What Every Builder should know about Land Planning  Page 32

How to Build in Winter  10 pages of ways to beat the weather  pages 108-118

For experience with roofing in winter  page 115

A better system for monolithic construction  page 144
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WHAT, ANOTHER CRISIS?

Several years ago Dick Hughes, NAHB's capable and popular veep, delivered a typical Hughes speech. The basis for the speech was an enumeration of the number of times various well-known figures had "viewed with alarm," and proclaimed current problems to be grave crises upon the turn of which depended the entire future of the home building industry. While Hughes poked a little fun at the viewers with alarm and the crisis proclaimers, he did so with no intention of discrediting them, but instead to drive home the point that this industry always will have problems, and that we had better accustom ourselves to meeting and handling them.

Early this summer Dick revised the speech by adding several later crises to it. One of these was the mortgage problem or crisis. In both the original and revised speeches he has always called attention to the labeling of each crisis as more formidable than any of its predecessors, or than any problem of the future can be.

Now, there is the budding of another crisis. It is the public ground swell of revulsion at slums and neighborhood deterioration, already resulting in a growing demand that somebody do something about urban redevelopment. It is inevitable that the demand will spread and soon embrace rural and farm redevelopment. But this new spawning ground for a brand new, first class crisis need not and probably will not provide Dick Hughes with a new chapter for his speech. Even the viewers with alarm likely will be found with their mouths hanging open and no words coming out.

The primary reason is that the home building industry, for the first time, is sufficiently organized and vocal to defend itself against the unwarranted charge of being responsible for slums and neighborhood deterioration. That was not true when the unexpected onslaught by the advocates of federal public housing had to be met in the interest of preserving private enterprise. It has not been true in meeting most other subsequent problems.

The second reason is that the home building industry anticipated by a full year the hue and cry against toleration of substandard housing that is about to burst into full voice. Several years of committee study was climaxed by the acquisition of Yates Cook to implement the association's urban redevelopment program. That implementation is under way and gaining great momentum.

So, it is likely that this problem and its companion problems in rural and farm areas will be contained as simple problems to which an effective answer is being provided, and never allowed to reach crisis proportions. If this is true, and it probably is, the fact will mark the turning point of NAHB from an organization forced from its inception to a defensive position, to a positive, dynamic force capable of formulating and directing action aimed at improved housing. Of even greater significance, the industry for the first time goes beyond its primary function of providing new houses, and assumes some responsibility for the use and maintenance of its product. No crisis this time.
TRENDS—AB TELEGRAPHIC SURVEY

Here's the Home Building

What are the chances for continued home production at a record level? Are there enough prospects in the market to keep up the high pace of housing starts? If so, will there be adequate financing to enable builders to meet this demand?

Last-minute replies to these and other pertinent questions are reproduced below in the American Builder quarterly survey. Information is supplied by home building authorities from every section of the nation.

Consensus:

Financing difficulties are threatening to effect the sharpest curtailment of housing starts since the end of a general shortage of labor and of restrictions on the use of materials. Building authorities see a 15 to 25 per cent average cutback in new home production during the next six months, place the blame squarely on two factors: a woefully short supply of mortgage money and, where financing is available, high down payments which bar many good prospects from their goal of home ownership. Few can see much hope for early improvement.

Despite the impending drop in starts, prospects are generally holding firm in number. Given adequate financing, nearly every area would be in line for a 25 to 50 per cent jump in sales activity.

* * *

What's the Mortgage Situation for New Homes? Any Improvement in Sight?

Northeast: All types of loans in good supply at Buffalo, which hopes situation "remains as good as it is." Adequate mortgage money also reported in Rochester and Hartford. Fair market in Boston is gradually tightening: ditto in Cheshire, Conn., which attributes difficulty in obtaining VA loans to compliance inspections. Long Island finds situation much tighter in all classes, although old line builders still have no problems. Financing of FHA and VA loans at standstill in eastern Pennsylvania, "very bad" around Pittsburgh. Situation for all types of mortgages is "worst in years" in southern New Jersey. Conventional are available, but tight, in Baltimore, where large discounts are being asked for VAs. Washington brands financing as its one and only barrier to a healthy market. Northern New Jersey payments 1 1/2-point premium for FHA, 2 to 5 points for limited number VA. No hope for improvement offered anywhere.

Southeast: Conventional mortgages with 5 per cent interest generally available, but no VA or FHA money noted at par. Birmingham reports limited number of FHA loans at 96 or 97; VA at 94 or 95. Jackson, Miss., indicates a similar situation. In Memphis, such loans are limited to homes ready for delivery at price averaging 96. Atlanta finds all mortgage types, even conventional, have hit "a low stage."

Central: Cleveland and Grand Rapids, Mich., have VA loans provided the down payment is at least 20 per cent. Elsewhere, VA is either non-existent or practically so, except Lincoln, Nebr., which has one building and loan group still issuing VA as well as FHA mortgages. Only Milwaukee and Sioux City, Iowa, hold out any hope for early improvement. All loans tight in Chicago, Des Moines, and South Bend, Ind. Conventional adequate in Minneapolis, Indianapolis, Lincoln and Davenport, Iowa; beginning to slow down in Columbus. VAs, FHAs discounted 5 to 10 per cent in Wichita, Kans.

Southwest: Small quantities of FHA and VA loans available in Oklahoma City at 3 to 6 per cent discount. VAs plentiful at 5 to 6 points premium in Tulsa, but local institutions are said to be "thumbing their nose" at FHAs. Latter reports many low-priced houses are conventionally financed: expects improvement "when Republicans discover hard-money policy won't win votes—maybe next spring." Dallas demanding 6-point discount for VA money: Houston will take 5. Premiums for FHA loans usually 4 points less. Conventional extremely selective in Texas Panhandle.

West: Conventional loans only in all reporting cities, though some recent FHA and VA offerings noted in Spokane, Wash., at discount of 5 points and in Salt Lake City at "very large discounts which builders cannot afford to pay." San Mateo, Calif., area reports VAs selling at 93 to 89, FHAs at 95 to 90.
Are Home Buying Prospects Increasing or Decreasing? By What Per Cent?

Northeast: Prospects remain normal in Washington, also in most New York and Pennsylvania areas. Potential market for home buying is brisk in Baltimore which blames lack of adequate financing for lower purchase level. Slight decrease, 5 to 10 per cent, indicated in most of New England. Drop of 25 per cent seen in Camden-Haddonfield area of southern New Jersey.

Southeast: All centers report prospects are holding steady, only drawbacks being a lack of proper financing and a high cash payment requirement which limits choice. Birmingham notes 10 per cent increase in interest.

Central: Slight increase noted in St. Louis, Minneapolis and Sioux City, Iowa. Chicago believes current activity due to rent control removal and signs of impending shortage due to inadequate financing. Columbus reports 25 per cent drop; Grand Rapids, Mich., 35 per cent.

By What Percentage Would Sales Increase, Given Adequate Financing?

Northeast: Baltimore and southern New Jersey predict brighter loan picture would boost sales 50 per cent; Pottstown, Pa., thinks sales would double. Pittsburgh sets the improvement at 30 per cent, Washington and northern New Jersey at 20 per cent, Long Island at 10 per cent. Little effect anticipated elsewhere except Chemung Valley area of New York, 30 per cent.

Southeast: Availability of more financing would raise sales total at least 25 per cent throughout region. Atlanta sees improvement of at least 40 per cent; Memphis, 50 per cent; Charlotte, N. C., between 25 and 40 per cent.

Central: Increase predicted everywhere, beginning with 10 per cent at Minneapolis, 20 per cent at Indianapolis, Des Moines and Columbus, and extending to more than 30 per cent in Chicago and Grand Rapids, Mich. Any increase with adequate financing would be negligible unless lowered down payments were also effected, according to Lincoln, Nebr. Rise of 75 per cent possible in Wichita, Kans.

Where Are Building Costs Headed in the Next Six Months?

Northeast: No change is the word from Baltimore, Hartford, Conn., Albany, N. Y. and most of New Jersey. Washington and Pittsburgh predict 2 per cent rise; Buffalo, 4 per cent; Boston, Bridgeport, Conn. and eastern Pennsylvania, 5 per cent; Long Island, 4 to 7 per cent.

Southeast: Costs will fall if present mortgage situation continues, believes Charlotte, N. C., but Birmingham feels this condition will be offset by higher wages. Only Jackson, Miss., expects a rise, predicting a gradual increase from 1 to 3 per cent.

Central: Consensus indicates no marked change. Chicago points out that while labor costs are rising, an intensive effort to increase efficiency and to have builders and subcontractors reduce their profit formula may stabilize current costs. Definite increases predicted are 2 to 31/2 per cent in St. Louis; 3 to 4 per cent in Cleveland, 5 per cent in Davenport.

Southwest: Costs will go up another 3 per cent, according to Tulsa, Okla. Amarillo, Texas, puts the figure at 5 per cent more. Other reporting cities expect to hold the line.

West: Salt Lake City anticipates slight rise; San Mateo, Calif., one of 3 to 5 per cent to reflect higher labor costs. No change expected elsewhere.
Are Home Starts Headed Up or Down in the Next Six Months?

**Northeast:** Only Rochester, Albany and Long Island see activity equal to the comparable period of a year ago. Latter sees possibility of slight slowdown during the fall as result of extended teamster's strike which so delayed starts that some buyers may want to cancel their contracts. Other New York centers and most of New England look for drop of 10 per cent. South Jersey, Baltimore and Pottstown, Pa., fear cut of 50 per cent. Pittsburgh sets reduction at 20 per cent. Washington looks for 25 per cent fewer starts, as does Cheshire area near New Haven, Conn. North Jersey anticipates 15 to 20 per cent less production.

**Southeast:** Birmingham, Ala., which predicted a 10 per cent increase in last July's survey, expects to do it again. Starts likely to decline 5 per cent in Miami, 25 per cent in Jackson, Miss.; at least 30 per cent in most other centers. Unless money supply improves, the drop may reach 60 per cent in Memphis.

**Central:** Des Moines alone sees improvement: 20 per cent more starts through first half of 1954. Other Iowa forecasts range from 10 to 25 per cent decline. Activity to remain about the same in Minneapolis, drop only about 6 per cent in Milwaukee, 10 per cent in South Bend, Ind. Cleveland anticipates a 20 per cent slowdown; Chicago and Grand Rapids, Mich., envision a one-third reduction, while Indianapolis and Columbus believe production may be halved. Lincoln, Nebr., already cut 40 per cent, looks for another 10 per cent slash. Summer work stoppage makes estimate impossible for St. Louis. Exceptional drop of 60 per cent feared in Wichita, Kans.

**Southwest:** Consensus indicates 50 per cent reduction, with Oklahoma City possibly holding the drop to 25 per cent. Starts may fall 70 per cent in Amarillo, Texas; 60 per cent in Tulsa, Okla., and Pampa, Texas.

**West:** All centers report fewer starts likely, averaging 35 to 40 per cent. Smallest decline, 20 per cent, is anticipated at Spokane, Wash.; largest 75 per cent, at Sacramento, which barely exceeds the San Mateo, Calif., estimate.

At What Price Does Sales Resistance Begin? Is It Increasing?

**Northeast:** Whole trouble is down payment, not price, says Pittsburgh. Resistance begins at $12,500 in most centers and is steady to increasing. Exceptions are Hartford, Albany, N. Y. and Pottstown, Pa., $15,000; Washington and Bridgeport, $13,000. Long Island finds sales slowdown, starting at $13,000, is not so much a resistance as a demonstration that higher price ranges naturally have a lower volume of prospects. North Jersey notes resistance at $19,000—$21,000.

**Southeast:** Jackson, Miss., finds no particular resistance at any price level; Atlanta says it exists all along the line. Down payment requirement has slowed sales in $15,000-$25,000 bracket in Charlotte, N. C.; from $14,000 in Miami. Most areas see resistance increasing unless something is done to ease financing. Sales in Birmingham are affected, beginning at $12,000-$14,000 level.

**Central:** Columbus, Ohio, and Lincoln, Nebr., note increasing resistance in all brackets, but most cities find it starts around $12,000. Other levels include $15,000 at Minneapolis and Sioux City, Iowa; $17,000 at Chicago; $18,000 at Des Moines, $16,000-$21,000 range is slowest around Cleveland. St. Louis finds business good at all prices, with main resistance from $20,000 to $45,000 and decreasing. Nearly all centers indicate tendency to higher resistance.

**Southwest:** Oklahoma City resistance mainly from $13,500 to $17,000, but is decreasing. Tulsa finds $12,000 to $20,000 range increasingly tough for buyers. General resistance noted in Texas, beginning at $12,000 in Pampa, $11,000 in Houston, still lower in other cities.

**West:** Resistance starts at $15,000 in Spokane, Wash., and is stable. In San Francisco area, it begins at $12,500. All other areas report sales are stiffening, from levels beginning at $10,000 in Denver and extending up to $18,000 in Seattle.

Are Labor and Materials in Sufficient Supply?

**Northeast:** Hartford, Conn., reports a labor shortage: needs experienced carpenters. Common labor and skilled cabinet or trim men not too plentiful in Washington. Supply sufficient on Long Island but may be temporarily short during fall because of extra demand occasioned by builders trying to catch up to schedule set back by teamsters' strike. Mason labor short at Albany, N. Y.

**Southeast:** Labor tight in Charlotte, N. C. South Florida reports 5 per cent temporary shortage of carpenters. No other shortages indicated.

**Central:** Slight shortage of electricians noted in Sioux City, Iowa. South Bend, Ind., reports labor is generally available, "but must dig to find it and pay price." Minneapolis believes cement shortage may be developing. Labor and materials range from adequate to plentiful elsewhere.

**Southwest:** No shortages in sight.

**West:** Sufficient supplies throughout territory. San Mateo, Calif., notes unemployment in various trades.
"Mortar as it oughta be!"

—SAID THE MASONS ON NEW WEST TEXAS DELUXE MOTEL

"Here's a mortar that makes sense... you can see the difference in the mortar box, feel the difference on the trowel... it's mortar as mortar ought to be." Ask the Masons on West Texas's newest deluxe motel, The Triple-D, at Midland. Here is how ONE STAR MASONRY CEMENT helps assure quality, speed and economy:

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4. RENTAL-PURCHASE PLAN offers you the opportunity to use the Symons Forming System on a rental basis. Then, if you want to purchase the forms, the rental charge will apply on the purchase price. Contractors throughout the country have tried the Symons 4-Point Plan and like it. Send in your request for the complete facts—no charge or obligation.
reserves. So, the association took a contract for $12,000 to do the excavating for a new Minneapolis-Honeywell plant.

ALL THE MEMBERS assembled with their equipment and moved 28,000 yards of dirt in two days, a job that ordinarily takes nearly a month. Bulldozers, carry-alls, cranes and other equipment were supplied by the more than 80 members without cost. Orders were relayed to the various units by a network of 30 walkie-talkie radios from eight field superintendents. All the proceeds went to the association treasury.

ASIDE FROM the fund raising and fun producing aspects of this venture, isn't there an idea here for cooperation by excavators, and possibly other subcontractors, where an owner wants to speed up his work?

THIS GUY is not an arctic peeping Tom. He's our field editor, Zar. All snow-shoed and mackinawed, getting a winter building story where winter is winter, and snowfalls are measured in feet instead of inches.

CLIFF MAY has announced that a settlement was made recently on his claim that four demonstration houses built by the Alcap Investment Co., were copies of the NAHB prize-winning $7,500 house designed by Cliff May and Christian E. Choate and built at Cupertino.

THE CLAIMED infringement of copyrights and designs by May and Choate was disposed of by agreement to pay the architect’s fee on each house and lot sold in the tract.

"THE MONEY," said Cliff May, "is not the important thing. What is important is that, up to now," (Continued on page 12)
Building contractors, like MacIsaac & Menke Co., in all parts of the country tell us how the ‘yellow pages’ of the telephone directory are helping them reach more prospects than ever.

Most of them advertise under separate ‘yellow pages’ headings to cover every service they supply...every product they carry.

Are you using all the headings in the ‘yellow pages’ where prospects are likely to look for you?

To find the best headings for your business, call the telephone directory representative at your local telephone business office.

On and Off the Record

(Continued from page 11)

whenever someone does something good in architecture, many builders and even architects jump in and copy, tearing it down. If, as a result of this settlement, it can be established that architects have rights to their creations, it can give them the ability to license.

HAWLEY WILBUR, one time boy mayor of Waukesha, Wisconsin, and since that time, one of the middle west’s most progressive and prosperous retail lumbermen, and also wholesaler-distributor and millwork head, probably will go gunning for this writer for calling him the grand old man of the retail lumber industry.

BUT THERE’S no denying that he’s grand, and I’ll eat a 2x4-3 out of his biggest yard if he isn’t 70.

CHARACTERISTICALLY, this g.o.m., who could probably throw 90 per cent of the men 20 years his junior—catch as catch can or in a debate—celebrated his 50th year as a lumberman by taking all of his 200 employees to a Milwaukee Braves baseball game.

IT’S ABOUT TIME somebody did something about Hawley Wilbur, and this column has an idea. Anybody interested?

SPENT A DAY with Dick Hansen recently. Dick, who has been building homes in Kenosha, Wisconsin, for the past 26 years, is president of the Wisconsin Home Builders Association. “There are no extras in any of my deals,” said Dick. “All of my commitments are firm. I deliver my houses for exactly the price stated on the contract. Everybody in Kenosha knows that, and I never have any trouble selling.”

INTERESTING THING about Hansen is that he built two-thirds of all the new homes constructed in Kenosha one year. That was in 1933, when he built two of the three houses that comprised the city’s total home building program.
For Homes Designed To Sell

To meet increasing competition, new homes need built-in "sales appeal," created by beauty and discriminating attention to all-important details. Locks are a very important detail.

Schlage locks offer designs that will add distinctive beauty to homes in every price range. They offer modern convenience in the precision-made locking mechanisms. Schlage locks put the stamp of quality on the doors of the homes you build.

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When you show the name SCHLAGE on the latchplate, it's proof that your standard is quality.
Sales-minded builders and modernization-minded homeowners are quick to see the many conveniences offered by the Ledgbak Laundry Tray. It is cast iron, enameled inside, with generous top ledge and soap depression.

The chrome plated faucet spout swings aside out of the way when not in use and the supply pipes are concealed under the back ledge.

To increase your business, recommend the Eljer Ledgbak Laundry Tray for utility rooms in one story, ranch-type homes... or for basement laundry rooms. Ideal for use with an automatic washer. You can reap the profits from the many extra sales that will be made on sight and from builders' repeat orders.

For more information about Eljer Plumbing Fixtures, write Eljer Co., Ford City, Pa.

with 2 Bathrooms Sell Faster
Lenders, Builders Split Over Mortgage Money

A fight between lenders and builders broke into the open last month as the two groups split sharply over the cost of mortgage money. Lenders renewed pleas for higher interest rates, while builders warned that demands for "excessive discounts" by the lenders is going to bring on action by Congress.

The National Association of Home Builders called the present shortage of mortgage money "the Number One national housing problem"—a view government officials agree that is shared by several government officials in the housing field. The question was how to correct the situation.

According to NAHB, "no definite plan" had emerged by September 1, although several proposals were "under consideration."

The lenders believe, generally, that another interest rate increase would do the trick. As early as mid-August, the Mortgage Bankers Association said restoration of a "satisfactory" mortgage market "demands an increase in the interest rate on government insured and guaranteed mortgages of the FHA and VA rather than the questionable expediency of unlimited mortgage discounts."

Meanwhile, NAHB charges that lenders are requiring discounts that are "excessive."

"Some lenders are demanding all the distressed traffic will bear," the builder association declared. Unless the situation is relieved soon, NAHB added, the buying public will demand that Congress act to secure more equitable loans for home buyers.

Private mortgage lenders do not take kindly to the idea of direct lending by the government—a fact well known by the builders.

The lenders claim that present FHA and VA interest rates are out of line with general money market conditions. Long-term government interest rates of 334 per cent have, in their opinion, eliminated the traditional "relationship" between mortgages and long-term bonds.

This might be true, NAHB admits, if it were not for the discounts. When discounted, present mortgage yields are relatively higher in comparison to other types of investments than they have been in the past, NAHB declared.

Government officials agree that

Reserve Board Sees Much Repair and Modernization

Size of the home improvement and maintenance market was pointed up in a survey made public last month by the Federal Reserve Board. The survey showed about four million home owners each spent $500 or more for home improvement and maintenance in 1952. About the same size demand was expected throughout 1953.

"Plans for improvements and repairs were reported by about three in ten non-farm home owners in early 1953," the board said.

Discussing the current market for houses, the reserve board said "trade reports" indicate that both new and old houses in some places are taking longer to sell, concessions are being given on price and terms, and vacancies are appearing more frequently.

"In this setting, however, purchases of both new and existing houses have continued very large," the board said.

"New house buying has fluctuated more than old since 1951, but the general level has changed little."

OCTOBER 1953
City of 8,200 Houses Planned
40 Miles Northwest of Chicago

A new Chicagoland Suburban City, comprising 2,200 acres, and named Meadowdale, is now under development. The 150-million-dollar project will take 12 to 15 years to complete, according to the builder, Leonard Besinger. The project is by far the most ambitious program now in the Chicago area. Houses, shopping center, schools, churches, post office, parks, police and fire departments, power plant, water plant, and industries are planned for the new city. The first houses offered for sale are six-room prefabricated models manufactured by National Homes. Three models are available.

Leonard Besinger owns the 2,200 acres where he plans to build 8,200 houses each having 960 square feet of floor space including three bedrooms, living room, bath, dining area, and kitchen. Kitchens are equipped with Hotpoint appliances including a 9½-cubic-foot refrigerator, range, garbage disposer, dishwasher, washing machine and dryer. The houses are priced at $11,445 and require a down payment of $1,500. Monthly payments are $53.50.

An outstanding selling operation has been set up by Besinger. Prospects park in his 600-car parking lot and leave their children in a supervised playground where they receive free refreshments. The parents then go through the models, one of which is furnished. From the models, the prospective buyers select the one that suits them. A彩色 movie explains the "Meadowdale Story." The sales office is nearby and well marked for those wanting additional information.

The first week's sales operation netted 55 buyers. Future development of the area will see higher-priced custom housing for the executives of the proposed industrial development of the new town.

Floor plan has 960 sq. ft. and is standard '53 National Home unit

Employees of development home builders in New Jersey who work as brokers or salesmen, either on a salary or a commission basis, must now obtain licenses and operate under the jurisdiction of the State Real Estate Commission.

This new requirement was authorized in new state legislation extensively revising the Real Estate License Act.

Coogan Resigns Defense Post

Thomas P. Coogan, assistant to the Secretary of Defense and director of the Armed Forces Housing Agency, has resigned, expressing his opinion that the agency had served its purpose and would probably be absorbed in a reorganization of the Defense Department now under way.

"The critical stage in housing is undoubtedly back of us," he said, "especially in view of the truce in Korea."

Under Coogan's direction, and under terms of the Wherry Act which provides for private financing of housing for military and civilian personnel on military bases, private builders produced about 81,400 units.

Warnecke Proposal on Apartment Mortgages Studied by HHFA

Albert M.Cole, Housing and Home Finance Agency administrator, is studying the Warnecke proposal to take the government out of the business of guaranteeing mortgages on multiple-family housing. The plan, presented by George W. Warnecke, head of the national mortgage investment firm bearing his name and former government housing adviser, was referred to Administrator Cole for his consideration.

The Warnecke Plan suggests three steps to restore private financing for an average of some $500,000,000-worth of mortgages on apartment houses and other multi-family construction which are now insured by the Federal Housing Administration:

1. Repeal of those provisions of the National Housing Act as amended which provide for FHA mortgage insurance of multi-family rental housing.

2. Establishment of a trust or trusts under private auspices to review mortgage applications for apartment houses and other investment-type properties and issue participation certificates to be traded at stock exchanges throughout the country, carrying interest at the rate of 4½ to 5 per cent.

3. Excepting such real estate participation from "cumbersome" Securities and Exchange Commission registration requirements.

In his memorandum to the HHFA, Warnecke points out that this method of financing essential apartment housing would be superior to government mortgage insurance as being anti-inflationary, flexible, and self-adjusting with respect to demand, supply and interest rates on financing funds, and more in accord with the economic theories of free enterprise.
Materials Lower Than Labor,
Los Angeles Group Reports

Labor now costs more than the material in the average home, compared to previous residential boom eras when materials represented a greater cost than labor. This was the information given the Young Builders Council of the Home Builders Institute, Los Angeles, at a recent educational seminar on the subject, "Organizing and Carrying On the Construction of Homes."

One of the panel members, Earl W. Smith, El Cerrito, Calif., is building 3,000 low-cost homes during 1953 in several communities within 150 miles of the San Francisco area. He described his business methods in building two-, three- and four-bedroom homes. His firm builds a pilot model of each new design, then makes time studies of each operation in order to determine the budget for every operation when construction of tract begins.

Panelists at the Young Builders Council seminar (l. to r.): A. Quincy Jones, A.I.A., Los Angeles; Dave Slipher, Los Angeles, technical director of Fritz B. Burns organization; the panel moderator; Earl W. Smith, builder, El Cerrito, Calif.; and Walter W. Keusder, Los Angeles, second vice president of Home Builders Institute, sponsor of the Council.

Panel members were in agreement that controls for construction costs now are more necessary than since the end of World War II because the construction industry is now entering a competitive era in which selling costs are tending to rise.

A. Quincy Jones, A.I.A., Los Angeles, another member of the panel, cautioned against using house plans designed for level lots on sloping or hillside lots.

Hartford Mortgage Market Maintains Strong Level

The mortgage market in Hartford County, Connecticut, is stated to be above that of the national average. There is no shortage of money for home building in this area, in contrast to some sections where builders are reported to be cutting down on new home production.

OCTOBER 1953

Dickerman's Column

John M. Dickerman, Executive Director, National Association of Home Builders of the United States

Housing Industry Can Anticipate Further Expansion Ahead

Once again, the pessimists are being proved wrong about the underlying strength and resiliency of the housing market. At the beginning of 1953, there were many "experts" in and out of the industry who warned that we were in danger of overbuilding, that the unprecedented construction activity of the past seven years had satiated the market.

But today, demand for good housing is still strong, although certainly home buyers are in a highly selective mood, and it appears that 1953 might well have been a record year had it not been for the shortage of mortgage credit. Undoubtedly, that shortage has clouded the immediate building outlook. But for the long pull, all signs point to a continued expansion of home building and home ownership.

A recent survey of consumer finances, conducted by the Federal Reserve Board, reveals that a larger proportion of American consumers were planning to buy homes this year than in either 1951 or 1952—both big building years. Many of these potential buyers have been forced to postpone home ownership because they were unable to obtain financing on the right terms. But this deferred demand certainly will make itself felt whenever mortgage financing conditions improve.

The Federal Reserve survey discloses that the families planning to buy homes this year is concentrated in the same age groups which have been most active in the housing market since World War II. About 60 per cent are younger married couples (under 45), although they make up less than 40 per cent of the population. As in recent years, nearly half are veterans.

Half of the prospective home buyers have incomes of $5,000 a year or more, but 34 per cent are in the $3,000 to $4,999 bracket, and 16 per cent earn less than $3,000 a year. In 1952, 54 per cent of the families who actually bought homes earned $5,000 or more, 29 per cent were in the $3,000 to $4,999 group, and 16 per cent were in the lowest income range.

A continuing strong market for repairs and improvements on existing homes also was revealed by the survey. At the beginning of 1953, about three of every ten home owners planned some such expenditures, and a considerable number intended spending more than $500 to spruce up their homes. The Federal Reserve Board experts predicted, however, that actual spending for this work would be much larger than was indicated early in the year, because many home owners undertake minor repairs and improvements without long advance planning.

The survey bears out what has long been apparent to leaders of the home building industry: that there still is a great unsatisfied need for new housing and for the rehabilitation and "new conditioning" of the older portion of our national housing inventory.

A glance at the Government's population statistics confirms that this is still a vigorous, expanding nation whose housing requirements will continue to increase for generations to come. Although new family formations are down from the high level of the immediate postwar years, upwards of 700,000 young couples are marrying and establishing their own households each year. They form the solid core of a prosperous nation and a prosperous home building industry.

It is apparent that Hartford County is at this time one of the most active areas in the country for home building. There appear to be many prospective home owners, and extensive plans are under way for some large developments. In addition, there are a large number of single houses being bought and sold. All things considered, the Hartford County builder is in excellent shape. According to opinions of leading local financial men, this situation should continue in its present state for another six months to one year, since the buyers' market gives every indication of this contingency.
One man can handle installation of an R-O-W window. Sash lift out entirely to lighten the unit and prevent glass breakage. More important, from the standpoint of builders, homes equipped with R-O-W windows sell faster—build customer satisfaction and—more sales.

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NAHB Announces 1954 Convention Plans

The National Association of Home Builders has announced its Tenth Annual Convention and Exposition will be held in Chicago, January 17-21, 1954. Two hotels, the Conrad Hilton and the Sherman, will be required to house convention activities. Convention meetings, as well as exhibits, are scheduled in both hotels. Shuttle bus service will provide delegates with convenient transportation between the hotels.

The association is developing a convention program of unprecedented scope, with emphasis on "how-to-do-it-better" technical sessions and the major national issues confronting the industry, according to Convention Chairman Henry Fett, of Royal Oak, Michigan. A record-breaking exposition of building materials and home equipment will also be of interest to the delegates.

From Chicago, Convention-Exposition Directors Paul S. Van Auken reported all planned exhibit space had been sold out to manufacturers in August. Additional exhibit areas were secured to provide 25 per cent more space than last year, but even this has fallen short of the demand, he said. Nearly 300 leading manufacturers and services will be represented in the big show.

In addition to Fett and Van Auken, members of the NAHB Convention Committee include: Martin L. Bartling, Jr., Knoxville, Tenn.; Frank A. Collins, Bala Cynwyd, Pa.; Joseph B. Haverstick, Dayton, Ohio; Carl T. Mitnick, Merchinville, N. J.; George S. Goodwear, Charlotte, N. C.; Frank W. Cottright, Berkeley, Calif.; Franklin L. Burns, Denver, Colo.; Wilson H. Brown, Dallas, Texas; and Robert R. Schneider, Canton, Ohio.

Mortgage Limitations Halt
Westchester, N.Y., Project

Strict mortgage policies and inability to obtain 30-year loans for veteran buyers will halt the proposed 143-unit Wyndover Park project in White Plains, New York, after completion of the 25 houses now under way, according to the Carnoy-Wolter Construction Corporation.

Builder of 17 residential developments in Westchester County, New York, since 1945, the firm reported a large demand existed for the new homes, which at $14,000 to $17,000 are in a low-price bracket for the area. However, it found that the majority of veterans applying had an average annual income of $6,000, too small to qualify for a $14,000 mortgage for 20 years at 4½ per cent interest.

Original plans were to have all 143 homes under roof by September, but Alan Carnoy said that "continued production at this time does not depend on demand but on a change in the government's mortgage policies."

Under more pleasant circumstances, the same builders presented the deed of a two-acre playground site to residents of the 125-home Hillside Ridge colony recently completed in the neighboring town of Greenburgh.

Hendrik Wolter, who made the presentation to David O. Lynch, president of the Hillside Ridge Association, received from the owners' group a framed citation honoring the builders for their efforts in promoting community life in the colony.

Deed for two-acre playground is received by David O. Lynch, president of the Hillside Ridge Association (third from left), from Hendrik Wolter of Carnoy-Wolter Development Corporation, builder of the 125-home group in Greenburgh, New York. Looking on are (I. to r.): Frank P. Tutaro, president, New York State HBA and Alan L. Carnoy of the building firm; holding a citation presented by the home owners.

Trade Group Organized by Building Materials Firms

Building Contractors Associates is the name of a new west coast group which is comprised of manufacturers of building products, organized for the sharing of ideas and the creation of improved materials for use in building homes. The announcement was released by the Building Contractors Association of California, Los Angeles, of which the new group is an affiliate.

The new organization has elected Charles Eisenmayer of Sawyer Cabinet Co. as president. Other officers elected at the first meeting were Walter Jennis, Davidson Plywood Co., vice president; Owen L. McComas, Southern California Gas Co., secretary, and Charles Stivers, Land Title Insurance Co., treasurer. More than 30 firms formed the initial group as charter members.

The purposes of the organization are stated to be the promotion of greater unity among the various elements of the construction industry to bring greater benefits to the home buyer; the creation of educational programs of a technical nature for the contractors; the assembling of data on the contractors' needs, and the creation of closer ties between producers and consumers.

Home Building Keeps Pace with Population Growth

The 160,000,000th American has arrived ahead of the starting of the eight-millionth house built since World War II. This eight-millionth house was the 50-millionth residence unit in the national housing inventory. The eight-millionth postwar home was started on approximately September 20—the opening day of National Home Week.

Number of home loans for World War II veterans guaranteed by the GI Bill has just passed the three million mark. There are also two million veterans of the Korean War who represent another vast housing market, since only 20,000 Korea veterans have so far exercised their GI home loan privileges.

Home building has more than kept pace with the large population expansion of recent years. In 1940, the Census Bureau reported a population of about 131 million Americans and a housing supply of 35 million units, or about 3.7 persons per unit. Today there are more than 50 million dwelling units for our 160 million people, or 3.2 persons per unit. In 1940, more than half of the homes and apartment units were occupied by renters; today home owners are in the majority.
You can't help but profit when you sell these Dexter key-in-knob sets, with rugged, lifetime service and striking beauty at popular prices. And installation is simplicity itself. Illustrated above: No. 600 Pin Tumbler cylinder set for the ultimate in security; and (below) No. 300 Disc Tumbler cylinder set, for dependable security where price is a factor...now available Master Keyed. Write for a Dexter factory representative to call on you.
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Packaged for all standard 28", 30", 32" and 36" double hung windows, complete with nails and instructions. Quickly and easily installed by anyone. Makes a complete weather-tight seal.

FOR DOORS
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Nu-CALK CALKING COMPOUND
The “standard of quality” in the calking field, available in ½-pint, pint, quart, gallon, 5-gallon cans. Also in 55-gallon drums.

Nu-CALK SPEED LOAD
The world’s best calking compound in a ready-for-action load. Non-staining, always pliable, smooth even flow.

Nu-Phalt PLASTIC ASPHALT CEMENT
Used for sticking down shingles, setting loose floor tiles and dozens of other jobs! Comes in handy load form or in 1½ lb., 10 lb., 50 lb., and 55 gal. containers.

Nu-Glaze GLAZING COMPOUND
Use Nu-Glaze instead of putty—it’s not oily, needs no working up, will not dry out, harden, crack or peel. Packed in cans—½-pint, pint, quart, 5 pounds; and in drums from 50 pounds to 880 pounds.

Numetal DOOR BOTTOM STRIPS
Thick wool felt and heavy gauge brass, alacrome or stainless steel—in lengths 28", 30", 32", 36", 42" and 48". Packed 6 of same length per carton.

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Look to Macklanburg-Duncan for products of quality—always dependable. Sold at all Hardware, Lumber and Building Supply Dealers.

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Order now! Your order will be shipped the same day it is received. Macklanburg-Duncan products are fast sellers, nationally advertised.
"Operation Tornado" Successful in Flint

Over 7,800 volunteers of all kinds worked until dark on August 29 and 30, rebuilding an entire section of Flint, Michigan, representing a total of 193 individual projects. On June 8 a tornado devastated the city, killing 113, injuring nearly 1,000 and demolishing a residential area. The volunteer rebuilding project, called "Operation Tornado," was suggested by a local clergyman.

The volunteer workers were guided and helped by members of the various local building trades unions. The city's mayor, D. W. Riegle, in cooperation with the AFL-Flint Building Trades Council originally sought the help of volunteers. According to General Chairman M. F. Borgman, the response on the part of private citizens was far above that expected. In the two days of work, more was accomplished than was believed possible.

Of the 193 separate projects, many of the demolished homes were framed and roughed in the first day, and completed except for painting and trim on the second day. Other homes which were badly damaged were given new roofs, walls, additions or trim. Where damage was slight, or where owners had already made substantial progress before the "operation" took place, new coats of paint, new plaster, roofs, brickwork or interior trim were added.

Residents who wanted help in rebuilding registered in advance with a civic committee. The volunteer workers signed up with the Junior Chamber of Commerce. In most instances, owners had finished the foundations and arranged to have lumber and other building materials delivered to the job sites. At the close of the two-day volunteer operation, nearly every one of the 193 projects had been worked on. Completion of the homes, in most cases, will be up to the tornado victims themselves.

An interesting sidelight to "Operation Tornado" included the fact that volunteers by the hundreds registered not only from the tornado-stricken city itself, but also from Saginaw, Detroit and more distant communities.

Real Estate Writers Qualify for NHW Contest

With National Home Week just over, the National Association of Home Builders is giving real estate editors of city dailies a chance to win honors for themselves and their newspapers, plus substantial personal bonuses. The NAHB is sponsoring a contest to select the best National Home Week special sections which appear in U.S. newspapers. This annual contest has brought recognition to several papers in the past, as well as to a number of real estate editors.

Prizes for the editors placing first, second and third will be $100, $75 and $50 respectively. In addition, each winning editor will receive a certificate suitable for framing.

Contest rules require simply that the majority of editorial content in the appropriate section be devoted to National Home Week and building news. These sections will be judged, on the bases of interest and layout, by a jury of qualified newspaper and real estate promotion men.

Los Angeles Builders Hosts to Sacramento Group

A three-day midsummer inspection of Los Angeles construction was made by 22 members of the Associated Home Builders of Sacramento for the purpose of viewing developments and getting ideas to take back home. The tour of construction methods and designs included more than 200 tracts in various stages of construction in the Los Angeles area, which represents one of the largest single building concentrations in the United States.
The Root-Proof Fibre Pipe for Outdoor, Underground Non-Pressure Use That's—

**Lighter!** Bermico weighs far less than other types of pipe. So light you can easily lift and carry several 8-foot lengths at one time.

**Tighter!** Bermico has strong, tapered sleeve joints that are root-proof, water-tight, will not pull apart or get out of alignment. A few hammer taps seal joints permanently. No joining compound is needed.

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Don't waste time and money cleaning plaster and mortar mixer drums. New Muller Adjustable Rubber Scraper Blades (pat. pdg.) keep the drum clean always. Also, by by-pasing small pebbles, they prevent damage. Available at slight extra cost on all sizes of Muller Plaster and Mortar Mixers.

Product of 45 years of experience in mixer design and manufacture, new Muller Mixers incorporate many excellent features that insure efficient mixing at minimum cost. Among these the newest are: the Muller Everlasting Paddle Shaft Seal (guaranteed for life of mixer), and power throw-out on gasoline-powered smaller models, also built-in disc type clutches on larger sizes.

Muller Mixers are now available in 2, 3½, 6 to 8, and 9 cubic foot sizes. Mail the coupon today for literature and prices.
Houses equipped with Ludman Auto-Lok Awning Windows are easier to sell! They sell faster, more profitably because Ludman Windows give visible evidence of quality construction.

Ludman Auto-Lok Windows do not require time consuming adjustments. They cut labor installation costs and assure life-time homeowner satisfaction.

Ludman Windows are engineered to give complete satisfaction to builders, contractors and home-owners. The patented Ludman Auto-Lok mechanism makes them the tightest closing windows ever made. All hardware is concealed . . . eliminates dust and dirt. The Roto-type operator requires only finger-tip effort. There's no wear . . . no maintenance . . . no adjustment necessary as in ordinary awning or other windows.

Installation detail for installing Ludman Auto-Lok Windows in SCR Brick Walls are available. Write Ludman Engineering Dept. Write also for complete "Builders File" of sizes and other installation data.

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LUDMAN — WORLD'S LARGEST MANUFACTURER OF AWNING WINDOWS AND JALOUSIES
Good Markets Slow Trade-In Deals
But FHA Goes Ahead with Program

The "trade-in-your-home" experiment sponsored by FHA has moved slowly in six test cities, but FHA officials are not discouraged with results to date.

The trade-in program is faced with the still booming market for new houses in many areas. This means local builders don't have to look to trade-ins to help sell new units, and, as a result, they have given trade-in experiments a lukewarm reception.

FHA officials say it is still too early to draw any conclusions, and they expect to continue gathering facts on how the program can be useful to the home building industry.

Pilot studies are under way in New Orleans, Shreveport, Oklahoma City, Columbus, Hartford, and Washington, D.C. The National Association of Home Builders is cooperating in the studies.

The trade-in program has two purposes: To help FHA fulfill its job of improving housing standards; and to open up new markets for the builders.

FHA already has announced a liberalized mortgage insurance plan "to make it possible for builders to do a more economic job on trade-in homes."

Under FHA's new ruling a builder taking in an old house as a trade-in may get a prior commitment from FHA to insure 80 percent of the first $7,000 of value, plus 60 percent of the balance of the valuation. The total mortgage may not exceed $10,400.

This mortgage amount is further limited to the amount of the existing mortgage plus the cost of repairs. minus any cash received by the builder in the trade-in transaction.

FHA Commissioner Guy T. O. Holliday said this liberalized mortgage plan should encourage more extensive reconditioning of trade-in houses. It will assist in financing such repairs, as well as in refinancing existing mortgages.

"Analyses of trade-in house deals have shown that it pays to do a thorough reconditioning job on the old dwelling rather than just taking care of the bare necessities," Holliday said. "When the trade-in house is put as nearly as possible in a new house condition the economic value is increased."

Jersey Builders Present Annual Golf Trophy
Over 400 members and associates of the Home Builders Association of Northern New Jersey turned out for its sixth annual outing at the Aldercrest Country Club, Alpine. N. J. Here George Poydis, Jr., of Clifton, N. J., receives the golf trophy from Louis London, outing chairman (left) and Lewis Epstein, president.

Research Program Under Way for Prefabricated Home Industry

The considered long-range program in the field of home prefabrication has been begun with the formation of an Engineering, Design and Research Committee by Prefabricated Home Manufacturers' Institute, Washington, D.C.

The group is headed by Richard B. Pollman, Detroit, the designer of the "Pollman Homes" made by Thyer Manufacturing Corp., Toledo, Ohio. Other committee members include


Dealer's Viewpoint

H. R. NORTHUP, Executive Vice President, National Retail Lumber Dealers Association

NRLDA's Merchandising Calendar
Organized to Stimulate Customer Response

NRLDA has just published its new Merchandising Calendar which is designed to help retail lumber and building materials dealers get better returns from the $40,000,000 or more they spend each year on advertising, and to guide them in coordinating their displays and other sales promotion with their advertising.

Two years ago there was no perceptible interest in the preparation of an advertising and display guide for the retail lumber industry. The demand mushroomed almost overnight, right after it became apparent that material shortages and product controls were a thing of the past, and that every competing industry could be expected to go out after a maximum share of the consumer dollar.

The Calendar is based on the judgment of a Merchandising Committee composed of dealers experienced in successful merchandising, and on suggestions received from at least 100 other dealers in merchandising conferences held by NRLDA earlier this year.

It shows dealers which themes or appeals are most likely to bring the maximum response from the customers during each season and month of the year. Instead of attempting to set up separate calendars for dealers in various geographical sections of the country and for dealers who specialize in different types of trade, the Calendar, in its initial form, suggests alternate weekly themes each month to take care of those recognized variations. It leaves up to the individual dealer, who best knows his own local trade and market conditions, the job of adapting these ideas to his own requirements.

NRLDA and its members hope that manufacturers of building products will see fit to coordinate their consumer advertising and tie in their advertising material with the Calendar. If they do so in sufficient number and volume, the resulting coordination is certain to create additional sales for everyone concerned.

A specific proposal to that end has been discussed with a group of manufacturers, and considerable interest has been expressed. The suggested goal is to have a large number of dealers and a considerable number of materials producers all reach the public with the same appeal at the same time on several occasions during the coming year.
What every builder should know about micarta®

The one big fact you should know about Westinghouse Micarta® is that it helps to sell homes. The wide range of colors, patterns and wood surfaces will give you the versatility you need for satisfying a variety of tastes. This colorful, long-lasting, counter-top and wainscoting plastic will start that sales spark right in the kitchen. And Micarta is pretested for customer acceptance—nationally advertised. Millions of people have been pre-sold through national magazines and television. They're going to be watching for it in your homes.

Micarta is easy to install. Pre-bonded to plywood sheets, can be installed by any carpenter without the use of expensive tools or extra equipment.

You'll be able to tell your prospects about the maintenance-free qualities of Micarta. It never requires waxing, painting or refinishing. A flick of a damp cloth restores its surface to a bright luster.

For further information on Micarta, see your local lumber dealer or contact the nearest United States Plywood representative. Fill out the coupon below for our helpful booklet.

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Please send color guidebook and full application information on Micarta.

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more about the right-left door problem

Sir: I read with interest a letter from Harvey Behnke in the August issue of *American Builder* regarding determining the hand of a door. Try this simple method:

Place your back against the hinge jamb of the door: if the door swings to the right, it is a right hand door, and if it swings to the left, it is a left hand door.

A right hand door may be hung to swing in or it may be hung to swing out, and the same with a left hand door, so in describing it, the door must be one of the following:

- a right hand door swinging out,
- a right hand door swinging in,
- a left hand door swinging out,
- or a left hand door swinging in.

Now put your reverse bevel or whatever you want on the door, but it still remains one of the four types.

Wm. E. Stonebridge.
New York 61, N.Y.

appreciates recognition

Sir: In reading your excellent August issue, we were delighted to see your editor’s reference to “Architectural Graphic Standards” (page 28) in regard to “hand of locks.” Thank you very much for expressing your confidence in us.

Harold R. Sleeper, F.A.I.A.
New York, N.Y.

“truth about trade-ins” draws favorable comments

Sir: The writer read with much interest the article on home trade-in plans.

It was a very timely article and fitted in well since the local FHA office has been selected as one of four cities in the United States to investigate fully this phase of housing. They were selected on account of their exceptionally good record, based upon all FHA divisional offices of the country. We builders, and the city of Shreveport, are very proud of their record.

One meeting has been held with builders, financiers and realtors, sponsored by the local FHA office.

Sir: I have read the article entitled *The Truth About Trade-Ins* in your July issue. This article was of considerable interest to me as the Federal Housing Administration is now experimenting with similar methods in four offices throughout the county.

If possible, this Administration would be grateful should you be in a position to furnish this office with a supply of this issue of your magazine. We feel that it will be of great benefit in our experiment.

Harry F. Allen, Director, FHA
Shreveport, La.

One hundred copies of July issue were sent to Shreveport for distribution to local builders and interested members of the FHA office.

—The Editor

story creates interest in two-room school

Sir: The write-up which appeared in the July *American Builder* about the two-room school we designed is creating a lot of interest. We appreciate very much your interest and cooperation.

Would it be possible to obtain a half dozen or so copies to distribute among interested parties?

Charles F. Wiley, Architect
Wiley and Alexander Asso.,
Elkhart, Ind.

(Continued on page 30)
They provide more closet space in San Francisco, Cal.

"We like Glide-All Sliding Doors for several reasons," says Oliver M. Rousseau, Pres., of Oliver Rousseau Construction Co., San Francisco. "They're simple and economical to install and they provide more accessible closet space." You'll like them for the same good reasons. Choose from overhead or bottom roller types in 8-ft. floor-to-ceiling or 6-ft. 8-in. standard heights.

GLIDE-ALL Sliding Doors

They divide a room in Knoxville, Tenn.

"Glide-All Sliding Doors are not only highly practical," says M. L. Bartling, Jr., of Fonde-Bartling Builders, Knoxville, "they're beautiful as well. It was for both these reasons that we installed them as room dividers in Knoxville's Living House." You, too, will like the eye and buy appeal of these durable, trouble-free doors. They're available in modern flush or recessed panels, which may be painted, papered or waxed in natural finish.

Write today for new low price schedule and specification bulletin.

Glide-All Sliding Doors are a product of

WOODALL INDUSTRIES INC.
DETOUR 34, MICHIGAN

Wherever they're used . . . they're easiest to install

A Top track is easily mounted on ceiling with screws.

B Aluminum bottom channel is simply screwed to floor.

C Doors are mounted by engaging top rollers in top track—then engaging bottom guide in floor channel.

4 Woodall Plants Coast-to-Coast
Save You Shipping Time and Costs!

Write to Plant nearest you
CHICAGO, 1310 Oakton St., Skokie, III. • LAUREL, Miss., P. O. Box 673 • NEW YORK, Glen Cove Rd., Mineola, N. Y. • SAN FRANCISCO, 1970 Carroll Ave.

letters ...

(Continued from page 29)

paint series still in demand

Sir: An employee of our organization has brought to my attention your Volume 73, No. 9, September 1952, issue.

I have been impressed by the comprehensive manner in which you deal with the subject matter of various articles. One in particular, The World of Color, is of special interest, and I would like to ask your permission to use the tinting guide on pages 124-125 in that article. It is our intention, with your permission, to print a reproduction of this guide. We would, of course, give full credit to your publication.

If possible, I would like to obtain back copies of all issues containing chapters related to the article.

Charles W. Blacketer
Technical Director
KWAL Paint Laboratories, Inc.
Denver, Colo.

new products and catalogs keep reader posted

Sir: Thank you for your great sections New Products and Catalogs. What a blessing they are to keep up on the latest equipment.

Could you please inform me as to whether you will notify me when my subscription is about to expire, so I may renew it in time. I wouldn't want to be without my copy of the American Builder for one minute.

John G. Saeve
Carpenter-Contractor
Buffalo 12, N.Y.

liked July issue

Sir: I wouldn't have missed this issue (July, 1953) for anything, not only because of the wonderful treatment you gave the article on the Millar home (This House Has Been Soundproofed), but because of the other articles and information of such great current interest. I liked particularly the article on taking old homes in trade—extremely valuable information for the contractor: Are Bedrooms Necessary? and Back to the Two-Room School House. With the pace you are set
Dollars and Cents Wise...

American Kitchens

5 WAYS BETTER THAN OTHER STEEL KITCHENS

10 WAYS BETTER THAN WOOD

Sell your homes faster with American Kitchens!

COMPARE
AMERICAN KITCHENS WITH OTHER STEEL KITCHENS!

1. cost no more, yet are of higher grade steel, finest construction
2. beautiful design; well-known name indicates to buyers
3. easiest kitchen to clean—rounded corners, smooth surfaces with no dirt-catching handles
4. exclusive features that sell homes faster include the 15° larger sink bowl with no dirt-catching ledge, rounded drawers that clean as easily as a bowl
5. exclusive Roto-Tray dishwasher—the one really work-free dishwasher that women want most.

COMPARE
AMERICAN KITCHENS WITH WOOD KITCHEN CABINETS!

1. less costly than quality wooden cabinets
2. require less installation time, less planning time
3. no finishing, no painting, no staining required
4. no call-backs or complaints because of warping or swelling
5. no complaints because of faulty catches or doors that stay half open or sag
6. perfect uniformity of sizes means perfect fitting
7. odor-proof, vermin-proof
8. can't rot, can't absorb moisture
9. fireproof, stain-resistant
10. drawers and cabinets far easier to clean with no seams and cracks found in wooden cabinets.

American Kitchens Division
AVCO Manufacturing Corp.
Connersville, Ind., Dept. AB-10

Please send me complete information about American Kitchens and your new Architect's and Builders' File.

Name
Address
City Zone State

OCTOBER 1953
A **BEAUTIFUL SOLID BRASS KNOCKER**

... **BUT INSTEAD OF KNOCKING**

It Chimes

**SUBURBAN MODEL**
No. 840

**Completely Non-Electrical... No Wiring**

A pull on this smart-looking forged brass knocker sounds two rich, resonant chime notes throughout the home or apartment. Installed in a jiffy by simply drilling a single hole and fastening to door (knocker outside, chime inside). Adjustable to any door thickness. Always operates and requires no maintenance. The knocker is finished polished brass ... the chime (only 6½” x 3” x 2") ivory enamel.

Auth Door Chimes are the only original Non-Electric Door Chimes. In use in more than a million homes and apartments. A real buy from two viewpoints . . . they cost so little and they install so quickly and easily. Send for booklet and complete details. Write the Auth Electric Company, Inc., 34-20 45th Street, Long Island City 1, New York.

**Other Auth Non-Electric Door Chimes**

**NATIONAL MODEL No. 850**

Utilizes a mechanical push button instead of knocker to sound two musical notes on a similar non-electrical chime. Push button escutcheon plate is forged solid brass, with polished finish. Fits all doors or door frames up to 9” thick. The most inexpensive of Auth Non-Electric Door Chimes but extremely efficient with smooth-action push button and decorative escutcheon.

**METROPOLITAN MODEL No. 890**

Similar to the National Model in its operation by a mechanical push button, but with an additional “peephole” feature. An adjustable window in the chime permits the resident to observe a caller through a one-way mirror without, in turn, being observed. Space for name and apartment number on front plate. A beautiful new design, just released, and ideal for apartments.

**letters . . .**

(Continued from page 30)

Sir: It is time we told you how pleased we are with our advertising experience this year in American Builder. The result has been gratifying, and we have done business with a high percentage of inquirers through the Merchandiser as well as with individuals writing to us direct.

We enjoy reading your magazine and we plan further insertions for the late summer and fall.

Thank you for the cooperation you give your advertisers.

(Mrs.) Margery C. Moses,
Sterling Paint & Varnish Co.,
Malden 45, Mass.

Sir: I received your renewal order slip . . . but since I have arrived at the age of 76 years, and Father Time says it is a must for me to take the rocking chair for an evening’s rest, I reluctantly pass the sad news to you, and ask you not to renew my subscription to the finest building magazine in the world.

Nothing has aided me as much as the American Builder in keeping abreast of building progress, new materials and their uses, better methods of construction, new designs and building engineering. . . . I have nothing but praise for a truly great magazine, and shall be very glad to recommend it to all those who are engaged in or interested in the building business.

C. H. Knox,
Overton, Texas

**National Home Week**

booklet favorably received

Sir: I have taken a quick glance through your booklet “How to Plan a Successful National Home Week” and it looks to me like an excellent guide for this important program.

Irvin H. Yackness, Ex-Sec’y,
Builders Assn. of Detroit,
Detroit, Mich.

**American Builder**
NEW DUSTLESS FINISHING SANDER

You know what sanding drywall joints is like. You raise a cloud of fine, talc-like dust that settles on everything. It gets in your eyes — your nose — your throat. Unless you wear a mask, all you can smell and taste hours after is powdered plaster.

Now this new Model 127 Finishing Sander gets the dust before it gets you. Like a miniature vacuum cleaner, it sucks up the dust — traps it in a sealed bag. Keeps the room clean — the air clear. No more masks — no more wheezing and sneezing for you!

Clears the air...and the work...of aggravating dust!

Porter-Cable DUSTLESS FINISHING SANDER
Model 127
$59.50

Large-size bag optional.
Costs only $2.

See your Porter-Cable dealer for details and free demonstration. Or mail coupon today.

PORTER-CABLE Machine Co.
1010 N. Salina St., Syracuse 8, N.Y.

IN CANADA send to:
Stronridge, Ltd., London, Ont.

Please send me complete information on the new Porter-Cable Dustless 127 Finishing Sander...also name of nearest dealer. I am particularly interested in finish-sanding...

☐ Drywall seams and plaster patches
☐ Wood paneling and inlay surfaces
☐ Cabinets and built-ins
☐ Other

Name
Address
City
County
State

OCTOBER 1953
designed for slope, this plan adapts to a level lot

BUILDER: 
E. Harold Johnson, 
Minneapolis, Minnesota

DESIGNER: 
F. G. Theis, 
Minneapolis, Minnesota

SALES PRICE: $24,000

Good light is available from two large windows in kitchen for the major work area, breakfast nook.
The use of stone facing enriches the exterior lines of the house

This plan is primarily for the site on which it is placed, a level plot across the front sloping down to a lower level at the rear. However, the plan can be changed quickly to accommodate it to a level lot by raising the porch from the basement to the first floor level. To provide access to the porch the dinette window can be changed to a French door.

The site played an important part in the orientation of the rooms. A small lake located at the rear of the property proved to be a focal point of interest. Therefore, the porch and the main rooms of the house were located to take advantage of the view. Service units face toward the street front.

The slope at the rear permits the entire basement wall on that side to be exposed. The wall is equipped with full size windows, allowing ample light for the large basement, which is devoted to recreation. Adjoining this area at the basement

OCTOBER 1953

Area over basement stairs allows space for recessed china cabinet with glass sliding doors in dining room wall
level is a large porch glazed with jalousies. Access to the porch and lower level is provided by a stair which leads directly to the side entrance of the first floor. Exterior of the house is faced with stone and 10-inch wood siding. Ornamental shutters flank the windows on the front wall. Exposed masonry basement walls are finished with stucco.

A feature of the street front is the 5-foot, 6-inch roof overhang in the recessed area between bathroom and garage. Entrance doors are placed at each end of this recess with a stone planter between. Flush recessed lights are placed in the soffit directly over the doors.

Portions of two walls in the living room contain fixed picture windows with ventilating units at each end. An inside wall of this room contains a large fireplace faced with Roman brick with a continuous wood architrave member on top and sides.

---

**BRAND NAME PRODUCTS USED**

- Armstrong Linoleum
- Carey bathroom cabinet
- Crane hot water heater
- Fiberglas insulation
- G-E Disposall
- Janitrol furnace
- Kentile asphalt tile
- Lightolier lighting fixtures
- McKee garage door
- Mosaic clay tile
- Moore's paint
- Nutone exhaust fan
- Kwikset hardware
- Rezo doors
- Standard plumbing fixtures
- Thermopane windows
- USG lath

---

For complete one-quarter-inch working plans of this house, write American Builder Home Plan Service, 79 West Monroe Street, Chicago 3, Illinois.

Roman brick laid up in a stack pattern and the narrow wood architrave emphasize the horizontal lines of the fireplace

---

See Gatefold Blueprint for complete working drawings —quantity list of materials

---

Rear elevation of the house is a full two stories
BASEMENT PLAN
SCALE: 1/4" = 1'-0"

TYPICAL EAVE SECTION
SCALE: 1/4" = 1'-0"

SECTION A-A
SCALE: 1/4" = 1'-0"

DETAIL OF LIVING ROOM CORNER WINDOW CASING

TURN AND UNFOLD FOR ELEVATIONS, DETAILS & QUANTITY LIST OF MATERIALS.
Quantity List of Materials
For American Builder Blueprint House No. AB 195
F. G. Theis, Architect

General Information
House — Type: combination
Area: 1,385 sq. ft.
Cone: 25,622 cu. ft.
Garage — Area: 288 sq. ft.
Cone: 3,456 cu. ft.
Porch — Area: 184 sq. ft.

Excavating
Trench for foundation: 500 lin. ft.
Chimney and column footings: 50 sq. ft.
Excavation for basement: 65 yds.

Cement Work
Foundations: 1,608 cu. ft.
Concrete work: 1,550 cu. ft.
Thickness: 4 in.
Anchor bolts: none shown, but if wood plate is used.

Waterproofing
Concrete driveway apron: 500 sq. ft.
Concrete: 36 sq. ft.

Masonry
Type: stone, stucco and frame
Walls — Stone veneer: 200 sq. ft.
Window sills: 1 - 12"
1 - 15'
Planters rail — special: 20" wide x 20 lin. ft.
Chimney: 8" x 12" - 72' 0"

Fireplace: Roman brick
Throts and dampers: 2
Lintels: sets - 2
Miscellaneous — Stucco: 490 sq. ft.
Stone steps: sets - 2
Risers — each averaging 6" long (per set) — 2
Fireplace hearth: 1
Tile floor in vestibule and living room fireplace: 30 sq. ft.

Iron Work
Structural: 1,100 lbs.
Lally columns: pipes — 3 - 3" diameter

Millwork
Windows — Type: D. H., casement and fixed
Material: wood
Windows — Glazed including trim: 2 - 4 lin. — 28" x 24" 3 - 6 lin. — 32" x 16" 1 - 2 lin. — 40" x 24" 2 - 2 lin. — 36" x 24" 1 - 2 lin. — 32" x 24" 2 - 4 lin. — 32" x 24" 2 - 2 lin. — 24" x 16" 1 - 1 lin. — 28" x 16" 1 - 2 lin. — 14" x 14" 2 - 2 sq. — 10' 0" 60 - 2" x 4" - 120" 24 - 2" x 6" - 120" 2 - 2" x 8" - 120" 2 - 2" x 6" - 60" 2 - 2" x 8" - 60" 2 - 2" x 6" - 10' 0" 2 - 2" x 8" - 10' 0" 2 - 2" x 6" - 14' 0"

Exterior doors — Material: wood
Exterior doors — Glazed entry: 1 - 3' 0" x 6' 8" 1 - 2' 6" x 6' 8" 2 - 2' 6" x 6' 8" 2 - 2' 6" x 8' 0" 2 - 2' 6" x 6' 8" 2 - 2' 6" x 6' 8" 1 - 2' 6" x 8' 0" 1 - 2' 6" x 8' 0"

Regular sliding doors: 2 - 2' 6" x 6' 8"
Special interior doors — Slides-in-wall-door: 1 - 2' 6" x 6' 8"

Carpentry
Foundation plates: none shown but 200 lin. ft. required
Joists: 61 - 2" x 10" x 16' 0" 16 - 2" x 10" x 12' 0"
Bridging: 1 x 4" - 500 lin. ft.
Studs: 450 - 2" x 4" x 8' 0" Ceiling joists: 50 - 2" x 6" x 10' 0" 43 - 2" x 6" x 12' 0" Roof rafters: 160 - 2" x 4" x 16' 0" Hip and valley: 1 - 6" x 6' 120" Framing linte: 2 - 2" x 6" x 8' 0" 4 - 2" x 6" x 10' 0" 2 - 2" x 6" x 12' 0" 2 - 2" x 6" x 10' 0" 2 - 2" x 6" x 12' 0" 2 - 2" x 6" x 14' 0"

Subflooring: 1,385 sq. ft.
Roof sheathing: 2,400 sq. ft.
Side wall sheathing — surface measure: 1,050 sq. ft.
Side wall materials — 1" x 10" beveled siding: 1,050 sq. ft.
Furring: at chimney only
Carpenter stairs: set of 12 risers — 1
Newel posts: 2 - 2" x 4" x 3' 0"
Top rail — 2" x 4": 10 lin. ft.
Intermediate rail — 1" x 4": 15 lin. ft.
Flooring — Hardwood: 850 sq. ft.
Softwood: 170 sq. ft.
Exterior material — Soffits — 1/2 exterior grade plywood: 840 sq. ft.
Eaves: 840 sq. ft.
Porch: 200 sq. ft.
Insulation: none shown
Casing requires — 4" thick batts: 2 sq. ft.
Walls require — 2" thick blanket: 1,000 sq. ft.

Sheet Metal
Gutters: 200 lin. ft.
Downspouts: 50 lin. ft.
Flashing: at chimney and metal deck
Miscellaneous — Roof vent: 1
Metal deck over porch: approximately 200 sq. ft.
Steel area walls: 2

Roofing
Type: asphalt shingles: 24 squares
Type: mineral surfaced roofing: 84 sq. ft.

Interior Walls
Wall area to be covered: 4,300 sq. ft.
Ceiling area to be covered: 1,400 sq. ft.

This quantity list will be subject to variation depending on the common practice 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.
a low-cost house for '54

Advertised as "a year ahead," this two-bedroom design on a slab foundation is being sold in a Seattle tract for $8,500 on lots 75 by 120 feet. The builders are Al La Pierre and Jack Peterson.

Surprisingly, the house has only one entrance. This idea evolved out of discussions between the builders and FHA. Its advantages: space is saved in the living room and a third wall is left free for furniture placement. Also, it saves the cost of framing an opening and installing a door. As for the customary argument that every house needs two exits in case of fire, it has been recognized in this case that, for emergency exit, the windows of a ranch-type house can be almost as good as doors. Seattle buyers have not shown any marked resistance to this innovation.

Bedrooms have wardrobe walls. Those in the master bedroom include built-in features, and this room also provides a built-in dressing table.

The builders have thought through the idea of expandability for this house, as shown by the plan reproduced here.

The following warranty is given with each house and has proved to be a strong selling asset: "The builder will repair or replace to the satisfaction of the owner any and all imperfections in house due to faulty material, construction or latent defects which may develop under normal or proper usage during a period of one year from date of purchase."

42
You see it happen every day. At sporting events, in entertainment circles, in any field whatever . . . some names are sheer magic. They’re the names of the leaders, the star performers . . . the names that draw the crowds like a powerful magnet.

*And that’s the way it is with products, too!* 

Over the years, the name RO-WAY on overhead type doors has meant advanced design, skilled engineering, fine quality, top performance . . . solid value through and through.

Today’s Ro-Way doors—residential, commercial and industrial—are the finest ever. With such outstanding features as Taper-Tite track and Seal-A-Matic hinges, ball bearing Double-Thick tread rollers, and Power-Metered springs individually matched to the weight of each door . . . smooth, easy up-and-down operation is assured.

With Ro-Way sections rabbeted for weather-tight joints . . . muntins, rails and stiles precision-squared . . . mortise and tenon joints both glued and steel doweled . . . heavy gauge hardware both Parkerized and painted . . . long life is a certainty.

These are the reasons why Ro-Way is America’s most wanted overhead type door. And that’s the magic in the RO-WAY name.

**ROWE MANUFACTURING COMPANY, 732 Holton Street, Galesburg, Ill.**

*THERE’S A Ro-Way FOR EVERY DOORWAY!*
KEYSTONE'S KEYBEAD
GALVANIZED REINFORCING CORNER BEAD

FOR STRONG, ECONOMICAL, "TRUE" PLASTER CORNERS

Yes, Keybead is available. Plasterers have swamped us with orders; say it's one of the most important improvements in corner bead ever made. Machines are running day and night to meet the demand. Now, we're speeding production again.

You'll like the strong, full plaster corners you get with Keybead. You'll like the extra strength and crack resistance that results from the exceptional bond of plaster with the network of galvanized wire. The true-formed steel bead adds still more strength and crack resistance to corners. And, galvanized, it prevents rust.

These are the benefits you can count on when your plasterer says—"How about using Keybead on the next job?" It's your opportunity to get greater value from your plaster dollars.

Keybead is another contribution to stronger plaster by the makers of Keymesh and Keycorner galvanized plaster reinforcing.

KEYSTONE STEEL & WIRE COMPANY
Peoria 7, Illinois
Notice how the plaster flows through Keybead providing a generous bond of plaster to lath. The steel wire mesh is thoroughly embedded producing strong reinforcement.
4 Powerful Reasons Why

CHEVROLET ADVANCE-DESIGN TRUCKS

work harder . . . work longer

. . . work for less!

MORE POWER AT LOWER COST! You can look forward to sizeable savings on gasoline with Chevrolet trucks on the job. In heavy-duty models, the advanced Loadmaster engine with new high-compression ratio of 7.1 to 1 delivers more power than ever—and does it on less fuel! In light- and medium-duty models, Chevrolet's Thriftmaster engine combines top-notch performance, with rock-bottom operating cost.

TAILORED TO YOUR JOB! Of course you want a truck that fits the requirements of your particular job. And you get just that when you buy a Chevrolet truck! You get the right power . . . the right chassis units from tires to transmission. Chevrolet trucks are factory-matched to do your work at lowest cost!

RUGGED AND RELIABLE! These great 1953 Chevrolet AdvanceDesign trucks are built stronger to stay on your job longer! Frames, for example, are sturdier and more rigid. And you'll find extra strength in other vital places, too. The result is a truck that gives you extra miles and months of low-maintenance operation.

LOWEST PRICED LINE! You start saving money the moment you buy a Chevrolet truck. For, in addition to all its other advantages, Chevrolet is America's lowest priced truck line! Why not start saving now? Your Chevrolet Dealer will be happy to give you all the facts.

CHEVROLET ADVANCE-DESIGN TRUCK FEATURES

TWO GREAT VALVE-IN-HEAD ENGINES—the Loadmaster or the Thriftmaster—to give you greater power per gallon, lower cost per load. POWER-JET CARBURETOR—for smooth, quick acceleration response. DIAPHRAGM SPRING CLUTCH—for easy-action engagement. SYNCHRO-MESH TRANSMISSION—for fast, smooth shifting. HYPOID REAR AXLE—for dependability and long life. TORQUE-ACTION BRAKES—on light-duty and medium-duty models and on front of heavy-duty models. TWIN-ACTION REAR BRAKES—on heavy-duty models. DUAL-SHOE PARKING BRAKE—for greater holding ability on heavy-duty models. CAB SEAT—with double deck springs for complete riding comfort. VENTIPANES—for improved cab ventilation. WIDE-BASE WHEELS—for increased tire mileage. BALL-GEAR STEERING—for easier handling. UNIT-DESIGNED BODIES—for greater load protection. ADVANCE-DESIGN STYLING—for increased comfort and modern appearance.

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Believe what you hear...
they are that good!

Ever talk to a carpenter who uses a Porter-Cable Saw? Do it sometime—he'll gladly explain the practical benefits of quality tool design.

He'll tell you, for example, that a Porter-Cable Saw feels natural. That it's easy to guide—doesn't twist in the work—doesn't strain his wrist. He'll tell you, too, that he's had his Porter-Cable a mighty long time and wouldn't part with it at any price, unless he could get another.

When you want a quality saw, see your Porter-Cable dealer. Seven models to choose from. Shown here is Model A6 (2" cut)—only $65.00. For name of nearest dealer consult your phone book...or write to factory.

- Every Porter-Cable Tool is inspected 100%. That means thorough examination of every bearing, motor, switch, casting, etc. Each tool is guaranteed against defects in workmanship and materials.

Porter-Cable
Quality Electric Tools.
Here's how Bryant Boilers add extra sales appeal to new homes

There are four things that you—and home buyers—look for most in a boiler. Note how Bryant Boilers—in measuring up to all of these essentials—become an outstanding home sales feature.

1. **Outstanding features**—Only in Bryant Boilers will you find convenience features like "Magic-Action" Valve, "Safety-Sentinel" Pilot and "Finger-Tip" Igniter.

2. **Space-saving size**—Bryant Boilers are extremely compact, requiring as little as 2½ square feet of floor space.

3. **Proved high quality**—Bryant Boilers have been the standard of comparison in the industry for over 40 years.

4. **"Big name" appeal**—Bryant Boilers own a reputation based on superior performance dating back to the very beginning of the automatic heating industry. It's a name homeowners have confidence in.

Your nearby Bryant distributor will be happy to supply you with complete information on the Bryant line. Call him today, or write: Bryant Heater Division, Affiliated Gas Equipment, Inc., 17825 St. Clair Avenue, Cleveland 10, Ohio.
By All Means, Our New Home Must be a **FIRE-SAFE All-Masonry Home!**

**VIBRAPAC BLOCK for Walls and Foundations**

**. . . . SOFFIT BLOCK for Floors and Ceilings!**

When you build a new home, you naturally want to make it FIRE-SAFE. You never can tell when fire will strike, erasing in a matter of minutes, the dreaming, planning and savings of years. An ALL-MASONRY home . . . with Vibrapac Block for walls and foundations and Soffit Block for floors and ceilings . . . assures maximum fire-safety and performance, without sacrificing charm and architectural beauty.

Vibrapac Block are available in a variety of attractive styles for sturdy, fire-resistant walls. The quality of these block can be controlled and varied in both texture and density as required for sound-proofing, acoustical correction or attractive appearance of wall.

Soffit Block give you fire-safe concrete floors . . . warm and dry . . . rigid floors that won't sag or shrink . . . floors that are especially adapted for radiant heating. Soffit Block ceilings produce a surface of acoustical and insulation value that can be left exposed or painted.

---

Vibrapac Block and Soffit Block are both produced on Besser Super Vibrapac machines. Every block can be made of uniform texture. You can make your selections from a wide variety of block designs and sizes . . . units that will exactly meet your individual requirements. Write on your letterhead for sample pages from new "Block Masonry Homes Plan Book" featuring 116 residential plans . . . also names of Vibrapac-equipped Products Plants in your area.

---

**BOTH Made on a Besser VIBRAPAC**

Besser Manufacturing Company • ALPENA, MICHIGAN, U.S.A.
Mr. Hendy of Cincinnati, Ohio, talked to builders from many states.

He questioned outstanding builders; asked them what was really behind their phenomenal sales of houses.

He came back feeling very certain that the installation of the General Electric Kitchen in his new houses would really help to sell them fast.

He found that women want the General Electric Kitchen in their new homes. He discovered, too, that this trump selling-feature cost the home-buyer only about $3.45 per month extra on monthly mortgage payments.

His judgment was right

He sold 64 houses equipped

Here is Mr. Hendy calling back on one of his new homeowners. Mr. Hendy is convinced—more than ever—that it pays to install General Electric equipment.

"Pleased as punch with my new G-E Dishwasher," says Mrs. T. J. Radley, 1153 Morado St., Cincinnati, Ohio. "The dishes are cleaner than I can wash by hand, and G-E Disposall® is out of this world. No more garbage for us!"

"There's so much room in my new G-E Refrigerator, and with four children, I certainly need it. I'm glad it's a General Electric Refrigerator, too, because it's a brand I know I can depend upon year after year."

"Look at my wall and you can see how clean cooking by electricity really is. This G-E Range is wonderful. Heats up fast, too. And to think that all these G-E appliances are costing us only about $3.45 a month extra on our regular mortgage!"

AMERICAN BUILDER
with G-E Kitchens in 60 days
—before even one single foundation was completed!

Think about this a minute. Mr. William F. Hendy, builder of Arcose Company Houses in Price Hill, Cincinnati, Ohio, took a tip from the pages of other successful builders—and sold his houses in record time.

And, we say YOU can, too . . . when you install the G-E Kitchen-Laundry.

Two reasons why: First of all, women prefer General Electric appliances to any other brand. A 1951 survey shows that 55.7% of the people interviewed believe that G.E. makes the best appliances for the home.

Second: A G-E Kitchen-Laundry can be built right into houses in the $10,000 or $12,000 price range—and the monthly cost to the homeowner may be no more than that for a typical telephone bill, because under modern home-financing the cost of these dependable appliances can usually be included right in the regular mortgage.

Start selling your houses faster, just as many other builders are doing from coast to coast. See your local G-E distributor or write to the Home Bureau, General Electric Company, Louisville 2, Kentucky.
big opportunities in
COMMERCIAL BUILDING

The upsurge in commercial construction, fully expected after credit and material controls were eased last fall, is exceeding government expectations. Despite gradual and continuing relaxation during 1952, the all-out relinquishing of control came with the "open ending" of the Controlled Materials Plan on February 16. This development means that for the first time in two years clients, architects and builders can plan, design and build any type of commercial building of any size using any materials available on the market other than nickel-bearing, stainless steel.

The long pent-up demand is now released like a flood. The $729 million spent on commercial building during the first six months of 1953 was 43 per cent more than for the first half of 1952.

This condition opens the door to a type of building that is supplementing the activities of the project builder, subdivider, or the builder of fewer than ten homes. The changing population pattern has given rise to widespread suburban development, with its typically smaller and lower structures for business and professional use.

A number of useful ideas are contained in this eight-page study which includes a variety of structures typical of thousands either under way or in the planning stage.

an extension in the modern mode adds new life to old structure

BUILDERS:
Clausen Construction Co., Winnetka, Illinois

ARCHITECT:
Ralph Stoezel, Chicago, Illinois

CUBIC CONTENTS: 18,900
COST: $20,000

By taking advantage of the space devoted to a property setback, the new addition to this old established plumbing concern in Winnetka, Illinois, was built in the area between the property line and the front of the existing building.

The new building which has been made a part of the old is a one-story structure containing a large display space, office, boiler room and lavatory, and a storage area which opens into the old shop building.

The street front exterior is a combination of glass and a wide range of colorful Lannon stone, one wall of which extends into the store, making an attractive background for fixture display. The extended wood canopy over the windows forms a unit which ties the design together and also provides shelter from the sun. The planters along front and side at grade add a touch of color to the architectural arrangement.
New addition finished in Lannon stone and glass with face brick return on end walls. Upper facade of old building provides space for a display sign.

First floor plan of new addition

Section through front and rear wall and planter
This effective design is the result of good materials used in a dignified manner

men's store for suburban community

BUILDERS:
Hansen and Werhane, Lake Forest, Illinois

ARCHITECTS:
Stanley D. Anderson and Associates,
Lake Forest, Illinois

CUBIC CONTENTS: 94,635
COST, exclusive of fixtures: $73,000

Added display area is provided by using a deep, recessed entrance
THIS one story and basement store building in Lake Forest, Illinois, provides complete facilities for an exclusive men's furnishing establishment.

The exterior materials of the two street fronts are red face brick, Lannon stone laid up in a random ashlar pattern and Bedford cut stone trim which forms an eyebrow frame enclosing the entrance and store front windows. The other two walls are common brick.

A feature of the store front is the display window at the left of the entrance which occupies a space nominally set apart for a side-street approach. Large, divided fixed sash with an aluminum planter inside at floor line frames the display case and entrance door. Store front members, doors and frame are aluminum.

The building is heated with a forced warm-air furnace located in a suspended area adjoining the lavatory, eight feet above the finished first floor. Two compressors located in the basement provide summer cooling for all areas.

The building is constructed on concrete foundations with 12-inch brick walls above. The first floor and roof area are divided into equal panels supported by steel members and posts. Wood floor joists and roof rafters 16 inches o.c. are spaced between the beams.
Great window combination!

Andersen Pressure Seal with Removable Sash and Handy Storm-Screen Units...

The Andersen Storm-Screen Unit is built to be the best-looking, most practical, easiest-to-use, longest-lasting storm-screen combination there is. It’s built to last a lifetime with reasonable care. Wood parts are treated with toxic and water repellent preservative. Screen wire is non-rusting aluminum. Once installed they’re meant to stay on all year ‘round.

The rugged Storm-Screen is a part of the Andersen Pressure Seal Unit. Each has its own brand of customer appeal that helps sell its partner. Andersen Pressure Seal Windows with the Storm-Screen Unit form the double hung window combination that’s complete in every detail—complete in the details to please every home builder, every homeowner.

Check the Storm-Screen features listed here...  Then you’ll know why the combination of Pressure Seal Windows with the Storm-Screen Unit makes the greatest double hung window package ever!

Full length screen; 2 storm panels. Easy to change in a few seconds. Cuts down storage problems. Provides full screen in summer. Up to 25%, more insulation in winter. No complicated installation. Quality fine-mesh aluminum screen cloth.
Row of Andersen Pressure Seals in a bedroom... instant sash removability plus weathertightness.

Sash removability makes Pressure-Seal easy to install... easy to operate...

Because sash of Andersen Pressure Seal Windows lift out instantly and easily, they are favorites with builders and homeowners. The removable sash make it a breeze to clean windows and to change the lightweight storm panels on the Storm-Screen combination from inside the house. Only Andersen has the wedge-like device that gives instant and effortless removability to Pressure Seal sash and at the same time assures a highly weather-tight double hung window.

There's a saving in installation time and costs, too. You can paint the sash out of the opening... wait to put it in till paint is dry. Eliminate paint bind for a quicker installation job with less clean-up.

LIFT SASH RIGHT OUT
Strongman tactics are out when you remove Pressure Seal sash. Sash slip out instantly, smoothly with no tools, no struggling. Simply open sash fully. Keep thumb levers depressed. Move sash to left and lift out. Anyone can do it in seconds!

For specification data see your millwork dealer, Sweet's Light Construction File or write Andersen Corporation.

Andersen Corporation
BAYPORT - MINNESOTA
WINDOW SPECIALISTS FOR 50 YEARS
The existing half timber work and brick above the store front were left undisturbed except for painting in the remodeling of corner store.

the new was successfully blended
with the old in this remodeling job

**BUILDER:**
Eugene Goodman, Highland Park, Illinois

**ARCHITECT:**
Milton Schwartz, Chicago, Illinois

**COST**, including fixtures and air conditioning: $50,000

A NUMBER of important factors had to be considered in remodeling one half of this large store building in Glencoe, Illinois, to provide adequate medical facilities for a clinic consisting of five doctors.

First, the design of the original building was suburban in character, in sound condition, and an asset to the community. Therefore, it was decided to retain its general outline.

Second, the intent of the clinic was to limit the remodeling to the store front in order to reduce costs.

Third, the application of a new surface material to the remodeled front would mean an encroachment over the property line.

The photographs show solution to each problem.

The area of wall and roof above the store front in the remodeled section is painted a soft gray, neutralizing the effect of the painted brick and half timber work. The white painted wood surface, together with the strip windows, is a portion of the new work which starts at the top of the old store front but is kept flat with the wall to blend easily with the surface above. The one-inch Bluestone facing below windows is applied to one inch of cement grout. Village authorities granted permission to extend the facing not more than two inches beyond the property line.

Space now devoted to this clinic was formerly occupied by a large chain grocery store. The first floor is divided into a series of offices, examination, injection and treatment rooms and a laboratory. All of these areas are positioned around a centrally located reception room. The basement contains all mechanical equipment including a complete air conditioning plant. Space is also provided for a lounge and large storage area.

Commercial Building continues on page 62
This new 18-piece line of fast-selling forged iron cabinet hardware for use on both natural wood and painted surfaces. Offered in Dead Black, Old Copper and Swedish Iron finishes. Natural 11 x 16" display board is FREE. Order No. 70 display and hardware stock from your wholesaler.

DISTINCTIVE HARDWARE . . . ALL FROM 1 SOURCE
NATIONAL LOCK COMPANY
ROCKFORD, ILLINOIS • MERCHANT SALES DIVISION
LOOK JOE!...FREE TRIAL
GUARANTEES Your...Clipper
MASONRY SAW
WILL PAY FOR ITSELF!

CUT Any MASONRY MATERIAL
Easier - Faster
WITH A NEW CLIPPER MASONRY SAW

HERE'S WHY! The DUSTLESS Clipper operates right beside your bricklayers because the Clipper is PORTABLE easily moved from basement to roof. One Clipper Model HD with a Clipper Diamond Blade will do the cutting of 3 ordinary abrasive saws! This is possible ONLY with such Potented Clipper features as the Pressure Equalizer Spring, the Famous Select-A-Notch, Water Application System, and Adjust-A-Cut which makes possible One-Spot Operation.

INCREASE YOUR PROFITS... Saw Concrete Before Breaking for Patches and Trenches

Save up to 50% in labor and material. Saw repair patches—gas, water, sewer and air line trenches in floors, streets, walks, runways and highways. Save, too, by sawing contraction joints—eliminate costly hand forming and spalling.

5 MODELS, GAS OR ELECTRIC POWERED

CLIPPER "CONSAWS"

SAME DAY SERVICE FROM YOUR NEAREST FACTORY BRANCH—

KANSAS CITY 8, MISSOURI

COAST TO COAST

MODEL C-130

CLIPPER MANUFACTURING CO.
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Send FREE Literature and Prices on:

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• DRY
• CLIPPER DIAMOND BLADES

COMPANY:

ADDRESS:

IN CANADA—P.O. BOX 476, WINDSOR, ONTARIO

SOLD ONLY DIRECT FROM FACTORY BRANCHES

OCTOBER 1953

61
this is a new idea

The front of the two old buildings in process of demolition

This new front reveals an application of standard materials used in a new way to produce a new and fresh design

BUILDER:
Henry De Koning Construction Co., Ann Arbor, Michigan

ARCHITECT:
Douglas D. Loree, Ann Arbor, Michigan

COST, including removal of old store fronts: $8,500

SECTION THRU STORE FRONT

PLAN

AMERICAN BUILDER
in store front design

This new store front is the result of combining two outmoded buildings in the business section of Ann Arbor, Michigan, into one store with a unified design.

The old fronts were demolished for a short distance back from sidewalk line, leaving rear of the building intact. Framing for the front, including end piers, bulkheads and masonry wall above, is new.

On the face of the masonry wall above the show windows are secured 15 metal panels which are built of two-inch angle frames bolted to metal straps. These straps are embedded in brick inserts in the concrete masonry wall. The bolted frames are removable for repair, cleaning and repainting.

The panels are formed of 16-gauge expanded metal wire stretched tightly and welded to the angle frames. Metal display signs or individual letters can be quickly and easily secured to the wire.

In the new design, the intermediate supports on the front were removed and a new steel lintel was installed for support of the masonry wall above. This lintel rests on end piers leaving the entire show window area clear of columns. The masonry wall above is surfaced with a half inch of cement plaster.

A 4-foot, 4½-inch setback of the bulkhead and store windows provides ample space for window shopping. Soffit of overhang is surfaced with cement plaster.

this office has a residential look

Located on the outskirts of the business area of Northbrook, Illinois, and adjacent to a main highway, this small real estate office simulates the appearance of a private home.

The large reception room entered from a covered porch, has a residential appearance. A wood-burning fireplace is located in the center of one side wall. This wall is finished in random pine boards laid vertically. On the other two exterior walls the common brick is left exposed. The ceiling is exposed 4x10 framing members and 1x6 V-jointed t&g boards.

The building is of masonry construction with wood framing for floor, ceiling and interior walls. Crawl space is provided under floor joists for the distribution of warm-air heating pipes.

Builder and architect: Jones and Duncan, Highland Park, Ill.

Cubic contents: 9,636
Cost: $10,000

Wood, brick and concrete add up to a neat and compact exterior

FLOOR PLAN
Now there are two kinds of Sea Swirl—select and knotty. The demand for this decorative fir plywood grows and grows. With the addition of Knotty Sea Swirl, we hope to increase production to the point where everyone will be happy.

Knotty Sea Swirl comes in interior and exterior types, in 4'x8' panels, 5/16" thickness. Other sizes on special order.

Contact the closest Associated warehouse for Sea Swirl and for all of your plywood needs. We welcome your inquiries.

**ASSOCIATED PLYWOOD MILLS, Inc.**
...means EASY TO-SELL HOMES at LESS COST TO THE BUILDER!

- When you install Kaustine oil-fired, fully automatic heating in your homes you make your selling job easier and your profit margin greater.
- Kaustine engineering enables you to give your buyer an efficient top quality heating plant at the very lowest cost to you.
- These dependable furnaces are not only designed for economical operation but for simple, convenient installation...another Kaustine cost saving feature.
- The Kaustine line offers forced air heating units delivering from 65,000 to 250,000 B.T.U.'s in models for every type of installation in any style or size of home.

FOR FULL INFORMATION WRITE DEPT. AB-10

Kaustine FOR SAVINGS

There is a Kaustine Furnace or Winter Air Conditioner for every type of home.
Celotex National Advertising Puts the Spotlight on You

To help make this a banner year for you, Celotex is staging a power-packed national advertising campaign. Big, colorful, hard-selling ads—month after month—in THE SATURDAY EVENING POST, BETTER HOMES & GARDENS, AMERICAN HOME, SMALL HOMES GUIDE.

These impressive Celotex ads are designed to build business for you. Tie in with them by emphasizing to every prospect that your homes are built with genuine Celotex Products. This makes your selling job easier. Because, over a third of a century of national advertising leadership has created nationwide preference for the brand name Celotex!

Impartial survey shows
ARCHITECTS PREFER
CELOTEX
INSULATING SHEATHING
2 to 1
over the next leading brand
costly after-rain delays
by using Double-Waterproofed
CELOTEX INSULATING SHEATHING

"We have been using Celotex Double-Waterproofed Insulating Sheathing for 12 years. We have found it sheds water like a duck. Its asphalt coating and integral treatment provide such complete protection that we can resume work many hours sooner after rain. In addition, we have been storing it outdoors, exposed to the elements, with no ill effects."

James J. Culotta, General Contractor
New Orleans, Louisiana

Mr. Culotta’s letter is typical of reports from builders in every section of the nation. Celotex Double-Waterproofed Insulating Sheathing provides many practical job advantages that save time, labor, materials... helps you build stronger, more comfortable, more salable homes at lower cost! Applied, Celotex Insulating Sheathing costs no more—usually LESS—than ordinary sheathing. Yet it gives you all these big extra benefits...

1. **Insulates and Weatherproofs** as it builds. All at one cost. No building paper needed.
2. **Laminated for Extra Strength** and rigidity. All Celotex Insulating Sheathing is made of 2 plies, permanently bonded.
3. **No Corner Bracing Needed** to meet F.H.A. requirements, with 4 ft. wide, 2" thick Celotex Insulating Sheathing. Has approximately 30% greater bracing strength than ordinary sheathing.
4. **Goes Up 30% Faster.** Easier to cut and fit. Up to 15% less waste.
5. **Excellent Shingle Base.** Shingles can be applied direct, or over Celotex Impregnated Backer Board with special nails.
6. **Double-Waterproofed.** Inside, by integral treatment that coats every fibre; outside, by asphalt coating. Lets you resume work quicker after rain. High vapor permeability, too!
7. **It is the Only Sheathing** made of tough, strong, long Louisiana cane fibres—and protected by the patented Ferox process from dry rot and termites.

Mail coupon for factual FREE new booklet, "40 Questions and Answers about Insulation Board Sheathing."

Build Better... Build with Genuine

CELOTEX INSULATING SHEATHING

Mail Today!

THE CELOTEX CORPORATION, Dept. AB-103
120 S. LaSalle St., Chicago 3, Ill.
Please send me free the new Celotex booklet, "40 Questions and Answers about Insulation Board Sheathing.

Name
Address
City Zone State
Split-level design is definitely on the march.

In many areas along the east coast and in suburban sections of some of the larger midwestern cities, it has been appearing steadily in increasing numbers. In the New York City area, however, its rise in popularity has been so spectacular that since spring, few builders have dared to open a new development of any size without having a split-level model ready for public inspection. Even small plots scattered throughout heavily built-up sections in the close-in suburbs are being sold at high prices for improvement with attractive multi-level, four-level, tri-level or duo-level dwelling units.

In one of its biggest real estate sections of the year, the New York Times recently published 48 display advertisements of new developments in Long Island and Westchester County, New York, and in New Jersey. Thirty-three, or 70 per cent, featured the split-level home. Six others indicated such units were available.

Klein and Teicholz, one of the largest operators on Long Island, disclosed recently that of the first 196 signed contracts in their current Lakeville Estates operation at East Meadow, New York, 89 families, or 45 per cent, bought split-levels despite the fact that three ranch-type models and a two-story unit were also offered at lower prices. Even more significant, nearly all the buyers wanted to pay $575 more for a finished recreation room, which brought the total unit price up to $13,065.

Perhaps the most startling disclosure of split-level popularity came the last Sunday in July. Morris Sosnow and Leonard Schwartz, builders of the several Birchwood communities in Long Island, announced the opening of their 150-dwelling development in New Hyde Park, New York, a suburb just outside the city limits, where land remaining for
residential expansion is very scarce.

Four models were offered: a five-
room Cape Cod with double-dormer
expansion attic for $17,790; a six-
room ranch home with three bed-
rooms and a center hall plan for
$17,990; and two seven-room 21/2-
bath split-levels, each having a basic
price of $21,500. The latter included
two-car garages and up to 1,692
square feet of living area.

One week later, Sosnow and
Schwartz reported they had sold 73
homes on opening, representing a
value of $1,500,000. All but one
buyer wanted one of the two split-
levels displayed. Practically all the
remaining homes were reported sold
the next weekend. Farther out on
Long Island, these builders last May
had opened a larger Birchwood
Park project at Syosset. Models of
the same type as at New Hyde Park
were displayed, but they were scaled
down slightly in size and in price. A
breakdown of the first 200 sales
contracts indicated a three-to-one
preference for split-levels.

Developers featuring the split-
level often refer to it as a stagger
plan combining two-story privacy
with the convenience of a ranch
house. They point out that it has the
same over-all dimensions as a three-
bedroom ranch house but, in raising
a portion of the dwelling one-half
story, considerable extra space is
gained from former basement area
at less than a proportionate increase
in cost.

Many builders do not like the
split-level, but are building it any-
way, because of popular demand.
They say it affords twice as much
opportunity to fall down and break
a leg, yet admit that shorter stair
lengths minimize the chances of
serious injury. They argue that it
presents an awkward appearance,
particularly when built in a row of
similar homes on level ground. Such
ground has to be reformed in two
levels for the front of each plot:
one to meet the front steps, the other
to align with the garage floor.

Like split-level design or not, the
fact remains that today it is king in
the New York area. Its potential
reception in other markets should
provokesome interesting studies.

Some conventional split-level de-
signs, as well as some variations,
are presented here.

finished playroom behind double garage

A large finished recreation room behind a double
garage is offered with this seven-room model at Birch-
wood, a 150-unit development just over the New York
City line in New Hyde Park, Long Island. Selling at a
price of $21,500 and encompassing 1,692 square feet
of living area, this plaster wall design and another
similar four-level type virtually sold out the entire
project in two weeks.
larger rooms spur sales

double garage, large sundeck in luxury model
OPENING week end brought out 2,000 persons to see this hipped-roof, seven-room model in Glen Crest Manor, Glen Rock, New Jersey, and 16 decided to buy. Builder Fred Brunetti attributes the interest in his latest 60-home development to larger room sizes, particularly those of bedrooms, at a basic $17,990 price in the busy Bergen County area of northern New Jersey. For $600 additional, he will finish the large space adjoining the garage as a recreation room with knotty pine walls and asphalt tile floor.

Each bedroom has a wardrobe closet approximately six feet wide and the master bedroom has a separate lavatory. The oversize bathroom has a square neo-angle tub, 5-foot vanity, 4x4 mirror, built-in hamper and utility cabinets.

A large brick flower box provides a decorative touch at the side of the entrance porch. Heat is gas-fired forced warm air.

THE PEPPERIDGE, whose builders prefer to call it a "multi-level" house, is the luxury model of the 180-unit Newfield Corners project in northern Stamford, Connecticut, selling for $23,990.

Offered with a minimum half-acre plot, this house has a two-car garage cut only part way into a side elevation, thus providing a large sundeck overhead with direct access from the master bedroom. Wider than average, the living room features a fireplace and a bay window.

The grade level contains a recreation room 12 feet 8 inches by 16 feet 2 inches, a hobby room or workshop 6 feet 8 inches by 10 feet, a laundry area and a lavatory. The forced warm-air heating plant is designed for future addition of air conditioning.

For $22,750 a one-car garage type, named the Peppermill, provides the same size land, the same room arrangement but eliminates sundeck.

Split levels continue on page 74.
Give your customers the finest automatic heating comfort with Thrush controlled hot water heat. Invisible radiant coils in floor or ceiling, or radiant baseboards or convectors that are out of the way, provide continuous radiant warmth without noticeable temperature fluctuations. Forced circulating Thrush Radiant Hot Water Heat is the most efficient, economical, convenient and completely automatic heating system made. It's just what today's alert home-planner wants. Get acquainted with Thrush equipment now.

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H.A. Thrush & Company
Peru, Indiana
The CONTINENTAL STYLIST

the Original All-Weather Decorator Door

Wabash introduces an exciting new combination weather door—The Continental Stylist—a true decorator door of three equal panel design. Styled to blend with any type of architecture—traditional, contemporary or modern—it is a combination door that gives both new utility and new personality to the home.

To add to the beauty already present in its well-balanced proportions and soft shadow lines, the Stylist lends itself to a wide variety of challenging color combinations. Here is an all-weather door that all home-owners will welcome—a door that will give that "New Look" to any home, old or new.

Outstanding durability is built into this combination door. The three-insert design permits the use of two cross rails, giving the door frame and inserts unusual rigidity and strength.

manufactured by

THE WABASH SCREEN DOOR COMPANY
Minneapolis......CHICAGO......Memphis
... added possibilities with the **STYLIST**

Further decorative possibilities with the Stylist are achieved by applying attractive wood grids to the screen and sash inserts. Grids are durably built and drilled for easy installation.

- **the STYLIST** with circle grids
- **the STYLIST** with diamond grids
- **the STYLIST** with square grids

Storm and screen panels are easily interchanged. For partial ventilation in mild winter weather a screen panel can be combined with two glass panels. Out-of-season panels require small storage space.

**Wabash Quality as Always...**

- **Made of Ponderosa Pine**—The wood of warmth, beauty and durability.
- **Quality Workmanship**—Mortise and tenon construction. Cross rails add strength and rigidity to door frame. Door frame 1 3/4" in thickness, screen and storm panels 1 1/4".
- **All Wood Parts treated with Woodlife**—Toxic water repellent preservative. Resists weather, decay and dimensional changes.
- **Glass in Sash Panels** bedded in putty and held in place with wood molding.
- **Screen panels wired with non-corroding, non-rusting aluminum cloth.**

**Available Now!**

The Continental Stylist is available in the following stock sizes:

- **2 - 8 x 6 - 9**
- **3 - 0 x 6 - 9**
- **3 - 0 x 7 - 1**

Grids are available as an extra. They come cartoned, a set of three to the carton. Be sure to specify both type and size when ordering.

Stylist all-weather combination doors are distributed through retail lumber dealers.

Address Inquiries to: 310 S. Michigan Avenue • Chicago 4, Illinois

**manufactured by**

**THE WABASH SCREEN DOOR COMPANY**

*Continental product*
Owners are having second thoughts about insulation’s?

Maybe they don’t always mention it—but many prospective home owners mentally ask the question “If I should ever want to sell this house, could I get my money out of it?”

You can go a long way toward establishing that second—or resale value—when the house has Balsam-Wool sealed insulation. Balsam-Wool has the primary value of keeping a house comfortable and reducing fuel bills throughout the owner’s occupancy.

But its second value is that it lasts a lifetime—keeps its efficiency as long as the house stands. It doesn’t deteriorate. Doesn’t settle or pack down. Its efficient vapor barrier prevents damage resulting from moisture condensing within walls.

A Balsam-Wool insulated house is a better buy today—and tomorrow. WOOD CONVERSION COMPANY, 119-103 First National Bank Bldg., St. Paul 1, Minnesota.

Balsam-Wool*  Sealed Insulation

*Balsam-Wool... Nu-Wood Interior Finish... Products of Weyerhaeuser
bath and half-bath are joined

This four-level design will comprise about half of the 400 units at Lakeville Estates in East Meadow, Long Island. The one and one-half baths are together on the bedroom level and have a connecting door. Lower level includes separate workroom, playroom and laundry areas. The price of $17,490 includes an automatic washer, refrigerator, electric range and venetian blinds. Nearly all buyers are ordering a finished playroom for $575 more. Sliding window units over large fixed glass panels are a living room feature.

playroom converts to bedroom

BUILDERS:
Joseph Carillo, Joseph Wanes and Samuel Levin
ARCHITECT:
William Paul La Vallee
LOCATION:
Hicksville, New York

The Jefferson, in the 567-home Hillside Terrace at Hicksville, Long Island, is a four-level dwelling priced at $14,990. A large, finished playroom on the grade level is so designed that it can be converted quickly to a fourth bedroom. It has a jog in the wall beside the “down” steps to provide space for a small bar. The lavatory is placed downstairs next to the rear service entrance, a feature intended to appeal to families with young children who frequently run in from play and track dirt through the house. A covered porch shelters front entry.
expansible on
a fifth level

BUILDERS:
Sokolov Brothers and Sons
ARCHITECTS:
Matern and York
LOCATION:
Cold Spring Hills, New York

Sixty-three houses with eight rooms, two and one-half baths and an expansion attic for a future ninth room are being built from this plan in the Holiday Hill development at Cold Spring Hills, Suffolk County, Long Island. These homes have about 1,300 square feet of living space and measure 60 feet across including a 12 by 15 screened, covered porch. They are sold with a minimum third-acre plot at a base price of $21,500. The storage room can be used as a maid's room.

another five-level expansible plan

BUILDERS:
Paul Axelrod
and Jack Lazar
ARCHITECTS:
Matern and York
LOCATION:
Westbury, New York

Spacious living quarters, as much as 2,240 square feet with installation of an 18 by 19 future bedroom in the expansion attic, feature this five-level plan at Sherwood Gardens, Westbury, Long Island. Extra depth in the two-car garage is provided, as well as a 20-foot finished recreation room. Wide corner windows flood dining area with light.
full basement adds to living area

The Holiday, a two-car garage model in the 101-family Broadlawn Estates community at East Meadow, Long Island, could technically be called a five-level plan, since its large living room is depressed two steps below the entry, dining room and kitchen.

All rooms on the bedroom level are aligned in a row in place of the usual "L" shape. The master bedroom has a private bath and a 5½-foot-square, cedar-lined, walk-in closet with a built-in chest of drawers.

Open plan of the house is accented by using a wrought-iron railing instead of a solid partition between the upper hall and living room. This creates a mezzanine overlooking the lower hall, living and dining areas.

A full-width dining bay extending past the rear elevation line helps to create an unusually large kitchen, measuring 12 feet by 17 feet 9 inches.

Heated by an oil-fired hot water system, the house is priced at $19,990. For $1,000 more a playroom area, virtually the size of the garage, is finished as a recreation room with knotty pine bookshelves and a continuous seat and storage cabinet around three sides.

variation of living room plan

Builder: Ben Okun Associates
Architect: Lee Perry
Location: New Rochelle, New York

Living room placement across plan, instead of the more familiar front-to-back arrangement, provides space for a covered rear terrace in this model for a new 40-unit section of Stratton Heights at New Rochelle, Westchester County, New York. These four-level homes, priced at $28,500, have slate fireplaces and are equipped with three-ton Carrier air conditioners. Closets as well as rooms are oversized.
**truss roof adapted to split-level**

Pioneering in split-level use of the truss roof, this house is featured with two other models to make up one of Long Island's largest developments, the 700-unit Mid-Island Park at Hicksville, New York. Construction permits extensive use of storage walls, one of which is a three-section sliding door closet, 10 feet wide, in the master bedroom. The price of $15,990 includes a finished multi-purpose or family room, two complete baths, each with tub and overhead shower, a lower level lavatory and a storage room 7 feet 10 inches by 14 feet with outside door in the rear of the garage. An oil-fired forced warm-air system supplies heat. Wide, sliding aluminum windows are used. Those in the smaller bedrooms on the front elevation are embellished by decorative shutters and flower boxes.

**air conditioned model under $15,000**

West Hills Greens, a 224-home project at Huntington, Long Island, supplies a variation in four-level planning by locating bedrooms on two levels and offering such a house for $13,990, or $14,990 with air conditioning.

Actually a modified Cape Cod style, it includes garage, workshop, hobby, laundry and heating facilities on the grade level; the customary main floor of living room, dining room and kitchen; two bedrooms and bath on a third level and a studio bedroom and bath above.

When announced in June, this home and a smaller, ranch-type attracted over 3,000 visitors the first week end. The installation of a two-ton unit of the United States Air Conditioning Corporation for $900 more was an added incentive.

Air conditioner and oil-fired forced warm-air furnace used in Huntington houses
Quiet is the word for R-W Silver Streak vanishing door hardware

Notice how sliding doors permit full utilization of every inch of space in this limited hall area. There's no conflict between doors.

Quiet it is. Noiseless, smooth and so easy to operate with a minimum of effort. That's R-W Silver Streak Vanishing Door Hangers and Track. It's the sliding door hardware built for extra comfort, extra convenience and space economy demanded by modern living.

Silver Streak is designed for installation in standard 2x4 studded walls for more living space, more efficiency to every home. Its easy, noiseless operation due to precision ball bearings, molded bakelite wheels and extruded aluminum track makes it first choice with builders and home owners everywhere. For complete information on all the exclusive features of SILVER STREAK Hangers and Hardware, write for illustrated leaflet complete with architectural sketches of installation methods.
Waterproofed BRIXMENT HELPS PREVENT EFFLORESCENCE

Efflorescence is caused by soluble salts which are present in almost all masonry materials. When reached by water, these salts dissolve and may be drawn, by evaporation, to the surface of the wall.

Brixment is permanently waterproofed, during manufacture, with the most effective air-entraining waterproofing agent known.

Waterproofed Brixment mortar checks the passage of water and keeps it from percolating down through the wall, dissolving salts which may be in the masonry materials, and carrying them to the surface.

* * * * * *

In addition to reducing the possibility of efflorescence, Brixment mortar gives you two other practical benefits:

1 HELPS PREVENT LEAKY WALLS
   Even under pressure, water cannot readily pass through Brixment mortar. Therefore, if the face brick are back-plastered with Brixment mortar, an effective barrier is set up against the passage of water to the inside of the wall.

2 GREATLY INCREASES DURABILITY
   Water cannot readily penetrate Brixment mortar. This prevents the mortar from becoming saturated — therefore helps protect it from destructive action of freezing and thawing to which it is subjected many times each winter.

Both these advantages of waterproofed Brixment mortar are fully described in other recent advertisements. Write for reprints.

Louisville Cement Co., Louisville 2, Ky.

OCTOBER 1951
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International's...

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• Improves Financing
• Speeds Construction

THE INTERNATIONAL HOME was designed with both the builder and home owner in mind. The use of latest engineering techniques, and on-site construction methods, has produced one of the fastest built and fastest selling homes in the residential sales market.

THE INTERNATIONAL HOME PACKAGE, truck delivered to your foundation, includes:

1. Exterior Wall Panels, with all windows, insulation board, siding, door frames, painted.
2. Gable Ends, sided, prime painted; windows and vents installed.
4. Partitions, completely assembled.
5. Interior: Doors completely finished and assembled into finished jambs. All trim finished in syntho blonde enamel; Youngstown Kitchens by Mullins; assembled, disappearing stairway; pre-cut utility room closet and shelving.

“Everything, including the Kitchen Sink”

18 MODELS 2 and 3 BEDROOMS
Kitchen Exhaust Fan; Insulated Ceilings, Outside Walls and Floors; Storm Doors for front and rear doors; Garbage Disposal; Westinghouse Washer and Dryer; New Gas Furnace with counterflow heat, controlled by thermostat; large, spacious closets and storage space.

Asphalt Tile Floors, easy to clean; Hollywood Flush Doors, easy to dust; Youngstown Kitchens with new Lazy Daisy Corner Base; Beautifully Painted Interior Walls and Ceilings; Expansible Attic, can add 2 bedrooms; All Aluminum Windows, fully weatherstripped; Thermopane Picture Window.

Full Expansible Attic: 5 TO 7 ROOMS OVERNIGHT
Youngstown Kitchens announces

New Diana Ensemble Sinks

An entirely

Now you can literally build a sink with features most

Think what it means! Custom-planned kitchens at mass-production prices. Planning flexibility never before possible. Streamlined beauty beyond all expectations!

Youngstown Kitchens add thrilling, new sales appeal to homes you build . . . new custom-planned beauty . . . the economy of prefabricated steel kitchen units.

Never before did you have such kitchen-planning flexibility. Never before could you offer home buyers kitchens so beautiful, so practical, so work-saving and timesaving. And never before have so many desirable features been offered—so many, many lovely all-new units been provided for added appeal.

These new Diana-style Youngstown Kitchens offer true custom planning at mass-production prices.

Get the entire story. Contact your distributor today. Or write Builder Sales Department, Mullins Manufacturing Corporation, Warren, Ohio.
NEW Diana ensemble sink, 36-inch twin-bowl model. The first twin-bowl 36" cabinet sink. Double-terraced rims keep water from splashing over. One-piece, acid-resisting porcelain-enamed steel top, as on all Diana ensemble sinks and Diana-style cabinet sinks.

NEW Diana ensemble sink, 42-inch twin-bowl model. Handsome years-ahead styling of Diana ensemble sinks gives new "built-in" beauty to Diana-style Youngstown Kitchens. Large undersink storage space. Stainless steel backsplash matches base cabinet.

NEW Diana ensemble sink, 42-inch single bowl. Combines every desirable feature of a flat-rim sink with the advantages of porcelain-enamed drainboard. Curved, recessed knee space is beautifully trimmed with stainless steel. Easy-V handles, chrome-finished.

new concept in kitchen sinks

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Your choice in sink features is no longer limited by models—because Youngstown Kitchens Diana ensemble sinks permit you to select from 16 major storage, convenience and beauty features to build into your sink ensemble. Now you plan a sink from a countless variety of possibilities instead of choosing from a limited number of models.

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THIS HOME, built by L. I. Combs & Sons, typifies the successful use of Thermopane by builders in northern Indiana. It is an $18,000, three-bedroom house with full basement, garage and perimeter gas heat. It's all set for the cold Lake Michigan winds coming over the dunes. It has Thermopane insulating glass in every window.

"This sign packs a wallop for builders"

—says HENRY J. BULZA
of GARY, INDIANA

"This is Thermopane* insulating glass." Those words in the window of a new house—or spoken to a home-buying prospect—are powerful selling. Thermopane is known—and wanted.

Henry J. Bulza of the Ambridge Lumber and Supply Company, Inc., Gary, Indiana, can tell you from experience that it works! Builders have bought from him over 1,000 lights of Thermopane in two panel window sizes. They're offering Thermopane in every window of houses ranging from $18,000 to $25,000. They give home buyers insulated windows right at the start, included in the mortgage package. There's no extra selling job for storm sash.

The use of Thermopane in panel windows gives builders an economical way to add the extra value and the sales appeal of Thermopane. Mr. Bulza says: "The panel window eliminates storm sash and cuts the builder’s cost. Also, it gives the home owner more glass for less money. We can give him 82 sq. ft. of glass for about $200. The same wall area with conventional windows would cost a lot more."

Write for full information. We'll send you full data on Thermopane sizes, types of windows for Thermopane and details on panel windows. Libbey-Owens-Ford Glass Co., 3103 Nicholas Building, Toledo 3, Ohio.

For better vision, specify Thermopane made with Polished Plate Glass

OCTOBER 1953
A new house becomes a Delta saw-shop for cutting all materials. An 8-foot roller conveyor section solidly mounted at each end makes work handling easy.
DELTA Radial Saw

says JACK CARUANA

Buffalo builder saves at least that in “mill time” alone

One man operating a Delta radial saw cuts all the rough material for a house—everything from foundation to trim—in about 24 hours, saving at least $200 per house in “mill time” alone, says Jack Caruana, veteran home and subdivision builder of Buffalo, New York. Saw output includes studding, joists, hip-rafters, door and window frames, cabinet members and the like. All other sawing is practically nil.

Actually Caruana’s radial saw pays for itself over and over again every time two more houses go up.

“Stop in any time we’re building and you’ll find the saw running,” says Caruana. “It never gets a vacation—never needs one. Maintenance—none.”

This is the new secret weapon with which alert builders are conquering costs: Delta tool installations at the job. Why not find out about it—to your own handsome profit? Ask your Delta dealer, listed in the Classified Phone Book under “Tools” or “Machinery,” and send the coupon for the new Delta Catalog.

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You can offer home owners a better buy and make selling easier. Barrett batts won't crumble or settle... they give more insulation value because of greater thickness when installed and greater number of permanently retained air spaces. Barrett Spun Wool Insulation is a cleaner, more "shot-free" product, yet it costs no more than ordinary mineral wool.

And Barrett backs you up! Your Barrett line is supported with promotional material that paves the way to greater sales.

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its brand name is the best-known in America

**FLEXALUM** is 5 times better known than any other venetian blind brand, according to a recent study by McCall's Magazine. The FLEXALUM name tells your prospects that you've used top-quality construction materials.

its beauty is a decorating feature in itself

Only in the all-FLEXALUM blind can all parts be perfectly color-matched.
(Or you can pick contrasting colors from 165 combinations.)
The trim top and bottom bars, slim nylon cords, and unbreakable plastic tassels add extra beauty touches.

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**FLEXALUM** spring-tempered aluminum slats snap back to perfect shape. **FLEXALUM** plastic tapes wipe clean, won't fade, fray, shrink or stretch. **FLEXALUM** nylon tilt cords can't slip—they're locked to the foolproof mechanism.

Write for all-Flexalum sources in your area and complete architect's file.

it's the new all-**FLEXALUM®** blind

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Available in 30 rainbow colors for perfect flexibility of design and harmony. TILEMASTER colors are molded all the way through! 16 molded tile pieces permit "all-tile beauty" — eliminate any need for substitutions or bent tiles.

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A-1 PLASTIC MOLDERS, Inc.
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what every builder should know about

a check list of major points

1. Keep the earth as much as possible as nature made it. This means laying out the streets to follow the natural drainage lines, and taking advantage of every contour for house siting. It also means lower development costs.

2. Building and lot should always be considered as one problem, not as separate problems. Subdividing is the science of cutting up land into building sites. Each lot should provide a good house site with a minimum of grading and the retention of as many trees and other natural advantages as possible.

3. The gridiron pattern is outmoded. Its supposed economies are largely illusionary and it does not preserve values. The 40-acre tract shown here under "right" and "wrong" site plans was originally subdivided into 264 lots on the gridiron pattern and the plot recorded in 1925 (in Chicago). Only 9 per cent of the lots were over 30 feet in width, and by 1952 the tract was still mostly vacant. Today it is being revived under proper site planning which will preserve values for at least 40 years, to say nothing of making more economical use of the land.

4. Design the house or house-type first, then lay out the lots to get the most economical size of lot to suit the house. This keeps paving costs and length of sewer line connections at a minimum.

---

Where grades are steep, streets should generally be built diagonally across contours, and not parallel or at right angles to contours. This will eliminate excessive grading and costly retaining walls. (Figure from FHA's "Neighborhood Standards")

WRONG—Street pattern permits through traffic to use residential streets; residential lots face boundary streets, which are much-traveled thoroughfares; gridiron pattern wastes land in alleys, does not permit integration of the tract or beauty through groupings of buildings on curving streets. Nothing contributes to the preservation of residential values over a long period.

RIGHT—More economical use of land; all lots are wide enough (minimum is 50 by 112 feet) to allow driveways so no alleys are needed; lots adjacent to boundary streets are deeper than others to provide buffer between the homes and the thoroughfares; no houses face the thoroughfares or the industrial area on the fourth side; street plan discourages through traffic.
LAND PLANNING

5. Place the buildings on the lots (a) for the best possible orientation to sun, prevailing wind, view and privacy; (b) to form interesting street vistas.

6. Where grades are steep, it is generally desirable to cut streets diagonally across the contour lines. This results in avoiding excessive grading and retaining walls, and gives each property a reasonable relationship to the street. (See figure.)

7. Minor streets should enter major streets at right angles. Keep the number of streets converging on a single point at a minimum.

8. Avoid placing streets on tract boundaries. Such planning exposes the lots in the tract to possible dangers from uncontrolled development on opposite side of the street, and increases the length and cost of street improvements in the tract.

9. Traffic should flow toward thoroughfares. When this is not provided for, there will be unnecessary use of local streets in order to reach the main traffic-ways.

10. Discourage heavy through traffic, and protect residential lots against major street traffic by planting strips or service roadways at boundaries of tract.

11. Cul-de-sacs have numerous advantages but also some practical disadvantages when it comes to providing such services as fire protection, garbage collection, mail and other daily deliveries. When used, a cul-de-sac should drain toward its entrance to avoid expensive sanitary and storm water mains constructed across adjoining lots or at excessive depths. Cul-de-sacs should be kept less than 500 feet in length. The outer curb at the turn should have a minimum radius of 40 or 45 feet. Never bring a cul-de-sac to the property boundary line but place it so that the lots can back on the property line.

12. Short blocks are not economical. The large number of cross streets will increase initial construction costs and also increase traffic hazards. FHA has concluded that plotting suburban residential blocks up to 1,300 feet in length by two lot-depths wide, bounded by streets that are adjusted to topographic and traffic requirements, is most economical.

13. Corner lots should be from 10 to 15 feet wider than interior lots in order to provide an adequate yard space on the side street.

14. In grading, the relationship between street grades and lots is all-important. Aim for a finished house grade which is not less than one foot above the elevation of the curb with a 25-foot building line. In any case, best usage as recommended by the "Home Builders Manual for Land Development," 1953 edition, is to slope your grades away from the building for a distance of at least three feet.
Heating a home built over a crawl space has never presented the problem that was encountered with the basementless home built over a concrete floor slab. In the first place, the number of slab floor homes far outnumbered those built over a crawl space. Furthermore, the floor construction in a home built over a crawl space did not result in high-conductivity heat losses to the air and to the ground. Nevertheless, the heating industry has recognized that the home built over a crawl space has not been as easy to handle as one built with a full basement. Some of the problems which have been encountered can be summarized as follows:

1. Floor surfaces over unheated crawl spaces have not been as warm as desirable.
2. Air temperatures in the living zone of rooms built over a crawl space have shown larger temperature differentials between the breathing level and floor level than was considered desirable.
3. Unless adequate ventilation of the crawl space was used and good drainage provided around the house, the moisture conditions in the crawl space were not satisfactory. The writer recalls two installations in which the moisture was so great that parquet flooring in the rooms above had buckled and formed a ridge two inches high.
4. With excessive ventilation of the crawl space in cold weather, freezing of water pipes has occurred.
5. Excessive moisture conditions in the living areas have been reported in some installations.
Fortunately all of these complaints do not occur simultaneously in any given house. Again, as in the case of the slab floor home, the problems presented are primarily of cold weather origin and hence occur more frequently in the colder climates of the country. It may be apparent from the discussion that in this article we are dealing with the enclosed type of crawl space construction, and not the well ventilated crawl space which is formed when the house is built upon piers and the wind can whistle below the subflooring. The latter type of construction is found more often in the warmer climates where no unusual heating difficulties occur.

**Moisture from Ground**

When a house is built over unprepared soil, especially where the water drainage is not rapid, moisture will evaporate from the ground into the air above. This vapor becomes of great concern to the builder since the relative humidity of the crawl space is raised, and the moisture content of the wood used in the subfloor, joists and plates is dependent upon the relative humidity of the air surrounding the wood. When the moisture content of the wood is greater than 20 per cent of oven-dry weight, rot fungi become active and wood deteriorates.

Obviously, the wood deterioration is not as severe in a dry climate or in regions where sandy soil permits good water drainage, as in a damp region or in places where the soil retains the moisture. Four basic approaches have been made towards the prevention of damage resulting from excessive relative humidity in crawl spaces, as follows:

(a) Airvents in crawl spaces have been specified to permit the moisture-laden air to leak out and be replaced by dryer outdoor air. Unfortunately, the number and size of vents may not be adequate to do a good job of flushing out the humid air. Furthermore, if the air vents are closed for winter, they may be left closed during spring and summer when much of the damage may occur.

(b) In some cases, chemical treatment of all wood used in the crawl space has been specified. In all too many cases the builder is not impressed with the importance of the dry rot treatment so that any wood treatment is spotty and inadequate.

(c) For the purpose of minimizing vapor travel into the living spaces, a vapor barrier paper has been attached to the floor joists. This barrier may reduce the moisture travel to the rooms above, but it does

(Continued on page 96)
not protect the exposed wood at the plate and header at the top of the foundation wall. Furthermore, moisture can travel upwards through the studding spaces and condense in the attic space.

(d) Insulation of the floor joists has been used, either in the form of mineral wool batts between the floor joists or rigid insulating boards tacked on the lower side of the joists. This insulation will serve to reduce the heat loss from the living quarters to the crawl space, but will not effectively control the moisture damage at sill, header and plate of the foundation wall.

**Use of 55-lb. Roll Roofing as Ground Cover**

The most effective method for control of excessive humidity in the crawl space is to attack the problem at the source, namely, the ground from which the moisture arises. That the moisture released from the ground can be of extremely large magnitude has been shown from a report by the Housing and Home Finance Agency, Technical Bulletin No. 8, January, 1949. The following data are condensed from the report:

The soil evaporation experiments were made with

<table>
<thead>
<tr>
<th>Treatment of Soil</th>
<th>Evaporation: gals. per 24 hrs. per 1,000 sq. ft. (Average Values)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smooth untreated soil</td>
<td>12.1</td>
</tr>
<tr>
<td>Smooth soil treated with Calcium Chloride-Sodium Silicate</td>
<td>8.2</td>
</tr>
<tr>
<td>Soil treated with Vinsol N.V.X.</td>
<td>9.7</td>
</tr>
<tr>
<td>Soil covered with 3&quot;-thick layer of pea gravel</td>
<td>1.4</td>
</tr>
<tr>
<td>Soil covered with 55-lb. heavy mineral surfaced roofing</td>
<td>0.3</td>
</tr>
</tbody>
</table>

(Continued from page 95)
No data are available on the treatment of soil with a thin cover-coat of concrete. Tests reported by the Housing Research, October, 1952. Housing and Home Finance Agency show that 55-lb. roll roofing is definitely preferred over 15-lb. asphalt-saturated felt. The following quotation from this report is of interest:

Dr. J. D. Diller of the Bureau of Plant Industry at Beltsville, Maryland, has carried on observations of 15-lb. asphalt-saturated felt and 55-lb. roll roofing and other materials under actual exposure conditions as ground cover under crawl space houses for nearly ten years. Tests show that 55-lb. roll roofing specimens are still effective vapor barriers after eight years of service, whereas 15-lb. asphalt-saturated felt ground cover has disintegrated sufficiently to be relatively ineffective as a vapor barrier in three years or less.

A membrane for use as ground cover in a crawl space house need not be an unusually good vapor barrier to reduce the moisture content of the wood floor system above it sufficiently to prevent deterioration caused by fungi, often commonly referred to as "dry rot." For that reason few authorities recommend cementing of the laps.

Accordingly, 55-lb. roll roofing ... is recommended for ground cover in a crawl space. It also has sufficient puncture resistance to permit periodic access to the crawl space for inspection.

Heating Methods in Use for Crawl Space Houses

From the foregoing discussion it can be seen that the ground moisture problem has to be solved first before further consideration is given to heating performance. Assuming that the ground will be protected with 55-lb. roll roofing, let us consider some of the approaches that have been made towards obtaining warmer floors and comfortable living temperatures.

1) The obvious step towards obtaining a warmer floor is to insulate the subfloor. Such insulation can consist of insulating sheathing below the floor or floor joist, mineral wool batts applied between floor joists or reflective insulation used between the floor joists.

2) Some merit exists in the notion that if the floors are to be kept warm and the heat loss from the building is to be reduced, the best place for the insulation is in the walls of the foundation. If the ventilators are kept closed, as they can be if the ground is covered with a vapor barrier, then the crawl space temperature will increase.

3) In warm-air heating practice, some installations have been made with the return air ducts carried in the crawl space. Obviously, if the crawl space is at a very low temperature, considerable heat loss will occur from the return air duct. In such cases the recommendation has often been made that the return air duct be covered with at least one inch of mineral wool batts. Usually, however, the ducts are uninsulated and the heat loss from the ducts is allowed to heat the crawl space to some extent.

4) In a few isolated cases, installations have been made with the entire crawl space serving as a return air plenum. The return air intakes in the floor, or in the baseboard, permit the air to drop into the crawl space without benefit of any ducts, and then to travel towards the blower inlet of the furnace. Obviously, the crawl space will be under reduced pressure, and any leaks around the foundation or vent openings will permit large quantities of outdoor air to leak into the circulating system. Such air leaks will tend to reduce odors and relative humidity in the house, but at the same time will tend to increase the fuel consumption. Obviously, in an installation of this type the floors should not be insulated, but the insulation should be applied to the foundation wall.

Trend Towards Heating of Crawl Space

In 1948 some experiments were carried on in the Warm-Air Heating Research Residence No. 2 at the University of Illinois which gave some unexpected trends. The following quotation is from Engineering Experiment Station Bulletin No. 401, page 58:

... it is apparent that the most significant effect of the change in basement-air temperature was to change the temperature differential from floor to breathing level as well as from floor to ceiling. Since the minimum differential was obtained when the basement was heated, the maintenance of a layer of warm air below the floor joists seems desirable.

In other words, it was found that when a layer of heated air existed below the floor joist, not only was the floor surface temperature increased, but also the living zone temperatures were made more uniform from floor to breathing level. In many respects, this was one of the most significant contributions made from the warm-air heating research program at the University. This phenomenon begins to explain why higher efficiency furnaces located in basements have not always given an improvement in comfort as compared with older hand-fired coal furnaces with relatively obsolete control equip-

(Continued on page 100)
All set to save dollars
on every door-hanging job

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BUILDERS KIT

Now in one compact carrying case are all the power tools you need for hanging doors quickly and expertly right on the job.

Look at what you can do—the time and money you can save—with the Stanley Handyman Builders Kit:

With the motor unit in the plane attachment, you can fit doors and sash in a jiffy—also fit storm sash, screens, shutters, inside trim, drawers.

Then, using the templet and router, you can mortise for door hinges six times faster than by hand—and every mortise will be perfect.

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Made by men who make tools BEST

For Production-Line Efficiency
Investigate These Companion Tools

Lock Mortiser, UMF. Does a complete mortising job in about 30 seconds. Easily adjustable.

Safety Saw. Well lighted, 6" saw, full 3" cut. High speed, sturdy construction. Easy to handle in any position.

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HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL
STOPS WARPING!

Paint can't protect improperly sealed wood from warping, swelling and blotching

Photo shows what happens when paint is applied to improperly sealed wood surface. Moisture penetrates the pores, causes the wood to warp, twist and swell. Note, too, how paint has soaked deeper into soft areas than into hard areas, causing uncontrolled grain raise which streaks and blotches wood, ruining its appearance.

Rez SEALS and PRIMES wood, reduces warping, stops swelling and blotching

Rez Sealer and Primer protects identical piece of wood — actually penetrates surface pores to seal out moisture—equalizes surface porosity, controlling grain raise. Rez preserves the beauty of wood grains in natural or rich color tones, beautifies wood trim, makes houses more salable.

10 Places to Add Beauty—
Protection—Sales Appeal with

Rez Sealer and Primer
Clear Synthetic Resin

- Wood siding
- Flush doors
- Wood frames
- Paneling
- Cabinets
- Wood fence
- Shingles
- Trellis
- Beams
- Woodwork

HEATING

ment. Apparently, a panel-heating effect from the floor will serve to produce more uniform air temperatures in the living zone.

The industry was in a stage of development where this method of having the subfloor space could be easily done. The down-flow furnace had been developed for the perimeter loop system used in slab floor constructions and was readily adaptable for crawl space heating. The warm air was discharged into a subfloor plenum, to which branch pipes were connected. In one of the most common arrangements in use, these branch pipes led to floor registers or baseboard registers located along the exposed wall. The branch pipes were not insulated so that the heat loss from the pipes tended to warm the crawl space to some extent.

Another method which has been under trial is one in which the branch pipes from the subfloor plenum are only about six feet long and merely point towards the exposed cold corners of the crawl space. The warm air discharged from the branch pipes heats the crawl space to temperatures higher than 70 degrees F. and the air is permitted to escape into the room above through either floor or baseboard registers along the exposed wall. In this system the rooms are heated partially by floor-panel heating and partially by convection air from the registers. The results reported from the field have been most promising. Since the system is still new, some problems exist that will have to be settled by research and by interpretations of building codes:

1. Proper vaporproofing of the ground surface is mandatory. The presence of heated air in the crawl space will tend to evaporate water from unprotected ground and this moisture may give excessive relative humidity in the living spaces.

2. Adequate insulation of the foundation wall is also mandatory. Asphalt-treated rigid board insulation can be applied to the wall down to the ground level. Care must be taken to seal any cracks along the sill plate to reduce air leaks.

3. Precautions must be taken to eliminate any fire hazards. The sheet metal plenum which extends below the floor must not be in contact with the wood. No combustible material should be stored in the crawl space. A final ruling on the permissive use of this form of heating has yet to be made.

If and when the regulations are formulated for permissive use of the crawl space plenum system of heating, the heating contractor will have available a method which has proved to be the most effective yet devised for crawl space structures.
REZNOR PAC answers YES
to more outstanding features than any
other horizontal furnace on the market

ASK YOURSELF THESE QUESTIONS

- DESIGN: Are controls, gas and electric connections enclosed within one main cabinet?
- FILTERING: Do you have to build a special holder or is it provided?
- DRAFT DIVERTER: Is it built in or must you add it?
- FLUE CONNECTION: Can you install in more than one location?
- CONTROLS: Are they low voltage with matched thermostat, transformer and electric valve?
- BLOWER: Is it adequate?
- LUBRICATING: Is oiling a problem?
- MOTOR: Is it resilient mounted, automatic resetting, overload protected?
- HEAT EXCHANGER: Is it made with safety sealed, welded construction?
- EXCHANGER TUBES: Are they venturi action and made of aluminized steel?
- BURNERS: Do you have to change for different gas?

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Just a casual glance at the new Reznor PAC tells you that here is a horizontal furnace that has what it takes to satisfy your most meticulous customer. Features galore, yet small as a TV set and almost as easy to install.

Reznor PAC makes itself at home in an attic, utility room, basement or crawl space. It's a real area saver for users who need every precious inch of space.

Better yet, you are not limited to residential installations. PAC as a unit heater may be sold to all types of commercial and industrial firms.

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- Grey-green Perlite cabinet.
- Built by Reznor — manufacturers of the world's largest-selling gas unit heater.
- Takes as little as 22" x 23" x 40" of space.

REZNOR MANUFACTURING COMPANY • 42 UNION ST., MERCER, PA.

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<tr>
<th>NAME</th>
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<tr>
<td>FIRM</td>
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<tr>
<td>ADDRESS</td>
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<tr>
<td>CITY</td>
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OCTOBER 1953
“Century” roofing gives your houses outstanding selling features that impress any prospective buyer. For these remarkable shingles offer *durable beauty at low cost*. Here’s what we mean:

As far as durability goes, “Century” asbestos-cement shingles are almost stone-like in their permanence. They resist sun, rain, vermin, and insects. Temperature changes won’t harm them. They won’t burn, rot, or corrode.

As for beauty—well, you have only to see these attractive shingles gracing a fine home to appreciate why homeowners find “Century” shingles so appealing. K&M makes them in several attractive colors with various surface textures and butt lines.

And now for the important question of cost. “Century” shingles are truly economical because they go up quickly and easily, because they never need protective paint, because they require virtually no maintenance, because they last indefinitely.

Sound like the high-quality, low-cost roofing you’ve been looking for? Then get detailed information today on “Century” asbestos-cement shingles. Ask your K&M distributor to show you the complete “Century” line, or write directly to us for information.

(For your reference, “Century” shingles are illustrated in Sweet’s Architectural and Light Construction Files.)
Mahogany! — the very word suggests the ultimate in luxury, beauty, good taste, desirability.

Now The Mengel Company offers you the magic of Mahogany — doors of genuine African Mahogany — at less cost than for comparable doors faced with most domestic woods! Get all the facts today!

YET COST LESS THAN MANY DOMESTIC WOODS!
Color-Grained Siding was selected for this 1421 unit housing project at the Cherry Point, N. C. Marine Corps base. Builders were Phillips, Bonin & Covington.

Color-Grained Siding... 3-WAY BENEFITS SPEED SALES... BOOST PROFITS

Every builder can cash in with Ruberoid’s Color-Grained Siding. Whether you’re building 1 house or 1421, you get the same three big advantages:

COLOR THAT SELLS – Color-Grained Siding was designed by a leading professional decorator in a range of distinctive two-tone colors that pack a powerful sales punch with every prospect. For variety in large projects you can mix the colors. They harmonize beautifully with each other.

BEAUTY THAT LASTS – Color-Grained Siding is made from durable asbestos-cement that neither you nor your customers ever need paint. And wonderful new Duroc adds a protective finish that enriches the color, resists dirt, stains and weather. Tell your prospects how Color-Grained Siding ends upkeep for keeps.

COSTS CUT 77% – Color-Grained Siding cuts siding costs as much as 77½% when compared with conventional painted wood siding. To some builders this has meant savings of $650 and more per house.

Call your Ruberoid dealer for full details or write for free illustrated folder. The Ruberoid Co., 500 Fifth Ave., New York 36, N. Y.

*Patent Nos. 2207733, 2307734, others pending.
new duette! Miami-Carey's Sliding Door Bathroom Cabinet
with Twin Compartments...twice as much storage space!

The duette DeLuxe Sliding Door Cabinet by Miami-Carey. (Model SD1818FL)

Finished in baked-on gleaming white enamel. Twin storage compartments and sliding mirror doors. For recess or wall-hung installation.

Here is a bathroom cabinet that's roomier, more beautiful than any you've seen before. It's the duette Sliding Door Cabinet by Miami-Carey, in four smart models—all so roomy, so brilliantly styled, so low in cost you can fit them perfectly into your plans, even for inexpensive homes!

Dollar for dollar, no other cabinet can match the duette for functional styling and utility. Mirror doors slide open at a finger's touch. Inside in twin compartments—more than double the storage space of most ordinary cabinets. Room galore for medicines, cosmetics, shaving needs, all the items that have a way of "cluttering" bathrooms short on storage space.

These new duette cabinets are ideal for new construction and remodeling. So ask your Miami-Carey dealer for all the facts—or mail coupon on other side of this page.

Specify freedom from topsy-turvy bathrooms...New duette by Miami-Carey

Available with or without tubular fluorescent light and shade plus switch and electrical outlet.

MIAMI-CABINET DIVISION - THE PHILIP CAREY MFG. COMPANY, CLEVELAND, OHIO
they're all-new
and crammed with sales-making features
new duette
SLIDING DOOR CABINETS
another leader from MIAMI-CAREY

- Twin Sliding Mirror Doors (mirrors first quality plate glass, copper protected)
- Fluorescent tubular light with shade, plus switch and electrical convenience outlet (optional)
- Twin Storage Compartments
- Stainless Steel Toothbrush Rack in each compartment (Custom models)
- Razor Blade Chute in each compartment (Custom and DeLuxe models)
- Crystal Glass Shelves (8 in Custom, 4 in DeLuxe)
- Easy to Install

<table>
<thead>
<tr>
<th>Overall Size</th>
<th>Width</th>
<th>Height</th>
<th>Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custom (without light)</td>
<td>38&quot;/100 x 22&quot;/55 x 5&quot;/12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DeLuxe (without light)</td>
<td>36&quot;/91 x 25&quot;/63 x 6&quot;/15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Custom Light Fixture</td>
<td>38&quot;/96 x 21&quot;/53 x 4&quot;/10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DeLuxe (with light)</td>
<td>36&quot;/91 x 25&quot;/63 x 6&quot;/15 (without shade)</td>
<td></td>
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</tr>
</tbody>
</table>

duette Custom (Model SD1820FL) features fluorescent tubular light unit with curved translucent shade, plus switch and electrical convenience outlet; welded one-piece steel construction; snow-white baked enamel interior finish; Stainless Steel mirror door has "picture frame" trim. Over 3450 cubic inches of storage space. For recessed mounting. Also available—duette Custom Model SD1820 without light unit.

Separate mirror and separate storage compartment for Him and for Her—no more "waiting turn"; no more bathroom clutter.

duette DeLuxe (Model SD1818FL) features fluorescent tubular light with matching metal shade, electrical outlet and switch—a lavish cabinet at a budget price. Beautifully finished inside and out in baked-on gleaming white enamel. For recessed or wall-hung installation. Also available—Model SD1818 without light unit.

Note: duette DeLuxe furnished in special colors if desired, when ordered in lots of 50 or more, at no extra charge.

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for detailed information on new duette Sliding Door Bathroom Cabinets by Miami-Carey

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The Philip Carey Mfg. Co.
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**SINK** One-piece porcelain top of heavy gauge steel. Faucets and all hardware triple-chrome plated. Units also available without sink.

**BURNERS** Units come with 3 gas burners (easily adjusted for bottled, natural or manufactured [L.P.] gas), or 3 electric burners (220 V.) or 2 (110 V.).

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HERE IS YOUR WINTER CHECK LIST
Plan your operation and procure any specialized winter equipment now!

<table>
<thead>
<tr>
<th>CONCRETE WORK</th>
<th>DO</th>
<th>DON'T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Footings</td>
<td>After digging, cover with hay to keep from freezing. Pour concrete between 70 and 80 degrees. Protect during curing period.</td>
<td>Do not pour over snow, ice or on frozen ground.</td>
</tr>
<tr>
<td>Foundation</td>
<td>When pouring at 40 degrees or less, maintain 70 degrees curing for 3 days or 50 degrees for 5 days.</td>
<td>Do not pour over snow, ice or on frozen ground.</td>
</tr>
<tr>
<td>Slab</td>
<td>Protect with shelter and provide temporary heat until curing period is over.</td>
<td>Do not pour over snow, ice or on frozen fill.</td>
</tr>
<tr>
<td>Basement floor</td>
<td>Pour footings and furnace slab with side wall footings. Delay floor until building is under cover and temporary heat is turned on.</td>
<td>Do not pour over snow, ice or on frozen fill.</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>CARPENTRY</th>
<th>DO</th>
<th>DON'T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Framing</td>
<td>Precut members and deliver to job for fast erection.</td>
<td>Installation in very cold house will lead to expansion in warm weather; doors will stick, etc.</td>
</tr>
<tr>
<td>Siding—exterior trim</td>
<td>Pre-paint both sides. Delay finish paint until spring.</td>
<td>Do not lay brick on snow or ice-covered surfaces.</td>
</tr>
<tr>
<td>Trim—out</td>
<td>Wait until heating plant is on.</td>
<td>Do not lay lines on ice, snow or frozen fill. In winter use sand fill.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MASONRY</th>
<th>DO</th>
<th>DON'T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block</td>
<td>Follow cold weather precautions for block and mortar. 40 degrees is critical temperature. Below 18 degrees, heat block to 40 degrees.</td>
<td>Do not lay block on snow or ice-covered surfaces.</td>
</tr>
<tr>
<td>Brick</td>
<td>Follow cold weather precautions. Maintain 40 degrees on both sides of wall for 48 hours.</td>
<td>Do not lay brick on snow or ice-covered surfaces.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PLUMBING</th>
<th>DO</th>
<th>DON'T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sewer lines</td>
<td>Prefabricate sections under cover to speed job.</td>
<td>Do not lay lines on ice, snow or frozen fill. In winter use sand fill.</td>
</tr>
<tr>
<td>Water lines</td>
<td>Test with nitrogen gas. Nitrogen does not burn.</td>
<td>Do not use water to test. It might freeze during test period.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HEATING</th>
<th>DO</th>
<th>DON'T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiant</td>
<td>For first time, raise temperature of coil water very slowly in imbedded coils. Take 4 to 6 days.</td>
<td>Do not try to speed operation. You might crack slab or ceiling.</td>
</tr>
<tr>
<td>All other</td>
<td>No apparent problems. Work usually done in temporarily heated building.</td>
<td>Do not try to speed interior finishing. Finishing in winter takes longer.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAINTING</th>
<th>DO</th>
<th>DON'T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interior</td>
<td>Delay interior decoration until heat is turned on. Use furnace since oil or kerosene heating units can soot and streak paint.</td>
<td>Do not use untreated exterior materials.</td>
</tr>
<tr>
<td>Exterior</td>
<td>Pre-prime before erection. Delay finish coat until spring.</td>
<td>Do not neglect to provide ventilation. Moisture must be eliminated.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PLASTERING</th>
<th>DO</th>
<th>DON'T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wallboard</td>
<td>Delay until furnace is turned on. Keep heat up until dry.</td>
<td>Do not butt wallboard sheets if house and material are cold. Expansion could cause seams to crack. Do not neglect ventilation.</td>
</tr>
<tr>
<td></td>
<td>Delay seaming until heat can be turned on.</td>
<td>Do not neglect to allow for expansion of glass at summer temperatures.</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>GLAZING</th>
<th>DO</th>
<th>DON'T</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>If possible, take windows out and glaze under cover. Use pre-glazed sash wherever possible.</td>
<td>Do not neglect to allow for expansion of roofing material at summer temperatures.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ROOFING</th>
<th>DO</th>
<th>DON'T</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Keep material stowed out of weather. Asphalt shingles are brittle in cold weather, need special handling.</td>
<td>Do not skimp. This is winter building's largest expense. Man units 24 hours if not thermostatically controlled.</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>TEMPORARY HEAT</th>
<th>DO</th>
<th>DON'T</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Use temporary heating units during construction, then turn on furnace.</td>
<td>Do not neglect frequent winter servicing. Use lightweight oil.</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>POWER TOOLS</th>
<th>DO</th>
<th>DON'T</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Use them to speed erection. Get under cover faster.</td>
<td>Do not neglect frequent winter servicing. Use lightweight oil.</td>
</tr>
</tbody>
</table>
how to build in WINTER — an on the job study

Winter weather—shackle of the building business—can be overcome with thorough pre-planning. Today, with proper technical information and cold weather tools, builders can continue operations. It's true that winter construction costs more, but, properly planned, a winter job can show a profit.

To bring our readers a job experience story covering all phases of winter building, the American Builder sent its field reporter to Michigan's northern peninsula in the depth of winter, where men were building a town in spite of snow and sub-zero weather.

The town site of 400 houses, of which 130 were under construction, is part of a new copper mining venture—White Pine Mine, near Ontonagon, Michigan. Principal contractor for the mining construction job is the Turner Construction Company. Pace and Associates, architectural engineers of Chicago, laid out the town and designed many of the non-process buildings. Herman Gundlach, Inc., of Houghton, Michigan, was awarded the contract for the first 130 houses to be built.

Since the winter season in northern Michigan extends from October through May, winter weather was the controlling consideration in planning the construction program. Accumulated snow in the area—the heaviest in the United States—averaged about three feet. Temperatures of from 30 to 40 degrees below zero had to be taken into consideration. To facilitate a steady flow of material to the job, Gundlach instituted an enclosed precutting operation. He primed exterior siding, trim, windows and doors before they were delivered to the job site. To protect the pouring and curing of concrete, he designed and built shelters. These are but a few of the many pre-planned operations which made this winter building venture run smoothly.

Some of the 130 houses that were constructed on Michigan's northern peninsula in the depth of winter 1952-1953
with waterproof building paper. He supported larger shelters with steel pipes set into the ground. These had welded brackets which held 4x6 purlins which supported a 1x4 frame over which canvas was laid. After the concrete was cured, the posts were cut off and grouted. He installed heating equipment to maintain temperatures above freezing.

**concreting**

Batching in the winter requires the operation of a boiler to generate steam for heating both aggregates and water. Since the concrete must be between 70 and 80 degrees when delivered, the operator must know the exact pouring time. This requires close coordination between the builder and concrete supplier.

The Portland Cement Association suggests that mix be not lower than 70 degrees nor higher than 80 degrees when placed in a form. Freshly

**shelters**

Concrete cannot be poured on frozen ground and left to set; the recommended procedure is to deliver heated concrete to the site and pour it over a thawed fill. Shelters, therefore, were needed to protect the concrete and make working conditions more favorable. The Portland Cement Association suggests shelters be used whenever concrete is to be poured in temperatures of 40 degrees or less.

On this job, Gundlach used two types of shelter, depending on the size of the work. To enclose a slab area, he built a truss-constructed frame, nailed Homasote panels to the trusses and covered the panels...
placed concrete should be maintained at a temperature of 70 degrees for three days or 50 degrees for five days for normal concrete. For high early strength concrete, the curing temperature should be 70 degrees for two days or 50 degrees for three days. Chlorides, up to 2 per cent by volume, can be used to speed curing.

Concrete was poured into foundation forms; crew then shoveled mix into place.

The concrete was screeded. Tarps were lowered and heat placed inside shelter during curing stage.

Shelters were needed if outside temperature was below 40 degrees. Temporary heating units insured proper curing of concrete.

Precutting and assembling

Material for each house is cut in a centrally located shed. Correct size stock patterns speed the engineered method of cutting. Lumber is stored outside and sent through the mill only as it is required.

The pieces, cut to size and in the correct quantity, are stocked outside in individual house packages for delivery to the job site. Window and door frames are pre-assembled at one side of the cutting shed. The sliding window unit is installed but not glazed until the frame is nailed into the wall.

carpentry

Carpentry costs are very little more in winter than in summer. The contractor's big problem here was to keep areas open for the delivery of materials to the men on the jobs. Consequently, an extra $25 was added to the cost of each house for the removal of snow.

Precut framing members were delivered to the site, where framing crews assembled the walls on the slab and tilted them into position.
Ceiling joists and roof decking were then installed and wood or insulated sheathing applied. Wood sheathing was used where the plan called for vertical siding, and insulated sheathing where horizontal siding was indicated.

Cold weather has so little effect on wood that not much technical information is available. However, the California Redwood Association does warn that green lumber can crack or check in below-zero weather. Residual moisture in the wood cells freezes and breaks down the wood structure, lowering the strength. This is possible with all types of lumber.

Nitrogen used to test service lines in place of water during winter. Tank had enough gas for four or five houses.

**plumbing**

While cost of the unskilled plumbing labor was 50 per cent above normal on this winter building job, the plumbers' and steam fitters' labor costs did not show a similar increase, the plumbing subcontractor at this White Pine project reported. He pointed out that the need for dry sand, which had to be brought in, and the work involved in keeping the sewer and water line ditches clear of ice and snow further increased his costs.

When weather prevented the plumbers from working on outside services, they would either prefabricate sewer line sections under cover or work on other jobs.
Service lines in the house were tested with nitrogen gas instead of water. A testing manifold was rigged to test at 150 pounds of pressure for two or three hours. The nitrogen tank has a pressure of 15 atmospheres, or 1,500 pounds per square inch, enough for four or five houses. Nitrogen was substituted for water to lessen the danger of cracked lines for water might freeze during the test period. The nitrogen added to winter cost.

**Masonry**

Measures to protect masonry were rigidly observed at the project. Every effort was made to keep the units dry while they were stored. They were placed on planks and raised above the ground and then covered with tarpaulins to prevent moisture absorption. Some masonry material was stored inside partially completed buildings.

It is important that the mortar mix used in cold weather masonry work is properly prepared. On this job, batch mixers were used and all the aggregates and water heated to 150 degrees. To eliminate the possibility of scorching, the sand was piled around a 36-inch metal stack and heated with a Silent Glow oil-burning unit. The finished mortar had a temperature of 80 to 90 degrees, well within the specifications set up by the Structural Clay Products Institute.

Masonry units were heated as the need arose. Hollow units were heated when the temperature dropped below 13 degrees, and solid units in below-zero weather.

Further precautions called for not placing the masonry units on ice or snow-covered surfaces. All walls were kept covered to keep them dry.

Recommended specifications of the Structural Clay Products Institute are as follows:

1. **Protective period and curing temperature**

   Construction with 1:1/4:3 (cement-lime-sand by volume) mortar should be heated to over 40 degrees when the outside temperature is below 40 degrees. The air temperature on both sides of the masonry wall should be over 40 degrees for at least 48 hours. With high early strength cement, the protective period can be reduced to 24 hours.

   For 1:1:6 mortar the same pro-
Large Silent Glow poured heat through 36-inch stack, warming sand piled around it

Silent Glow oil burner provided temporary heat in painting shed

III. Protective methods

(A) When temperatures fall below 40 degrees, all masonry units should be free from ice and snow and the mixing water or sand should be heated not more than 160 degrees or less than 70 degrees.

(B) Below 32 degrees, in addition to A above, both sand and water should be heated to within the temperature listings in A.

(C) Below 25 degrees, in addition to A and B above, four pounds of calcium chloride per sack of cement should be added to the mixing water. Do not add to the cement, unless specified by the cement manufacturer.

(D) Below 18 degrees, in addition to the above, heat hollow masonry units to at least 40 degrees.

(E) Below-zero masonry construction is not recommended except in emergencies. Then all units should be heated to 40 degrees and temporary enclosures should be used.

III. Construction practice

<table>
<thead>
<tr>
<th>Temp. range</th>
<th>Type of heating</th>
<th>Masonry protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 40</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Above 32</td>
<td>Salamanders</td>
<td>Provide wind</td>
</tr>
<tr>
<td>Below 32</td>
<td>Salamanders</td>
<td>Breakers</td>
</tr>
<tr>
<td>Above 25</td>
<td>Salamanders</td>
<td>Sisal-kraft or</td>
</tr>
<tr>
<td>Below 25</td>
<td>Salamanders</td>
<td>Canvas cover</td>
</tr>
<tr>
<td>Above 18</td>
<td>Salamanders</td>
<td></td>
</tr>
<tr>
<td>Below 18</td>
<td>Salamanders</td>
<td>Steam or steam</td>
</tr>
<tr>
<td>Above 12</td>
<td>Salamanders</td>
<td>Canvas cover</td>
</tr>
<tr>
<td>Below 0</td>
<td>Steam</td>
<td>Complete enclosures</td>
</tr>
</tbody>
</table>

painting

Because the painter pre-primes all exterior materials before sending them out to the job site, painting costs were slightly higher than normal on this job, due to this extra handling.

Material to be painted received both a front and back prime brush
Roofing costs are likely to increase with winter building. In this case, snow had to be removed from the house tops and the paper that had been covered with ice and snow replaced with new paper before the terne plate standing-seam roof was installed. The entire job increased costs $21.60 per house—$9.60 for six hours of one laborer’s time for snow removal; $11.00 for new paper and $1.00 for increased handling charges. A small builder could save most of these additional costs by laying the roof immediately after putting on the paper. Project builders resort to the use of temporary paper protection to expedite other operations.

**EXTRA COSTS PER HOUSE IN WINTER BUILDING**

<table>
<thead>
<tr>
<th>Category</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snow removal</td>
<td>$25.00</td>
</tr>
<tr>
<td>Hay for foundations</td>
<td>$1.00</td>
</tr>
<tr>
<td>Sisalkraft</td>
<td>$5.50</td>
</tr>
<tr>
<td>Portable shelter erection and removal</td>
<td>$200.00</td>
</tr>
<tr>
<td>Heating and attending</td>
<td>$50.00</td>
</tr>
<tr>
<td>Concrete</td>
<td>$20.00</td>
</tr>
<tr>
<td>Roofing</td>
<td>$21.60</td>
</tr>
<tr>
<td>Heating and plumbing</td>
<td>$25.00</td>
</tr>
<tr>
<td>Painting</td>
<td>$15.00</td>
</tr>
<tr>
<td>Overhead increase</td>
<td>$5.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$368.10</strong></td>
</tr>
</tbody>
</table>
Power machinery played an important part in this project. Gundlach's Traxcavator spent most of the time clearing snow from roads, driveways and sites. The machine not only pushed the snow out of the way but also carried it to isolated places.

In winter both heavy machinery and light, hand-powered equipment are lubricated with lightweight oil. The builder made a nightly ritual of cleaning the snow and ice from the treads of the crawling units. Had these been allowed to build up and freeze, the expansion might have broken the treads. Also, the builder found it was easier to get the operation under way in the morning if the equipment was thoroughly cleaned at night.

Major job of Caterpillar tractor was snow removal. Unit could carry snow to out-of-the-way places, keeping road shoulders open for future plowing.

Power equipment

Portable generator furnished current for electrician's power tools. Electricians found winter no handicap.
Below is a selection of various types of equipment including space heaters, salamanders, thawing devices and other apparatus essential to an efficient building operation during the cold weather months.

**AB105301—Oil-Burning Salamander**

Eliminates usual fire hazards of all-night heating by the turn of a shut-off valve. Fuel oil is sealed in a steel, welded pressure tank. Danger to workmen from poisonous fumes is also eliminated. Unit shown will heat approximately 850 square feet of floor space, with average ceiling height and at average winter temperatures. Legs raise firebox from floor, allowing better draft. Salamander is portable, light in weight and has fuel consumption of 5% of a gallon per hour. Aeroil Products Co., Dept. AB, 69 Wesley St., South Hackensack, N.J.

**AB105302—Thawing Outfit with double burner**

Permits dual heat application on a single job or single heat application on two different jobs within the base length radius of the fuel tank. Unit is completely self-contained; hand pump is built into the tank. After the initial pumping, a few strokes at half-hour intervals keep the unit in continuous operation. Outfit includes a 15-gallon fuel tank, two 12-foot lengths of oil hose and two burners. The outfit is recommended where there is demand for fast heating, indoors or out. It is useful for thawing frozen concrete or sand, frozen ground in excavations, concrete forms, etc. Hauck Manufacturing Co., Dept. AB, 124-136 Tenth St., Brooklyn 13, N.Y.

**AB105303—Space Heater**

Furnishes 12 hours of continuous operation without refueling. Thermostats are provided on all models as well as safety devices including a solenoid on the pump for instantaneous cut-off and flow of fuel. Compact, portable unit is available in three models, furnishing from 160,000 to 400,000 Btu's per hour. Fuel tanks have 14-, 21- and 34.5-gallon capacities. Totally enclosed stainless steel combustion chamber permits almost complete elimination of either carbon dioxide or carbon monoxide gases. Master Vibrator Co., Dept. AB, 108 Davis Ave., Dayton 1, Ohio.

**AB105304—Unit Heater**

Has proved useful in supplying temporary heat in buildings under construction. This gas-fired unit is light enough to be transported in the trunk of an automobile and can be installed without difficulty. It can be hooked up with temporary electrical wiring and a few feet of rubber hose to supply gas to the unit. Suspended from hooks screwed into a floor joist, it can be moved to other locations being worked on wherever heat is required. Modine Manufacturing Co., Dept. AB, Racine, Wis.

**AB105305—Unit Heater, gas-fired**

Operates automatically by fan forced air. The warm air moves directly into the working zone and continuous circulation eliminates cold areas and stagnant air levels. Directional grilles permit the air flow to be controlled as desired. Threaded pipe hangers permit suspension of the heater in temporary locations, allow easy removal to other spots where needed, yet keep the unit up out of the working area. Four models are available, rated from 52,000 to 180,000 Btu's per hour. Utility Appliance Corp., Dept. AB, 4651 S. Alameda St., Los Angeles 58, Calif.

**AB105306—Portable Heater**

Has been especially designed for various requirements of portable space heating on construction jobs. It offers complete separation of the products of combustion from the ventilating air stream, plus forced hot air delivery to areas where it is most needed. Fuel consumption is 1.4 gallons per hour, heat output is from 125,000 to 190,000 Btu's per hour. Application shown is use of unit to heat brick piles at homes under construction by a Racine, Wisconsin, builder. Heat's use tripled the number

(Continued on page 118)
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winter building products

(Continued from page 117)

her of bricks that could be conditioned at one time, preparatory to bricklaying. Herman Nelson Division, American Air Filter Co., Inc., Dept. AB, Moline, Ill.

AB105307—Unit Heater, gas-fired, is installed by suspension from ceiling. It is suggested with a variety of diffuser accessories to provide proper distribution of warm air in special directional flow problems. This unit warms and mechanically circulates large volumes of air within the required space to be heated.

No piping systems or change-overs are required for temporary installations. Unit operates on natural, manufactured or LP gas. Heating capacities in nine models range from 50,000 to 225,000 Btu's per hour. Units are applicable to winter building, due to portability, capacities and minimum space requirements. Surface Combustion Corp., Dept. AB, 2375 Dorr St., Toledo 1, Ohio.

AB105308—Concrete Mixer Heater is made in three sizes to fit different makes and styles of mixers. The heating unit consists of a torch-type burner, special discharge elbow or reflector pipe, fuel tank equipped with brass hand pressure pump, etc. A universal, clamp-type attachment precludes cutting or threading of pipe, drilling holes or making special brackets. The "Fireblo" burner uses kerosene, distillate, diesel or light fuel oil and produces a quick, intense flame of over 2,000 degrees F. It is useful in thawing out concrete mixers, melting ice around foundations, pre-heating machinery, American Steel Works, Dept AB, 27th & Southwest Blvd., Kansas City 8, Mo.

For More Information
Use Coupon, Page 228

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Contractors for University of Minnesota's new Mayo Memorial Medical Center gave the Remington Stud Driver a real workout. They used 10 of these powerful tools to install ventilating ductwork and to anchor 2,500 metal door bucks to concrete. Door bucks were set separately, walls finished later. This meant plenty of open space for moving in equipment and other material.

For fastening 900 window frames, Remington Stud Drivers again proved fast and convenient. Workmen found the rugged 5½-lb. tools easy to handle, simple to operate. They liked the fact that there were no wires or hose to get in the way as they worked from frame to frame. And every stud was driven arrow-straight—thanks to the precision power supplied by 32 caliber cartridges.

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OCTOBER 1953
Developed right after the second world war, the jalousie of today was adapted from the adjustable wooden- (or metal-) louvered jalousie used on porches to obtain ventilation without sacrificing privacy. Glass was substituted in the venetian-blind-like slats and aluminum replaced wood in the frame. A screen was attached to the inside of the frame.

Improved ventilation was apparent. Louvers set at 90 degrees permitted a maximum passage of air. Partly closed, they still admitted air, excluded the average rainfall. The claim has been advanced that louvers in full open position influence a compression of air between them which actually pulls more of it into a room than would enter through a rough opening of the same size.

Where Used

At first, problems of water and air leakage during severe storms limited the use of glass jalousies to porch enclosures and breezeways, mostly in remodeling work. But in 1948, jalousies began to be specified for every opening in new homes, from bathrooms to front door. Their use spread to interior walls, full and partial office partitions, stores, schools, hospitals, factories, motels; even boats, truck cabs and trailers.

Popularity of jalousies throughout the south induced so many winter visitors to investigate that manufacturers redesigned their windows about two years ago to take interchangeable screens and storm sash for adaptability to northern climates.

Claimed Features

According to the manufacturers, the following are the outstanding features of a jalousie:

1. Controls ventilation from maximum flow to none.
2. Allows airing of a room during most rainstorms.
3. Creates extra space for year-round use.
4. Prevents children from falling out of windows.
5. Guards against burglars, even when windows are wide open.
6. Permits entire window to be cleaned from inside.
7. Has interchangeable screens and storm sash.
8. Opens to considerable degree without loss of privacy in installations using obscure glass.
9. Improves conditions in hard-to-ventilate rooms, if installed in interior partition.
10. Reduces chance of breakage since at weakest point, where two vanes join, it is one-half inch thick.
11. Limits replacement of glass, in event of a break, to one or two louvers as a rule.
12. Provides frame with life-long lasting qualities.
13. Adjusts windows silently.
14. Offers builders a design innovation for new houses.

**Hurricane Test**

Until a year ago, there was much skepticism that jalousie windows would perform efficiently during hurricanes and other storms. This led five leading manufacturers to engage the University of Miami to test windows under these conditions.

Windows were installed in a test house, the glass being about 20 feet from the variable pitch propeller of a large Pratt & Whitney airplane engine. Lasting 12 minutes, the test simulated gusts of wind with a maximum velocity of not less than 100 miles per hour for ten minutes and gust conditions of 80 to 120 miles per hour for two minutes. During this time, water was introduced into the airstream at a rate of 20 gallons a minute, equivalent to a 4-inch rainfall during the 12 minutes.

Under these conditions, windows were considered satisfactory if air infiltration was not over 75 cubic feet per minute and water not over one-fifth gallon per minute. While this seems like a lot of air and water, the university report stresses that few hurricanes are ever as severe as this test.

Of 16 jalousies listed in the study, all but two passed the water test; four failed the air test. Two admitting too much air were among the most watertight windows, due to baffles which catch water between louver clips and jams but do not stop all air. The test revealed a pinhole through a window frame will let through more water than a loosely-constructed baffle.

The Florida Window Manufacturers Association was formed, with membership contingent upon a satisfactory test. In return, the university permits members to use a seal bearing this statement: “Hurricane approved. Florida Window Manufacturers Association specifications for air and water infiltration under dynamic condition of wind and water—confirmed by the University of Miami Housing Research Laboratory.”
between door and threshold enters weepholes and is returned outside.

Within the past few weeks, a new jalousie frame designed especially for doors was made available. When closed, it is no wider than the 13/4-inch door it was designed to fit. When open, the over-all width of the door and extended louvers is about 31/2 inches, nearly two inches less than the width of the regular jalousie set in a door frame.

**Vertical Louvers**

A variation in jalousie operation is the vertical-louvered window. Because the glass slats stand on end

---

**Construction**

Basic parts of nearly all jalousies are the same: aluminum frame, glass louvers, an operating mechanism in each jamb to control the position of the clips and one or two operators mounted on jamb or sill. However, there is quite a difference in design toward the common goal: a sturdy, easily-operated window that will be airtight and watertight at all points.

A detailed description of jalousie construction, including weathertight features, will appear next month.

**Costs**

The cheaper varieties are said to compete in cost with other windows using heavy sheet or plate glass; higher quality jalousies figure 10-20 per cent more; heavier, wider-louvered units up to 50 per cent more.

Shipping costs are considered a minor factor for bulk shipments, due to light weight of aluminum and the fact that most glass is bought locally.

**Jalousie Doors**

General practice of the industry is to install jalousie windows in 13/4-inch door frames, either half-panel or full-panel. Since the frame is wider than the door, wood or aluminum molding strips are used. Some doors are equipped with an aluminum strip flush with the bottom so that it overlaps an aluminum threshold. Water enter-
they can be longer than usual without danger of bowing at the middle. One of these jalousies can cover a large window opening, instead of two or more with horizontal louvers.

This installation is recommended only for protected inside partitions between two rooms, or between a hallway and a room. Such use normally calls for obscure glass slats.

Outside use is not generally considered practical, because of a tendency for the glass to “bend” during high winds, but the vertical jalousie has been successfully installed in a wide window of shallow depth, protected by a wide overhang.

**WHAT THE JALOUSIE IS DESIGNED TO DO**

- **WIDE OPEN**: maximum admission of air
- **THREE-QUARTERS OPEN**: deflects average rainfall; still admits nearly 100 per cent air
- **HALF OPEN**: admits large quantity of air but deflects it to prevent drafts
- **NEARLY CLOSED**: kills off all possibilities of draft but admits enough air to allow room to “breathe”
- **CLOSED**: is virtually airtight and watertight, even under hurricane conditions

---

Vanes opened at this angle will keep out the average rain shower but permit near-maximum ventilation. Interior of this porch is shown at left on opposite page

Vertical-louvered jalousie in partition between private offices. Such position eliminates need for several windows mullioned together; also improves air distribution through inner office. Obscure glass panels are used for privacy.

Practical as well as decorative, this interior partition allows through-the-building ventilation when desirable

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here's how
one custom builder
operates

an American Builder interview

Most economical operation for the small volume builder is to buy his material from his local retail lumber dealer and stick with the same family of subcontractors. That's the business approach of E. Harold Johnson, Minneapolis builder. This year Johnson is president of the Minneapolis Home Builders Association, one of the few small builders to hold that office in a large metropolitan organization. One of his houses is featured as this month's blueprint house, see page 34.

Questions and answers:

1. What design are you now building?
   "We are building the ranch type house. People do not want extreme contemporary design. I guess there aren't enough who like it."

2. Where do you get your plans?
   "Most plans that we use are originated by us. I mean we have a designer who works with buyers and prospects. I don't have the time to draw plans. The designer can also figure load limits and other technical data."

3. What is the biggest headache of a custom builder?
   "Financing is our biggest problem as it always has been and probably always will be. Most of our clients, however, have large enough equities in their old property to buy or they might have enough cash."

4. Where do you obtain your financing?
   "Before we start construction we make application to a home loan concern for commitments."

5. Do you ever explore other sources of financing?
   "No, so far the savings and loan money has been available. Government programs require too much red tape and we have had trouble finding VA and FHA money."

6. Do you have any problems with financing?
   "We could stimulate more business if mortgage bankers would have a longer viewpoint. I would like to see longer amortization periods, lower down payments and start of the trade-in."

7. What down payment do you require?
   "We must have 40 to 45 per cent. I would like to see the requirements drop to one-third down."

8. Do you ever do any speculative building?
   "At the present time we are doing 50 per cent speculative building. We get mortgage commitments on these after construction."

9. Why do you do that much speculative construction?
   "That is the starting point we need to build the custom work. We can show the speculative job even though we are going after custom work. It also keeps our crews busy."

10. How do you obtain land?
    "We purchase our land and have a land planner design the plot for its greatest use. We do this before we submit project to the city."

11. How do you finance the land?
    "Many times the owner wants his money over a period of time due to the tax situation. We take title to the individual lots when we start construction. Of course we option the whole plot. We then use either a 'contract for deed' or 'purchase money mortgage' system to obtain the land. A 'contract for deed' is where the land owner keeps title after we pay down payment. We get deed when lot is paid in full. On a 'purchase money contract' we take title to the land after paying down payment, owner holds mortgage."

12. How do you sell houses?
    "Rarely have we had to advertise a house. Most of our construction is in the open and can be seen by traffic. People see the house and inquire for us. Now, people are beginning to seek us out and our custom work is growing."

13. What are your selling techniques?
    "After someone has shown a definite interest in a house I ask them how they are going to pay for it. If it is a cash deal, we might come down a couple of hundred dollars because we can save two or three months in getting our money. Cash deals are faster. If they need to finance the house, we try to work out the deal. If they haven't enough money for our houses, we refer them to other builders who are building in their price range."

14. Do you use a realtor?
    "We use a realtor in our trade-
    (Continued on page 128)"
custom builder

(Continued from page 127)

in selling as we are not familiar with older houses. We sell our new houses. I've had instances where our carpenters have helped sell houses.

15. How do you work with your subcontractors?

"We do not look for the lowest bid; we want quality. We need it for custom houses. We use the same subs most of the time. We like to stick with them and if things turn up, the sub will take care of it. We are very selective in choosing subs and then stay with them if their prices don't get out of line.

16. Where do you buy lumber?

"We get our lumber from a retail yard. They handle very good grades and do not charge us a premium for it. I like their service."

17. Do you specify products?

"Yes, I am very careful to specify products. I want the best. We get our product information from ads, local suppliers and other builders. We read the trade paper ads. When buyers want a product other than the one we use we sell them on the one we are using. Seldom do we change our brand names to satisfy buyers' whims."

18. Who does your bookkeeping?

"I have a part-time accountant who keeps our books. I pay all bills and save the check stubs and cancelled checks. The accountant uses this information to put everything in the ledger. It costs me $35 to $40 a month. The accountant also handles tax returns, social security, workman's compensation, etc."

19. Do you use any business forms?

"Yes, we have a simple time card. It is the only form we use."

20. How do you estimate a job?

"We call in all our subs and get firm bids on their end of the work. We then figure our costs from recent past performances."

21. How about architects?

Architects usually over-design for the price and try to beat the builder over the head to deliver more house for less profit. I am not going to build for free. We want 13 per cent broken down as 10 per cent profit plus 3 per cent overhead.

(Continued on page 131)
Insulux Glass Blocks go in right along with the rest of the masonry. Here a panel brings needed light for living room and entrance without sacrificing privacy.

Glass blocks are handled in the same way as cement blocks — same mortar, same laying technique... go in at the same time. Two 8" glass blocks can be substituted for one standard cement block.

Here's traditional charm that says "come in, you're welcome." This panel of random clear glass block retains all of the charm of this colonial doorway... adds to its antique feeling.

Glass block "belongs" with wood or brick...

With pleasure...

Here's a kitchen with brightness and cheerfulness built right in. Panels flood working surfaces with soft diffused daylight, yet keep the room shielded from outside view. Soil marks, even splattered grease, rub right off.

whether a home is wood, brick, stucco or stone... whether it is ranch or split level... traditional or modern, it can have the advantages of panels of Insulux Glass Block®. Patterns are available in a wide variety that "go" with any architectural design.

What other material offers you the opportunities to create such interesting, new architectural effects that are so decorative... so useful... yet so practical?

Start to plan now to use this versatile, practical building material in your homes. Write to Insulux Glass Block Division, Kimble Glass Company, Dept. AB-10, Box 1035, Toledo 1, Ohio, and get complete information about the many advantages Insulux can bring to the homes you build.
FOR RADIANT HEATING choose easy-to-bend CHASE® COPPER TUBE

For floor or ceiling radiant heating jobs, architects and builders prefer Chase Copper Tube. It's easy to bend. It's lightweight. Together with Chase Solder-Joint fittings it makes perfect radiant heating installations. You can't beat it for quality, thermal conductivity and corrosion resistance. Write today for FREE 50-page Radiant Heating Book.

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130
22. How do you select color?

“I have a woman who is an interior decorator. She helps a client choose colors and wallpaper. She sells the wallpaper. Her service doesn’t cost us anything.”

23. Are there any disadvantages to being a custom builder?

“Yes, we must do all the work ourselves. I give each job my personal attention. People feel that you are building just the one house. That service to each buyer is important in building up the business.”

24. Where is your office?

“I have an office in the basement of my home. All work is carried on from there.

25. How many people do you employ?

“I employ five people, an office girl, three carpenters and one apprentice. I join the crew if necessary to get a certain job or operation completed.”

A national competition for interior panel door design, sponsored by Ponderosa Pine Woodwork, produced a winning design by Laurence S. Higgins, an architectural design student at the University of Illinois.

Higgins' design is based on the ingenious use of perforated board for the main panels of the door. A back door, for example, may have a solid outside panel with the inside panel of perforated board to which may be applied hooks for hanging various items.

An office passage door may have both main panels of perforated board in an unmatched placement of holes which will obstruct the light while permitting restrained ventilation. The tenant's name and the room number may be applied to the outside panel on detachable plaques arranged to suit individual fancy.

Ponderosa's new design is fully detailed so that it can be mass-produced on existing panel door manufacturing machinery.
ATLAS MORTAR is in a class by itself

says JOHN C. CAVALIER, of the Westmoreland Construction Company, Greensburg, Pa. He especially praises Atlas Mortar for its “plasticity, durability and strength” — and no wonder! It contributed to the excellent masonry work on the new addition to Westmoreland Hospital shown here. Mr. Cavalier adds, “We also like its color and good appearance in the wall.”

Buttery smooth — Masons remark on the exceptional plasticity and good workability of Atlas Mortar. They like the way it responds easily to the trowel.

True, tight joints — Experience proves that masonry units are strongly bonded with Atlas Mortar; satisfactory hardening and tight joints are obtained.

True, tight joints — Experience proves that masonry units are strongly bonded with Atlas Mortar; satisfactory hardening and tight joints are obtained.

Good color of Atlas Mortar makes it a favorite of both architects and contractors alike. Here, it adds to the good appearance of Westmoreland Hospital, Greensburg, Pa.

ATLAS MORTAR has proved itself on large jobs and small and in the laboratory as well. It complies with ASTM and Federal Specifications for masonry cement. For further information write Universal Atlas Cement Company (United States Steel Corporation Subsidiary), 100 Park Avenue, New York 17, N. Y.

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Headlines G-E Summer Cooling

LOU BARBA'S ADS DRAW CROWDS BY FEATURING EXTRA VALUE OF G-E AIR CONDITIONING—STANDARD EQUIPMENT IN $19,800 QUALITY HOMES!

THE BARBA COMPANY, developers of attractive South Gate at Summit, N. J., have not only made G-E Air-Wall Heating and Cooling standard equipment in their $19,800 split-level homes—they're starring it in their newspaper advertising!

DOES IT SELL HOMES? "One of the best sales tools we have," says Lou Barba, partner. "G-E Summer Cooling brings the folks out to look—and helps us close sales. People are beginning to demand year-round comfort, and they buy faster when the brand is one they respect."

WHAT ABOUT COST? Says Barba, "I've been especially pleased that I can have the drawing power of the G-E name—and all its extra sales features—at such reasonable cost. We're way ahead when you consider how G-E.'s flexible, compact units save floor space and fit every home without modifying design." If you're looking for a way to spark home sales, why not check with your G-E Home Heating and Cooling dealer today—or mail the coupon below.

SEE HOW NEATLY the G-E Year-Round Air Conditioner is tucked away in a tiny alcove. With over 190 models to choose from, you have a size and system to fit any home—as you design it! Cooling from 2 to 5 tons. G-E electrical refrigeration system backed by 5-year protection plan.

G-E AIR-WALL* SYSTEM gives extra benefits! Same register delivers both heating and cooling, eliminating high-wall outlets. Homebuyers want features like these: room-wide comfort even in front of picture-windows... no hot blasts or cold drafts for air spreads upward, not straight out... freedom of furniture and drapery arrangement... no carpet-cutting.

For Your Comfort
G. E. Summer Air Conditioned

G-E HOME HEATING AND COOLING WITH AIR-WALL SYSTEM

*Reg. trademark of General Electric Co.
Build it Better... Faster... Cheaper with RUSCO Galvanized Steel PRIME WINDOWS

RUSCO PRIME WINDOWS Are Fully Pre-Assembled — Glazed, Finish-Painted and with Hardware Attached — All Ready to Install in Window Openings!

- In ever-increasing numbers, architects and builders are finding Rusco Prime Windows their best solution to the problem of top-quality specifications within fixed cost limitations.

These unique, ready-to-install windows make truly remarkable savings in installation time and costs. They can be fully installed on many types of construction in as little as 5 minutes per unit! When you consider their low initial cost, plus the elimination of field glazing, painting and fitting of hardware, you can readily appreciate why the installed cost on Rusco is frequently less than that of the cheapest conventional windows obtainable.

Rusco Prime Windows are precision-built of sturdy, tubular galvanized steel, bonderized and finish-painted with baked-on outdoor enamel. Smooth and effortless in operation, they are available with insulating sash (eliminating the need for storm windows—and also MORIZONTAL SLIDE VERTICAL SLIDE) and with Rusco's Fiberglas screens which are rustproof, rotproof, burnproof and never need painting.

For Complete Specifications and Illustrated Catalog, Write Dept. 7-AB-103

THE F. C. RUSSELL COMPANY
Cleveland 1, Ohio • In Canada: Toronto 13, Ontario

RUSCO PRIME WINDOWS

RUSCO HORIZONTAL SLIDE WINDOWS

For Complete Specifications and Illustrated Catalog, Write Dept. 7-AB-103

THE F. C. RUSSELL COMPANY
Cleveland 1, Ohio • In Canada: Toronto 13, Ontario

RUSCO FULVUE PRIME WINDOWS make on excellent treatment where large window areas are desired. Available in 3-panel-high and 4-panel-high types, in a wide variety of sizes. Easily joined in series with Rusco's simple, non-bearing mullions.

RUSCO HORIZONTAL SLIDE WINDOWS ideally meet design and construction requirements for high window placement, such as in ranch type homes, above sinks, bath tubs, etc. Provide added usable wall space.

THOUSANDS OF RUSCO PRIME WINDOW INSTALLATIONS have been made throughout the United States, Canada and Alaska on every type of construction from low-cost housing projects to the finest custom-designed homes, apartments and commercial establishments.

AMERICAN BUILDER
Consider this important fact: Medusa White, the original white portland cement, has been used by builders in America’s finer stucco homes for forty-six years. No other white cement has such a service record. Consequently when you use Medusa White for stucco you know in advance that you are going to get a white cement that is dependable . . . diamond blue white in color—not pink—not yellow . . . that can be tinted to any color you desire. Furthermore, Medusa White’s exceptional plasticity enables you to attain a stucco finish that harmonizes with other building materials. Stucco made with Medusa Waterproofed White Portland Cement has amazing, non-staining properties. Water-carrying dirt is repelled at the surface instead of being absorbed into the stucco leaving a stain when it evaporates. For Finer Stucco you can depend upon Medusa White!
TRUSCON STEEL CASEMENTS
Design for lifelong service with this versatile steel residential window. Made from 1" sections of heavier than average weight—less likely to twist out of line. Extra depth glazing ledge for additional ventilator rigidity. Bonderized to increase resistance to rust and provide superior base for baked-on prime paint. Quality rato operators hold ventilators in any open position. Window frame is tapped to receive screen and storm sash. Available from warehouse stocks.

Specify Truscon “Highest Quality” Residential Building Products

TRUSCON ALUMINUM CASEMENTS AND AWNING WINDOWS
Design to modular dimensions with Truscon's new Aluminum windows. New range of modular sizes to match standard concrete block dimensions and cut costs on labor and materials. Modern horizontal lines . . . increased light and ventilation area . . . stronger, more rigid construction of heavy extruded aluminum sections. Hardware, fittings and operators are either aluminum or stainless steel. Screens and storm sash available for installation from inside. Popular sizes in warehouse stocks.

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TRUSCON UTILITY STEEL WINDOWS
Design for utility value with Truscon Utility Windows of sturdy, durable steel construction. Especially suited for use in basements where extra light is desired, for garages, areaways, etc. Removable ventilator opens in at top. Screens for attaching to exterior. Made in just one size to fit a masonry opening 2' 8½" x 3' 6½". In warehouse stocks.

TRUSCON BASEMENT STEEL WINDOWS
Design for lasting service with Truscon Steel Basement Windows. Rigidly built of heavy hot-rolled sections. Double weathering contacts around entire perimeter. Ventilator opens in at top—can be easily removed. Screens for exterior. Available in three sizes from warehouse stocks.

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TRUSCON RESIDENTIAL INTERIOR STEEL DOORS
Design for permanent trouble-free operation with Truscon Residential Interior Steel Doors. Precision-engineered and manufactured of high quality steel, swing doors and frames fit perfectly—permanently. Doors can be installed in considerably less time than normally required to fit and hang a conventional door. Combination of sound-deadening material and closely spaced bracing members inside panels reduces closing sound to a minimum. Four types of locksets for your selection. Swing doors also made with louvers, glass or vision panels. Double-swing doors supplied in a single frame. Popular sizes of all types of Truscon Residential Doors available from warehouse stocks.

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TRUSCON STEEL DIVISION
REPUBLIC STEEL CORPORATION
TRUSCON STEEL RANCH WINDOWS
Achieve modern openness with Truscon's new Ranch Window—handsomely styled in long-lasting steel, especially designed for one-story ranch homes. In larger sizes, it provides an attractive living room picture window, minimizing the "wide open" effect of large undivided glass areas. Medium sizes just right for dining rooms, dens, libraries. Smaller units ideal for sleeping rooms. Ventilators swing outward at bottom. Can be fitted with double insulating glass. Sliding wicket screens available. Popular sizes from warehouse stocks.

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Design with Truscon Metal Lath and Accessories for the maximum in craftsmanship in any plastering program. Truscon offers the exact design, the quality construction and the complete range of metal lath and accessories plastering contractors need to assure a good job and a safe job every time. Made of the finest materials, fabricated by the most advanced methods in the industry . . . accepted by all building codes in the United States. Available from warehouse stocks.

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TRUSCON DOUBLE-HUNG STEEL WINDOWS
Design for lifetime satisfaction with the Truscon Double-Hung Steel Window, the one that's "right at home" in any type of home architecture. For greater rigidity and durability, 18 gauge electrogalvanized steel is used, sash members are of welded tubular construction. Weathertight design throughout features full-length stainless steel weatherstripping attached to frame. Sash and frame members are electrogalvanized, Bonderized and primed with a phenol-resin base paint, oven-baked. Two motor-action spring type balances on each sliding sash assure easy operation. Solid bronze hardware. Full and half screens and storm sash can be supplied. Popular types and sizes in warehouse stocks.

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TRUSCON RESIDENTIAL STEEL CLOSET DOORS
Design for total accessibility with Truscon Residential Steel Closet Doors. They make every nook and corner of a closet readily accessible. They provide more usable floor space. And use of these modern sliding doors saves so much in material and labor! Precision-made of prime quality cold-rolled sheets heavily reinforced for rigidity, Truscon Sliding Doors fit perfectly—indeinitely. Each door equipped with two noiseless nylon rollers, dense felt top guides and rubber bumpers at jambas. Package Units contain two doors, hardware, and accurately punched header, jamb and track sections. Framed Units come with knocked-down frame. 6'8" high doors available in four standard widths from warehouse stocks.

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OF HOME BUILDING

TRUSCON RESIDENTIAL STEEL CLOSET DOORS
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TRUSCON" a name you can build on
IT'S EASIER TO PLAN
with Convertible American-Standard KITCHEN CABINETS

Space like this...
can be converted...
to meet storage needs!

ADAPTABLE TO FUTURE NEEDS OF YOUR CLIENT
... sizes and styles to fit any kitchen layout

Give your clients a feature that only American-Standard cabinets can offer—convertibility. The position of adjustable sliding shelves or drawers may be changed in any undersink or base cabinet, except the 27" base cabinet. Each sliding shelf, shallow or deep concealed drawer can be located at any of four levels. Deluxe exposed drawers can replace doors. Wall cabinet shelves are adjustable on one inch centers. These changes can be made easily—in just a few moments.

American-Standard kitchen cabinets offer you wider flexibility of kitchen planning... give your clients streamlined, work-saving kitchens that can "grow" with their particular needs. There is a wide variety of sinks, and base, wall, utility and undersink cabinets that can be combined to fit any kitchen shape and dimension requirements.

Rugged construction is another client-pleasing feature of American-Standard kitchens. Made of heavy gauge steel, bonderized for long life, the cabinets are smoothly finished in a glossy white enamel that will stay new-looking indefinitely. They are perfect companions for American-Standard sinks—the finest made—which are constructed of rigid cast iron to which is fused a thick coating of acid-resisting enamel, available in five colors as well as white.

For further information about adaptable, convertible American-Standard kitchens, write for the Kitchen Products catalogue—Form No. KP-52.

For further information on American-Standard products see Sweet's Light Construction File.

American Radiator & Standard Sanitary Corporation
Dept. AB-103, Pittsburgh 30, Pa.

AMERICAN-Standard KITCHENS

Serving home and industry: AMERICAN-STANDARD ~ AMERICAN BLOWER ~ CHURCH SEATS & WALL TILE ~ DETROIT CONTROLS ~ KEWAUNEE BOILERS ~ ROSS EXCHANGERS

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Take your choice...or take all three!

Bruce Hardwood Floors

They're naturally beautiful!
When you choose one, or all three, of these Bruce Floors, you give a home all the natural beauty and lasting charm of solid oak...plus smart new styling.

The glamorous Ranch Plank Floor (with alternate widths and walnut pegs) is perfect for rambling, informal homes in all price ranges. Distinctive Bruce Blocks are ideal for modern as well as formal styles, and can be installed over concrete or wood subfloors. A Bruce Strip Floor, of course, has timeless appeal and is in good taste in any setting. It's well to remember, too, that very interesting effects may be achieved by using two or three types of Bruce Floors in the same house.

Specify "prefinished" to save time and money on the job. See our catalog in Sweet's and write us for booklets with color photos of Bruce Hardwood Floors.

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REYNOLDS ALUMINUM
REFLECTIVE INSULATION

Low Cost, High Efficiency ... the Fastest, Cleanest to Apply!

Quick application is just one reason this insulation is "going up fast" in popularity. It takes the least manpower... lightest, easiest to handle. It takes the least space...you can carry enough for a house in your car. It takes the least capital...for material, labor, storage. Yet it does a big job winter and summer. And it's the perfect vapor barrier, too!

Remember, Reynolds Reflective Insulation is pure aluminum foil laminated to tough kraft paper by special pressure-embossing for a firmer bond and better appearance. Reflects up to 95% of radiant heat. Clean, odorless, pliable yet rigid enough to hold position permanently. Ideal for unheated crawl spaces...for radiant-heated and air-cooled installations. Comes in 250 sq. ft. rolls...double-faced (Type B), single-faced (Type C), 25", 33" and 36" wide.

Reynolds Metals Company, Building Products Division, Louisville 1, Kentucky.
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Save 3 working hours a day

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On the El Paso Motel job in Denver, the Hayward & Feller Construction Co. used two B&D Saws—and really cut building time! The company found that by switching to B&D power sawing they saved three working hours a day. In 10 working days, the 30 hours saved was money in the bank for them. The contractors also report that B&D tools have proved reliable, durable, and tops for all-round performance.

With reports like these as typical, it's small wonder builders all over the country specify Black & Decker! Builders like the powerful, B&D-built universal motor in the Utility Saws. They like the light weight and perfect balance for cutting operator fatigue; the telescoping blade guard and instant-release switch for maximum safety; the ball-bearings, heat treated alloy steel gears, and strong, aluminum housings for long life.

For free demonstration, see your B&D Utility dealer. Write for free catalog to: The Black & Decker Mfg. Co., Dept. H663, Towson 4, Md.
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Exclusive FEATURES* and REAL FACTS with ABC JALOUSIE WINDOWS!

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Makes installation easy, foolproof, chip-proof...glass is held firmly in "knee-action" assembly that cannot rattle!

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Perfectly suspended jalousies are smooth-operating...never a strain on moving parts...you can eliminate unnecessary operators because there is no weight to lift!

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ABC Jalousies have acceptance...national advertising makes sales for you...and full sales aids and installation manuals make your job easy!

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WRITE NOW FOR FULL INFORMATION about the jalousie window that gives FACTS and FEATURES to sell with!

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MAIL THIS COUPON TODAY!
You complete homes faster — sell them easier with Roddiscraft Panawall interiors. The builders win — creating interiors that are showplaces, at reasonable cost, and doing the job in less time. There’s no matching necessary with Panawall. The buyers win — getting far more beautiful interiors, saving on installation costs, and having walls that keep their beauty through the years. There is no more “decorating” after Panawall is installed. Costly repainting is ended, messy papering eliminated! It’s the ideal material for use in new homes, and for home modernization.

Panawall is the best of today’s plywood paneling!
Roddiscraft Panawall is genuine hardwood plywood, made of random-width veneers V-grooved at the joints. Looks like costly solid wood — costs only a fraction as much. 4’ x 8’ x ¼” panels simplify new construction, or can be installed over existing walls.

Get the facts on Panawall now!
Learn how Roddiscraft Panawall can help you build faster, sell easier. Clip and mail the coupon for complete information.

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Precision forms lower costs and speed production for monolithic poured structure

precision forms speed construction of concrete buildings

Reinforced monolithic construction, dream of many building professionals, has taken another step forward. For now Tom Jelks, Lawton, Oklahoma, builder-manufacturer, has invented special forms which speed erection and impart architectural beauty to the face of the concrete wall. Jelks also claims solutions to other age-old problems: high cost of forming and dampness in the wall.

Jelk's system utilizes special forms made by him in 4-6- and 8-foot sections, two feet high. These forms are set on the foundation wall and leveled. Each form is equipped with a leveling bolt at each side and after the first set is in position, the concrete is poured. The next operation is to place another set of forms
on top of the first and then pour these. Three or more sets of forms are used for best results. From this point the wall is progressively raised by first stripping the lower form and then setting it on top.

Jelks warns that care must be exercised after the forms have been stripped from the lower extremities of the wall. The exposed concrete surface must be kept moist until it is cured.

Provision for window and door openings is made at the time of pouring. A special frame encases a metal window unit, allowing it to be placed in the form so that the concrete can be poured around it. Corner sections are rolled steel forms which are tied to the regular form.

The exterior walls of an average-sized house can be erected in 3 to 16 hours with a crew from 6 to 10 men. The crew moves the forms, prepares the mix and fills the forms.

Scoring the face of the wall is the architectural keynote of this poured-in-place method. Jelks has patterns resembling brick and many other types of parallel, horizontally scored bands. Aluminum half rods, attached to the face of the forms, leave the scored depression.

Dampness in the wall has been overcome, according to Jelks. He uses Styrofoam, a rigid insulation material, which he mortars to the inside of the wall. The material serves two purposes: as an insulation and as a plaster base.

**House Construction**

The lot is leveled, footings are laid out and then excavated. Grade...
Roof trusses are bolted to the poured-in-place wall. Bolts are placed in position when concrete is poured.

and the slab poured. After the exterior wall is erected, roof trusses are raised and roof sheathing nailed in place.

Interior walls are conventional stud and plasterboard or plaster. These are designed for a 4-inch module and are shop-fabricated and trucked to the site.

Jelks recently completed ten houses in Lawton and sold them the first week even though, as he puts it, “There were hundreds of vacant houses at the time.”

Using the progressive forming method, Jelks has built houses, schools, gymnasiums and commercial buildings. He now plans to manufacture the forms and set up franchises throughout the country.
Today's home builders demand both 

**Comfort and Beauty**

**B&G Hydro-Flo Heating**

with baseboards or radiant panels provides overall sunny warmth ... permits full decorative freedom

Homes with large glass areas present a special heating problem—easily solved with radiant B & G Hydro-Flo Heating. This forced hot water system permits proper placement of the heating units to protect against icy downdrafts from the windows and to keep floors warm.

B & G Hydro-Flo Heating provides not only a better quality of heat but better controlled heat as well. Every change in the weather is automatically met with a corresponding change in the heat supply. No fuel-wasting overheating—but always plenty of heat when the thermometer hits bottom.

**All year 'round domestic hot water**

An abundant supply of domestic hot water is a genuine necessity in the modern home. The Water Heater of a Hydro-Flo System provides an ever-ready supply, 24 hours a day, winter and summer ... at amazingly low cost. Plenty for automatic washers, bath, showers and every household use.

**Snow melting an optional feature**

Pipe coils can be installed under the sidewalks and circulated with hot water from a heat exchanger connected to the boiler. Snow is melted as fast as it falls ... ending a back-breaking job. A snow melting installation can be made when the original heating system is installed or at any time thereafter.

**Bell & Gossett Company**

Dept. DD-11, Morton Grove, Illinois

Canadian Licensee: S. A. Armstrong Ltd., 1600 O'Connor Drive, Toronto

OCTOBER 1953
For the fiscal year ending June 30, National Homes' volume of business showed an increase of 27% over the previous 12 months. During that same period the home building field remained virtually static.

And this sensational gain was registered on top of National's already dominant position in the field. It might be easy for a small company to do 27% more volume, but when the leader does it—that's amazing!

If you haven't stepped up your business in the same ratio, investigate the profit opportunities in a National Homes dealership. Your area may be available. Write or wire today.

Charles M. Goodman, AIA, is now exclusive Architectural Counsel for National Homes. This internationally famous architect will help you sell more houses as a National Homes dealer-builder, by giving you a still greater variety of space-setting plans and designs. This exclusive National Homes feature further adds tremendous sales appeal!

Now—Air-Conditioned!

Any new National home may now be ordered completely air-conditioned at unbelievably low cost—only $500 additional for the small and medium-sized homes, $600 for the larger models, with just a very slight increase in the down payment. And this health-giving feature annually averages only a few cents per day to operate.

GABRIEL HEATTER, called America's No. 1 Salesmen, is now on the air for National Homes, coast to coast. Listen to his new program, "Good News Today"—every Monday, Wednesday and Friday morning over the entire Mutual Network. Just think how Heatter's dynamic personal selling could build business for you as a National Homes dealer!

SOUTHWESTERN BUILDERS!

You are invited to see new "RANGER" series of National Homes, introduced at Texas State Fair, Dallas, Oct. 10-25. A complete house of the "Ranger" series will be on display just inside main entrance, General Exhibits Bldg.
You can add this note of quality to your homes—without paying a price premium!

MORE AND MORE BUILDERS ARE PUTTING Silent Automatic IN THEIR PLANS!

Here is a name customers know... priced for builders with an eye to value!

Let your customers know that you build quality homes! Install Silent Automatic—the heating equipment they know and can rely on for dependability!

A handsome Silent Automatic unit in the home you’ve built is one of your salesman’s best talking points. But you don’t have to pay extra to add this note of quality! Silent Automatic is priced to compete with other makes that can’t offer as much in prestige and resale value.

Look over the complete Silent Automatic line of furnaces, boilers and conversion burners. There are models and sizes to suit your every building need.

Write for the name of your nearest wholesaler!

Put quality heating into all your homes. Write today to National Sales Manager R. E. Loebell in Jackson—he’ll rush you the name of your nearest Silent Automatic Heating Equipment Wholesaler.

Silent Automatic HEATING EQUIPMENT

TIMKEN SILENT AUTOMATIC DIVISION
THE TIMKEN-Detroit Axle COMPANY
General Offices, Jackson, Michigan
2 New Models

BOTH Double Bowl Beauties
—each practically a complete kitchen in one unit!

It's a cinch
to lick the competition
with these

ask for data now!

STAINLESS STEEL SINKS
priced like ordinary porcelain

V-84-UMS

V-72-UMS

always
high
sky
quality
down
to
earth
prices

BUILDERS' TACK BOARD

AMERICAN BUILDER
Builders! It's a proven fact!

"Plug-In" Strip sells homes*

KITCHEN — Type CF-2 (constant service) "Plug-In" Strip provides a spread of outlets every 6' along the kitchen work centers. Every appliance has its own outlet.

You know that such conveniences as modern kitchen facilities add real value to a home... increase its saleability. But did you know that there's another way to make your homes even more desirable and at no extra cost? It's National Electric "Plug-In" Strip, the permanent multi-outlet wiring system.

Economical, easy-to-install, "Plug-In" Strip puts your homes years ahead electrically... provides your prospects with all the electrical outlets they'll ever need.

Here's what NE "Plug-In" Strip offers...

- A spread of outlets every 18" all around the room... for lamps, appliances, radio, TV.
- Outlets every 6" for kitchen work centers.
- A choice of electric service—Type CF-2 for constant service; CF2-G for grounding equipment; CF-3 for both constant service and automatic switch control.

Give your homes the added lift that can mean the difference between a sale or no sale. Write for the details on National Electric "Plug-In" Strip today. It's listed by Underwriters' Laboratories, Inc.

EVERYTHING IN WIRING POINTS TO

National Electric Products
PITTSBURGH, PA.
3 Plants • 7 Warehouses • 34 Sales Offices

OCTOBER 1953
**FEATURES**

that add up to

**SALES**

**ADJUSTABLE • REMOVABLE • BALANCED**

**WOOD WINDOW**

---

**THE HEART OF THE “400”**

The metal sash guides and the spring tension units make the “400” an outstanding, fast selling prime window. The sash guides give all weather protection.

---

**REMOVABLE**

Easily removed for washing or repairing.

---

**EASILY INSTALLED**

Takes no more time nor effort than ordinary prime windows.

---

**QUICKLY ADJUSTED**

Two minutes with a screwdriver and the window slides as desired.

---

**METALS**

**BY**

**A. R. B. WINDOW SALES CO.**

**306 E. State Fair Ave., Detroit 3, Mich.**
Take a tip from the gardener, there’s no plant like a hardy perennial. And you can build your plant that way with reinforced concrete. Experienced plant owners find there’s nothing like reinforced concrete construction for real strength and long life. They get, in addition, the beauty and safety that only concrete can provide.

To give concrete proper reinforcement, experienced builders choose welded wire fabric. For only fabric furnishes uniformly spaced steel members for correct load distribution and added strength. Specify Clinton Welded Wire Fabric and meet all A.S.T.M. requirements. Available in sizes and weights for all reinforcing needs.
A trade-in sale nets the builder approximately one-and-one-half times what he could make on the sale of a new house without a trade-in, that's the statement of Richard Hansen of Kenosha, home builder and president of the Wisconsin Home Builders Association. Hansen has been trading for 25 years.

"What difference does it make," asked Hansen, "if you speculate on the new or the old house?" The new house is no problem when trading. The large equities in the old house make financing the new house easy. A builder who can arrange financing on the old house can add dollars to his business. "It's the cream of the crop," according to Hansen.

Hansen uses the "Trade-In Guarantee" method. (The Trade-In Guarantee method was fully explained in the original trade-in article appearing in the July, 1953 American Builder. The Trade-In Guarantee allows a buyer a certain pre-determined value for his older house if it has not been sold by the time the new one was completed. Every effort is made to sell the older house during the construction period.) In the past six years, Hansen has not taken in one house. In every case he has sold the old one before the new one was completed.

This Is How He Does It

As soon as the sales agreement is signed, whereby Hansen will build a new house in his subdivision, he will begin listing the older house. Hansen will not trade on existing new houses, only on ones to be built. If the older house is sold before the new house is completed and if the buyer of the older house wants immediate possession, Hansen will move the buyer of the new house into a rental. He charges a nominal $60 per month until the new house is completed. Hansen doesn't believe in turning buyers of older houses away because they can't get occupancy. Providing a place for the buyer of the new house is one of the keys to the trading operation.

Watch Your Real Estate Values

Biggest pitfall in the trading business, according to Hansen, is guessing at real estate values. "Competent appraisals mean success," stated the builder. In fact, Hansen, who is a qualified appraiser, is so certain of his figures he guarantees 90 per cent of the appraised value. Hansen warned, however, that most builders had better offer 85 per cent if they are not experts. The 85 per cent figure was recommended by the American Builder in its July kick-off article on trading.

How To Appraise

Appraising, as outlined by Hansen, includes three steps. These, he states, are used by most appraisers. The average, or mean, of the three is the correct value.
Both houses pictured were built by Hansen. The owner of the house on the right wanted to trade for a three-bedroom model. He paid $10,000 for the older house with garage in 1948. In 1952 the house sold for $12,500. The new three-bedroom house for which he traded cost $13,500. Owner had a $5,500 equity in the older house which was applied to the new house. He took a $8,000 Building and Loan mortgage. Upon hearing his neighbor talk about this deal, the owner of the house on the left also wanted to trade. In 1948 he paid $9,200 for the expansible. He completed the second floor and raised the value to $12,000. His new home was priced at $13,500 and his equity and mortgage plan were the same as the example above.

1. Cubic Foot Appraisal:
First determine the cubic-foot content of the house and multiply it by the area value for certain type structures. The unit factor could not be given by Hansen because it differs in all parts of the country. After the total is reached, subtract one per cent per year for age of the house. Square-root figures can be used as well as the cubic-foot figures. The cube figure in Kenosha is 62½ cents.

2. Comparable Prices:
Builders can take into account recent sales of like property in the same vicinity. These are a good indication of values.

3. Tax Assessor Figures:
The city or township tax assessor is doing a better job today, according to the Wisconsin builder. The assessor's figures, multiplied by a constant, will produce a realistic value for older property. However, areas differ as to what the constant might be. In Kenosha the constant is nearly 220 per cent.

Unforeseen Conditions Affect Appraisals
Other unseen problems can crop up to affect appraisals. Hansen tells the story of the house that could be sold only in the winter. It seems the house was a couple of blocks from a lighted baseball field. Almost every night in the late spring, summer and early fall, autos belonging to the baseball crowd would park in front of the house. Noise and lights made the area unfavorable. Amusement centers, air fields, and certain types of manufacturing plants can adversely affect property values.

Overcoming Owner's Unrealistic Values
Hansen, like most builders who are trading, frequently comes face to face with owners who place the value of their property way out of line. His method of bringing them down to earth is unique. When he sets up a trading deal he does not ask the $64 question. He doesn't want to know. Hansen makes a complete appraisal. Then he goes back to see the buyers for their estimate.

A typical example is one where he made an appraisal of $13,500 yet the owner wanted $15,000. Hansen asks, and usually receives, an exclusive 60-day listing at their figure. He tells them, “If you are right and I am wrong, we will sell the house for $15,000. But if it's not sold in 60 days, then I must be right and we will use the $13,500 figure. If you want my trade-in deal, that's how we will do it.” It works.

Hansen is a small builder. He builds 15 to 20 houses a year and makes five to ten trades. He sums up the operation this way, “Builders should have this type of service and they don’t need to go to poorhouse.”

Hansen guaranteed this buyer $13,000 and sold the house for $14,000. New house was priced at $17,000. Buyer had an $8,200 equity in the old house which he applied on the new one.

Older house was built by Hansen 28 years ago. It sold quickly at $12,500. Hansen moved the buyers of the new house to his rental while they waited for their new $14,200 house to be completed. The deal was cash in both cases.
Now you see it...now you don't

NEW AMWELD Slide-away

POCKET DOOR AND FRAME UNIT

A SPACE SAVING SOLUTION for "door swing" problem areas

The new Amweld Slide-Away is an attractive steel flush door when closed — yet it completely disappears by gliding into a hidden wall pocket — out of sight — out of the way. Operation is smooth and silent with no obstruction to room or hall space. It is the most practical answer for floor plans where "swing" may not be conveniently available.

EASY-TO-INSTALL

Designed for use with standard Amweld Steel Flush Doors — it can be installed without mortising or drilling. The Slide-Away Frame Unit is also available separately for use with wood doors. Complete step-by-step instructions furnished in every carton. Factory primed with grey baked-on enamel, Amweld Flush Doors are ready for your choice of colors.

See Your Authorized Amweld Dealer

He will be glad to discuss your door problems with you and show how the Amweld Slide-Away as well as Amweld Steel Doors, Frames and Sliding Closet Door Units can save you money. Contact him today.

The American Welding & Manufacturing Company
310 Dietz Road  •  •  •  Warren, Ohio

156 American Builder
NEW SHATTERPROOF TRANSLUCENT REINFORCED GLASS-FIBER BUILDING PANELS FOR STRUCTURAL AND DECORATIVE USES WITH EXCLUSIVE, DISTINCTIVE RIBBED DESIGN SO EASY TO INSTALL.


THE NEW SHADES — "FROSTED GREEN" AND "COPPERGLO" — ESPECIALLY CREATED FOR PATIO USE WHERE GLARE AND HEAT ARE UNDESIRABLE. GIVE RESTFUL, GLARE-FREE LIGHT. HEAT RAYS SCREENED OUT BY EXCLUSIVE NEW CHEM-O-FILTER COMPOUND "XO." ALSO IN NATURAL BLONDE AND MARBLED YELLOW. COLORFUL. COLORFAST. VIRTUALLY INDESTRUCTIBLE.

CHEM-O-GLAS (pronounced Kem-O-Glass) is precision molded in 8' lengths, 32½" wide, 132" wide from c/c of outside ribs when overlapped. Some jobber-dealer territories still open. Write today.

HUNDREDS OF USES

No need to paint—or repaint—ever!
"Your first cost is your last cost"

CHEM-O-GLAS UPS SALES — Outdoor showroom of J. A. Eisele Sales, Inc., one of west coast's largest Lincoln-Mercury dealers, showing utilization of CHEM-O-GLAS ribbed structural panels as roofing for structural steel carports.

CHEM-O-GLAS is available in flat sheets or the distinctive new RIBBED design. Many architects and builders have found ribbed CHEM-O-GLAS the answer to inside and outside structural and decorative problems where canvas, porcelain, tile, wood, plastic, glass, aluminum or plywood have proved impractical. Inquiries invited.

CUSTOM MOLDING: Manufacturers are invited to submit production problems to us for estimate.

Write for information today

CHEMOLD COMPANY, DEPT. AB-10
2310 Broadway, Santa Monica, Calif.

Send details on CHEM-O-GLAS

NAME_________________________
FIRM___________________________
ADDRESS_______________________
CITY___________________________

OCTOBER 1953
Mixing chopped Fiberglas yarns with gypsum plaster helps makers of gypsum wallboard to almost double the board's impact resistance!

Fiberglas reinforcements are used in gypsum wallboard to replace such conventional fillers as cellulose fibers, cork, wood pulp, etc. They permit significant product improvement at no increase in price.

Previous to their adaption into the general line of gypsum board, they had been used to increase the fire resistance ratings of special gypsum boards by as much as 300%. They proved ideally suited for this application because they do not burn, because they retain their great tensile strength even at high temperatures and help reduce shrinkage of the gypsum core.

Improved flexibility. Fiberglas reinforcements help hold the board's gypsum core together, increase its flexural strength and resiliency. Means easier handling, greater resistance to cracking, chipping of edges and other damage.
For tougher gypsum wallboard:

"Season well with Fiberglas® yarns"

You'll be hearing a lot before long about this new, improved gypsum wallboard. For this is gypsum board that's been "seasoned well with Fiberglas yarns"—a board that builders say is tougher, better to nail, longer-lasting than gypsum board has ever been before!

It's the chopped Fiberglas yarns that make the big difference. They're light, incombustible, rotproof. Above all, they have exceptional tensile strength.

When chopped and mixed with gypsum plaster, these Fiberglas yarns form a reinforcing network which holds the gypsum core together—gives the board added resistance against impact... improved nailability... greater resilience.

MORE AND MORE
PEOPLE ARE TALKING
ABOUT THE NEW
FIBERGLAS-REINFORCED
GYPSUM WALLBOARD
Do you have all
the facts?

Owens-Corning Fiberglas Corp.
Textile Products Division, 16 East 56th Street, New York

FIBERGLAS
leading a great new industry forward

*Fiberglas is the trade mark (Reg. U. S. Pat. Off.) of Owens-Corning Fiberglas Corporation for a variety of products made of or with fibers of glass.

Better nailability. Fiberglas-reinforced gypsum board is less brittle, doesn't flake as readily during nailing. Nails hold better, too; reduces likelihood of unsightly pop-ups by nailheads. Installations look better... longer.

Cut-outs break clean. Trimming out for electrical outlets, etc., is easier, neater, because the Fiberglas reinforcements help keep the gypsum core from chipping off. Reinforced board is easy to score-and-snap or to saw.

Resistance to shock. The high tensile strength (well over 200,000 psi) of the filaments of glass from which Fiberglas reinforcements are made helps give Fiberglas-reinforced gypsum board up to 89% greater resistance to shock.
An original Hall-Mack idea, this new Concealed Toilet Paper Holder is the extra touch of convenience and charm that makes a home more desirable... more saleable! Only the finest materials and craftsmanship go into bathroom accessories bearing the Hall-Mack name.

In Hall-Mack's complete line of bathroom accessories you'll find a number of original developments with the kind of special appeal that sparks up an entire bathroom... and conveys the impression that the entire home is the result of careful thought and planning.

May we send you complete information on Hall-Mack's new Concealed Toilet Paper Holder... and on other exclusive Hall-Mack bathroom accessories?
All over America contractors and builders have been asking for standardized hollow-metal doors combined with hardware to assure trouble-free service.

Ceco accepted the challenge and now presents a new hollow-metal door line with standardized name-brand hardware.

Here are three standardized doors that you can use in architectural and commercial buildings, as well as industrial plants. Here are doors engineered and prepared for proper attachment of hardware—saving you installation time. And Ceco offers the widest hardware line...suitable for all three doors.

Interchangeable muntins, panels and hardware plus reversible doors mean quick delivery from stock.

The end result is lowest cost—with doors and hardware made for each other, furnished by one responsible source.

This is another example of Ceco broadening its building products to better serve builders and contractors. Send for full information.  

CECO STEEL PRODUCTS CORPORATION

General Offices: 5601 W. 26th St., Chicago 50, Illinois
When it comes to **custom kitchens** ... nothing makes as

This New Freedom Gas Kitchen* features an automatic Gas range, made to "CP" standards by the Caloric Stove Corporation.

Cabinets by Mutschler Bros.

Even a man can be "sold" by a kitchen when it holds the new Servel Gas refrigerator with the automatic ice-maker. (Shown above.) It starts itself, stops itself, supplies its own water, makes ice cubes without trays, and puts them in a basket automatically. This dependable refrigerator carries a 10-year warranty.

*Reg. A.G.A.
much sense as gas

So very often, a distinctive kitchen means a pace-setting house. You decide on the picture windows, the service bar, the modern decor and the open rafters. Let Gas supply the range and the refrigerator that can set them all off. Instead of a few range models, you have hundreds — all fully automatic. Ranges that glitter with chrome. Ranges that glow with color. Mammoth ranges that can handle a banquet. Thirty-inch ranges that nestle in a corner. Separate range units that are built into cabinets. Name it — and you'll find it in Gas; the fuel that every woman knows cooks best by every test, the fuel that costs less to install and use. Whether you're building or remodeling, Gas definitely makes the most sense.

A custom home is almost sure to have an automatic washing machine, an automatic dishwasher and extra bathrooms—3 good reasons for an automatic Gas water-heater. The recovery rate of Gas is so much faster that a 30-gallon tank actually gives more service than an 80-gallon tank run by any other all-automatic fuel. An automatic clothes dryer is also rapidly becoming a standard feature in better houses. Here, too, Gas is considerably faster (there's no warm-up period), more efficient. No two ways about it, in every area of every home, Gas is faster, thriftier, more satisfactory.

AMERICAN GAS ASSOCIATION

Your local Gas company will be happy to work with you on any problem.

Only Gas gives you such a big choice of modern models

GAS—the modern fuel for automatic cooking . . . refrigeration . . . water-heating . . . house-heating . . . air-conditioning . . . clothes-drying . . . incineration.
Convertible power equipment like this is relatively inexpensive for small builders to own. With many attachments, it will do many jobs and will quickly pay for itself; save time and money

multiple uses of new convertible POWER EQUIPMENT make it feasible to own

Lightweight tractor, shown doing backfill with front-end loader. weighs 2,500 lbs., costs $1,700 without attachments. Loader carries heavy weights, excavates, grades and loads trucks

Lightweight rubber-tired tractor with power digger attachment is used to excavate, to dig ditches and to load trucks. This power digger adds about 1,750 pounds to basic unit
BUY YOUR OWN convertible power equipment and save time and money! This is the conclusion of many small-volume builders today. The small-volume builder who constructs from 25 to 75 houses a year has found that it is now feasible to invest capital in new machinery which will do many jobs for him that he formerly had subcontracted for.

Convertible power machinery consists of a basic tractor unit to which various attachments can be easily fastened. With some of this equipment, the small-volume builder is able, at a relatively low cost, to purchase the basic tractor unit and the many attachments that will enable him to dig basements, grade new streets, do rough and finished grading, dig trenches, lift material, and transport and move earth.

American Builder research, in talking to both manufacturers of convertible equipment and to small-volume builders, has found that many of these builders have purchased convertible power equipment and are using this machinery with great benefit to their businesses.

Take the case of Victor Baron of the Cosmic Construction Company, Orland Park, Illinois, for example. He and his partner, Hans Schaller, make up a building (Continued on page 166)
Because of its light weight, pale color, even grain and small tight knots, this softwood has a particularly wide range of uses, from rough construction to interior finish and fine cabinet-work. Easy to work, nails without splitting, and holds nails and glue firmly.

This is but one of ten fine softwoods from member mills of the Western Pine Association. All are manufactured, seasoned and graded to exacting Association standards. Lumber dealers, builders, architects and wood users have found them dependable and best for many construction uses.

**THESE ARE THE WESTERN PINES**
- 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

Write for free illustrated Facts Folder about Engelmann Spruce.
Address:
Western Pine Association,
Yeon Building,
Portland 4, Oregon.

Another crawler-type tractor that lends itself to convertible equipment. This one weighs about 6,000 pounds without front-end loader: sells for about $5,000. With it and attachments, operator can dig, load, carry, grade, spread and trench team who are convinced that by doing their own work with convertible power equipment they have saved themselves time and money.

The Cosmic Construction Company has completed its Orland Hills development and is now at work on a new development called Palos Highlands in which there will be an eventual 120 homes selling for $11,900 to $12,400 each. Most of the homes it builds have no basements. Baron and Schaller built approximately 36 houses in 1952, and they have built 36 houses so far this year. Builder Baron estimates that his company builds about 70 houses a year.

The Cosmic Construction Company owns two pieces of convertible power machinery. It owns a relatively light, rubber-tired tractor with a 1/4-yard bucket in front and a grader at the rear. It also has a fork lift. The company also owns a heavier crawler-type tractor with a one-cubic-yard front-end shovel attachment.

The light tractor is used for various light odd jobs. The crawler-type tractor is used to rough grade, finish grade for lawns, dig occasional basements and move earth. Baron states that this piece of equipment is used to build all of his roads. "In a new development like..."
to give your houses the
extra appeal that makes sales

Stanley
Cabinet Hardware

Your dealer has it now or can get it promptly.

The Stanley Works, New Britain, Conn.
Packaged Chimney Housing
Looks Like Massive Brick

Now...the low installed-cost of a Van-Packer Packaged Masonry Chimney with the sales appeal of a "brick" housing

QUICKLY INSTALLED — Complete packaged masonry sections and chimney housing assembled by two men in 97 minutes.


EFFICIENT, PERMANENT — Develops 34% more draft than standard code brick chimneys. Not a temporary metal pipe, but a lifetime masonry chimney.

NEW SIMULATED BRICK HOUSING — Molded 3/16" asbestos panels brick embossed and pre-painted brick red. If desired, easily repainted on the job to match other brick colors. Massive appearance, measures 16 1/2" x 24". Fits any roof ridge or pitch.

LOW COST — Saves 50% on time and material over brick chimney construction.

IMMEDIATE DELIVERY — Nationally distributed. See your local heating or building material dealer or jobber. Write Van-Packer for full details.

Van-Packer
PACKAGED MASONRY CHIMNEY
WITH NEW SIMULATED BRICK HOUSING

Van-Packer Corporation
Dept. 1210 - 209 S. LaSalle Street - Chicago 4, Ill.
Also manufactured and distributed in Canada by C. A. McRobert and Son, Ltd., St. Laurent, Quebec

Essentially a grader, this piece of equipment can be supplied with a back-end loader and a scarifier. Basic unit without back-end loader sells for about $4,500 and weighs about 8,800 pounds. Rubber-tired, it will do shallow excavating for slab foundations, will grade, level and load ours, if you used the crawler-type tractor for roads alone, the machine would pay for itself."

Baron says that they purchased the crawler-type tractor not quite a year ago and that it has paid for itself by now. "I couldn't get by without it," Baron says. "It saves me time since the equipment is right on the job. It is here when I want it. Sometimes you have to wait a week for a subcontractor."

The most valuable piece of equipment owned by C. S. Foster, a prominent El Paso, Texas, builder, is a 5-cubic-yard crawler-type tractor with a ripper and a backfill. He also owns a heavy-duty crawler-type tractor. Building about 50 homes a year, Foster is representative of the average small-volume builder.

Foster, who is the president of the Home Builders Association of El Paso, conducted a panel discussion at the recent Conference of Southwest Home Builders at Amarillo. There he expressed his opinion that it is best to "own your own levelling equipment. It more than pays for itself in a short time."

One of the points he makes is that very few of the smaller cities in the country have the means to contract sewer and water extensions. Since nearly every city in

A heavier crawler-type tractor that is an excellent piece of convertible power machinery costs about $10,000 with a one-cubic-yard shovel. It weighs about 16,200 pounds, including the shovel. With its many attachments, it will dig basements, bulldoze, backfill, lift palletized material and do some grading.
Overwhelming Preference—**OAK FLOORING’S**

New 4th Dimension Appeals
to Sales-Minded Contractors.

Preference—overwhelming preference—is a 4th Dimension quality of Oak Flooring. It’s a matter of record that on a nationwide basis 86% of all architects, 88% of all contractors, 96% of all realtors, and 83% of all future homeowners prefer Oak Flooring over all other flooring materials.

Oak Flooring has earned its 4th Dimension because, more than any other flooring, it combines lustrous durability and valuable insulating qualities with underfoot resilience for walking comfort.

Oak’s overwhelming preference has real significance for you.

**If you are an operative builder,** you must sell as well as build. Since 88% of the contractors agree that a house highlighted by a good Oak Floor sells more readily, you build-in tremendous sales advantages with Oak. And you’re meeting the Oak Flooring preference of 83% of the future homeowners.

**If you are a custom builder,** you can’t afford to suggest anything less than the best to your clients. And the many advantages of Oak Flooring enable it to meet the specifications of even the most discriminating.

Remember, too, that 96% of all realtors agree that houses with Oak Flooring sell faster. So, you see, Oak’s 4th Dimension—overwhelming preference—means more than the attractiveness and structural worth you have always provided with Oak Flooring.


This mark on Oak Flooring is your assurance that it meets NOFMA standards.
The country is expanding beyond its sewer and water facilities, somebody has to extend these lines and do it in a way that the city can afford.

Foster finds that, with a full line of equipment, he can do this work for the city on a contract basis at much less money than the city can have it done in any other way. The result is that he can do his own grading and trenching, along with what is necessary for the city, and charge off the overhead against himself, giving the city the benefit of a good deal.

Unlike many of the builders described above, there is a large group of small-volume builders who put up as few as 6 to 10 houses a year. These builders subcontract most of their excavating work, but find that it is very profitable to own a small rubber-tired tractor with attachments.

With a tractor of this sort, they can do all of their own grading for roads or driveways. They also find it useful for moving sand and gravel. A post-hole digger attachment saves them much time and money when placing fencing or for the occasional planting of trees and shrubbery.

This is the experience of one typical small builder of the type described above who said that owning a lightweight convertible tractor “saves money just in getting off a job and on another when you want to. So often there is the problem of getting subcontractors when you want them. Owning your own convertible power equipment saves time.”

Asked if he would like to own heavier convertible power equipment like the crawler-type tractor, he thought that if he were to build 50 houses a year, it would be worth his while to buy more equipment. “But,” he added, “what I would buy would depend upon the type of construction contemplated, and other factors like soil conditions.”

Hardly a small-volume builder, Andy Place of South Bend, Indiana, builds about 250 basementless houses a year. He owns a great deal of equipment including some convertible power machinery. But Andy Place is an enthusiastic booster for convertible power equipment and recommends the purchase of such equipment to builders far smaller in operation than himself.

Place feels that “if a builder only puts up 20 houses a year, it would pay him to own convertible power equipment with attachments.” However, the experience of the small-volume builder (6 to 10 houses a year) and the popularity of lightweight convertible tractors seem to prove another point. They seem to prove that a much smaller building schedule than 20 houses a year can make some convertible power machinery pay.
Model Home—sold before it was open

That's the story at Westchester Estates—a new 85 home development on Cleveland's suburban West Side. This new 3 bedroom, L-type Pollman Home was built for a model home showing—a buyer signed the purchase contract two weeks before the doors were open. On opening day, contracts for nine other Pollman Homes were sold.

A wonderful story in today's market? Yes—and Pollman Builders in other areas continue to report similar sales experience. If you are a builder who would like to learn more about this salable line of factory assembled homes, write us. We will be glad to have a factory representative call.

Pollman Homes are designed by noted American house designer, Richard B. Pollman. The popular L-type plan features 3 bedrooms, plenty of closet space and a floor plan that eliminates family traffic problems. If you are located in the Southern or Gulf Coast States, we suggest the Southerner Line of Pollman Homes, designed for warmer climates and manufactured in Collins, Mississippi.

THE THYER MANUFACTURING CORP. 2854 Wayne St.—418½ E. Pearl St. Dept. S Toledo, Ohio Jackson, Miss.
HERE are two strong reasons for "blan-
keting" your homes with Gold Bond
Rock Wool.

1. Gold Bond saves you time and money on
the job. Exclusive rugged construction of
Gold Bond Blankets—rock wool adheres to
both sides of the casing—makes them easier
to handle, speeds installation, reduces tear
and damage in transit and on the job.

2. Your prospects know Gold Bond Rock
Wool. They've seen it advertised, year after
year, in magazines like The Saturday Evening
Post, Better Homes & Gardens, Successful
Farming, Popular Mechanics and others.
When you tell a prospective home-buyer a
house is insulated with Gold Bond Rock
Wool, you've made an important sales point!

Gold Bond Rock Wool Blankets come in
three widths—15", 19" and 23" to fit stan-
dard construction—and in three thicknesses
—Full-, Semi- and Mat-Thick. They meet
FHA requirements.

Ask your Gold Bond lumber and building
material dealer to show you samples of Gold
Bond Rock Wool Blankets.

Another 100% Gold Bond Rock Wool Insulation job—1067-unit Azalea Park,
Orlando, Florida. Other recent 100% Gold Bond Rock Wool Insulation jobs are:
Eastmont Development, 600 Units, Pittsburgh, Pa.; Green Acres, 400 Units, North
Tonawanda, N. Y. and La Salette Place, 550 Units, Houston, Texas.

The fireproof rock wool in Gold
Bond Blankets is adhered to the
casing front and back...won't
slip or sag. Breather strips
give added protection
against condensation.

Fireproof Wallboards, Decorative Insulation
Boards, Lath, Plaster, Lime, Sheathing,
Roofing, Siding, Wall Paint, Textures,
Rock Wool Insulation, Metal Lath and
Sound Control Products.

NATIONAL GYPSUM COMPANY
BUFFALO 2, NEW YORK
One of your best salesmen is the modern convenience of two Briggs Beautyware bathrooms in every home you build. Prospects are sure to be impressed with the functional design and smart lines of Briggs fixtures, as well as the handsome decorator colors. They'll be doubly pleased when they learn that Briggs Beautyware keeps its fresh, sparkling newness for years and years.

Because all Briggs fixtures are acid-resistant, with non-fading colors and tarnish-proof chromium plated fittings, Briggs Beautyware is an asset to any house—gives your customers the assurance of consistently high quality.

No matter what the size of the house, always specify two bathrooms of Briggs Beautyware in color for complete customer satisfaction. You'll sell more homes—earn greater profits—faster!
How to install sliding doors in as little as 6 minutes

1. Mount track to header, keeping face of track flush with opening. (35 seconds)

2. Use template to position carriers, attach with single screw. Mount guide strip on bottom rear. (2 minutes)

3. Hold rear door at angle and engage rollers on bottom of track. Let hang. Do same with front door. (30 seconds)

4. Bottom clearance should be .75. Loosen screw, raise or lower door, tighten. Insert other screw. (100 secs)

5. Open doors. Place floor guide halfway under doors, screw to floor. Move doors and secure other side. (55 secs)

That's all! Time, less than 6 minutes for a pair of bypassing doors! Rocket Sliding Door Hardware goes up fast!

You save twice when you use Rocket Sliding Door Hardware. First on the cash-cost of the hardware, then on the time-cost of installing it.

You get fine features in the Rocket. The handsome self-facing track mounts flush, needs no fascia plate. Headroom is low, nylon rollers are quiet and construction is absolutely sturdy.

Pre-Packaging brings Rocket Hardware to the job complete, protected and cut to standard size. (4', 5', 6' or 8' openings, for single, bi-parting or bypassing doors). Also special sizes.

It all adds up! Low cost, easy handling, fast installation and excellent operation make the Rocket the top seller in its field. See your supplier or write us for full information. Grant Pulley & Hardware Company, 31-63 Whitestone Parkway, Flushing, New York.

For cutting costs without cutting quality...

Grant Pulley & Hardware Company manufacturers of Sliding Door Hardware, Drawer Slides, Sheaves & Track, Curtain and Drapery Hardware, Industrial Slides.
is the distribution system for building products outmoded?

“NO!” says American Builder

Price controls and shortages of building materials during the war gave rise to black markets and gray markets, both of which, by reason of the shadowland in which they operated, tended to circumvent the traditional channels of distribution. Some retail dealers, hard pressed to fill the needs of their builder customers, bought lumber wherever and from whomever they could. Some builders, impatient with their retail suppliers or dissatisfied with prices, resorted to the same practices. The net result was a serious disruption of price structures and supply.

With the demise of price controls and the subsequent resumption of adequate production, reasonable balance was restored. But the seeds of circumvention were sown during the war, and we are still reaping the produce in some quarters. Added aggravation is being visited on the distribution system by slovenly merchandising habits into which some producers, wholesalers and retailers fell during the wartime imbalance of supply and demand, by failure in some places to respect the functions of wholesalers and retailers, and by the inability of some builders to determine their own inventory and handling costs when buying direct.

This is not to be construed to mean that no builder should enter the retail supply business as an economy or that every retailer should see to it that he sells every builder in his community. Some builders should not be sold by service-minded dealers. These are builders who shop for a price regardless of service or the quality of materials. Some builders should enter the retail supply business because they cannot get the service to which they are entitled for the price the retailer asks.

But, in cases where these statements are true the fault does not lie with the distribution system itself, but rather with the people operating it at the local level.

It is obvious that whenever a builder buys directly from a wholesaler or a manufacturer there is a wholesaler or manufacturer who is willing to short-circuit the normal distribution channels. And it is equally obvious that whenever a retailer buys directly from a manufacturer who has wholesale distribution connections, there is a manufacturer who has no rigid regard for a wholesaler. This naturally leads to the question, “Is the traditional distribution system for building products outmoded?”

American Builder, viewing the question in the light of historic fact, seeing the economic need for ever more speed in construction, and appreciating the need for continuing specialization as a tributary to top performance, believes the answer is no.

How did this distribution system of producer to wholesaler to retailer to builder come about? About the time of the Revolutionary War job-site fabrication of practically all building materials began to move slowly away from the field and into the factory. Even with primitive equipment it was becoming evident that structural lumber and boards could be manufactured at a central sawmill and shipped in job lots to the job site for less money than it cost for carpenters to select and cut their own trees and fabricate their own lumber. Slowly this also happened with other materials—glass, screen cloth and nails, to mention a few.

Soon, the lumber mills and others found themselves in competition for business, and faced with the need for selling their output. Direct selling to master builders was economically out of the question. The areas to be covered were too great to permit manning them with mill salesmen, and communication was limited to uncertain mails. It was found necessary to make stocks of materials available locally in warehouses or yards operated by people who could contact the master builders and sell them. With the rapid growth of the country these local stocks were not sufficient, and it was found that shipping great quantities to an area distribution point was economical. Thus, the advent of the wholesaler and the retailer was no accident. Nor was it a device for creating an idle class of middlemen to grow fat on unwarranted markups. It was a marketing necessity from the standpoint of the producer, and a service necessity from the standpoint of the consumer—both the master builder and his customer. As long as the wholesaler carried stocks adequate to the needs of the retailer, and the retailer in turn carried ample inventory for his master builder customers, no one quarreled with

(Continued on page 176)
the two markups between producer and master builder—the markups, of course, always held within reason by the forces of open competition.

It is axiomatic that it costs money for a wholesaler to select materials, provide and maintain warehouse facilities, carry inventory, secure orders, process those orders and make deliveries on time at the area level. It costs money for the retailer to perform the same functions at the local level. And if, as is demonstrably true, these services represent final savings in time and money to the buyer of a new home, whole-

salers and retailers are entitled to respect and protection.

That is the traditional picture, greatly over-simplified, and not taking into consideration other important factors such as installation and performance of mechanical trades products, of which, more later. But the essentials are there, and that is the important thing at this stage of the discussion.

It is not to be implied from the foregoing that the established channels of distribution for building products always ran smoothly until World War II. They never did, and probably never will. But, the fact that the fabric of the system developed and has survived in open competition which quickly eliminates everything outmoded and non-essential, proves that until now, at least, the system has been the most economical. If any better distribution system could have been devised competitive forces would have forced it.

It should be recognized here that there are all sorts of justifiable variations from the complete traditional pattern. These variations are dictated by the nature of the product, location of the manufacturing plant, the market area, and the individual abilities and merchandising theories of the management. To some extent the same is true of wholesalers. As for retailers, many utopian standard plans of operation have been advanced. None has ever been universally adopted, or likely ever will be. Aside from the primary function of all retail lumber yards, that of serving the structural needs of builders and contractors, each community has its own set of special local conditions which determine largely how far beyond the primary function the dealer wishes to or can go. Of more importance, each retail lumber dealer is an individual in his own right, with his own ideas of what lines he should carry and how he should merchandise them.

Until human nature is changed and until the business fabric of every community is a prototype of every other there will be no uniformity of operation in the conduct of retail lumber yards.

To reiterate, the primary business of a retail lumber yard, a plumbing supply business, a heating supply house or an electrical supply concern is to serve builders and contractors by selecting guaranteed branded merchandise, stocking it, selling it and delivering it, and in the case of the latter three, installing and maintaining it.

None of this is news to these types of suppliers or to the producers or wholesalers from whom they purchase. Nor is it news to them that some of them are being circumvented. It is news to no one that these circumventions are a source of annoyance to the entire industry, and of vigorous protest in many cases, especially where they are practiced in violation of announced distribution policies.

So we come to the question of why these irregularities in buying and selling, and what can be done about them. But, before answering either, we should go back to the original question, "Is the traditional distribution system for building products outmoded?"

The answer, in the light of evidence supplied in cases where established dealers and large operative builders do business with each other to the mutual satisfaction of both, is that the system is as economical as it ever was. A number of these cases will be reviewed in a future article. The several cases studied have two common denominators. These are, first, the dealer knows his function and the cost of his service, and, second, the builder anticipates delivery requirements, and understands the costs involved in buying, warehousing and delivering.

Even without such evidence there is no reason to conclude that because transportation and communication facilities, and population density are not what they were in colonial days when the system was set up, present conditions are such that something else should be devised. The development of telephone, telegraph and radio communication, and the growth of fast rail, air and truck transportation have been accompanied by an acceleration in construction speed that is at least comparable. So, the need for ready stocks of building products at both wholesale and retail levels is as great, if not greater than it ever was. It is well known that costs can mount to non-competitive figures on jobs that are delayed because of material shortages at the job site.

The basic function of both wholesale and retail operators is to eliminate any possibility of costly delays. If both are functioning properly the cost of the services they render is less than the cost of delay on account of shortages. And it should follow as an axiom that a retail supplier can purchase, warehouse and deliver for a number of builders for less cost to each builder than if the individual builder performed these services for himself. Where that is not true the dealer may be at fault in one or both of two ways. Or the builder may be at fault.

If the trouble lies with the dealer, he may not know how to perform effective service for a builder. He may not have sufficient capital to enable him to carry inventories adequate for the needs of a fairly large operative builder. If that is true he should either increase his capitalization, discontinue trying to service such a large account, or enter into a joint service agreement with one or two other dealers. On the other hand, the dealer may have sufficient capital, but not know
how to service a large account economically but profitably. Finally, he may have capital and know-how, but not enough sales ability to make a builder see that direct buying is an expense in spite of low prices.

On the builder's side, if the system falls down in a community where there are one or more competent dealers, the chances are that the builder has never sat down and figured ALL the costs of direct purchasing—the time of a man to choose and purchase materials, the cost of warehouse facilities, the cost of carrying inventory, the cost of personnel for these two operations, and the cost of purchasing, maintaining, garaging and operating delivery trucks.

Most of the discontent caused by short-circuiting one or more of the traditional channels of distribution begins with the relationship between dealer and operative builder. The builder is engaged in a never-ending fight to keep his costs down. Somewhere in his scrutiny of cost factors he compares his supplier's prices with the direct-from-factory or direct-from-wholesaler prices. Then he looks at the service he gets, and if he decides that the latter is negligible, he decides either to find ways to eliminate the retail supplier or enter the retail supply business himself. Regardless of which he does, and in a vast majority of cases neither is the right answer, some of the dealers involved are inclined to apply the same kind of reasoning to their wholesale suppliers, or the wholesaler, seeing an opportunity to move in on a direct account, does so. In the end, largely through incompetent operation or bad selling on the part of the retailer, or ignorance of costs on the part of the builder, a chain reaction of disturbance is set off, finally involving producers as well as their distribution factors.

To say that the whole situation can be resolved easily by the retailers' simply standing pat is to overlook the basic cause of the trouble. If the distribution system is as sound and economical as this magazine believes it to be the answer to saving it and making it work to the best interest of the home buyer and home owner is for all of the factors involved to make it their business to understand the problems of all the others. It is only through such an understanding that inefficiency and dereliction can be cured. If the system is right and some of the people operating are wrong, and the evidence indicates that this is true, it is time for those who are wrong but would like to be right to begin studying their own operations and the operations of the people to whom they should be selling. Once the problems on both sides are in focus, adjustments can be made in the interest of mutual economy, and within the fabric of the system as it exists.

Earlier in this article brief reference was made to the problem of installing and maintaining appliances and heating, plumbing, lighting and air conditioning. It isn't only structural materials that are being distributed outside the traditional channels. The distribution of heating and plumbing fixtures, appliances and connections are getting a share of the criticism. Everything that has been said about structural materials applies to these items.

But, in addition, there is the matter of performance of mechanical parts, safety, sanitation, and service after installation. In addition to the distribution economies already explored with respect to structural materials, producers of mechanical items have the problem of performance, and in most places, the obligation to meet rigid safety and sanitation codes. As a matter of self protection, as well as in the interest of the home buyer, these producers have had to develop an elaborate dual system of distribution and installation. When the distribution system for these items breaks down and the builder buys direct, then finds his own installation crews, he is taking a long chance, and so is the manufacturer who sells him direct. If anything goes wrong, and it is more likely to with an unlicensed installation crew, the manufacturer can rest assured that the home owner is going to blame the equipment. A few such installations can cause more lack of prestige than can be regained in years. On the other hand, when it comes time for a financial settlement the builder can rest assured that if the fault lies with his unlicensed crew or crew not approved by the manufacturer, it is the builder who will make things right with the owner.

A lot of criticism has been shouted at the plumbing and heating industries for alleged arbitrariness in distribution and distribution markup, and while the system may appear cumbersome, inhibiting, and at times costly, it does, on the whole, work for the best interest of the entire building industry, and its client, the home buyer. The system's most ardent defenders among heating and plumbing producers likely will not claim perfection for their distribution and licensing plan, but until some better way of protecting themselves, the builders and the ultimate customer comes along, the basic system should be preserved.

As in the case of structural materials, where the plumbing and heating distribution system breaks down the fault lies with the people running the system, and not with the system itself. Here, the proof is not only in the evidence afforded by numerous harmonious and economical relationships that do exist, but in the added fact that disaster and disease from faulty plumbing and heating installations are at a minimum consistent with human frailty where the producer controls handling and installation through the channels he has set up.

Competition for business is expected to sharpen in the next few years. Sharper and tighter competition always means that there is a greater premium on economy. Everybody knows this. But it is questionable if everybody knows that many of the essential economies that will have to be effected are ready and waiting to be realized within the distribution fabric as now constituted. There is no final economy for anyone in a breakdown of the system. On the contrary it needs strengthening through study on the part of all the factors involved. It is not to be denied that the conditions of building today are not those of ten years ago, but nothing that has changed indicates the traditional system of distribution is any less useful now than it has ever been. Indeed, it may be said safely that under tightening competitive conditions those who survive will be those who make the most effective use of the system.
nail streaks on siding

Will you please let me know what to use over nailheads in red cedar siding to keep them from showing black spots and streaks down the boards. I have more trouble with coated nails. I have been thinking of using shellac.

W. F. R., Longview, Ill.

Regarding streaking caused by nails on red cedar siding, we have found that the only way this can be eliminated is by the use of aluminum nails. I believe that where appearance has to be considered, their use is necessary.

is a "below grade sill" practical?

Would you recommend the type of construction shown in sketch at right? Would final drying (shrinkage) of floor members tend to cause corner cracks where an inside wall connects with an outside wall?

I would like to use this type of sill in order to set the house lower into the ground and do away with all steps on outside entrances. E. S. C., Johnston, N.Y.

it is entirely possible for shrinkage cracks to appear at the base.

2. Our interpretation of FHA rulings in this case is not entirely clear. If you take them very literally they call for the plate to be 6 inches above finished grade.

3. Most serious of all is the possibility of the sill and header deteriorating due to moisture and decay. I would question the use of 30-pound felt in this location and feel that a termite shield, possibly metal, would be much more desirable.

Small Homes Council, University of Illinois

how to prevent wall from sweating

I would like to get your idea of how to prevent a solid 8-inch brick wall from sweating on the inside.

The wall is of solid brick construction, 8 inches thick and plastered on the brick. The rooms, two, are heated with a floor furnace.

My idea is to fur out the wall and provide an air space. Any better way would be much appreciated.

F. Q. S., Atlanta, Ga.

To prevent sweating on the inside of an 8-inch brick wall, we recommend that you fur out at least one inch with 1x2 furring strips on the inside of the wall. These furring strips may be placed 16 inches o.c. with a one-inch blanket insulation with a vapor seal applied between strips. The vapor seal is on the warm side. Lap all joints over the face of the furring strips. Any type of interior finish may be applied to furring strips.

C. E. Lund, University of Minnesota
We call this the "Triple-Duty" Utility Room because it serves a three-fold purpose.

Behind the wall at the left, it functions as a regular utility room — with Crane boiler, Crane-Line water heater and Crane-Line water softener performing their duties unseen and out of the way.

Out in the open, it's a complete and roomy Crane-equipped laundry — with Crane Duraclay Laundrette tub, Crane wall and base storage cabinets, washing machine, drier and ironing board conveniently arranged along one wall.

And when not in use as a laundry—zip! A flexible door completely shuts off the laundry area and provides a beautiful garden passageway from kitchen to carport.

Whether shown as a finished room in a house up for sale or just as an idea in preliminary plans, a room idea like this can be a strong factor in closing a deal. And 46 equally modern room ideas—for kitchens and bathrooms as well as utility rooms—are now available in the big, helpful Crane Sketchbook of Ideas. Get your free copy from your nearest Crane Branch or Crane Wholesaler, today.
SAVE TIME...SAVE MONEY...
and do a better insulating job with
Johns-Manville Spintex

Fewer packages to handle!

- When you open a package of Spintex Insulation you'll find 25% more Batts or Blankets than in the same size package of ordinary insulations. That's because Spintex is so resilient it can be compressed for packaging yet springs to designated thickness when packages are opened. When you use Spintex you save money on each job because of fewer packages to handle.

Easier to Install!

- You can install Spintex faster and do a better job of insulation because the batts and blankets are far more firmly felted than ordinary types. They are rigid and strong, hold together, don't "flop" or sag when you handle and apply them. And their remarkable resilience makes them grip the studs or rafters when pressed in place. This saves time and money on every job.

Your choice of Batts and Blankets!

- Spintex Insulation is available in fully wrapped blankets or open faced batts in thicknesses to meet every job budget. Each has a heavy vapor seal backing with projecting flanges for easy fastening. Easy-to-follow instructions for application are printed on each batt or blanket.

Johns-Manville—22 E. 40th Street, New York 16
In Canada—199 Bay St., Toronto 1, Ont.

Johns-Manville
THE FIRST NAME IN INSULATION
weatherstripping storm sash

Being a reduce-the-heat-loss enthusiast in house construction, I fit some of my storm windows in the manner shown in the accompanying sketch. The object, to reduce the cold air infiltration in the space between the two glass units. My questions are:

1. Does the reduction of the ventilation between sash present a condensation danger of rotting sash, sills and frames? There has never been visible evidence of high humidity. These windows do not frost over as much as unstripped ones, in spite of the fact that I have treated the north windows this way.

2. Are there any figures on the effectiveness of weatherstripping outside storm sash in reducing heat loss?

   L. C. C., Sioux Falls, S. Dak.

We do not believe that the use of weatherstripping on your storm sash will present any condensation dangers. Condensation occurs only when too much water vapor or high humidity is allowed to develop within the house. Even if moisture should show on the storm sash after weatherstripping has been installed, it is an easy matter to drill two one-half-inch holes below and above the glass to permit a slight circulation of air which will carry the humidity outdoors.

In answer to your second question, any figures on the effectiveness of weatherstripping outside storm sash would be available through the weatherstripping industry. We believe that weatherstripping would cut down the infiltration slightly in addition to the weatherstripping of inside windows.


too much heat for floors

A client of mine has asked for my advice on a problem concerning the bumpy condition of the asphalt tile laid over a heated, concrete slab.

What is the cheapest and best way to correct this?

G. J. A., Noroton Heights, Conn.

The bumpy condition of the asphalt tile placed over a radiant-heated, concrete slab may be the result of running too much heat through the pipes. Regardless of the heating system used, the surface temperature of the floor covering must not go above 95 degrees F. Also, on all legs of furniture equipment used throughout the home, Armstrong's furniture rests should be placed to eliminate excessive indentation to the asphalt tile.

The only solution to your client's problem now is to replace the bumpy tiles with new material.

Armstrong Cork Company

method of construction for crawl space

I want a concrete floor but over a crawl space. How can this be done? I believe I have seen where a type of block is laid somehow and then the finish floor poured over it.

M. S. B., Rochester, Mich.

By providing a crawl space under the slab, the concrete slab would have to be reinforced and supported from underneath by concrete piers and beams. Another alternative would be to use Flexicore precast concrete slabs spanning from wall to wall or to intermediate posts. The normal manner of construction where a crawl space is provided is to use wood joists and wood floors with the proper amount of insulation under the joist to prevent dampness from the ground coming through into the first floor area.

footings below or above frost line

Please outline the disadvantages of pouring a concrete footing for a one-family home above the frost line. For example, if the frost line is 4 1/2 feet below the existing ground surface, and the footing is poured so that the bottom is only two feet below this ground surface, what is going to happen?

S. O., Bronx, N.Y.

We prefer discussing the advantages of placing the footings at least six inches below the frost line, rather than the disadvantages.

Every well-designed house is planned from the ground up. It should be supported on concrete footings having the proper width, spread and depth.

The footing should be carried down at least six inches below frost penetration. Freezing of the subsoil might well cause the walls to heave and produce cracking in some part of the house. Any unequal movements caused by heaving will have the probable result of distortion, causing doors and windows to bind, plaster to crack, and cracks to form throughout the masonry.

Experienced builders know the proper depth to go in their localities to make footings safe against frost upheaval.
The quality standard of all sash cords

ask the experts

soundproofing partition

The walls of a private office in one corner of a building are 2x4 studded and covered on both sides with 1/4-inch plywood.

Our trouble is sound transmission. Voices in a normal pitch can be heard quite plainly from either side of the wall. Would a blanket insulation in this partition remedy this condition?

H. M., Hardy, Nebr.

The most practical way to soundproof an interior partition is to stagger the studs and then weave a blanket type of insulation between them. This will prevent sounds from penetrating through the wall by eliminating direct contact of facing material with studs.

If the partition is already in place, then we suggest the plywood be removed from one side of the studs and 2-inch batt insulation be installed between the studs, after which replace the plywood. This type of insulation is comparable with a normal plastered wall.

laying subfloors

I have been building in a community where builders are in the habit of laying subfloors, boxing and sheathing in a diagonal manner, claiming that it gives the building more strength. It seems to be a great waste of both time and material and I would like to have your opinion on it. I have been laying my subfloors in this manner but am of the opinion that laying a subfloor straight across the joists gives it more strength. The argument for the diagonal flooring is that the hardwood can be laid either way when the subfloor is diagonal.

C. M. N., La Plata, Mo.

Warping is due primarily to differentials of moisture on the two sides of the door or differentials in temperature or both. Where these conditions are severe and the differentials are large, the likelihood of warping is always greater.

Warping of 1/4 inch on the full length of a door is not considered too serious. This does not mean that all wood doors are expected to warp as much as 1/4 inch. But if conditions are sufficiently severe even a well manufactured door might do so. This is the reason that the guarantee allows for 1/4-inch warpage.

One safeguard which we recommend in any and all cases, is that the door be given a standard water repellent preservative treatment at the factory. It does retard and reduce the effect of moisture on door.

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Recipe For A Face Lifting...

Take an old building...strip off the gingerbread...resurface with smooth marble...add a chaste sign...and accent with Lupton Aluminum Windows. That's what George K. Heebner, Inc., Philadelphia contractors and builders did to get a smart, modern office in an old part of town.

They used Lupton Master Aluminum Projected Windows, whose horizontal lines blend perfectly with the simple exterior. And...that beauty will stay, because of sturdy construction with etched-finish long life aluminum. Painting is unnecessary. Precision fitted ventilators, with full over-lap on all sides, will work efficiently down through the years. Over forty years experience in designing and manufacturing metal windows assures their satisfactory service.

Put Lupton Metal Windows in the list of “Brand Name Products” you install. Their recognized quality will add to your reputation. Available from coast to coast. See the complete Lupton line in Sweet's...look for the Lupton Representative in the Yellow Book of metropolitan areas under “Windows—Metal” or “Sash—Steel”—or write direct for complete information.

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700 East Godfrey Avenue, Philadelphia 24, Penna.
Member of the Steel Window Institute and Aluminum Window Manufacturers' Association

LUPTON METAL WINDOWS
From the days of the ox-team and shanty-boy; the vast, challenging forests, log rafts and driving streams—to the efficient, functional, precise, highly specialized way of contemporary living the Paine Lumber Company has established an enviable record in a century marked by dynamic achievement. For 100 years it has not only kept pace in the Millwork Industry, but has set the pace in the manufacture of doors. The Paine Lumber Company holds every gold medal ever awarded the door industry by any national or international exposition held in the United States—pride marks of structural superiority. The original development of the hollow core flush door is current testimony of leadership. The REZO door started this trend in modern design and remains incomparable in the field.

PAINE LUMBER CO. LTD., Oshkosh, Wisconsin

Structural excellence combined with the pleasing grain of hardwood veneers yields unsurpassed achievement in door manufacture. The illustration on the opposite page shows the versatility of REZO doors. Appropriate in any setting—attractive and functional from core to finished surface,
Setting stake for form in preparation for laying sidewalk. Grade of other form is established by means of a level for fill where soils are heavy and not well drained.

Concrete mix is placed between screeds. Strikeboard used for leveling the concrete.

Excavating and placing of screeds for sidewalk.

Cinders are often used for fill where soils are heavy and not well drained.

how to build concrete sidewalks and driveways

The main requirements for a good sidewalk are: (1) It should be durable. (2) It should be smooth without being slippery. (3) It should be easy to clean and pleasing to the eye.

The width of the sidewalk will vary depending on its use. The walk from the street to the main entrance should be at least four to five feet wide. Service walks alongside or at the rear of the house are usually two to three feet wide.

The first step in laying a sidewalk is to prepare the base. If the soil is well drained, the concrete can be placed directly on the surface after the soil has been thoroughly compacted. If the base is of hard clay or similarly compact earth, a 4-inch-thick subbase of well-compacted, clean, coarse gravel or cinders should be laid between the wood forms.

The thickness of a concrete walk should be four to six inches. If the walk is to be used only by pedestrians, a 4-inch thickness is sufficient, but if automobiles or other heavy vehicles are likely to be moved over the surface, then the thickness should be increased to six inches.

Side forms are made of 2x4 screeds held in place by wood stakes. The top edges of the screeds serve as guides in leveling the top of the slab. The first step is to set one form to line and grade. The other form is located by establishing the width from the first form and then fixing the grade by means of a level. It is good practice to let the top surface of the slab be one inch above the fixed grade. The surface of the walk should be sloped about 14-inch per foot toward one side for drainage, preferably away from the building.

Sidewalks should be laid in one pour. This means that the full thickness of the walk is laid at one time, using the same mixture throughout. The topping is poured integral with the base concrete and is floated to a smooth finish.

Making quality concrete is a simple procedure if a few basic fundamentals are observed. In laying a sidewalk, care should be taken to see that the concrete is: (1) carefully proportioned; (2) properly mixed and placed, and (3) adequately cured.

(1) Careful proportioning means that the concrete mixture should not contain more than five gallons of water per bag of Portland cement when the sand is in an average moist condition. If the sand is very wet, the amount of water can be reduced to 41/4 gallons.

(Continued on page 188)
FIVE-WAY protection is required of an insulation against (1) CONDENSATION, (2) VAPOR FLOW, as well as against Heat Flow by (3) RADIATION, (4) CONDUCTION, (5) CONVECTION.

Multiple accordion aluminum provides this 5-fold protection. It is pre-fabricated to automatically create a “blanket” of multiple alternating layers of air, aluminum and fiber as it is installed.

The aluminum sheets are completely impervious to water vapor. Infiltration under flat, stapled flanges is slight. The scientific construction of multiple layers of accordion aluminum, fiber and air spaces minimizes condensation on or within this insulation. Its slight mass produces little heat storage.

An improved* multiple accordion aluminum, now on the market in the form of Infra Insulation Types 6-Si and 4-Si, gives every fraction of the area between studs and joists maximum protection against heat loss and condensation formation.

Against (1) RADIATION there is high (97%) reflectivity, low (3%) absorptivity and low (3%) emissivity of heat rays. (2) CONDUCTION is low because of preponderant compartmented air spaces of slight density. (3) CONVECTION, outer and inner, is retarded by multiple layers of aluminum and fiber.

The U.S. National BUREAU OF STANDARDS has published an informative and authoritative report on “Moisture Condensation in Building Walls.” This booklet explains the conditions under which condensation will take place in insulated as well as un-insulated walls; what part is played by effective vapor barriers such as metal foils; how to use and interpret thermal-resistance and vapor-resistance fractions. You can obtain it at our expense by sending us the coupon below.

*Patent applied for
The trial batch for sidewalks should consist of one part Portland cement by volume to 2{1/4} parts sand and 3 parts gravel or crushed stone having a maximum size of one inch. If this mix is too stiff, the amount of sand and gravel should be reduced in the next batch. If the mix is too wet, small amounts of sand and gravel should be added in the proportion of 2{1/4} parts sand to 3 parts gravel. If the mix is coarse and difficult to work, the amount of sand should be increased. NEVER CHANGE THE CEMENT AND WATER CONTENT.

(2) Concrete should be thoroughly mixed and then poured directly into previously laid screeds. During the pouring process, the concrete should be well spaded along the screeds. After it is poured, a strikeboard resting on the edges of the side screeds is passed across the surface in a saw-like motion, leveling the concrete. In the event that freezing weather is encountered, the mixing water should be heated so the concrete is between 60 and 80 degrees F. when poured. Materials containing ice or frost should never be used. Concrete should not be poured on frozen ground or in forms containing frost or ice.

To provide for expansion and contraction of the concrete during the summer and winter months, joints 1{1/2}-inch thick should be placed where the new walk meets such fixed objects as foundations, street lights, fire hydrants, driveways, etc. Expansion joints should also be provided where sidewalks intersect and at curbs. Contraction points should be provided at about 5-foot intervals for the entire length of the walk. These are made with a trowel by cutting grooves about one-third the depth of the slab. These grooves are then finished with a grooving tool.

(3) Several hours after the concrete is poured, or when the sheen or shiny film of water has disappeared, the walk should be finished with a wood float to produce an even, gritty surface. New concrete must be protected from freezing, and should be kept above 50 degrees F. for at least three days after pouring.

To assist in curing, a covering of moist sand, earth, straw, burlap or similar material should be placed on the concrete as soon as it has become sufficiently hard to resist marring. This covering is kept continually moist for at least three days, and may then be removed and the sidewalk put to use.

**Driveways**

Preparation of the soil base is one of the first steps in the construction of a concrete driveway. This consists of leveling the base and staking the wood forms in which

(Continued on page 266)
CECO HAS ACHIEVED AN EXACTNESS IN INTERMEDIATE WINDOW DESIGN THAT MEETS THE NEED OF THE PRESENT...

SETS THE PATTERN FOR THE FUTURE

It's easy to make a cheap product and it's easy to over-manufacture. But it requires ingenuity and infinite skill to create the ideal of quality and selection without compromising value or indulging extravagance.

Only CECO offers you 1 1/4" and 1 1/2" intermediate windows

For years Ceco engineers have been experimenting so as to give you the "just right" window. Today we can announce mission accomplished in the two new Ceco creations...

1 1/4" Intermediate Windows and 1 1/2" Intermediate Windows,

For here are two windows that can be adapted to any building problem where intermediate design is indicated. The 1 1/4" window gives you weight and strength plus beauty at a sensible price. Hardware is handsome bronze lacquer finish. The 1 1/2" window assures greater strength and rigidity, adequate for any need, longest trouble-free service, will outlast any structure. New beauty is reflected in rich solid bronze hardware.

In these new windows Ceco has reached deeply into the future to bring you truly balanced design plus an innovation in simplicity... an exactness you can find nowhere else.

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Ceco Product and Design Specialists will assist you in the application of Ceco building products at the pre-planning stage... Call your nearest Ceco office for overnight consultation service.
SURFWOOD. When you want the rustic touch in a den, boy's room or TV room, try new Surfwood. It's the Weldwood with 3 dimensions which adds depth and warmth to any room.
NOVOPLY. Newest Weldwood product for wall paneling is Novoply. Its rich mosaic textured look has become a decorator’s favorite. This paneling, in rich pine or glowing California redwood, is also ideal for sliding doors and built-ins because it is known as “the flattest panel ever made.” 3/16” and 1/2” thick; good both sides.

PLANKWELD. It’s beautifully factory pre-finished, comes in Honduras or Philippine mahogany, birch, walnut, oak or Hazelwood. Put it up and your job is done. No on-the-job finishing. Special edge grooves conceal nails and unique metal clips make your installation job easier.

Whether you’re remodeling old homes or building new ones...

Low cost Weldwood adds the beauty that sells

Beautiful wood paneling goes up easily... adds charm and distinction... and is guaranteed for the life of the building.

If you are one of the many thousands of builders who are cashing in on the growing remodeling and modernization market, Weldwood is an ideal product for you. Whether you’re remodeling old houses or making additions to newer ones, these beautiful wall panelings—which are guaranteed for the life of any building—make your job easier and keep your customers satisfied.

Take pre-finished Plankweld, for instance. Whether you install it in rich Honduras mahogany or any other of the five beautiful woods, it goes up directly over plaster or dry wall without firring.

Your job is also easy with Weldwood Novoply, Weldtex, Surfwood, or any beautiful Weldwood hardwood because sheets come in large sizes right for almost any job.

But best of all, when you panel with Weldwood, you give your customers real wood—beautiful, lasting wood which fits with any decorating scheme, needs little or no costly, frequent redecoration and which gives you a job you’ll be proud of.

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WELDTEX. Builder favorite—and increasing in popularity—is patented Weldtex—the wood with the grooves. Goes up fast, easy to paint or lacquer; low in cost.

BEAUTIFUL MENGEL DOORS add rich dignity to any home. All Mengel doors are engineered for maximum strength, give lasting satisfaction, yet are economical.

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AR-10-53
how would you do it?

**ideas for the man on the job**

**use dowels to tighten loose hinges**

Remove casing near loose hinges. Bore \( \frac{1}{2} \)\text{-inch} hole exactly opposite each screw hole. Insert \( \frac{1}{2} \)\text{-inch} dowels and then replace screws. Screws will then be able to anchor themselves more tightly.—V. Shearer, York, Pa.

**use this jig to place plaster grounds**

Here is a method of applying plaster grounds for interior doorways of frame construction. After the inside door opening is framed and gypsum lath is applied, use this jig as a guide to apply wood lath around the door opening. The lath will serve as plaster grounds to insure the correct wall thickness, and will help to make sure that the wall surfaces are plumb.

Apply the gypsum lath first. Then tack the jig to the inside bottom of the door opening. Use a level to plumb the sides of the jig. Then tack the top of the jig to the frame. Tack the two pieces of lath to the frame. When one side of the door is finished, repeat the process on the opposite side. Then remove the jig and apply header strips flush with both vertical strips of wood.—A. Kucharski, Akron, Ohio.

**how to make a straightedge for concrete work**

A 24-foot straightedge used to screed concrete must be without bow when suspended at each end, and should be light in weight. A straightedge that fits these requirements can be made in the following way: Two 1\times6's that are 24 feet long are spaced apart with three 2\times6 blocks (one placed at the center and one at each end). High test wire is used as a diagonal brace. The wire is secured at each end with eye bolts. Eye bolts enable correct tension to be placed on the wire. By increasing the tension on the wire it is possible to put a negative bow into the straightedge, enabling it to be used to crown a slab.—M. Sorensen, Dallas, Texas.

(Continued on page 195)
Now Flintkote announces
a new Hook-Nail for applying
asbestos-cement sidings over insulation sheathing

At last . . . a nail that saves installation time and money . . . gives added security . . . improves siding appearance!

It's the new Flintkote Hook-Nail . . . developed by Flintkote's famous research laboratory, for applying Asbestos-Cement Siding Shingles over insulation board sheathing in new construction.

Look What This New Hook-Nail Gives:

1. Ease of driving.
2. Automatic alignment of siding.
3. Quick placement of backer strips.
4. Rapid application, equal to, or quicker than face nailing.
5. Both top and bottom of siding firmly held without working back of wall.
6. Weight of siding contributes to lasting tightness.
7. One size fastener for both 25 32" and 1 2" boards.
8. Can be driven over studs.
9. Increases butt shadow.
10. Good appearance, non-corrosive, non-staining, inconspicuous.

Send today for complete information, prices and illustrated instructions for applying Flintkote Asbestos-Cement Siding over Flintkote Insulation Board with the new Hook-Nail.

THE FLINTKOTE COMPANY, Building Materials Division, 30 Rockefeller Plaza, New York 20, N. Y.
Here's News! Masonite Siding and flush doors faced with Masonite Dorlux (see opposite page) to be offered in the beautiful new "Pacemaker" line featured by National Homes Corporation. See one of these new homes in your area beginning Oct. 3rd.

More and more builders now switching to MASONITE SIDING

Why are so many builders, architects and home-owners insisting on Masonite Siding, that new packaged Presdwood® Product?

There are several reasons.

Take the matter of cost. Masonite Siding is very much in line with conventional materials. And, because every square inch is usable (no knots or grain), because it goes on faster, and because it takes less painting time and material—you can count on some mighty important savings overall.

Appearance? Masonite Siding has all the good looks you want—and then some. Comes in 3 widths: conventional 12", wider 16" and extra-wide 24". No premium on the wider widths. True-cut lengths between 8' and 12'. In 2' and 2.5" thicknesses. (Board and batten siding? Tempered Presdwood does the job!)

This all-wood hardboard is really rugged! Takes all kinds of rough weather without flinching. Resists small children and baseballs. Won't split, splinter or crack. Won't rot or corrode. Won't push nails out.

Ask your building materials dealer about this time-tested siding. Or send the coupon for the whole story!

Better hardboards for better building
Quite often there is the problem of not having a sufficient base on which to nail the first row of shingles for the exterior wall of a house. Many of the nails driven often hit the area between the sill and the foundation and therefore do not offer a secure clinch. To remedy this, nail a 1x6 band around the sill near the foundation. Then apply sheathing over the box sill and up to the edge of the 1x6 band previously applied. When the first row of shingles is applied to the sheathing and over the 1x6 band, there will be a very solid member to which you can nail securely. Each nail will do an effective job. Each shingle will be fastened tightly.—T. M. Reeves, Albany, Ga.

This gypsum lath marking jig saves time, reduces errors

Before applying your gypsum lath sheets, marking them with this simple marking jig will save you time and work, and will assure a more accurate nailing job. The jig is simple to construct. It is simply a frame made of 1x2 stock. The inside measurements are slightly wider and longer than a 4x8 sheet. A heavy, chalked string is stretched tight across the center of the frame.

In use, the jig is simply placed over a piece of gypsum lath and the line is pulled up and then snapped. If the ceiling joists are spaced 16 inches apart, stretch two lines across the frame at the proper distances.—H. E. Fey, New Braunfels, Texas.

Looking for an "extra" that'll give home buyers more value—at little or no extra cost?
Then specify Masonite Dorlux for the facings of paint-grade flush doors. Here's why:
This smooth, strong Preswood® Product offers a perfect base for paint, enamel and varnish. Gives a maximum choice of finish and colors...that stay on.
A sturdy all-wood hardboard, Dorlux has no knots or grain to pull and strain. Holds its shape in all climates. Helps keep the door from binding or sagging. Never splits, splinters or cracks. Withstands knocks, bumps, other household hazards.
Many builders and remodelers, such as National Homes Corporation, already know and like Dorlux. You will, too. Send coupon on opposite page for more information.

better hardboards for better building

MASONITE CORPORATION Dept. AB-10, Box 777, Chicago 90, Ill.

"Masonite" signifies that Masonite Corporation is the source of the product.
how would you do it?
ideas for the man on the job
(Continued from page 195)

how to keep fascia joints tight

Sometimes fascia boards pull apart where they are joined, leaving an unsightly gap. To keep a fascia joint tight indefinitely, put pressure on the rafter tails away from the fascia joint as you nail each side of the two fascia boards. Then, when pressure is released, the relaxed rafter tails will force the fascia boards together into a tight-fitting joint.—C. E. Chubb, San Fernando, Calif.

how to cut rafters quickly

When cutting common rafters, make all ridge cuts first, using a power saw and an adjustable steel square or guide. Cut two rafters complete with bird's mouth cuts and tail cuts. Use these two completed rafters as patterns for cutting others.

Take as many rafters as is possible (usually 30) and place a patterned rafter at each end to act as guide. Clamp the rafters together with 4-foot (or more) adjustable clamps to keep the rafters rigidly placed. Then snap chalk lines across the rafters to guide your sawing of tail cuts and bird's mouths.

If it be possible to turn the complete clamped-up unit of rafters over, the other tail cut can then be made.—J. H. McNeil, Rome, N.Y.

CASH FOR JOB SHORTCUTS—American Builder will pay five dollars ($5) in cash for each shortcut or job pointer accepted for publication. Send all material to the Architectural Editor, American Builder, 79 W. Monroe St., Chicago 3, Ill.
Glazed, pre-fitted and ready to install, the Curtis Silentite window unit saves time on the job. Here, the Silentite double-hung windows flanking the picture window have the exclusive patented Silentite construction—including "floating" weatherstrips—which assures superior weather-tightness and fuel economy.

Silentite wood casements close tightly to shut out wind and dust—won't swing or rattle in the wind. They come in several sash styles and in all commonly used sizes. Special Curtis operating hardware gives easy, simple control.

The new Curtis panel windows offer a highly flexible means of providing for any desired number of window openings. Simple, yet rugged in construction, they are available for standard Thermopane or Twindow glazing. Ventilating units and louvers are furnished when desired.

The Curtis Certificate is a guarantee against manufacturing defects in materials and workmanship in any Curtis product over which Curtis has control. It is issued by the dealer who furnished the Curtis Woodwork. Architects who specify "Curtis Silentite" can be confident of satisfied clients... builders who feature the Curtis guarantee are getting substantial help in moving homes faster and at a better price.

Even we didn't realize what a powerful selling tool this Curtis Woodwork guarantee could be! But today it's actually being used by builders to sell the entire house. It's not hard to find the reason why. Today's home buyers are choosey... value-wise and quality conscious. No wonder they respond to the kind of assurance they get from the Curtis name and the Curtis guarantee of quality.

The Curtis Certificate is a guarantee against manufacturing defects in materials and workmanship in any Curtis product over which Curtis has control. It is issued by the dealer who furnished the Curtis Woodwork. Architects who specify "Curtis Silentite" can be confident of satisfied clients... builders who feature the Curtis guarantee are getting substantial help in moving homes faster and at a better price.

Curtis makes a complete line of architectural woodwork and birch kitchen cabinets for homes of all types. Make your next home "all Curtis."
NEW SPENCER SUBURBAN
THE OIL-FIRED BOILER BURNER UNIT
with the beauty and convenience of a kitchen appliance!
NEW PRODUCT

COMPLETE NEW HEATING UNIT

combines "kitchen appliance" beauty with "code boiler" dependability . . . offers easier installation and servicing

Spencer now offers a new ready-to-install oil-fired heating unit called the Suburban. This unit combines time-tested Spencer efficiency and durability with a new kind of beauty and ease of installation. It’s equipped to supply year-round hot water, conforms to ASME and SBI codes, offers several unique advantages.

FITS IN ANYWHERE—the Spencer Suburban actually rivals modern kitchen appliances in adding beauty to kitchens or utility rooms. All parts are completely enclosed in a gleaming white enamel beauty jacket. Connections are easily concealed. And because the Suburban is completely insulated, it can be placed flush against metal appliances or wooden cabinets, or even set directly on a wooden floor. No special base is necessary.

EASIER TO INSTALL—just hook up electrical connections, oil and water lines, and smoke pipe. That’s all.

EASIER TO SERVICE AND CLEAN—readily removed plate on top makes all fire tubes easily accessible. No need to disturb jacket or smoke pipe when cleaning this unit. Controls and all working parts can be reached from front for easier servicing.

This is the newest member of Spencer’s Complete Line.

510 SQ. FT. NET SBI WATER RATING
DIMENSIONS—ONLY 21½” x 32½” x 36”

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BIG CAPACITY Handling big boards is a sure, easy job on big Atlas working surfaces. THE TABLE IS 42" LONG! Fence, itself, is 32" long, 4½" high. Fence quickly removes for surfacing wide boards.

REMOVABLE CUTTER HEAD Atlas cutter head removes for sharpening blades without disturbing their setting. An exclusive feature.

Builder Says,
"Best on the Market"

F. L. Randall, builder, "wouldn't be without an Atlas 6" jointer." It saves him time and money in finishing out a house by enabling him to do most of the mill work. Randall considers the Atlas "the best jointer on the market" — likes "its accuracy, the big table and fence, and the easy way the fence can be positioned."

Randall's experience is typical. Put an Atlas 6" jointer on the job and you cut time-costs and improve accuracy on almost every surfacing operation. The Atlas handles planing, edging, truing, beveling, and rabbeting fast and accurately. It is especially useful on cabinet work, built-in units, doors, windows, screens.

You'll like its size, speed, and smooth performance. Table is 42" long — precision-ground for smooth work feeding. New two-way tilting fence is 32" long, 4½" high — has positive adjustable stops for 45° settings. 2¼" diameter cutter head with 3 blades spins 4100 RPM on large, sealed ball bearings. Exclusive features include a timesaving width-of-rabbet scale, and simultaneous blade positioning.

The Atlas 6" jointer can make money for you. Look into it. Send for the latest catalog.

ATLAS PRESS COMPANY
1001 N. Pitcher St., Kalamazoo, Michigan

DEPENDABLE QUALITY TOOLS SINCE 1911

No. D-105
Fireplace made integral with wall

In this house of contemporary design, the fireplace and the adjoining brick wall which extends all the way over to the side wall of this room are the outstanding features. The light-colored buff pressed-brick, laid up in a stack pattern, provides a pleasing contrast to the brownish red of the Philippine mahogany which is used on the other three walls.

The stone hearth of the fireplace was raised 18 inches above the floor and extended 18 inches out from the face of the fireplace to provide space for the storage of fireplace logs. An opening under the hearth and extending beyond the end of the fireplace and over to the side wall of the room, is used for the under-floor warm-air duct and register face.

The upper portion of the fireplace above the opening is a splayed surface with a one-inch projection at the left end extending to 10 inches at the right end of the fireplace. A 2¼-inch steel column provides support at this end for the splayed 3½-inch steel plate placed under the overhang.

An interesting surface pattern is provided in the upper portion of the splayed wall where the masonry comes in contact with the sloping ceiling of the living room and the overhang of the drop ceiling. The brick wall adjoining the fireplace extends up to the stone sill of the strip windows and the Philippine mahogany plywood walls that surround them.
AMERICAN BUILDER'S BETTER DETAIL PLATE

NO. D-105 FIREPLACE

Section

Elevation

Plan
48" DOOR CANOPY  72" STOOP CANOPY

The sensational new CANOPY made of sturdy rustproofed STEEL!

- STRONGEST BY FAR!
- HARMONIOUS IN DESIGN—THEY LOOK LIKE AN INTEGRAL PART OF THE HOUSE
- LOWEST IN PRICE—BECAUSE OF QUANTITY PRODUCTION

A REAL PROFIT ITEM!
Packaged—for over the counter sale. Easily installed by the purchaser.
A sample hung in your show room will start a chain reaction of sales.

Write at once or just clip this advertisement to your letterhead.
Prices, liberal discounts and complete merchandising suggestions will be sent promptly.

THE TROY SUNSHADE CO., TROY, OHIO

THE OLDEST AND LARGEST MANUFACTURERS OF SUN CONTROL PRODUCTS

No. G-48
dental clinic is a community asset

Located close to a busy intersection, yet far enough away to permit off street or curb parking, this small dental clinic, designed in the contemporary style, blends well with the suburban character of the neighborhood.

The front wall of the clinic, which is set back to conform to the building line of the adjoining homes, is designed in a series of sawtooth bays. This method provides a greater glass area for two of the treatment rooms, and introduces an informal design effect for the entire front and part of the side. This area is further enlivened by the use of continuous planters, which form a base for the stone facing and the vertical wood framing members supporting the roof overhang. Planters of pressed brick are divided at front to form a passage to the entrance door.

The angular, vertical wood members and beams forming the support for the roof overhang, including fascia boards and 1x6 V-grooved sofit boards, are all of redwood which is sealed to preserve the surface. The frame of the large windows in the reception room is built of 3x8-inch rabbeted members with half-inch plate glass set in stops. All units are fixed.
NO. G-48 DENTAL CLINIC . . .

Plan

Elevation

Section 1-1
Sewer Gas Can't Harm

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There's no safe substitute for Vitrified Clay Pipe. It resists corrosion from the acid gases that rise out of sewage waste. Gases actually do more damage than waste liquid. But sewer gases do not affect Clay Pipe.

Clay Pipe is also completely safe from acid liquids, strong detergents, or the corrosive substances produced by decaying waste from garbage disposal units. Clay Pipe is guaranteed for 50 years.

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Spotlights AIR-COOLED

Year 'Round Air Conditioning by CHRYSLER AIRTEMP

Uses no water! Uses no living space! Makes any home
MORE SALABLE!

You find Year 'Round Air Conditioning by Chrysler Airtemp in more and more new homes these days, including many of the famous model homes to appear in the national spotlight. Here is mute testimony of builders' recognition of the public's confidence in the Chrysler Airtemp name and the public's respect for Chrysler Airtemp engineering leadership.

Now Chrysler Airtemp makes it practical for builders to incorporate the tremendous buy appeal of year 'round climate control in more new homes than ever before! The new Chrysler Airtemp Air-Cooled Air Conditioner provides refrigerated cooling without using water. It costs less to install... costs less to operate in many locations. In any of four recommended installations, it takes up no living space!

Get complete details of this latest achievement of Chrysler Airtemp engineering and the complete Chrysler Airtemp line of Air Conditioning for homes. See your nearest Chrysler Airtemp Dealer or return coupon today!

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unfair off-street parking law invalid, Court rules

By John F. McCarthy
Attorney at Law

The City Council of Chicago has adopted the proposed off street parking ordinance explained in last month's article. This ordinance, it was noted, is broad in its application and refers to all types of new construction and conversions. It requires a private garage or an open parking area on the same lot as, or in close proximity to, the building to be served. It replaces an earlier ordinance held invalid by the Illinois Supreme Court as an unreasonable exercise of the city's zoning power. See Ronda Realty Corp. v. Lawton, 414 Ill. 313, 111 N.E. 2nd 310.

The earlier ordinance, which was held invalid, required a private garage or automobile compound for the storage of passenger automobiles on the same lot as apartment houses of more than two units. It set up the ratio of one parking space for every three apartments. The ordinance, however, made no requirement for off street parking facilities for lodging houses, hotels, hospitals, schools, colleges, clubs, libraries, museums and the like.

In that case the facts were that Ronda Realty Corporation had applied for a building permit to remodel an apartment building which it owned by increasing the number of units therein from twenty-one to fifty-three. It planned to provide off street parking facilities for eight cars rather than for eighteen as required by the earlier ordinance. The Court held that the building permit applied for should be issued despite the fact that off street parking facilities in compliance with the ordinance would not be provided. The reason for this, as we have said, was the Court's opinion that the ordinance was invalid as an unreasonable exercise of the city's zoning power.

The Court observed that relieving congestion in city streets was a proper object of a zoning ordinance. It pointed out, however, that the particular ordinance required only apartment buildings, as distinguished from many other types of structures, to provide off street parking facilities. It suggested that the occupants of rooming houses and hotels, for example, contributed to the city's traffic congestion at least equally with those of apartment buildings. The Court concluded that it was unreasonable to impose the burden of providing off street parking facilities on one kind of property, namely apartment buildings, but not on others, where each contributed substantially to the congestion sought to be remedied.

The Court thus decided that the earlier ordinance was invalid. The later ordinance is explained in some detail in last month's article. By subjecting all types of new construction and conversions to some requirement for off street parking facilities the present ordinance attempts to meet the objections which caused the earlier one to be stricken from the records.
Here is the ultimate in home lighting—a light control designed to replace the ordinary ON-OFF wallswitch...to permit the selection of any amount of light from darkness to full brightness. Simply by turning a knob, light can be set to any brightness to suit each seeing task, every activity, all occasions. Operation is smooth and silent. Installation is easy. The powerstat WALLBOX Dimmer is Underwriters’ Laboratories Approved. A variety of knobs and faceplates are available to blend with any room decor.

Learn more about CONTROLLED LIGHT, write to:

THE SUPERIOR ELECTRIC CO.
11103 Demers Avenue, Bristol, Conn.

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418—MASONRY CEMENT
—Useful information for architects, engineers and masonry contractors is presented in this 16-page catalog. Descriptive matter is divided into four sections, presenting cement's economic value, analysis of properties assuring quality masonry mortar, range of product performance and reference tables for estimating quantities of cement in relation to block, brick and mortar. Clear illustrations, concise text brighten catalog's usefulness.

Lone Star Cement Co., Dept. AB, 100 Park Ave., New York 17, N. Y.

419—CELLULAR GLASS INSULATION—A new 24-page booklet, "Foamglas: Low Temperature Insulation for Walls, Ceilings, Floors," contains information on application methods for this material. Characteristics, finishes, suggested thicknesses, insulation values (in typical construction) and properties are listed. Insulation is impervious to moisture, as shown by vapor penetration tests; is also incombustible, lightweight, verminproof. Pittsburgh Corning Corp., Dept. AB, 1 Gateway Center, Pittsburgh 22, Pa.

420—DISPLAY HARDWARE—16-page folder presents manufacturer's complete line of metal fixtures, including counter brackets and posts, counter display channels, splicers, clips and holders, sign frames, price tag holders, display hooks, knife-type and keyhole brackets, molding for price markers, sliding door hardware, including track, carrier and pulls. Harry Salt & Co., Inc., Dept. AB, 802 W. Girard Ave., Philadelphia 23, Pa.

421—ELECTRIC TOOLS—A new 40-page catalog of portable electric power tools contains complete illustrations, descriptions, specifications and prices on all of the manufacturer's universal electric tools, including drills, grinders, hammers, saws, screwdrivers, nut setters, sanders, polishers, tappers, nibblers, balancers, impact wrenches, as well as automotive tools, air hammers and air impact wrenches. Accessories and available attachments are also shown. Thor Power Tool Co., Dept. AB, 175 N. State St., Aurora, Ill.
LIKE IT OR NOT, building more “sell” into new homes is here to stay. But to stay ahead of choosy buyers doesn’t have to mean bigger costs. I’ve seen one good answer in Fremont Rubber’s Vinatile and Vinatop, with their SOFT-GLO finish. Believe me, that SOFT-GLO finish is expensive — but is priced so you can stay within your building budget. Try it in a kitchen, bath or any room. Nine brilliant, matching colors. Vinatile in 6”x6” or 9”x9” True-Cut squares. Vinatop in rolls 30”, 36” and 42” wide. See your dealer or write Fremont Rubber Company, Fremont, Ohio.

THE TREND TOWARD COLORFUL EXTERIORS has taken hold and enterprise builder-contractors are taking advantage of this and using it as a sales tool. Soft, pastel shades for frame houses, contrast trim for brick homes, many interesting effects possible with aggregate block construction and cement paints — result in houses that are half sold before the prospect enters the door. Once inside, color again plays a big part in selling the house. Without our being aware of it, color makes a tremendous impression upon us. Houses today must not only be functional but cheerful looking and attractive. Color is important. Use it — sell with it.

HERE’S YOUR CHANCE to see a new kitchen merchandising plan in action! It’s shown in full color in this month’s issue of Woman’s Home Companion — a house trailer containing a natural maple kitchen and laundry, with all major and minor appliances operative. This is the kind of sales-backing promotion enjoyed by dealers of MUTSCHLER BROTHERS COMPANY, Nappanee, Indiana — manufacturers of custom hardwood kitchens. There’s also a Mutschler sales training school for your employees. And each kitchen is built to your specifications, eliminating inventory problems. Write MUTSCHLER for franchise information.

IT’S NOT TOO EARLY to make your plans now . . . attend the National Association of Home Builders Convention and Exposition this coming January 17th through January 21st, 1954 in Chicago. Two great hotels will house the enlarged planned activities and exhibits for this 1954 convention . . . the Conrad Hilton on Michigan Boulevard and the Sherman Hotel in the heart of Chicago’s Loop. Special inter-hotel bus service will be provided . . . another record attendance in January is anticipated . . . the tempo of the convention is being stepped up to meet the challenge of constant improvement and necessary expansion. Don’t miss this . . . make plans early.

I’VE JUST READ SOMETHING that’s opened my eyes to the big difference in portable heaters. It’s the new, fully illustrated 40 page booklet just issued by the people who make Herman Nelson Portable Air Heaters. Here, in unbiased form, are all the facts about all portable heaters. You can see for yourself why some are safe — and others not so safe. You’ll see, too, why Herman Nelson is the only complete line of completely safe portable air heaters. Send for your free copy today. Herman Nelson Division, American Air Filter Company, Inc., Dept. 401, Moline, Illinois.

MORE AND MORE BUILDERS are installing Tilemaster, the “mechanic’s” tile. “It goes up right — stays on tight” — they say. There’s not only profit in it, but it’s got some exclusive features. For instance, each tile has an arched construction called “Bew-All” which prevents “dishing-in” or “cupping.” Don’t overlook the Mastic-Seal Rib either, that seals mastic in — water out! It prevents water damage in shower stalls or any areas exposed to water! For the complete Tilemaster story, write A-1 Plastic Molders, Inc., 1415 Diversey Pkwy., Chicago 14, Ill.

THIS HOUSE SOLD BY — is the sign that builder-contractors hope to tack on their houses by the time of completion, if not before. To help do this, remember that buying a house is ordinarily a family affair. ATTRACTION is the “lady of the house” with plus features in kitchens, bathrooms, dens, playrooms, etc. and CONVINCE the “man of the house” with sturdy construction with top flight products that will stand the test of time and weather. Products that will attract and sell the whole family are featured each month in BUILDING BUY-WORDS by Herb Willson, 5510 Cornelia Ave., Chicago 41, Illinois.

SPECIAL CABINETS . . . to fit around chimneys, pipe chases, angled corners, etc., can be supplied by GENEVA. This ability to furnish special custom cabinets . . . plus offering the most extensive variety of stock size base and wall cabinets in the industry are two important reasons more and more builders are featuring GENEVA steel kitchens in their new construction and kitchen remodeling jobs. GENEVA makes it possible to beautifully tailor a kitchen to any room dimension without loss of time or materials . . . and at prices competitive with conventional kitchens. For complete specifications and details on GENEVA quality kitchens write . . . GENEVA MODERN KITCHENS, Dept. BG-5, Geneva, Illinois.
Lowest priced Delco forced air furnace ever made reduces new home costs!

**NEW DELCO-HEAT**

**OIL-FIRED FORCED AIR FURNACE**

**FEATURES NEW, MODERN, MASS PRODUCTION WRAP-AROUND DESIGN FOR LOWEST BIDDING PRICE EVER OFFERED BUILDERS!**

Costly frills and extras eliminated without sacrificing quality

To offset rising costs, General Motors Delco-Heat now offers you top-quality, top-performance heating units at new, low prices for truly profitable installation. The new economy OBC75-H oil-fired Conditionair is compact — only 25x25x66 3/4s for use in closets or other small out-of-the-way spots. 75,000 Btu Hr. output. Has new wrap-around steel cabinet with Delco Green enamel finish. The 16 ga. steel heat transfer unit is seam welded to eliminate combustion leaks. The Circle-Air Radiator adds an extra heating surface — improves efficiency. Other great Delco features are the Quik-Action stainless steel combustion chamber; Delco-Heat Pressure Oil Burner powered by the vibration-free Rigidframe Motor; centrifugal blower; replaceable air filter; wrap-around wipe sheets; knockouts in side panels that permit installation of filter at either position; and base pan with knockout for floor return.

Similar in every detail, the new Model GBC90-H answers all your needs for an economy Gas-Fired Conditionair. Both models shipped assembled.

For warm air, hot water or steam installations — gas- or oil-fired — for every kind of heating problem, contact your Delco-Heat Distributor. Or write Delco-Heat, Dept. ABH, Rochester 1, N. Y. In Canada, Toronto 13, Ontario.

For a good deal— **DEAL WITH DELCO**

... your keys to Sales Success...
422—SHOWER RECEP-TORS—This new manual contains technical data, construction details and installation instructions on the manufacturer's receptors used with modern stall showers. Manual describes advantages and uses of two shower floors—one for plaster or tile walls (ceramic, metal or plastic), the other a rabbeted terrazzo-type for slab wall construction (marble, slate or structural glass). Mono-lithic design is stated to assure permanent, leak-proof and joint-free shower floor. Fiat Metal Mfg. Co., Dept. AB, 21-33 Borden Ave., Long Island City 1, N. Y.

423—TRENCHER—New eight-page bulletin on Model 110 trencher contains information on this unit which is capable of digging all types of trench from 12 to 24 inches wide and up to 5½ feet deep. Bulletin features versatility of the machine. Job applications within the trench size range are illustrated. Design and construction features are described. Information on optional extra equipment for special trenching requirements is given. Cleveland Trencher Co., Dept. AB, 20100 St. Clair Ave., Cleveland 17, Ohio.

424—RESIDENTIAL WINDOWS—"Glazing the Air-Conditioned Home" is the title of this pamphlet which points out the importance of window planning in relationship to the air conditioning system. Data on the transmission of solar energy through different types of window glazing is presented. Year-round effectiveness of insulating glass and the role of heat-absorbing glass in the air conditioned home are included. Libby-Owens-Ford Glass Co., Dept. AB, Nicholas Bldg., Toledo 3, Ohio.

425—BASEBOARD PANELS—Four-page folder presents manufacturer's line of radiant baseboard panel heating. Cast iron baseboard panels designed for forced hot water or two-pipe steam systems are supplied in 18- and 24-inch lengths to provide flexibility in unit assemblies. Corner and extension pieces are designed to match baseboards, improve installation appearance. Folder contains ratings covering assembled length range of from 1½ to 23 lineal feet. Utica Radiator Corp., Dept. AB, 2222 Dwyer Ave., Utica 2, N. Y.

"Be sure of real running water under pressure with a Delco Water System"

Build in guaranteed water capacity with a Delco Water System

Nothing can help sell a home faster, and keep it sold better, than a dependable water system that will meet all the demands for comfort, luxury and healthful living. So, when you build past the "city mains," install the proved reliability of a General Motors DelcoWater System. Every pump is test rated to deliver every gallon promised, and more…every system is quickly and easily installed and designed for lasting peak performance. Here's top quality guaranteed to keep home buyers happy; yet priced low to save you money.

This convertible jet pump is super-simple, super-powerful. Converts quickly to deep well operation if water table falls. For complete information about all pumps, contact your Delco Dealer. Or write: Delco Water Systems, Dept. ABW, Rochester 1, N.Y.

For a good deal DEAL WITH DELCO

‡ FOR MORE INFORMATION USE COUPON, PAGE 228
"You don't need a professional blueprint for a small house like ours."

This is common sense

No need to be embarrassed by poor planning when the National Plan Service, in conjunction with America's alert retail lumber dealers, makes top-notch blueprints available at low cost. Good plans, like good cedar shingle roofs, are essential to good home-building.

Plan on Cedar Shingles

CERTIGRADE cedar shingles, because of their great strength and rigidity, can be applied on spaced rather than solid sheathing. You can count on saving about half the sheathing materials cost, and much of the cost of sheathing application, when you use cedar shingles. Let us send you a free estimating form so that you can accurately check the comparative cost of roof construction including sheathing. Your own check, in your own area, will prove that cedar shingle roofs are your best buy. Write today, ask for "Roof Cost Estimating Form."

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5510 White Building, Seattle 1, Wash.
425 Howe Street, Vancouver, B. C.
PC GLASS BLOCKS give

- light and charm to entrance halls
- extra salability to all types of houses

A good way to brighten a drab entrance hall, lighten a dark stairway is to use large panels of PC Glass Blocks. Prospective home owners are quick to notice “extras” like this. They know the use of PC Glass Block panels means a smarter, more modern and safer home—one that will stand out from its neighbors.

And home owners really appreciate the advantages of glass block panels, too. They like their long life, easy cleanability, freedom from undue maintenance and repair and the way they insulate against heat in summer, cold in winter and reduce condensation.

Because of this buyer preference, you will do well to consider PC Glass Blocks for the houses you are building—for cellar windows, bathroom windows, over kitchen work counters, and interior partitions throughout the house. PC Glass Blocks are available in a variety of attractive patterns.

Pittsburgh Corning Corporation
PITTSBURGH, PA.

Pittsburgh Corning Corporation, Dept. AQ-103
One Gateway Center, Pittsburgh 22, Pa.

Please send me more information on the use and installation of PC Glass Blocks.

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A new hard type panel board, known as Type "A" Plaswood, is made of specially treated long wood fibers bonded with a resin binder. It is available in medium density board for use as sidewall sheathing and high density board for underlayment of asphalt and rubber tile, linoleum and wall-to-wall carpeting. Underlayment is available in 4x8-foot square edge panels, 3/8-inch thick. Sidewall sheathing is made in 1x8-foot square edge panels, 1/2-inch and 3/4-inch thick, and in 2x8-foot shiplap panels, 3/4-inch thick. All panels, including shiplap, afford 100 per cent coverage.

The material's resistance to indentation makes it suitable for underlayment. Its nail-holding ability and bracing strength are an advantage when used as sheathing, its manufacturers claim. Southern Plaswood Corp., Dept. AB, P.O. Box 123, Hope, Ark.

A new 25-pound consumer package of flake Calcium Chloride is being introduced. The new package, which can be used on counters or in window displays, is designed to attract store customers' attention to the product and its principal uses. The front of the package carries, in addition to the product and brand name, large contrasting squares of gold and blue in which are shown the principal uses of the product. On the back of the package, full directions for the various uses of the material are given. Allied Chemical & Dye Corp., Dept. AB, 61 Broadway, New York 6, N.Y.

A 5-yard, five-ton rated crawler-mounted line of cranes, back hoists, draglines, shovels, clam-shells, etc., can be used with a buyer's truck, a factory rebuilt truck or with the manufacturer's own crane carrier. The unit is designed with two-speed, independent travel, enabling the operator to work a front-end attachment while simultaneously traveling and swinging the machine; undercarriage has a heavy-duty main frame and rigid side rails; six track rollers provide even distribution of load weight over entire track assembly; drive power through chain and jaw clutches is used for each track.

Fast-acting mechanical controls and jaw clutches enable operator to enter turns with a split-second pause and return to straight-line travel after turn without stopping. The crawler-mounted unit has low ground-bearing pressures with either 16- or 24-inch pads available. Wide range of front-end attachments is available. Shiel Bantam Co., Dept. AB, 221 Park Ave., Waverly, Iowa.

A heavy-duty, 71/4-inch portable electric saw, Model 687, has been designed for carpenters, contractors and builders. It features a powerful universal motor, half and needle roller bearing construction, overhead-type handle for one-hand control, a built-in rip fence and an automatic telescoping blade guard with retracting handle. Depth of cut is regulated at one point by use of a lever-type clamp, permitting quick adjustment.

Weighing only 13 1/2 pounds, the Model 687 is stated to be useful for all framing on home construction. It cuts two-inch dressed lumber at 45 degrees and cross-cuts two-inch rough lumber. Its speed of 5,000 r.p.m. recommends it for cutting and scoring concrete, cement block, stone, metal and composition materials. Skil Corp., Dept. AB, 5055 Elston Ave., Chicago 30, Ill.
Save $50

PER HOUSE

INSTALL 12
READY HUNG DOORS
IN ½ DAY

SLIP THE HALVES
TOGETHER IN
THE OPENING
AND NAIL IT
TO THE
WALL

Time studies made by the Independent Researchers show that it takes from 2 1/4 to 3 3/4 hours, on the average, to case and hang a door, that is, to fit and block a set of jambs, trim two sides, fit and hang the door, stop it out and mortise and install the lock — or, for a house with 12 doors, the door casing and hanging takes 33 to 45 hours.

Actual timing by thousands of builders prove that it takes less than 20 minutes to install a Ready Hung Door. You can install 3 Ready Hung Doors per hour, or 12 Ready Hung Doors in half a day. Save 29 to 39 hours' labor per house with Ready Hung Doors!

Ready Hung Door units cost a little more than conventional material, but the tremendous saving in labor always makes the installed cost — labor plus material — up to $50 per house LESS!
Free folder shows how to save time and money in figuring estimates, payrolls, invoices

It tells how the printed tape on the Printing Calculator proves each step of every calculation...on all your figuring jobs - how the touch-controlled ten-key keyboard means easier operation. Mail the coupon below for your free copy of "Figure Fact Efficiency For Contractors and Builders."

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new products

LIGHT SWITCH  AB105325
A device which is said to be the first quiet mechanical light switch is called the “Lifetime Quiette Switch.” It can be installed in any position, not vertically alone. It is claimed to be the only quiet switch which is safe for use with either incandescent and fluorescent lights.

Other features of the switch include its compact size, fully enclosed mechanism, heavy Bakelite body and the silver alloy contact tips that provide greater electrical efficiency and resistance to wear. The switch offers optional back- or side-wiring with a handy wire strip gauge marked on the back plate, assuring faster, safer wiring. Unit is supplied with Ivorylite or brown Bakelite operating handles, or lock type with key for commercial applications. The Arrow-Hart & Hegeman Electric Co., Dept. AB, 103 Hawthorn St., Hartford 6, Conn.

ALUMINUM SCROLLS  AB105334
Door scrolls, a new product to enhance the beauty of home entrance-ways, are finding ready acceptance by home owners. The scrolls consist of full depth aluminum castings made from hand carved models; they are finished in textured white or natural lustre pattern. Two patterns are available: "Enchantment," a swirling leaf design to be used in sets of four, one for each corner of the screen or storm door; and "Morning Glory," with entwined leaves and flowers, to be used in sets of two in diagonally opposite corners. Mounting holes are provided and rust-proof screws are furnished. Leigh Products Division, Dept. AB, Coopersville, Mich.

FOR MORE INFORMATION
USE COUPON, PAGE 228
“We've built over 400 houses in our Azalea Park development, and there will be 241 homes in Lakewood,” says Mr. Wellborn C. Phillips of Phillips Properties, Orlando, Florida. “The price range varies, but one item of equipment is standard in every house—the Electric Water Heater. It not only supplies adequate hot water automatically, but does so with economy, and that’s what customers want.”

Builders and customers both approve the Electric Water Heater because of these features: Automatic hot water. Cleanliness of operation. Economy of operation, due to short hot water lines and fully insulated tank. Easy installation, because there's no flue or vent.

The Electric Water Heater is a modern water heater for the modern house!

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The Phillips houses are of concrete block construction. 2 and 3 bedroom models, beautiful modern designs from which to choose. Large, landscaped plots. Liberal closet and storage space, dining area, breezeway and car port. Each home has fully-equipped electric kitchen which includes range, refrigerator, food waste disposer, washing machine—and the 66-gallon Water Heater... of course, it's ELECTRIC!

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Equip your homes with

**electric water heaters**

![Image of electric water heaters]
new products

ALUMINUM-GLASS JALOUSIE AB105319
Engineering and design features incorporated in the “Alenco” jalousie include a heavy extruded aluminum frame with a friction-free lifetime operating mechanism which can be assembled with only eight screws. The unit is available in assembled or knocked-down units. Weatherproofing at the vane ends is achieved by a double baffle system which has been tested and proved. The unit’s aluminum screen is removable, and storm sash may be substituted for cold weather.

The jalousie is provided in 24 stock sizes. It is designed to enable the dealer to convert stock size units into specials simply with the use of a hack saw. Picture window frames are also available for use in connection with these jalousies. Albrighton Engineering Corp., Dept. AB, 2501 Wroxton Road, Houston 5, Texas.

OUTSIDE WALL PLATES AB105314
Electrical contractors are occasionally faced with the job of patching plaster or other wall surface adjacent to a switch or outlet box, when damage is too extensive to be covered with a standard size wall plate. A practical solution is embodied in “Jumbo-Plates,” similar in appearance and construction to standard wall plates, but substantially larger (3 1/2 x 5 1/2 inches) to cover up many defects.

These outside wall plates are made of ivory or brown Plaskon in two types, a toggle switch plate or a duplex receptacle plate. Sierra Electric & Mfg. Co., Dept. AB, 514 E. 31st St., Los Angeles 11, Calif.

and that includes a Scott Lawn
This builder knows a Scott lawn adds value ... helps clinch sales. He knows too, that folks realize a Scotts Lawn is the best ... more beautiful, healthier, more enduring. Scotts Lawns are economical ... Scotts seed goes farther ... use less.

Fall is the best season to start lawns ... so get all the facts on Scotts Lawns at once. Just drop us a card and say “Lawns.” We’ll also send you a binder of Lawn Care bulletins. Free!

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Marysville, Ohio, also Palo Alto, Calif.

HOT BLAST HEATERS
This handy heater will more than save its cost in speeding up construction for you! Licks humidity and condensation in Fall construction for faster drying of plaster, paint, varnish ... prevents freeze-ups and aids worker comfort, too, for Winter work. Saves both time and labor.

The Portable, HOT BLAST generates an intense blue flame, smokeless, sootless, on a mixture of kerosene and compressed air—like a blow torch. Completely safe. Automatic Shut-Off Control stops fuel supply if flame goes out. Lightweight, sturdy, easily portable. Also available with wheels.

See your Builders’ Supply Dealer, or write for details and prices.

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Dept. A, 1211 N. 62nd St., Milwaukee 13, Wis.
YOUR BEST BUY
IN BLOCK FLOORS

READ THESE FACTS ABOUT POPULAR DELFAIR OAKBLOK

DELFAIR Oakblok offers to builders a truly distinctive floor, one that is equally suitable for small or large homes, commercial structures, housing projects, schools and institutions. It is especially adaptable to economical installation over concrete.

DELFAIR Oakblok is available in all standard strip flooring grades and also in the following special grades: Prime, Standard and Better, Standard, Tavern and Better and Tavern.

DELFAIR Oakblok is made of either Red Oak or White Oak, and is available either unfinished or prefinished.

DELFAIR Oakblok comes in the following sizes: 25/32" x 6 3/4" x 6 3/4", 25/32" x 7 1/2" x 7 1/2", 25/32" x 9" x 9", 1/2" x 8" x 8" and 1/2" x 10" x 10". All blocks are steel spline joined.

DELFAIR Oakblok's milling characteristics: tongue and groove end-matched—slight vee-edge on prefinished blocks — cross-wise grooves spaced to insure better mastic adhesion.

DELFAIR Oakblok can be a money-maker for you. Write today for complete information.
new products

SLIDING DOOR HARDWARE AB105322
A new series of hangers and tracks for communicating and closet doors offers several features which will appeal to architects, builders and dealers. The new Challenger track is an aluminum extrusion, top-mounted for quick installation without mortising, and V-grooved to prevent roller vibration. Durable nylon rollers glide on self-lubricating Oilite bearings that require no maintenance and assure smooth rolling for the life of the fixture. Hangers are made of cadmium-plated ribbed steel; side-mounted models are adjustable. Three hanger and track models cover all requirements for doors weighing up to 70 pounds. Metal Products Corp., Dept. AB, 807 N.W. 20th St., Miami 37, Fla.

GREASEPROOF TILE AB105318
Vinylized Asphalt greaseproof tile is a floor covering which has been designed to offer exceptional resistance to all kinds of greases and oils, according to its manufacturers. The tile is flexible and possesses a smooth, tight surface that resists the wearing in of grime and dirt. The tile is offered in twelve decorative colors to blend with either modern or traditional decor. The tile is available in standard 9x9-, 6x12- and 12x12-inch sizes, also 18x24-inch borders in plain black, and special 6x6- and 12x12-inch duotone sizes, all in ¼- and ½-inch thickness. Pattern is stated to remain throughout the life of the floor. Uvalde Rock Asphalt Co., Dept. AB, Frost Bank Bldg., San Antonio, Texas.

For More Information Use Coupon, Page 228

AMERICAN BUILDER
new products

STEEL SLIDING DOORS  AB105327
This sliding closet door unit with a birch finish is supplied complete, with all hardware, in one package. Panels are finished in baked enamel birch grain or with gray primer. The baked enamel is durable and easy to clean and keep clean.

It requires no additional painting. Door units are available for four- and five-foot door openings, with two bypassing panels for each side.

Construction and installation permit use of the units both in new buildings and in remodeling. The complete package, including doors, track, guides and hardware, is shipped knocked-down. All hardware snaps into place with no screws, bolts or nuts required. Nylon rollers assure smooth, quiet operation. Detroit Steel Products Co., Dept. AB, 3101 Griffith St., Detroit 11, Mich.

BASEBOARD ACCESS PANELS  AB105328
Access panels for Vulcan baseboard covers are now available. Panel is hinged to the cover and is easy to operate, with light pressure required to open and close. The unit is furnished in a short cover section, 13½ inches long. It may be located at any point along a run of baseboard cover, a convenience for making control valves accessible, with the remainder of the run taking regular covers. Vulcan Radiator Co., Dept. AB, 26 Francis Ave., Hartford, Conn.

*FOR MORE INFORMATION USE COUPON, PAGE 228

OCTOBER 1953

Give the Buyers what they WANT

in garbage and trash disposal equipment

Incinerators are a "must" in automatically heated homes, where the furnace no longer provides a refuse burner. Buyers are learning that incinerators give the complete answer to both disposal problems—including large bones and husks that other disposal methods can't touch, as well as all burnable household trash.

Majestic INDOOR INCINERATOR

Model 30—Deluxe 3-bushel unit
Burns Garbage and Trash without other fuel

Welcomed by home buyers the country over! Readily burnable portion of household trash plus Majestic's patented downdraft burns wet and dry garbage easily, efficiently. Just fill it as the refuse collects, then drop in a match. No auxiliary fuel needed. That's all there is to it!

Double-walled steel casing has cast-iron liner and grates for long service. Holds a full three bushels of refuse. Installs in basement, utility room or garage with only a simple connection to furnace flue.

Majestic Model 2

Here's the economy model in Majestic's full line of indoor and outdoor incinerators. Its cost is surprisingly low. Thousands of satisfied users proclaim it the best buy they've made!

As simple to operate and easy to install as Model 30. Steel-rod basket liner lifts out of double-walled steel casing for removal of non-burnables (cans, jars, metal objects) that may be dropped in. Has a two-bushel capacity.

See your distributor or write

The Majestic Co., Inc.  300-A Erie St.  Huntington, Indiana

221
ELECTRIC HAMMERS AND HAMMER DRILLS
Work right off the ordinary 110 volt light line. Drilling cutting, chipping concrete and masonry.

ELECTRIC DRILLS
High quality, powerful Drills—capacities from ¼” to 1” —end handle and breast plate styles.

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Heavy duty tools for severe smoothening, wire brush work, sealing and a host of other jobs.

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Five models from which to choose, ranging from light-weight to heavy industrial polishers and sanders —there is one to do your work.

ELECTRIC SCREWDRIVERS
Essentially production tools for fast driving and running-in a variety of styles and models—all with adjustable clutches.

ELECTRIC IMPACT WRENCH
A versatile tool for all types of work—running and setting nuts—tapping and threading—or ordinary drilling, screwdriving, etc.

ELECTRIC ALL-PURPOSE TOOL
The ideal shop tool—available with attachments for polishing—fine orbital sanding—drilling and grinding—a real value.

CONCRETE VIBRATORS • FORM & MASS
Produce stronger, denser concrete in less time—electromagnet form types or flexible shaft mass models with electric motor or gas engine drives.

DUAL V-BELT ELECTRIC SAW
Dual V-Belt drive eliminates gears—provides fast smooth cutting—uses 8½” blade—cuts from ¼” to 2 ½/16”—adjustable depth and angle cutting of wood, masonry and light metals.

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618 Lexington Avenue Homer City Penna.
EVERYTHING HINGES ON HAGER!

FREE! If you enjoyed laughing at Herb Brammeier's mirth-making cartoon this month, send for Hager's new book containing 28 full-size popular "Everything Hinges on Hager" cartoons! It's FREE! Just address

C. Hager & Sons Hinge Mfg. Co. • 129 Victor Street • St. Louis 4, Mo.
Founded 1849 — Every Hager Hinge Swings on 100 Years of Experience
Kencork helps sell homes faster
YET COSTS NO MORE*

Home buyers know all about Kencork...want it because they've seen it and read about it month after month in their favorite magazines...in colorful advertisements as well as impartial news stories. That's why it's smart selling to remind every prospect about the exclusive advantages of Kencork Floors and Walls. Explain that the preferred random tones are perfect with any color scheme, period plan or decor. Yes, Kencork in one or more rooms takes your houses out of the ordinary class with conventional floors and makes them easier to sell.

*KENCORK COSTS NO MORE THAN HARDWOOD WHEN INSTALLED OVER CONCRETE!

Install Kencork over any interior surface...even over concrete in contact with the earth where drainage is away from installation and sub-floor is 12" above grade.

Kencork installed prices are surprisingly low. Your Kentile Flooring Contractor will gladly furnish you with an estimate...he is listed under FLOORS in your Classified Phone Directory.
**new products**

**SLIDING PANEL DOOR**  
AB105324  
A sliding panel door which saves space while offering ease of installation and foolproof operation is being adopted by home builders. Called the "Trig Door,"

the unit is said to add beauty and convenience to home interiors, in addition to saving time, space and materials. Constructed from lightweight, non-warping Novoply, and without exposed hardware, the door slides on built-in nylon bearings over a heavy-gauge track which is completely concealed. Rollers are in proper positions and track is in place on the jamb head when the door comes from the manufacturers. In just a few minutes it can be slipped onto the track, aligned and securely fastened. The unit is useful for closet and wardrobe doors and for storage walls. Craftwood Products, Dept. AB, 94 Stephen St., Belleville, N. J.

**DOOR LOOK-OUT**  
AB105330  
This device has optically ground lenses which give occupant of home, apartment or hotel room a head-to-toe view of callers, even at close range. Occupant cannot be seen by the caller. Lenses are sealed in heavy-duty lock metal which is corrosion and weatherproof.

The unit can be installed in any standard wood or metal door. Patented, locking flange adjustable for door thickness holds unit rigidly in place and is tamperproof. The device is 2½ inches long, two inches in diameter at the outer flange. It is available in chrome, brass or bronze finishes. Danca Products Corp., Dept. AB, 116 Broad St., New York 4, N.Y.

*FOR MORE INFORMATION USE COUPON, PAGE 228*

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**annular-threaded linoleum underlay drive screws**

To make your linoleum underlays hold tightly and lie flat permanently, secure them with Hassall annular-threaded linoleum underlay drive screws. They are cement-coated for maximum gripping power. Heads are flat countersunk type. Size: 1¼" x #3 gauge. State quantity when writing for prices to:

JOHN HASSALL, INC.  
P.O. Box 2151  
Westbury, N.Y.  
Established 1850

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**CALBAR PAINT & VARNISH CO.**  
Manufacturers of Technical Products  
2612-26 N. Martha Street  
Philadelphia 25, Penna.

**match every building material!**

With brick, stucco, asbestos-cement siding, shingles, metal or wood... there's a CALBAR color to match or harmonize perfectly! Non-staining, non-hardening CALBAR Caulk complies with Federal and ACPA specifications. Write for details.

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**you get the**  
**EXACT SAW you want when you ask for**

These are some of the saws in the MALL line. Take your pick—get the exact kind of saw you want! MALL also offers a complete selection of drills, sanders, and other portable power tools for builders. See your MALL dealer or mail this handy coupon today.

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**MALL TOOL COMPANY**  
7732 S. Chicago Ave., Chicago 19, Ill.  
Send me more information about MALL  
[ ] Saws  
[ ] Drills  
[ ] Other Tools for Builders  

Name ____________________________

Company ________________________

Address _________________________

OCTOBER 1953
new products

CONCEALED SASH BALANCE AB105331
A concealed sash balance unit that eliminates all exposed parts and provides quiet, positive action for double-hung windows is now offered with a combination "L" and "cup" type attaching bracket, permitting the unit to be used on all types of installations.

The device can be adjusted (tensioned) with an ordinary screwdriver during or after installation. The "L" type bracket permits tensioning of the sash before it is placed in position. The use of a high quality coiled spring contained in a dust proof, pre-lubricated tube is said to assure positive lifting power and true counter-balance. Turner & Seymour Mfg. Co., Hidalift Division, Dept. AB, Torrington, Conn.

PERIMETER REGISTER AB105332
Two new models of perimeter baseboard registers are available in four foot sections; other sizes, up to six foot sections can be supplied. Each four foot section provides 36 square inches of open area, and is equipped with its own individually operated sliding damper control which is adjustable for volume control.

Made of 20 gauge steel, register has metallic finish; special finishes are available upon request. The unit comes with end caps, butt straps and backs. It can be used with any standard perimeter heating system. Standard Stamping and Perforating Co., Dept. AB, 3131 W. 49th Place, Chicago, Ill.
new products

ALUMINUM FRAME DOORS AB105316

Packaged unit aluminum frame doors and frames have all sections of extruded or drawn architectural aluminum alloy.

All exterior surfaces are polished and anodized. The frames and doors are factory-assembled with concealed fastenings and factory machined joints.

The doors are tongue-and-groove pressure bolted and lock welded for maximum rigidity. Doors are provided in both single and double widths, and with sidelights. Wide stile doors are custom-built to customer specifications and factory fitted to manufacturer's stock frames. Door stiles are 4 1/2 or 5 1/2 inches wide; aluminum or stainless steel kickplates are furnished up to 24 inches. Crane Fulview Glass Door Co., Dept. AB, 4616 N. Clifton Ave., Chicago 10, Ill.

GLASS DRILL AB105333

Improved spear-point-type carbide drill designed for producing holes in glass is available in a complete range of sizes. The drill is stated to be able to cut clean, true holes without cracking or chipping the glass at either end of the hole.

The tool is designed to provide for many regrinds and still drill its original size. The free-cutting design and carbide top insures cool cutting, less breakage of glass and extended tool life, according to manufacturer. Super Tool Co., Dept. AB, 21650 Hoover Road, Detroit 13, Mich.

Houses move faster with floors of WRIGHT RUBBER TILE

A floor of Wright Rubber Tile instantly indicates to the prospective buyer that you have put quality first. It gives him confidence in whatever you may tell him about the rest of the house ... helps you clinch the sale.

Features that show are features that sell. You install the latest cabinets, dishwashers and electric refrigerators. Don't spoil the effect with a drab, unexciting floor. Go modern all the way with floors of Wright Rubber Tile. The customer will be impressed very favorably.

Tell the prospect ... about the 100-year life of a Wright Rubber Tile floor ... that no floor requires less maintenance. Explain to him that over the years Wright Rubber Tile floors will save him money by needing no replacement.

Just try one house! Put one of these gleaming floors in the next house you build for sale. Then watch how much more quickly your prospect becomes a buyer.

WRIGHT MANUFACTURING CO.
5203 Post Oak Rd., Houston 5, Texas

WRIGHT RUBBER TILE

# WRIGHTEX — Soft Rubber Tile
# WRIGHTFLOOR — Hard Surface Rubber Tile
# WRIGHT-ON-TOP Compression Cove Base

FLOORS OF DISTINCTION

FOR MORE INFORMATION
USE COUPON, PAGE 228
**new products**

**CONCRETE SAW**  AB105313

The “Eveready” concrete saw, according to its manufacturers, will meet with the approval of contractors, utility companies, highway departments and others concerned with breaking old concrete and asphalt or pouring new concrete.

The saw is designed with a hydraulic control for lowering the blade at a controlled rate of speed as a means of providing longer blade life. There is no danger of bouncing the blade against the material.

Savings up to 50 per cent in time and material are stated to be realized when the saw is used before breaking out concrete or asphalt for plant floor patch work, cutting utility line trenches, in sawing openings for new machinery bases. Sawing provides square shoulders against which to rebuild, and eliminates feather-edging with its resultant spalling and future maintenance. Unit is also said to be well suited for fast, economical sawing of contraction joints in new construction. Eveready Briksaw Co., Dept. AB, 1509 S. Michigan Ave., Chicago 5, Ill.

**RUBBER TILE**  AB105320

The “Rubberlock” interlocking rubber tile is made in 8x8- and 24x24-inch interlocking sections in 1/4- and 1/2-inch thicknesses in a variety of marbledized colors, also on smooth and corrugated surfaces in black. It can be placed in position on concrete or wood floors on or below grade level without the use of cement or mastic.

Tiles are made of solid rubber, making floors comfortable underfoot and easy to keep clean. Application is stated to be quick and easy, with angles, crosses or squares as simple to lay as a straight strip of the material. Damaged sections can be removed and replaced by new units with a minimum amount of effort, making them adaptable. R. L. Mitchell Rubber Co., Dept. AB, 2114 San Fernando Road, Los Angeles 65, Calif.

**AWNING-PICTURE WINDOW**  AB105315

New window for architects and builders, called the “Panoramic Package,” provides a complete variety of wood awning window sizes together with custom-sized picture windows. Units are delivered pre-assembled to the job in heavy fiberboard cartons. The new service eliminates the need for assembly on the job, thereby cutting considerably the installation time. In addition, these wood awning windows are designed similar to double hung windows, which enables them to adapt to any type of wall.

Bronze channels provide a smooth gliding surface for the metal-on-metal hardware. Each sash is provided with individual adjustment plates for adjusting the window for degrees of closing tightness. All operating hardware is internal and out of sight. Super-Vent Co., Dept. AB, 905 W. North Ave., Chicago 22, Ill.

**RELIEF VALVE**  AB105312

A compact, 1½-inch relief valve, about half the size of its predecessor and weighing one-third as much, has a rated capacity of 1,050,000 Btu’s at 30 pounds pressure, as compared with 1,000,000 Btu’s for the former model.

The new unit, equipped with a non-ferrous high temperature seat, obtains positive action with the most extreme water conditions to give full relieving capacity under emergency pressure increase. A slight increase in pressure over the valve setting brings a corresponding low water relief. Bell & Gossett Co., Dept. AB, Morton Grove, Ill.

**CYLINDRICAL LOCK**  AB105326

A new line of standard duty, cylindrical-type, residential locks and latches has been introduced under the name “Stilemanor.” They are at present made of wrought brass, but will be made also of wrought bronze or aluminum. They are available in five popular functions. Each knob has dual bearings to assure rigid knob assembly and prevent wobble. Bearings are of brass on steel, to provide long life. Knob spindle has self-aligning thrust bearing. Latch retractor glides on ball bearings for smooth knob action and longer service life. Rugged steel case construction contributes to positive alignment of parts. Cylinder entrance door lock-sets are equipped with the manufacturer’s ball bearing five-pin tumbler cylinder. Russell & Erwin Division, The American Hardware Corp., Dept. AB, 102 Washington St., New Britain, Conn.

**USE THIS COUPON FOR MORE INFORMATION ON NEW PRODUCTS AND CATALOGS IN THIS ISSUE**

Save Time—Just Insert Key Numbers and Mail To: American Builder, 79 W. Monroe Street, Chicago 3, Illinois

Name  
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City  
State  

Please indicate whether you are  
Builder ( )  
Dealer or Distributor ( )  
Other ( )

When you address inquiries direct to manufacturers concerning a new product described here, please mention that you saw it described in American Builder
One Key Opens Many Locks. Although it has been employed for years, master-keying and keying alike is today's big news in the mass building field. Once restricted to luxury homes, single key convenience is now available to low cost housing in the new YALE "Preassembled" FAirFIELD lockset. With single key feature, virtually all locks about a home can be operated by one key.

NOW SINGLE KEY CONVENIENCE FOR MASS BUILDING FIELD

New Yale 5200 Fairfield Design Tubular Lockset First in its Price Class to Offer this Important Security Feature

Men in the mass building field have an important new feature to offer the bargain conscious buyers of new homes. It's single key convenience, now available for the first time in low cost housing with the introduction of the new YALE* "Preassembled" FAirFIELD (Series 5200).

This advanced residential tubular is available in polished solid cast brass and cast aluminum with a satin finish. Five basic functions of entrance, passage, patio, bedroom and bath, offer a complete line to satisfy every building requirement. In addition, it boasts a wrought steel case, rugged girder construction and comes in only three pieces...each a preassembled unit...for rapid foolproof installation. It has push button locking...decorative accessories...and, most important of all, the name "YALE"...a trademark instantly identified with security and quality.

These features combined with the beauty and simplicity of the new "Preassembled" FAirFIELD, make it far and away the top buy in residential locksets for both builder and buyer alike. The Yale & Towne Manufacturing Company, Lock and Hardware Division, Stamford, Connecticut. In Canada, St. Catharines, Ontario.

*Registered in U. S. Patent Office
This built-in storage unit was designed for an area 24 inches deep, with a standard door, 34x80 inches. It consists of six shallow drawers, a ventilated clothes hamper on casters at lower right and space for a tank-type vacuum cleaner.

Sides of the closet are lined with 3/16-inch Standard Presdwood. Liners are flush with the door opening. A filler block, also Presdwood, is inserted along the door stop so that when the liner is in place, it will be flush with the stop. To support the liners, 3/4-inch boards are screwed into place in the corners and midway along the closet walls. Liners are nailed into boards at four-inch intervals.

Hardwood drawer slides are secured by screws through the Presdwood into the wooden supports. Drawers are of standard construction with snag-proof bottoms of 3/16-inch Standard Presdwood with the smooth side up.

Front of the clothes hamper has a spring-hinged door with a latch. Back of the top is open for easier access. Bottom and front are made of Peg-Board panels for ventilation. A hardwood stop block is nailed to the bottom drawer support in order to keep the hamper from rolling back any farther than flush with the front of the closet.

The entire interior of the closet may be left unfinished. However, a coat of shellac is recommended as a sealer, plus one coat of good spar varnish to make cleaning easier.

Material courtesy Masonite Corporation
Architect Carl Graffunder used G-E Textolite plastics tops, with the new Ming pattern (reproduced in actual size in frame above), to add distinction and practicality to the home of Mrs. James O. Hanley in Minneapolis.

For an ideal combination of Beauty and Durability

**SPECIFY G-E TEXTOLITE** plastics surfacing

It's easy to select patterns that will add real beauty to the interiors you plan. But it's not so easy to find materials that will take hard knocks and still retain their sparkling good looks throughout the years. With G-E Textolite, you can be sure of the ideal combination . . .

Distinctive patterns that harmonize with the finest interiors.

Rugged durability, with a finish that retains its beauty even when subjected to hard usage.

Modern architects and builders have high praise for the many distinctive patterns available in G-E Textolite plastics surfacing. And, of course, they like the practical aspect of a lustrous finish that resists heat, stains, and scratches—and wipes clean easily and quickly with a damp cloth.

**For new ideas,** take a look at the latest G-E Textolite full-color pattern booklet. Copies are available through your G-E Textolite distributor, or from: General Electric Company, Section 321-7B Chemical Division, Pittsfield, Mass.

---

G-E Textolite surfacing has so many uses!
Here's a lovely bathroom vanity, for example, that's both practical and beautiful. Consider G-E Textolite, too, for linen closet and pantry shelves, game rooms, laundries—and wherever you want beauty plus extreme durability.

You can put your confidence in...
Multi-colored enamel offers wide variety of wall finishes

Spraying of two or more colors simultaneously in one operation is made possible by a new interior wall enamel featuring the qualities of simple application, quick drying, extreme toughness, long life and a wide variety of color combinations.

This multi-colored paint, named Plextone, is a mixture of any number of colors in any predetermined proportion. Upon mixing, however, the colors do not blend; instead, the pigment particles repel each other and retain their own color identity.

One coat, either flat or semi-gloss, is represented as sufficient for a properly primed surface. When applied by any standard spray gun operated at fairly low pressure, the enamel is reported to emit no spray dust or fog.

The product is said to dry to the touch within two hours and become almost completely dry in four hours. After that, the hardening process continues for several days after application.

Because of its toughness, it can be applied in new homes before construction is completed, without fear that a careless workman may mar the finish. A recent demonstration for trade and consumer press at the Newark plant of the Maas & Waldstein Company, the manufacturer, disclosed:

1. Ordinary scratches, such as those made with a knife, are invisible because the colors extend through the coating, which is extra thick.

2. Where scratches are so deep they actually gouge the wall, the cracks can be filled in and then given a couple of squirts of the enamel with an ordinary hand spray.

3. Dirt and grime come off by wiping with a damp rag.

4. Stubborn stains, such as the marks of an indelible crayon, are removed by washing with soap and water. Anything which still remains will come off by rubbing with fine sandpaper. The abrasion will not disturb the color integrity, since the colors run through the coating, several times thicker than usual.

5. The finish is expected to have a life of about ten years.
The variety of finishes which can be obtained is almost limitless. In addition to the many solid colors which can be mixed, the pigment particles of any color can be prepared in small, medium or large sizes. For example, an order may call for paint 60 per cent white, 30 per cent yellow and 10 per cent gray. The pigment particles can be the same size for each color; they can be small white, medium yellow and large gray, or any other combination. Each change will alter the final appearance, whether percentages of color used are altered or not.

Except for the bolder color combinations, the usual effect of the finish is that of a solid color from a distance, with the pattern becoming apparent only as one moves close to a treated wall surface. Batches of this enamel have been made up to simulate marble, granite, cork and various leathers. Just as easily, it can appear as a plain, solid color.

Maas & Waldstein, one of the nation’s largest lacquer manufacturers, devoted several years of research to this revolutionary product before making it available to builders. Early in 1950, Levitt & Sons, Inc., became the first big customer and have been using it ever since in their vast projects at Levittown, New York, and Levittown, Pennsylvania. Levitt, like most other users, sprays the enamel over walls, trim, doors and even switchplates.

Plexstone, when sprayed on in its recommended thick coat, is estimated to cover an area of 130 to 150 square feet per gallon. It is prepared to order in lots of 50 gallons or more.

Marlite’s ideal for remodeling any room in any building

Here are only a few of the many different types of interiors which can be remodeled faster, more economically with beautiful Marlite plastic-finished wall and ceiling panels. In the home, business, factory, and institution, Marlite is easily installed over old or new walls. The soil-proof finish slashes dollars off maintenance costs . . . eliminates painting.

New Wood and Marble patterns, plus a complete range of striking colors, provide a versatile selection for any interior in new construction or remodeling. See genuine Marlite at your lumber and building materials dealer, or write for full-color architect and builder catalog. Marsh Wall Products, Inc., Dept. 1003 Dover, Ohio. Subsidiary of Masonite Corporation.

THE MARLITE NAME ON THE BACK OF EVERY PANEL IS YOUR GUARANTEE OF SATISFACTION.
JAEGGER'S shorter mixing cycle increases daily yardage

Jaeger's shorter mixing cycle means more batches-per-day with no increase in crew and payroll. Here's how it's done—charge and discharge have both been cut to only 5 to 7 seconds. The original Skip Shaker throws its load into the drum in one swift slide. Extra big bucket and flight blades and specially designed "catch-all" spoon discharge it with equal speed.

What's more, Jaeger's rugged design stands up to the pace. Heavy duty high carbon machined tracks, Timken bearing rollers, engines with power to spare, automotive transmission—all require minimum upkeep, give years of service free from breakdowns.

Available in 6, 11, and 16S sizes. Ask for Catalog M-10.

5 REASONS WHY LUFKIN "RED END" RULES GIVE YOU ON-THE-JOB ACCURACY AND DURABILITY

"RED END" RULES
— Your Guarantee of Quality

1. Triple-locking brass joints are double-attached to the rule—eliminates end play and maintains accuracy
2. Brass strike plates prevent wear
3. Only the finest straight-grained hardwood is used in their manufacture
4. Durable snow-white enamel finish coated with tough, clear plastic for longest wear
5. Bold, easy-to-read figures and graduations are embedded right into the wood

See the display of "Red End" Rules at your hardware dealers. "Red End" Rules are available in a wide range of markings—regular, flat reading, Two-Way, vertical, engineers, extension, plumbers, brick-masons, metric.

are you working with kitchen remodeling?

Henry and George Bertch, remodeling specialists in South Pasadena, California, find this check list very useful when discussing a kitchen job with the owner. It not only reminds the builder of all the various points that should be covered in planning the work, but it also often suggests to the owner additional ideas which she will want to include in the finished job.

KITCHEN PLANNING—CHECK LIST

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<tr>
<th>CABINETS</th>
<th>COUNTER TOPS</th>
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<tbody>
<tr>
<td>Painted wood</td>
<td>Plastic laminate</td>
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<td>Natural hardwood</td>
<td>Ceramic tile</td>
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<td>Metal</td>
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<td>Wood</td>
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<th>FLOORS</th>
<th>BASE</th>
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<td>Linoleum</td>
<td>Cove base</td>
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<td>Asphalt tile</td>
<td>Top-set base</td>
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<td>Vinyl</td>
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<th>EQUIPMENT</th>
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<td>Built-in range (gas or electric)</td>
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<td>Dishwasher</td>
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<td>Garbage disposer</td>
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<td>Dishmaster</td>
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<td>Roaster</td>
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<td>Exhaust fan</td>
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<td>Water heater</td>
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<td>Upholstered nook</td>
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<td>Breakfast set</td>
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<td>Food freezer</td>
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<th>ELECTRICAL (FACILITIES FOR)</th>
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<td>Special lighting (range, sink, etc.)</td>
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<td>Clock</td>
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<td>Refrigerator</td>
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<td>Toaster</td>
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<td>Range (220v.)</td>
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<td>Waffle iron</td>
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<td>Roaster</td>
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<td>Radio</td>
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<td>Garbage disposer</td>
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<td>Mixer</td>
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<td>Dumbbell</td>
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<td>Soap trays</td>
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<th>CABINET FEATURES</th>
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<td>Draw boards</td>
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<td>Tray rock</td>
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<td>Mixer attachment drawer</td>
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<td>Lip or flush doors and drawers</td>
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<td>Metal-lined bins</td>
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<tr>
<td>Vegetable storage</td>
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<td>Space for kitchen ladder</td>
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<tr>
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<td>Breakfast bar</td>
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<td>Cooler</td>
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<td>Vent for gas refrigerator</td>
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<td>Metal range hood</td>
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<td>Baking center</td>
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<td>Broom closet</td>
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<td>Laundry area</td>
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<tr>
<td>Ironing board</td>
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<td>Bar sink</td>
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BUY LUFKIN TAPES • RULES • PRECISION TOOLS FROM YOUR HARDWARE DEALER
REMODELING MARKET BOOMS*

FIAT FITS RIGHT IN!

Break the Bathroom Bottleneck... with FIAT Shower Cabinets you have the easy, economical answer millions of homemakers are looking for.

As families grow—both in members and age—they often find their bathing facilities inadequate. Show them how you can furnish FIAT for increasing present bathroom capacity; for adding another bathroom; for remodeling an old-fashioned unattractive bath.

Build a Reputation in Remodeling There's big money in remodeling—and bathroom modernization ranks high on the list! So feature FIAT and establish yourself locally as the source for bathroom ideas, plans and service. Build this reputation and you'll not only sell more showers, but more fixtures and accessories than you ever thought possible.

Here's Help on Plans and Sales Send for special FIAT remodeling file—contains helpful sheet with 12 practical bathroom arrangements, detailed catalog of available showers, and sample of envelopes stuffer available in quantity for your own promotion.

Fiat First in Showers is more than an idle claim—it is an important fact you need to know. Surveys prove more builders and architects by far, know and prefer FIAT Shower Cabinets to any other make! It means you make the easy sale when you feature Fiat.

Look to FIAT for FEATURES that Sell!

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In Canada: Fiat Products are made by Porcelain and Metal Products, Ltd., Ouellette, Ontario
How To...  
BY MASTER

MARK STUDS FASTER

If you are planning to build a house or building in your business here is a valuable short cut. On the reverse side of your steel tape blade, etch a mark every 16 inches, the length of the blade. Then when you are placing columns, joists or studs you have only to mark as indicated, roll out and mark.

FOR ACCURATE FOUNDATION LEVELING

Insert two identical lengths of glass pipes into the ends of a length of hose. Fasten stakes to each end (as indicated). Fill the hose with water and insert pipe into each end. Drive your stakes into the ground to get approximate level. Remove plugs and adjust stakes so water level is equal on both sides.

EASY WAY TO FIT A THRESHOLD

Lay a piece of scrap 1/8 across the threshold. Lay the edge of your template rule against both jams (as indicated) and scribe. Now place scrap piece under the threshold, scribe and you can make a perfect cut every time.

TUFBOY

- For an inside measurement add 2 inches for Case and Tip.
- Blade replaceable without tools.
- Blade is graduated on both edges.

To get most accurate measurements, plus a rugged blade which lasts longer and will not break any steel tape blade made, try the Master Tufboy. Available in 6, 8 and 10 ft., satin or Britta Blade finish. See it at your dealer's today.

WHEN YOU BUY YOUR NEXT STEEL TAPE:

Ask the dealer to show you the new Master Tufboy rule. You get a rugged die-cast case, plus the world's most accurate and durable tape... and the blade is replaceable too.

AS A SERVICE TO YOU:

Each month we service to you we will print the finest building short-cuts available. Why not make a scrap book or card index file for handy reference? If you have a short-cut which you feel we can use send it to "HOW TO", care of Master Rule Co., Mulberry St., Middletown F4, N. Y. and if we use it we will send you free of charge your choice of any wood rule or steel tape in the Master line. All entries become the property of the Master Rule Co. and will not be returned.

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If you send it, please send me a rule.

MASTER

WOOD AND STEEL TAPE RULES

Photos by Julius Shulman

A laminated plywood arch with a span of almost 60 feet supports this living room as it projects out over a 45-degree grade.

Footings supporting the arch are eight feet deep and are tied into the foundation. Anchor plates are secured to the piers by 18-inch bolts. Metal straps with turnbuckles for leveling hang from the arch and support the steel i-beams which form girders on which the projecting portion rests.
This dramatic house was built in the Hollywood hills by L. C. Guthrie, a Los Angeles builder. Designer was Richard O. Spencer of Santa Monica.

Spencer's unusual design suspends a portion of the house over the hillside by means of a huge plywood arch made up of 20 laminations of 2x8-inch and 1x8-inch boards. In section this arch is \( 7\frac{1}{2} \times 27\frac{1}{2} \) inches. Its span is 57 feet 8\frac{3}{4} inches. It was made by Summerbell Roof Structures, in two pieces so that it could be hauled over a sharply curved road to the hilltop site. Erection was handled with a crane having a 75-foot boom. Cost of arch installed was \$1,400. 

From a cost standpoint, Spencer

(Continued on page 238)
**How To...**  
**BY MASTER**

**MARK STUDS FASTER**

If you are planning to build a home or if building is your business here is a valuable short cut. On the reverse side of your steel tape blade, etch a mark every 18 inches, the length of the blade. Then when you are placing re-foots joke or tape you have only to back as indicated, roll out and mark.

**FOR ACCURATE FOUNDATION LEVELING**

Insert two identical lengths of glass pipes into the ends of a length of hose. Fasten hose to each end (as indicated). Fill hose with water and insert pipe into each end. Drive your stakes into the ground to get approximate level. Remove pipes and adjust stakes so water level is equal on both sides.

**EASY WAY TO FIT A THRESHOLD**

Lay a piece of scrap wood across the threshold to be fitted. Lay the edge of your Gaqueries rule against both jams (as indicated) and scribe. Now place strip piece under the threshold, scribe and you can make a perfect cut every time.

**TUFBOY**

- For an inside measurement add 2 inches for case and tip.
- Blade replaceable without tools.
- Blade is graded on both edges.

To get most accurate measurements, plus a rugged blade which tested prove will outwear any steel tape blade made, try the Master Tufboy. Available in 5, 8 and 10 ft., satin or Brita Blinde finish. See it at your dealers today.

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**MASTER**

**WOOD AND STEEL TAPE RULES**

---

**a NEW way to build on**

A laminated plywood arch with a span of almost 60 feet supports this living room as it projects out over a 45-degree grade.

Footings supporting the arch are eight feet deep and are tied into the foundation. Anchor plates are secured to the piers by 16-inch bolts. Metal straps with turnbuckles for leveling hang from the arch and support the steel I-beams which form girders on which the projecting portion rests.
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(Continued from page 228)

**REINFORCED GLASS FIBER MAT AB105340**

"Duramat" is made from glass fiber mat reinforced with parallel strands of glass yarn, coated with waterproof asphaltic materials. It is used as a vapor barrier under basementless buildings and in refrigerated rooms; as a covering and weather sealing for above-ground insulated pipes and exposed ducts; and as a lining for irrigation ditches, laterals, stock ponds, swimming pools, etc.

The reinforced glass fibers give the product added strength and make it more resistant to tears and punctures. It will bend around curved or irregular surfaces and conforms readily to ground contour, its manufacturers say. "Duramat" is available with a nominal weight of 51.8 pounds per 108 square feet, furnished in rolls 36 inches by 36 feet; and in a nominal weight of 23.5 pounds per 108 square feet, in rolls 36 inches by 72 feet. Glass Fibers, Inc., Dept. AB, 1810 Madison Ave., Toledo 2, Ohio.

**MASONRY DRILL BIT AB105341**

One man can now drill holes in green concrete by using an electric or pneumatic hammer equipped with a new carbide tipped drill bit called the Thunder-Twist. The tool is provided with two deep spiral vanes which remove dust rapidly, eliminating the hazard of packing or binding of the bit. This feature also permits faster drilling in granite and similar hard masonry materials. The bit is capable of drilling holes of from 3/16 to 1/2 inch in diameter, up to 36 inches deep. Available lengths are 3, 4, 6, 12, 18 and 24 inches, with special diameters, shanks or extra-length bits furnished on request, New England Carbide Tool Co., Inc., Dept. AB, Auburn & Brookline Sts., Cambridge 39, Mass.

FOR MORE INFORMATION USE COUPON, PAGE 228
Low-cost lighted valances make rooms more livable, houses more salable

It takes just a few dollars and minutes to install, yet a lighted valance adds a design touch that makes any room a special attraction to home buyers.

See the difference it makes in this room. Notice how it uses the ceiling as a reflector to spread light, taking away the dark corner, making the room seem bigger. How it gives more diffused, restful light.

SIMPLE, INEXPENSIVE TO BUILD-IN

Valance units can be ordered complete from a number of fixture manufacturers or built on the job using an inexpensive strip fixture to hold the fluorescent tubes (General Electric De Luxe Warm White lamps are recommended). G-E Light Conditioning with lighted valances is an easy way to add extra value to rooms at low cost, extra value that prospects can see and admire.

General Electric has a simple, inexpensive Light Conditioning plan for every room in the house. For more information, contact your electric service company.

FREE BOOKLET: For your free copy of "See Your Houses in a New Light", the new Light Conditioning booklet for builders, write General Electric, Dept. 166-AB-10, Nela Park, Cleveland 12, Ohio.
new products

ELECTRIC WIRING DEVICES AB105342
Plastic locking wiring connectors feature sturdy, foolproof construction. Receptacles (upper right) have plastic bodies, heavy armor and positive contacts. Binding screws have large heads to facilitate wiring.

These devices are designed with a dependable lock device. A turn of the cap locks it positively; a reverse turn unlocks it. Triple blade assembly is accurately positioned for positive alignment.

Plugmold 2000 is your perfect answer to home buyers who insist on utmost convenience...it provides a double convenience outlet every 30 inches around every room, with closer spacings available.

In addition, you can now have both "hot" and switched outlets in the same receptacle.

You'll save time and installation costs — Wiremold's famous Snapcoils, pre-wired in 50 foot coils is installed in one, long, continuous run.

Plugmold 2000 is easily installed in new homes; and in homes you're modernizing without tearing out walls or floors.

Write today for the new, free Plugmold 2000 book.

Units are designed for back or side wiring. Connectors (upper left) have heavy-duty two-piece build; extra heavy insulation is provided by plastic back cover. Mounting straps are held rigidly at ends of the body preventing distortion or bends in installation.

RANGE COOKING TOP AB105343
This new cooking top design is a recent addition to the manufacturer's line of "Bilt-In" ranges. It incorporates two quick-heating cooking units to provide compact space for cooking needs in a limited area. One, two or three sets of units answer small, medium or large requirements.

Each cooking top features stainless steel finish, two surface units individually controlled by five-heat reciprocal switches. Neon indicator light glows when any unit is on. Units are 13 1/2 x 20 1/2 inches and can be installed individually, in pairs or divided where it is desirable to have units in several locations. Thermador Electrical Mfg. Co., Dept. AB, 5119 District Blvd., Los Angeles 22, Calif.

FOR MORE INFORMATION 
USE COUPON, PAGE 228

Since 1912 Protection for Masonry

WATERPLUG stops the leaks
In every type usable below-grade room, tunnel, dem. water-supply system and cellar. Ask for Circular No. 14.

THOROSEAL seals the surface
Against entrance of moisture into masonry, prevents mildew, which causes sour odors in interior rooms. Ask for Circular No. 16.

QUICKSEAL for beautiful finish
In pastel shades for finish coat over THOROSEAL base applications. Ask for Circular No. 15 and Color Card 32-R.

Write for Pictorially described literature "HOW TO DO IT"
This new cabinet-type lavatory measures just 16" x 14" over-all—provides the perfect answer to limited space in the "second" bath or powder room. Of gleaming, lifetime vitreous china, in Richmond's famous "whiter-white" or any of five decorator colors. Front overflow, anti-splash rim, twin soap dishes. Lavatory supplied separately, or installed in handsome C-147 cabinet.
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People are more interested in kitchens than ever before! All the great new work-saving appliances have focused new attention on this wonderful room. The trends toward "open" planning and toward indoor-outdoor living are re-establishing the kitchen as "the heart of the home".

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Take full advantage of the new interest in kitchens. Learn more about beautiful new Republic Steel Kitchens—the quality kitchens that are competitively priced. Send coupon today. Republic Steel Corporation, Berger Manufacturing Division, Canton 5, Ohio. Export Dept.: Chrysler Bldg., New York 17, N. Y.

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TRAY COMBINATION AB105344
A-42 inch sink and laundry tray combination for apartments and small homes is equipped with a sliding drainboard. Made of vitreous enamel cast iron, its surface is easy to clean and withstands hard use. The laundry tray is 13 inches deep and the sink, eight inches deep.

Widely separated grooves on the drainboard provide space for small objects.

The enameled steel cabinet has two roomy compartments for storage. Cabinet handles and base are recessed for comfortable working position. Unit is also available with pedestal for lower cost installation. Universal-Rundle Corp., Dept. AB, New Castle, Pa.

FOR MORE INFORMATION
USE COUPON, PAGE 228

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For locks and latches, only two holes to bore... all alike for every door ... but more than that... all locksets and latches are easy to install... all packaging is easy to identify, easy to handle. In addition, you have a choice of lock lines to offer plus finishing hardware that's uniform in quality, size, finish... a combination that can't be beaten for customer satisfaction year in and year out. See your Russwin dealer's display. Russell & Erwin Division, The American Hardware Corporation, New Britain, Connecticut.

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new products

BIRCH CABINET KITCHENS AB105345
Three types of “living kitchens,” fashioned in natural birch, are available in three price ranges, allowing the individual home owner to install a kitchen of beauty which will meet his financial requirements. The assembled version is ready to install and is finished in clear, high-luster lacquer. The second type is assembled but unfinished, offering the customer his choice of finish. The third, unassembled kitchen appeals to the “do-it-yourself” customer who likes to do his own work. Each cabinet is packed flat in its own carton, complete with hardware.

Among their features are continuous shelving and counter-tops, dovetail drawers, a recessed sink base unit and rotating shelves which give easy access to all stored items; they are available in both wall and base units. Overall flexibility allows these cabinets to be installed in any type kitchen. Brammer Manufacturing Co., Dept. AB, Davenport, Iowa.

BATHROOM CABINET AB105346
The “Mr. and Mrs.” bathroom cabinet with double size mirror measures 32x26 inches. Both sides can be opened at the same time. Six adjustable bulb-edge glass shelves have non-tipping brackets. Cabinet has stainless steel frame, piano hinges and positive closing bullet catches. Outside corners are square in order to facilitate tile setting.

A feature of interest to builders: the cabinet can be installed by using two standard size rough openings, left and right, of any 16-inch center stud, saving the job of installing headers in a large rough opening which would require removal of one stud section. Jensen Industries, Dept. AB, 159 S. Anderson St., Los Angeles 33, Calif.

FOR MORE INFORMATION
USE COUPON, PAGE 228

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Also manufacturers of Roly-Door Steel Sectional Garage Doors and Carry-All Truck Bodies

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SHOWER CABINET AB105347
A packaged shower cabinet called the “Cadet” features rapid installation. When assembled the shower is leak-proof without the use of compound. The unit has smooth cove corners, hollow stiles and a completely enclosed threshold. The entire construction has been designed so that there are no raw edges or hard-to-clean dirt pockets.

The shower cabinet can also be built-in through the use of an escutcheon-type adapter frame and a rigid one-piece slip-on top which is supplied with a dome light. A terrazzo receptor is included with the shower. Fiat Metal Manufacturing Co., Dept. AB, 9301 Bel- 

mont Ave., Franklin Park, Ill.

ORNAMENTAL LETTERS AB105348
Designed for placing on chimneys, entrance doors, garage doors and indoor fireplace chimneys, these ornamental letters are made of solid cast aluminum from hand carved patterns, with hand-rubbed, black antique finish. Letters are fastened with two cap screws, and measure 18 inches high and up to 16 wide. The
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In one operation

No joints to conceal
No nails to treat
It’s building magic!

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Ask your U.S.G. building supply dealer about Panel SHEETROCK or write 300 W. Adams St., Chicago 6. Inquire, too, about new U.S.G. METAL TRIM for concealed metal edge reinforcement around doors and windows in SHEETROCK con-
How Bill Trude
this nationally

This house is designed to incorporate the architectural features most wanted by the readers of a national home magazine. It is expected to be the prototype of hundreds of new homes. One of the most important considerations in the selection of the materials was that of quality. When Bill Trude selected Bildrite for a quality sheathing job (greater bracing strength, weatherproofed wall and added insulation value) he also realized a saving of $59.00 per thousand square feet as compared with wood. Pictures on this page show how.

Write! See how you can save with Bildrite. Free literature includes cost-comparison forms. Figure your own saving. Illustrated “case histories” and product data show how. Write Inslultite, Minneapolis 2, Minnesota.
added quality to known "idea house"... and saved $59 per M!

1. Bildrite goes up faster and easier. Two carpenters can sheath 1,000 square feet in half a day or less. Cuts application time as much as 43% compared with wood. Has tremendous bracing strength. 4" Bildrite eliminates need for corner-bracing (F.H.A. accepted).

2. Easy to cut, reduces waste. Bildrite cuts cleanly, quickly, easily with a handsaw or power saw. Virtually eliminates cutting and matching waste. You order 1,000 ft. to cover 1,000 ft. Compare this saving with the minimum of 12% loss figured for wood sheathing.

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Made of hardy Northern wood

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Minnesota and Ontario Paper Company, Minneapolis 2, Minnesota
SAVE TIME, SAVE PAINT, SAVE MONEY
On Every House You Build With

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GPX GREEN

PLASTIC-FACED PLYWOOD
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IT'S EXCLUSIVE! GPX GREEN

is made by an exclusive formula of the Georgia-Pacific Plywood Company. Years of research make it the material that meets all the requirements of paint. It combines the miracle of modern plastics with the structural strength of plywood. It offers an improved interior and exterior surface in one grade. It's exclusive in color and surface. So insist on green—GPX GREEN . . . if you want the surface that's engineered for painting.
IN EXTERIOR SIDING—GPX GREEN paint grade plywood is weatherproof and waterproof when painted. Paint lasts up to three times longer on GPX GREEN than on other materials. And it’s easy to apply. No priming is needed and the smooth surface can be covered with one coat. GPX GREEN sidewalls will not check or crack and grain raise is reduced to a minimum. Use the panels in their full 4 x 8 ft. size or cut in strips and lap. Either way, you save time, paint and money and give your customers the finest paint surface obtainable.

IN INTERIOR WALLS—GPX GREEN is made from top-grade Douglas Fir Plywood and surfaced with a plastic overlay fused to both sides of the plywood. The large panels are nailed right to the studs and produce a complete wall in minutes. Checks and cracks won’t mar the smooth surface—ever! Your painters will be amazed to see how GPX GREEN can be covered with one coat without any primer. Walls of GPX GREEN seldom require repainting. For you and your customers—GPX GREEN is the best buy by far.

IN CABINETS AND BUILT-INS—GPX GREEN is easy to work. Solid cores produce a smooth, clean edge when cut. The smooth plastic surface eliminates feathering and chipping. GPX GREEN is flexible...bends to the same short radius as regular plywood and is ideal for curved counter bases. This “engineered for painting” material saves you money in every application. To cut costs and speed completion time, use GPX GREEN in the next house you build.

GEORGIA—PACIFIC PLYWOOD COMPANY
Dept. 617, North Capitol Way, Olympia, Washington
OFFICES OR WAREHOUSES IN: Augusta, Baltimore, Birmingham, Boston, Chicago, Cleveland, Columbus, Detroit, Fort Worth, Lancaster, Los Angeles, Louisville, Nashville, Newark, New Castle, New Hyde Park, New Orleans, Olympia, Orlando, Philadelphia, Pittsburgh, Providence, Raleigh, Richmond, Salinas, Savannah, Seattle, Spokane, Toledo, Vineland, Waltham.

MAIL COUPON TODAY!

GEORGIA-PACIFIC PLYWOOD COMPANY
Dept. 617, North Capitol Way, Olympia, Washington
Please send me further information on GPX GREEN Plastic-faced Plywood.
Name
Title
Company
Address
City...State
new products

ORNAMENTAL HARDWARE AB105349

A new line of ornamental hardware for kitchens, game rooms, living rooms and dens is named “Rustic Iron” for its rugged appearance and hand-forged look. It features a rough-textured finish, hammered edges and authentic early American designs. Hardware is available for all cabinet applications and for full-size interior doors. Made of steel, toughened and hardened by cold rolling, the hardware is said to complement natural wood or painted surfaces.

A sales display, illustrated, is offered as part of a cabinet hardware package. Black ornamental hardware is now offered both in a rough-textured and in a smooth, satin finish. The Stanley Works, Dept. AB, New Britain, Conn.

PACKAGED HOMES AB105350

Precut, packaged homes in 17 elevations and five floor plans are now available for small and large builders. The designs include two-, three- and four-bedroom homes that sell in the $8,500 to $18,500 price range. The builder enjoys a conventionally built house with the advantages of fixed costs, low inventory and savings in labor and materials.

The package includes everything except masonry, electrical, plumbing and sheet metal materials. Place Homes, Inc., Dept. AB, 1212 S. Walnut St., South Bend, Ind.

Hassall threaded asbestos siding nails are the choice of contractors throughout the country. Made of bronze and steel with plated finish. Note threaded shank which guarantees maximum holding power. Made of #14 gauge wire (.082) in 1", 1 1/4", 1 1/2", 1 3/4" lengths. Advise quantities. Prompt shipment.

JOHN HASSALL, INC.

P.O. Box 2152
Westbury, N. Y.
Established 1850
THE Capacity TO SERVE...

For many years, we have been producing Weslock units at a constantly increasing rate to meet the demands of our thousands of customers throughout the world. Our system of rigid quality control plus our high precision engineering standards have established the reputation of Weslock as America's greatest lock value.

* Beautifully designed and finished  * Millions in use  * Unconditionally guaranteed for the life of the installation  * Simple, fast installation  * Budget priced  * Expert field sales assistance

For Economy, Dependability and Beauty, choose Weslock, America's greatest lock value!

WESTERN LOCK MFG. CO.  Manufacturers and Sole distributors of Weslock residential locksets

GENERAL OFFICES: 211 NORTH MADISON AVE., LOS ANGELES 4, CALIF.  * FACTORY: HUNTINGTON PARK, CALIF.

OCTOBER 1953
building a remodeling business on advertising

In five years, Builder Arnold Nathanson of Brooklyn, New York, has solidly established himself as a remodeling specialist—by consistent advertising. Nathanson’s advertising policy has been carefully worked out and is followed without deviation.

His ad budget is divided as follows: 47 per cent for major newspaper; 28 per cent for a second newspaper; 13 per cent for direct mail; and 12 per cent for classified phone books.

The Nathanson firm—Arnold Construction Co.—can be found under six separate classified headings in the Brooklyn “yellow pages” directory. The largest permissible display ad, covering a quarter-page, appears under “Contractors-General,” while another display ad under “Siding Contractors” offers “complete modernization service.”

Portable heat can make money for you this winter—keep men on the job and materials at safe working temperatures. And Herman Nelson Heaters, with flexible ducts, put all the heat exactly where you want it with minimum waste. Heat can be “piped” under tarps, into bins and cargo spaces, direct to working areas.

Herman Nelson portable heat is absolutely safe. The heated air is completely free of combustion gases—no carbon monoxide, no smoke, no sparks. All products of combustion are kept separate and vented off as in a modern home furnace. You get all the heat you want, where you want it, with none of the dangers of salamander-type units. Act now. Your investment will be repaid in just one winter, this winter!

Remember, Herman Nelson has the only complete line of completely safe Portable Air Heaters.

American Air Filter Company, Inc.
Moline, Illinois

Please rush my free copy of booklet “Guide to the Selection and Use of Portable Space Heaters.”

NAME
COMPANY
TYPE OF BUSINESS
ADDRESS
CITY ZONE STATE

Phone book ads are the biggest business-getters. Arnold has entries under six classified headings

Other Arnold listings are maintained in the sections for “Painters,” “Roofers,” “Shingling Contractors,” and “Fence.” Nathanson says, “Even though we spend less on it than on our other advertising, the directory is our most consistent business-getter.”

Nathanson always includes a photograph of himself in his ads. It’s a personal touch which he considers important, because remodeling is a very personal kind of service. The content of his newspaper ads is rarely changed. The feeling is that since specials are never offered, there is little reason to vary the one-column 8- to 9-inch ad that appears each week in the two newspapers. Specials are avoided on the grounds that readers remember only the offer and forget the name of the firm making it.

Arnold’s newspaper ad cites the availability of hundreds of photos and recommendation letters from homeowners, banks, landlords and others. This same type of testimonial solicitation is used in direct mail. Two separate 4-page folders are used, one for industrial, the other for residential prospects. Mailings average 1,200 pieces a month. “We don’t expect prompt responses,” Nathanson states. “If one of these mailings brings us just one good account in six months, it will have been more than justified.”
A whole town site
with FOLLANSBEE TERNE METAL ROOFS!

On a budget type contemporary, or a stately traditional... whether a single unit or a whole town site... you'll find the lifetime roofing protection, the rich color, the permanent weathersealing of a Follansbee Terne Metal Roof. Any home takes on a fresh individuality, a distinctive new look with a roof deck of versatile Terne Metal, beautifully adapted to any architectural style.

TO THE BUILDER Follansbee Terne Metal Roofing offers many advantages. It's simple and easy to install. Follansbee Terne Metal comes in continuous 50-foot rolls, which can be cut in the shop to required lengths and delivered, or cut right on the job and can be formed and installed mechanically. Terne is light, weighing only 70 pounds per square foot... yet it's strong and durable. The expansion-contraction factor is negligible, eliminating the need for expansion joints or allowances. And it's low in overall cost.

TO THE OWNER Follansbee Terne Metal Roofing also offers many advantages which helps to keep a house in top condition. A Terne Roof lasts a lifetime, providing trouble free protection in any weather with no maintenance other than painting. The roof can be painted any color and as often as the owner wants, giving the home a new personality just by applying a paint brush.

These are just a few of the reasons why Follansbee Terne Metal was selected for the White Pine town site... reasons why you, too, will find Terne Metal a good roof investment. Write us for additional information.

FOLLANSBEE STEEL CORPORATION
GENERAL OFFICES, PITTSBURGH 30, PA.

Cold Rolled Strip Seamless Terne Roll Roofing
Polished Blue Sheets and Coils


FOLLANSBEE METAL WAREHOUSES
Get the BIG COMPETITIVE EDGE

MURRAY has the Quality that sells!

No finer line of steel kitchen cabinets and cabinet sinks is offered.
Your customers will immediately recognize and appreciate the rugged construction of heavy-gauge steel . . . the stain- and acid-resistant titanium porcelain-enameded sink tops . . . with more usable work surface.
And there's more solid sales appeal in the brass drawer runners . . . the heavy sound-deadening . . . the positive closing of doors. And what woman could miss the smart contour styling? It's an instant eye-catcher that says superlative quality in every graceful line.

MURRAY gives builders a price that's right!

The Murray Builder Department is staffed by men whose job is to see that you get feature-packed kitchens that sell homes at a profit. Murray distributors are prepared to go all-out in helping you plan and promote. Operating with Murray's new construction pricing formula, they can pack terrific appeal into a limited space and a tight budget. You can count on full co-operation in the timing of delivery and in the supervision of first installations, so that you are sure of a job that goes in fast and goes in right.
The Murray Kitchen line is complete! Murray Kitchens for your houses can be planned from a wide variety of units. Cabinet sinks are offered in 12 different models, 42”, 54” and 66” widths... single- and twin-bowl models. Wall cabinets in both 18” and 30” heights, 15” to 36” widths, with adjustable refrigerator-type shelves. Also new 54”-width wall cabinet. Base cabinets in 15” to 36” widths (sliding shelves) with a choice of 8 beautiful vinyl tops. Broom cabinet, Lazy Susan corner base and wall cabinets, condiment cabinets, glass what-not shelves, maple cutting-board tops round out equipment available.

New! Murray Food Waste Disposer offers you simple, bayonet-type installation. Continuous feed; extremely quiet. Especially attractive price.
The flexibility of PG's meets all design requirements. Center line spacing ranges from 4½ in. to 12 in. At normal 6 in. spacing the over-all dimension of a PG is 56 in. x 60 in.

**A NEW ANACONDA PRODUCT MAKES A BETTER JOB — FASTER**

Now—something new in radiant panel piping. It's ANACONDA Panel Grids® (PG's). These action pictures show how easily PG's install. No more awkward "stringing up" of coiled tubing. The job is done easier and quicker with PG's. These handy and adaptable panel grids are conveniently packaged ready for installation. The machine-made prefabricated grids eliminate on-the-job bending and the expense of special panel-forming aids.

PG's are supplied in one standard size, consisting of 50 linear feet of ½ in. Type L copper tube. At normal 6 in. spacings, PG's are rated at 1800 Btu/hr. This simplifies estimating and layout. PG's may be extended or contracted by hand to serve panel surface areas from 22½ to 60 square feet.

PG's are not yet available everywhere, but production is increasing. We are shipping to wholesalers as fast as possible. Ask your Anaconda Distributor to show you why it's easier to design and faster to install panel systems using PG's.

For full details we'll be glad to send you an informative booklet that will answer almost any question you have about this new Anaconda product. Use coupon, or write for Anaconda Publication C-6 to The American Brass Company, Waterbury 20, Connecticut.
2. PG's are readily laid out to the required spacing.

3. PG's are easily put in place. Trim, straight and true, they fasten tightly to the ceiling and require only normal plaster thickness.

4. PG's save fittings—one end of the tube is expanded so that grids can easily be connected in series by soldering or brazing.

The American Brass Company
Waterbury 20, Connecticut

Please send me Anaconda Publication C-6, describing PG's.

NAME ........................................

FIRM NAME ..................................

ADDRESS ....................................

CITY ................ ZONE .... STATE ............
For Practical, Effective Installations, at Moderate Cost...

exterior wall insulation

We have in mind insulating a wall section and we would like to know the names of the best insulation materials on the market, to place in between the wall facings, made of asbestos wall board. The material can be loose, can be furnished in sheet or can be flat paper containers.


Almost all of the nationally advertised brands are good and do an excellent job of insulating the house. It would be a matter of individual choice as to whether that insulation would take the form of batts, which could either be two inches or four inches thick, or whether it would be of the poured type, such as loose mica which would fill the entire area of the studs or joists. If you desire thermal ratings on the various types of insulation, I would suggest that you write to the Bureau of Standards, Washington, D. C., for a booklet on insulation materials and their thermal values.

concrete floor chalking

A friend of mine has a concrete floor that continues to chalk. He says he can sweep it 20 times a day and still a dust will come up from it. It has not been down very long, about two or three years. It is a full basement and is dry. He wants to know if I can stop this chalking with a sealer of some kind or will it require a new floor. I will appreciate any help in the matter.

R. M., Urbana, Ohio

Where there is a thin layer of soft, chalky material on the surface of a concrete basement floor, the “dusting” may often be removed with pads of steel wool attached to a scrubbing machine. After removal of this material, the surface should be thoroughly cleaned, then allowed to dry and one of several hardener treatments applied. It should be pointed out that these surface treatments are not cures for poor materials or careless workmanship nor will they make a perfect wearing surface of a poorly built floor. Among the more popular floor hardeners used for this purpose are magnesium, fluorosilicate, zinc fluorosilicate, sodium silicate, aluminum sulphate, zinc sulphate and various oils such as chinawood, linseed or soybean oil. The oils should be diluted with gasoline, naphtha or turpentine.
Some home buyers like one type of exterior construction, some like another . . . but in the kitchen, a large percentage of them prefer one type of range—and that's the Electric Range. Alert builders have recognized this fact, so a constantly increasing percentage of them install Electric Ranges as standard equipment. They use its features to help them sell, because this range is both economical and easy to use, and assures a clean, cool kitchen. No matter what type of homes you build, the modern Electric Range can help you sell them better, too!
Because this unit will give you a Superior Balance... PLUS... Full Jamb Weatherstripping... at no greater cost than most conventional balances alone.

**MASTER NO-DRAFT**

**SASH BALANCE**

The economy of quality is inherent in this equipment. It has long been established as a sales feature in new homes, as well as a low-cost and efficient means of modernizing windows in old homes. It is easy to install. It is durable and gives finger-tip control. It eliminates expensive box frames, pulleys, ropes, chains and weights. Requires no maintenance and will outlast the window.

**AN "AIR CONDITIONING" MUST**

Proper mechanical conditioning of temperature, in both winter and summer, requires weather protection at all openings. The weatherstrip feature of this sash balance provides an ideal seal under all atmospheric conditions against air infiltration, as well as dust and dirt.

The Master combination Sash Balance and Weatherstrip Unit has been proved and tested on over 4 Million windows for over a decade. Builders have accepted it as the "Standard of Quality."

---

**MASTERS METAL STRIP SERVICE, INC.**

1720 No. Kilbourn Ave., Chicago 39, Illinois

☐ Please send me the description and installation data about Master No-Draft units:

☐ I am also interested in standard weatherstrip equipment of Master quality.

NAME:

ADDRESS:

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**ask the experts**

**seeking the impossible**

Please send me information on reinforced concrete work with reference to correct sizes of steel and concrete in relation to length of beams (suspended) also slabs, data referring to initial strength of same, also some mathematical computations necessary to compute this type of structure.

A. L. D., W. Woodsport, N. Y.

It would be very difficult, if not impossible, to set up a few simple rules, formulas, or charts from which the design of reinforced concrete slabs, beams, etc. could be extracted without a detailed qualification for each condition encountered. We therefore suggest a book entitled "CRSI DESIGN HANDBOOK" which tabulates concrete design data for varying conditions. The price of this book is $5.00 and can be obtained by writing to the Concrete Reinforcing Steel Institute, 38 South Dearborn St., Chicago 3, Illinois.

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**seeking millwork data**

I am starting in the business of manufacturing millwork and cabinet work. I would like to obtain a book on estimating the cost of manufacturing millwork and cabinets, such as Walker's Building Estimator Reference Book is for the contracting business.


The only book which will fill your requirements would be the Millwork Cost Bureau, Cost Book "A," which can be obtained from the Millwork Cost Bureau, 28 E. Jackson Blvd.

---

**what finish is best over wood siding?**

We are using one coat of Rez on yellow pine bevel siding and woodwork on outside of our house. Would like to have your recommendation as to best clear finish to apply over the Rez.

J. P. R., Sheridan, Mont.

You can apply varnish over the color-tone Rez. but you may then be defeating the purpose of this type of finish. Why not use conventional house paint?

National Paint, Varnish and Lacquer Assn., Inc.
sub-contractors use Dodge Reports ... they know who is going to build ... what jobs are out for bids. They get the contracts they want because they get their bids in on time on the jobs they want.

supply men use Dodge Reports ... they know where to go and when to get business. They get the orders they want because their quotations go in on time on the jobs they want.

builders make sure their jobs are reported in Dodge Reports ... they get more—and better—bids from both sub-contractors and supply men who use Dodge Reports to find the business they want.

The leading firms in the entire industry, as they have for 63 years, depend upon Dodge Reports in doing business in all the construction markets throughout the 37 Eastern States.

If you are a sub-contractor or dealer—write or call nearest Dodge office listed in Classified Telephone Directory—Write today for "Dodge Reports—How to use them effectively."
One-piece algae
No sleeves or covers are necessary

Cross member
Installation
ALLWEATH
FULL JAMB BALANCE STRIP
Weatherstrip and Sash Balance Combination
for quick, efficient
Sash Mill INSTALLATIONS

ADJUSTABILITY IS BUILT-IN - Balance tube with semi-
cantilever action insures weatherstrip contact in all kinds of
weather. The base of section is always in close contact with
jamb insuring stability.

BEAUTY OF DESIGN ... sets off the pleasing quality of fine
wood sash and frames. Counter-balance springs are con-
cealed by a functional part of the strip itself.

COLD AIR AND DUSTY DRAFTS CONTROLLED ..... by generous area of contact between strip and sash. Tests
made by the University of Minnesota Institute of Technology
Testing Laboratory in cooperation with the Weatherstrip
Research Institute, show that double-hung wood
windows, when weatherstripped show an infiltration ratio 6 TIMES LESS than non-weather-
stripped windows.

Concrete will be poured. Excavate the base to the re-
quired depth and level the surface with a rake. With
well-drained subsoils, the concrete can be poured di-
rectly on the subgrade, which should first be well
tamped. When there is some doubt about the drainage,
the base should be excavated deep enough to permit
a four-inch layer of well-compacted, clean, coarse gravel
or cinders to be placed over the subgrade.

The pavement type of driveway usually is made 8 to
10 feet wide and six inches thick. A six-inch slab is
recommended in order to sustain heavy loads and
delivery trucks. If trucks are not permitted to enter
the drive, a five-inch slab may be adequate. However,
the six-inch slab insures maximum durability. The
center of the driveway should be given either a crown
or a valley to insure rapid drainage.

The base is prepared so that the finished pavement
will have a uniform thickness. Wood side screeds, con-
sisting of 2x6's, are placed on both sides for the entire
length of the driveway. A cord stretched from one end
to the other helps to set and align the screeds at the
required level.

The top edges of the 2x6 screeds opposite each other
should be placed at the same elevation. The side screeds
should be carefully placed and firmly supported with
stakes to prevent the concrete from forcing them out of
position.

The width of concrete drives should be increased at
least three feet at curves. When laying out a turn, the
radius of the curve should be not less than 15 feet.
Where the driveway has a curved section, a length of
3/4-inch form lumber can be curb-sawed on the back face
and bent around stakes or heavy stones.

The proportion of materials to be used is the same
as those specified for sidewalks. Use the same method
for pouring, finishing and curing driveway concrete as
recommended for sidewalks.

Concrete should be well mixed and then poured di-
rectly into the forms. After pouring, the concrete should
be spaded along the side forms.

The concrete is struck off with a template (or strike
board) shaped to give the pavement its desired crown
or valley. The strike board, consisting of a length of 2x4
or 2x6, rests on the edges of both side forms and is
worked in a saw-like motion to level the concrete.

The forms can be removed about three days after the
concrete has been poured.

window placement in house planning

A window idea book which will stimulate the thinking of con-
tractors, builders and those who contemplate building a perma-
nent home is now available. It contains designs and photographs
of 62 different types of picture windows in modern homes, show-
ing their effective use in various rooms of the house, and how
they can be utilized to the best advantage with outside surround-
ings, by skillful placement of window areas.

The booklet, "Beautiful Picture Windows," is available for 25
cents from Fleet of America, Inc., Dept. AB, 467 Dun Blvd.,
Buffalo 2, N.Y.
THE EASY WAY TO SELL MORE HOMES

IT'S EASY to sell fine MODERN HOMES because they are packed with "let's buy it" appeal from the first glance at their long, clean exterior lines to the final inspection of the extra large rooms. MODERN HOMES were designed to sell in today's market. They are well-planned, smart looking homes designed by experienced architects and they are conventional homes—factory assembled by conventional methods using the finest nationally advertised materials. And because MODERN HOMES are skillfully mass produced in an efficient manner, they are priced substantially lower, even as much as 20% lower, than comparable site-built homes.

Valuable Opportunity for Builders

We have recently expanded our facilities and we have openings for qualified builders-dealers. If you have sound financial resources and an established reputation for building well-designed, high quality homes we offer you the opportunity of building fine MODERN HOMES in your community. Write today on your letterhead.

Manufacturing Plants at
Dearborn, Mich. and Port Jervis, N.Y.

7744 GREENFIELD ROAD • DEARBORN, MICHIGAN

OCTOBER 1953
CONCEALED-GUIDE
SURFACE BOLT
NO. 354
by
ADAMS-RITE

The New

The ultimate in streamlined appearance... and made of solid brass, of course.
This is the new Adams-Rite No. 354 Surface Bolt. It is mounted completely on concealed guides—even the screws are not visible after installation.

Designed especially to blend with contemporary architecture. It is unusually strong, made of solid brass throughout and hand polished. Available in ½” widths and 4”, 6” and 8” lengths.

WRITE FOR COMPLETE INFORMATION

The mask of excellence

Coated optics give you
this— not this—

with a White
Universal Level-Transit

HERE'S what coated optics do for you.
You can put in a full day without eyestrain or headache. There's less chance for a mis-reading. You get a clear, sharp sight—not a fuzzy image. What's more, you get your reading in far less time.

Check this diagram. See for yourself how coated optics pass through up to 40% more light, provide a clearer image contrast.

PASSAGE OF LIGHT THROUGH
UNCOATED LENSES

Here is a recommended built-up roof (with a 10 year bond) for a flat or slightly inclined deck showing joist and exposed beam construction. Quantities here are for 100 square feet.

25# roofing asphalt
15# asphalt saturated felt
25# roofing asphalt
8# asphalt saturated felt

/*Prices subject to change without notice.

AMERICAN BUILDER
ALL-ALUMINUM CROSSLY "SURSEAL" JALOUSIES

GLASS LOUVER WINDOW

SPECIAL FEATURE: When jalousie closes, patented weatherstripped vertical operator bar locks into place and seals jalousie along both sides of jamb. Head and sill are also weatherstripped to insure complete all-weather seal.

STANDARD FEATURES:
- Heavy Extruded Aluminum Frame 635-T5
- Frame Is Recessed And Grooved For Interchangeable Screen Or Storm Window
- Outside Frame Grooved To Hold Storm Shutter
- Full Vision (4½" wide) Glass Louvers
- Patented Louver Spring Clip Locks Glass In Place

KNOCK-DOWN UNITS...
Designed for quick assembly and installation...saves money. 8 screws mechanically lock frame sections into one unit.

SPECIAL CROSSLY OPERATOR
locks jalousie louvers in any position...opens 90° wide with a quarter turn.

DEALERS / DISTRIBUTORS
Write, wire or phone for details

CROSSLY WINDOW CORP.
3550 N.W. 71st St., Miami, Florida

Dealer □ Distributor □ Builder □

Gentlemen: Please send me information on your all-aluminum Crossly Window. Thank you.

NAME: __________________________
ADDRESS: _______________________
CITY: ___________ ZONE _______ STATE _____

OCTOBER 1953
Business Executives!
Check These Questions
If you can answer "yes" to most of them, you—and your company—are doing a needed job for the National Blood Program.

- Have you given your employees time off to make blood donations?
- Has your company given any recognition to donors?
- Do you have a blood donor honor roll in your company?
- Have you arranged to have a bloodmobile make regular visits?
- Has your management endorsed the local blood donor program?
- Have you informed employees of your company's plan of co-operation?
- Was this information given through plan bulletin or house magazine?
- Have you conducted a donor pledge campaign in your company?
- Have you set up a list of volunteers so that efficient plans can be made for scheduling donors?

Remember, as long as a single pint of blood may mean the difference between life and death for any American...the need for blood is urgent!

America's blood bank needs more blood, now. Be a regular depositor and know that your dividend is saving a life of some American—somewhere.

It may be a soldier shot down in battle, suffering from shock. Or someone here at home, sick and in dire need of new blood to restore life. A mother in childbirth, or a child in an accident.

America must give. America is you. Won't you call your Red Cross, Armed Forces or Community Blood Donor Center right now, for an appointment?

Give Blood
...give it again and again

National Blood Program
lumber industry plans big research program

The nation's lumber manufacturers have embarked on a million-dollar research program designed to cut home building costs and give consumers new and better lumber products.

One major objective of the program will be to find new uses in home building and other construction for small pieces of lumber and wood species which, up to now, have had little or no commercial value.

Leo V. Bodine, executive vice president of the National Lumber Manufacturers Association, said the program will guarantee the public "greater value for its lumber dollar through development of new and improved uses for wood."

Major emphasis will be put on lamination—the gluing of two or more pieces of lumber in layers to give them greater strength than a solid piece the same size.

End-products which the program is expected to develop include glued-up lumber panels faced with veneer, heavy-duty paper or thin fiberboard. Some panels might require no special facing.

"Indications are that builders could effect worthwhile economies by using these lumber panels for exterior wall and roof sheathing, subflooring and interior partitions," Bodine said.

Studding costs may also be reduced through lamination, Bodine continued. He explained, as an example, that there are plenty of one-by-four boards which lumbermen could laminate into two-by-four's.

The research project will be set up by NLMA's Products and Research Committee, headed by D. B. Frampton, Columbus, Ohio, lumber manufacturer. It will involve an outlay of $1,100,000 over a ten-year period.

Construction Outlays Set Record in January-June 1953

Expenditures for new construction were at the highest level in history during the first half of 1953, according to estimates by the Departments of Commerce and Labor. Outlays for new residential construction were estimated at $5.4 billion, up nine per cent from last year and slightly higher than the record year of 1951.

For the month of June alone, the estimates for private residential construction showed a ten per cent rise from May. The June, 1953, figure also was ten per cent higher than in June of last year.
A liaison maintenance superintendent providing personal service to new home owners before, during and after they take occupancy is a new merchandising idea introduced by Lester Robbins in his Woodbridge Oaks communities at Woodbridge, New Jersey. The liaison man at this 800-family project supplies the following five-step service in his role as the builder's goodwill ambassador:

1. He inspects a home before the family moves in and, in the event of any flaws in workmanship or material, arranges for prompt correction of the faults.
2. He meets the new owners prior to their taking title and "introduces" them to their home. He conducts them on a tour from basement to attic, explaining construction, heating, plumbing and electrical details on the way.
3. He offers advice on the care of the home to keep maintenance costs down; also points out the possibilities it offers for future expansion.
4. He obtains the family's probable move-in date, then arranges to have the home cleaned, heated and otherwise ready on moving day.
5. He invites the new arrivals to call on him for any assistance they may need. They are requested to note anything that may warrant attention during the first 30-days' occupancy and turn the list over to him. All notations are checked and, if deemed proper, work orders are issued. An effort is made to have all corrections made at one time, thus holding inconvenience to the home owner to a minimum.

John Schappert, the liaison man, has added a service. Enough families have now moved into the homes to form a civic association, so he makes it his business to attend all meetings as the builder's representative and work out any problems that may arise.

For Many Digging Jobs, Only the Sherman Power Digger is Practical

Get the most out of the excavating equipment you already own or rent by keeping it on your big volume jobs.

For miscellaneous excavating and trenching jobs the Sherman Power Digger is fully capable and far less expensive to operate. You can buy Digger and Tractor complete for less than many automobiles cost.

The Sherman Power Digger is the answer where giant digging equipment and manual labor are both uneconomical. It reaches 8 feet below ground surface and swings in an arc of 140° with a radius of 10 feet behind the tractor.

For complete information on how the Sherman will cut your digging costs, write today for free literature T-36.

Efficient performance of the Sherman Power Digger is assured by positive hydraulic action and patented actuated bucket.

The Sherman Power Digger is attached to a lightweight, rubber-tired tractor giving unmatched maneuverability and transportability.

Designed, Engineered and Manufactured Jointly by
SHERMAN PRODUCTS, Inc.
Royal Oak, Michigan
WAIN-ROY CORP.
Hubbardston, Mass.

Other patents pending.

New owner being "introduced" to his home by John Schappert, liaison maintenance superintendent for the Robbins Construction Co.
getting cost down for negro housing

New housing for Negroes is available in many parts of the country at low prices. Floyd Kimbrough of Jackson, Mississippi, delivers this 750-square-foot model for $4,000 built on the owner's lot. Kimbrough has cut many of the luxury features yet maintains high-quality construction in a low-cost package.

The house is built on concrete piers with a brick curtain wall on the front side. Double 2x10 sills span the piers. Joists are 2x8's spaced 16 inches on center. The exterior wall has diagonal wood sheathing and an exterior finish of asbestos siding. The roof is standard (Continued on page 274)
negro housing

(Continued from page 273)

The living room is 12x14 feet, has oak flooring and plasterboard walls framing with 2x6 ceiling joists 16 inches on center and 2x6 rafters on 24-inch centers. The roofing material is 210-pound asphalt shingles.

The house includes two bedrooms, bath, living room, kitchen and screened porch. Rooms are of adequate size. Bedrooms are 10x14, living room is 12x14, kitchen is 10x12 and porch is 8x10.

Floor plan for the 750-square-foot house includes two bedrooms, bath, kitchen, living room, screened porch, storage area.

Kitchen is 12x12 feet and has a dining area. Cabinets are job-built. Floor and counter top are linoleum.
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Here, at last, is an exact working guide on every detail of house construction from foundation to finish. Tells you dimensions, materials, processes, step-by-step working methods. Hundreds of scale drawings and photographs make every step easy to follow. Can be used for alterations in a set of stock plans, for making additions or changes in a building, or for complete construction of a dwelling. Conforms with modern practice and building regulations in all parts of the country. A book you will refer to for years! The professional guidance you get on even a single house construction detail can repay you a hundred times the small cost of this wonderful volume! Send for free-examination copy today. Mail coupon below.

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3 standards and 6 brackets make this work display counter.

6 standards and 12 brackets make this work bench.

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"E-Z" Brackets and Standards are strong enough to carry the heaviest merchandise for hardware, building supply stores and lumber yard display rooms; for wall shelving, counters, island, table, and other type displays.

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GOOD JOBBER TERRITORIES ARE STILL AVAILABLE.

A BIG SALES PRODUCER FOR BUILDING SUPPLY STORES

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TRIMLINE cover snaps on brackets, easy installation.

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Over Twenty-Eight Years A Leader in Fin-Tube Radiation
21 FRANCIS AVENUE HARTFORD 6, CONNECTICUT

boring jig speeds lock installation

This new boring jig is supplied with the necessary reboring attachments with which to replace existing locks with those of the manufacturer, or to install locks for the first time.

In putting in new locks, the installer marks the height line (center line of the latchbolt) on the door's edge at a suggested height of 3 3 inches. The jig is positioned on the door and the hand wheel tightened until the jig is clamped on the door, automatically centering the latch hole guide.

The backset marker is slid to its desired position, pressing the

(Continued on page 277)
boring jig speeds
lock installation

(marker point against the door to indicate the center of the lock hole; arm is then swung out of position. With the bit point on the center mark, the 2-1/4-inch diameter lock hole is then bored.
The latch hole is bored last, by inserting the proper size bit through the latch hole guide. Latch hole is drilled to intersect the lock hole.

Material courtesy of Schlage Lock Company)

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TO WORK EFFECTIVELY

CONSIDER THE TIME AND PROFIT you gain by SAFELY putting your skilled workers close to the job they’re doing. The Safway rolling tower does just that. On maintenance and repair jobs, for example, it follows the work . . . along building walls, down corridors. It will help you put your skilled hands to work more profitably for you.

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At hardware and building supply dealers everywhere.

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Sharp-cutting RESINIZED® SPEED-GRTS®
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Prevents Warping, Swelling, Shrinking, AND Rot.
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Catalogs —
and Manufacturers Literature

430—PACKAGED CHIMNEY—Step-by-step installation instructions, dimensions and features of the “Air Jet” ready-to-install chimney are presented in a catalog sheet. The chimney, made of aluminum with a high temperature porcelain steel smoke pipe, is approved by Underwriters’ Laboratories. Special anti-down draft top protects against rain, snow and down drafts. General Products Co., Dept. AB, Fredericksburg, Va.

431—ORNAMENTAL CASTING—Used on porches, railings, brackets, valances, gates and with deck and wall railings, the “Scarlet Oak” casting is a reproduction in malleable aluminum of the leaf, acorn and branches of this tree. It is designed to be appropriate both for modern or traditional architecture. Being a double-faced casting, the pattern is seen on both sides. Catalog sheet illustrates the design in three different scales as an aid to architects and draftsmen. The R. G. Coffman Co., Inc., Dept. AB, Orlando, Fla.

432—FLEXIBLE TUBING—for ventilation, fume and dust removal and materials handling is described in a new eight-page bulletin giving detailed information on two types of highly flexible lightweight tubing made from continuous helical coils of spring wire wound with overlapping plies of treated multi-coated fabric. One type is designed for ventilation, dust and fume removal and similar applications, either blowing or exhausting; the other type, with built-up extra thicknesses of rubber or Neoprene, is designed for materials handling and similar type uses. Flexible Tubing Corp., Dept. AB, Guilford, Conn.

FOR MORE INFORMATION USE COUPON, PAGE 228

The Ivy Flower Shop design called for exposed beams, 29’ 4” long, that would create a comfortable, pleasing atmosphere without added expense—Hagstrom Construction Company, chose Rilco Beams.

Beams arrived at the job completely finished—not a saw cut was made nor a hole bored. A protective paper wrapping prevented marring or scratching during shipping and erection. The Rilco Beams were simply set into position and secured with the furnished engineered connections. Erection was simple, fast and economical.

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Rilco Products are glued laminated of selected grades of West Coast Douglas Fir. They offer strength plus adaptable, efficient, structural shapes. Rilco’s engineers will be pleased to consult with you about your requirements and give "on the job" cooperation.

Send for free catalog for information.

AMERICAN BUILDER
THE COACH ROOM—
how to make a
2-bedroom house grow

In Mountlake Terrace, 12 miles from Seattle, builders
Al La Pierre and Jack Peterson are offering a $10,500
2-bedroom house designed not only to look bigger but
actually to be bigger.

The design, by George W. Heideman, revolves around
an extra room which the builders call a coach room.
This is a separate room located adjoining the double
carport-breezeway. About 12x12 in size, its walls and
ceiling are finished with insulation board, and it is
heated by a Thermador wall heater. Double doors open
out onto the concrete terrace at the rear of the house,
(Continued on page 280)

The house can grow by the addition of a wing at right angles.
Coach room then formally becomes a bedroom

OCTOBER 1953
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FOR SIMPLEST ONE MAN OPERATION
ANYTHING YOU NEED LEVEL LEVEL ALL DOES IT.

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welcome to see. Cannot be put out of adjustment and
work with. The esti. -r. He was principle: in a
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Of all the homes on display in the Denver Parade of Homes, 80%
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for greater economy.

Contractors throughout the country who are using the Gates Form Ties
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The coach room—

(Continued from page 279)

Fireplace, guest closet and bookcases are combined here
really an extension of the breezeway floor.

This extra room can be used as a den, shop, playroom or even as a third bedroom. Thus it takes the
pressure off activity within the house proper, which has
346 square feet.

To get a bigger house, the coach room becomes the
anchor unit in an extension at right angles to the house,
as shown in the plan reproduced here.

When using this design in project building, the coach
room-breezeway section can be angled to help get variation
between houses. La Pierre and Peterson also sometimes
add brick to the facade, use breakfront fences, shutters and other decorative items.
teamwork sets 45-hour record for building a house

Builders Jack Bennington and Hal Smith have established what is probably a world's record for house building. During the days and nights of Aug. 5-6-7 they and their subcontractors built an 1,860 square-foot house in Apple Valley, California, in just 45 hours.

The house was a community-sponsored project in honor of Capt. Joseph McConnell, American flying ace, who had announced his intention of making his home in Apple Valley. The community decided to give him a house in appreciation of his war services. It was widely announced that the house would be built in five days.

The project started out calmly enough at 7 a.m. on August 5. The slab foundation was in place and the fireplace was built up about five feet. Wall sections with top and bottom plates and studs 16-inch o.c., with redwood plywood siding applied, were piled up around the slab. Eighteen carpenters and 12 laborers swiftly began setting these sections in place. Roof trusses, also prepared beforehand, quickly followed.

(Continued on page 282)
Things went so well that after the first few hours everybody on the job began to get the fever for record-breaking. Somebody remembered that a small house had been built in Fullerton, California, a couple of years ago in 57 hours. The Fullerton builder sent Bennington and Smith a wire egging them on. Upshot was that the Apple Valley house was completed at 4 o'clock on the morning of August 7, just 45 hours after it was started. In general, the time table of work divided up in this way:

All exterior and interior framing was in place before noon the first day. Roof trusses were in place by 4 p.m. the first day. Roof sheathing (Douglas Fir plywood) was half-completed by 6 p.m. the first day. The crushed rock built-up roof was applied the first night under floodlights. Electricians and plumbers were at work all that first day, which saw some 50 workmen in or on the house. Heating ducts were installed the first day. During the first night all insulation was applied. Celotex-finish walls and ceilings were installed (Sheetrock was used for walls and ceilings in kitchen and bathrooms) and application of trim was begun. Cabinets were installed the second day and the painters moved in. Glaziers came in early the second night and during that night the finish plumbing and electrical work was done. Asphalt tile floors were laid after midnight and the last stretch of work was the painting of the base molding.

The local building inspectors stayed on the job throughout and no time was lost over inspections.
record for building a house

FIRST DAY two hours later, at 4 p.m., trusses are in place

FIRST DAY two hours later, at 6 p.m., roof sheathing is almost completed

25 HOURS AFTER THE START, at 8 a.m. of the second day, the house looked like this

BOOKS

PLASTERING SKILL AND PRACTICE by F. Van Den Branden and Mark Knowles; American Technical Society, Chicago, Ill., 1952; $4.90.

The eleven chapters of the book are arranged to facilitate the reader's locating the particular subject he wants. The first three chapters approach the subject of plastering on the apprentice level, and continue through the fundamentals into actual practice. Such advanced techniques as acoustic plastering and plastering of steel structurals are covered in the final sections. Journeymen plasterers should find the book particularly useful as a guide to modern plastering techniques.

OCTOBER 1953

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IN THE HARDEST WOOD!

Simply snap the KORNER KING right angle attachment on your present heavy duty drill (1/4" or larger). LOW side gives you 80% more power at half rpm ... HIGH side doubles your drill's rpm. Drill holes up to 2-9/16 inch in diameter in the most inaccessible spots — between joists and studs, in tight corners, etc. All with 100% safety because an exclusive RCS Torque Release eliminates dangerous torque reaction if drill jams ... drive shaft continues turning if load or obstruction ever locks driven shaft or bit.

RCS SUPER SPEED BITS range in size from 1/4" to 2-9/16" diameters. Their new, simple design requires less torque, needs less thrust. Fast acting, cool running and long lasting, RCS SUPER SPEED BITS assure economical operation — as well as low initial cost. They're easy to sharpen, inexpensive to replace.

Extra extensions are available for these new RCS SUPER SPEED BITS which permit drilling holes, in perfect alignment, to just about any length.

If you use a drill, learn more about how RCS KORNER KING and RCS SUPER SPEED BITS can increase its efficiency and versatility.

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In hundreds of small communities over the United States there is a real need for low-cost homes, because incomes are often at a lower scale there than in the larger centers, and the supply of this type of housing has been generally neglected for several years.

Purely as an experiment, the Earl W. Smith Organization, project builders of El Cerrito, California, recently built twelve 3-bedroom houses in the small town of Lincoln in the Sacramento Valley. Smith’s objective was to determine whether it was possible to give modest incomes in the typical small town the benefit of cost savings made possible by mass production methods.

The experiment was successful. Smith was able to sell the twelve houses at $8,000, the same price which he charges for the house in tracts involving hundreds of houses.

The local builder or subcontractor need not be left out of the picture, Smith says. In small towns there are often one or more small-volume builders engaged in building fine custom houses. But without an established precutting and assembly operation, and without the buying power that comes with production building, the local builder cannot accomplish really low-cost construction by himself.

In collaboration with the volume builder, however, the local man can participate in the construction to the

(Continued on page 286)
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1950, 5th Ed, 304 p, 123 illus., 60 tables. 5x8, $3.75

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Now the latest and most complete venting research yet undertaken has shown what conditions are necessary for proper gas venting. It proves the importance of a properly designed vent and demonstrates conclusively the superiority of Metalbestos, an insulated double-wall vent pipe, over other commonly used types.

**METALBESTOS** is designed specifically for venting gas appliances

Here are the reasons why you can be sure of better, safer venting when you specify Metalbestos:

- Insulated double-wall construction
- Inner hot stack carries off vent gases without condensation
- Cool outer pipe protects surrounding walls
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- Easy, fast installation with quick couplings and adjustable fittings

For the best venting job, always specify METALBESTOS—the insulated vent

---

bringing construction savings to the small towns

(Continued from page 284)

extent of supervising construction or acting as a working foreman on a financial basis that may be agreed upon.

Also, Smith believes that the local materials men and subcontractors should be given the opportunity to participate as fully as may be possible.

**Pick In-Between Locations**

In selecting towns in which to build, the volume builder will do well to find locations which are en route to larger projects upon which he is working. This will make it possible to drop off supervising personnel to and from the larger jobs. Also, this will expedite shipment of materials, which can be unloaded at the smaller jobs while on the way to the larger ones.

The small town construction will involve greater expense because of travel time and shipment costs. However, some of this cost can be absorbed where improved lots are available at a modest price, as is often the case in small towns.

Smith also advises that any volume builder undertaking a program in a cluster of small towns be sure that all the locations are within the same union jurisdiction. Otherwise there may be squabbles about shifting men from one job to the other.
for unlimited flexibility

...increased profits

...build PEASE Homes!

All three homes above are PEASE "Kirkwood" Homes, Plan No. 20. Each has been built distinctively different, however, by using PEASE alternates and extras. PEASE flexibility makes possible unlimited variations on any of its 18 basic plans to satisfy individual tastes and needs.

PEASE HOMES are your key to profitable building for the mass market. They go up fast... sell fast... cut your overhead, inventories and investment. You buy our package at a fixed cost, with no chance of rising building material costs during erection.

PEASE HOMES offer a wide selection of plans from 791 sq. ft. to 1374 sq. ft. in total area... with or without basement... one or two floors... 2, 3 or 4 bedrooms... one or two-car garages, carports, breezeways and solariums. PEASE HOMES are Quality homes only.

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City Zone State
Some 9,500 people were in South Amboy, N.J., that drizzly evening in 1950. At the waterfront, longshoremen were transferring the last of 12 freight cars of ammunition to lighters that would carry it to a waiting vessel in Raritan Bay.

But the City Hall clock never got to 7:27—and the freighter's deadly cargo never got loaded. Explosions shattered windows over a radius of 12 miles; and hundreds of people looked at their arms and legs and saw that flying daggers of glass had stabbed them. At dawn, 312 of the injured had been counted.

Such disasters have happened many times before in America. They could happen again. And if they do—and when they do—there must be blood plasma on hand to take care of the injured. For blood saves lives!

Business Executives!

If you can answer "yes" to most of them, you—and your company—are doing a needed job for the National Blood Program.

- Have you given your employees time off to make blood donations?
- Do you have a Blood Donor Honor Roll in your company?
- Have you set up a list of volunteers so that efficient plans can be made for scheduling donors?
- Have you arranged to have a Bloodmobile make regular visits?
- Has your management endorsed the local Blood Donor Program?
- Have you informed employees of your company's plan of co-operation?
- Was this information given through Plant Bulletin or House Magazine?
- Has your company given any recognition to donors?
- Have you conducted a Donor Pledge Campaign in your company?

Remember, as long as a single pint of blood may mean the difference between life and death for any American...the need for blood is urgent!
how would you do it?
ideas for the man on the job

floor bridging with metal strapping

A simple and effective method of installing floor bridging is done with 22-gauge metal strapping about 1 1/2 inches wide. Strapping is laced in both directions and nailed to the top and bottom of each joist. This method of bridging of floor joists is much stronger than the average kind of wood bridging. Metal strap bridging does not tend to pull apart and it eliminates excessive cutting of lumber. — Bob Capps, Lombard, Ill.

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But the City Hall clock never got to 7:27—and the freighter's deadly cargo never got loaded. Explosions shattered windows over a radius of 12 miles; and hundreds of people looked at their arms and legs and saw that flying daggers of glass had stabbed them.

At dawn, 312 of the injured had been counted. Such disasters have happened many times before in America. They could happen again. And if they do—and when they do—there must be blood plasma on hand to take care of the injured. For blood saves lives!

But blood cannot be mined or manufactured. It must come from the veins of healthy men and women. Men and women who feel concern for a suffering neighbor. So give blood—now! Whether your blood goes for Civil Defense needs, to a combat area, or to a local hospital—this priceless, painless gift will some day save an American life!

### Business Executives!

**Check These Questions!**

If you can answer "yes" to most of them, you—and your company—are doing a needed job for the National Blood Program.

- Have you given your employees time off to make blood donations?
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ideas for the man on the job

floor bridging with metal strapping

A simple and effective method of installing floor bridging is done with 22-gauge metal strapping about 1½ inches wide. Strapping is laced in both directions and nailed to the top and bottom of each joist. This method of bridging of floor joists is much stronger than the average kind of wood bridging. Metal strap bridging does not tend to pull apart and it eliminates excessive cutting of lumber.—Bob Capps, Lombard, Ill.

Every How-ell-dor—residential, commercial and industrial—is a study in classic styling and beauty of design.
Equally important are its ease of installation and operation, its quality workmanship and materials.

...they're How-ell-dors!

Now, all How-ell-dors® are equipped with the NEW HOW-ELL-TITE TRACK, featuring hardware that is precision-engineered for weather-tite fit and extra durability. Truly, "How-ell-dor Hardware is Designed for Hard Wear." Inside or out . . . the How-ell-dor is the modern garage door . . . at its best!

Over 40 stock sizes for immediate delivery. Custom-built sizes and designs are a specialty.

There's a How-ell-dor Electric Operator for every type of sectional garage door.

Write for FREE '53 Catalogs
Growing in Popularity

From the inside, two inches or more of perlite concrete are sprayed onto the lath in layers by the E-Z-On plastering machine. The paper-backed lath is torn off and an additional layer of perlite concrete is sprayed onto the exterior to form a reinforced concrete slab.

The American Bildrok Company and the E-Z-On Corporation, both of Chicago, have joined forces to introduce a sprayed-in-place, load-bearing wall suitable for houses and using lightweight steel framing, aluminum siding (or other exterior finish), plaster finish inside.

American Bildrok manufactures the lightweight perlite aggregate (volcanic glass) which is mixed with Portland cement and sprayed on metal lath to form the...
sprays walls in place

First a light steel frame of vertical wire trusses is erected. Paper-backed lath is wired on the outside of this frame. The procedure can be varied if conventional wood framing is used.

2-inch core of the wall. E-Z-On makes the machine which does the spraying. This is the same machine developed by E-Z-On to speed plastering and reduce its cost. It is distributed on a rental basis by American Bildrok, 2001 W. Pershing Road, Chicago 9, Illinois.

(Continued on page 292)

Smart builders put plenty of selling features in their houses. One of the best is ADJUSTO—the swing-down fixture that permits standing showers without bathing cap, sitting showers and luxurious shampoos.

No special equipment necessary—only one set of valves. There is no danger of back siphonage. ADJUSTO gives a modern look to bathrooms—definitely helps sell houses.
Owners of buildings used for commercial purposes have much to gain by the use of Trinity white, the whitest white cement. The whiteness arrests the customer's eye—the trim attractiveness of the place says "here's a good place to trade!"

As white as snow
plain or waterproofed

Trinity White Portland Cement

A Product of GENERAL PORTLAND CEMENT CO. • Chicago • Dallas • Chattanooga • Tampa • Los Angeles
sprays walls in place

Insulating value of such a wall, American Bildrok states, is equal to 24 inches of an ordinary brick wall. Cost, as compared with the average $1.85 per square foot of a common brick wall, is estimated at from $1.25 to $1.50 per square foot, including the plastered interior finish.

Experimenting with this new method, but using conventional wood studs instead of lightweight steel framing for a 6-room house on Chicago's Northwest side, the Laczak Construction Company was given a one hour fire rating by city inspectors. This means that, in Chicago at least, long notorious for rigid code requirements on fire resistance, a new method is available for achieving the advantages of masonry construction at considerably lower cost.

Photo courtesy of Central Manufacturing District Magazine

For a house job, aluminum siding applied with clips to studs serves both as wall finish and backing for sprayed-in-place wall

Install This

And sell your houses faster

A proven fact! Ask any builder who installs BILCO Doors. He'll tell you it's the best selling feature he ever used. Home buyers sign up fast when basements are useful, livable and safe. Don't "date" your homes - investigate America's fastest growing building product . . . the BILCO all-metal permanent door.

Direct access to the basement eliminates tracking mud and dirt through the upstairs rooms. Countless steps are saved by repairmen, servicemen and the home owner. It's the only means of installing big equipment necessary for a work shop, recreation room or extra living room.

Check all these BILCO Benefits!

ECONOMICAL!
LIFE-TIME DURABILITY!
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Please send me complete information on the BILCO DOOR, sizes, prices and dealers' names.

I build □ 10 or less □ 10-100 □ 100-500 houses

NAME ____________________________
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CITY ____________________________ STATE ____________________________
Home building is leveling off — and competition for heating plant installations is keener. Now you will have a better chance of getting your share if you feature the new Aldrich GULF STREAM Boiler-Burner. Here's why:

The GULF STREAM was developed for small home owners to furnish economical hot water heat and instant domestic hot water supply with either oil or gas. Five sizes cover every need and budget. SBI net ratings from 440 to 1120 sq. ft. of water radiation. All meet ASME code.

COMPACT and RUGGEDLY BUILT GULF STREAM is easy to install, efficient and dependable. The Aldrich GULF STREAM will close more sales when people demand MORE for every heating dollar invested. Write for money-making details.

The problem of helping prospective buyers find their way to a new home built somewhat off the beaten path has been solved in a novel way by Marguerite Walker Jordan, developer of a luxury-home section in North Stamford, Connecticut.

Upon completion of a nine-room, four-bath house, Miss Jordan distributed an illustrated brochure to interested parties. A Stamford railroad timetable is attached to the back cover alongside of a detailed road map directing the way to the home from nearby highways as well as the station.

In selecting his train from the timetable, prospect notes frequency and speed of train service. When he arrives, the map takes over as a silent salesman.
fireplace opens into two rooms

Living room side

Bedroom side

This unusual use of a 2-way fireplace was worked out in a house built by Thomas B. Jordan near Los Angeles. The living room and master bedroom share the same inner hearth and so are open to one another through the fireplace. Both

(Continued on page 296)
Hammer Tackers and Gun Tackers for all your Tacking Jobs
DUO-FAST AUTOMATIC TACKERS are widely used in home construction work, for tacking insulation, building papers, ceiling tile, metal lath. They provide the fastest, easiest, and best way to do the work.
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Here's why

HAR-VEY ROLLING DOOR
HARDWARE

SAVES GRIEF
for you and your clients

No Maintenance Worries
with self-lubricating Oilite Bearings

No Rusting
with Har-Vey's sturdy, extruded ALUMINUM track

No Installation Problems
Har-Vey hangers are mounted on the door first—then easily slipped onto the track and quickly adjusted!

You'll save time and money as well as grief when you use Har-Vey. Get all the facts on this complete line which offers you champion quality at surprisingly low cost.

See your supplier or write Dept. O
METAL PRODUCTS CORPORATION
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609 E. Anderson, Los Angeles
Mid-West Div. (Plymouth Metal Products)
505 W. Harrison, Plymouth, Indiana

OCTOBER 1953

fireplace for two rooms
(Continued from page 296)

Making the ceramic tile facings for fireplace walls. (1. to r.) Each small tile is set by hand in small forms. Small sections are made into larger panels. Large panels are cemented to brick fireplace walls. The tile pieces are \( \frac{3}{4} \) inch by \( \frac{1}{2} \) inches in size. Each piece had to be set by hand in wet mortar to get the pattern desired.

The tile setter worked on small forms so that his mortar wouldn't dry out before he had finished a course. Several of these small sections were joined to make a panel, which was then cemented to the fireplace wall. Reinforcing wire was used in the cement to make possible secure joining of the sections.

The tile pattern for the living room side was carried out in tones of brown and beige, while the bedroom side used soft tones of green. Hearth on both sides is an elongated strip of 6x6-inch quarry tile.

Photos Courtesy The Mosaic Tile Co.

You'll save time and money as well as grief when you use Har-Vey. Get all the facts on this complete line which offers you champion quality at surprisingly low cost.

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OCTOBER 1953

"Color-styled

by beatrice west"

... a feature that is helping
to sell more and more

NATIONAL HOMES

Over a year ago, National Homes Corporation retained the Beatrice West organization to color-style their new models for greater individuality and feminine appeal. Results of the first showing last October were so gratifying that this service has been continued.

In the words of President James R. Price:

“Our sales record for 1953 showed an increase of 27% over last year, our best previous sales year in history. While everyone associated with these homes shares the credit for this fine record, it is significant that this sales increase coincided with our first year's use of your valuable services.”

Proper color styling can sell more houses for you, too . . . whether you build a dozen homes a year or many thousands. But color styling is no job for an amateur. It requires sound knowledge, careful study of your problems, wide experience. For proof of our performance, write or telephone today—no obligation, of course.

beatrice west
COLOR CONSULTANT
147 E. 50th • New York 22
Plaza 5-1507

National's all-new 1954 "Pacemaker" now being shown nationwide . . . each model home identically color-styled and decorated by Beatrice West

297
Thermasote
THE ONE-MAN sheathing

- The 2' x 8' size of this 25/32" asphalt-free sheathing is easily handled by one man. The V-groove feature cuts air leakage to minimum, assures the same high insulating value and sound-deadening qualities as in the larger sizes up to 8' x 12'. Completely weatherproof. Send coupon for full details.

Novaproofing
— whenever you want to keep water in or out

- a coordinated science of weatherproofing buildings. 20 years of experience have produced 5 top products and the know-how of their use. All tried and tested for specific jobs — virtually unbeatable as a team. On any water problem — pools, cellars, sidewalls, slabs or any porous masonry surface — you will want to check Novaproofing first. Full details at your request.

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Send detailed, illustrated literature on
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CITY & ZONE

My lumber dealer is

Both of these precision milled wood window units are fully weather-stripped. Both have removable sash that are easily removed for cleaning, painting. The MALT-A-MATIC is a friction type balanced unit. The MALT-A-MASTER is a fully, invisibly balanced unit. Both units are WOODLIFE treated. They arrive on the job completely assembled with sash and can be installed in the rough opening in a few minutes. They are available in a wide range of modular sizes and window styles for unlimited design opportunities.

Write for illustrated literature, specification sheets and name of nearest dealer.
Recent developments in ceiling fixtures have opened a new field to overhead diffusion: the home building industry.

For years the air diffuser has been recognized as a standard method of heat distribution in commercial and industrial buildings. However, it was designed to move a high volume of air over large areas and, accordingly, was considered too inefficient, noisy and costly for housing. Another objection was the idea that warm air must inevitably rise.

The residential diffuser bears a close resemblance to commercial types but is somewhat smaller and costs only about one-fourth as much. Ordinarily, it comes in six different sizes from four to nine inches, based upon the diameter of its neck, which will handle a range of 3,000 to 23,000 Btu's per hour.

Installation is the same as in any forced warm-air system except that the furnace bonnet rises vertically and ductwork is laid across the attic, rather than below the floor or between walls. Using the customary “inches of heat” method, a duct size which will supply the required amount of Btu's is determined for each room. Prefabricated round ducts and elbows are used, and should be insulated. The proper size of diffuser is that having the same neck diameter as the duct.

One style of diffuser requires a ceiling opening about two inches (Continued on page 300)
men over 45

More than six times as many men of your age will die of lung cancer this year as died in 1933. Our research scientists still don’t know why.

They do know, however, that over half of those who will develop lung cancer can be saved...if they get proper treatment while the disease is still in the silent, symptomless stage. That’s why we urge you to have a chest X-ray every six months no matter how well you may feel.

For more information call us or write to “Cancer”, care of your local Post Office.

American Cancer Society

using ceiling air diffusers in houses

(Continued from page 299)

wider than its neck. Its outer cone, with a diameter twice this opening, fits snugly against the ceiling. Inner cone’s lowest point from the ceiling varies from two to four inches. In some models, it is flush with the outer cone.

Forced air passes between the dif-
fuser cones, shaped to direct the flow outward and downward so that it will not smudge or streak the adjacent ceiling area. The movement also is said to deflect incoming air to counteract ceiling stratification or “layering”—the tendency of air

(Continued on page 301)

ROOM More than six times as many men of your age will die of lung cancer this year as died in 1933. Our research scientists still don’t know why.

They do know, however, that over half of those who will develop lung cancer can be saved...if they get proper treatment while the disease is still in the silent, symptomless stage. That’s why we urge you to have a chest X-ray every six months no matter how well you may feel.

For more information call us or write to “Cancer”, care of your local Post Office.

American Cancer Society

That’s it!
I’ll look it up in my AMERICAN BUILDER Catalog-Directory
I know I’ll find it there

NEW OPENING FOR AGENTS

Due to a recent redistribution of areas, a few positions are open for reliable agents. Steady income selling product popular for 31 years. Contact . . .

AMERICAN Roof Truss
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THE MODERN SOLUTION TO AN OLD PROBLEM

KORD Extruded Prefabricated Caulking Compound.

A modern technical development reducing wastes and labor costs.

| NO. 1 | Channel type KORD, used as sketched on all gaskets between concrete and wood.
| NO. 101 | Ribbon type used between steel plates permits expansion and contraction.
| NO. 5 | Four strip KORD for stone setting, weatherproofing joints. Also eight strip No. 501.
| NO. 102 | To set sealed window units and steel casings.

See Sweet's File or send for full information today.

STERLING PAINT & VARNISH CO.
184 Commercial St, Malden, Mass.

flower Hill, N. Y. house equipped with ceiling air diffusers was built by the Greenway Construction Corporation. Sterling M. Palm, architect

to rise and hug the ceiling.

Supply air has sufficient mass and velocity (600-800 feet per minute) to mix in a ratio of one part to 4.5 parts of room air. The blending, which takes place one to two feet diagonally outward from the diffuser and over the heads of occupants, slows down velocity to as little as 50 feet per minute. Kinetic energy or "throw" of this mixture is declared to be sufficient to set in motion, imperceptibly, all air in the room to maintain a uniform temperature.

Grilles for return ducts draw out cooler air from under the warm air.

ceiling air diffusers

(Continued from page 300)

wallboard drive screws

For installing asbestos cement-type wallboard use Hassall wallboard drive screws. Specifically designed with spiral threading for better holding power. Supplied with nickel-plated finish with either casing or button heads. Advise quantities. Prompt delivery.

JOHN HASSALL, INC.
P. O. Box 2154
Westbury, N. Y.
Established 1850

America's Largest Selling Lowest Cost Louvred Window SUN-SASH ... a louvred window that is designed specifically to meet your building needs. Sun-Sash is perfect for new construction or remodeling... for kitchen windows... porches... breezeways... interior partitions... bathrooms... attic ventilators and cellars. Specify Sun-Sash air-controlled louvred windows — America's largest selling louvred window.

BUILDERS... Specify SUN-SASH air controlled louvred windows

INSTALLATION IS EASY AND INEXPENSIVE

Screw on Sun-Sash fittings to louvers in slots of window to hold blades firmly in position.

MAIL THIS COUPON TODAY.

SUN-SASH COMPANY
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America's Largest Selling Louvred Window

Porch Enclosure

For installing asbestos cement-type wallboard use Hassall wallboard drive screws. Specifically designed with spiral threading for better holding power. Supplied with nickel-plated finish with either casing or button heads. Advise quantities. Prompt delivery.

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METAL WEATHERSTRIP
an Essential Home Economy

- for Fuel Saving
- for Protecting Home Furnishings
- for Healthful Comfort
- for All Around Efficiency

Prospective home buyers will sell themselves on the quality of the homes you build when they see they have been completely weatherstripped, and when you tell them of the needless heat loss and discomfort it prevents. Actual tests show (University of Minnesota Institute of Technology) the air infiltration is 6 TIMES LESS through weatherstripped windows than non-weatherstripped windows; which means an average savings of approximately 24% in fuel costs. Also that a weatherstripped home means clean, comfortable living in every room—that’s vitally important to their families’ health and well-being.

The metal weatherstrip that is installed should depend mainly on two factors: reputation of the product and reputation of the manufacturer. Members of the Weatherstrip Research Institute possess both—a reputable product, and all are reputable, long established companies. Remember these facts when considering metal weatherstrip for the homes you build.

For complete facts on the economic value of weatherstrip, send for Bulletin No. 35—“Air Infiltration Through Weatherstripped and Non-Weatherstripped Windows,” published by the University of Minnesota Institute of Technology—no charge or obligation.

INSTITUTE MEMBERS

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6416 S. Ashland Ave., Chicago 36, Ill.

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8070 So. Chicago Ave., Chicago 17, Ill.

ceiling air diffusers

(Continued from page 301)

Living room has one large-sized ceiling diffuser (9-inch neck). In long, rectangular living rooms, two smaller diffusers are often recommended

Builder centered kitchen diffuser between two fluorescent light panels

so that the latter fails to fill the void. Since these grilles are located below window areas, they also act as a barrier against cold air convection by collecting such air as it "washes down" the windows.

Among other advantages claimed for ceiling air diffusers are:

1. Freedom of furniture arrangement. No floor registers or wall grilles to get in the way.

2. Unobtrusive appearance. Diffusers may be treated with the same paint as the ceiling since they are sprayed with an aluminum lacquer finish at the plant to insure a firm prime coat and eliminate future paint peeling due to heated air.

3. Air conditioning. Merely add the air conditioner to the duct system. No structural changes are necessary.

4. Elimination of drafts. Due to slow, steady velocity of air by time it enters the "occupancy zone" of a room, no drafts are present.

5. Ease in supplying heat to future attic room. It is simple to run a branch from the main supply duct already in the attic.
New Books
And Bulletins—
Briefly Noted

The City of Man, by Christopher Tunnard. Scribners. $8.50. An erudite and selective history of city planning, with a full emphasis on the American scene. Profusely illustrated and written with wit as well as learning, this is a valuable source book for land developers who take a scholarly interest in the historical background of their work and who like to think about the meaning of its future.

Urban Land Institute Technical Bulletin No. 20—Shopping Centers, Principles and Policies. Compiled and written by J. Ross McKeever. $6.00. The assistant director of the Urban Land Institute in Washington, D. C., has prepared the fourth technical bulletin on shopping centers to be issued by this well-known agency. The bulletin is essentially a skillful transcription of the experience-exchange on shopping centers which has been going on recently between members of the Institute's Community Builders Council. Thus it is a mirror of the most recent adaptations of shopping center planning and management principles.

Sunset Ideas for Hillside Homes. Lane Publishing Co., Menlo Park, Calif. $1. One hundred how-to illustrations and 132 photographs show how many a hillside building problem has been solved in sunny (and often hilly) California. Light on technical detail, heavy on the "idea" side.

Housing and Building in Hot-Humid and Hot-Dry Climates. Research Conference Report No. 5 of the Building Research Advisory Board, National Research Council, Washington, D. C. $6. This is a collection of 17 papers on hot climate building by leading technologists from the United States and other countries. It is perhaps the most comprehensive review of this subject ever attempted, and contains theories and solutions as well as detailed, technical studies. The material is especially significant for the Southern and Southwestern states, where building still tends largely to imitate traditional Northern architecture.
METAL WEATHERSTRIP
an Essential Home Economy

- for Fuel Saving
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- for Healthful Comfort
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Prospective home buyers will sell themselves on the quality of the homes you build when they see they have been completely weatherstripped, and when you tell them of the needless heat loss and discomfort it prevents. Actual tests show (University of Minnesota Institute of Technology) the air infiltration is 6 TIMES LESS through weatherstripped windows than non-weatherstripped windows; which means an average savings of approximately 24% in fuel costs. Also that a weatherstripped home means clean, comfortable living in every room—that's vitally important to their families' health and well-being.

The metal weatherstrip that is installed should depend mainly on two factors: reputation of the product and reputation of the manufacturer. Members of the Weatherstrip Research Institute possess both—a reputable product, and all are reputable, long established companies. Remember these facts when considering metal weatherstrip for the homes you build.

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These BEST-VENT features help sell houses easier—faster:
- Enduring beauty—yet no upkeep effort—no painting
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- All corners smooth mitred—precision machined—no bumps, snags, holes or overlaps
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Generally this is true—prices of our windows and wood double hungs vary in different sections of the country—often BEST-VENT cost less! Have you compared prices in your locality lately?

...And You Will Be Amazed at the Simplicity and Economy of Installation.

BEST-VENT Windows are what builders have been waiting for—the quality aluminum window that adds buyer appeal at no extra cost.

COMPARE the cost and value of BEST-VENT Windows with that of other windows you are now using—whether metal or wood—and you too will switch to BEST-VENT.

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1205 East 52nd Street, Indianapolis 5, Ind.
LET RAYNOR HELP YOU INSTALL THE DOOR THAT FITS THE HOME

For customers who desire predominant horizontal lines.

To assure lasting finger-tip control and complete weather-tite seal, all Raynor doors are equipped with patented graduated seal. Write for details on Raynor complete line of Wood Sectional Overhead Doors.

Dealers Listed in Your Telephone Directory

Builders of a complete line of residential, commercial and Wood Sectional Overhead Doors.

RAYNOR MANUFACTURING CO.
HOME OFFICE AND PLANT: Dixon, Illinois

here's a fire station for a residential area

What appears to be an expensive home is really Enginehouse No. 9 in Fresno, California. Fresno architect Robert W. Stevens designed this one to blend unobtrusively with the surrounding residential neighborhood. Contractor Victor G. Taylor of Fresno constructed it on a corner lot for the city at a cost of $43,000 and with a hose-drying room unique for fire stations.

One reason why Architect Stevens was able to make this fire station appear to be a contemporary ranch house that would fit the residential character of the area was his use of an unusual method for drying and storing fire hoses.

The usual construction for storing fire hoses calls for a drying tower in which the hoses are hung vertically. A drying tower of this sort usually requires at least a two-story building.

In Enginehouse No. 9, the hose-drying room and the room for storage have a normal ceiling height. Plaster finished, the hose-drying room is equipped with steel stanchions that are attached along one side of the room. They accommodate iron pipe trays of sufficient size to hold one length of hose each. Fire hoses are placed in the stanchions horizontally in a way similar to the placing of trays in an ordinary kitchen gas range.

The heat needed to dry the hose properly is provided by a gas unit thermostatically controlled and located in a room adjacent to the drying room. Ducts channel heated air from the furnace to vents near the ceiling of the drying room. Vents near the floor of the outside wall provide for adequate circulation of air. Temperatures are kept low, not to exceed 105 degrees.
try a fireplace in the kitchen

Thermador oven and fireplace, side by side, are a novel touch in this kitchen in a house built speculatively by Henry C. Cox in Garden Grove, California. The fireplace shares flue and chimney with the fireplace in the living room. It not only lends real charm to the kitchen but also is a practical piece of equipment, making possible barbecue suppers and other variations on informal entertaining.

SOMETHING NEW
The Gohm Butt Mortising Tool and Butt Marker

Mortise doors and jambs for a 5 room house in less than one hour—only $28.95

A clean and perfect job everytime—Precision made—Folds to fit tool box. No mistakes; any handyman can use these tools.

Guaranteed to satisfy or your money refunded.
(Fits any 1/2 inch electric drill)

Mortiser for 3”, 3 1/2”, and 4” butts. Round or square corner butts may be used.

The Butt Marker marks the positions for all door butts and clearances in one operation—only $8.95.

No C.O.D.—Please send check or money order

Knight Manufacturing Co.
914 Citizens Bank Bldg.
Flint 3, Mich.

GET HIGH
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