Your Building Weather for February — See Page 13

REGIONAL and NATIONAL
Begins on Page 8

This House Has Seven Features For Your Idea Scrapbook See Pages 76-83

A Restaurant Designed to Stop Traffic Page 116
Here's one easy way to "Stop the Shoppers" and get them to look and ask questions

When sales are slow, your one big problem is to get the "shoppers" to stop cruising around, look at your homes and listen to your salesmen. Sometimes that isn't too easy—if you haven't something unusual to make them stop, look and listen. Crawford Customized Garage Doors give you something that is not just unusual but is dramatic, colorful, beautiful and CAN BE SEEN RIGHT FROM THE STREET. There are so many different designs and color schemes that each of your homes can have its own, individual, Customized door, and, remember that the garage door is usually the LARGEST SINGLE AREA IN THE ENTIRE FRONTAGE and when you change the looks of the garage door, YOU CHANGE THE LOOKS OF THE HOUSE. And, it's no trick at all to make the front door and window shutters match up with the Crawford Customized Door and thus produce a stunning "ensemble." As you well know, women go for these striking and colorful custom effects and this is the one that CAN BE SEEN FROM THE STREET. They can see, from their cars, that EVERY FRONT IS CUSTOM DESIGNED. Can you think of a better way to make the "shoppers" STOP, LOOK, LISTEN! Why don't you get in touch with your local Crawford Door Sales Co., listed in your classified phone book under "DOORS" and get them to show you how practical and inexpensive it is to give your homes this very important buying pull? It won't cost you a cent to find out. Or, write us for literature.
now KWIKSET offers two great lockset lines

THE NEW "600" LINE
A finer lock for finer homes
Available in all popular functions and finishes for fine residential and commercial building.

THE ECONOMICAL "400" LINE
A quality lock for quantity building
More than 19,000,000 placed in unconditionally guaranteed service since 1946.

kwikset sales and service company, anaheim, california
make houses sell faster because they give visible evidence of quality construction!

What a difference Ludman Auto-Lok windows make! Houses equipped with Ludman Auto-Lok windows actually bring a higher price and sell easier — yet cost you no more to build!

You save both time and money. No costly time consuming installation adjustments are necessary. And costly call-backs are eliminated because Ludman Auto-Lok windows never need adjustment after installation.

Your houses sell faster because Ludman Auto-Lok windows add extra value home-buyers want, and are willing to pay for. Ludman Auto-Lok windows feature automatic locking . . . Floating-Seal weatherstripping . . . a self-locking device that automatically seals the window like a refrigerator when it’s closed . . . Never sticks, never rattles . . . finger-tip control that’s so easy to operate, a child can open or close even the largest windows with ease.

Add your savings to the plus features of Ludman Auto-Lok windows and you’ll find they are the most economical windows you can use.

Try Ludman Auto-Lok Windows in your next house. See for yourself what a big difference they really will make!

Ludman Auto-Lok Windows close ten times tighter than generally accepted standards . . . have the lowest air infiltration of any window model! Many beautiful window arrangements are possible using standard Auto-Lok units.
ONLY *Bl-Fax* HAS

9 SPEEDS

With this exclusive 9-speeds control, the fan operates at the speed selected by the factory of its position—and so easy to work on it to regulate the speed of use comfortably.

**Bl-Fax FIRST ELECTRIC**

CEILING EXHAUST VENTILATOR.

30 years ago Pryne and Company made the original ceiling ventilator—Bl-Fax WAR Box... is still Brat!

---

**Bl-Fax FINEST ELECTRIC**

EXHAUST VENTILATOR FOR YOU AND YOUR CUSTOMERS

Everybody wants to save the house... so do Bl-Fax fans.

Leads to ventilation recovered... leads to quality of product... leads to operating efficiency!!!

SPECIFY THE LINE DESIGNED BY

pryne

BOX B-24, POMONA, CALIFORNIA

Eastern Factory: Keyser, West Virginia.
Warehouses: Los Angeles, San Francisco, Chicago, Newark, New Jersey
Distributed by Electrical Wholesalers Everywhere in the U.S. and Canada

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**AEROFAN**

Exhaust fans for multiple housing projects and remodel work.

**PRY-LITES**

Residential and commercial recessed lighting fixtures.

**GLOMASTER**

Infra-red, recessed, auxiliary wall heater.
How to Forestall Recession

WHEN the score for this year is added it will show more than one million new housing units added to the nation's inventory. That is a more optimistic figure than anyone would have predicted 24 months ago, because according to the statistics dealing with net new family formations, the market for new houses was supposed to begin a decline in 1954. The point that the statisticians missed is that, for the first time in the history of home building in this country, there is an organized industry capable of creating demand to sustain a million-house year even when the need measured by net new families is declining.

Added to the merchandising skills developed by individual builders in the past several years is the inestimable but heavy influence of National Home Week. Then, there are numerous home shows, and other local and national promotions headed by NAHB and its chapters. These are the selling tools that have been used successfully.

But, the time will come sometime in the next 24 months when these effective tools will have to be sharpened. They will need cleaner, finer edges, and fortunately the means with which to provide these edges are at hand.

Results of the vast amount of research directed on numerous fronts to develop improved materials, equipment, appliances and construction methods are almost daily being translated into usable realities. All of them permit refinements in design, and the net result is that each year home builders are able to provide more livability—more house for the buyer's dollar than he ever got before. Up to this time the buyer has needed little more than to be shown, but there is every likelihood that before long some tangible proof will be needed to keep sales apace with production.

So, American Builder proposes an adaptation of the phrase which this magazine coined in the dreary thirties as the head for a series of articles generally credited with reviving home building after the depression.

That phrase was "More House for the Money." The articles proved the head, and the industry used them effectively to convince the public that investment in a home was sound. While we have no fear of a grave recession, we see no need for a recession of any kind, provided that the industry forestalls it with convincing proof of the values it has to sell.

We suggest that the industry set itself now to assemble documented proof that the day-to-day advances in materials, construction techniques and design give the home buyer more house for his money than he got last year, the year before last, or at any time in the past. We suggest the phrase, "You Get More Home for Your Money Today," as the tag on which to hang the proof. And we suggest the phrase and the proof as the finer edges for National Home Week and the other selling tools.

Let's not fear a recession. Let's forestall the possibility with National Home Week and the proof that "You Get More Home for Your Money Today."
TRENDS in the Building Field

how a revolution in marketing affects builders

WE HAVE BEEN BUILDING houses in this country for 350 years and yet, of all the houses standing today, one out of six has been built since the end of World War II—a short span of eight years. In 1940 there were 132 million people in this country and 37 million dwelling units. Today there are 160 million people living in 46 million houses and apartments.

NEWER HOUSES CONTAIN more mechanical appliances of all kinds so that today's house is more and more a "living machine" what with modern refrigerators, deep freezers, dishwashers, heating and air conditioning machines, cooking stoves, garbage disposals, automatic hot water heaters and automatic laundries. The housing industry is one of the main supports of the American economy.

OBSERVERS OF THE ECONOMY predict that the 20th Century will go into history as the period of the marketing revolution. They say that it is and will be the time when finally we learned to market as skillfully and efficiently as, years earlier, we had learned to manufacture. All this is the cumulative sign of a healthy, dynamic economy—one in which both business and consumer will continue to benefit.

THE MARKETING REVOLUTION is still the biggest factor in the economy, and its scope, future and power-for-good are only now beginning to be realized or appreciated by business leaders.

Important cogs in this marketing revolution are the tens of thousands of builders and about 25,000 lumber dealers who are building and selling new houses at the rate of a million a year.

ONLY A FEW BUSINESSMEN, relatively speaking, are aware of the changed rate of population increase in the United States. The rate is actually more than twice the rate of 1941, when only 1,280,000 were added to the census rolls. During the last fiscal year, the population increased 2,709,000. Since the last census, in 1950, the country's labor force has grown by about 2,000,000; the number of children in the elementary schools (5 to 13 years), by about 3,000,000. Skipping back to an earlier census, there are now 65 per cent more children under five years of age than there were in 1940.

ONE UNEXPECTED FACTOR, upsetting predictions, is the increase in the size of a large segment of families. Instead of raising one or two children only, married couples are raising three or four. This fact alone is causing some families to look for larger houses and to leave the cities for suburban areas. Today's favorable economic conditions are underwriting the increased number of marriages and the larger family units. It would appear that young families have confidence in the nation's economic future and are not afraid to assume heavier obligations. The Department of Commerce estimates that by July, 1955, the number of households in the nation will have grown to 47,701,000.

ADDED POPULATION does not tell the whole story of mounting sales opportunities for builders. There is a trend for family units to exceed the rate of population growth because the average size of families is decreasing. There are now more one, two and three person families who require separate living units. At the other end there is a large number of young families with three, four, five or more children.

Furthermore, our market will grow not only in numbers but in buying power. As each person increases his production, he increases his income and ability to buy. Over the last half century, the productivity per man hour of work has increased on the average of two per cent to three per cent each year. This means that every 10 years the average worker increases his real wages or buying power by about 25 per cent, regardless of price levels.

THESE FACTS—increased population, an ever greater increase in family units and a mounting buying power for each family—cumulate to unleash tremendous demands for which builders can build better and more completely equipped houses.
Easy-Working LONE STAR MASONRY MORTAR Pluses Appearance and Durability of 'World's Most Modern Nail Plant'

That happy balance of good design, good workmanship and good materials which distinguishes top-quality construction stands out all over the new Westbury, L. I. plant of John Hassall, Inc., makers of uncommon nails of almost infinite variety. Called 'the world's most modern nail plant', it is built throughout with Lone Star Cements, for stability, fire-safety and lowest annual cost.

Appearance is enhanced by well-built masonry walls, with clean, smooth joints emphasizing the skill of the Mason and the quality of the mortar—mortar made with LONE STAR MASONRY CEMENT:

One rigidly-standardized, quality-controlled cementing material, combining qualities which formerly required two or more materials ... assuring uniform mixes, with an appreciable saving in time and cost.

Mortar that works faster and easier ... sticks to brick or block, saving labor ... easier to tool, doesn't gum up the trowel ... makes a neater job that costs less to clean down.

With utmost durability, due to low absorption, high water repellency ... sound mortar, no delayed expansion.

Mortar that builds good-will and repeat business —for the Masons who use it ... and for the Building Material Dealers who supply it.

Owner: JOHN HASSALL, Inc., Westbury, L. I.
Architect-Engr.: R. L. BERTIN (P.E.), Elmhurst, N. Y.
General Contractor:
THE WININGER CONSTRUCTION CO., New York
DUNWELL CONCRETE CONSTRUCTION CO., New York
Masonry Contractor:
WIELANDT CONSTRUCTION CO., Great Neck, L. I.
Ready-Mix Lone Star Concrete:
PREFERRED TRANSMIX CONCRETE, INC., Hicksville, L. I.
Lone Star Portland Cement for floors:
GENERAL BUILDERS SUPPLY CORP., New York
Lone Star Masonry Cement:
Model Home City, Six-year Program, Begun in Columbus

Two miles west of Columbus, Ohio, 1,170 acres of raw land are being transformed into a complete model city planned especially to emphasize proper home surroundings and safety.

Within three years, the Peoples Development Company plans to build 900 homes ranging from $9,500 to $2,000, garden apartment buildings to house 750 families, a 60-store shopping center and numerous public and religious buildings. Hundreds of additional homes are planned for a second three-year program beginning in 1957.

Lincoln Village, as the project will be known, is said to represent a long-time dream of Murray D. Lincoln, president of the sponsor's parent organization, the Farm Bureau Insurance Companies.

Among the planning features embodied in Lincoln Village are park and playground areas surrounded by houses; residential areas situated some distance from industrial zones but near enough for workers to walk to work; "king-size" blocks to reduce intersections; curved streets to discourage speeding; and varying lot sizes with special attention to eliminate blind intersections.

Des Moines Builders Launch Co-op Listing of New Homes

Designed to serve home-seekers as well as builders, an unprecedented cooperative program for monthly listing of new homes for sale has been launched by the Home Builders Association of Des Moines. President Ernest L. Canine said the new program will:

1. Make it easier for prospective buyers to find a new house suiting their requirements.
2. Give builders an accurate method of referral to other builders.
3. Provide a continuing inventory of new homes for sale to help the industry avoid "over-building" in any one size of price category.
4. Gain for builders a larger share of the total housing market and thus help prevent any serious letdown in new home building and sales.

Developed by a committee headed by E. T. McMurray, the plan calls for participating builders to submit a monthly list of houses they have for sale. A master list is sent to each builder. When a builder cannot meet requirements of a prospect, he refers to the complete list and gives him locations of available homes in his size and price range.

King Played an Ace

Buffalo's Mayor Pankow (center), himself a recent victor at the polls, successfully campaigned for B. G. King (left) as retiring president William R. Doll looked on...
Arquilla Installed
In Chicago Post

Chicago Metropolitan Home Builders Association seated George Arquilla as president at an installation dinner Jan. 14 in the Conrad Hilton Hotel attended by several hundred members and friends. President of the Burnside Construction Co., he has been building South Side homes for 41 years.

Arquilla succeeded Laurance H. Mills as president. Other officers are Irvin A. Blietz, H. Morton Robbins, C. E. Bloome and Roy Barry, vice presidents; Martin H. Brauns, secretary, Joseph E. Valenti, treasurer.

Early in December, CMHBA observed its annual Christmas party in the Hotel Sherman with a record turnout of nearly 1,000 members and guests.

Indiana Dealers Meet Mar. 2-4

The Indiana Lumber and Builders' Supply Association will hold its 70th annual convention March 2-4 in Indianapolis. John C. Hilkcr Jr., of Fort Wayne is chairman of the committee. They'll Handle Northern New Jersey Affairs in '54

Lewis Epstein, renamed president of Home Builders Association of Northern New Jersey, joins officers and directors at end of annual meeting in Teaneck, N. J. From left: John J. Durante, Gerrard Berman, George Marcus, Vincent Cucchiara Jr., Ralph Carletta, Epstein, Edward Dowling Jr., Russell Willis, Albert Sier, Fred Brunetti, Patsy De Andrea, Joseph Goldman, George Poydine, John O'Hara

From Grateful Buyers

Builders Joseph Shapiro and Martin Buxbaum, on hand to install officers of Joseph-Martin Civic Association, were surprised with this "symbol of appreciation" from the 368 members who acquired East Meadow, L. I., N. Y., homes from them. Shapiro (right) is accepting plaque from Milton Cohen, retiring association head.

Buckeye Choice

A. B. Stanbery of Toledo, named head of Ohio Home Builders Association at its Akron convention, announced he would push slum rehabilitation plans in 1954.

Northern News continues on page 12-N

They'll Handle Northern New Jersey Affairs in '54

Lewis Epstein, renamed president of Home Builders Association of Northern New Jersey, joins officers and directors at end of annual meeting in Teaneck, N. J. From left: John J. Durante, Gerrard Berman, George Marcus, Vincent Cucchiara Jr., Ralph Carletta, Epstein, Edward Dowling Jr., Russell Willis, Albert Sier, Fred Brunetti, Patsy De Andrea, Joseph Goldman, George Poydine, John O'Hara

Here's a brand new line of doors that has everything. Made by a manufacturer with over half a century of designing and engineering experience, the new Calder doors are available in every conceivable size and style for every conceivable need. Special designs and sizes to order and for extra appeal to the customer and extra profit for you—all Calder doors can be equipped with radio controlled electric operators.

Send for complete information and our new, free, illustrated catalog.
It's no wonder that **U/R Lavatories** make houses **easier** to sell!

Your prospect can recognize real quality when he sees it—and one look at a Universal-Rundle lavatory tells a quality story that can't be beat. U/R's Arctic White, for instance, is the whitest white in the fixture industry, by scientific test! And Universal-Rundle's harder-than-steel surface means beauty that stays lovely ... beauty that's easy to clean. The modern styling of U/R lavatories is clean and uncluttered—the kind of styling that is smart for years.

And when you offer Universal-Rundle fixtures, your prospect recognizes a familiar name—nationally advertised in leading magazines as the world's finest bathroom fixtures.

Write for **FREE** Catalog!

**U/R Uni-Lox Lavatory Hanger**

Patented one-piece hanger gives easier, faster, more sure installation of china lavatories! A U/R exclusive!

*The World's Finest Bathroom Fixtures* by **Universal-Rundle**

Plants in Camden, New Jersey; Milwaukee, Wisconsin; New Castle, Pa.; Redlands, Calif.; San Antonio and Hondo, Texas
install the finest
year 'round conditioning
...with confidence!
Your key sales feature
for 1954

Janitrol Win-Sum Twins

ALL SEASON COMFORT NOW PRACTICAL FOR AVERAGE HOME OWNERS

Year 'round conditioning, the Janitrol way, need not be confined to the so-called luxury custom-built home. This year, Janitrol twin installations will be the key sales feature for many alert builders.

The addition of summer cooling will increase your home's market values far more than the cost of the unit...this is important to you and your prospect. Janitrol cooling is a home improvement that is approved for FHA loans.

You can depend on well engineered installations of Janitrol year 'round conditioning ideally suited for your house plans.

Authorized Janitrol dealers are factory and field trained in the modern applications of home comfort. Use their experience to put more value and "sell" in your new homes.

SPACE SAVING
You need only a 27" square for the 2 or 3-ton Janitrol conditioners. They are out of the way in the utility or recreation room.

WHISPER QUIET
Janitrol is the quietest unit made. Rubber mountings and thick insulating blanket lining efficiently absorb operating sounds.

FILTERED COOLING
Over 5 square feet of filters removes the dust, dirt and pollen from Janitrol cooled air for a healthier, cleaner home.

WRITE TODAY FOR COMPLETE SPECIFICATIONS

Janitrol

DIVISION • SURFACE COMBUSTION CORP.
400 DUBLIN AVE., COLUMBUS 16, OHIO

Offer the Win-Sum Twins in your model homes.

DIRECTORY • SURFACE COMBUSTION CORP.
400 DUBLIN AVE., COLUMBUS 16, OHIO

FEBRUARY 1954

LET JANITROL ENGINEERS LAY OUT YEAR 'ROUND CONDITIONING TO FIT YOUR PLANS...LEAVE COOLING OPTIONAL.
Buy Direct from MANUFACTURER

Save 25% on your purchases of FIREPLACE FORMS (Heat Circulating)

GUARANTEED
Highest Quality
The Price Fireplace Heater & Tank Corp. gives you its guarantee that Price Fireplace Units are of highest obtainable quality of materials and workmanship.

EXTRA BENEFITS
At No Extra Cost
Features available on no other fireplace form:
1. Ductmakers save hours of masons time.
2. Expansion channels eliminate troublesome mortar joints.
3. Improved design provides increased heat output.

Gentlemen:
Please rush the following information to me:
☐ Send specifications and price list with builders discounts.
☐ Send 8½ x 11 book of "100 Fireplace Ideas".
☐ Send prices on septic tanks.

Name
Street
City

Number of fireplaces used in one year
Number of septic tanks used in one year

PRICE FIREPLACE HEATER & TANK CORP.
93 W. Ataturk St., Buffalo 7, N. Y.

NORTHERN NEWS
(Continued from page 9-N)

Roamin' the North
A dozen NAHB officials headed by "Manny" Spiegel and John Dickerman remained in New York an extra day after the December convention committee meeting to take in the Long Island Home Builders Institute annual meeting. They saw Walter G. Stockler re-elected president, also the consolidation of the Queens Home Builders Assn. with the institute. Lester Tobin, who headed the former Queens group, was elected LI vice president representing the Queens-Brooklyn Division of Edward A. Lashins, himself just renamed president of the Home Builders Assn. of Westchester (N.Y.), announced the appointment of Robert A. Drennan as executive director. The HBA of Rhode Island has a new address. It's the Warner Building, 433 Westminster St., Providence. President Anthony Viola says it will provide greater public access to the association's information center. Omaha Builders Exchange has moved to its new building at 2565 St. Marys Ave.

Construction volume topped $20 million last year in Winnipeg, Canada, upsetting a mark fixed in 1912. Something unique in home show presentation will be attempted Feb. 6-14 at the Arena, St. Louis, when Bldor members of the HBA of Greater St. Louis will display both an "X-ray" house and an "avenue of homes" approximating a small subdivision. C. S. "Todd" Upson heads the committee.

Art Falace, Cleveland's new exec. VP. is an antique car hobbyist. His successor at Ohio HBA, Clifford M. St. Clair, earned degrees at Penn State and Duke.

First formal annual meeting of HBA of Indiana elected Gale C. Cooley, Valparaiso, president; Ralph L. Shirmeier, Fort Wayne, vice president; L. M. Hersheberger, Crawfordsville, treasurer; W. H. Highsmith, Anderson, secretary.
NORTH: For February, 1954, the North areas generally may anticipate less favorable working weather than that of last year. Only in Area 4 are comparable conditions in prospect. The number of days free of restrictive weather elements, therefore, should be less than that observed last February.

Colder than usual weather in the western portion and near to slightly warmer than normal temperatures in the eastern portion should characterize the February, 1954 weather picture here in Area 1. Rainfall and snowfall amounts are not expected to be excessive with the region generally recording deficient totals at the month's end. Last February's weather was warm as compared to normal with only North Dakota and northern Minnesota receiving less than the usual precipitation.

Warm, wet weather was observed in Nebraska, Iowa, northern Missouri and northern Illinois last February with the balance of Area 2 experiencing warm, dry conditions. For this coming February, the entire region may anticipate above normal precipitation totals. Temperatures, however, are expected to vary considerably. Colder than usual weather is in prospect for Nebraska and northwestern Iowa with Ohio and southern Missouri experiencing generally warmer conditions. Elsewhere, about average temperatures are in prospect.

Area 3 may expect less favorable working conditions this February. Principal weather restricting factor should be precipitation amounts in excess of the critical value as rainfall and snowfall totals are expected to be above normal. Temperatures also are likely to be above normal for the month. Last February, warm and mostly dry conditions prevailed here.

Both temperatures and precipitation totals are expected to average slightly above normal in Area 4 during February, 1954. Last year in February, similar weather conditions occurred although temperatures generally were much warmer than those anticipated for the coming month. Nevertheless, the number of days suitable for carrying on outdoor construction activities appears likely to equal that of last February.

CRITERIA
Special climatic studies were made for selected cities in each area to determine AVERAGE and LAST YEAR Operational Days. ESTIMATES are generally applicable to each area. Precipitation and temperatures extreme enough to stop outside work have been forecast as number of NON-operational days. Naturally, inside work (plastering, wiring, finishing, etc.) may on occasion proceed without interruption even through the cold and wet spells shown on the month's timing bars.
ALLWEATHER
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 concealed 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-weatherstripped windows.

ALLMETAL
Weatherstrip Company

Growing in Popularity

a money-saving
MFMA
"gymnasium"
grade of
NORTHERN HARD MAPLE

- Approved by architects and school authorities in leading cities for gymnasium floors, this fine (and relatively new) "combination grade," officially known as Second and Better, is fast becoming a favorite school specification. It matches MFMA First Grade in every performance attribute, yet sells for less—actually consists of 50% or better of First Grade, blended in the strip with the Second Grade areas. Stock and sell Second and Better, the ideal "gymnasium" grade, with fullest confidence. It makes a splendid floor of enduring beauty—competitive on EVERY basis!

MAPLE FLOORING MANUFACTURERS ASSOCIATION
Suite 596, Pure Oil Building, 35 E. Wacker Drive
CHICAGO 1, ILLINOIS

FLOOR WITH NORTHERN HARD MAPLE
BEACH AND BIRD-
Build NEW light into modern homes with...

- a HORIZONTAL SLIDING!
- FULLY WEATHERSTRIPPED!
- EASILY-REMOVED SASH!
- NEW, UNIQUE SILL SEAL!

Wide, wide expanses of glass—for that wall to wall window treatment so greatly admired! Today's architecture demands that exterior walls have that simple, uncluttered look, yet provide adequate light and ventilation. MALT-A-GLIDE Horizontal Sliding Wood Window Units are ideal for every room . . . serving handsomely as "light-walls" for living areas, or as high "ribbon windows" where privacy is wanted.

MALT-A-GLIDE Horizontal Sliding Wood Windows—newest in the time-proven line of MALTA wood window units—are chemically treated for long life, fully weatherstripped and feature a positive watertight sill that also eliminates uncomfortable drafts and expensive heat loss. As in all other MALTA units, sash is easily removable for cleaning or painting.

SEE YOUR NEAREST DEALER OR WRITE FOR LITERATURE

FEBRUARY 1954
Whether you are a speculative builder or a custom builder, your '54 homes should include the features which provide construction insurance at no extra cost.

Homes with R-O-W lift-out windows sell faster—stay sold longer.

Patented R-O-W spring-cushion construction permits sash removal and also provides a year-round snug fit.

No other window excels the R-O-W removable window in appearance, convenience or weather-protection.

See your local lumber dealer or write

R.O.W. SALES CO. 1324-46 ACADEMY AVENUE - FERNDALE 20, MICHIGAN

R-O-W is the registered trade mark of the R.O.W. Sales Co.
AUTHORIZED R-O-W DISTRIBUTORS:

NEW HAMPSHIRE
GENERAL WOODCRAFT COMPANY, INC.
North Bergen, New Jersey

NEW JERSEY
GENERAL WOODCRAFT COMPANY, INC.
North Bergen, New Jersey
JOHNSON & WIMSATT, INC.
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NEW YORK
GENERAL WOODCRAFT COMPANY, INC.
North Bergen, New Jersey
A. ROBERSON & SON, INC.
Binghamton, New York
THE WHITMER-JACKSON CO., INC.
Buffalo, Rochester, New York

NORTH DAKOTA
JACK R. KINNARD & COMPANY
Minot, North Dakota

OHIO
FABROW MFG., INC.
Toledo, Ohio
THE MANHENY SASH & DOOR COMPANY
Canton, Youngstown, Ohio
LOW WHOLESALE DISTRIBUTORS, INC.
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PENNSYLVANIA
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Pittsburgh, Pennsylvania
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Westville, New Jersey
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Binghamton, New York

RHODE ISLAND
GENERAL WOODCRAFT COMPANY, INC.
North Bergen, New Jersey

SOUTH DAKOTA
WATERTOWN SASH & DOOR COMPANY
Watertown, South Dakota

VERMONT
GENERAL WOODCRAFT COMPANY, INC.
North Bergen, New Jersey

WEST VIRGINIA
R-O-W DISTRIBUTORS
Rocky Mount, Virginia

WISCONSIN
WISCONSIN WINDOW UNIT COMPANY
Merrill, Wisconsin

CANADA
D. PORTER & SON
Stellarton, Nova Scotia, Canada

The recessed cups in
R-O-W sash guides identify
America's most popular window.
These cups house the tension-adjustment screws.
It is easy to adjust R-O-W removable windows
for snug operation and
year-around weather protection.
Many competitors have
tried to imitate
patented R-O-W window construction.
None have approached
R-O-W window quality.

See your local lumber dealer or write
R.O.W. SALES CO. 1324-66 ACADEMY AVENUE - FERNDALE 20, MICHIGAN
R-O-W is the registered trade mark of the R-O-W Sales Co.
Specific advantages important to the housewife are offered by these Kohler enameled iron sinks.

Maximum convenience is afforded by the twin drainboards which provide sanitary, self-draining work surfaces. The fixtures are in one-piece, without joints.

Durability is assured by a strong, rigid base of iron, which safeguards the Kohler enamel from strain. This superior enamel is acid-resisting clear through, has a sparkling, smiling hue and finish, easy to clean and clean looking, no orange peel texture.

Other advantages of Kohler sinks include a full-length ledge; Duostrainers that make the deep basins water-retaining, collect solid waste and drain freely; a high-arched spout which simplifies filling bottles and vases; and a lever control sprayer for rinsing.

Kohler chromium-plated fittings match the sinks in style and quality.

A full line of undersink cabinets is available—simple to install and easy to keep clean throughout.
here are 10 reasons

Sterling Hardware is better for you

**BETTER SLIDING DOOR HARDWARE THRU BETTER DESIGN**

Sterling Hardware saves time and money through simple installation and adjustment. No expensive callbacks.

Your customers prefer Sterling Sliding Door Hardware because Sterling means longer, quieter service and trouble-free operation.

Available in complete packaged sets for most door openings.

STERLING HARDWARE MFG. CO.
2343 WEST NELSON STREET • CHICAGO 18, ILLINOIS

Sterling means Quality

- NATIONALLY ADVERTISED in Leading Magazines
- SEE OUR CATALOG IN SWEET'S: Architectural File • Light Construction File
- VISIT OUR DISPLAYS: Architects Samples Corporation, 101 Park Ave., N.Y.C.
  Chicago Met. Home Builders Ass’n., 130 W. Randolph

FEBRUARY 1954
Glass walls in living room are Panaview sliding doors. Fireplace is of slump brick. Kitchen is open to dining area, has white metal cabinets by Crane, birch cabinets by Miller.

Indianapolis builders offer a contemporary

This $32,000 house of 1,340 square feet was built cooperatively for sale by members of Marion County Residential Builders, Inc., as the focal event of National Home Week in Indianapolis. Carl L. Sanders supervised construction. Consulting architect was Edward D. James. The design combines Rainbow Range slump brick from Miami, Florida, with vertical redwood siding. The slump brick is used also for the carport wall, planter boxes, patio wall and fireplace. The house has all-year air conditioning by units from Peerless Furnace & Foundry Co., storage walls by Fabricon, Mohawk birch doors, Crane plumbing fixtures. All interior walls except those in bathrooms were finished with Maas-Waldstein Company's Plextone, a lacquer coating which is sprayed on and dries with a speckled finish.
building in brick
for the Northern market

$23,950 in suburban Philadelphia

A n all-brick ranch-type built in Colwick, New Jersey, by the Collingswood Construction Corporation. Price includes G-E dishwasher, range and Disposal. Heating system is G-E's Air-Wall. The house has plastered walls (covered with linoleum in kitchen), full ceramic tile bathrooms.

$15,450 in metropolitan Pittsburgh

B rawn and Vaughn Development Company is the builder of this brick bungalow in McCandless Township, Pennsylvania. The use of natural stone and knotty pine trim brightens the exterior. The house requires a down payment of $3,150, monthly payments of $97.

Long Island split-level at $16,990

F lorage Park Homes, a 106-unit project by Sam and Julius Guterman and Jack Friedman at Bethpage, New York, features this all-brick model, from plans by John Burton.
The only heating comfort guarantee your customers can find.
Add summer cooling at any time without costly alteration

The Coleman Comfort Bond builds buyer confidence to sell homes faster. Your buyer knows that there is no gamble when he purchases a Blend-Air heated home. He has a $1,000.00 guarantee that means “warm home” to him—in every room.

Magic Blenders are the source of Coleman’s unusually good results. They deliver greater circulation control, prevent heat from packing uselessly at the ceiling while floors freeze. Every cubic foot of air is constantly circulated and evenly heated to provide uniform comfort—in every room.

The coupon below, or a post card mailed to us today, will bring you detailed information on Blend-Air costs—for heating or for year-round air conditioning. You’ll find this system ideal for low-cost specification housing where quick sales are necessary for profit in building. The Coleman Company, Inc., Dept. 750-AB, Wichita 1, Kansas.

NO OTHER SYSTEM OFFERS YOU AND THE OWNER ALL THESE ADVANTAGES

1 INSTALLATION FASTER
with 3¼-inch air tubes prefabricated to fit any construction. A complete package.

2 SPACE IS SAVED
with compact furnace taking as little as 6 square feet of floor space. Cooling equipment fits alongside, snugly.

3 COST IS SAVED
with fuel-burning efficiency. In cooling, 97% of water costs can be saved with Water Miser.

4 TWICE SUMMER COMFORT
with twice the moisture wrung from hot, wet air by super-cooling beforehand—a Coleman development.

5 OPERATION IS AUTOMATIC
Over-all temperature control by thermostat with control in each room independently.

6 COOLING COMES LATER
if desired. Pre-engineered to use same system, same tubes, same Magic Blenders. Low monthly payments.

COMFORT COSTS SO LITTLE WITH

Coleman Blend-Air CENTRAL HEATING AND AMERICAN BUILDER
Comfort Bond gives your homes a selling edge

OWNERS AND BUILDERS SING THE PRAISES OF THIS DEPENDABLE LOW-COST SYSTEM

"Far above our expectations — We are very much pleased . . . our home could not be more comfortably heated."
Robert Gasson, Owner, Woodland, Calif.

"Satisfaction to our house buyers — I have installed about forty of these units during the past two years."

"More reasonable than any other furnace — gives an even heat and is very economical to operate."
Walter N. Mees, Owner, Zanesville, Ohio

"Has done an outstanding job for us — most satisfactory in its performance . . . worked wonderfully well."
Harold Chapman & Son, Builder, Kalamazoo, Mich.

"Count us among your satisfied customers — We don't have cold floors any more . . . it was installed with a minimum of mess and confusion."
Dale M. Bronson, Owner, Fremont, Ohio

"A heating marvel — noiseless, economical, dependable and safe . . . permits us to go about the house in summer sport clothing."
Morris G. Bernel, Owner, Ama, La.

"As a contractor I am more than pleased — an excellent heating system . . . one of the most economical to install."
Edward L. Bolding, Contractor, Tampa, Fla.

"Even heat distribution in every room — when the warm air floods my home in the early morning, I know I have the 'modern' heating system."
Milton J. Gale, Owner, Keyport, N. J.

"We install Blend-Air exclusively — in all our ranch type homes. We strive to give the utmost in value in a low-priced home."
Lewis Cook, Paradise Homes, Inc., Builder, Mahopac, N. Y.

"More reasonable than any other furnace — gives an even heat and is very economical to operate."
Walter N. Mees, Owner, Zanesville, Ohio

"We install Blend-Air exclusively — in all our ranch type homes. We strive to give the utmost in value in a low-priced home."
Lewis Cook, Paradise Homes, Inc., Builder, Mahopac, N. Y.

Blended air
Recharges here

Room air enters

the Magic Blender
does the job better

In winter it blends room air with freshly heated furnace air to maintain constant comfort. In summer it blends and recirculates cool air the same way, providing dry mountain-air coolness.

OIL GAS LP-GAS

EQUIPMENT SAA APPROVED
OR LISTED WITH
UNDERWRITERS LABORATORIES

AIR CONDITIONING SYSTEM

FEBRUARY 1954
E. J. PLOTT has caught public attention in Canton, Ohio, with houses like this one, styled as an ultra contemporary and built with full basement, plastered walls and ceilings. This house sold for $28,000, including $3,000 landscaped lot, to the first visitor who came to its opening. An unusual feature is the heating, which is by Glassheat electric panels, with Minneapolis-Honeywell thermostats in each room. Plott reports that cost of installation of this system in a 1600-square-foot house is about $350 more than for gas-fired forced air. Biggest factor in satisfactory operation is a good insulation job. Other electric helpers included are touchplate light switches, General Electric dishwasher, National garbage disposal unit, built-in Thermador range and oven, generous wall plugs—including television and telephone outlets, flush lighting fixtures and indirect lighting. Siding is California redwood finished with Redwood Rez. Walls and ceilings have Fiberglas insulation. The house uses the Ludman Auto-lok awning-type windows.
catches on

General activity or television room has Celotex acoustic ceiling and Armstrong cork floor to eliminate excessive noise. Kitchen, too, has cork floor. Note use of cork to face work base. Hanging cabinet is covered with acoustical tile.

N. J. takes to a convertible

Samuel and Guy Padula are building 40 of these houses, with variations, in a tract in New Milford, in northern New Jersey. All are priced at $17,990 and all have full basements. The 30-foot living room has a sliding partition which makes possible a third bedroom. Padula reports strong buyer interest in this convertible feature, in the T-plan of the hall, and in the amount and arrangement of closet space.
General Electric announces

**NEW Advance-Design Electric Sink**

General Electric's new custom model Electric Dishwasher Sink changes the sink area in new homes from a work center to the glamour spot of the kitchen.

Let this feature-packed new appliance add the customer-appeal you need for quick sales of your new homes.

1. New improved dishwasher racks. Amazing capacity! Easiest to load. No racks to lift or shift!
2. New improved dishwasher detergent cup—optional second wash. Cleanest, most sanitary dishwashing possible.
3. Selective control with Tel-a-Wash lights shows stages of cycle. Control provides completely automatic or manual operation as desired. Drying cycle can be used as plate warmer!
5. New sink top—specially designed "no-drip" edge.
6. New single-control faucet, back-mounted for easy cleaning.
7. New built-in fluorescent light over sink bowl.
8. New and bigger under-sink storage.
10. Utility door—holds many accessories.
12. Special rack for hand towels.
13. Special racks for soaps and detergents.
15. Extra intermediate shelf—specially for scouring materials.
16. Automatic touch latch on the door.
Even one with a wood front!

Special wood fronts for custom installations! Wood-front dishwasher dramatizes style-variety and beauty of the new 1954 General Electric line! Wood fronts are G-E extra features! Available in knotty pine, birch, mahogany and oak.

Under-counter dishwasher models. Every model is an under-counter model. Installation under kitchen counters saves work space. Gives kitchen clean, functional lines. Freestanding model, with separate top is also available.

Standard cabinet widths. Under-counter dishwasher is 24" wide. Takes only the space of a standard-size 24" base cabinet. Electric sink models are standard 48" width.

Maximum flexibility. Fits to the right or left of sink, wherever most convenient.

And remember, G-E Dishwashers are pre-plumbed...Easy and economical to install.

New low-cost "Standard Model" G-E Disposall!

Brand-new, standard model FC-20 Disposall—at a price you, as a builder, can’t afford to overlook!


The FC-20 joins the famous General Electric de luxe Disposall models FA-4 and FA-45. G-E de luxe models have the famous G-E safety Twistop control, and are covered by a written, 5-year protection plan!

Write G-E electric sinks and Disposalls into your specifications. For more details, see G-E catalogue in Sweet’s file.

Before you buy, see G-E. You’ll get the economy you want, and the brand your customers want!

Architects and Builders: For detailed information, see your General Electric distributor, or send this coupon direct to General Electric Company, Appliance Park, Louisville, Ky.
CONSULTANT SERVICE established for members of HBA of Metropolitan Pittsburgh by A. M. Rearick, president, has quickly proved its worth. Any builder troubled with some financial, labor situation or similar problem is encouraged to refer it to the president or executive director. In complete confidence, four or five members with experience in the particular situation will be called to advise the builder. Pittsburgh credits the recently adopted procedure with saving one member from a grave situation.

FIRST AID FOR AILING BUILDERS is a valuable service provided by the HBA of Greater Cincinnati. A "sick committee" stands in readiness to take over the work of any builder member who becomes incapacitated. Thus, customers get the homes they contracted for and the builder is saved a severe financial loss.

EXCESSIVE LAND COSTS may force some builders to price themselves out of the home market, believes Frederick W. Jackson Jr., assistant vice president, Dime Savings Bank of Brooklyn.

Citing the Long Island story of 200,000 homes, nearly 1,000 factories and many scores of shopping centers built in five years, Jackson said it appears demand is increasing. With less land available on one hand and more people wanting it on the other, he reasoned, prices are bid up.

Costs of finished building plots have increased greatly due to local zoning requirements pertaining to acreage development, he pointed out.

Rising land price and development trends were said to be forcing many builders to jump from the $14,000 bracket to $16,000 or more.

EARLY-YEAR HOUSING SURVEYS in many areas find the building industry exuding confidence the new year will maintain a high degree of activity.

A Milwaukee Journal survey said all builders checked had met their 1953 goals and none expected any weakening of the market this year.

Chicago's First Savings & Loan Association predicted home starts in the area will exceed the 1953 volume of about 40,000 units.

Checking brokers in its area, the Indianapolis Times said housing demand would remain strong, reflecting continuance of a slow but steady growth in population.

A late 1953 spot check of its metropolitan area by the HBA of Greater Kansas City showed 2,000 homes under construction, more than two-thirds sold. Another 2,800 units were expected to start soon.

LOWERED DOWN PAYMENTS and longer terms have long been called a key to increased markets but Irving Rose, president of Edward Rose & Sons, Detroit, has raised a vigorous dissent.

A year ago, he said the Rose firm was unable to build as many homes as it could have sold due to labor shortages. Charging that availability of men and materials governs the number of houses that can be built in a year, Rose declared there is no point to easier financing if it won't result in more houses.

A CLEARING CENTER for information on construction bids is said to be aiding both builders and architects.

Operated by the Wisconsin chapter, Associated General Contractors of America, the center informs architects if any bid openings conflict with a time they intend to call for bids. By spreading out their bid openings, the opportunity is improved for a larger number of builders to submit bids in each case.
"LET PEOPLE SELL THEMSELVES. Talk quality and value all you want. What really counts is when a prospect sees for himself and sells himself. That's why we use so many nationally advertised materials and appliances. In fact, 13 that we use are advertised in The Saturday Evening Post. They not only help build good houses, but help build a good reputation, too."

(Manufacturers of building materials, equipment and fixtures place more advertising dollars in the Post than in any other consumer magazine.)
NOISELESS, FREE-WHEELING TRACK AND WHEEL

This track and wheel are made for each other! See how the wheel rolls on the sides of the track—not the bottom! This not only centers the wheel, but keeps it riding above dust and lint that may accumulate in the groove. Rustproof aluminum track, plus the lifetime nylon wheel and solid brass wheel bearing, guarantees you quiet, smooth, trouble-free operation.

Built-in Protection AGAINST TRACK JUMPING!

At last—sliding door hardware with built-in, positive protection against track jumping! And there's no extra work, nothing for you to do—because this exclusive M-D design stops track jumping with a built-in bumper ridge that makes it impossible for the wheel to lift out of the track once the door is in place over the floor guide. It's simple, sure, foolproof!

Another Quality Product from MACKLANBURG-DUNCAN CO.
OKLAHOMA CITY, OKLAHOMA
ATTENTION DEALERS!

STOCK-DISPLAY CASE & ACTUAL WORKING MODEL

FREE WITH THIS ASSORTMENT!

TRACK

10 PIECES - 4' EACH
10 PIECES - 5' EACH
10 PIECES - 6' EACH
10 PIECES - 8' EACH
TOTAL TRACK - 230'

40 boxes of complete hardware for ¾” doors.
10 boxes of complete hardware for 1½” doors.

★ ATTRACTIVELY DISPLAYED
★ INCREASES IMPULSE PURCHASES
★ TAKES SMALL SPACE

COMPLETE HARDWARE FOR DOORS ¾” TO ¾” OR DOORS 1” TO 1½”

Hardware comes completely packaged for a pair of ¾” doors, or for a pair of 1½” doors. Each package contains 2 front door hangers and screws, 2 rear door hangers and screws, 2 door guides and screws, as well as sufficient screws for mounting track. Cartons are clearly marked for ¾” doors or for 1½” doors.

BUILDERS

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

DEALERS

Order now! Your order will be shipped the same day it is received. Macklanburg-Duncan products are fast sellers, nationally advertised.
New Athens, Illinois, (pop. 1,500) had never seen anything like it before, although accustomed to the progressive policies of the builder, Louis E. Lauerman of the New Athens Lumber Company. Lauerman furnished the house to style and promoted it as a National Home Week venture, winning a prize in American Builder's NHW contest for lumber dealers. Howard Bollmeier was general contractor; Charles E. King, architect.

Lauerman found enthusiastic acceptance of the interior but definite resistance to the exterior styling. However, this grass roots reaction simply increased the pitch of general interest in the house throughout the county. In a week, 4,000 people had visited the house, filling out cards indicating interest in remodeling, building, furnishings, etc.

Features visitors liked most were: step-saving kitchen, steel-framed sliding glass door at south end of living room, use of easy-to-keep floors throughout (linoleum, except for rubber tile in bathroom and cork tile in children's bedroom), folding slat doors for guest closet and between kitchen and living room, sloping ceilings with exposed center beam. Price of the house, including draperies, was $17,500.

Immediate results from the showing of this house included the sale of 10 Novopty sliding door closets, one sliding glass door unit, four folding doors, two built-in stove units, and one complete kitchen remodeling job.
Look what you get in newly styled

FIR PANEL DOORS

style . . . Today's trend toward dramatic use of color and texture provides an important role for panel doors. Newly styled fir panel doors offer refreshing relief from the monotony of flat surfaces. The new wide molding becomes a frame for exciting decorative treatments that add colorful deep-shadow accents—a definite sales feature in any home you build.

dependability . . . Fir panel doors are made to last—a fact attested by over one hundred million installations. When you specify this hallmark **FDI** you get doors that are strong, stable, structurally sound; built to meet exacting U. S. Commercial Standards. Fir panel doors won't warp, won't come apart. Cabinetmakers working with straight grain, old growth Western fir detail each door meticulously, carefully sand, trim edges square and true. No shortcuts, no shoddy materials—to West Coast fir door craftsmen, dependability is a word with real meaning.

economy . . . New fir panel doors offer custom features at competitive prices. Compare them for style . . . compare quality . . . compare dollar for dollar price—then specify new fir panel doors. Call your regular supplier, or write Fir Door Institute, Tacoma 2, Washington.

. . . get all this in **FDI** hallmarked FIR PANEL DOORS

*Industry grade trademark signifying independent inspection assuring manufacture and quality called for in U. S. Commercial Standards.*
NEW BEAUTY
IN GAS BOILERS...

NEW SPENCER RANCHER
1G Series: 6 Models—40 to 128,000 BTU output
2G Series: 6 Models—80 to 232,000 BTU output
W—18 1/2", L—28 3/4" to 47", H—49 3/4"

OUTSTANDING
NEW GAS UNIT

COMPACT...
EASY TO INSTALL...
EFFICIENT

New beauty, compactness and rapid-heating qualities make Spencer's new ready-to-install gas boiler an outstanding choice for either large or space-budgeted homes.

Easily installed anywhere in any home, the new Spencer Rancher adds attractiveness to a kitchen, utility room or finished basement. It is completely enclosed in a compact gleaming white jacket—even the flue diverter is out of sight. The door is designed to be hinged on either left- or right-hand side. The walls and base are water-cooled, so it can be set directly on a wooden floor.

Easy to service. Controls and burner are readily accessible through the front of the boiler. Cleaning may be accomplished without disturbing controls or piping.

A code boiler, built to ASME and IBR regulations. AGA approved for manufactured, mixed, or natural gases. Other features—self-cleaning boiler, rapid heat transfer, compact design.

This is only one of Spencer's Complete Line.

NEW PRODUCT
THIS MATERIAL MAKES NEW HOMES
More Enticing to Buyers IN SO MANY WAYS!

The pay-off is in added sales appeal and
customer satisfaction—and more!
For beautiful Goodyear Vinyl-Tile, in tiles
and full 45"-wide rolls, is adaptable to so
many practical applications—floors, walls
and counter tops—and looks AND SERVES
so well!

SAVES, TOO! Installation is easy, and—
because it covers so perfectly—it eliminates
costly metal trim on counters, does away
with baseboards and dirt-catching "hard"
corners.

Beauty and style are paramount, for

Goodyear Vinyl-Tile comes in a rainbow
range of sun-drenched colors—no wonder
leading decorators call it "The World's Most
Beautiful Flooring!"

The fact that it never needs waxing—is fac-
tory pre-polished to a lasting, natural luster
that withstands practically every known
household hazard—makes it doubly appreci-
ciated by mortgage people and homeowners
alike.

WRITE FOR CATALOG S-8315 at no obligation. Get
the facts on why Goodyear Vinyl-Tile is such a boon
to modern builders! Simply write a postcard request
to Goodyear, Flooring Dept. N-8321, Akron 16, Ohio.

GOODFIRE Vinyl Tite
FLOORS, WALLS, COUNTER TOPS—IN TILES AND 45"-WIDE ROLLS

We think you'll like "THE GREATEST STORY EVER TOLD"—every Sunday—ABC Radio Network—THE GOODYEAR TELEVISION PLAYHOUSE—every other Sunday—NBC TV Network

FEBRUARY 1954
RENEWABLE UNITS

Two basic units fit most Eljer faucets and fittings. They are interchangeable, easily replaceable. Eljer's patented Swivel Disc virtually eliminates dripping by preventing wear and tear on seat and washer.

No. 1 unit for conceal fittings
No. 2 unit for exposed fittings

ELJER BALL COCKS

New Balanced-Construction Ball Cock is typical of Eljer's extra quality. Available in either regular or anti-siphon units. Operates quietly and efficiently under extremes of pressure. Snap-Action Shut-off provides instantaneous closing without water hammer, assures longer seat life, maintains constant water level.

ELJER SHOWER HEAD

A short turn of the easy-action lever on the Vari-Spray Ball Joint Shower Head adjusts spray to suit individual preference. Molded rubber core can't corrode, and normal use prevents lime deposit build-up. Easy-action, leak-free ball joint has special seal and packing, allows smooth adjustment, insures against leaks.
President Gets A Housing Program

Advisory committee proposes general overhaul of government's housing policies in a 375-page report

A comprehensive report on the nation's housing problems, and what to do about them, went to President Eisenhower late in 1953. The report, while not binding on the President—and certainly not on Congress—is expected to have considerable influence on housing legislation in 1954.

The more than 60 major recommendations in the report are aimed at one thing: Development of a "new and revitalized" housing program. This program calls for the wiping out of slums, a continued large volume of new home construction, and housing for low-income and minority groups.

The 375-page report is the work of the President's Advisory Committee on Government Housing Policies and Programs. The 22-man committee, appointed in September 1953, was headed by HHFA Administrator Albert M. Cole.

As this issue of American Builder went to press, the White House announced that President Eisenhower was planning to send a special message to Congress on housing. This message will no doubt be influenced by recommendations contained in the report of the advisory committee.

With one principal exception—the elimination of FNMA—the advisory committee recommended no drastic change in the government's present role in housing.

The concept of insured mortgage financing would, if anything, be expanded. Federal assistance in clearing slums would be increased. Even the public housing program established in 1949 would be continued, while a substitute "private enterprise" system is studied.

Industry reaction to this housing report has been generally favorable. For example, a spokesman for the National Association of Home Builders declared that the committee program "can put a new face on America." NAHB's only major criticism had to do with the form of secondary mortgage market facilities which would replace FNMA.

HHFA Administrator Cole is himself "very enthusiastic" about the over-all report. He admits he doesn't agree with all conclusions reached by the committee; but he has declined to elaborate until the President takes his housing message to Congress.

The committee report recommended action in five areas:

1. A "vigorous" attack on slums; effective maintenance and utilization of existing houses; a steady increase in the volume of building of new houses; special assistance for families of low income.

2. A new mortgage insurance provision. FHA-VA Interest Rates

Interest rates on FHA-insured and VA-guaranteed loans should be permitted to rise and fall to meet changes that occur in the investment market, according to the report handed down by the President's Advisory Committee on Housing.

The report said the way to obtain this "flexible interest rate" would be to set up a committee of government officials to study the money market continually. This group would have to have authority to change FHA and VA interest rates so as to make home mortgages attractive to investors.

Legislation should be enacted, the report said, to create this government committee. The group, by majority vote, could change interest rates. In no case, however, could interest rates be higher than 21/2 percentage points above the current average yield on long-term (15 year) government bonds.

The committee would also have authority to determine permissible charges for originating FHA and VA mortgages, and to establish the FHA debenture rate.

3. A new housing program. Let FHA and VA set up some way to compare notes on builders who fail to do a satisfactory job in meeting home-owner complaints.

4. New Home Warranties

Should a mandatory warranty be adopted in connection with government-insured or guaranteed home mortgage financing?

No, says the President's Advisory Committee on Housing. For one thing, complaints by home owners have fallen off "very substantially" in recent months, according to the subcommittee which studied FHA and VA programs.

"The subcommittee is in general agreement with the objective to be achieved by the proposal for a mandatory builder's warranty. It is our judgment, however, that the imposition of such a warranty would do more harm than good. The proposal... would be unworkable."

This idea did get a favorable comment: Let FHA and VA set up some way to compare notes on builders who fail to do a satisfactory job in meeting home-owner complaints.

5. FHA and VA programs. This idea did get a favorable comment: Let FHA and VA set up some way to compare notes on builders who fail to do a satisfactory job in meeting home-owner complaints.

To wipe out existing slums and to check the spread of blight is a major goal of our housing program," the committee said. Among other things, the committee recommended that the present Urban Redevelopment Program be broadened to help communities rehabilitate and conserve areas.

Also recommended was the establishment of a new Urban Renewal Administration as part of HHFA. FHA...
Rheem Coppermatic makes NEWS—and news makes SALES! Here is the lowest cost copper-tank water heater, different from all others, with every sales advantage.

And so your whole new Rheem Coppermatic sales story is a "stopper"—from the sensational 4-color national advertising in top magazines to your local displays, mailings and newspaper advertisements!

Use the big 3-dimensional copper foil cutaway display shown below on the right—actual size, 5-ft. high. Use the presentation book to sell prospects and train salesmen. Use the hard-selling envelope stuffers to tell the Coppermatic news for little more than the cost of mailing! And choose from a big selection of newspaper ads—proved successful in every test!
The home building industry looks forward confidently to another banner year in 1954, when new home production should run “very close” to the 1953 level, E. M. Spiegel, 1953 president of the National Association of Home Builders, declared in a year-end statement.

Building material prices seem to have stabilized in recent months, Spiegel said. Labor and land development costs continue to exert upward pressure on new home prices, but the 1954 home buyer will benefit from improvements in design and construction methods.

“The 10,000,000 visitors who thronged into the best new homes of 1953 during National Home Week last fall are proof that there still exists a tremendous demand for, and interest in, new housing,” Spiegel added.

Millions of American families still need and want good homes and have the steady incomes to carry them, Spiegel declared. Given the right kind of financing, fitted to the needs of the mass housing market, there can be no doubt that at least 1,000,000 new homes will find ready buyers in 1954.

The NAHB president expressed hope that legislation now under preliminary discussion — in hope that legislation now under preliminary discussion — in the Senate would “strengthen our existing mortgage finance machinery and provide the additional mass market financing tools that are needed.”

Spiegel said the “acute and prolonged shortage of mortgage money” was one of the gravest handicaps faced by home builders in 1953. He pointed out, however, that there were “definite signs” of improvement late in the year, and “good grounds to hope” that mortgage money will be more readily available during 1954.

Housing Program

(Continued from page 37)

and there would be a provision authorizing FHA to include an open-end clause in insurance contracts.

The job of encouraging a continuing high level of private home building would be undertaken by liberalization of FHA terms under Title II, Section 203 (one-to-four family dwellings) would be made more attractive by increasing maximum terms to 30 years and by increasing maximum amounts.

As noted elsewhere in this issue, the committee recommended the elimination of the Federal National Mortgage Association, and proposed a substantial change for fixing FHA and VA interest rates.

Low-income families would be affected by a two-year “experiment” recommended by the committee. This proposal calls for 40-year, 100 per cent FHA-insured loans on houses costing up to $7,600 ($8,600 in high cost areas). Occupants of such houses would rent under a lease-purchase contract and would be encouraged to acquire ownership.

Meanwhile, pending demonstrated progress of this experiment, the low-rent public housing program would be continued. The Administration and Congress would determine its size, and the committee made no recommendation in this respect.

The Advisory committee recommended no change in the single-agency concept for handling the government’s role in housing. It did suggest that the Office of the Adminis-
Dealers Widen Scope of '54 Contest

The National Retail Lumber Dealers Association has announced a new type of contest this year for the members of its federated associations. Successful contests sponsored by the group during the past two years were restricted to entries describing public relations activities alone. Now the scope of the contest is broadened to include awards for entries which describe either a public relations activity or a combination of good public relations and good merchandising.

Entry blanks and contest rules may be secured from NRLDA headquarters, 302 Ring Building, Washington 6, D. C. Entries must be submitted by March 31, 1954.

New '54 Construction To Reach $34 Billion

Expenditures for new construction are expected to total about $34 billion in 1954, only two per cent less than the record volume of nearly $34 billion estimated for 1953, according to outlook figures prepared jointly by the U. S. Department of Commerce's Building Materials and Construction Division and the U. S. Labor Department's Bureau of Labor Statistics.

A mild decline in private construction was forecast for 1954, but indications are that publicly financed activity will about equal 1953 volume. It is estimated that private expenditures in 1954 will total $22.8 billion, and public outlays, $11.2 billion.

Private housing and industrial plants may decline somewhat, along with farm construction and defense facilities, according to the report. These decreases will be largely offset, it was believed, by extensive backlogs and constant pressures for the kinds of construction needed to serve the mobile population and the suburban communities which have grown up since the war, such as utilities, stores, schools, churches, etc.

The joint report assumed no significant change in the international situation and a continuing high level of employment and personal income. It was anticipated that about one million new non-farm dwelling units will be started, that mortgage funds will be adequate and that building costs will vary little from current levels.

Dickerman's Column

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

NAHB's Fight for New Housing Legislation and Slum Clearance

The vital importance of the home building industry to the stability of the entire American economic system has been demonstrated graphically by the severe mortgage crisis that gripped the housing market during much of 1953. The inability of builders and prospective home buyers to obtain adequate mortgage credit caused a midsummer letdown in residential construction that threatened for a time to touch off a general business recession. Fortunately, the Government's so-called "hard money" policy, which was a major cause of the mortgage drought, has now been relaxed and we look forward with confidence to an improved situation in 1954.

We are hopeful that the lessons of 1953 will not be lost on members of Congress and the Government officials responsible for developing a new housing program next year. Far-reaching changes in the mortgage machinery upon which housing depends have long been overdue. The housing credit facilities of the Federal Government must be modernized and strengthened to meet the needs of today's mass market, and a workable central mortgage reserve system must be devised to prevent a recurrence of the 1953 crisis. With the new awareness of home building problems that now exists in official Washington, there are good grounds for confidence that those necessary changes will be made promptly and effectively.

We feel that the National Association of Home Builders has contributed toward creating this improved Washington climate for the building industry. The Association was prominently represented on President Eisenhower's Housing Advisory Committee which helped prepare legislative recommendations for the next session of Congress, and it is accepted in Washington and across the country as the responsible voice of the home building industry.

NAHB, however, is much more than a "voice" for its 28,000 members. Through the NAHB Research Institute, the Association is actively promoting the development and use of improved housing design, construction methods, and new materials to provide better homes at the lowest possible cost.

One of the most important undertakings of the Association is its nationwide campaign to halt and reverse the spread of slum blight which for decades has been eating at the hearts of our cities. Recognizing that not even the United States is wealthy enough to destroy all its blighted housing and rebuild from the ground up, NAHB has launched a realistic program to rehabilitate the millions of run-down older houses which are structurally sound and can be restored to useful life at a minimum of expense to the taxpayer.

Law enforcement is the big weapon in this attack on slums. The health, safety and sanitation codes that govern the use of housing in every American community should be strengthened and vigorously enforced.

The lessons learned in organizing the New Orleans program can be of invaluable help to Washington and other cities confronted with a slum problem. One of the most essential steps taken in New Orleans was the creation of a separate City Department to administer the program on a unified, efficient basis, rather than assigning it to an existing department already heavily burdened with its regular municipal duties. The task of cleaning up big city slums cannot be handled on a part-time basis. Official neglect and indifference are among the root causes of slums, and municipal authorities everywhere must recognize that nothing short of an all-out, intelligently planned attack can cure them.
We are manufacturers of the complete line of Bilt-Well Woodwork: Unit Windows, Casements, Unit Kitchen Cabinets, Unit Multiple-use Cabinets, Overhead Garage Doors, Combination Doors, Storm & Screen Units, Basement Windows, Shutters, Exterior and Interior Doors, Entrances, Gable Sash, Louvers, Corner China Cabinets, Mantels, Telephone Cabinets and Stair Parts.

MANUFACTURED BY
CARR, ADAMS & COLLIER COMPANY
DUBUQUE, IOWA
Established 1866
Give your homes extra sales appeal with "Century" NU-GRAIN asbestos-cement siding

Colorful, attractive NU-GRAIN siding gives any type home a decided "plus" in the minds of prospective buyers. For here is a siding material that offers beauty, durability, and economy!

These remarkable shingles are made from asbestos fiber and portland cement—which makes them as permanent as stone itself. They won't burn, rot, or corrode; they can't be damaged by vermin: they are completely weather-resistant.

And here's a feature really worth noting: To make the attractive NU-GRAIN shades as long-lasting as possible, K&M embeds colored ceramic granules into the shingles under hydraulic pressure. There's no paint or protective coating to peel or wash off—and no such finish need ever be applied. Both the color and the distinctive wood-grain pattern are designed for a lifetime!

What's more, because they are low in cost and easy to install, NU-GRAIN shingles help you hold down the prices of your homes, thus broadening your potential number of buyers!

Ask your K&M distributor to tell you more about these nationally-advertised, widely-known shingles. Or, write directly to us for complete information.

These attractive shingles are made in four distinctive colors—NU-GRAIN brown, gray, whitetone, and green (illustrated).

KEASBEY & MATTISON COMPANY • AMBLER • PENNSYLVANIA
America's first maker of asbestos-cement shingles.
Distributors Urged
To Emphasize Services

Building material distributors must emphasize their services and benefits they offer both retailer and manufacturer to save space, time and money in order to meet the challenge to their business, declared John P. Ashton, retiring president of the National Building Material Distributors Association, at its recent Chicago convention.

Praising members for their support, he indicated group’s membership would double in 1954 if present rate of growth was maintained. More than 250 persons attended the meeting, at which Senator Everett M. Dirksen of Illinois discussed “Washington Today” and Phil H. Hanna, Chicago Daily News financial editor, reviewed “The Building Outlook for 1954.”


Low Down Payment Loans
Prove Sound Credit Risks

A new survey of the delinquency rate of residential mortgages made by the Mortgage Bankers Association of America would appear to belie an old banking maxim that a high percentage home loan—one which permits a low down payment—is a comparatively poor risk.

The study, based on investigation of about 70 per cent of the mortgages which members of the MBA have on their books, shows that the so-called poor risks compare favorably with borrowers considered as excellent risks. VA home loans were found to have a low rate of delinquency—only .41 of one per cent were two months behind in payments; .19 of one per cent were three months in arrears.

Delinquent borrowers with FHA mortgages amounted to only three-tenths one per cent for two months’ arrears and .12 of one per cent were three months overdue.

The association claims these figures indicate that the easier credit pattern followed under the VA and FHA programs has been quite sound.

But the Biggest, of Course, Got Away!

Al Balch of Seattle, who booted the largest fish at the Acapulco Derby, lost an even heavier one (he says) when his steel line broke

Twenty Acapulco Derby winners have returned home with fond memories of a fabulous nine-day Mexican holiday. From successful deep sea fishing excursions to bullfights, historical sightseeing tours to midnight deep sea diving exhibitions, builders adjudged to have best promoted National Home Week in areas from New England to the West Coast were treated like visiting royalty. Contest sponsor Minneapolis-Honeywell Regulator Company picked up the tab.

As its reporter for the trip, American Builder happened to select the one among the group who walked off with the trophy for landing the biggest fish—Albert Balch of Seattle.

Each of the builders flew to Dallas on Saturday, Nov. 28. M-H representatives met them at the airport, whisked them to the Adolphus Hotel for cocktails and steak dinners. The group flew to Mexico City (7,500 feet above sea level) the next day and spent the evening hours in relaxation at the Hotel Del Prado.

An extensive sightseeing trip of the city on Monday, included the National Palace, University City, Chapultepec Castle and Park. Tuesday, the party planed to Acapulco, spent the rest of the day swimming and loafing and the evening at the La Perla night club where divers performed thrilling leaps into the sea at midnight.

On Wednesday and Thursday, the builders teamed up as partners and spent eight hours each day fishing: two teams to a boat. Friday featured a sightseeing tour via sailboat to Puerto Marquez and by native dugouts to Revolvedadero Beach after relaxing during the day. a gala farewell dinner was held Saturday evening in La Bocana night club. where fishing rodeo trophies and diplomas were awarded. On returning to Mexico City Sunday, the group attended the bullfights at Plaza Mexico, billed as the world’s largest bull ring. Later, they were guests of Virgil Hiermeier, general manager of the M-H Mexican subsidiary. The next day, the party flew back to Dallas and disbanded.

Minneapolis-Honeywell men who conceived and carried out the Acapulco Derby, all vice presidents, included Walter Bask, Eldon Richardson, Kent Wilson, Chet Lyford and Hiermeier.
Mr. Builder: PRICE? You will be astounded at the low cost of this window when your dealer quotes you. Acclaimed by everyone as the window they have been waiting for. Its new advanced design results in amazing quality at surprising low cost. Study each of these important features. You too will say "This is the window I've been waiting for".

Screw-lock smooth, mitred frame corners factory sealed. Rock-free rigidity. Class fixed joints—wind, water and dust tight forever. Factory located hardware assures perfect fit at storm sash and screens.

- All frames have continuous perimeter installation fins.
- Semi-pneumatic Ventilated weather stripping inside jambs. The most advanced weathering system, plus a sash cushion.
- Continuous zinc weather strip in frame head; smooth operation and full length weather seal.
- Rubbing block on zinc weather strip in head assures perfect closure and seal of meeting rails.
- Scientifically designed weep holes in sill frame for immediate drainage under all conditions.
- Weep holes in sill frame protected from weather by continuous beaded flange which is an integral part of the removable cover plate.

- All weathering is built into the window frame where it belongs; out of harm's way and thoroughly protected by the frame. Screw-lock mitred sash corners permit easy job re-glazing. Lifetime Ventilated glazing.
- Sash side rails have two point contact with semi-pneumatic jamb weather strip for double weather protection.
- Nylon pressure buttons in sash head rail, actuated by stainless steel springs, eliminate wind rattles in any sash position; constantly push sash firmly against the zinc weather strip. Nylon-aluminum, aluminum-zinc contact provides natural lubrication for permanent, easy, fingertip operation.
- Full-length self-sealing action provided between sash and sill cover-plate.
- Forged and machined cam action lock forces sash against the semi-pneumatic weather seal 4 side jambs; seals meeting rails air-tight, dust-tight; maximum weather seal. Top to bottom finger rail for quick, easy opening; prevents pinched fingers; adds beauty—and rigidity—at a critical point.
- No sharp, easily damaged weather strip exposed when sash is out; no home-owner injury hazard.
WITH THE TEMPERATURE standing at two below zero who would be thinking of electric fans?

NOBODY, you say? Well, practically nobody, and certainly not the guards at the Superior Sugar Refining Company in Menominee, Michigan, where 14 packaged electric fans of the Signal Electric Manufacturing Company were stored.

BUT SMART THIEVES are different. Probably reasoning that nobody in the warehouse would get within fanning distance of the wind-jammers on a subzero day, they got away with the whole lot!

CAN A DEALER make an easy profit on a proposition represented to enable him to compete with hardware jobber distributors? Here's the way one dealer sizes up the proposition:

SAYS HE—A hardware salesman calls on us with a proposition to enable us to compete with jobber distributors in this area. If we stock enough hardware for 15 houses at a cost to us of $50 a house, or a total of $750, we can get a special price which will allow us to gross 14 per cent on sales.

NOW LET'S LOOK AT IT on my chart. With hardware a sideline to our business I think $1,000 a year gross profit is not too much to set as our goal. To gross 14 per cent on each sale, our selling price will be $856.14, and our gross profit $86.14.

So, to gross $1,000 a year we will have to make sales of $7,143 with cost of sales not to exceed $6,143. And to do this we will have to sell 123 houses of this hardware, and turn our inventory over a little more than eight times a year. For us to promote the hardware through advertising and pay a salesman five per cent commission or $5,000 plus expenses of $3,000, where do we come out? We don't.

WELL SUPPOSE we decide we want to gross $15,000 a year on this line, continued the dealer. Let's try that. We will now have to sell $107,143 worth of hardware with sales costs not to exceed $92,143. We will then have to sell 1,313 houses of hardware, and turn our inventory over 123 times.

CONCLUDED THE DEALER—It's a nice guaranteed way to go broke fast, no matter where you set your gross.

WENT TO Colorado Springs recently and was met and toured by the three amiable Coloradoans in the photo. Note that they are placed on the sharp mountain slope to adjust for size. Actually there is about a foot difference in the heights of the two wingmen. Left to right they are Arlie Moore, Jim Snyder and Dave Duell.

COLORADO SPRINGS will forever conjure up a memory of Tod Sloan selling his city to NAHB as a site for a semi-annual meeting. With what obviously was a carefully rehearsed speech to accompany a set of what were among the most beautiful scenic slides ever shown, Tod was so overwhelmed by the grandeur of what he was showing that he became totally mute. Managed to sputter about ten words, but after that could say nothing until the last slide had been shown.

HIS WHOLE SALES talk consisted of "Well, for Pete's sake, if what I showed you doesn't sell you, nobody can talk you into it." And he couldn't have done better if he had rehearsed it just that way.

PRESENTATION was notable for three reasons—breath-taking beauty of the pictures, best sales talk of the
**LOOK JOE!...in SECONDS**

A... **Clipper**

...WILL CUT THE HARDEST BRICK—STONE—TILE!*

*and at the lowest cost per cut

**Clipper**

MASONRY SAW

...will PAY FOR ITSELF from the SAVINGS in TIME and MATERIAL

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 Patented 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.

**IT'S YOURS ON...FREE TRIAL!**

ORDER TODAY...on FREE TRIAL. Discover for yourself how CLIPPER...will increase your profits by increasing your production at reduced costs. CLIPPER'S "On the Job" FREE TRIAL guarantees you satisfaction at no obligation!

**OUR ONLY BUSINESS FOR NEARLY 20 YEARS...**

MASONRY & CONCRETE SAWING!

The unqualified Clipper guarantee of satisfaction is backed by world-wide experience, the ability to select the finest materials, and the "know-how" to put them together.

**SAW BEFORE BREAKING WITH A CLIPPER CONSAW!**

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 saving construction joints—eliminate costly hand forming and spalling.

**KANSAS CITY, MISSOURI**

- **BOSTON**
- **HOUSTON**
- **MILWAUKEE**
- **ST. PAUL**
- **INDIANAPOLIS**
- **NEW YORK**
- **PITTSBURG**
- **SANT FRANCISCO**
- **CINCINNATI**
- **ATLANTA**
- **WASHINGTON, D.C.**
- **BIRMINGHAM**
- **CHARLOTTE, N.C.**
- **DALLAS**
- **KANSAS CITY**

**SOLD ONLY DIRECT FROM FACTORY BRANCHES**

**AMERICAN BUILDER**
Exclusive tongue and groove joint eliminates mouldings and adhesive!

Yes, it’s easy to install new Marlite Plank and Block! And you offer your building and remodeling clients new beauty, new economy, faster installation... plus the same high quality that has made Marlite panels famous.

*Easy installation*—New Marlite with exclusive tongue and groove joint is installed over old walls or furring strips with concealed nails or clips.

*Easy to handle*—Planks are 16” x 8’. Blocks are 16” square. Both 3/16” thick. In cartons for convenient handling.

*Beautiful new colors*—Ten new companion colors styled by Raymond Loewy Associates, plus four distinctive wood patterns, are sure to please every customer.

*Baked Marlite finish*—Planks and Blocks feature the same durable, easy-to-clean Marlite finish used on all other Marlite panels.

See your building materials dealer for full details on new Marlite Plank and Block, or write Marsh Wall Products, Inc., Dept. 203, Dover, Ohio. Subsidiary of Masonite Corporation.
PACKAGED CHIMNEYS

offers you

3 models
sizes

To meet a variety of specifications and needs, AIR JET is available in 3 models and 3 sizes, in a wide range of prices for your customers to choose from.

MODEL AA DELUXE has a 17” x 34” top. Ideal for large, ranch style or ‘rambling type’ homes.

MODEL A STANDARD has a 17” square top. Ideal for average middle prices homes.

MODEL B ECONOMY has a 12½” square top. For economy homes and low cost building projects.

The 3 smoke pipe sizes you can choose from are: 6”, 7” or 8”

THE BEST DOLLAR VALUE

Weighing less than 100 pounds, AIR JET requires only one man-hour of labor for installation. Made of light aluminum with high temperature porcelain steel smoke pipe, AIR JET is UL approved for use with coal, oil, wood and gas fuels.

WRITE TODAY...

for complete information. There are several territories for distributors available.

GENERAL PRODUCTS COMPANY
FREDERICKSBURG, VIRGINIA

On and Off the Record
(Continued from page 45)

year, and Sloan mute for the first time in his life, subtracting possibly the first two months of his life.

AND HERE IS a pair of pictures taken from a sixth floor room in the Broadmoor. One overlooks the only outdoor rodeo arena in the world with roofed grandstands. Mountains in background can be reached from hotel in 15 minutes.

THE OTHER overlooks the hotel swimming pool, cabanas and lagoon. Both were taken through a window screen in case the screen shows up here and baffles someone.

ELECTRONICS is a new word as far as the home building industry is concerned. Prior to 1953 it was a word that had something to do with the art of modern war.

NOW IT’S a word that has begun to have an understandable meaning to home builders through development and application on a mass scale of electronics to the scientific control of home temperatures.

AND THAT is only a beginning. It’s less than two years ago that air conditioning on a mass scale for medium- and low-price homes was the great new horizon. Now, it’s electronics, and probably no one will predict the wonders it will unfold for home builders in the coming five years.

WHICH PROVES that even wars can pay dividends in comforts, although no one in his right mind would accept war for any dividend.
WONDER IF BUSINESS in general is not a little punch drunk? Everyone who can speak with any authority and can find a medium through which to speak predicts a very good year for all business. But few seem to be very happy about the condition. In the twenties it was different. Everybody was happy.

BUT BUSINESSMEN of the twenties had not endured the restrictions imposed in World War II, nor cut their eye teeth in a depression.

MAYBE we have been fighting so hard for so long that we have forgotten how to enjoy the calm. Something like the trench-bound doughboys of 1918 on the morning of November 11. Everybody knew the war was over but it took some time to adjust to a world with no more shooting and killing. Likely it will take some doing and some time to adjust to a business climate that does not daily threaten the existence of private enterprise.

IT'S A YEAR that probably will see some weeding out of misfits, revival of the art of selling, and demand for better all-around merchandising. But, that means a normal year, if there is any such thing. And as such it deserves to be enjoyed. Can't tell how many of the same are left for many of us, so we will do well to cherish it.

NRLDA'S PRESIDENT, Henry Munnerlyn, says that many dealers are complaining about too many variations in the grades of lumber they receive, and that they are forced to buy low grades with the high.

OTHER COMPLAINTS are that customers demand specific sizes and grades, and that because the lumber does not always meet requirements in these respects, returns are running from three to 11 per cent of deliveries.

CRITICISM IS ALSO leveled at car loading practices in many cases. Too expensive, say the dealers. It would help if lengths were loaded together, if widths were placed separately, and if grades were separated in the loads.

THE ANSWER to these complaints and problems, points out Munnerlyn, is full consideration of them between dealers and manufacturers.
The future of America belongs to its school children. Thus, today's efficient modern school buildings are "Built For The Future" in more ways than one.

Increasingly, school boards who look to the future favor schools built with reinforced concrete. Such construction means clean lines and attractive appearance... extra strength and durability... long-lasting weather resistance... utmost protection from fire.

School builders, architects and engineers find it pays to specify CF&I Clinton Welded Wire Fabric for their concrete reinforcing needs. This fabric provides strong steel members closely and uniformly spaced for proper load distribution and added strength. CF&I Clinton Welded Wire Fabric meets all A.S.T.M. requirements; is available in all popular sizes and weights.

THE COLORADO FUEL AND IRON CORPORATION
Denver and Oakland
WICKWIRE SPENCER STEEL DIVISION
New York, New York

CLINTON
WELDED WIRE FABRIC
THE COLORADO FUEL AND IRON CORPORATION

LETTERS

NAHB mailing list not for private use

Sir: You will recall that you spoke to me about a promotional plan which would involve utilization of our mailing list. I explained that I did not see how it could be done in view of our policy against anyone's using our mailing list, but suggested that if you would state your ideas in a letter, I would take it up with our policy people. Not having heard from you, I assume that you have received my letter in which I stated that NAHB's membership list is not now nor has it ever been available to anyone.

John M. Dickerman, Executive Director, National Assn. of Home Builders, Washington 6, D.C.

mortgage for mass market story rings bell at Detroit FHA

Sir: The Detroit Insuring Office appreciates more than we can say, the complete and accurate story on our Title 1, Section 3, program (American Builder, December, 1953, pp. 88-91). We use the word "accurate" for the reason that another publication recently ran an article and insisted on calling this a "shell" house.

Our business under this Title has jumped rapidly since your article was written. We currently have 1,647 applications during 1953, and in one week alone we received 124 cases for processing.

Wendell O. Edwards, Regional Director, Federal Housing Administration, Detroit, Mich.

wants cost of building plywood filling station

Sir: While leafing through some back issues of American Builder, I came across an article in the April, 1940, number containing a write-up and picture of a gasoline service station, 21×10 feet, built of plywood and covered with porcelain enameled steel. Since we plan to build a station next spring, we would like to explore the possibilities of erecting one, with plywood, time, material costs, etc., as compared to masonry, labor costs, etc. Is it possible to obtain the blueprints of this building at this late date?

Clyde E. Arnold, Grand Rapids, Mich.

Information on this service station is no longer available, due to obsolete date of magazine. It was suggested to the reader that he seek help for his problem from Douglas Fir Plywood Association, Tacoma, Wash.—The Editor

National Home Month contest winner pleasantly surprised

Sir: Your telegram advising that our entry had been selected by the judges as the winner in Group II of American Builder's National Home Month contest came as a pleasant surprise.

We did not submit the entry with the idea of winning a prize, but with the thought that the details would be helpful to others in the future who are not in a position to feature a "Parade of Homes," or to put on a "Home Show." Of course, we appreciate the honor, and thank all those concerned.


sectional news edition meets contractor's approval

Sir: I am happy to note your decision to publish a Western Edition, featuring matters of interest to builders in this part of the country.

Have always felt that features pertaining to construction methods in the East were not of particular value to us out here.

If you could suggest to the smaller custom builder, like myself, ways to compete with the present trend of mass construction in building homes to sell, and how to overcome its competition, you will surely be doing something.

Frederick Hack, General Contractor, La Canada, Calif.

(Continued on page 32)
GENERAL MOTORS OFFERS BUILDERS NEW
DELCO WINTER-SUMMER CONDITIONAIR

New low-cost way to add extra sales appeal to your homes

Now every builder can answer the rising demand for air conditioned homes at reasonable prices. Here's the sensational new Delco Conditionair that uses either gas or oil for heating and electrical refrigeration for cooling. It provides complete air conditioning, ventilation, filtering and humidity control.

One cabinet houses both heating and cooling mechanisms. Has Delco-Heat Circle-air heat transfer system, centrifugal blower, Multipath Cooling coils, twin filters, and sealed reciprocating compressor. It's low in first cost, low in operating cost, and packaged for easy installation. The cabinet is made of heavy duty furniture steel and is finished in the rich Delco green. In appearance, performance, and cost it's your best answer to adding the magic of year 'round air conditioning to the homes you build.

For detailed information, contact your Delco-Heat Distributor. Or write or wire Delco Appliance Division, General Motors Corp., Dept. ABH, Rochester 1, N.Y. In Canada, Delco-Heat, Toronto 13, Ontario.

---

... a complete line of automatic oil and gas fired conversion burners; Conditionair forced warm air furnaces, heating, cooling units; boilers; water heaters; electric water systems.

DELCO CONDITIONAIR

For a good deal... deal with Delco
Everybody knows where Mount Vernon can be found... but
do people know what services you offer... where your office is located... what your telephone number is?
Spread essential information about your business all over town easily and economically by advertising in the 'yellow pages' of the Classified Telephone Directory.
The 'yellow pages' are the most used shopping guide in the community. You'll find them in homes, offices, factories and shops. They'll help direct prospects to you for new homes and remodeling jobs.
If you're now using the 'yellow pages', make certain that you're listed under all the appropriate classifications where future customers are likely to look for construction services of any sort.
Call the Classified Directory Representative at your local telephone business office. He'll be glad to assist you in preparing your directory advertising.

letters...
(Continued from page 50)

Wilson Rafter Table
a useful tool
Sir: Please advise if you can send a reprint on your Modular Principles in Roof Construction which contains the Wilson Rafter Table. My subscription to American Builder began in June, so I missed most of this series. However, I did see the Wilson table in a borrowed copy and thought it to be the best. Please keep up the good work.
R. L. Hauptman,
Maderite Block Works,
Litchfield, Ill.

American Builder—can't do without it
Sir: I have recently been doing a great deal of work for a local builder, and have been using his copies of American Builder for reference. Since this is awkward, I desire to enter my own subscription for three years.
Your publication has so many materials and products advertised, and contains so much subject matter, I feel that it is a great asset, not only for current trends, but also to keep as future reference.
K. Stanton Lewis, Builder,
Arvada, Colo.

duplicates $21,000 house for less than $12,000
Sir: We recently built the house featured in August as your Blueprint House. If plans for this house are available, we will appreciate receiving them. We were able to build this house for less than $12,000, even though you report that in the Chicago area it cost $21,140. We sold both house and lot (90x120 feet) for less than half of this figure.
H. W. Cannon,
Cannon Insurance Agency,
Hartsville, S. C.
(Continued on page 55)
Sell Your Homes Faster For More Money!

Sets your homes apart from all others equals sprinkler systems on million dollar estates.

New EVERSFRAY Automatic UNDERGROUND Lawn Sprinkler System

Make your homes different! Give them plus value that hits the appetite of all buyers!

No matter what type homes you build—large, small, high or low cost—EVERSFRAY is a clincher that boosts sales! The new EVERSFRAY Automatic UNDERGROUND Lawn Sprinkler System! You can buy three such Sprinkler Systems—each one capable of watering up to 1,000 sq. ft. of lawn with six “Pop-Up” heads for little more than a hundred dollars! Yet this small investment can bring you several hundred dollars more profit on every home! Here's the "plus" that will give you the edge on other builders—sell homes as fast as possible! Mail coupon now for literature and complete information.

DISTRIBUTORS WANTED

Exclusive county franchises available. Leads furnished from National Advertising. Write a special letter if interested in distributorship.

EASY TO INSTALL WITH ORDINARY WRENCH. ONLY 4 INCHES UNDERGROUND. DRAINS AUTOMATICALLY—CANT FREEZE!

EVERSFRAY DIVISION

2001-09 W. Carroll Ave., Dept. 112, Chicago 12, Ill.

Builders say houses SOLD FASTER when equipped with the Thor built-in electric range

Here is what just a few leading builders say about the new Thor Built-in Electric Range:

"The Thor Built-in Range has attracted favorable comments from every one visiting our open house—helped sell many homes."

"We feel that the Thor equipment was more than instrumental in helping us sell our homes in such a short time."

"We notice an enthusiastic response when prospects see the extra convenience and space saving of this Thor unit."

Need we say more? See what's in the new Thor Built-in Electric Range for you!

THOR CORPORATION, Chicago 50, Ill.

There's a BESSLER way to do it!

There's an easier, better way to get your home-buyers up into their attics and upper floor areas! It's the BESSLER DISAPPEARING STAIRWAY method. Used for over 40 years in new and old homes of every type. Safety-engineered in every detail. Meets all building codes. Attractively priced! Immediate delivery!

FREE BESSLER CATALOG!

Gives complete specifications on 7 Bessler Disappearing Stairway models. Hundreds of thousands in daily use. More sales and service features than any other type. Write now!

BESSLER DISAPPEARING STAIRWAY CO.

1900-A East Market Street, Akron 5, Ohio

CLIP—MAIL TODAY FOR FACTS!

BUILDER-CONTRACTOR DIVISION

Leeson Steel Products, Inc., Dept. AE

Subsidiary of Thor Corporation, Chicago 50, Illinois

2115 So. 54th Avenue, Chicago 50, Ill.

Gentlemen: I'd like to see how the new THOR Built-in Electric Range will help sell more homes for me.

Name ____________________________

Firm ____________________________

Address ____________________________

City Zone State
ALUMINUM THRESHOLDS HELP YOU BUILD BETTER, SELL QUICKER!

Aluminum is the modern building material with a "two-way" advantage that benefits both builder and buyer. For example—lustrous, attractive aluminum thresholds are the first assurance of quality construction in entering a new home. They are economical in first cost, easy to install, require no maintenance and are available in a variety of Reynolds designs that provide a type for every entrance or between rooms application—including weatherstrip thresholds.

Several makes of aluminum weather-stripping are also available to complete the near-perfect door seal provided by Reynolds Aluminum thresholds. Weather-stripping made of Reynolds Aluminum has all the usual advantages plus the added benefits offered by attractive, low-cost, non-rusting aluminum.

Remember—aluminum's strength, light weight, ease of fabrication with regular carpenter tools, and long life—now available in most standard metal building products—help you build better homes. These homes sell easier and faster because buyers quickly recognize that they are getting more for their money in aluminum.

Send for free Architectural Aluminum catalog. For quick reference, see catalog in Sweet's Architectural File.

See "Mister Peepers" Sundays on NBC-TV. Consult local listings for time and station.
NEW POWERNAIL SPEEDS PRODUCTION

letters...

(Continued from page 52)

the truth about trade-ins still going strong

Sir: The reprint of the article on trade-in selling of houses has been read with great interest by several on our staff.

They join me in commending you on the article and thanking you for sending it to us.

Edwin R. Butler, Publicity Manager.
Timber Engineering Co.,
Washington 6, D. C.

long-term subscriber renews once again

Sir: I have just begun my seventh year as subscriber to American Builder and each issue has meant dollars plus. I particularly like the April "Directory" issue.

Robert K. Martin,
Northfork, W. Va.

"back of the yards" area meets housing challenge

Sir: In July, 1953, a meeting on conservation was called by the Back of the Yards Council. Some 71 people representing the building industry, savings institutions, industry, labor and others attended. A progress report of this program to date has just been issued.

The program is organized on a community level with the people of the community and the forces representing them doing the job without outside help. It is practical because it is predicated on the belief that the soundest conservation program must be conducted by the residents of each home in the community.

The program's emphasis is centered on: (1) Remodeling of existing homes by the owners with our savings institutions providing loans; (2) Legal conversion of empty stores into flats; (3) A complete title and tax search of a specific area, separated according to whether taxes are paid or delinquent, and if the latter, whether owners can be located for the purpose of new building; (4) Purchase of land and the building of new homes.

Joseph B. Meegan,
Social Action Committee,
Back of the Yards Council,
Chicago, Ill.
The New CONCEALED-GUIDE SURFACE BOLT NO. 354 by ADAMS-RITE

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 1/2", 4" and 8" widths.

WRITE FOR COMPLETE INFORMATION

ADAMS-RITE MANUFACTURING CO.
1410 WEST CHRYSLER DRIVE BURLINGTON, CALIFORNIA U.S.A.

SPECIALIZED LOCKS AND BUILDERS' HARDWARE

how small commercial builder creates business

A great sales feature of some of the Hixon buildings is their convertability. The building shown is rented as one industrial unit. Note the store fronts. However, the building can be divided into many units if the future warrants them. That is why the Hixons got their business.

Sometimes the Hixons start with a tenant who wants a location for his business. Sometimes it is a site owner who wants to put his ground to work. Regardless of how the deal originates, the essential element is that Hixon Brothers deliver a package so complete that all of the guesswork and most of the thinking is taken out of it for the renter and the property owner.

When, for example, the Hixons approach the owner of a vacant lot, they say in effect, "Here is a design for a store which will rent quickly. Here is what it will cost to build. Here's what the loan will be. You will be able to get this much rent for it. Here are the figures showing the return you get on your investment."

The owner cannot help but be impressed, especially when a profit seems probable. The chances are

(Continued on page 38)

Rendering of an office and manufacturing building that is now under construction and is typical of the kind of work Hixon Brothers do
The Kay kitchen features electric refrigerator, dishwasher-sink with electric food-waste disposer, and electric range—so that the homemaker can be modern... cook electrically! Each kitchen is designed to save steps and work.

What really sells a house?

When "lookers" turn into buyers, their eyes focus on the features of the house.

That's when an Electric Range in the kitchen can help you clinch the sale. When home buyers see that, they realize that here is cooking equipment at its best, that it means economy and ease of operation, a clean kitchen as well as a cool one. Instinctively they feel that the rest of the house must also have the best of everything. They're well on the way to being sold!

Builders of homes in every price bracket, in all parts of the country, are making full use of the Electric Range as a selling feature. Are you?

The Kay Construction Company of Washington, D.C. offers different plans, and wide variety of interior design. But Builder Jack Kay says: "When I began to feature Electric Ranges, I found the rest of the selling job was easier. Women almost always prefer this type of range. When they see it in the kitchen it 'builds up' the rest of the house in their eyes."

More builders every day are installing ELECTRIC RANGES
commercial builder
(Continued from page 56)

that the owner will seriously consider the investment. The Hixon's experience is that they usually do consider it seriously.

Naturally, the Hixons must know what they are doing when they persuade people to build stores and manufacturing buildings under the assurance that they will rent quickly and profitably. They must know where to get the construction money and final loans. They must know where to find a buyer if the building is to be sold upon completion. These things are learned through close observation and study of the real estate market as it pertains to commercial and industrial fields.

Any builder can acquire this knowledge about his own market by following, over a period of months, all of the transactions involving this type of construction, noting the rents and sales prices, etc. He can get studies from his chamber of commerce, He can get help from banks who can show the types of businesses needed in the community. He can form his own conclusions by making a study of the development of shopping centers and manufacturing districts in other areas.

The Hixons follow this procedure. They do not get all of their business from people who drift into their offices or from chance encounters, although these contacts are, of course, valuable and are not to be underestimated. The Hixons have established contacts with realtors, with local chambers of commerce and with banks. They watch the newspapers for ads looking for business sites and for business sites that require tenants. Thev also do some advertising.

One of the problems that the Hixons have in this type of work deals with financing. Les Hixon feels that mortgage money is much more difficult to get on commercial and industrial work than it is for residential work.

He finds it difficult to understand why lending institutions seem anxious to loan money on homes built in an area where there is no industry and then seem reluctant when asked to loan money on industry

"We selected 'Modernfold' doors to be included in the 'Ranger' and the 1954 Custom-Line because they give complete accessibility from floor to ceiling in closet areas, offer enhancing decorative value, and are the most trouble-free folding or sliding door on today's market," says James R. Price, President of National Homes Corporation.

"'Modernfold' will help us sell our homes because they contribute to the happiness of a National Home owner—and happiness is what we are selling."

Not only do "Modernfold" doors add sales appeal—they speed construction as well. They come complete, ready to install in 30 minutes or less. No exact fitting, no extra hardware needed. No need to "build out" or "build down" with "Modernfold" (note picture).

For full details, see our distributor—listed under "doors" in your city classified directory. Or send coupon.

"Modernfold's" double-strength frame insures customer satisfaction.

There's more steel in "Modernfold's" sturdy frame. Double box-like hinges prevent warping and twisting, assures dependable, even opening and closing.
creates business

to support these home owners. He feels that part of the reason for it is that many lending institutions do not have the personnel familiar with commercial and industrial building.

The Hixons, however, take an optimistic view. They have found that the lending institutions have begun to change their minds. Little by little, lenders are beginning to have confidence in the Hixon’s judgment. The lenders have found that each of the projects on which the Hixons requested loans came out exactly as they had forecasted.

Here’s how creative selling works—three case histories from Hixon Brothers files:

Example 1. The case of the maker of blinds. He said that he wanted to build a factory to be used for the manufacture of venetian blinds. He owned a lot, he said, but was not in a position to finance such a building project. The Hixons suggested that he sell the lot he owned. Then the Hixons located another lot suitable for manufacturing. The Hixons arranged for the financing and put up the building themselves. Then they sold the building to an investor who wanted to own income property. The investor gave the manufacturer of venetian blinds a long-term lease. The Hixons created business for themselves. Their two customers are happy with the deal.

Example 2. The case of the satisfied veterinarian. One of the Hixon Brothers talked to a veterinarian one day and found that he was not satisfied with his present business location. The veterinarian said that he could afford to pay double his present rent or $500 monthly if he could find the right location for his business. The veterinarian was taken to look at possible sites. He chose the first lot looked at. The Hixons saw the owner of the lot and told him that they had a tenant willing to pay $500 a month for space in a building if it were constructed on that site. When told that the Hixons would prepare plans for the building and arrange financing, the owner of the lot agreed. The owner now has improved property

FEBRUARY 1954
The original SASH BALANCE

The MASTER Unit offers a superior Balance...PLUS...Full Jamb Weather-strips...at no greater cost than most conventional balances alone.

The easiest to install...no setting of pull mechanisms or adjustment of tension required...it automatically adjusts for expansion or shrinkage of sash.

QUALITY
Manufactured of heavier gauge...high quality spring aluminum. Incorporates the finest workmanship and best functional design. Larger, smoother acting steel sash springs. Tried and tested in over 4 million windows for over 13 years. Proven in University of Minnesota tests.

SUPERIORITY
In Design...Quality...and Performance, its Superiority over inferior imitations is well established. The most imitated...but never duplicated...product of its kind in the world.

THE STANDARD OF QUALITY
This Channel is designed to avoid any binding or sticking of the sash — especially where shrinkage takes place.
This wide contact area...a NO-DRAFT Exclusive...assures constant weatherseal...regardless of sash shrinkage.

SEND FOR FREE CATALOG

MASTER METAL STRIP SERVICE, INC.
1720 North Kilbourn Avenue Chicago 39, Illinois

Red Devil Wood Scrapers

Longer handles for Easier handling

Supersharp Blades Cut Waste Motion


A Product of Red Devil Tools

Irvington 11, N. J., U.S. A.
In this installation, hanging roller type, floor-to-ceiling panels with deep valances provide generous closet space, eliminate a door clearance problem.

In this installation, the versatility of these doors is demonstrated by their use on both lower wardrobe and overhead storage areas.

In this installation, the floor-to-ceiling, living room wardrobe panels are beautifully wallpapered to carry out the decorative scheme.

They're easiest to install... One, two, three and they're out! (A) Top track is easily secured on ceiling with screen. (B) Aluminum doorstop is screwed to floor... (C) Doors are placed in upper track, then engaged in screen...

They save construction costs and solve storage problems... Everybody wants their own individual size construction cost for the modern home. Here's your own money-saving, great for the investor. Happy home, self-service, available in modern, classic and standard trims...

They offer unlimited decorating possibilities... They're right at home in any room in any type of structure. Glide-all Sliding Doors can be painted, papered, lacquered, varnished or medallioned finish to match or complement the decorative scheme of any room.

There's a type for every type of construction... Choose from 6' foot-to-ceiling or 6' 6" standard height, overhead or bottom roller types, in modern flush or recessed panels. Take a look at your construction problems, then take your choice...

Write today for new low price schedule and specifications bulletin.
Simply snap the KORNER KING right angle attachment on your present heavy duty drill (¼" 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 5/8" 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.

WRITE DEPT. AR-2 TODAY FOR COMPLETE DETAILS
operator, tool, work being done. The result was a white line track traced by the light bulb, showing the exact pattern of movement of the operator’s hand. Thus was recorded the amount of motion and time needed to do the job by electrical power.

Next, the same performance was carried out under identical conditions and for precisely the same task, but using the corresponding hand tool.

This procedure produced an accurate comparison. By blowing up the pictures and carefully measuring the lines of light, it was possible to compare the amount of hand motion between electric and hand tools, and also to get an approximate indication of the amount of muscular energy which had to be expended in each case. The time comparisons recorded by the stop watch were simple to calculate. Each performance was run through three times to get an accurate average.

When the three repeat runs were being made with the electric tool, there was little or no increase in time on the successive runs, which indicated practically no loss of efficiency due to fatigue. In timing the repeat runs on the hand tools, each successive run was noticeably longer because of fatigue slow-down. No attempt was made to plot a fatigue curve for a full day of electric work vs. hand work.

(Continued on page 64)

HAND SANDING makes tracer light build up a strenuous pattern of "spaghetti" on oak stair tread being smoothed with block and sandpaper. This particular operation took 8 minutes, not including necessary pauses for rest.

ELECTRIC SANDER, using endless abrasive belt, does exactly same amount of work in two minutes, four times faster than hand sanding. Operation takes only a few strokes.

DESIGNED, BUILT, and GUARANTEED for constant, heavy-duty service!
Here's one of the most interesting and architecturally-appealing combination storm and screen doors ever designed for the popular-price field! The new Continental Contemporary presents a delicately “fluted” lower panel which offers infinite possibilities for decorative color treatments. Storm inserts are available in three styles: One-light, flush type; three-light, flush type; and one-light with the popular new protruding “picture” frame. Combining beauty with value, the Continental will enrich the appearance of any home, old or new. Continental Contemporary doors are available in all standard stock sizes through retail lumber dealers.

**Orbital Sander** smooths same door in 40 seconds, six times faster than by hand.

**Brace and Augur** take 38 seconds to drill 1-inch diameter hole through 4 inches of wood. Coil of light shows laborious cranking action necessary. Hundreds of holes must be drilled in contemporary house for piping, wiring and fixtures.

**Electric Drill** with 1/2-inch chuck drills same size hole in 6 seconds, six times faster than hand method. Short light streak proves minimum manual effort. Electric drill is oldest and most popular of all portable power tools.

**Finish Sanding** kitchen cabinet door by hand takes 4 minutes.

**Orbital Sander** takes 40 seconds to sand the same door, six times faster than by hand.

**Brace and Augur** takes 38 seconds to drill a 1-inch diameter hole through 4 inches of wood. Coil of light shows laborious cranking action necessary. Hundreds of holes must be drilled in contemporary house for piping, wiring and fixtures.

**Electric Drill** with 1/2-inch chuck pierces same box in 2 seconds, 13 times faster. Short light streak indicates brief effort.

**Electric Drill** with 1/4-inch chuck pierces same box in two seconds, 13 times faster.
HAMMER AND CHISEL is the traditional method of cutting out recesses on door and jamb to seat three hinges flush with edge. Position of each hinge must first be carefully measured. Skill and labor required for operation are indicated by complicated light tracks. Time for average 15-door house is four hours.

ELECTRIC ROUTER with hinge butt templet does same job in 22 minutes, 11 times faster. Router also rabbets, dadoes, flutes, inlays, dovetails, coves, molds and relieves. Interchangeable motor can be transferred to plane or shaper, saves cost of two extra motors.

HAND PLANE is used here to trim down storm sash to fit window opening. Manual labor required to fit storm sash and screens for average 16-window house takes 5 hours and 20 minutes. Bottom of frames must be beveled to fit sill.

ELECTRIC PLANE is 20 times faster, fits all 32 frames in 16 minutes. Tracer light reveals that 80 strokes are necessary with hand plane to equal one stroke of electric plane. The tool cuts level or bevel, also serves as jointer and weatherstrip groover.

(Continued on page 66)
Are builders missing a bet?

You know from experience that you sell a house by selling its features. You also know that the kitchen contains some of the most important selling features in the house.

There was a time when a builder got by with a modern range in the kitchen as a selling feature. Then he began to include a refrigerator and, one by one, other appliances. Why? Because his customers demanded them!

Now customers are demanding freezers. More and more homemakers every year want this appliance that saves them time, money and work, allows them to serve better meals, at lower cost. They want to "be modern—live electrically." Last year, more than 1,000,000 freezers were installed in American homes.

That's why you're missing a bet unless you design your kitchens with space for a freezer—allowing, too, for the weight of this appliance and its contents, in designing the load-bearing strength of the floor.

Don't miss out on this important selling feature. If you need more information, write to any of the manufacturers listed below—or see their dealers in your community.

FARM & HOME FREEZER SECTION
National Electrical Manufacturers Association
135 East 44th Street, New York 17, N. Y.

ADIRONDACK • BENEDIX • COOLERATOR • CROSSLEY • DEEPFREEZE
FRIGIDAIRE • GENERAL ELECTRIC • GIBSON • HOTPOINT
INTERNATIONAL HARVESTER • KELVINATOR • NORGIE • PHILCO
QUICKFREEZ • REVCO • SEEGER • WESTINGHOUSE

SLIDING GLASS DOORS
reduce installation costs

SIMPLICITY OF INSTALLATION saves TIME and MONEY

- Jambs and headers are all full width of a standard stud
- Flat surface on the reverse side of jambs, header and threshold
- Less expensive trim

EXTRA FEATURES OF DESIGN

- Center and corner load-bearing columns
- Quality hardware
- Automatic weather stripping

== FRANK B. MILLER MFG. COMPANY ==
3216 Valhalla Drive, Dept. 103, Burbank, California
Please send me complete information on how to save money on my sliding glass door and window installations.

Name
Street Address
City Zone State

66 AMERICAN BUILDER

how fast is a power tool?

(Continued from page 65)

HAND SHAPER (hidden blade; light pattern) requires 5 minutes to put single 1/2-round edge on stair tread. Hand shaping is almost a lost art. Old-time carpenters used an assortment of variously shaped blades in a narrow plane-like tool to mold and edge on wood. Most molding and shaped woodworking is bought ready-cut from millwork shop.

ELECTRIC SHAPER does the same job in one pass, is more accurate and 25 times faster. Machine cuts all kinds of molded edges. Also chamfers, rabbets, tongues, grooves and serves as a jointer. Builder can make all kinds of fancy trim right on job as needed. Saves time and cost of frequent purchases from millwork shop.

STAIRS STRINGERS must be notched out to hold ends of risers and treads to prevent squeaking, warping, cracking and breaking off of lip of tread. Hand operation requires drilling a hole with brace and auger, making four cuts with hand saw, chiseling out two notches. Composite photograph records complicated maneuvers involved. For a flight of 13 steps, this series of operations is repeated 26 times; total time is four hours.

STAIR TEMPLET AND ROUTER notch two 13-step stringers in 15 minutes. Templet adjusts to any size step and, after plotting first position, in self-indexing for all additional steps, thus reducing layout time to 5 1/2 minutes; setting tools, 3 minutes; routing, 6 1/2 minutes; complete flight, 15 minutes.
You can make rooms look bigger with Gold Seal Nairn Inlaid Linoleum

Have you ever seen a floor make a small room look so big? The colorful Jackstraws seem to push back walls and let in light. Every house-hunting couple is looking for extra large, airy rooms. You can convince them they've found their dream house in your house . . . with the help of "Jackstraw" in Gold Seal Inlaid Linoleum.

Look at the talking points it gives you! "Jackstraw" makes decorating easy . . . in every pattern there are four different colors to work with! It's practical, too . . . long wearing, grease resistant and easy to clean. It's so resilient customers notice the comfort underfoot. Next time you build, make your home easier to sell. Specify "Jackstraw" in Gold Seal Inlaid Linoleum. You know it will be a success! By the yard or in 9" tiles it offers you the famous Gold Seal guarantee of satisfaction or your money back. Mail coupon for detailed information . . . and for free Gold Seal sign to use in model homes.

GOLD SEAL

FLOORS and WALLS

Congoleum-Nairn Inc., Kearny, N. J. 07032

FEBRUARY 1954
Ceiling treatment in kitchen conforms to adjoining dining room. Note planter over cupboards on high wall.

AMERICAN BUILDER
BLUEPRINT HOUSE

here's a low-cost modern
with luxury features

BUILDER:
J. A. Peterson, Kansas City, Missouri

ARCHITECT:
Everett H. Rothrock, Kansas City, Missouri

SQUARE-FOOT AREA

<table>
<thead>
<tr>
<th>Item</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>House</td>
<td>948</td>
</tr>
<tr>
<td>Porch, 1/3 area</td>
<td>80</td>
</tr>
<tr>
<td>Garage, 1/2 area</td>
<td>144</td>
</tr>
<tr>
<td>Total area</td>
<td>1172</td>
</tr>
</tbody>
</table>

COST, per square foot ........................................... $12

68

AMERICAN BUILDER
This medium-price three bedroom house includes many features not usually found in houses of this price class. These features, which add to the comfort and the pride of ownership of the home owner, are seven in number. They include birch cabinets in the kitchen with a planter on the high wall above; sloping beam ceilings in principal rooms; wide-angle eaves; a full dining room that can be used as an extension to the living room or kitchen; a large breakfast bar which is a continuation of the kitchen counter; an all-vertical redwood board and batten exterior; and casement, awning and fixed California-type windows. A wing wall extension to the front makes the house appear wider than it is. The top cap member of this wall is increased in width and perforated at regular intervals to receive flower pots.

The builder, who has been operating less than two years, has 24 houses under construction with a total of 72 contemplated for the area. Two types of floor plans are now used: one with the end of the house facing the street as shown; the other, with the broad side of the house to the street, has a garage adjoining but the breezeway is eliminated. Five exterior design variations lend variety to the grouping of houses on any one street.

The floor plan integrates the house, breezeway and garage efficiently, with the entrance to the living room in the center of the breezeway, thus providing a sheltered approach. Living, dining and kitchen spaces, while actually separate rooms, are so arranged that in...
reality they become one large area. An effective quiet zone for a house of limited square-foot area is achieved by grouping the bathroom and bedrooms in one end, and connecting the grouping to the living room with a short hall.

Foundation for the house is an eight-inch-thick concrete block wall placed on 3x16-inch poured concrete footings. The structure above is entirely frame. The finished floor is approximately 13 inches above grade with a minimum two-foot clearance under the floor joists for a continuous crawl space. This space is used for the distribution of warm-air supply and return ducts. Frame walls are faced with 1x12 vertical redwood boards. Joints are covered with 1x3 battens. Two-inch insulation is placed between studs. The interior is drywall. The ceiling of the living area follows the slope of the roof with 4x8 exposed beams approximately four feet o.c. placed against the bottom face of the rafters. The tar and gravel roof is placed over plywood sheathing.

Ceiling of built-up wood beams on four-foot centers follows slope of roof in living area.

**BRAND NAME PRODUCTS USED**

- American Cabinet hardware
- American Standard plumbing fixtures
- Andersen Flexivent windows
- Armstrong asphalt tile
- Certain-teed rigid insulation
- Fiberglass insulation
- Kirwin recessed electric fixtures
- Miami-Corey plate glass medicine cabinet
- Minneapolis-Honeywell regulator
- Mission water heater
- Overhead garage door
- Payne warm-air furnace
- Pratt & Lambert paints
- Schlage hardware
- US Gypsum plywood
- Warren folding slat door

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

## For American Builder Blueprint House No. AB 199

**Everett H. Rothrock, Architect**

### General Information

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>House — Type</td>
<td>frame</td>
</tr>
<tr>
<td>Area</td>
<td>948 sq. ft.</td>
</tr>
<tr>
<td>Cube</td>
<td>9,480 cu. ft.</td>
</tr>
<tr>
<td>Garage — Area</td>
<td>288 sq. ft.</td>
</tr>
<tr>
<td>Cube</td>
<td>2,880 cu. ft.</td>
</tr>
<tr>
<td>Height taken for cube was 10 ft</td>
<td></td>
</tr>
</tbody>
</table>

### Excavating

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trench for foundation</td>
<td>222 lin. ft.</td>
</tr>
<tr>
<td>Column footings</td>
<td>3</td>
</tr>
<tr>
<td>Excavation for crawl space</td>
<td>71 yds.</td>
</tr>
</tbody>
</table>

### Cement Work

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundations</td>
<td></td>
</tr>
<tr>
<td>For footings</td>
<td>200 cu. ft.</td>
</tr>
<tr>
<td>Concrete block</td>
<td>735 sq. ft.</td>
</tr>
<tr>
<td>Concrete work</td>
<td>330 sq. ft.</td>
</tr>
<tr>
<td>Thickness</td>
<td>reinforced — 4&quot;</td>
</tr>
<tr>
<td>Anchor Bolts</td>
<td>30 — 1/2&quot;x8&quot;</td>
</tr>
<tr>
<td>Waterproofing</td>
<td>parging on foundation</td>
</tr>
<tr>
<td>Foundation vents</td>
<td>4 — 16&quot;x8&quot;</td>
</tr>
<tr>
<td>Reinforcing steel for concrete slabs</td>
<td>6x6 wire mesh — 333 sq. ft.</td>
</tr>
<tr>
<td>Roll roofing for crawl space</td>
<td>55 lb. — 900 sq. ft.</td>
</tr>
</tbody>
</table>

### Masonry

- NOTE. Foundation is concrete block and is included in concrete work.

### Millwork

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>Windows — Type</td>
<td>casement, awning and fixed</td>
</tr>
<tr>
<td>Material</td>
<td>not included</td>
</tr>
<tr>
<td>Windows — Glazed including trim</td>
<td></td>
</tr>
<tr>
<td>Fixed</td>
<td>2 — 44&quot;x22&quot;</td>
</tr>
<tr>
<td>Awning</td>
<td>7 — 44&quot;x22&quot;</td>
</tr>
<tr>
<td></td>
<td>8 — 46&quot;x22&quot;</td>
</tr>
<tr>
<td></td>
<td>2 — 26&quot;x14&quot;</td>
</tr>
<tr>
<td>Casement</td>
<td>4 — 18&quot;x42&quot;</td>
</tr>
<tr>
<td>Exterior doors — Material</td>
<td>wood</td>
</tr>
<tr>
<td>Exterior doors — Glazed</td>
<td>2 — 28&quot;x6&quot;</td>
</tr>
<tr>
<td>Slab</td>
<td>1 — 30&quot;x6&quot;</td>
</tr>
<tr>
<td>Garage door — upswing type</td>
<td>1 — 60&quot;x7&quot;</td>
</tr>
<tr>
<td>Exterior millwork</td>
<td></td>
</tr>
<tr>
<td>Louvers</td>
<td>1 — 20&quot;x10&quot;</td>
</tr>
<tr>
<td>Flower box planter</td>
<td>1 — 10&quot;x10&quot;</td>
</tr>
<tr>
<td>Interior doors — including jamb and trim</td>
<td>8 — 26&quot;x6&quot;x8&quot;</td>
</tr>
<tr>
<td></td>
<td>1 — 22&quot;x8&quot;</td>
</tr>
<tr>
<td></td>
<td>2 — 20&quot;x8&quot;</td>
</tr>
<tr>
<td></td>
<td>2 — 18&quot;x6&quot;</td>
</tr>
<tr>
<td></td>
<td>1 — 12&quot;x6&quot;</td>
</tr>
<tr>
<td>Special interior doors</td>
<td>3</td>
</tr>
<tr>
<td>Folding wardrobe doors</td>
<td></td>
</tr>
<tr>
<td>Special interior millwork</td>
<td>Kitchen cabinets</td>
</tr>
</tbody>
</table>

### Carpentery

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beams and girders</td>
<td>6 — 2&quot;x12&quot; — 20'0&quot;</td>
</tr>
<tr>
<td></td>
<td>1 — 4&quot;x10&quot; — 10'0&quot;</td>
</tr>
<tr>
<td>Foundation plates</td>
<td>4 — 2&quot;x12&quot; — 12'0&quot;</td>
</tr>
<tr>
<td></td>
<td>2&quot;x8&quot; — 128 lin. ft.</td>
</tr>
<tr>
<td>Joists</td>
<td>42 — 2&quot;x8&quot; — 24'0&quot;</td>
</tr>
<tr>
<td></td>
<td>4 — 2&quot;x8&quot; — 20'0&quot;</td>
</tr>
<tr>
<td>Bridging</td>
<td>240 lin. ft.</td>
</tr>
<tr>
<td>Studding and plates</td>
<td>110 — 2&quot;x4&quot; — 12'0&quot;</td>
</tr>
<tr>
<td></td>
<td>30 — 2&quot;x4&quot; — 10'0&quot;</td>
</tr>
<tr>
<td>Ceiling joist</td>
<td>18 — 2&quot;x6&quot; — 24'0&quot;</td>
</tr>
<tr>
<td>Ridge</td>
<td>2&quot;x12&quot; — 68 lin. ft.</td>
</tr>
<tr>
<td>Blocking</td>
<td>2&quot;x4&quot; — 108 lin. ft.</td>
</tr>
<tr>
<td>Roof rafters</td>
<td>92 — 2&quot;x6&quot; — 16'0&quot;</td>
</tr>
<tr>
<td>Framing lintels</td>
<td>2 — 2&quot;x10&quot; — 10'0&quot;</td>
</tr>
<tr>
<td></td>
<td>10 — 2&quot;x6&quot; — 8'0&quot;</td>
</tr>
<tr>
<td></td>
<td>2 — 2&quot;x8&quot; — 14'0&quot;</td>
</tr>
<tr>
<td>Subfloor</td>
<td>875 sq. ft.</td>
</tr>
<tr>
<td>Roof sheathing</td>
<td>1/2&quot; plywood — 2,000 sq. ft.</td>
</tr>
<tr>
<td>Sidewall sheathing (not shown on section)</td>
<td>1,900 bd. ft.</td>
</tr>
<tr>
<td>Sidewall materials</td>
<td>1&quot;x12&quot; — 1,850 bd. ft.</td>
</tr>
<tr>
<td>Batts</td>
<td>1,850 lin. ft.</td>
</tr>
<tr>
<td>False built-up beams</td>
<td>16 — 1&quot;x8&quot; — 12'0&quot;</td>
</tr>
<tr>
<td>Roofing</td>
<td>10 — 1&quot;x3&quot; — 12'0&quot;</td>
</tr>
<tr>
<td>Flooring — Softwood</td>
<td>plywood — 875 sq. ft.</td>
</tr>
<tr>
<td>Asphalt tile</td>
<td>875 sq. ft.</td>
</tr>
<tr>
<td>Exterior material</td>
<td></td>
</tr>
<tr>
<td>Soffits</td>
<td>1&quot;x6&quot; — 135 lin. ft.</td>
</tr>
<tr>
<td></td>
<td>41 — 1&quot;x8&quot; — 8'0&quot;</td>
</tr>
<tr>
<td>Eaves</td>
<td>1&quot;x6&quot; — 200 lin. ft.</td>
</tr>
</tbody>
</table>

### Sheet Metal

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gutters</td>
<td>96 lin. ft.</td>
</tr>
<tr>
<td>Downspouts</td>
<td>36 lin. ft.</td>
</tr>
<tr>
<td>Flashing — around roof opening</td>
<td>32 lin. ft.</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td></td>
</tr>
<tr>
<td>Termiti shields</td>
<td>200 lin. ft.</td>
</tr>
<tr>
<td>Gravel stop</td>
<td>190 lin. ft.</td>
</tr>
</tbody>
</table>

### Roofing

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td></td>
</tr>
<tr>
<td>Area</td>
<td>3-ply tar and gravel</td>
</tr>
</tbody>
</table>

### Interior Walls

| Area to be covered             | 3,400 sq. ft.                                                          |
| Special interior millwork      | 20 squares                                                             |

### FEBRUARY 1954

- 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.
seven FEATURES for your

MUCH of the quiet dignity usually associated with traditional design has been captured in this large, rambling ranch house located in Hinsdale, Illinois.

Balanced fenestration and nicely executed details of porch, cornice, cupola and moldings of traditional design blend with low roof lines, wide overhanging eaves and numerous planters characteristic of the modern type of design.
Well designed cupola serves as a ventilator for the garage. Another feature of the front is adequate off-street parking with easy access to the two-car garage. Exterior facing is a combination of painted brick and stained striated wood shingles. Note brick planters on three sides of the entrance court.

IDEA scrapbook

Interior design features illustrated on this and following pages are indicated by the numbered arrows shown on the floor plan.
Three different doors are used in the reception hall: one is made of adjoining vertical paneling; one is a flush type; and the other shows the molded contour of the entrance doors. Wood paneling in each case extends to edge of frame, thus eliminating casings.

**Feature 2**

how the hall wall frames a view and provides ample storage

**Feature number two** (refer to plan) consists of a number of interesting details in the reception room.

Through a large counter-high, eight-foot-wide opening in the separating wall, the living room fireplace and bookcase motif is clearly outlined. This opening also borrows light from the window wall of the hall for the part of the living room farthest away from natural light. The design of the guest closet door follows the character of the vertical wood-paneled walls and is flush with the wall surface. Other doors in the reception hall are flush or molded.

**BRAND NAME PRODUCTS USED**

- Armstrong Linoleum
- Chicago shower doors
- Curtain-headed asphalt shingles
- Copper fiber insulation
- Crane plumbing fixtures
- Donnelly fireplace damper
- Formica Counters
- H. A. Frommberg lighting fixtures
- Grant sliding door hardware
- Hall-Mack bath fixtures
- Heinsley wood shutters
- Hunter attic fan
- Insultite wall sheathing
- Johns-Manville Rockwool insulation
- Kenflex vinyl asphalt tile
- Lennox gas furnace
- McKee garage door hardware
- Minneapolis-Honeywell heating controls
- Rezo doors
- Rheem hot water heater
- Robbins vinyl rubber tile
- St. Charles kitchen cabinet
- Schlage hardware
- Thermopane glass
- Thermador kitchen range
- Trade-Wind kitchen fan
- Universal gas incinerator
- US Gypsum metal lath
Fireplace and bookcase in living room are framed in opening to reception hall. Decorative accordion-type wood-louvered doors with fixed slats are folded against jamb when in open position. Doors are operated on a concealed overhead track.

Storage case is in the area below counter with accordion doors filling the opening to living room. Opposite wall of case is finished with V-jointed vertical boards.

Guest closet in foreground is in end of room-separating wall between reception hall and living room. Accordion-type louvered doors at rear open to bedroom hall. 1x10 V-cut vertical pine paneling is used throughout.

February 1954
The heart of the house is the hearth.

Feature number three (see plan on opposite page) is the fireplace recess located at end of living room opposite dining area.

This entire recessed wall is faced with Lannon stone laid up in random ashlar pattern and flanked with open book shelves at each end. The actual fireplace opening, five feet wide by three feet high, is placed in the center of the wall with a 16-inch-high stone hearth extending across the full width of the recess. Soffit of recess is faced with 1x10 pine boards laid the length of soffit.
Feature number four (refer to plan) is in the living-dining area which is actually one large room. The dining area is separated from the living portion by a 3-foot 6-inch-high stub wall which curves around two sides of this area and is faced on both sides with 1x10 vertical pine boards. The surface of the stub wall forms a wood counter 17 inches wide with three built-in planters located at each end and in the center of the curve.

In addition to setting the dining room apart from the living portion, the stub wall also forms a passage from the reception hall and kitchen. In this way the wall becomes a room separator without interfering with the ceiling line which becomes an unbroken area for approximately 43 feet 0 inches.

Feature number five is a group of sliding doors that provide access to two closets in the corner bedroom. Each closet contains two sliding doors with a mirror on one door of each closet, and a mirror on the jamb between doors. Each mirror extends the full height of the opening. This provides a mirror surface for an approximate 5-foot 6-inch-wide area on one side wall of bedroom. Doors are hung with standard sliding door hardware.
The built-in case in the study is a combination unit containing a magazine rack, display case, storage space below and a television storage area; shown in a closed position at right, in open position below.

**here's the concealed TV cabinet and magazine rack**

**Feature** number six is a built-in case in the end wall of the study. This case contains a concealed television cabinet, an exposed magazine rack above, storage cabinets adjoining TV space below counter line, and display cupboards above. In the space allotted for it, a full-size TV set is placed. It can be viewed when the cupboard doors are open. The carpet extends into this space and interior walls of the cupboard are finished in the same manner as the outside. The center louvered door of the group enclosing the display case is fixed, with the door on each side hinged to the side stile of fixed door. The other two doors are hinged from the jamb.
Adequate light is available for breakfast area at end of kitchen

Feature number seven is the kitchen arrangement, particularly as it relates to the position of the breakfast area, located at one end, and the bar service which is placed at the other end.

In both spaces the wallpaper is used to define a division line. The work units of the kitchen are placed on both walls between these areas. A further definition is obtained by the drop ceiling over the breakfast area. A battery of casement windows on two walls provides adequate light. The bar service is completely contained in the top and bottom cabinets which are a continuation of the kitchen units.
laminated trusses lead the way to cost savings

I N T H E new St. Martin’s church, San Jose, California, the use of plain laminated V-shaped trusses as the basic structural element opened the way for the application of new design techniques and cost savings.

Large 8x20-inch truss bents 10 feet o.c. extend to a height of 48 feet 6 inches from floor line. These are secured to the angled surfaces of concrete pedestals at the floor by means of steel plates and clip angles. Pedestals rest on concrete piles and footings with an 8x20-inch concrete grade beam acting as a tie member. Further footings for the main structural members are not necessary. Grade beam acts as a terminus at exterior wall line for the concrete floor slab.

The exterior profile of the church follows the truss in an unbroken sweep to within 10 feet 0 inches of the floor line, where a vertical projection which extends all around the building intersects the roof slope. Roof sheathing of 2x8-inch t&g spans the area between trusses, and is left exposed as the finished surface in the nave.

Exterior surfaces are covered with vertical and diagonal redwood siding. The two large windows on the front wall and the horizontal skylight flush with the roof surface, in addition to windows in the one story portion, provide the natural light for the nave and other areas. The roof is covered with asbestos shingles.

The greater part of the interior walls is finished with wood. The three walls of the sanctuary are faced with 1x4-inch vertical redwood boards with the area in back of altar lined with 1x12-inch boards laid diagonally. Parts of the walls, other than those finished with plaster, are vertical redwood boards. A thin coat of white paint is applied to wood surfaces and then wiped off to produce a blond finish.
this is the key to RO-WAY superiority

& here are the reasons why:

Ro-Way doors are designed & built for lasting service & satisfaction.
Ro-Way doors are styled to complement & enhance any architectural design.
All wood sections are specially selected West Coast lumber & exterior grade Douglas fir plywood—for rugged service.
All muntins, rails & stiles are precision squared.
All mortise and tenon joints are both glued & steel doweled for greater strength.
All millwork is drum & hand sanded for exceptional smoothness.
All hardware is Parkerized & painted—after fabrication—for maximum rust resistance.
Standard & Special sizes & designs meet practically every commercial, industrial & residential need.

All of which adds up to owner approval & satisfaction. If that's what you want, just be sure to specify Ro-Way whenever the job calls for overhead type doors.
WINDOW WALLS OF TWINDOW. Pittsburgh's window with built-in insulation, are practical in homes in every price bracket. For Twindow openings mean high-grade workmanship, out-of-the-ordinary value. Another proof of this is the installation of these units in the houses of Place Homes, Inc., South Bend, Indiana, shown here. Fact is, the cost of glass walls compares favorably with that of conventional masonry or other construction. Buyers of new homes, as well as homeowners interested in remodeling, know that Twindow means greater interior comfort, actual savings in heating costs, increased enjoyment of the outdoors from indoors.

THIS CUTAWAY shows the make-up of a Twindow unit. Two panes of Plate Glass enclose a dead-air space, giving Twindow its high insulating properties. A stainless steel channel frames the unit, protects the seal and glass edges, makes handling easy, quick and safe.

Every nickel you spend on glass shows.
And the results far outweigh the cost.
the stamp of quality on your homes and remodeling jobs!

WALL MIRRORS of Pittsburgh Plate Glass, in the bedroom, living room, bathroom, entrance hall, help you sell your homes faster. For they impress prospective buyers with the superior value of your homes. And in renovating work, they're always in big demand. There's nothing like a Pittsburgh wall mirror to add sparkle to a room. It can make a small room look larger—a narrow one appear wider. Pittsburgh has also developed cost-saving, labor-saving brackets for use in installing even large wall mirrors flush against the wall. They take care of wall irregularities, too. Ask your local Pittsburgh glass distributor for full details.

FULL-LENGTH DOOR MIRRORS are much in demand, in new homes as well as in remodeling work. You'll be wise to include several—in bedrooms, bathrooms and entrances. They're very easily put up. And they come in five widths—16, 18, 20, 22, and 24 inches. All of them are a full 68" in height and are made to fit all standard interior millwork doors of 80" in height. Your nearest Pittsburgh Plate Glass Company branch can fabricate mirrors for doors other than standard heights.

Build it better with Pittsburgh Glass

See Sweet's Builders Catalog for detailed information on Pittsburgh Plate Glass Company products.

PAINTS - GLASS - CHEMICALS - BRUSHES - PLASTICS - FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY
IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED
FEBRUARY 1954
FOR many years, plaster has been accepted as a superior and highly adaptable material for finishing interiors of buildings. However, with today's trend toward larger ceiling areas and large picture windows, architects, builders and craftsmen are insisting on greater plaster strength.

One of the most practical and economical ways to get this strength... to stop plaster cracks before they start... is to reinforce it with the Keystone System of Plaster Reinforcement, called "3 Keys to Stronger Plaster."

You'll be surprised at how little it costs to get this quality feature. You'll be pleased at the valuable benefits it gives to buildings... lasting plaster beauty... greater client satisfaction... maximum fire resistance.

Your plastering contractor will be glad to figure your jobs with the "3 Keys to Stronger Plaster."

KEYSTONE STEEL & WIRE COMPANY
PEORIA 7, ILLINOIS

Notice how easily Keymesh is lathed to the ceiling. Joints are lapped two inches. Engineered for true, solid corners, Keybead, goes up easily— is easy to plaster. Lathers easily strip joints and corners with preformed Keycorner.
3 KEYS TO STRONGER PLASTER

1. KEYMESH

Keystone's woven wire galvanized reinforcing lath—applied directly over the gypsum or insulating lath on the entire ceiling. This network of multidirectional reinforcing increases the strength of ceilings. It assures a uniform thickness of plaster and guards against cracks. Where ceiling radiant heat is installed, Keymesh accelerates uniform heat distribution as well as reinforcing the plaster.

2. KEYBEAD

Keystone's woven wire galvanized reinforcing lath with the precision-formed bead—applied at all outside corners. The open mesh of Keybead wings permits plaster to completely embed the steel wires, adding strength. Full, solid corners result. Keybead is available in standard lengths; is easy to splice when required.

3. KEYCORNER

Keystone's preformed-for-corners, convenient width, woven wire galvanized reinforcing lath—applied at corners, joints and ceiling-wall junctures. It fits snugly in corners when you flex it. It lies flat, too, for stripping wherever required. It has the same multidirectional reinforcing as Keymesh for maximum crack resistance. It doesn't rust . . . and eliminates waste.
KENFLEX vinyl tile floors can be installed below grade...over concrete in contact with the earth

Specify KenFlex for below-grade basements with complete confidence. Once down, it is amazingly durable...outwearing other types of resilient floors of equal thickness. KenFlex is easy to clean, too...with a smoother, non-porous surface that is imperious to spilled greases and oils, inks and detergents...acids, alkalies and alcohols. Yet, normal residential maintenance consists only of a damp mopping...and KenFlex doesn't require waxing except to make the crystal-clear colors shine a bit more.

Specifications and Technical Data

INSTALLATION: Over any smooth, firm interior surface: wood, plywood, radiant heated concrete slab, concrete in contact with the earth—on or below grade.

THICKNESSES: Laboratory and in-use tests have proven the wear-resistance and durability of vinyl flooring. Consequently, Standard Gauge (1/16") is recommended for normal residential and commercial uses. Where traffic will be very severe 1/8" KenFlex is suggested.

SIZES: Standard tile size is 9" x 9"...also available are 9" x 9" decorative ThemeTile inserts, and 1" x 24" Feature Strip in four solid colors.

Approximate Installed Prices (per sq. ft.)

<table>
<thead>
<tr>
<th>KenFlex—all colors</th>
<th>1/16&quot; Gauge</th>
<th>1/8&quot; Gauge</th>
</tr>
</thead>
<tbody>
<tr>
<td>40¢</td>
<td>65¢</td>
<td></td>
</tr>
</tbody>
</table>

KenFlex is available in 15 colors, all of which are marbled. Costs shown above are based on a minimum area of 1,000 sq. ft. over cement underfloor.

Samples and Literature available on request from nearest Kentile, Inc. office listed below. Or, contact the nearest Kentile Flooring Contractor. He's listed under FLOORS in the VINYL TILE Classified Telephone Directory.

KenFlex is the floor your clients know and want...

BACKED BY MORE FULL-COLOR ADVERTISING THAN ANY OTHER VINYL TILE FLOOR

KENFLEX
VINYL TILE

KENFLEX is the floor your clients know and want...
how can an awning window be a casement?

what window is always right side up?

turn the page for today's biggest window news—

can a hopper sash be interchangeable with a louvre?

can one basic window unit provide more than 1000 window combinations?
America's most versatile window
CURTIS SILENTITE Convertible

It's an AWNING! It's a CASEMENT! It's a HOPPER!

LIMITLESS DESIGN POSSIBILITIES! Now one basic window unit provides right- or left-swing casements—the popular awning window—swing-in hopper-type sash—and a thousand or more different window combinations! The new Curtis Silentite Convertible is available in units so proportioned that they can be combined to achieve almost unlimited variety. Basic sash units come in ten sizes and companion louvre units in five sizes. The result: a wood window unit that fits every taste—every job requirement—and every size budget.
Entirely NEW in Design and Construction
—Priced to Fit the Lowest Building Budget

Creative thinking—careful research—modern engineering and production—have created this newest member of the famous Curtis Silentite window "family." Here is a window embodying traditional Curtis quality—yet priced for the modest building budget, thanks to advanced Curtis research and manufacturing methods.

**WHAT'S NEW about the New Curtis Silentite Convertible**

- A completely factory-assembled unit, ready for quick, easy installation—basic frame with operating hardware, sash, screen and insulating light installed. May be used without insulating light if desired. All units mortised for sash locks, which are included.
- Fits any wall construction. The Convertible may be installed singly or in any desired combination of multiples—its construction permits stacking for awning or hopper-type operation. Any sash may be stationary. It's ideal for low-cost window walls.
- To match existing exterior trim in remodeling, or to fit local conditions in new construction, any exterior trim—plain or molded—may be applied.
- Superior weathertightness assured by modern spring-leaf type weather-stripping, thoroughly tested both in laboratory and field. The insulating light further reduces heat loss and condensation.
- New-type manual operator is included. An optional crank operator is available for added convenience when sash are used for awning or casement installation. Operator does not require opening screen to permit sash operation—and it holds sash rigidly in place in any position.
- Greater versatility is provided by wood louver units—made in five sizes—with interior birch doors for use in regulating ventilation.
- Like all Curtis Silentite Windows, the new "Convertible" is a WOOD window—and now window walls are within the budget of the smallest home!
- All wood members are toxic and water-repellent treated to assure lifetime satisfaction. All units are carton-packed.
- The new Curtis Silentite Convertible, like all windows in the famous Silentite line, comes with a certificate guaranteeing materials and workmanship—your assurance of lasting value. Your Curtis dealer will tell you about this big sales feature.

*(Above) With Curtis Convertibles, any home owner can afford weathertight awning windows.*

*(Left) Exterior showing awning and casement sash and louver unit. Sash are made in ten sizes.*

Write at once—or see your Curtis Woodwork Dealer—for full information on the amazing new Silentite Convertible—the window of a thousand uses.
here's a simplified system for controlling

Copies of all forms and general correspondence dealing with a certain job are placed in this job file. The builder keeps all data concerning the customer on the left side, and on the right side, data that deals with construction is filed.

**OUTLINE OF JOB FILE'S CONTENTS**

**LEFT**
- Change orders
- Copies of builder's invoices to owner
- Copies of builder's correspondence with owner
- Completed waiver of lien forms

**RIGHT**
- Affidavit of completion
- Copies of work orders to subcontractors
- Invoices from subcontractors and suppliers
- Decorating Schedule
- Lot survey
- Building permits
 Builders' record keeping systems have undergone some revolutionary changes in the past few years. No longer are back-of-envelope records or check book stubs sufficient for a well organized business.

Today's accounting system needs a basic program which gives the profit and loss picture for an individual house at any time. Along with the accounting system, a builder needs a set of business forms that detail the dollar history of the job.

Builder Charles A. Bowser of Lansing, Michigan, has such a system. His complete accounting method is based on 20 operations needed to build a house. In addition, Bowser has a complete set of business forms that not only keep the history of the job, but also protect his interests when dealing with the subcontractor and the buyer.

Bowser's system is relatively simple. It centers around a Job Cost Form made out for each house. On the form are columns for the 20 operations.

Bowser, bidding for a house-building contract, makes a detailed estimate. He figures each of the 20 operations and gets bids from subcontractors for those operations. He double-checks the estimate with recent square-foot cost averages. These estimates can be entered in the Job Cost Form and used as comparisons with actual costs. As subcontractor invoices and Bowser's own labor costs for each job are received in the office, they are entered in the Job Cost Form. At any time the builder can see when he stands percentage-wise in regard to cost–the amount of work done against the estimate.

For instance, if Bowser inspects an excavation and grading operation estimated at $170, and finds half the job done, column three of his Job Cost Form should show $85 spent.

Keeping the history of the job, Bowser sets up a job file folder. Each file carries the various correspondence and executed forms for a single job. Each job carries a job number so that the records easily find their way to the proper file. Bowser uses the year and consecutively.
live number system to determine his job number. The tenth house built in 1954 would carry 5410 as the job number.

**Business Forms**

In addition to the Job Cost Account Form previously mentioned, Bowser also has a Daily and Weekly Time Report, Purchase Order Form, Change Order Form, Subcontract Agreement, Work Order, and a Decorating Schedule Form.

**Daily and Weekly Time Report**

Bowser’s labor costs are tabulated on the Daily Time Report by the foreman. The form is executed for individual workmen and lists the specific job, the operation (one of the twenty) and the time involved. All of these reports are combined at the end of the week on a Weekly Time Report form. From the weekly form the payroll is made and the information is entered under the appropriate operation in the Job Cost Form.

**Purchase Order**

All purchases are made for each job on a company Purchase Order Form that carries the job number. The job number makes accounting in Bowser’s office easier. When invoices arrive with the job number, they can be checked and quickly credited to the correct house.

**Change Order**

When a customer desires a change in the contract, he must execute a Change Order in the builder’s office. The form carries the change and the differential in price. Bowser’s crews are instructed to make no changes unless they have a copy of the Change Order form.

The Weekly Time Report is a composite of the Daily Time Reports. One of these forms is made out for each workman for pay purposes. Also entered on this form is the amount of time spent on each job and the various operations. This information can then be tallied and entered in the ledger Job Cost Account.
Subcontract Agreement sets down the work of the subcontractor and the price. Other covenants are time when the work is to start, insurance, extras, and assignment of contract.

Change Order. The form is filed in the job file and is handy at the time of closing so that the builder can get his additional money.

Subcontract Agreement

Bowser sends the subcontractors a Subcontract Agreement Form to legalize the bid. The form is filed in the job file.

Work Order

A week or so before a subcontractor is to start on the job, Bowser sends him a Work Order. This form schedules the subcontractor’s operation. The form carries a three-day cancellation clause whereby the contract is cancelled if the work is not started at the time previously agreed. The clause allows the builder to get another subcontractor if tardiness will affect scheduling. The form also lists the address of the job, the job number, the type of work, and the starting date.

Decorating Schedule

The final form used by Bowser is a Decorating Schedule. Buyers list their colors on this form. They also include a color chip so that misunderstandings cannot arise later. The builder’s past experience shows that misunderstandings can arise when oral agreements are made. A copy is sent to the builder, one is kept in the job file, third is given to the owner.
PLYWOOD QUALITY
in 1954
...as always

We are not crystal ball gazers on world and national events. But of this we are sure —
In 1954 the various products of APMI will be quality, as always.

Fine Douglas fir gives us superb raw material. Modern mills give us excellent plant layouts and machinery. Veteran employees provide important know-how. More than 30 years of plywood manufacture gives us invaluable experience in serving you through our own sales warehouses. We welcome your inquiries.

ASSOCIATED PLYWOOD MILLS, Inc.
GENERAL OFFICES: EUGENE, OREGON
Plywood plants at Eugene and Willamina
Lumber mill at Roseburg

BRANCH SALES WAREHOUSES:
4268 Utah St., St. Louis, Missouri
4814 Bengal St., Dallas, Texas
4003 Coyle St., Houston, Texas
1026 Jay St., Charlotte, North Carolina
Worley Road, Greenville, South Carolina
925 Toland Street, San Francisco, California
Eugene, Oregon
Willamina, Oregon

SALES OFFICES:
31 State Street, Boston, Massachusetts
595 E. Colorado Street, Pasadena, California
There's one sure way for the "Sold" sign to go up quicker—and that is to offer proved advantages in the homes you build. Prospective home owners want the new but they don't want the "Untried Experiment."

Before Ceco products are offered to the building industry, they must pass rigorous tests in the field...must "make good," time after time, under actual living conditions.

For we at Ceco do not aspire to be first just to be first. Instead we prefer to observe developments with studied care...to present new products when we can proudly say—"Here is a Ceco tested and improved design...the finest of its kind...a product you can use with assurance it will perform as intended."

Here are 4 new improved Ceco Trend Tested products...

Ceco Intermediate Windows. Exactness in design, assuring the just-right window is the "Trend Feature" here. Only Ceco offers both 1 1/4" and 1 1/8" Intermediate Windows that can be adapted to any building problem.

Ceco Sterling Aluminum Projected Windows. Functional simplicity is the "Trend Feature" in this newest Ceco product. Framing members have simple lines that blend with modern motifs...hardware is in keeping with functional thinking.

Ceco Standardized Hollow Metal Doors. Pin-Point Precision in matching hardware to doors is the "Trend Feature" here in the broadest line ever offered with doors and hardware made for each other and supplied by one source.

Ceco Sterling 3-in-1 Aluminum Window. Prime window, storm window and screen combine for versatility as a "Trend Feature" of this Ceco creation. Self-storing screens and storm windows take the work out of seasonal changing.
How to build good cast-in-place Concrete Foundations

In homes or commercial or industrial buildings basements are (1) the most economical space for heating plants, storage, work rooms and other essentials and (2) a safe refuge from tornadoes and atomic blasts. One way to build a strong, dry basement is with cast-in-place concrete foundations. Here’s how to do it:

1. Clean forms thoroughly. Coat inside surfaces with oil, soft soap or lacquer to keep concrete from sticking.
2. Erect the forms. Tie and brace them securely so they retain their shape and position while placing concrete.
3. Design a quality concrete mix. Proper proportioning results in a mix which, when lightly troweled, fills all spaces between aggregates with cement paste.
4. Transport concrete in rubber-tired buggies or wheelbarrows to lessen the chance of segregation. Place in even layers not more than 12 in. deep, dumping from as low a height as possible.
5. Spade or vibrate concrete enough to settle it and work it thoroughly against the forms. This avoids honeycombing.
6. Strip forms after concrete hardens sufficiently—usually one or two days in warm weather, four to seven days in cold weather. Then pull out tie rods or break them off back of the surface.
8. Brush on two coats of hot bituminous material at right angles to each other over the exterior wall surfaces.

For more information write for free booklet, “Concrete Basements for Homes.” Distributed only in U.S. and Canada. Address Dept. 2-3.

PORTLAND CEMENT ASSOCIATION
33 W. Grand Ave., Chicago 10, Ill.
A national organization to improve and extend the use of portland cement and concrete through scientific research and engineering field work
NOW! A better way to add sales-appeal to the homes you build! Roddis Craftwall is genuine hardwood plywood, but with a difference. Face veneers are random-matched for the luxury look of solid lumber — yet Craftwall costs less than conventional plywood. No matching problems, either!

Pre-finished Craftwall can eliminate the tremendous time loss incurred in plastering, painting and papering interiors. It lets workmen complete jobs fast... with no possibility of the last-minute troubles that often occur. It assures you of perfectly finished paneling for every installation.

Offered in 4 styles — 3 sizes

Pre-finished Craftwall gives you a style for every need... and styles that can be used together. It's available in 48" x 96" x 1/4" panels... 16" x 96" x 1/4" panels... and 32" x 64" x 1/2" panels. Pre-finished Craftwall is carefully carton-wrapped; color-blended putty stick to fill nail holes after installation is included with each shipment. Matching hardwood moldings are available, together with materials and complete instructions for perfectly matching Craftwall finishes.

Roddis Plywood Corporation

NATIONWIDE Roddis Craftware HOUSE SERVICE

Cambridge 29, Mass. • Charlotte 6, N. C. • Chicago 22, Ill. • Cincinnati 4, Ohio • Cleveland 6, Ohio • Dallas 10, Texas • Denver 14, Colo. • Detroit 10, Mich. • Houston 10, Texas • Kansas City 2, Kan. • Los Angeles 58, Calif. • Louisville 10, Ky. • Marshfield, Wis. • Miami 28, Fla. • Milwaukee 8, Wis. • New Hyde Park, L. I., N. Y. • New York 55, N. Y. • Port Newark 5, N. J. • Philadelphia 24, Pa. • St. Louis 16, Mo. • San Antonio 6, Texas • San Francisco 24, Calif. • San Leandro, Calif.
WORK PATTERN
for MASS PRODUCTION

Cutting table in the mill at the project, featuring two De-Walt radial saws with 18-inch blades and 71/2 b.p. The lumber comes into the saw shed from the left (to the left saw) and from the right (to the right saw). The clipboard in front of each operator tells him the number and size of each piece to be cut, and the length of material from which it is to be cut. In the case of rafters, the saws are used as a gang, the right saw making the plumb cuts and the left saw making the cheek cut by using a rafter notcher. These special heads are used to eliminate cutting rafters twice.

Plate jig is used for all outside plates. It drills holes for anchor bolts, marks layout for outside studs, windows and door openings. Same jig is used for top plates. Jig is all-metal and the pipe sleeves are tempered steel so they will wear better while they act as a guide for lining up the bolt holes. Five plates are drilled at one time.
The secret of success is three-part: (1) purchasing by the carload or truckload, (2) a highly efficient core organization, and (3) full cooperation from the subcontractors. The last is most important.

In streamlined house production, the fullest sort of cooperation between the builder and his subcontractors is really the answer to most of the problems involved, according to the Winn-Rau Corporation of Kansas City. The company's staff includes an engineer and 10 surveyors who prepare the way for the assembly line building process. Then there is a supervisory and office staff and a crew of carpenters, laborers and truck drivers, all on the Winn-Rau payroll. All the rest of the work is let on subcontract.

Meetings That Mean Something

Every Monday noon, a meeting of the company heads and the subcontractors is held in the construction office on the project. Between 15 and 20 attend each meeting. The idea is to stress cooperation among the subs and provide an opportunity for the subs to bring up their individual problems so that everyone in authority on the job knows what's going on in all departments of work.

Winn-Rau knows exactly where each sub stands by a set of daily charts which show 36 separate operations. If a sub is behind schedule, the spotlight of discussion is thrown squarely on him. Then everyone pools ideas on how to help him catch up and so get the show back on the road. The evil of falling behind is constantly kept before the subs and these weekly meetings have worked wonders in keeping it under control.

Timing Is Of The Essence

It has been agreed at these meetings that timing is one of the most essential factors in successful mass production of housing. When any one sub loses time or slows down, he slows down the whole chain of work that produces a completed house.

Winn-Rau has found that an assembly line crew can work in two ways. A crew of say 20 men can look busy doing a job that apparently takes five days. But on close study it may well be discovered that the same crew can do the same job in two days. In other words, if the men don't have a schedule to meet, they can slow down their hourly work and string it out for five days and still look busy, instead of hitting the maximum efficiency of two days for the job.

Timing is vital even down to such a seemingly unimportant operation as cleaning the houses. Winn-Rau soon discovered that there was too much lost motion, loafing and waste in materials in the cleaning of houses. So a policy was established which requires each subcontractor...
to clean up after his work immediately upon its completion.

When the plumber has installed the bathtub and other crated fixtures, he picks up the crates and wrapping paper immediately. When the drywall applicator has completed his work, he picks up the paper he has laid down to protect the floor, sweeps up and hauls away scrap pieces. And so on down the line. This procedure has saved several work days per house on the job.

Handling the Materials

Winn-Rau homes start on the production line at the company's siding in Turner, Kansas, five miles from
the Winn-Rau system is producing these results

A 4-bedroom house for $9,100. Blacktop drive, no garage

A 3-bedroom house for $9,100. Drive runs to rear

A 2-bedroom model with attached garage for $8,950

A 2-bedroom house with 745 square feet, for $7,850

the office. A 15-minute truck ride brings lumber and other materials to the company's saw mill on the job. About 100,000 feet of lumber goes through the mill every day. Winn-Rau is operating full blast, not including sheathing, insulation and drywall. Various power tools: saws, jointers, sanders and others, help convert about 30,000 feet of lumber a day into gable ends, dormer roofs, window bucks, bathroom walls and stairwell assemblies, all of which are built on jigs.

Every plate is precut and premarked by code number at the mill. All studs are marked and prelaid on the concrete slabs at the job sites. A template is used for interior partition marking. The plates are fitted to the openings in the template. Then marks from the template are transferred to the plates. This makes a complete prelaid house, laid out ahead of the carpenters.

Exterior plates are cut at the mill and then go to the layout jig which predrills all holes for the foundation bolts and marks all places for the studs, window and door openings and all partitions. All ceiling joists and rafters, after being precision cut at the project mill, are delivered to the house site by tractor-trailer. Three loads make up the delivery schedule: (1) the bottom, including plates, studs and bucks; (2) the intermediate, which takes care of the ceiling joists and rafters; and (3) the top, which includes sheathing, gable ends, boxing and all other materials needed to complete the carpenter's rough-in.

Such items as reinforcing steel and wire mesh, windows, stairs, doors, hardware and bathroom fixtures are on hand for about 100 houses at all times.
How to CUT COSTS & UPGRADE QUALITY

1. Install

**LOCKWOOD'S**

'C' SERIES

2. with

**LOCKWOOD'S**

New

**SPEEDRIL**

Here's the most potent lockset installation ever to hit the home building field:

Lockwood's new 'C' series, the finest quality locksets in the low-price field... all brass or steel parts, smooth-working, long-lasting, beautifully designed.

And, Lockwood's new SPEEDRIL, a tool that makes conventional methods of installation obsolete... takes the hard labor out of hand boring... makes clean-edged, accurate holes in perfect alignment every time... and does it up to 75% faster than other hand boring tools.

- **Actual timed speeds with unskilled operator**
  25 to 40 seconds for hole through stile (depending on door thickness),
  15 seconds for hole in edge of door.

- **Clean cut edges both sides**
  breakthrough ring ensures clean edges, no splinters.

- **Holes in perfect alignment**
  threaded bit shank ensures a perfect bore, exactly at right angles to door stile.

**SPEEDRIL** is available in two models... Model No. 540 for installation of Lockwood 'C' Series only... Model No. 541 (as illustrated) is a Universal model equipped with adaptors for use with all types and sizes of Lockwood cylindrical locks.

⇒ Send for descriptive literature giving complete details on new Lockwood SPEEDRIL.

Lockwood

LOCKWOOD HARDWARE MANUFACTURING COMPANY

Fitchburg, Massachusetts
Choose the floor that's NATURALLY beautiful!

BRUCE STRIP

Prefinished ... or for job-finishing
You give owners more for their money when you specify beautiful, durable Bruce Strip Floors.
They get top quality flooring that's properly seasoned, precision manufactured, and always "up to grade." An extra bonus is the pride of ownership and higher value of the home with a Bruce Strip Hardwood Floor.
For added beauty, durability and economy, specify that the flooring be prefinished with the Bruce "Scratch Test" Finish that outwears surface finishes 3 to 1. The cost of a Prefinished Bruce Strip Floor is usually less than for an unfinished floor of the same grade plus on-the-job finishing. Write us for information or see your Sweet's File.

E. L. BRUCE CO., MEMPHIS 1, TENN.
SMALL IN SIZE... BIG IN FEATURES

with super pulling power for smooth positive action!

R222 MAGNETIC CATCH
by NATIONAL LOCK

for cabinet doors
buy it from your wholesaler

small investment
FREE demonstrator
(only 6¼ by 2 inches)

Here's a new item with remarkable profit opportunities. Strong magnetic power closes door quickly, securely, silently... at a gentle push of finger, hand or elbow. Steel and aluminum inner parts are contained in attractive, sturdy tenite housing.

packaged in handy SLIDE BOX
Unique box has clear acetate slide cover. Effectively displays merchandise. Provides extra customer convenience and product protection. Box contains catch, strike and necessary number of screws for installing.

packed 1 doz. slide boxes to the carton...
1 doz. cartons to the case

Assortment consists of 2 dozen R222 Magnetic Catches with a list price of $8.40 per dozen. Compact, space-saving demonstrator is provided FREE with this assortment. A real merchandising aid, this attractive, actionized unit encourages your customers to operate the new catch. It demonstrates the outstanding pulling power and convenience.

NATIONAL LOCK COMPANY

ROCKFORD • ILLINOIS

MERCHANDISE SALES DIVISION
Every inch is livable space with

**B & G Hydro-Flo Heating**

B & G Hydro-Flo Heating solves the problem of properly heating homes with large glass areas. Radiant floor or ceiling panels, or baseboard panels effectively prevent cold downdrafts from the windows...keep floors warm and draft-free.

B & G Hydro-Flo Heating is a forced hot water system—which means that the heat supply is always under positive control. The temperature of the circulating water is automatically raised or lowered to meet every change in the weather. Even in spring and fall, when only a little heat is needed, indoor temperature is kept exactly at the comfort level.

That's why a B & G Hydro-Flo System costs so little to operate. No overheating to cause fuel waste...but always plenty of heat when the thermometer hits bottom.

**Abundant hot water—winter and summer**
The modern home needs hot water as never before...automatic washers and showers require ample quantities for satisfactory operation. The Water Heater of a Hydro-Flo System produces an abundant year 'round supply.

**Simple, dependable equipment**
The basic units of B & G Hydro-Flo Heating are (1) the Booster Pump to circulate hot water through the system, (2) the Flo-Control Valve to prevent an over-ride in temperature and (3) the domestic Water Heater. These units can be installed on any hot water heating boiler.

**Bell & Gossett Company**
Dept. DH-11, Morton Grove, Ill.

Canadian Licensee: S. A. Armstrong Ltd., 1400 O'Connor Drive, Toronto, Canada

FEBRUARY 1954
OFFICE—WAREHOUSE TRAILER FOR BUILDERS & CONTRACTORS

DESIGNED BY

THE DEPARTMENT OF ARCHITECTURAL ENGINEERING
LOUISIANA STATE UNIVERSITY—BATON ROUGE, LOUISIANA
The standard-size trailer shell is recognized by many builders and contractors as an excellent movable office and warehouse unit for use in connection with all types of building projects.

Here are some of the advantages of a mobile unit:
1. It saves the cost of constructing and removing a small building for each separate job.
2. It saves numerous trips during the construction period, and in many cases it avoids delay.
3. It provides better care and permanent storage for transits, tapes and other engineering equipment.
4. It provides safe storage for finish hardware and tools.
5. It provides better facilities for the clerk of the works or the superintendent on the job.
6. It provides "on the job" facilities for tool maintenance.

The trailer illustrated in this article is primarily used by building contractors, however, with simple changes it may be adapted and redesigned for use by subcontractors. Units of this type can be of great benefit and can also result in lower costs to the builder.
OFFICE—WAREHOUSE TRAILER
FOR
BUILDERS & CONTRACTORS

DESIGNED BY
THE DEPARTMENT OF ARCHITECTURAL ENGINEERING
LOUISIANA STATE UNIVERSITY—BATON ROUGE, LOUISIANA

---

Office—Warehouse Trailer for Builders & Contractors

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The Department of Architectural Engineering, Louisiana State University—Baton Rouge, Louisiana
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The trailer illustrated in this article is primarily used by building contractors, however, with simple changes it may be adapted and redesigned for use by subcontractors. Units of this type can be of great benefit and can also result in lower costs to the builder.
You asked for all these NEW Black & Decker

MAN-SIZE CONTROLS... big trigger switch, heavy wing nuts give faster action, quicker adjustments!

NEW Rihack & Decker.

EASY-GRIP HANDLE... at natural sawing angle... plus second hand-hold... and cord is out of the way!

SAFETY-LIFT GUARD... large guard lift-lever lets you retract lower guard by hand safely!

POWER TO SPARE... on the toughest jobs... because all motors are B&D-built just for these saws!

NEW B&D 6" SAW WITH 8" POWER!

Yes, for power and performance, the new B&D 6" Heavy-Duty Adjustable Saw can equal an 8" saw on many jobs! Cuts from 0" to 2" deep... bevel cuts from 0" to 45"... depth of cut at 45° is 1 3/4". Built-in depth-and-bevel attachment... plus all the other new B&D features that make this the greatest 6" Saw yet. Only $64.50

NEW B&D 8" SAW FOR ALL-ROUND WORK!

Here's your power-packed 8" Heavy-Duty Saw... an all-round saw that just won't stall on the job! Cuts from 0" to 2 3/4" deep... bevel cuts from 0" to 45"... depth of cut at 45° is 2 3/8". Easy to adjust built-in depth-and-bevel attachment, expertly designed and constructed, plus all the other new B&D features. Only $96.50

NEW B&D 7" SAW... $84.50 and NEW B&D 9" SAW... $114.50.

Both Heavy-Duty Units with All the Features Described Above.
We've talked to plenty of you who use saws... and you've told us plenty about the features you want in saws. Lots of those features were already in Black & Decker Saws. Some of them weren't. Now, in the completely new B&D Saws, all of these features are in... and then some!

NOW PROVE IT YOURSELF
and get a chance to win $1,000.00

AT YOUR DEALER'S! See and try the great new Black & Decker Saws yourself soon... AND GET A CHANCE TO WIN $1000.00 at the same time! Just ask your dealer to show you the new B&D Saws. Try them. Note their many features. Then fill out official entry blank, and leave it with your dealer. He'll do the rest... and you'll be in line for the grand prize... $1000.00... or one of 52 other awards. See your dealer quick! For dealer nearest you, see Where-To-Buy-It Section of local phone book, under TOOLS-ELECTRIC.

RIGHT ON THE JOB! To make the big B&D Saw Contest even easier for you to enter, we'll arrange to have the new B&D Saws brought right out to your job site, let you try them yourself, enter right then and there. To arrange this, just fill out coupon and mail it today!

THE BLACK & DECKER MFG. CO., Dept. H663, Towson 4, Md.
I want to see and try the new B&D Saws right on my job! No obligation, of course!

Name
Company
Address
City Zone State
Job Location

Classified Telephone Directories TELL'S WHERE TO BUY IT

February 1954
Build homes that offer more... you'll sell more, profit more

There's no selling problem with this new P&H Home. Just let your prospects see it; let them compare with others at the price. That's all the selling you'll have to do. The new P&H Pioneer Home has full bath plus powder room, more than 1,100 sq. ft. of living space. And it has more new ideas, more selling features than any home you've seen at the price in years.

Site costs are lower, too, when you build P&H Homes. Homes arrive at site complete with hardware, millwork, glazing and trim, ready to go up in a day. You can build P&H Homes the year around, offer 2, 3 or 4 bedroom models with or without basements. Financing aid is available from a P&H subsidiary when local sources are limited.

See how risk-free and profitable home building can be

WRITE FOR DETAILS ON THE P&H BUILDER PROFIT PLAN NOW

P&H HOMES
HARMISCHFEGER CORPORATION
312 Spring St., Port Washington, Wis. Phone Port Wash. 611

New Flexibility! 3-Way Dining Area
Here's a real sales-closer in the '54 P&H Homes — a changeable dining area. The matchstick bamboo folding screen on a ceiling track makes dining area part of kitchen or living room, or open to both, in seconds.

Now sell homes to the low-cost market — profitably. Write for details on the new P & H minimum-cost Home, priced to sell at $5,500.
THE ONLY COMPLETE LINE

It's twice as smart to do business with Vikon, because 1) Vikon is the only tile manufacturer who offers you a complete line of steel, aluminum, and stainless steel tiles plus two grades of plastic tiles. 2) Vikon has been in the business longer than any other manufacturer, with a reputation for quality that has been growing since 1926. This double-barreled combination means more profits for you, and many more satisfied customers!

HERE'S WHAT VIKON OFFERS YOU

Enameled Steel • Enameled Aluminum • Stainless Steel • Plastic • Mastic • Accessories
Matching electric receptacles and switch plates

VIKON TILE CORPORATION
Washington, N. J., Dept. XD-1

Please send me, without cost or obligation, the complete story of Vikon Tile together with full-color brochure and sample tiles

☐ DEALER ☐ DISTRIBUTOR ☐ CONTRACTOR ☐ ARCHITECT

NAME: ____________________________

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EICHLER HOMES SHOW HOW—
Eichler Homes of Palo Alto, California, are enjoying ever growing sales success. They panel entire homes with a variety of Weldwood paneling. Eichler's success shows that the beauty, durability and low maintenance cost of Weldwood paneled interiors has tremendous sales appeal. Other builders who feel the same way include: Boris Gertzen Associates, Huntington, L. I., Graeme Stewart, Wheaton, Ill., Joseph P. Carp, Chicago, Ill., Harris Homes Inc., Morton Grove, Ill., C. A. Hemphill & Associates, Evanston, Ill., Trude Land Development, Inc., Arlington Heights, Ill., and many others in every section of the country.
Growing public demand for wood paneled interiors, plus Weldwood’s hard hitting Life promotion, can help you sell homes.

Whether you panel a single wall or do entire rooms, you’ll still be closer to a closing if you include Weldwood paneling in your plans right now. The big two-page Weldwood ad in full color in the March 1st issue of Life magazine will show interior paneling which you can easily duplicate.

LOW COST! You’ll be surprised to learn that for as little as $26 in material cost, for a wall 8’ x 12’, you can add this big sales feature to your homes.

Think of the sales appeal of a fireplace wall in rich mahogany Plankweld®, a dining room in sliced walnut, a den or cellar playroom in rustic Surfwood® or dramatic Novoply®, a library nook in distinctive Weldtex®, a utility room in birch, or a really glamorous room in exotic blond Korina®.

Builder enthusiasm is growing by leaps and bounds. Many tell us that no other type of interior finishing can match the sales appeal of real wood paneling. And remember, Weldwood interior paneling is guaranteed for the life of the home! The guarantee packs a sales wallop too!

Act now! Be one of the many builders who have already made plans to tie in with Weldwood’s big Life promotion which will be seen by more than 26 million readers—many of them red-hot home buying prospects!

For further information see your local lumber dealer now or contact any of the 60 United States Plywood or U.S.-Mengel Plywoods distributing units in principal cities, or mail coupon.

FOLLOW THESE SUGGESTIONS—THEY’LL HELP YOU CLOSE SALES!

IN YOUR HOMES—Check your blueprints and see where Weldwood paneling can most effectively be used. (For homes under construction Weldwood paneling can be included for less than you think.) Visit your local lumber dealer or Weldwood showroom and see the paneling.

IN YOUR PROMOTION—Weldwood products are constantly being advertised in other leading national magazines. Your building site display boards and promotional literature should place strong emphasis on the fact that your homes feature beautiful Weldwood paneling.

IN YOUR ADVERTISING—The Weldwood guarantee has tremendous sales appeal! Use it in your newspaper advertising and promotional literature. You can even include it in your sales contract because the guarantee is backed by the largest plywood organization in the world.

FREE: Please send me new Weldwood Catalog packed full of Weldwood data and specifications. ( )

United States Plywood Corporation
55 West 44th Street, New York 36, N. Y.

NAME

ADDRESS

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Announcing the NEW-

AMWELD® "KING SIZE"

FLOOR-TO-CEILING "K-D" STEEL
SLIDING CLOSET DOOR AND FRAME UNIT

Full length floor-to-ceiling wardrobes are high on the list of features that home buyers want this year. Installation is quick, easy, and most important, low in cost. Operation is smooth and quiet—the trim, modern styling enhances any type of decor. Sturdily constructed of heavy-gauge steel, they will not warp, crack, shrink or stick. Once properly installed they require no time-consuming call backs for service or adjustment. Try them on the next house you build. You will find their attractive appearance, and the extra storage provided are an effective sales argument to buyers, particularly to the housewives.

Write today for full details. Let us show you how Amweld Steel Sliding Closet Door and Frame Units can help you cut costs and still build more salable houses.

Look at these sales features

- Smooth, quiet operation
- Baked-on grey prime coat ready for finish coat
- Snap-in nylon hardware and finger pulls
- Long-life nylon rollers
- Fits ceilings 8 feet or higher

Prime finish

<table>
<thead>
<tr>
<th>Opening</th>
<th>No. Panels</th>
<th>Floor to Ceiling</th>
</tr>
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<tr>
<td>4'0&quot; wide</td>
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<td>2</td>
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<tr>
<td>6'0&quot; wide</td>
<td>2</td>
<td>8'0&quot; high</td>
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Amweld Building Products Division
THE AMERICAN WELDING & MANUFACTURING CO.
310 DIETZ ROAD • WARREN, OHIO

AMERICAN BUILDER
RICHMOND SCORES FOR '54

With a New WFD Gas-Fired Boiler

Now available for either steam or hot water systems, fully automatic operation—AGA approved—Meets S.U.R. standards—A.S.M.E. Standards.
Controls for all types of gases.

The Richmond WFD Series F wet-base, cast-iron, gas-fired boiler offers many advantages. Its white enamel jacket harmonizes with other appliances in the utility room or finished basement. All controls are fully enclosed within the sturdy steel jacket. All units are "Duridized" to provide a firm bond for the white enamel finish and positive protection against rust or corrosion.

The WFD Series F boiler is supplied with control groups for all types of gases. Available in 8 different capacities from 80,000 to 290,000 input Btu/hr. for a complete range of hot water or steam installations. The hot water boiler can be supplied with tankless heater for instantaneous hot water in 3 or 5 gal. per min. capacities. Here is an efficient, dependable source of heat—the new Richmond WFD Series F gas-fired boiler—backed by almost a century's experience in the development and manufacture of heating equipment. For complete information send off the coupon today.

Sold through wholesalers.

Check these features:

☐ For hot water or steam systems
☐ Cast-iron, wet-base—AGA approved for combustible floor installation
☐ Completely automatic operation
☐ All controls and tankless domestic water heater enclosed in steel jacket
☐ White enamel jacket "Duridized" for superior bonded finish
☐ Available with tankless heater for instantaneous hot water—3 or 5 gal. per min. capacities

Richmond Radiator Company + Box 111, Metuchen, N. J.

Please send me more information and literature on the new WFD Series F boiler. No obligation, of course.

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COMPANY_________________________________

ADDRESS_________________________________

CITY__________________ ZONE______ STATE______

We are ☐ plumbing wholesalers ☐ plumbing contractors
☐ building contractors ☐ architects. AB-2

FEBRUARY 1954
SHOW the frame

The free-standing stanchions, which are the main structural members, are framed to form basic architectural motif of building.

FLOOR PLAN
Facilities for complete dining service provided in this one story building.

BUILDER:
Roy Diem. La Canada, Calif.

ARCHITECT:
David Underwood. La Crescenta, Calif.
and STOP the traffic

In this new restaurant in Pasadena, California, the designer has taken the basic structural members supporting the building (steel beams and columns) and used them as his principal design motif by effectively extending them beyond the eave line of the roof.

The building is planned as an indoor-outdoor eating place having a partially covered patio at one end. The steel beams and columns are framed out to a width of 2 feet 6 inches and faced with plywood. The furred beams continue on the inside as a feature of the ceiling up to the intersecting beam at ridge.

Of interest is the manner in which piers, columns and beams are finished. They are given two base coats of paint and then a coat of Zolatone which is sprayed on. Due to the special properties and the action of the material, a mottled color results. The exterior masonry is a special type of concrete brick, size 1x3x15 inches, with a one-inch-wide mortar joint.

A novel window treatment extends the full width of the end (west) wall of the dining room. Plastered stub walls are placed at an angle of 45 degrees to the end wall of this room. These occur at regular intervals. Glass is installed in metal stops and placed at right angles to stub wall surface. The depressed area at sills between walls and windows, both inside and out, is used effectively for planters. The wall surfaces in this area are also sprayed with Zolatone resulting in a mottled finish.

The inside wall of the dining room, which includes the kitchen projection, is faced with Ceratile, a decorative clay tile, in dark green with an inscription and the company's trade mark as a special design in white running through the background tile.

Kitchen projection is faced with rough-finished lapped boards up to the counter line. A stepped designed hood, with concealed fluorescent tubes located in each step, forms a canopy over the kitchen area and is lined on the underside with stainless steel.
Now it costs less than ever... in money and manpower... to give your homes the colorful appeal of

Every builder knows the sales wallop that built-ins of every kind carry in today's new-home market. But up till now, built-in ranges have been costly and difficult to install, Now Murray designers have found the answer to built-in features—counter-top ranges that match lovely Murray Kitchens' "Contour

SEE THESE UNITS AT THE MURRAY BOOTH NAHB SHOW
New Murray color units offer builders advantages never before found in counter-top ranges or built-in ovens!

1 COLOR HARMONY! Murray’s beautiful built-in range tops and ovens come in porcelain enamel Sunset colors: Golden West Yellow, Ranch Green, Horizon Blue, Mist Gray, and white. Stainless steel is also available. It’s a new, dramatic way to bring smart color into the kitchen! Colored cabinet handles to match let you extend this color scheme throughout the kitchen.

2 STYLE HARMONY! Range tops are actually counter tops—with contours and backsplash to match Murray base cabinet tops perfectly! No more “built-in hot-plates,” the Murray range top is a complete, integrated unit with all the beauty of Murray “Contour styling!”

3 EASIEST INSTALLATION! Counter-top range fits on any 24” or 30” Murray base cabinet... replaces the regular top! Full-depth cabinet drawer gives convenient storage space. No special holes to cut in counter tops. No difficult fitting problems. And the same goes for Murray’s oven-to-match! Control panel for counter-top range can be located for greatest convenience.

styling” exactly ... replace counter tops on regular Murray base cabinets! Read how your regular Murray Kitchens supplier can help you achieve new, colorful built-in glamour ... at lower cost, with easier installation. Then see your Murray supplier or send the coupon ... now, in time for your next project!
When concrete blocks are laid, the mortar should have "body", to support the weight of the unit, thus holding it up to the line. If the mortar lacks body, the block will settle below the line even if a thick bed of mortar has been spread.

At the same time, plasticity is required. Unless the mortar is plastic, the bricklayer cannot quickly and accurately tap the block down to the line.

Brixment has body and plasticity. It is firm but not stiff — soft but not sloppy. This combination of body and plasticity makes Brixment the best possible mortar to use with concrete blocks.
LAND PLANNING is worth it

IN THE 1920’s, a far-sighted realtor conceived the idea of creating a purely residential community of expensive homes “far, far” to the east of Wichita, with Douglas Avenue, a main east-west artery, running through it. The depression took its toll of this “dream.” Nevertheless, today the municipality of Eastborough is a reality and consists of a neighborhood fully improved with some of the finest homes in the Wichita area.

As the city grew, expansion eastward gained momentum, and by the 1940’s the city limits were within half a mile of Eastborough. Lying between Eastborough and the city were a 160-acre tract south of Douglas Avenue and a 65-acre tract north of Douglas. The directors and officers of The Wheeler Kelly & Hagny Investment Company saw this land as an opportunity to preserve the continuity of high-class residential development in its proper course, to plan and restrict large areas in advance, and to build an outstanding shopping center which would serve the eastern part of the city.

So we set out to acquire these tracts. The 160 acres were ready for immediate development; the 65 acres we considered as reserve land for future development. In April, 1946, through our affiliate, Town and Country Estates, Inc., we acquired the 160 acres south of Douglas and called it “The Village.” At about the same time, the 65-acre tract was purchased by a group in which Town and Country Estates has a substantial interest.

The Planning Stage

When we bought The Village tract we knew that we were faced with what would probably be a long-drawn-out court action to acquire title. Actually this took two years, but was probably the best break we ever had because it gave us plenty of time in which to plan.

The tract had the usual share of undesirable features. There was a water course which, because of adjacent development, could not be used for park or playground purposes. There was a major high-speed

(Continued on page 126)
highway bordering the property for half a mile on the south. Worst of all, there was an undeveloped, unzoned, uncontrolled area across this highway, which presented a real danger to the proposed community of fine homes. (This was met by building a service road along the southern boundary, which protects the homes in The Village from the highway and its undesirable features.)

After much time and effort, our office came up with a development plan for the 160 acres. We were not wholly satisfied with it, but in general thought it was good, and certainly far better than the gridiron pattern of land development so commonly used in Wichita.

At this point, we began to realize that after all we were amateurs in land planning and subdividing. It occurred to us that the Urban Land Institute of Washington, D.C., in which we had held membership for a number of years, could perhaps be of real help to us. We decided to present our plan for The Village to the session of the Institute's Community Builders Council which was held in Chicago in February of that year, 1948.

What the Experts Said

The suggestions made by the Council's members convinced us that our plan wasn't much of a plan. However, it wasn't all bad. Where the original plan had merit, we were commended and told how to capitalize on the good features. In my opinion, only an impartial group of men who have learned the hard way—such as those who constitute the executive committee of the Community Builders Council—can render such honest and unbiased opinions.

One of the most valuable suggestions made was that our shopping center location was too small and that we should retain considerably more land for this purpose. Also, we were advised to go out and acquire additional land in the immediate neighborhood for the protection of the proposed shopping center and for future residential development to support it.

Having put in much hard work on the original plan, all this was naturally somewhat discouraging to us. But at the noon recess in the Council's session, the late J. C. Nichols took me by the arm and said, "You've got a jewel there, but it needs a lot of polishing." And Hugh Potter of Houston said, "Son, you have a fine piece of property. Get yourself the best land planner in the country and turn him loose on it. Then bring it back to us for review."

That is just what we did. Harman and O'Donnell of Denver, land planning consultants, made our basic land plan. Sixteen preliminary studies of the tract were made and the master plan which resulted was submitted to the Community Builders Council. After a few revisions it was adopted as final and we have not deviated from it one iota.

Platting and the Master Plan

We now had an over-all plan for the entire 160 acres, but we only platted a small portion. The first site was sold in July, 1949, to an operative builder who immediately started construction. But most individuals and builders were skeptical, and it was November before the second site was sold. Then things really caught fire, and we had to begin recording plats of additional sections to keep up with the demand.

We still feel, however, that it's...
a good idea not to plat all of a large tract at one time. If you do, activity will probably begin to scatter, and it's best to hold the development together.

It is all-important to adopt a master plan in advance and to use this master plan in consulting with your city engineer and utility companies. We found our city departments and utility companies to be enthusiastic about such procedure. We are convinced that having a master plan has saved us many times the cost of the land planning service, as well as effects real savings for those who supply our utilities—all this in addition to the direct savings in land sal-

vage, errors avoided and (most important of all) getting the job done in a reasonable length of time.

Another result of good planning is that by it you can make your tract a self-contained neighborhood, a focal point for surrounding areas. We started our planning by going to municipal authorities and asking such questions as, "Do you want a school and a park? If so, where? May we locate a store center at such-and-such a spot? Will you give us the zoning we need?" We asked ourselves, "Shall we provide for churches and apartment areas?" and had all such answers ready when our land planning consultants went to work on the tract.

Protective Covenants and Amenities

While the land planners were busy with their work, we spent months on preparing what we believe to be the most complete and workable protective covenants ever recorded in the county. Instead of the old-fash-

ioned minimum square foot requirement or dollar requirement, we have relied entirely on architectural control. As developer, we have passed on the plans and specifications of every structure built in The Village.

As developer, we decided to pay for certain amenities—something new in Wichita. We decided to put in spun concrete light standards instead of the usual wooden light poles. We brought the wires in to the standards from power lines in the easements at the rear of the building sites, instead of stringing wires along the street frontage. We built entrances to The Village—stone pillars on each side of boundary streets.

Little Lessons in Land Development

1 Don't buck the trend. Buy in an area that suits the type of development you have in mind. If you intend to cater to high-cost housing requirements, buy in that environment. By the same token, you have a civic responsibility to refrain from developing low-cost housing in areas generally developed with expensive homes.

2 Be prepared to give the home owner real protection. Require everyone to submit protective covenants, so that your first buyers will know where they stand. Deed restrictions only bind the buyer. Some developers change their minds as they go along. This is certainly no protection for the home owner. You are safe in recording protective covenants if you plan in advance and if your planning is sound.

3 Give your buyers a little more than the competition offers. Give them certain amenities that will make them proud of their homes and the area as a whole.

4 No matter what the size of the tract is, plan the whole area in advance, even though you intend to plat only a small portion at this time.

5 Consult with all of the city departments as to their needs—parks, schools, streets, sanitary and storm sewers. Consult on the basis of the whole tract.

6 Consult also with the public utility companies.

7 Check with the church organizations.

8 You may not have much of a problem when it comes to grading. But if you lay your master plan before the city departments, grading problems, if any, will show up right away. If a problem exists, the city street department will undoubtedly set your street grades in advance, which will make it much easier for you to grade correctly as you go along. Thus you will avoid setting your houses by guess, only to find out later that they are too high or too low. Remember, too, that a competent land planner will lay out your subdivisions to take advantage of topography, thereby minimizing grading problems.

9 Never attempt any large-scale subdivision plan or shopping center without retaining the most competent technical personnel to assist you. The cost may seem high at first, but you will save in the long run.

(Continued on page 128)
Magdalen has completed a chapel, school and rectory on a 6-acre site, with plans going forward for other buildings. Another 6-acre site is being built up by the Lutherans.

This, together with a small section reserved for luxury apartments, leaves about 25 acres which we set aside for the proposed "Woodlawn Shopping Center." About seven more acres have been allocated as a buffer zone between the shopping center site and the homes of The Village.

The Shopping Center

The natural growth of Wichita to the east has made The Village a perfect location for a relatively large shopping center. Our planning for the shopping center has been based on an economic survey made by Larry Smith and Company of Seattle in 1950. Victor Gruen, a New York architect, has designed a split-level cluster of buildings, the construction of which is expected to be started this year.

More Land

Following the Community Builders Council's suggestion, we recently bought 240 acres to the northeast of The Village and its proposed shopping center. Another 320 acres to the east is in friendly hands. This, added to the 65 acres already owned by Town and Country Estates, will assure the continued growth eastward of the better residential section of Wichita, as well as providing purchasing power for the shopping center.

To Sum Up

While the above is the story of The Village, in our opinion it represents the type of planning procedure which should apply to all subdivisions, large or small, expensive or low-cost. Low-cost housing areas are entitled to the same careful planning, protection and forethought as any other. Sometimes good planning is even more important to a low-cost development than to a high-cost one. It may not be possible to add the more expensive amenities to the cost of land in medium- or low-cost developments, but adequate protective covenants should never be omitted.
everybody wants the money-saving advantages of ALUMINUM WINDOWS

Windows that cannot rust or rot, that never need painting or other costly maintenance are "First Choice" with most everybody who is building or buying a new house.

Regardless of the style, size or price of the new houses you build—either under contract or for sale—your customers are bound to appreciate the money-saving advantages of "Quality-Approved" aluminum windows.

"Quality-Approved" aluminum windows are available through many manufacturers, in sizes and styles (double-hung, casement, projected and awning types) to fit any design treatment. Only those that carry the "Quality-Approved" Seal have been tested by the independent Pittsburgh Testing Laboratory and approved for quality of materials, construction, strength of sections and minimum air infiltration.

For detailed information and names of approved manufacturers, see Sweet's Builders File (Section 4c/ALU), or write to Dept. AB-2.
Paneled Doors... Mark of the Better Home

Fads and fancies in home decorations come and go—but the charm of a paneled door is ageless. That's why paneled doors are so often the choice for the better home...the home that expresses stability; enduring beauty and comfort. Today, Ponderosa Pine paneled doors enable you to offer homeowners a wide choice of styles—thus creating sales-stimulating individuality in the homes you build.
NOW... MATCHING DESIGN IN

CABINET HARDWARE

RESIDENTIAL LOCKSETS

THE NEW, CONCAVE CABINET HARDWARE IS AVAILABLE IN BRASS, BRONZE AND CHROME FINISHES AND IN THE FOLLOWING SIZES: CABINET PULL WITH 3" CENTER; 1½" KNOB WITH 1½" BACK PLATE; 1½" KNOB WITH 2" BACK PLATE; 2" KNOB WITH 2½" BACK PLATE.

WRITE FOR FURTHER INFORMATION

WESTERN LOCK MFG. CO.
Manufacturers of Weslock Residential Locksets and Builders Hardware

FEBRUARY 1954
SALES AMMUNITION!

A FURNACE YOU'LL WANT TO TALK ABOUT!

Perfection with *Regulaire*®
the only real exclusive in the heating business

Regulaire® is the "blower of 1000 speeds" that regulates air flow to the exact amount of warmth coming from the furnace. No cold blasts... no sudden surges of hot air. Regulaire is the one feature that every manufacturer would love to have but only Perfection can offer. And it's the one feature that really gives you something to talk about with your customers. Vital for perimeter heating... too. Ask your heating contractor about Perfection oil or gas furnaces with Regulaire, or write Perfection Stove Co., 7519-A Platt Ave., Cleveland, Ohio.

*Pat. pending

Companion Unit for Complete Home Air Conditioning. Gives you the opportunity to "sell up" with prospects who are interested in air conditioning as well as heating.

YOUR HOME DESERVES Perfection

FURNACES - HOME HEATERS - RANGES - AIR CONDITIONERS - WATER HEATERS

PORTABLE HEATERS

AMERICAN BUILDER
Here's Why:

1. The **HEAD** — thick, uniform shape, perfectly centered on the shank. Compare it with others of the same type... and you see the result of brand-new **precision machinery**, manned by skilled operators!

2. The **SHANK** — highly polished, uniformly coated, or deeply barbed as the case may be... one thing stands out: Here is the product of only the finest, **first-quality steel**!

3. The **POINT** — sharp, centered, clean... the uniform result of closely supervised production, prime materials, and the most modern wire mill in the world... built expressly for the production of perfect nails!

4. The **TEST** — drive it... hear it ring clear as it seats deep and holds fast. Test good Gulf nails again and again... you will always get the same result. Straighter, cleaner, easier drives... greater holding power... **LOWER NAILING COSTS FOR YOU**.

Communicate with the nearest Gulf representative:

- **Davidson Steel Corp.**
  - New York 17, N. Y.
  - Phone: Plaza 9-7151

- **Edward D. Sperry Jr.**
  - Santa Barbara, California
  - Phone: 2-9625

- **C. G. Fallon**
  - Boston 30, Mass.
  - Phone: Jamaica 4-5046

- **The Crispin Company**
  - 1617 Bank of Commerce Bldg.
  - Houston 2, Texas
  - Phone: Fairfax 0338

- **B. S. Meade Company**
  - 504 Duquesne Terrace
  - Union, New Jersey
  - Phone: Unionville 2-8068

Manufacturers of: Nails and Staples - Chain, welded and weldless - Chain-link fencing - Concrete wire mesh - Steel wire: plain, annealed, galvanized.

*FEBRUARY 1954*
How to pick a door

Sure — it depends upon what you want the door for. That’s how you pick.

But there are so many different doors for so many different purposes, that the best way to do is pick your source for all doors. Atlas Plywood is the preferred source for flush doors of all types: hollow or solid core, high grade or inexpensive. Atlas Plywood makes flush doors and panels its chief business

...controls their kind and quality at each step from forest to finished product.

So tell your supply dealer you want Atlas Plywood, he can get just what you order. Atlas Plywood is one of the world’s oldest and largest makers of plywood and its products.

Atlas Plywood

CORPORATION

FROM FOREST TO FINISHED PRODUCT

Boston 16, Mass. Distributors in all principal cities
PLAN ON Kaustine HEATING

YOU CAN SAVE SPACE...

Kaustine fully automatic oil fired "Jersey 75" Furnaces are designed to operate efficiently in a 3 1/2 square foot area enabling the builder to deliver extra living space. Quiet operation makes them ideal for closet installation.

YOU CAN SAVE TIME...

Factory assembled, these units are completely wired ready for quick, economical installation. It is only necessary to hook on the plenum, mount the burner, and run the hot wire and fuel oil line.

YOU CAN SAVE MONEY...

You need only to compare Kaustine quality, engineering, price, installation costs and their operating and service performance to be convinced that they will lower your building costs.

FOR FULL INFORMATION
WRITE TO DEPT. AB-2

Kaustline

QUALITY COSTS LESS

There is a Kaustine Furnace or Winter Air Conditioner for every type of home.

FEBRUARY 1954
Here is where you tell them
Where to Buy Your Product LOCALLY

Up to now . . . manufacturers have had little or no opportunity to tell builders just where to buy their products or equipment in their local building area. This has been one of the biggest sales problems confronting every manufacturer serving the light construction industry.

But now . . . in the April 1954 Builder-Dealer Catalog Directory . . . AMERICAN BUILDER gives you the opportunity to place your dealer listings in the WHERE TO BUY IT LOCALLY Section . . . and at NO ADDITIONAL COST to you!

FREE To Full Page Advertisers — 105 Two-line or 210 One-line Dealer Listings in this Section

This is how the plan will work: for every full page display advertisement placed in the April Catalog Directory issue of AMERICAN BUILDER . . . you will receive 105 two-line or 210 one-line dealer listings absolutely FREE OF CHARGE! If necessary, additional listings may be purchased at $2.50 each, so that you can list all of your dealers.

This is it . . . the most powerful dealer sales-help ever offered to manufacturers . . . the answer to your problem of building better builder-dealer relationships! It's a natural goodwill builder for you . . . and will pay off . . . in many more SALES. Be sure to list all of your dealers . . . (you get 105 two-line or 210 one-line listings with every full-page advertisement) . . . so builder-contractors know where they can buy your products locally!

Here You tell the Builders Who You are and What Products You Make

To further strengthen the tie-in between your dealer listings in the WHERE TO BUY IT LOCALLY Section and the PRODUCT LISTINGS Section . . . AMERICAN BUILDER offers manufacturers a direct route to bigger and better SALES in the light construction industry.

One, two and three-inch display ads . . . to run in both the Product and Dealer Listings Sections . . . are available to any manufacturer wishing to complete the tie-in between his Dealer and Product Listings in the APRIL AMERICAN BUILDER Catalog Directory. These display ads will be placed adjacent to your specific Dealer or Product listings at the nominal cost of $35.00 for a one-inch ad; $65.00 for a two-inch ad; and $95.00 for a three-inch ad.

All display ads should be tailored to fit the specific classification they appear under . . . and they should be used throughout both sections . . . thereby offering you the opportunity to present as many additional sales messages as you desire.

This is the way to obtain maximum product identification! Multiple ads . . . strategically placed . . . all shooting to sell the builder — at the most opportune time — when he is in the mood to buy. And remember — these ads will work for you throughout the year — for this Catalog Directory is kept and referred to all year long.
First time available in any Light Construction Magazine

Now for the first time ... you can let the builders know where to buy your products LOCALLY! Here . . . in the April Catalog Directory issue of AMERICAN BUILDER . . .

you can get your sales message across to the 'hard-to-reach' builder-contractors. And

furthermore, you can now tell them WHERE TO BUY YOUR PRODUCT LOCALLY!

Stop and realize the impact of your catalog-type advertisement in this readership-stimulating Catalog Directory issue. The builder-readers will come to you . . . in their search through the pages of this Directory . . . looking for the products they NEED . . .

the products you make.

This offers an inexpensive way of reaching this biggest of all markets . . . a market that cannot possibly be adequately covered by personal selling. Remember . . . it will cost you money . . . IN LOST SALES . . . if you pass up this once-a-year opportunity to

SELL THE WORLD'S BIGGEST MARKET.

Plan now . . . to be adequately represented in this April Catalog Directory issue of AMERICAN BUILDER. Take advantage of the 105 two-line or 210 one-line dealer listings which you can obtain FREE OF CHARGE with every full page advertisement placed in this Directory. Also, remember to use several of the one, two and three-inch display ads in the WHERE TO BUY IT LOCALLY and PRODUCT LISTINGS Sections.

Follow these suggestions . . . and do a more complete selling job for your products.

Besides, it's a good way of stretching your initial investment over a full year's time.

FREE Send today for 16-page brochure completely describing all the new, exclusive features of the April Builder-Dealer Catalog Directory.

Send your Space Reservation Now

Regular Advertising Rates Apply

Send today for 16-page brochure completely describing all the new, exclusive features of the April Builder-Dealer Catalog Directory.

and... here are more sales-stimulating editorial features — designed to make this the most Sales-Productive Buying Guide for Builders


- Regional Weather Forecast — by famed Dr. Irving P. Krick. Monthly forecast designed to save home builders countless days and dollars.

- Color House — 4-color illustration of exterior and interior . . . complete with block plans and specifications of home designed by top-notch architects.

- New Products — editorial description and photographs of new products designed to save time, labor and money for builders.

- Ask the Experts — gives factual, concise solutions to problems sent in by builders.

- Technical Guide — presents the 'how-to' solutions to new ideas, innovations which enable builders to keep abreast with changing times.

- Blueprint Gatefold Plan — shows complete working plans of Color House . . . giving builder first-handed impressions of every detail in its construction.
8 Facts About Chimneys you should know

Why install a “horse and buggy” chimney on today’s modern house? Old fashioned brick chimneys are expensive and slow to build. Metal prefabricated chimneys create sales resistance and are subject to corrosion. There is an answer. The Van-Packer Packaged Masonry Chimney combines the advantages of complete masonry construction with the economy of prefabrication. The table below gives you the facts.

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>Brick Chimneys</th>
<th>Van-Packer Chimneys</th>
<th>Metal Chimneys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Built of time tested masonry materials</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Joints permanently sealed with acid-proof cement</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Attractive brick type housing helps sell house</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Rust-proof and corrosion-proof construction throughout</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Can be installed in 3 man hours or less without special skills</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Can be suspended from floor or ceiling</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>FHA accepted, UL listed, approved by major codes and U.S. Army Engineers for gas, oil and coal</td>
<td>YES</td>
<td>YES</td>
<td>SOME</td>
</tr>
<tr>
<td>Available for immediate installation from nation-wide jobber and dealer organization</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
</tr>
</tbody>
</table>
Build in Chrysler Airtemp
Air-Cooled Air Conditioning—
get all of these big plus advantages . . .

- Chrysler Airtemp Air-Cooled Air Conditioners can be installed with a Chrysler Airtemp Furnace in a variety of ways—without using a single square inch of living area floor space.
- Because they offer such flexibility and require no plumbing, Chrysler Airtemp Air-Cooled Air Conditioners cost you less to install.
- Because Chrysler Airtemp Air Conditioning can be installed without using living area floor space, because it licks all problems of water supply and expense, it makes Year ‘Round Air Conditioning practical and economical in any home—anywhere.

Specify Chrysler Airtemp Air-Cooled Air Conditioning for homes where you—and your buyers—will realize the greatest benefits from its exclusive advantages. Where space and water supply are not problems, you may choose Chrysler Airtemp Water-Cooled Air Conditioning. In either case, you will have the extra selling power of a name which people know and have confidence in—the Chrysler Airtemp name. For complete information on Air-Cooled or Water-Cooled Chrysler Airtemp Year ‘Round Air Conditioning for homes, mail the convenient coupon today.

CHRYSLER AIRTEMP
HEATING • AIR CONDITIONING
FOR HOMES, BUSINESS, INDUSTRY
Airtemp Division, Chrysler Corporation, Dayton 1, Ohio

THE TRULY MODERN HOME MUST BE AIR CONDITIONED
FEBRUARY 1954
Builders! It's a proven fact!

"Plug-In" Strip sells homes*

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; CF-2G 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.

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.

In Reading, Pa.'s "all-electric" house National Electric "Plug-In" Strip drew more approving comments than any of the other convenience features of the home.
The matter of discounts, charges and fees in connection with the sale of guaranteed or insured mortgages—a subject which has received widespread publicity and comment—is not yet free of possible entanglements. This is true despite the so-called clarifying amendments to Section 504 of the Housing Act of 1950, which amendments became effective June 30, 1953.

Those amendments provided that a builder or other seller might pay an originating lender the amount of any discount, charge or fee incurred in the sale of a guaranteed or insured mortgage to a secondary lender or permanent investor. It should be noted that charges against a purchaser of the property often the veteran—and charges against the builder or seller by the first or originating lender otherwise are strictly regulated.

Under the amendments, the discount must arise in connection with the sale of the guaranteed or insured mortgage by the originating lender to the permanent investor, and may be passed on to, or be absorbed by the builder or other seller, but not by the purchaser of the property. A few specific examples will illustrate the proper application of the amendments and some of the difficulties present.

The obvious case sanctioned by the amendments involves what we loosely may call a mortgage house making loans on residences constructed by a builder. The loans are guaranteed or insured. The mortgage house sells the loans to an insurance company at 96. Under these circumstances it may require the builder to make reimbursement for the amount of the discount involved. However, neither the mortgage house nor the builder may make such a requirement of the purchasers of the residences. The same result follows where the builder, either in his own capacity or through some wholly or partially owned affiliate, is the mortgagee. He may sell his loans for such prices as he will, but he may not pass on his losses to the purchasers of his residences.

Discounts may not be collected where the mortgage house does not sell the loans but retains them for its own portfolio. In that case the mortgage house is limited to the fees otherwise permitted by the statute and regulations to be charged by originating lenders against builders and purchasers. A similar result occurs when the mortgage house is simply an agent of the permanent investor taking the loans. These conclusions follow in consideration of the language of the amendments that a builder may pay an originating lender the amount of any discount incurred in the sale of a mortgage to a permanent investor. In neither of the above cases is any sale of the loans made.

Under the statute and regulations, the sale of the loans must be bonafide. Thus there is ruled out various devices to accomplish indirectly what the statute and regulations seek to avoid. These include, for example, a subsidiary corporation making loans in name only and formally transferring them to a mortgagee which originally had supplied the funds, or a mortgagee making loans for its own portfolio and then transferring them but later reacquiring them. What cannot be done directly may not be accomplished indirectly.

Renew your subscription today!
"PLUS VALUES" possible
with HOT WATER heating

PART III
by Warren S. Harris
Research Professor of Mechanical Engineering,
University of Illinois

EXTERNAL TANKLESS HEATER
with Round or Square Sectional Hot Water Boiler

External heaters should be installed at top of boiler to cause
active circulation of boiler water

Storage tanks should be located as high above heater as ceiling
permits. Horizontal tanks less than 14 inches in diameter are not
recommended because of cost involved

If boiler has two return tappings, it is recommended that return
from heating system be connected to one and connection from
bottom of external heater to the other

The increase in demand for hot water heating in recent years has been accelerated by the popularity of
such equipment as automatic washing machines and automatic dishwashers. Today the housewife demands an
ample supply of hot water, at an automatically controlled
temperature, available at any time of day or night.

Domestic hot water may be supplied by a separately
fired water heater, or it is possible to use the house-
heating boiler to supply hot water for domestic uses the
year around when it is heated with steam or a forced-
circulation heating system. The advantages claimed for
this method of heating are:

1. An ample supply of hot water is available at all
times.
2. Fewer units of mechanical equipment are required.
3. The cost of producing hot water by this means is
low.
4. The equipment requires a minimum amount of
floor space.
5. In localities where the humidity is high during the
summer months, condensation on basement walls and
floors is eliminated.
6. The life expectancy of the heating system is in-
creased because summer shut-down periods are avoided.

Indirect water heaters may be classified as to type
(storage or tankless) and as to location with reference
to the boiler (external or internal). The external heater
has the heat transfer coils encased in a steel or cast-iron
shell located outside the boiler; thus it requires the ad-
dition of suitable piping to enable the boiler water to
circulate over the coils. The internal heater is screwed
into or bolted onto the boiler and extends directly into
the boiler proper. A storage-type heater requires less
coil surface than a tankless heater because a reserve
supply of hot water can be stored in tank against peri-
ods of peak demand. A tankless heater, on the other
hand, has no storage tank and thus requires a large heat
transfer surface in order to provide sufficient hot water
to meet the maximum requirements. In all direct heaters
the boiler water and the domestic hot water are in
separate circuits and never mix, thus giving assurance
that the hot water for domestic use will be clean.

There are no hard and fast rules governing the choice
of heater for a given installation. The selection to a large
measure is one of personal preference. It should be re-
membered, however, that tankless heaters designed to
heat three gallons of water or more a minute from the
temperature of the water in the mains to about 140
degrees F require heat transfer rates of 150,000 Btu's
per hour or more. Many boilers installed in homes today do not have this capacity and for that reason some manufacturers follow the practice of not installing a tankless heater on a boiler which has a heat input rate of less than 200,000 Btu's per hour. Storage-type heaters may be used on any size boiler.

Often the design of the boiler controls the selection of the heater. Some boilers are designed to use a particular style of heater with special provision made for its mounting. In such cases it is wise to use the heater recommended by the manufacturer.

Available space may be the factor governing the choice of heaters. The storage type requires the use of a water storage tank which requires extra space over and above that needed for the boiler and water heater. In small utility rooms space is at a premium, and the selection of a tankless heater is more suitable for these installations.

A fourth factor governing the choice of heaters is the composition of the water to be heated. When hard water is heated, scale is deposited on the walls of the tank. This same thing occurs inside the tubes of indirect water heaters in hard water areas. One solution to the lime problem is the use of tank heaters. These are designed so that boiler water is circulated within tubes located in the storage tank. With this arrangement the lime is deposited on the outside of the tubes and may be removed by draining the storage tank and then circulating water as hot as possible through the heater tubes. After that spray the tubes with cold water. This will crack off the scale without damage to the heater.

Satisfactory operation of any indirect heater is dependent upon proper installation. In the first place, the heater manufacturers recommend that the pipe between the heater and the storage tank be made the full size of the heater tappings. Oftentimes the tappings will be bushed down to 1/2- or 3/4-inch pipe at the time of installation when one-inch tappings were provided in the heater. Tests in the Mechanical Engineering Laboratory of the University of Illinois have shown that this practice reduces the output of the heater by 10 per cent or more, and this is sufficient to make the difference between satisfactory and unsatisfactory operation.

In storage heater installations, the pipe between the heater and the storage tank is sometimes left uninsulated. A study of the operation of storage heaters proved that this method increased the fuel consumption during the summer by as much as 20 per cent. Not only will insulation on the piping between the heater and the storage tank result in more economical operation, but it will also prevent excessive heat gain to the house in summer. I-B-R Installation Guide No. 3, "Indirect Water Heaters," outlines details for selecting and installing indirect water heaters with residential hot water heating systems.

Tests conducted as part of the I-B-R Research Program at the University of Illinois have shown that indirect water heaters are economical to operate. Tests made on an indirect storage-type heater attached to a gas-fired house-heating boiler showed that the cost of providing 140-degree F water at the rate of 50 gallons daily with gas at 8 cents per therm (100,000 Btu's) was about $2.15 per month, or approximately $25.80 per year. Doubling the quantity of water used increased the operating cost by approximately 20 per cent. More recent tests have shown that the operation of the tankless heater is even more economical.

The cost of adding an indirect water heater to a hot water heating system is generally less than the cost of a separately fired automatic water heater, and the combination of a series-connected hot water baseboard heating system and indirect water heater has proved to be a most economical combination to provide house heating and domestic hot water combined, both as to first cost and operating cost.

Table 1 is a summary of actual bids for several types of hot water heating systems for a one story, five room house, located in a New England metropolitan area. In every case the total bid price included all material, labor, overhead and profit for the complete system, including the provision of heating water with an indirect tankless heater. The cost of the series hot water system and indirect water heater using a design water temperature of 215 degrees F was found to be less than the combined cost of competitive heating systems and separately fired domestic water heaters.

**Snow Melting**

A snow melting system is another one of the plus values that can be had in a home heated with hot water. Obviously a snow melting system does not increase the (Continued on page 144)
PONDEROSA PINE
one of 10 woods
from the WESTERN PINE REGION

"The pick o' the Pines"—light-colored, fine-grained, suitable for all high-quality exterior and interior uses. Excellent workability—cuts to clean edges and contours. Takes stain, paint, enamel beautifully. Tight, sound knots make it very popular for knotty paneling.

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Write for free illustrated book about Ponderosa Pine.
Address: Western Pine Association, Yeon Building, Portland 4, Oregon.

In the experimental snow melting system placed in walk at I-B-R Research Home, the coils were made of \( \frac{3}{4} \)-inch steel pipe with all connections welded. Pipes are spaced on 12- and 15-inch centers. The five-inch gravel fill and part of the reinforcing mesh are located under the coils. The slab thickness is five inches with approximately two inches of concrete both above and below the pipes tests are to be made on this system to obtain information on operating costs and loads encountered.

The equipment required for a hot water snow melting system consists of \( \frac{3}{4} \)-inch coils under the area where snow is to be melted, a circulating pump, and a heat exchanger somewhat similar to a large indirect water heater. Small systems are usually manually controlled, although controls have been developed to automatically turn them on and off as needed. Since the snow melting coils are subjected to temperatures below freezing, they must be filled with a non-freezing solution. During operation, boiler water is circulated through the shell of the heat exchanger, warming the solution in the snow melting circuit. The solution in the snow melting circuit is circulated from the heat exchanger through the coils and back to the heat exchanger by a small pump.

A common practice in the design of snow melting coils is to use \( \frac{3}{4} \)-inch pipe on 12-inch centers. The pipe is buried in the concrete walk or driveway with two inches of concrete above and below the pipes.

HEATING
(Continued from page 143)

comfort within the home, but in areas where the snowfall is heavy, it can be a welcome labor saving device which many prospective home owners find attractive.

The cost of installing a snow melting system is nominal, usually amounting to only two or three dollars per square foot of area to be cleared of snow. Operating costs are said to be less than the cost of hiring someone to shovel the snow off the walks. An experimental snow melting system has been installed in the front walk and in the driveway at the I-B-R Research Home. This winter
Build Better with Vibrapac Block

You Get Both Beauty and Permanence at an Amazingly Low Cost!

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of concrete over the pipe and at least two inches of concrete under the pipe. If bituminous type of paving is used, the coils should be placed closer together, about nine inches on centers. On driveways it is not necessary to place coils under the entire width of the slab. One or two pipes under each wheel track will usually be sufficient. Variation in snow melting capacity can be ob-

View of supply header for both circuits in I-B-R Research Home. A valve is included in the return of each circuit (along garage wall) so that either circuit can be operated alone or both together, as desired. In this arrangement the pipes are installed for melting the snow along the tire tracks only.

tained by a change in the temperature of the fluid circulated. Design procedures for snow melting systems are given in the "Guide" published by the American Society of Heating and Ventilating Engineers. Design manuals also have been published by manufacturers of equipment and by some trade associations.

Summer Cooling

Throughout most of the United States the winters would be unbearable without some form of heating for the homes we live in. On the other hand the summers are not so severe and throughout most of the country they are of shorter length. No doubt this is one of the reasons why so much work has been done to improve the performance and efficiency of house-heating systems and until recent years relatively little to develop suitable cooling equipment for residences.

The present trend seems to be to develop methods of providing both heating and cooling with the same equipment. Such units are now available for all types of heating systems, including hot water. Homes heated by hot water systems can have summer cooling by the use of room units resembling convectors and containing both heating and cooling coils. These units are used in place

(Continued on page 148)
BEE GEE modern wood windows

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H. B. WIGGIN'S SONS CO.
56 Arch St., Bloomfield, N. J.

HEATING

(Continued from page 146)

of the conventional radiator or convector. They can be installed in all rooms of the house to provide complete summer cooling, or they can be used in only one or two rooms. The same piping system is used to circulate chilled water through the summer and heated water through the winter. The dual-purpose room units do not have to be installed at the same time as the heating equipment, but if there is a possibility that they will be added later, certain provisions which are difficult to add should be made while installing heating equipment.

If summer cooling is to be added to a hot water heating system, the pipes should be covered with an insulation intended for use on cold water lines. This insulation has a watertight covering so that moisture from the air will not get to the cold pipes during summer operation. Provision should be made in the piping near the boiler to attach the water chiller and make it possible to circulate the water either through the boiler or the water chiller, depending upon the season. In multi-story houses drains should be provided to carry off the condensate from all units located above the first floor. Drains for first floor units can be provided at the time the units are installed, providing there is a basement or crawl space. If the house has slab-on-ground floor construction, it is usually cheaper to provide all drain connections before the floor is poured.

It is not necessary that the summer cooling system be made a part of the heating system. Individual units may be used. These may be of the window type, or if preferred, they may be a cabinet type of unit which resembles a convector in appearance. Individual room units contain all equipment, including the compressor and condensing unit. They require an opening to the outdoors, either through a window or the wall, through which air to cool the condenser is brought in and discharged. Condensate is discharged to the outdoors as a vapor in the air used to cool the condenser; thus these
units require no plumbing connections. Oftentimes units of this type can be installed in one or two rooms more cheaply than the cost of a complete central system. In localities where the summers are short and mild, such an arrangement will produce very satisfactory results.

In discussing both heating and cooling there is a tendency to ignore the effect of geographic location. Some sections of the United States have very hot summers and the winters are so mild that there is little or no need for heating. At the other extreme there are areas in which the winters are long and severe, but summer temperatures are mild and pleasant. Obviously equipment suitable for one of these conditions is not necessarily suitable to the other. In selecting equipment the relative need of heating and cooling should be taken into consideration. In those areas in which summers are severe and winters mild, first consideration should be given to an adequate cooling system, and heating should be made secondary. On the other hand, in areas where the winter is severe and the summer mild, the major emphasis should be placed on good heating. In this way maximum comfort can be provided at minimum cost over the greatest possible part of the time.

It is important that the house be constructed to keep summer cooling loads as low as possible. However, nothing has been said at this time concerning the importance of window shading, use of insulation, etc., in reducing summer cooling loads since this subject will be treated in a later article of this series.

Watch a builder like Joseph Valle behind his Berger Convertible and you'll see why he says: "It's one of the first things on my job and practically the last to leave. I use it for checking existing site contours, staking out foundations, checking cuts and fills, laying out sanitary and storm drains—right up to establishing final grades. And it hasn't been down for repair in the two years I have it."

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This table compares the Berger Convertible with the other two leading instruments—shows why so many more builders buy BERGER.

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<tr>
<th>TELESCOPE</th>
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<th>Convertible No. 2**</th>
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<td>Aluminum</td>
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<tr>
<td>TELESCOPE CLAMP</td>
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<td>No. 2 Berger</td>
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See "how to" pictures next page

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The tacker has all-steel construction; mechanism is of hardened steel with an all-chrome head and plastic handle. Arrow Fastener Co., Inc., Dept. AB, 1 Junius St., Brooklyn 12, N.Y.

FOR MORE INFORMATION USE COUPON, PAGE 172
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Tile Contractor Damman has used Mosaic Tile for 25 years. Mosaic Tile has been the choice in 2,000 of his jobs in the past several years. Mr. Damman is now working on "Lake Marie Homes," built by Harry Brittain, who has built 10,000 Southern California homes in thirty years.

Successful builders and tile contractors know what makes new homes sell. Builder Brittain states "Mosaic Tile is one of the largest factors in the sale of these homes. Homemakers like its attractiveness, easy maintenance and durability."

In new "Lake Marie Homes," priced from $11,500.00 to $12,500.00, Mosaic glazed tile is used on all kitchen counters and splashes, around all tub-showers and on all shower walls. All bathroom and shower floors are Mosaic unglazed ceramic tile. Each prospective buyer is offered a choice of six different Mosaic color combinations.

Give your customers Mosaic Clay Tile. It will help sell your houses faster, make your buyers happier. See Mosaic Clay Tile today at your nearest Mosaic showroom, or at the showroom of your Tile Contractor. For helpful tile-fact literature, write Department 35-17, The Mosaic Tile Company, Zanesville, Ohio.

Mr. and Mrs. Richard H. Munn in their new "Lake Marie" home. Mrs. Munn is delighted with the attractive combination of Mosaic Tile colors in the house and she likes the easy maintenance of tile. "It makes housekeeping so much easier!" she says. "And it will remain beautiful without costly redecorating or repairing."
WHEN WALLS DISAPPEAR, even small houses seem to grow larger. Enclosed space becomes more usable. Houses attract buyers faster.

This home shows the way to make certain that an open plan assures comfortable living. Keep plenty of ventilation in the picture with Andersen Windowalls. Andersen complete wood window units fulfill all the demands made of a window—including the demand for lots of fresh air when the owner wants it—the demand to provide the protection of weathertight, transparent walls. How about Andersen Windowalls for your customers?

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

Andersen Corporation
BAYPORT, MINNESOTA
new products

AWNING-PICTURE WINDOW AB25412

A new window service for architects and builders is called the "Panoramic Package." It provides a complete variety of standard wood awning sizes together with custom-sized picture windows, delivered preassembled to the job in heavy fiberboard cartons. This service eliminates the need for on-the-job assembly, reducing installation time considerably. The design of the wood awning windows, similar to double-hung windows, enables them to adapt to any type of wall, eliminating special wall construction problems.

Hard bronze channels provide smooth gliding surface for the metal-on-metal hardware. Each window sash is provided with individual adjustment plates for adjusting the wood window for degrees of closing tightness. All operating hardware is internal and hidden. Windows automatically lock in any open position.

Pour faster with a Jaeger

Look how this mixer puts out stiff concrete as fast as you can take it. You charge in only 5 to 7 seconds with Jaeger's "Skip Shaker" loader. You mix and remix more thoroughly with Jaeger's criss-cross action, then discharge in another 5 to 7 seconds with Jaeger's big bucket and flight blades and special "catch all" spoon.

Available in 3 1/2, 6, 11, and 165 sizes. Ask for Catalog M-10.

THE JAEGER MACHINE COMPANY

PUMPS • COMPRESSORS • HOISTS • TRUCK MIXERS • PAVING MACHINES

160 AMERICAN BUILDER
NEW AMERICAN-STANDARD POST-FORMED COUNTER TOPS

New American-Standard counter tops are a practical and glamorous feature for the modern kitchen. From integral back splash to no-drip water bead edge these counter tops form a continuous, unbroken surface that has no joints or crevices. They're made of Micarta, the plastic material which retains its beauty even after years of daily use, bonded to a sturdy plywood core. The non-directional scatterline design of the tops eliminates any pattern conflict in turning corners or in adding new tops at a later date. Available in Gray, Dark Green, Lime, Yellow, Red. Special new union strips, joint moulding strips and end caps are available as top quality finishing accessories.

NEW GRAY BATHROOM FIXTURES

Beautiful American-Standard bathroom fixtures now are available in another distinctive color—Platinum Gray. Harmonizing perfectly with virtually any decorative scheme, this new color permits wider flexibility in bathroom planning. And Platinum Gray is one color nearly everyone can agree on; a bathroom featuring American-Standard fixtures in this smartly modern color will have outstanding customer appeal. In addition to the new Platinum Gray, you can choose from six other popular American-Standard colors and white. All colors are true and permanent. They will not dull or fade.

For further information on American-Standard products see Sweet's Light Construction File.
Nobody knows better than you that in today's market the extra values built into a house make the difference between Sale and No Sale.

Most "extras" add to your cost—but Durall Aluminum Tension Screens reduce it!

Durall consumer prices range from $3.65 to $5.82 for most sizes. Compare that with your present screening costs!

Not only will these new and different screens cost you less—your home owner will be everlastinglly grateful to you because he'll have no upkeep. Duralls last much longer than conventional screening—never warp, rot, rust or stain.

Duralls are pre-made to fit! That means your installation costs are sharply cut. It also means the home owner can put them on or take them off from the inside in just nine seconds. He can roll them up to store in a nearby closet instead of lugging them from window to basement or attic.

Ask your lumber or hardware dealer today for money-saving, time-saving, sales-building Durall Tension Screens.

DURALL
ALUMINUM TENSION
SCREENS

N. Y. Wire Cloth Co., Inc., New Canaan, Connecticut
Funny thing about Porter-Cable Tools . . . it's hard to find anyone willing to sell his.

Seems the owner grows mighty fond of it. Likes its feel—its balance—its knack for getting work done in a hurry. Likes the fact that its upkeep figures out to nickles and dimes over the years.

When you want to lay your hands on a real good tool, stop in at your Porter-Cable dealer. Let him show you how to make your job go easier, your energy go farther, your work go better.

Model 107 3/4" Drill, shown above, $29.95. Send for free catalog of other fine quality electric tools.
Nova Insulated Sidewalls

- Sheathing and shingling in one operation
- Major savings in time, labor, materials
- Finest cedar shingles
- W-i-d-e exposures
- D-e-e-p shadow lines

Chalk line establishes level for a course of shingles

Clip and sheathing are nailed together at each stud

Kerf in butt of shingle is engaged in clip

Only one staple secures each shingle at top

Now sidewalls can be shingled and sheathed — fully insulated — in one operation. Simultaneously, you achieve the rich architectural effect of extra-wide exposures — formerly available only through luxurious double-coursing — at a remarkably low cost. Nova Insulated Sidewalls have beautiful 14" exposures and 1/4" deep shadow lines.

There are no exposed nails to rust or stain the shingles. The shingles cannot split or curl. The method saves 33% of the time, 33% of the labor and 100% of the undercourse materials otherwise required. The beauty of the finished application enhances the value of the property.

Nova Insulated Sidewalls are built with only three major materials: 16" x 96" Homasote Sheathing Panels; galvanized, 26 gauge steel Nova Shingle Clips (in 96" strips); Nova #1 Certigrade Processed Shakes (either Natural or in a choice of 9 colors).

Nova Insulated Sidewalls are eligible for FHA Insured Mortgage Loans.

The method of application is very simple — for new construction or for re-siding existing structures. May we send you the complete details? Kindly address your inquiry to Department 28.

NOVA SALES Co. TRENTON, N. J.

A wholly-owned subsidiary of Homasote Company — manufacturers of the oldest and strongest insulating-building board; wood-textured and striated panels.

FOR MORE INFORMATION USE COUPON, PAGE 172

AMERICAN BUILDER
It's true! Now you can offer beautiful, custom-planned all-steel kitchens in the homes you build... with more features than ever before in any given space. At the same time, you enjoy the economy of mass-produced steel units.

New Diana-style Youngstown Kitchens give you the long-sought-after built-in look in completely fabricated steel units.

• You get more continuous work surface in less space.
• Installation is quick and easy.

New Diana ensemble sinks combine with other exciting new units to give you added freedom in your kitchen planning. Youngstown Kitchens Jet-Tower® Dishwasher and Food Waste Disposer make your homes modern today, modern to stay.

To gain the extra sales appeal of nationally accepted Diana-style Youngstown Kitchens in the homes you build, contact your distributor today. Or write: Builder Sales Department, Mullins Manufacturing Corporation, Warren, Ohio.

NEW Built-in Beauty!
MORE Work-saving Features!
"Sold 3 G-E 'Young America'

Between 3,000 and 4,000 people went through this house in one week. The builders are now erecting 22 additional houses. This success story is being repeated in many sections of the country—month after month. Why not let General Electric help sell your houses, too? See your G-E distributor about the "Young America" program.

Feature attraction of the model home was the General Electric Kitchen-Laundry shown above with the proud owner, Mrs. Gerald Ensign, and builder Robert MacKenzie. When prospects see dependable appliances such as the G-E Range, G-E Refrigerator, G-E Disposall, G-E Dishwasher, G-E Washer and G-E Dryer, they associate the entire construction of the house with quality materials and workmanship.
Houses the first weekend!
(The builders are now erecting 22 more)

WHY DID PEOPLE BUY SO QUICKLY?

Let Mr. Robert Mackenzie, president of Contemporary Homes, Chagrin Falls, Ohio, tell you: “Of all the fine features in our G-E ‘Young America’ House, prospects were impressed most with the General Electric Kitchen-Laundry. Nothing sells houses for us like an array of wonderful, laborsaving G-E appliances!”

Isn’t it time you investigated how General Electric can help you sell houses faster?

You get faster turnover when your houses are G-E equipped. Your buyers are more pleased.

And, you or your prospects need not worry about “luxury price tags,” for G-E appliances have top consumer acceptance yet are competitively priced.

A General Electric Kitchen-Laundry can be included right in a regular mortgage—and the monthly cost to the homeowner is usually no more than that of a typical telephone bill.

How your G-E distributor will help you

Available to you is a folio of 4 new “Young America” Homes, with complete promotion plans for the opening of your model house—the very same successful promotion plans that have sold thousands of houses for other builders all over the country.

Furthermore, a G-E Distributor Builder Specialist will work with you to tailor these promotional plans to fit your problems and your market. He will place before you builder sales experience gained through many previous successful builder promotions.

Get all the facts today through your G-E distributor, or write to the Home Bureau, General Electric Company, Appliance Park, Louisville, Kentucky.

New G-E Room Air Conditioners at low per-unit cost! Models are easily installed. No plumbing required.

REGARDLESS OF PRICE RANGE, your houses can have a G-E Kitchen-Laundry

(See your G-E distributor for answers to your builder problems)

IN YOUR $9,995 HOUSES
Includes G-E Refrigerator, G-E Range, G-E Automatic Washer, G-E Disposall and G-E Cabinets. Adds as little as $2.98 monthly to mortgage payments.

IN YOUR $12,500 HOUSES

IN YOUR $16,000 HOUSES

You can put your confidence in—

GENERAL ELECTRIC

FEBRUARY 1954
new products

RESIDENTIAL AIR DRYER AB25406
A new desiccant air dryer, capable of maintaining "desert dry" atmosphere in controlled small premises, is stated to reduce relative humidity in controlled areas from as high as 90 per cent to eight per cent. The unit is plugged directly into 115-volt electric circuits; it may be controlled by a standard humidistat, and requires no drains or other connections.

In operation, the new unit brings in outside air, dehumidifies, and exhausts moisture-laden air from inside. Damp air passes through a bed of silica gel, trapping moisture within the gel particles. A small electric heater continuously regenerates the gel. In periods of high humidity, the unit will remove up to 21 pints of water per day from the air. The dryer mechanism will not frost and its efficiency is stated to improve as its control level is lowered. Bryant Heater Division, Affiliated Gas Equipment, Inc., Dept. A10, 17225 St. Clair St., Cleveland 10, Ohio.

AWNING WINDOWS AB25409
Shatterproof fiber glass comprises all or part of the vents in these awning windows. Credited with filtering out heat and glare while admitting soft, diffused light, the vents are made up in 18 colors, transparent or opaque. They range from 1/16 to 1/8 inch in thickness. Screens and storm sash are interchangeable.

Another recent development by the manufacturer is the introduction of a "balance bar" operator for awning windows in place of the customary crank handle. This is said to be especially appropriate for use in schools, hospitals and community buildings, since children cannot damage the device. Miami Window Corp., Dept. AB, 1299 S.W. 37th Ave., Miami, Fla.

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. Sizes: 1/16" x 3/8", State quantity when writing for prices to:

JOHN HASSALL, INC.
P.O. Box 2150
Westbury, New York
Established 1850

SYMONS

@ STRAIGHT WALLS
@ BATTERED WALLS
@ CURVED WALLS
@ SLABS

Ask for Estimate

SYMONS CLAMP & MFG. CO.
Dept. A-3
4301 Diversey Ave. • Chicago 39, Illinois

For more information use coupon, page 172
One Minute...

TO MORTISE AND BORE a DOOR and JAMB

Completes All Mechanical Work

COMBINATION MORTISE & BORING MACHINE

For the potential Door Unit Manufacturer, the Door Manufacturer, Retail Lumber Dealer, Project Builder, Pre-Fab House Builder, General Contractor, or anyone using two or more cars of doors per year. One insertion of the door and the jambs into this new machine completes all work for either R.H. or L.H. Door. You handle your product only one time. Materials are held and centered by hydraulic pressure. Any stock Door or Jamb can be mortised and bored. Any type cylindrical lock can be used, 3½” or 4” butts can be used.

- In 35 SECONDS, the machine bores for face hole and the plunger hole, mortises for plunger plate and hinge butts. Flush or panel doors may be used.

- In 25 SECONDS, the machine will mortise for hinge butts, strike plate and plunger hole on jambs. Either split or straight jambs can be used. Any width or thickness stock jamb can be used.

This machine is equipped to handle any width door from 1'-6" wide to 3'-0" wide; any height door from 6'-0" to 7'-0" high; any thickness door from 1½" to 2". Approximate size is 7' x 12'.

We deliver and install the machine and give your mechanic or foreman two days instruction in the simple operation of same. The machine is operated by one man.

DELIVERED AND INSTALLED ANYWHERE IN U.S.A. $2,985.00

CUSTOM MACHINERY COMPANY

P. O. BOX 1803 • TELEPHONE WE-6711 • FORT WORTH, TEXAS

FEBRUARY 1954
...rich appearance helped sell houses"
— W. P. "Bill" Atkinson
Oklahoma City Builder-Developer

...that's the beauty of Higgins Block

No wonder builder after builder is chalking up big selling successes with Higgins Block. Just look at the blocks themselves, with all the well-loved grain and texture effect of oak. And just look at the specifications:

- 9" x 9" net face hardwood blocks — easy to install
- 3-ply cross-grain construction — when properly installed will not warp, buckle, cup or crack
- Selected oak face — comes with final finish
- Pressure bonded with marine-type glue — water-repellent, climate-proof
- Deep-impregnated with famous "Penta" — rot-proof, termite-proof
- Grooved back anchors into adhesive — quiet and comfortable
- Can be laid without special preparation directly on concrete slab — ideal for radiant heat
- Blocks fit flush — without large, visible V-grooves

Use this coupon for free sample block and literature
Gentlemen: Please send sample block and literature to
Firm Name
Address
City Zone State

new products

PLASTIC FLOOR TILE AB25416
Pabco Floron Tile is a new type of plastic floor covering that can be installed safely on grade-level slab concrete as well as on wood floors. The tile features a dense but resilient plastic surface applied to an exclusive, rubberlike mastic backing. The brushed design is available in seven patterns and is made in nine-inch squares.

The tile’s long-wearing characteristics, its resistance to alkali, acid and grease, the attractiveness of design and color and its smooth, easy-to-clean surface are said to give this tile great appeal for commercial installation. Impartial tests on Floron and competitive tiles show that Floron rated high in dampness resistance, alkali abrading resistance, initial and residual indentation, flexibility, grease and acid resistance. Pabco Products Inc., Dept. AB, 475 Brannan St., San Francisco 19, Calif.

STAPLING HAMMER AB25403
This stapling hammer drives a new wider staple of .102" x .030-inch wire with a 1"-inch leg length, stated to be twice as wide as those used by other medium-duty stapling hammers.

The hammer is designed for tacking jobs where a greater surface contact is needed. Applications of insulation batts and roofing paper are examples of work that can be done effectively with the wider staple. The increased surface contact helps to prevent paper materials from tearing away from the staple. One hand and one blow drive the staple all the way home, even into hard woods, the manufacturer states. Illustrated model weighs two pounds, eight ounces, and holds a strip of 100 staples in its magazine. Bostitch, Dept. AB, 1010 Mechanic St., Westerly, R.I.
One big reason why General Doors cost less to hang

If you have wondered why General Doors seem to go up easier and stay put without complaint, the answer can be found in General’s manufacturing process.

First of all, frame materials and panels are dried to a uniform moisture content of 5 to 7%. Then, General’s giant hot presses drive the finest moisture-resistant glues deep into the assembled doors, sealing out moisture—the most common cause of warpage.

General Doors are not only flat, true and accurately sized when they leave the plant, they remain that way, saving you time and money on the job.

General Plywood Corporation, Louisville 12, Kentucky

All General Doors are HOT pressed

The doors that pass the “Elephant Test”
new products

AIR CONDITIONING UNIT AB25420

This summer air conditioning unit is designed to increase the salability of low-cost housing. It was introduced at the recent National Association of Home Builders' exhibit in Chicago. The unit, known as the Climatrol Type 910 recessed summer conditioner, is designed for in-the-wall installation. It is air-cooled, self-contained (coil and compressor in the same casing) and compact enough to fit in two stud spaces below a window.

While adaptable to all types of homes, the unit is recommended for providing cooling in low-cost homes because of its low installation and operating costs. It is available in two sizes, ½ and one h.p. It uses 220-volt, 60-cycle current. L. J. Mueller Furnace Co., Dept. AB, 2005 W. Oklahoma Ave., Milwaukee 15, Wis.

BASEBOARD RADIATION SEAL AB25415

Delivering the positive insulating seal so essential to efficient baseboard radiation, "Alfoil Asbestos No. 103" is said to be the first reflective insulation especially designed for use by the heating industry. It consists of pure aluminum foil bonded to asbestos paper with a special heat-resistant adhesive which cannot soften or "bubble," and will not run, form odors or permit the foil to peel. According to an independent laboratory, Alfoil Asbestos is stated to be equal to nearly two inches of plain air-cell asbestos. Packaged in rolls of 100 lineal feet, it is available in seven widths: 6, 9, 10, 12, 18, 24, 36 inches. Reflectal Corp., Dept. AB, 155 E. 44th St., New York 17, N.Y.

RESIDENTIAL LOCKSETS AB25423

New "600" line of locksets for fine residential and commercial building are cylindrical-type locks stamped from heavy-gauge steel and brass. They are precision-made and hand-finished to a lasting brilliance in polished and satin brass, chrome and bronze.

The lock's dual-locking feature combines push-button and turn-button in one lock, to provide automatic two-way locking. When the button on the interior knob is pushed and turned, the interior knob turns independently, while outside knob remains locked, giving home owners added protection and convenience. Other features include simplified cylinder reversing, adjustable strike plate, self-adjusting knobs, feather-touch knob action. New line also has a time-saving installation feature. Kwikset Sales and Service Co., Dept. AB, Anaheim, Calif.

SCAFFOLD BRACKETS AB25419

An efficient working stage for building and construction operations which can be erected by one man in a few minutes is made possible by the "Step-A-Time" scaffold bracket and its accessories. The bracket consists basically of a sturdy steel unit with angle braces welded to the frame. Hanger gussets are keyhole-punched so that the frame may be attached to any accessible location. All threaded parts are of zinc-coated steel for long wear. Brackets are furnished in pairs for right- and left-hand operation. Wing nuts on the clamp rod hold the ladder securely in position and may be adjusted toward or away from the building, so that the inside of the ladder may be as close as six inches or as far out from the building as 20 inches. The stage is laid across ladder ranges, thus the ladders, not the brackets, sustain the weight. Brackets fold to a 36x17x2-inch package when not in use. Beaver Art Metal Corp., Dept. AB, Ellwood City, Pa.

TAPING MACHINE AB25414

This taping machine for drywall applicators is said to eliminate 90 per cent of the hand work in spreading and taping operations, while doing it five times faster. One operator and a finisher can do in one and one-half hours what formerly was a full day's work for an applicator and a finisher, manufacturers say.

The machine weighs only eight pounds when loaded with tape and joint cement, and is thus maneuverable and easily controlled. It tapes over open seams of Sheetrock and over outside corners and angles. The unit holds 250 feet of tape and handles any standard width up to 2½ inches. Savings on cement are assured because the cement is spread automatically to any desired thickness; mud will not collect in the machine because of a tight rubber gasket seal. Goldblatt Tool Co., Dept. AB, 1910 Walnut St., Kansas City 8, Mo.
You can depend on DESIGN to sell the homes You build

And Good Design is Built Right into Gate City Wood Awning Windows.

Windows are quick to catch a prospective buyer’s eye the moment he approaches a house; and, on entering a room, the windows again command his attention. That’s why so many builders agree that well designed windows can make sales faster than any other single feature.

With pleasing horizontal lines, and wood sash offering maximum possibilities for colorful decoration, the beauty of Gate City Windows speaks for itself.

More and more home buyers are requesting awning type windows and more architects are specifying Gate City.

See our Catalogue in Sweet’s.
TRUSCON METAL DOORS AND WINDOWS
ADD EXTRA HOME-SELLING FEATURES

Extra beauty, utility and value
provided at low installed cost

Get set now for 1954 selling! Add new interest and excitement to your homes. Make them better competitive values than ever before. Give buyers "plus" features and conveniences—and hold your costs—by standardizing on Truscon quality residential building products.

The big Truscon line includes steel and aluminum windows and interior steel doors for every room, every home style. All are easy to install. All are lasting values in home comfort and convenience. All are available in warehouse stocks. See Sweet's File for details and specifications, or write Truscon for latest literature.
What woman can resist the wonderful convenience of real sliding doors? Plan them for every closet. Truscon Steel Sliding Doors are complete with frames, easy to install. Insulated. Glide on nylon. 6'8" and 8'0" heights.

NEW!

Sell the door that sells itself! The Frantz No. 10 does the selling job for you because it has everything you could want in a one-piece door, plus “Powermatic” Action that clinches the sale every time! Needs only 2” headroom, and is as beautiful in looks as in operation. Pre-fitted at the factory for easy installation, designed to give years of trouble-free service, you can show this door with pride.

Check up on the No. 10 and other Frantz Overhead Door models. Write for a copy of Catalog No. 302, which gives full details of the beauty and easy operation of FRANTZ line of Overhead Garage Doors.

INSTALL FRANTZ • YOUR BEST DOOR FOR ’54!

No. 10
Overhead
GARAGE DOOR

FRANTZ MANUFACTURING CO., STERLING, ILL.
KITCHEN DESIGNS FOR ONLY $5? Yes, it's a new service for specialists in hardwood kitchens. You send rough floor plan with overall dimensions to be used, preference of natural or enamel cabinets, color and style desired, and Mutschler then advises cost for detailed floor plan and artist's sketch of kitchen as it will appear when completed. (Cost, based on number of appliance and cabinet units used, may be low as $5.) Your "okay" starts a kitchen design like those featured editorially in leading women's magazines ... a design that sells the kitchen, sells the home! For free quotations, mail rough plan and information to KITCHEN DESIGN SERVICE, Mutschler Brothers Co., Nappanee 4, Indiana.

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 "Bev-All" which prevents "dishing-in" or "cupping." Sturdy, Styron plastic withstands hard knocks or blows. Don't overlook the Mastic-Seal Rib either, that seals mastic in-water out! It prevents water damage in shower or any areas exposed to water! For the complete Tilemaster story, write A-1 Plastic Molders, Inc., 1415 Diversey Pkwy., Chicago 14, Ill.

IF YOU'RE BUILDING out beyond city water mains, you'll want to know all about Burks Super Turbine Pumps and Water Systems. The Burks Super Turbine is famous for its Life-Lok feature—an engineering advantage that assures more gallons per minute, better performance, and up to 40% longer life. Guaranteed to lift water 28 feet as a shallow well system, the Burks Super Turbine is readily adaptable to deep well application simply by adding an educer. It's self-priming, fully automatic, has only one moving part, and is available in a wide range of capacities. For full details, write Decatur Pump Co., 13 Elk St., Decatur, Ill.

YOU'VE GOT YOUR EYE on the same thing home-buyers have—if you're looking for extra beauty, extra value at no more cost. And I've found a top-notch answer in Fremont Rubber's colorful, long-lasting line of Vinatile and Vinatop. It matches—fully automatic, has only one moving part, and is available in a wide range of capacities. For full details, write Decatur Pump Co., 13 Elk St., Decatur, Ill.

MR. ROT and MR. TERMITE go hand in hand to cause untold millions of dollars in damage each year to homes and other structures. Did you KNOW that replacement of rotted or termite infested wood uses an estimated 20% of our annual lumber cut? This damage takes place in 47 of the 48 States. Protect your customers and your reputation as a good builder...use WOLMANIZED brand pressure-treated lumber. American Lumber & Treating Co., Chicago, Illinois or their Licensees are the ONLY producers of WOLMANIZED one specification pressure-treated lumber. Processed and produced to prevent rot and eliminate termites. Sold by Lumber dealers coast to coast. Use coupon for FREE information.

DID YOU SEE those quick-and-handly new "double-coursed" shake units at the NAHB Show? Called "GLUMAC Units," they're just about the slicest idea yet—with deep-grooved cedar shakes bonded to a tapered backer-board. Big, easy-to-handle panels, 16" x 46" and end-lapped, GLUMACs build sidewalks better and up to three times faster! Just 22 pieces cover 100 sq. ft.—compared to over 400 separate shakes and under-coursing formerly needed. Tops in beauty, quality and economy, too! See the Yellow Pages, or write Perma Products Co., Cleveland 27, Ohio.

AN IN-SINK-ERATOR IN THE KITCHEN will many times mean the difference in the prospective "lady of the house" being enthusiastic or simply interested in the new house you have to offer. One thought goes through her mind when she sees an IN-SINK-ERATOR: "No more garbage!" It's a wonderful and inexpensive way to get her on your side. And the manufacturer has a model just for builders—Model 33. It has all the famous nationally advertised IN-SINK-ERATOR features: continuous feed, simple self-service, automatic reversing action, yet has a simple money-saving arrangement for installation in new buildings where rough-ins may be controlled. Write In-Sink-Erator Mfg. Co., Racine, Wisconsin for details.

BUILDING BUY-WORDS 2-3
5510 Cornelia Avenue
Chicago 41, Illinois

Please send information on products checked:
[ ] MUTSCHLER'S Kitchen Design Service (Include rough plan)
[ ] A-1 PLASTIC MOLDERS' Tilemaster Story
[ ] DECATUR PUMP CO.'S Burks Super Turbine
[ ] FREMONT RUBBER'S Vinatile and Vinatop—Free Samples
[ ] AMERICAN LUMBER & TREATING'S Wolmanized Lumber
[ ] PERMA PRODUCTS Glumac Shake Units
[ ] IN-SINK-ERATOR Mfg. Co.

Name
Address

FEBRUARY 1954

An Advertising Page.
SUCCESSFUL PACKAGED DOOR UNIT
The READY HUNG DOOR was the first successful door unit because it was Job Engineered so that nail driving only is required to install it. There is nothing to saw, fit or plane.

SHIPPABLE DOOR UNIT
The READY HUNG DOOR is the first to be packaged by a method which will deliver the unit with the joints square and tight. The READY HUNG DOOR crating method (Patented*) will deliver the unit 15 or 1,500 miles in perfect condition.

IN UNIFORM QUALITY
Assembly line production assures uniform high quality workmanship with only the finest of materials. The READY HUNG DOOR Unit is precision built on specially designed high production machinery and incorporates features which insure a better finished job.

IN SAVINGS TO THE BUILDER
The READY HUNG DOOR installs in less than 20 minutes, saving up to $50 per house in the labor of installation. READY HUNG DOOR Units cost a little more than conventional material but the tremendous saving in installation labor always makes the installed cost less.

READY HUNG DOORS SAVE TIME—LABOR—MONEY—WASTE
WORRY—SKILL...
DO A BETTER JOB
*PATENT NO. 2489029
At Every Important New Housing Project
you always find

VITRIFIED CLAY PIPE

Over 60,000 feet of Vitrified Clay Pipe have been installed to serve 1,000 homes in the new $15,000,000 Scottsdale Housing Project in Chicago. It is the largest home development in Chicago in more than six years. This "suburb within the city" was designed by A. J. Del Bianco and is being built by Raymond L. Lutgert Construction, Inc. Sewage contractors are the Di Paola Bros.

When you see a project on which outstanding designers, engineers and contractors are staking their reputations—you always find Vitrified Clay Pipe.

Experienced construction people will tell you that Clay Pipe is the only permanently corrosion-proof pipe. Acids and alkalis can't weaken it ... detergents can't make it soft and spongy ... sewerage gas does not cause it to crumble and give way ... backfill loads and ground movement can't cause Clay Pipe to "oval" or squash out. Clay Pipe is so good that it is backed up with a 50-year guarantee.

The manufacturers of Vitrified Clay Pipe work constantly to make this fine product even better through research and testing. You can be sure you're getting the latest and the best when you specify Vitrified Clay Pipe. It is performance-proved ... precision-produced ... permanently safe.

NATIONAL CLAY PIPE MANUFACTURERS, INC.
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Go the American way to volume selling with the American "Patriot"

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WE ARE CONVINCED THAT THE AMERICAN "PATRIOT" IS
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468—TEMPERATURE CONTROLS—16-page booklet presents Electronic Moduflow, completely automatic home temperature control system. Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., Minneapolis 8, Minn.


470—PLUMBING FIXTURES—new 146-page, 8½ x11-inch catalog offers practical organization of material and easy reference. Ten full-color pages illustrate bathrooms, washrooms and kitchens, with floor plans included. Large illustrations picture complete line of fixtures and fittings. Many new baths and lavatories are listed for the first time. Modifications and improvements are noticeable in bath and lavatory sections. Kohler Co., Dept. AB, Kohler, Wis.

471—SWIMMING POOL EQUIPMENT—28-page illustrated catalog contains data on everything needed to build a new pool or improve an existing pool. Illustrations and prices of complete range of pool fittings, detailed information on filters, pool ladders, underwater lights and chlorinators are given. Catalog describes automatic skimmers, diving equipment, underwater vacuum cleaners, etc. Modern Swimming Pool Co., Inc., Dept. AB, 1 Holland Ave., White Plains, N.Y.

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IMPROVED 78" ONLY

Plain Electroplate Finish 78" $15.95—72" $15.45
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For setting door jambs and window frames! No other like it. 4 Plumbs, 2 LEVELS. Use either end or edge up. Weighs only 3 lbs.

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Spirit tube holder (50c) replaced in a minute with screwdriver. An ideal gift for any occasion. Send check or M.O. express prepaid, or C.O.D.

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IMPROVED VINYL-PLASTIC TILE FLOORING

- Available in both low-cost standard gauge and 1/4" heavy-duty thickness.
- Vinyl-Plastic throughout—no felt backing.
- Lasts for years!
- Can be installed on, above or below grade.
- Resists dirt, grease, acid, alkali and fire.
- 13 striking color combinations.

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DEPT. M5-2

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of course, it's electric!

The plus that makes the sale!

Turn lookers into buyers with this handsome Westinghouse Dishwasher

Your prospects will quickly spot this bonus feature in the kitchens of your homes. It's styled to arrest attention. Dishwashers are plumbed-in appliances that your prospects probably don't own and can't bring with them if they do. But they want one.

Young people, with growing families, want a Westinghouse Dishwasher because it saves time and sanitizes dishes for health protection. Working mothers, and there are millions of them, will be delighted with the way it lightens their housekeeping chores.

You'll like this Under-Counter Model because it is easy to install. Only 24" wide, it slips under standard height counters. The front-opening, top-loading design means no sacrifice of valuable counter work surface. And, it does not require a separate drain line or trap. Other models available are the 24" free-standing Cabinet, 48" Dishwasher-Sink and a Portable. Contact your Westinghouse Distributor or write direct for additional specifications.

WESTINGHOUSE ELECTRIC CORPORATION
Electric Appliance Division - Mansfield, Ohio
Makers of Refrigerators, Home Freezers, Ranges, Loundromats, Dryers, Dishwashers, Food Waste Disposers, Water Heaters, Vent Fans and Room Air Conditioners.

YOU CAN BE SURE...IF IT'S Westinghouse
"You can't skimp anywhere when you build quality homes. That's why we use Revere Copper Water Tube for hot and cold water lines and service lines,"
say the HENDY BROTHERS
Arcose Company, Cincinnati, Ohio

"When we sharpen our pencils to find ways to cut construction costs naturally we look for materials, means and ways to do things at less cost but, not at the sacrifice of quality. We have found Revere Copper Water Tube is one item on which we can cut costs without cutting quality.

"The slightly higher material cost is more than offset by the ease of handling, and the speed of installation plus the fact that no allowance in pipe size need be made for rust accumulation... for Revere Copper Water Tube does not rust. And finally, we are dealing with a metal that has proven its enduring qualities for centuries. All of which results in happy home owners and protects our reputation as builders of quality homes."

Benefit by the experience of the Arcose Company. Keep out of trouble with copper. There is not another metal or alloy that has all of its desirable construction characteristics. Next time you write specs remember: there is no "OR EQUAL" for copper water tube for radiant panel heating, hot and cold water lines, underground service lines, air conditioning and processing lines, waste stack and vent lines. There is a Revere Distributor near you. And, if you have technical problems, he will put you in touch with Revere's Technical Advisory Service.
To help you really score in '54, Celotex hits the residential construction market with a great new advertising campaign. Month after month you'll see big, colorful, eye-catching ads—working for you—in THE SATURDAY EVENING POST, BETTER HOMES & GARDENS, AMERICAN HOME, SMALL HOMES GUIDE.

Make the most of this powerful sales help. Tie in by stressing to prospects that your homes are built with genuine Celotex Products. This smooths the way to sales because a third of a century of national advertising leadership has created nationwide preference for the brand name Celotex!
3 important savings
by using Double-Waterproofed
CELOTEX INSULATING SHEATHING
instead of ordinary sheathing

"Of the many reasons we have for using 4' wide, 25/32" thick Celotex Double-Waterproofed Insulating Sheathing exclusively, perhaps the most important are: First, it saves material by eliminating the need for corner bracing. Second, it saves labor because it goes up easier and faster. Third, it saves time because its asphalt coating provides such effective moisture protection that after-rain delays are minimized. In addition, Celotex's double-waterproofing process prevents moisture absorption during construction, thus avoiding the risk of enclosing moisture in the walls."

David Refkin, President, Island Construction Company Division of Long Island Homes, Milwaukee, Wisconsin

Mr. Refkin's letter on the practical job advantages of Celotex Double-Waterproofed Insulating Sheathing is typical of reports from builders in every part of the nation. They have found it saves labor and materials—speeds construction—gives your homes the big, added selling feature of fully insulated sidewalls! Applied, Celotex Insulating Sheathing costs no more—usually LESS—than ordinary sheathing. Yet it offers you all these extra advantages . . .

1. Insulates and Weatherproofs as it builds. All at one cost. No building paper needed.
2. Laminated for Extra Strength and rigidity. All Celotex 7/8" Insulating Sheathing is made of 2 plies, permanently bonded.
3. No Corner Bracing Needed to meet F.H.A. requirements, with 4 ft. wide, 25/32" thick Celotex Insulating Sheathing. Has approximately 30% greater strength than ordinary sheathing with let-in bracing.
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 special treatment that coats every fiber; 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 fibers—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

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It's double waterproofed!

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Please send me free the new Celotex booklet, "40 Questions and Answers about Insulation Board Sheathing."

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with patented demountable cushion that's replaceable in minutes right on job—no long, costly delays when nails rip cushion. Designed and built to eliminate vibration and chatter, so you get smooth floors easily. Double, self-adjusting belts, sure-grip clamps, high-speed cutting keeps jobs rolling, enable you to sand more floor daily.

HOLT Rotary Edgers for quick, easy sanding of edges, corners, stairs, closets, etc. Two-hand front and back controls permit fast starts and stops, improve control on close work.

HOLT Floor Machines put a sheen on floors that wins friends and extra business. Use for waxing, polishing, scrubbing, rug shampooing, steel wooling.

Take the HOLT way to more profitable floor jobs—mail coupon TODAY.

AMERICAN BUILDER
Why take chances on Hot Water?  This builder doesn't!

This house at Shanopin Highlands, Pittsburgh, Pa., was built by Mr. G. K. Meyer. He says: "Although I'm building in a more conservative part of the country, I find home buyers here eager to accept progressive ideas. That's why I put an Electric Water Heater in every house I build. It keeps me out of 'hot water' by keeping my customers in it."

Why risk any question about the hot water supply in the homes you build? You can sell them easier by installing Electric Water Heaters.

Home buyers want to be modern electrically—so they will want this water heater that automatically assures an ample supply of hot water at any hour of the day or night. They'll like the fact that it's clean in operation, and doesn't heat up the area where it's installed, because the tank is so completely and heavily insulated.

The Electric Water Heater is good for the builder—as well as his customer. Since it can be installed anywhere, hot water lines can be short—to reduce installation cost and minimize radiation loss. That's why you should...

QUIZ FOR BUILDERS

Q. Where is the water heater installed in this house?

A. Here it is installed in the basement. Some builders install it in the kitchen, others in the garage—or even in a closet. It can be installed anywhere that's most convenient and efficient—without regard to flue or vent.

Be modern... live Electrically!

Equip your homes with electric water heaters

They're what people want!

ELECTRIC WATER HEATER SECTION
National Electrical Manufacturers Association
155 East 44th Street, New York 17, N.Y.

FEBRUARY 1954

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REX • RHEEM • SEPCO • A. O. SMITH • THERMOGRAY • WESIX • WESTINGHOUSE
Thousands of home builders flocked to see our new “CADET” at the NAHB Convention in Chicago last month. It stole the show! Perhaps you were there. If so, you know what amazing values you could offer as a National Homes dealer, with the 2-bedroom model at about $4800 plus lot, the 4-bedroom at approximately $5400, plus lot! Right in your town—today—there’s a terrific pent-up demand for just such homes. Some builder will cash in on that waiting market: why not YOU? Write, wire or phone for complete details on what it can mean to you to build the “CADET” and other fast-selling Nationals!

**SELL EVERY BUYER WITH NATIONALS!**

Besides the incredibly low-priced “Cadets,” the 1954 National line includes the thrifty “Pacemakers” . . . the de luxe “Custom-Liners” . . . the spectacular open-planned “Rangers” . . . covering every taste, every income bracket. It’s by far the most beautiful, most complete line of homes on the market!
This New Stanley Kit Has The Hang Of It!

This new Builders Kit saves dollars by really reducing your door-hanging time. See how many hours you’ll save on each step using the equipment in this kit.

Here’s what’s in it for you: ½ hp. motor, straight and circular gauge, router base, plane attachment, hinge templet, cutter grinder attachment, templet guide, arbors, bits, plane cutter, grinding wheels, wrenches, spindle and guide finger assembly — all in a distinctive metal carrying case.

Here’s the plane attachment for fast, flawless trimming and fitting. Safe chip disposal is positive. Cuts up to 1-13/16" wide and to 3/32" deep.

Here’s the router mortising the door for Stanley round cornered butts. It’s 6 times as fast as by hand. The hinge templet is adjustable for cutting 2 or 3 hinges on door and jamb. For doors up to 2" thick. Grinding wheel and arbor facilitate bit sharpening. The router is also useful for molding, decorative cuts and many other interior finishing jobs.

Here’s the cutter grinder attachment with guide fingers, spindle and grinding wheel. Quick on-the-job cutter sharpening for better work. Keeps spiral plane cutters honed for top production.

For a closer look at the new Stanley Builders Kit, call your dealer or write for further information to Stanley Electric Tools, 400 Myrtle St., New Britain, Connecticut.
Build Faster, Better and more Economically with TECO TRUSSED RAFTERS

★ They speed up interior and exterior finishing by eliminating load-bearing partitions.

★ They are easily, quickly and accurately assembled with TECO Wedge-Fit connectors in conforming grooves.

★ They are erected with minimum time and labor.

★ They are so simple and easy to fabricate right at the job site, using standard lumber items procured at any lumber yard.

Here's "HOW TO BUILD WOOD FRAME TECO TRUSSED RAFTERS"

The new 12-page, illustrated booklet that shows step-by-step fabrication, assembly and erection of these versatile TECO trussed rafters.

TIMBER ENGINEERING COMPANY

3110 18th Street, N.W., Washington 6, D. C.

Please send FREE COPY of the booklet, "How to Build Wood Frame TECO Trussed Rafters."

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Company _________________________________________

Street ____________________________________________

City _____________________________________________ Zone State

a form to analyze labor costs by trades

Sheets like these, collected into a single file on a given job, enable C. A. Blomgren, semi-custom builder of Northbrook, Illinois, to keep a running track of labor costs on every house he builds.

Each trade has its own sheet, with columnar headings broken down into the various categories of work done by the trade. These man-hour records, added up periodically to give intermediate totals, not only enable the builder to check precisely on labor costs-in-progress, but if trouble is brewing, they will indicate the exact phase of the job which is guilty of upsetting cost estimates.

These sheets are filled in regularly by Blomgren's field superintendent (who also fills in the time cards from which the payroll is made up) and are rated by Blomgren as one of his most valuable cost-control tools. These records are not part of the bookkeeping system, but supplement it.
All Pella Casements come with inconspicuous Pella Rolscreens — the original inside screens that roll up and down like window shades.

Pella Casement Windows have Dual Glazing that protects against winter cold and summer heat . . . the year-round storm window.

You can create countless custom window effects by combining stock-size Pella Wood Casement Windows. Pella Windows also save money on the job because they are completely assembled and pre-fitted at the factory. Your clients appreciate Pella beauty and convenience. Only Pella gives you all 3 — Rolscreens, Dual Glazing and stainless steel weatherstripping. Available with vertical and horizontal muntins, horizontal muntins or without muntins. Glass openings up to 60" high. Patented hinge design, stronger 1 3/4" wood sash and steel inner frame. Low air infiltration factor permits use of more glass, yet saves more heat. More standard Thermopane sizes available for Pella than any other wood casement window. Investigate Pella Casement units today.

AND ELIMINATE THESE 6 WINDOW CHORES

1. PUTTING UP AND TAKING DOWN SCREENS
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FOR MORE INFORMATION MAIL THE COUPON TODAY

ROLSCREEN CO., Dept. F-19 Pella, Iowa

Gentlemen:

Please send free literature on Pella Casement Windows and name of nearest Pella distributor.

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ZONE

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FEBRUARY 1954
Built to endure the effects of time and rugged New England winters, the new Carmelite Monastery at Concord, N. H., is an example of wise construction planning. The Brideau Construction Co., both designer and contractor for this job, used brick, stone, and concrete block, bonded with joints of Atlas Mortar, to achieve this striking combination of strength, durability and good appearance.

TRUE, TIGHT JOINTS are evident in this close-up of bell tower and wall. Experience shows that masonry units are strongly bonded with Atlas Mortar and tight joints are obtained. UNIFORMLY GOOD COLOR and appearance are also characteristic of Atlas Mortar. Overall view shows it contributes materially to the clean, simple beauty of the monastery.

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.

BUTTERY PLASTICITY and good workability of Atlas Mortar are commended by masons, contractors who use it—and by architects who specify it.

OFFICES:
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Boston • Chicago • Dayton
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ATLAS MORTAR CEMENT
THE SATIN OF MASONRY CEMENTS

UNITED STATES STEEL HOUR—Televised alternate weeks—See your newspaper for time and station.
INVISIBLE RADIANT HEATING
fills every room with sun-like warmth

There's more livable space and your clients are happier with modern heating units which are out of the way and invisible.

plan homes for more Comfort
with THRUSH RADIANT HOT WATER HEAT

HEAT HOMES BETTER AT LOWER COST

NOW YOU can provide the finest automatic heating comfort in the homes you plan or build, for Thrush Radiant Hot Water Heat is well within the budget of the smallest home. It is one of the most efficient, economical and completely automatic controls for radiant hot water heat offered today.

Fuel is saved because there is never any overheating. There is no chilling or discomfort, because radiant heat is present. Room temperature varies less than one-fifth of one degree. Installation costs are reduced. Also, a plentiful supply of hot water for kitchen, laundry and bath is available the year 'round from the regular heating boiler. Get the facts now!

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Send coupon below for our new, illustrated booklet which tells all about Thrush System. Also see our catalog in Sweet's.

The Thrush equipment shown at right maintains room temperature without noticeable variation throughout the heating season.

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NEW ORLEANS BUILDER REPORTS...

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Robert D. Gibbens, President
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"All my homes have Fasco kitchen ventilating fans because they have proved to be the most efficient and economical way to reduce home air conditioning loads. They have guaranteed the home to be free of kitchen smoke and odors which so often are found in air conditioned homes. Those homes which I do not air condition are equipped with Fasco ventilating fans too. They prove to the prospective housewife that thought and planning have been a part of the kitchen construction. I am also beginning to use Fasco ventilating fans in my baths—they are plus features which sell my homes quicker!"

Robert D. Gibbens

Bob Gibbens is typical of progressive builders everywhere in his choice of Fasco Ventilating Fans for his 100 custom homes. Power-plus performance, rugged dependability, ease of installation, and wide choice of models make Fasco America's most popular ventilating fans. Customer-preferred Fasco adds a real sales punch!

Every Fasco Ventilating Fan you specify proves you build extra quality homes.

FASCO INDUSTRIES, INC.
12 Augusta Street Rochester 2, New York

MANUFACTURERS OF THE ONE COMPLETE LINE OF VENTILATING FANS
New Chevrolet Trucks for '54

Loaded with brand-new advantages you need and want!

You'll get more work done in less time and at lower cost with new '54 Chevrolet trucks on the job. They bring you more new features . . . more big new advantages than any other truck on the road.

For example, you get new engine power in all models. The advanced "Thriftmaster 235" engine combines bigger displacement and higher compression with other new features to give you greater power and finer performance. The rugged "Loadmaster 235" engine offers increased strength and stamina for heavier trucking operations. The all-new "Jobmaster 261" engine brings you extra reserves of high-compression power for hauling big loads on schedule.

In addition, you enjoy new and even greater operating economy. All three 1954 Chevrolet truck engines bring you the full benefit of thrifty high-compression power.

And there are many, many more new things you'll like about these great new Chevrolet trucks. New, roomier pickup and stake bodies let you haul more . . . save you time and extra trips. And they're set lower to the ground for easier loading and unloading. New truck Hydra-Matic transmission* lets you drive all day without shifting. It's offered not only on '2- and '4-ton Chevrolet trucks, but on 1-ton models, too. New Comfortmaster cab with one-piece curved windshield and amazing new Ride Control Seat* offers the last word in comfort, convenience and safety.

Plan now to see your Chevrolet dealer and get all the facts about the new Chevrolet trucks for '54. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

Most trustworthy trucks on any job!

CHEVROLET ADVANCE-DESIGN TRUCKS


*Optional at extra cost. Ride Control Seat is available on all cab models. "Jobmaster 261" engine on 2-ton models; truck Hydra-Matic transmission on '2-, '4- and 1-ton models.
how to install hardboard underlayment panels

Hardboard, which is manufactured in panel sizes of 3x4 and 4x4 feet, is a material that is approximately 1/4 inch thick and is found to be adaptable as an underlayment floor surface. It can be used as a base for the application of floor coverings. Its advantages include economy, performance and ease of application.

This material is suitable for use over 1x6 or 1x8-inch t&g wood subfloors, laid diagonally or straight, or plywood subfloors. This method is used primarily in the construction of new homes. It can also be applied over finished wood floors in existing homes.

The hardboard underlayment panels provide a smooth, flat surface for the floor covering. The panels will also bridge small irregularities or cracks in the subfloor or the existing wood floor. In addition, the panels add insulation to the floor, decrease sound transmission, and give the floor construction greater strength and rigidity, although basically the hardboard underlayment panel should not be considered as a structural member. Because of the smooth, even surface that the underlayment provides, thus eliminating the possibility of breaking or cracking, the life expectancy of the floor covering will increase.

(Continued on page 200)
NEVER Ventilate a Ceiling or Wall Space to the Inside...

If you do, the better the insulation, the worse will be the condensation; for the colder the air in the space between insulation and roof, or walls, the less vapor can it support.

In new construction, moisture is evaporating from many tons of cement and plaster. Vapor flows from areas of greater density into this small, cold space, an area of less vapor density and small vapor capacity.

Where multiple accordion aluminum is used, fortuitous vapor and water (for instance rain) will gradually flow out, as vapor, through exterior walls and roofs as vapor pressure develops within. The vapor cannot back up through the continuous, impervious aluminum. It will flow out because walls and roofs have substantial permeability, by comparison far greater than the required 5:1 ratio. Infiltration under the flat stapled flanges of multiple accordion aluminum is slight.

Unusual amounts of vapor, as from crowds in theatres, churches, schools, stores, etc. must be adequately vented to the outside.

The new multiple accordion aluminum* Infra Types 6-Si and 4-Si forms a continuous blanket of uniform thickness between joists, giving the entire area maximum protection against heat loss and condensation formation. Write for samples.

The U.S. National Bureau of Standards has prepared a helpful and informative booklet, "Moisture Condensation in Building Walls" which discusses causes and cures. Use the coupon and we will send a free copy.

*C Patent applied for

COST OF INFRA INSULATION INSTALLED
in new construction between wood joists, material with labor,
Type 6-S; under 9½¢ sq. ft.
Type 4-S; under 7½¢ sq. ft.
Meet Increased Competition with a...

**HIGHER QUALITY HOME - LOWER PRICES**

For over 30 years the Colpaert organization has built homes on a large scale. Retaining the accepted and most desirable features of conventional building, Colpaert homes are factory assembled and delivered as a complete package; ranging in price from $6,000 to $15,000... and sold on terms that appeal to 80% of the prospective home buyers.

An experienced management and skilled personnel... utilizing modern factory facilities and volume buying... provide a most complete building service. This includes land planning, engineering, approved architectural designs, landscaping, financing, and proven advertising and sales methods.

The accumulated experience and service of this organization is now available to dealers. Builders in the Midwest who are interested in selling approved quality homes at the lowest possible price and terms, may call or write for detailed information.
Here's a brand new, low-cost plus feature to help new home sales. Easy to install. Gives modern, uncluttered look. Plan for Tel-in-Wall locations when you lay out wiring for lighting fixtures. No extra sawing or drilling required. A profitable item for remodeling jobs. Also designed for apartments, hospitals, hotels, motels and trailer coaches. Order through your electrical supply or hardware house. Special introductory offer. Telechron Department, General Electric Company, 12 Union St., Ashland, Mass.

Installs easy as A-B-C

A Attach adaptor plate to 4" outlet box. Fits GE model 3PS2151 or equivalent.  
B Connect wires. Operates on 110 v., 60 cy. house current. Outlets rated at 15A.  
C Mount clock. Only four screws to fasten. Movement recesses into wall.

Telechron  
MARK OF TIMING LEADERSHIP
Made particularly for the building industry (from a special formula using true reclaimed rubber), Tuff-Bond super-strength adhesives are tenacious, flexible, waterproof, and assure extraordinarily strong bonds. They are very easy to apply...with trowel, bead or spot methods; shock-resistant; unaffected by climatic changes (will not freeze); exceptionally economical. Available in different types for specific uses, Tuff-Bond adhesives stick almost anything to anything! In ½ oz, 1 oz, ¼ oz. and 4 oz. tubes; also ½ pints, pints, quarts, gallons and 5 gallon containers.

A few choice distributorships and dealerships are available. Write, wire or 'phone...GOODLOE E. MOORE INCORPORATED DANVILLE, ILLINOIS In Canada; W. D. ELMSLIE, Ltd. 409 Notre Dame St., West, Montreal 11, Quebec

All hardboard panels should be fitted loosely. Avoid forcing them together. A space of ⅛ to ⅛ of an inch should be allowed between abutting panel edges, end panels and walls. The diameter of a small nail offers a good spacing guide. Manufacturers recommend drive screw underlayment nails, or 4d cement-coated sinker nails for securing the hardboard to the subfloor. Nail heads should be driven flush with the surface of the hardboard panel.

Hardboard underlayment panels should be placed in position on subfloor so that all joints are staggered. Where other than diagonally laid subfloor is encountered, care should be exercised to avoid having underlayment panel joint occur directly over the joint of the subfloor or rigid insulation board. If subfloor joints are parallel to one wall of room, continuous joints of the underlayment panel should be placed at right angles to these joints. Protruding nails, as indicated above, serve as a gap guide in panel fitting.
often the cheapest
ALWAYS THE BEST...

Resilient, sturdy, wood floors combine all the advantages you look for in floor construction. Comfortable to walk on, they are warmer in winter because of wood's natural insulating quality. Between-joists access makes wiring and plumbing easier... and lumber can be shaped to fit the most advanced plan. Use West Coast lumber with confidence...
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Send for folder describing free literature available for your reference files.
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whatever the job consider WOOD first
ORNAMENTAL LETTERS
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Any letter desired. Adds distinction and identifies the home. Put owner’s initials on chimney, fireplace, garage doors, porches, etc. Size 18” high up to 16” wide.


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Cedar Rapids, Iowa

builders!

low cost storage space with EZ-Way Folding Stairways specify into your building plans this inexpensive storage space

EZ-Way Folding Stairways

Sturdily built, modern in appearance. EZ-Way features touch-control, balanced spring action. Stairways to fit all ceiling heights from 7” to 10”. Close study of EZ-Way Folding Stairway specifications will prove to you the way to best please your customers on auxiliary, low cost storage space.

Write today for the illustrated brochure providing information and specifications on EZ-Way products. EZ-Way products are manufactured by EZ-Way Sales, Inc., Box 300-7, St. Paul Park, Minnesota.

technical guide

for builders and craftsmen

(Continued from page 200)

Hardboard panels are easily cut to measured size with hand saw or portable power saw. Underlayment panels come true to line so that another board can be used as a straight edge to draw a line across panel to be cut. All panels should be cut exactly to size to avoid jamming or allowing too wide a gap to occur between panels.

In order to minimize cutting and waste in laying, select the size of hardboard panel (3x4 or 4x4 feet) with respect to the dimension of the room. Securely nail each panel in place before laying adjoining boards. This assures a solid base for the succeeding panels.

The hardboard underlayment is now ready for any floor covering. Apply all floor covering in accordance with manufacturer’s instructions. In some cases it will be recommended that a liner felt with butt joints should be applied over the underlayment. In these cases avoid having the joint of liner felt directly over the hardboard underlayment joints to avoid any possibility of unevenness.
To Make a House SELL...

Make it Comfortable!

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All-Year® Air Conditioner
HEATS! COOLS! AIR-CONDITIONS!

Particularly in summer, there's no feature that leads to faster, more profitable sales!

Servel Wonderair All-Year air conditioning offers every comfort-control benefit—heating as well as cooling, humidity control, air cleaning and circulation. And it's silent and vibrationless—because there are no moving parts in heating or cooling systems—an exclusive of Servel's absorption principle!

The two-ton Wonderair is ideal for smaller homes—costs little more than heating, adds little to cost of home. Operates on gas... carries a five-year warranty. To make a house sell... make it comfortable... with Servel Wonderair. What a salesman!

Two-ton model—two full tons of refrigeration... 72,000 Btu/hr. heating—in just 2½' x 4' of floor space! This compact Servel unit is ideal for small homes.

3-ton unit... compact big-home size.

5-ton model... extra sales stimulus for larger homes.

SERVEL, INC., Dept. AB-24, Evansville 20, Indiana
Please send complete information on Servel air conditioning for homes.

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Address________________________
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FEBRUARY 1954
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. • 139 Victor Street • St. Louis 4, Mo.
Founded 1849—Every Hager Hinge Swings on 100 Years of Experience

"EVERYTHING HINGES ON HAGER!*
how would you do it?
ideas for the man on the job

to make a rustic hinge

![Diagram of hinge setup]

Use a 2x4 for the two parts of the hinge as shown in the illustration. Use it on a knotty pine door to create a rustic appearance. The hinge is made of two parts: a vertical member screwed beside the door, and a horizontal member screwed to the door itself. The vertical member has a circular dowel-like part to which is fitted the second or horizontal part of the hinge.

J. Menkveld, Grand Rapids, Mich.

use a needle as a drill

![Diagram of sewing needle as drill]

An ordinary sewing needle makes a good substitute for drills that are missing or broken. Grind the needle head off as far as the center of the eye. File each prong of the tiny fork on the inside slightly. The pointed end of the needle goes in the chuck. Needles can be used for this purpose because they are made of strong steel.

A. Springman, Montoursville, Pa.

save that extra concrete!

When pouring ready-mixed concrete, avoid the waste of surplus by having empty cartons on hand. Or have some scrap lumber nailed together to the size of footing blocks. You will find plenty of use for these precasts.

W. Kraatz, Santa Cruz, Calif.

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Save one-half or more on the new iron-wood furniture, plus designing it to your own specifications. It's simple with Coffman wrought iron table and chair legs. All you need is a screw driver! Fasten legs to beautiful veneers and mahogany plywood, melamine or Formica tops and build your own...

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- Coffee Table
- Occasional Chairs
- Cocktail Table
- TV Table
- End Table

and much, much more.

No. 770 16 inch legs.  In sets of four
No. 771 26½ inch legs.  In sets of four
No. 772 16 inch legs.  In sets of four
No. 773 11 inch legs.  In sets of six

Legs are round, solid iron. Rigid one-piece welded construction. Finish is black primer coat. Prices range from approximately $9.95 to $13.50.

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Leading builders in every part of the country are using this newest of siding materials. The wide range of colors lends itself to the variety so essential in group housing. The vertical striated texture adds character, lifts homes out of the ordinary.

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In new communities from coast to coast you’ll find Colorbestos on entire shopping centers as well as individual store fronts. Its rich color, striking texture, and maintenance economies make it ideal for soffits, facings and exterior walls.

Colorbestos combines for the first time beautiful color and handsome texture in large-size asbestos siding sheets.

Colorbestos sets a style of its own that is completely different and refreshing. Made of two practically indestructible materials, asbestos and cement, it comes in sheets that are 32” wide, 96” long and 3/16” thick. One man can handle a full-size sheet of Colorbestos that weighs only 36 pounds, and each sheet covers 21 1/2 square feet of finished exterior wall. Colorbestos will not burn or rot; once in place it needs no further decorative or preservative treatment. For Colorbestos Booklet and full details, write Johns-Manville, Box 60, New York 16, N. Y.

Colorbestos sheets are shipped from the factory, strapped on a pallet which normally contains the required combination of colors and sheet sizes for each unit.

Johns-Manville
Uniform texture, straight grain and the ability to take a lustrous natural finish make West Coast Hemlock ideal for paneling. West Coast Hemlock—the "Ability Wood"—has served generations as an extra-value flooring in homes, schools and public buildings.

Weyerhaeuser 4-Square

WEST COAST HEMLOCK

The "Ability Wood"

From West Coast Hemlock, Weyerhaeuser produces a great variety of superb lumber products, ranging from boards and dimension to siding and paneling. Used inside or out, Weyerhaeuser 4-Square West Coast Hemlock invariably earns the respect and admiration of builder and home owner alike. Workmen are particularly pleased with its light weight, ease of sawing, and the ability to take and hold nails firmly.

Home owners are delighted to find that Weyerhaeuser 4-Square West Coast Hemlock siding, for example, stays firm and tight for decades. They are pleased with Hemlock's amazing ability to take and hold paint. The absence of pitch in this species eliminates paint discoloration, and natural finishes bring out the straight grain, the uniform texture and the light color which mellows slightly with age.

Because Hemlock is such a remarkably versatile wood—because it is so abundant—and because it has a long record of successful service in a wide variety of applications, builders find it is good business to take advantage of the outstanding characteristics and uses of Hemlock.

Write for literature that tells you more about Weyerhaeuser 4-Square West Coast Hemlock—the abundant "Ability Wood."

Weyerhaeuser 4-Square
LUMBER AND SERVICES
WEYERHAEUSER SALES CO., ST. PAUL, MINN.

BUILD BETTER WITH HEMLOCK...THE ABUNDANT "ABILITY WOOD"
FEBRUARY 1954
207
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HEATILATOR Inc.
922 E. Brighton Ave., Syracuse 5, N. Y.

how would you do it?
ideas for the man on the job

to cut drawer runners from 4x4

To cut a number of identical drawer runners, set the table-saw blade so that the cut will be made one inch deep and one inch from the edge of the 4x4. Eight cuts are then made without the need to reset or to readjust the saw blade. The two final cuts are then made, as shown, to complete the job.

H. E. Fey, New Braunfels, Texas.

for a handy helper—

Try this combination saw horse, step stool, tool box and workbench. Use it for finishing or general carpentry. Measurements may vary to suit the individual with height of bench about 18 to 20 inches high, top of bench about 12 inches wide. Note in illustration, the slot for the square, hole for level, hole in top for easy transport. Note also the tool tray for tool storage.

W. Hite, San Fernando, Calif.
how would you do it?

*ideas for the man on the job*

**about warping doors**

When fitting doors, take the trouble to paint the newly cut surfaces. This is particularly true of the bottom of the door where more moisture is encountered and where cutting for fitting is most frequently done. A great deal of trouble with warping can be avoided if this is done.

C. H. Conroy, St. John's, Newfoundland

use a tire chain scaffolding

Use this simple scaffolding rig for those occasional repairs that do not require elaborate equipment. A tire chain makes this arrangement possible. The ends of the staging plank are supported by a readily adjustable triangle formed by ladder, tire chain and a short piece of lumber cleated on the underside to engage the rung of the ladder.

C. V. Johnson, Bristol, Conn.

**fine hair cracks in plywood**

If fine hair cracks show up on fir plywood after painting or enameling, it is often impossible to fill them by merely applying another coat of paint. Putty will not fill the cracks because the cracks are too fine for the putty to penetrate. But if you use a wide putty knife and apply thick paint from the bottom of a paint can, the cracks will disappear. Another coat of enamel or paint will, of course, have to be applied after the filling of the cracks.

M. J. Hiland, Lansing, Ill.

---

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Architect Builder Dealer

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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.

FEBRUARY 1954
to prevent an echo

What can be done to stop an echo from occurring in a large church room? We have built an addition, using hollow tile, to the original church building. The ceiling is high and is finished with Sheetrock. The echo is so bad that conversation is not understandable.

I. F., Lewistown, Mo.

Echoes usually develop from the use of non-sound-absorbent material. Sounds rebound from wall to ceiling thus causing the echo. Applying a sound-absorbent material to the walls and ceiling would help greatly. This could best be done by applying a coat of acoustical plaster.

insulating a church roof

We are building a church, using laminated rafters and purlins with 2x6 end-matched center-matched roof sheathing. The decking, purlins and rafters are to be left open, with a natural finish. Therefore, no insulation can be used on the inside. The roof is to be of 12x36 thick-butt shingles. Some heating engineers do not think that 1 3/8-inch sheathing is enough insulation. How would you suggest that the ceiling be insulated?

H. P., Findlay, Ill.

In your case where the roof sheathing, purlins and rafters are exposed, strip the top side of the 2x6 roof sheathing with 1x2 stripping, 12 inches o.c. This will provide space for conduits which will have to be distributed within this area in order to fit the lights exposed in the auditorium. On top of the furring strips apply 1-inch-thick rigid insulation and on top of that your regular thick-butt shingles.

This has been done a number of times and has proved successful.

when the chimney leaks

What can be done with a chimney that is drawing moisture and wetting plaster and paper around it? The furnace in this house has been converted from coal to gas. The owner asked about the possibility of using a flue liner that would slip down inside of the present flue.

My suggestions to him were: (1) Remove all plaster from chimney and cover the brick with a masonry paint and then replaster; (2) Remove chimney entirely and replace with a Transite pipe of right size.

J. M. N., Marysville, Ohio

The remedies you suggest have been mentioned by heating equipment dealers who have had first-hand experience with such problems. Here is what they say: A number have inserted a special, tightly constructed flue liner (sometimes of metal, or of other material) which was slipped down inside the present flue. Many have found it satisfactory. But the majority have found that if the original condition is really serious (which it seems to be in your case) they have not been too well satisfied. This has not seemed to be because of any defect in the material of the flue liner, but rather it has seemed to be due to the difficulty of installing it so that it will be absolutely tight.

Removing the plaster, painting the brick with masonry paint and then replastering has usually been unsatisfactory if the original condition was serious.

Removing the old chimney and replacing it with a first-class gas-vent flue is relatively expensive but it has usually been reported as being the safest and surest remedy.
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What prospective homeowner's eye wouldn't be caught with a "see through" wall as attractive as this one? You can build such a desired feature into your homes by including panels of Owens-Illinois Glass Block.

Glass Block panels are as practical as they are beautiful. They have the insulating efficiency of an 8-inch brick wall; won't frost or sweat in winter. Patterns are available in a wide variety—from the clear block shown above to those that restrict sight completely.

Give the homes you build the benefits that Owens-Illinois Glass Blocks bring. Applications are practically limitless. Stairwell, kitchen, utility room and basement, to name just a few places—can use glass block panels to advantage. Start to plan now to use this versatile, practical building material to help you sell your homes, faster.

For information about these uses of Glass Block or for help with a specific problem, just write Glass Block Division, Owens-Illinois Glass Company, Dept. AB-2, Box 1035, Toledo 1, Ohio.

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ask the experts

how shall the framing be done?

What roof pitch must I have on a 24x30 foot house to obtain a 9 foot wide room on the second floor? The height of sidewalls should be about 6 feet. If a 9 foot wide room cannot be had without a steep roof pitch, could outside walls from grade to underside of roof soffit be increased with the inner partitions and ceiling and remaining at the eight foot height? If this is done, how will the ceiling joists be secured to outer walls? Would the 2x6 inch ceiling joists be solid nailed into side of outer studs with a block under each?

Recently many old houses have been moved from the country into our city, remodeled and rented. Some were in pitiful condition until they were repaired. After seeing the changes made in these old houses I was wondering about some of the construction practices. For example: would it be feasible to erect a frame house with studs on 4 foot centers if the outside is diagonally sheathed and all inside walls and partitions were stripped horizontally with 1x4 inch furring strips? Would this make a substantial house? (One story, not one and a half) By furring the inside I thought I could use 16 inch planks of tongue and groove pre-painted wallboard. This would speed up the slow finishing work. If a house would be strong enough on 4 foot centers (for walls-partitions), would it be feasible to put rafters or ceiling joists on four foot centers? Would it help any to make ceiling joists and rafters 2x6’s?

The point I want to find out is this: Can I use less lumber? If so, will I save labor erecting it, and thereby cut the cost of labor and material, as well as get a house up faster?

L. F., Hominy, Okla.

In order to supply sufficient head room in the rooms on the second floor, the pitch of roof would of necessity have to be at least 9-12 or 3-12. This pitch might be reduced in the event that a wide overhang is provided in front of the two side walls. The soffit of the overhang should be directly above the head of the window. This would automatically drop the soffit of the overhang below the finished first floor ceiling, but it would also provide additional head room in the rooms on the second floor. It would also permit a reduction in the pitch of the roof. There is no reason why the roof rafters cannot be notched into the wall plate and the ceiling joist nailed into the side of the roof rafters. The sketch indicates the way this should be framed. FHA probably would not go along with a house having exterior walls using 2x4 studs four feet o.c. It will be necessary to employ a post and beam type of construction in the event that the 4 foot centers are maintained. This would mean that these timbers would be of sufficient size to thoroughly brace the exterior walls together with diagonal bracing placed between both horizontal and vertical members. It is my opinion that you would not save much on material and certainly less on labor by changing from the norm of construction. I believe the most economical method would be to employ standard type of frame construction such as 2x4's, 16 inches on center. All carpenters are familiar with this method and I am sure that your building would proceed faster than when using the other special type.
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CHASE COPPER TUBE

Smooth inside surfaces assure even flow!

Chase Copper Tube with Chase Solder-Joint Fittings for waste, vent and soil lines can be installed rapidly...more economically...do a better drainage job...last longer.

You get a lightweight system that can be easily assembled and handled on the job. Pipe and joints are rugged enough to take hard knocks. 20 foot lengths need fewer joints.

For complete information, see your Chase wholesaler.

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FEBRUARY 1954
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 observers
use truss construction

Would you study the accompanying sketch of roof construction and tell me whether you consider it sound practice? Will the rafters fatigue and spread out under the pressure of roof and weather load? The wing, for which this construction is proposed, is 31 feet long. Walls will be of pumice block.

G. M. Jr., Chesterfield, Mo.

The roof system you propose has the tendency to thrust against the walls. The tendency is that when the roof is loaded to a deformed position, indicated by dotted lines, the original point "A" will tend to move to new position "A'". This would create a force "F" thrusting against the walls below.

Wall construction, such as you indicate, would develop horizontal cracks and a tendency to buckle. Use the system shown in the bottom sketch. Thrust will be less likely.

Wilbur Tuggle,
Structural Engineer

wants information

Where can I get information about concrete block construction, including proper furring methods, insulating, plastering and stuccoing concrete block walls?

R. H., Green Bay, Wis.

Write to the National Concrete Masonry Association, 38 South Dearborn St., Chicago 3, Ill. or to the Portland Cement Association, 33 West Grand Ave., Chicago 10, Ill. Either will be able to supply you with information.

Simonds, sawmakers for woodworkers since 1832, now offers this complete new line of high quality saws at new popular prices . . . 13 types of blades up to 12" diameter (including Dado Heads and Carbide-Tipped Saws) . . . all made of Simonds Steel and fully guaranteed. Get them at your hardware dealer or local saw shop.
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Ford's expanded new truck lines include brand-new Ford Tandem-Axle Big Jobs, up to 60,000 lbs. G.C.W., and two more giant new Ford Cab Forward Big Jobs rated up to 55,000-lbs. G.C.W.!

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Mightiest concentration of power per cubic inch ever built into any truck engine line! Only FORD has it!

For the power they develop, Ford’s new truck engines have less cubic inch displacement than any other truck engine line. The Ford 239 cu. in. Power King V-8 develops its 130-h.p. from as much as 43 cubic inches less displacement. Smaller-displacement engines normally need less gas! That’s why Ford concentrated power is a big factor in new Ford Truck TRIPLE ECONOMY!
We have the problem of sound deadening a dance floor located above offices. The floor is of maple laid over a subfloor. The dancing classes held on the second floor make noise that the tenants below find objectionable.

We have suggested using ½-inch underlayment, spot cemented to the present floor to hold it in place. Over this, we have recommended placing ¾-inch-thick 24x24-inch blocks diagonally for the wearing surface. Please advise if this would remedy the case.

Your suggestions would seem to be the answer to your problem. A regular acoustical treatment would be very expensive and require quite a little tearing up. Although we feel certain that the recommendations you have made will do the job, it might be a good idea to take a piece of underlayment, put it on the floor and lay the tiles over it. Then let somebody Charleston on it to see what the results are before you go ahead and do the whole job.

R. B. Leonard, Inc.
5775 N.W. 35th Court • Miami, Florida

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New G-E “3-Directional” line gives you complete freedom in locating home heating and cooling system!

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IDEA of the MONTH

Scheme for sliding doors which conceal closet at end of divan

Scheme for the Novoply partition that can be used to shut off den-bedroom from living room

a pullman divan for a den

This clever divan-bed combination for the den-bedroom of a house built by Richard Hail Brown in Birmingham, Alabama, does not require anything that is not in regular stock. It simply utilizes two standard Hollywood beds (mattress, springs and wood frame all in one).

One bed is set on a box base on the floor; the other is hinged to the wall with barrel bolts at each end (top) to hold it up. In order to give proper pitch to the bottom bed when used as a divan, a slanted base sill or joist was made (see sketch). This permits pulling the bed forward and raising it at the front edge. For extra comfort, Brown added a sheet of foam rubber over the top of both beds.

Actually, as the photograph shows, the divan-bed is part of a built-in arrangement which occupies the whole wall and also includes chest of drawers, mirror, strip light and clothes closet with sliding doors which cover closet when room is being used as a den. These doors are 6½ feet high. The storage space above them has Masonite by-pass doors without rollers, which slide in a groove in the closet door header (see sketch).

The Novoply partition between den and living room is merely two 4x8 sheets hung from a regular double track screwed to the rafters, which lets it recess the thickness of the stripping and the Sheetrock. The doors by-pass and pile up on the 4x8 fixed piece which forms one wall of the built-in desk shelves, shown at extreme right in the photo.
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Today's home buyers are demanding cool comfort...and a Hunter Attic Fan is the economical, efficient way to provide it. This modern ventilating fan pulls cool, refreshing breezes through every room in the house. Cost of operation is negligible (only a few cents a night) and there is no maintenance through long years of service.

The Hunter Package Attic Fan, complete with ceiling shutter, is easily installed in any new or old home. It requires only 18” attic clearance...ideal for low pitched roofs. Sizes from 5000 to 16000 cfm (air deliveries certified) fit any home size and climate.

This new, improved attic fan has the same smooth, quiet operation and dependable performance that have made Hunter Fans famous for 67 years. Fan unit is guaranteed 5 years; motor and shutter, 1 year.

Easily installed — Simply place the Hunter Attic Fan over ceiling opening on attic floor or joists. Modern automatic ceiling shutter with metal trim screw-fastens from below.

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HUNTER Attic Fans
SEE OUR CATALOG IN SWEET'S
One particular type of fireplace that is finding favor with project builders as well as with builders of custom-designed homes is the two-way fireplace detailed here.

This fireplace, extending out from the wall approximately four feet, serves as a partial divider between the living and dining rooms. With three sides exposed, it can be viewed from any part of the two rooms.

The flue area in this kind of fireplace needs to be increased nearly 50 per cent to eliminate any possibility of smoke's drifting out into the room. The concrete smoke diverter is placed in the center of the smoke chamber just above the opening. This prevents any down rush of air into the fireplace.

The two-inch steel pipe, placed in the center and at one end of the fireplace opening, supports the steel angles above. These angles are welded together at corners to make a continuous member.

While in the sectional drawing the hearth is indicated as a level surface 12 inches above the floor, in the photograph it is shown with the floor depressed and a 4-inch curb above the hearth level and all around the opening.

A hearth at floor level can be dispensed with where the level of the interior hearth is depressed as shown in the photograph. The brick curb provides the protection needed. If constructed as detailed in the drawing, a hearth at floor level is optional. The wire screen which surrounds the opening prevents the sparks of the fire from getting onto the floor.
NO. D-107 FIREPLACE

Plan (AT LINTEL)

Section...

Elevation...

Plan (AT HEARTH)...
fast, easy-boring
electric-drill bits
by Greenlee

Do the job faster, "cleaner,"
better with these carefully
made electric-drill bits.
Modeled after the famous
Greenlee brace bit line, these
new bits are specially designed for use
in portable electric drills. They
have fine-pitch screw points to compensate
for high rpm of electric drills and are
completely heat-treated for extra strength.
Shanks are accurately machined for
precise alignment of the tool throughout.
Greenlee electric-drill bits are of
highest quality to assure fast,
accurate boring and long life. Write
direct for additional information and
descriptive material on the
Greenlee hand tool line.

NO. G-51
corner entrance

In the design and layout of a new
F. W. Woolworth & Co. store on the
far south side of Chicago, the
emphasis is on a large and promi-

nent corner entrance. This ar-

rangement was prompted by the
location of a lunch counter which
extends the entire length of the
street wall adjoining the entrance-
way. The extra pair of doors pro-
vides accommodations for both
shoppers and diners.

A point of interest to builders is
the method employed by the archi-
tect in framing the circular canopy
over the entrance, supporting the
octagonal-shaped masonry wall
above, and recessing the entrance
doors into the back wall of show
windows, leaving a smooth, un-
broken surface for the canopy soffit.

This cantilevered effect is ob-
tained by extending the two 24-inch
steel beams, that support masonry
over the show windows, out to a
point where they intersect a 12-inch
steel beam. The octagonal masonry
wall above is supported on these
beams. The canopy framing is car-
rried on an 8-inch steel beam ex-
tending out from the main struc-
tural framing. To this framing is
hung a series of 6-inch channels and
steel facing members to form the
canopy framing Wood joists se-
cured to steel framing provide nail-
ing surface for the wood sheathing
to which is applied Marlite secured
with snap-on molds. Two inch con-
crete slab laid on Hi-rib lath forms
the roof of canopy. Wood vertical
sheathing on face of canopy pro-
vides a backing for display signs.

Credit was inadvertently omitted
for the store-front detail plates in
the October and November issues of
American Builder. These plates were
designed by Elmer C. Carlson, archi-
tect from Chicago, Illinois.

AMERICAN BUILDER
Precision Folding Stairway
FIRST AGAIN!

now equipped with
Hydraulic Safety Checks

1. Prevent slamming
   on opening and closing.
2. Operate stairway silently,
   safely, without effort.
3. Close stairway completely.

5 YEAR
written guarantee
furnished
with each stairway

Add safety checks to
present PRECISION
Stairways at small cost.

Manufactured by
PRECISION PARTS CORP.
400-AB North First Street . . . Nashville 7, Tennessee

ask the experts

who is right?

I recently specified vertical siding for gables using 4x8x3/4 exterior plywood which the owner contends is not vertical siding. Who is right?

P. R. K., Bay City, Mich.

It is undoubtedly a matter of local interpretation. In Chicago, plywood is not normally called "vertical siding" when it is used on gable ends. We think of vertical siding as t&g V-jointed boards. Recently, some scored plywoods have been put on the market and will, no doubt, be known as siding. The use of any material needs to be carefully specified to avoid misinterpretation.

Edward Hines Lumber Co.

terrace floor effloresces

How can I prevent or reduce efflorescence on a masonry surface? The present case occurs on a brick terrace floor laid over a concrete slab. The brick was laid this year. The concrete slab has been in place for several years.


The problem of preventing efflorescence in a terrace floor is more difficult to solve than is the case of efflorescence occurring on a wall. There will be many times, following a heavy rain, when there will be a considerable amount of water standing on the floor. This will be absorbed eventually by the masonry. Upon evaporation, this moisture will bring to the surface the soluble salts that form efflorescence.

In many cases, such a condition will gradually correct itself as the soluble salts, present in either the masonry units or in the mortar, are dissolved and disappear. If, however, the efflorescence continues to occur, it might be possible to correct the condition by applying a base-water repellent. Since a terrace floor would be subjected to a considerable amount of wear, such treatment could not be considered permanent. You would probably have to renew it every few years to maintain its effectiveness.

Structural Clay Products Institute
Every home is a
MODEL home...
that has the "Lifetime"
SHAMPOO SPRAY!

Introduced last Fall in the Better Homes & Gardens "Reader's Choice" home erected by prominent builders all over the country, the "Lifetime" won immediate and enthusiastic acceptance! Easy to install using standard diverter valves or separate fixtures. Stainless steel and chrome, beautiful and inexpensive, $13.50 (suggested retail). Sold through plumbing and heating wholesalers and dealers only. Write Dept A-1 today for plans of installation and literature.

T&S BRASS & BRONZE WORKS, INC.
32 Urban Avenue, Westbury, Long Island, N. Y.

USE Trinity White
the whitest white Portland cement

...for the utmost beauty in architectural concrete units... terrazzo... stucco...
light-reflective uses... and better color jobs.

Use Trinity White Cement when you want the permanence and workability of a portland cement plus the remarkable beauty of a brilliant white. So when you're asked for something that is better than the ordinary—you'll find that making it of Trinity White Cement is a most constructive suggestion. It's a true portland and meets all Federal and ASTM specifications. For descriptive literature, write Trinity White, 111 W. Monroe St., Chicago.

A Product of GENERAL PORTLAND CEMENT CO. • Chicago • Dallas • Chattanooga • Tampa • Los Angeles

February 1954

Add these
SALES POINTS
to YOUR NEW HOMES

See These Complete Windows at Booth 328,
Hotel Sherman, Chicago.

Windows provide a wonderful talking point in selling new homes. They are seen from inside and outside. A mechanical feature, they justify extra dollars when well engineered.

Fleetlite are America's Finest Windows. They are made of Extruded Aluminum.

1. Balanced sash with patented automatic locks found on no other windows.
2. Removable sash for cleaning from the inside.
3. Pile mohair weatherstripping.
5. New twin tamper proof locks.
6. Quadruple seal at sill.
7. New exclusive flat type overhead balances.
8. Lifetime plastic screen cloth.
9. Complete elimination of maintenance or painting.
10. The only complete double window for your protection against all the elements.

Picture Windows — available to match.

"Money can buy no finer window than Fleetlite"

TERRITORIES OPEN FOR FULL TIME FACTORY REPRESENTATIVES AND DEALERS

WRITE TODAY for the full story on Fleetlite.

As advertised in House Beautiful, House & Garden, Small Homes Guide,
American Builder and Magazine of Building.

FLEET OF AMERICA, INC., 112 Pearl St., Buffalo 2, New York

ask the experts

an opinion on a
method of heating

I am sending a drawing I have made of a ceiling radiant heating panel using Sheetrock. The forced warm water circulation is 120-140 degrees F. Could you oblige by criticizing this panel as to construction and efficiency? You will note its efficiency is dependent on reflection of warm air to lower radiating ceiling panel.

R. F. C., Teaneck, N. J.

Concept of system is satisfactory although somewhat complicated. Since the heat transfer is from water, to tube, to air, to Sheetrock, a fairly high water temperature will be required.

The panel is similar to Kritzer panels in design though probably less efficient since there is less metallic transfer surface. Assuming that the ceiling is the only source of heat, the probable required panel output will be approximately 45 Btu's per square foot (average).

At a mean equivalent room temperature of 70 degrees, the panel surface temperature would be approximately 100 degrees.

Required air temperature above first layer of Sheetrock:

(Continued on page 230)
NEW DODGE "JOB-RATED" TRUCKS OFFER . . .

A better deal for the man at the wheel

A better deal in comfort, visibility! More vision area than in any other leading make. New easy-chair seats with most hiproom. New cab sealing against dust, drafts. New two-tone interior styling.

A better deal in loading height with pick-up and panel floors less than 2 feet from the ground . . . knee-high for loading ease. Lower running boards for easier entry. Lower hood for greater visibility.

A better deal in power from famous 6's and the most powerful V-8's of all leading trucks. V-8's with efficient hemispherical combustion chambers are available in 1½, 2, 2½-ton, standard on 2¾, 3, 3½-ton.

A better deal in handling ease! New steering system keeps Dodge ahead of the field with the sharpest turning of any comparable trucks. New power steering available in 4-ton models.

New Dodge "Job-Rated" trucks are designed to save the driver time and effort—to give the man at the wheel "a better deal" and make him more efficient. Dodge trucks offer a better deal for the man who pays the bills, too. They're priced with the very lowest; and their low operating costs can save the owner hundreds of dollars during their long lifetime of service.

So, for a better deal on a new truck, see your friendly Dodge dealer. He knows trucks, and he's the kind of a man you can rely on completely. See or phone him today.

See "Break The Bank" with Bert Parks on TV (ABC, Sundays) • See "Make Room For Daddy" with Danny Thomas on TV (ABC, Tuesdays) • Hear "The Roy Rogers Show" on radio (NBC, Thursdays) • Enter the Dodge 40th Anniversary All-America Contest. See your dealer.

SEE YOUR FRIENDLY DODGE DEALER

NEW DODGE "Job-Rated" TRUCKS

FEBRUARY 1954
TYPE "A"
PLASWOOD PANEL

An extra-strength panel board, made from specially treated long wood fibers. Made in two densities—one as sidewall sheathing—one as underlayment for asphalt and rubber tile, linoleum, wall to wall carpeting.

High resistance to indentation—exceptional nail-holding power—strong bracing qualities—these, along with positive lower cost of Plaswood make it the answer to stronger, more economical construction.

Southern Plaswood Corporation
Hope, Arkansas

Send this coupon today.
Southern Plaswood Corporation
Post Office Box 123
Hope, Arkansas

Please send me the facts about Plaswood and the name of your nearest jobber or dealer.

I am:

□ Home Owner □ Contractor
□ Material Dealer □ Architect

Name:

Address:

ask the experts

(Continued from page 228)

U for 7/8-inch Sheetrock + 1 surface

\[
\frac{.27 + .82}{1} = .92
\]

\[
.92 \times \text{temp. difference} = 45
\]

Temp. difference = 49 degrees

Therefore, required air temperature is 149 degrees (approximately). Heat loss from tarnished copper tube to air approximately .45 Btu's per linear foot per degree of temperature difference.

Since tubes are six inches O.C. there will be two feet of tube square feet of panel area or .90 Btu's per square foot of panel surface.

\[
\frac{45}{.90} = \text{air to tube temperature}
\]

Temperature difference = 50

Some temperature difference will exist between average water temperature and tube surface. Therefore, the water temperature required will be approximately 202 degrees F.

S. R. Juracich, Consulting Engineer.

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. Get all the facts on Scotts Lawns—you'll be pleased and so will your clients. Just drop us a card and say "Lawns." We'll also send you a binder of Lawn Care bulletins. Free!

O M Scott & Sons Co.
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Also ask about the extra value in:

VENTO "THRIFTY" BASEMENT WINDOWS
VENTO FORMED STEEL LINTELS (FOR BLOCK AND BRICK CONSTRUCTION)
VENTO "Champion" Barred Basement Windows
VENTO "Champion" Utility and Barn Windows
VENTO Thrifty Utility and Special Type Windows

Some desirable territories are open for representatives and distributors. Write for particulars.

STEEL PRODUCTS CO., Inc.
247 Colorado Ave., Buffalo 15, N. Y.

American Builder
restoring colored concrete

My concrete patio was colored with a mixture of cement and red color. It has faded severely. How can I bring it back to its original color?

K. M., Paradise, Calif.

Clean the surface and make it more dense by washing with liquid soap. Allow the soap to stand overnight. Wash it off thoroughly the next morning. After washing, there are three things you can do: (1) apply floor wax once a month for a time; (2) if waxing fails to restore color, apply an acid wash (10 per cent muriatic acid solution) then paint with a commercial stain; (3) if this fails, apply a new topping of colored concrete after getting professional advice as to procedure.

wants truss information

I would like to know how to build trussed roof rafters. I have seen them used on different housing projects and would like to try using them. The bracing size of lumber and method of making the splices would be important to me.

A. R. P., Ware, Mass.

The Small Homes Council of the University of Illinois has several publications relating to trusses in which you might be interested. Write to them asking for the yellow sheet of their publications. See also page 42 of the August, 1953, issue and page 51 of the July, 1953, issue of the American Builder for articles on roof trusses.

log cabin construction

I have a log house, and find the logs have large cracks in them; logs are fairly good size lying lengthwise of house (not up and down). Can you advise me as to where and what I can get to fill the cracks before I stain or oil the logs?


We are attaching a copy of an information sheet, “Chinking Log Cabins with Portland Cement Mortar,” which specifically covers the subject on which you requested information.
Ask any owner why he decided in favor of a prefabricated home and he’ll tell you prefabrication’s modern methods gave him more house and a better house for the same money. It’s a fact. It’s the reason for the five-year trend to prefabrication that continues to gain momentum as more and more home owners, builders and lenders discover its many advantages over conventional construction.

Investigate prefabrication as the answer to class market homes at mass market prices. A PHMI member firm serving your territory will be glad to give you full information.

FOR PROOF, COMPARE...

Check these advantages of investing in homes that are the product of the experience of PHMI member firms in meeting demands of today’s market for quality homes at popular prices:

- Precision-Engineering
- Shorter Erection Time
- Flexibility of Design
- Fast Starts, Quicker
- Higher Resale Value
- Completions
- Predetermined Cost
- Better Architectural Planning and Design
- Quality Materials

Have you subscribed to PF, the new official monthly journal of PHMI? $3 a year. Keeps you fully informed of new developments in the fast growing field of prefabrication.

Cement Slab on Mine Site

I plan to construct a community hall in a mine site. You will find enclosed my sketch of the slab that I have considered using. Will you please advise me as to the size of the reinforcement and the thickness of the slab that would be most suitable in my case?

A. C. W., Oriente, Cuba

The accompanying drawing and table will answer your request in regard to the cement slab. There still remain, however, the problems of columns, supports, lintels, footings, and details. For these problems, we suggest that you consult a structural engineer in your area. Give him the information that we have supplied and discuss the situation with him before proceeding further. A structural engineer, who has the advantage of seeing the site and the problems peculiar to it, will be better able to advise you.

Wilbur Tuggle,
Structural Engineer

Oil Stain on Stucco

Can you suggest any way of removing a yellow stain caused by accidentally splashing fuel oil onto a white stucco wall? Repeated washing with soap and water has partially reduced the discoloration, but...
it is still very noticeable. Can you recommend a way of reducing or eliminating the discoloration?


Fuel oil will dissolve in mineral spirits, gasoline or kerosene. The stain you mention is probably the result of dirt imbedded in the fuel oil. It is likely that the stain is not limited to the surface, but has soaked into the stucco. Soap and water will not remove it.

Use kerosene. Several applications may be necessary. Since the stucco surface may be rough, soak Fuller's earth with kerosene and apply the paste to the stained area. The kerosene will dissolve the fuel oil and draw it into the Fuller's earth. Later, you can brush it off. This is the method used to remove oil or grease from concrete floors.

National Paint, Varnish and Lacquer Association, Inc.

exhaust fan in chimney stack?

A chimney runs through my kitchen. In the basement, a gas hot-water heating flue is connected to the same chimney stack. I want to connect a kitchen exhaust fan to this same chimney. Would the fan work efficiently? If it did not, would the normal draft of the hot water heater be impaired?

A. F., Vineland, N. J.

Do not connect your exhaust fan to the chimney stack. Such a fan should be exhausted directly outside through a duct prepared specifically for this job. If this exhaust empties into a chimney, there is a possibility the draft will blow the exhaust back down through the chimney and out into the hot water heater. If this happened, there is the danger of the heater pilot blowing out, creating a hazard.

Too often a chimney is considered an instrument to move a draft only upward. This is true, under satisfactory conditions. However, certain weather and air conditions will cause the draft to go down rather than up. It is also possible that the outside air pressure is such that the air in the chimney will move in no direction and an exhaust fan blowing into the chimney will take the line of least resistance and have a tendency to go down into the hot water heater.

Heating Division, The Majestic Company, Inc.
Ask the man behind the gun...

White gives you everything you want in an engineer's transit

SUPERIOR Flexible Folding Doors are in sharply increasing demand as room closures. The draped folds of selected bamboo provide an interesting soft texture that harmonizes with almost any type of decorative treatment.

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Increase your knowledge with these practical books covering all phases of LIGHT CONSTRUCTION

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   For construction engineers, architects and builders. Here, in one handy volume, is a whole library of information covering all the building trades. Twenty-three chapters, over 400 tables, 544 drawings and a 20-page index. A completely new kind of handbook stressing actual building practice and what-to-use and how-to-do-it instructions. An American Builder publication sold on a ten-day inspection privilege (see coupon).

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   Everything needed to take-off a bill of materials from a set of plans and specifications for a frame house. Many helpful tables and short cuts that simplify the work. $2.75

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   Two companion books containing latest estimating and cost data on everything that goes into a house. Most complete available, $12.00

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   Full set of detailed house specifications (and item index) with spaces for inserting pertinent descriptive data. $5.00

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   Basic bricklaying job instruction. Many illustrations, glossary, special scaffolding and cement block chapters. $4.00

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   (Tools-Materials-Practice)
   By Dalzell and Townsend
   Practical masonry procedures in the various phases of construction from concrete forms to fireplaces and septic tanks. Includes discussions of new products such as glass blocks, waterproofing mixtures and insulating blocks. Each vol. $3.50; $10.00 for both.

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   Handy reference manual and practical instruction book. 706 pages, 251 illustrations, $4.00

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    By Uhl, Nelson & Dunlap
    How-to-do-it book of wiring and estimating. $3.95

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    By A. C. Beakish
    Guide for planning wiring in moderate-priced homes. With emphasis on safety, effectiveness and efficiency. $1.00

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    While designed for prospective homeowners in the "dreaming" stage, builders find this book useful as a source of ideas and suggestions to customers. Sketches and detailed floor plans for 80 houses in a wide variety of popular styles, divided into general price brackets according to family income. Complete plans and specifications for these houses are also available. $3.95

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    Almost 200 pages of short cuts, "kinks" etc. from the American Builder which you probably meant to clip but didn't. Illustrated and cross-indexed. $4.50

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    Standard heating systems illustrated with 17 floor plans with heating outlets. 40 photos of equipment and installations; 25 boiler and piping diagrams; 11 heat loss calculating tables. $3.50

*Starred books are our publications sold with 10-day inspection privileges with full refund.
NEW LOW PRICE! Cost radically reduced by ease of installation and less accessories. Fewer joints necessary. Dampers may be installed anywhere, or any time on the job.

NEW EASY INSTALLATION! Vulcan's famous rod hangers provide for planned expansion. Covers available in continuous lengths up to 15 feet.

NEW BEAUTY! Now... Vulcan's NEW streamlined cover of enduring beauty. Designed to harmonize with any decor. Shape of top reduces apparent depth. Front easily removed for cleaning.

Complete I-B-R Ratings

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Cut Screen Costs

MAKE YOUR OWN LIFETIME ALUMINUM FRAME OR TENSION SCREENS

Save $40 to $50 per house by making B & W Screens in your own shop, using present tools, labor, and idle time.

B & W is the best screen that can be made today.
$106.25 buys all materials, (minus screen wire), needed to make about $500 worth of screens.

Tension type has improved strips, top and bottom, patented selvage on sides. Frame type offers choice of two channel designs shown at left.

Gentlemen:
Please send me, without obligation, complete information on making B & W Lifetime Aluminum Screens.

Name ____________________________________________
Address __________________________________________
City __________________________ State _____________

Office—meeting room. Registers 4x14 inches are used in floors throughout most of the building.

VULCAN TRIMLINE
RADI-VECTOR

Modern Baseboard Heating at its BEST!

Perimeter installation serving rear section of the building. Trunk duct (right) lies under corridor. Loop and feeder ducts (foreground) are under kitchen.

Graduated trunk and multiple "Y" feeder assembly used in auditorium zone. Feeders are made up of concrete tile joints sealed with vapor barrier sleeves.

proof insulation board was then laid on the bed and the sheet metal trunk ducts installed on this board.

The same insulation material was applied to the sides and top of the duct work, and concrete retaining walls were poured along the insulated sides of the duct. Metal reinforcing rods were laid over the insulated tops of the trunks to give proper reinforcement to those sections of the concrete slab which spanned them.

Insulation of the trunks eliminated hot spots in the floor over the trunk ducts, conserving heat for dis-
for larger buildings

for larger buildings

Return air grille high on auditorium wall is 30x18 inches. Use of furnace blower helps keep summer audiences cool.

distribution into the eight-inch feeders and perimeter ducts.

Most of the feeders and the perimeter ducts in this installation are of concrete tile, a special type of eight-inch round being manufactured in the locality. Tile joints were sealed with strips of vapor barrier locked in place by a clip. Tile was connected to sheet metal ducts by sheet metal sleeves and elbows.

LADDER JACKS

- ONE-MAN Ladder Jacks (left) adjust to any pitch on either side of the ladder.
- Weight distributed on three rungs.
- New, rail-type jack (right) uses side rails of ladder for extra safety.

SCAFFOLD BRACKETS

- Erected and dismantled faster than you can build a make-shift wooden scaffold.
- 3 and 3½ ft. lengths—rail carbon steel.
- Nail, studing and bolt-attached types.
- Attachments to convert any one type to any other type.

Write for Catalog M: complete information on all "Trouble Saver" Scaffolding Accessories.

The Steel Scaffolding Company, Inc.
846 Humboldt Street, Dept. AB, Brooklyn 22, New York
Telephone: Evergreen 3-5510

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IT MAY PAY YOU WELL to get full details on economics now possible through use of these shatterproof, translucent, chemical-glass sheets. Only one of its type L.A. Code Approved as "Flame resistant." Colorfast. Fadeproof. Maintenance-free. No paint needed—ever. Precision-molded under 400,000 lbs. to give greater strength of 26,000 psi and absolute uniformity throughout. 5 colors in flat, or exclusive RIBBED shape so easy to install without costly special moldings. Small ¾ rib overlap saves up to 5¢ per sq. ft. Get facts!

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(Dealers: write for franchise details.)

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Cool attics mean cool homes and cool families... sales assurance for architects and builders.

Today, when year 'round comfort is of top importance to home buyers, it will pay you to add Emerson-Electric Attic Fans to your plans and specifications. And by installing these fans during original construction, your clients save half the installation cost.

Write for complete installation data at once. Ask for Bulletin No. 610.

THE EMERSON ELECTRIC MFG. CO., St. Louis 21, Mo.

Also Specify Emerson-Electric Kitchen Ventilators

You add "Kitchen Appeal" to your homes when you specify Emerson-Electric Kitchen Ventilators. Wall and ceiling models available for easy installation in any type construction.

new laminated fiber duct for

A laminated, insulated fiber duct has been developed for use as supply or return lines in crawl, basement or attic space with gas- or oil-fired warm-air heating systems. It is recommended for crawl space radial, trunk-and-branch, standard plenum or extended plenum systems. Called "Sonoairduct-XP," it has "built-in" insulation, with a 16-pound asbestos wrap on the outside and an aluminum foil inner wrap, permitting a low coefficient of air friction. Heat-loss factor is stated to be identical with that of 26-gauge metal with a half-inch fiber glass insulation.

The duct will support a 200-pound weight without damage. Its fiber construction is said to possess sound-deadening qualities, thus minimizing transmission of sound from the heating unit or from room to room. "Sonoairduct-XP" is supplied in 27 sizes, from two to 36...
and insulated warm-air heating

inches inside diameter, and up to 24 feet long or longer on special order.

This new development should not be confused with regular “Sonoair-duct,” made by the same manufacturer, which is for use only in slab-ground perimeter heating systems, encased in concrete.

Courtesy of Sonoco Products Co., Hartsville, S.C.

DOORS for a double-duty room

When a den room adjacent to the living room, and essentially a part of it, doubles as a bedroom, extra wide doors can be a handsome solution to the problem of making the separation. In this house built by Henry C. Cox in Garden Grove, California, very wide doors in Philippine mahogany plywood do the job. When closed they become an unobtrusive unit in a living room wall section paneled in the same material.

Renew your subscription to the American Builder NOW!

FEBRUARY 1954

10,000 WATTS A.C.

with half the weight! in half the space!

Check these advantages!

★ High capacity for big jobs.
★ Twin-cylinder, horizontally-opposed, air-cooled, alternate-firing engine.
★ Aluminum-alloy cylinder heads.
★ Extra-large, replaceable bearings.
★ Full-pressure lubrication, 6-quart oil capacity, oil filter.
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Costs less than any other complete electric plant!

You can’t match it anywhere in performance, equipment or value. The sensational new Onan 10CW gives you everything you’ve wanted in an electric plant plus exceptional mobility for a unit of its capacity.

On large construction jobs, where wattage requirements for power tools are high, or where floodlighting of extensive work areas is essential, the Onan 10CW delivers all the electric power you need.

Before you buy another electric plant for any purpose, take a good look at this new low-cost powerhouse!

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5,000 watts
Some advanced design as the 10CW with all its exclusive advantages. Built for heavy duty, economical operation.

Write for Detailed Specifications!

D. W. ONAN & SONS INC.

5473 University S.E., Minneapolis 14, Minnesota
Here's a motel for a northern lake

Good, sound construction is now the rule rather than the exception for motels, including those built for occupancy by summer tourist trade.

This two-story motel was built on the shore of Rice Lake, Wisconsin, by King Brothers, Rice Lake builders; plans by E. W. Hanson, Stillwater, Minnesota architect.

The structure is modern in design with a low-pitched shed roof.

New reasons why... Sherman Power Diggers give you more for '54

Important new features, combined with advantages proven by thousands of users, add up to more production for your digging dollar! The Sherman Hydraulic Power Digger is designed and built for that wide range of job requirements beyond the economical use of hand labor and below the efficient use of larger equipment.

Yes, between the smallest and largest jobs, you'll find there's always a place for your Sherman Power Digger! Ask your nearby Sherman dealer for an on-the-job demonstration today. Write for free literature, Dept. T-49.

Sherman PRODUCTS, INC.
ROYAL OAK, MICHIGAN


The building in process of construction and a continuous balcony across the lake front and at the second floor level. The balcony on the opposite side is used for service. The building contains, in addition to three housekeeping apartments which are located on both levels, six single rooms and bath and an office.

**door selection made easy**

A new device called the "Merry-go-Round Door Selector" gives builders a chance to see and compare a complete selection of door designs almost at a glance.

The door selector is a revolving drum on which are mounted wood miniatures of the most popular designs of wood doors. Each of the doors is reproduced at 1 1/2-inch scale and is precision cut. The selector contains space for 10 doors or for nine doors and a plastic pocket to hold descriptive literature.

By revolving the drum, a builder can compare the doors on display and make a choice quickly. All doors displayed are said to be readily available for delivery. The door selector is put out by Ponderosa Pine Woodwork, 38 South Dearborn, Chicago 3, Illinois.

Unique, invisible SOSS HINGES are completely hidden from view when doors or lids are closed. This feature eliminates ugly protruding hinge butts. SOSS HINGES make possible the flush, streamlined surfaces so necessary for smart, contemporary architecture. SOSS HINGES increase the beauty and quality appearance of any home. Use them whenever you build or remodel.
FOR PANEL WINDOW SYSTEMS

Especially designed to provide the most practical, efficient operating mechanism for use on ventilating panels of the modern multi-panel windows in all types of residential, monumental and commercial buildings. It swings ventilating panels outward and downward to any degree of opening to assure full view as well as the most efficient ventilation regardless of weather. Special and detailed engineering service available to Unit Window Manufacturers.

Window fully opened to 90° angle (Right hand stop removed)

Window partially opened to 45° angle (Right hand stop removed)

Locking mechanism
Window fully closed (All stops in place)

INVISIBLE SPIRAL TYPE, OVERHEAD TYPE, CABLE AND SUPERIOR DUAL FLAT TYPE SASH BALANCES, PULLEYS AND CABINET HARDWARE.

GRAND RAPIDS HARDWARE CO.
GRAND RAPIDS 2, MICHIGAN
NEW YORK • LOS ANGELES • DANBURY, CONN.

Under construction is La Porte’s new house with an $18,500 price tag. House will be completed in 30 days. Builder gave old house owner 30 day trade-in guarantee; will take old house if not sold

The 35-year-old house was offered to Portland builder John La Porte as a trade. Owner believed it to be worth $16,000. Builder valued it at $14,250. Stated it needed $1,500 repair before resale at a profit

Portland builder demonstrates selective TRADE-IN selling

“I’d rather be stuck with one of my new houses than an old worn out house I had taken on trade,” stated John La Porte, builder from Portland, Oregon, when emphasizing his selectivity in accepting trades. To prove his point, La Porte demonstrated with an example.

He had received a phone call from an interested prospect, who wished to trade an old home for a new one. La Porte was told that the old house was worth $16,000. His new house is priced at $18,500. The old house was in a good section of town where resales have been above average. The house was a two-bedroom, basement home, 35 years old.

La Porte, after a detailed appraisal, valued the house at $14,250. He appraised it as follows:

1,500 sq. ft. at 38 per ft. (+2% of the present building cost due to age—35 years) $12,000

Land ........................................ 3,000

Finished party room .......................... 750

Total $15,750

Deduction for repairs ......................... 8,150

Total $14,250

He offered the owners of the old house a 30-day guarantee plan whereby, if their old house did not sell (at the owner’s price), he would allow them $14,250. If La Porte did take in the old house, he planned to decorate it throughout, take off the gingerbread on the front, build a private driveway for parking, repair the garage, and completely remodel the bath. He figured these alterations would run $1,500. This would place an eventual price tag on the house of $16,750. The sales price figures $14,250 trade-in guarantee, $1,500 repair, and $1,000 gross profit.

La Porte believes that trade-in selling will be an increasing part of a builder’s business. “The future of trades is just ahead,” stated La Porte. “People will expect a builder to take an old house on trade.”
Miter cuts of complicated moldings are sometimes hard to lay out and scribe and sometimes cannot be cut in an ordinary miter box because of the sharp angle required. But two pieces of molding that fit this description can easily be cut at the same time with the rig shown above.

Piece A has a stop on it to hold molding against it. It also has a liner to raise the molding as much as its own thickness. In this way, the second molding can pass under it. Piece B acts in itself as a stop for the second molding. This piece is nailed on top of A to the required angle (easily renailed to a different angle). A guideblock is nailed halfway between the stops to facilitate aiming and guiding the saw.—W. Kraatz, Santa Cruz, Calif.

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.
Many of the finest horses in the country have been stabled here. The Devon Horse Show is one of the world's biggest and best known, and when the Devon stables were damaged by fire last year, steps were taken to assure maximum protection in the future. For the roof, fire-resistant, weather-defying asphalt shingles were specified.

The applicator recommended Certain-teed Asphalt Thick Butt Shingles, which combine good looks with excellent weather and fire-resistant qualities. Thick Butt shingles are thicker where it does the most good—on the exposed part. The extra layer of asphalt and mineral granules here give added protection—years of longer life.

Certain-teed asphalt shingles—made in 8 styles, including Woodtex and Saf-T-Lok—are first choice in important roofing jobs like this all over the country. For both new roofing and remodeling, Certain-teed's famous solid colors and artistic blends provide an extra selling point for this well-known line of high quality, long-wearing asphalt shingles. Write or wire for complete information now—and on your next job use Certain-teed—they're "Millerized"!
It pays to insist upon the best in screen hardware

Look for this flag symbol

Every room in the home needs full screen protection

National

Home owners are becoming more quality-conscious today and are vitally concerned about building for permanence. Modern methods and materials follow this popular trend of a longer and more serviceable life. National Screen Hardware has always exemplified the best in design, basic materials and operational efficiency. Dealers find it easier to sell and certain to satisfy the most discriminating of buyers.

A wide selection of styles

Note the variety and the completeness of the sets shown with all component parts included for a first-class installation—all securely packed including necessary screws, etc.

A catalog of the complete National line is yours for the asking—send for one today!

No. 86 Nois-Less Storm Sash Adjuster Set

No. 90 Screen and Storm Door Set

No. 79 Screen and Storm Sash Hanger

No. 80 Screen and Storm Sash Hanger

No. 93 Screen and Storm Door Set