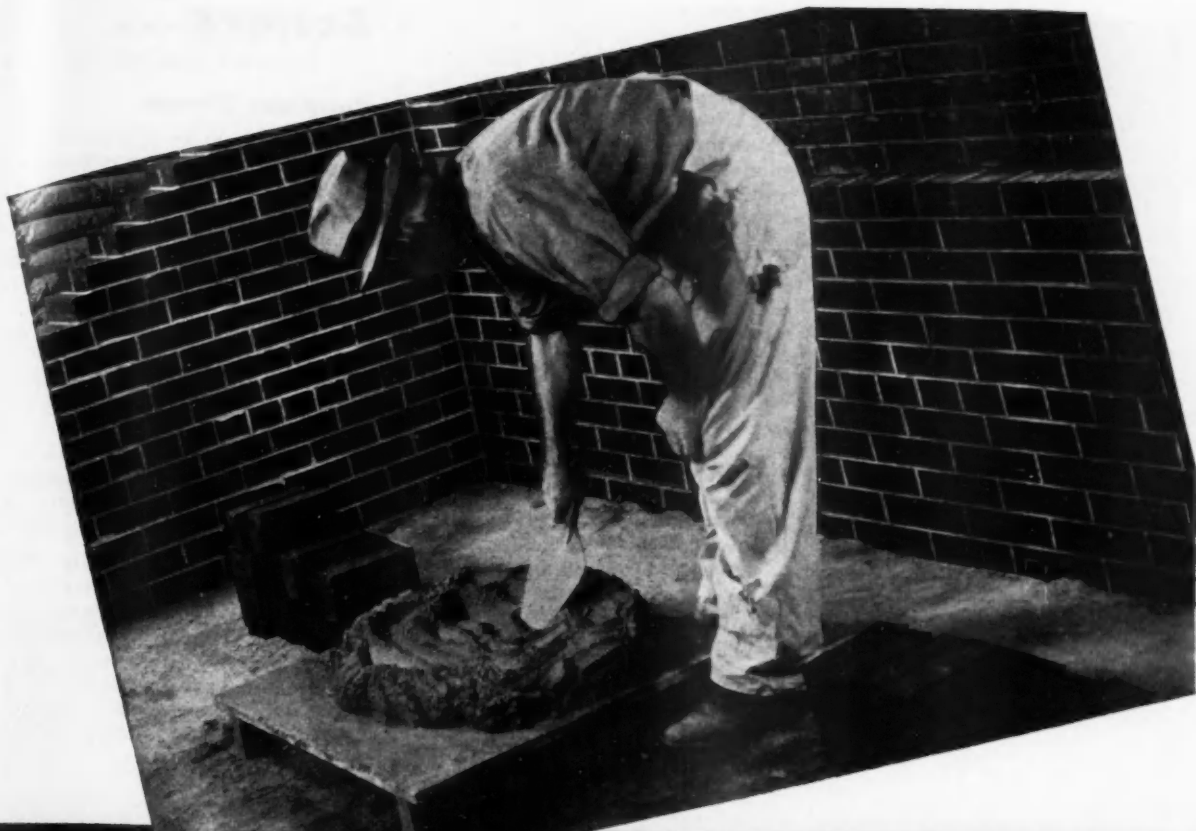
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*is more plastic!*

ONE of the most outstanding characteristics of Brixment is its plasticity. Its working qualities are comparable to those of lime putty. Because of this unusual plasticity, a bag of Brixment will carry three full cubic feet of sand, and still make good workable mortar. . . .

This exceptional workability makes it easy for the bricklayer to secure neat, clean brickwork, with the brick properly bedded and the joints well filled. The final result is a better job, at lower cost.



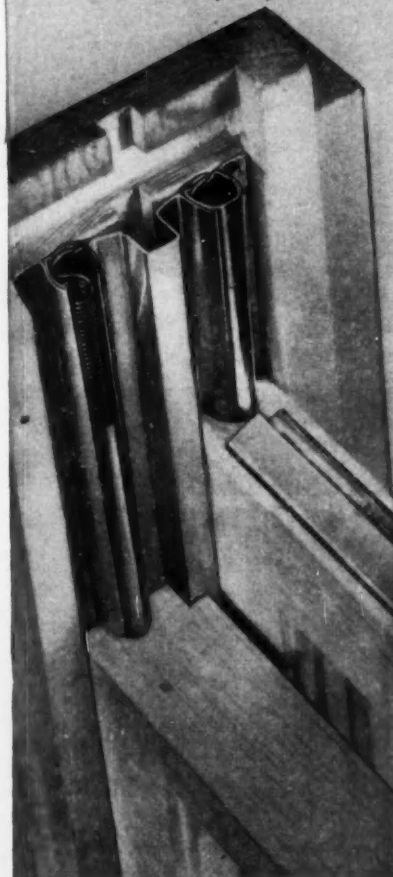
LOUISVILLE CEMENT COMPANY, Incorporated, LOUISVILLE, KENTUCKY

NOVEMBER, 1951

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This concavity is important!



It's equipped with Dura-seal . . . the combination metal weatherstrip and sash balance! It provides the best weather protection and the easiest window operation!

● Dura-seal's jamb member is made in one piece and its concave back surface provides a flexibility which maintains a constant air seal and smooth window operation even when the sash expands or contracts due to changeable atmospheric conditions. (Springs are completely covered—photograph shows cover down on lower sash to illustrate spring.)

● Full jamb weatherstripping provides better weather protection, eliminates paint-stuck windows and improves window appearance.

● Because Dura-seal is self-adjusting, it assures trouble-free operation with no replacement or maintenance costs.

**BUILDERS!** Ask your lumber dealer about Dura-seal or see Sweet's File, Builders, Section 3g.

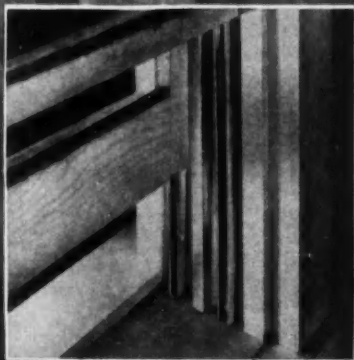
Zc

**ARCHITECTS!** See Sweet's File, Architectural, Section 19b.

Zc

**ZEGERS**  
*Dura-seal*  
COMBINATION  
METAL WEATHERSTRIP  
SASH BALANCE

Manufactured by  
**ZEGERS INCORPORATED**  
8076 South Chicago Avenue  
Chicago 17, Ill.



Dura-seal is cut exactly to the pitch of the sill—another feature that helps make a more attractive and efficient window.

## Letters . . .

(Continued from page 46)

### Continue Please

Sir: It has been brought to our attention that your firm is considering the discontinuance of the Daily that you publish during the NAHB Convention in Chicago.

The feeling of the men in our organization who have attended past conventions is that this is a terrifically interesting part of the convention, and we thought that if this expression were conveyed to you you might reconsider and continue the very interesting little Daily.

E. W. DeLaitre  
Executive Vice President  
Home Builders Association  
of Greater Cincinnati

This and other communications have convinced me, and my associates, that we should continue to publish the Daily at the NAHB Convention. Thank you for your interest and your endorsement of the Daily.—The Editor.

### Please Send

Sir: The following subscribers have requested tear sheets of original articles from your magazine. We would appreciate your sending the complete articles direct.

May, page 96, Automatic Nailer. Simons' Emballagefabrieken en Houthandel N.V., Oosterhout, Holland.

April, page 169, Adobe Blocks for Homes. Mr. Hector Obes Polleri, Rincon 487—Piso 4—Esc. 404-405, Montevideo, Uruguay.

Harry S. Wharen, Editor  
McGraw-Hill Digest

### Indispensable

Sir: Kindly change the address of my indispensable *American Builder* from St. Louis, Michigan to Avon Park, Florida.

Glenn S. Easton  
Avon Park, Fla.

### Big Improvement

Sir: You are certainly improving the *American Builder*, and we do appreciate your service to us very much.

T. J. Dagenois  
710 Parallel Avenue  
Atchinson, Kas.

● Letters to the Editor should be sent to 79 W. Monroe St., Chicago 3, Ill. Your comments are invited.

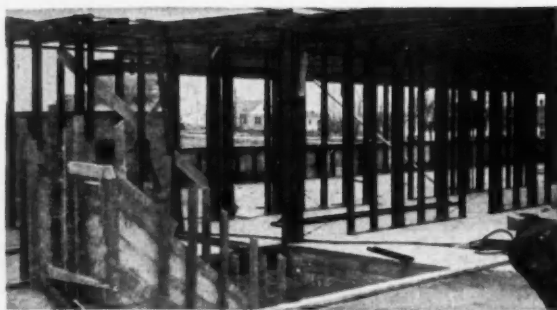
**AMERICAN BUILDER**



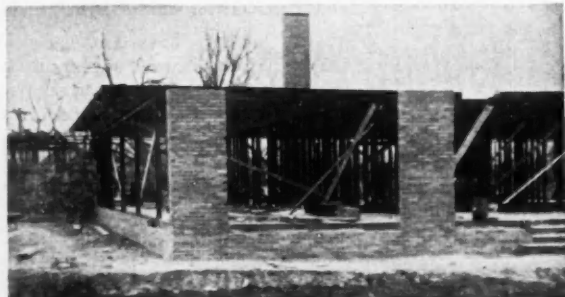


*Architect saves time and money  
in new hospital construction with*

# STRAN-STEEL® FRAMING



Interior view of Redfield (S.D.) hospital under construction. Stran-Steel framing comes pre-cut, pre-punched, treated with rust-inhibiting paint.



Exterior view of construction. Electrical wiring is installed through factory-punched holes in framing members.



Spick-and-span interior of the hospital shows how flush finishing of walls and doors lends convenience, promotes sanitation.

Architects are quick to recognize the many advantages of Stran-Steel *nailable* framing in commercial and industrial construction. Read what Mr. A. McWayne, of Perkins and McWayne, architects and engineers, Sioux Falls, S.D., says:

"We are well pleased with the Stran-Steel construction as incorporated in the hospital at Redfield, South Dakota . . . Stran-Steel offers many possible savings in time and cost of construction."

Mr. McWayne says that Stran-Steel framing permitted complete enclosure of the building to allow interior work to proceed before exterior completion. This means that sub-trades (electrical, plumbing and heating) were not held up waiting for bricklayers, concrete workers, etc., to finish their jobs. Man-hours were saved and costs held down.

*If you are planning a school, hospital or industrial building, it will pay you to investigate Stran-Steel framing. Complete literature available on request, or see Sweet's catalog service, architectural (  $\frac{26}{27}$  ) and builders' (  $\frac{22}{23}$  ) files.*

**GREAT LAKES STEEL CORPORATION**

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Ecorse, Detroit 29, Mich.



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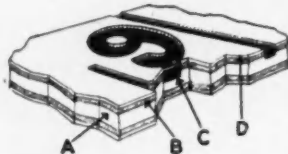




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**HANDIER!** Longer lived! Better looking! . . . You get everything with Roe Steel Tapes! They're extremely easy to read . . . and stay legible. Black markings are etched into the steel which is then nickelplated to give a lustrous background. An added transparent plastic coating assures maximum durability.



- A - Steel tape
- B - White nickel
- C - Black etched markings
- D - Plastic overcoat

Shown here is Roe Steel Tape #202A with leatherette metal-band case. Other models feature cases in handsewn leather, and in metal-banded leather. All have a reinforced rust resistant liner, flush-folding handle, press button center and roller mouthpiece. Available with 25, 50, 75 or 100-foot tapes; feet in inches and eighths, or in tenths and hundredths . . . also, with unique retractable hook for long one-man measurements.

Get Roe Steel Tapes from your hardware dealer — or — send us his name and address.



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Makers of fine steel tapes since 1876

PATCHOGUE, NEW YORK



## ON and OFF the Record

News, Views and Comments

**PRECAST SQUARES**—Demonstration homes exhibited during National Home Week in Chicago in the past two years show a preference for precast concrete squares for walkways.

**ADVANTAGES**—There are several. In the first place, they cost less than having continuous squares cast in place. Second, if for any reason the home owner decides to change the location of a walkway, it's a simple, easy job to dig up the individual squares and re-locate them. Third, if there is a break for any reason, it's an equally simple and easy job to remove the broken slab, and replace it with a new one. And this is no attempt to sell a product. We have no idea who makes the slabs.

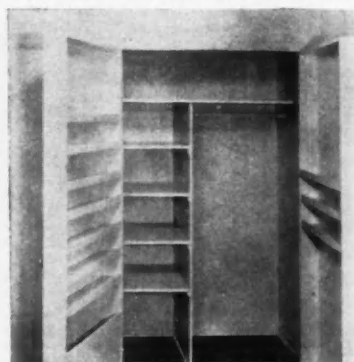
**MERCHANDISING**—It's an important part of National Home Week. Every builder who exhibits a house is confronted with the problem of how best to tell visitors what the features of the house are, as they pass through. One answer is a neatly framed typewritten list of materials and equipment placed at a location visible to all visitors.

**MATERIAL LISTS**—They are not the best answer to the problem. First, by the time the visitor gets to the list he may have forgotten the item in which he was interested. Second, there is a good likelihood of creating a bottle-neck at the list.

**FOLKE VICTORSEN**—This Minneapolis builder found an attractive and practical answer. It's illustrated here. He made several dozen

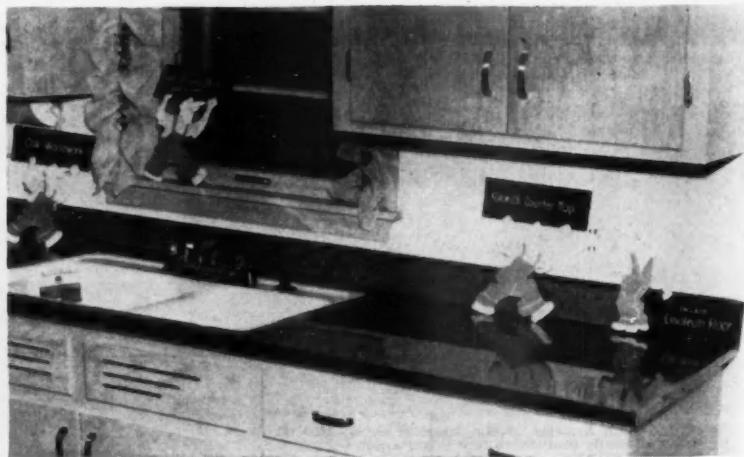
cut-outs of a carpenter carrying or standing close to a rectangular sign with the name or description of the material or equipment. Note the two types in the photograph, illustrated by "Inlaid Linoleum Floor," and "Formica Counter Top." They are inoffensive. They compel attention. The idea is good.

**WARDROBE DOORS**—The only other illustration in this section shows the wardrobe doors designed, made, and installed by J. E. "Jack" Boran for the house he exhibited in the Minneapolis National Home Week. The frames for the shelves are made



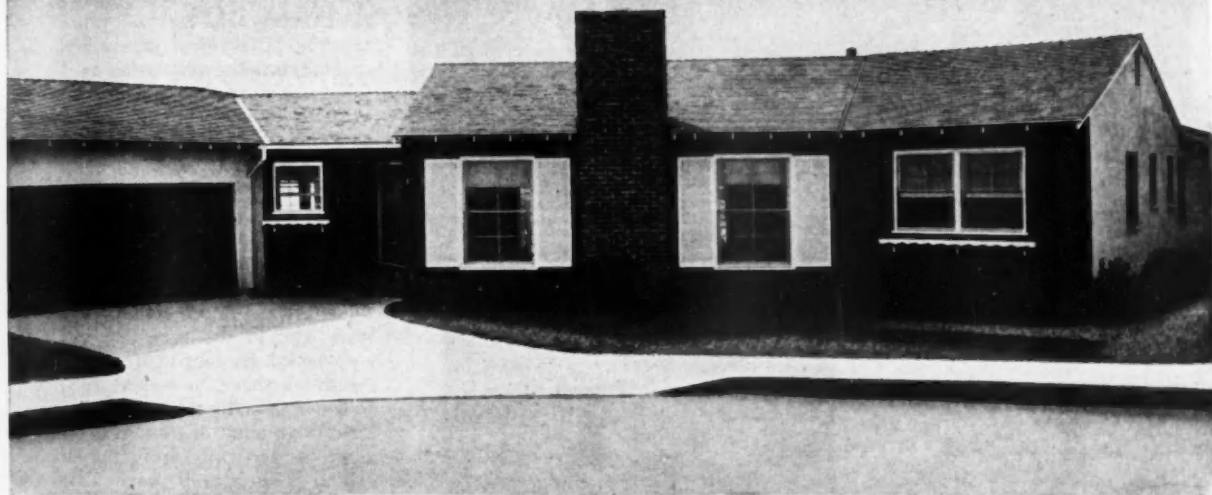
**SHELF DOORS** for wardrobes built on job of 1x6 lumber. They are placed so that they taper inward slightly in order to provide clearance for easy operation. Floor stops hold the doors in place when closed. They proved to be attention-getting features in the modernistic house which Boran designed for the occasion.

(Continued on page 52)



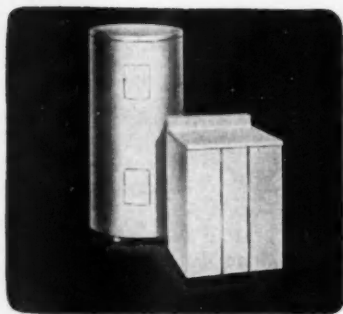
CUT-OUTS in Minneapolis demonstration house call attention to materials used

"Every home should have an  
**electric** water heater,"



Felling Brothers homes are custom built, but in the moderate-price class. They feature adequate wiring in every room, electric ranges, food waste disposers, refrigerators, heaters in bathrooms—and *Electric Water Heaters* which are a real selling feature.

says builder **GORDON D. FELLING**



"One of the appliances that home buyers always look for nowadays is the Electric Water Heater," says Mr. Gordon D. Felling of Felling Brothers, Los Angeles, Cal. "It stands to reason that when everything else is done electrically, the water should be heated that way, too. That's why I say every home should have an Electric Water Heater."

*Electric Water Heaters* help sell homes because they're clean, they're built for long life, they're economical in operation. Electric, automatic, dependable controls keep water at the desired temperature in their fully insulated tanks. Installation can be made anywhere. This shortens hot water lines, cuts piping cost, reduces radiation losses. Customers recognize these advantages. That's why they look for *Electric Water Heaters*!

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**THEY'RE WHAT  
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**ELECTRIC WATER HEATER SECTION**

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BUILD FOR PERMANENCE AND ATTRACTIVENESS

**with a beautiful,  
lifetime roof of ...**

**FOLLANSBEE TERNE METAL**



The D. H. Boyd Residence,  
Ben Avon Heights, Pa.

Architect: Sterling and Wolfe  
Building Contractor: J. H. Shoup  
Roofing Contractor: Limbach Co.



Typical of today's architecture, this home was designed and built for permanence and gracious living. Naturally, it has a colorful, life-time roof of Follansbee Terne Metal.

No other roofing material offers so much to architects, builders and home owners. Ideally suited for flat or low pitch roofs, Follansbee Terne Metal permits unusual variability in design. Equally good for traditional homes, it is permanent, economical, wind and fire proof ... which all adds up to *sales appeal!*

And builders aren't overlooking the pulling power of *color harmony* offered by Follansbee Terne Metal—the roofing which can be painted to conform to any exterior color scheme, any time.

More and more home buyers are asking about Follansbee Terne Metal Roofing. It will pay you to know the answers. Write for our booklet "Beautiful Lasting Roofs," as well as the bulletin "How to Paint Follansbee Terne Metal Roofs."

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## On and Off the Record

(Continued from page 50)

**BORAN**—He stepped out ahead of traditional design with a functional house. It stands alone on a plot of ground which can be developed with similar designs provided the exhibition house sells. Little doubt that it will.

**NHW**—If there is any doubt about the interest that people have in new houses, Minneapolis furnished the answer. National Home Week was ushered in with a pelting rain which began early in the morning. The downfall continued throughout the day and totalled two inches by nightfall. In spite of this more than 10,000 visitors waded through rain and mud to inspect the houses on exhibit. And there were sales, and prospects for future sales.

**STAIRWAY CUPBOARD**—Smart use of what ordinarily is waste space was worked out by Folke Victorson. In the sloped ceiling above the stair well to the basement he built a cupboard. By sacrificing just a little headroom above the second step down in order to make the cupboard accessible to an adult of normal height, he came up vertically from the sloping ceiling with a wall panel about 30 inches high, and the width of the stair well. A pair of side hinged doors with cupboard catches were installed.

**USE**—The cupboard extends back about two feet, and is designed for milk and other bottles. It can also be used for off-season work clothes, rubbers and galoshes. The back of the cupboard forms the upper part of the wall of an adjacent wardrobe.

**HEATING DUCTS**—In Chicago, Kimball Hill, well known home builder, worked out a system for warm air heating ducts which enable him to confine the entire system to one straight line contained between two floor joists. It's a neat arrangement, keeps all the ducts above the joist soffit, minimizes the amount of material used. The system is in a low-cost house (\$11,000) used as a demonstrator for National Home Week.

**ILLUSION OF SPACE**—It's amazing how much space a projecting fireplace appears to subtract from an effective area in a good size living room. Ed Blomgren, Northbrook, Ill. builder, demonstrated that truth in

(Continued on page 54)

# Brite-Lite AREAWALLS



## FOR GOOD SERVICE...

Your Brainard Supplier can give you fast, dependable service on Brite-Lite Areawalls. He has ample stocks, is backed up by the service-minded Brainard organization.

## FOR MAN-HOUR SAVINGS...

You'll cut labor costs with Brainard Brite-Lite Areawalls. One man can complete an installation in 15 minutes. Clear the space, attach to the wall, back fill, and the job is done. Contrast that with the man-hours used in constructing concrete wells.

Home-owners, too, like the features of Brite-Lite Areawalls. They are galvanized, rust-resisting, attractive, reflect welcome light into basements. Brite-Lite Areawalls last for years, undisturbed by frost or other conditions. Brite-Lite means lower first cost—and permanence. Consult your Brainard Supplier, or write for complete specifications.

BRITE-LITE  
Super Corrugated-Straight



BRITE-LITE  
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For low-cost housing...  
BRITE-LITE Standard



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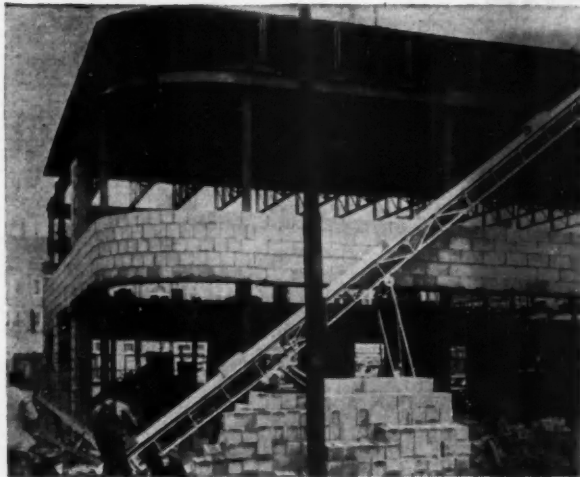
STEEL COMPANY

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16111 GRISWOLD STREET, WARREN, OHIO



## COST-CUTTING PORTABLE ELEVATOR AMAZES BUILDERS · CONTRACTORS



Biggest news in material handling for contractors and builders is portable MULKEY ELEVATOR. Custom built and tailored to the building trades . . . handles concrete blocks, bricks, mortar, sand, insulation, sacks, boxes, with ease. Strong as a bridge, yet one man . . . easily trailed up to 35 miles per hour. Has patent-design assembly. Basic length, 24 ft., 17½ ft. maximum lift, 8 ft. extension up to 40 ft., approximate maximum lift 28 ft. One contractor reports ELEVATOR keeps 10 men constantly supplied with brick and mortar for itself many times over." Write now for FREE LITERATURE

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**how to mix 12 to 15 yds.  
more concrete a day**

Gated hopper on the Jaeger 3½ S "Auto-Loader" can be loaded while previous batch is being mixed. Hopper automatically shakes load into drum in a flash. This time-saving feature means 12 to 15 yds. more concrete per day. Jaeger engineered for long life. Machined steel drum tracks ride on carwheel rollers. Automotive transmission. See Catalog M-10.

**THE JAEGER MACHINE COMPANY**

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**PUMPS • COMPRESSORS • HOISTS • PAVING EQUIPMENT**



3½ S Tilter  
Also 65, 115 and 165  
Power Loaders

### On and Off the Record

(Continued from page 52)

the demonstration house he used for National Home Week. With a sim-

# PA MIS

creased usable wall space. Usually this added wall space permits a wider choice of bed placement, and nearly always permits the use of added furniture in the bedroom. No view from the bedroom, of course, but often there isn't much of a view anyway.

**AMERICAN BUILDER**



# DON'T HEAT THE GROUND UNDER THE BUILDING!

**WHERE RADIANT HEATING** operates upward from an uninsulated **GROUND**

Heat Flow from Floor Radiant Heating Panel  
WITHOUT INSULATION

Room to be heated



— Floor Slab with Radiant Heating Panel

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aluminum ing panel, e saved for UCTION air spaces, 3%. There

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Type 4 C.065 R15.38 equals 6" DRY Rockwool  
Type 4 Jr.\* C.097 R10.30 equals 4 1/2" DRY Rockwool  
\*in 1" Space

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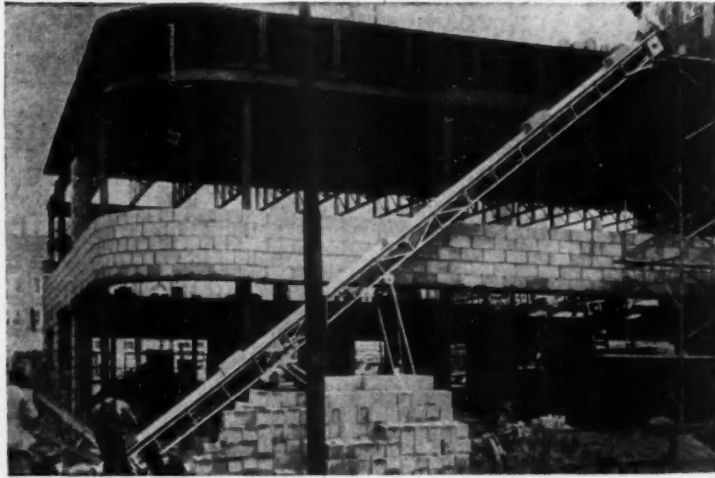
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Biggest news in material handling for contractors and builders is the new, low-cost, portable MULKEY ELEVATOR. Custom built and tailored to the requirements of the building trades . . . handles concrete blocks, bricks, mortar, sand, dirt, lumber, roofing, insulation, sacks, boxes, with ease. Strong as a bridge, yet one man handles and operates . . . easily trailed up to 35 miles per hour. Has patent-design clutch and brake assembly. Basic length, 24 ft., 17½ ft. maximum lift, 8 ft. extension available. Balanced up to 40 ft., approximate maximum lift 28 ft. One contractor reports . . . "my MULKEY ELEVATOR keeps 10 men constantly supplied with brick and mortar . . . it has paid for itself many times over." Write now for FREE LITERATURE AND PRICES!

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**how to mix 12 to 15 yds.  
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Gated hopper on the Jaeger 3½ S "Auto-Loader" can be loaded while previous batch is being mixed. Hopper automatically shakes load into drum in a flash. This time-saving feature means 12 to 15 yds. more concrete per day. Jaeger engineered for long life. Machined steel drum tracks ride on carwheel rollers. Automotive transmission. See Catalog M-10.



3½ S Tilter  
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## On and Off the Record

(Continued from page 52)

the demonstration house he used for National Home Week. With a simple, inexpensive trick he gives the illusion of much more space than there actually is.

**THE TRICK**—It isn't a new design wrinkle. It is done by building an open alcove about two feet deep and ten feet wide in one end of the room—the end containing the fireplace. In the center of the alcove wall is the fireplace. It is flanked by two windows, and there is a window in each end of the alcove. Not much added area, but since the fireplace does not project into the main rectangular area of the room it appears to add greatly to the usable space.

**FURNISHINGS**—Blomgren has a theory that a furnished demonstration house detracts from the house itself. Whether that is true or not, Blomgren believes it is. Maintains that he is showing building value, and not furniture. But—he also wants to suggest furnishings. To accomplish this he selects several drapery samples and mounts them at the side of the window that any housewife would want to drape.

**RESULT**—He finds that in this way he keeps principal attention focused on the house itself, but at the same time plants in the mind of the visitor a suggestion of what the room will look like when draped and carpeted. It's an idea deserving of close attention, especially by builders who share Blomgren's theory concerning furnishing a demonstration house.

**BEDROOM WINDOWS**—What about full-length double hung windows in one-story houses built close to the ground? Many builders believe their use in bedrooms is just a thoughtless carry-over of a practice that was standard when houses were perched on high foundations. For today's house, they favor top or bottom hinged or sliding single sash windows, installed at head or shoulder height, for assured privacy and a better feeling of security. Another advantage, especially in relatively small bedrooms, is the greatly increased usable wall space. Usually this added wall space permits a wider choice of bed placement, and nearly always permits the use of added furniture in the bedroom. No view from the bedroom, of course, but often there isn't much of a view anyway.

**AMERICAN BUILDER**

# DON'T HEAT THE GROUND UNDER THE BUILDING!

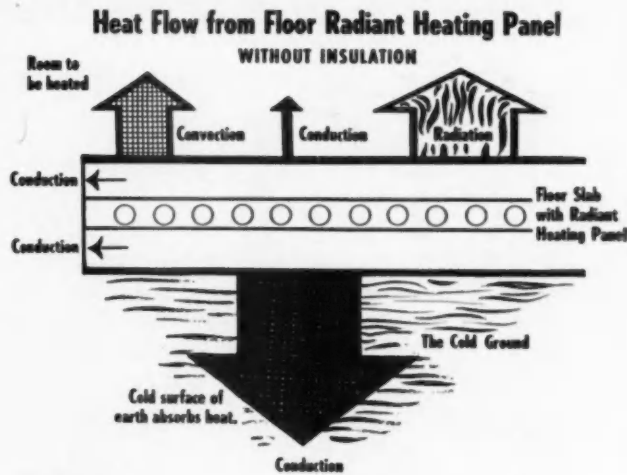
**WHERE RADIANT HEATING** operates upward from an uninsulated **GROUND FLOOR** the loss of heat downwards by straight conduction through solids is substantial.

Heat by conduction follows the law that warmth flows to cold, never the reverse; in any direction, down and sideways, as well as up.

Since the ground is colder and more massive than the space above the floor, there will be considerable flow of heat to the earth below as well as the floor above.

The GUIDE of the Amer. Society of Heating and Ventilating Engineers says, "When the heating pipes are imbedded in a concrete floor slab a portion of the heat emitted by the pipes will flow upward into the space to be heated, and the remainder will flow downward into the ground."

"When the heating pipes are placed below the concrete floor slab instead of being imbedded in the slab, a larger portion of the heat will flow into the ground, and a smaller portion into the space to be heated."



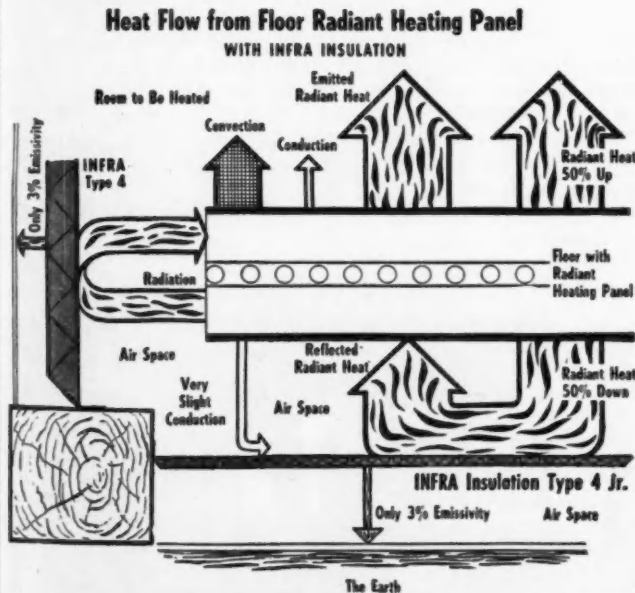
COLD AREA

The National Research Council of Canada recently conducted numerous tests and found that without insulation under ground floor radiant panels, heat flow *into* the earth was preponderant; in considerable amounts to 6 ft. underground, and extending in lesser amounts to 12 ft.

By installing multiple accordion aluminum with assured air spaces, under the heating panel, MOST of the dissipated heat would be saved for radiant heating, because 95% of CONDUCTION to the earth would be stopped by the air spaces, and RADIATION loss would be only 3%. There is NO CONVECTION downwards.

Six-space and 4 space multiple accordion aluminum have C factors for downheat flow of .044 and .065 respectively, equal to 9" and 6" laboratory dry rockwool. They are non-condensation forming, of zero vapor permeability.

Insulation in relation to radiant heating, with a new technique for floor slabs, is one of the topics covered in Infra's "Simplified Physics of Vapor and Thermal Insulation," a complete and concise manual mailed free on request.



**INFRA THERMAL FACTORS, DOWNHEAT FLOW**  
 Type 6 C.044 R22.72 equals 9" DRY Rockwool  
 Type 4 C.065 R15.38 equals 6" DRY Rockwool  
 Type 4 Jr.\* C.097 R10.30 equals 4 1/3" DRY Rockwool  
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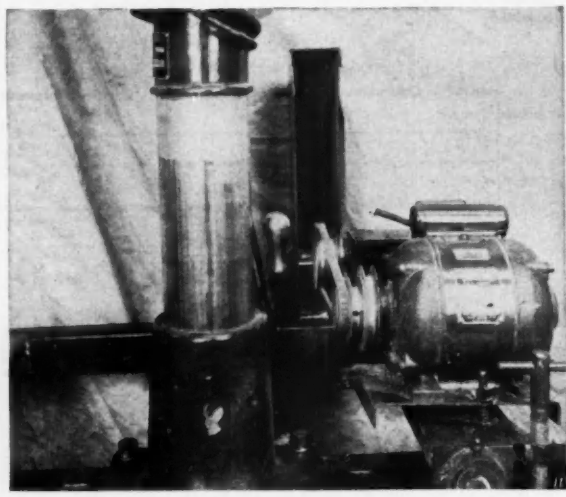
Send Prices of Infra Insulations  Send Sample

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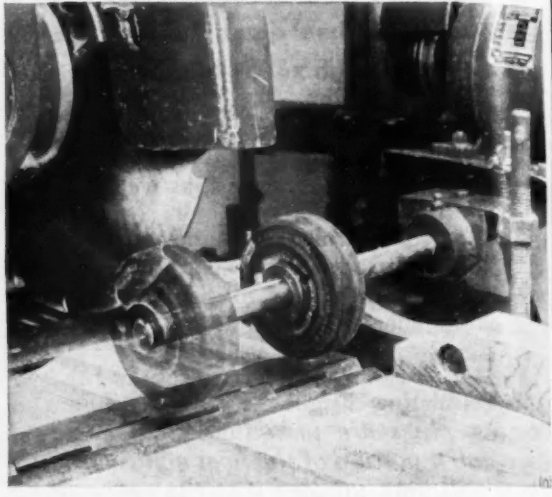
# TECHNICAL GUIDE for Builders and Craftsmen

## How To Use Power Feed On Radial Arm Saw

(Continued from page 58)



**THREE-SPEED** pulley controls the rate of speed of the safety power feed



**THE DRIVE WHEELS** can be adjusted to any width. The wheels are locked in operating position with a set screw

ploughing. Moulding is easily run on radial arm saws equipped with this safety power feed.

Safety is another valuable feature of this unit, and its safety value is highlighted by the fact that it practically eliminates kickback. For example, the operator cannot feed material from the wrong side of the saw and have it kicked back at him. The off-feed drive wheel constantly and effectively works against the efforts of an operator forgetfully trying to feed material from the wrong side.

Kickback hazards are eliminated in another important way. The operator is never working where material might be thrown or "kicked." He merely feeds material to the in-feed roller of the unit, and the unit does the rest. The unit moves the material to the cutting tool, it holds the material snugly in position, and it removes the material when the operations have been completed. The operator

does not approach any danger points during the entire operation.

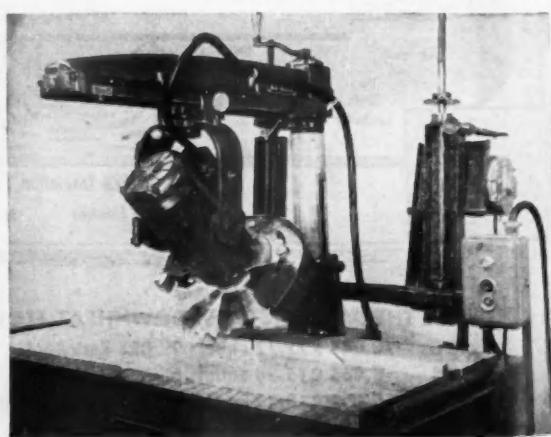
Another point to remember is the fact that the drive wheels of the safety power feed unit are constantly working against possible kickback. Likewise, the constant feed of the unit eliminates any possibility of a pause that will permit the saw blade to grasp material and throw it.

The shafts of the safety power feed unit are "toed" slightly so that material is held firmly against the back guide during all operations. Therefore, there is no possibility that the material will waver or flutter during any operation.

An added attraction of the safety power feed unit is the fact that it can be moved out of the way when necessary. The shafts are merely swung up and back when, for example, the radial arm saw is used for cross cutting.



**EXAMPLE** of the tongue and groove that can be run on a radial arm saw equipped with a safety power feed



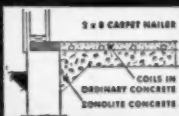
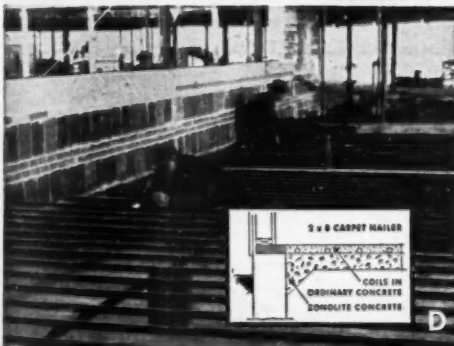
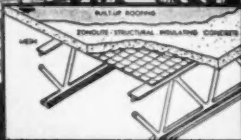
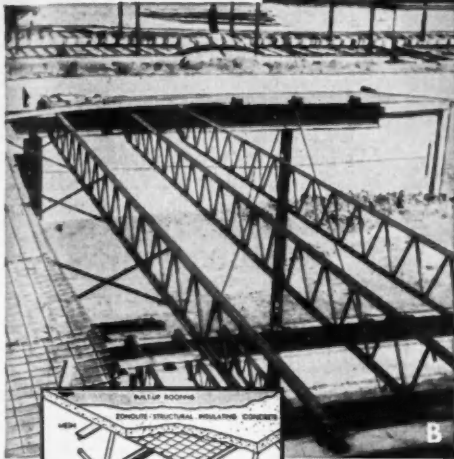
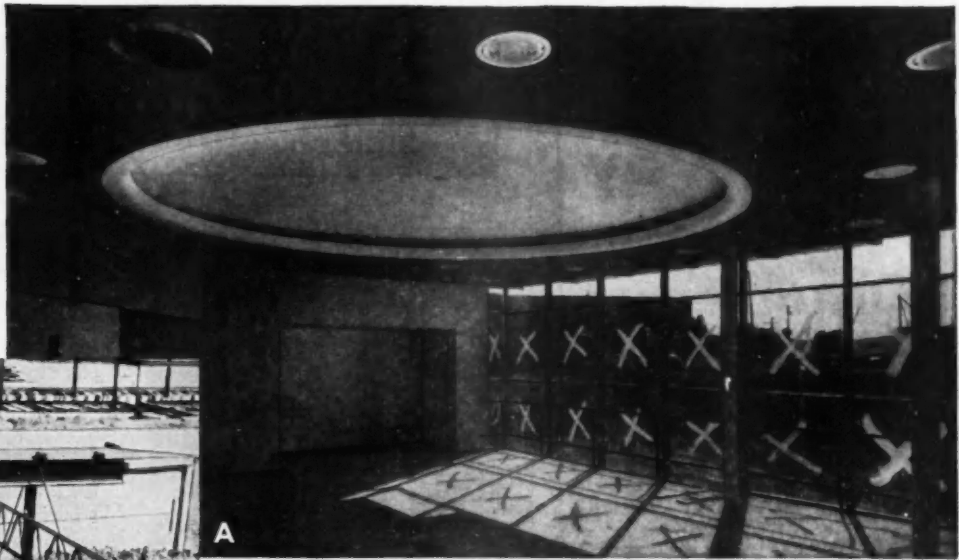
**THE SHAFTS** of the safety power feed can be easily swung up and out of the way when not needed

Illustrations and data courtesy DeWalt, Inc.



## LOWEST COST SOUND CONDITIONING

Right: Library ceiling shows typical use of Zonolite Acoustical Plastic. Frequently, low cost and ease of application over irregular surfaces permit use where other acoustical treatments would be prohibitive.



# IT "COULDN'T BE BUILT"

*But they did it with*

# ZONOLITE\*

## VERMICULITE AGGREGATES!

The new Senile Ward Building—Eastern State Hospital, Medical Lake, Wash.—illustrates graphically how Zonolite vermiculite aggregates are used in plaster and concrete to eliminate dead weight. They permit construction of class-A buildings at great savings over conventional materials. Many observers declare that the Medical Lake job could not have been built without lightweight aggregates.

Where Zonolite plaster was used in lieu of conventional materials for suspended ceilings, for 2" solid partitions and for fireproofing beams, up to 66% of the dead weight was eliminated. Zonolite concrete used throughout for lightweight roof and floor slabs weighed only 20% as much as conventional concrete applications.

This wholesale elimination of dead weight made practical the use of much lighter structural steel members. By reducing weight in these 3 ways, further drastic reductions in time and costs were made possible.

But why not get the whole story? Mail the coupon below for a detailed story about the Medical Lake job and complete reference material on the use of Zonolite Vermiculite Aggregates.

**WEIGHT COSTS MONEY—  
ZONOLITE REDUCES WEIGHT**

### CONSTRUCTION DETAILS

- A** Zonolite Acoustical Plastic used on library ceiling.
- B** Paper-backed, welded wire mesh for Zonolite concrete roof slabs.
- C** Applying metal lath for fireproofing girders with Zonolite Plaster.
- D** Installing radiant heating pipes over Zonolite concrete floors.
- E** Zonolite Plaster 2" solid partitions—first side.



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Please mail me detailed reference material on use of Zonolite Vermiculite Aggregates in plaster and concrete.

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# This is the New Way To Buy Ornamental Iron

## 1. CHECK YOUR PLANS

Go over the blueprints with your contractor. Decide where you want porch posts, railing, grilles. Your blueprint tells you the size.

## 2. SELECT THE DESIGN

Your building supplies dealer will show you designs in stock, or you can choose from his catalog.

## 3. PHONE YOUR ORDER

If you have catalog AB you can phone stock numbers and sizes. Immediate delivery if you need it.

## 4. INSTALL EASILY

Modern design enables semi-skilled labor to install Coffman's easily and quickly, with beautiful effect.

**NO PORCH POST**  
is easier  
to install than  
**Coffman's #150**  
(universal height)

One stock size of this sturdy post fits all height requirements, from 6'10 1/4" to 8'0". Just saw off the legs to fit, on the job. Flat \$21.78; Corner \$35.70, FOB Factory.

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Supply dealers  
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**The R. G. Coffman Co.**  
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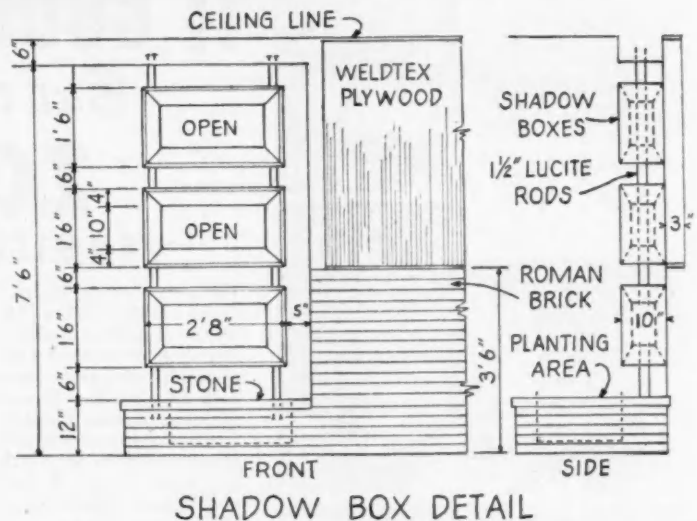
# TECHNICAL GUIDE for Builders and Craftsmen



## Shadow and Planting Box a Between Room Feature

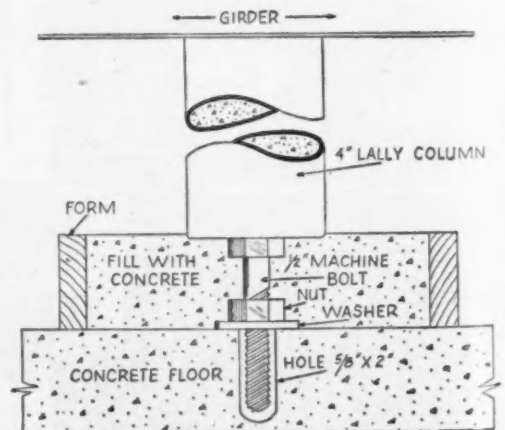
Plenty of color can be introduced into a room through the use of this feature unit. The shadow box and planting area shown in drawing and photo provide space for the display of knickknacks and a concentration of planting where it will be effective.

Planting area is built up of Roman brick with a stone cap and lined with a metal pan. Wood shadow boxes are secured in place by Lucite rods imbedded in beam above and stone coping below.



## How to Hold Lally Column in Place While Pouring Concrete

To install and hold lally column in place while pouring concrete in a basement repair job proceed as follows. Drill 5/8x2 inch hole in concrete floor in center of location for column. Slip a 1/2 inch bolt of suitable length through washer into hole. Set lally column on top of bolt and tighten up nut until column is set in place. Set forms for concrete base and pour.—Hans Christiansen, Bernardsville, N.Y.



from the makers of famous FIRE-CHEX asbestos-plastic shingles

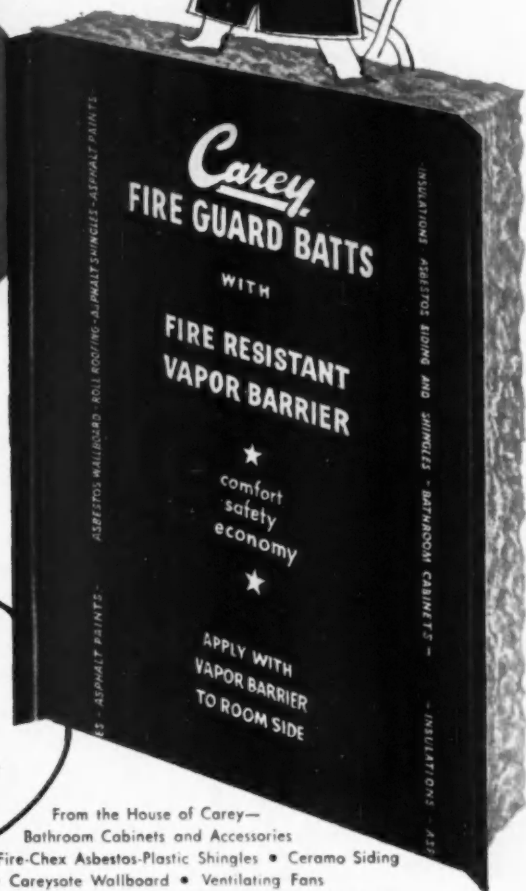


# Fire-Guard

## ROCK WOOL BATTS

with exclusive  
**FIRE-RESISTANT**  
vapor barrier!

the only  
**ROCK WOOL BATT**  
that provides  
*Complete FIRE SAFETY!*



- From the House of Carey—  
Bathroom Cabinets and Accessories
- Fire-Chex Asbestos-Plastic Shingles • Ceramo Siding
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  - Other Famous Products for Home, Farm and Industry

Let's talk facts—a rock wool batt is only as fire-safe as its vapor barrier! That's why safety-minded architects and builders like Carey Fire-Guard... the only building insulation of any kind with fire-resistant vapor barrier, approved by Underwriters' Laboratories, Inc.! Besides the exclusive advantage of a vapor barrier that fights fire—that doesn't feed it—Carey Fire-Guard rock wool batts offer these other extra values: greater resilience—uniform thickness—strong, firmly-felted con-

struction—flanged vapor barrier for rapid tacking or stapling—sizes to fit standard framing members—moisture and vermin resistance.

You can't afford to overlook this new, safest-of-all insulation in your plans. It's the low cost way to build-in year round comfort without sacrificing fire-safety. Get all the facts today. Ask your Carey dealer or mail the coupon for your sample.

PROMOTE SAFETY—WITH CAREY FIRE-GUARD Rock Wool Batts

# Carey

The Philip Carey Mfg. Co.  
Lockland, Cincinnati 15, Ohio  
In Canada: The Philip Carey Co., Ltd.  
277 Duke Street, Montreal 3, P. Q.

The Philip Carey Mfg. Company  
Dept. AB-11, Cincinnati 15, Ohio

Please send me a sample of Carey Fire-Guard.

Name \_\_\_\_\_

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**Ponderosa Pine...** "The Pick o' the Pines!" This is the most popular, most plentiful, multi-purpose soft wood. Versatile! Beautiful! Enduring! A superior material for almost every building use from framing lumber to finest millwork.

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Idaho White Pine, Ponderosa Pine, Sugar Pine

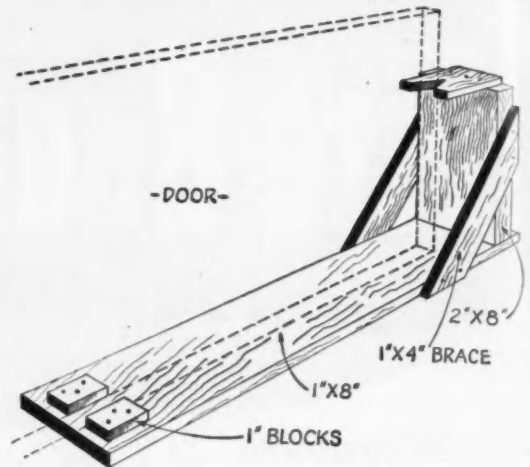
**THESE ARE THE ASSOCIATED WOODS**

Larch, Douglas Fir, White Fir, Engelmann Spruce, Incense Cedar, Red Cedar, Lodgepole Pine.

**WOODS FROM THE WESTERN PINE REGION**

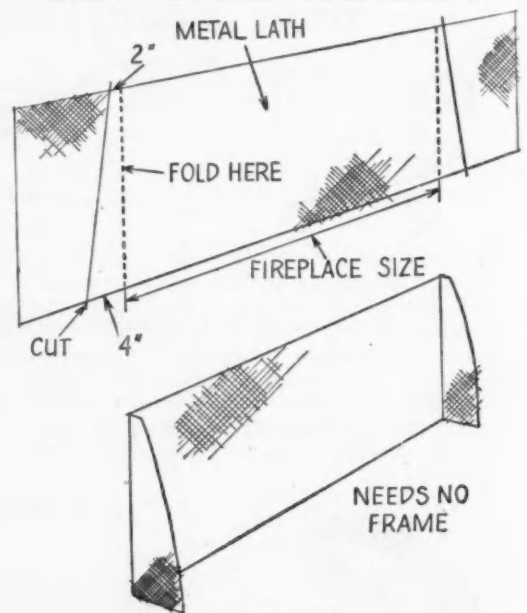


## How would YOU do it? Ideas for the man on the job



### Jig Holds Door for Edge Planing

This simple jig holds door securely for edge planing. A 1x8 inch, 7 feet long is used for the base with a 2x8 for the upright member. The two are held together at right angles as shown with two 1x4's to form braces. A short piece of 1x6 is nailed to the top of 2x8. A tapered V-cut is made in this piece. The door is slipped in position on the jig and held in this cut.—Herbert E. Fey, New Braunfels, Texas.



### How to Make a Fireplace Screen

A fireplace screen that does not require a frame, and one that can be made quickly and easily, does a good job of holding back flying sparks.

To make the screen, measure the fireplace opening. Then add four inches on each side to the over-all length. Taper the cut to two inches at the top on each side. Cut and fold and a ready made screen is the result.—O. S. Johnson, Spokane, Wash.





**"Our DELTA Radial Arm Saw has worked  
6 hours a day for 5 years—MACHINE COST  
ONLY 29 CENTS AN HOUR"**

**THE HUNKIN-CONKEY CONSTRUCTION Co., CLEVELAND, OHIO**

**"IDEAL FOR CUTTING FIRING STRIPS, STAIR RUNNERS, TRIM, JAMBS,  
CASEMENTS, CONCRETE FORMS AND OTHER ITEMS."**

Both small and large building firms are realizing big savings by installing Delta radial arm saws *at the job*—speeding the work, eliminating handling and hauling operations.

"This saw turns out the cross-cut work of 6 men with hand-saws—and will out-rip 10 men," says the superintendent of Hunkin-Conkey's Nottingham Filtration project.

"Six carloads of plywood for concrete forms have been cut at the rate of 1000 pieces per day. Our operator cuts 22

wedges a minute, largely from 2 x 4 waste. Templates for repetitive work save much time.

"In addition to saving an enormous amount of time, our Delta saws—we have seven of them—save men's backs. Our operators are proud of their output and of the saws that make it possible."

You, too, can cut costs, increase profits, by installing Delta tools *at the job*. More and more builders are doing it—small concerns and big ones. Talk it over with the Delta dealer

**Total Operating Cost \$3 an Hour**

Based on 6 hours operation per day or 1500 hours a year, the Delta radial saw on the Nottingham project shows operating costs as follows:

	Per Year	Per Hour
Depreciation 10% and average interest at 2%	\$75.00	.05
Maintenance and repair allowance (average of 7 saws)	30.00	.02
Saw blade depreciation	36.00	.024
Saw sharpening, 3 16" blades a week	150.00	.10
Power cost, 7½ hp motor		.10
Machine cost per hour (1500-hour year)		.294
Labor		2.70
Total operating cost per hour		2.994

Cost of the saw itself is only 10% of the total hourly cost, or only 1/9 of the cost of the operator.

**There's a Delta Power Tool for Your Job—**

WOOD OR METAL WORKING

53 Machines—246 Models—More Than 1300 Accessories

For Delta dealers, see your Classified Phone Directory under "Tools", or write for their names.

Write for new idea book filled with ways to cut building costs using this saw.

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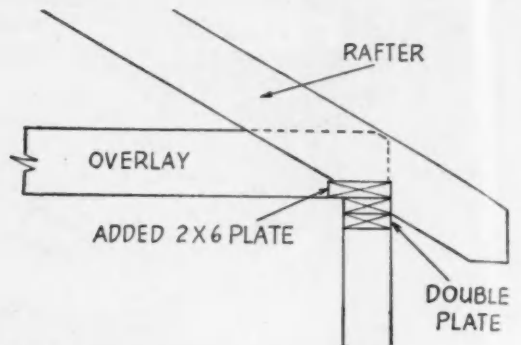
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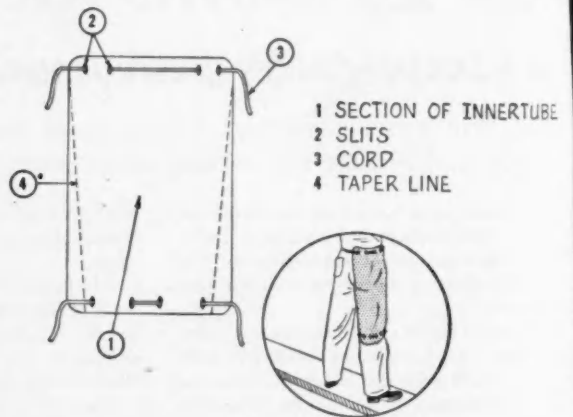
## How would YOU do it? Ideas for the man on the job



### How to Provide a Nailer for Dry Wall Construction

One of the problems in connection with dry wall construction is to provide a nailer around the perimeter of room at ceiling line.

To simplify this operation three plates are installed on top of the studs, the top plate being a 2x6 member. All rafters are notched an extra  $1\frac{3}{4}$  inch to compensate for the extra plate. The overlays must also be notched  $1\frac{3}{4}$  inch. The extra framing involved is nothing compared to cutting in headers which must otherwise be done to obtain a good job. The rafters and overlays topping the 2x6 plate make an exceptionally strong nailer.—Clifford Mallory, Oswego, N.Y.



### Inner Tube Saves Pants

When laying sand-coated composition shingles on roof the pant legs wear out quickly. Damage and embarrassment can be avoided with the aid of an old inner tube.

Cut a section from the inner tube (1) of size to cover the hip and leg. This may be tapered as at (4) to a smaller width at bottom which does not need to be as wide as the top or hip side. Cut slits (2) at intervals near the top and bottom of the inner tube (1). Thru these slits (2) weave a cord (3), the top one to be long enough to tie around the waist, and the bottom around the leg below the knee.—Warren W. Howe, Longview, Wash.



**MENDEL**  
**MAHOGANY**  
*Flush* **DOORS**

add Greatly to House Values-

**YET COST LESS THAN MANY DOMESTIC WOODS!**

Everyone knows the sales magic of "Mahogany". The very *word* means extra luxury, extra quality, extra value. . . .

Now Mengel offers you *Mahogany* Flush Doors at remarkable savings.

**You can equip any building with these beautiful African Mahogany doors for less than comparable doors faced with many domestic woods!**

Why? Because The Mengel Company operates its own logging concession and mill in the best Mahogany section of Africa, and imports this King of Woods in tremendous volume. Then Mengel manufactures its famous doors in two of America's greatest factories, geared to the mass production of highest-quality doors.

Choose Mengel Mahogany Doors and you get doors of unbelievable beauty. In both Hollow-

Core and Solid-Core types, they are the *greatest door values in America!*

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THE MENDEL COMPANY  
 Plywood Division, Louisville 1, Ky.

Gentlemen: Please send me full information on Mengel Mahogany Flush Doors—Hollow Core and Stabilized Solid Core.

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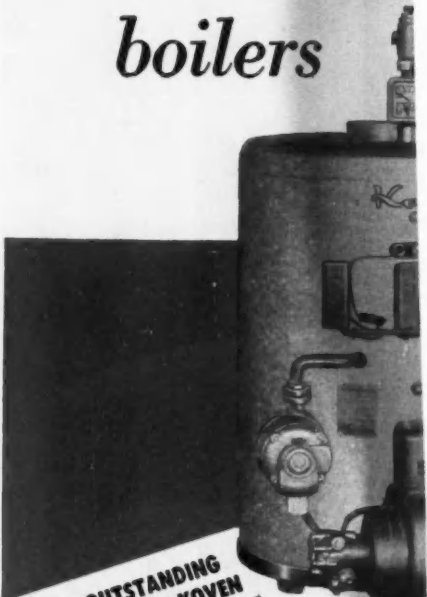
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for  
*Small Home*  
installation...

*Koven*  
**venko**  
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scientifically  
designed for  
economy and  
efficiency

**How would YOU do it?**  
Ideas for the man on the job



**OTHER OUTSTANDING  
FEATURES OF THE KOVEN  
VENKO PACKAGED UNIT**

- Beautifully finished.
- Tested controls especially selected to give quick response to calls for heat and domestic hot water.
- Completely assembled, equipped and wired, ready to connect to system and operate.
- Built for utility rooms with all control and operating parts available at the front of boiler.

Wherever and more small homes  
over the country, are used in fact  
specially designed and best suited to  
homes...and that, of course, means  
You can assure your customer of  
efficiency and economy when you recommend  
Boiler.  
Not only does the small home owner  
sustained heat needed to keep his home  
but lower fuel consumption in this unit  
savings as well. Recommend KOVEN  
customers today!

**WATERFILM BOILERS, Inc.**  
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Plants: Jersey City, N. J. • Dover, N. J.

**PAC**  
**MISS**

When a large number of hangers are to be secured to screens, a cardboard template is made. Two small holes are made through template where hanger is to be located. Mark off holes on frame through template with ice pick or similar tool. By this method all hangers will be fastened in their proper place.—H. E. Fey, New Braunfels, Texas.

**AMERICAN BUILDER**



# AGES SSING



"TH" THAT SELLS  
ULATION

sition to offer all these  
tt today. Your Barrett  
you full information,  
tive sales-building and  
is available.

BARRETT Rock Wool is made from carefully selected slags which are tested to assure a cleaner, lighter, more resilient wool.

But *no* extras on the price—for BARRETT Rock Wool is priced right for the average home owner.



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

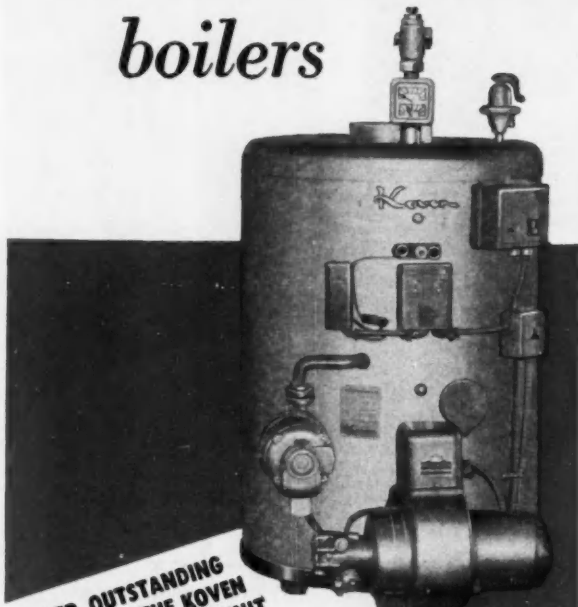
**THE BARRETT DIVISION**  
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for  
*Small Home*  
installation...

scientifically  
designed for  
economy and  
satisfaction

# Koven venko boilers



**OTHER OUTSTANDING  
FEATURES OF THE KOVEN  
VENKO PACKAGED UNIT**

- Beautifully finished.
- Tested controls especially selected to give quick response to calls for heat and domestic hot water.
- Completely assembled, equipped and wired, ready to connect to system and operate.
- Built for utility rooms with all control and operating parts available at the front of boiler.



Whether and more small home projects being built all over the country, you want to feature the boiler that's especially designed and best suited to the needs of smaller homes. And that, of course, means the KOVEN Venko Boiler! You can assure your tenants of greater comfort, convenience and economy when you recommend a KOVEN Venko Boiler.

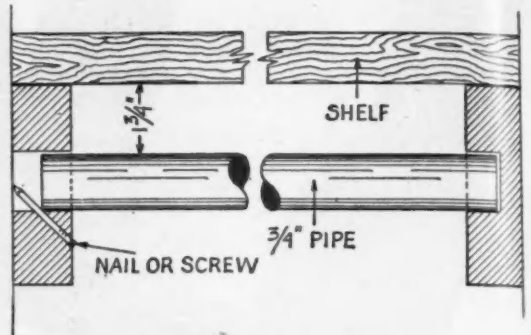
Not only does the small home owner receive all the rapid, sustained heat needed to keep his whole house comfortable, but lower fuel consumption in this smaller unit means greater savings as well! Recommend KOVEN Venko Boilers to your customers today!

**WATERFILM BOILERS, Inc.**

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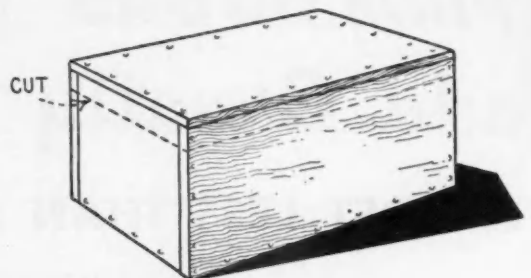
**How would YOU do it?**  
Ideas for the man on the job



**Installing Closet Clothes Pole**

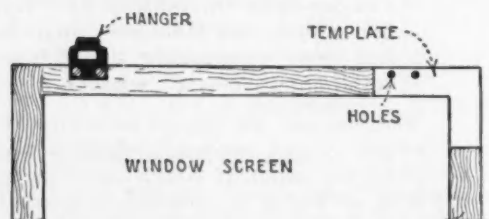
When installing 3/4-inch iron clothes rod, bore a hole the entire depth of clothes bar on one side, and 1/2 the depth of bar on the other side. The length of bar should be the distance from wall minus the thickness of one hook rail.

Insert bar into rail. Then place nail or screw at an angle into hook rail as shown in sketch, so that it just misses the end of bar, thus securing it into position. The distance from top of rod to underside of shelf should not be less than 1 3/4 inches.—Myron G. Miller, So. Williamsport, Pa.



**How To Make a Box Lid**

When making a box with a lid, nail the box together and then cut top off the box to form the lid as shown in sketch.—Myron G. Miller, So. Williamsport, Pa.



**Fastening Screen Hangers Quickly**

When a large number of hangers are to be secured to screens, a cardboard template is made. Two small holes are made through template where hanger is to be located. Mark off holes on frame through template with ice pick or similar tool. By this method all hangers will be fastened in their proper place.—H. E. Fey, New Braunfels, Texas.

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IT'S "EXTRA-BIG MONEY'S WORTH" THAT SELLS

# BARRETT\* ROCK WOOL INSULATION

*Extra* big money's worth in *every* feature!

*Extra* easy to apply, for Barrett\* Rock Wool comes in 8-foot batts, with seamless, vapor-barrier, ceiling-to-floor protection. *Extra* strong fastenings because of its triple-thick nailing flange. *Extra* insulating efficiency because BARRETT Rock Wool is made from carefully selected slags which are tested to assure a cleaner, lighter, more resilient wool.

But *no* extras on the price—for BARRETT Rock Wool is priced right for the average home owner.

To place yourself in position to offer all these *extra* values, write Barrett today. Your Barrett representative will give you full information, and show you the attractive sales-building and promotion material that is available.



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# "Ask The Experts"

Got a problem you haven't solved? Can't solve? Haven't the time to solve?

Have you solved a problem with an answer you aren't sure of?

Are you doing some particular job—big or little—in a way that you think might be improved?

Then "ASK THE EXPERTS"—a group of industry authorities—experts in their fields. They'll give you the answer.

Address your questions to: "Ask The Experts," *American Builder*, 79 West Monroe St., Chicago 3, Ill.

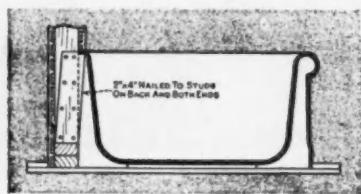
As many questions and answers as space permits will be published monthly in *American Builder*, under the head—"Ask The Experts."

## Prevent Bathtub Slipping

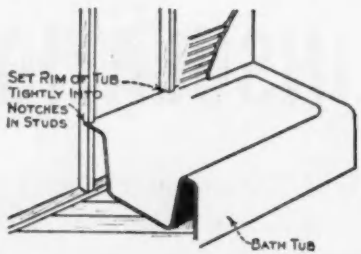
Recently I have noticed bathtubs pulling away from tiled walls. This is difficult to fill and makes a poor looking job. Can you tell me how to correct it in future building.

E. T. Y.  
Detroit, Mich.

Bathtubs pulling away from wall surfaces, either tile or plaster, is due to the tub settling. Manufactured



TWO-BY-FOURS are set at an angle to support bathtub and prevent sagging or cracking



HOW THE TUB is notched into the wall to prevent settling

supports are made to keep the tub in place. There are, however, two simple methods used on the job—2x4 brace supports or stud notching. The brace support is best as the full rim of the tub is left exposed. These 2x4 braces are placed with the end firm against the tub then are spiked to each stud in back and on both ends,

## Basementless Construction

Will you kindly try to supply an old subscriber with a little information? Where can we secure the best information concerning construction of unexcavated or basementless houses? We are interested especially in construction of the main floor, methods of heating and insulation.

E. H. M.  
Hershey, Pa.

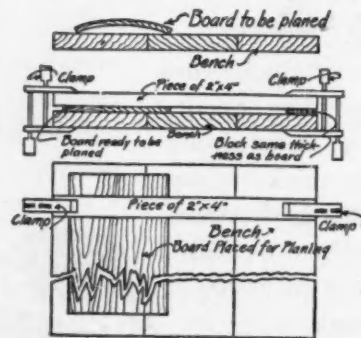
The University of Illinois has done much research in slab perimeter heating using a counter flow warm air system. Information can be secured from Mr. John Lendrum, Small Homes Council, University of Illinois, Urbana, Ill.

## Planing Warped Boards

I have accumulated a supply of warped boards around 10 inches in width. Can you tell me of a method to plane and sand the edges of this lumber?

D. P. M.  
Dallas, Texas

A method of planing the edges of warped boards is to place the board



WARPED BOARDS can be planed and sanded by this clamping method

on a solid work bench with the end extending over the side and clamp a piece of 2x4 across the end or middle. The clamped 2x4 should be placed close to the part to be planed. A piece of wood the same thickness as the material to be worked is to be placed at the other end of the clamp under the 2x4. This assures the board will be pressed flat.

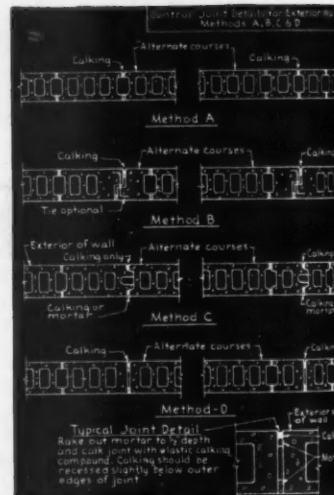
For working the edge of the length of the board place the 2x4 down the center and clamp to the bench.

## Expansion Control For Long Span Concrete Block Walls

A few years ago I built a long span concrete block wall. Last winter the wall cracked. I would like to know how block can be used so that cracking will not take place.

J. P. C.  
Seattle, Wash.

Information received from the National Concrete Masonry Association shows that control joints in masonry block walls should be placed about



CONTROL JOINT details for relieving stresses in concrete block long span walls

every 20 feet and not more than 5 feet apart. The control joint should also be incorporated into interior walls and partitions when the length exceeds 20 feet in heated buildings and 40 feet in unheated buildings.

Control joints in straight walls are either straight or staggered. Half size blocks are used in the straight joint. The mason should lay the wall

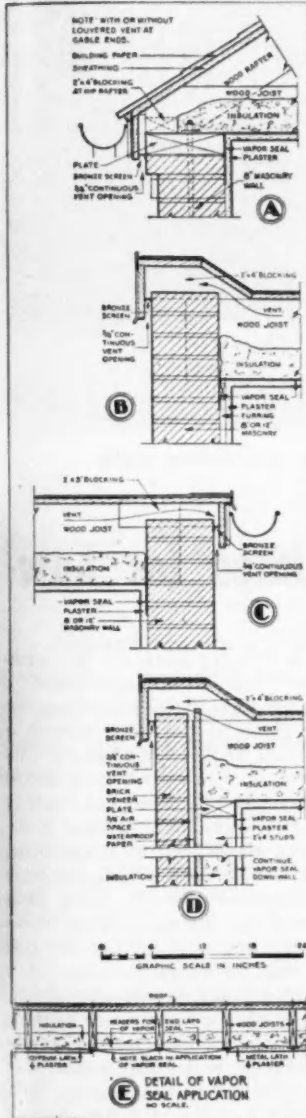


the usual manner, raking out the mortar in the control joint at least  $\frac{1}{2}$  inch. After the wall is finished, this joint is caulked with an elastic compound.

### To Ventilate Insulated Roofs

Could you please tell me how I can ventilate insulated roofs without using louvers or roof ventilators.

J.M.C.  
Milwaukee, Wis.



Though wood and metal louvers are predominantly used for ventilating, other methods give fine results. Continuous openings in the soffits, combined with non-corrosive screening, is one of the best. One rule of thumb is to make openings at each

### Knotty Pine Corner Construction

I have had trouble with knotty pine corners opening after the wood shrinks. I do not want to place wood moulding or quarter round on new installations. What can be done?

B. W.  
Chicago, Ill.

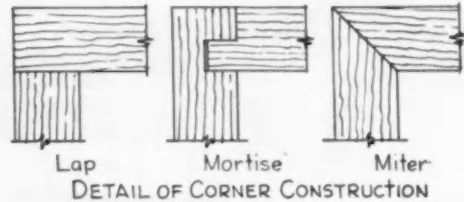
Shrinkage sometimes occurs in kiln dried lumber that has become

wet on the job. Knotty pine or any other lumber should not be stored near drying plaster.

Shrinkage will be held to a minimum if the smallest widths are used at the corners.

Butt corners will be satisfactory if the above advice is used. The rabbeted corners are best because shrinkage will not leave an opening. The bevel corner is the least satisfactory.

DETAILS of corner construction for knotty pine show butt, rabbeted, and bevel types. These methods can be used with any wood paneling



end of the roof with area equal to at least  $\frac{1}{4}$  square inch for every square foot of horizontal ceiling area.

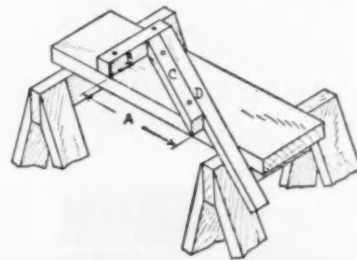
Vapor barriers must not be overlooked as guards against moisture condensation. See Page 94, Sept. 1950, *American Builder*.

### Save Time in Cutting Bridging

We have been spending a lot of time cutting floor bridging. Can you suggest a method that will speed up this process.

E. D.  
Indianapolis, Ind.

A portable rig for cutting bridging accurately can be made. The form can be used to mark every piece



A FORM for cutting bridging that will save time

quickly. However your floor joists must be the same distance apart.

Take a board 4 feet long of the same stock as the floor joist and mark, with a square, the distance between the joists. The distance is usually  $14\frac{1}{2}$  inches but measure it to be certain (A). Next nail a block with the right edge on the line (B). Then lay a piece diagonally between the two lines (C). The bridging can be sized by placing against board B and marked at same length as C. The unit can be rested on two saw horses.

### Saving An Old Shingle Roof

I have been asked to save, or extend the life of, a large roof of wood shingles, which shows its age though there are no leaks yet. The best that I can think of is to staple through the center of each butt and into the sheathing, using an ordinary staple hammer. The staples would be cold-galvanized wire.

Would this add materially to the life of the roof or would it do more harm than good? Would the same procedure be good on asphalt shingles?

W. J. F.  
Toronto, Canada.

Stapling old wood shingles would do more harm than good. You will find two things might occur. First the staple hammer or any fastening method will crack the shingle. This is true if the material is old and in a badly warped condition.

Secondly, any exposed hole will invite leakage.

But if the roof is not in a bad condition and stapling will not crack the shingle, you might try your method. For best results tar the staple after it is applied.

The same applies for asphalt shingles.

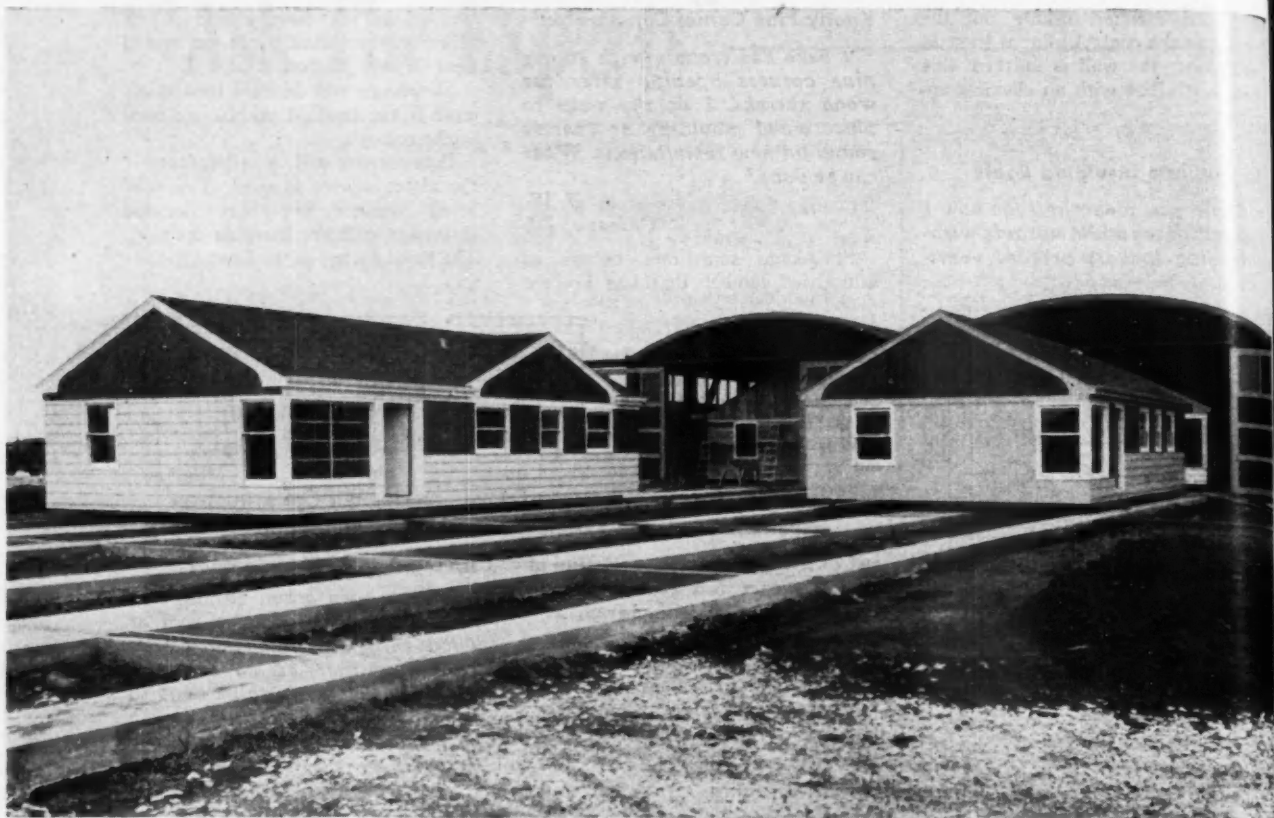
### IN THIS ISSUE

The first of a series of exclusive articles on

### MODULAR CO-ORDINATION IN CONSTRUCTION

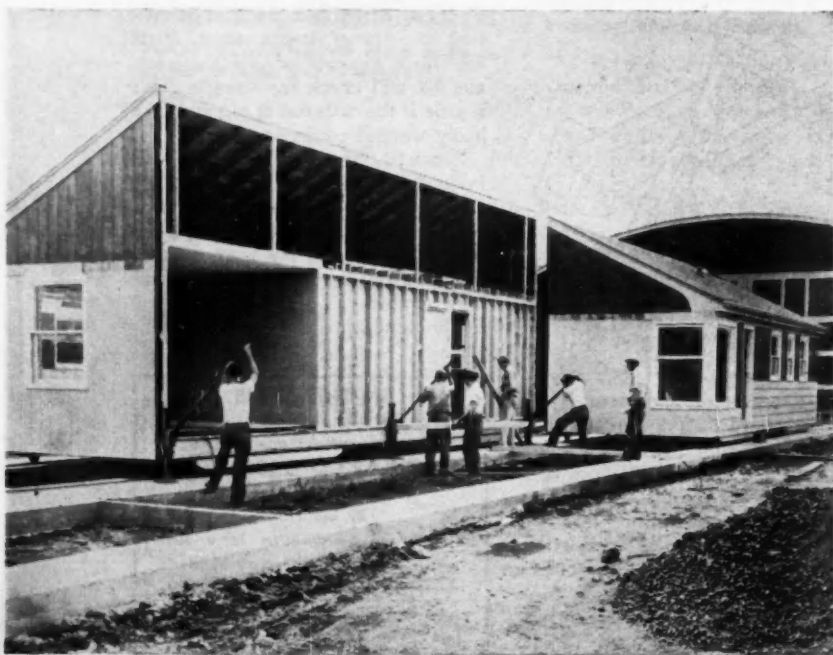
By Lee Frankl

"Modular co-ordination is a tool which can make the small builder's operation more efficient, more profitable and increase his yearly production," Mr. Frankl states in this month's article which begins on Page 14-A.



HOUSES roll out of factory for completion of interiors. They are built in halves for ease in transporting to site

## Building Under Cover Achieves Economies for Low-



HERE completed halves of house are readied for loading on trailer

ON a six-acre tract, on the northwest rim of Chicago, stands a large structure which might pass for an airplane hangar. But instead of planes, out of its huge doors roll carpenter-built 5½-room houses, 24x40 feet, completely finished and ready to go to the buyer's lot. Available in five different elevations, they are being sold at the plant for \$9,800, and have been developed by the Best Built Company of Chicago, a firm which has been operating in the low-cost house field for 40 years.

When standing on long cement runways outside the factory, one of these cleverly built houses looks like any conventional unit. The house was constructed inside the factory, both units side by side, to assure perfect alignment when they are finally erected. All exterior construction is completed and painted inside the factory building. The house is then moved to the outside runways where the interior is finished. The house, separated in two equal halves, the long way, is taxied by truck trailer to the site. The half units are 12x40



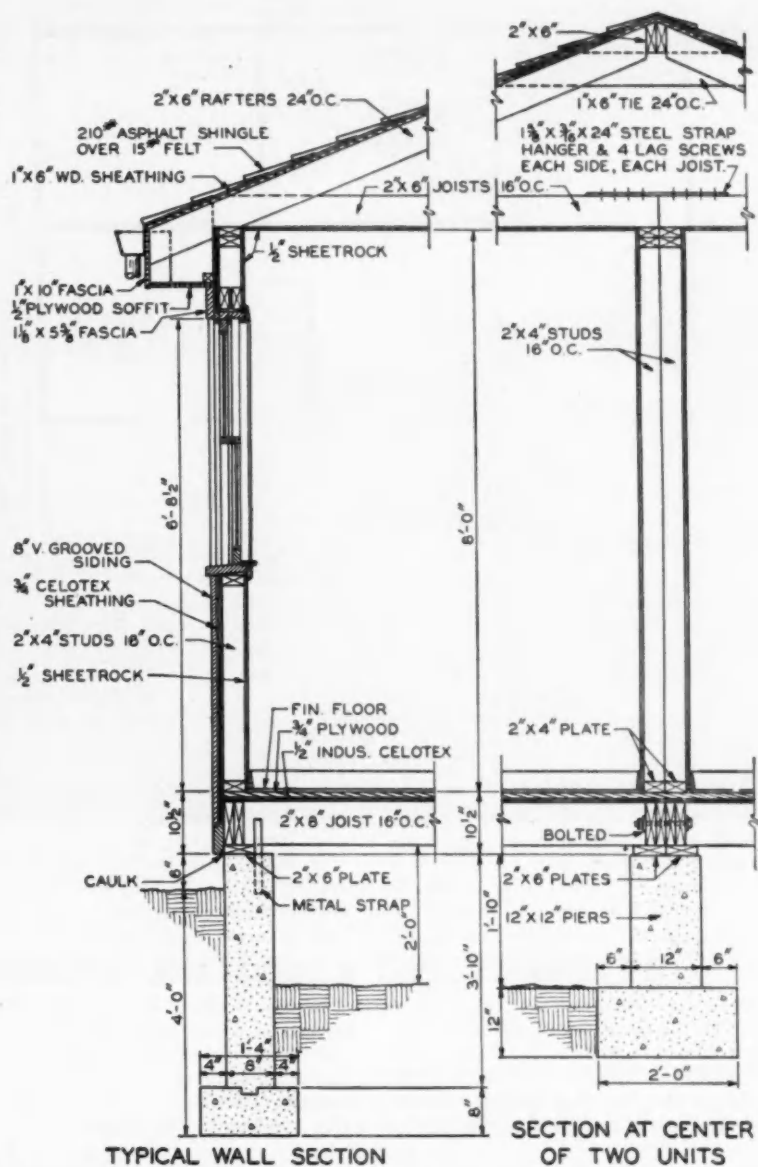
## Priced Market

Chicago company utilizes a modified assembly-line for building conventional houses indoors and delivering them to the site

feet long thus complying with traffic regulations. It takes only a day's work at the site to join the two halves permanently on the foundation.

The secret of the Best Built construction system is the double bearing partition down the long axis. Here two stud walls are made resulting in one 8-inch partition. All members—joists, beams, rafters—are tied to this partition. Each unit then is a complete structural half, ready to move.

On the site completion of the house is accomplished by first aligning the two halves on the foundation. Four fastening operations permanently secure the halves of the structure. (1) The ridge is fastened by nailing a collar beam to each



WALL SECTION shows construction details and procedure for assembly of the two halves

rafter. (2) Lag screws and steel strapping tie the ceiling joists together. The strap is 1 1/2 x 3/8 inches, 24 inches long. Four lag screws are placed into each joist. (3) The floor level of the house is secured by bolting together the four 2x8-inch members that are located under the double stud bearing partition.

Each section is completed at the factory and only minor finishing operations are needed to complete the house. Gable trim is nailed on, living room wallboard corner and joints are sealed, electrical connections made, heating ducts fastened together, water lines connected, minor asphalt tile work done, and entrance trim applied to complete the job.

Actually, the basic unit in Best Built's design is half the 5 1/2-room

house, and this single unit can be purchased at the factory as a finished 3 1/2-room house for \$6,000. This single unit version has possibilities as FHA Title I emergency housing, but Best Built is naturally concentrating on the more widely marketable 5 1/2-room plan, and has approval for FHA financing. Eventually the firm will have 24 different front elevations from which to choose.

Once out of the plant, a house gets its interior finishing and is ready for transport. Moving is done by an ingenious rig devised by the Belding Engineering Company. The two halves of the house are pulled sideways onto a specially designed trailer. Transportation cost is \$110 for the first 25 miles, plus a charge of so much per mile beyond this to any



**BASIC FLOOR PLAN of 5½ room house**

point within 100 miles of the plant.

The idea back of this newcomer to the low-cost house market is that real economies can be achieved by a modified assembly-line system of building houses indoors, then moving the completed product to the site. Best Built's factory encloses 20,000 square feet, which is sufficient to keep rolling a program of eight houses a week—four under construction inside the plant and four getting final finishing outside on the runways. The company figures that under the controlled conditions of factory work, about 25 per cent can be saved on the cost of on-site construction. Chief among the factors which Best Built says make for savings in an under-cover construction technique, are: (1) availability of power tools and automatic machinery which save many man hours; (2) weather no longer holds things up; (3) theft and spoilage of materials by weather are eliminated;

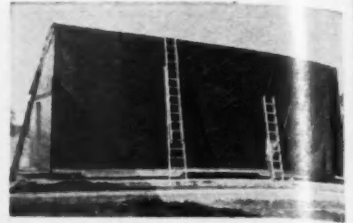
(4) labor talent can be utilized without waste—that is, with assembly-line production, a man can be kept doing whatever part of the job he is best qualified to do.

The company is also convinced that the under-cover system makes for a better seasoned house, since no part is open to the weather during construction. Best Built uses No. 1 kiln-dried lumber and believes that by building these houses indoors, 20 years are added to their life.

Included in the \$9,800 F.O.B. price are an oil-fired heating unit, 55-gallon electric hot water heater, colored bath fixtures, plastic wall tile in the bathroom, weather stripping, and door chimes.

Interior features include plenty of kitchen cabinets, five clothes closets and linen closet, flush doors, and choice of color and patterns in the flooring material.

A combination of talents and ex-



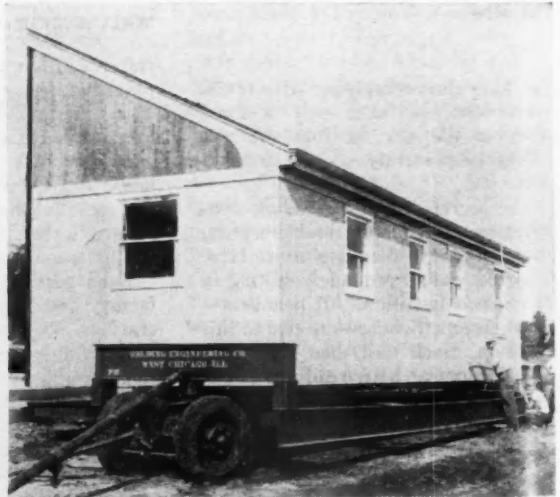
**CANVAS COVER** over open side protects house as it is transported to site

perience is back of the Best Built house, not the least of which is the practical know-how of the company's president, A. I. Lurya, who pioneered the semi-finished house idea, and Joseph B. Bergman, sales manager. Harold L. Sherman, a young architect at Massachusetts Institute of Technology, and Alfred Jorgenson, the company's construction engineer, were chiefly responsible for working out the construction system. Designing architect was A. J. Del Bianco of Chicago.

As part of the program, the Best Built Company laid out a 184-lot, \$2¼ million subdivision, "Hillside," in the town of West Chicago, some 25 miles from the plant. Once details were set, the company moved right along. The plant site was acquired early this spring, the factory was ready for operation by July, and on September 16 the new house was announced to the public through display advertisements in Chicago papers. On that first day, a Sunday, according to an estimate of the highway police called out to handle the crowds, some 10,000 people inspected Best Built's new product at the plant. In the first week of sales, seven houses had been set up in the subdivision (price each, complete, \$12,600), with prospects bright for plenty more to come.

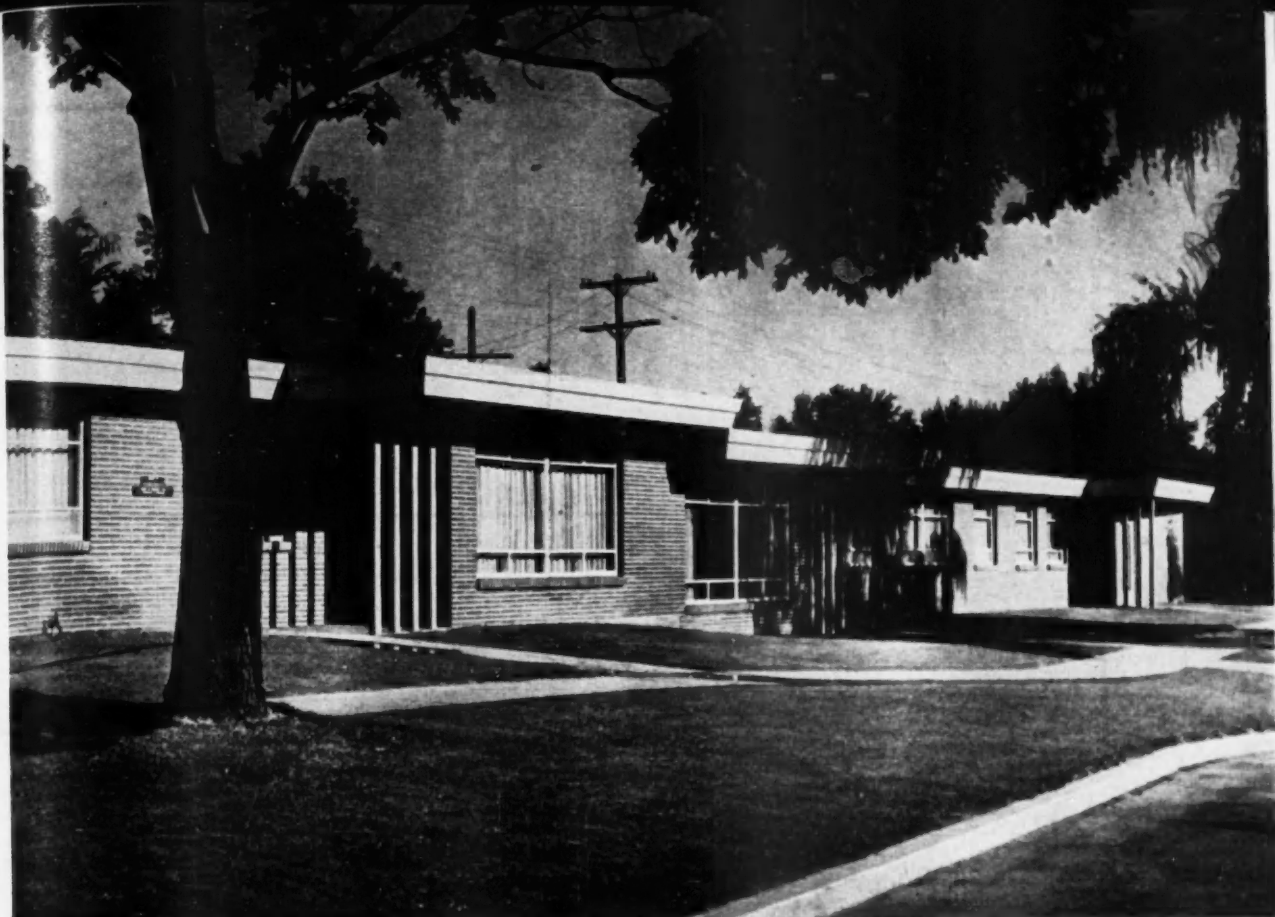


**SECTION ROLLS** on special rig for transportation to site. Transportation costs are \$110 for the first 25 miles



**THE SECTION** placed on the transportation rig is ready to be transported to buyer's lot. This system meets traffic regulations





SPACE AND QUIET of outlying section of city contribute to making this an ideal location for medical center

## Doctors' Co-ops Make Business for Builders

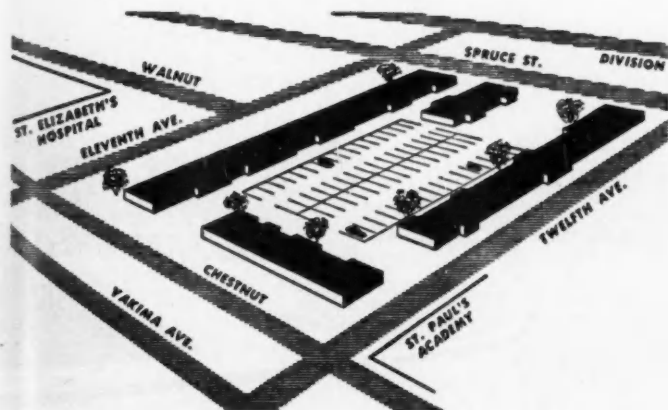
**Builder:**

Gilbert Moen, Yakima, Wash.

**Architect:**

T. F. Hargis, Jr., A. I. A., Yakima, Wash.

Medical centers of this type are needed in many cities. They can mean good business for builders who take the initiative in organizing them



PLAT PLAN of Yakima medical center shows hospital across street

A GROUP of doctors in downtown offices conceived the idea of, and raised the money for, this medical center in an outlying section of Yakima, Wash. They wanted and got:

(1) A nicer environment for themselves and patients, with open space, grass, trees, and good parking facilities; (2) larger and better-planned office space; (3) proximity to hospitals; and (4) a site from which they could avoid heavy traffic in getting to their own and patients' homes.

Located in the southwest part of the city, the center is close to the three major hospitals. Each of the 21 doctors in the cooperative project owns one share of common (voting)



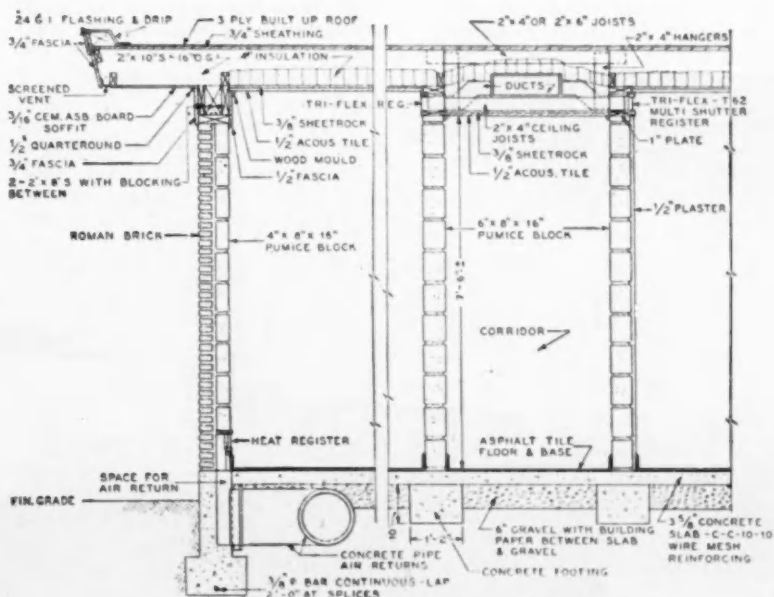
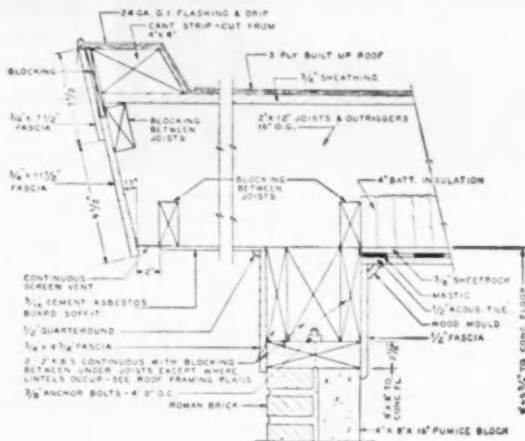
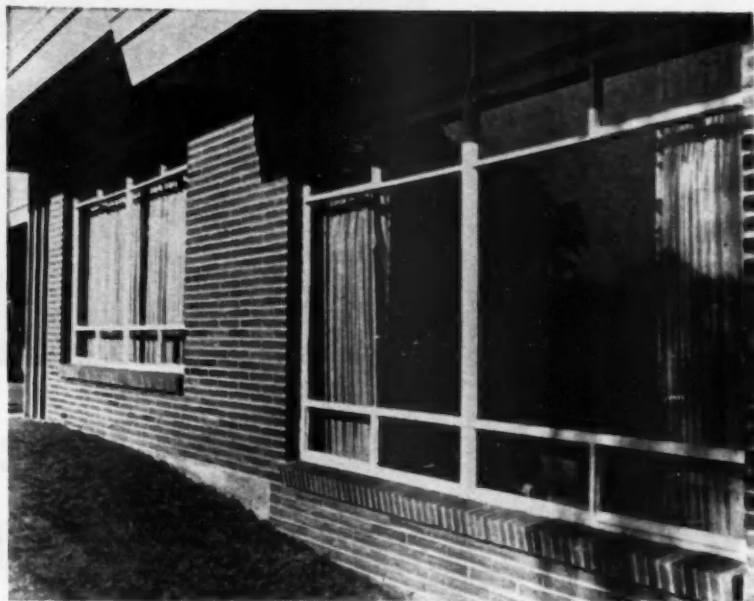
stock and preferred stock in proportion to the amount of money he put up. Cost to each participant depended on the floor space and arrangement required. Special plumbing and other equipment was paid for individually. A doctor's interest can be sold if the governing board approves the buyer.

### 111 Parking Spaces

There are four separate buildings grouped around an asphalt-paved court which provides 51 curb and 24 center parking spaces. Outside the court is space for 36 more cars. Reception rooms face the court with a view of lawn and trees. Arrangement of some suites permits one receptionist to serve two or more doctors.

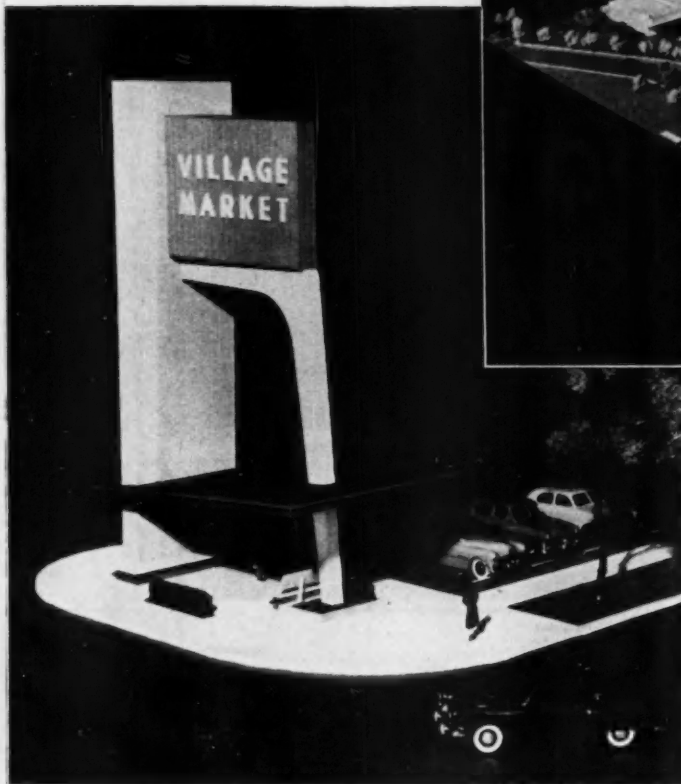
Construction of the buildings is on concrete slabs, all covered with asphalt tile. Exterior walls facing the court are roman brick veneer. Pumice concrete blocks are used on street sides. Partitions between suites are of pumice blocks, some painted and some left natural. Acoustical tile is used on most ceilings. The built-up roof has an 18-inch overhang on the court side. There are 11 separate oil furnaces, with thermostatic controls, one between each two offices.

In addition to the doctors' suites the center houses a pharmacy and optical store. A building manager supervises general maintenance and does some group buying of supplies which the doctors use in volume.

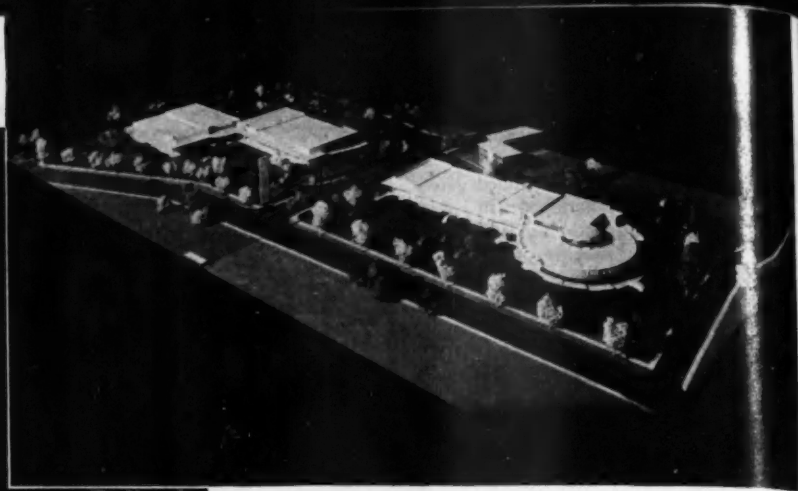


TYPICAL SECTION THRU EXTERIOR WALL AND CORRIDOR

RECEPTION ROOM window (top) gives good view of court. Construction details of typical exterior wall and roof section (center) and section through exterior wall and corridor (below)



BIRD'S-EYE view of model of entire shopping center upper right. Pylon at street corner forms sheltered bus stop



## A Modern Two-Level Shopping Center

Architects - Engineers:  
Mittelbush & Tourtelot,  
Chicago, Ill.

Builder and Developer:  
Wm. Joern & Sons,  
La Grange, Ill.

FRONT COVER PHOTO shows construction of entrance to circular ladies' apparel shop with the restaurant above

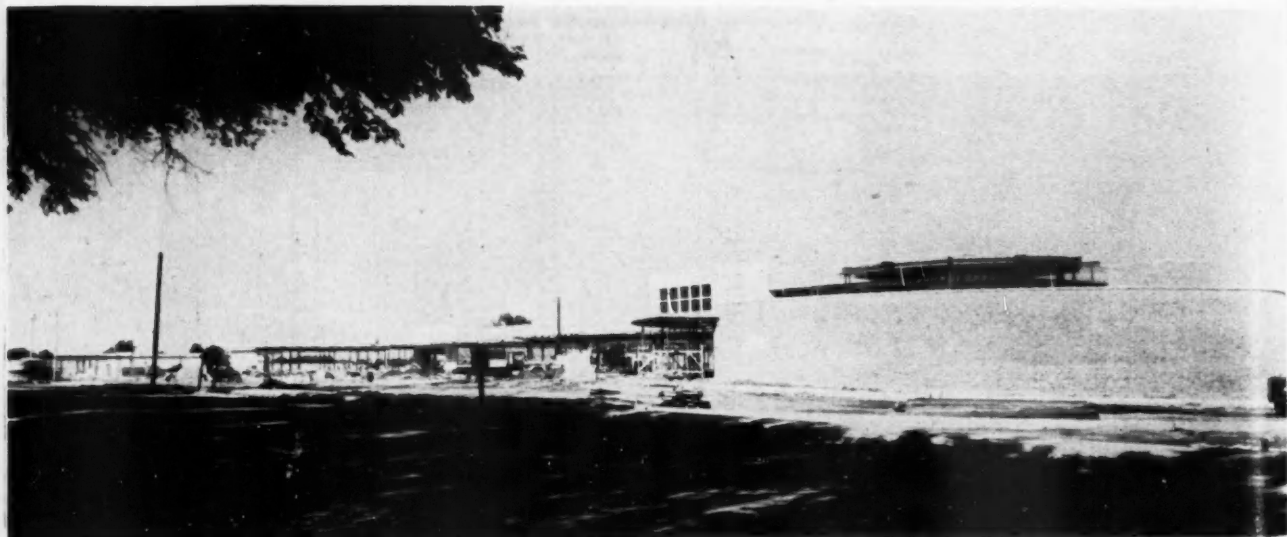
THE Village Market is a new, modern one-stop shopping center, located on a 6½-acre irregular tract of ground in the center of a built-up area. The site, which has a grade differential of 12 to 14 feet, fronts on a heavily traveled through-highway.

Because of its location in the cen-

ter of a built-up area, the market was arranged to serve both auto and walk-in trade. This contrasts with the usual arrangement of planning a shopping center on the fringe of a community where large areas of land are available, and the general architectural character of the area

has not been fully established.

The Village Market, now under construction in La Grange, Ill., is the result of several years of intensive study and planning. The site and structures in their semi-completed state give a slight indication of the many problems which confronted the



CONSTRUCTION now in progress on the Village Market, a shopping center having a total gross floor area of 138,000 square feet

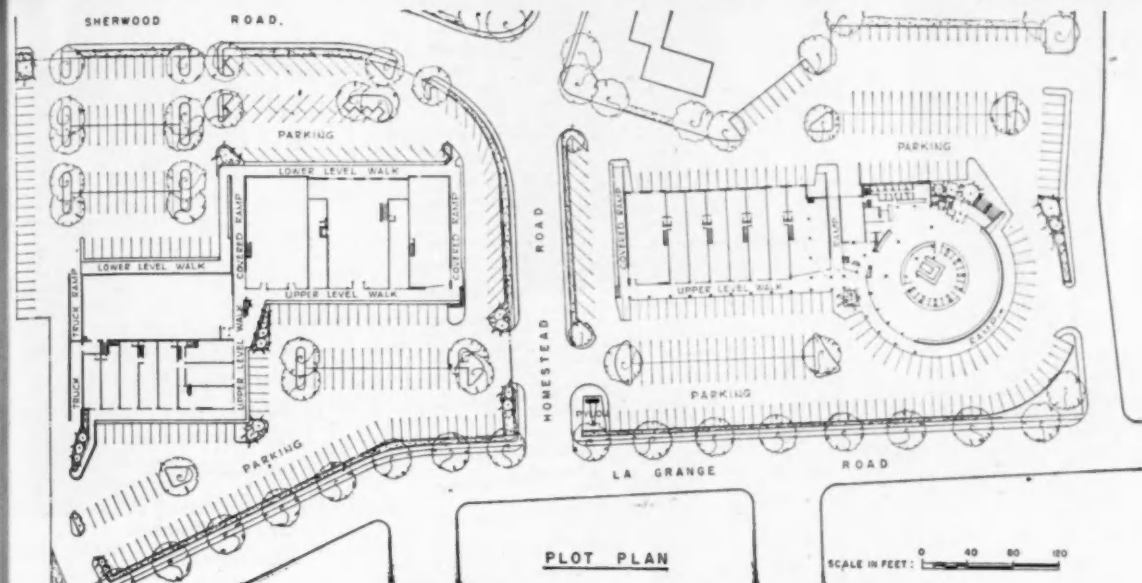




MODEL of one of the specialty shops in the development



GROUP of stores connected by a wide canopy over walk



OVER-ALL PLAN showing arrangement of buildings on site with space available for parking 1,000 cars

planners in the development of this project.

The layout is designed with two levels to take full advantage of the natural slope of the site. This has produced economies in construction as well as conservation of valuable land area. Each level is provided with its own grade frontage and adjacent parking. The two levels are connected by continuous walks which are ramped. This makes for uninterrupted shopping comfort. The servicing of all stores is solved by means of interior service corridors. This system completely eliminates the unattractive "alley view" so often found in developments of this type.

One of the interesting features of the plan is a one-story circular Ladies Apparel Shop, 120 feet in diameter, arranged according to lease requirements. Fitting rooms, stock rooms, and cashier's offices are located in the central circular service core of the store. This core is 60 feet in diameter. The remaining space serves as the main sales room. On the floor above the apparel shop a

terraced restaurant is located.

Modules of 17 and 18 feet were established as the standard average widths for the small stores, and multiples thereof for the larger stores. By using long span open web steel joists for the roof construction clear unobstructed areas are obtained in the stores. Flexicore precast concrete units are used throughout the first floor area, except the circular women's apparel shop. Open web joists are used in this area. Roofs are

poured gypsum with built-up roofing. The entire structure is of incombustible material.

The cost of the development, not including land is \$1,900,000. The project contains a total of 49 stores with parking space for 1,000 cars (560 on site, 440 in parking lot adjoining development to the north). Total rentable floor area, which includes storage space is 112,600 square feet. Total cubage is 1,765,187. Area of site is 290,187 square feet.



CONSTRUCTION view of two story unit at south end of project



**EXTERIOR WALL** shadow box displays food specialties. Flowering box and walls of Crab Orchard stone present highly stylized exterior treatment

**Builder:**  
Maxon Construction Co., Inc.  
Barrington, Ill.

**Architect:**  
Norman Maxon,  
Barrington, Ill.

**Owner:**  
Orville Wente,  
Barrington, Ill.

## ***This Design Focuses Attention on Interior***



**LIMESTONE** and Crab Orchard stone combine to make attractive store front. Owner's neon sign will be placed on stone parapet when materials become available

**T**o have customer traffic look inside the store before noting the exterior treatment was the architect's intention in the design for this food store. It was built for Orville Wente, Barrington, Illinois, caterer. A large kitchen where food is prepared for over-the-counter sales or catering service was incorporated in the plans.

A combination of Indiana limestone and Crab Orchard stone was used on the front. The stone parapet adds height to the low building so it is not dwarfed by its two-story neighbor. The parapet was also planned to carry a large neon sign. Exterior shadow boxes display either food specialties or models of prepared food. The flower box unit conceals the one foot slope in ground level with low horizontal lines.

Building problems arose when the business lot was cleared by moving a large 7-room house. Footings went down as far as 7 to 8 feet to strike firm ground. Four feet of sand fill was used underneath the slab. The building was erected and enclosed, with the heating plant operating, before the slab was poured. It was poured when the outdoor temperature was 10 degrees above zero.

**AMERICAN BUILDER**



# Planned Lighting

## for the Small Commercial Building

As told in an interview with

**A. C. Barr, Engineering Department, Lamp Division,  
General Electric Co., Nela Park, Cleveland, Ohio**

**G**OOD lighting costs so little and the penalty to the merchant who has poor lighting is so great, that today serious thought must be given to the lighting installation by the architect and builder of small commercial buildings while plans are still in the blueprint stage.

Chances are if the merchant is ever going to have good lighting, provisions have to be made for it in the construction of the building. It is easy to see that it is more economical from the standpoint of cost and much

sult in added sales, and in a more efficient and profitable operation. A minimum lighting installation that is maintained purely as an unavoidable expense with little or no thought to its effectiveness as a compelling sales tool, means dollar and cents loss to the merchant; but a carefully planned lighting installation pays its way many times in added sales.

When owning and operating costs of typical lighting equipment used in stores today are considered, their very low cost is a further indication

fluorescent lighted wall case can be owned and operated at the low cost of 5 cents per day.

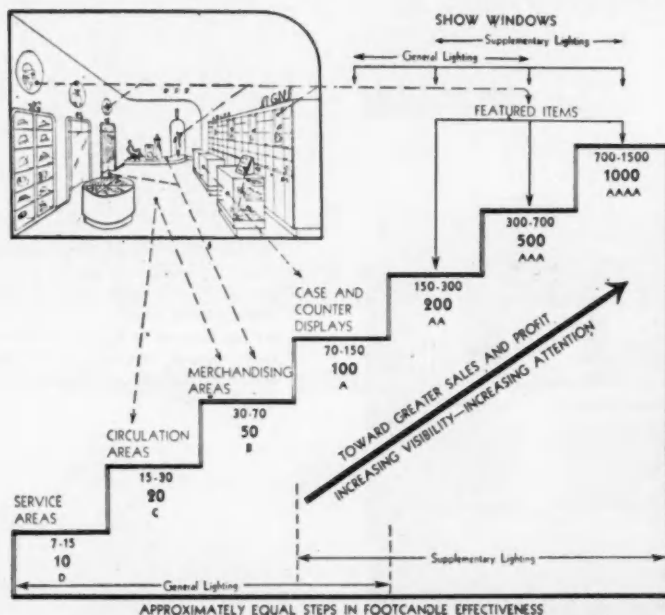
To give lighting its proper emphasis from the very beginning of the planning stage, it is necessary to clarify some of the aims and objectives of good lighting. Good lighting must be diversified. The lighting installation that is designed to serve the grocery well will not of necessity be best for the florist, or the bakery shop, or the drug store. The merchandising needs of each operation are different, and the arrangement of fixtures and types of equipment needed by each to do the maximum selling job must be tailored to suit individual needs.

Although it is safe to say that there is no pat formula which can be followed for each lighting installation in the small commercial building field, the total wiring capacity and the arrangement of electrical outlets needed for general and supplemental lighting must be provided by the architect and builder.

Wiring is similar in most small store operations. The provision of the basic essentials is the prime responsibility of the architect and builder. Once adequate wiring is provided, it becomes possible to design the kind of lighting that converts the ordinary store into a real selling machine.

The objectives of good lighting are well established, and although the means of reaching these objectives may be different for each small store operation, these general principles will hold true for almost all types of retail establishments.

The merchant, who will in the future occupy the small commercial building being built today, will demand that his store attract customers. That, as all of us recognize, is the real basis of his business. Many factors enter into the modern store building that will be attractive both to the merchant and to the customers he serves—store fixtures, display



### FOOTCANDLE LEVELS REPRESENTATIVE OF MODERN PRACTICE

easier from the installation standpoint to make provision for the lighting installation at a very early stage in the planning of the building.

Light is tremendously important in store operation and merits both the architect's and the builder's serious consideration. Wherever merchandise is bought and sold, quicker seeing, more accurate and conclusive seeing, more comfortable seeing re-

that good lighting is a "must" if the merchant is going to be competitive. Four 40-watt lamps in a typical fixture operating 8 hours per day at typical energy rates will light approximately 50 square feet and can be owned and operated for less than 10 cents per day. A 150-watt spot lamp under similar conditions can be owned and operated at approximately 6 cents per day. Ten feet of



cases store layout, air conditioning, light walls and floor coverings. All of these play an important part in modern merchandising, but their full value can best be realized in a store with well designed lighting.

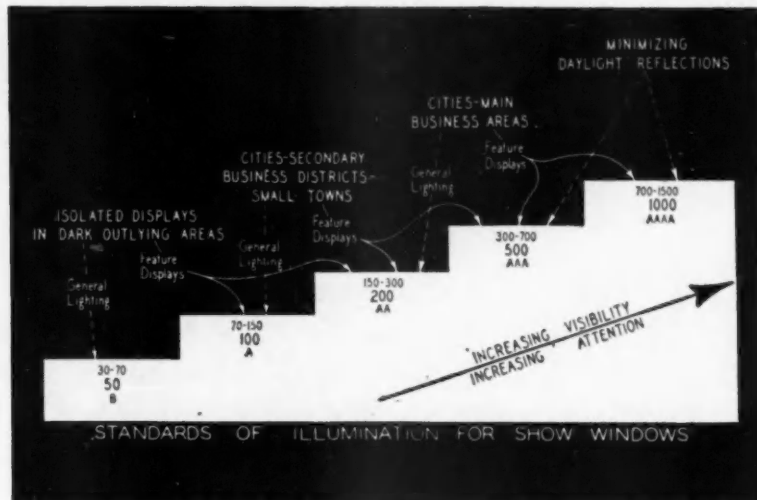
The lighting installation should be designed to provide three services to the merchant who will occupy the building. These are generally classified as the "Three A's of Store Lighting"—Attraction, Appraisal, Atmosphere. The completely visual-conditioned store cannot depend entirely on any one of these. On the contrary, all three are necessary with varying emphasis, depending on the class of store, the kind of merchandise sold, and upon the people to whom the store makes its appeal.

**ATTRACTION**—Merchants realize the sales value of attraction. It influences their store location; they bid for it in advertising, and expect it of their signs, show windows and displays. Through attraction, the merchant invites shoppers into this store, shows the various departments and kind of goods sold, and directs their attention to new, timely and high-profit items. Attraction lighting punctuates shoppers' interest by eye-catching brightness, gives emphasis by compelling contrasts, creates backgrounds for displays, reveals three-dimensional forms by modeling and highlighting, and puts appeal into the merchandise by the magic of color.

**APPRAISAL** — Good general lighting reveals the inherent qualities of merchandise for sale, gets quick and accurate buying decisions, builds a clientele of satisfied customers and reduces returns. Appraisal lighting at the point-of-sale has enough light of the correct color and quality as to direction and diffusion.

**ATMOSPHERE** — The atmosphere of a store gives those who enter both a snapshot and a time-exposure picture of its desirability as a place to shop. The quick-glimpse impression is important in getting them to come in. The results of the time-exposure largely determine how long customers stay and whether they want to return. Atmosphere in lighting is obtained by designing a brightness and color pattern of the store ensemble—ceiling, walls, displays, luminaires—that is consistent with the classification of the store and its merchandise, harmonizes with the architectural and decorative scheme, and is appropriately co-ordinated with the brightness and color patterns of the displays.

An integrated lighting program provides not only general sales lighting for the entire merchandising



**MUCH HIGHER LEVELS** of illumination are needed in show windows than in the interior of the store. These levels vary with the location of the store and many other local conditions

area but also supplementary lighting for wall cases, showcases, special displays and decorative efforts. The supplementary lighting draws the customers' attention to the merchandise. The general lighting allows quick and easy appraisal of the merchandise. And the combination of these gives a pleasing pattern of brightness and a distinctive atmosphere to the store—making it a preferred place to shop.

#### Steps to Good Store Lighting

Steps in a guide for planning functional lighting for selling are 1-3-5-

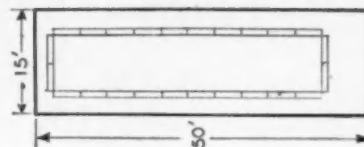
10. The numbers represent relative footcandle values for the store areas indicated. The footcandle levels are graded to satisfy the normal visual requirements that occur in various areas and to create differences in brightness which will be effective in attracting attention and producing a stimulating atmosphere for selling.

Levels of illumination indicate the wiring needed in watts per square foot. Many factors must be given consideration in arriving at a given footcandle level in the store area—footcandles desired, type of luminaire, size of room, ceiling height



**MEN'S SHOP**—This 15 x 50-foot men's store uses 4-lamp 40-watt fluorescent units mounted on the 15-foot ceiling. This type of unit is particularly good in long narrow stores with high ceilings. The wall cases are lighted by the single row of 40-watt fluorescent lamps behind the valance around the edges of the store. Each of the niches in the upper wall contains two 40-watt fluorescent lamps to emphasize displays. The average illumination is 70 footcandles and the ceiling lighting re-

quires about six watts per square foot. Notice that fixtures running across the back of the store will light the merchandise and draw customers to that area





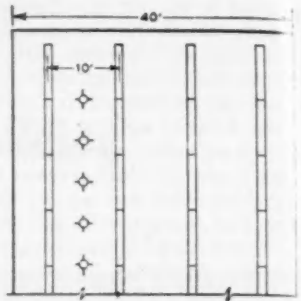
and mounting height of fixtures, finish of walls, ceilings and floors, and type of light source to be used—but reasonable accurate estimates of wiring requirements can be made.

Roughly speaking, 50 footcandles are supplied by three watts of fluorescent light per square foot or by eight watts of filament type lighting per square foot. In many instances fluorescent and filament lighting are combined to provide general lighting and this combination requires approximately five watts per square foot to obtain the given 50 footcandles. In addition, wiring should be provided for the supplementary lighting system to supply the higher levels of attraction lighting needed

in displays, showcases, wallcases and for "perimeter" lighting. Additional wiring and outlets should provide, on the basis of two to three watts per square foot, for supplementary lighting fitted to the design of the store.

#### Show Windows

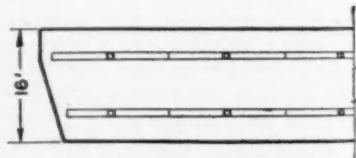
The show window is the visual "on-the-spot" link between merchandise inside the store and the thousands of potential customers who walk or ride past. And light multiplies the selling power of the show window. Selection of appropriate footcandle levels is the first step to be taken in the design of a well lighted show window. The need for much higher levels of illumination



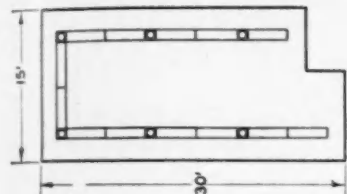
**GROCERY**—Units containing two rows of 96-inch T-8 slimline fluorescent lamps operating at 200 milliamperes provide an average illumination of about 35 footcandles. Additional brightness is given to the shelves and displays along the walls by a continuous row of 30-watt fluorescent lamps mounted behind a valance. Brightness on the fresh foods displays is built up by light from 150-watt PAR-38 spot lamps in bullet-type units. This installation provides good light for appraisal and, through the use of valance lighting around the perimeter and spot lamps in flexible mountings, good brightness contrasts

in show windows than the interior of the store is obvious. These levels vary with the location of the store and many other local conditions.

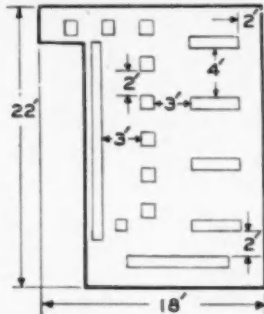
Show windows are usually lighted by a general lighting system consisting of rows of filament lamps in show window reflectors or fluorescent lamps in trough units. For downtown stores, 200-watt filament lamps on about 12-inch centers are necessary for average windows; 100-watt filament lamps on the same centers are adequate for neighborhood or small town stores. Fluorescent lamps in four parallel rows (40-watt lamps) produce 100 footcandles in a window of similar size and shape. Luminous accents can be provided to give the



**DRUG STORE**—Louvered fluorescent units are mounted about 11½ feet above the floor in this drug store. Each unit contains 96-inch T-8 slimline lamps operating at 200 milliamperes. Notice how these units brighten the store walls as well as provide a general illumination of about 45 footcandles. Accent lighting for special displays is provided by 150-watt PAR-38 lamps mounted in gimbal housing between every other fluorescent unit. A single row of 30-watt fluorescent lamps in a closed-top valance along both walls emphasizes the displays in the racks and shelves. Addition attraction lighting is provided by brightness in the showcases provided by 40-watt fluorescent lamps. About 6½ watts per square foot is the power requirement of this installation



**MEAT MARKET**—General illumination averaging 40 footcandles is supplied by 2-lamp 40-watt fluorescent units mounted on the 11-foot ceiling. Accent lighting is provided by 300-watt R-40 spot lamps in gimbal units. The store is given a spacious look by a single row of 40-watt fluorescent lamps behind an open valance which lights the back counters and the walls. Showcases are lighted by a row of fluorescent lamps in reflectors. The power required by all the lighting units mounted on the ceiling is  $6\frac{3}{4}$  watts per square foot.

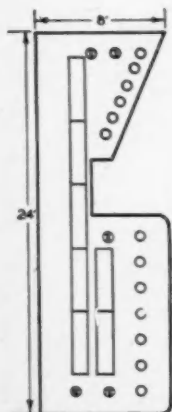


**CANDY STORE**—Notice how the "1-3-5-10 store lighting formula" is used in this 18 x 22-foot store with an 11-foot 6-inch ceiling. Four individual and one double 2-lamp 40-watt fluorescent recessed troffer units provide the "1" step of the formula in the circulation area. These units combined with another troffer of four units located next to the wall behind the counter provide the "3" step of the formula, providing 35 footcandles of general appraisal lighting. Nine 100-watt incandescent downlights contribute an additional 20 footcandles on the counter top. This local counter lighting, plus the fluorescent lamps inside the showcase provides the "5" step. Fluorescent-lighted wall displays are "10" step of formula

window "punch" or accent lighting which will make it stand out from its competitors by: extra spot or floor lamps; fluorescent footlight strips; filament or fluorescent background lighting; adequate wiring in overhead circuits, plus a sufficient number of floor outlets, for seasonal auxiliary effects.

Some typical lighting designs for the small commercial buildings are shown on these pages. Each of these designs is typical of many successful small store schemes today. You will note that each of them is tailored to fit the operating needs of the type of store. Although several of them show similar lighting designs, each store is a different operation. However,

each of four of the lighting designs provides continuous rows of fluorescent lamps running the length of the store; valance lighting around the perimeter of the store; spot and flood lamps for extra attraction lighting; and provisions for wall case and show case lighting. This is important to the builder who is building for lease and does not know at the time of construction what type of store will be housed in the building, for these illustrations represent typical layouts. Outlets laid out to suit this pattern are the best compromise if occupant of store is not known.

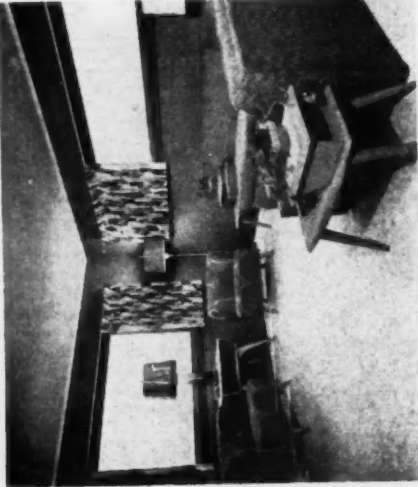
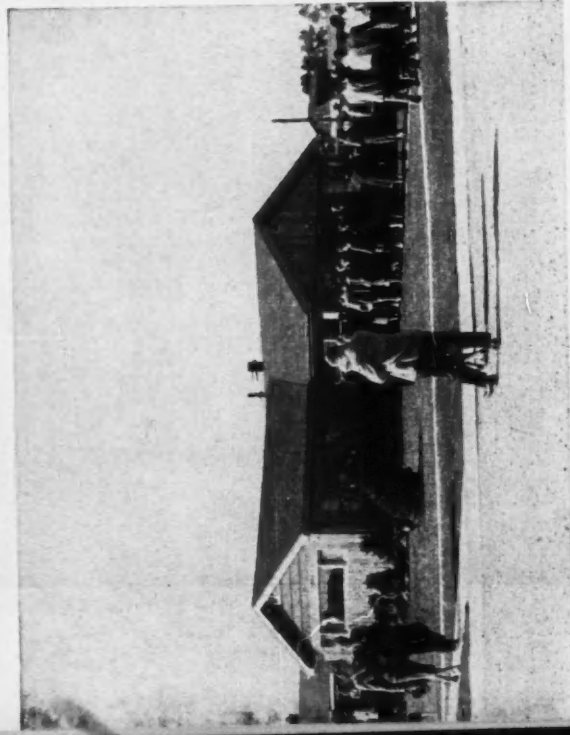


**SHOW WINDOW**—Over 110 footcandles of general illumination is produced by louvered fluorescent and filament units recessed in the 7-foot ceiling. 150-watt R-40 lamps in gimbal mountings provide emphasis and extra attraction "punch" to this show window. Additional attraction lighting is provided for this store front by 100-watt filament lamps in reflector mountings





# AMERICAN BUILDER BLUEPRINT HOUSE NO. 59



**MORE THAN 3,000 PERSONS** visited this house on the day National Home Week opened and a total of 8,000 inspected it during the week it was open. Left: crowd waiting to enter on first day; center: interior of living room; right: exterior features are emphasized with contrasting colors.



## A Typical National Home Week Demonstration House

**Designer and Builder:**  
J. A. Miedema, Aurora, Ill.

**T**HIS demonstration home, part of a 61 house development in Aurora, Illinois, is a good example of the free use of color to emphasize or set apart feature portions of the house.

Here the vertical knotty cedar facing of living room wing is left in its natural finish with a protective coat of varnish applied to the surface. The 12-inch-wide red-wood siding used on the main body of the house is painted a deep blue to form a background color. Gable ends alternate with the type of wall surface and color used. All of the surfaces are highlighted by the trim which is painted a chartreuse shade. Roof is covered with brick red asphalt shingles. Variations in surface materials and the application of strong color tones is a stimulating addition to the design pattern of the house.

This potential five-room house contains 1,082 square feet of living area, exclusive of 60 square feet for rear

porch. In addition to a utility room, there is an enclosed storage area, lined with transitite, which houses the oil storage tank and provides space for outdoor tools and equipment.

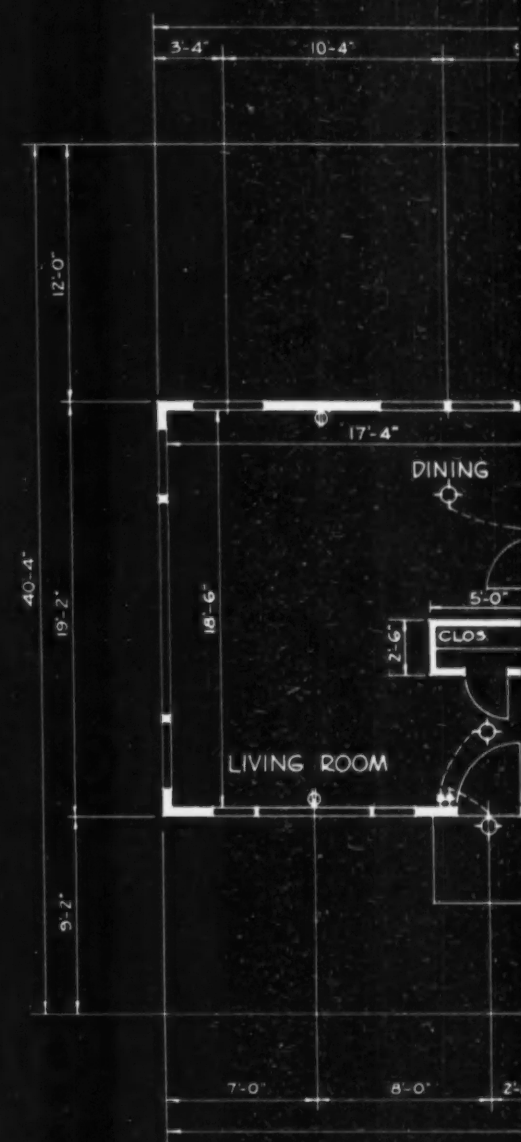
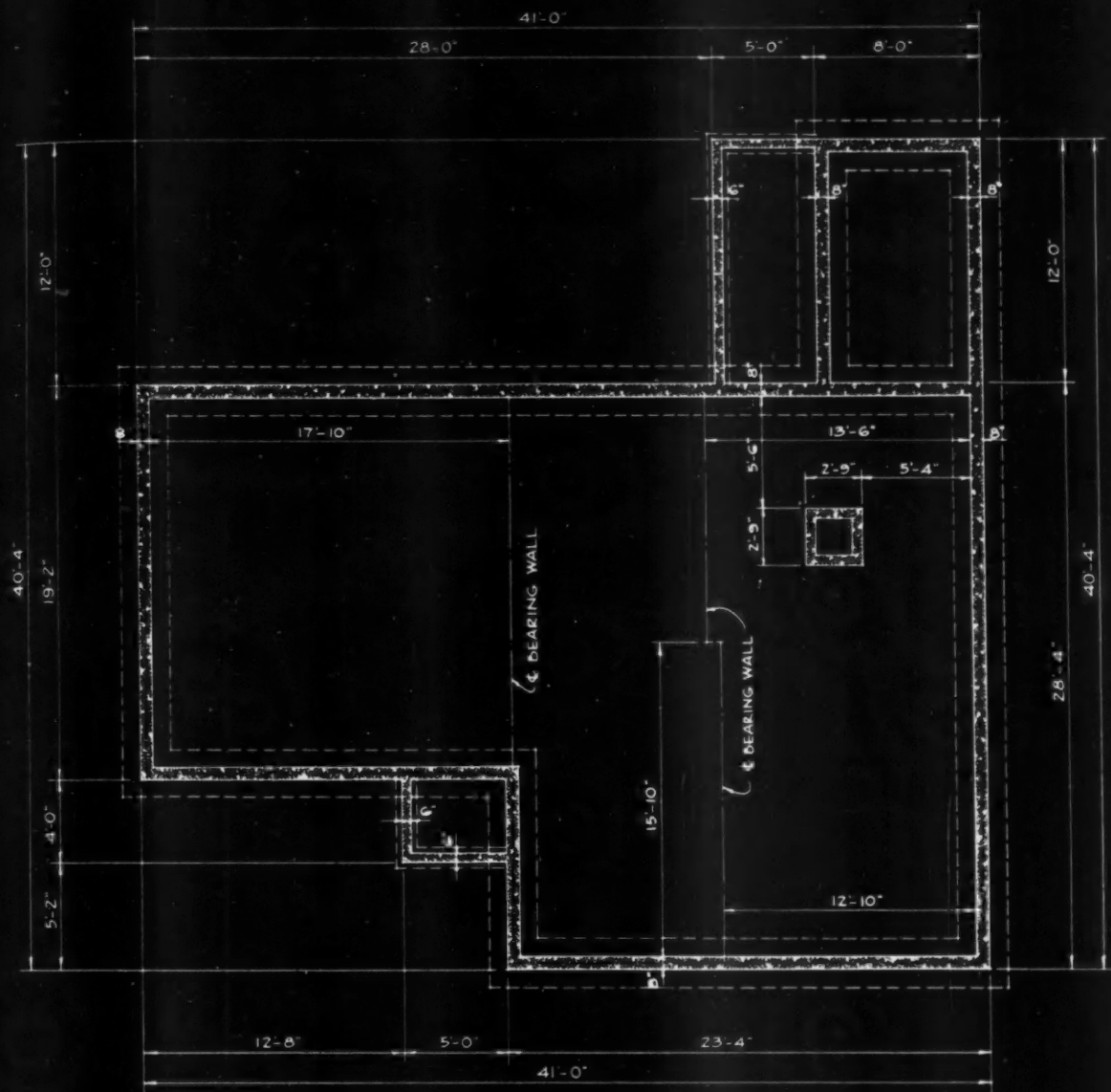
Cost of the house is \$16,500. This includes lot, curbs, gutters, black top street, front lawn landscaping, disposal unit, 50-gallon electric hot water heater, forced air oil-fired warm air furnace, 275 gallon storage tank and complete interior decoration.

The design follows the lines of the accepted practice in the midwestern area for a house of this size. However a number of practical variations are employed such as the strip window in the front wall of the living room. This arrangement provides wall space for the placement of furniture. The door height and light fixture are points which would be dark. The door height and light fixture are points which would be dark.

Further information and complete 1/4 inch scale blueprints available on this house from American Builder Plan Service, 30 Church Street, New York 7, N. Y.

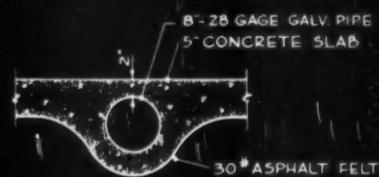
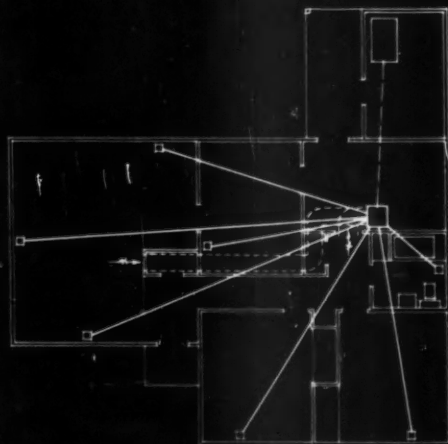


This potential five-room house contains 1,082 square feet of living area, exclusive of 60 square feet for rear hall and kitchen gives light to a half which otherwise would be dark.



FOUNDATION PLAN  
SCALE: 1/8" = 1'-0"

FLOOR PLAN  
SCALE: 1/8" = 1'-0"

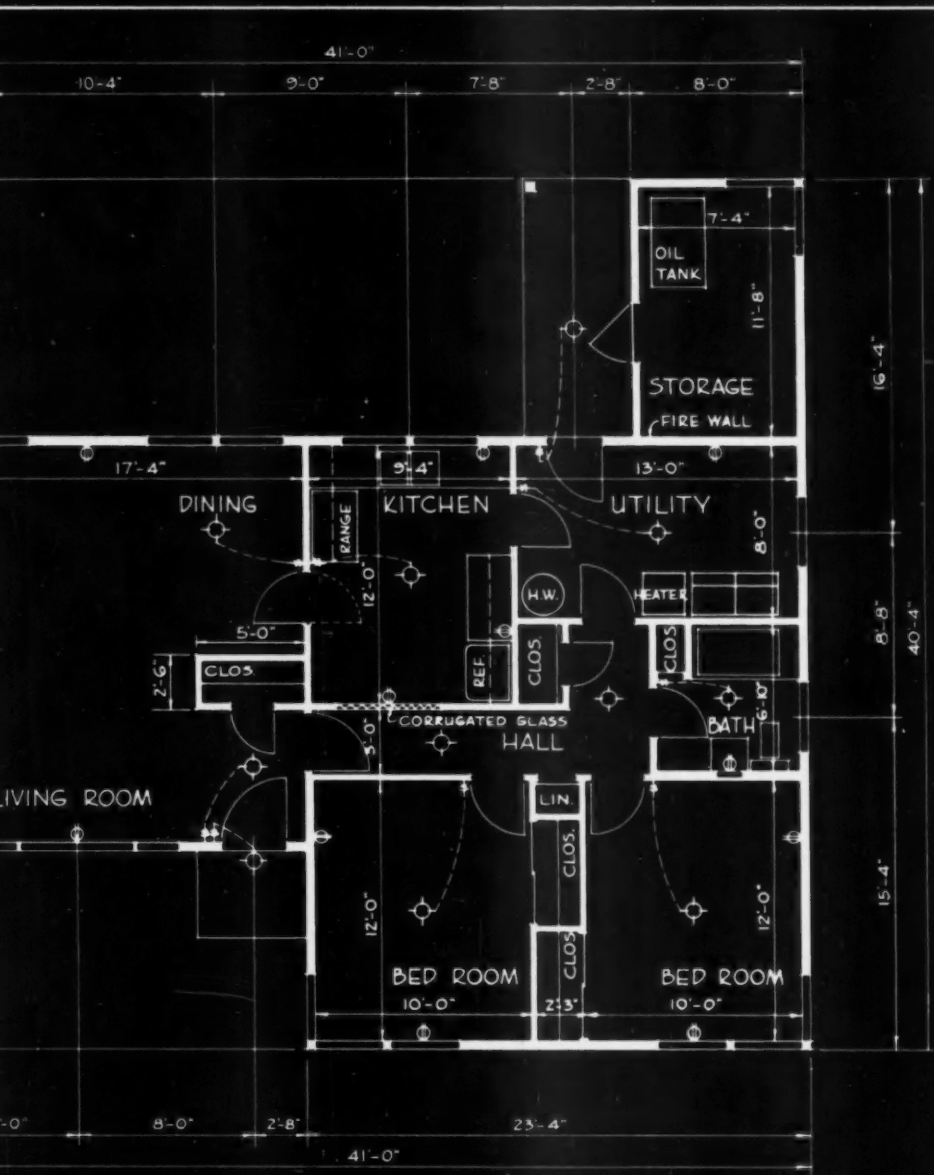


DETAIL OF HEATING DUCT

LEGEND TO HEATING PLAN

- RETURN DUCT AT CEILING
- > RETURN REGISTER
- HEATING DUCT IN SLAB
- OIL LINE TO HEATER
- WARM AIR REGISTER

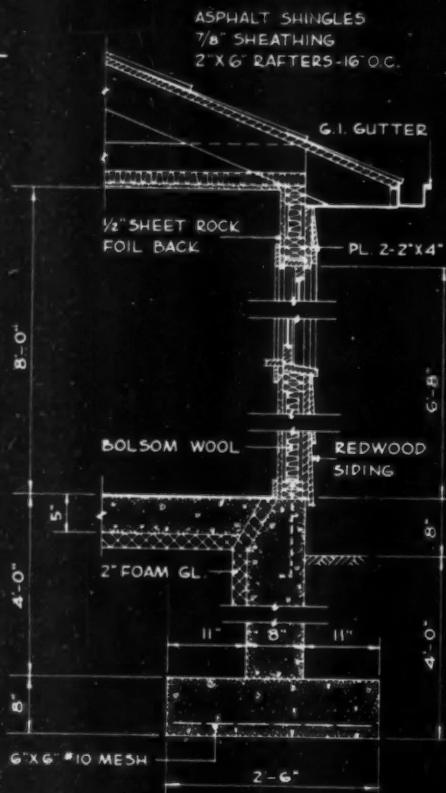




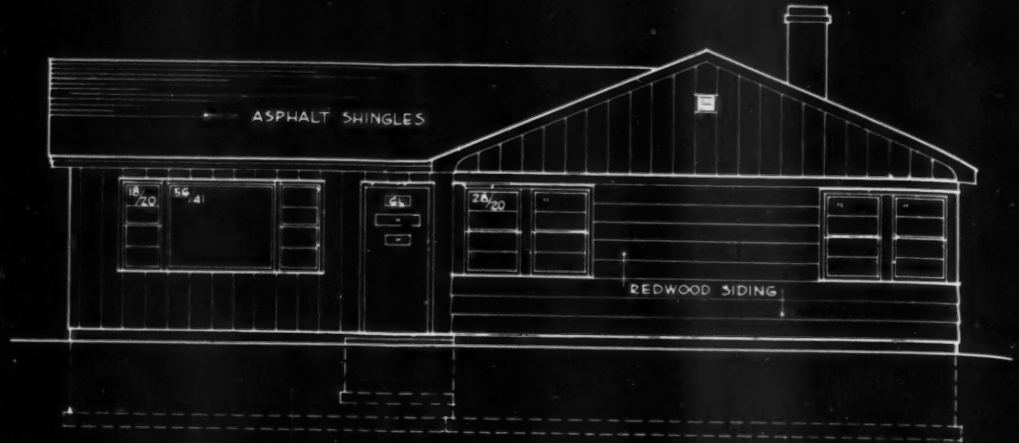
DR PLAN

1/8" = 1'-0"

DESIGN No. A.B. 173  
 AMERICAN BUILDER BLUE PRINT SERIES  
 Designed By  
 J. A. MIEDEMA  
 Aurora  
 DESIGNER  
 Illinois  
 Simmons Boardman Pub. Corp. 79 W. Monroe St. Chicago, Ill.

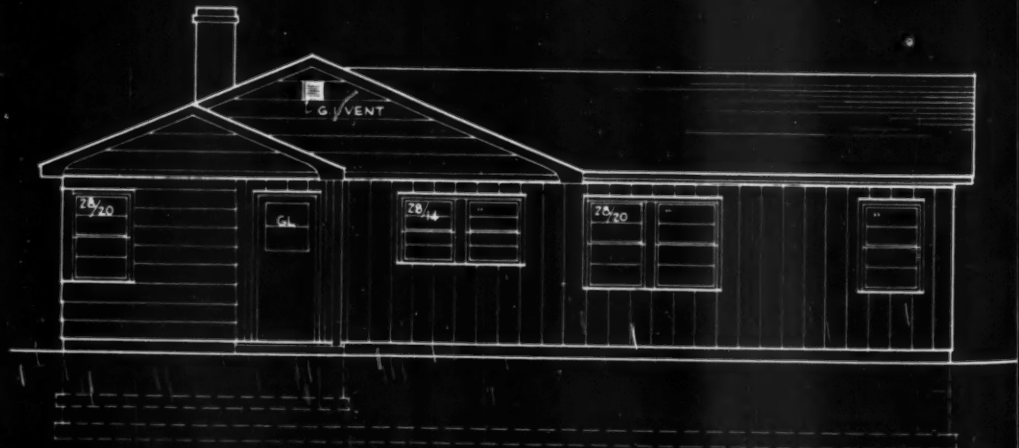


TYPICAL WALL SECTION  
SCALE: 1/2" = 1'-0"



FRONT ELEVATION

SCALE: 1/8" = 1'-0"



REAR ELEVATION

SCALE: 1/8" = 1'-0"

House

Porch

Trench

Heater

Excavati

Foundat

Concrete

Thick

Anchor

Miscella

NOTE:

requi

Brick

Walls

Window

Glass

Chimne

Firepla

Miscelle

Window

Window

Exterio

Interio

Specie

1 C

1 n

NOV



# Quantity List of Materials

## For American Builder Blueprint House No. AB 173

J. A. Miedema, Designer

### General Information

House — Type .....	Frame
Area .....	1,082 sq. ft.
Porch — Area .....	60 sq. ft.

### Excavating

Trench for foundation .....	198 lin. ft.
Heater footings .....	4 sq. ft.
Excavation for basement .....	No basement

### Cement Work

Foundations .....	796 cu. ft.
Concrete Work .....	1,059 sq. ft.
Thickness .....	5 in.
Anchor Bolts .....	45— $\frac{1}{2}$ " x 12"
Miscellaneous: .....	6x6 #10 Wire Mesh . . . 430 sq. ft.

NOTE: Approximately 11 squares of 30# asphalt waterproof felt required under slab

### Masonry

Brick .....	— Stone	— Other
Walls — square feet .....	—	
Window sills .....	—	
Glass block .....	—	
Chimney .....	— Flue Lining	— Cap
Fireplace .....	— Throat and Damper	— Lintels
Miscellaneous: .....	Pre-fab metal chimney	

### Millwork

Windows — Type .....	Double Hung & Fixed
Windows glazed including trim: .....	11 — 2 lt. 28/20
	4 — 2 lt. 28/14
	2 — 2 lt. 18/20
	1 — 1 lt. 56/41
	2 — 1 lt. 30/32
	1 — 1 lt. 120/32
Exterior Doors .....	2 — 2' 8" x 6' 8"
	1 — $\frac{3}{4}$ Slab type with sash
	1 — 3' x 6' 8" Same
Interior Doors — Including jambs and trim: . . .	2 — 2' x 6' 8"
	4 — 2' 4" x 6' 8"
	5 — 2' 6" x 6' 8"
	2 — 2' 8" x 6' 8"

### Special Interior Millwork:

- 1 Corrugated glass panel, kitchen cabinets, 2 linen cabinets,
- 1 medicine cabinet

### Carpentry

Foundation Plates .....	29 pieces — 2x4-12'
Studding and Plates .....	.250 — 2x4-8'
	Studs and 39 pcs. 2x4-12'
Ceiling Joist .....	10 pcs. 2x6-10'
	44 pcs. 2x6-12'
	15 pcs. 2x6-20'
Roof Rafters .....	20 pcs. 2x6-8'
	40 pcs. 2x6-12'
	48 pcs. 2x6-14'
Framing Lintels .....	2 pcs. 2x8-12'
	2 pcs. 2x8-20'
Roof Sheathing .....	1,560 sq. ft.
Side Wall Sheathing .....	1,600 sq. ft.
Side Wall Materials .....	Redwood siding
Grounds depend on interior wall material	
Flooring .....	1,094 sq. ft. area to cover

### Exterior Material:

Soffits .....	100 l.f. of 14" wide x $\frac{3}{8}$ " plywood soffits
Eaves .....	1" x 4" fascia boards
Porches .....	60 sq. ft. ceiling
	1 — 6" x 6" x 8' wood post
Insulation .....	2,000 sq. ft.

### Rain Conduction

Gutters .....	100 l.f.
Downspouts .....	5 — 8 $\frac{1}{2}$ ' long each
Flashing .....	G.I. flashing at chimney
Miscellaneous .....	3 — 12" x 12" G.I. screened louvers

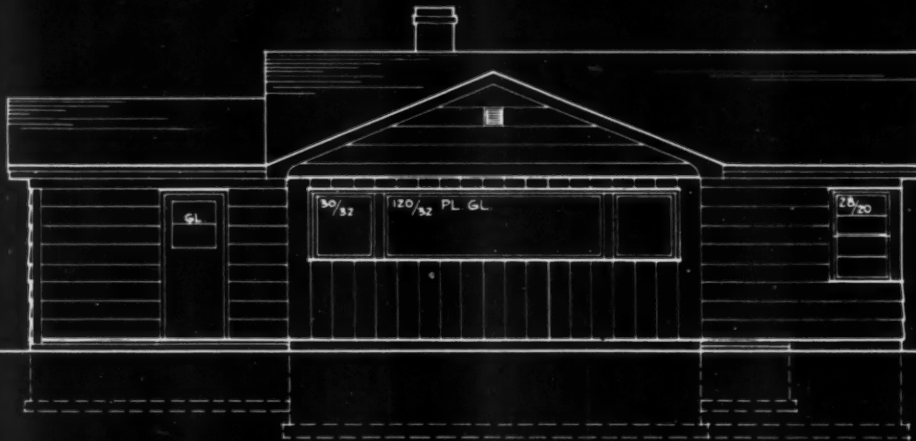
### Roofing

Type: Shingles .....	Area: 15 squares
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### Interior Walls and Ceilings

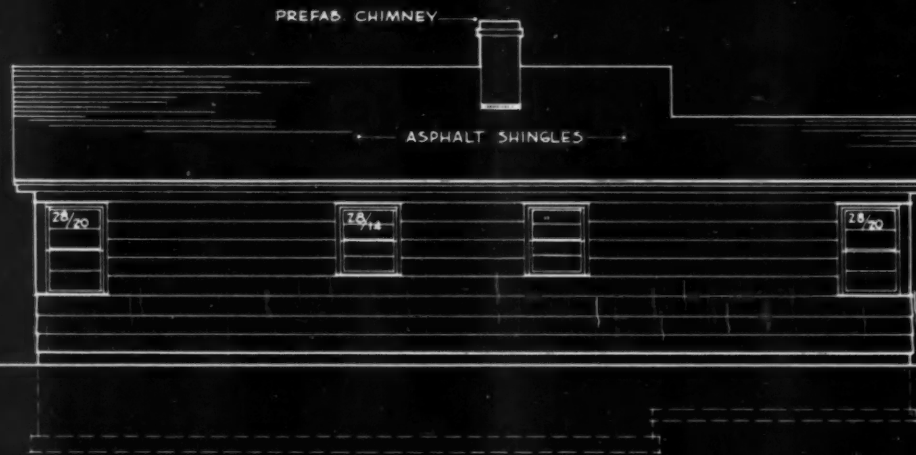
Area to be covered .....	4,200 sq. ft. $\frac{1}{2}$ " wallboard
--------------------------	---

● This quantity list will be subject to variation depending on the common practices in various sections and municipalities of the country, the techniques of individual builders, the types of materials available locally and cost factors. The list published here is a suggested one, complete enough so that it can be used in arriving at a reasonably accurate estimate of the quantities and cost of materials that will be required to complete the structure. It was prepared by experts at the Edward Hines Lumber Co., Chicago.



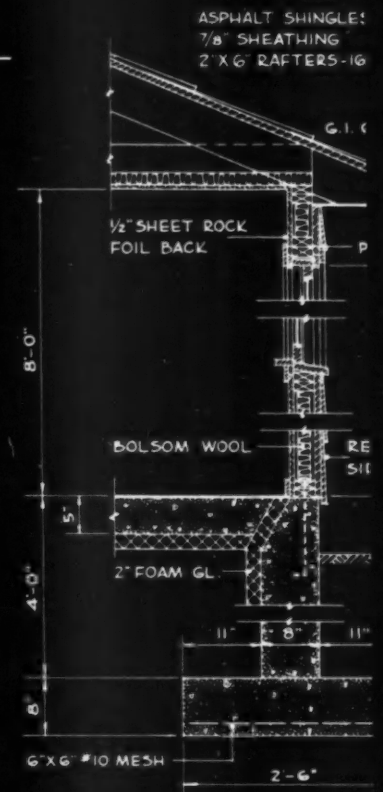
RIGHT SIDE ELEVATION

SCALE : 1/8" = 1'-0"



LEFT SIDE ELEVATION

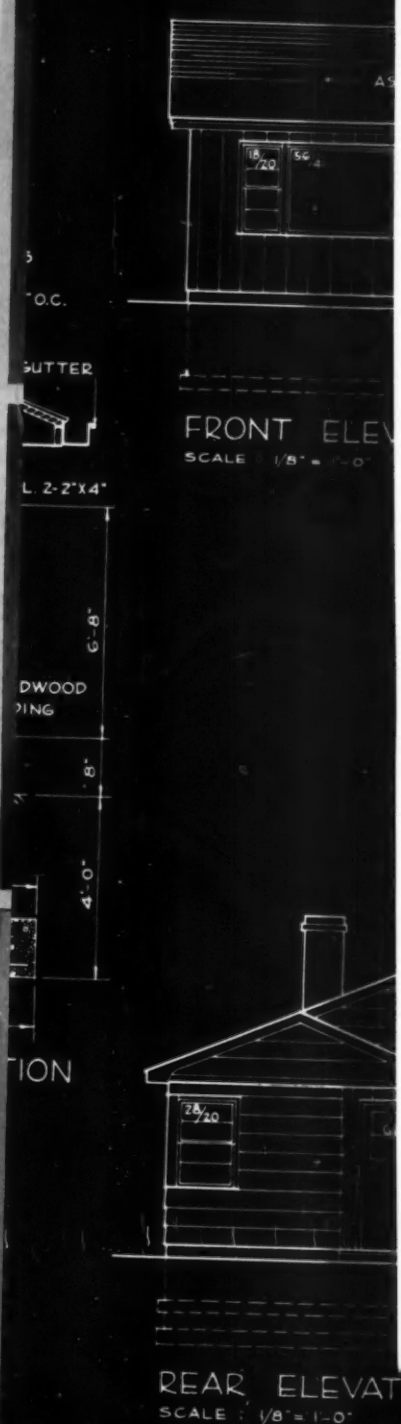
SCALE : 1/8" = 1'-0"



TYPICAL WALL SECT

SCALE : 1/2" = 1'-0"

AMERICAN BUILDER BLUEPRINT HOUSE NO. 59



PAC  
MISS

Special  
1 C  
1 m  
NOV

# Quantity List of Materials

For American Builder Blueprint House No. AB 173

# PAGES SSING

## try

- ..... 29 pieces — 2x4-12'
- ..... 250 — 2x4-8'
- Studs and 39 pcs. 2x4-12'
- ..... 10 pcs. 2x6-10'
- ..... 44 pcs. 2x6-12'
- ..... 15 pcs. 2x6-20'
- ..... 20 pcs. 2x6-8'
- ..... 40 pcs. 2x6-12'
- ..... 48 pcs. 2x6-14'
- ..... 2 pcs. 2x8-12'
- ..... 2 pcs. 2x8-20'

- ..... 1,560 sq. ft.
- ..... 1,600 sq. ft.
- ..... Redwood siding

## erial

- ..... 1,094 sq. ft. area to cover

- ..... wide x 3/8" plywood soffits
- ..... 1" x 4" fascia boards
- ..... 60 sq. ft. ceiling
- ..... 1 — 6" x 6" x 8' wood post
- ..... 2,000 sq. ft.

## ction

- ..... 100 l.f.
- ..... 5 — 8 1/2' long each
- ..... G.I. flashing at chimney
- ..... " x 12" G.I. screened louvers

## l

- ..... Area: 15 squares

## id Ceilings

- ..... 4,200 sq. ft. 1/2" wallboard

- 5 — 2' 6" x 6' 8"
- 2 — 2' 8" x 6' 8"

### Special Interior Millwork:

- 1 Corrugated glass panel, kitchen cabinets, 2 linen cabinets,
- 1 medicine cabinet

NOVEMBER, 1951

ct to variation depending sections and municipalities idual builders, the types of materials available locally and cost factors. The list published here is a suggested one, complete enough so that it can be used in arriving at a reasonably accurate estimate of the quantities and cost of materials that will be required to complete the structure. It was prepared by experts at the Edward Hines Lumber Co., Chicago.





ASBESTOS-CEMENT wall panels and roof tile simplified construction of this Marion, Indiana service station

## Cutting Costs with New Material

**Small commercial structure built with new two-inch-thick laminated panels which serve as finished exterior and interior walls**

**S**IMPLIFIED construction reduced the cost of a recently completed service station at Marion, Indiana, by 10 to 15 per cent, according to W. H. Lugar, the owner. The use of two new building products made the savings possible, Lugar said, with no sacrifice of quality or area.

The station, measuring 30x48-feet,

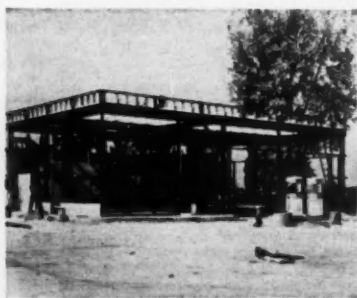
is an outlet for Cities Service products and follows the style of that company's stations.

The new products credited with the cost reduction are Kaylo C-A (cement-asbestos) panels and insulating roof tile, manufactured by Owens Illinois Glass Co. They are hydrous calcium silicate and have a density of

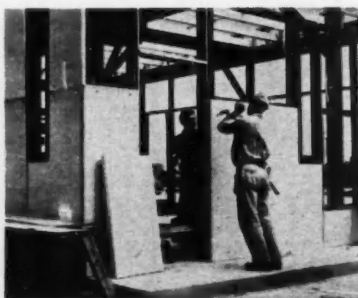
20 pounds per cubic foot.

The panels, fastened to light steel framing, make up the entire wall thickness of the new building. No siding, sheathing, insulation, lath or plaster were used. The panels come in 2 inch by 4 foot by 8 foot, 9 foot or 10-foot sizes.

The roof tile was used as the roof



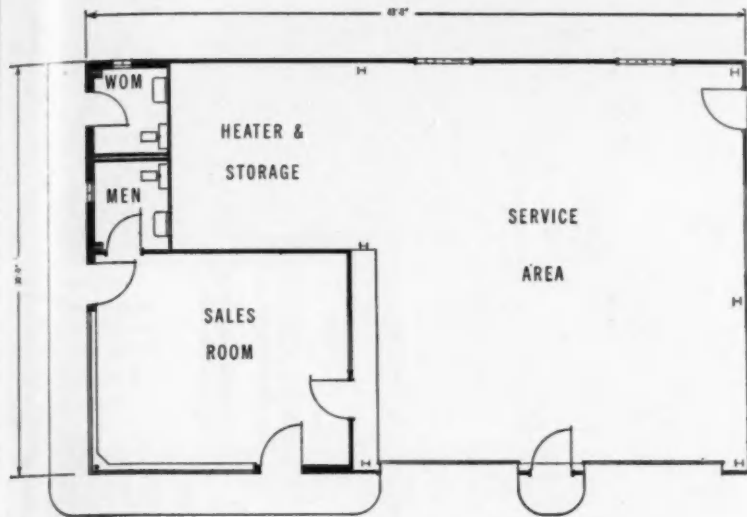
FRAME OF BUILDING is steel, with wood joists. Panel is fitted and anchored



PANEL PLACEMENT close-up. Chrome-plated joints weather-seal caulking



ANCHOR HOLES were counter-sunk so boltheads could be pointed and concealed



FLOOR PLAN is a standard one for efficient operation

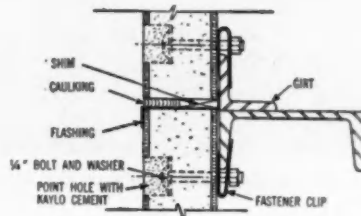
deck material. The roof tile are nominally 2 $\frac{3}{4}$ -inches by 18 inches by 36 inches and weigh only five pounds per square foot.

Use of these two materials made it possible to reduce the building load substantially and to use lighter structural steel. Because both materials are easily handled and applied, a saving in labor cost was realized.

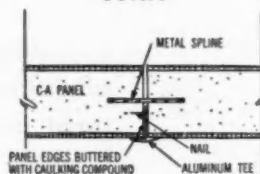
The structural steel frame was anchored to an 8-inch concrete slab foundation. The walls were made by securing the 2-inch thick panels (4 by 8-feet) to the steel frame by means of special fasteners. Where a standard-size panel would not fit, cutting was done by a portable power saw with an abrasive blade. A caulking bead was laid along the edge of the panel just before bolting it into position. This assured a good seal.

Anchor holes in the laminated panels were counter-sunk so that the bolt heads would be recessed. The space over and around the bolt heads was pointed to conceal the location of the bolts. A perfectly smooth surface resulted. After being bolted into place, the panels were butted with a chrome-plated joint strip to close the caulked joint to weather. Window frames were constructed of steel angles which were welded to the structural steel frame. For the inside wall of the salesroom the panels were fastened to the steel framing, thereby providing a double wall construction and concealing the steel members from view.

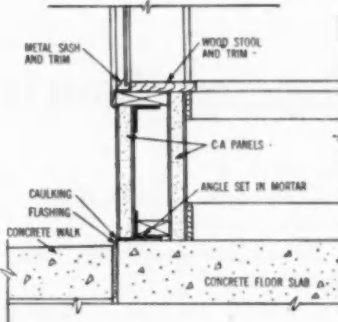
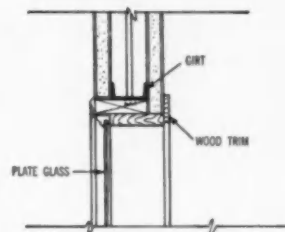
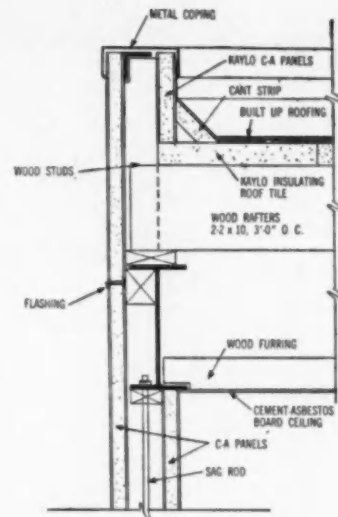
In the service area, however, this was not necessary and the cement-asbestos facings of the panels served as both outside and inside finish, except for painting. The steel work was



HORIZONTAL JOINT



VERTICAL JOINT



VERTICAL SECTION

left exposed. No other materials had to be added to the wall since a single thickness of the panel affords adequate insulation. Inside and outside decoration was a matter of standard procedure. The whole outside surface was painted white and trimmed with green. The inside was painted a light green, although any color combination could have been employed.

Roof joist construction was typical of that used in most flat deck buildings and consisted of two two-by-fours running side by side. They were spaced 36 inches between centers. Kaylo Roof tile, measuring

2 $\frac{3}{4}$ -inches thick by 18 inches by 36 inches, were spiked to the wooden joists with 20-penny nails. A built-up roof was placed over the roof tile. The deck needed no insulation because of the insulating value of hydrous calcium silicate. The parapet was finished with a metal coping.

The ceiling of the new station was formed by the use of a cement-asbestos board. The butt edges of the board were taped and ceiling then painted. This is not necessary, however, since the white undersurface of the roof tile has high light reflectivity and makes an attractive ceiling.



REAR WALL of house has a continuous assembly of glass panels and sliding doors placed between supports

## Exposed Structural Members Make Effective Design

**Builder:**

Olson Bros., Lake Bluff, Ill.

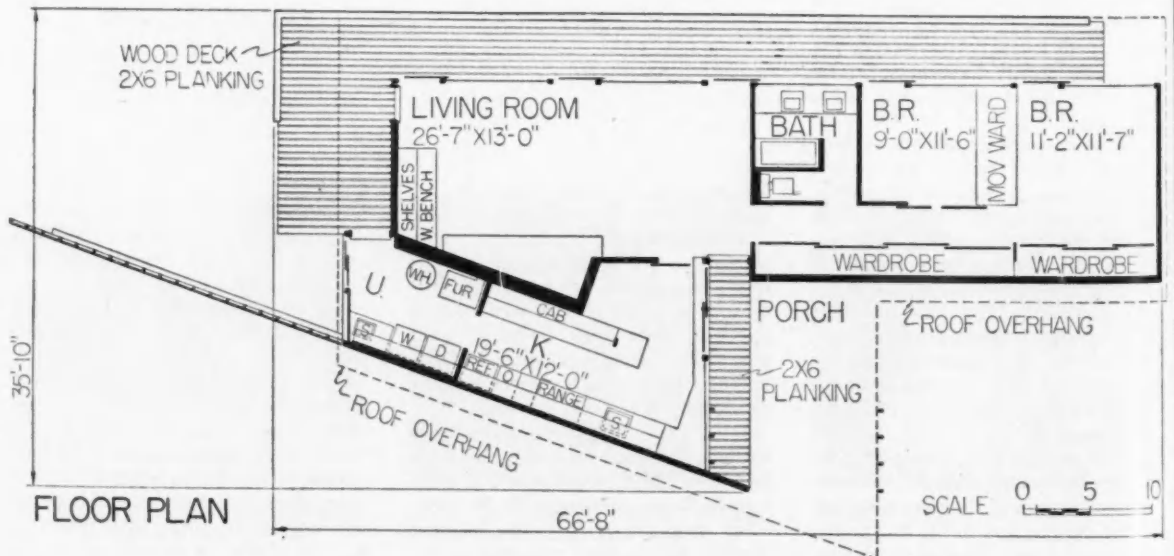
**Architects:**

Schweikher and Elting, Roselle, Ill.

**Owner:**

Robert R. Marring Jr., Highland Park, Ill.

*Economies are introduced in this all frame house through use of structural members for finish as well as framing*



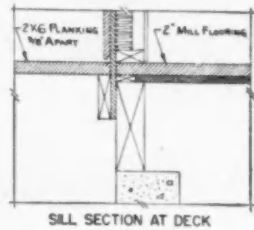
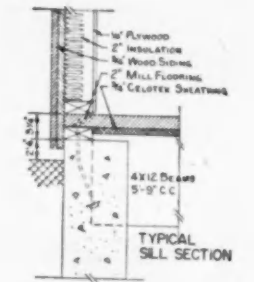
**E**POSED structural members can be incorporated as part of the architectural features of a house to give it attractive elements of ruggedness and character. This was done on the house shown here—first, to obtain the design effect that was desired; second, to utilize to the utmost the effects obtained by exposing structural members in the rooms and on the exterior; third, to establish economy in construction.

The structural frame of the house is a combination of wall supports on the street side, and posts and beams on the ravine side. Posts are spaced 5 feet 9 inches on center with 4x12 beams above dowelled to posts. The area between wall, posts and beams, which is approximately 15 feet, is spanned with 3x8 inch roof sheathing, exposed for finish on the room-

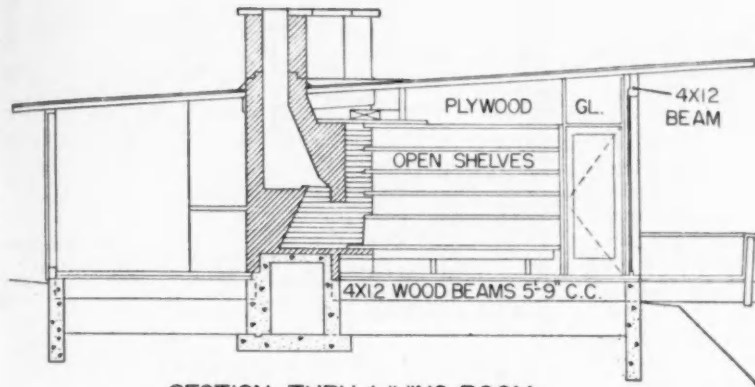
side and for reception of rigid insulation and built-up roof above. By using 3-inch thick sheathing further roof framing is eliminated.

Floor is framed with 2x6 inch milled material, but due to the additional load required 4x12 beams are placed under the floor at right angles to the length of the house, each spaced 5 feet 9 inches on center. Roof sheathing on the ravine side is extended out beyond the wall line to form a canopy over the wood deck. Floor framing beams are cantilevered beyond the wall to provide support for a deck which extends over the ravine. The 2x6 inch planking for the deck is spaced  $\frac{3}{8}$  inch apart for drainage.

The plan of this house, which conforms in shape to the small irregular lot, contains 1,100 square feet of

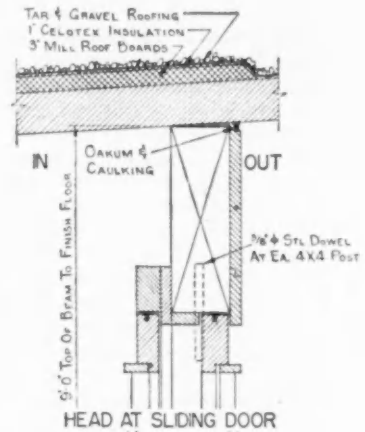


**DRAWINGS** show detail of floor construction at street and ravine front of house

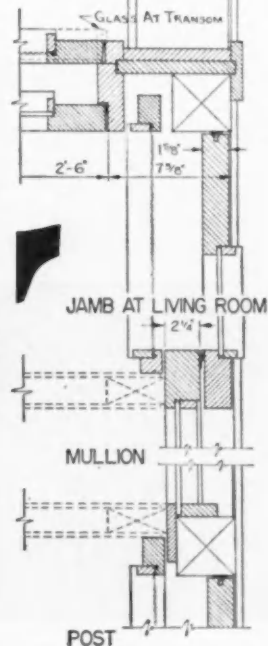


**SECTION THRU LIVING ROOM**

**CROSS SECTION** shows use of planking for floor and roof construction



**HEAD AT SLIDING DOOR**



**JAMB AT LIVING ROOM**

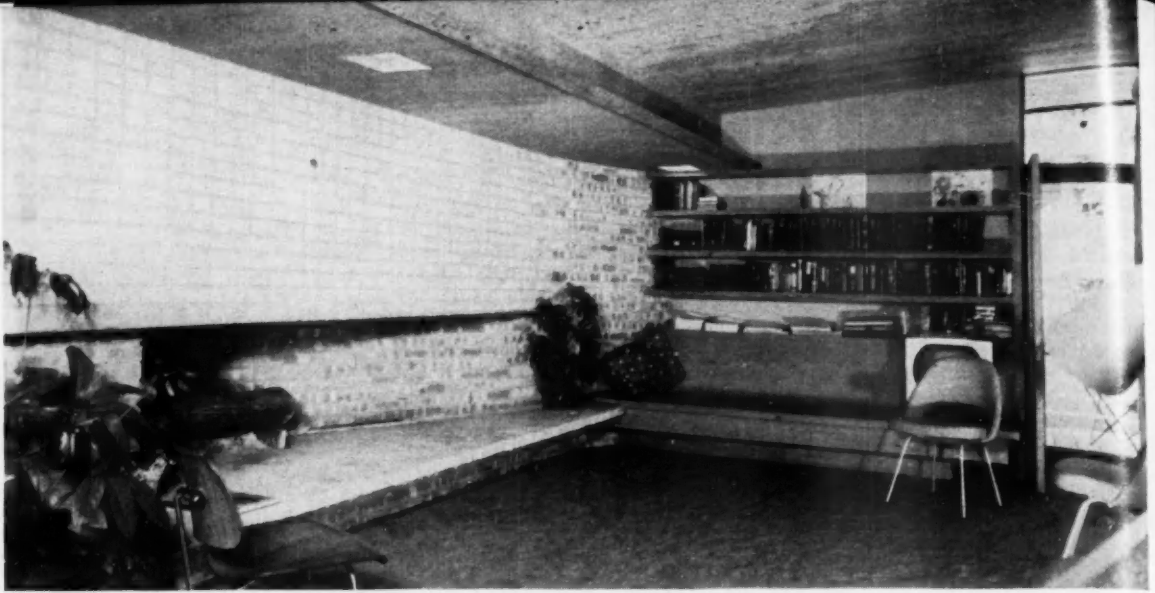
**MULLION**

**POST**



**STREET VIEW** of house presents a solid wall surface with no openings





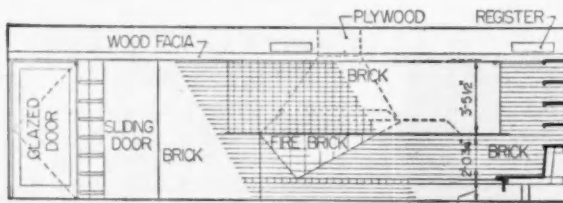
**LIVING ROOM** features a room-length fireplace and raised hearth. Drop ceiling above encloses heat ducts

living area, 440 square feet for the deck, and 208 square feet for the combination porch and carport. The cost of construction is \$20,000 exclusive of the lot.

Features of the house, exclusive of the construction, are the many built-in units which reduce the furniture requirements to a minimum, and the extended fireplace which occupies an entire wall in the living room.

The unusual shape of the fireplace opening is the natural result of the plan arrangement. The opposite side of the long angular wall of the opening adjoins the kitchen where side walls run parallel to the road. The overmantel of brick is parallel with the side wall of the living room to form an interesting ensemble. The raised hearth, extending to the end of brick wall, forms a ledge that can be adapted for many purposes.

A novel method was employed in the construction of the 12-inch overhang of the raised hearth. Quarter-inch round reinforced bars are placed in every mortar joint of the hearth at right angles to the front. The extended hearth, thus, literally becomes a cantilevered slab.

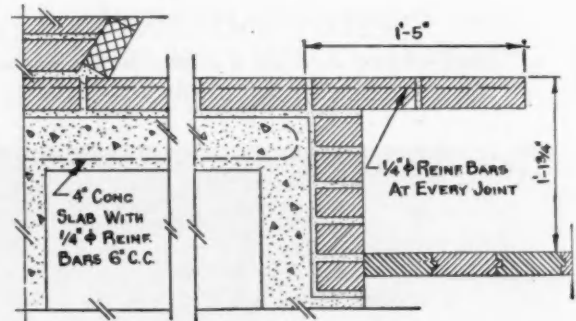
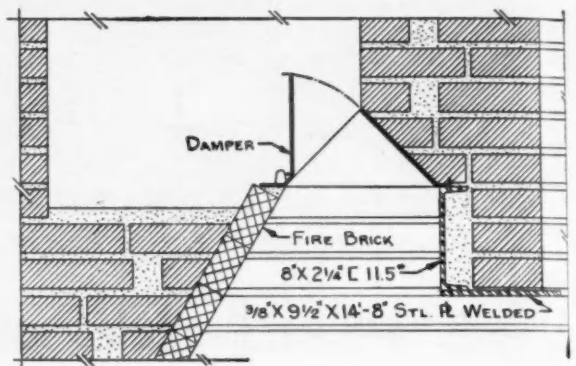


**ELEV. OF FIREPLACE IN LIVING ROOM**

**ELEVATION** shows relation of fireplace opening to brick wall

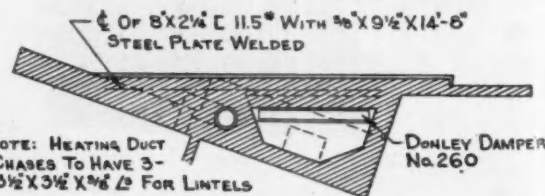


**3-INCH MILLED** roof boards form ceiling in living room



**FIREPLACE DETAIL**

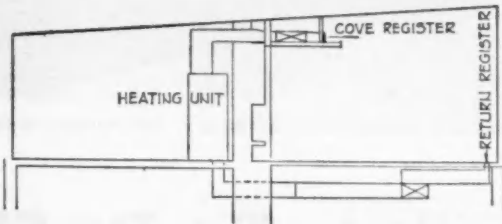
**DETAILS** show unusual fireplace opening construction



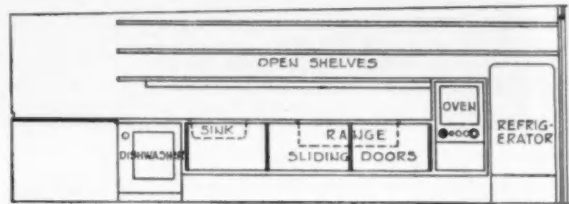
**PLAN OF DAMPER & SMOKE CHAMBER**

**PLAN** of fireplace above opening level

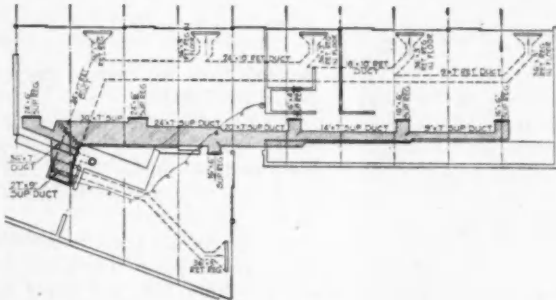
**KITCHEN** with wood ceiling, walls, shelves, cabinets and counters all finished in natural wood tones with surfaces waxed. Framing posts for carport are placed in front of large stationary glass panel



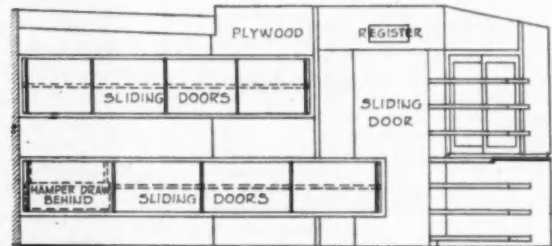
**SECTION** showing position of supply and return ducts in house



**KITCHEN FEATURES** open shelves, free standing cupboards



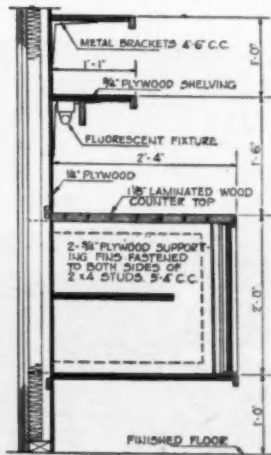
**PLAN OF SUPPLY** and return ducts for warm air heating system



**NOTE OPEN AREA** above and below cupboards

**BRAND NAME PRODUCTS USED**

- Armstrong Cork asphalt tile
- Bryant gas-fired furnace
- Celotex insulating board, roof insulation
- Crane bathroom fixtures
- Denley fireplace damper
- Hotpoint automatic laundry and hot water heater
- Insulite Bildrite wall sheathing
- Minneapolis-Honeywell controls
- Fryne exhaust fan
- Schlage hardware
- Thermador kitchen range
- Timber Structures milled sheathing



**TYPICAL COUNTER** cabinets and shelves



**CHINA SHELVES** in kitchen



SET-BACK of living room wall and garage, together with broken roof lines enhance front elevation of this Dubuque, Iowa home

## H-Shaped House Built to Fit Its Site

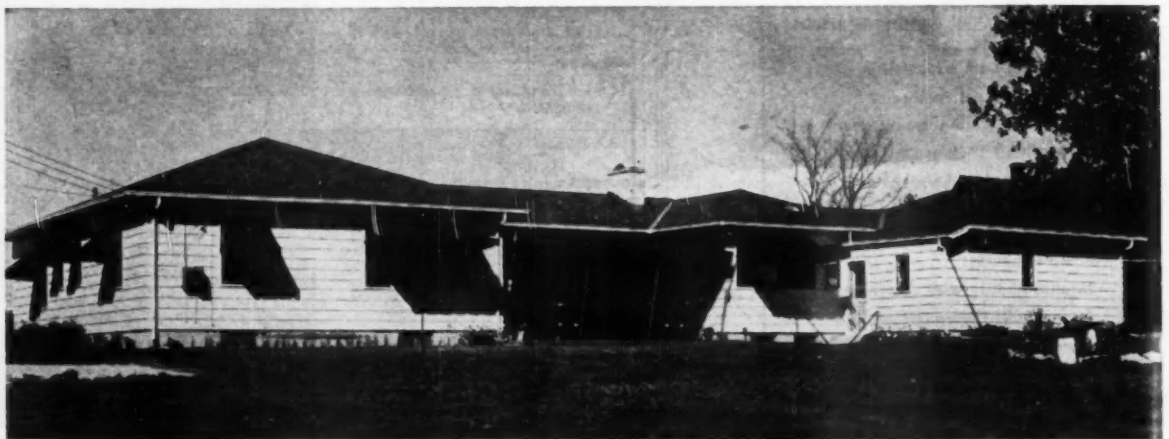
**Builder and Designer:**  
**Vern Carris**  
**Dubuque, Iowa**

**B**ECAUSE of the gently rolling hills that surrounded its 110 x 700 foot lot, this Dubuque, Iowa residence was designed in an "H-shape" to permit a full living room view of an equally scenic front and rear landscape. Off the centrally located living room are two wings. One contains the kitchen-dinette, dining room and lavatory. The other contains the three bedrooms and two baths. The entire sleeping area directly accessible from the front entrance can be

isolated from the rest of the house with a folding door.

Recognizing the importance of closet space, two of the bedrooms have two wardrobes each, and the third, one. The master bedroom has its own private bath.

A concrete slab patio is at the rear of the living room. The patio is accessible from both the living room and the dinette. It is shaded by a large awning. The attached garage is set back 22 feet 10 inches from the



PATIO and window awnings give unity to rear elevation



**DOUBLE TIERS** of factory built wall cabinets contribute to kitchen efficiency

front of the house and there are side doors to the kitchen-dinette and rear yard from the garage. Stairs lead from the dinette to the full basement, which has three distinct areas—heating, laundry, and recreation. The interior walls are finished with  $\frac{3}{8}$ -inch gypsum wallboard over  $\frac{1}{2}$ -inch fiberboard sheathing.

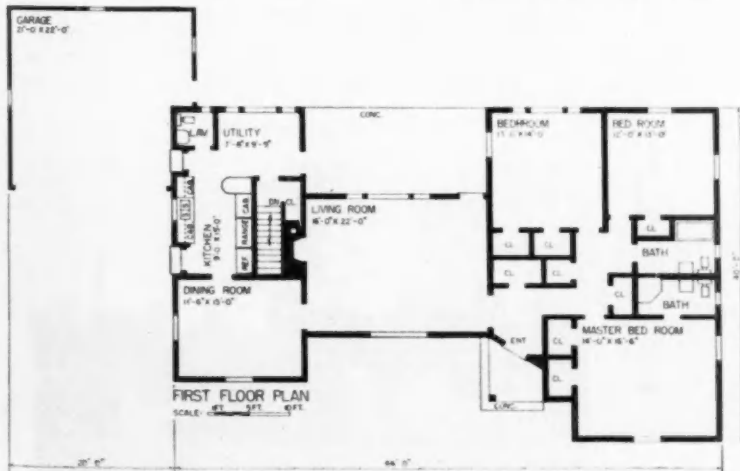
Bonus cabinet space is featured in the colorful kitchen, which has white wood cabinets, yellow walls, red ceiling and a speckled linoleum floor. In addition to cabinets below the work counters, there are two tiers of factory-made wall cabinets on two walls. Other kitchen features include a garbage disposer, exhaust fan, and a bullet shaped spotlight above the sink. The home is heated with oil.



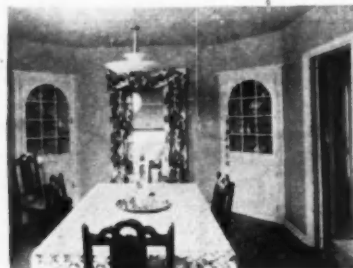
**AWNING-SHADED** factory-built window unit allows living-room occupants clear view of farm land at rear of house

**BRAND NAME PRODUCTS USED**

- Adams Co. fireplace damper
- Armstrong linoleum
- American Standard plumbing fixtures
- Carr, Adams & Collier Bilt-well windows, combination storm and screen units, corner china cabinets, kitchen and bathroom cabinets
- Corbin (P & F) hardware
- Frantz garage door
- General Electric garbage disposer, range and refrigerator
- National Gypsum Gold Bond wallboard
- Johns-Manville insulation
- Lennox oil-fired furnace
- Lightolier lighting fixtures
- Maizewood interior wall sheathing
- Marion hot water heater
- Minneapolis-Honeywell heating controls
- Modernfold folding doors
- Mulehide Town & Country shingles
- Nu Tone door chimes
- O'Brien paints
- Pittsburgh Plate Glass Twinwinds
- Pryne exhaust fan
- Pullman sash balances
- Rezo hollow core doors



**LARGE CLOSET** areas are a feature of this plan

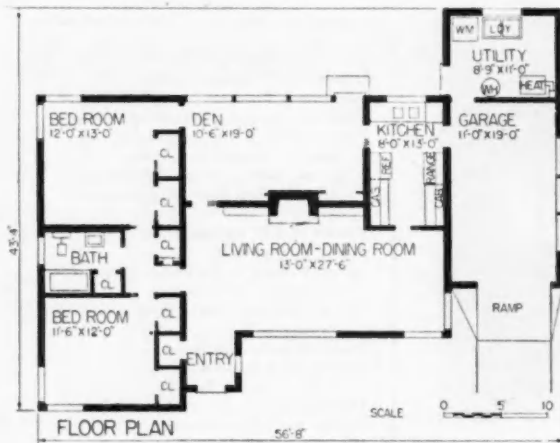


**CORNER CHINA CABINETS** with storage space increase utility of dining room

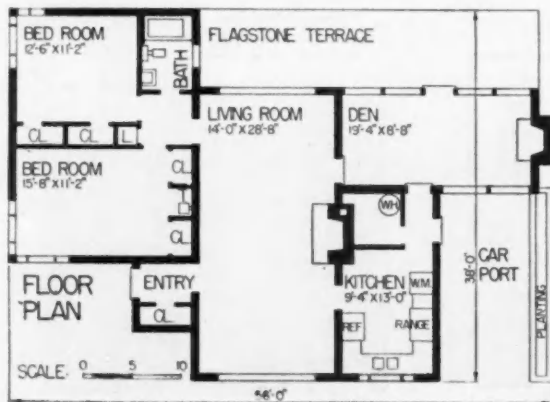




WALLS are white stucco over concrete block; roof surface is light colored asbestos shingles



CIRCULATION in five-room house revolves around living room



TWO FIREPLACES a feature of this five-room house

## Two Good Examples of All Block Construction

**Builder:**  
Byrd Real Estate Co., Birmingham, Ala.  
**Architect:**  
Frank Burford, Birmingham, Ala.

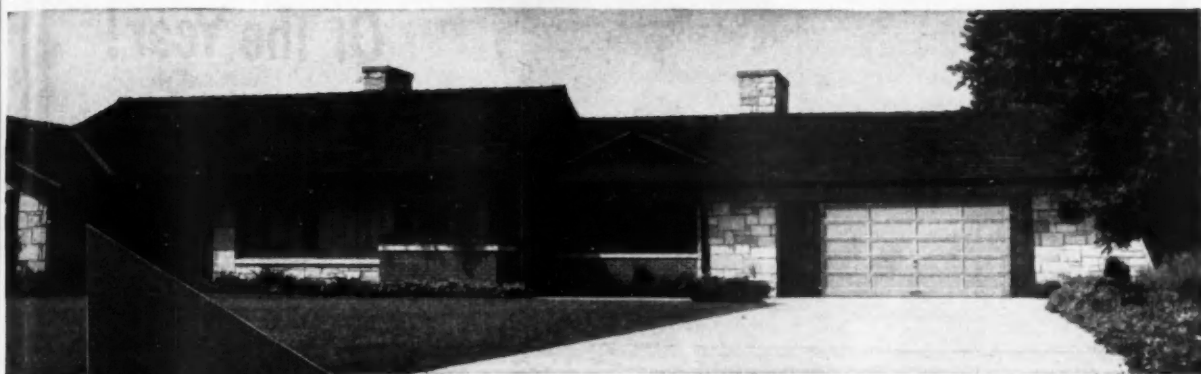
THESE two houses located in Vestavia Hills, a suburb of Birmingham, Alabama, have exterior and interior walls constructed entirely of concrete blocks. The blocks on one house are covered with cement stucco; on the other the blocks are exposed. Plaster is applied directly to the inside surface of all blocks. Both houses are built on concrete slabs.

The floor plans are similar in both cases, each containing two bedrooms and a large den or all-purpose room in addition to the other rooms. The house at the top of the page contains 1,425 square feet with 240 square feet for a garage. The other totals 1,358 square feet for the house and 218 square feet for a carport.



EXTERIOR SURFACE is concrete blocks, painted

# AGAIN **Ro-Way** DOORS MAKE NEWS!



NEW TAPER-TITE  
TRACK

NEW SEAL-A-MATIC  
HINGES

NEW CLASSIC  
DESIGN

Once again Ro-Way doors are making big news! With the handsome new 5-section *Classic* design, new Taper-Tite track, and new Seal-A-Matic hinges, they're far and away the finest residential garage doors in Ro-Way history.

Designed especially for ranch type houses, the new Ro-Way *Classic* adds new beauty to this style of architecture. See how its horizontal panels carry out the lines of the house, and tend to accentuate its rambling character.

Inside, too, there've been some changes made—for even better performance, smoother operation. The new Ro-Way Taper-Tite track and Seal-A-Matic hinges work together to snug the door tightly against side and head jams for positive protection against the weather—yet permit easy, almost effortless up-and-down operation.

Here's proof again that Ro-Way sets the pace in overhead type garage doors. Proof that it pays to specify Ro-Way for all residential, commercial and industrial installations. Specify Ro-Way—and be sure of the finest.

*Taper-Tite track and Seal-A-Matic hinges are available on all residential Ro-Way doors, and on some models of commercial and industrial doors.*

*there's a Ro-Way for every Doorway!*



Nationwide sales and installation service. See your classified telephone directory for nearest Ro-Way Distributor.

**ROWE MANUFACTURING CO., 791 HOLTON ST., GALESBURG, ILLINOIS**  
NOVEMBER, 1951



"You ought to be shouting that story from the roof," said my prospect.

## A Prospect Gave Me The Sales Idea Of The Year!

IT was funny the way it happened. We were walking around the outside of the house when my prospect said, "What's that?" And he pointed to the Anticipating Thermostat.

"Just one of the thermostats in the new Honeywell Electronic Moduflow control system," I said. "It matches your heating to the changes in weather. Working together with another thermostat indoors, it makes sure your rooms are always comfortable. This system can be 100 times more sensitive than standard controls."

Well—you should have seen his face light up. "That's really something," he said. "Why, you ought to be shouting that story from the roof. It's one of the best features in the house!"

Frankly, I was amazed. I'd put in Honeywell Electronic Moduflow because I knew my customers would be more comfortable—and better satisfied with the house. I'd never thought about it as a special sales feature like my modern kitchen and automatic laundry and my picture windows. But this experience changed all that.

Since then, I've been making a big point of electronic temperature control—both in my sales talks and my advertising. And the response has been wonderful.

For my money, the new Honeywell Electronic Moduflow is the sales idea of the year.

☆ ☆ ☆

The new Honeywell electronic controls can help you sell houses, too. For more of the "whys" and "hows" call your local Honeywell office. Or write Honeywell, Dept., AB-11-191, Minneapolis 8, Minnesota.



MINNEAPOLIS  
**Honeywell**

*First in Controls*

# PANEL WINDOW SYSTEM ADDS SALABILITY...

lets you feature "Thermopane in every window!"



WITH CONVENTIONAL WINDOWS

These are two drawings of the same house . . . with one big difference. One has conventional windows—the other features the newest idea in windows—the panel window system with *Thermopane*\* insulating glass throughout the house.

What does it do? Makes homes of any price class more attractive to buyers. Saves so much time and material cost that it actually should enable you to use *Thermopane* in every window, thus giving home buyers one of the most-wanted features you can offer them.

Panel windows are made up of rabbeted, pre-cut 2 x 6's that come to the site all ready to nail together to form a finished frame—ready for glazing with DSA *Thermopane* standard units. They may be installed singly or in multiples for other windows throughout the house.

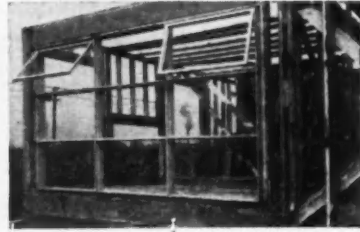


WITH NEW PANEL WINDOWS

1. Carpenter nails together the pre-cut, rabbeted members to make a complete panel window frame. Cutting and fitting eliminated, he can assemble the frame for a 9-light window wall in 20 minutes.

2. Top-hung ventilators may be easily put in as many openings as you wish. Can be readily screened and, when made of wood, can be weather-stripped. Used singly or in groups, they provide ventilation in all rooms.

3. Panel window frame is ready for glazing. Takes standard 45½" x 25½" units of DSA *Thermopane* for fixed lights. Ventilators take standard 42½" x 22½" size. Only two glass sizes required.

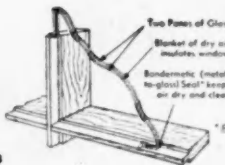


Send for full Information . . . Mail the Coupon



**Thermopane**

LOOK FOR THE NAME ON THE SEAL BETWEEN THE PAGES



Two Panes of Glass  
Blanket of dry air insulates window  
Bondomatic (metal, no-glass) Seal keeps air dry and clean

Libbey-Owens-Ford Glass Company  
11111 Nicholas Building, Toledo 3, Ohio

Please send me complete information on installation methods for low-cost window of *Thermopane*.

Name . . . . . (Please Print)

Address . . . . .

City . . . . . Zone . . . . . State . . . . .





A Prospect Gave  
Me The Sales Idea

# PAC MISS

"You ought to be shouting that story from the roof," said my prospect.

*First in Controls*

AMERICAN BUILDER

# PANEL WINDOW SYSTEM ADDS SALABILITY...

Let your feature "Thermopane"

indow!"

... with one big differ-  
—the other features the  
dow system with *Thermo-*  
*pane*.

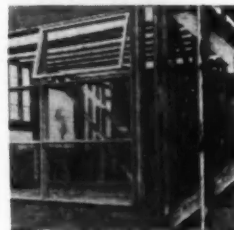
... price class more attrac-  
and material cost that it  
*pane* in every window, thus  
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# AGES SSING



... w frame is ready for glaz-  
dard 45½" x 25½" units  
pane for fixed lights. Ven-  
dard 42½" x 22½" size.  
sizes required.



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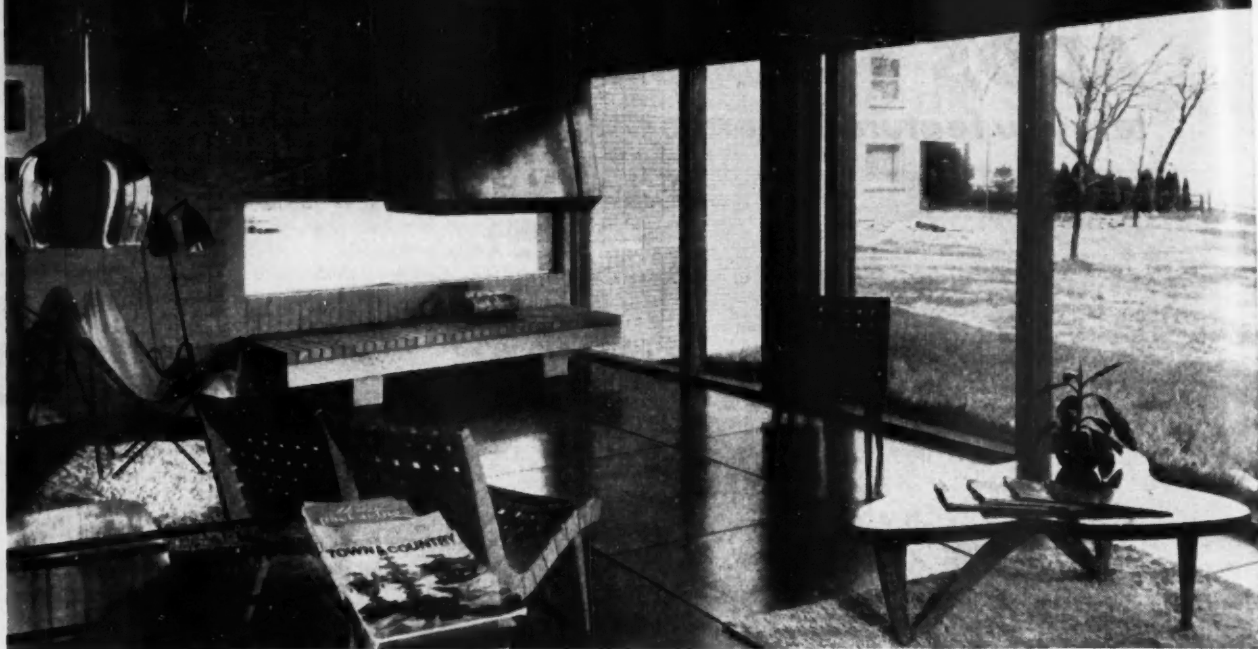
Address .....  
City.....Zone....State.....



*Thermopane*

LOOK FOR THE NAME ON THE SEAL BETWEEN THE PANEES





DOUBLE GLAZED WINDOWS of Wisconsin home permits unobstructed view of Lake Michigan. Fireplace has heat-resistant glass backing

## Unusual Radial Design Centers Interest on Rear Yard

**Builder:**  
Goelzer & Schultz Co.  
Milwaukee, Wis.

**Designer-Owner:**  
James D. Floria  
Milwaukee, Wis.

**Structural Engineer:**  
P. L. Ruenzel  
Milwaukee, Wis.



LONG CURVED OVERHANG in front ends at concrete block wall projection

**I**NCORPORATING the use of a new type of scored concrete block along with redwood siding and interior paneling, this Fox Point, Wis., home, which faces Lake Michigan, was designed on a radius to a focal point in the rear of its 110 x 640 foot lot. At the front its wall and roof lines are convex, at the rear, they are concave.

The concrete blocks, scored to simulate stacked Roman bricks, were designed, as was the house itself, by its owner, James D. Floria, partner in the Milwaukee industrial designing firm, Brooks Stevens Associates. Containing 1400 square feet of floor area, the house, including landscaped scenic site, cost \$35,000.

All walls, interior partitions, and hallways, running from south to north, follow the arc of the circle, while those east to west, follow the radii.

The north wall of the living room is of double concrete block construction with a two-inch air space. It extends nine feet beyond the front of the building and acts as a protective barrier against chilly wintry blasts. Except for the unglazed portion of the west living room wall, which also is of concrete block, all other exterior wall surfaces are redwood siding.

The east wall of the living room, which faces Lake Michigan, is entirely glazed. It consists of five double glazed panels and a glass door. Above the windows are individual custom-designed two-way-opening vents. The living room has a ceiling of exposed redwood boards and redwood veneer 3x10 inch fir beams.

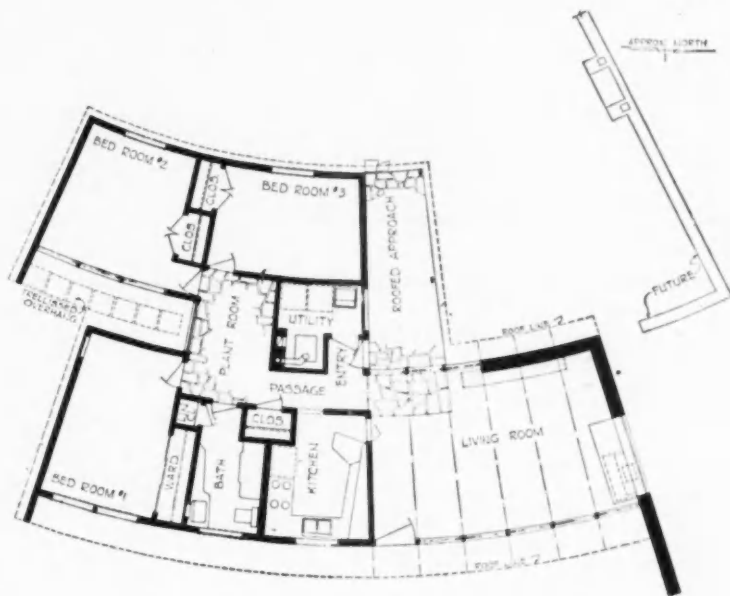
To allow masons to start and finish trowel strokes in one square, the colored concrete two-inch slab floor placed over concrete planks was scored into sections.



**SLIDING ORNAMENTAL GLASS DOORS** make it possible to see outlines of packages in cabinets

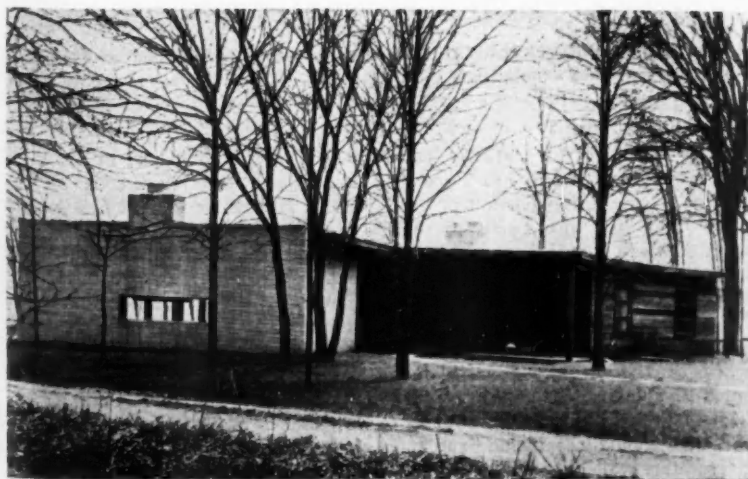


**CURVED HALLWAY** has walls of scored concrete block and redwood boards. The floor is Tennessee stone



**FLOOR PLAN**

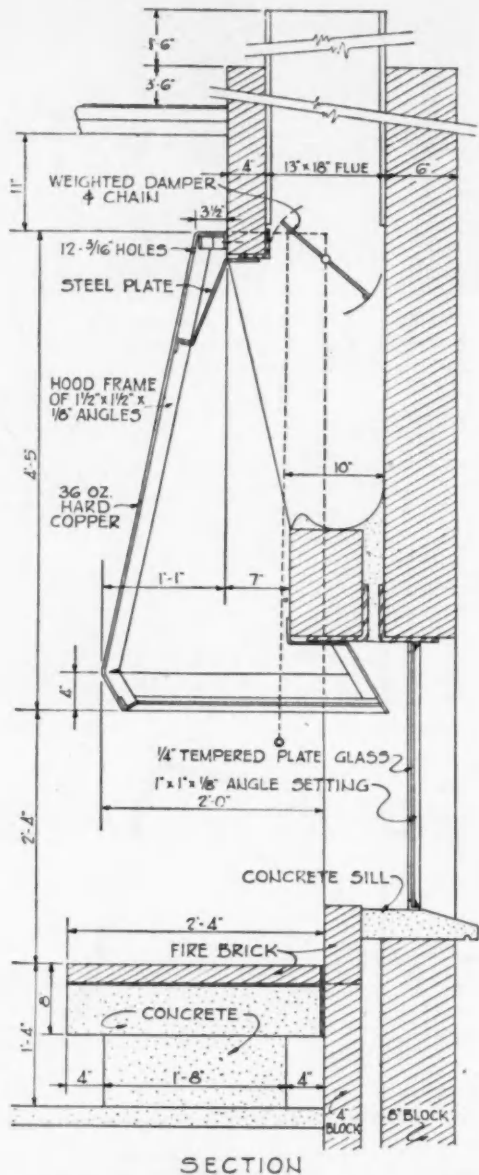
**FLOOR PLAN** shows how walls and partitions adhered to focal point planning



**INTERESTING COMBINATION** of materials is shown in side and rear view

- BRAND NAME PRODUCTS USED**
- Advance Stone Cast Co. of Milwaukee Bric-Blax
  - Armstrong Cork 5/16-inch cork tile
  - Bronx exhaust fan
  - Coronado kitchen range, refrigerator and automatic laundry
  - Crane plumbing fixtures
  - Fornica vanitory bathroom cabinet
  - Gate City awning-type windows
  - Hook & Ackerman furnace
  - Hotpoint garbage disposer
  - Ledlin & Finland house lighting fixtures
  - Libbey-Owens-Ford Thermopane windows
  - Minneapolis-Honeywell heating controls
  - Nu Tone door chimes
  - Pittsburgh Plate Glass Herculite panel (behind fire-slab)
  - Rezo hollow core flush and sliding doors
  - Thermador wall oven
  - Thru-View vertical blinds
  - United States Gypsum Rocklath





SECTION

**FIREPLACE SECTION** shows support under and hood over unique hearth slab

At the north end of the living room is an unusual open fireplace, incorporating an 8 foot by 2 foot 4 inch reinforced concrete slab with firebrick top, supported 1 foot 4 inches above the floor. Above it is a copper hood, while set into the wall behind the fire slab is a 96 by 30 inch heat-resistant plate glass panel.

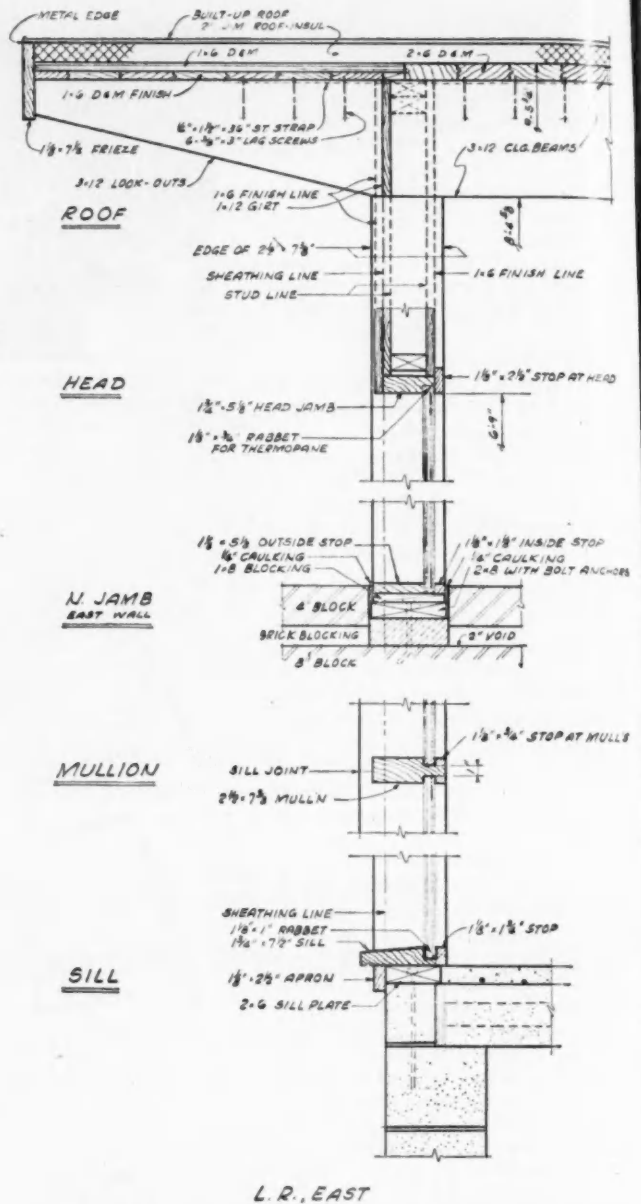
The entry section of the living room, the roofed loggia, hallway and indoor planting room are all floored with Tennessee stone. Off the planting room are the three bedrooms and bath. One of the bedrooms is being

used by the owner as a studio. The custom-designed kitchen has a pass-through to the dining portion of the living room and also opens to the center hall. In addition to redwood cabinets with decorative glass sliding doors, the kitchen has Formica covered work counters, aprons, drawers, splashboard and dinette table, all designed by the owner. He also designed the bathroom vanity and much of the furniture.

Kitchen appliances include range, refrigerator, wall oven, and garbage disposer. The clothes washer and

dryer have been placed in the heating room which is directly off the entry. Hot water radiant heat is supplied by a gas-fired boiler, also equipped for domestic hot water output.

All rooms have at least one wall of redwood. Except for those that are glazed, all other walls and partitions have been given a two-coat sand float finish over gypsum lath. Ceilings follow the slight roof slope, with living room excepted, plaster against joists. Doors are birch with a redwood stain.



CONSTRUCTION DETAILS ON FLORIA HOUSE

**FOUNDATION, WALL, window, and roof construction details.** Scale 1/2-inch equals 1 foot

# Remodeling and Maintenance Are Constant Markets

By R. E. Saberson

**A** CHANGED set of circumstances now looms on the horizon of the construction industry.

Some of these new conditions will be regarded by home builders as a step up in opportunities. Others will be looked upon, in some cases, as insurmountable obstacles.

What happens in the industry will depend upon the attitude of those who not only construct the nation's buildings but are also equipped to keep them up to date and in good repair. Actually the latter job may well be the most important since it applies to all existing structures whereas the line on the chart which represents the rate of activity in new construction is more or less noted for its high peaks and low valleys.

Today we are still in the peak cycle as far as new construction needs are concerned. True the sharp edge of the unprecedented demand for new houses may be a bit duller in some areas, than was the case in the record year of 1950, but in most places there remains an acute shortage of homes.

But there is also another great market that is to be found on every side. To appreciate its size and importance we merely need to cast an appraising eye in any direction for it applies to the modernization and repair of practically all existing buildings in cities and towns of all sizes as well as on the farms of the nation.

## **Few Buildings That Cannot Be Improved**

The word "all" is used advisedly for there are few buildings that cannot be improved upon through the use of new materials that have come into the picture since they were built or, if available at that time, were not used.

The end result of the continuous evolution in building parts is a prodigious market that is never satisfied since the rate of obsolescence exceeds the facilities (including salesmanship) that are needed to stem the tide of deterioration.

Few, if any, establishments on Main Street are up-to-date and the same thing is true of the balance of buildings in the area . . . including homes. The big job that confronts the building industry today is to add the improvements that make them as good as new so that they will function efficiently and economically.

Examples? Here are a couple of cases in point. Take noise. Assuredly

it should be easy to convince the owners of stores, schools, churches, auditoriums, public buildings, and even homes, that a noise reduces efficiency. All of which adds up to a huge market through the use of modern acoustical materials.

Another case in point is insulation. Conservation of fuel is a must in a defense economy. Why use from one-fourth to one-third more oil, gas or coal than is necessary to achieve comfort in homes or in any other building? While the use of insulation is far more advanced than is the case with acoustical tile, the surface of this great market has only been scratched as is revealed by the tell-tale icicles which hang from the eaves of countless homes during the winter months, or the ever-present heat which robs occupants of comfort in homes located in warmer climes.

Best of all, under today's conditions, it does not require a pound or a foot of critical materials to achieve quiet and year-around comfort. No steel, copper, aluminum, brass or metal of any kind is needed to bring about this desirable transition in which the economies effected quickly pay for the job. What product, commodity or service packs more potent sales points?

Nor do we have to stop with these two typical examples which too often escape the attention and the interest of the industry that is equipped to provide them. The same things are true of the many elements mentioned above—floors, roofs, sidewalls, rejuvenated basements, finished attics.

## **Unusual Sales Opportunities**

One day last week the unusual sales opportunities which exist under present conditions were brought forcibly to our attention when an alert builder said to a friend of ours:

"Sure I can provide you with a 'new' home. Tell you what you do. Watch the 'Parade of Homes' next Sunday on your TV, or read the column after column of 'Homes For Sale' ads in your newspaper. When you come across something that looks promising as far as location and size are concerned, don't worry too much about other details. We'll give the place a careful going over and you'll be surprised when you learn what can be done with non-critical materials and a minimum of manpower to give you all you want in the way

of a home . . . more room for less money than if you tried to build a new house."

It all seemed to make rather good sense since there are 1½ old homes sold for every new one that is constructed. And why not? Locations are usually better since vacant lots in built-up neighborhoods are unavailable or too high in price. Then, of course, there is the ever-prevalent problem of how to get more space in the home. How else can the growing family obtain the number of rooms needed?

To our way of thinking it is plenty smart to utilize fully the critical basic materials already in place in existing houses rather than permitting them to become useless through neglect.

We are not claiming that the erection of new homes will not continue to play an important role in the construction industry. That seems to be assured with the passage of recent laws putting the government behind a drive to build permanent housing in defense boom areas and easing credit on homes costing less than \$12,000.

## **Some Materials Will Be in Short Supply**

There is one highly important thing the Government has not been able to do. It may turn on the spigot of easier financing but it cannot suddenly start the machinery that produces the essential materials needed to construct the homes. The best it can do is to set up controls that attempt to direct the flow of materials to projects that need them most . . . probably the toughest job in our national economy.

You may be sure of one thing. It will not be easy to obtain such materials in sufficient quantities to satisfy all eligible needs. Since they do not exist in sufficient quantities to meet top priority requirements, some one will have to do without.

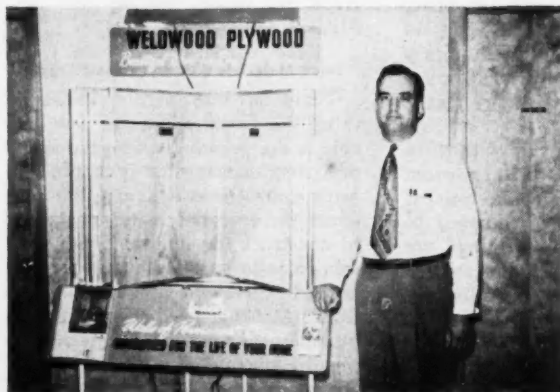
It is the same old story of the battle that was lost because of the want of a horseshoe nail. Great ingenuity, courage, determination and plain downright guts will be required to pull us out of the situation we now are in. If we are inclined to play down the importance of the rehabilitation of existing structures in favor of something bigger in new construction, we will not be making the most of our opportunities or meeting our full responsibilities.



DISPLAY of kitchen cabinets made in Seth Lumber Company shop



SERVICE COUNTER is of birch plywood with Formica top



MANUFACTURER'S DISPLAYS are featured in the showroom



MORNING DEVOTIONAL observed here before day's work begins

## Old Firm Gives New Yard a Modern Look

Architect:

Herman Howard

Owner:

Seth Lumber Company

Lincolnton, N. C.

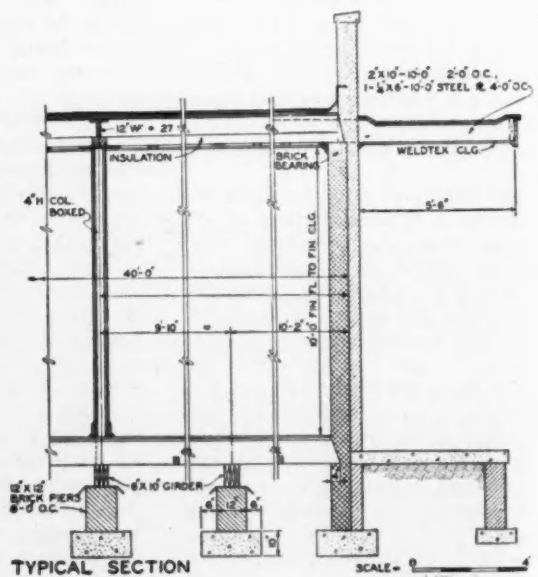
G. L. Goodson, President-Manager

**A**N old established dealer firm in Lincolnton, N.C., The Seth Lumber Company, recently completed and opened a new office and display store building featuring full plate glass front and extensive use of wood paneling on interior partition walls.

In the president's office, natural cedar paneling was used on two walls and knotty pine paneling was used in the drafting and conference rooms. Other partition walls are of birch plywood. Doors are flush birch. Other walls are plastered.

Floors are asphalt tile with a wide variation of colors in the different rooms. The president's office, however, has a cork tile floor. Ceilings are insulated tile with recessed fluorescent lighting fixtures.

In addition to the main sales and display rooms, there are three offices, a drafting room, a bookkeeping room, a conference room, and two washrooms. The conference room has been integrated into the plan to help contractor customers discuss building developments and problems with their clients—right at the source of their materials—supply where displays and samples are at hand. The sales room has good island displays, a hardware section, kitchen cabinet display, power tools display, door display racks, and other smaller manufacturers' displays.





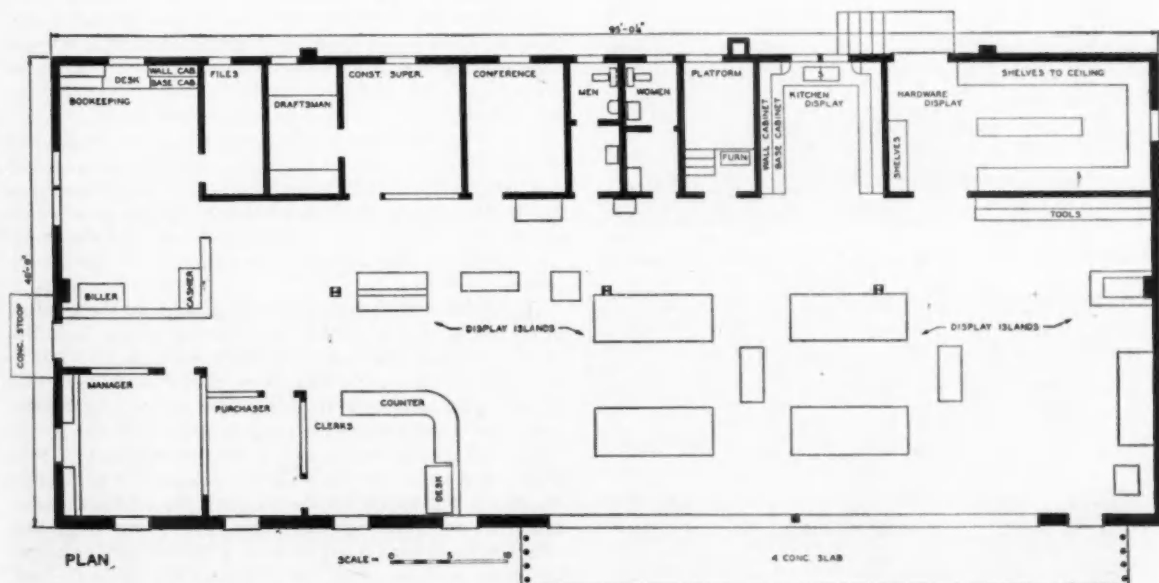
**PRESSED BRICK FRONT, large expanse of glass, and name canopy highlight new lumber yard display and office building**

Concrete block was used in the construction of the building which has a pressed brick veneer front. A 52-foot-long canopy across the front of the structure extends out  $5\frac{1}{2}$  feet beyond a sidewalk. This canopy, which supports the company's name is built with  $2 \times 10$  joists 10 feet long, 24-inches in center. These are cantilevered back into the roof joists. A steel plate  $\frac{1}{4} \times 6$  inches is bolted to every other canopy joist for additional strength.

Termite shields were placed on both the supporting piers

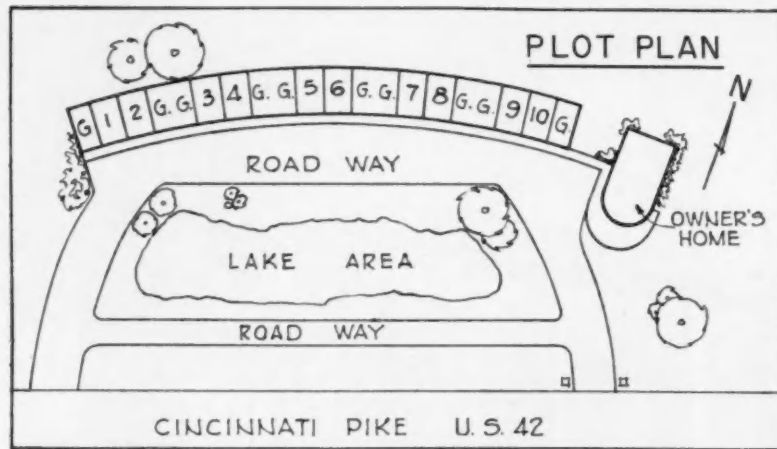
and the footings. The roof joists are  $2 \times 12$ 's 12 inches on center. Three steel H-columns down the center of the building support 12 inch steel, wide flange beams. The roof joists are tied to these. A 450,000 B.T.U. forced air furnace supplies heat in the winter months. A ventilating fan has been installed for use in the summer months.

A devotional corner reflects the religious feelings of the management and the employees. Here a morning devotional is read each day before work.



**FLOOR PLAN of new building shows relationship of offices and sales area**





PLOT PLAN showing relation of motel and office building to state road

## Here's Rest for the Motorist

Good design and construction, with all conveniences, add up to comfort and relaxation for the occupants

**Builder:**

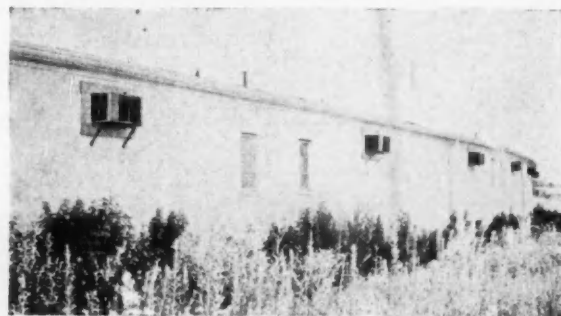
Frank Bradbury, Lebanon, Ohio

**Architect:**

Adamson & Moore, Lebanon, Ohio



INTERIOR OF UNIT showing conditioner located in opening



REAR VIEW of motel with conditioner bracketed in opening

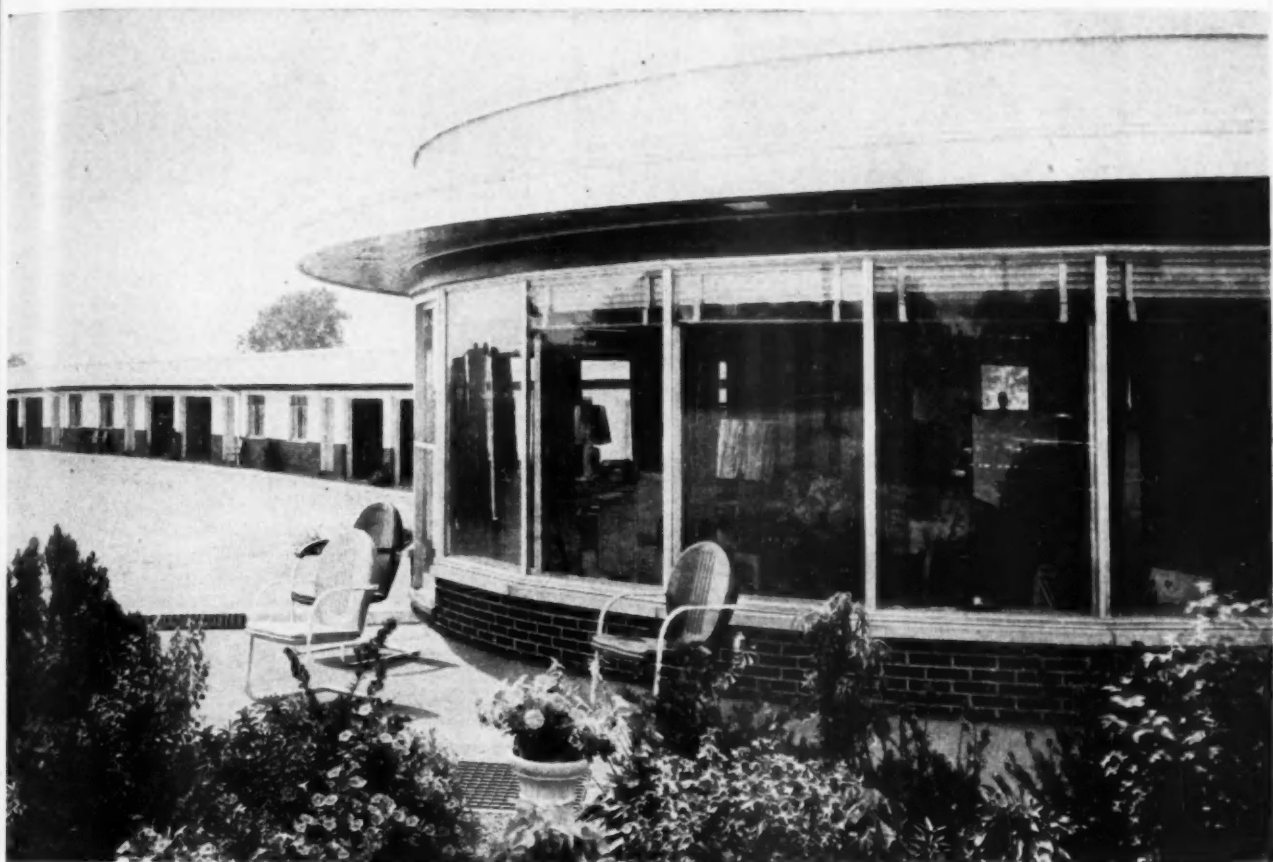


**T**HE Lebanon Tourist Court, Lebanon, Ohio, is an example of the current trend in motor court or motel planning, designed to incorporate economically the most desirable conveniences and accommodations.

The court is composed of two separate buildings. The main building, which is the motel, consists of ten individual units, each with a large room for sleeping and living, private bath, closet space and attached garage. All are placed under a single roof. This building is formed in the shape of a broad semi-circle facing a gravel approach drive and a landscaped area between drive and road.

The other building, placed just east of the motel and facing the road, is used as a combination office and living quarters for the owner. A feature of this building is a large half circle room which is faced with full length glass panels across the entire front. This room is used as the living room for the owner as well as an office and lounge for the guests.

A feature of both buildings, which adds to the comfort of all occupants, is the air conditioning system installed. In this modern brick and concrete tourist court, 1/2 H.P. window-type air conditioners were placed in the back wall of each individual unit. In this unique type of installation, every guest can control the temperature of his own room. The on-off control for the unit is conveniently located next to the light switch on the wall between the two beds. This is not only convenient for the occupant, but is also economical from an operating standpoint. The owner finds that once the room has cooled down to a comfortable temperature late in the evening, the guest usually turns the unit off unless it is exceptionally warm. Each room is approximately 15'-6" x 14' in size and the conditioner cools



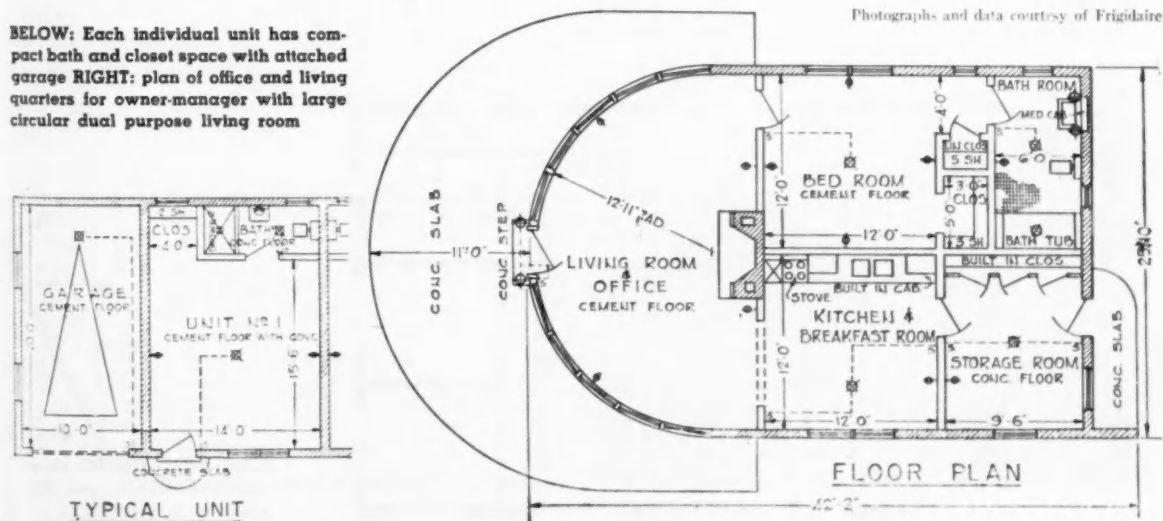
**MOTEL** with lobby of office building in foreground. Note orderly arrangement of various units and garages

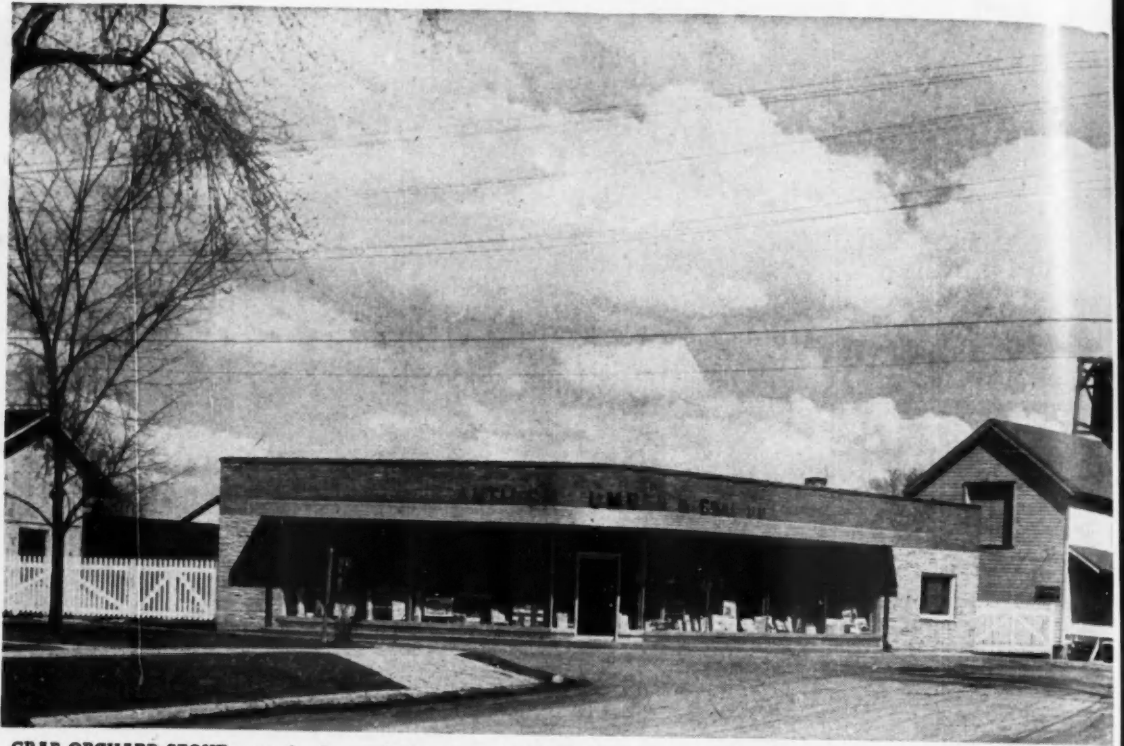
this space in a short period of time. An additional feature, for greater guest comfort, is the circulating ice cold drinking water system with a separate faucet on each sink basin. This system is operated by a 1-H.P., air-cooled compressor, and water cooling storage tank.

Walls of both buildings are constructed of concrete blocks and face brick. Face brick extends from grade to window sill. Cement stucco is applied to face of blocks from sill to coping line except on rear wall where blocks

are left exposed. Walls separating individual units are also constructed of 8-inch-thick blocks. Floor construction is a 4-inch concrete slab placed on four inches of gravel. This is the finished floor in the units. Batt insulation is placed between joists in ceiling with a three-ply built-up surface on the roof. All walls and ceilings throughout are plastered. Windows, including large sash in living room, have aluminum frames. All units are heated by an oil-fired steam boiler.

**BELOW:** Each individual unit has compact bath and closet space with attached garage **RIGHT:** plan of office and living quarters for owner-manager with large circular dual purpose living room





CRAB ORCHARD STONE around a large glass area under a wide canopy make attractive front on this building material store

## Small Town Lumber Dealer Builds Store for Merchandising

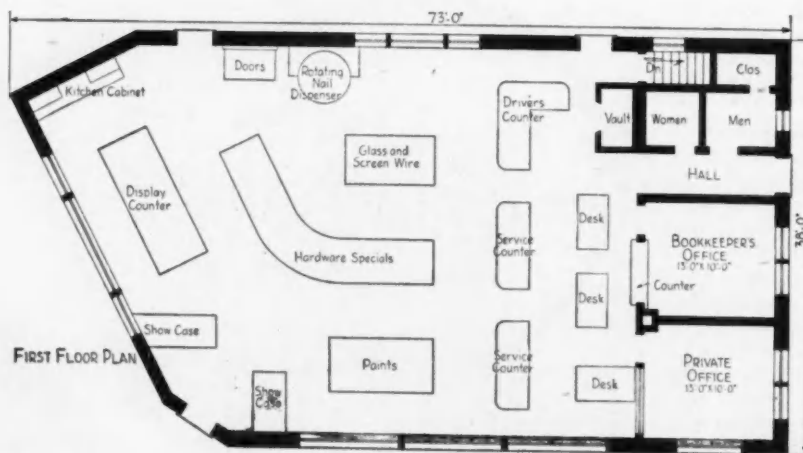
**Builder:**

Edward Kidere,  
Lake Villa, Ill.

**Owner:**

Antioch Lumber and Coal Co.  
Antioch, Ill.  
Edmund F. Vos, President

*New, modern salesroom and  
offices planned for efficiency and  
customer satisfaction*



**PLAN OF BUILDING** shows large, open display and office areas

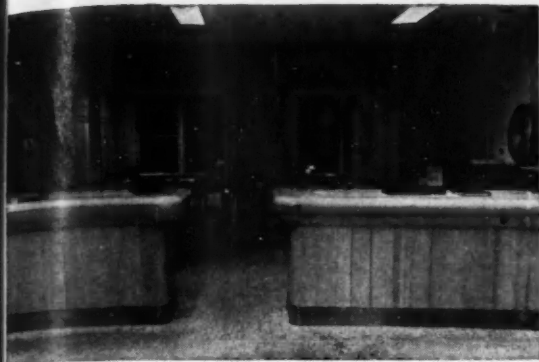
CUSTOMER

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BASEMENT PL

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**CUSTOMER COUNTERS** are made of imported Parana pine



**THREE CUSTOMER COUNTERS** prevent congestion of customers

**T**HE new fireproof office and display building of the Antioch Lumber and Coal Company, Antioch, Illinois, is in tempo with modern retail lumber merchandising techniques. Replacing a 75-year-old structure the 60x38-foot building features modern materials and design.

The exterior incorporates large glass areas which invite inspection of displays. Roman rough brick and Crab Orchard stone are combined on the front with a stainless steel canopy carrying the firm name. The company's name on the canopy is lighted from the back.

The interior island displays are widely spaced to provide ample shopping area. Thirty feet of customer counters are divided into three units to prevent a congestion of customers during rush periods. The floors are mottled terrazzo. Lighting is soft fluorescents recessed into the ceiling.

A stairway at the rear of the display room leads to the basement where glass, paint, and surplus stocks are stored.

The building is of masonry construction with steel beams and floor joists. Wire netting laid over the steel joists was used as the base for the concrete floor. Terrazzo was poured over the concrete. The heavy steel framework is supported by steel posts.



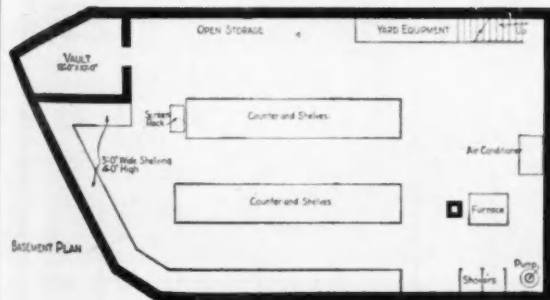
**SPACIOUSNESS OF DISPLAY** areas invites customer browsing



**OFFICE AREAS** are to the rear of customer counters

**BRAND NAME PRODUCTS USED**

- |                           |                                |
|---------------------------|--------------------------------|
| American Standard furnace | Minneapolis-Honeywell controls |
| Du Pont paints            | Pittsburgh Plate Glass windows |
| Glidden paints            | U. S. Gypsum Rocklath.         |
| Johns-Manville insulation |                                |

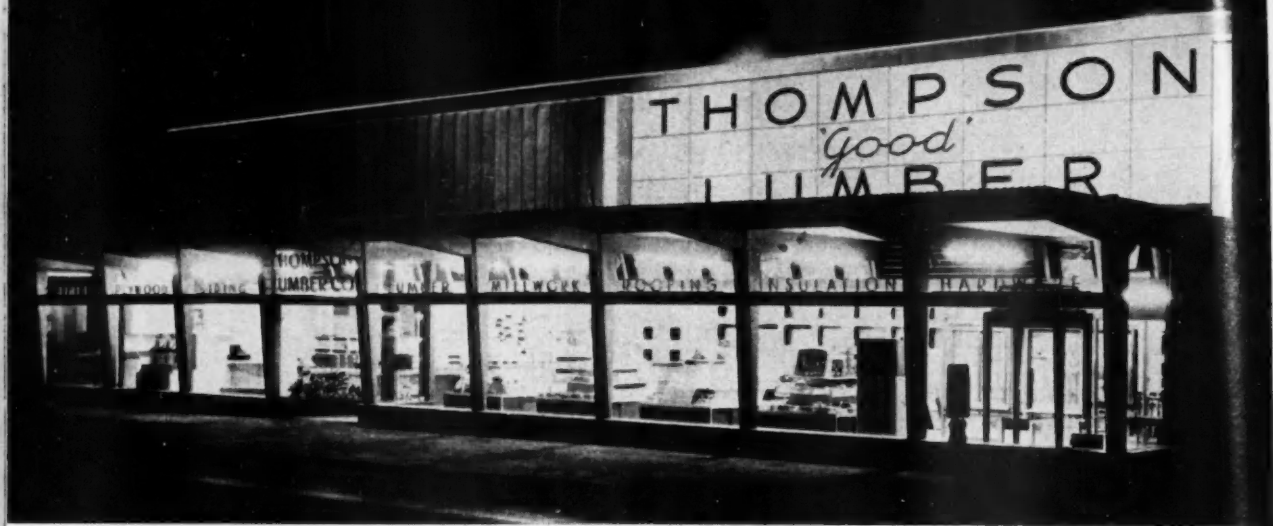


**BASEMENT PLAN** shows efficient storage layout



**BASEMENT AREA** houses screening, glass, paint, surplus stock





MODERN LUMBER SHOWROOM and yard built by Clarence Thompson, chairman Lumber Dealers Research Council, after fire destroyed old buildings Thanksgiving Day, 1950

## New Yard Planned for Customer Service

### Builders:

C. A. Petry & Son, Champaign, Ill.

Simon & Rettberg, Champaign, Ill.

Raymond Development Co., Champaign, Ill.

### Architect:

Latest trends in merchandising and lumber handling are incorporated in new Champaign, Ill., Yard

THE new display store and lumber yard for Thompson Lumber Co., Champaign, Ill., is planned around a business principle of merchandising. Designed with the customer in mind, building materials are displayed to emphasize their use.

Few materials carried by the dealer were featured in the construction of the new building. Clarence Thompson, the owner, felt that materials to be sold should be kept up to date and fresh in appearance. He did not believe that display materials should be incorporated into the building as displays because in time they would become soiled, wear out, or be superseded by later types.

The building incorporates a full plate glass front set angularly from expansive overhanging eaves. Roman brick was used from the foundation up to the front sills. The posts were cased with redwood which also was used in the vertical louvers at the left on the parapet wall. The right of the parapet wall, which carries the firm name, was built of 1/8 inch asbestos cement board. The offset entrance has a glass door and planting area on the interior side.

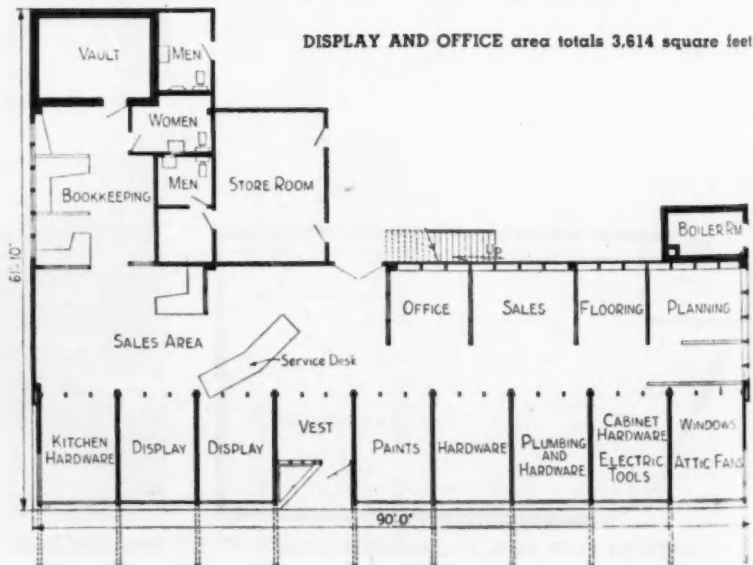
The new construction followed a fire that completely destroyed the main building and offices on Thanksgiving Day, 1950. The fire, origin of which was never known, burned

stock and all vehicles except the oldest truck. All employees reported for work the next day. Temporary office space was furnished by a neighboring wholesale firm. A large tent was erected on the employee's parking lot and lumber was delivered from there. Other lumber yards co-operated to help supply Thompson's customers while stock was being rebuilt.

During this period Thompson and his staff visited 50 other lumber yards

studying display and warehousing methods. These ideas were crystallized in staff meetings and given to the architect. Though the building was not quite completed, it was occupied on May 28, 1951.

The store features a service desk, rather than the usual counter, where a customer can be comfortably seated, and discuss and purchase his material. Unusual display methods, usually not found in lumber yards, are sta-



low boxes. They are three tiers high and run almost the complete length of the building. Displayed in them are squares of roofing, paneling, siding, and home planning photographs. The shadow box displays are lighted with fluorescent tubes. Three rows of island counters display and stock small builders items. A window frame section has windows mounted on swivels. This allows their construction and trim to be viewed from either side. The windows can be changed when they become out-of-date or soiled. Other interesting display features are a tool bar, a turn-around kitchen cabinet display built on casters, and a home planning section. There are no private offices. This serves as an invitation to customers to discuss their problems with the firm's officials.

### Warehousing Methods

Not to be overlooked in this new yard are the warehousing and yard methods. The builders hardware department has become the place where contractors do their ordering.

The first floor storage area stocks plywood, wall boards, hardboards, and roofing materials. This expansive area with its orderly stock and vertical racks amounts to 60 per cent of the company's volume.

The second floor houses a complete stock of millwork. A reversible conveyor carries the material. End loading and storing of framing lumber is one of the time and labor saving methods used by the firm. Box cars are unloaded to the permanent storage space. This operation does away with double handling. A company-designed



**SERVICE DESK** is an integral part of Thompson's building material merchandising



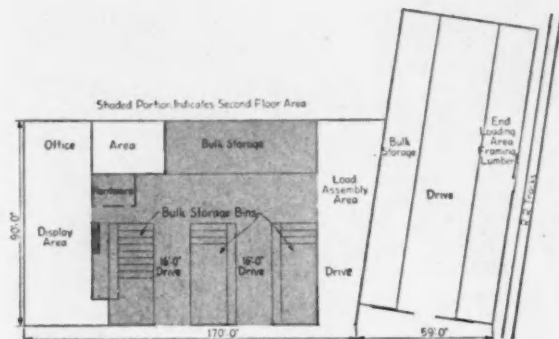
**ISLAND DISPLAYS** feature small building items and packaged goods



**SALES COUNSEL AREA** in the rear of display room where consultations are conducted to solve building and financing problems



**WINDOW UNITS** are displayed in turn-around frames so the complete units can be studied



**LAYOUT OF THE YARD** shows storage and alley ways. The large drive areas facilitate easy handling

end-loading truck picks up the lumber and transports it to the delivery assembly area. The end loading system, though in its experimental stages, was brought to the company by the sales manager. While in the Navy he saw end loading and storage successfully used in handling large propeller crates. The end loader can transport 1000 feet of material in one load.

All materials in the yard are palletized so that they may be easily shifted. Because all material is kept under cover, frequently the item wanted is piled to the rear. The palletized method fork truck operation allows a fast and efficient method of getting at the material.

Storage of material to be delivered on bulk orders is carried on across from the end loading section. Here all the palletized material is assembled from the various parts of the yard. Small or single items are delivered or picked up from a shed to the south of the main building. The warehouse has 22,000 square feet of storage area.

**BRAND NAME PRODUCTS USED IN STRUCTURE**

- |  |  |
|--|--|
| Celotex wall sheathing                       | Minneapolis-Honeywell heating controls |
| Chicago Paint and Varnish paints             | Morgan kitchen cabinets and doors      |
| Hunter exhaust fan                           | Pittsburgh Plate Glass windows         |
| Johns-Manville building paper and insulation | Schlage hardware                       |
| Kewanee furnace                              | Starline sliding doors                 |
| Kohler plumbing fixtures                     | U.S. Plywood paneling                  |



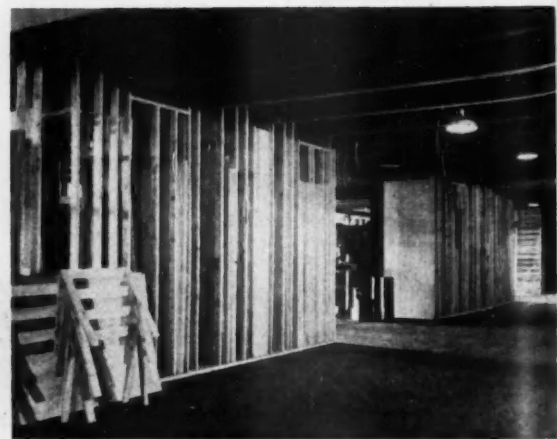
**PALLETIZED HANDLING** makes storage of materials easier. Roll insulation is moved to storage area with lift trucks



**END LOADING** from railroad car to pile lowers handling cost



**BUILDERS HARDWARE** department carries a complete line. Most contractor customers do their ordering here



**PLYWOOD STORAGE** in vertical racks saves space and handling

# BEE GEE

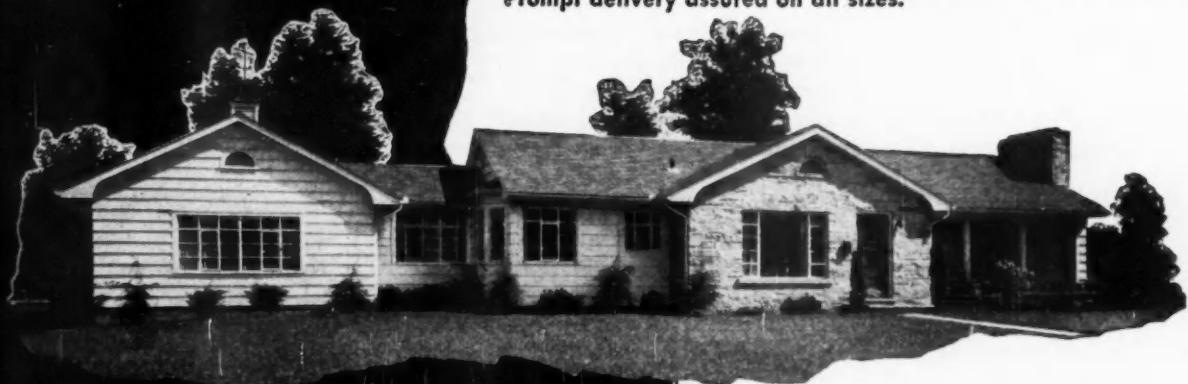
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*for any style home!*

Beautiful Bee Gee Modern Wood Windows... styles for every type home... prices for every budget. Bee Gee Windows are complete units consisting of frame, pre-fit glazed sash with glass embedded in putty, copper screen and all hardware installed at the factory... ready to set in the wall.

Picture windows available with Thermopane or Twindow. Prompt delivery assured on all sizes.



**BROWN-GRAVES CO.**  
Akron I, Ohio

*Write now! Get the complete, beautifully illustrated Bee Gee Window Catalog.*

BROWN-GRAVES CO., Dept. AB-105  
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your  
first  
choice



 **Expansion Screw Anchors**

For more than forty years Paine Fastening and Hanging Devices have been the first choice of the best craftsmen. They have found, through use, that Paine's high quality material and production assure ease and speed of installation. Today and tomorrow make Paine devices *your* first choice.

Paine Expansion Screw Anchors will HOLD in any solid material. Anchors are stamped with size and thread of bolt or screw required, and have a directional arrow indicating which end goes in the hole. Setting tool furnished with each box of anchors.

For the holes use a Paine "Sudden Depth" Drill.

THE PAINE COMPANY 2959 Carroll Ave., Chicago 12, Ill.

the best craftsmen always take



Spring Wing Toggle Bolts  
Expansion Anchors  
"Sudden Depth" Drills  
Wood Screw Anchors

Conduit Clamps  
Pipe Hooks and Straps  
Hanger Iron, perforated  
Expansion Shells

Star Drills  
Malleable Shields  
Special Hanging and  
Fastening Devices

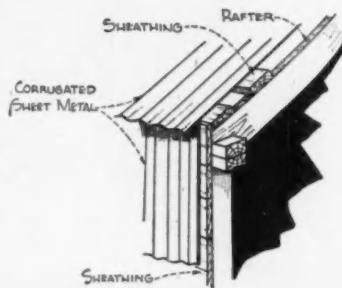
**No. D-84**  
**Sliding Doors**

Ranch houses, outdoor terraces, living areas and sliding doors go hand in hand. This is particularly true in warm climates where it is desirable to have the living room and outdoor terrace as one.

In the case of the large 16-foot living room opening, shown in detail on the adjoining page, the center panel is fixed and the two end panels slide back across the face of the stationary panel. A wood truss is directly over the opening at ceiling line, with wood hangers anchored to the truss. The truss serves as a support and as a nailing member for head of door frame and casings.

The fixed window unit and sliding doors are of steel set in a 14-gauge steel frame. The doors slide on 2-inch diameter bottom rollers with rubber guide rollers on top. The sliding door sections are removable for adjustments. The bronze track is screwed to a steel sill at the floor.

Screens slide on rollers that are hung from the top track, which is welded to the door frame. The screen frame is made of 16-gauge steel tubing. The bottom U member is welded to the sill and acts as lower track for the screen guide.



**Applying Metal Roofing and Siding on Barns**

In the construction of a frame barn where walls and roof are covered with corrugated galvanized iron the following method is used: At intersection of wall and roof at eaves the metal sheets of roof are extended over the wall line to provide ample protection for the wood surfaces.

At gable ends the metal roof sheets are allowed to project six inches beyond the wall line, and then the projecting surface is turned down to fit tight against the wall.—F. W. Gruber, Lindsay, Texas

AMERICAN BUILDER

# You'll have a BETTER BUILDING BUSINESS...

Profit More from  
Satisfied Customers

No other window has all  
these important features:

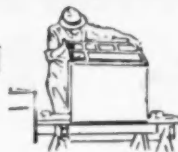
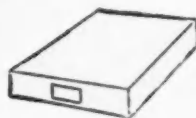
- 1 Patented Superior Jamb Liner, plus . . . perfect counter-balancing, assures easy operation in all kinds of weather.
- 2 Adjustable blind stop and jamb strip adaptable to various wall thicknesses.
- 3 Completely weather-stripped plus wide overlapping windbreak that seals installation making it perfectly weather-tight and achieves substantial fuel savings.
- 4 1½" thick jambs and 1¾" thick sill of kiln-dried Ponderosa Pine.
- 5 Toxic water-repellent preservative treated with \*NWMA approved solution.
- 6 Produced by skilled window specialists.
- 7 Accurately machined and prefitted at factory . . . saves hours installing at job.

\*National Woodwork Manufacturers Association

Build Well with  
BILT-WELL

**BILT-WELL**  
**WOODWORK**  
REG. U. S. PAT. OFF.

**BILT-WELL**  
Nu-Style Unit  
Kitchen Cabinets



All parts are completely machined, prefitted and assembled, as far as practical, for carton packaging. All hardware with exception of nails is included. They can be finished natural or enameled any color.

. . . distinctive design "with beautiful rounded corners" that harmonize perfectly with latest ranges and refrigerators. They can be enameled any color or finished natural wood. Exceptionally well constructed of kiln-dried clear Ponderosa Pine, with dovetailed drawers, solid (¾" thick) standards, mortised, tenoned and glued framework. Offered in sectional units in graduated sizes of 3" multiples, 15" to 42" widths. Fit any size or shape of kitchen, can be sawed or scribed to fit plastered walls. Height of counter-top can be regulated in the auxiliary base.

Use Bilt-Well Woodwork. You'll have a better building business . . . profit more from satisfied customers.

**CARR, ADAMS & COLLIER CO. DUBUQUE, IOWA**

Manufacturers of the Famous Bilt-Well Line

Mantels & Telephone Cabinets • Multiple Use & Linen Cabinets • Stair Parts • Nu-Style Cabinets • Superior Unit Wood Windows • Exterior & Interior Doors • Entrances • Shutters • Clos-tite Casements • Carr-dor Garage Doors • Basement Unit Windows • Louvers & Gable Sash • Breakfast Nooks • Combination Doors • Screens & Storm Sash • Corner (China) Cabinets • Gli-dor Cabinets • Ironing Board Cabinets

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 **Expansion Scre**

For more than forty years Paine Fasten Devices have been the first choice of the l They have found, through use, that Paine's hig material and production assure ease installation. Today and tomorrow make *your* first choice.

Paine Expansion Screw Anchors will H solid material. Anchors are stamped with of bolt or screw required, and have a indicating which end goes in the furnished with each box of anc For the holes use a Paine "Sudden I

THE PAINE COMPANY 2959 Carroll Ave., Chicago 12, Ill

the best craftsmen always tak

Spring Wing Taggle Bolts  
Expansion Anchors  
"Sudden Depth" Drills  
Wood Screw Anchors

Conduit Clamps  
Pipe Hooks and Straps  
Hanger Iron, perforated  
Expansion Shells

Special Hanging and  
Fastening Devices

jecting surface is turned down to fit tight against the wall.—F. W. Gruber, Lindsay, Texas

**No. D-84  
Sliding Doors**

Ranch houses, outdoor terraces, living areas and sliding doors go hand in hand. This is particularly true in warm climates where it is desirable to have the living room and outdoor terrace as one.

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You'll have a  
**BETTER BUILDING  
BUSINESS**

# PAGES MISSING



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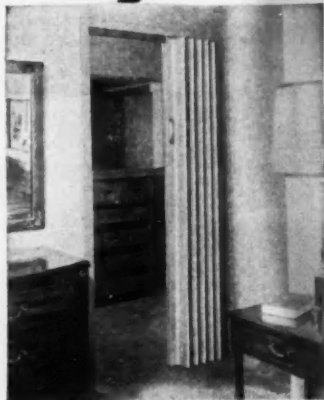
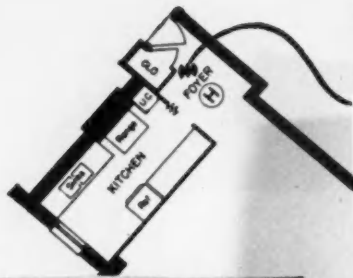
**QUE, IOWA**

- Stair
- exterior
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- e Sash
- Cor-

- Breakfast Nooks • Combination Doors • Screens
- Corner (China) Cabinets • Gli-dor Cabinets • Ironing Board Cabinets

**WOOD**





## Metropolitan Life "MODERNFOLD" Parkmerced and Park

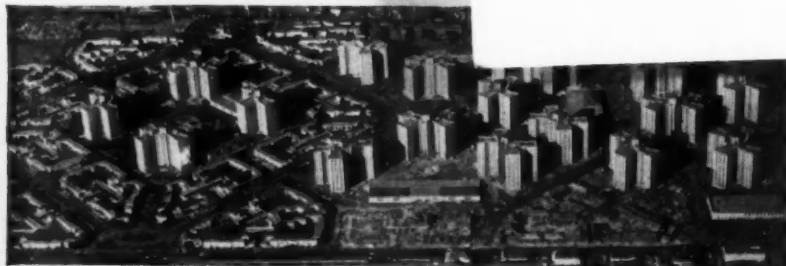
In its new San Francisco and Los Angeles apartment house projects, Metropolitan Life Insurance Company selected "Modernfold" doors for kitchen and dressing closet openings.

"Modernfold" doors—because they *fold* rather than *swing*—save 8 square feet of space per opening. They're simple to install, too. No provision need be made for recessing them into walls.

"Modernfold" doors provide value as a *permanent investment*. For example, *only* "Modernfold" doors have a double-strength steel framework.

And just as durable are the handsome, Vinyl-coated fabric

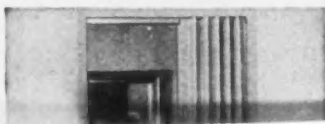
New Parkmerced Apartments, housing approximately 1,000 families. New Parklabrea Apartments, housing approximately 1,000 Los Angeles families. *Architect:* Leonard Schick. *Builder:* Metropolitan Life Insurance Co.



## No. G-25 Store Front

Problem:

To improve



# PAC MISS

### SECTION THRU RAKE AT EAVES.

#### A Metal Shingle Starter

The metal shingle starter shown in sketch stands up under all conditions. It can be used on all edges. It is crimped double for a 1-inch extension, over edge.—Arnold Weitting, Wheaton, Ill.

# AGES SSING

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**COMPANY** *Manufacturers of America's Original Tubular Locks*  
GRAND RAPIDS, MICHIGAN

A SUBSIDIARY OF NATIONAL BRASS COMPANY

In Canada: Dexter Lock Canada Ltd., Guelph, Ontario



*The Lock with a Million Friends*



# DEXTER



DEXTER TYPE "E" LOCK

**DEXTER  
LOCK  
COMPANY**

*Manufacturers of America's Original Tubular Locks*

GRAND RAPIDS, MICHIGAN

A SUBSIDIARY OF NATIONAL BRASS COMPANY

In Canada: Dexter Lock Canada Ltd., Guelph, Ontario



MAKE YOUR FLOORS

# 4 WAYS BETTER

*Increase Profits!*



- 1 SAND WITH SUPER 8.** Use American Super 8 for high production in sanding body of floor. Cuts not just faster . . . but nearly *twice as fast* as any other 8" machine . . . reduces costs, increases your profit!
- 2 DO EDGES WITH SPINNER.** Always use an American Spinner for edges, closets, small halls, stairs. Saves time!
- 3 DISC SAND AS FINAL CUT.** Makes the finest finish—a flatter surface—easier to clean. Use American DeLux Maintenance Machine—19", 16" or 14" size.
- 4 USE QUALITY SEALS.** American Finishes are finest quality—complete line for all floors . . . seals, finishes, waxes and cleaners.

Keep your profits UP . . . keep up-to-date with American machines and materials in *all four steps* in floor finishing! This assures finest floors . . . saves time . . . saves labor . . . on wood, cork, concrete, terrazzo, asphalt, rubber, linoleum or plastic. Send for free catalogs describing "4 Steps to Fine Floors." American Floor Surfacing Machine Co., 511 So. St. Clair St., Toledo, Ohio,

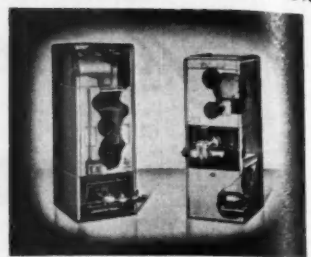


# AMERICAN FLOOR MACHINES-PORTABLE TOOLS

## NEW PRODUCTS

(Continued from page 152)

**HIGHBOY FURNACES** AB 15104



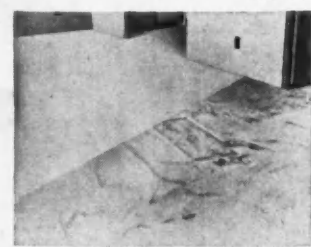
Designed and priced for low cost are four new gas and oil fired 110,000 B.T.U. highboy furnaces. The designs are either the conventional or counter flow types fired with gas or oil fuel. The units are convertible by an easy and inexpensive conversion burner package. The unit is pre-assembled at the factory and the oil types are pre-wired. The unit is 24 1/2 inches wide and has the flue outlet in the front to minimize space requirements. A 13 inch blower delivers the heat at a slower speed, assuring quieter operation. L. J. Mueller Furnace Co., Dept. AB, 2005 W. Oklahoma Ave., Milwaukee 15, Wis.

**LIGHTWEIGHT ROOF TILE** AB115119



A recent development is a lightweight roof tile that combines fireproofing, insulation and structural strength. Developed for short span installations over bar joists and bulb tees, the material will support loads of 50 lbs. per sq. ft. with a safety factor of four. The size of the blocks are 18 inches wide by 36 inches long by 3 inches thick. Sound absorption of approximately .50 at 512 cycles is realized when the tile is used as a ceiling. The tile blocks are made from moulding plaster and vermiculite. Zonolite Company, Dept. AB, 135 S. LaSalle, Chicago, Ill.

**SYNTHETIC RUBBER FLOORING** AB115109



Exceptional strength, long life, and high resistance to acids, alkalis, water and other destructive materials is Vulcrete, a new synthetic rubber flooring material. Without the need for preliminary bonding, the material dries to a light concrete color. It is adaptable to resurfacing, patching, and leveling. It can also be used as table and bench tops and waterproofing. Flash-Stone Company, Inc. Dept. AB, 30 E. Rittenhouse St., Philadelphia 44, Pa.

*New Products continued page 156*

104

Look how you can use PLANKWELD to improve a living room. Make a survey! There are undoubtedly a great many opportunities for similar remodeling jobs in your own and nearby residential sections.



# One word that creates remodeling jobs...and sells a lot of homes **PLANKWELD**<sup>®</sup>

Whether you're interested in remodeling jobs—in building new homes... or both... here is one magic word that will bring you increased profits:

## PLANKWELD!

For Plankweld, "the wood-paneled room that comes in a package," now makes it possible to satisfy the desire of the majority of your customers for one or more wood-paneled walls.

It has a tremendous appeal in luxurious, lasting beauty... in long-range economy... in first cost.

And builders who have installed one or more Plankweld-paneled rooms in the houses they build know how the magic of Plankweld helps sell houses!

Plankweld is top-quality Weldwood Plywood, pre-finished at the factory. No staining or other finishing is needed. It is available in birch, oak, knotty pine, and Philippine Mahogany—pre-cut to 6', 7' and 8' room heights in 16 1/4" panels.

Plankweld Panels are easy to handle—easy and fast

to install. They're edge-grooved to provide a neat lap joint, designed with a simple, concealed metal clip that holds Plankweld firmly to the wall... eliminating nailing through the face of the wall.

And they can be installed over old plaster or walls without furring strips—used vertically or horizontally.

Yes, for more profitable remodeling jobs—and for faster-selling homes, use Weldwood PLANKWELD.\*

Your Weldwood dealer can supply your needs immediately.

\*Patent applied for

### **BARGAIN PRICE!**

#### **During October and November!**

During October and November only—you can buy genuine Philippine Mahogany Plankweld for just \$49.50 per package of 10 panels. Enough to panel one average wall in each package.

Birch, Oak, and Knotty Pine cost only slightly more. See your lumber dealer now—before this special offer expires.



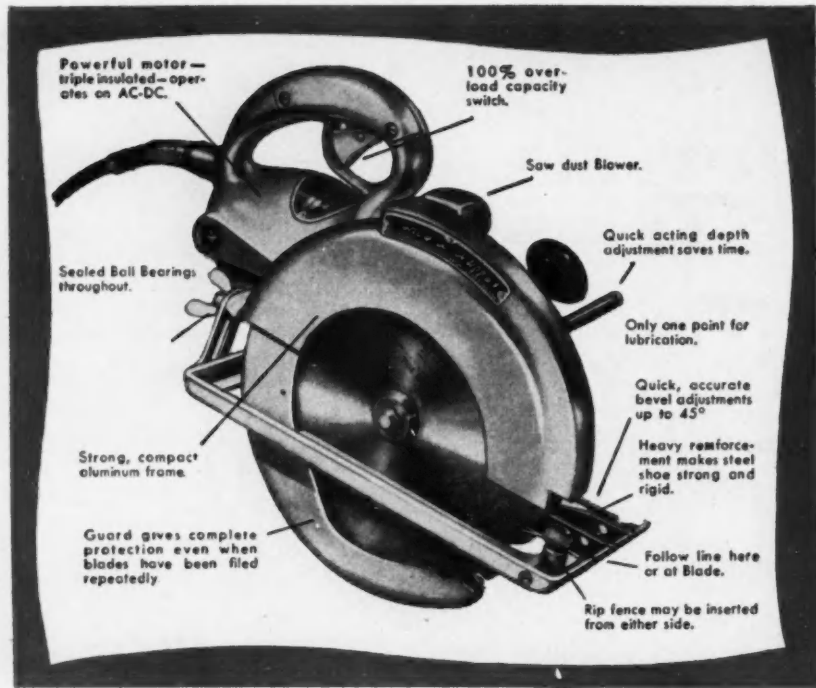
## WELDWOOD<sup>®</sup> Plywood

Manufactured and distributed by

**UNITED STATES PLYWOOD CORPORATION** New York 18, N. Y.

and **U. S.-MENGEL PLYWOODS, INC.**, Louisville 1, Ky.

Branches in Principal Cities • Distributing Units in Chief Trading Areas • Dealers Everywhere



# Fred W. Wappat SAWS CUT COSTS!

One man saws as much stock per hour with this 8" Fred W. Wappat Saw as three men with hand saws. At better than two dollars an hour it doesn't take long to figure that this saw pays for itself in a hurry.

It goes right on paying you after it pays for itself, too. Fred W. Wappat Saws have been famous for more than 25 years—famous for turning out vast quantities of work and famous for long-lasting value.

Check the features on this saw—find out what it can do for you right on the job—to make more money. Compare it with other saws. When you compare—you'll buy this Fred W. Wappat Saw!

**AT CURRENT LABOR COSTS THIS FRED W. WAPPAT 8" SAW PAYS FOR ITSELF IN LESS THAN 36 HOURS!**

Heavy duty motor, ball bearings, precision-cut, steel gearing, blade speed 3600 RPM. Base adjusts vertically 0 to 2 3/4" for straight, rabbet, mortise and pocket cuts—2 3/4" at 45 degrees.

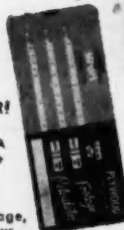
*Built to Save You Money*

MODEL A-8  
ONLY  
\$135

**FREE!**

**LUMBER AND PLYWOOD CALCULATOR!**

Send for yours today! A free, slide-rule type calculator for lumber and plywood footage, that makes your figuring of square feet, board feet, and prices as simple as can be. Reads directly, accurately at a glance. Saves time and eliminates mistakes. Send for yours, today. It's FREE!



**Fred W. Wappat** DIVISION OF **Cummins-Chicago Corp.**  
MAYVILLE, NEW YORK - ON CHATEAUQUE LANE  
**POWERFUL ELECTRIC SAWS**  
FOR MORE THAN 25 YEARS

In Canada: J. S. Broadfoot Company, Limited, 405-6 Terminal Bldg., Queens Quay West, Toronto 1, Canada

Simply fill in this coupon, attach it to your letterhead, and mail today for your FREE Calculator!

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Company \_\_\_\_\_

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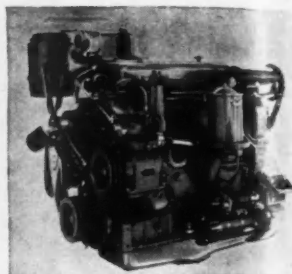
City \_\_\_\_\_ State \_\_\_\_\_

## NEW PRODUCTS

(Continued from page 151)

**DIESEL ENGINE**

AB115111



A new diesel engine with an increased horse power rating of 12 1/2 per cent has been announced for many GMC trucks and trailers. Although the horsepower rating has increased, fuel consumption has been lowered by a device called a "fuel modulator", which automatically controls the feed regardless of throttle position. The governed top speed of the new engine has been increased to boost performance, requires less shifting. The extra speed and greater horsepower will make hill climbing with heavy loads easier. The "Million-Miler" will power the GMC 650, 740, 750, 900, 950, and 970 series truck and tractors. GMC Truck and Coach Division, General Motors Corporation, Dept. AB, 660 S. Boulevard East, Pontiac 11, Michigan.

**ADHESIVE BACK FELT**

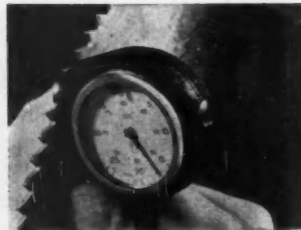
AB115130



Announced recently is a reinforced felt tape with a pressure-sensitive adhesive back. The material does not require a paper or other separation material between layers. It can be applied rapidly. The adhesive backing makes installation possible by finger pressure. Uses for the material include rattle and squeak deadening, sealing against dust, wind, fumes, and foreign materials, thermal insulation, and vibration and shock cushioning. Many sizes and lengths are available. King Felt Products Research Co., Dept. AB, 5426 San Fernando Road, Glendale 3, Calif.

**SAW TOOTH INDICATOR**

AB115107



A new accurate indicator for checking the set of circular saw teeth has been announced. The new dial gauge enables instant checking within .001-inch. The indicator can be used on any type of saw blade—rip, cross-cut, conventional, or safety types. The dial gauge is two-faced, precision built throughout and is unconditionally guaranteed. Its use with a combination gauge enables checking the settings for planers, joiners, and shaper knives. PTL, Inc., Dept. AB, 401 Broadway, New York.

New Products continued page 158

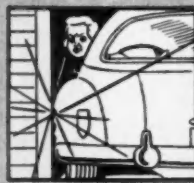
# HOW GARAGE DOORS HAVE CHANGED!



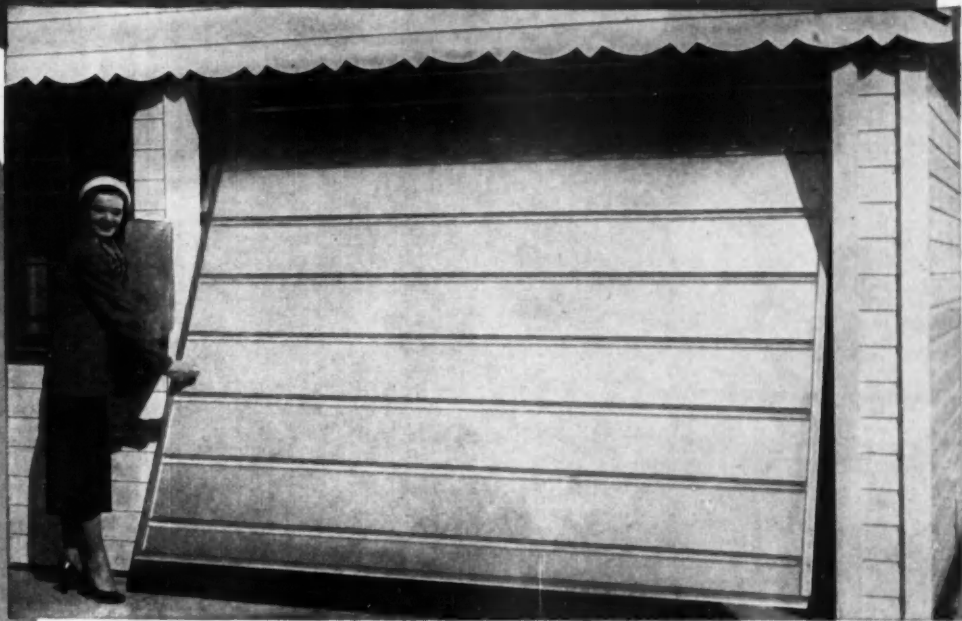
**No More**  
assembling of door  
panels on the job



**No More**  
sagging, warping,  
shrinking of garage  
doors



**No More**  
banged-up fenders  
resulting from too  
narrow a garage  
opening



*Handsome new Strand nine-foot-wide door stresses horizontal lines*

## YOU'LL LIKE THIS NEW ALL-STEEL DOOR . . . AT THE LOWEST INSTALLED COST IN AMERICA!

**FULL 9-FT. WIDTH** accommodates today's wider cars. Horizontal lines add beauty to the garage.

**THE STRENGTH AND DURABILITY OF STEEL . . .** that can't warp, sag, rot, or shrink, assure easy operation for a lifetime. **GALVANNEALED** for rust protection and clinging base for paint—no prime coat needed. You get an enthusiastic owner every time you install a STRAND Door.

**SAVE ON FIRST COST . . .** STRAND'S low first cost is the result of standardization on manufacture of 5 models, and large-scale production concentrated in

one plant. STRAND is America's greatest garage door value.

**SAVE ON INSTALLATION COST . . .** Low installation cost is the result of the one-piece door leaf and factory-assembled hardware. Ordinary tools used for installation and adjustments . . . no special tools needed. STRAND is the easiest of all doors to install.

**AVAILABLE** in these types and sizes: 8' x 7' Receding (track) and Canopy; 9' x 7' Receding (track) and Canopy; 16' x 7' Receding (track) only. Order from your dealer, or mail coupon for information and dealer's name.

ALL-STEEL • GALVANNEALED • OVERHEAD

# STRAND

GARAGE DOORS

FOR SINGLE AND DOUBLE GARAGES

STRAND GARAGE DOOR DIVISION  
Detroit Steel Products Company  
Dept. AB-11, 2242 E. Grand Blvd.  
Detroit 11, Michigan

- Please rush detailed description of the new Strand all-steel Garage Door for 9' x 7' openings.  
 Please send full information about Strand Doors for 8' x 7' and 16' x 7' garage openings.

I am a  Builder  Dealer  Prospective Owner  Other

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_





BATH ENCLOSURE

**Cascade**

BEAUTIFUL  
COLORFUL  
PRACTICAL

An entirely new concept in bath enclosures. Rigid sliding panels of Plexiglas in beautiful transparent pastel colors of crystal clarity: Pink, Gold and Crystal Clear.

Can be installed at a cost much less than a glass panel enclosure.

Plexiglas is shatterproof, withstands heat, resists water and has strength far beyond requirements present in the home bathroom.

Simple to install: (1) Cement track to rim of tub, (2) res: panels in track and adjust top rod in position, (3) fasten end plates of top rod and the job is finished. Made to fit a regular 5 foot recessed tub.

Available from your plumbing contractor. Write for bulletin showing the Cascade Bath Enclosure in actual colors.



**FIAT METAL MANUFACTURING COMPANY** • Three Complete Plants  
(Chicago area plant) Franklin Park, Illinois • Long Island City 1, New York  
Los Angeles 33, Calif. • In Canada: Porcelain and Metal Products, Ltd., Orillia, Ontario

**NEW PRODUCTS**

(Continued from page 155)

**INDUSTRIAL FLOORING** A 115124



Block flooring for heavy industrial use has been designed to be laid over a concrete slab. Made of close grained heavy hardwoods, the blocks are dipped in a toxic solution as a protection against rot and wood boring insects. Further finishing is not required where service is the principal consideration. However a light sanding and seal coating will give added beauty to the floor. Five square block sizes and two thicknesses are available. Bruce Dura-Wood Block, E. L. Bruce Co., Dept. AB, Memphis 1, Tenn.

**SEAL-PRUF** AB115102

An impermeable sheeting—Nervastral Seal-pruf—damp-proofing and moisture vapor sealing is offered to solve many masonry moisture problems. The plastic-like substance is used for spandrel waterproofing, window flashing, damp-proofing, water cut-offs, and membrane waterproofing. The material comes in two weights, 36 inch widths and lengths of 72 feet. Rubber & Plastics Compound Co., Inc., Dept. AB, 30 Rockefeller Plaza, New York 20, N. Y.

**CAULKING LOADING AID** AB115112



A simple mechanical device to aid in loading caulking guns has been placed on the market. Called the Mastic Master, the unit is a series of circular and segmented plates designed to fit gallon size cans of caulking compound. Filling the gun is accomplished by fitting the nozzle of the gun to the device and withdrawing the plunger, at the same time pushing down. This forces the compound into the gun. Advantages claimed by the manufacturer are easier and faster filling, and protection against the filming over of the mastic. The device is produced by Rabco Products, Dept. AB, Route 1, Huron, Ohio.

New Products continued page 160

You can't give this little giant  
**TOO MUCH WORK!**

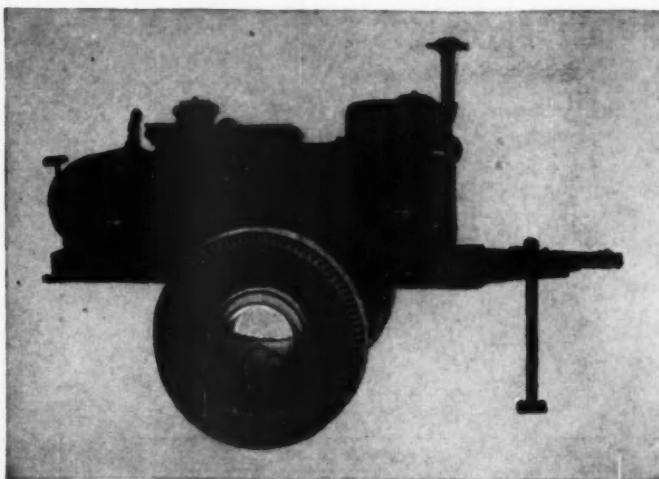
It's 30 cu ft of air power, ready and willing to tackle the host of building jobs that can be powered by air.

You'll find this Worthington Blue Brute portable air compressor has the same stamina as bigger Blue Brutes—60 cu ft and larger—and the same top quality of design and construction.

Ruggedly built 2-stage compressor. Light over-all weight for convenient towing, easy spotting. Worthington's famous Feather\* Valve. Spring-mounted axle. Telescoping leg support. Special industrial model available for use in limited space.

See the "Blue Brute 30" at your Worthington distributor. Write for bulletin to Worthington Pump and Machinery Corporation, Construction Equipment Division, Dunellen, N. J.

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



**USE IT FOR**

Breaking • digging • trenching • tamping • paint guns • scalars • sprayers • inflating tires • carving tools • chippers • small riveters • nut setters • wood borers.

**BUY BLUE BRUTES**

**WORTHINGTON**



K17

*Superb floor, isn't it?*



\* See Sweet's 1951 Architectural or Builders

Catalogs for specifications and data covering

Bradley's comprehensive line of Hardwood Flooring and

related products, including oak trim, stair treads, risers, thresholds

and glued-up panels; Arkansas Soft Pine trim, mouldings, paneling, finish.

**BRADLEY**  
 UNIT WOOD BLOCKS,  
*of course!*

Owners and developers alike respond with spontaneous enthusiasm to Bradley's smart block floor styling! Reason: it combines stimulating modern design with the beauty and dignity of oak; it appeals to owners' pride of possession; it promotes home development sales.

To duplicate the beautiful floor shown, specify Bradley's Prime Grade Pre-finished Red Oak 9" x 9". Bradley blocks are produced in all standard grades and sizes, finished or unfinished, including beech and pecan. Detailed data\* and Block Installation Manual sent on request.



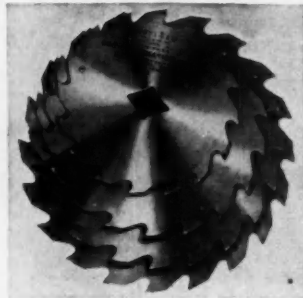
**BRADLEY LUMBER COMPANY** of Arkansas

**WARREN, ARKANSAS**

# NEW PRODUCTS

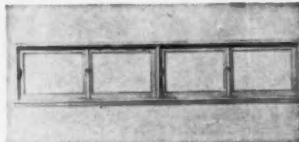
(Continued from page 158)

## CHISEL TOOTH BLADE AB115127



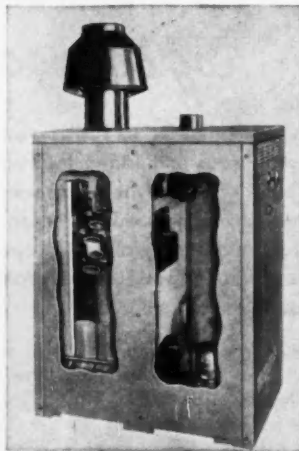
A saw blade especially designed for use in portable electric hand saws features a chisel-tooth blade. The teeth have a greater hook angle and cut faster than the regular combination blades. The angle teeth also produce chips instead of fine saw dust. Fewer teeth reduces the load and minimizes vibration and side flutter. No special equipment is needed to sharpen the blade. Sizes for models 67, 77, 800, 825, and 87 are stocked by the manufacturer and branches. Skilsaw Inc., Dept. AB, 5033 Elston Ave., Chicago 30, Ill.

## RIBBON SLIDING WINDOWS AB115123



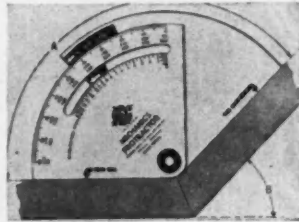
New sizes added to their line of gliding windows are these short height units. Intended for ribbon-type or transom use, the windows are just short of 2 feet. The rough-in opening is 2 feet 4 inches in height and 3 feet 8 inches, 4 feet 8 inches, and 5 feet 8 inches long. Andersen Corporation, Dept. AB, Bayport, Minn.

## GAS FIRED BOILER AB115110



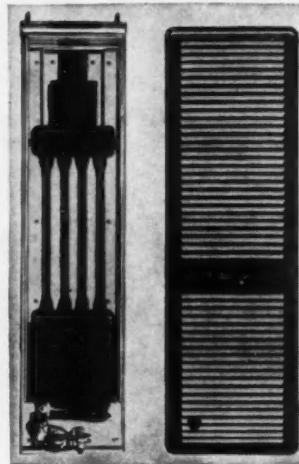
A steam or hot water gas-fired boiler, which keeps heat loss at a minimum by the use of a staggered flue, boasts low fuel consumption. The boiler has a special burner design for quick, smooth ignition, and quiet operation. The burner assembly is easily removed for inspection, adjustment and cleaning. Flue passages may be cleaned without removing the casing or piping. The unit is designed for small and medium sized homes, and is modestly priced. "T Series" Boiler, Thatcher Furnace Co. Dept. AB, Garwood, N. J.

## PROTRACTOR AB115101



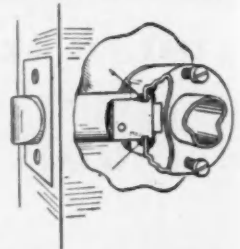
A new model Mechanics Protractor offers solutions to on the job angle measurements up to 180 degrees. The construction aid will give the degree reading for inches per foot, rise up to 24 inches per foot. Interstate Sales Co. Dept. AB, 123 E. 18th St., New York 3, N.Y.

## GAS WALL HEATER AB115118



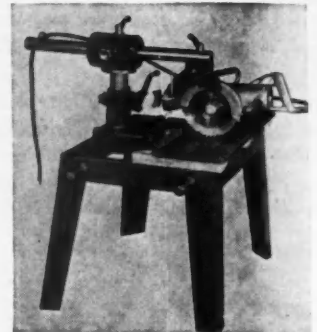
Released for this season's use after two years of development and test is the Brilliant Fire gas wall heater. The heater, ventilated, and approved by the A.G.A. is engineered for all gases. Safety features include extensive free-air space and dimpled pattern casing that touches the wood studs at staggered points. A telescope wall box makes for easy wall fitting. The unit is gas tight and the combustion chamber is of heavy cast iron. The unit can be installed on interior or exterior walls. Automatic and manual controls are available. The Ohio Foundry & Mfg. Co., Dept. AB, Steubenville, Ohio.

## NEW DOOR LOCKS AB115122



Faster installation according to the manufacturer is the new Series "410" locks. Seven operations are needed to install the lock and only two holes need be drilled. The mechanism is adjustable to doors varying from 1 1/4 inch to 1 3/4 inch in thickness. The escutcheon is snapped on and permanently held in position. The locks are easily reversed or adapted to either right- or lefthand doors. A unique time-saving installation feature is the slot engagement of the latch to the lock body. National Lock Company, Dept AB, Rockford, Ill.

## RADIAL ARM AB115128



A fully retractable radial arm for mounting electrical hand saws has been introduced to the industry. The saw can be mounted in a matter of seconds and is a valuable aid in mass producing framing members. The unit called Comet Radial Arm is complete with column, portable steel base, and hardwood work table. It has a cut-off movement of 24 inches, bevel range of 0 to 45 degrees, mitre range of 45 degrees left or right, and adjusts 9 3/4 inches vertically. Positive locks prevent creeping or variation from cut to cut. Consolidated Machinery & Supply Co. Dept AB, 2031 Santa Fe Ave., Los Angeles, Calif.

**USE THIS COUPON FOR MORE INFORMATION  
ON NEW PRODUCTS IN THIS ISSUE  
Save Time—Just Insert Key Numbers and Mail To:  
American Builder, 79 W. Monroe Street, Chicago 3, Illinois**

Name .....

Address .....

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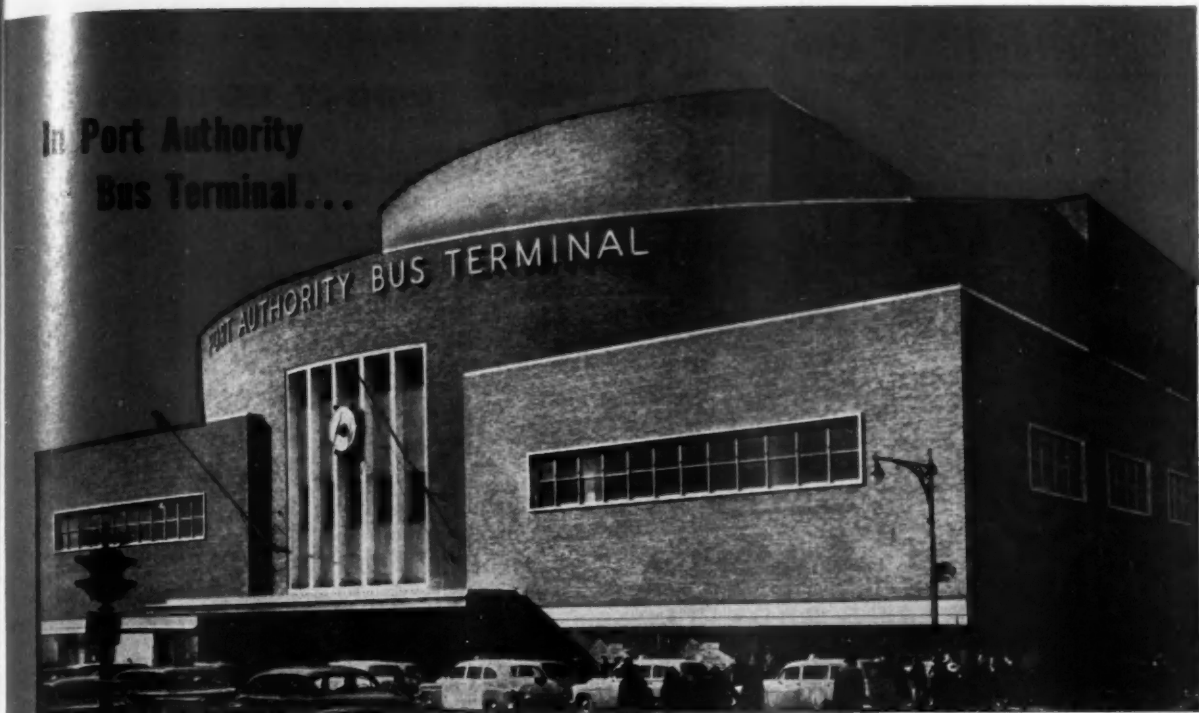
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No. .... No. .... No. .... No. ....

**When you address inquiries direct to manufacturers concerning a new product described here, please mention that you saw it described in American Builder**

In the Port Authority  
Bus Terminal...



Bus Terminal Building, Port of New York Authority

Turner Construction Co.—Contractor

# ADLAKE aluminum windows

add modern beauty that lasts a lifetime!

Yes, the handsome ADLAKE Aluminum Windows that add to the modern beauty of New York's Port Authority Bus Terminal will last as long as the building itself!

**ADLAKE Windows** never warp, rot, rattle, stick or swell. Their exclusive combination of woven-pile weather stripping and patented serrated guides assures minimum air infiltration and absolute finger-tip control.

When you specify **ADLAKE** Windows, you'll save your clients money! For full information, drop a card to The Adams & Westlake Company, 1124 N. Michigan, Elkhart, Indiana. No obligation, of course.

## ADLAKE ALUMINUM WINDOWS HAVE THESE "PLUS" FEATURES

- Woven-pile Weather Stripping  
and Patented Serrated Guides
- Minimum Air Infiltration
- Finger-tip Control
- No Warp, Rot, Rattle, Stick
- No Painting or Maintenance
- Ease of Installation



THE **Adams & Westlake** COMPANY

Incorporated 1927—ELKHART, INDIANA—New York—Chicago



# REVOLUTIONARY!

The new form of glass  
you can nail!



**WANT A SKYLIGHT** or a window in a metal building? Simply substitute a panel of Alsynite for a metal sheet. Alsynite "nests" with any corrugated material.



**HUNDREDS OF THOUSANDS** of Alsynite panels are now being installed throughout America and abroad. Branches of the U. S. Gov't. have used tens of thousands of sq. ft. in the past 6 months.

**BUILD WITH ALSYNITE...** Alsynite is a new form of structural glass made by combining glass fiber with plastic. It is shatterproof, permanent and feather-light... can be sawed, nailed or drilled... is as easy to use as plywood. Requires no conventional window framing. Like patterned glass, Alsynite transmits light freely but you can't see through it. Now being used for thousands of skylights and windows as well as partitions and decorative effects. Ideal for patio roofs, barbecue shelters, awnings, etc., and for almost any

patterned glass application, plus many new uses never possible before. Corrugated panels come in six colors, eight sizes. Write today for complete information and name of nearest supplier.

**NOTE** Big new Midwest Plant is now in full production

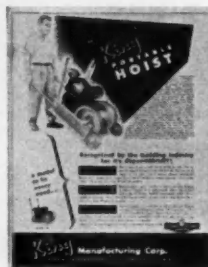
## Alsynite®

ALSYNITE COMPANY OF AMERICA  
4670 De Soto Street, San Diego, Calif.

# Catalogs and

## HOW-TO-DO-IT INFORMATION

**117—SLIDING DOOR TRACK**—A catalog describing and illustrating the "Kenna-track" single and double sliding door track for interior sliding doors together with door locks, latches, pulls and converging guides has been issued by the manufacturer, Jay G. McKenna, Inc., Elkhart, Ind. The booklet shows typical installations and specifications for hardware and sliding door installations.



**118—PORTABLE HOIST**—A catalog describing the King portable hoist which finds extensive use in the building industry is issued by King Mfg. Corp., 3146 W. Chicago Ave., Chicago 22, Ill. The catalog tells how the hoist is used to good advantage by contractors, brick masons and plasterers and contains unit specifications and pertinent information.

**119—CABINET HARDWARE**—A brochure describing use and features of Colonial cabinet hardware for natural and enameled woods is issued by American Cabinet Hardware Corp., Rockford, Ill. It tells how the charm and beauty of Old Colonial is offered for the first time with the advantages of modern construction by the Amerock line of cabinet hardware.



**120—AIR-DRIVEN TACKERS**—A brochure entitled "Faster, Easier, Better Tacking with a Flick of the Trigger" and describing the Duo-Fast air-driven tacking unit is issued by Fastener Corp., Franklin Park, Ill. Specifications and uses of this product are included as well as other Duo-Fast products such as hammer tacker, gun tacker, pocket stapler and putty knife.

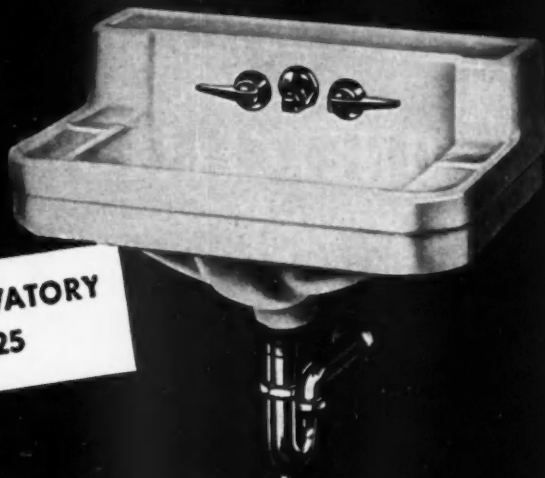
**121—SYNTHETIC RUBBER RESIN COATING**—What has been described as probably the first, most complete and authentic presentation on the properties, uses and methods of application of synthetic rubber resin based coatings is contained in a brochure issued by the Casey & Case Coating Co., P. O. Box 151, Maywood, Calif. The brochure is entitled "Synthetic Rubber Based Corrosion Control Coatings."



(Continued on page 164)



**DENTAL LAVATORY**  
Plate No. G-625



**"SPACE-SAVER" LAVATORY**  
Plate No. G-125

## 2 new lavatories by RICHMOND

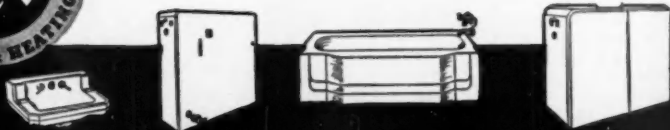
Here are two new, modern lavatories by Richmond... typical of Richmond's quality standards in construction, styling and economy. Here are two more reasons why more Richmond enameled cast iron and vitreous china fixtures are used nation-wide!

Here are two lavatories designed for specific use... for dental service in homes, dental offices, schools, hospitals and other institutions use the G-625 dental lavatory... for any location where space is tight use the G-125 space saver.

### Keep these quality features in mind:

**The Richmond G-625**—vitreous china dental lavatory—for service in homes, dental offices, schools, hospitals and other institutions... 14" x 14" ... with flushing rim, shelf back, rear outlet, combination supply and drain fittings with vacuum breaker... in "whiter-white," or choice of five rich, lustrous colors.

**The Richmond G-125**—Midal... vitreous china "space-saver" lavatory for any location where space is at a premium. Just 14" deep by 20" wide with shelf back, two soap dishes, rear outlet, front overflow, combination supply and drain fitting... in "whiter-white" or choice of the five popular Richmond colors.



See your wholesaler or Mail Coupon Today:

Richmond Radiator Company  
19 East 47th Street  
New York 17, New York

Please send me information and literature on the new Richmond dental lavatory and the Richmond space-saver lavatory.

NAME.....  
COMPANY.....  
ADDRESS.....  
CITY.....ZONE....STATE.....

# UNEQUALLED!

The

## Sterling

SLIDING DOOR HARDWARE

NATIONALLY ADVERTISED

The Choice of

Architects, Builders

and Dealers

from coast to coast

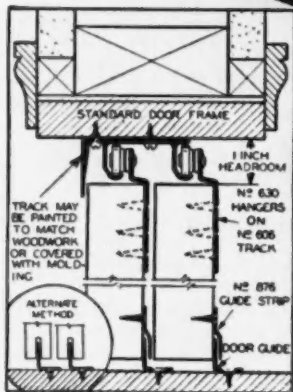
### UNEXCELLED

The Complete Line of

Sterling Sliding Door Hardware

For Every Size and Type

of Residential Doors



The 600 Series includes Hangers both 3/4" and by-passing. Track is c...



No. 676 eliminates the need for door adjustment time.



**No. 642**  
Adjustable Hanger  
For Single Doors

**No. 603**  
Aluminum Track  
For Single Doors

**THE Sterling 800 Series**  
ANOTHER COMPLETE LINE OF HARDWARE  
TRACK FOR RESIDENTIAL SLIDING



**No. 840**  
For 3/4" Doors



**No. 845**  
Has many uses



**No. 852**  
For Heavier Doors



**No. 860**  
For Pocket Doors—Adjustable



**No. 862**  
For Heavier Doors

Write today For Catalog on Complete Line!  
**STERLING HARDWARE MFG. CO.**  
2345 Nelson Street, Chicago, 18, Illinois

## Catalogs—

### and Manufacturers Literature

(Continued from page 162)

# PAGE MISS



door locks made by National Lock Co., Dept. AB., Rockford, Ill., has recently been issued. The eight-page four color booklet describes installation and the many outstanding features of National locksets.

(Continued on page 166)

# AGES SSING



## MANUFACTURED TO REQUIREMENTS

7 windows are manu-  
l in 27 and distributed  
erritories throughout  
3. Each of these local  
acture-distributors  
e windows specially  
ed to meet the require-  
of your locality.

MPANY  
NDALE 20, MICHIGAN



information on R-O-W—  
the window with sales appeal.

Name \_\_\_\_\_ I am  Architect  
 Company \_\_\_\_\_  Builder  
 Address \_\_\_\_\_  Dealer  
 City \_\_\_\_\_ Zone \_\_\_\_\_  Carpenter-  
 State \_\_\_\_\_  Contractor

your free copy of  
R-O-W's "Window  
Washing Time Study"  
—fill out the coupon at  
right.





# UNEQUALLED!

The

## Sterling

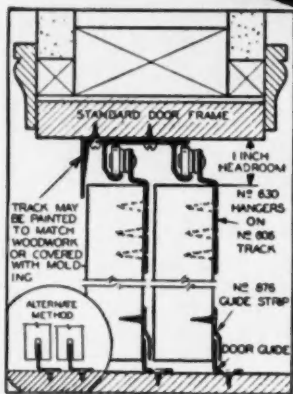
Line of

**SLIDING DOOR HARDWARE  
NATIONALLY ADVERTISED**

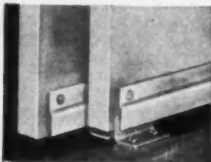
The Choice of  
Architects, Builders  
and Dealers  
from coast to coast

# UNEXCELLED!

The Complete Line of  
**Sterling Sliding Door Hardware**  
For Every Size and Type  
of Residential Door



The 600 Series includes Hangers for both  $\frac{3}{4}$ " and  $1\frac{1}{4}$ " by-passing doors. Track is aluminum.



No. 876 Guide Strips eliminate grooving bottom of door. Save installation time and trouble.



**No. 642**  
Adjustable Hanger  
For Single Doors

**No. 603**  
Aluminum Track  
For Single Doors



## THE Sterling 800 SERIES

ANOTHER COMPLETE LINE OF HANGERS AND TRACK FOR RESIDENTIAL SLIDING DOORS



**No. 840**  
For  $\frac{3}{4}$ "  
Doors



**No. 845**  
Has many  
uses



**No. 850**  
Fully  
Adjustable



**No. 852**  
For  
Heavier  
Doors



**No. 860**  
For Pocket  
Doors—  
Adjustable



**No. 862**  
For  
Heavier  
Doors

Write today For Catalog on Complete Line!  
**STERLING HARDWARE MFG. CO.**  
2345 Nelson Street, Chicago, 18, Illinois

## Catalogs—

and Manufacturers Literature

(Continued from page 162)

**122—PLUMBING**—A new manufacturers informative booklet covering manufacturing processes, complete new line, and suggested bath layouts has been published by the Eljer Company, Dept. AB., Railroad Street, Ford City, Pa.



**123—LIGHTING**—A booklet entitled "Lighting and the Nation's Welfare." has been prepared as a public service by National Information Committee on Lighting, 1410 Terminal Tower, Cleveland, Ohio. The booklet is a report involving research and summarizing the present-day services of illumination in American industrial production, in public safety, in research and education, and in government.



**124—GLASS BLOCK**—During this period of material shortages, the role of glass block is described in a new booklet. The 16 page edition covering the replacement of worn out window sash has just been released by the American Structural Products Co., Dept. AB., Toledo 1, Ohio.

**125—STORM WINDOWS**—Combination wood storm windows made of California Redwood are described and illustrated in a brochure issued by Featherlite Mfg. Co., Dept. AB., 8205 Lyndon, Detroit 21, Mich.

### 126—MOLDER - PLANER

—A four-page folder illustrates and describes the molder-planer unit for precision planing and pattern work made by the Eagle Sales Co., Dept. AB., Keene, N. H. Specifications for the unit are given and a chart shows some of the patterns the unit will produce.



**127—HEATING SYSTEM**—"How to Select Your Heating System" is the title of an informative booklet designed to help the builder select the proper heating system. It is issued by The Lennox Furnace Co., Dept. AB., Marshalltown, Iowa., manufacturers and engineers of warm air heating systems. The booklet is composed of questions and answers on heating problems as well as descriptions of the line of the manufacturer's heating units.



**128—DOOR LOCKS**—Catalog No. 410, illustrating and describing the Series 410 line of door locks made by National Lock Co., Dept. AB., Rockford, Ill., has recently been issued. The eight-page four color booklet describes installation and the many outstanding features of National locksets.

(Continued on page 166)

INSTALL  
**R·O·W**  
*Removable*  
 WOOD  
 WINDOWS



All R·O·W sash can be quickly removed from their frames, stacked, and prime coated at one time.

Shortens priming, exterior and interior painting time, cuts painting costs. Then sash may be covered and stored until danger of breakage is past.

See R·O·W at Booth No. 81, N.A.H.B. Show, Chicago, January 21-25.

**LOCALLY MANUFACTURED TO MEET LOCAL REQUIREMENTS**



R·O·W windows are manufactured in 27 and distributed in 48 territories throughout the U.S. Each of these local manufacture-distributors produce windows specially designed to meet the requirements of your locality.

For the name of your nearest distributor and your free copy of R·O·W's "Window Washing Time Study" —fill out the coupon at right.

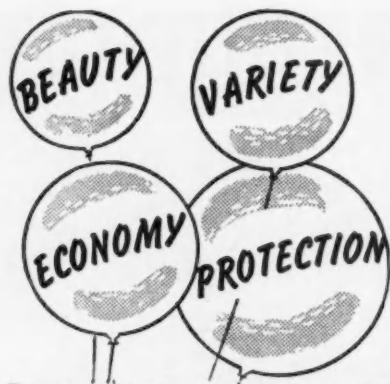


**R·O·W SALES COMPANY**  
 1336 ACADEMY • FERNDALE 20, MICHIGAN



PLEASE Send more information on R·O·W—the window with sales appeal.

Name \_\_\_\_\_ I am  Architect  
 Company \_\_\_\_\_  Builder  
 Address \_\_\_\_\_  Dealer  
 City \_\_\_\_\_ Zone \_\_\_\_\_  Carpenter-Contractor  
 State \_\_\_\_\_



Paul Drake, Architect, Summit, N. J.



## YOU GET ALL 4 WITH CABOT'S STAINS

Cabot's Creosote Stains will give your houses attractive variety at *minimum* cost — only 1/3 as much as good paint. 60-90% creosote oil — best wood preservative known — means long-lasting protection against decay and termites.

Cabot's Stains are easy and quick to apply by brush or spray-gun. They penetrate deeply, bring out all the natural beauty of wood grain in siding, shingles and clapboards.

Cabot's Stains make your houses more salable.

**WRITE TODAY**

for Cabot's Creosote Stain Color Card and complete information. Many Cabot colors are unique and available from no other source.

**Samuel Cabot, Inc.**

1131 Oliver Bldg., Boston 9, Mass.

### Misinterpretation in Metals Restriction Order NPA-M-4A

A common misinterpretation of NPA-M-4A was brought to the attention of *American Builder* editors by Dave Miller, director of sales, The Kawneer Company, Niles, Mich.

Mr. Miller points out that on page 233 of the September issue of the *American Builder's* "Government Revises Regulations on Building" is where the misinterpretation occurred. His letter arrived too late to be included in our regular "Letters to the Editor" department.

Mr. Miller says: "In the third paragraph from the bottom you state that aluminum is prohibited for the use in store fronts. Unfortunately, this is a common misinterpretation of the regulation as it was issued, and there is no basis of fact for this statement. We very carefully studied the regulation, and I think you will find that the only metal in that regulation specifically restricted for store front usage is copper. Incidentally, our interpretation of the wording was cleared with N.P.A. officials in Washington and was later issued in August to all our sales organization and our customers as well as to our architectural mailing list.

It would be appreciated if you would do everything you can to make sure that this misinterpretation is cleared up so that no confusion will result."

### Electric Products Firm Plans New Factory

Sylvania Electric Products, Inc., has purchased a site at Woburn, Mass., for early construction of a new factory to produce electronic tubes and equipment for national defense. James J. Sutherland, general manager of the electronics division, has announced the plant will have 100,000 feet of floor space, will employ approximately 600 people and cost in the neighborhood of \$1,000,000.

Woburn, a city of 20,000, will be the 19th community in which Sylvania has a plant. The firm has plants located in 18 other communities in six states. The newest one, in Shawnee, Okla., started production of radio tubes in February.

### WHERE TO BUY?

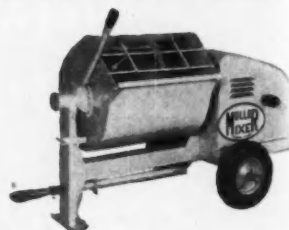
Your April, 1951

### AMERICAN BUILDER DIRECTORY

contains a complete list of Building Products and Building Manufacturers.

### CONTRACTORS—save money!

Mix plaster and mortar in a MULLER 3 FOOT MIXER



• An investment that will give you better plaster and mortar at far lower costs than old hand methods. Ideal for both inside and outside use. Holds full bag batch of most mixtures.

PRICE \$312 (with electric motor)

\$330 (with air-cooled engine)

FOB Metuchen, N.J.

Also available in 6, 9 and 12 cubic foot sizes

Write for name of nearest distributor.



**MULLER MACHINERY COMPANY, Inc.**

Metuchen 4, N.J. Cable Address MULMIX

Made \$900 IN SPARE TIME

"I did very well last year with my Foley equipment, about 950 saws and 240 lawn mowers, in my spare time. About \$900 for me." —Leo H. Mix

Carpenters make up to \$2 or \$3 an hour in Spare time. With a Foley Automatic saw Filer you can file hand, band and circular saws better than the most expert hand filer. Cash business—no canvassing. No eyestrain. No experience needed.

FREE BOOK "INDEPENDENCE AFTER 40"

shows just how you can start at home in spare time, with small investment, no overhead — and develop into a full-time repair shop. Send coupon today for this practical plan. No salesman will call.



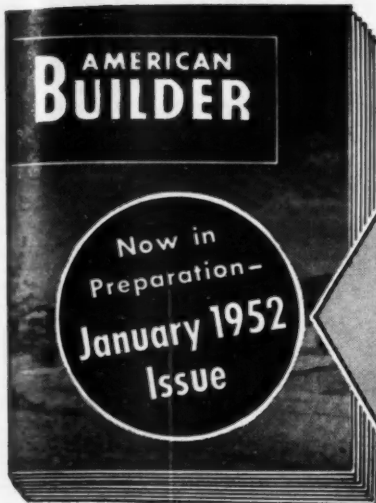
Send Coupon for FREE BOOK

FOLEY MFG. CO., 1124-1 Foley Bldg., Minneapolis 18, Minn.

Send FREE BOOK—"Independence After 40"

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

AMERICAN BUILDER



*Important News for*  
**MANUFACTURERS OF BUILDING PRODUCTS—**

**4** **BIG FEATURES** *in*  
**1** **BIG ISSUE . . .**  
*plus all regular departments*

*This*  
**Editorial Power**  
*assures extra*  
**long life**  
*for your*  
**Sales Message**  
*in the BIG*  
**January 1952**  
**Issue**

**1** *NAHB Convention Program Features*

The big January issue will be in the hands of readers before they leave for the big NAHB Convention and Exposition in Chicago. It will carry a complete outline of program features. It will help guide those attending the convention to get the greatest value from the convention activities. AMERICAN BUILDER also will list location of your Exhibit and the names of your booth personnel.

**2** *Building Products on Review*

This is AMERICAN BUILDER'S Exposition-in-Print—the perfect tie-in with your advertisement. New and improved products will be illustrated and described. It's a guide for planning product and equipment purchases for the coming building season. Readers of AMERICAN BUILDER keep their copies and refer to them throughout the year.

**3** *National Home Week Contest Winners*

AMERICAN BUILDER'S exclusive National Home Week Contests in cooperation with NAHB and NRLDA. Winners in each group (builder and dealer) will be honored by AMERICAN BUILDER for outstanding organization and conduct of National Home Week programs in cities and towns of all sizes. Awards will be made by Edward G. Gavin, editor of AMERICAN BUILDER and creator of National Home Week, at the convention in January.

**4** *Your Own Product Sales Story*

Your advertisement becomes an integral part of this BIG issue. It completes this editorial-advertising tie-in that makes it easy for building men to get product information from both the editorial and advertising pages. Don't risk the loss of sales—be sure you are adequately represented.

Be sure you are well represented with your strongest sales story.

Final closing date for Advertising—

**Dec. 3rd**

Here in one big issue is a wealth of buying information covering every phase of the light construction industry—in both the editorial and advertising pages. Manufacturers can cash-in on the extra high reader interest created by these timely editorial features.

**AMERICAN BUILDER** ABC • ABP

79 W. Monroe St.,  
Chicago 3, Ill.

30 Church St.,  
New York 7, N. Y.



# Dependability

- plus* • Accuracy  
• Speed • Low cost  
• Ease of operation  
• Extra features



**\$107<sup>50</sup>\***

## Smith-Corona ADDING MACHINE

Offers features you'd expect only on machines costing much more. For instance:

*Colorspeed Keyboard* speeds finger action...*Error Control* corrects mistakes instantly before adding...*Clear Signal* guards against including unwanted figures...*Instant Tape-Eject* shoots out tape with a flip of your finger.

Dealers will tell you this handy adding machine is practically trouble-free...dependable, like all Smith-Corona products. See your dealer or mail coupon.

\*Price for all states permitting Fair Trade Laws. Subject to change. Tax extra.

### SMITH-CORONA CASHIER

A complete cash register with adding machine advantages at lowest cost.



### MAIL COUPON TODAY

L C SMITH & CORONA TYPEWRITERS INC.  
137 ALMOND STREET, SYRACUSE 1 N. Y.

Please send me further information about your Adding Machine and Cashier and the location of a near-by place where I can see and try these machines.

Signed \_\_\_\_\_

CLIP THIS TO YOUR BUSINESS LETTERHEAD

### Ida R. Simmons Passed Away Sept. 20

Mrs. Ida R. Simmons, a director of the Simmons-Boardman Publishing Corporation, publishers of *American Builder*, died on September 20 at her home in New Rochelle, N. Y., at the age of 66. Mrs. Simmons was a former employee of the publishing company, having joined its service while still in her 'teens. In 1914 she was married to the late Colonel Edward A. Simmons, then president of the company. Following his death in 1931, she was elected a member of the directorate and thereafter maintained an active association with the company, in which she held a large stock interest.

### C. L. Best, 73, Caterpillar Tractor Co. Founder, Dies

C. L. Best, one of the founders of the Caterpillar Tractor Co., died September 22 in San Francisco at the age of 73. He was board chairman of the firm and a member of the executive committee at the time of his death.



C. L. Best

Mr. Best, son of Daniel Best, a pioneer west coast manufacturer, was born in Albany, Ore. He was a member of his father's firm until it was dissolved in 1910, then organized the C. L. Best Co., manufacturing farm-machinery in Elmhurst, Calif. In 1913 his company entered the field of gasoline-powered track-type tractors.

Mr. Best continued as president of his firm until 1925 when it merged with the Holt Manufacturing Co. to form Caterpillar Tractor Co. He became chairman of the board of the new organization.

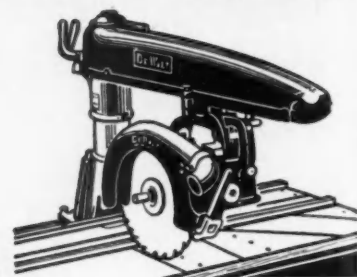
He was a leader in tractor design and one of the first to advocate diesel engines as track-type tractor power.

*Renew Your Subscription*

# BUILDERS!

save up to  
**\$200 PER HOUSE**  
by using an all-purpose

## DE WALT



Builders everywhere say they save money from cellar to roof by putting DeWalts on the job! This versatile, flexible "builder's saw" is many machines in one. It starts your house — finishes your house—saves you time and money and builds a better house. It's fast, accurate, safe, dependable. Write for catalog! DeWalt, Inc., Dept. AB-11, Fountain Ave., Lancaster, Pa.

## SUPERCEDAR

*Brown's*  
RED CEDAR CLOSET LINING

*Guaranteed*  
90% RED HEART 100% OIL CONTENT

### NATIONALLY ADVERTISED

Brown's SUPERCEDAR is nationally advertised in House and Garden, House Beautiful and Small Homes Guide. Cedar closets help sell homes—help rent apartments.



Brown's sealed package protects the aroma and makes it easy to stock and sell at a good profit. Ready for use—dressed, tongue and grooved and end matched. Write for builders folder and consumer booklet.

Product of  
**GEO. C. BROWN & CO., Inc.**  
GREENSBORO, N. C. Established 1896

Largest Manufacturers of  
Aromatic Red Cedar in the world

You can get equal  
results at less cost with  
**VERSIBOND®**



*Easy to Install!*

**(No Prefabrication Required)**

VERSIBOND—the High Pressure Laminate with the FLEXIBLE rubber backing—is easy to apply—directly on the surface to be covered—by contact pressure.

This feature saves you time and money on every installation. VERSIBOND can be shaped, routed, drilled, counter-sunk and counterbored. It is easy to cut to size.

VERSIBOND is made in cigarette-PROOF quality yet costs no more than ordinary high pressure laminates. VERSIBOND passes NEMA tests for resistance to boiling water, stains, heat, and wear.

Send for descriptive folder. Get the FACTS on VERSIBOND.

***THE OHIO RUBBER COMPANY***  
100 BEN HUR AVENUE • WILLOUGHBY, OHIO

VERSIBOND is made in a full range of popular color-patterns and in either Brushed Satin or Mirror Bright finish, as specified. Five standard sheet sizes:

30" x 72" x 1/8"	36" x 72" x 1/8"
30" x 84" x 1/8"	36" x 84" x 1/8"
42" x 84" x 1/8"	

**VERSIBOND®**

**HIGH PRESSURE  
DECORATIVE LAMINATE**



## WINTER PROTECTION THAT SAVES MONEY



"Sheds Winter Weather!"

### PENGUIN BRAND TARPAPULINS

Protect out-of-doors materials with waterproof Penguin Tarpaulins.

13 Stock Sizes  
Quick Delivery  
Seams Double Sewn  
Rustproof Grommets in Extra Strong Triangular Patches  
Raw Edges Hemmed  
Now Low Price  
3 Weights



### DANCO OIL SALAMANDERS

For economical heating on-the-job, try the automatic firing Danco Oil Salamanders. They burn less than a gallon of fuel per hour, giving over 125,000 BTU without smoke.

Square Bottom . . . Won't Tip  
No Thin Spots or Leakage  
Operates Up to 20 Hrs.  
Without Refueling

# DANDUX

C. R. DANIELS, INC.

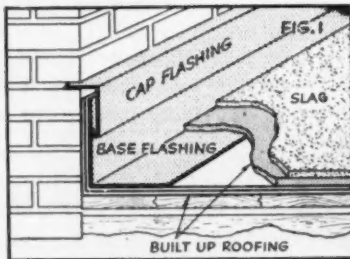
75 West St., New York 6, N.Y.  
549 W. Randolph St., Chicago 6, Ill.  
2109 Commerce St., Dallas 1, Texas  
BALTIMORE ORANGE, N.J. BOSTON  
PHILADELPHIA CLEVELAND MINNEAPOLIS  
BUFFALO PITTSBURGH ST. LOUIS  
CHARLOTTE MILWAUKEE

## How to Get Most Out of Metal In Built-up Roofs

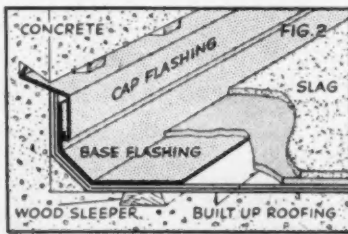
Using metal in critical areas will solve many problems roofers are having with composition roofs. The composition expands and contracts with temperature changes. This flexing will, in time, cause cracks at seals between roof and chimneys, parapets, and skylights.

Metal flashing installed in these areas will allow the composition material to creep and still hold the roof watertight. As composition roof material will contract and expand more in longer roof areas it is advisable to install metal expansion joints every 20 feet.

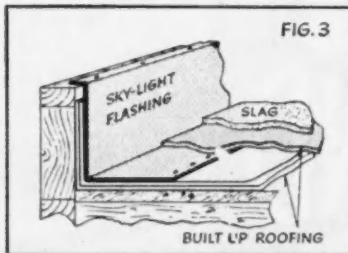
Following are some suggested illustrations on how metal flashing can be used to prevent cracks at seals, between roof and chimneys, parapets and skylights.



SUGGESTED method of flashing a brick wall, chimney, or parapet when composition roof is laid on a wood deck



FLASHING for concrete wall and deck



FLASHING for a wood skylight is one piece. The metal is turned over the wood so that water cannot run behind the flashing

(Continued on page 174)



Send for our quotation on all your railing and column work. It pays! Send sketches or ask for our suggested designs.

## CINCINNATI IRON FENCE CO.

INCORPORATED

2107 FLORENCE AVE., CIN. 6, O.

Designers-Crafters of Ornamental Ironwork, Fencing and Gates.

## SAMSON BAR CUTTERS

- All Steel Construction
- Unbreakable Frame
- Easy Operation
- Immediate Shipment



Write for catalog of Metal Working equipment

CAPACITY	No. 20	No. 23	No. 26
Rounds	3/8"	3/4"	7/8"
Squares	1/2"	3/4"	3/4"
Flats	2" x 1/4"	2 1/2" x 5/16"	2 1/2" x 3/8"
Concrete Bars	3/8"	1/2"	5/8"
PRICE	\$44.90	\$60.30	\$68.50

f.o.b. New York, subject to change

JULIUS BLUM & CO., Inc.

ESTABLISHED 1910

536A West 22nd St., New York 11 • WAtkins 9-7042

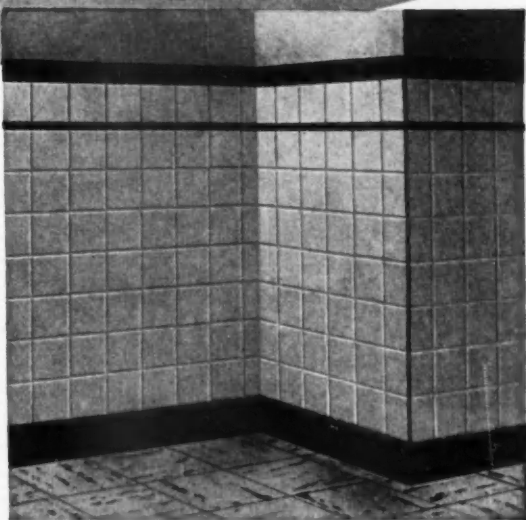
# HELP SELL YOUR JOB

WITH THESE TWO

*Inexpensive Luxuries*

**HAKO**  
**Coronet**  
**PLASTIC WALL TILE**

The better appearance of Coronet Plastic Wall Tile is proof of extra value . . . the home owner is sure to be pleased with its lustrous surface and beauty. . . . A range of colors to suit all tastes . . . unique pastel shades . . . plain or marbled . . . exclusive deep-beveled edges . . . light and easy to install . . . THE INEXPENSIVE LUXURY TO HELP YOU SELL THE JOB.



**HAKO**  
*Asphalt Tile* FLOORING

When you say you furnish HAKO Asphalt Tile Flooring you're talking about the best . . . there is no question of "that extra value" . . . and, what a selection you can offer in colors . . . pastel shades . . . plain or marbled. You can be sure of precision square cut tiles . . . factory quality control. A truly durable and inexpensive luxury . . . MAKE SURE YOU INCLUDE HAKO TO HELP YOU SELL THE JOB.



**ATTENTION LUMBER AND BUILDING SUPPLY DEALERS**  
 Hako Products will mean much to you in making you more valuable to your contractor-builder customers. There is a HAKO distributor near you. Write for information.

*Mail Coupon Today!*

**HACHMEISTER-INC.**  
 Dept. AB-3  
 Pittsburgh 13, Pa.

I am interested in more information about  CORONET Plastic Wall Tile  
 HAKO Asphalt Tile Flooring

Have a HAKO representative call on me \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

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



**HACHMEISTER-INC.**



## WINTER PROTECTION THAT SAVES MONEY



"Sheds  
Winter  
Weather!"

### PENGUIN BRAND TARPAULINS

Protect out-of-doors materials  
with waterproof Penguin Tarpau-  
lins.

- 13 Stock Sizes
- Quick Delivery
- Seams Double Sewn
- Rustproof Grommets in Extra  
Strong Triangular Patches
- Raw Edges Hemmed
- New Low Price
- 3 Weights



### DANCO OIL SALAMANDERS

For economical heating on-the-job,  
try the automatic firing Danco Oil  
Salamanders. They burn less than a  
gallon of fuel per hour, giving over  
125,000 BTU without smoke.

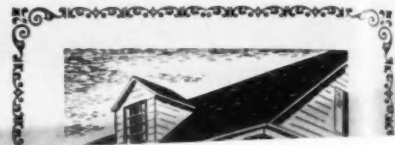
- Square Bottom . . Won't Tip
- No Thin Spots or Leakage
- Operates Up to 20 Hrs.  
Without Refueling

# DANCO

C. R. DANIELS, INC.

- 75 West St., New York 6, N.Y.
- 549 W. Randolph St., Chicago 6, Ill.
- 2109 Commerce St., Dallas 1, Texas
- BALTIMORE ORANGE, N.J. BOSTON
- PHILADELPHIA CLEVELAND MINNEAPOLIS
- BUFFALO PITTSBURGH ST. LOUIS
- CHARLOTTE MILWAUKEE

## How to Get Most Out of Metal In Built-up Roofs



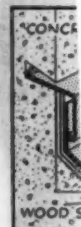
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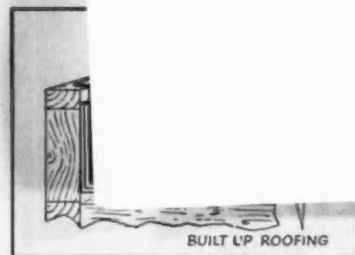
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FLASHIN



FLASHING for a wood skylight is one  
piece. The metal is turned over the wood  
so that water cannot run behind the  
flashing

(Continued on page 174)

# PAC MIS

Flats	2" x 1/4"	2 1/2" x 5/16"	2 1/2" x 3/8"
Concrete Bars	3/8"	1/2"	5/8"
PRICE	\$44.90	\$60.30	\$68.50

f.o.b. New York, subject to change

**JULIUS BLUM & CO., Inc.**

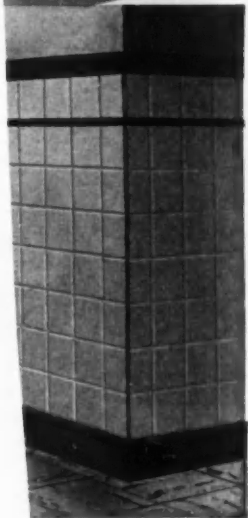
Established 1910  
536A West 22nd St., New York 11 • WAtkins 9-7042

AMERICAN BUILDER

HELP SELL YOUR JOB

*Exercises*

# PAGES MISSING



I am interested in more information about

CORONET Plastic Wall Tile

HAKO Asphalt Tile Flooring

Have a HAKO representative call on me \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

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

**HACHMEISTER-INC.**



## Aristocrat of Hammers

### Stanley 100 Plus Nail Hammer

**T**HE "tops" in nail hammers. Made especially for those who take pride in owning the *best tools*. Fine alloy steel head is drop-forged, scientifically heat-treated and polished. Comfortable, selected hickory handle has distinctive octagon-shaped neck. "Evertite" handle processed for permanent tightness. Exceptional design gives extra striking power. Perfect balance makes work easier, faster.

The best hammer you can buy, the best you can use . . . heft the Stanley 100 Plus and "feel" the difference. See the complete display of Stanley Tools at your nearest hardware dealer's. Stanley Tools, New Britain, Conn.

THE TOOL BOX OF THE WORLD



Reg. U.S. Pat. Off.

HARDWARE • TOOLS • ELECTRIC TOOLS  
STEEL STRAPPING • STEEL

## 70-Year-Old Store Gets Face-Lifting

**Contractor:**  
Mellwin Construction Co.  
Denver, Colorado

**Architect:**  
T. H. Buell & Co.  
Denver, Colorado

Faced by the spirited competition of postwar merchandising, the four story building of Gano-Downs, exclusive Denver apparel store recently underwent a comprehensive modernization. When the remodeling was completed the protruding columns, buttresses, and heavy cornices which characterized the 70-year-old building were gone, replaced by a streamlined fascia of architectural porcelain enamel panels.

Although settled, with walls vary-



**DURING MODERNIZATION** cornices and projections were removed, windows re-shaped



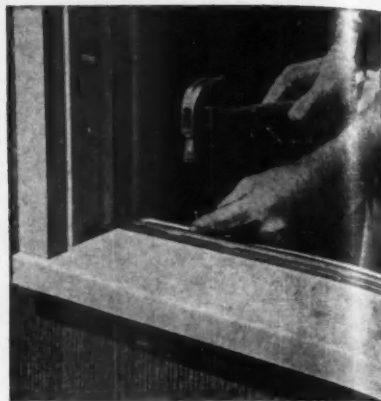
**PORCELAIN PANELS** give "1951 Look" to Denver apparel store, built in 1880

ing as much as two inches in perpendicular plane, the old building was used as a basic structure. This required the selection of a lightweight material for exterior covering. Other problems to meet were the four-inch recessed panel effect between pilasters and the irregular window treatment. Textile lifetime architectural porcelain enamel was chosen for the job.

The building was stripped of all projections beyond surface of pilasters including complete cornice at the top. The new window openings and corner radius were framed with

(Continued on page 178)

## metal weather strip NAILS



Preferred everywhere by the trade for many years. Made with barbed shanks and suitably plated for maximum resistance to elements. Available in one, two or five pound packages and in bulk. Immediate delivery.

**JOHN HASSALL, INC.**

192 Clay Street  
Brooklyn 22, N. Y.  
Established 1850



## PRECISION folding stairway



- No springs—Actuated by counterweights
- Easy to operate
- Safety treads on steps
- Insulated door panel
- Requires no attic space
- Shipped in one package

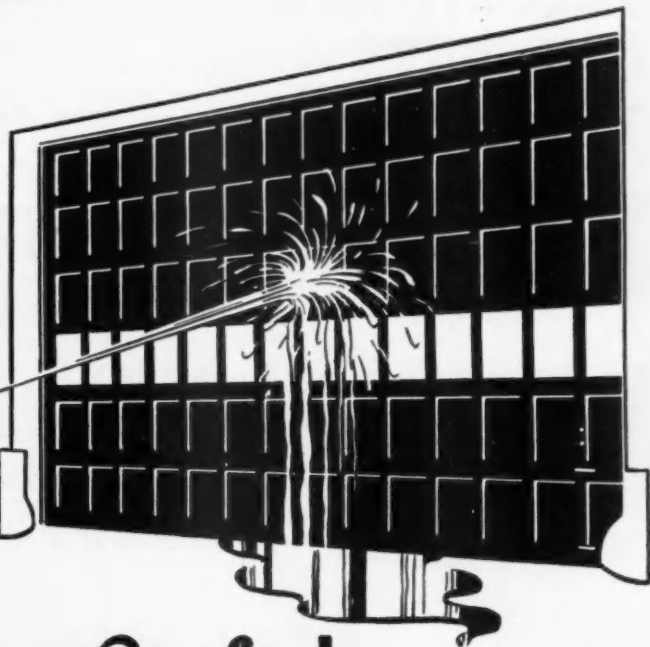
Write for full information

**PRECISION PARTS CORP.**  
Nashville 7, Tennessee

AMERICAN BUILDER

NOT YET PAINTED

but . . . **SAFE!**



## NEW Crawford Magi-Cote PROCESS

seals all surfaces (*including those not usually painted*) against moisture, fungus, molds, dry-rot, insects, etc.

**E**ACH section of each Crawford-built door (east of the Rockies) now undergoes a 3-minute Magi-Cote Process immersion in colorless liquid chemical seal which closes wood pores to all destructive elements.

Magi-Cote penetration is such that a 10' x 10' door drinks up five quarts of liquid. Sections are then air dried. Magi-Cote effectively seals all surfaces (including those usually left unpainted) against moisture, fungus, molds, dry-rot, insects, etc. It protects the door against soiling during erection and against moisture while it is waiting for

whatever finish is to be applied. Because it controls the porosity of the wood, it is an excellent base for varnish or paint, and gives these finishes superior stand-out and durability because their binders are not absorbed but stay where they belong, in the material, on the surface.

When you specify Crawford-built doors (Marvel-Lift, Fleetwood, Stylist or Door-master, all sizes, all models, east of the Rockies) your client gets Magi-Cote Process protection as standard.

A sample of Magi-Cote treated wood is yours for the asking.

*"Standard  
of the  
Industry"*



## CRAWFORD DOOR COMPANY

Main Plant: 85-401 St. Jean Ave., Detroit 14, Michigan

FABRICATING PLANTS in Portland • Tacoma • Los Angeles  
San Francisco • Dallas • Kansas City • Chattanooga • Milwaukee  
Hudson • Cadillac • Williamsport • Ottawa, Canada.

DISTRIBUTING WAREHOUSES in 79 major cities.

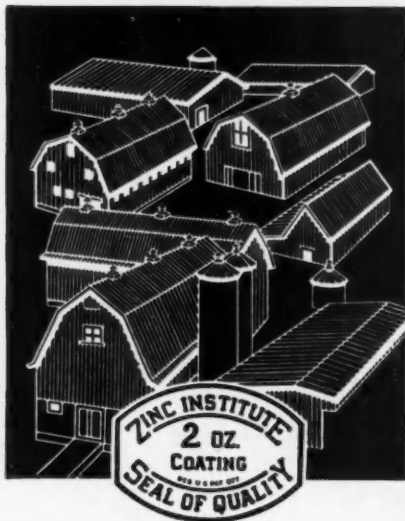
SALES AND SERVICE companies everywhere.



On All Your Farm Buildings

# GALVANIZED SHEETS

Give You All 3!



- 1. PROTECTION . . .** of valuable crops, livestock and machinery against elements. Galvanized roofing covers more than  $\frac{1}{3}$  of all U.S. farm buildings today!
- 2. STAY-ABILITY . . .** Hold at the nail-holes, resist high winds, stay sealed and solid for years and years. *Strength of steel—protection of Zinc!*
- 3. ECONOMY . . .** Reasonable original price . . . low repair and upkeep cost . . . long years of service . . . add up to *economy you can count on* thru the years.

#### Now, More Than Ever . . . PROPER CARE PAYS!

When material shortages threaten to limit new construction and replacement, careful maintenance of present structures is essential. A few simple steps with very little labor can make galvanized roofing a lifetime material. The valuable booklets described below will show you how.

#### AMERICAN ZINC INSTITUTE

35 E. Wacker Dr., Room 2605  
Chicago 1, Illinois

Without cost or obligation, send the illustrated booklets I have checked.

- Facts About Galvanized Sheets
- List of Metallic Zinc Paint Mfrs.
- Directions For Applying Galvanized Sheets
- Repair Manual on Galvanized Roofing and Siding
- Use Metallic Zinc Paint to Protect Metal Surfaces

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ADDRESS \_\_\_\_\_

TOWN AND STATE \_\_\_\_\_

**Send for FREE Booklets**

#### 70 Year Old Structure

(Continued from page 176)

four-inch light structural channels attached to recessed wall sections with bolts through the wall. Additional channels were used where required, giving support not exceeding four feet on centers. These channels started at the top of the awning bar spanning the transom opening and stopping at the heavy masonry course

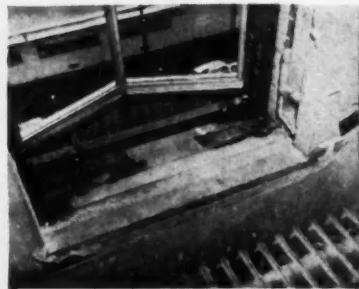
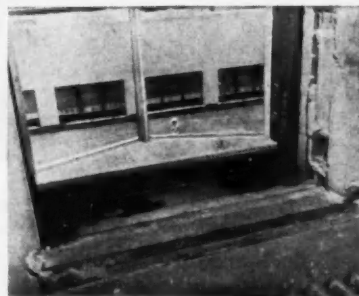


PLATE GLASS WINDOWS and aluminum spandrels replaced wood frames and sash



WINDOW COMPLETION nears with the installation of porcelain enamel stool

immediately below the fourth floor window sills. A second channel was used to frame windows at fourth floor level above the heavy masonry course. These channels attached to the building with special slotted clips, allowing for adjustment to cover variance in building wall. It was necessary to cut stone at window sill levels so that channels could run continu-



ously. Additional framing was attached to the channels forming support for the plate glass windows and cast aluminum spandrels.

Special fabricated J-type 16-gauge galvanized furring was welded directly to the four-inch channels. These

(Continued on page 180)

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Build sooner  
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Yes, whether you want Standard or Tempered Weldwood Hardboard—a dozen sheets or a thousand—or Weldwood Tempered Tile Board... your regular Weldwood salesman will supply it with his usual prompt, reliable service.

Weldwood Hardboard is a superior board in every way. Light in color. Works and cuts better... with a sharp, clean edge.

The Tempered Grade is a perfect material for shower stalls, exterior sidings and many

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And to meet all your requirements, both Standard and Tempered grades of Weldwood Hardboard come in three popular thicknesses:  $\frac{1}{8}$ " ,  $\frac{3}{16}$ " and  $\frac{1}{4}$ ". In sizes: 4' x 6', 4' x 8', 4' x 10', 4' x 12' and 4' x 16'. Panels up to 4' x 12' are wrapped six to a package. The 4' x 16' panels, four to a package. Weldwood Tempered Tile Board is available only in  $\frac{1}{8}$ " thickness and in sizes 4' x 4', 4' x 8', 4' x 12'.

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United States Plywood Corporation is the world's largest manufacturer of plywood, producing a complete line of decorative hardwood plywood, fir plywood, Weldtex and other specialty items—as well as the most complete line of wood-faced flush doors on the market.

### WELDWOOD® Hardboard

Manufactured by Abitibi Power and Paper Company, Ltd.\*

Distributed Exclusively By

UNITED STATES PLYWOOD CORPORATION

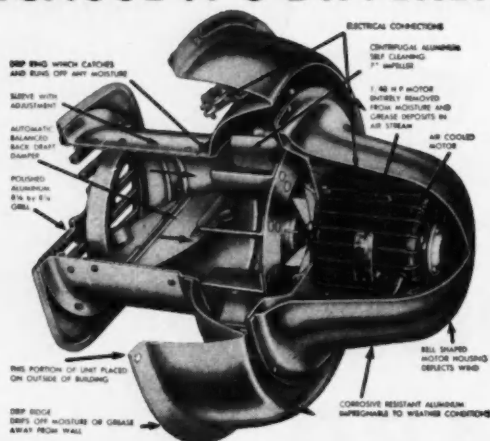
55 West 44th Street, New York 18, N. Y.

Branches in Principal Cities • Distributing Units in Chief Trading Areas

\*Weldwood Hardboard distributed on the West Coast is manufactured by Forest Fiber Products Company.



# HOME BUYERS LIKE THE KITCHEN-AIRE EXHAUST FAN BECAUSE IT'S DIFFERENT



Different, because it is **FIRE-SAFE**, grease laden air is **NOT** drawn over motor;  
 Different, because intake grill may be mounted above cooking range even on inside wall;  
 Different, because ordinary 6" stove pipe will serve for making connection between intake grill and exhaust fan;  
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Yes, the Kitchen-Aire is different. Electrically operated, easily installed, the Kitchen-Aire adds that plus-value which makes new homes salable. It is the last word in Kitchen ventilation, a feature your buyers will like. Underwriters Approved. Advertised in Better Homes and Gardens.

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 320 E. St. Joseph Street, Indianapolis, Indiana



## Control the Moisture Problem

The **INSULITE**\* "Wall of Protection" controls condensation in walls . . . guards against paint failure and other destructive action. **Sealed Lok-Joint Lath**\* on the inside retards vapor flow into the walls. Permeable **Bildrite Sheathing**\* allows the remaining vapor to escape toward the outside.

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Made of Hardy



Northern Wood

INSULITE DIVISION, MINNESOTA AND ONTARIO PAPER COMPANY

## 70 Year Old Structure

(Continued from page 178)

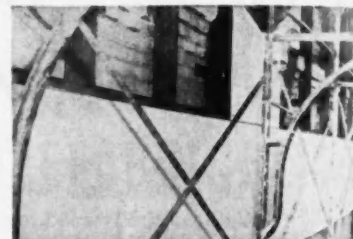
furring strips were continuous at each horizontal joint, and allowed the hanging of each panel as a self-supported unit.

The panels were modular of 36-inch horizontal joints with the largest panel approximately 36 inches square. Special J-type furring and panel construction allows a 3/16 inch caulked, trouble-free, weather-resistant joint.

Wooden window frames and sashes were removed from inside after new plate glass windows and aluminum



**PORCELAIN ENAMEL PANELS** were hung on "J" type 16 gauge galvanized furring



**CLOSE-UP** shows scaffolding, porcelain panels, channels

spandrels were installed. Openings not used and openings around circular windows were blocked with cinder blocks. All were finished with plaster on sides, suspended lathe ceiling and plaster at head. A porcelain enamel stool was used.

The porcelain enamel panels were fabricated of 16-gauge special Armeo enameling iron on a 700-ton press, using a special forming die. All flanging and forming were completed in one operation. The porcelain enamel finish consists of one ground coat and two cover coats of acid resisting full matte finish with stippled effect on face of panels. One heavy slush coat was used on the back of panels. All coatings were sprayed and fused at 1575° F. in a hang-up conveyor type furnace.

The exterior of the building required approximately 12,000 square feet of architectural porcelain enamel. The course is 50 feet, 6 inches high, extending from the top of canopy trim to the top of parapet wall.

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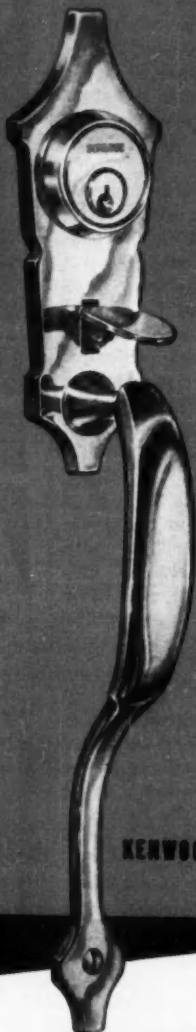
*"First Impression"*



# SCHLAGE® ENTRANCE LOCKS



PLYMOUTH



KENWOOD



WAVERLY



DORCHESTER

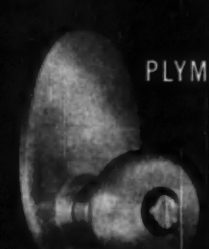
These classic designs in grip-handle locks, with push-button convenience on inside trim, have that solid Schlage feel. Easy to install...mechanism and latchbolt are completely reversible.

**SCHLAGE LOCK COMPANY**  
BAYSHORE BLVD.    EMPIRE STATE BLDG.  
SAN FRANCISCO    NEW YORK

INSIDE TRIM



NOVO



PLYMOUTH



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*Book*

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**decide on the**  
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It describes the Fyro-Place—the extraordinary heat-circulating form that eliminates troublesome mortar joints and provides the time and material-saving "Ductmakers"

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**PRICE** FIREPLACE HEATER  
& TANK CORPORATION  
195 West Austin Street Buffalo 7, New York

**U. S. Free Enterprise :  
A Cool Look at the Rate  
Of Government Invasion**

By Franklin L. Burns President,  
D. C. Burns Realty & Trust Co.,  
Denver, Colorado

Most of us still look upon this great country of ours as the last bulwark of the co-called "free enterprise" system, but let us pause and think for a moment to what extent that system is gradually and inexorably crumbling before the constantly increasing intrusion of government into so-called private business. "Private," we say? The invasion of such "privacy" has been taking place in major segments of our economic structure for the past five decades with an increasing tempo readily apparent in the last two decades.

The railroads were the first important industry to feel the rein of governmental regulation. With the passage of the Interstate Commerce Act in the 1890's that industry was placed in the position of being told what could be charged for the transportation of freight and passenger business between given points; the rate of depreciation to be charged on the multitudinous equipment used; how the accounts were to be kept, etc.

The same situation is true to a very large extent so far as the public utilities are concerned. Their rates and conduct are subject to fiat handed down by Federal and State commissions.

**RADIO, TELEVISION NEXT?**

These are the two outstanding, and first, economic segments that came under the heavy hand of government. But there are others as we know—radio and television to a lesser extent as yet, but the foot is in the door and the full entry is practically foregone, common carrier bus and truck lines, airlines, shipping.

No attack was made on the building industry until 1933 when the first authorization for federally supported public housing was made under the National Industrial Recovery Act. Its stated primary objective then was employment, but in addition to employment the act authorized construction, reconstruction, alteration, or repair under public regulation or control of low cost housing and slum clearance projects.

The Public Housing Act enacted into law on July 15, 1949, provided for the erection of 810,000 units of federal political shelter in the next six years to cost more than thirteen

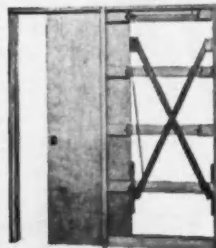
(Continued on page 184)



**Dorflo**  
**floating doors**  
now assembled  
in the new  
**READY-UNIT**

- Comes on the job as an assembled wall section — all hardware on!
- Makes installation easier—faster ... more economical ... absolutely foolproof.
- Complete assembly in just a few minutes.

**Dorflo** brings you  
**RECESSED DOORS**  
the *Modern way*



Packaged  
Hardware  
K-D Wall  
Sections  
Ready-Unit  
Section

- **NO TRACKS** above or below ... a new cantilever principle which gives silent, trouble-free operation.
- **BALANCED SPRING CONTROL.**
- **EASY ADJUSTMENT**—every moveable piece of hardware accessible and removable without disturbing wall or door trim.
- **ADAPTABLE** to 1 3/4" or 1 3/8" doors —standard wall construction.

For literature and further information write to

**DORFLO MANUFACTURING CORPORATION**  
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## More remodeling jobs when you sell **M-67**

You can get a big share of today's profitable remodeling market when you sell Armstrong's Monowall®. The new M-67 finish is the reason Monowall is so easy to sell.

**M-67 means beauty.** This new plastic gives Monowall a sparkling variety of color, unusually high luster, and extra long life. That's why it's ideal wherever rough wear is expected—in commercial interiors as well as in kitchens and baths. Since a big part of the remodeling dollar is spent in these areas, your M-67 sales story will mean bigger profits for you.

**M-67 means durability.** Monowall's glass-smooth surface is a result of ten years of research. In severe tests for resistance to hard knocks, abrasion, solvents, stains, and fading, M-67 Monowall rated much higher than any of 16 other panelboards tested. A tough hardboard base, a primer coat, and two layers of M-67 plastic give Monowall an especially hard surface that will not crack or craze.

**M-67 is in demand.** Armstrong's consistent national advertising has created a ready-made Monowall market. Consumer magazines and network television have already brought the M-67 story to millions of people. Literature and displays in your showroom will help you capitalize on this powerful advertising. For samples and literature, see your Armstrong lumber dealer or write Armstrong Cork Company, 1611 Lincoln Street, Lancaster, Pa.

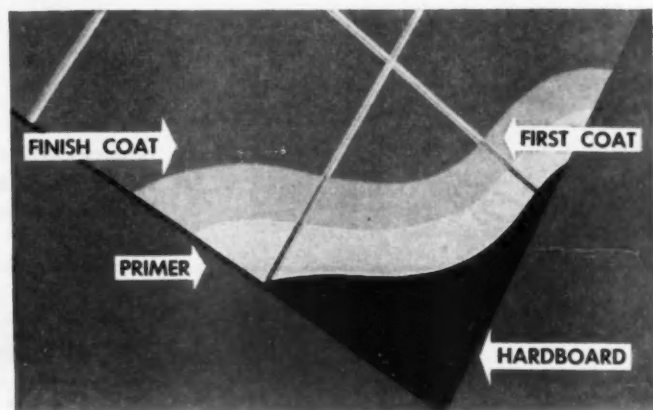


# ARMSTRONG'S **M-67** MONOWALL

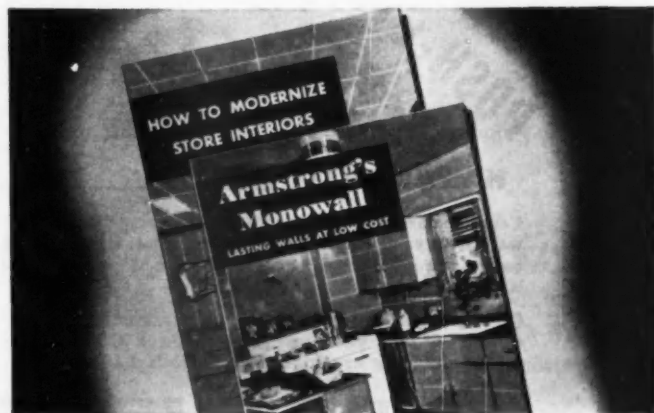
NOVEMBER, 1951



Sell M-67 and increase your own remodeling business. With the remodeling market active as it is today, attention is focused on both commercial jobs and home interiors. The durability and bright colors of Armstrong's new M-67 Monowall make it the ideal material for both these areas.



Built-up layers of M-67 plastic enable Monowall to withstand unusually rough treatment. Monowall's beautiful colors will stay bright. Laboratory tests have proved it unusually resistant to soap, water, household stains, abrasions, and hard knocks. Its lustrous surface will not crack or craze.



Monowall displays and literature will help you sell. Armstrong's consistent national advertising program has created strong demand for M-67 Monowall. Your selling job is made easier because millions of people have heard about the new Monowall through magazines and television.

Balanced  
design —  
easy  
operation

Zip! Zip!  
Fast as you grip!



# HANSEN

the Tacker  
with 1001  
uses —

Tacks insulation,  
ceiling tile,  
metal lath, etc.

INSULATION of all types quickly and properly installed with Hansen, the Tacker you hold and operate with one hand — securely holding material and bracing self with other. Flanges on insulation are easily tacked securely in place. Reflective insulation looks and holds better when tacked with Hansen. Building paper, screens, ceiling tile, metal lath, cornerite, are among other time-saving uses of this modern tacking method.

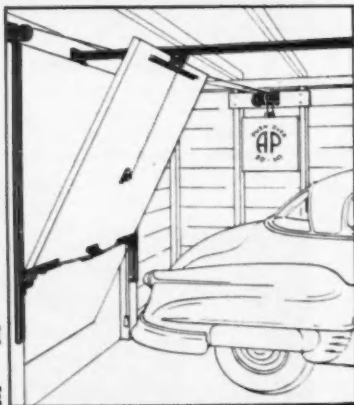
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Easy to Install...  
Lasting Satisfaction

**ALLITH**  
**50-50**  
**PUSH-OVER**  
GARAGE  
DOOR  
HARDWARE



Combine the expertly-designed Allith garage door hardware with your own or any standard door. Result . . . a rugged, easily-operated overhead door that gives full and lasting customer satisfaction.

Quickly installed, standard set fits any opening up to 9' wide x 7'6" high when doors do not exceed 275 lbs. Other sets available for openings up to 10' wide x 10' high.

**ALLITH**  
**PROUTY, INC**  
DANVILLE, ILLINOIS  
IN AMERICAN BUILDER for Forty-Five Years

## U. S. Free Enterprise

(Continued from page 182)

billion dollars in direct grants and loans in the next 40 years—direct grants up to \$308,000,000 each year for up to 40 years. It also authorized "slum clearance" grants and loans of one and one-half billion, and federal farm subsidies and loans of 250 million dollars. Thus we have a total potential expenditure spread over that 6 year period of 15 billion, 645 million dollars.

### \$308 MILLION ANNUAL SUBSIDY

Let us look at the tax loss angle for a moment. The 1½ billion dollar revolving loan fund, and 308 million dollar annual subsidy for 40 years is authorized to assist local public housing agencies to construct and rent at a loss public housing for up to 810,000 families over a six year period (135,000 annually) but with permission in the President to increase up to 200,000 a year or decrease to as low as 50,000 per year. The city is required to contribute nothing in cash but must agree to give up right to tax the property. Up to 10 per cent of the shelter rent of the project could be allowed "in lieu of taxes." Room costs of projects can go up to \$2,500 per room, plus land, utilities, site preparation, and equipment if the Public Housing Administration finds it not feasible to construct for \$1,750 per room. A gap of at least 20 per cent must be left between upper rental limits for admission to the public housing project and the lowest rental at which private enterprise is providing new and available existing housing as determined by the Public Housing Administration.

The cost of this program, to us, as taxpayers, is staggering. Aside from the carrying charges for federal government deficit financing on this program, the tax loss at the local level is readily apparent. Let us assume, as an example, that public housing units rent for \$35.00 a month. Using the figure of 10 per cent allowed "in lieu of taxes," \$3.50 per month or \$42.00 per year would be returned to the municipality's treasury. As contrasted with this, a comparable unit privately constructed and owned would in all probability be assessed a tax of \$125 per annum or \$83 more than that paid by the publicly owned unit.

### TAX-FREE GOVERNMENT BONDS

Government bonds amounting to \$680,000,000 will be required to finance the public housing units constructed this year. Such bonds are

(Continued on page 186)



# Safe AND Profitable

## TO RECOMMEND...



# Quick AND Easy

## TO INSTALL

### SARGENT "4500" LOCKS



**BEAUTIFUL DESIGN . . . convenient key-in-knob action . . . highest quality construction throughout.**

Those are *three* good reasons why many builders are installing Sargent "4500" Locks on entrance and interior doors.

One *more* reason why the Sargent "4500" Lock leads among bored-in locks is that it is installed so quickly and easily. Requires only a 1 1/4" crossbore.

And here's still another advantage of the Sargent "4500" that's worth stressing: *it has a full 1/2" throw.* The bolt will travel the full distance *every time.* It is built with four separate springs for smooth, positive latching.

*No other lock in its price class offers so many features.*

Ask your supplier for full information—or write us. Dept. 5L.



—the line that people want—  
with the name that everyone knows

## Sargent and Company

New York • NEW HAVEN, CONN. • Chicago  
Builders Hardware and Fine Tools since 1864



# Help Beat Rising Costs with "TROUBLE SAVERS"

Men can do more work in less time because of the extra convenience, fast-handling features, safety and efficiency of "Trouble Saver" Scaffolding accessories.

## SCAFFOLD BRACKETS



- Erect and dismantle faster than you can build a make-shift wooden scaffold.
- Nail, studding and bolt-attached types—in 3' and 3½' lengths—rail carbon steel.
- Attachments available to convert any one type to any other type.

## LADDER JACKS



- **ONE-MAN RUNG-TYPE** Ladder Jacks (left) adjust to any pitch on either side of the ladder. Takes weight on three rungs.
- **NEW RAIL-TYPE** jacks (right) use side rails of ladder for extra safety.

Used by thousands of builders. Write for literature giving information on all money-saving "Trouble-Saver" Scaffolding Accessories.

Manufacturers of  
"Trouble Savers" © since 1912

## The Steel Scaffolding Co., Inc.

856 Humboldt Street, Dept. AB • Telephone EVERgreen 3-5510 • Brooklyn 22, New York



How many meshes  
in a sheet of Bostwick  
Diamond metal lath?

• The large number of diamond meshes in a sheet of Bostwick Metal Lath is not there by happenstance.

A complicated metal lath machine takes a sheet of solid metal 8½"x112" and expands it to 27"x96". As the sheet is stretched, 22,032 meshes are formed in the sheet.

Of course every sheet of Bostwick Metal Lath is square and of uniform length and width. Small meshes and square sheets are your big cost-saving features.

# Bostwick

STEEL LATH COMPANY  
103 HEATON AVE. • NILES, OHIO

## U. S. Free Enterprise

(Continued from page 184)

tax-free. Consequently, the interest paid on the bonds represents a substantial loss in income tax revenue. This method of financing is used merely as a device to endeavor to prove that government housing can be provided more economically than private enterprise can. But at no time does the Government use it to finance the most important project to all of us, namely, War. During war periods we are told it is impractical and unsound to issue tax free government bonds.

Let us now examine what has been done by private industry in the way of providing new and adequate housing. The 1,400,000 new non-farm dwelling unit starts in 1950 exceeded the previous peak years of 1949 by 36 per cent and 1925 by 50 per cent. One-family homes starts accounted for almost 85 per cent of all new dwelling unit construction in 1950, against 77 per cent in 1949. Expenditures for new private non-farm dwellings in 1950 amounted to 11 billion, 500 million dollars.

Despite these huge strides under private initiative, the Federal government was dissatisfied and publicly suggested in November, 1949, that at least two million new homes per year be started and doubled the public housing program from 100,000 units annually to 200,000.

### THEN CAME KOREA

Then came Korea and the building industry was promptly singled out as one to receive the brunt of the most restrictive controls—credit and otherwise. The government decided that not more than 800,000 to 850,000 new units should be constructed during 1951. It is quite likely this goal will not be achieved. Yet, at the same time the 42,300 public housing starts in June 1951 were 50 times those of June 1950, an increase of over 5,000 per cent. There were 60,500 public housing starts in the first six months of 1951, an increase of over 600 per cent contrasted with the same 1950 period.

Government ownership of homes is a principle and practice imported from Europe. One of the prime bases of the Communist Manifesto issued by Karl Marx and Friederick Engels in 1848 was the destruction of the private ownership of property. This has happened in many countries in Europe. Most of the building has been done since World War One—in Russia under Lenin and Stalin; in Germany under Hitler; in Italy under

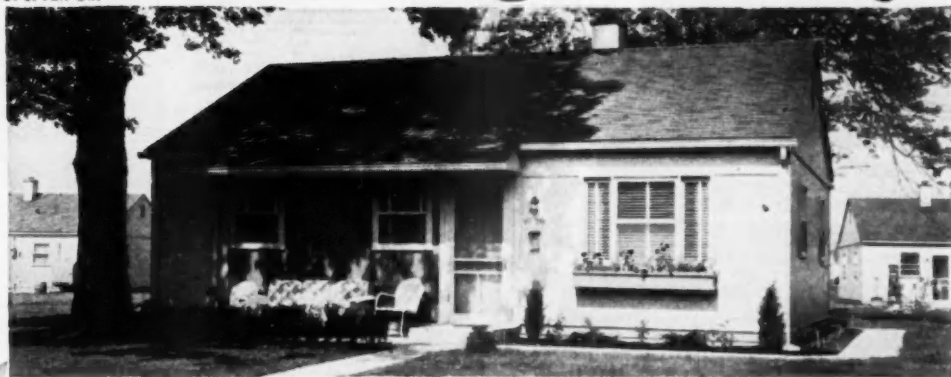
(Continued on page 188)

**NATIONAL HOMES SAVED UP TO 50%  
ON HEATING INSTALLATION WITH**

*\*Pressurized Air Gravity*

# "BALL FLAME" Oil Burner

Reg. U. S. Pat. Off.



Illustrated is a typical National Home project at Indianapolis, Indiana

On heating installations, National Home Corp. of Lafayette, Indiana, one of the nation's largest producers of prefabricated homes, saved up to 50% by installing the Weir-Meyer furnace, manufactured by the Meyer Furnace Company, equipped with Kresno-Stamm "Ball Flame" Pressurized Air Gravity Oil Burner.

Many leading developers and builders specify "Ball Flame" automatic oil burners for small homes . . . to save up to 50% on heating equipment and installation costs.

Here's the dependable, trouble-free oil heating system developed specifically for the low-cost small home—the kind builders will be concentrating on from now on.

Yes! . . . the "Ball Flame" is actually 50% cheaper to buy and install than the gun type burner . . . and it's 1/3 cheaper to operate! Ask your heating contractor to quote both ways . . . and see the difference.

Many leading furnace manufacturers feature a Kresno-Stamm "Ball Flame" model. For your larger homes, specify Kresno-Stamm POW-R-MATIC Gun Type Burners.

*Designed Specifically  
for the LOW-COST  
Small Home Market*



*\*P.A.G. "BALL FLAME" is featured in leading furnace lines!*

**Write for Brochure  
on revolutionary "Ball  
Flame" heating for small homes.**



**KRESNO-STAMM  
MANUFACTURING CO.**

COMMERCIAL AVE.

PALISADES PARK, N. J.

Canadian Plant, 506 Harbour St., Montreal



# TODAY'S HOMES demand GRANT SLIDING DOOR HARDWARE

*featuring*

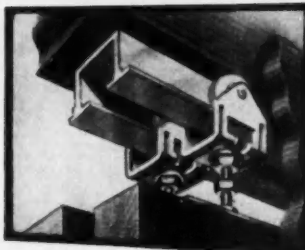
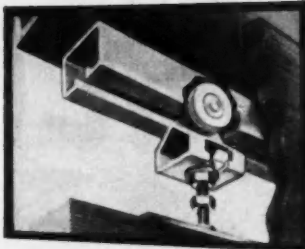
- Simple Installation
- Silent Sliding — No metal to metal contact
- Three adjustments
- For all door sizes
- Hanger cannot "jump track"
- Meets Low Headroom requirements
- Track is efficient dust shield

Send for complete, illustrated catalogue

**GRANT PULLEY & HDWE. CO.**

31-87 Whitestone Pkwy.  
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GRANT No. 16  
Hanger, for  
single sliding  
doors



GRANT No. 17 Hanger, for mul-  
tiple door installations

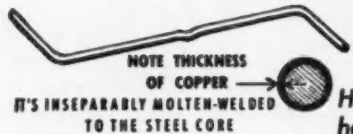
*The foremost name in Sliding Devices*

## THICK COPPER COVERING

Permanently Protects  
High-Strength

**Copperweld**  
CAVITY

## WALL TIES



NOTE THICKNESS  
OF COPPER

IT'S INSEPARABLY MOLTEN-WELDED  
TO THE STEEL CORE

No Other  
High-Strength Tie  
has this Safety Feature

Copperweld\* Cavity Wall Ties are not made of wire thinly coated with a temporary rust-resisting material. They are made by Molten-Welding a thick layer of copper to a strong steel core. Long life and high strength are assured because the two metals are inseparable—with the heavy sheath of copper permanently protecting the steel against rust.

For safe, long-lasting cavity wall construction, you need strong, non-rusting ties that will resist the corrosive action of moisture, lime, and mortar. In other words, you need Copperweld Ties. The original breaking strength of the wire—about 2 tons—remains the same for the entire life of the wall. You can't get these important advantages with any other tie.

Protect the building owner's investment by insisting on "Copperweld" in your cavity wall tie specifications and orders.

\*Trade Mark

Made in two sizes—6" and 8"—500 of one size to a box. Order them from your dealer today. If he can't take care of you, write us for literature and prices.

**COPPERWELD STEEL COMPANY**

Glassport, Pa.

SALES OFFICES IN PRINCIPAL CITIES



## U. S. Free Enterprise

(Continued from page 186)

Mussolini; in Austria under various socialist regimes and in England since 1918 under several party labels.

### IN ENGLAND, PRIVATE BUILDING'S ALMOST OUT

The situation in England under the post World War II Socialist government has reached the point where the government does nearly all the building. It is illegal for a private citizen to build a home even for his own use without the express permission of the cumbersome national socialist bureaucracy. If this permission could be obtained, the citizen would then face almost insurmountable obstacles in securing materials and labor which likewise can be obtained only through government channels.

It is only natural for human beings to seek collective security but in doing so we have concentrated so heavily on the economic variety that we have neglected the physical, spiritual and political. Yet we should have known better, because there was in this country—a century ago—a widely-established system of social security under which large numbers of our people were guaranteed work, food, clothing, shelter and all the basic necessities of life from the cradle to the grave. But, that system was abolished. You see, we called it Slavery.

True security can never be fashioned out of slavery, injustice and corruption. It must be founded firmly upon, and dedicated wholly to, the dignity of man.

I will sum up in a single sentence the lesson we must learn from the unhappy experiences of nations all over the world:

There would be little progress without incentive; you will not have hope if there is no opportunity, and absolutely no security without freedom.

### Film Tells How to Handle Redwood Siding

Information on redwood siding—how to handle, apply, paint and trim—is given in a new slide film released by the California Redwood Association. The film, called "In Your Hands," is designed for use by retail lumber dealers, contractors, carpenters and painters.

Running time of the 35 millimeter sound and color presentation is 15 minutes. It may be booked by writing the California Redwood Association, 405 Montgomery St., San Francisco 4, Calif.

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BUILDER



"We Found That  
**CHAMBERS  
BUILT-INS  
PUT OVER  
SMALL-KITCHEN  
HOMES**"



# Chambers

COOKS WHILE THE COOK'S AWAY®

CHAMBERS BUILT-INS sell the small, compact kitchen. Making do with less space often is necessary in current low-cost building projects. And Chambers Built-Ins make that reduced space actually desirable—by introducing the convenience of counter-level cooking with speedy, dependable GAS. Chambers Built-Ins permit full utilization of compactness and step-saving design. Women are won by the Chambers Oven's unique ability to save kitchen time and drudgery while it "cooks with the gas turned off"

A COMPACT KITCHEN is easy to plan with Chambers Built-In Cooking Units. The spacious Chambers Oven fits into 24 inches of wall space—may be surrounded on 4 sides with wood or metal cabinet groupings. Triple-wall oven insulation enables Chambers to meet the exacting requirements of the AMERICAN GAS ASSOCIATION for this type of installation.

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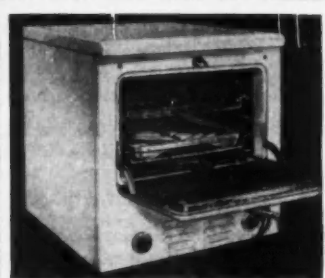
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CITY.....ZONE.....STATE.....



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Guarantee  
on burners and  
east oven bottom

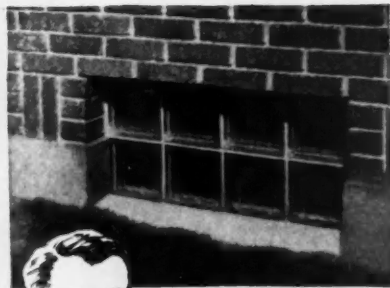


"IN-A-WALL" Oven is heavily insulated—top, bottom, all sides—utilizing retained heat to "cook with the gas turned off." Its huge, family-size capacity accommodates up to 40 lbs. of roast. Beautifully finished in stainless steel, or stainless with oven doors in choice of seven beautiful decorator colors.



"IN A TOP" 3-Burner Drop-In with plated surface fits into counter top by providing opening of 18 1/2" x 33 1/4". Individual drip rings may be removed easily for quick cleaning. 4 burner top also available.





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windows**

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A glass block panel can't rust nor rot; never needs to be painted. Insulux Glass Block makes a sound, weathertight, insulating panel that's extremely hard to break.

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Want more information about Insulux Glass Block? We'll be glad to send you all the details. Just write: Daylight Engineering Laboratory, Dept. A.B.-11, Box 1035, Toledo 1, Ohio, American Structural Products Company, Subsidiary of Owens-Illinois Glass Company.

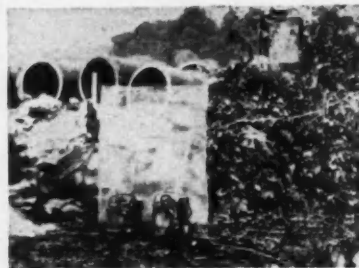
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**"WALLS OF  
DAYLIGHT"**

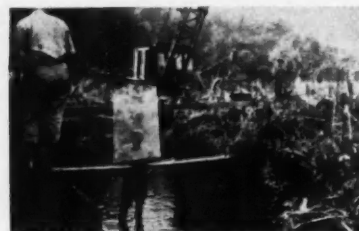
**—by the leaders of  
Daylight Engineering**

**Drainage Job Completed  
With Two Utility  
Submersible Pumps**

Failure of a four-cylinder four-inch gasoline drainage pump during a sewer-laying operation posed a cost problem for a Greenwich, Conn., general contractor, Peter Mitchell: another pump had to be procured if work was to be maintained and although a large 7½ HP six-inch pump was available it required a 220 volt power source and an expendi-



**SUBMERSIBLE PUMPS** are ready for installation in sewer trench



**WIRE BASKET, made on the job, serves as a coarse screen for pump**



**WORKMEN lower pump into basket**

ture of \$1,500 to run power to the pump site.

The solution was found in the purchase of two utility automatic submersible pumps which operate on 110 volt power, which was available nearby without extra cost.

Weight of the pumps used was 50 pounds. They were completely submerged, the motors being hermetically sealed and run in oil and activated by an air pressure switch mechanism. A small sump was dug at the lowest point of the ditch and partially filled with slag. A basket was made for the pump with 2x12-inch planks as a bottom and a heavy

(Continued on page 194)

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THIS EASY WAY**

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ESTIMATING**

**Quick... Easy... Accurate  
with this simplified guide!**

You can earn higher pay when you know how to estimate. Here is everything you need to know to "take off" a bill of materials from a set of plans and specifications for a frame house. Saves you time figuring jobs, protects you against oversights or mistakes that waste materials and cost money. Nothing complicated—just use simple arithmetic to do house carpentry estimating with this easy-to-use ready reference handbook:

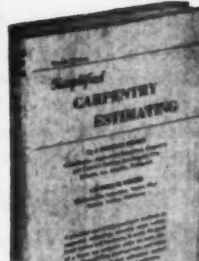
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CARPENTRY ESTIMATING"**

Shows you, step by step, how to figure materials needed for (1) foundation, (2) framing, (3) exterior finish, (4) interior finish, (5) hardware, and (6) stairs. Gives definite "take-off" rules, with many helpful quick-reference tables and short-cut methods that simplify the work.

**SPECIAL FEATURES:** Lumber Checking List. Millwork Checking List. Hardware Checking List. Materials Ordering Information. Quick-Figuring Tables for estimating concrete footings and walls, concrete piers, window frames, door and window areas, sash weights, nail quantities. How to figure labor hours per unit of work. Rules for linear, area and volume measurement. Mathematical reference tables, including decimal equivalents, lumber reckoner, conversion of weights and measures, etc.

**TURN TO CHAPTER 8** and see the "Estimating Short Cuts" for quick figuring of board footage. Here are simplified ways to estimate lumber needed for floors, walls, ceilings, roof, door and window frames, inside trim for these frames, inside trim for inside doors, and drawers and cabinets. *This chapter alone can be worth the entire price of the book to you!*

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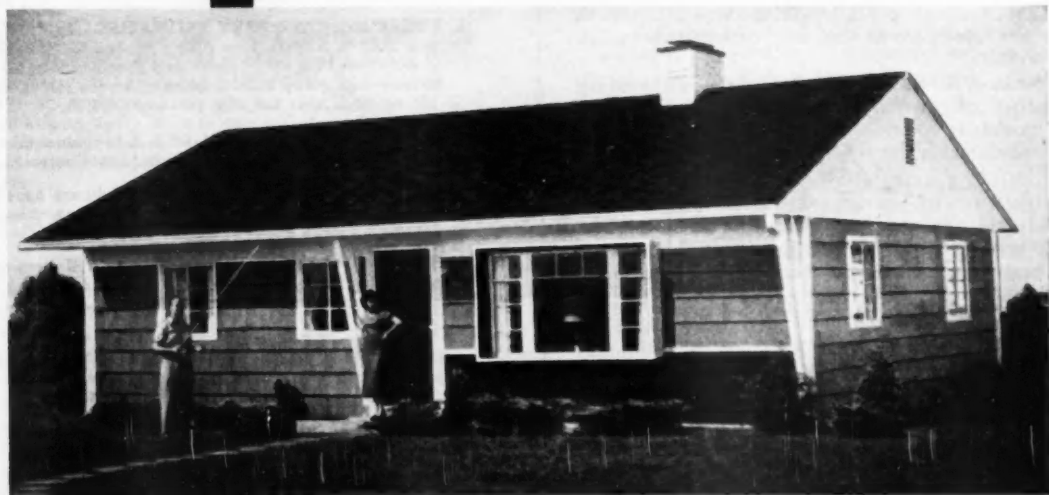
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## BOOK REVIEW



### A REFERENCE HANDBOOK FOR CONSTRUCTION ENGINEERS, ARCHITECTS, BUILDERS, SUPERINTENDENTS OF CONSTRUCTION, AND BUILDING CONSTRUCTION FOREMEN.

By H. G. Richey. 4 inches by 7 inches, 1600 pages, illustrated. \$10.00. See No. 29 in adjoining columns.

It is impossible to summarize everything that Mr. Richey has put into his book. It is enough, however, to state that he has attempted with a good deal of success to provide the man in charge of any construction job with a working knowledge of all the building trades engaged on that job. That's a big order, but it appears that this is one of the few books we've seen that comes close to fulfilling its promise.

For example, in the 126-page chapter devoted to heating and ventilation information the eleven sections carry the following headings: Heating, Warm Air Heating, Steam Heating, Vacuum Heating Systems, Hot Water Heating, Radiant Heating, Piping of Heating Systems, Heating Data, Ventilation—Air Conditioning, Automatic and Air Washers, Humidifiers and Air Washers. That is a lot of coverage to give any single subject in a general handbook and while heating and ventilation may not be every builder's dish the same thorough treatment is devoted to carpentry, lathing and plastering, plumbing, wiring, lumber, painting, masonry, metal work, drawing, mathematics, etc.

The multitude of data that has been brought together in this book represents a lifetime of practice on the part of the author as a carpenter, contractor and architect. Fortunately for his readers he has been able to translate his practical experience into good clear English so that anyone seeking information in an unfamiliar building field should have little trouble understanding its basic points.

### SHOPPING CENTERS—DESIGN AND OPERATION.

By Geoffrey Baker & Bruno Funaro. 9 inches by 11½ inches, 288 pages, nearly 500 photographs and plans, \$12.00. See No. 30 in adjoining columns. Reinhold Publishing Corp.

We call this brand new architectural picture and plan book to the attention of our readers simply because we feel that they have more than passing interest in the astonishing growth of shopping centers that has taken place during the past ten years. Also because it appears that what has already been done in the building of shopping centers is only the beginning.

The idea of suburban merchandising centers is not new when you consider for example, that Cleveland's Shaker Square was built twenty years ago and planned five years before that. The important factors behind the more recent growth of shopping centers that are new, however, are the spread of the super-market method of merchandising, the shift of population during the past ten years from city to suburb and from East to West, increased use of automobiles and buses, and finally the tremendous increase in the general American public's buying power. Typical of the sixty-three shopping centers illustrated and described in this book are such well-known ones as Levittown, Hudson's Detroit, Park Forest, Hampton Village, Bullock's-Pasadena, Linda Vista, Highland Park and Shirlington.

# A SPECIAL B

Here's an easy way to get new essential information that will help you increase your income. Every volume a standard work by leading authority. Remember—it's the informed builder who is the successful builder.

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2. **SIMPLIFIED CARPENTRY ESTIMATING.** By J. W. Wilson and Clell M. Rogers. Everything needed to "take-off" a bill of materials from set of plans and specifications for a frame house—with many helpful quick-reference tables and short cut methods that simplify the work. \$3.75.
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4. **SPECIFICATIONS.** Full set of detailed house specifications (and item index), with spaces for inserting the pertinent description data. \$50.
5. **HOUSE CONSTRUCTION COSTS.** By G. Underwood. Estimating instruction book written for students but equally useful for carpenters and contractors. \$4.75.

## CARPENTRY AND BUILDING

6. **HOUSE CONSTRUCTION DETAILS.** Compiled by Nelson L. Burbank. Exact working guide on every detail of house construction from foundation to finish. Tells dimensions, materials, processes, step-by-step working methods. \$4.75.
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9. **FUNDAMENTALS OF CARPENTRY.** By Walter E. Durbahn. Complete house carpentry course in two volumes. Outstanding value. \$7.50.

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10. **STEEL SQUARE.** By Gilbert Townsend. This how-to-do-it steel square instruction book provides fundamentals plus step-by-step house construction problems solved by proper steel square use. \$2.25.
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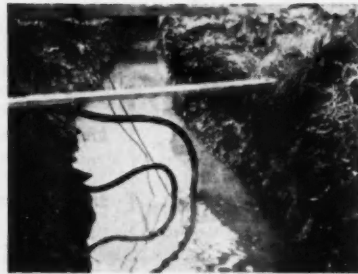
### Drainage Job . . .

(Continued from page 190)

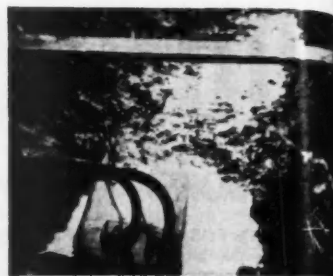
circular screen in order to screen out large rocks and foreign matter, and to prevent the switch from sinking into the muck.

Capacity of the 1/8-HP submersible pumps was 3,300 gallons per hour at a discharge head of 10 feet. They were operated all night after rains, enabling workmen to continue in the morning in a dry trench.

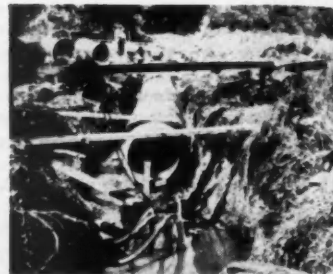
On this job, bulldozers and drag lines accidentally buried the pumps and they were not discovered and dug out until 36 hours later. Although the impellers were jammed and the motors running continuously in a stalled position, drawing six times



**PUMPS COMPLETELY SUBMERGED.** Motors on the pumps are sealed in oil. The patented switch mechanism is activated by air pressure



TRENCH has been pumped nearly dry



WORK IS RESUMED under dry conditions

the normal amperage, Mitchell said the pumps were restored to good running order as soon as the impellers were freed of silt.

The submersible pumps used on this job, a Stamford, Conn., housing project, were manufactured by Kenco, Inc., Lorain, Ohio. Palmer Electric Motor Repair, Stamford, was the supplier.

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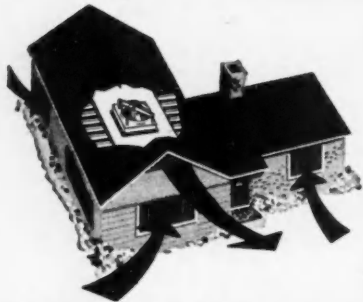
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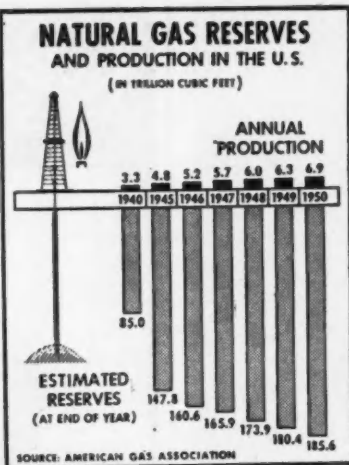
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Package Attic Fans



**GREAT EXPANSION** in the use of natural gas has been consistently outstripped by new discoveries. In the period 1940 to 1950, three times as much natural gas was discovered as was used, and more than 100 trillion cubic feet were added to reserves. This Chart shows only proved recoverable reserves, while some authorities have estimated gas reserves still underground to be about 500 trillion cubic feet

**6,000-Home "Leisure City"  
Launched in Florida**

A retirement village with an ultimate goal of 6,000 concrete houses, "Leisure City," has been started near Homestead, Fla., 20 miles south of Miami. The first four demonstration homes, prices at \$5,280, were recently opened for public inspection. All are one-bedroom models.

The builders are Frank A. Vellanti and Thomas F. Palmer, both formerly of New York. Leonard G. Feinen, Hasbrouck Heights, N.J., and Fort Lauderdale, Fla., is the architect.

Construction, designed for protection against hurricanes, is of solid concrete, reinforced with steel and topped by a concrete slab roof with three inches of insulation. Each house has a bedroom, bath with shower, kitchen-living room combination and a carport. The carport can be converted at slight cost, according to the builders, to two extra bedrooms, a large living room, or one extra bedroom and carport or porch.

**Issue Specification  
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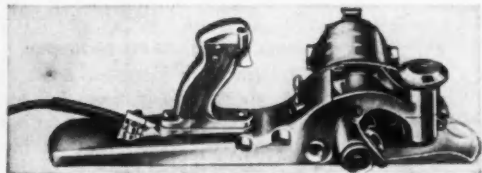
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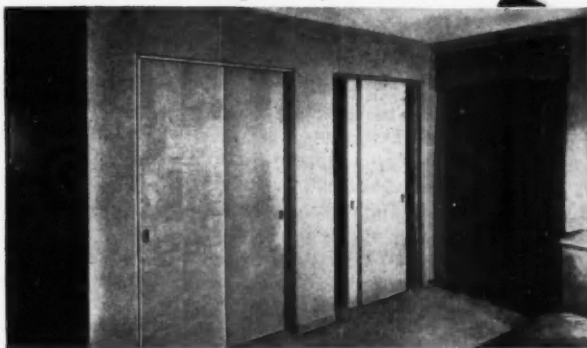
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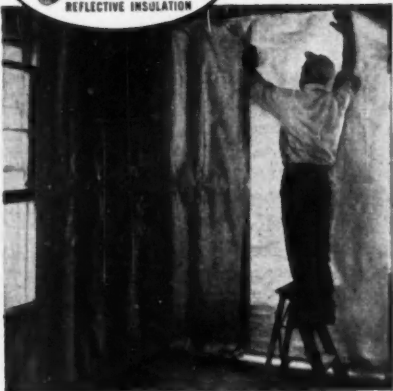
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## Mortgage Financing Devices Now Tend to Socialize Residential Building

By R. H. Morris

Publisher, American Builder

A long step toward the imposition of the English system of socialized housing may be seen in several proposals now under consideration by bureaucratic Washington. We learn that a new way to slow housing starts is under study. Officials thought they could retard building through credit controls but Congress has eased the rules. The first step toward a further slowdown may be to require permits for housing costing more than \$15,000. The Government now shies away from the system of permits for ALL houses, but thinks the chances are that it will be "forced" to a full permit system next year. Other plans will put three government agencies in the mortgage business, as follows:

### DIRECT FINANCING BY RFC

Much publicity has been given a plan for the RFC to finance, directly, housing built in defense areas. This provides for the RFC to go into the mortgage business, and, to paraphrase the explanation offered the public, "force" institutional mortgage investors into acceptance of the mandatory interest rates decreed by the Veterans Administration and the Federal Housing Administration, or lose this type of business altogether. Once we get the United States Treasury into the mortgage business, regardless of the agency used, we shall soon find both standards and interest rates so lowered because of political pressures that builders will be forced to confine their business to government loans, and hence become completely dominated by government and politicians, if they are to remain in business. It will be interesting to observe the reaction to this proposal by the industry in general, and by organized builders in particular. It is quite possible that some builders, in common with some other business men, will approve a "little socialism," actuated by the desire to "get mine now," regardless of ultimate disastrous efforts on the economy, on constitutional government, and on our posterity.

### DIRECT FINANCING BY VA

A second straw in the wind is the entry of the Veterans Administration directly into the mortgage business. The Associated Press has quoted the Veterans Administration as saying that its new direct Home Loan Program will start with a revolving fund of about \$43 million, and that this fund will increase as war veterans repay their loans, amortized on a

monthly basis, or "as VA sells the loans (at 4 per cent) to insurance companies and other buyers." The VA spokesman stated that they "may have to revise their list of areas in which private 4 per cent building loans to war veterans are not currently available." A survey showed that the program should operate initially in about 2200 of the nation's 3100 counties, largely in non-metropolitan areas, but as conditions change the list of operating areas will be revised. The 1950 Housing Act provided \$150 million for the VA Home Loan Program. In the year of operation, some 17,000 loans totaling about \$107 million were granted, leaving \$43 millions. However, the Act contained no provision for a revolving fund. The 1951 Defense Housing Act renewed VA's authority to make loans directly and also authorizes a revolving fund. It provides no new money however. Senator Sparkman of Alabama now has introduced a bill in the Senate to increase the lending authority of the Veterans Administration and provide additional funds.

### \$5 BILLION MORTGAGE FUND FOR VETERANS

As another move to pave the way to socialistic government control, Senators Maybank and Sparkman now have come up with a scheme to open up the \$5,400 million National Service Life Insurance fund to mortgages on homes for veterans. If the whole fund were used, it would finance over 500,000 homes with mortgages averaging \$10,000 each. (No doubt this "reserve" fund consists of Treasury IOU's, as in the case of Social Security "reserves.") The proposal would provide a "Fair Deal" type of "curb on inflation," as well as a fertile new field for political manipulation.

### HIGHER INTEREST RATE REQUIRED

Insurance companies, trust funds, and other large institutional lenders have every justification, in an inflated economy, to insist upon an interest rate higher than 4 per cent in the case of VA loans, and 4½ per cent in the case of FHA loans. After servicing and other charges are deducted, such loans yield little better than 2¾ per cent. The proposal to raise interest rates on FHA and VA mortgages to allow a gross yield of 4½ per cent is considered politically unacceptable by official Washington. Perhaps one reason behind the stand pat attitude

(Continued on page 200)

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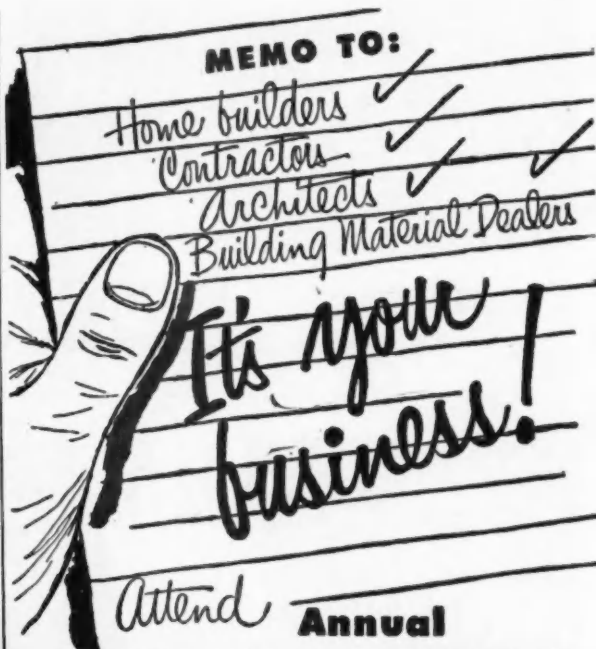
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(Continued from page 198)

of the Administration is to keep private money out of the mortgage market as much as possible with a view of speeding up the socialist program. Vote catching is obviously another reason.

### BUILDERS' GRAY TRAIN

Home building is being adequately financed in some areas, and in others mortgage money is hard to find. Loans for projects of several hundred houses at one time are difficult to finance, while loans for construction of, say, twenty houses or less are readily available in most areas, providing the houses are in the wanted price brackets. One benefit of the regulation has been to weed out many speculators and opportunists who are unable to cope with the credit restrictions and the temporary tightness of mortgage money.

FHA and VA loans form a substantial part but do not dominate the mortgage market. During the years 1946-50 inclusive they insured an average of 43 per cent of private starts.

### PRIVATE ENTERPRISE SYSTEM WILL BE UPSET

How many people are there in the United States who will be directly and adversely affected by the socialization of the building industry? To begin with, there are, according to latest studies, about 120,000 professional builders and contractors. Assuming an average of as few as two employees for each, there are an additional 240,000. Retail building material dealers, who would be disastrously affected, total about 26,000, employing an average of 12 persons each. Hence, another 312,000 are added to the list. In 1949 the Bureau of Labor Statistics estimates there were 270,000 owner-builders, a figure which, if accurate, would be repeated annually.

There are about 24,000,000 home owners in the United States, and experience in England has shown socialism to be calamitous to private home owners. Of course, all members of our society will suffer by change from the philosophy that has made America the greatest nation in history.

Those who seek to socialize the residential building industry might conceivably force it by such a devious device as a 1/4 per cent difference in interest rates. We are certainly faced with a situation that is going to call for courageous aggressiveness on the part of all believers in the American enterprise system. This industry must meet the attack with the same intelligent enterprise that marked the successful attack of the organized medical profession against socialized medicine.

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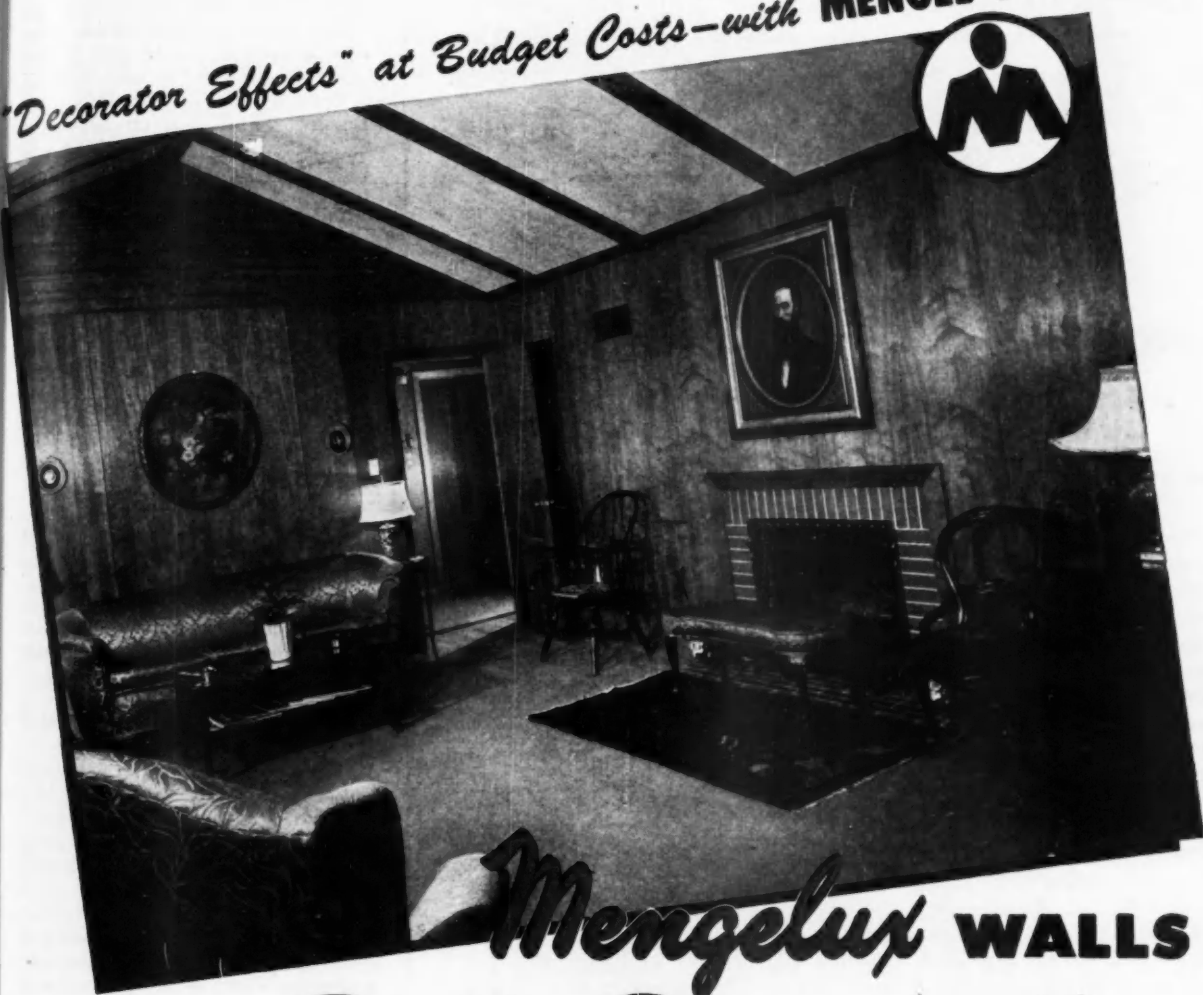
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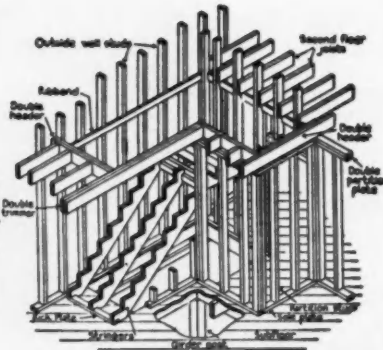
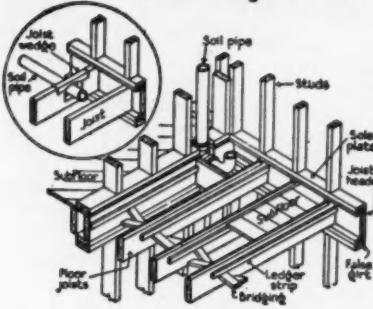
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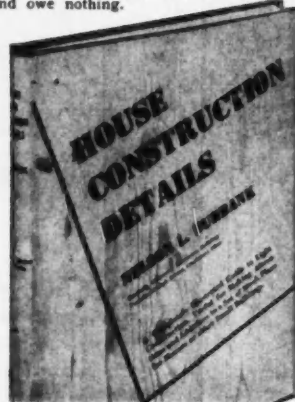
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11-51

## Tells How FHA Section 213 Operates

Detailed information on the operation of Section 213 of Title II was given to 160 builders who attended a seminar held by the Milwaukee Builders Association on September 25. The authority on the subject was Charles E. Powell, FHA, Washington, D.C.

Powell said that the intent of the section is to encourage builders to provide housing for the group with incomes just above the requirements for public housing, but not high enough to afford the terms of other insured mortgage forms.

While the provision of the section sounds as if it were a deal to encourage people to provide their own housing, said Powell, it is anything but that. The people, he stated, cannot build their own shelter.

### IT'S A BUILDER'S PROGRAM

"It's really a builders' program," continued Powell, "and here is the way it works. The builder first lines up the land. Then he gets the FHA to look at it, and approve the site. The next move is for the builder to get his preliminary plans. With these, he secures a nod from FHA."

At this point there is no firm commitment from FHA. Showing the preliminary plans to FHA is just a check-up to be sure that progress is being made along lines that appear to be acceptable.

"The next move," continued Powell, "is complete plans, specifications and details for determining a blanket mortgage. These must be accompanied by the names of five members for the cooperative.

"There appears to be a widespread idea that the five members whose names have been secured must necessarily be among the final list. This is not true. It is entirely possible that none of the five will finally participate. There is a charge of \$1.50 per one thousand dollars for a statement of eligibility. After the blanket amount of the mortgage is obtained from FHA the builder then works out what he can do. That is, he determines costs, the amortization period he will need, the interest rate that will be required, and the list of his qualified buyers. The selling is done before the work is started. If the membership or buyers' list consists of 65 per cent or more of veterans, the builder can get as much as a 95 per cent loan.

"It is expected that the section will result in cutting down the number of starts of middle and upper income houses, and re-emphasize low cost housing. The terms allow five per

cent profit for the builder, and a sales commission of three per cent."

#### SALES PRICE SETS REG. X VA DOWN PAYMENT

At the same meeting John P. Cullen, Veterans Administration, Milwaukee, illustrated the difference between transaction price and sales price in computing terms for veterans' loans.

Since \$7,000 is the dividing line that determines the application of the four per cent factor, Cullen said that there has been a lot of confusion. The four per cent factor applies to prices up to \$7,000, with six per cent applying to prices above. The price that is meant is the sales price, and not the transaction price.

Thus, for example, if the sales price is \$6,900, and there is a closing cost of \$300, the total, or transaction price is \$7,200. Since the sales price is below \$7,000, the four per cent factor is applied to \$7,200. The six per cent factor is applied only when the sales price is \$7,000 or more.

#### Analyst Sees More Mortgage Money — Lower Interest

James C. Downs, Jr., president, Real Estate Research Corp., and publisher of the National Market Letter, predicted building conditions for 1952 at the seminar for builders held by the Milwaukee Builders Association on September 25.

Downs predicted that for the next six months wages will continue to rise, and that the public will begin to spend more money. The demand for all goods will increase, he said.

"The government bond situation," said the speaker, "has cleared up. By January the insurance companies will have caught up with commitments, and there will be mortgage money in sufficient amount to take care of home building requirements."

Interest rates, said Downs, are coming down and will continue to decline. Politics, he stated, will make money available soon to keep the economy running full tilt. We are going toward a cash-induced inflation, and mortgage money will be no problem next year.

World War III, concluded Downs, is on now both economically and politically, and there is much less chance next year of a material shortage than there was at any time during World War II. The only real shortage is manpower, and that will continue.

**NAHB ANNUAL CONVENTION**  
January 20-24 At Chicago

NOVEMBER, 1951

## Redwood in the News

Today, when more plans specify redwood exteriors than ever before, the California Redwood Association announces a new redwood data sheet, "Exterior Finishing Treatments."

Here is what you need to know about paints, stains, clear finishes and bleaches on redwood siding and fences. Here, too, are suggestions which can help you take advantage of the beauty, stability, and durability of redwood lumber.

"Exterior Finishing Treatments" will be sent to architects, builders, contractors and lumber dealers. Write the California Redwood Association, 405 Montgomery Street, San Francisco 4, California.



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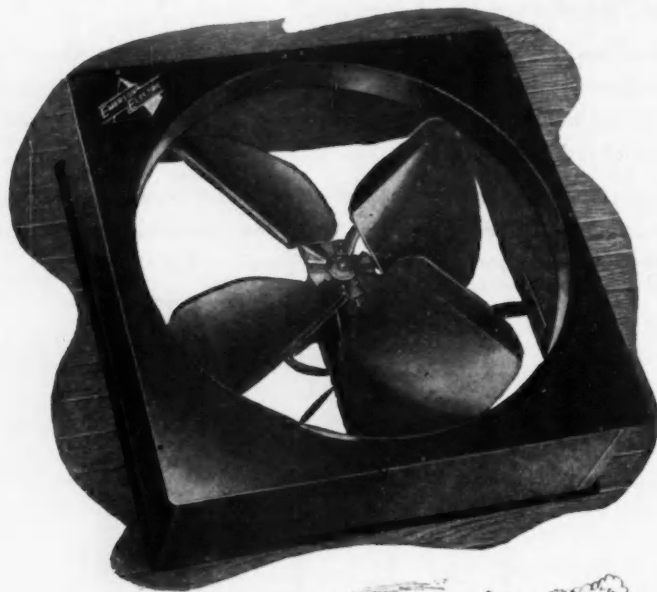
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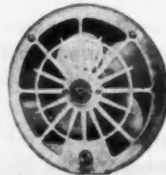
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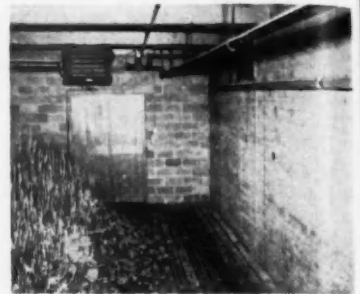


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**This Plant Needed Even Temperature, Got it with Heating-Cooling System**

When the Utz Potato Chip Co. planned its new, larger plant in Hanover, Pa., a major problem was to provide the correct temperature in potato storage rooms to prevent spoilage. Heating contractor H. X. Bange of Hanover solved this problem, and at the same time furnished more comfortable working conditions for employees, by installation of a



**POTATO STORAGE** bin, one of three in new Hanover, Pa., plant of Utz Potato Chip Co. Fin-tube convactor along wall, with cooling unit above door, maintains a constant temperature in the 35-50 degree range to minimize sprouting of potatoes. Sprouting in picture is far less than if potatoes had been stored in a room with variable temperature

combination heating and cooling system.

A potato chip producer ordinarily buys a year's supply of potatoes during six weeks in the early fall and stores them for use throughout the year. Spoilage from rotting can result in a serious financial loss, as can sprouting if it is not properly con-



**UNIT HEATER** shown in a portion of the company's warehouse. Steam is fed to these distribution outlets from two large boilers in the basement of building

trolled. Most sprouting occurs on top of the storage pile; rotting takes place uniformly and can do greater damage. Both can be controlled by uniform cool storage room temperatures.

For heating the new 120x220 foot Utz building, the contractor installed two No. 400 Series National



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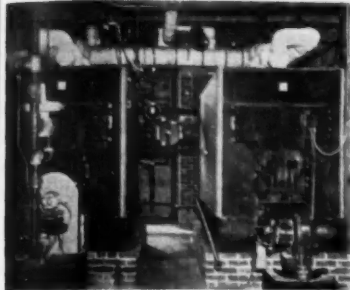
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Radiator Co. cast iron boilers, one oil and the other gas fired. Each can carry 75 per cent of the heating load and both together handle 6,000 square feet of steam radiation through a two-pipe distribution system. The boilers also furnish steam for cleaning conveyors and other equipment. Present plans call for the future use of steam to wash chips.

For area heating, use is made of both unit heaters and fin-tube con-



**BOTH GAS AND OIL** fuel supply equipment has been installed in these big cast iron boilers. The boilers can operate either independently or together

vectors. The convectors are installed in the three storage rooms to avoid high-velocity movement of warm air which induces sprouting. Heating and cooling units in storage rooms are controlled by thermostats to maintain a constant temperature in the range between 35 and 50 degrees F., ideal for potato storage.

Thermostats on the unit heaters in the chip process rooms and warehouse are connected into the boiler control circuit through relays. Each thermostat is wired to its unit heater fan motor through a pressure control connected to the condensate side of the heater. When room temperature drops, the thermostat starts the boiler, and when steam pressure rises high enough to trip the pressure relay at a unit heater, its fan starts.

### Manufacturer Issues Film on Complete Kitchen Sales

The formula for the sale and installation of complete kitchens, developed by Hotpoint, Inc., over many years, has been standardized for use by all its dealers and incorporated in a 20-minute sound film now available through distributors.

The successful grouping of appliances into a compact sales package for dealers' profits was described as the theme of the formula, which tells how to plan a kitchen for step- and labor-saving use, how to choose the proper appliances to fit the project, and how to coordinate these elements.

A plan book has been devised to merchandise the film to dealers.

## CUT SCREENING COSTS

...ADD

# "Buy-Appeal" WITH

# Keystone

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Sealed Tight...  
Held by tension.  
Exclusive sill bar adjusts  
to off-level sills.

It's the smart way to cut screening costs and add sales-appeal to homes and apartments! Use these new-type Keystone Aluminum Tension Screens on all double-hung windows!

Saves 25 minutes per window in installation time. Easily installed—no heavy frames to cut or fit. No painting—no rust. Adjustable sill bar assures tight fit on uneven windows. Easily replaced screening. Low first cost, low upkeep, neat appearance. Investigate!

### Easy to Install



### Easy Handling



### No Rust—No Painting

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New Jersey builder says "Keystone very simple to install... solves problem of storage. Superior to other types of screens. We recommend Keystone for either apartments or homes."

New York contractor says "Installed 865 Keystone screens on one project. Cut installation time in less than half and used unskilled workers."

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Dept. 3-16, Hanover, Pa.  
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Powerful Milwaukee HOLE-SHOOTER combines straight and right-angle drilling... wonder-tool for close quarters

Used by Building Contractors everywhere, this Milwaukee 1/2" HOLE-SHOOTER... America's only 3-speed Right-Angle drill... has demonstrated its unmatched time-saving performance on thousands of jobs. Most powerful drill built, of its size and 9 lb. weight. Ball and roller-bearing equipped for extra-long service life.

You'll be amazed at its versatility — unit-built for quick change to suitable speeds for drilling in wood, metal, masonry, concrete, tile. Uses wood bits up to 3" ... also carbide-tipped drills.



Head swivels full 360°. Locks in any position. S-412 Drill with "2-speed Right-Angle Drive"..... \$7400

For straight drilling, S-412 1/2" HOLE-SHOOTER (above) has a chuck speed of 450 R.P.M. With the 2-speed "Right-Angle Drive" attachment, speeds are 300 R.P.M. or 675 R.P.M.



3 flats specially machined on shanks of these bits to fit Jacobs 3-jaw chuck.

Other bits available also — See assortment at left. We can supply you with any size wood-boring bits up to 3". Write us.

### Complete S-412 Tri-Speed Kit Contains

- 1 — S-412 1/2" HOLE-SHOOTER, Jacobs geared chuck.
- 2 — \*Two-speed "Right-Angle Drive" attachment.
- 3 — 3 special bits — 3/4", 1 1/8", 2 1/8".
- 4 — Special wrench.

\*Pat. Pending

### Complete S-412

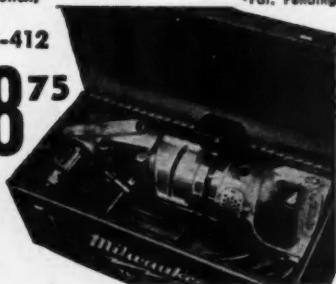
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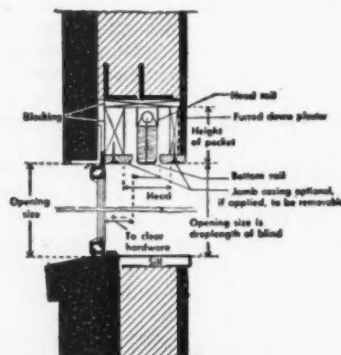


BLINDS draw up into recess and out of sight to permit full use of picture window

### How to Install Pockets For Venetian Blinds

Two new architectural features of windows with venetian blinds are gaining popularity with builders—pockets or recesses which conceal the blind when it is not in use, and a scalloped wood box frame.

The pockets are a West Coast solution to the picture window-venetian blind problem: homeowners want to make use of the advantages of the blinds but object to the drawn-up



### CONSTRUCTION detail of pocket

bulk which interferes with the sweep of a picture window. Recesses completely conceal the blind when it is not being used.

The scalloped wood box frame is especially suitable for kitchen, bathroom and foyer use. The venetian blind plus decorative wood frame constitute a fully dressed window; no curtaining or draping is required.

In installing the concealment pockets, depth is determined by the type of blind to be used, the kind of slats, and the length of the blind. For ordinary blinds the minimum width of the pocket is 2 1/2 inches. Depth is computed by allowing three quarters of an inch for each foot of window length if the slats are metal, or 1 1/4 inches if slats are wood. About 2 1/2 inches should be added to the depth for the top-rail of the blind. Outsize blinds with special worm gear lift

hardware require a recess from six to seven inches wide with eight to nine inches for the head rail.

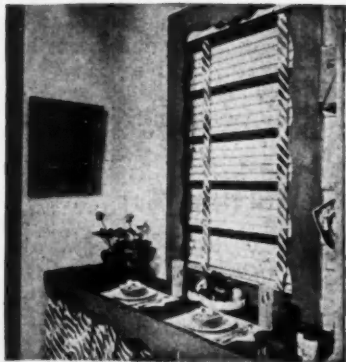
#### STANDARDS IN BLINDS

The Venetian Blind Association of America has worked out commercial standards on Grade A and Grade B venetian blinds and has also established a fair trade program accepted by the Federal Trade Commission. Some sound installation practices, recommended by the association, follow.

#### HOW TO MEASURE

Venetian blinds, according to circumstances or taste, may be installed either inside or on the outside of wood casings. They should be measured carefully with a wood or metal rule and the exact measurements taken; allowances for clearing should be left to the manufacturer.

When installing blinds inside win-



**BOX CORNICE** frame is simple and inexpensive, has good sales appeal

dow casings, measure distance between points where brackets are to be placed, then take the length dimensions—from top of inside casing to window sill. If blind is to be hung in a plaster reveal, measure at several points, then give the narrowest measurement as width. This is necessary because plaster may be uneven.

If blinds are to be mounted on the face of the casing, again take exact measurement between points where brackets are to be placed. This width measurement should be at least three inches more than window opening to allow about 1½ inches overlap on either side of casing. Brackets, however, should be at least ½-inch from the edge of the casing to avoid splitting the wood when brackets are installed.

#### INSTALLATION

Installing venetian blinds is a relatively simple job. Most brackets are designed for mounting on both inside and outside of window facings. Each

(Continued on page 209)



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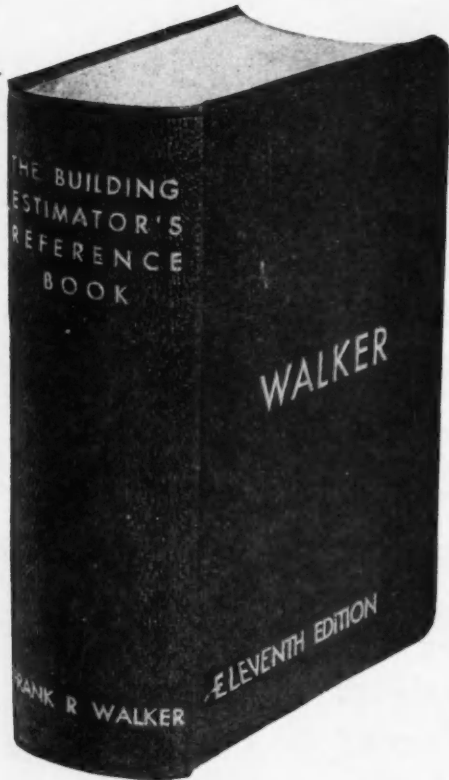
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## Venetian Blinds

(Continued from page 207)

blind is furnished right and left hand brackets, with center supports being included for extra large blinds.

When installing in wood facings, merely spot the position of the bracket holes with a sharp point, then screw the right hand bracket in place. Position the other bracket,



FROM EXTERIOR, blinds add interesting detail to wide glass area

making certain that both are level. Out of plumb brackets mean a crooked blind and trouble.

After the brackets are in place, open them by swinging out the hinged slots which hold the fascia or wooden finishing board that conceals the mechanism in the head rail. This will reveal small shelves on each bracket on which will rest the blind. Merely slip the head rail of the blind into place, insert fascia board in place, and snap the hinged slots closed.

If the blind is to be mounted on plaster, it is advisable to use a No. 8 masonry drill and a fiber plug. A toggle bolt may be necessary if the plaster is thin and the blind very heavy. For mounting on steel, use a No. 29 speed drill, thread with an  $\frac{1}{2}$  tap, and fasten bracket in place with machine screws.

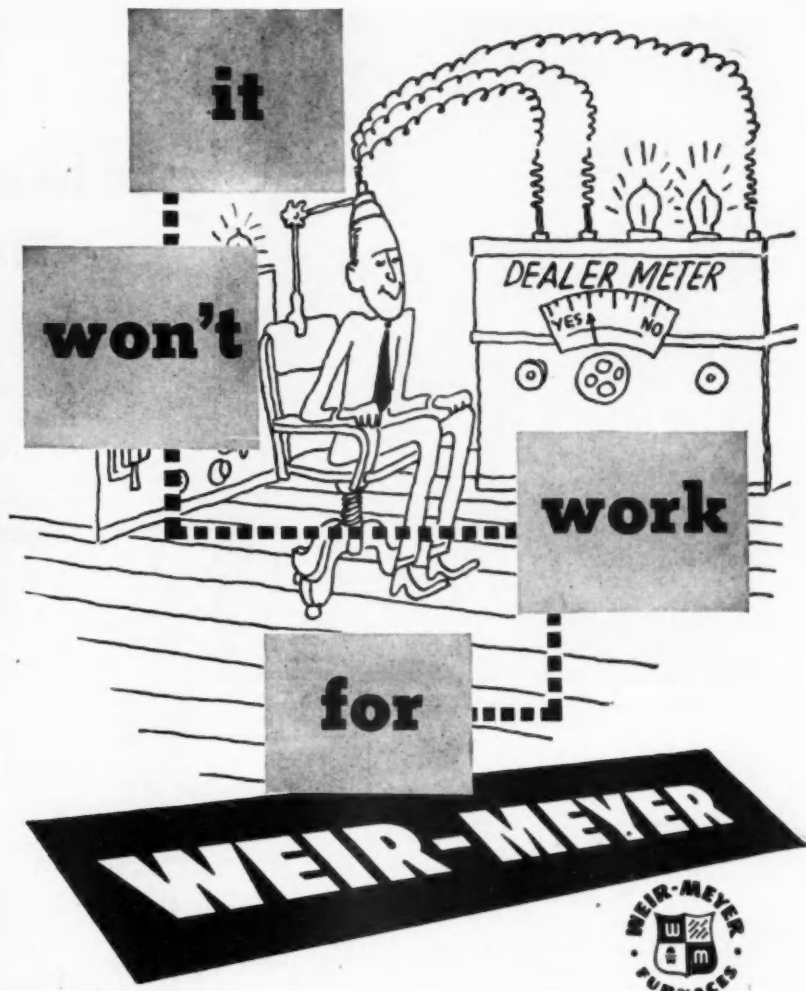
### Western Pine Association Offers Research Facilities

An offer of research laboratory facilities free to customers of western pine mills is outlined in a new publication of the Western Pine Association.

The booklet entitled "Western Pine Forest Products Research and You," contains a list of research projects, many of them adaptable to dealer problems. The association invites dealer suggestions and difficulties.

The folder also traces the history of the 28-year-old laboratory.

Single copies of the booklet are available without charge by writing to Dept. RL, Western Pine Association, 510 Yeon Building, Portland 4, Oregon.



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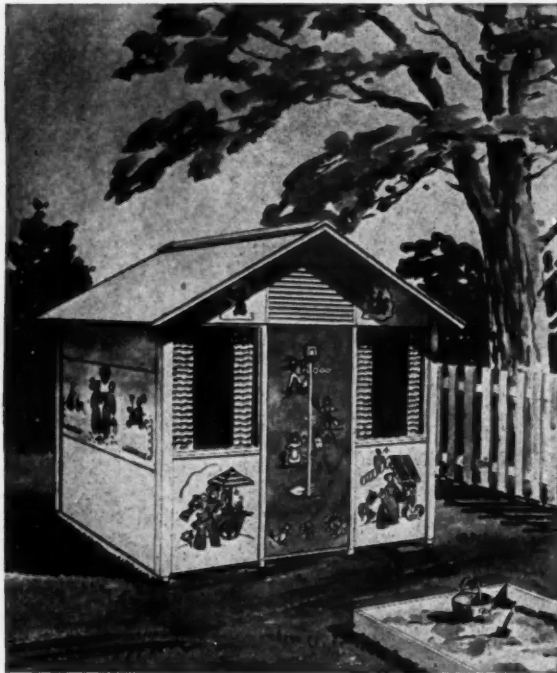
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OUTSIDE walls of asbestos-cement may be decorated

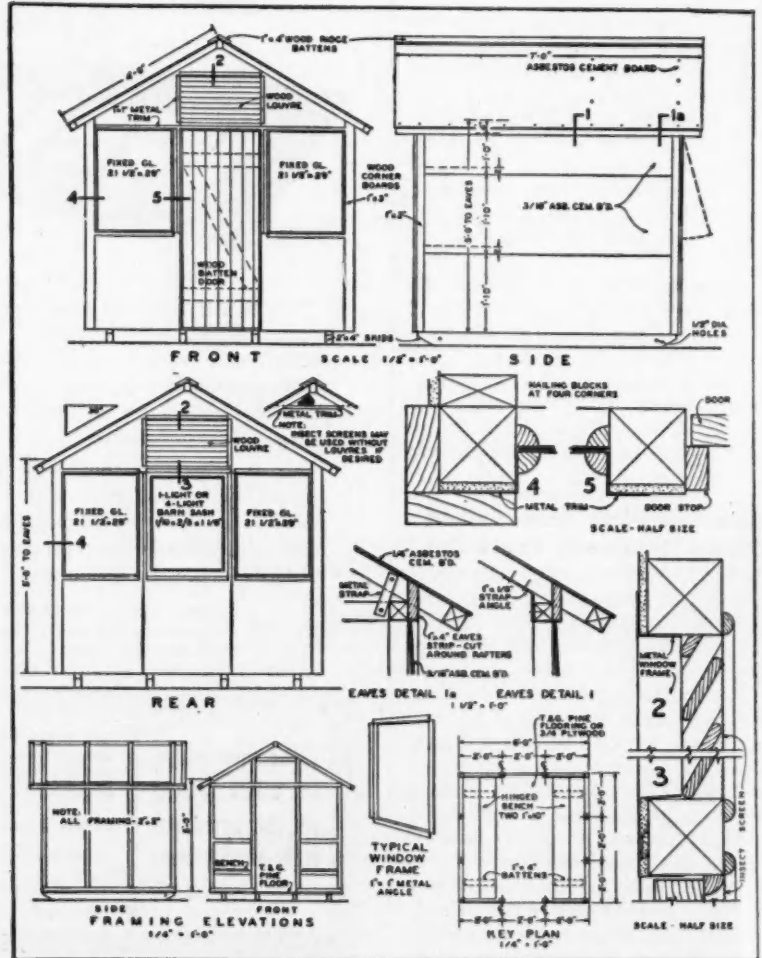
## Summer Playhouse — Winter Storehouse

An attractive yet inexpensive small building with asbestos-cement flat sheets for roofing and siding has year-round use—in summer as playhouse, in winter, as a storage place

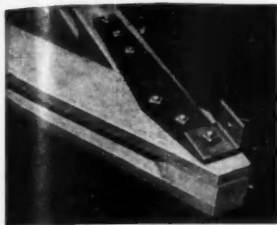
**A** PRACTICAL and easy-to-build small building that can be used as a playhouse or bicycle garage in summer and as a storage place for summer furniture, screens, and lawn tools in the winter has been designed for construction utilizing flat sheets of asbestos-cement for roofing and siding. Built on skids for easy moving to various locations in the yard, the playhouse is 6 feet square and is designed to pleasing proportions.

Framing for the play or storage house is of wood, using 2x2-inch pieces. All the asbestos board required can be cut from six 4x8-foot sheets. The plan calls for four fixed windows and one hinged on barn sash. The design was featured in home magazines and newspapers this summer as a means of familiarizing more persons with the workability of asbestos board as a construction material.

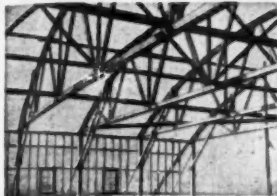
Other features of the design include flooring of either tongued and grooved pine boards or 3/4-inch plywood strips, pitched roof with eaves, and wood louvers over door. Descriptive folder including construction details has been prepared by the Asbestos-Cement Products Association. It presents two methods of building the house, one the conventional piece-by-piece way and the other through the erection of pre-assembled wall and roof units.



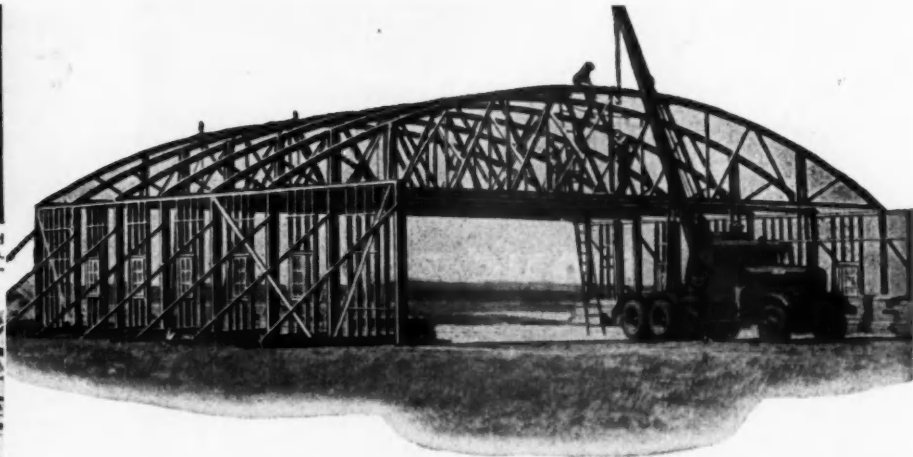
PLAN shows construction details of summer-winter play and storage house



Necessary hardware items for base and gable connections are furnished with trusses. Connections are engineered to handle computed reactions.



This shows construction detail of 71' 10" by 70' hangar erected at Holman Field, St. Paul, Minnesota. Trusses are spaced 10' O.C.



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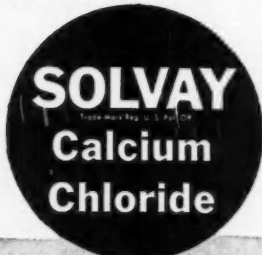
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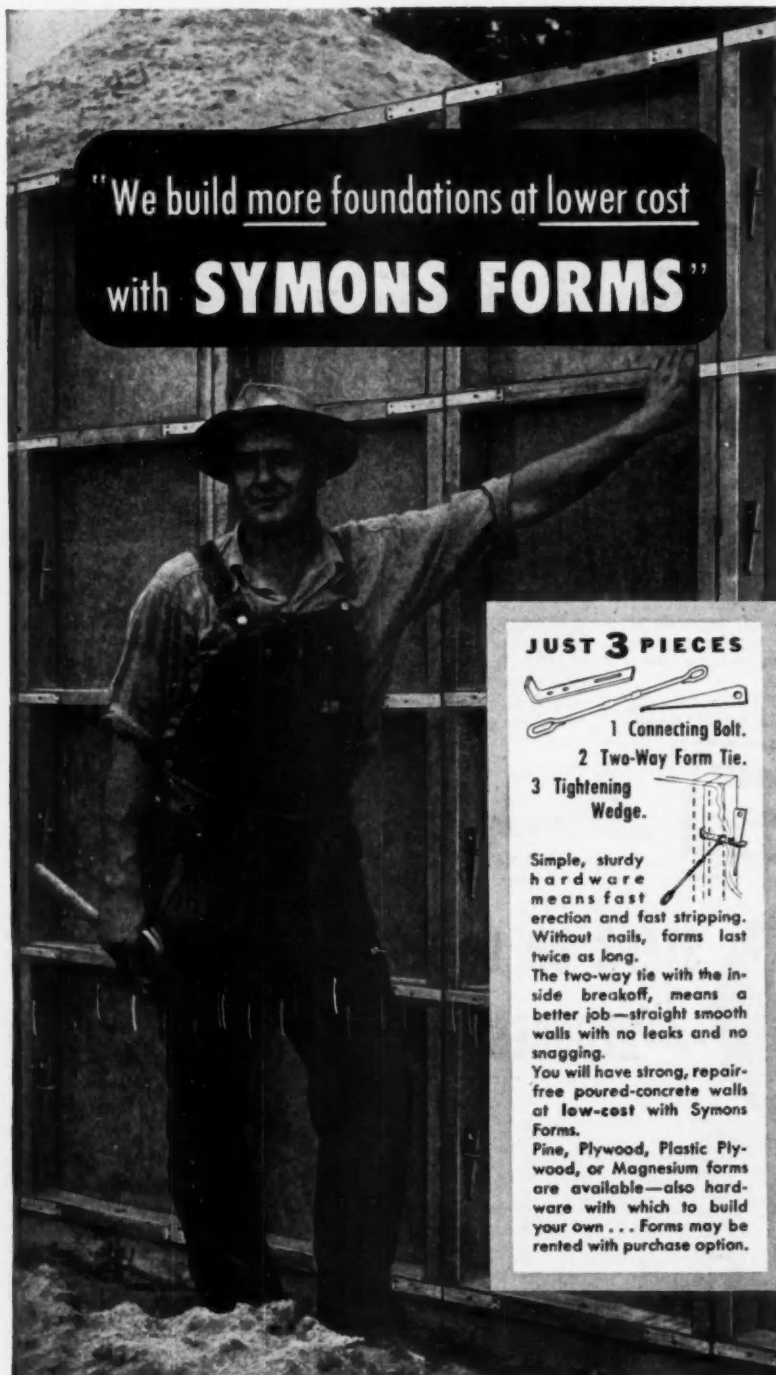
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**Quality Housing Award**



SEATTLE BUILDER Albert Balch (center), recipient of his fifth certificate for high quality housing from the Southwest Research Institute, San Antonio, Texas, is congratulated by Governor Arthur B. Langlie of Washington. Robert B. Magner (right), director of the institute's Housing Research Foundation, flew to Seattle for the award presentation. Balch has won the award more times than any builder in the country

**Harry K. Lange Dies; Was Prominent in Trade Press**

Harry K. Lange, retired vice president of the Western Mineral Products Co., Minneapolis, died August 21. He was 73.

A well-known trade publication writer, he wrote monthly columns for several magazines in the lumber and building material field, as well as many articles.



Harry K. Lange

Mr. Lange received national recognition for some of his consumer sales letters, one of which is being used as a model in a college text book. Articles about his promotional ideas have appeared in national magazines.

He joined Western Mineral Products as advertising manager shortly after its organization in 1936 and became vice president in 1946. He was also publicity director of Vermiculite Institute, Chicago, until his retirement in 1949.

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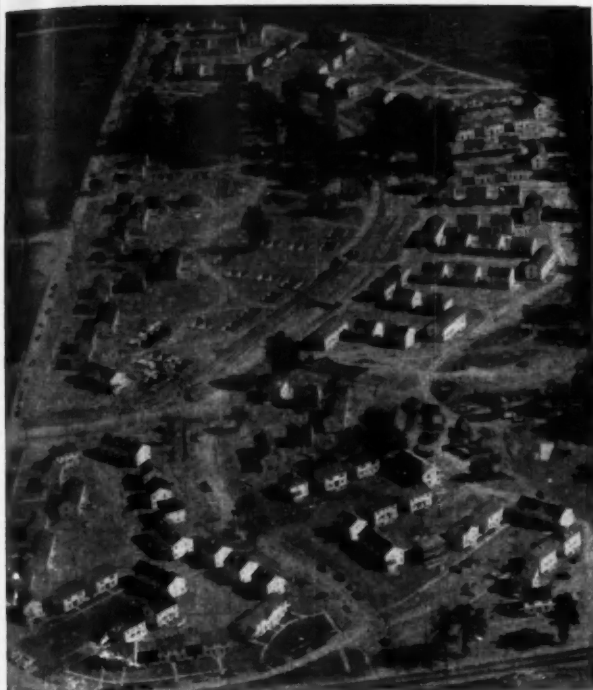
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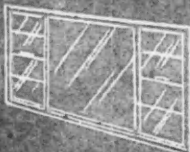
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### BEAUTY



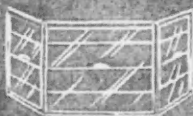
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Per-Fit windows, made of a specially developed extra heavy aluminum alloy, are highly resistant to corrosion and pitting. They cannot rust, rot, stain or warp. Brazed sill and side joints are strong and leak-proof.

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DELIVERY

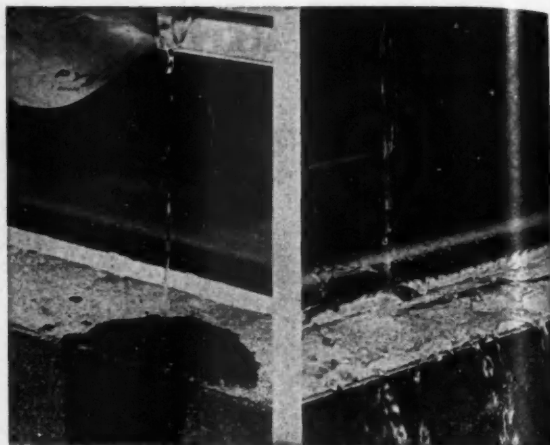
Factory glazing with Koroseal is permanent. No expensive putty re-glazing, no costly painting, no heavy screen or storm sash to install. Ease of installation makes Per-Fit pre-assembled windows cost less. 20 standard double hung window sizes—4 standard muntin arrangements (others available on special order)—Flanker-matching picture windows (9 standard sizes)—3 mullion angles (180°, 135°, 90°).

Write for complete information and literature today.  
Dealer and Distributorship Inquiries Invited.

**PER-FIT** PRODUCTS CORPORATION

1200 East 52nd St.

Indianapolis 20, Indiana



TREATED and untreated window sills shows effectiveness of new repellent. Note how water runs off treated sill at the right

## XR-129G New Water

### Repellent for Masonry

Fast drying silicone resin sealer finish has been developed for all masonry surfaces

An inexpensive new water repellent material for masonry surface XR-129G, has been developed by the Dow Corning Corporation, Midland, Mich. The new repellent's ability to exclude moisture and yet not change color or fill the pores of masonry is significant. Treated masonry remains weather-tight, yet is allowed to breathe.

Water repellent finishes that contain the new material have been used successfully to treat brick and mortar, concrete, cement based paints, asbestos-cement combinations, sandstone, limestone, and stucco walls. The material can be brushed or sprayed during outdoor working temperatures.

Formulations containing from three to five per cent of XR-129G are the most satisfactory and are cheaper than higher concentrations. Spraying is the least expensive method of application. A liberal coating with a spray gun held close to the surface using five to ten pounds per square inch pressure is the recommended practice. Painting has proved satisfactory when the repellent is flowed on the surface and not brushed.

XR-129G is weather resistant and unaffected by water and sunlight. Comparative tests indicate that an effective life of five years can be expected under normal conditions. The material shows no ill effects from rain after it has dried for a few hours. However, a very high degree of water repellency develops after 24 hours.

The solution will repel water and dirt, minimize efflorescence, and tends to reduce spalling. Limitations are the same as for other repellents. It will not hold water under pressure. It is not a "cure all" for leaking masonry surfaces where leakage is due to faulty construction or deterioration. Holes and cracks opened up from settling or aging must be pointed up before applying the silicone resins.

The Dow Corning Corp. supplies the silicone resins to formulators of water repellents who make the finished products.

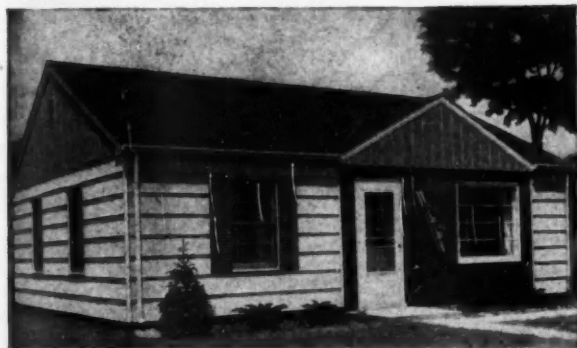


**"BEST**  
**out-builds 'em!**

**BEST**  
**out-sells 'em!"**

You can't find a better-built home for the money—  
or a home that sells faster! And now, within a 15  
state area Best Homes are available to dealers on an  
*exclusive franchise.*

Get full facts now about Best Homes. They're priced  
to sell from about \$7000 . . . accepted for FHA and  
GI financing . . . A. F. of L. built . . . sold in two-  
bedroom and three-bedroom models, with or with-  
out basement. Newspaper ad mats, radio copy,  
beautiful hand-out literature help you sell.



- Standard-size double-hung windows with weather-strip-  
ping, balancers, hardware and trim all installed in walls.
- 2x4 studs spaced 16 inches on center in all bearing par-  
titions and outside walls—with double course red cedar  
shingles factory-applied.
- Build on basement or slab. Offer 4 exteriors on 2-bed-  
room home . . . 3 exteriors for 3-bedroom. Also available  
with attached garages.
- Exterior wall panels include insulation, all wiring con-  
duit and outlet boxes—your choice of "Strongbilt Up-  
son Panels" or "Sheetrock" installed at factory.
- Complete panels make erection fast and easy . . . speeds  
occupancy and turns your money faster. Get facts now!

**WRITE, WIRE OR PHONE**



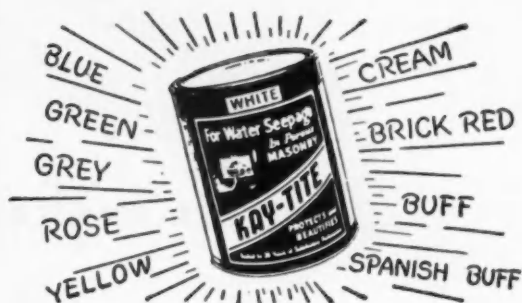
**BEST HOMES, INC.**

628 W. Lake Street  
Peoria, Illinois

*Member, Prefabricated Homes  
Manufacturers' Institute  
and National Association of  
Home Builders*

NOVEMBER, 1951

# STAY TIGHT WITH KAY-TITE



FOR

CINDER BLOCK WALLS CEMENT BLOCK WALLS  
STUCCO SURFACES  
PUMP AND BOILER PITS  
FIELD AND QUARRY STONE  
CONCRETE MASONRY RETAINING WALLS  
ROUGH MASONRY UNGLAZED TILE  
SWIMMING POOLS CISTERNS SILOS  
ELEVATOR PITS CELLARS RESERVOIRS  
COPINGS BRICK WALLS  
BRICK PIERS FISH PONDS

KAY-TITE CAN BE USED ABOVE OR  
BELOW GRADE, INSIDE OR OUTSIDE

Available in 50 lb. drums  
White and 9 colors.

Member National Association of Home Builders

SEND THIS COUPON FOR  
INFORMATION FOR BUILDERS

KAYTITE COMPANY BOX 550 WEST ORANGE, N. J.  
PLEASE SEND BUILDERS INFORMATION:

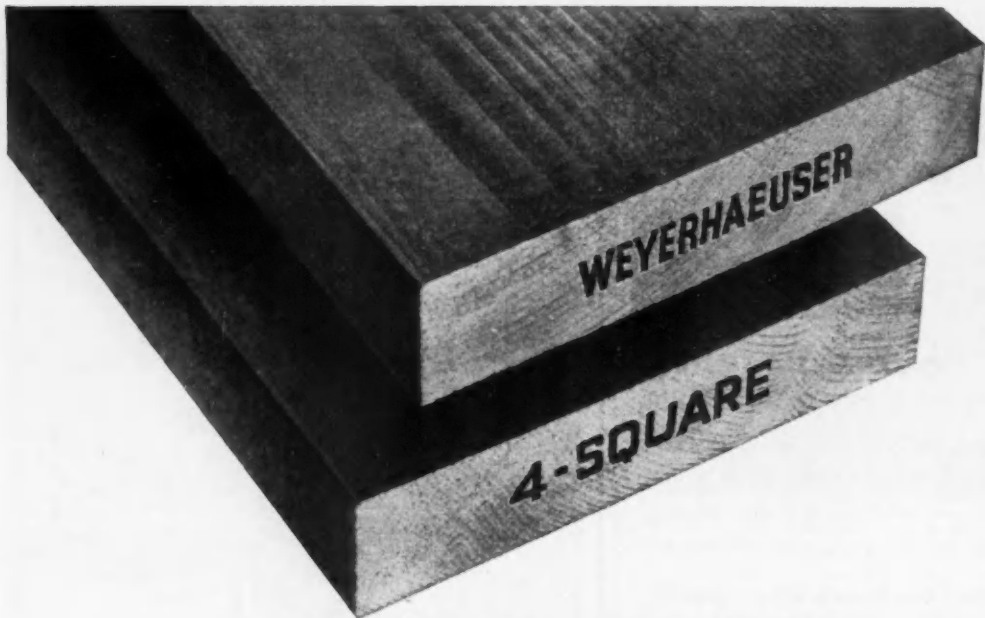
NAME OF COMPANY .....

STREET .....

CITY ..... STATE .....

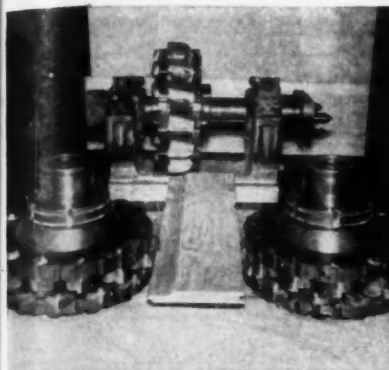
ATTENTION OF .....

**KAY-TITE COMPANY**  
WEST ORANGE NEW JERSEY  
ELEVEN FAR WESTERN STATES CONTACT KAY-TITE COMPANY  
1737 WESTLAKE AVENUE, NORTH, SEATTLE 9, WASHINGTON  
*More than 20 years of satisfactory performance*



**THIS BRAND NAME ON LUMBER MEANS . . .**

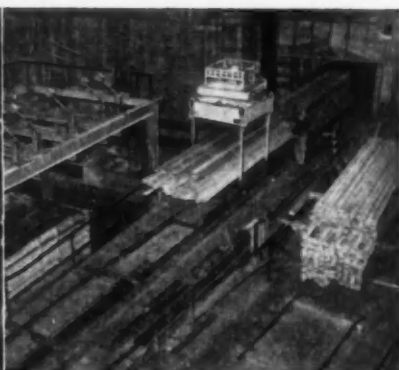




THREE CUTTER HEADS, used in planing mill, arranged to show how they shape drop siding. Whirling at 3,250 r.p.m., they cut tongue, groove and channel simultaneously.



GANG SAW (seen from feeding end) cuts big cants into lumber of wanted thickness. Multiple-blade saws quickly transform these huge cants into many lumber items.



LUMBER is carried in units by crane to chain transfer systems leading to rough dry sheds or planing mills for further fabrication. Here lumber is entering the unstacker.

# ...GOOD LUMBER...*through* Efficiency in Manufacture

When you are in the market for the "best buy" in lumber, look to the producer who can convert good logs into fine lumber most efficiently.

On that test, one famous line of lumber products stands out above all others. It is the one branded . . . "Weyerhaeuser 4-Square".

If you could follow the flow of lumber through a Weyerhaeuser mill, you would see a series of sawing, sorting, kiln-drying and finishing operations demonstrating mass production at its best. Slow and costly hand operations have been virtually eliminated. Belts, rollers and conveyors, rail cars, cranes and straddle buggies move the lumber along swiftly. An amazingly efficient arrangement of every type of saw, trimmer, surfacer, shaper and mechanical device for manufacturing lumber . . . many designed by Weyerhaeuser engineers . . . get the maximum footage of good, usable lumber from every log.

These great mills are ingenious in design and efficient in layout. And for every dollar invested in safer, more pleasant and efficient plants; in finer, faster saws; more efficient

conveyors, and more precise control equipment, Weyerhaeuser has been able to deliver better lumber value to the consumer.

When you need good lumber, in a wide selection of species and grades, see your Weyerhaeuser 4-Square Lumber Dealer.

*One of a series of advertisements defining the important factors contributing to the production of good lumber.*



The Longview, Washington, Mills

At mills located on the West Coast and Inland Empire, Weyerhaeuser 4-Square Lumber is produced in a range of products from Douglas Fir, Idaho White Pine, Ponderosa Pine, West Coast Hemlock, Western Red Cedar and related species.

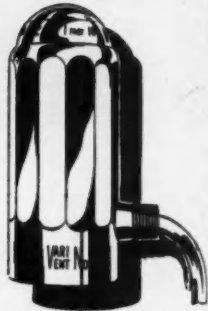
## Weyerhaeuser 4-Square Lumber and Services

WEYERHAEUSER SALES COMPANY • ST. PAUL 1, MINNESOTA



# COMFORT

added profitably to  
houses,  
stores,  
offices,  
plants  
by



**DOLE 1A VARI-VENT**  
for 1-pipe steam  
heating systems.  
Complete line  
includes all types.

# DOLE

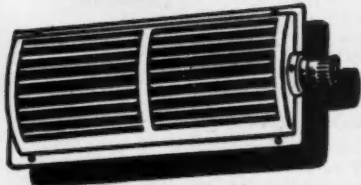
air & vacuum  
valves for  
hot water,  
air & steam  
heating  
systems



**No. 20 CHAMBER  
VENT**, air vent for  
hot water radi-  
ators, convectors,  
etc., with air  
chamber.



**No. 20 HOT WATER  
AIR VALVE** fully  
automatic vent for  
hot water convec-  
tors and radiators  
for heating systems.



**DOLE THERMOSTATIC AIR CONTROL**  
regulates room temperature — balanc-  
ing forced warm air heating systems  
for comfort and economy.

Control with DOLE

**THE DOLE VALVE COMPANY**  
1933 Carroll Avenue, Chicago 12, Illinois  
Representatives in Principal Cities

## It Takes a Real Magician These Days



REPRINTED through the courtesy of the Washington Times-Herald and the Chicago Tribune in which newspapers the above cartoon by Holland appeared during National Home Week of 1951

### STATEMENT OF THE OWNERSHIP, MANAGEMENT, AND CIRCULATION REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 39, United States Code, Section 233)

Of American Builder published monthly at Bristol, Conn., for Oct. 1, 1951

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Simmons-Boardman Publishing Corp., 30 Church St., New York 7, N.Y.; Editor, Edward G. Gavin, 79 W. Monroe St., Chicago 3, Ill.; Managing Editor, Lyn E. Arent, 79 W. Monroe St., Chicago 3, Ill.; Business Manager, R. H. Morris, Publisher, 79 W. Monroe St., Chicago 3, Ill.

2. That the owners are: Simmons-Boardman Publishing Corp., 30 Church Street, New York 7, N.Y.; Stockholders of 1 percent or more of the total amount of stock are: Mrs. I. R. Simmons, New Rochelle, N.Y.; S. O. Dunn, 79 W. Monroe St., Chicago, Ill.; Mrs. C. E. Dunn, 3500 Lake Shore Dr., Chicago, Ill.; Mrs. Mae E. Howson, 6922 Paxton Ave., Chicago, Ill.; Ella L. Mills or Catherine S. Mills, Westfield, N.J.; Mrs. E. G. Wright, 398 No. Walnut St., East Orange, N.J.; Mrs. E. H. Thompson, East Cleveland, Ohio; Mrs. Ruth W. Johnson, 1615 Ravenna Blvd., Seattle, Wash.; J. V. McManus, 39 Broadway, New York, N.Y.; J. Streicher & Co., 2 Rector St., New York, N.Y.; Partners of J. Streicher & Co. are: Joseph Streicher; Jack L. Streicher; Ethel Streicher; Judson L. Streicher, all of 2 Rector Street, New York, N.Y.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

ROBERT H. MORRIS, Publisher.

Sworn to and subscribed before me this 20th day of September, 1951.

(SEAL)

RALPH E. WESTERMAN, Notary Public  
(My commission expires February 3, 1953.)

# The Builder's Joy... The Homeowner's Pride!

## REYNOLDS ALUMINUM WINDOWS



Outstanding for finish and design, Reynolds Residential Casement, Fixed and Picture Windows have flash-welded corners for extra strength and weather-tightness.

A joy to the man on the job and a big plus to the home-seller, these quality windows mean most to the *homeowner*. His pride grows through the years! His Reynolds Aluminum Windows always look beautiful, with no painting... always work perfectly, with no sagging or warping. They mark his home as thoroughly modern... enhance its value.

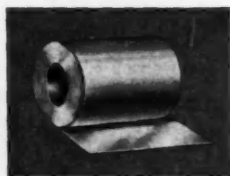
Though military demand for aluminum affects total supply, these windows are still being produced. And aluminum capacity is rapidly expanding. So keep asking your dealer. For more information, mail the coupon. Or call the Reynolds Dealer or Office listed under "Building Materials" in your classified phone book. Or write Reynolds Metals Company, Building Products Division, Louisville 1, Ky.



**Reynolds Aluminum Reflective Insulation.** Foil on kraft paper. Reflects up to 95% of radiant heat. Perfect vapor barrier. In heavy demand; anticipate your needs.



**Reynolds Lifetime Aluminum Gutters.** A visible sales-plus in Half-Round or Ogee style, smooth or stippled. Easy to put up, no soldering. Ask your supplier.



**Reynolds Lifetime Aluminum Flashing...Nails.** Increasingly preferred by builders, these items are available in limited supply. Check your sources.



Reynolds Metals Company,  
Building Products Division,  
2003 South Ninth St., Louisville 1, Ky.

Please send me full details on:

- |   |  |
|---|--|
| <input type="checkbox"/> Gutters                          | <input type="checkbox"/> Flashing              |
| <input type="checkbox"/> Nails                            | <input type="checkbox"/> Insulation            |
| <input type="checkbox"/> Windows                          | <input type="checkbox"/> Industrial Corrugated |
| <input type="checkbox"/> Regular Corrugated and 5-V Crimp |  |

Name \_\_\_\_\_

Address \_\_\_\_\_

ALSO INDUSTRIAL CORRUGATED, REGULAR CORRUGATED AND 5-V CRIMP ROOFING... REMEMBER THAT RATED ORDERS GET PRIORITY HANDLING

# REYNOLDS ALUMINUM

**ADD AN EXTRA ROOM  
WITHOUT ADDING TO  
BUILDING COST!**

## Murphy BEDS

From coast to coast, builders have found that the answer to the demand for the "extra" room is a Murphy Bed. The Pivot Model shown below is only one of several Murphy models. Others include roller and recess models, some of which require as little as 13" depth. All Murphy Beds are built to receive STANDARD MATTRESSES to assure MAXIMUM sleeping comfort.

### NEW MODELS!

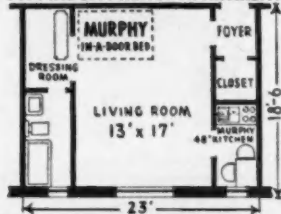
#### SLUMBER LUXURY AT NIGHT



#### LIVING SPACE BY DAY



#### TYPICAL EFFICIENCY APARTMENT



Send today for complete data file on all Murphy recess, pivot and roller models and Murphy Kitchens.

**MURPHY DOOR BED CO., INC.**

19 West 44th St., New York 18, New York

Please send your free data file on Murphy Beds and Cabranette Kitchens.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

STATE \_\_\_\_\_

## INDUSTRY BRIEFS

Appointment of **Harvey R. Cook** as advertising manager of the **Timken-Detroit Axle Co.** has been announced by **Walter F. Rockwell**, president. Cook was formerly assistant to the advertising director of **Servel, Inc.** In



Cook

his new post he will assume full charge of all advertising and sales promotion for the parent company and for **Timken Silent Automatic**, the home heating equipment division.

\*\*\*\*\*

**A. J. Hall** has been made assistant vice president in charge of personnel and industrial relations for all divisions of the **Burnham Corp.** Hall joined **Burnham Boiler Corp.** in 1925, and when **Burnham Boiler Corp.** and **Lord and Burnham** were merged in 1947, as the **Burnham Corp.** he became director of personnel. **Burnham Corp.** also announced the election of **Virgil A. Good** to the post of vice president in charge of sales and research for its boiler division.

\*\*\*\*\*

**C. G. Wollaeger**, for the past six years vice president in charge of sales for the **Aetna Steel Products Corp.**, has resigned to direct his own enterprises. These are **Casings, Inc.**, manufacturers of steel casings for door and window trim; and a newly formed company, **Drywall Trim, Inc.**, which has begun production of a new type of steel door and window casing. Prior to joining **Aetna**, **Wollaeger** was associated for 20 years with **Inland Steel Products Co.**, Milwaukee.



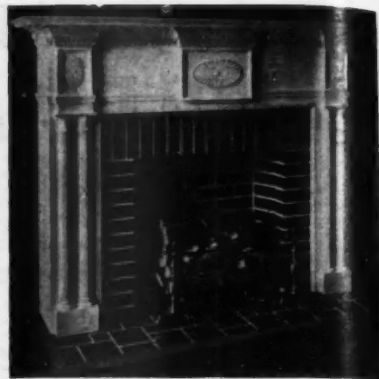
Wollaeger

\*\*\*\*\*

The appointment of **J. H. Rasmussen** as vice president in charge of sales for all its cooking and heating appliances has been announced by **Perfection Stove Co.** **Rasmussen** has been in the appliance field since 1925, and had his own manufacturers representative firm in Chicago. **Perfection** also announced the appointment of **Ralph S. Cadwallader** as sales promotion manager of its furnace division. **Cadwallader** joined the firm in 1946 and has been western territory salesman.



Rasmussen



## READYBUILT

(Reg. U. S. Pat. Off.)

## FIREPLACES

Adds beauty, cheer and comfort to any home, old or new.

The modern fireplace that fulfills all modern day requirements—used with gas or electricity.

Large variety of attractive models in brick, stone, wood, etc., available.

Furnished complete—ready to be installed by a handy man—shipped anywhere.

DEALERS, BUILDERS and HOMEOWNERS write for catalog and full information.

The **READYBUILT PRODUCTS COMPANY**  
1705-23 McHenry Street Baltimore 23, Md.



## Caulking Compound

meets the requirements  
of the **Asbestos-Cement**

**Products Association and**

**Federal specifications!**

Use **CALBAR** . . . now available in 26 permanent colors to match or harmonize with any building material. Non-hardening . . . non-staining.

Send for your **FREE** copy of the **CALBAR CAULKING COMPOUND DIRECTORY**



**CALBAR PAINT & VARNISH CO.**

Manufacturers of Technical Products  
2612-26 N. Martha St., Philadelphia 25, Pa.



IF IT'S TEXACO'S  
TOP PERFORMING

# TEX-LOK

## THE ANSWERS ARE ALL YES!



### WIND-TIGHT?

**Yes!** TEX-LOK shingles are specially designed to resist high winds! Concealed nailing at four points plus interlocking means TEX-LOKs are locked down to stay put!



### RELIABLE MANUFACTURER?

**Yes!** TEX-LOKs carry a name that millions know and trust—Texaco. And—The Texas Company is one of the largest producers of asphalt in the world!



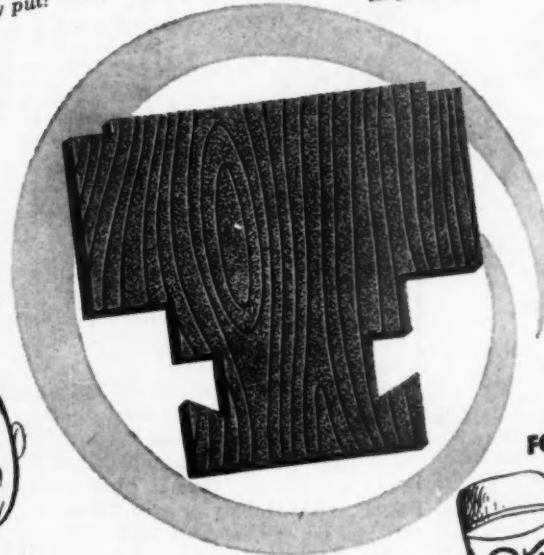
### LONG LIFE?

**Yes!** This interlocking type shingle has been tested in every weather—and has weathered every test. TEX-LOK is a heavy duty shingle built to give years of trouble-free protection and performance.



### GOOD LOOKING?

**Yes!** TEX-LOK shingles make a mighty attractive roof. They add a great deal to the appearance of any home—coming in a variety of rich, solid colors and beautiful color blends.



### FIRE-RESISTANT?

**Yes!** Of course. The Fire Underwriters' Class "C" label is on every bundle of TEX-LOK shingles. That's assurance of protection against flying embers and sparks—the causes of so many fire losses.



### FOR OLD ROOFS, TOO?

**Yes!** Heavy duty, double coverage and interlocking, TEX-LOKs are ideal for re-roofing right over old shingles. And they are perfect for new construction, of course.



### ADEQUATE COVERAGE?

**Yes!** Actually only 42% of the surface of each TEX-LOK shingle is exposed to the weather. So—it's double coverage plus. An average of more than two thicknesses of rugged asphalt shingles over the entire roof area!



### GOOD BUY?

**Yes!** Self-aligning plus interlocking make for easy, fast application. And—there's no better shingle value on the market today!

TEX-LOK shingles are available in the areas served from roofing plants located at Lockport, Illinois; Port Neches, Texas; and Port Wentworth, Georgia.

In the East, it's

### TEX-LATCH

Another top-performing Texaco asphalt shingle. TEX-LATCH is heavy-duty, double coverage and interlocking—similar to TEX-LOK except in method of locking tabs. Available in the areas served from the Edge Moor, Delaware roofing plant.





# TEXACO

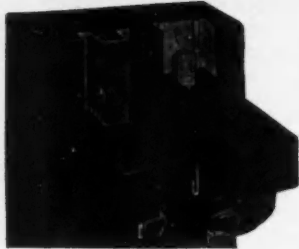
## Asphalt Roofing Products

THE TEXAS COMPANY

MEMBER OF THE ASPHALT ROOFING INDUSTRY BUREAU



The Milwaukee  
Combination  
**SASH BALANCE**  
and  
**WEATHERSTRIP**



Available with or without bronze covers that completely hide spring, as shown above.

**PERMITS REMOVAL OF SASH WEIGHTS, INSULATION OF MULLIONS.**

*Slash Labor Costs*

Simple installation allows one man to easily install 30 or more windows in 8 hours. No high-priced skilled labor needed. This means you can get more satisfied customers at lower cost . . . higher profit!

*Tops in Operation!*

Smooth, positive action; accurate balance; finger-tip control plus the perfect seal against draft, dust, moisture. No wood-to-wood contact. Prevents sticking windows and window rattle.

**EFFICIENT FOR OLD**  
**LOW OR NEW**  
**COST BUILDING**



**ATTENTION MILLS AND LUMBER YARDS**  
**IDEAL FOR PRE-FIT WINDOWS**

Can Also Be Sold in Single Unit Packages

**Mail this coupon today!**

Milwaukee Strip Service, Inc.  
4621-23 W. Lisbon Ave.  
Milwaukee 8, Wisconsin

Please rush me folder A-11 and price list of Milwaukee Combination Sash Balance Weatherstrip.

Name .....  
Address .....  
City ..... Zone ..... State .....

I am (please check) Building Contractor   
Lumber Yard  Installer

**INDUSTRY BRIEFS**

Frank Toler has been appointed sales manager of the gas appliance division of Temco, Inc., it has been announced by W. Bratten Evans, Temco president. Toler was formerly with the Norge division of Borg-Warner Corp., as district sales representative and manager of water cooler sales. During the past year he operated his own manufacturers' agent business in Detroit.

\*\*\*\*\*

Promotion of **Frank C. Hassler** to advertising manager of the **Davis Plywood Corp.**, Cleveland, has been announced by E. F. Davis, president. Hassler was formerly assistant to the marketing director. In his

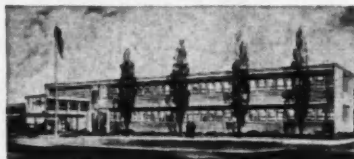


**Hassler** new post, he will handle all advertising for the main offices in Cleveland, and for branch offices in Columbus, Toledo, Rochester and Syracuse.

\*\*\*\*\*

The **Connor Lumber & Land Co.** recently purchased the business of **McFarland-Scanlon Lumber Co.** and **McFarland Hardwood Lumber Co.** in Chicago. The new property, organized as the **Connor Hardwood Products Co., Inc.**, will be used as a distributing yard for the Connor products. **P. F. (Fred) Taylor** will manage the new outlet, in addition to directing sales of the Connor Lumber & Land Co.

**Firm Gets New Plant, New Product Symbol**



**NEW OFFICE** building of **Georgia-Pacific Plywood Co.** in **Olympia, Wash.**, scheduled for completion late in fall. The two-story structure will house the company's western division manufacturing, accounting and sales offices and its national plywood sales office. Sketch

(left) of trade character "both tough and smooth" now appears on all Georgia-Pacific literature to dramatize qualities claimed for the company's **GPX** plastic-faced plywood

**Compare**  
↓  
**WYTEFACE\***  
**STEEL TAPE FOR**  
**CLARITY...FOR**  
**DURABILITY**

You'll find . . . **FAVORITE, WYTEFACE** is the only steel tape of its length with jet black markings on a white background (footmarkings in red) for easy and instant readings in any light!

You'll find . . . **FAVORITE WYTEFACE** is particularly durable, too. Full-strength steel line—resists kinks, wear and rust!

Available in 25, 50, 75 and 100 foot lengths. Your supply house or hardware store carries a full line.

TRADE MARK

*"I'll take the WHITE one every time!"*



**KEUFFEL & ESSER CO.**

EST. 1867

**NEW YORK • HOBOKEN, N. J.**

Chicago • St. Louis • Detroit • San Francisco  
Los Angeles • Montreal

# Let us send you this book of HOME BUILDERS SHORT-CUTS

for FREE five-day trial

More than 800 "practical job pointers" that save time, expense and labor on building jobs.

Now! Carpentry, building construction and building repair jobs are made easier with the practical methods shown in this big 211-page book. Every one of these methods has been TESTED in actual use; every one saves time, saves work, saves money.

**Contents include:** 88 handy ways to use tools; 37 ideas for work benches and attachments; 62 work-saving ways to use portable equipment; 39 suggestions on excavations, foundations and forms; 32 methods for making sills, girders, joists and sub-flooring; 49 hints on exterior and interior wall construction; 36 short-cuts in roof and bay construction; 19 tips on making cornices and porches; 54 ideas for interior wall covering and trim; 27 helps on stair construction; 37 window suggestions; 54 ideas for installing doors; 29 tips on closets, shelves and built-in equipment; 24 flooring pointers; 35 aids in installing sanitary equipment; 44 short-cuts in laying out work; etc., etc., etc. More than 700 illustrations show you exactly "how-to-do-it." All items indexed so that any particular idea or short-cut you want can be located instantly.



### DO YOU KNOW HOW TO

- Raise a sagging beam without using a jack?
  - Repair a sunken floor board without ripping out the entire floor?
  - Scrub and fit boards to an irregular surface?
  - Replace broken asbestos shingles?
  - Repair worn door hinges?
  - Lay a wood floor over a concrete base?
  - Fit door casing to a wall surface out of plumb?
  - Make sagless garage door?
  - Make a septic tank grease trap?
  - Put pipe into a partition already plastered?
  - Apply corner moulding to wallboard?
  - Quick answers on these and HUNDREDS OF OTHER building problems are at your fingertips in "Practical Job Pointers."
- Mail coupon below for your copy today.

### SEND NO MONEY

Examine 5 Days FREE  
Just fill in and mail coupon below to get practical Job Pointers for 5 DAYS FREE TRIAL. If not fully satisfied, return the book and owe nothing. If you keep it, send only \$3.98 plus few cents postage in full payment. You take no risk. Mail coupon below, now.

### FREE TRIAL COUPON MAIL TODAY

Simmons-Boardman Publishing Corp., 11-51  
30 Church St., New York 7, N. Y.

Send me for 5 DAYS FREE TRIAL, "Practical Job Pointers." I will either return it in 5 days and owe nothing, or send only \$4.50 (plus shipping charges) in full payment.

Name \_\_\_\_\_

Address \_\_\_\_\_

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

## Announcing THE SERIES 600 KENNATRACK

A NEW DOUBLE TRACK FOR 1<sup>3</sup>/<sub>8</sub>"  
BY-PASSING WARDROBE DOORS,  
WITH ADJUSTABLE HANGERS

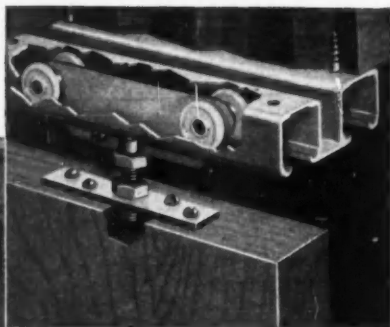


Saves installation time! Track is easily screwed to header.

Allows speedy adjustment of door height and alignment of door to jamb.

A fine, sturdy, extruded track of heat-treated Aluminum.

Assures correct space between by-passing 1<sup>3</sup>/<sub>8</sub>" sliding doors.



**H**ERE'S a new addition to the Kennatrack line of sliding door hardware especially designed for by-passing 1<sup>3</sup>/<sub>8</sub>" wardrobe doors. Series 600 has a newly designed adjustable hanger providing a convenient means of aligning the door to the side jamb. Each door slides on not 2, not 4 but eight nylon wheels. Installation is so easy you'll be amazed—just screw track to header. Kennatrack's fast delivery and prompt service are a by-word in the industry. Ask any Kennatrack dealer! Get the facts on Series 600 now.

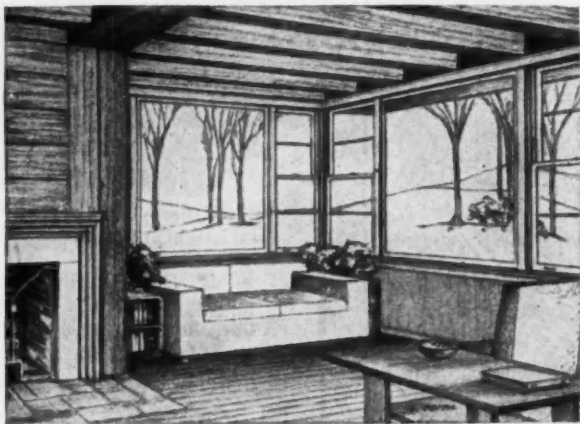
Address Dept. 262

**JAY G. McKENNA, INC.**  
ELKHART, INDIANA

Specializing Exclusively in the  
Manufacture of Sliding Door Hardware

# economy

with wood windows

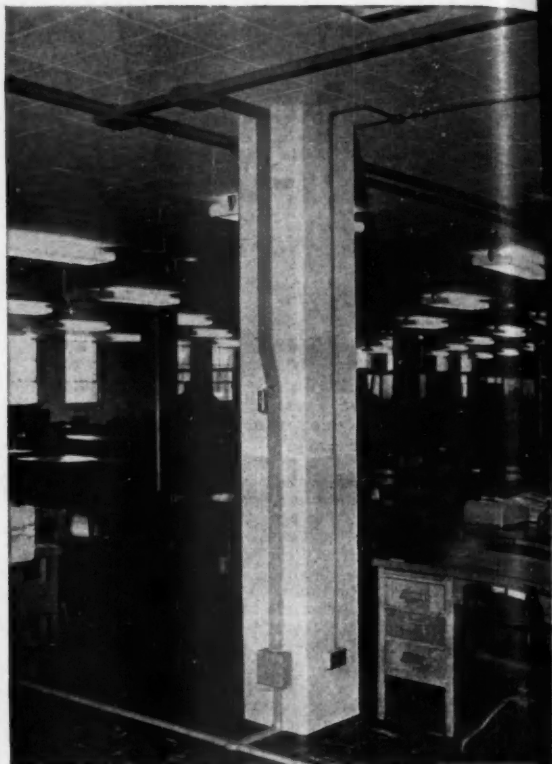


Stock design wood windows can be obtained as completely assembled units, ready to be installed—a time-saving, cost-saving feature for you and the home-owner! Such windows are pre-glazed, efficiently weatherstripped, equipped with modern sash balances. And wood window units are obtainable in modular sizes to speed installation and avoid cutting, fitting, and waste of materials on the job. Wood Window Program, 38 South Dearborn Street, Chicago 3, Illinois.



## wood windows

for modern beauty  
and modern performance



**SURFACE RACEWAY** for electrical and communication facilities used in structure remodeled from garage into office quarters

## Surface Raceways Make for Economy in Remodeling

**I**NSSTALLATION of electrical and communication facilities was a serious problem in the remodeling of a garage into offices by the Richfield Oil Company of Los Angeles, California. The class A construction of reinforced concrete made it highly impractical to install conduit or under the floor ducts inexpensively. Because of the short term, two year lease, surface raceways were chosen. Installed from office plans, 5,850 feet of surface raceways supply the necessary electrical and communication service.

Materials for the installation were supplied by the National Electrical Products Corp. of Pittsburgh, Pa.



**INSTALLING** telephone service for offices in surface raceways brought about considerable saving in remodeling costs



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**BUILDER**