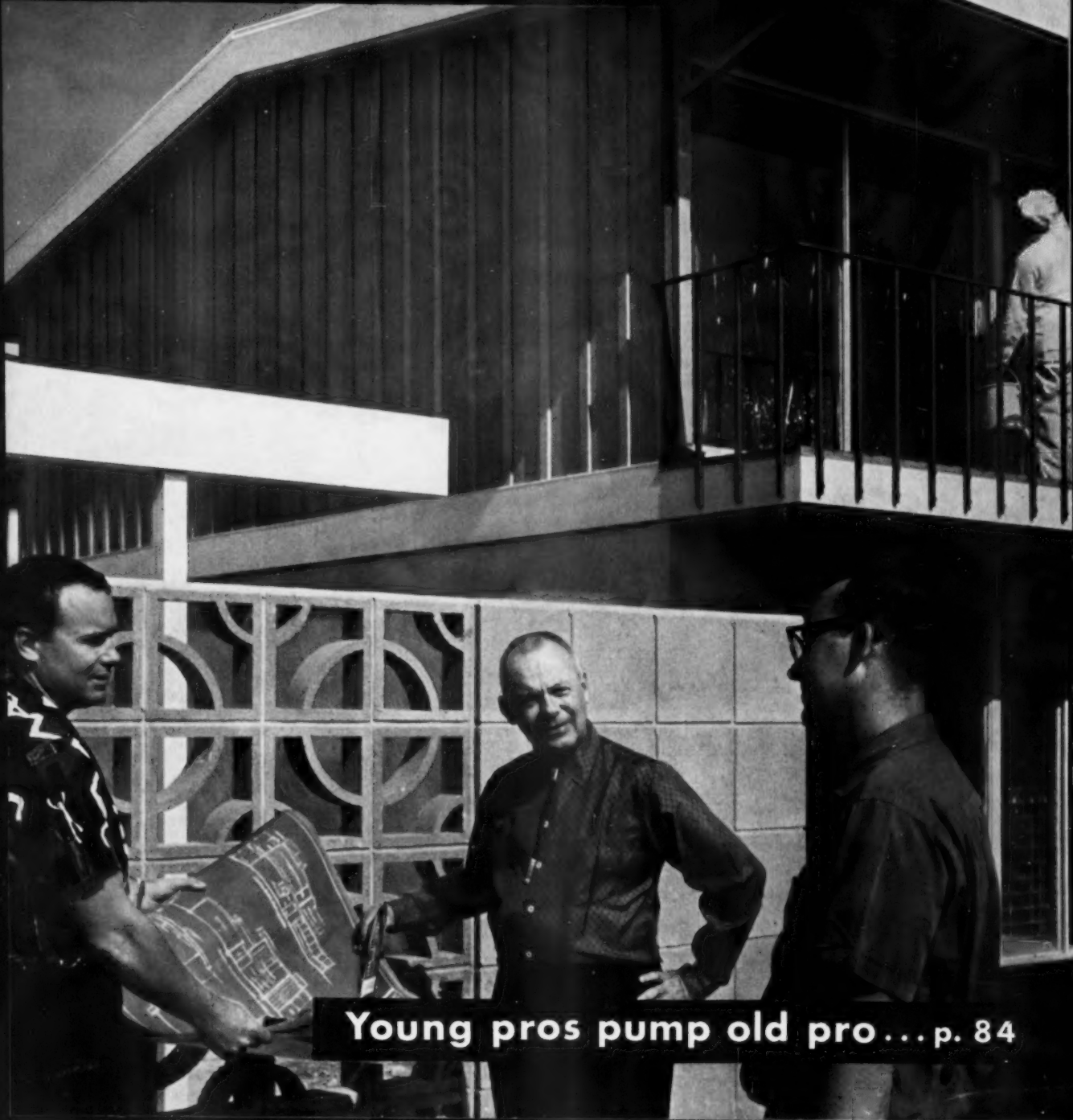


JUNE 1960

American Builder

*SPECIAL
Building's
Coming
Breakthrough*

II A SIMMONS-BOARDMAN TIME SAVER PUBLICATION • 75c



Young pros pump old pro ... p. 84

COMPLETE LIST OF CONTENTS

At least twice a day,

Berry's Series 60 "Suburban"

protects your reputation as a quality builder



Features new textured surface, new dune-colored primer requiring only one coat of paint (even white) . . . saves installation and call-back dollars, too.

Whenever your customer uses this door, you please him with its handsome, rugged appearance and effortless gliding operation. He's pleased, too, by other Suburban features. Deep horizontal "V" grooves and finely textured surface deaden noise and increase strength without adding weight. Pre-assembled hard-

ware reduces on-the-job labor costs and virtually eliminates callbacks.

See the Series 60 Suburban and other one-piece and sectional models by Berry, world's largest manufacturer of residential garage doors. Remember, a Berry Door usually costs less, because installation is so quick and easy. And you're protected by Berry's five-year guarantee. Contact your distributor or write: Berry Door Corp., 2400 E. Lincoln, Birmingham, Mich. In Canada: Berry Door Co., Limited, Wingham, Ontario.



COMPLETE VENTILATION FOR YOUR KITCHENS

Over the Range

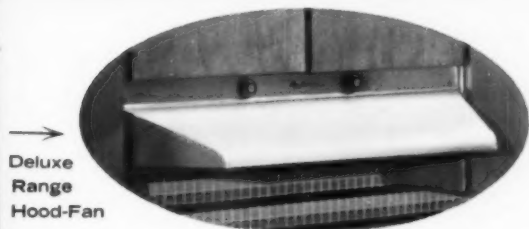
Over the Oven

NuTone



NUTONE RANGE Hood-Fans

NUTONE OVEN Hood-Fans



→
Deluxe
Range
Hood-Fan

For cooking or frying . . . a NuTone Range Hood-Fan acts like a "huge vacuum cleaner" over the cooking zone . . . to prevent greasy film from settling on walls . . . to get rid of offensive cooking odors, steam and smoke before they circulate all through the house.



←
Oven
Hood-Fan
open

"Fold-Away" Hood-Fan turns on exhaust when the hood swings open . . . turns it off when the hood is pushed to flush position. Protects cabinets from damage caused by scorching heat, grease and smoke which escape when the oven door is opened.

See Next Page →

FREE CATALOGS . . . Write NUTONE, Inc., Dept. AB-4, Cincinnati 27, Ohio



New! DIAL SWITCHES



Deluxe Unit with Filter Removed

New! PLUG-IN POWER UNITS

NuTone Built-In Food Center



COMPLETE FLEXIBILITY . . .
of SIZE + FINISH + POWER UNIT

. . . OVER 75 COMBINATIONS
EASY TO INSTALL IN 4 WAYS !

#3000 SERIES HOOD-FANS

CAN BE "TAILOR-MADE" TO FIT YOUR EXACT NEEDS

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- Choice of 5 finishes . . . plus prime-coat for matching color..
- Distinctive "crisp-line" styling has the "appliance look."
- Interchangeable "plug-in" power units. No extra wiring.
- Quiet, "super-suction" exhaust fan whisks away all odors.
- Full 21 inches under hood, reaches to front burners.
- Concealed power unit inside hood . . . does not protrude.

See
Other
Side
←

FREE CATALOGS . . . Write NUTONE, Inc., Dept. AB-4, Cincinnati 27, Ohio



Alden Wagner is shown in the kitchen of one of the modern Mahaffey-Wagner homes. Note the convenient wall phone.

**“We’ve always telephone-planned our homes.
We consider it a fine investment”**

SAYS ALDEN WAGNER, MAHAFFEY-WAGNER CONSTRUCTION COMPANY, DALLAS, TEXAS

John Mahaffey and Alden Wagner have built 940 development homes in the Dallas area since they formed the Mahaffey-Wagner Construction Company in 1953. The homes range in price from \$9900 to \$18,000 and reflect contemporary, modern and early-American stylings. One thing they have in common is *concealed telephone wiring*.

“People no longer think in terms of a one-telephone home,” says John Mahaffey. “They

want telephones where they *need* them—and they want them installed without exposing wires or drilling holes in the walls. We give them as many as five built-in outlets, each in a key area of the home.”

Says partner Alden Wagner: “We’ve always telephone-planned our homes. We consider it a fine investment—a feature that tells people our homes are quality-built.”



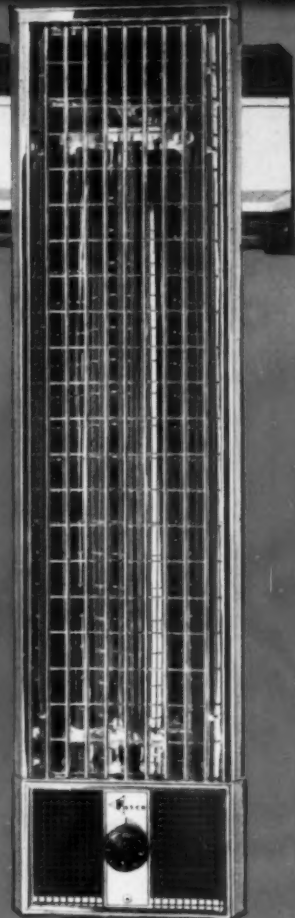
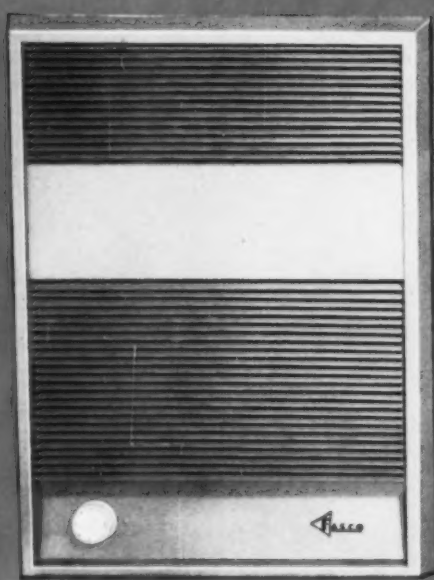
Your local Telephone Business Office will gladly help you telephone plan your homes. For details on home telephone installations, see Sweet's Light Construction File, 8i Be. For commercial installations, Sweet's Architectural File, 32a Be.

BELL TELEPHONE SYSTEM





FASCO'S HELPFUL FACTS and FIGURES ON NEW ELECTRIC HEAT

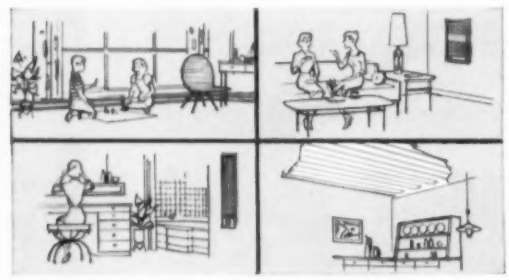


BASEBOARD HEAT BB-2408

7½" high, 2½" deep in 48" and 32" sections; built-in temperature control; corners, blanks, receptacle sections; removable front panels; ideal where decorative appearance is essential.

FORCED AIR HEATERS (Models FW-2415, 2420, 2430, 2440)

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RADIANT WALL HEATER (Models RW-1215, RW-1210)

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Fasco offers a complete new home-heating combination scientifically designed on a room-by-room basis . . . available as a complete system or for supplementary heat, in baseboard sections, radiant wall insert heaters, forced air wall insert heaters, radiant cable, precise controls and accessories.

This line features the progressive slim-trim styling and practical installation now in demand among heating contractors and builders. Units are 100% efficient, give clean, even heat silently and quickly without drafts.

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FOR
HOME HEATING
BY



first
with
the
finest...
Always!

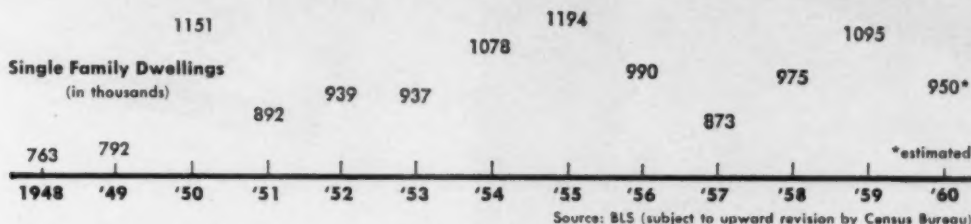


FASCO INDUSTRIES, INC.
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Please send additional information on FASCO electric heat.

Name _____
Address _____
City _____ Zone _____ State _____

OPPORTUNITY



Building's coming breakthrough

Homebuilding has been bumping its head on a ceiling a little under 1,400,000 units a year—a little under 1,200,000 in the critical Single Family Dwellings For Sale area of the market profiled above. To many, this magazine included, this ceiling has seemed unnaturally low—all out of proportion to America's wealth and its need for houses. Two million houses a year has seemed a more reasonable figure.

Failure to break through the 1,400,000 ceiling is one way to say that building has not realized its potential. Failure to retain its historic share of the consumer's dollar is another way to say it. Actually, housing's share has fallen off 33% in the last 35 years, losing ground to automobiles, appliances, boats, etc., etc.

What is the ceiling made of? Code restrictions, financing restrictions, restrictions on land use . . . *any and every kind of restriction that has tended to keep a house's price higher than it might be, its sales appeal lower*—or however you want to express it.

Less than 6% of homes built last year by NAHB members were priced below

\$10,000. Yet less than half the nation's families can afford to buy a house over \$10,000. *The industry is building almost nothing in the market where its greatest potential lies.*

Take this \$10,000 house and imagine these savings: \$300 from lower mortgage discounts, \$300 from eliminating unnecessary code requirements, \$400 from better construction methods. You now have a \$9,000 house; and if you've ever built low-cost housing, you know how many more buyers the lower price would qualify.

Now move up the economic scale and do the same arithmetic. Take the man who could afford a \$30,000 house, but prefers to stay in his old home and buy a new car or a boat instead. Put \$3,000 more value into the new house without raising the price, and he'll probably spend his discretionary dollars there.

With this issue, AMERICAN BUILDER begins a series of reports on how we can and must knock the lid off homebuilding. How we can use research to make a house more irresistible begins on page 63.

Arthur J. McGinnis, Publisher

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HUSH-TONE® CEILING TILE

Featured by Top Builders, Coast-to-Coast!
In All Price Brackets... Helps Sell Homes!

"There was a world of comment on the attractive ceiling," say Mr. Gual and Mr. Smith, well-known builders in the Western part of Dallas. Their stunning room (above) and their description of the impression made on prospects by the use of HUSH-TONE ceilings are representative of the results being achieved by scores of builders in all parts of the country.

"This \$35,000 home sold several people," Mr. Gual and Mr. Smith add, "and when we built for them, they all wanted the same Fissured HUSH-TONE tile you see in the picture. People like the idea of cutting down noise, and these ceilings make HI-FI and Stereophonic sound better, too. We like HUSH-TONE tile because it helps us sell our homes."

See glamorous new Hush-Tone designs at Celotex dealers, now!



A national program to encourage
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This Smith-Gual, Inc. home is a "Parade House," one of from 6 to 15 model homes built at each of 5 locations by members of the Dallas County (Texas) Home Builders Assoc. for the annual National Homes Week Fall Festival.

If it's "by CELOTEX"
you get QUALITY... plus!



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Nobody covers American Building like **AMERICAN BUILDER**

← PLANNING → ← BUYING → ← BUILDING → ← SELLING →

June 1960

Building's Coming Breakthrough—Wanted: more research to spearhead efficiency and lower costs 63

Which Glue Where?—The latest on structural nail-gluing 70

Lightweight Steel—New opportunity in commercial building 72

Best Split Yet?—AMERICAN BUILDER's Blueprint House is an outstanding split 74

Minority Housing—How one builder taps this market 82

Building a Multi-Million-Dollar Business—Old pro tells young pro how to diversify 84

Saved—\$140 Per House—with steel beams and plywood 92

37 Ways To Win—AMERICAN BUILDER announces its new contest 93

Up Your Profits and Sales—New FHA trade-in rules can widen your market 94

New Concepts in Kitchens—Are you keeping up with the latest in kitchen planning? 96

Sold: 3,400 Houses on Scattered Lots—How Harmony Homes did it in one year 104

Opportunity	5	Building with Brains	25	How To Do It Better	164
What's New and What To Do About It	9	Regional News	35	Ask the Experts	166
Tomorrow's House	13	Selected Regional House	36	Better Detail of the Month	171
Change	15	New Products	115	Technical Guide	174
Ideas in Action	17	Land Planning	158	Advertising Index	177
				The Month Ahead	178

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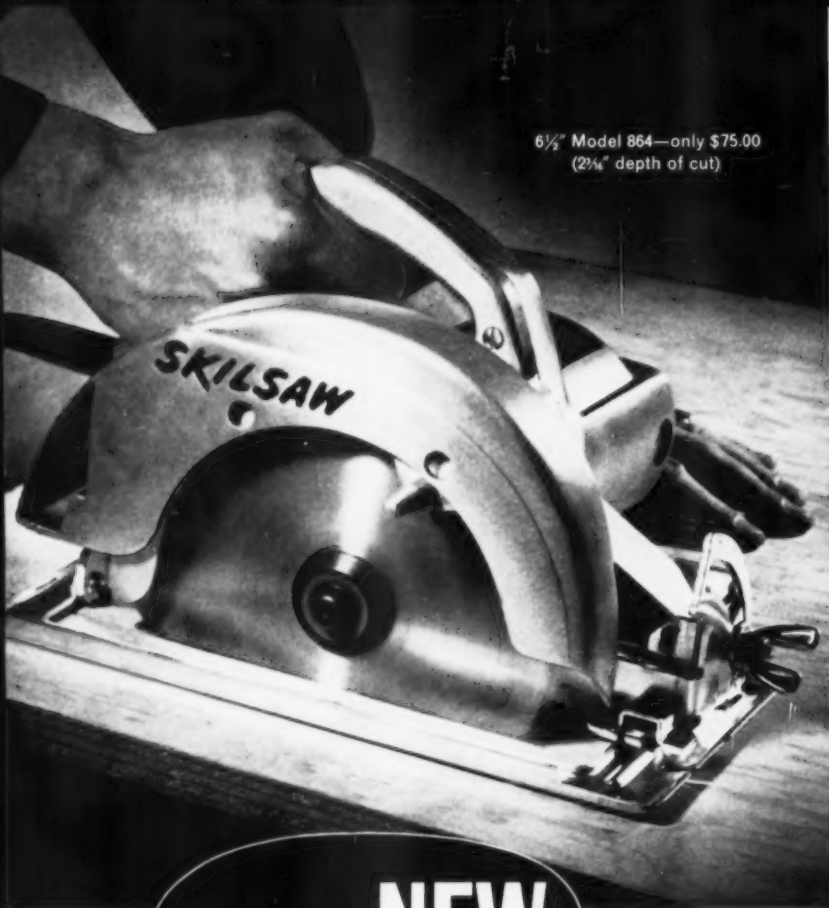
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6½" Model 864—only \$75.00
(2¼" depth of cut)



7¼" Model 874—now \$85.00
(2¾" depth of cut)



8¼" Model 884—now \$95.00
(2¾" depth of cut)



3 NEW

SKILSAW POWER SAWS

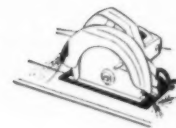
*...combines famous
SKIL quality with low cost!*

These new ball-bearing heavy-duty models are a perfect complement to the "Standard" of the industry—SKIL's Super-Duty Line. They're the ideal "extra" saws you need to cut down non-productive time and speed up construction. Best of all, prices are low enough to meet everyone's budget.

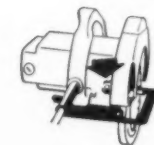
Just look at these exclusives... a new saw dust ejection system that directs dust away from the operator's face and line of cut. New "push but-

ton" blade lock for faster, easier blade changes... redesigned upper guard that permits full blade visibility... new easy-to-reach depth adjustment... many others. And each has the famous SKIL "Vari-Torque" clutch for protection against kick-back and overloading of motor and bearings.

Now available from your SKIL Distributor. Call or see him today—ask for a demonstration—of course there's no obligation.



EXCLUSIVE!
New ejection system directs dust away from operator and line of cut.



EXCLUSIVE!
New Push-button engages, locks saw shaft permitting fast, easy blade changes.



NEW!
Blade visibility is greatly improved, gives extra accuracy needed on critical cuts.



...another basic Skil construction tool

Famous SKIL and SKILSAW products made only by SKIL Corp., 5033 Elston Ave., Chicago 30, Ill. In Canada: 3601 Dundas St. West, Toronto 9, Ontario.

WHAT'S NEW *and what to do about it*

"Biggest house party in town"—Model Homes pay off

Model home openings have been drawing big crowds since the weather warmed up. Field reports from local builder associations also tell of top sales results. More model home parades are planned this year than ever before: Dallas' big show of 38 opens June 10; Milwaukee's, June 11. Cleveland advertises "biggest house party in town."

If you want to pick up new ideas by visiting parades, plan a tour. A list of 100 is available from NAHB's field service dept. You can also cash in on your own model home by entering AMERICAN BUILDER'S Quality Model Home contest. Any model home open one week to the public is eligible. Contest closes Oct. 1. See contest announcement, page 93.

Houses out of test tubes—research blazes new paths

The tempo of change in building products rises sharply as more manufacturers step up their research programs. Activity is especially pronounced in plastics, metals, wood compounds and chemicals. Typical example is what is happening at Barrett division of Allied Chemical. Here a respected old-line building products firm is profiting by exciting findings of the parent chemical company. At a recent sales meeting a few futures were unveiled:

- nylon hot water pipe that snakes into place like BX cable
- plastic gutters that are impervious to time or weather
- plastic foam core wall panels and roofing
- molded nylon shapes, such as complete door units

Significant changes seen by experts will also come through, combining old and new materials. Change is the order of the day.

You don't have to wait until next year: current new products from manufacturers are at an all-time high—and they are changing the face of building. For some of the latest, see our New Products section, p. 116, and use the "supermarket" Reader's Service Card, p. 117.

Now: split-level industrial plant on Long Island

Split-level houses have been popular on Long Island for many years, but now the "split" idea has taken a long leap forward. A model split-level plant is being constructed, and its builder says it is the best solution for certain types of factories.

Builder-developer William Shames says the split-level is a good compromise where neither a one story nor a multi-story plant quite fits the production process. He's building it on a 15-acre tract in the Lake Success Business and Professional Park. A split-level hospital is also proposed for Staten Island—not too far from Long Island, where the split-level house is said to have originated.

AFL-CIO working on mortgage investment plan

It's been announced by AFL-CIO that the union is working on a plan to channel billions of dollars of its welfare and pension funds into government guaranteed mortgages. Such funds total over \$40 billion, could be a decisive factor in relaxing home credit. George Meany has appointed a committee of three vice presidents to speed up the move.

Continued ▶

WANTED: GARAGE DOOR DISTRIBUTORS WHO

THINK BIG

Do you sell over 70% of the home builders in your area? Graham Industries does, in markets in which they are established. Why get into the rat-race of garage door prices? Here's a line that gives you an opportunity to offer your customer, the builder, a plus feature that will sell his homes... truly beautiful custom-styled, flush sectional garage doors. Sell style that no one else can offer. Sell garage doors that sell homes.

If you're an aggressive, financially secure company who work with residential and commercial contractors and architects, WE NEED YOU...

AND YOU NEED US. Graham Industries, Inc., the parent company of Graham Garage Doors, is the oldest, exclusive manufacturer of nationally advertised flush sectional doors. We build our Graham Garage Doors with sales-appeal... with a modern, custom-made look at a ready-made price. Feature for feature, Graham flush garage doors are the most beautiful, strongest, most trouble-free overhead doors ever engineered.

We hope you've heard of us. About our architecturally-correct styling... our "Kitten-paw" quiet MAGI-DOR Operator... our "Insulcore" commercial doors. Now we want to hear from you. Just use the handy coupon below and mail it today. Or write us on your letterhead. We'll both make m-o-n-e-y.



THE MOST BEAUTIFUL
HOMES IN THE WORLD WEAR

GRAHAM GARAGE DOORS

HERE'S YOUR
HANDY COUPON
USE IT

GRAHAM INDUSTRIES, INC.

6901 Carnegie Avenue, Cleveland 3, Ohio
I am interested in becoming a franchised distributor for Graham Garage Doors. Send information to:

Name and title _____
Company _____
Address _____
City _____ Zone _____ State _____ AB-J60

Long Island home builders saw an easing in the tight mortgage money situation there when three large building unions announced plans to invest their welfare and pension funds in mortgages.

There's a crying need to bring more outside money into the mortgage structure. Large corporations serving the building field might also invest pension funds in insured mortgages.

Lower down payments, easier money, help building sales

A nation-wide easing of mortgage money seemed to be slowing the downward drift of housing sales. Discounts on FHA mortgages eased slightly and were generally in a range of from 2½ to 5 points.

While lowering of FHA downpayments worked no miracles, it had a definitely helpful effect in many areas. Builders of houses in the \$18,000 bracket got the best break—a \$500 downpayment drop from \$1,400 to \$900.

With wages, profits and business activity at continuing high levels there appeared to be little likelihood of a further decline in housing this year. An upturn the second half is possible.

Some construction types doing very well—total off only 3%

The total construction picture in 1960 is by no means gloomy. For the first four months, value of all types of new construction put in place was \$14.9 billion, just 3% below 1959. Private building of all kinds was actually up 1% for the first four months. Late reports by U.S. Census also show these bright spots: stores, restaurants, and garages, up 10%; industrial work, up 38%; social and recreational buildings, up 31%.

New workshops on estimating, profit planning, expense control

Builders will get a helping hand on business management problems in the months ahead. A series of workshop sessions is being sponsored by U.S. Gypsum Co. in co-operation with local Home Builders' Associations. This is a continuation of the popular "Blueprints for Profit" program of last year. Slide films, workbooks, forms and folders will be used to instruct in estimating, budgeting, expense control in the two-hour sessions.

Contact your local Home Builder's Association for information on time and place of Business Management Workshops.

Housing bill still in middle of political fight

Not one but a whole package of housing proposals have further complicated the housing battle in Congress. Housing Chief Norman Mason opposed most of the Democratic-sponsored measures in Senate hearings. He took particular exception to the Rain's bill calling for FNMA to buy \$1 billion of low-cost mortgages. Predictions are that if this bill passes it will be vetoed. With Convention time looming ahead, it seemed unlikely that a major bill with sound long-range features would emerge.

Senator Sparkman, chairman of the Senate Housing Subcommittee, accused President Eisenhower of "a lack of interest" in solving the nation's housing problems. He said that Administration proposals fail to show concern for "the many things which must be done to improve housing."

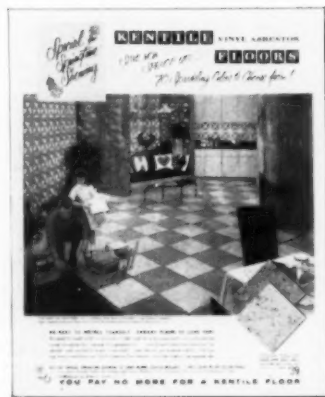
Builders should be interested in "Study of Mortgage Credit," a comprehensive report by the Senate Subcommittee on Housing, 75 pages, available from U. S. Printing Office. If no long-range Housing Bill passes now, this report may be the basis for action at the next session of Congress.

the house that less "jack" built!

There was once a very smart builder. Though every dollar counted with him, he knew that the quality of materials he used had to be above reproach if he was going to sell homes and build his reputation too. So he wisely insisted that his flooring contractor use Kentile® Floors. He knew that Kentile gave him and his home buyers the very best for the money. He knew that Kentile Floors had the smoothest surfaces, the finest, clearest colors . . . the most uniform distribution of marbleization or pattern. He knew that whenever he put Kentile Floors in any of his homes, it meant virtually no "call-backs." Above all he knew that Kentile Floors, through intensive national advertising, were a symbol of quality to new home prospects. That helped his selling. It'll help yours, too!

Kentile advertising like this appears in LIFE, LOOK, SATURDAY EVENING POST, 17 other leading National magazines and 51 Sunday Magazine Sections.

It's easy to give your homes a custom-flooring look. Over 200 colors, thousands of designs to choose from in Solid Vinyl, Vinyl Asbestos, Rubber, Cork and Asphalt Tile. Kentile, Inc., Brooklyn 15, N. Y.



KENTILE FLOORS

TOMORROW'S HOUSE



ALL-GLASS SIDEWALLS of this house relate the inside to the outdoor garden area, make it possible to grow

plants in almost any room. Privacy for the occupants is assured by the surrounding masonry fence.

Exhibit house solves space problems

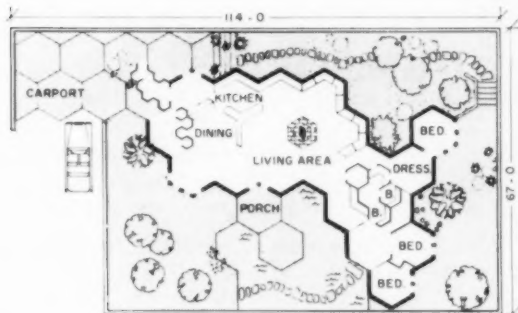
The main advantages of this house designed by architect John T. Kelly for the Cleveland Homes Show are "privacy for the homeowner, freedom of action and . . . flexible space to

meet the needs of a growing family."

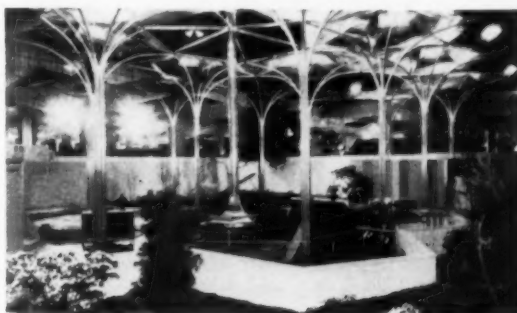
To achieve these aims, Kelly made a bold departure from conventional house design:

Instead of standard framing,

he used a series of 15 hexagonal umbrella frames, capped them with copper canopies. And, to tie the clustered frames together, he used metal grids covered with clear plastic and glass sidewalls.



GREAT FLEXIBILITY in house shape and room arrangement is possible with umbrella framing system. Irregular layout includes a large living area, three bedrooms, two baths, dressing areas, two dining areas.



ALUMINUM TUBING supports the roof of copper "tents" over this main living area, which includes an unobtrusive fireplace, a kitchen on the right and the play area with piano in the background.



Oven shown with Westinghouse Wood Cabinets in Heirloom Maple finish and Micarta® counter surfacing

NEW WESTINGHOUSE DOUBLE OVEN BUILDS IN AS A UNIT... INSTALLS WITH 2 BOLTS...SAVES TIME AND LABOR!

This new Westinghouse Built-In is delivered to the job already assembled, including trim. Just slide into place, make electrical connections, and fasten with 2 lag bolts furnished. Install at any desired height. Rough-in dimensions: 21 $\frac{3}{8}$ " w x 54 $\frac{7}{8}$ " h x 23" d (minimum). Westinghouse also makes the wood cabinet, shown above, to accommodate this new built-in.

Check your Westinghouse Distributor for availability of Model OAB-21.



YOU CAN BE SURE...IF IT'S **Westinghouse**

WESTINGHOUSE ELECTRIC CORP., CONTRACT SALES
DEPARTMENT, MANSFIELD, OHIO

A TOTALLY NEW LOOK IN THE KITCHEN!

Two beautiful full-size ovens in the floor space normally occupied by one!

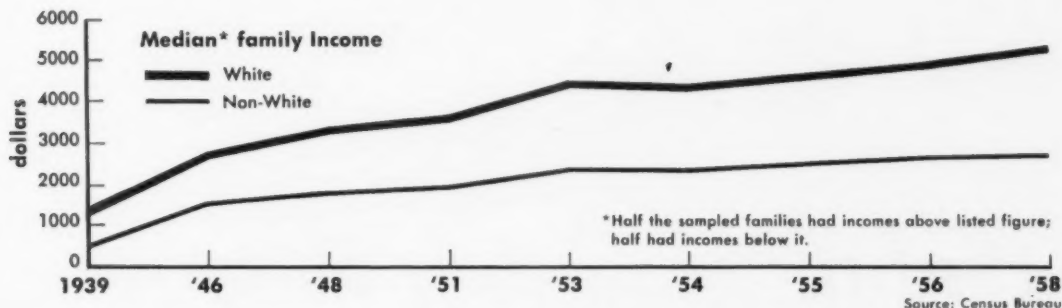
EITHER OVEN BAKES WHILE THE OTHER BROILS

Both ovens have Miracle Seal; Plug-Out Spread-Even Heaters; Single Dial Control; Interior Light. Top oven also has Automatic Electric Clock-Timer, Minute Timer and Look-In Window.

Colors: Mint Aqua, Frosting Pink, Lemon Yellow, Coppertan, Coppertext, and Brushed Chrome.

TUNE IN WESTINGHOUSE-CBS TV-RADIO COVERAGE—
PRESIDENTIAL CONVENTIONS, JULY 10-29.

CHANGE



Minorities have more housing dollars

These are times of tremendous social change in America. And there is tremendous opportunity for builders who realize the implications of these changes.

We have over 20 million nonwhites in the nation—about 10% of the total population. They comprise the major part of our population living in the nation's 11.5 million substandard dwellings. Yet, some 20% of the nation's nonwhite families are in the \$5,000 and over bracket. And, the rapid growth of nonwhite family incomes over the past 20 years closely parallels that of whites.

For a long time these people have been living on "leftovers." They've had to be content with second best—in jobs, in schooling, especially in housing. But for a portion of our minorities the situation is changing. They are better educated, have higher incomes, and are "status seekers" in terms of autos, furniture, and housing.

These are people who live in ghettos, not by choice, but by circumstance. They want, and can increasingly afford, new housing. Either the government or private industry will eventually give it to them—and private industry has been slow in getting started.

A few of these people want housing on equal terms with whites. Many more will take it where they can get it—they are more interested in better housing than in

fighting to "break" white suburbs. The essential point is this: builders aren't doing very much in the way of building homes for minority groups—either in or out of the minority communities. Yet, there's a big market for such housing.

It is a market with its own peculiarities and pitfalls. Approached logically and unemotionally, it can yield both profits and social satisfaction. Here are some pointers to keep in mind:

- Resistance to open-occupancy housing tends to be greater in the suburbs around cities that have been exposed to heavy minority influx. The solution in these areas for the moment, might be to build within existing minority areas. (For one such success story, see page 82.)

- Where there is not a heavy minority population you might be surprised at the lack of resistance you'll find to open-occupancy building (for an analysis of successfully developed interracial housing see "Privately Developed Interracial Housing" by Eunice and George Grier, U. of Calif. Press, \$6.00).

- Consider building prefabs or component-type homes. These give you a high degree of cost control—necessary in lower-priced houses.

- If you feel strongly about trying an open-occupancy development, contact Modern Community Developers, Princeton, N.J. They've had experience.

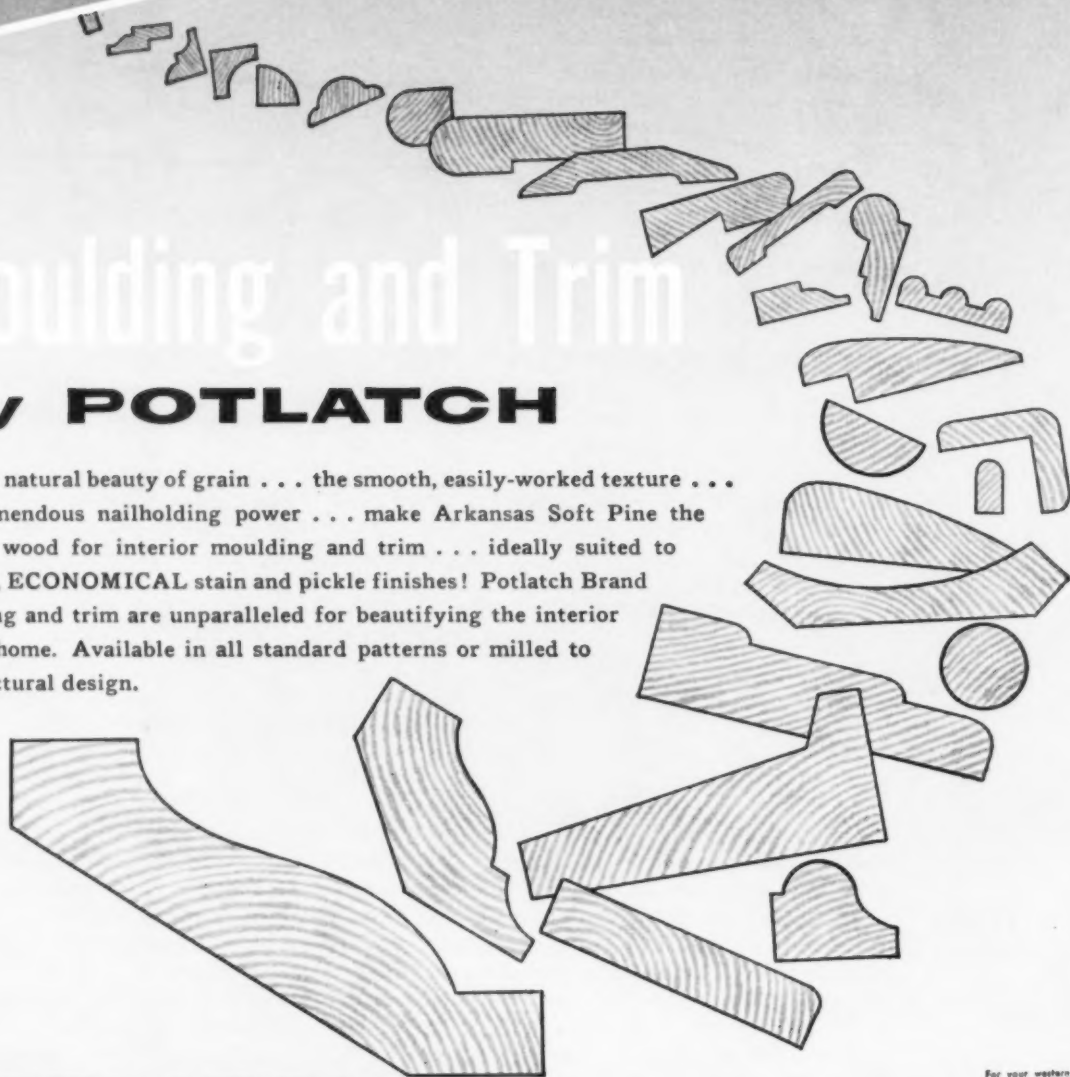


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20 N. Wacker Drive
Elizabeth, N. J.
720 Dowd Avenue
Lewiston, Idaho
General Offices

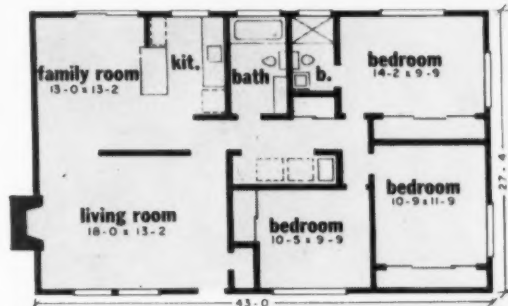
Look To Potlatch



For *Everything* In Lumber

IDEAS IN ACTION

California builder
starts with
a BASIC PLAN...



Varies the size of his model...

LINCOLN BUILT HOMES, operating in Contra Costa County, Calif., offers several variations on one basic plan. Prices range from \$14-18,300—with land valued at \$2,750 to \$3,300. Optionals include: beamed ceiling (\$350); modified living area (\$1,050); fourth bedroom (\$1,350).



Varies the orientation of his models on each lot



FLEXIBILITY of basic floor plan has been an important factor in sales (well over 300 units). Strong points: central laundry area; wall-length wardrobes; eat-in kitchen.

VARIED ELEVATIONS are achieved by staggered siting, shifting of garages, entries, etc. Owner can add extra bedroom later—a good young-family convincer.



PROVED TOP CHOICE FOR LOW OVERHEAD DELIVERIES



TRANSPORT* ALL TRACTION* *FIRESTONE T.M.

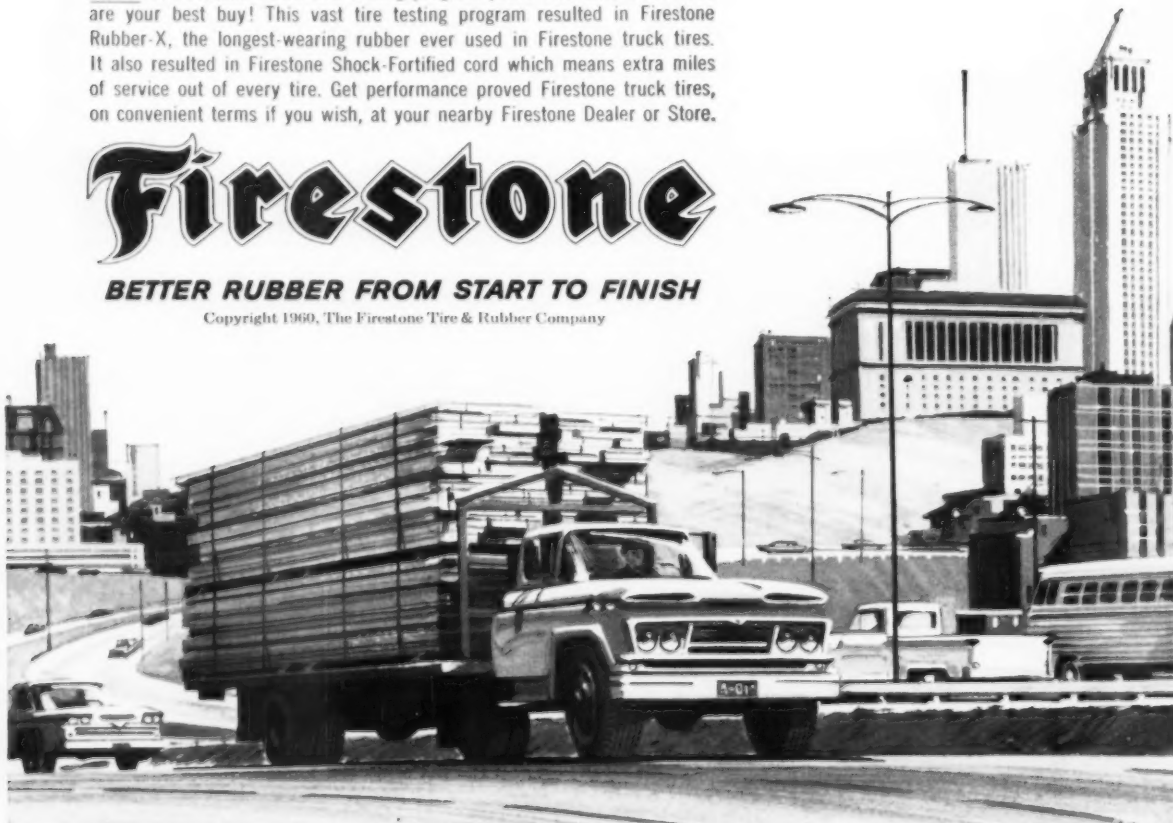
FIRESTONE, THE LOW-COST-PER-MILE TIRE FOR ON-TIME BUILDING MATERIAL DELIVERIES!

Firestone tires' low-cost-per-mile is reflected in performance records of thousands of trucks across the country. That's because 425,000,000 tire miles a year in Firestone's own tire testing program prove Firestone truck tires are your best buy! This vast tire testing program resulted in Firestone Rubber-X, the longest-wearing rubber ever used in Firestone truck tires. It also resulted in Firestone Shock-Fortified cord which means extra miles of service out of every tire. Get performance proved Firestone truck tires, on convenient terms if you wish, at your nearby Firestone Dealer or Store.

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BETTER RUBBER FROM START TO FINISH

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How to add warmth and beauty to concrete slab homes

The best thing that can happen to a concrete slab is a distinctive floor of Bruce PREfinished Blocks. Both the Unit-Wood Block (shown at right) and the Laminated Block (below) look warm and feel warm. These modern hardwood floors insulate the house from slab chill and provide foot-cushioning resilience. Blocks can be laid in mastic over concrete, plywood, or any level surface . . . and the Unit-Wood type can be nailed over wood. The beautiful factory finish saves on-the-job finishing time and expense. Write for color booklet on this popular, practical sales feature for any home. See our catalog on all Bruce Floors in Sweet's Files. E. L. BRUCE CO., 1598 Thomas St., Memphis, Tenn.




BRUCE PREfinished Block Floors



Unit-Wood Blocks (top photo) and Laminated Blocks (below)



PREfinished
*Twice the wear
-half the care*



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encasement-
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and costs!**

**USE "K&M" ASBESTOS-CEMENT AIR DUCT for heating,
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Used for perimeter-loop, radial, and lateral air systems, "K&M" Asbestos-Cement Air Duct can be laid directly on the moisture barrier, resting on it and the prepared bottom. Since there is no concrete encasement to cause it to float, it needs no anchoring. You never have to worry about costly pipe replacement and floor repairs due to unobserved floating.

"K&M" Air Duct won't weaken or crack under normal super-imposed loads. Never corrodes or deteriorates. It's strong and lightweight, almost as permanent as stone. Its smooth interior bore stays clear year in and year out, assuring even, unimpeded air flow. It has no odor.

"K&M" Air Duct is fast, easy, and economical to install in residential, commercial, institutional, and

industrial buildings. The light 13-foot lengths require fewer joints. And these joints are quickly and securely sealed with "K&M" Air Duct tape prior to pouring the slab. What's more, "K&M" Air Duct can be cut to fit on the job to prevent wasteful short lengths and leftovers. Also, stack head take-offs for registers or diffusers are easily cut with a chisel or carborundum disk. "K&M" Air Duct can be stored outside, on the job, without weather or dampness damage, and can be walked on during installation without damage.

Write today for a comprehensive illustrated brochure outlining in more detail the uses and advantages of "K&M" Asbestos-Cement Air Duct. Keasbey & Mattison Company, Ambler, Pa. Dept. P-3660.



Keasbey & Mattison at Ambler



Walls: Platinum Walnut Random and painted Perforated. Each wood-grain finish comes in Blok, Verti, Random, Plain and Perforated patterns.

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Abitibi® *Better building products through research in wood chemistry.*

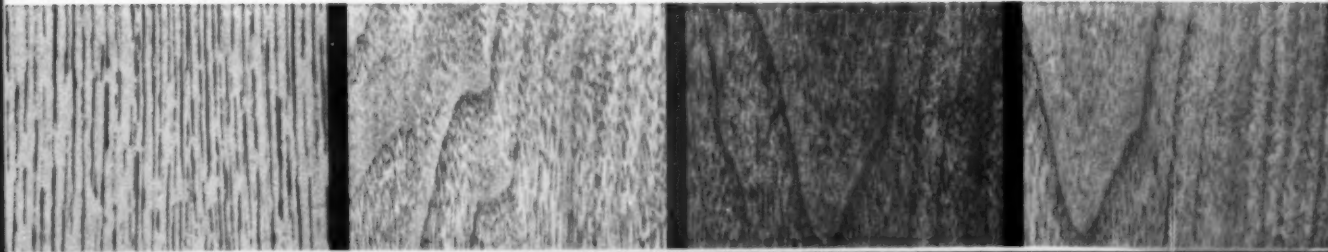
ABITIBI CORPORATION General Sales Office—Detroit 26, Michigan • Manufacturing Plant—Alpena, Michigan

Oak

Autumn Walnut

Natural Walnut

Platinum Walnut





New *Brian* "Uni-Rim" design eliminates conventional metal rim. Lavatory is available in color or snowy white.



Brian lavatory can be installed on any type counter top—marble, tile, plastic or wood.

Exciting news for architects, builders, plumbing wholesalers and contractors is the revolutionary new *Brian* vitreous china counter-top lavatory . . . another "first" in style and design from Eljer. Exclusive "Uni-Rim" design eliminates the costly metal rim between lavatory and counter top . . . unique "J" clip assembly permits fast, economical installation *without tools!* More than 1,850,000 homeowners and prospective homeowners (*your* customers) are being "sold" on the new *Brian* lavatory through distinctive full-page, four-color advertisements in leading national magazines.

ELJER
Division of The Eljer Corporation of America

3 Gateway Center
 Pittsburgh 22, Pa.

New *Sorrento* 5' enameled iron recess bath with exclusive modern apron design with straight floor line . . . in snowy white or choice of six soft pastel colors.



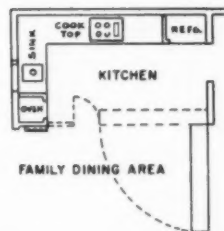
Convertible kitchen boost sales of medium priced homes



2nd in a series of practical, profitable ideas featuring Suburban built-in ranges

Another best-seller kitchen designed by Bruce McCarty, A.I.A. of Painter, Weeks, McCarty-Architects —all blueprinted and ready to use —each designed to give you the most value, the most sales-talk for a home in a specific price range. Suburban's Idea Kitchen shown here is for homes in the \$14,000 to \$16,000 price range.

Permanent custom-look is possible in convertible rooms with the use of a hinged, swing-out wall that features decorative shelves and storage cabinets, plus a built-in bar underneath. Home buyers love this quick switch from family room to kitchen privacy! That's why this newest kitchen idea deserves the most modern built-in range — Suburban, of course!



Free plans; free "Ideas File"

The sketch above shows how easily the Idea Kitchen may be adapted for varying space requirements. The details on design, equipment, sizes and dimensions are yours for the asking. A specially prepared expansion-file, "New-Home Ideas Kit," is also available for you to collect other ideas, articles and product dope with separate indexed sections for every room in the house. Just say "send it!"



Samuel Stamping & Enameling Co.
Department AB, Chattanooga 1, Tenn.

I want more information on Suburban:

Built-in Electric Ranges

Built-in Gas Ranges

I am an architect realtor kitchen remodeler builder (sales mgr.) builder (in charge of purchasing)

Please send me free Kitchen Plan and Specs for Medium-Priced Homes for New-Home Ideas File Kit .

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Firm _____

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City _____ State _____

suburban

Built-in Ranges

LOOK FOR SUBURBAN IN YELLOW PAGES



This toddler's room features Aristoflex-Confetti #773.

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There's nothing like the extra-value of a luxury-look floor to march your prospects right to the dotted line. You'll be happy to know Matico Tile is economical . . . low in cost, inexpensive to install, with long-time carefree use. It meets all applicable Federal Specifications.

This colorful floor is one of hundreds of decorator-dreamed patterns and colors that can make your model home eye-appealing and buy-appealing. Plan your next project with the sales-plus of Matico Tile Floors.

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BUILDING WITH BRAINS

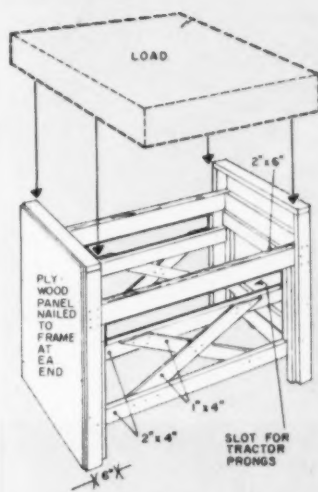


Job-made materials-handling frame speeds Bob Schmertz's second-story operation

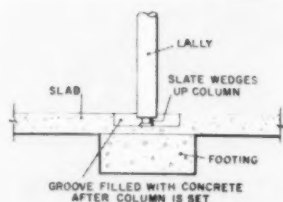
Bob Schmertz (Lakewood, N.J.) watches as roof framing crew receives sheathing from job-made materials platform (sketch, right). He saves \$50 a house with mecha-

nized materials-handling methods. There's no time-consuming man-handling of materials at the job site—they're all deposited by tractor within easy reach of his men.

↑ WHAT
→ HOW



Lally columns don't have to be cut when slab and footings are poured monolithically



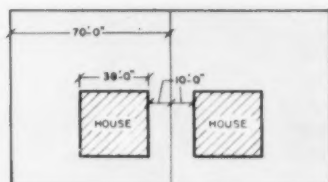
Besides saving a course of block, pouring basement slab and footings monolithically simplifies installation of lally columns. This new technique (sketch) does away with placing columns directly on footings, cutting them at top. Schmertz orders lallys to size, wedges-up, fixes wedges with concrete.



Placing low-cost houses in pairs makes small lots appear larger

“**P**lacing lots as shown creates an illusion of space, gives the impression we've built on every other lot,” says Bob Schmertz. The bedroom or dead-ends are placed next to

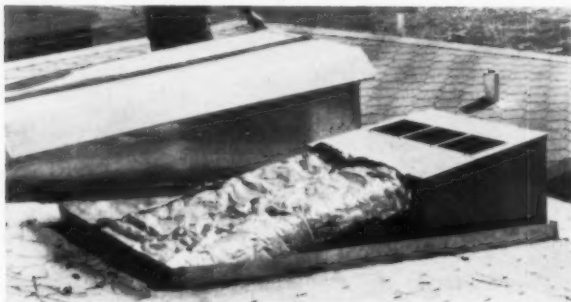
one another. The entry-kitchen ends have plenty of room for future expansion. At a price of \$9,300, these 1,248-sq.-ft. houses are a tremendous space value.





← WHAT

HOW

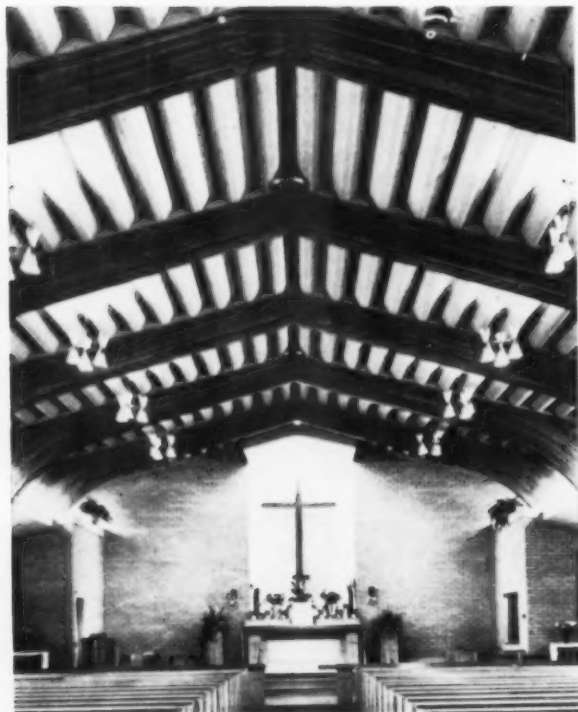


METAL GABLE in position (left). Above, it's easily removed by one man, to permit servicing of air conditioning unit.

Low-cost metal gable unit

Brooks Roofing and Sheet Metal Co. enclosed 2-ton roof-mounted air-conditioning units with attractive metal gables like this (photo left) in 40 new and existing houses in and around Bossier City, La.

The low-cost gables (\$35) permit a happy solution to the problem of where to mount the inexpensive one-piece equipment so that it will be easily accessible without marring a house's exterior good looks. George Brooks says,



← WHAT

HOW



NEW ROOF COMPONENT adds distinctive air to Ontario church (left). Above, component serves as roof concrete form.

Versatile new floor-roof

This new structural plywood component, called Trofdek, has been thoroughly tested in 50 installations in Great Britain and Canada. It's now finding its way to this country in the form of the latest plywood component offered by the Plywood Fabricators Service, Inc., a subsidiary of Douglas Fir Plywood Association.

The new system is a unique application of the folded-plate idea in which thin sheets of plywood are glued to

HOW



REAR VIEW of new-home installation. Prefabbed gable is mounted on rear pitch of roof to house central cooling unit.

HOW



COOLED AIR is discharged into rooms from small ducts shooting off from central duct housed in drop hallway ceiling.

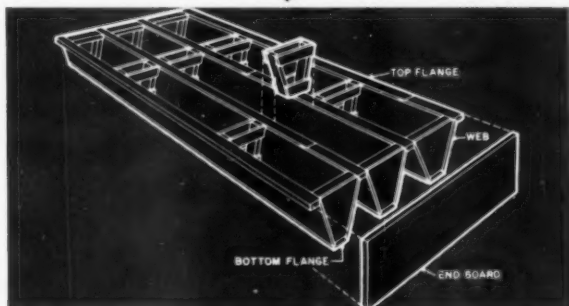
simplifies one-piece air conditioner installation

"The gable unit is cheaper to build and less cumbersome than a disappearing stairway, which FHA also accepts for servicing a unit located in attic space."

With the metal gable, which is easily accessible from the outside (see photo), the service man doesn't have to contend with 120-degree attic temperatures and cramped positions lying in fiberglass insulation. He can easily handle all repairs—working out in the open.

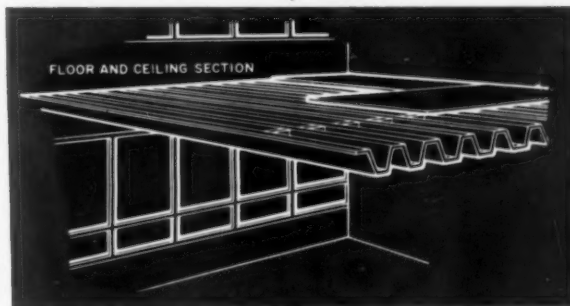
The one-piece, two-ton cooling unit, a Carrier Model 63D2, Universal Weathermaker, is set on a platform built on joists on the rear pitch of the roof. It's connected to the furnace and air distribution system by two short ducts. Air path is up through furnace, over to cooling unit and back to center duct, from which smaller ducts deliver air to ceiling diffusers in each room.

HOW



TROUGHS ARE FABRICATED on a 16 in. module. A special spline joint is used to join the four-foot-wide panels on the

HOW



job. The inserts (see drawing, left) come out when the components serve as concrete forms.

component is capable of 50-ft. clear spans

light stiffeners in a series of miniature troughs. This produces a lightweight component capable of carrying loads 100 times its own weight. Two men can easily handle a standard 100-sq. ft. panel, although the material combines both framing and deck.

Each unit of the system consists of a series of fabricated lumber and plywood troughs joined on a 16 in. module. The troughs run parallel to the span. Depending on the

load to be carried, component depth varies from 5¾ to 15½ inches.

A new twist in the manufacture of nail-glued plywood components is being tested on this system. Nailing is out. Instead, the pieces being glued are held together by air pressure applied against heated elements.

For more information, write to Plywood Fabricators Service, 3500 E. 118th St., Chicago 17, Ill.

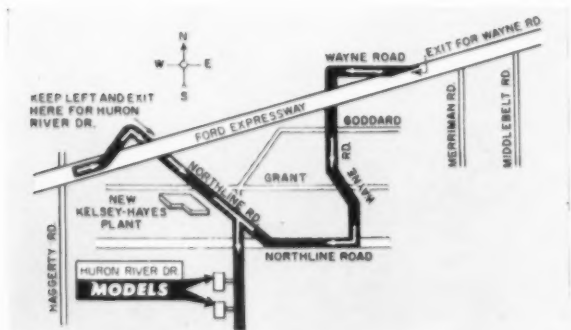
Striking road signs pull prospects off the highway



HAMILTON CONSTRUCTION CO. placed two signs like this on either side of Ford Expressway that runs between Detroit and Lansing, Mich. (map, below).



SAME CATCHY PHRASE and low price tag are repeated at intersection.



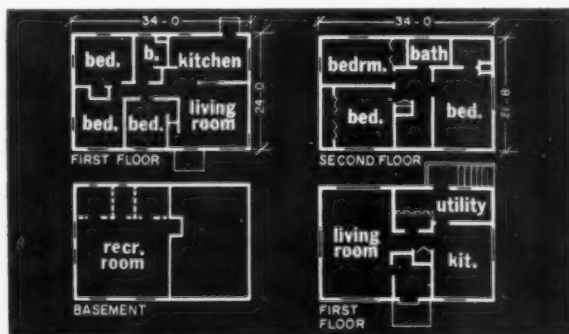
MAP SHOWS LOCATION of model homes near highway and manufacturing plant builder feels may boost his market.



OVER A DOZEN smaller signs, like the one on the tree above, were placed along the route, directed cars right to model area.



HISTORY-MAKER PHRASE is repeated on shingle sign in front of models. Hamilton sales manager, Jack Perlmutter,



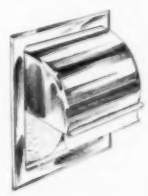
questioned prospects that were drawn to the houses, found out what type of houses would interest buyers coming to the area.

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Concealed Toilet Paper Holder. Revolving hood protects, covers paper, lifts at the touch of a finger.



Relaxation Unit luxuriously practical — recessed for toilet paper, cigarettes, ashtray, magazines.

Concealed Lavatory Unit. Revolving door hides soap, tumblers and brushes.



In HALL-MACK's complete selection of bathroom accessories, you'll find many unique, practical ideas such as those shown here. Pioneered by HALL-MACK to meet specific needs, they're designed to provide extra convenience and beauty . . . to add the touch of luxury that means so much.

Blending easily with any decor and styled for every budget, these quality, gleaming accessories spell customer satisfaction. The bath you design, sell, or install today — in modest abode or palatial setting — will always have the best when you specify HALL-MACK Accessories.

HALL-MACK COMPANY Division of **TEXTRON INC.**
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Please send your FREE color booklet of new bathroom ideas.

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Weyerhaeuser special quality features make 4-Square Lumber and Plywood a "best buy"

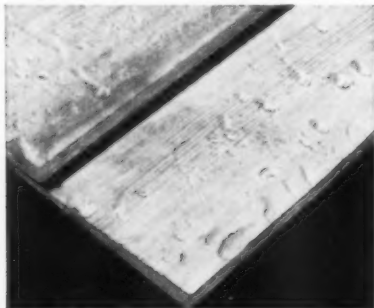
- Quality controls
- Special processing
- Continuous research for product improvement
- Long-range planning

Quality in lumber can best be determined by the following four queries: 1. Does it retain dimensional stability? 2. Does it maintain structural strength? 3. Is it surfaced clean, square and smooth? 4. Does it work easily, thus saving construction time? You can be sure Weyerhaeuser 4-Square Lumber and Plywood Products will consistently meet your requirements, grade for grade, on all of these standards of quality.

Quality in lumber doesn't just happen! Neither, for that matter, does leadership. A manufacturer, motivated by integrity, is constantly striving to achieve maximum quality in existing products, seeking through research to develop new products, and field testing to attain better product utilization. Such are the continuing goals of everyone in the Weyerhaeuser organization.

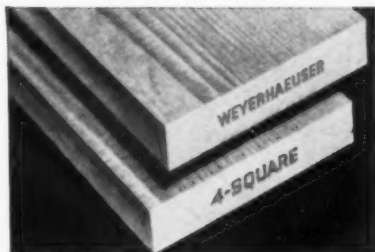
The achievement of these goals might easily be cited in three instances where Weyerhaeuser's qualitative motivation brought to the building industry top-quality products.

To make good siding even better
Weyerhaeuser science leads again . . . with a unique "raincoat" treatment that lines the surface cells of wood with a water-repellent material. Result: Weyerhaeuser 4-Square Water-Repellent Treated Siding that lasts longer, requires far less paint, and prevents "wicking."



To give you consistently better lumber products

Weyerhaeuser 4-Square Kiln-dried Lumber is scientifically pre-seasoned in giant kilns where skilled workmen, using advanced methods and equipment, keep precise control over temperature, humidity, and flow. Result: lumber that is stronger, smoother, better in every way.



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From Weyerhaeuser research came special glues, special manufacturing techniques . . . and a new idea. Result: Weyerhaeuser 4-Square Nu-Loc . . . a superior lumber product made of select, kiln-dried lumber pieces, end- and edge-glued into boards made to desired longer lengths and wider widths.



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The quality features available in all Weyerhaeuser 4-Square Lumber and Plywood Products make them a "best buy." For further information, write: Weyerhaeuser Company, Lumber and Plywood Division, Dept. 55, First National Bank Bldg., St. Paul 1, Minn.



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products of outstanding quality—products immediately acceptable by a brand-conscious market.

These quality features are important to you, too! The brand, 4-Square, assures these extra advantages of dimensional stability, structural strength, workability, and a finished job you are proud to offer a consuming public.



Weyerhaeuser Company

Lumber and Plywood Division

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In-Sink-Erator® HELPS YOU SELL THE WOMAN!!



you can't sell your house if you don't *sell* the woman. And now In-Sink-Erator gives you more help *selling* the woman than you've ever had before!

For *your kitchen—and hers*—In-Sink-Erator developed a beautiful new, different, and better garbage disposer. . . 4 glamorous new models—the *Gold Comet, Silver Star, Saturn,* and *Mark 27*. The new In-Sink-Erator will be her most wanted "built-in" because it has wonderful new features never before possible in one disposer . . . *exclusive* automatic reversing action, *exclusive* self-service wrench, *exclusive* miraculous Polystyrene sound-absorbing inner liner.

Let the magnificent new In-Sink-Erator Gold Comet help you *sell-the-woman*. Contact your Plumbing Contractor or In-Sink-Erator immediately.

This ad appears in glorious color in full pages in Vogue, Look, Reader's Digest, Saturday Evening Post, Sunset.

Flash!

SPECIAL BUILDER OFFER!

Limited time only! Introductory model home offer, prospect check list, feature display cards, and other helpful selling aids. Act now! Write In-Sink-Erator Manufacturing Co., Racine, Wisconsin.

Magnifique!



Designed by
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Free! Lovely embossed
Florentine change purse—just
for visiting your plumber to see
the new Gold Comet.

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New! Exclusive Miraculous Polystyrene Inner-liner achieves new level of quietness.



Twice The Life—
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*The magnificent new Gold Comet Garbage Disposer
from the originator and perfecter!*

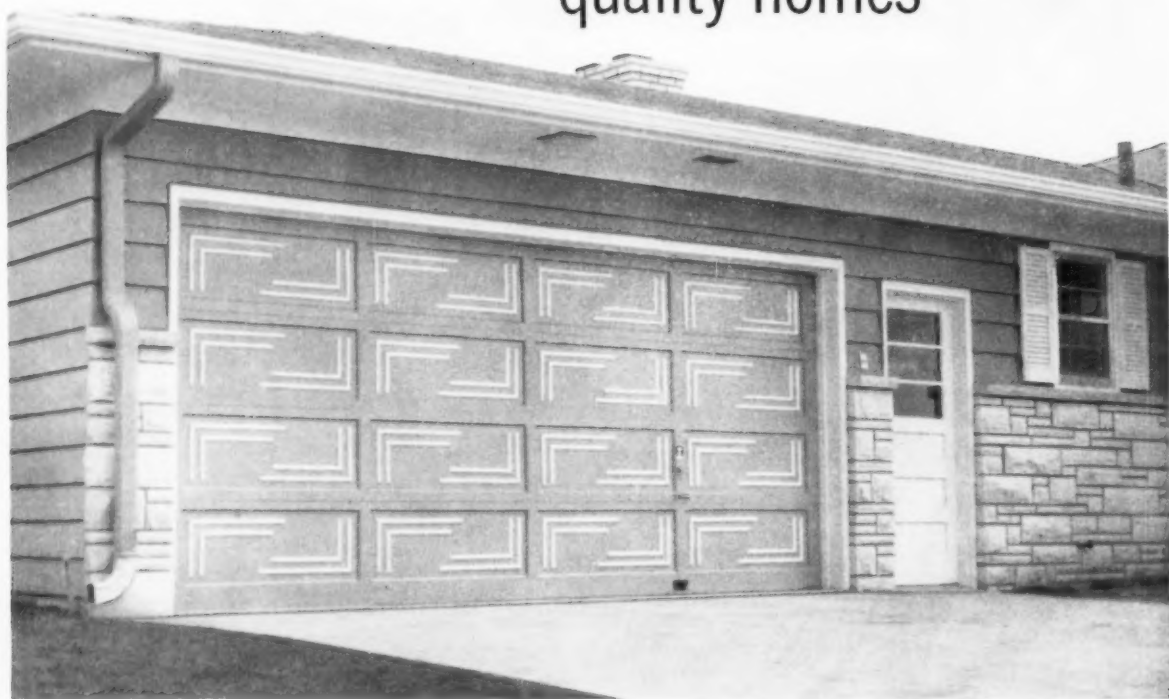
The fashion houses of Paris know no smarter styling than that found in the new In-Sink-Erator Gold Comet Garbage Disposer. Inspired by the heavens from which it gets its name, the new modern shape Gold Comet is as beautiful and quiet as the stars. It sets new standards for styling and design.

And this new In-Sink-Erator reaches new levels of performance with 124,200 positive cutting edges per minute. Never before have you seen trips to a garbage can ended in such high fashion. Never before has a Disposer been so efficient in shredding food waste down your kitchen drain.

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to your
quality homes



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This is RO-WAY quality . . . quality your prospects can see and appreciate . . . quality that helps make your sales job easier. See for yourself—call your RO-WAY distributor for full details.

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- Extra Room

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\$200 million supertown rises in San Diego

It looks like Southern California's "Megapolis" is well on its way. This "master city," as envisioned by growth forecasters, will be 200 miles long, 75 miles wide. (Rough boundaries: from the Mexican border to the Tehachapi Mts.). Recently, the Megapolis took another giant step forward with the completion of the first 450 houses in the San Carlos Development.

San Carlos is probably the largest "city-within-a-city" in the U.S. It takes in about 4,000 acres (including a lake and a mountain) and is planned for 8,000 homes by 1968. It lies within the San Diego city limits, but to the north and east of the downtown area—on that inevitable path toward Los Angeles.

Sunset International Petroleum swung the \$7,500,000 deal by buying builder Carlos Tavares' Development Company. Estimated sales by 1968: \$200,000,000.

Tavares, who hails from La Jolla, is planning what he considers "a completely integrated community," probably right on the hub of San Diego's growth pattern. On his drawing boards, besides the 8,000 single-family units, are 10 schools, five churches, 67 acres for two commercial developments, 83 acres for apartment sites, four parks and two golf courses. This may account for 50,000 people by '68.

The majority of houses will range in price from \$16,000 to \$24,950 but there will be higher-priced models, and estate-type homes will climb San Carlos' Cowles Mountain in a project modeled after Beverly Hills. The result, says Tavares, will be something new in the West: wide price ranging within one mass development.

The growth behind the growth

Californians take giant developments in their stride by now, but the recent San Diego growth figures have been impressive even the oldest building hands.

From Chicago and the Real Estate Research Corp. comes word that the San Diego real estate loan record is "incredible." Example: a \$664.5 million total in nine months of the 1959 year. San Diego County's residential construction, as



THIS IS THE CITY . . . within a city. San Carlos development will take in about 4,000 acres northeast of San Diego. The area, which includes mile-long Lake Murray, lies within the San Diego city limits.



THESE ARE THE HOUSES already completed . . . about 450 of them. Standard lot frontages are 65 ft., depth from 90 to 150 ft. Houses will eventually climb Cowles Mountain in background. Ultimate goal: 8,000 homes.

computed by UPI news service, is about 30,000 dwellings a year. And the county last year stepped into fourth place in total building dollar volume: \$430,000,000. Ahead of it were only the big three: Los Angeles, New York and Chicago.

Builder Tavares is himself an old hand at California development. His 70,000-population project, "Clairemont," also in San Diego, is still growing. His partner, Louis Burgener, is a "builder on the move" who came west from Chicago. His earlier experience was in developing along Chicago's North Shore.

Good land planning— answer to land scarcity

The wide open spaces of the Old West are getting harder and harder to find. But builders do have the edge over their eastern brothers—there's *still* land left to plan with.

Over-all planning of land development, particularly in relation to its "hub city," was advice of L.A. officials.



STRIKING USE OF STONE, cedar and glass gives \$22,825 house a custom look. Lot and share in community swim-

Small builder hits presale

An attractive, well-built house, plus a big assist from National Home Week promotion, enabled E. B. Vaughters to pre-sell about \$150,000 in new homes. The Seattle builder puts

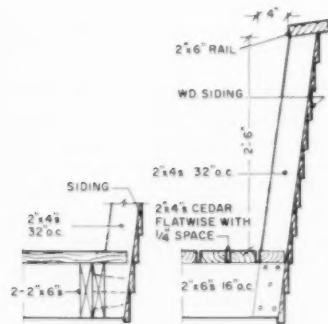
up about 20 houses a year.

Vaughters' home—an Award of Merit winner in AMERICAN BUILDER'S Best Model Homes contest—is well-planned as well as attractive. An efficient traffic

pattern begins at the large split entry, continues throughout the house. Other evidences of good planning: convenient garage entry to the lower level and easy access from stairs to all rooms.



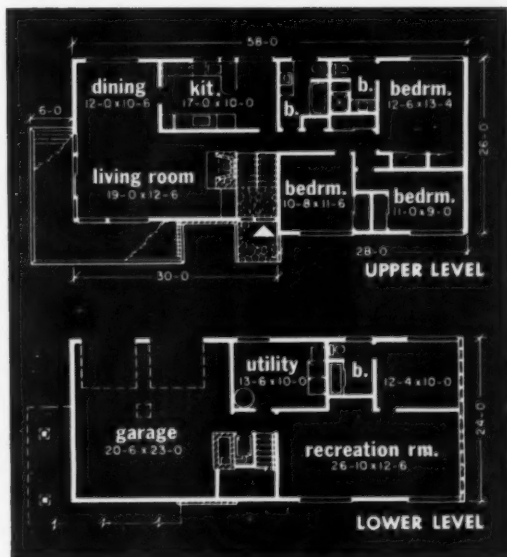
HIGHLY DECORATIVE and utilitarian deck outside of living room is top sales feature. Corner placement gives two "sun-bathing" exposures.



DETAIL of deck railing which spans living room corner of house.



ming pool are included in the price.

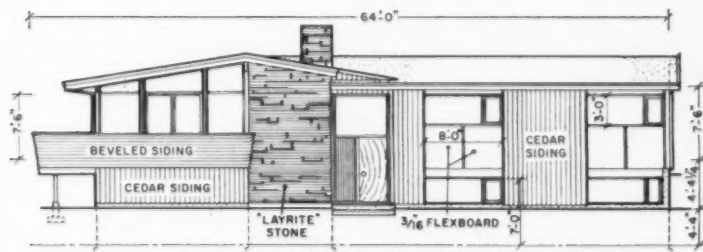


CONVENIENT GARAGE ENTRY to lower level is evidence of good planning. Third bath is optional.

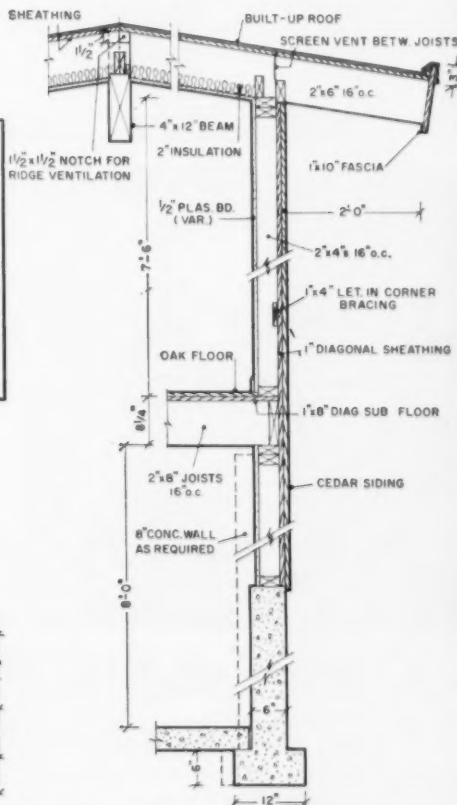
jackpot

Other popular features: more than ample storage space, including large closets in bedrooms; the large recreation room; and an area suitable for expansion into a bedroom or study.

List of Brand Name Products—Armstrong Cork and Congoleum-Nairn floors; Douglas Fir framing; Formica countertops; W. P. Fuller and Monsanto paint; GE furnace, thermostatic controls; GE or Hotpoint appliances; Kohler plumbing fixtures; Knap & Vogt hardware; L-O-F windows; Masonite wall covering; NuTone bells, chimes, ventilator; Owens-Corning insulation; Pomona Tile; U. S. Plywood walls; Simpson doors; Square D electric system; Stanley hardware; U. S. Plywood wall coverings, kitchen cabinets; Weiser Co. hardware; Weyerhaeuser lumber.

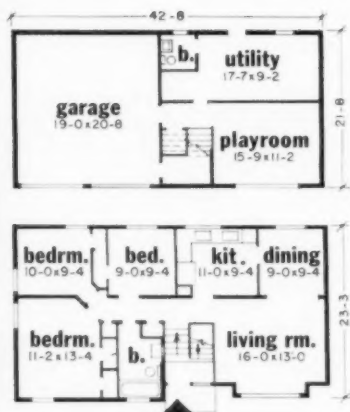


FRONT ELEVATION shows how clean lines and tasteful use of materials give the house a one-story, close-to-the-ground appearance.



CROSS SECTION shows half-frame, half-masonry wall of lower story.

SELECTED NORTHERN HOUSE



Long Island ranch draws 97 deposits in 5 week ends

This raised ranch model features a two-car garage and land for only \$12,790.

A bargain almost anywhere, it's especially attractive at the price on Long Island, N.Y., where land comes high. Initial buyer response came to 97 de-

posits in five week ends, report builders Morris and Sidney Weniger.

In stressing the two-car garage, the Wenigers capitalize on the spread-out transportation facilities of suburban Long Island.

Two cars often become a ne-

cessity there, the Wenigers find. Thus, the two-car garage appeals to many house-hunters.

Key to house's plan is the vestibule entry and two center halls. One hall is located a half-flight above entry, the other a half-flight below it.

SELECTED SOUTHERN HOUSE



Easy to sell: 4 bedrooms, 2 baths, and a patio

"The Mediterranean Look" is the way this prefab is billed. Chalaron Co. offers it in Harahan, La. (outside New Orleans), for \$27,500 with land.

Translated by the builders, "Mediterranean" means open-air

design (indoors and out), white-walled and white-floored rooms, a walled patio complete with a small decorative pool.

A double carport fronts "La Contessa." But thanks to its open block walls, wide overhangs, and

skylights, it actually adds to the house's appearance.

Biggest sales pull of all, however, is the four bedrooms and two baths included in this family-conscious model. It's all done in 1,500 sq. ft. (see plan).

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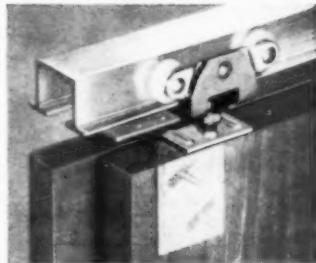
HER EYES WON'T BE CLOSED THIS TIME

She's looking at sliding doors with a wary eye this time around—and with pretty good reason, too. In the past she's probably fumed and fussed and pulled and pushed sliding doors till she was blue-in-the-face.

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WESTERN Section

Western Views by Bill Rodd

IT'S THE TRUTH—E. B. Vaughters, president of HBA of Greater Seattle, had this to say in his 1960 message: "There is little consolation in prayerful silence and bowed heads for the fellow that tried to end 1959 with a 1950 operation. With on-site carpenter labor 6-1/2¢ per minute and trending higher—with money tight and getting more costly—with land and improvements almost prohibitive and no end in sight, let me urge you to re-examine your 1960 program to be certain these added costs can be met in large part out of savings accrued from better business management and not out of profits. The alternative would only be to price ourselves out of the market."

SOUTHERN CALIFORNIA SETS ALL-TIME RECORD—According to Security First National Bank, residential building in the 14 southern counties of California broke all records with a total of 159,728 dwelling units authorized in 1959, an increase of 17% over 1958. The biggest gainers in numbers of units were Orange County with about 9,000 and San Diego County with 7,000 units ahead of 1958. Although Los Angeles County accounted for by far the largest volume of any county, it registered a

volume decline of 0.1%. **SOMETHING FOR EVERYBODY**—

Del Webb's Camelback Village in Phoenix comprises a row of apartment buildings designed to satisfy all comers. The Villa Moderne, three bedrooms, will accept children and well-mannered pets; so will the Katchina, two bedrooms. In the Colonial House—you can bring your wife but no other pets—two bedrooms. The Chateau Petite is strictly for bachelors.

SKY ROCKETING LAND COSTS ATTACKED—Speaking at a recent real estate convention in Los Angeles, HBA past president Walter Keusder, Sr., said, "Regulations and requirements placed on new subdivisions by municipalities and counties in recent years are far in excess of those necessary to achieve sensible and practical results." He said that in 1949 he could buy land at \$2,500 per acre and get five to six lots per acre and complete the improvements at a cost of \$600 to \$700 per lot. Today land costs \$8,000 and up per acre and now only four or five lots are allowed. Improvements cost \$1,600 to \$2,000 per lot, resulting in a cost to the subdivider of \$3,200 to \$4,500 per lot. Keusder suggested that realtors and build-

ers cooperate in attempting to enlist the aid of state legislators in combatting this problem.

WORKING WITH THE SHERIFF and the PTA—The HBA of Contra Costa County, Calif. have taken their fight against vandalism and thievery on construction jobs to the public. By contacting neighbors in the area, notifying the sherrif's office of all newly-started construction, placing warning signs on sites and locking up all valuable tools at night they hope to stamp out this costly nuisance.

FURTHER EVIDENCE of the vandalism outbreak comes in from Sacramento. Here the Associated Home Builders of Sacramento have met the attack with a posted \$100 reward. Signs announcing the reward are offered to all members to be placed on their jobs as a visual deterrent to such crimes. The \$100 goes to anyone giving information leading to the arrest and conviction of a vandal.

WESTERN EDITOR

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SPECIAL WESTERN SECTION

The Dale Bellamah Story: what can you learn from it?

Dale Bellamah is a colorful business figure—even for the colorful West. He's a native of New Mexico who made enough money to retire from the liquor business at the age of 32, but turned to building "to keep busy." He's now the sixth largest home builder in the U.S. (1959 volume: 1,521 homes) but he knows personally every "trainee" in his huge organization.

How to grow . . . carefully

Albuquerque was Bellamah's first building site. He took quick advantage of the area's fabulous growth rate, but he moved carefully, too. Operating on the principal that once he moved into a city he wanted to stay, Bellamah did a thorough market analysis before each new move. Result: a string of developments in Las

Cruces, Hobbs and Alamogordo, N.M., Lubbock and El Paso, Tex.

To keep his snowballing business running at top efficiency, Builder Bellamah has divided it into 14 corporations. Among them: six building firms (one for each of "his" development cities); a land company to buy and sell land; an improvement company to put in streets, water, sewage; an equipment-buying company; a sales company. Overseeing everything is the Dale Bellamah Corporation—a five-man board of "working" directors.

How to train men

Several years ago Bellamah began his own training program. Object: to get him the kind of trained manpower needed for each new organization as it was ready to be set up. Possible train-

ees are interviewed at "builder-producing" schools like the Universities of Michigan State, Florida and Denver. After approval by the board of directors, the young man starts a 21-month program. (Starting salaries range up to \$6,000 a year.)

The first three months are spent learning office work, company policies, getting in some field work. Then comes a 15-month period of running actual construction under the supervision of a project manager. During this time the trainee advances through five construction phases: (1) from layout of plan on lot to floor pouring; (2) all concrete work including paving; (3) framing through insulation; (4) dry-wall application through cabinet installation; (5) trim and finish through final inspection.

The final three months are



SAFETY—Bellamah's crews gather once a week. They get new ideas from their safety director, then draw for \$10 safety bonuses.

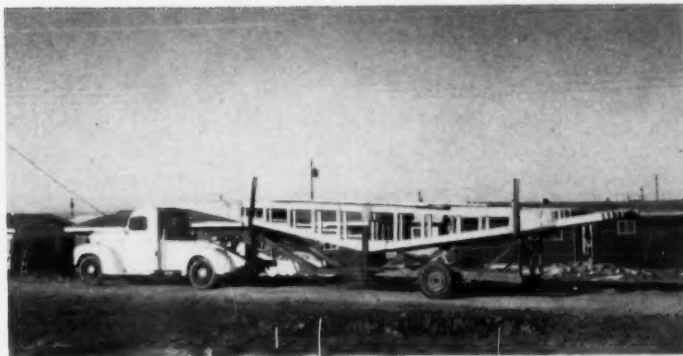
spent back at company headquarters learning land acquisition, planning, selling, etc. The "graduate" then becomes a senior assistant project manager. He gets a chance at full manager when a new operation opens up.

How to control costs

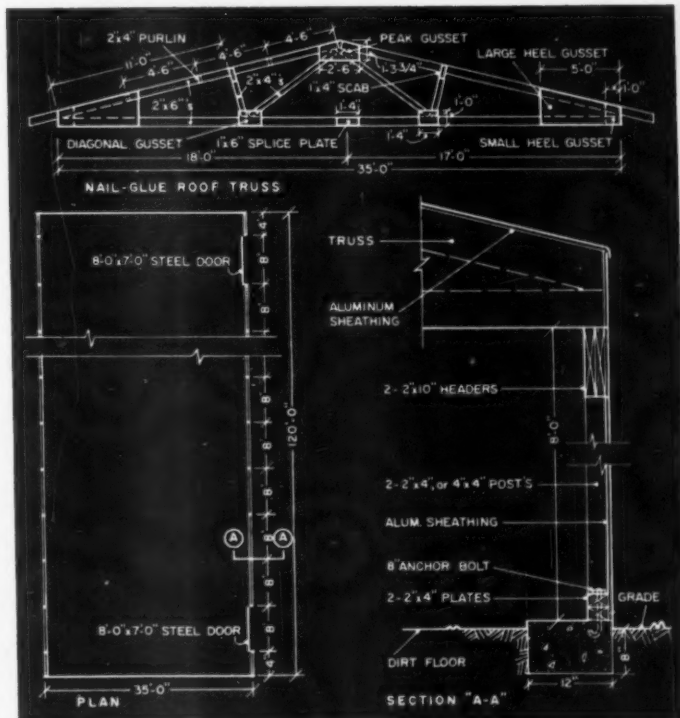
When Bellamah *does* open up in a new town he sends in a two-man team to take complete charge of the operation. Only requirement: that they "come out on top" at the end of the year.

Bellamah's men get plenty of help in meeting their goal. Besides the firm's sales, land-planning, and other setups, their boss is constantly on the look-out for new cost- and time-saving techniques to help the job along.

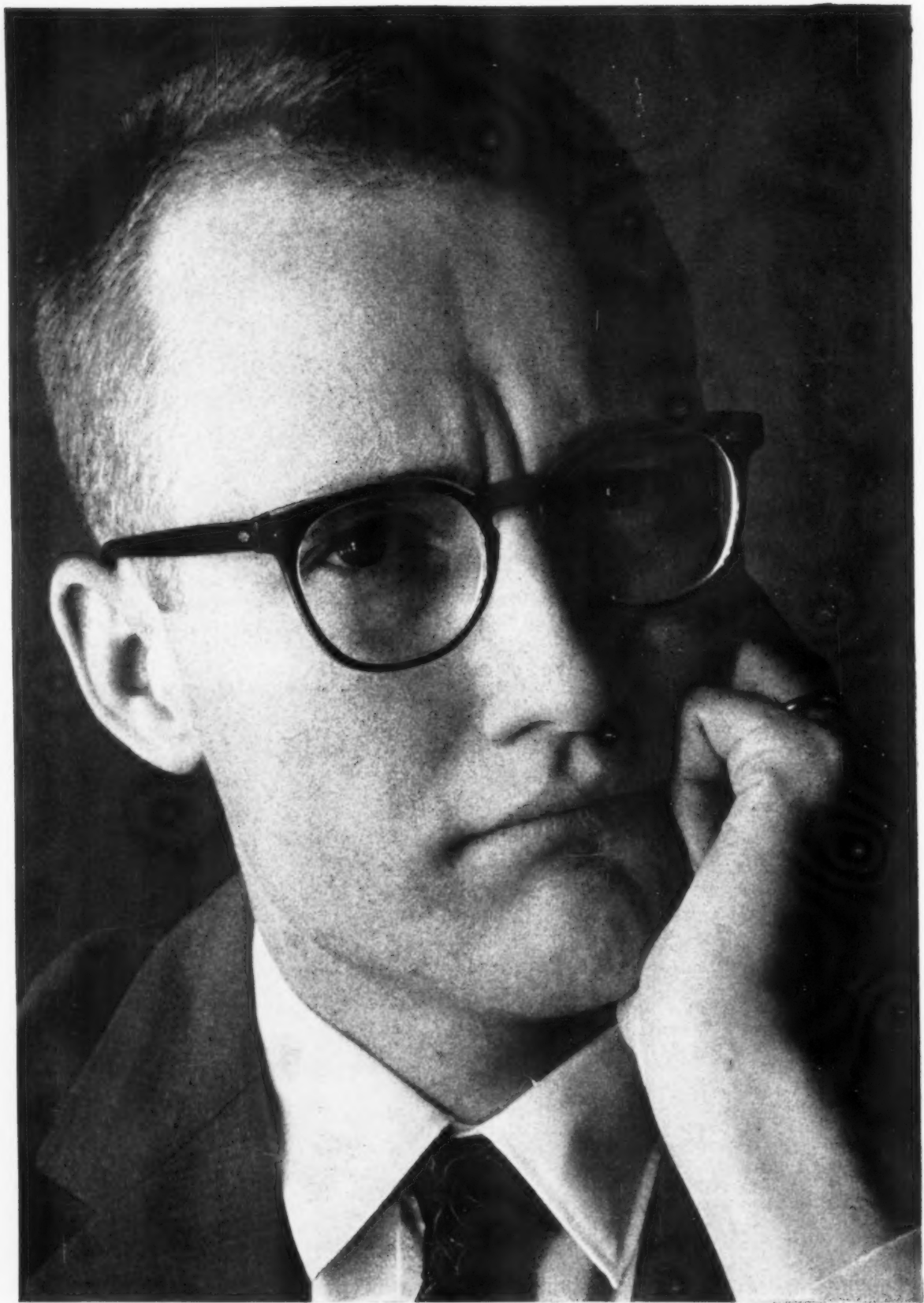
Example: trusses, shutters, cabinets and shelves are made on-site in a movable shed that can also be used for storage. Example: an accident-prevention program spreads new safety ideas, rewards "safety record" crew men. Example: a Bellamah "truss-trailer" (designed and built for \$700) speeds trusses to house site, cuts down on men and time needed to handle them.



MOVABILITY—Specially-designed trailer (top photo) takes trusses, 3 men, to house site. Bottom, 3 carpenters meet them. Team finishes assembly in 1 hr.



SUPPLY—Whether the sheds are for construction or storage, the big thing is . . . they're movable. They split into two 40'x60' sections. Details above.



choosy? ← he can't afford

He and his wife are about to take the big plunge. A house of their very own. Nice. But they're mighty nervous about the whole thing. He's gone to the folks, his boss, friends for advice. They've told him what to look for. One thing: make sure the equipment is made by a reputable manufacturer... equipment like heating, air conditioning and water heaters. He's made his mind up. He's got to be choosy. Be ready to satisfy him. Lose that first battle and you've lost a sale. That's why the smartest builders you know rely only on equipment with quality names. And they let prospects know these names. Builds confidence. Helps make the sale. You

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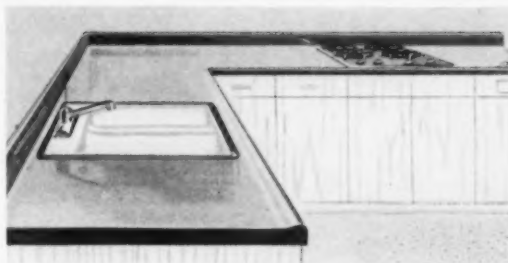
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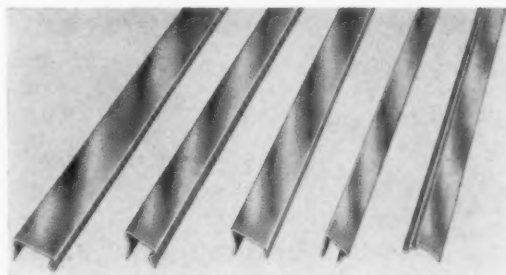
RADCO PRODUCTS, INC., 3121 SKYWAY DRIVE, SANTA MARIA, CALIF.

WESTERN PRODUCTS



Sink tops give a custom-home look

Volume builders can give their kitchen a custom look with "Sani-Top" sink tops. The laminated counter-tops have been engineered to facilitate installation with minimum manpower cost. From Sani-Top, Inc. (No. X61-W, p. 117)



Glazing bead useful for variety of windows

Expanded line of glazing bead can be used on wide range of slider (roller) windows. Types and sizes of bead have been increased to meet growing popularity of sliding windows. Pemko Mfg. Co. (No. X62-W, p. 117)

Insulating products detailed for builder

New, 16-page brochure on "Fir-Tex" wood fiber insulation has been published for builders and dealers. The three-color book gives a general description of product line. Points up specific application methods. Acts as buying guide. Is convenient, one-source reference for heat and sound insulation. From Kaiser Gypsum Co. (No. X63-W, p. 117)

Shows uses of insulating concrete

Bulletin covers use of expanded perlite insulating concrete in roof decks and floor fills. Eight-page catalog includes tables on mix designs, physical properties and thermal conductivity. Twelve roof and floor systems are clearly diagrammed. From Perlite, Great Lakes Carbon Corp. (No. X64-W, p. 117)

Describes metal casings for drywall

Metal casing for drywall construction, window and door trim is covered in two catalogs. Drawings show eight different casings for drywall, three for trim. Architectural specifications are discussed. Cutaway drawings diagram construction methods. Photos follow step-by-step trim casing installation. From Angeles Metal Trim Co. (No. X65-W, p. 117)



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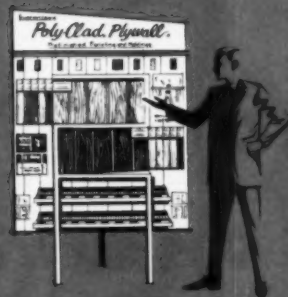
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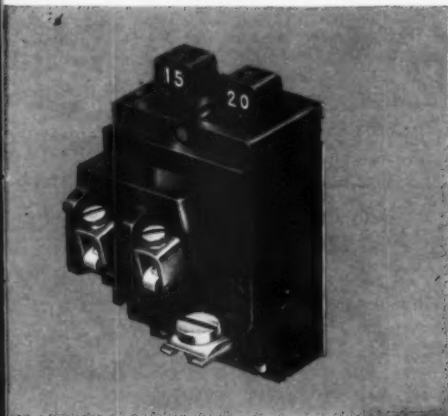
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Nu-CALK CALKING COMPOUND in Bulk—Knife or Gun Grade

Off-White Color available in knife or gun grade. Pure White Color available in gun grade only. Off-White shipped unless White specified. Gun Grade meets Federal Specifications No. TT-C-598 (Grade 1). Available in 1/2 pt., pt., qt., gallon, 5 gal. and 55 gals.



HAND SQUEEZE TUBES for small jobs

No gun needed. Simply remove cap from built-in nozzle, fasten key over crimped end, turn key and start calking. Here's a fast-moving item for over-the-counter sales. Packed 12 tubes in a handsome "Silent Salesman" display carton that can be quickly set up on your counter.



Nu-Glaze GLAZING COMPOUND Always stays "PUT"

Here's the perfect material for glazing wood or metal sash, replacing putty, setting plumbing, filling cracks, boatwork of all kinds. Clean to handle, easy to use. Will not dry out, harden, crack or peel. Available in 1/2 pt., pt., qt. cans; 25, 50, 100, 880 lb. drums.



Nu-Phalt PLASTIC ASPHALT CEMENT for all jobs!

Ideal for sticking down asphalt shingles and floor tiles ... for use on roofs, chimneys, flashings. Packed 12 loads to a carton ... with or without plastic nozzle. Shipped without nozzle unless specified. Also available in 2 1/2 and 10 lb. cans; 50 lb. pails; 550 lb. drums.

Advertised Nationally in 17
Leading Consumer Magazines

BUILDERS Sold by all
Hardware, Lumber and Build-
ing Supply Dealers.

DEALERS ORDER TODAY
—your order will receive
prompt shipment.



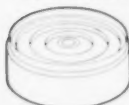
Perfect for Today's Quality-Built Homes!



AMERICA'S FAVORITE!

SPEED LOAD

WHEN ONLY THE BEST is good enough—builders and home owners choose M-D Speed Loads every time! With "controlled flow" action, M-D Speed Loads eliminate dripping or oozing of compound from nozzle. Get cleaner, neater jobs. It pays to tell customers about this feature. Point out the BUILT-IN Polyethylene pleated plunger (with accordion action) that STOPS flow of calking compound when desired!



- Available in white or off-white color.
- Available with or without plastic nozzle.

M-D Speed Loads are packed 12 loads to each carton. Please order in multiples of 12. Off-White loads without nozzle always shipped unless otherwise specified.

Meets Federal Specifications TT-C-598 (Grade 1)

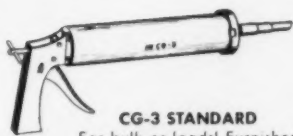


CALKING GUNS Bulk or Load Type



CG-4 SPEED LOADER

New half-barrel design. Furnished with $\frac{3}{8}$ " nozzle unless specifically ordered without nozzle; $\frac{1}{4}$ " nozzle also available.



CG-3 STANDARD

For bulk or loads! Furnished with $\frac{3}{8}$ " nozzle.

**A VARIETY OF
NOZZLES ARE AVAIL-
ABLE FOR CG-3 GUN**



MACKLANBURG-DUNCAN CO.

MANUFACTURERS OF QUALITY BUILDING PRODUCTS
BOX 1197 • OKLAHOMA CITY 1, OKLAHOMA

*Rangaire Builder-Engineering-Research brings you
of products... to please your prospects and*

Rangaire



a complete line
profit you . . .



RANGAIRE

Builder-Engineered Products!

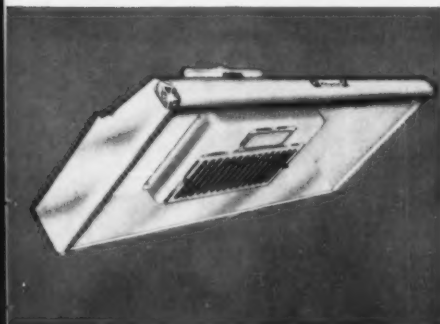
Designed, Engineered, Manufactured, and Priced to give you the *Quality, Style, and Features* you need for maximum sales appeal . . . with a range of prices to fit any budget.

Rangaire Builder-Engineered Products are designed to help you "upgrade" your homes for more buyer appeal—yet keep you in the market you're trying to sell. You get Top Quality Products, Easy Installation, Trouble-Free Performance, and Competitive Prices.

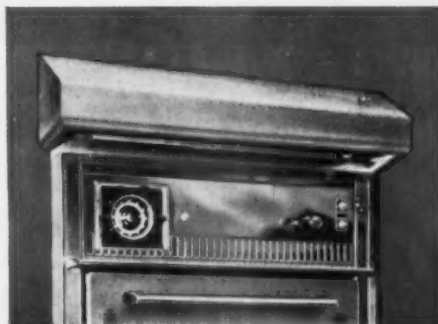
With Nationally advertised Rangaire you can offer your prospects *exactly what they*

want, since Rangaire offers you complete flexibility in styling, sizes, and prices. Rangaire Hoods and Radio-Intercoms can be color-matched to all major appliances.

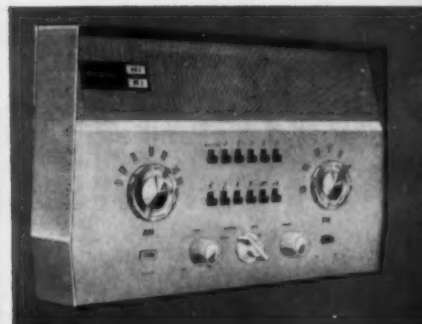
Rangaire Builder-Engineered Products are designed to add to your reputation as a quality builder. Call your Rangaire Dealer today.



RANGAIRE KITCHEN VENTILATING HOODS
Come complete, right down to the screws, in one package. Hoods and accessories color-match perfectly with all major appliances. Permanent, Washable Filters, Recessed Frosted Glass Lights, Powerful Exhaust Units. America's most complete line, with sizes and models to fit any kitchen.



RANGAIRE OVEN HOODS Newest addition to the Builder-Engineered line and designed for flexible installation, the Rangaire Oven Hood requires minimum cabinet space. The powerful exhaust vents through either wall or roof. Perfectly styled canopy color-matches all major appliances accurately at *no extra cost*.



RANGAIRE RADIO INTERCOM SYSTEMS A complete line of models and prices to choose from. Whether you select the economical WR90 or the luxurious AM-FM High Fidelity RI-95, each Rangaire intercom system is Builder-Engineered for easy installation, smart styling, simple operation, and maximum performance. They add new charm and sales appeal to your homes.

TESTED AND SELECTED FOR USE IN NATIONAL



HOMES

V I K I N G
L I N E

For additional information write
Roberts Manufacturing Company
Cleburne, Texas
Dept. A12



KEYMESH[®] and KEYCORNER
help give our
sales a lift



says **DON MORRISON**
*Morrison Bros. Real Estate,
Omaha, Nebraska*



"There's no doubt that home buyers want both beauty and durability. That's why we consider lath and plaster interiors such an important feature in our homes," says Don Morrison. "We reinforce ceilings with Keymesh and inside corners with Keycorner. Keymesh and Keycorner are two of the hidden, quality extras our home buyers expect from us. And, the sales advantage gained by adding this quality reinforcement more than outweighs its initial cost."

"We've found that Keymesh and Keycorner gives a better plaster job. Their open mesh assures a full bond with plaster and provides 50% greater resistance to cracking. Laboratory tests* show it and our on-the-job experience proves it."

"And our workmen like the fact that smooth, snag-free, easy-to-handle Keymesh and Keycorner won't tear hands or clothing. Keymesh always rolls out flat. And, pre-formed 4-foot lengths of Keycorner fit easily into place with no lost time or wasted effort," declares Mr. Morrison.

"One more important point that our customers appreciate. We point out to them that Keymesh and Keycorner gives them three to four times the fire protection of other materials tested," stated Don Morrison.

Latest new product in the Keymesh family is Keystrip—a flat 4 inch strip, supplied in 4 ft. lengths. Ask your dealer to see it.

**Send for more complete information and results of tests conducted by leading laboratories. Write.*

KEYSTONE STEEL & WIRE COMPANY

Peoria, Illinois



I would like to learn more about the effective crack resistant qualities of Keymesh, Keycorner, and Keystrip reinforcement. Please send me test reports and more complete information.

Name _____

Company _____

Address _____

City _____ State _____

Only Hotpoint gives you so



Model RJ76-A right-hand control panel

Model RJ77-A left-hand control panel

Only Hotpoint **Custom CREST** Ovens give you all of 1960's newest, most exciting features

NEW hood-fan automatically removes cooking odors during broiling and barbecuing.

NEW control panel comes mounted on side that fits your kitchen plan best.

NEW ventilation system circulates more even heat over every inch of each shelf for better baking.

NEW mirrored window gives a clear view inside when oven lights are on, but with them off the window acts as a mirror, hiding the oven interior.

NEW full-width door lifts off; new chrome floor liner, oven units and broiler spatter guards remove for faster, easier oven cleaning.

PLUS—Rota-Grill for recipe-perfect barbecues, Roast-Right Meat thermometer for just-right roasts.

Model RU75-A



New Hotpoint **Custom CREST** Surface Section with Cook Book Controls and Calrod® Recipe Heat Units

Now you can offer your prospects an end to cooking guesswork and an aid to recipe-perfect meals every time. One glance at Hotpoint's simple Cook Book instructions on the control panel shows how to enjoy the easiest cooking ever. One touch of a button lets your customers cook with Recipe Heat . . . heat as accurately measured as the ingredients of any recipe. And with the temperature-controlled Supermatic unit any pot becomes an automatic cooking utensil.

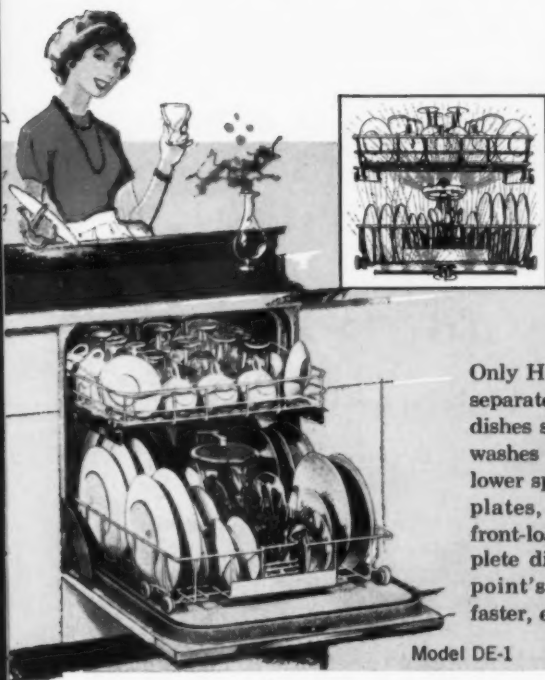
much MORE TO SHOW

MORE TO SELL

in the showplace of your home

Selling homes is really a "show" business and Hotpoint's business is to give you more to show and more to sell. That's why 1960 Hotpoint built-ins have more exciting, sales-boosting features than ever before. Features that say quality and better living the minute your prospects see them. Features that put new beauty and convenience in the showplace of your homes—the kitchen.

Never before has Hotpoint offered you so many models to choose from—all competitively-priced so you can build famous Hotpoint quality and convenience into even your moderately priced homes. And Hotpoint built-ins are available in four colors, classic white, stainless and brushed-chrome finish. Put the extra salespower of 1960 Hotpoint built-ins in your home today.



New Hotpoint Automatic Dishwasher with exclusive Double-Deck Washing Action

Only Hotpoint offers your customers a separate spray for each rack to wash dishes spotlessly clean. Top spray (1) washes glasses, dishes in upper rack, lower spray (2) scrubs away dirt from plates, utensils in bottom rack. Big front-loading Roll-R-Racks hold complete dinner service for 12. And Hotpoint's up-front connections mean faster, easier installation for you.

Model DE-1



New Hotpoint Disposall® is easier to install because plumbers helped design it

Model MB65-A

The Hotpoint Disposall food waste disposer installs fast—and it pulverizes and disposes of food waste quickly because of its super-hard cutting teeth and "jam-free" design.

When you build in Hotpoint you build in Public Preference

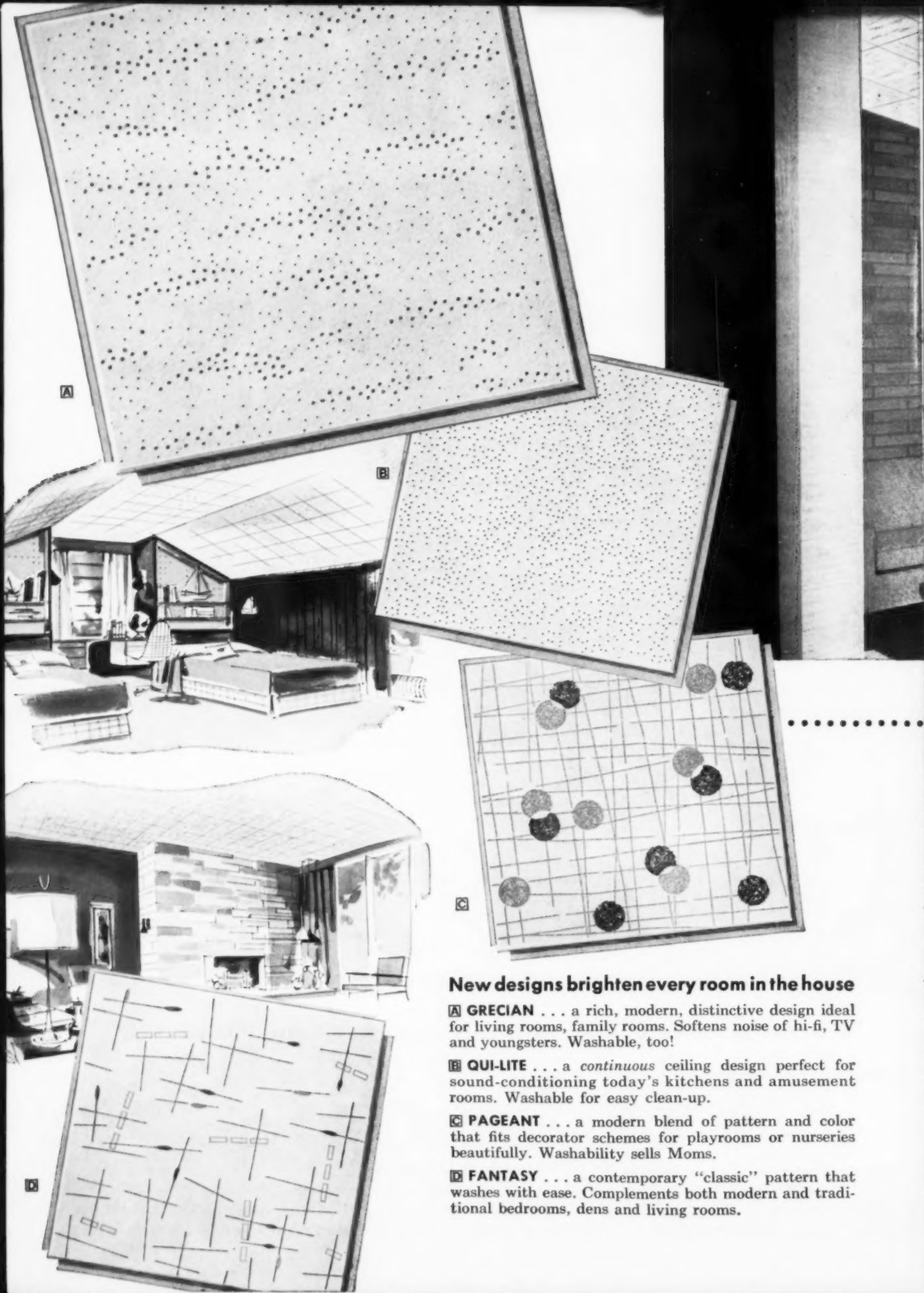
Hotpoint

LOOK FOR THAT DIFFERENCE!



A Division of General Electric Company, Chicago 44, Illinois

ELECTRIC RANGES • REFRIGERATORS • AUTOMATIC WASHERS • CLOTHES DRYERS • CUSTOMLINE® DISHWASHERS • DISPOSALLS® • WATER HEATERS • FOOD FREEZERS • AIR CONDITIONERS



New designs brighten every room in the house

A GRECIAN . . . a rich, modern, distinctive design ideal for living rooms, family rooms. Softens noise of hi-fi, TV and youngsters. Washable, too!

B QUI-LITE . . . a *continuous* ceiling design perfect for sound-conditioning today's kitchens and amusement rooms. Washable for easy clean-up.

C PAGEANT . . . a modern blend of pattern and color that fits decorator schemes for playrooms or nurseries beautifully. Washability sells Moms.

D FANTASY . . . a contemporary "classic" pattern that washes with ease. Complements both modern and traditional bedrooms, dens and living rooms.



.....**Insulite Ceiling designs help clinch sales, increase profits!**

They add new livability, give homes more saleability at less cost to you!

MORE AND MORE HOMEOWNERS are choosing ceilings finished with acoustical tileboard because they add to a room's livability. The trend started with recreation rooms—often added by do-it-yourselfers. But the attractive designs and quieter living afforded by tile "caught on." Now families are looking up to exciting patterns and acoustical ceilings in every room of the house.

Many builders capitalizing on this growing customer appeal use these exciting Insulite Ceilings in their homes. The eye-catching beauty and noise-absorption have strong customer appeal.

These new Insulite Ceilings quietly say "modern" and "quality" to buyers. They blend beautifully with the latest family room,

den, kitchen, bedroom or living room decor. They give new homes that extra "plus" for fast, low-cost sales. And they install quickly, economically. See these newest designs at your building materials dealer now; get more saleability at lowest cost.

build better, sell faster with

INSULITE
Ceiling Tileboard



INSULITE Ceilings are washable!
Insulite Division of Minnesota and Ontario
Paper Company, Minneapolis, Minnesota

INSULITE IS A REG. T.M. U.S. PAT. OFF. GRECIAN, QUI-LITE, FANTASY, PAGEANT ARE T.M.'S.



always operate smoothly, never sag!

There's a K-V drawer slide for every type installation — from lightweight to heavy duty. Write for complete catalog.



No. 1100 lightweight drawer slide

No. 1150 under-drawer slide

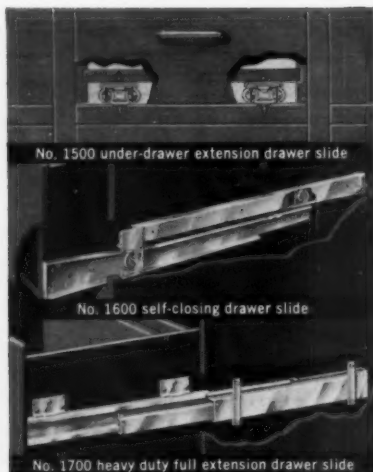
No. 1200 extension drawer slide



No. 1300 lightweight extension drawer slide

No. 1390 lightweight full extension drawer slide

No. 1400 heavy duty extension drawer slide



No. 1500 under-drawer extension drawer slide

No. 1600 self-closing drawer slide

No. 1700 heavy duty full extension drawer slide

KNAPE & VOGT MANUFACTURING COMPANY, Grand Rapids, Michigan

Manufacturers of adjustable shelf hardware, sliding and folding door hardware, closet and kitchen fixtures, Tite-Joint Fasteners and Handy Hooks for perforated board.

Sell in the \$11,000 MASS MARKET

WITH THE
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COLONIAL



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FRENCH PROVINCIAL



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NEW ORLEANS COLONIAL

PACKAGE PRICE

\$2691

(less quantity discounts)

includes

-  Attached Garage.
-  12 Colonial, Contemporary, French Provincial, Ranch and New Orleans Colonial designs.
-  Birch wood kitchen cabinets.
-  And much more we want to tell you about.

Model home financing furnished. Inland Mortgage Corporation will supply complete construction financing for a Model Home in your subdivision... at no cost to Builder-Dealers.

**GO MUSTANG IN '60!
GET THE FACTS!**

Today! Write, wire or phone (PR 3-7550). Neal B. Welch, Jr., Vice President, Sales, Department A-6, Piqua, Ohio.

INLAND[®] HOMES



INLAND HOMES CORPORATION

Plants in Piqua, Ohio; Hanover, Pa.; and **NOW CLINTON, IOWA**

MANUFACTURER OF AMERICA'S FINEST HOMES



1. "This pre-cast concrete form makes an ideal start for installing the General Electric Built-In *Thinline* in cement," Charles LaMonte says. To install the unit, merely tap out this outside shell.



2. After the all-aluminum case is permanently sealed into wall with mortar, the drawer-type chassis slides easily into place. No nuts, bolts or screws needed. Outside louver installs from room side.



3. Next, attach the interior baffle. It's adaptable to any room decor. Paint, paper or panel it. Or hang a picture over it. All that's left is to plug in the Built-In *Thinline* and let it run.

1...2...3...and they're built in

and one General Electric Built-In cools Florida builders' whole five-room house



Left to right: Charles LaMonte, Mandell Shimberg and James Shimberg.

"ONE General Electric Built-In *Thinline* really does the whole air conditioning job!" says Charles LaMonte, "and in Florida that's *quite* a job." LaMonte, in partnership with the Shimberg brothers, Mandell and James, owns Everina Homes, Inc., builders of Town 'N Country Park in Tampa, Florida.

Everina offers home buyers a General Electric *Thinline* Room Air Conditioner and have found that the majority of people want them. It is one of the top selling attractions of the homes.

The Florida builders went on to say that they especially like the *Thinline's* easy installation and design.

"With the inside baffle, it is so easy to furnish any room attractively. You can paint, paper or panel the baffle to match the decor. And, you don't have to worry about avoiding drafts when you arrange furniture."

Everina is partial to General Electric for other reasons, too. LaMonte listed three important ones. "The top acceptance of the General Electric brand name, the national advertising campaign that helps to sell the *Thinline* and the good product service that General Electric offers locally."

General Electric has the *Thinline* for your air conditioning needs, *whatever* the problem.* Your General Electric dealer will be happy to give you all the details. General Electric Company, Room Air Conditioner Department, Appliance Park, Louisville 1, Kentucky.

*Cooling capacities are tested and rated in accordance with NEMA Standard CN 1-1958.



Progress Is Our Most Important Product

GENERAL  ELECTRIC

AMERICAN BUILDER

Plywood with a Plus

**SAVE 30% PLUS ON
SINGLEWALL PROJECTS WITH
CREZON OVERLAID PLYWOOD**

FHA accepted singlewall construction eliminates sheathing costs and labor. Combine this new technique with CreZon overlaid lap, bevel or panel siding and you'll save at least 30% in material and labor costs on installations of comparable quality.

CUT LABOR COSTS... CreZon overlaid siding goes up quickly, easily, cuts cleanly, requires fewer nails for application.

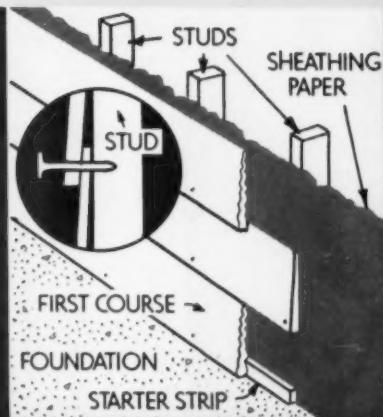
CUT PAINT COSTS... CreZon is easy to paint. Two coats do the job of three. You save one-third the cost of paint and labor.

EXTRA DURABILITY... CreZon's weatherproof surface will not split or crack... grain rise, paint blisters and checks are eliminated. Paint lasts twice as long. Discover how CreZon can help you build better, for less!
Write: Crown Zellerbach CreZon Sales,
One Bush Street, San Francisco 19,
California.



These leading plywood manufacturers produce the highest quality overlaid plywood by bonding CreZon to DFPA Tested exterior grade plywood:

Anacortes Veneer, Inc.	St. Paul & Tacoma Lumber Company
Diamond Lumber Corp.	United States Plywood Company
Evans Products Company	Washington Plywood Company, Inc.
Georgia Pacific Corp.	Canadian Western Lumber Co.
International Paper Company (Long-Bell Division)	MacMillan & Bloedel, Ltd.
Roseburg Lumber Company	Western Plywood Co., Ltd.
Simpson Logging Company	



FHA ACCEPTED
Singlewall construction with
CreZon saves 30% plus.



BEVEL SIDING of CreZon overlaid plywood is applied directly to studs.



CROWN ZELLERBACH
CREZON SALES



*The plumbing fixtures with the quality
that sells—BRIGGS BEAUTYWARE*

One glance tells the tale—that Briggs Beautyware has the classic design and quality home buyers look for. Tell your prospects, too, of Briggs' ever-dependable operation . . . of the fused-in compatible colors that won't fade . . . of the gleaming vitreous enamel surfaces that clean with wonderful ease.

And, like builders across the nation, you'll turn to nationally-advertised Briggs Beautyware for its home-flattering good looks, and cost-cutting ease of installation.

Give your homes an extra touch of quality—build with Briggs Beautyware. There's a Briggs fixture in every size, style and price range to suit your new homes.

For new homes and remodeling, send for Briggs' new 36-page four-color booklet, "New Adventures in Bathroom Designing with Briggs' Compatible Colors". . . plus Briggs' Beauty Wheel for bathroom color planning. Get both by mailing 25¢ to Advertising Department, Briggs Manufacturing Company, Warren, Michigan.

BRIGGS
BEAUTYWARE

THE KING vitreous china wall-hung water closet simplifies cleaning by eliminating awkward dust catchers and those hard-to-reach areas . . . a housewife's dream . . . Comes in Briggs' six compatible colors, as well as favorite white.



THE MEDALLION bathtub of formed steel is lighter yet stronger than ordinary cast iron tubs . . . installs easily, saves labor. Other profitable advantages: seam-free one-piece construction, leak-proof wall flange, and H-framework that needs no blocks, shims or extra support.



THE CHAUCER vitreous china lavatory, with eye-appealing design, has oval off-center bowl with spacious counter area, anti-splash rim and unique spray spout. Installs in counter top, vanity, or may be placed on legs. The unusual design is perfect for any style home.

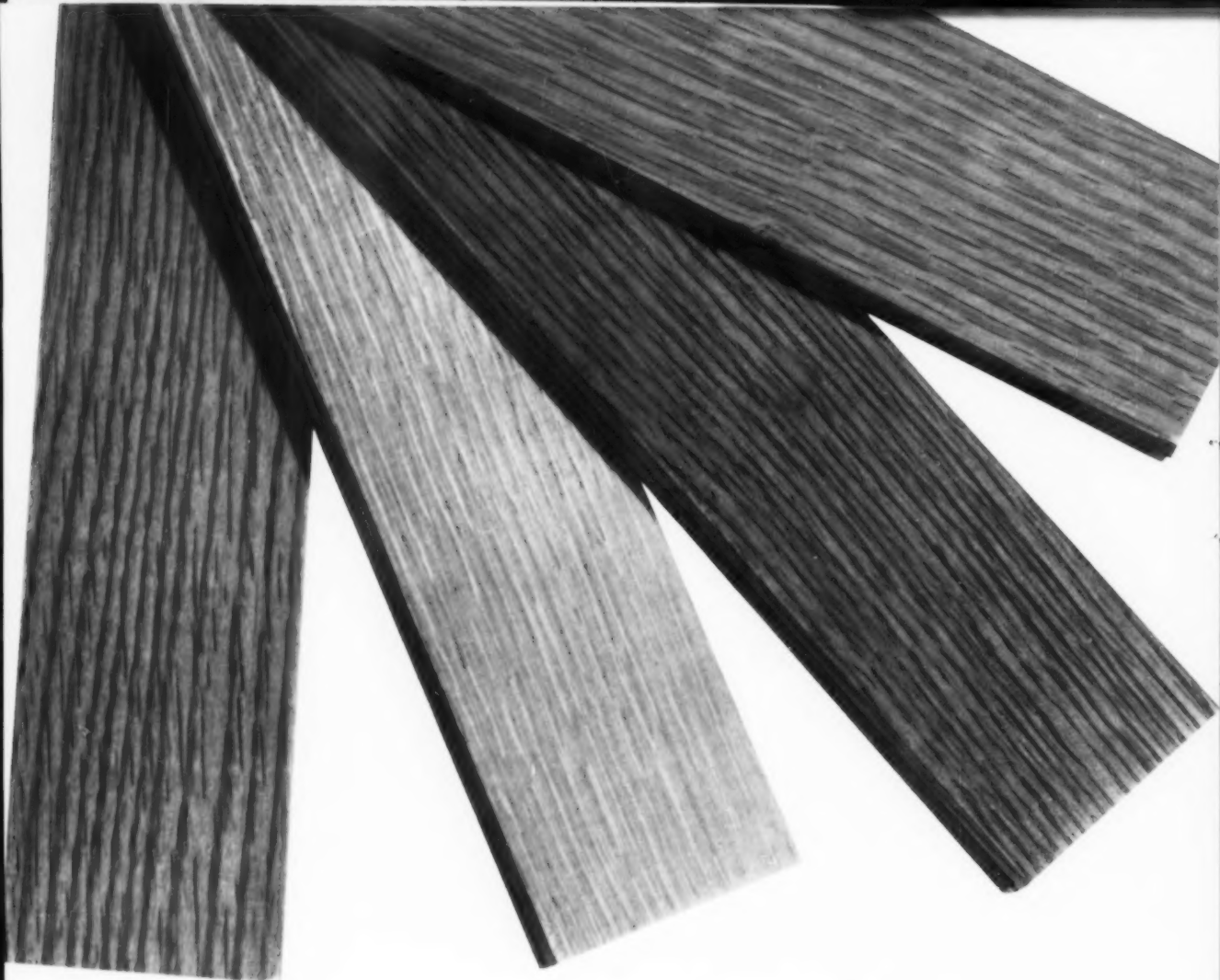


**First choice
for comfort and
beauty**

Oak has a well-earned reputation as a comfortable floor... naturally resilient, easy to walk on. High insulating value keeps out the cold, a particularly important quality when Oak Floors are laid over concrete slabs. But comfort is just one reason why home buyers prefer Oak over all other flooring materials combined. Natural beauty, lifetime durability, easy upkeep are others. Always use Oak Floors...and always be sure of buyer acceptance.

You know you're right when you specify **OAK FLOORS**

National Oak Flooring Manufacturers' Association, 814 Sterick Building, Memphis 3, Tenn.



Use COLOR STAINS on OAK FLOORS

for new, different, decorative appeal!

Here's a colorful idea with real merchandising possibilities. Try color-staining your Oak Floors for a "different" look. Modern materials provide a wide range of color tones which are easily applied and can be counted on to give dependable results.

With color-toned Oak Floors you can achieve whole-room harmony, matching or accenting the hues of wood-paneled, painted or papered walls. The effect is attractively different, because the wood stain usu-

ally accentuates the warm, rich wood grain of Oak. For a "feature" room or throughout the house, color-toned Oak Floors can be that extra touch to make your homes sell better. Try this different merchandising idea in your next model home.



NATIONAL OAK FLOORING
MANUFACTURERS' ASSOCIATION
814 Sterick Building—Memphis 3, Tenn.

OAK FLOORS

The most popular, most practical of all floors



HERE'S AN EXCITING IDEA TO SELL HOMES . . . EVEN ON A RAINY DAY!

Picture this: It's pouring—and you have an appointment to show a home. This is the day to pick up your prospects in *your* car. As you turn into the driveway of your model home, you say: "You know, this house even does something about the weather." Then you touch the Delco-matic button on your dashboard. And there—in the driving rain—the garage door opens and you drive right in. Let it rain. Who cares?

Delco-matic is much more than just another "added attraction." It's a built-in convenience that keeps your customers warm, safe and dry in all kinds of weather and at any time of the day or night.

Your prospects will be pleased to know: Its all-transistor design was nationally tested in homes and proved trouble-free. Built-in safety controls protect children and pets. And, Delco-matic can be operated by hand in event of power failure.

Once Delco-matic is installed, *you never have to worry*

about it! If service is ever required, it's taken care of by United Motors Service electronics service dealers. Delco-matic Garage Door Operators are sold and installed by the Crawford Door Company and authorized Delco-matic distributors. Call your local representative or clip and mail the coupon today.

FREE COMPARISON STUDY



Delco-matic / DELCO PRODUCTS

Division of General Motors, Dept. AB-60, Dayton 1, Ohio

Please rush me the research findings on how Delco-matic compares with the next eight popular brands.

NAME _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____

With P-B Components any house is—

... enclosed in one day
... completed in one to
three weeks

—and the builder
saves 15% of his
building costs!

HERE'S HOW:

The components are **BIG**
and custom-built to fit any plan

- Your wall components are 8' high and usually 12' to 14' long—
- Your floor components are 6' wide and up to 20' long—
- Your ceiling components are 8' wide and span the width of the room—
- Your roof components are 8' wide and rafter length—
- Your gable components are generally the width of the building—

HERE'S WHY:

With large components you get savings not obtainable in any other way and—these savings are made possible because of the "Big Sheets" of Homasote that are tough enough to stand the handling of large sections and, at the same time, are not affected by the weather in case a storm stops the operation before the house is closed in.

It takes only 11 seconds longer, with four men, to put an 8' x 14' P-B Component into place than to put an 8' x 4' "baby" panel into place; but you have erected, in less than a minute, 3½ times as many square feet!

Once erected, the components are ready for the exterior finish and the interior decoration.

To save money in conventional building—send us your blueprints for a free Cost-Reduction Analysis. They will be returned with an engineering report on the savings you can make with Homasote Materials. Homasote Board-and-Batten and Grooved Vertical Siding construction are lower in cost than anything else you can use currently for exterior walls.



- The floor panels are covered with factory-finished 2½" oak flooring which you cover immediately with Sisalkraft-type paper, leaving it on until the owner is ready to move in. When you finally take it up, he has bright, shiny new floors and you have eliminated a lot of extra cleaning expense.
- The ceiling panels are ready for decoration as soon as they are in place.
- The roof components have ¾" Homasote sheathing already applied, with joints flashed to prevent leaks before the roofing is applied. This, too, saves a lot of field labor.
- And you can erect the average house in one day!

Please write for our 8-page brochure containing complete details. Kindly mention Department F-3.

HOMASOTE COMPANY

TRENTON 3, NEW JERSEY

Homasote of Canada, Ltd. • 224 Merton Street • Toronto 7, Ontario

AMERICAN BUILDER

Building's Coming Breakthrough

It is theoretically possible for the housing industry to build a house that is (1) sufficiently more attractive and (2) sufficiently lower priced to cause housing demand to break through its historic ceiling, up to a higher level.

As a practical matter, certain very real obstacles keep the lid on housing. It is no exaggeration to say that:

- Out of date codes tend to keep advances in house engineering from being widely used.
- National fiscal policy tends to keep house financing prohibitively expensive at critical times.
- Failure to understand modern building methods and materials keeps many builders from taking advantage of cost-cutting techniques that are available today.

Add to these obstacles the high cost of land as it is now bought and improved, and the wonder is that housing operates as well as it does.

Yet it has never seemed so urgent to American Builder, in its 80 years of publishing, for housing to break through into an area of higher and wider markets. Housing must compete for the buyer's favor with automobiles, boats, travel, appliances, and a dozen other industries.

Here, in the pages that follow, is the part that research must play in the breakthrough. And in succeeding issues, we will examine such problems as land, financing, codes, building methods, and business management.

WANTED:

more research to spearhead the breakthrough

Home building, America's oldest and biggest industry, is staking its future on America's youngest and smallest research program.

If the automobile industry had paid as little attention to research as this, you'd be driving a car built of unrelated parts, hand assembled in someone's garage—if, indeed, you could afford a car at all. The price would be staggering.

Fortunately for home building, this is not the whole story. If housing's research is the smallest in the country, it is also the fastest growing. Says Ralph Johnson, NAHB's research director: "There's been more change in home building in the last ten years than in the previous 2,000 years." Manufacturers, together with their associations, have stepped up their programs enormously. Where a few years ago only a handful of universities were engaged in housing research, today there are literally dozens. And NAHB's Research Institute has made dramatic progress, both in field research and in co-ordinating the efforts of manufacturers with the needs of builders.

See for yourself what research can do

Just how important is all this research activity? Take a look through your own houses and count the items that, although you take them for granted today, didn't even exist for housing ten years ago.

Look at the new materials, especially the plastics. Melamines and the various forms of vinyl are standard items on your countertops, walls, and floors.

Look at the old materials that are finding new uses in home building. Aluminum is probably the most spectacular. Five years ago it was looked upon largely as a window material; today it's used as siding, roofing, soffits, ductwork, and dozens of other things. The list gets bigger every day.

Look at the way research has helped component construction. The new techniques with plywood and glue have produced much lighter, stronger,

and cheaper panels and beams. And the new foam-core panels, just now going into production, are even more promising.

Look at how accurate testing can save money. You can use a 2x4 truss today, instead of a 2x6 or a 2x8, because research has proven that they're far stronger than the old rafter and joist systems that used to be standard.

Future progress hinges on present research

All of this is good, but it's only a beginning. Says FHA Commissioner Julian Zimmerman: "Research is a major factor in the future of the housing industry. Progress by chance and happenstance is a poor and unproductive substitute for progress by plan and design."

Home building's future growth depends on the "plan and design" that only research can produce. We need far more research, and we need it right now if we're going to be ready to meet the vastly increased housing demands anticipated for the late stages of the 1960's. Whether you're a builder or a manufacturer, you have an enormous stake in research, and on page 69 we have suggested ways in which you can help to further it.

Research is really practical

One last point. The question is always raised, is research practical, or is it just a lot of blue-sky dreaming?

The answer is that it's as practical as the nails that hold your houses together. As proof, we offer the story on the next four pages. It shows what can happen when a research-minded builder, Andy Place of South Bend, Ind., gets together with manufacturers who are equally interested in research. It's one of the most promising construction techniques the industry has seen in years. And it may well prove to be the best way for you to build in the near future.

Here's how one builder is putting research to practical use on the job

1. He's using a "pre-fabbed" foundation of prestressed concrete that can go down in two hours in any weather.



2. He's using a one-layer floor system that includes the finished floor surface, sits on girders spaced 4' on center.



3. He's using a ductless heating system that combines the best features of warm air and radiant, costs far less than either.

Research produced this less-than-a-day foundation and flooring system

Prestressed concrete grade beams let Place "pour" his foundation in sub-freezing weather

The first step in Andy Place's foundation-flooring system uses research from outside homebuilding: the concrete industry. Prestressed concrete grade beams form the foundation walls. They are three times as strong as conventional poured concrete (they'll span 13'-6" under bearing walls), but their greatest asset is that they're prebuilt. The problems of pouring, finishing and drying concrete no longer are involved.

Consider these advantages:

- Speed—On Place's first job, a 1,520-sq. ft. ranch, the beams were set in 2½ hours (14 man-hours.) This, Place thinks, can be cut to 10 man-hours.

- Weatherproofness—The test job was done at 18 degrees above zero, could have been done at 18 below, as there is no wet concrete. This could save two days in normal weather, up to a week in winter. And for winter scheduling, all a builder need do is pour enough piers to handle his whole winter's work (see p. 68).

- Simplicity. The prestressed beams eliminate all form and finishing crews and equipment. A payloader carries the beams, an arc welder fastens them into place.

Place buys his beams from a fabricator in South Bend. This same concern handles all engineering and designing of beams.



REINFORCING BARS are cast into beams and piers. When beams are set, rods are hammered tight together, fastened permanently with arc welder.

4" x 24" PRESTRESSED CONCRETE GRADE BEAMS

Improved version of the 2-4-1 floor system combines sub and finish floor in one layer

By eliminating poured concrete from his new system, Andy Place ruled out his (up to now) favorite floor system, the slab. In its stead he used a modification (worked out with the E. L. Bruce Co.'s flooring research people) of the 2-4-1 plywood floor. Here are its parts:

- A 2-in-1 plywood, 1½ in. thick, with a top veneer of oak. While it has so far been made only in test batches, it will probably come in 4x4-ft. sheets, have parquet scoring so butt joints won't be noticeable. Edges will be tongue-and-groove, doing away with the 2-4-1 system's biggest headache, intermediate blocking between floor girders.

- Floor girders, made by spiking

two 2x8's together. These are supported at 10-ft (maximum) intervals by redwood posts, sit in joist hangers at their ends.

On the first job, 4 men had the floor down in 6 hours and Place thinks this can be halved. When the men left, the floor was waxed, had two temporary protective layers over it.

Outside edges of the floor are fastened in Place's standard manner: a powder-actuated stud is driven through the wall shoe and floor, into the foundation wall.

The new system opens some wild possibilities. On a small house, a fast crew might start with piers in the morning, walk away that night with completed shell up and door locked.

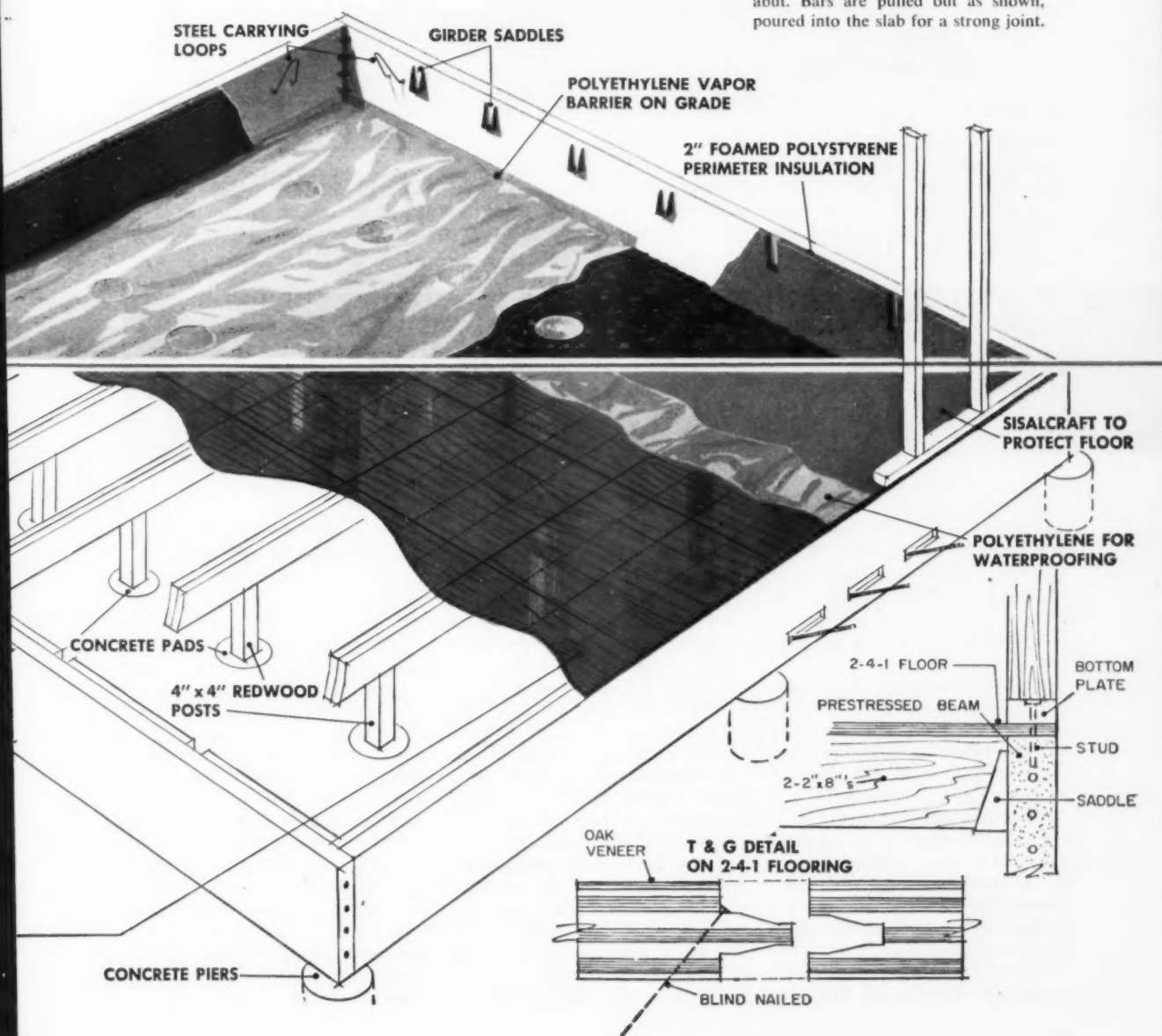


2-2" x 8" FLOOR GIRDEERS SPACED 4' ON CENTERS

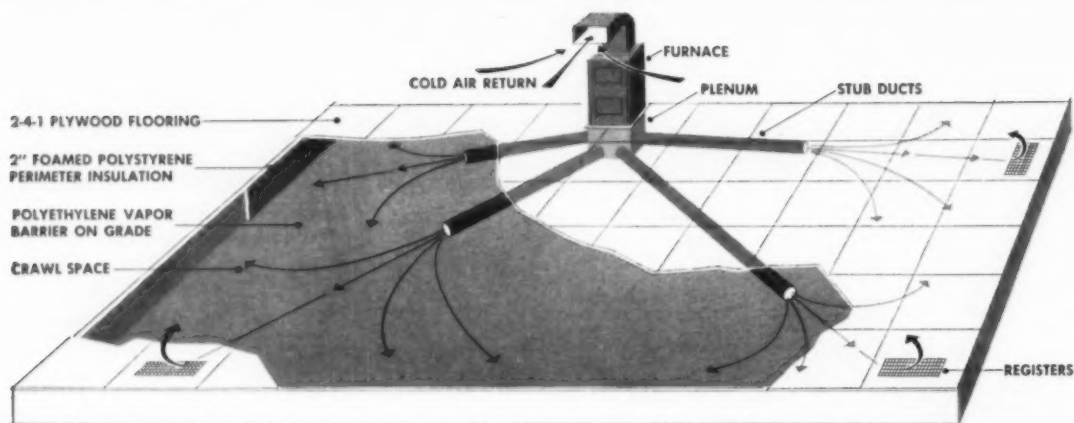
2-4-1 PLYWOOD FLOORING WITH OAK FINISH 4' x 4' PIECES—PARQUET SCORING



KEYWAYS are cast into beams wherever patio or garage slabs will abut. Bars are pulled out as shown, poured into the slab for a strong joint.



Research produced this low-cost, high-performance heating system



SIMPLE HEATING SYSTEM uses crawl space below the 2-4-1 floor as a giant plenum. Sides are insulated with 2 in. of plastic foam, registers are cut into the floor, and the only ducts are stubs to insure even distribution.

Humidifying water drips into the small plenum. Place tested the radiant warm-air system on a zero-degree day, found less than 1½ degrees variation throughout the house. The system should work as well for cooling.

Research produced savings like these, promises even more for the future

Andy Place is a builder who keeps track of every dime he spends. So the cost figures for the one house built with his new system are accurate enough to compare with his conventional slab system.

Best comparison is to take the old and new systems up through the finished floor. This includes all foundation and flooring, and the heating system with the exception of the furnace.

Place's normal cost to this point is 90 cents a sq. ft. (If this seems low, remember that he is one of the sharpest slab men in the country.)

Cost of the new system was \$1.05 a sq. ft.

But . . . this \$1.05 figure includes oak flooring for half the

house, while the 90 cents includes only asphalt tile. Add a parquet floor for half the slab area, and the slab cost climbs to \$1.08 a sq. ft. Or, substitute asphalt for oak on the new floor, and cost drops to 85 cents.

Either way, on the basis of direct comparison, the new way costs less. Also, costs of the new system are based on just one experimental house. Place is confident that as his men get more experienced, labor costs can be sharply reduced, perhaps cut in half. He has already made some changes in the new system that should cut costs. He began by using plywood box girders under the floor, rested them on concrete posts; the double 2x8's on wood posts will cost a lot less.

The price on the prestressed beams, now between \$1.60 and \$2.00 a lineal foot, should shrink with quantity purchasing. And the oak-veneered plywood, which was available just as a trial batch, should also become cheaper when it goes into production.

There are intangible savings too. Place figures every day saved in building saves at least \$30; so five days off a winter schedule is worth at least \$150 a house. And stockpiling foundations with the new system requires about \$100 worth of piers and grading per house, instead of \$1,500 worth of complete slab. On a 50-house winter schedule, this would mean \$70,000 of all-important credit and \$35 interest per house.

Where does research go from here? "These," say the country's most progressive builders, "are the worst problems. Let's lick them next."

The problem is not, does research have problems to tackle, but rather, which problems should come first? We put this question to some of the country's more cost-conscious builders; and while there isn't room to begin listing all the answers, the ones below were the most interesting we received.

- Clayton Powell of Savannah, Ga.: "First of all, I'd like to see a mechanical core that is completely preplumbed, prewired, and includes heating, cooling and ventilation equipment, plus laundry and baths. This could save \$1,000 a house."

- Bob Schmertz of Lakewood, N.J.: "I'd like to have wall panels complete from skin to skin that I can put in place more cheaply than the walls I'm building now. I think that when their price comes down, foam-core panels will be the answer. But I don't care if the core is made of ground-up hats as long as it does a better job for less cost."

- Bob Schmitt of Berea, Ohio: "I'd like to see some completely new concepts in light and ventila-

tion. The industry badly needs advances in window and door areas. I'd like to see a permanent spray-on roofing and siding material. And I'd like to see more work on a one-house sewage disposal system."

At this point a perennial question arises: Granted research can solve problems like these; but will the solutions be accepted by codes and labor—and by builders themselves?

Martin Bartling, NAHB President, thinks such obstacles are much overrated.

"First things first," says Bartling. "The first thing here is to produce the item that will do the job. When you've done that, and when you've proven it can lower costs dramatically, you'll find that public interest won't let it die."

And regarding research in general, Bartling adds, "we haven't even scratched the surface."

If this is so, how does home building go about scratching the surface?

If you're a manufacturer, here's how you can further the research program

First of all, you can try to understand homebuilding's tremendous need for an expanded research program. Remember that building is undergoing a change from a craft to manufacturing process; as a manufacturer yourself, you know how important research is to such a process of mechanization. Remember that housing faces increased competition from other consumer industries. These industries will make full use of research, and housing must follow suit if it is to keep pace. And remember that a strong research program will give you better products to meet your own competition.

Second, you can support the research program that your trade association is undertaking. Companies too small to support their own research can accomplish a great deal this way: a shining example is the brick industry, whose Structural Clay Products Research Foundation has done a tremen-

dous job producing materials and methods to keep the cost of brick construction at a highly competitive level.

Third, you can make every effort to key your research to the builder's real needs. This means increasing your own knowledge of building and of the builder himself. The most effective agency in furthering this sort of contact is the NAHB Research Institute, which is conducting a growing program of consultation between manufacturers and builders—to the benefit of both.

Fourth, you can help the builder sell the results of all this research. The most wild-eyed radical is an arch conservative when it comes to buying a home. Builders will need your help to merchandise the idea that the new type of house research is making possible is the best type of house Americans have ever been able to buy.

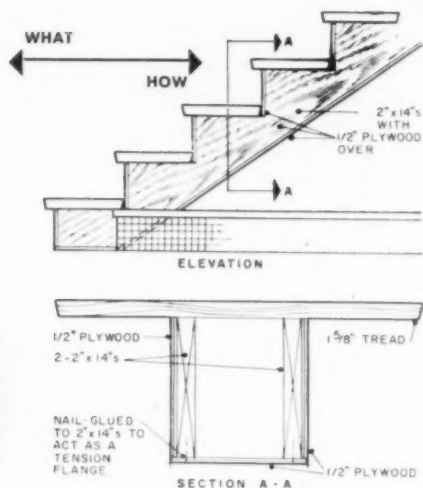
If you're a builder, here's how you can help research to help you

Above all, you can keep an open mind toward the new products and techniques that research will inevitably produce. In an industry that has remained static as long as home building, it is natural that sudden change should be viewed with suspicion. But the change is coming. And the change will benefit you, especially if you are a smaller builder. Research will produce the ideas, the materials, and the tools that can keep you from being dominated by huge building concerns.

Granted, there is little you can do directly in the field of research (unless you're one of the few like

Andy Place who have the temperament and the resources to do your own experimental work). But you are the one who will decide whether or not the fruits of research will actually be put on the market. You are the one who can make or break the progress that research can make possible.

Cost-saving ideas will not produce poor houses any more than they assure good houses. The quality of your homes depends on how well you build them. If you're building a good house with today's methods, research will be a tool to help you build an even better house with tomorrow's methods.



NAIL-GLUED BOX BEAM supports this open stairway. Idea was adapted from a commercial stairway that's usually done in steel or concrete.

**FOR RESIDENTIAL
CONSTRUCTION:**

What

Nail-glued box beams and I-beams are gaining as much acceptance among smart builders as the now common nail-glued truss. This development, a result of the beams' ability to carry loads economically over long spans, is certain to affect present building methods.

For example, they make practical basements without load-carrying columns, or with finished ceilings supported only by clear-span box beams.

Imaginative new use

An imaginative use of nail-glued box beams is in stairways, where a box beam runs up the center and supports the stair treads. Such a stairway is shown at left. It was designed by Prof. Byron Radcliffe (Michigan State University) for the Michigan State-NAHB 1960 Research House.

Which glue? Where? Here are properties of various types of glues

GLUE TYPE	USES	RESISTANCE TO WATER	RESISTANCE TO HEAT	MIXING REQUIREMENTS	RELATIVE COST	COMMENTS
NATURAL GLUES						
Casein*	Laminating, glued fabrication, nail-glued trusses & comp.	Good	Good	Add water & mix	Lower in large quantities	All facets considered, best for nail-gluing, good gap filler
Vegetable Protein (soybean)	Douglas Fir plywood up to 1940	Fair	Good	Complicated	Medium to high	
SYNTHETIC RESINS						
Phenolics	Marine plywood and exterior plywood	Waterproof	Excellent	Mix with catalyst	High	Bond can withstand any condition that the wood would be subject to
Phenolic-resorcinol*	Nail-glued components	Waterproof	Excellent	Mix with catalyst	Medium to high	Requires at least 70° for curing
Urea Resins	High-grade hardwood plywood	Fair to Excellent	Fair to poor	Mix with catalyst	Medium to high	Not durable at high temperatures
Melamines	Plastic laminates	Waterproof	Good	Complicated	High	High cost—no added advantages
Polyvinyl	Replacement for animal glue	None	Poor	Purchased prepared	Medium	Thermoplastic, creeps under load
Epoxy Resins	Bonding dissimilar materials	Poor	Poor unless curing agents are present	Requires catalyst	High	Bonding metal in aircraft industry

*These two glues recommended for structural gluing.

you should know about gluing

"Key to successful nail-gluing," says Radcliffe, a top authority on the subject, "is a durable glue bond. The builder must use the correct type of glue for nail-glued components—one that holds up under all conditions. Don't be misled by some hot-shot salesman bent on a sale."

Two glues recommended

A look at the above chart shows that only two types of glue are recommended for structural nail-gluing. The first of these is moisture- and mold-resistant casein glue that meets U.S. Government specification MMM-125-A.

Casein is the easiest glue to use. Application and curing may be done at temperatures as low as 50 deg. F. When mixed to manufacturer's specifications, its consistency is well suited to brushing or rolling onto the

members being glued. Also, the glue need only be spread on one of the two pieces being joined.

At a temperature of 70 deg. F, casein glue cures in about 8 hours. At a range of 50 to 70 deg. F, increase the curing period to 12 hours. Don't move the assembled structure while the glue is curing.

When nail-gluing plywood gussets to lumber, space 4d common nails 4 in. o.c. in a double row, and drive them hard enough to squeeze some glue out at the edges of the slates. Use 6d common nails on scribe slates of nominal 1-in. thickness.

Proper casein is sufficiently water-resistant for ordinary conditions encountered in a house. And it will resist several wettings by rain during construction. But reasonable care should be taken to protect nail-glued structural components.

The other glue recommended in the above chart is phenolic-resorcinol. It does an excellent job for nail-gluing, but with some reservations:

It's more difficult to use than casein; a minimum temperature of 70 deg. F should be maintained. It's more expensive than casein, requires special storage (conditions specified by manufacturer), and has an acrid odor that irritates some workmen.

However, a properly made phenolic-resorcinol joint is completely waterproof and heat resistant. Nailing pattern is the same as for casein, and curing period is also eight hours.

Do nail-gluing in the shop

One last pointer: nail-gluing should not be done at the site. It requires a shop setup, with jig tables—like the one on page 171, this issue.

What you can do with



PUT UP WHOLE BUILDINGS—Macomber's "V-Lok" service station in Bridgeville, Del. Designed by American Metalcore Systems, this building goes up in a week.

Lightweight steel members can be important aids to the smaller builder who wants to share in the growing volume of light commercial construction. (And the volume this year alone will be huge. AMERICAN BUILDER'S Research Department says it will reach nearly \$8 billion.)

● You get versatility

The lightweights cover a wide range of architectural designs. They can include complete packages of prefabricated buildings, serve as framing, floor and roof members for motels, schools, shopping centers, and other light commercial buildings.

The builder working with these lightweights generally needs little more than his basic home-building skills, plus a knowledge of the materials and the technical help the steel industry makes available to him.

● You get engineering

Where structural design gets complex, the structural engineer becomes the builder's most important ally. Show him the building you want to erect and he will specify the size and type of structural members that it requires. Shaping the members? That's where the steel fabricator becomes the builder's next important ally. He'll shape and ship you the steel you require ready for erection. The engineer-fabricator team will carry the burden for any builder with limited experience in steel.

With this help, the change for a builder from wood to steel becomes relatively simple. The builder soon learns the relative merits of sections that are hot rolled, cold formed, or fabricated. He finds that such members as Electricweld tubing in the form of rectangles and squares

soon become as familiar as wooden 2x4's, 4x4's, and 8x10's.

● You get prefabrication

A plus feature stems from the fact that more builders are working with prefabrication. Since virtually all steel construction involves prefabrication, lightweight steel structurals prove basic to the trend. Erection of lightweight steels is something little more complicated than playing with an erector set.

The builder receives from factory or fabricator all the required lightweight members pre-cut or preassembled, ready for erection. (The steel fabricator is the counterpart of the building supply house. He goes further, though, in tailoring materials to builder's exact needs.)

If the framework is to be bolted, all connecting members will be punched where bolts are

lightweight steels

to be inserted. If the frame is to be welded, every member is cut to fit and identified by the fabricator. This applies whether the builder is erecting a prefabricated building or placing steel roof decking.

● You get simple construction

Construction techniques and materials, in other respects, remain familiar to the builder. He still works from blueprints; finishing, both interior and exterior, remains much the same. In the end, the real difference to the builder is that lightweight structurals and members add diversification to his business, plus higher profits, whether he works with the steel as a spec builder or a general contractor.

● You get variety

The steel industry provides builders with a host of members suitable for working with lightweight steel from whole buildings to framing and decking. Included are many gauges and grades of steel—small angles, bars, rods, special rolled shapes, wire and hot-rolled and cold-rolled sheet and strip steel that form structural framing members and panels of various types. Here is a sampling:

● Open-web steel joists

These are lightweight steel trusses designed for light construction to support floor and roof panels between main supporting beams, girders, trusses and walls. They are manufactured in standard depths of 8, 10, 12, 14, 16, 18, and 20 in., to span up to 40 ft. for roofs.

● Lightweight steel structurals

These are hot-rolled, lightweight steel beams, channels, and joists specifically designed for fast, economical construction of residential, industrial, and commercial buildings. They're

generally used much like the open-web steel joists.

● Cold-formed shapes

These are relatively small, thin sections made by bending sheet or strip steel in roll-forming machines, press brakes, or bending machines. It's an inexpensive process well suited to the manufacture of special-purpose shapes, like door and window frames, metal partitions, non-load-bearing studs, and facing.

● Ribbed-steel roof decks

These usually consist of ribbed-steel sheets with overlapping or interlocking edges that serve mainly to support roof loads. Generally, they consist of long narrow sections with narrow longitudinal ribs 1½ to 2 in. deep and spaced about 6 in. o.c. These usually span from 6 to 10 ft., depending on the depth of the section, gauge of material, and details of design.

● Cellular steel panels

These play important roles in floor and roof construction. One of their big features is the built-

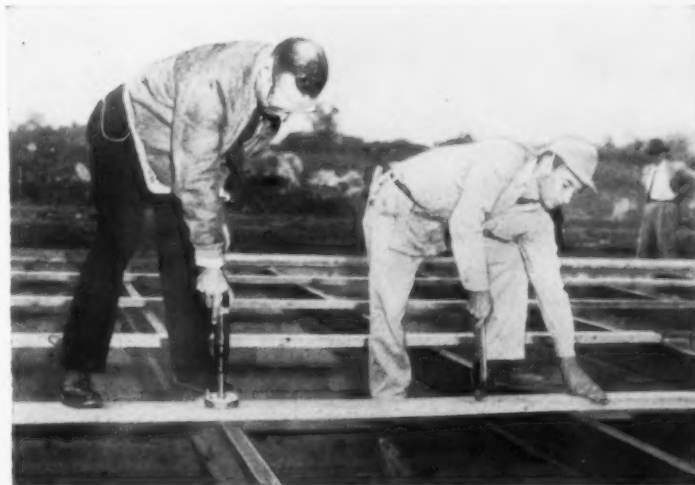
in space that accommodates wiring. They are also sometimes provided with acoustic metal ceilings. These usually are made of 18-gauge or heavier steel.

● Lightweight steel buildings

These are an important new avenue of profit for the smaller builder. They make use of all the previously mentioned lightweights but manufacturers make them available as complete building packages. They come in single-span, double-span, and triple-span structures that prove ideal for light commercial.

The factory delivers to the builder all the materials he needs to erect the building. The builder pours the foundation then fits the prefabricated columns and beams into position.

Next, girts and purlins are placed and the framework is ready for roof and wall panels. Embossed holes in girts and purlins speed the fastening of panels. Buildings see completion in weeks instead of months. The structures also prove adaptable to a wide variety of facades, such as curtain-wall or masonry.



OR PARTS OF BUILDINGS—Wood 2x4's are attached to Jones & Laughlin Junior Beams by powder-actuated gun at Brosius Homes, Maryland.

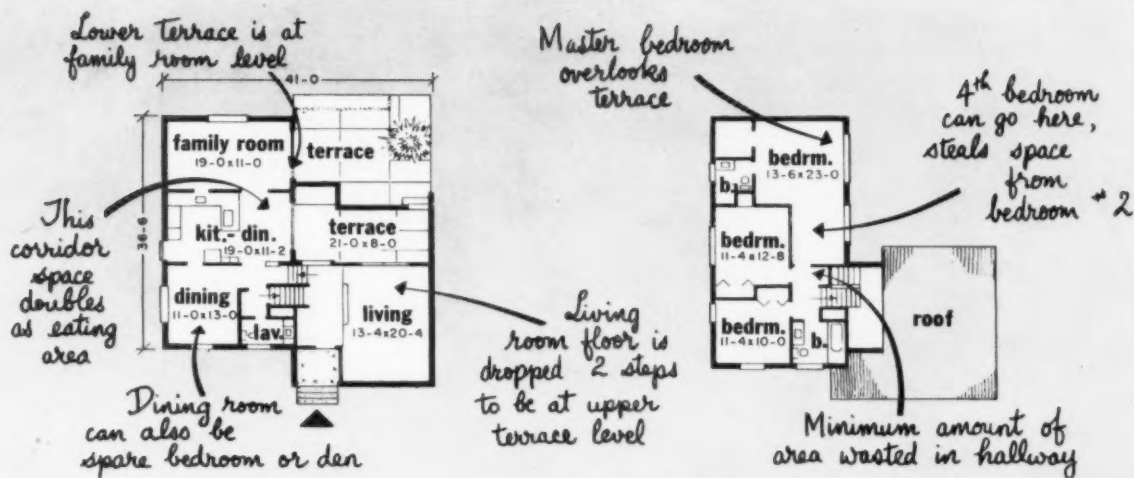
Best Split Yet?



From the outside, this looks like an ordinary split tailored to the conservative Washington, D. C. market; but behind the facade lies one of the most exciting designs our editors have seen



REAR TERRACES are focal points; builder Jack Kay has literally wrapped his house around them.



If you think there's no such thing as a new split level, look again. June's Blueprint House is a new design, and an unusually good one in the bargain.

The builder, Jack Kay of Washington, D.C., calls this house the high point in his interest in outdoor living. "We started with a terrace," says Kay, "and wrapped a house around it. Our aim was to get as many rooms as we could to face onto the terrace, and to make the whole rear area as exciting as possible. At the same time, we styled the street elevation to match the conservative market in this area."

The success of the design is apparent in its sales record. Although it's Kay's most expensive model (\$26,950), it's the best seller in his 150-house program.

Since the terrace is the design's key area, it gets special treatment. Kay includes both fencing and landscaping in the price. And he uses a landscape architect—Thurman Donovan of Washington, D.C. (Bartley & Gates, R.A., of Wheaton, Md., designed the house itself).

The terrace is built on two levels. The family room opens to the lower level, the living room to the upper level. The distance between levels is three steps; the entire living room wing has been dropped two steps so the terrace levels are not too far apart.



FENCE AND LANDSCAPING are included in the basic price of the house.

BLUEPRINT HOUSE



KITCHEN, although set back, still commands a view of the terrace through window (right) in dining nook. Pass-through at left opens into the family room.

AMERICAN BUILDER BLUEPRINT No. 274

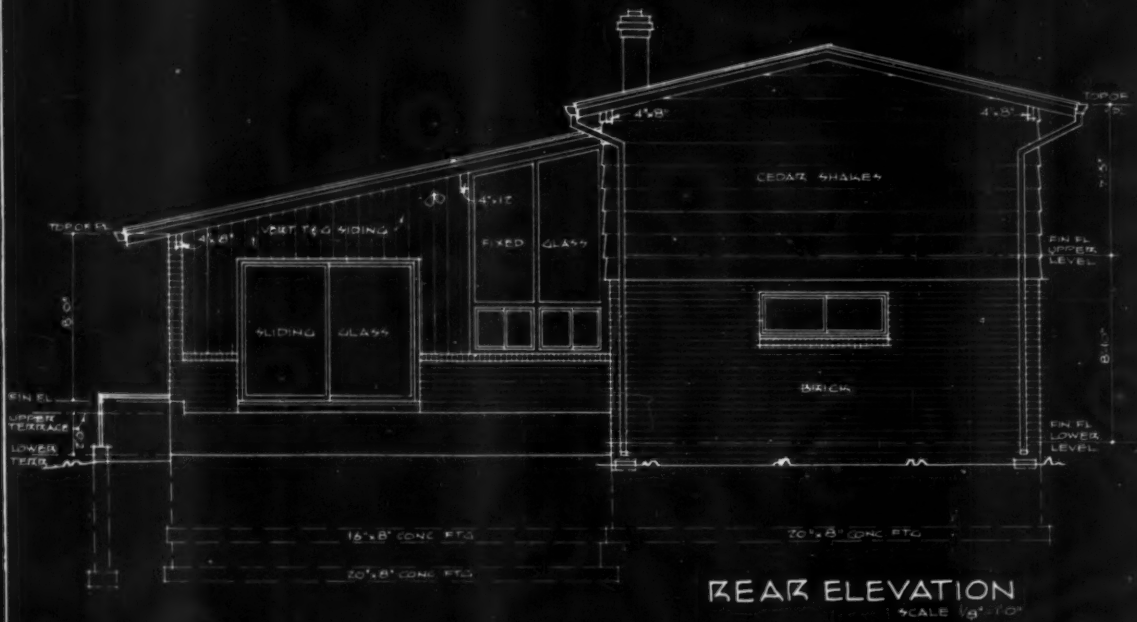
The kitchen is the informal living center



VIEW FROM FAMILY ROOM shows kitchen breakfast bar (center) and dining nook (left). Door beyond is to lavatory; to its right is dining-room door. Dining room can double as a spare bedroom, den or TV room.

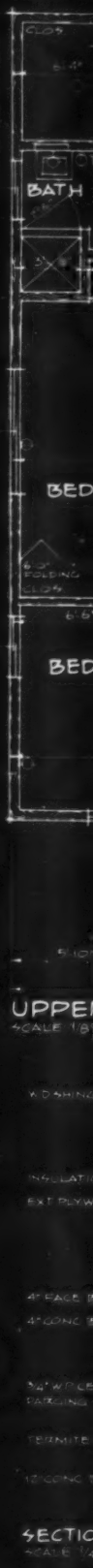
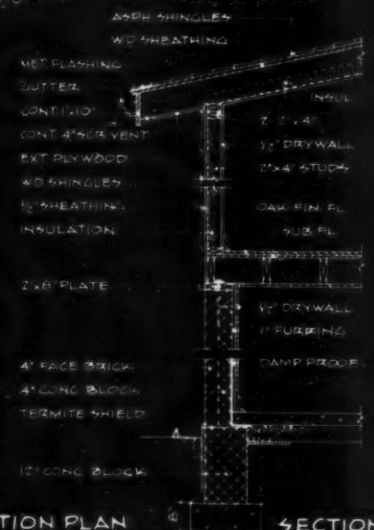
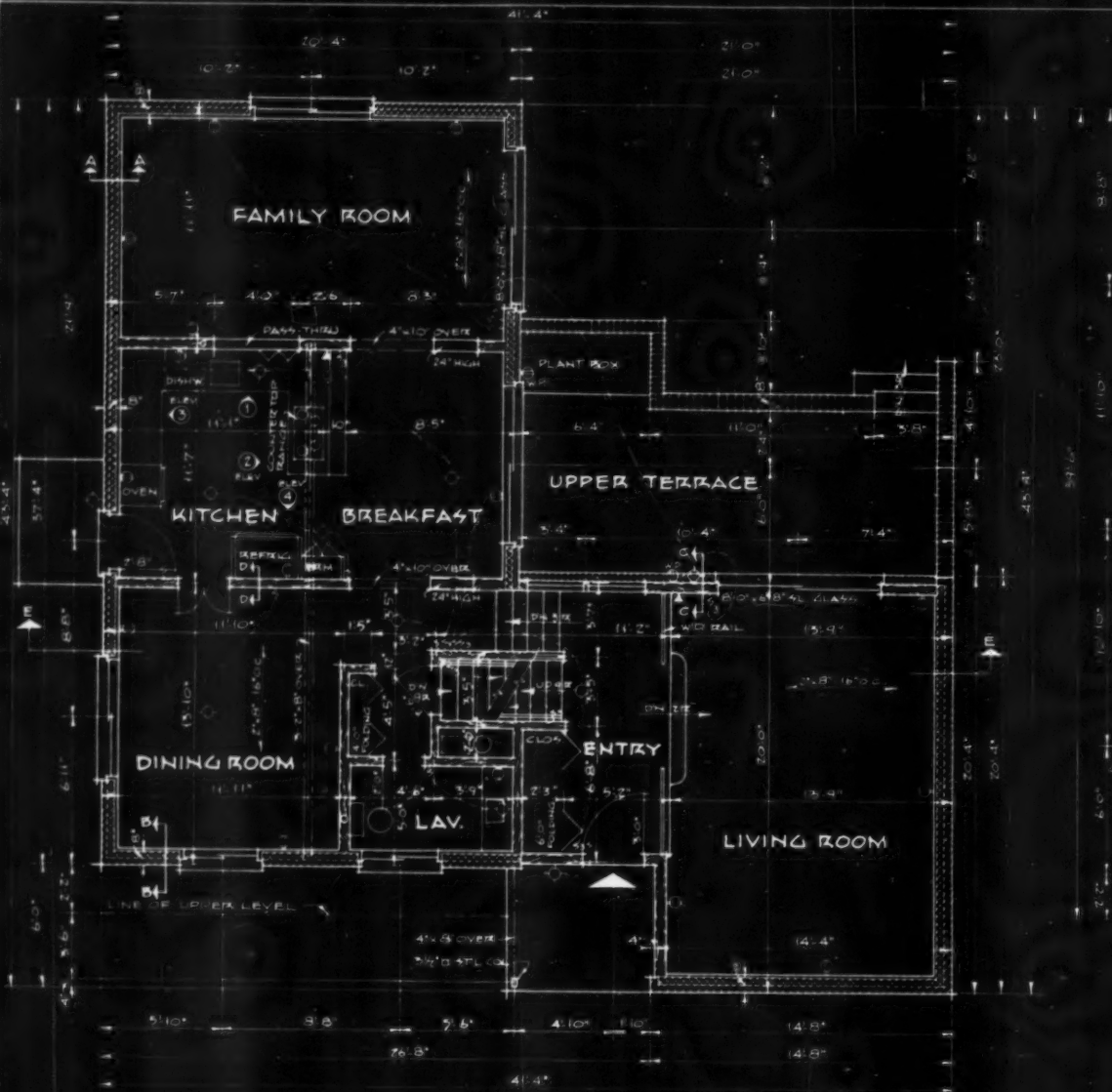


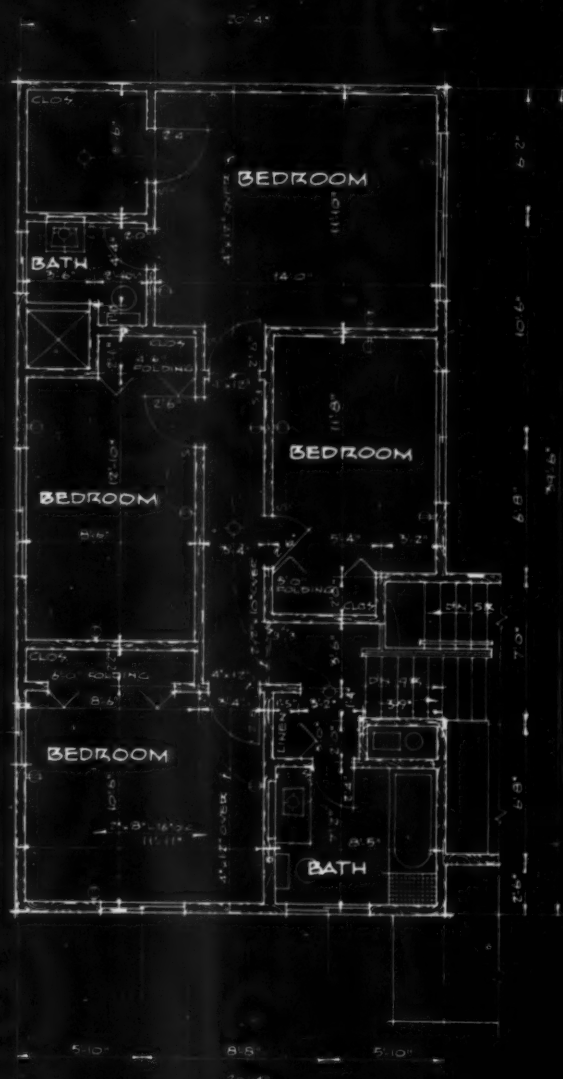
CORRIDOR SPACE is put to good use. Hall into family room doubles as part of the dining nook, or as breakfast bar eating area. Eating table is at right under the terrace window. Family room is through far door.



AMERICAN BUILDER BLUEPRINT SERIES.

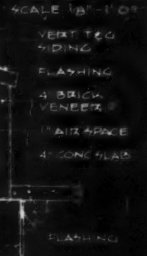
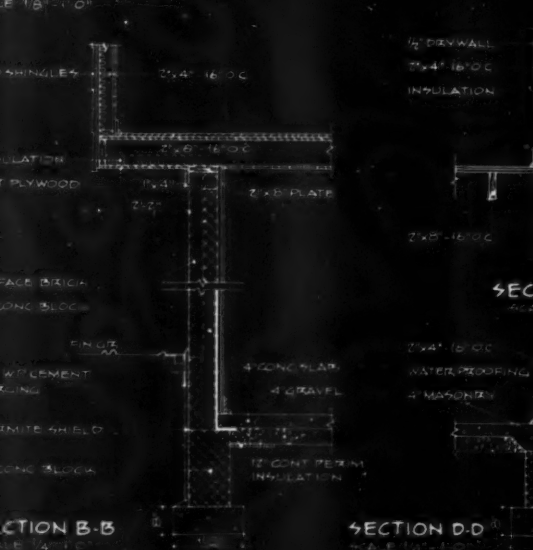
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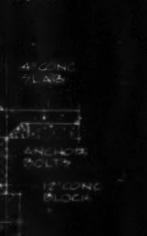


PER LEVEL

ALTERNATE UPPER LEVEL



SECTION C-C



SECTION D-D



KITCHEN ELEVATION



BLUEPRINT HOUSE



VIEW FROM BACK OF FAMILY ROOM shows sliding glass doors that open onto lower terrace. Family room

floor is just one step above the terrace level. Pass-through from kitchen is at right.

The family room opens to the lower terrace

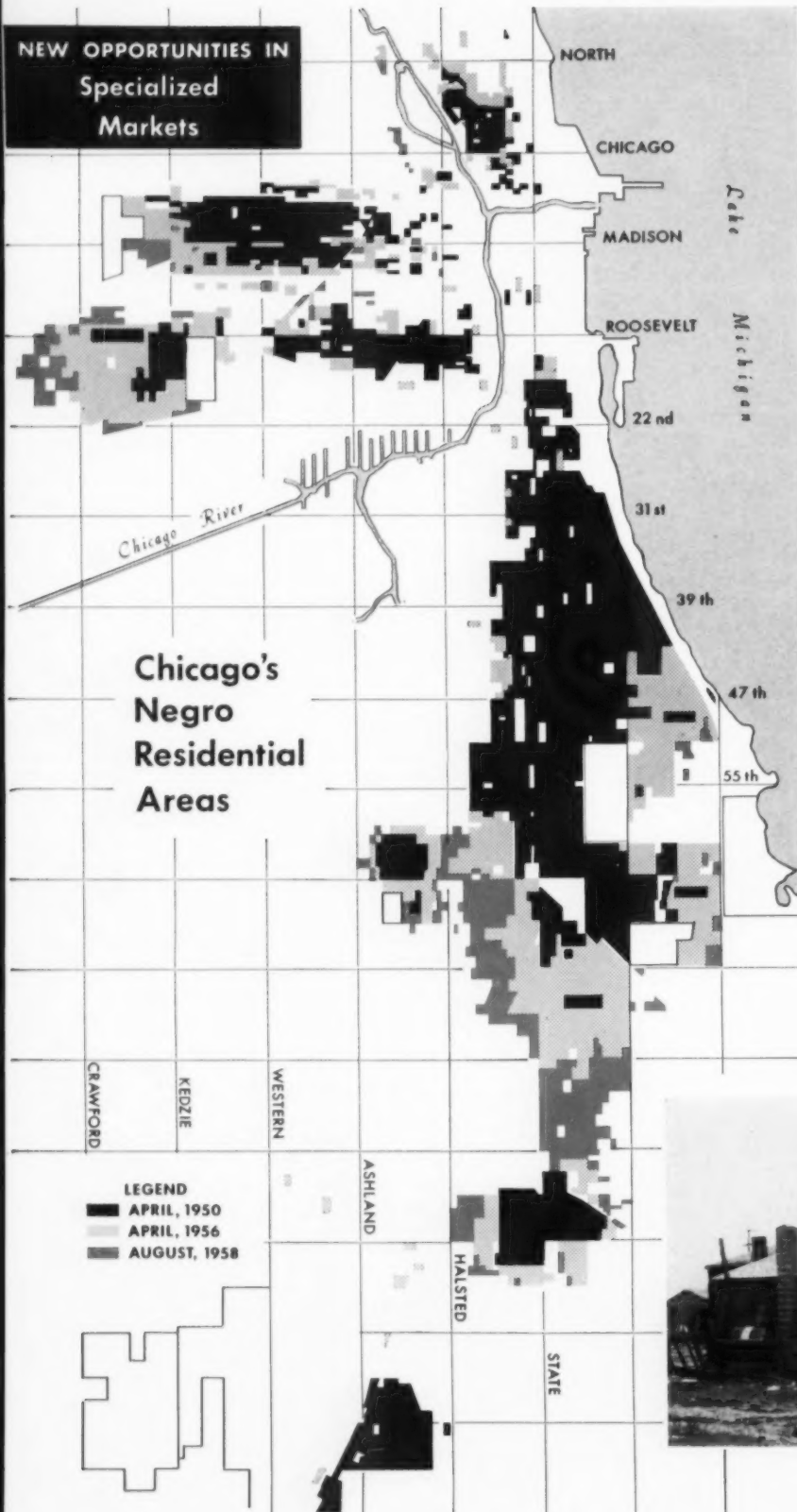
Quality products used in this month's Blueprint House

Douglas Fir lumber used throughout house
American Sisalkraft Corp. Vaporstop vapor barrier
Martinsburg brick
Schlage Lock Co. and Kwikset hardware
General Bronze Corp. Alwintite doors
North American Cement Co. Portland cement and Blue Band mortar
Philip Carey Mfg. Co. Seal-O-Matic roofing and shingles
N.O.F.M.A. Specification oak flooring
Nova Sales Co., Crea-Dipl. Co., Inc. cedar wood shakes
U. S. Gypsum Co. sheathing, drywall

Armstrong Cork Co. tile floors
Hall-Mack Co. chrome bathroom accessories
Owens-Corning Fiberglas Corp.
Eljer colored bathroom fixtures
Formica Corp. post-formed kitchen and bathroom tops (counter)
NuTone, Inc. combination bathroom light and ventilating fan
Progress Mfg. Co., Inc. kitchen exhaust fan and control hood
Rheem Mfg. Co. furnaces and air conditioning units
Frigidaire built-in kitchen appliances
Lightolier, Inc. lighting fixtures

Bulldog Electric Products fuse panel
Minneapolis Honeywell tap-lites
F. H. Lawson Co. 50-gal. water heater
Libbey-Owens-Ford Glass Co. picture windows
Thulman prefab aluminum chimney (Majestic Co. Inc.)
Huttig Mfg. Co. exterior flush solid core doors
Young Door Co. interior doors, flush hollow core
Select Oak Assn. stairs
Armour Company base paint
Wenzel Tile Co. ceramic bathroom tile

**NEW OPPORTUNITIES IN
Specialized
Markets**



Minority Housing:

Builder

As America's prosperity raises the economic status of its minorities, growing numbers of builders are finding these groups a lucrative market for new homes. Here's how one builder—Chicago's Lincolnway Homes Co.—taps the Negro housing market.

The strongest demand for houses among Chicago's Negroes is in the areas they have already occupied. So, Lincolnway Homes operates in the heart of the Negro community. "We have no



RAMSHACKLE HOUSING — less than 300 yards from Lincolnway subdivision—doesn't discourage buyers.



OPENING DAY at Lincolnway's subdivision. Prices for the prefab models range from \$14,500 to \$17,750, including lot.

taps Chicago's Negro market

integrationist or segregationist axe to grind," says Jack Sohr, vice president in charge of minority district operations for Lincolnway. "We simply build houses where they're wanted and where they can be sold. Chicago Negroes tend to herd together like any minority in any large city. And like any migrant group, they're not quick to leave areas that become familiar to them."

Chicago's Negro residential pattern bears out Sohr's statements. The growth of Negro resi-

dential areas follows a concentric pattern (see map, left) slowly spreading from the center toward the outer fringes.

Lincolnway's policy of building in existing Negro areas is paying off. They've built and sold forty-two \$14,500-\$17,550 Gold Star prefabs in the last six months, expect to sell more than 100 units during 1960.

Sohr feels that Lincolnway's Chicago success can be matched elsewhere if certain peculiarities of the Negro market are consid-

ered. Some pointers:

- "Build in areas the Negro is familiar with; don't isolate him from the rest of his community.
- "Sell him on a monthly-mortgage-payment basis. As an industrial worker and as a Negro he lacks strong job security, so it's catastrophic to talk of 25-year terms.
- "And, most important, study your minority market carefully. It can offer you a big opportunity, but it changes markedly from city to city."



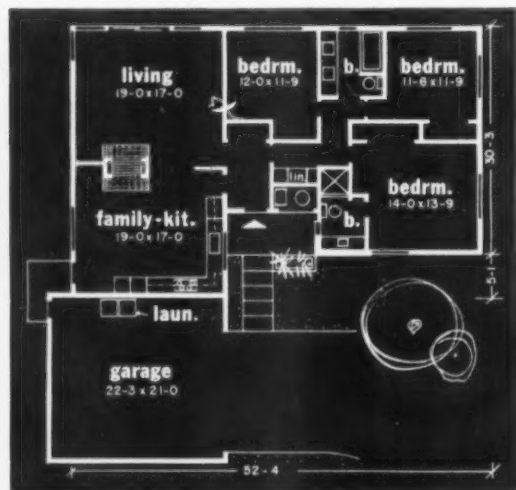
CLEAN CUT CONTRAST—offers lease purchase plan which has proved popular with Chicago's Negro buyers. After three years of rental, downpayment equity is built up.



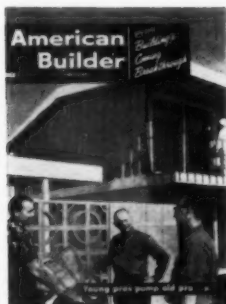
GOLD STAR HOMES, Rome, Ill., produces this model. Lincolnway builds identical model for sale in White areas—a strong selling point with minority clients.



"PICK A GROWTH AREA—make a master plan," Sturtevant tells young builder Lloyd Massey, Jr.



"PLAN AND PRICE your houses right," says Sturtevant. This 1960 1,600-sq.-ft. model sells for \$25,750. He uses five



OLD PRO TO YOUNG PROS:

Plan ahead—time it right—diversify!

Austin Sturtevant of Newport Beach, Calif., built a multi-million-dollar-a-year volume on the ideas outlined here

If you're a top builder with a reputation for getting good ideas and making them work, you have a lot of questions thrown at you. It happens to Austin Sturtevant every day. And his answers make sense for growth-minded builders—

Q. What do you mean by "diversify your work?"

A. I mean build the type of building that's most salable at a given time and place. We started out building low-cost houses, but we also build \$100,000 custom jobs, commercial, industrial.

Q. Isn't this a tough way to run a building business?

A. I'm first of all a business man. True, I have a contractor's license, and know construction and design—that's important. But business ability is equally important in this fast moving competitive era. And being able to build what the market needs at a given time is good business.

Q. Can you illustrate this point?

A. Right now, "Own your own" apartments are popular here, so we're constructing a good number under contract. A few years ago when we were held up in starting a new tract, we built many commercial and light industrial buildings. Our versatile organization served us well then. And if there should be a lull in the home and apartment field tomorrow, we'll be ready to turn to other types of construction.

Q. How do you "plan ahead"?

A. By "master-planning." In cooperation with another builder we had a master plan for our area drawn up in 1953. It embraced quality homes, apartments, a school, fire station, park, and a probable future shopping center. It makes sure we have an orderly, high-quality growth.

Q. Doesn't this tie your hands?

A. Just the opposite. Our master plan included a limited area zoned for apartments. In 1958 we felt the time was ripe for small rental units. So we concluded a deal with a management company whereby we sold them 21 lots and they gave us a contract to build seven 18-unit apartment buildings.

Q. How else does the master plan help?

All photos by Douglas M. Simmonds



different architects, features six major styles, 11 basic floor plans. He insists on diversity of style and siting.



OLD PRO TO YOUNG PROS:

A. It assures *everyone* of a continuing high-quality residential community. When we started the "Own your own" apartments, it assured both the management company and their clients that only a limited number of apartments could be built in the area, and that the community as a whole would remain desirable.

Q. Did you establish a good pattern?

A. Our first project of 90 homes in Westcliff sold out quickly at prices from \$22,000 to \$26,000. We priced the second group of larger homes at \$28,000 to \$35,000. We attracted executive and professional buyers who added pools and landscaping and set a high neighborhood standard. This will be a strong factor in selling our new areas.

Q. How else do you plan ahead?

A. By training key men for the future. I have three: my son, Warren, who has worked his way up through all phases of the business; my superintendent, Robert Kellogg; and my accountant, Foster N. Garn. In a few years I hope to be able to retire or turn my hand to other enterprises.

Q. What about timing?

A. It's important to know when to shift from one type of building to another. Or from one price range to another. Or from one architectural style to another.

Q. Speaking of architecture—how do you handle home designs?

A. We want freshness and variety, and all our houses are architect-designed. We use five different men, all talented. We have 11 basic floor plans, but encourage our buyers to develop their individual ideas.

Q. What styles are popular?

A. We intermingle six styles: rancho, Pacifica, colonial, Monterey, provincial, and contemporary.

Q. How do you keep the architects from running up costs?

A. We lay down certain rules and principles to assure economical construction and a salable house. And we write our own specifications for each house.

Q. How do you handle changes in your standard plans?

A. We know that many buyers in the upper brackets want to make changes, and we co-operate fully. We'll make almost any change desired at cost plus 20%. Since we use an open-end mortgage, we can include the changes in the mortgage.

Q. Do you do any second mortgage financing?

A. Most of our houses are financed on a conventional 75% mortgage basis. But where necessary we will take a down payment as low as 15%. We will then take back a second mortgage at 1% higher interest than the first, and payable at 1% a month, with a final payment at the end of five years.

Q. What is this "open escrow" plan you use?

A. This is a plan we use to help families who have to sell their old home before moving into a new one. We will sell on a six months' open escrow with the buyer paying the interest and maintenance costs. Or we will accept an irrevocable order on a home sold and held in escrow instead of cash, so that the buyer can pay when the deal is closed.

Q. What led you to pick Newport Beach as a spot to build?

A. From the time I came to California in 1947 I was constantly looking for a really hot growth area. I expected most of the state to grow, but I was sure some areas would expand faster than others. Newport Beach proved to be what I wanted. It's

45 miles southwest of Los Angeles, on the Pacific shore.

Q. How did you find such a growth area?

A. In 1953 I was chosen by the Boy Scouts of America to be construction manager for their International Jamboree campsite. This involved building a temporary city for 50,000 boys on a 3,000-acre site on the San Joaquin ranch of the Irvine Company at Newport Beach. While working on this project I realized Newport Beach had all the growth elements I was looking for.

Q. What growth factors were you looking for?

A. I believed that an increasing number of people would want to move to the area. As Los Angeles grew, I thought many well-to-do people would want to live by the water. This would mean more homes, shops, and services. Then industries would come into the area to make these same advantages available to their employees. My predictions were right. We now have both water sports and a sharp influx of light industry and research.

Q. How did you locate the right land for development?

A. The ability to acquire well-located land for subdivision is of first importance, of course. In Newport Beach the problem is unique because most vacant land belongs to one owner. No major development could take place without the co-operation of the Irvine Company. The master plan we had drawn in 1953 was prepared with their consent, and facilitated the development.

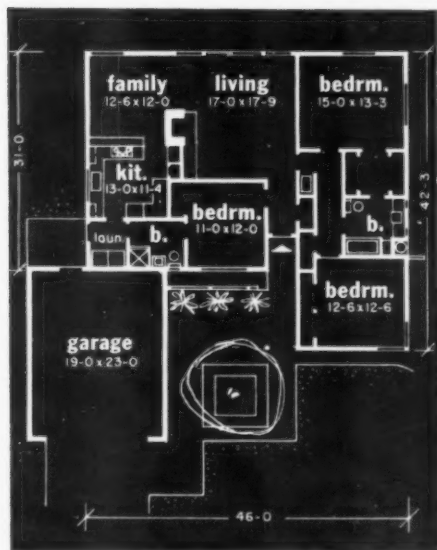
Q. How would you summarize these elements of success?

A. Find a sound growth area. Plan far ahead. Diversify your efforts to include all price classes in residential and apartments. Take on some commercial and light industrial work when necessary. And be alert to market opportunities and proper timing.

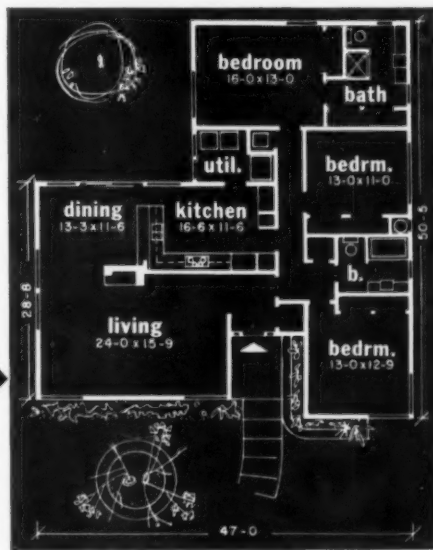


PACIFICA is one of the popular styles featured in Sturtevant's newest area, "Westcliff." This model sells for

\$25,750, has a large open kitchen-family room facing the rear. Many Sturtevant buyers add swimming pools.



WHAT
HOW



WHAT
HOW



COLONIAL designs with a "western" flavor are also good sellers. This 1,870-sq. ft. model sells for \$29,125.

While Sturtevant bases his sales on 11 basic floor plans, he encourages customers to achieve individuality.



UNIQUE "OWN YOUR OWN" APARTMENTS have residential look, combine one- and two-story units in clever



OLD PRO TO YOUNG PROS:

Here's how "own your own" idea

These are luxury-type apartments and have been designed with more than ordinary appointments and fine living features.

The low one- and two-story pattern maintains a residential character. In fact they might be described as deluxe row houses, but arranged in a cluster pattern that assures privacy, yet easy access by car to each unit.

Extensive and clever use of

concrete masonry designs has been achieved inside and out. Massive masonry fireplaces are included. Each apartment has a spacious carport, handily located. Roofs of the carports provide outdoor patios and terraces.

There are three basic floor plan units, but these are cleverly turned, reversed and modified to give plenty of variety. (See panel, next page.) A large pool and recreation area is provided in a central location.

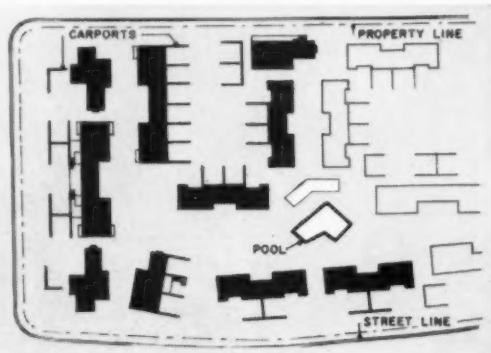
The "own your own" apartment idea has been popular in

California two or three years. These are close to a highly desirable beach and resort area, yet within driving distance of Los Angeles night life. Financing was on a conventional mortgage running 20 years at 6.6%.

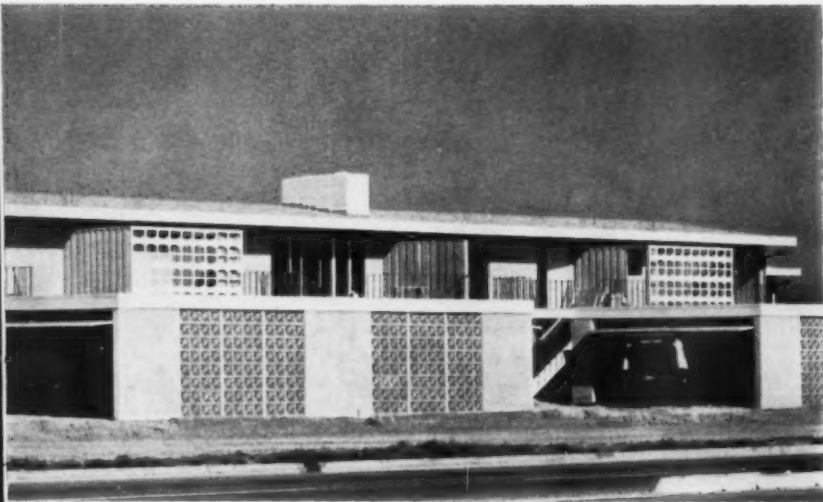
There are 22 units in 10 separate buildings. A similar project of the same size is planned for construction when these are completed. John C. Lindsay and Associates were the architects. Two-bedroom, two-bath units sell for \$28,975. Three-bedroom, two-bath unit sells for \$37,350.



YOUNG TEAM builds for future: (L to R) Warren Sturtevant; Foster Garn; Robert Kellogg, super.



PLOT PLAN of first section of Westcliff Villa shows thoughtful grouping of units for privacy, easy access.



grouping around a pool area. Units sell for from \$28,975 to \$37,350.

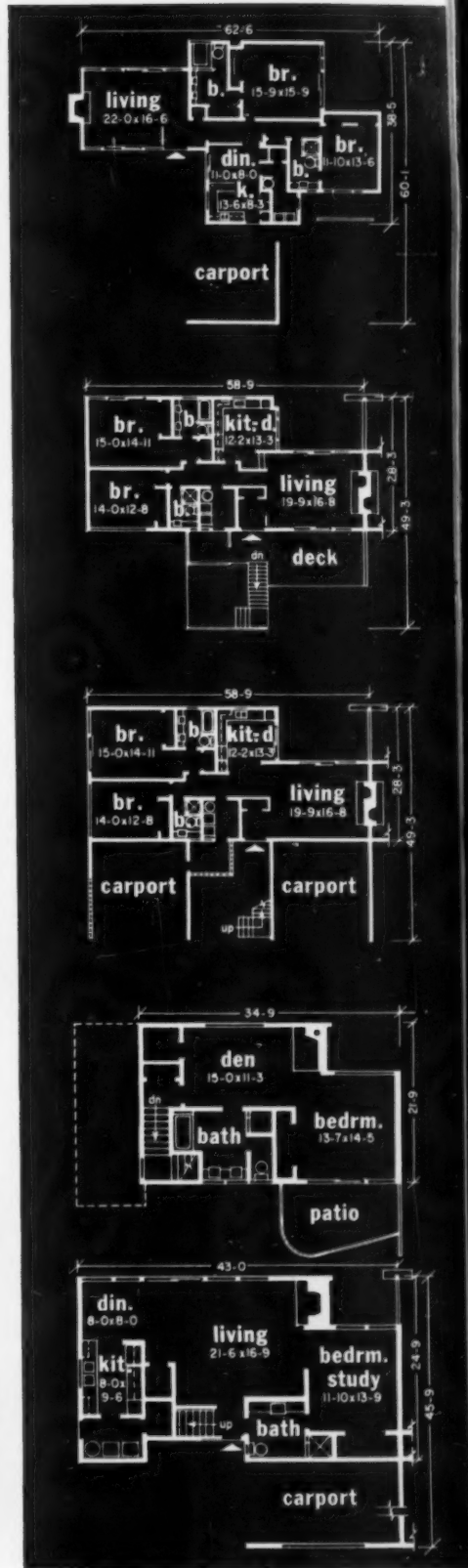
helps sell apartments



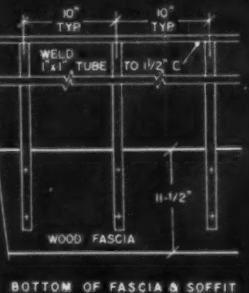
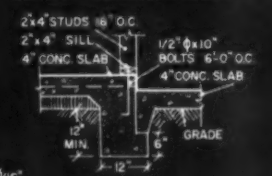
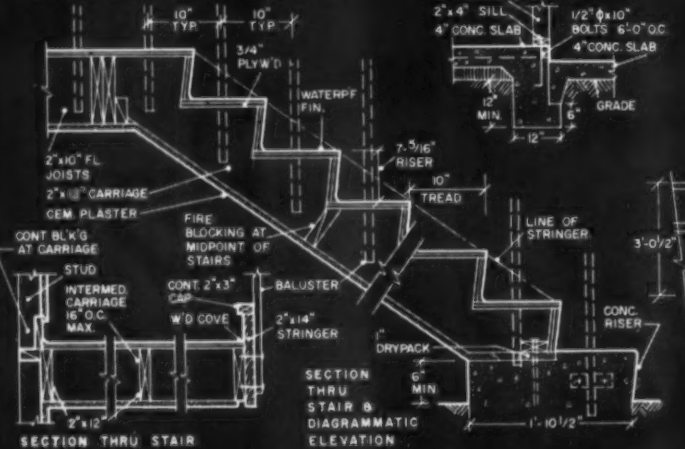
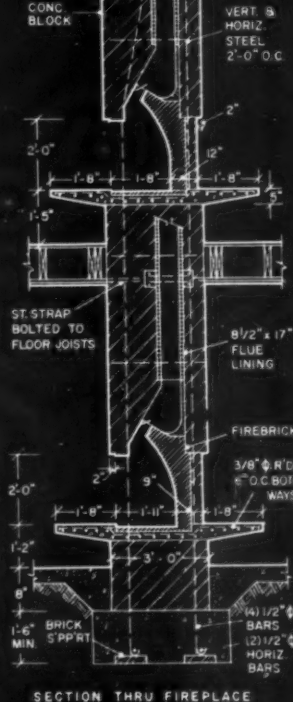
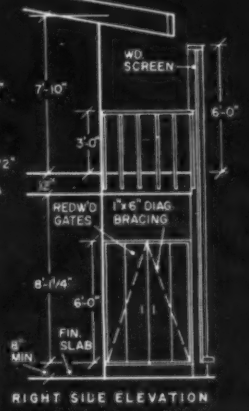
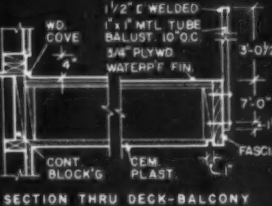
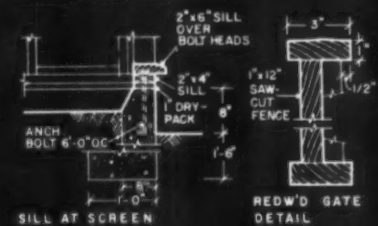
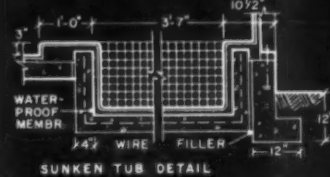
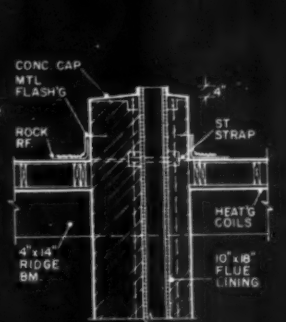
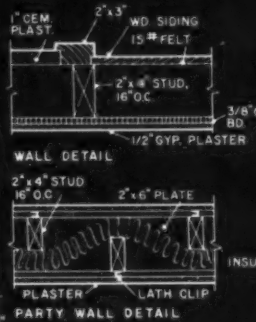
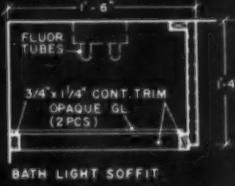
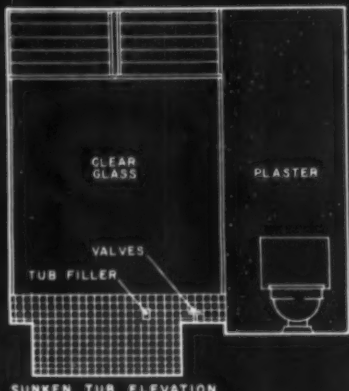
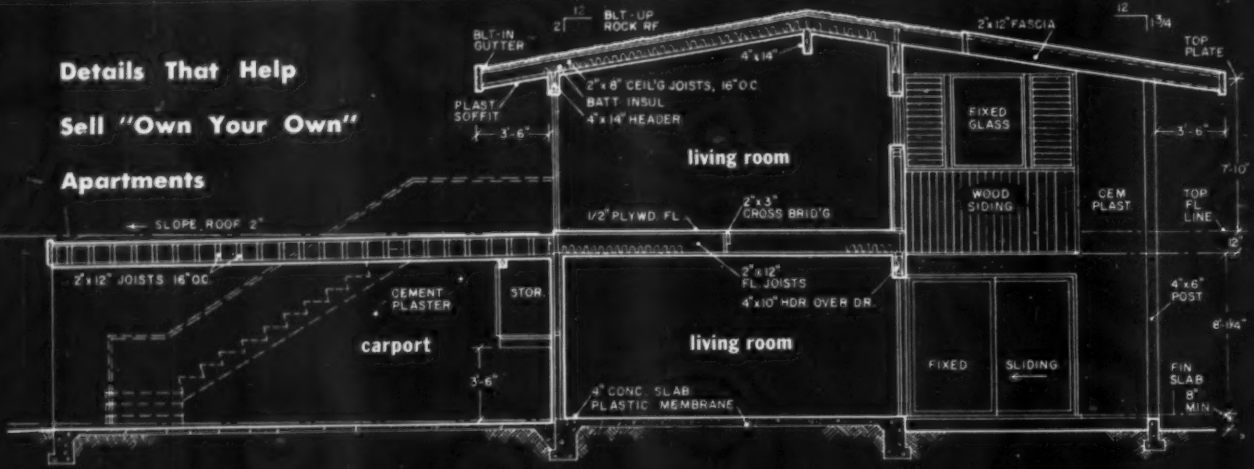
OUTSIDE STAIRS lead to second floor unit which has a huge living room, outdoor "living deck," fireplace, two bedrooms and two baths.



DELUXE TWO-STORY unit has handy carports, spacious rooms, fireplaces, attractive roof patios for sunning. Building is financed on 20-year loan.



**Details That Help
Sell "Own Your Own"
Apartments**





ONE- AND TWO-ROOM rental units are grouped compactly around a rectangular pool. Most apartments have

balconies. Rentals run \$135 for one-bedroom units, \$210 for two-bedroom, two-bath units.



OLD PRO TO YOUNG PROS:

Build apartments for rent too

Austin Sturtevant included an area zoned for rental apartments in the master plan of his Newport Beach development. In 1958 he felt the time was ripe for building rentals, and this is the project that resulted.

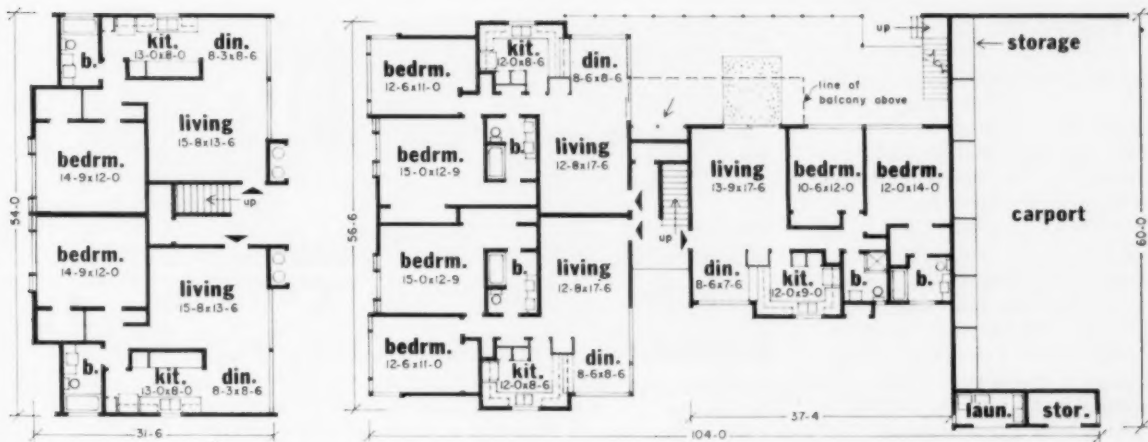
One- and two-bedroom apartments are skillfully grouped around a large swimming pool.

Easy access to the pool is provided, and most apartments have balconies or windows overlooking it. Rentals are \$135 for the one-bedroom units and \$210 for the two-bedroom units.

Sturtevant built the apartments on contract for a building management company to which he had sold the 21 rental lots re-

quired. A total of seven 18-unit apartment buildings are planned, three are completed. Architect was Richard Leitch.

Apartments are compactly arranged and well equipped to appeal to California visitors. Buildings are only a short distance from the Newport Beach waterfront and boating areas.



Steel saves \$140 on this house

Builder-lumber dealer combines lightweight steel beams and plywood panels to create cost-saving floor system

Lightweight steel beams can save money on low-cost house construction.

Harold Steinkamp, Batesville, Ind., builder-lumber dealer, puts Jones & Laughlin lightweight Junior Beams to work for floor joists and marks up savings of \$140 per house over all-timber construction.

Steinkamp's houses measure 24x40 ft. on crawl space. To put in a floor, his crews space nine 8-in. beams on 4-ft. centers across the width of the foundation.

The 156-lb. beams are supported in the center by a bearing wall. In between they are braced with steel bridging. Ends are imbedded in mortar in the concrete foundation block.

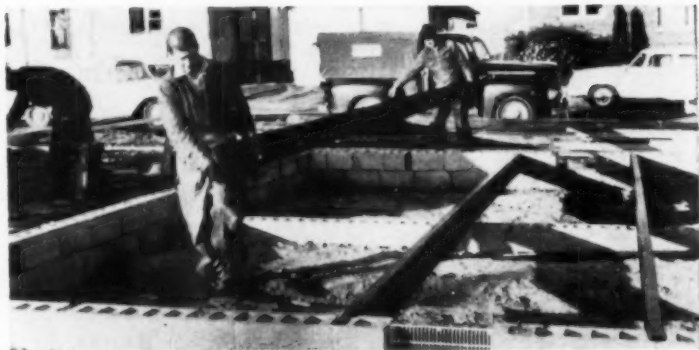
Once the beams are in place, 2x4's are set on 4-ft. centers at right angles to the 24-ft. beams.

A powder-actuated gun nails the 2x4's to the beams. Then the crew fastens 2x4-in. sleepers on top of the beams between the transverse 2x4's. This insures a series of 4-ft.-square grids for the rough flooring.

At this point, the crew attaches a 2x6 wood plate to the top of the foundation walls. This helps support the floor and side panels.

Finally, the carpenters nail 2-4-1 plywood panels to the 4-ft.-square grids. Several men in the five-man crew then jump up and down on the panels at the same time. But this test produces no drumming action. The beams leave a highly rigid floor.

Time to complete the flooring job? Just over three hours per house. The system was applied to a two-bedroom house selling for only \$9,500. And though the house is built over a crawl space, builder Steinkamp says the method easily can be adapted to homes with full basements.



SETTING BEAMS—Two men easily lift the last of nine steel beams and position it to complete the first phase of new steel-plywood flooring system. Beams weigh only 156 lbs. each and extend across width of foundation.



FASTENING SLEEPERS—Crew first nails 2x4's on 4-ft. centers at right angles to beams. Sleepers go in between, then are fastened to the beams. Non-adjustable rigid bridging is used between the beams.



PLACING DECKING—Grids 4 ft. square support 2-4-1 plywood panels that provide a rigid flooring. Floor finish in the form of vinyl, plastic tile, hardwood, wall-to-wall carpeting, etc., can go directly over plywood panels.

Quality Model Home Contest

- ▶ 36 Awards for the best 1960 Quality Model Homes
- ▶ \$1,000 for the best merchandising of Hidden Values*
- ▶ Purpose of contest: to encourage construction of Quality Model Homes and better merchandising of Quality Products

What you get as a winner

- 1 Awards: six top winners, 30 Award of Merit winners will be named as builders of best Quality Model Homes.
- 2 Special Prize: \$1,000 will go to builder doing the best job of merchandising his Hidden Value Products. Award is for advertising and promoting winner's Quality House and Products.
- 3 Publicity: winners will be announced and publicized in Dec. '60 and Feb. '61 issues of AMERICAN BUILDER. Formal presentation of AMERICAN BUILDER Award certificates will be made at our annual Award Evening in Chicago, during the January '61 NAHB Convention.
- 4 Publicity: a complete press kit concerning the Award will be mailed to the home-town newspapers of each winner. (Contest judging will be held Oct. 13th; kits will be mailed by Dec. 1st, to coincide with announcement of prize winners in our December issue.) Press kit will include a press release, photos of winning builder, of his Quality Home, of its floor plan, of winner's AMERICAN BUILDER Award.
- 5 Publicity: winners will be photographed receiving awards in Chicago. Newspapers will receive this photo and a press release.

How to enter your house

- 1 Entries must be model homes built in 1960 and open to the public for at least one week.
- 2 Include with each entry: (1) a list of at least 10 Top Quality Products used. (Quality Products are those adding most value and salability to house);
(2) a full set of working drawings;
(3) at least one exterior photo of the completed house;
(4) at least two interior photos;
(5) a photo of the builder;
(6) samples showing how your house and its Quality Products are merchandised;
(7) a completely filled-out Entry Sheet;

(8) additional photos, construction details, sales brochures, etc., will be welcomed. Entry Sheets and Reprints of this Contest announcement may be obtained by writing to Contest Editor, AMERICAN BUILDER, 30 Church St., New York 7, N.Y.

- 3 Houses should be entered (and will be judged) in one of three price categories: (1) under \$15,000; (2) \$15,000 to \$25,000; (3) \$25,000 to \$40,000. All prices exclude land.
- 4 Contest entries need not be mounted. Should be no larger than 24x36".
- 5 All entries must be received by Oct. 1, 1960. They should be mailed, prepaid, to Contest Editor, AMERICAN BUILDER, 30 Church St., New York 7, N.Y. They will remain the property of AMERICAN BUILDER for at least six months, after which they will be returned upon the request of the builder.
- 6 A builder wishing to enter more than one house may do so. But each house must be clearly marked and entered separately.

How your house will be judged

- On the merchandising and use of Quality Products (including Hidden Values).
- On quality of exterior and interior design.
- On quality of floor plan.
- From each of the three price categories mentioned above, two top winners and ten Award of Merit winners will be named. Total winners, including Hidden Value winner: 37.
- By a panel of seven top-level experts in the building field. Judges will include builders, housing experts, NAHB officials, architects, and the Editor of AMERICAN BUILDER.

* A Hidden Value is a quality that can't be seen, but adds to the life, strength, or value of a house. Examples: wood preservatives, vapor barriers, wiring.

How new FHA trade-in rules

Second- and third-time buyers make up an ever-increasing proportion of new-home prospects. You can tap this market with a trade-in plan

Each year the importance of adopting a home trade-in plan becomes more important to the growth-minded builder.

As the number of new-house prospects who already own homes grows, so does the necessity for a builder to take the old house off the hands of his buyer.

New help from FHA

Until a few months ago a builder who wanted to take an old home in trade found it necessary (in many cases) to tie up a large amount of capital in the old house. This is no longer true.

Under new FHA regulations a builder may get the same size mortgage as was formerly allowed only to an owner-occupant (up to 97% of the appraised value) with the proviso that 15% of the loan shall be

held in escrow with the lender for as long as 18 months. During this time, the existing home must be sold and occupied by a new owner-occupant. If the house is not sold within the 18-month period, the escrow fund is used to reduce the principal of the mortgage.

The advantage of the new regulations is obvious. For example, whereas formerly a builder could only get a loan of \$8,250 on a house valued at \$10,000, he may now get \$9,700—with 15% to be held in escrow.

These new regulations also make it easier for the builder to resell the old house since he can offer maximum mortgage insurance coverage without the buyer going through the expense of obtaining a new loan.

There are several types of trade-in plans (see below)—one or more of which will be of use to almost any builder, big or small. But before you set up a trade-in program, there are some basic do's and don'ts that you should know.

Rating the old house

One of the most important factors in any successful trade-in plan is the ability to know what an old house is worth. Only careful appraisal can tell if it can be resold quickly without too much work having to be done on it. Unless you're also a remodeler, it does not pay to take in an old house that needs extensive alterations.

How to sell the old house

It is also extremely important for you to decide whether you're going to handle your trade-in houses yourself or give them to a realtor to sell for you. If you decide to handle them yourself, you and your staff must know

Here are the three basic trade-in plans.

There are three basic trade-in plans in general use today. The following descriptions of the three plans only touch briefly on each. For builders who are interested in learning more about these plans and all the details of setting up and running a trade-in program, the Minneapolis-Honeywell Regulator Company has published a book, "Trade-In Housing Management." You can get it for \$1.00 by writing to the company at 2747 Fourth Avenue South, Minneapolis 8, Minn.

Straight trade-in

- 1 The straight trade-in plan is the simplest of the three. After setting an agreed-on price for the old home, the builder applies it toward the purchase price of the new house. The builder (or his agent) then sells the older home. Net prices for both the old and new homes are stated in the trade-in contract. The price the builder receives for the old home has no bearing on the payment to the homeowner.

The main advantage of the straight trade

is that both buyer and builder know where they stand. Formerly, builders shied away from this type of deal because taking title to the old house forced them to tie up a large amount of cash. New FHA regulations have eased this problem.

One of the main problems in this plan is to get the homeowner to accept a realistic valuation of his old house. By using the new FHA regulations and obtaining an FHA appraisal, this difficulty can be minimized.

Guarantee trade-in

- 2 The guarantee trade-in plan is the one where the new FHA regulations can play the most important role. Here, the builder definitely promises to take the old house in trade for his new one at a definite time and price—unless the owner can sell it himself before he's ready to take title to the new home. This method of trading has many advantages over the other plans.

The homeowner is assured of being able to

can up your profits and sales

or learn about appraisals, taxes, etc. For the smaller builder, this may prove unprofitable—particularly since selling a used home needs different techniques than selling a new one.

A top-notch realtor, on the other hand, has all the necessary experience in handling used-home sales. In addition, he has a made-to-order list of potential customers. And, if he's a member of the International Traders Club, he may open the door to "out-of-the-city" trades. Membership of the ITC is made up of the National Institute of Real Estate Brokers, an arm of the National Assn. of Real Estate Boards.

Other important factors

Some more important things to remember if you're ready to embark on a trade-in program:

- Use a work sheet to list all the costs involved in trading; i.e., commission to the realtor if you use one; costs of repairs to the old house, etc. This is the only

way you can be sure that trading costs don't cut into the profit on your new-home sale.

- Be sure to let potential buyers know you're willing to take trades. Placing an ad in the real-estate section of your local paper is one way to do this. Another way: let your local realtors know. They'll probably have some clients to steer your way.

- Keep your eye on the money market. There's a big difference of opinion as to whether trading is more important during tight money times than at others. But, one thing is certain. Someone who has a good equity in his old home is in a good position to put a substantial down payment on a new home. During tight money periods, it's easier to get a loan when a large down payment is made.

- Check the neighborhood where the old home is located. Even if the used house is in excellent condition, you may have difficulty reselling it if the neighborhood is deteriorating.

Why you should trade

Trading is an old, old custom. It was the means of exchange long before money was invented. The importance of trade-ins is well known by the auto industry which uses them as a valuable promotional tool. Builders must recognize this fact: as the percentage of home ownership rises, so will the percentage of prospective buyers who own homes. Builders must help owners dispose of their old homes.

If there are any doubts in your mind as to whether you should adopt a trade-in plan, these words from Clinton B. Snyder, New Jersey realtor should answer them.

Writing in "Learn to Trade," published by the NIREB, he said: "Trading is the modern way to serve clients in a market that has gained public acceptance. . . . The buying public recognizes trading as a welcome solution to the problem of disposing of one property to make ready to purchase another. . . ."

Any builder can find one that works for him.

dispose of his old home. He knows that if he can't sell it himself, the builder will take it off his hands. The builder, too, is assured of the sale of his new home. And, since under the new FHA regulations an FHA appraisal will have been made, the builder can be sure of the value of the property he's taking over. This FHA appraisal, together with a mortgage in the maximum amount, makes it easier for the builder to resell the old home without taking an unexpected loss on the deal.

There are some disadvantages: the always-present possibility that the old house won't be resold. And, without proper management, the builder might find himself stuck with too many old houses at one time, and too much capital tied up in them. The guarantee plan is the one where a builder can use the services of a realtor to the best advantage.

3 Conditional trade-in

The conditional or time-limit trade-in plan has been in use for the longest period of time.

With this plan, the builder never takes title to the old house, but will help the prospect sell it by a specified time. The time limit is generally the date the new house is ready. If the used house is not sold by the agreed-on date, the deal is off. Sometimes in this type of deal, the builder has nothing to do with the sale of the old house, but leaves it in the hands of the homeowner. Generally, however, the builder will want to try to help sell the prospective buyer's old home in order to push the sale of his new house.

Chief advantage of the conditional trade is that the buyer is definitely committed to purchase the builder's house if the used home is sold. Very little cash outlay is required on the part of the builder. However, some disadvantages do exist.

Neither the builder nor the buyer can be sure of a definite deal. If the time limit should expire without the buyer's old house being sold, the builder must find another purchaser for his new home.

New Concepts in Kitchens

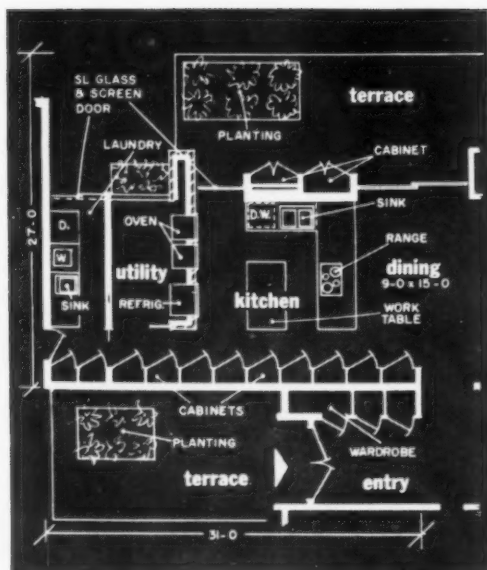
- More and better appliances
- 1-2-3 placement of equipment speeds work
- Today's kitchen opens out to family rooms, outdoor patios
- And it's color, color everywhere

The average American woman, who clinches most new-home sales, spends a third of her time in the kitchen. So the builder who gives her a kitchen design that is both practical and attractive is buying the best brand of sales insurance.

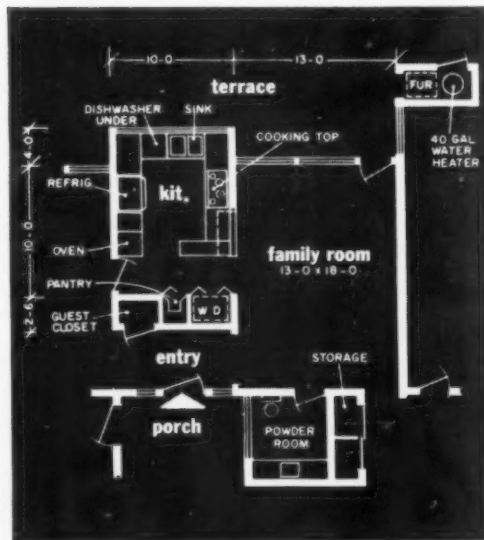
Women buy kitchens—As a home buyer, the American woman usually has a clear idea of what she is looking for in a kitchen. She wants attractive appliances, but she wants a practical, efficient working arrangement even more.

It is sales suicide for the builder to fall behind trends in appliance design, but even worse for him not to recognize the essentials of kitchen planning. It is not enough for him to provide the basic appliances, and fill the walls with cabinets. He must give the appliances a meaningful arrangement, and arrange cabinet space (see the next pages) so that it meets the demands of food storage, preparation, and cleanup. In planning today's kitchen the builder must also take into account current trends in indoor-outdoor living and dining.

"Keeping-room" concept—What is newest in American kitchens—a casual mingling of family cooking, dining, and living—is really an updated version of the colonial "keeping-room" concept, a combination living-cooking-dining area where the family spent much of their time in comfortable clothes, doing routine chores and enjoying each other's company. The 1960 version is better appliance, more utilitarian, often shows the influence of European and Oriental designs, but remains essentially the same room.



THIS OPEN-PLAN KITCHEN is a Medallion Award winner. Quality products include: Formica countertops; Mosaic Tile; Waste King dishwasher and disposer; Moen and Delta faucets; Westinghouse under-counter appliance center; G.E. oven, countertop range; Revco refrigerator, freezer; Arcadia sliding glass doors.



U-SHAPED PLAN has one open arm for pass-through service. Spotlighting and suspended cabinets are low-cost ways of customizing kitchen installations. Featured products in this kitchen include: RCA Whirlpool refrigerator; O'Keefe & Merritt top burner and oven; NuTone food mixer; Mosaic Tile; Emerson-Pryne flush lights and range hood; Armstrong Cushion-Eze floor covering; Day & Night gas water heater.



Courtesy Southern California Edison Co.



Courtesy Southern Counties Gas Co.

The Eternal Triangle

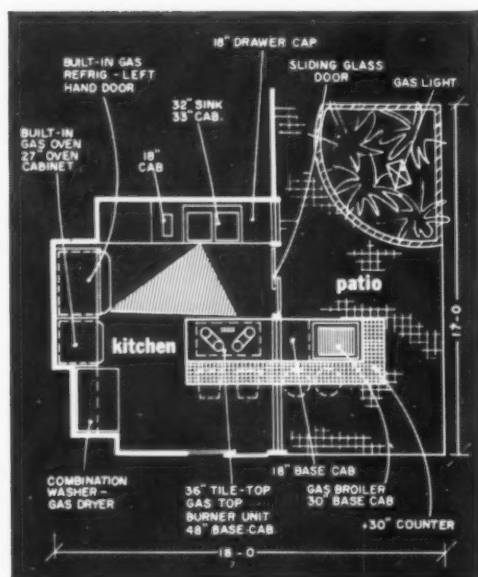
- Whether the kitchen be one-wall, corridor, L- or U-shaped—the basic planning triangle still applies
- A strong trend to U-shaped kitchens indicates they may be best suited to family living

Kitchen planning is simplified if the room is treated as a series of work centers—food storage, preparation, and cleanup. These are normally placed in a triangle, with the sink center at the apex. Efficient design limits the triangle perimeter to 22 feet. Each work center requires storage (for suggestions see pp. 100-103) and there is some necessary overlap. Many kitchens include a laundry area, though the current trend is to move it out of the kitchen toward the bedroom wing.

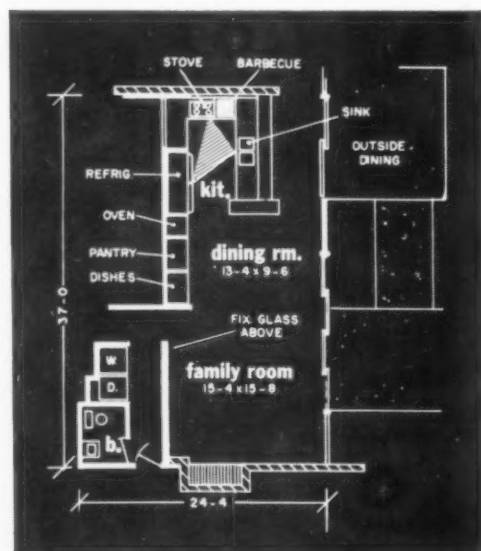
The U's have it—Of all the possible kitchen layouts—one-wall, corridor, L- or U-shaped—none has proved as adaptable to family living as the U. With one closed end to avoid through traffic and speed kitchen operations, it can open both arms to the family room and dining area, and more often than not, to the outdoor patio. All four of the color kitchens we have selected are essentially U-shaped, with pass-through serving counters emphasizing their open planning and family livability.

Appliance trends—Whatever shape kitchen you design, keep these new appliance trends in mind:

- 58% of all kitchens now feature *built-in* ovens and ranges
- 41% have *built-in* disposers
- 27% contain *undercounter* dishwashers (one appliance that gets strong masculine support.)
- Most of today's kitchens have built-in refrigerator-freezers—or models that look as if they are.
- Ventilating hoods are a must item for counter-top ranges.



CLOSE GROUPING of major appliances makes for easy food preparation and cleanup. Broiler serves outdoor patio, while dropped breakfast bar answers needs of heat-eat-and-move living. Name brands featured in this kitchen include: CharGlo broiler; Mosaic Tile; O'Keefe & Merritt washer-dryer, range and oven; RCA Whirlpool refrigerator.



THIS KITCHEN IS BASICALLY A U DESIGN. Pass-through island counter provides easy access to dining patio as well as indoor dining area. This dual service function is increasingly important in today's kitchen. Featured products are: Thermador electric range and oven; RCA Whirlpool refrigerator and freezer; Formica countertops; birch cabinets; decorative concrete block wall. Builder: J. L. Sorenson; Designer: J. P. Rognstad.



Courtesy Southern California Gas Co.



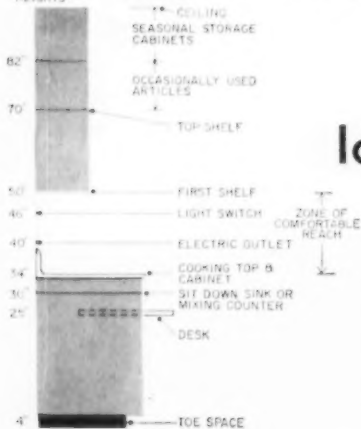
Courtesy Southern California Edison Co.

KITCHENS, Continued

INGREDIENTS USED IN MIXING



AVERAGE HEIGHTS

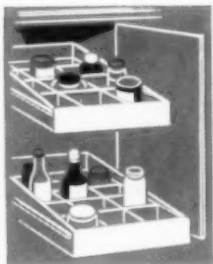


A **GLIDE-OUT CENTER DRAWER** and four separate temperature food-storage zones is the latest development of Westinghouse. This new refrigerator-freezer is an example of the way manufacturers are doing their part to plan for an efficient kitchen. Note counter space provided beside freezer.

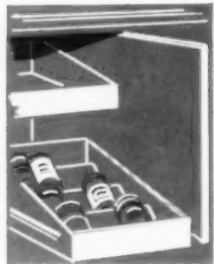
Ideas: food storage center



Place metal-lined bin for flour storage near mixing counter.



This bottle storage rack should be placed near the refrigerator.



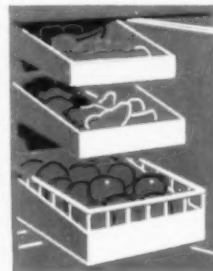
Canned goods should be located near the range or cook top.



BUILT-IN PANTRY, by Kitchen Maid is a ready-built unit that will store canned, dry foods; should be placed between freezer and sink.



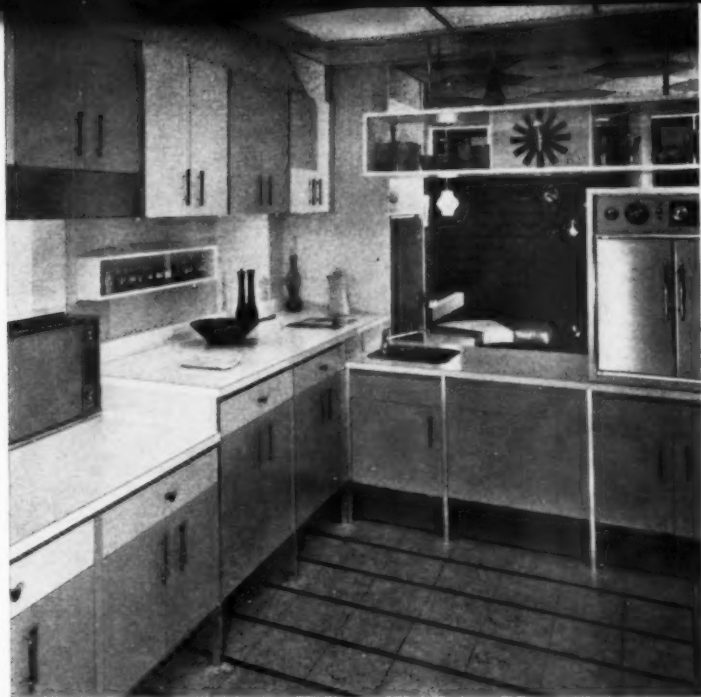
Tilt-out bin holds potatoes, onions, etc. Place near sink center.



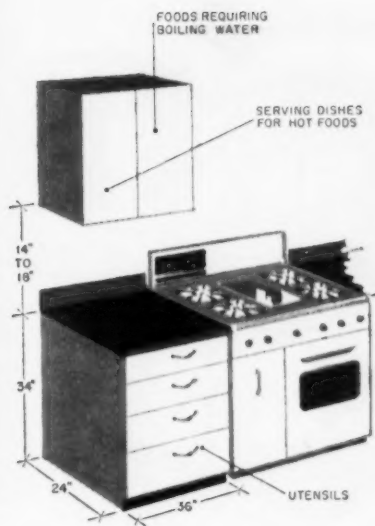
Alternate possibility for storage of non-refrigerated vegetables.



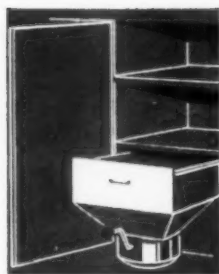
Bottle storage rack can be custom finished, classed a quality extra.



CUSTOM KITCHEN features cabinetry by Mutschler Brothers, foldup ranges and free-standing wall oven by Frigidaire. Other features include: NuTone range hood, blender, toaster; Lyon sink; Moen faucet; Frigidaire refrigerator freezer, and waste disposer; Formica counter tops and wall covering.



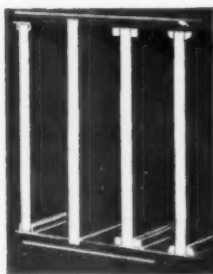
Ideas: cooking center



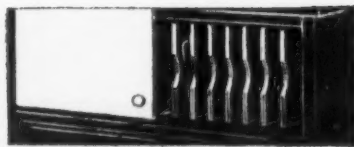
Top loading bin for flour or sugar is installed over counter.



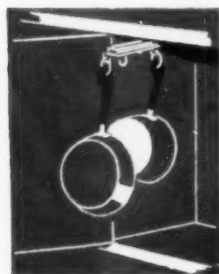
Pull-out mixer unit drops into place below work counter.



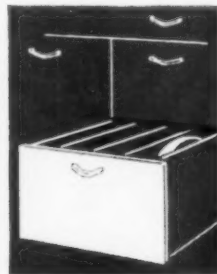
Several possibilities for installing vertical storage dividers.



Tray storage—near range or service bar—eases walk-away feeding.



Sliding pot and pan holder should be placed near range.



Deep drawer with dividers holds lids and baking tins.

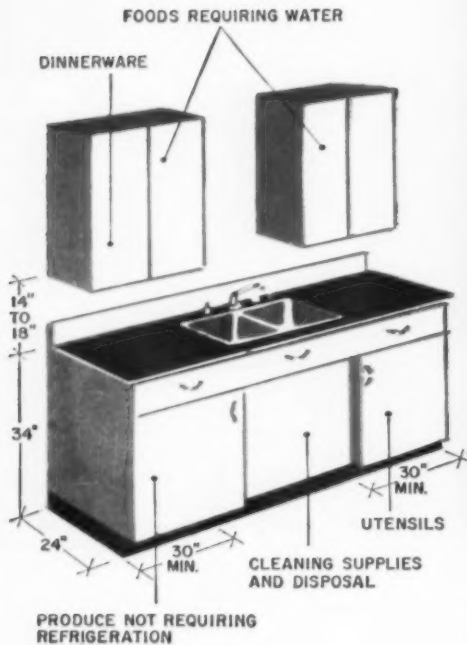


Swing-out shelves are handy near sink or preparation area.



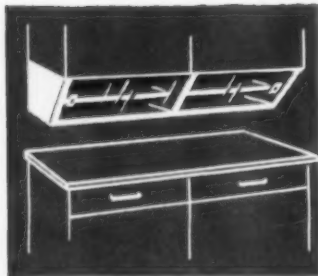
HANDY APPLIANCE STORAGE cabinet, by St. Charles, is near to range and oven (Roper). Other work savers: Sunbeam timer; Talk-A-Phone.

KITCHENS, continued

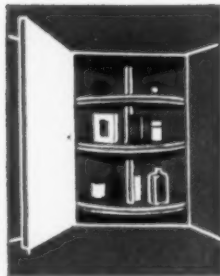


CUSTOM KITCHEN features Philco dishwasher built into combined planning center and cleanup island. Note head-on relation of dishwasher to serving counter and dining area. Dishwasher is optional appliance most-likely-to-succeed with male homebuyers. Floor tile is by Armstrong.

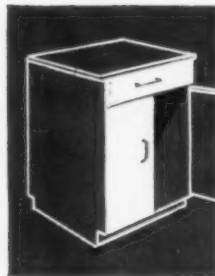
Ideas: cleanup center



This handy midway cabinet unit proves excellent for storage of household cleansers and detergents.



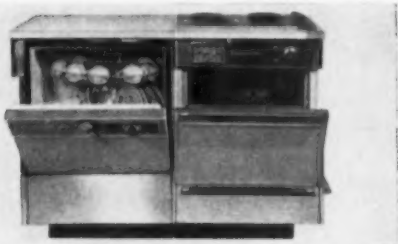
Rotating shelves are ideal for corner storage installation.



Counter on wheels aids cleanup, adds to service flexibility.

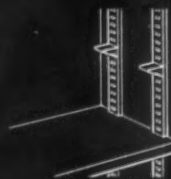


Rolling unit can be used for preparation, service, or cleanup.

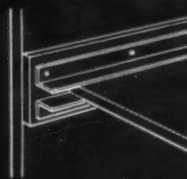


BUILD-IN UNITS from Youngstown Kitchens include countertop range, oven, dishwasher. Units like these continue the trend to built-ins.

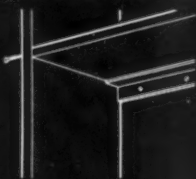
Here are eight basic ideas



Track and adjustable stops give flexibility.



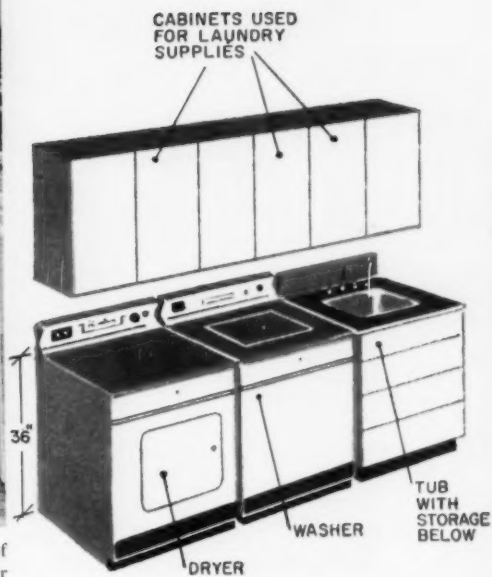
Angle irons mount easily on wood strip.



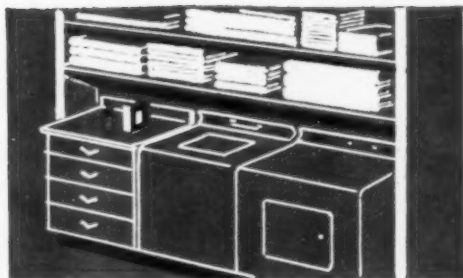
Angle iron and screws provide sturdy support.



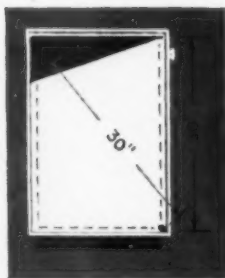
LAUNDRY ROOM provides complete facilities for care and maintenance of clothing. Storage cabinets and clothes hamper are by Geneva; washer-dryer combination is RCA-whirlpool; hot-water heater is by Rheem; sewing machine in slide-out mounting is by Necchi.



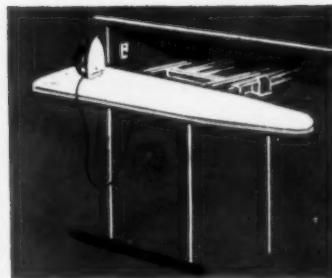
Ideas: laundry center



One-wall design for laundry center includes washer-dryer, linen shelves, and work top. Extra area is closed off by sliding screen when not in use.



Tilt-out laundry bin—a high priority cabinet—is easy to build.

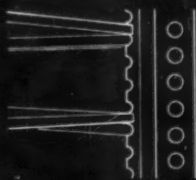


Slide-out Ironing Board eliminates storage problems of fold up type. Piano-hinged door conceals it.

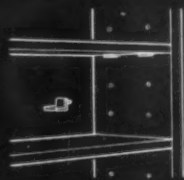
to help you build more flexible and attractive shelves—faster and cheaper.



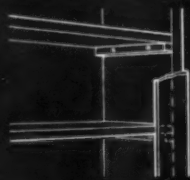
Track-and-brackets cut erection time.



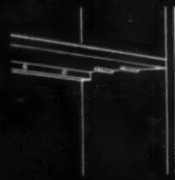
Drilled and cut 1 x 4 provides flexible strip.



Pin clips are simplest type of shelf supports.



Cleat is basic shelf-supporting method.



Dowels and cleat are easily fabricated.



THE ORGANIZATION—Harmony Management Service's head, Charles L. Criswell, is flanked by his management staff. It includes sales, business, construction consultant. They try to solve problems before they arise.

They sold 3,400 houses

Harmony Management Service guides the business destinies of 19 different, yet highly successful homebuilders. Here are some of the many profit-making services it offers

- Methods for building houses on scattered lots at \$5.50 psf.
- Systematized management methods.
- Freedom from financing worries.
- A family-like relationship between member builders.

This neat formula has resulted in the sale last year of 3,458 homes, all built on individual lots, throughout Southern California.

Sell at \$5.50 psf

All were sold at less than \$5.50 psf with 12x20-ft. garages at \$395 extra. Construction features slab floors, plaster on inside walls and ceilings, stucco on outside walls, and a gravel roof.

All are two-, three- or four-bedroom houses, some with two baths. All are approved by building departments of almost every municipality in Southern California, and by more than 35 building and loan organizations. (Money for every one of the homes was in escrow before construction began.) And there have been no liens, lawsuits, or foreclosures in over 15,000 units sold.

What brought these results about? Mainly, a group of 19 separate companies, organized, staffed and trained by Harmony Management Service. They operate under the group title of Harmony Homes. They sell identical model homes; but the compa-

nies have no legal tie with one another. They only pay HMS a fee for its services.

But the real HMS success story belongs to a human dynamo named Charles Criswell.

Success story

Criswell, a superintendent of schools in eastern Oregon, came to Los Angeles at the invitation of a small on-your-lot builder to analyze the market in order to increase the efficiency of the builder's organization. This was back in 1952.

Criswell became convinced that an almost unlimited market existed for low-cost homes—on scattered lots, and lots on which only one house stands though rezoning permits a second house on the property.

Devises formula

Mentally, Criswell developed a formula for designing, building, financing, and selling homes on



THE TRAINING—HMS recruits and trains a sales force for a member builder. Here, an HMS expert briefs a

builder's sales force on merchandising techniques that have helped sell nearly 300 Harmony Homes a month.

last year on scattered lots

these lots. He left the organization he was with, took a partner, and formed a company to test his theories.

The two men averaged sales of about 200 homes a month. But they dissolved their partnership shortly after because of differences in management practices. Criswell then formed HMS and quickly built it to 19 companies. This is how HMS functions:

Joins two men

Criswell selects two men from an existing company. One must be a qualified builder; the other a man of management caliber. The men are brought together to become partners. Each puts up at least \$5,000 of the amount needed to meet payrolls and overhead costs for the first few weeks. HMS, if necessary, lends additional money to the new company to get it started.

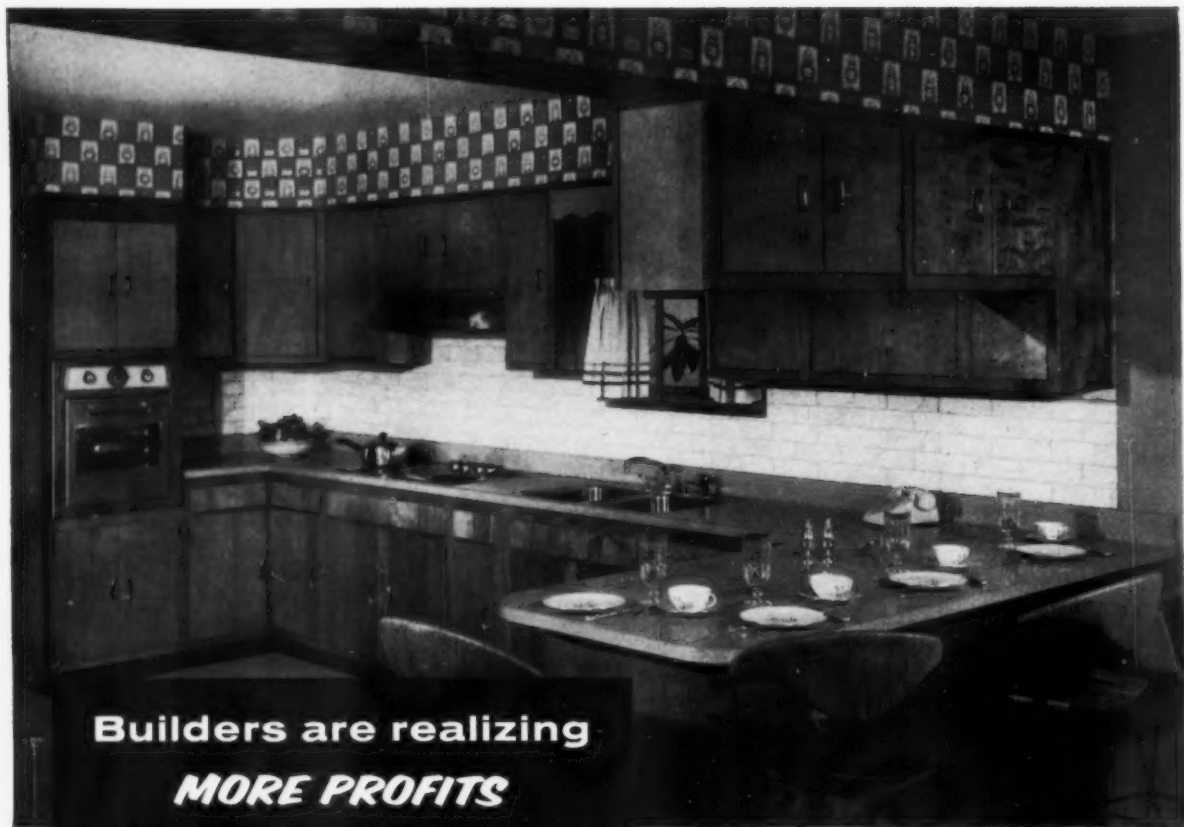
Company location is determined by careful market study. HMS's legal department sets up the corporation. The office is organized by installation of book-keeping and record procedures. And new employees are trained by HMS. HMS helps recruit a sales force, then trains it. And the service also sets up advertising and promotion for a new company at a fraction of what they would cost a single builder.



ONE MODEL—Harmony Homes are simply designed, well built. This model sells for \$4,845 (without land) plus garage for \$395. Exterior walls are stucco; roof is rock.



ANOTHER MODEL—This house also sells for \$4,845 (without land) plus garage for \$395. Interior features plaster walls and ceilings, up to four bedrooms, two baths.

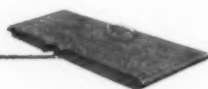


**Builders are realizing
MORE PROFITS
with Kitchen Kompact**

New design in this quality hardwood kitchen cabinet line means more rapid sales . . . faster delivery for all Kitchen Kompact customers. No advance in price!

All wall cabinets and single-door base cabinets are so constructed that the same unit can be installed hinged either left or

right. Other new features include slanted drawers with concealed pulls, smooth-running nylon drawer suspension, and semi-concealed door hinges on cabinets. Kitchen Kompact's new warm-tone finish adds universal color appeal to the entire line that's pleasing to every taste and complementary to any decor.



DOORS: Select red birch on solid, warp-resistant, chipcore, 1 1/2" lumber banded, full 3/4" thick with 3/8" lip.



DRAWERS: Now have rounded sides for easy cleaning (without removing). All hand pulls are concealed from view.



WALL CABINETS: Finished hanging strips are provided inside cabinet at top and bottom for secure installation.



DRAWER CABINETS: Top drawer divided for silver and third drawer is metal bread drawer.

Warehouse stocks are carried by distributors in most major cities. Write today for the one nearest you.



"THE BEST BIRCH LINE"
Kitchen Kompact INC.

JEFFERSONVILLE, INDIANA





Look for the
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*THE NAME ORANGEBURG AND THE SILVER BAND ARE REGISTERED TRADE-MARKS OF THE ORANGEBURG MANUFACTURING CO.

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Make sure *your* homes feature *genuine* Orangeburg quality. It helps make the sale easier. Means more satisfied customers. So look for the Silver Band to be sure you're getting *genuine* Orangeburg: *Root-Proof* Pipe for sewer lines from house to street; for run-offs from downspouts...*Perforated* Pipe for foundation drains, septic tank filter beds. Over 300 million feet in use from coast to coast. It's the Brand your customers know. Write for "Tips for Installing," Dept. AB-60, Orangeburg Manufacturing Co., Orangeburg, N. Y.

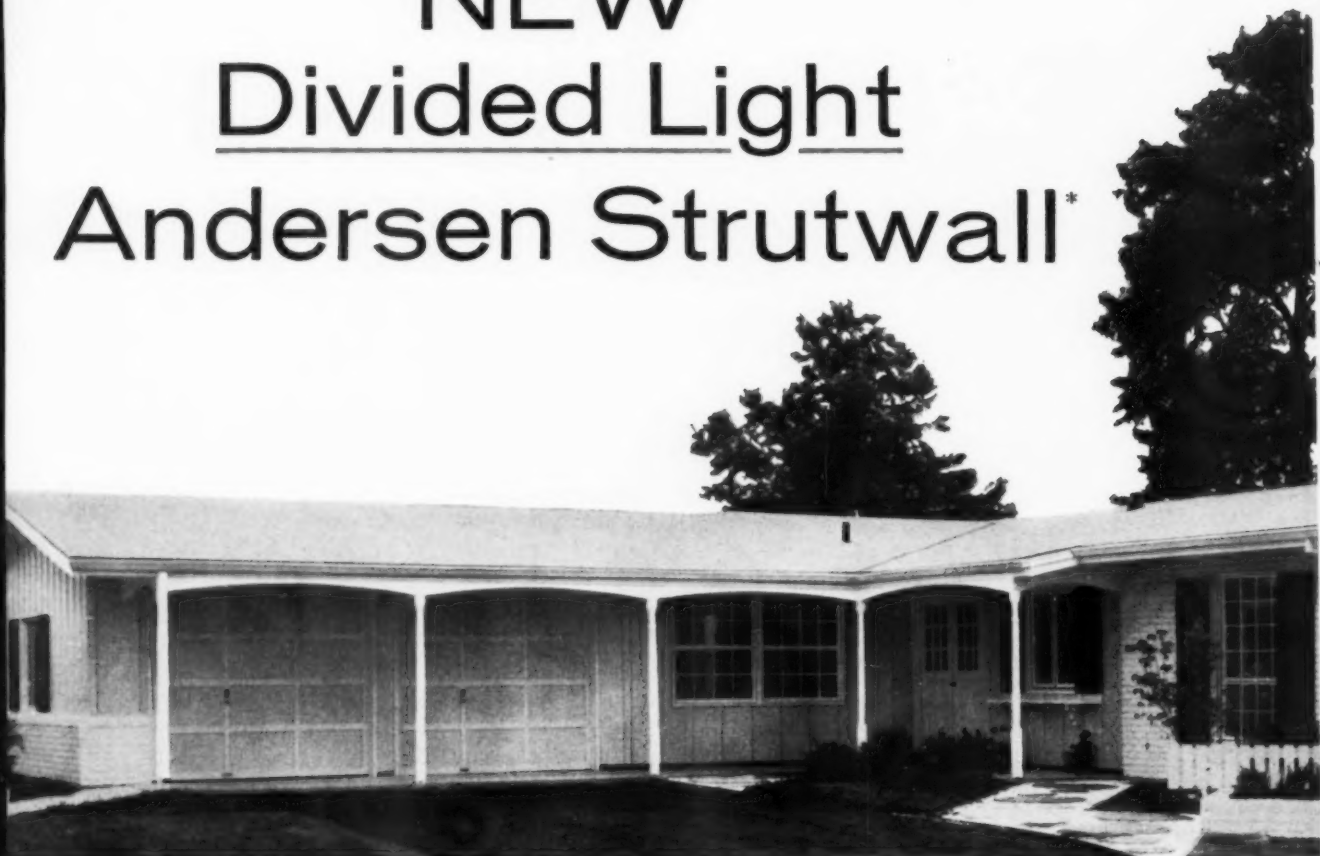


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Root-Proof Pipe and Fittings

NEW DESIGN FLEXIBILITY!
GREATER SALES OPPORTUNITY!

NEW Divided Light Andersen Strutwall*



Nothing brightens "traditional" like Andersen's all new Strutwall *Divided Light* Windows. Note clean, sharp lines.

Demand for the traditional home is growing. You can meet it this easy, profitable way: New Strutwall *Divided Light* Window!

Three years ago Andersen introduced its first Strutwall unit, a component making a quality window an integral part of the wall. Industry response was immediate. Many builders hailed Strutwall as a profitable advance in building technique. Everywhere users reported consistent big savings in installed cost, even when figured against cheap conventional windows.

Now Andersen gives you another adaptable Strutwall design, pre-tested and customer accepted. Strutwall *Divided Light* Window makes architectural design variations easy . . . lets you alter the

general appearance of your homes without sacrificing Strutwall's construction advantages. Exterior window detailing is sharp and clean due to the interior self-storing screens.

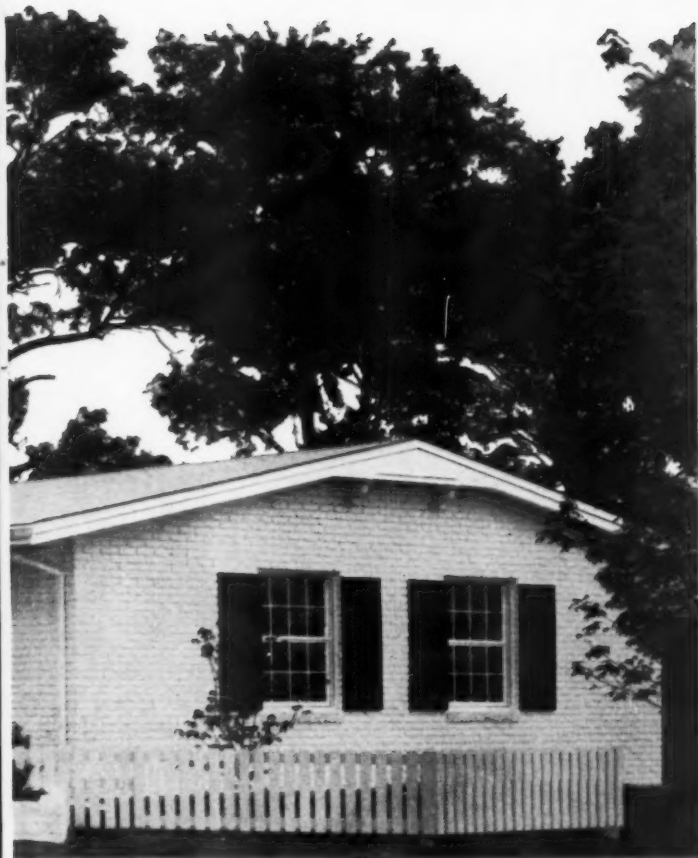
There's a range of Strutwall sizes to meet every building need. And all give you the same money-saving, time-saving advantages.

If you're not yet a Strutwall user, find out today the total savings that can be yours. For complete fact and figure information, including Strutwall sizes and details, call your dealer. Or write Andersen direct.



Andersen Windowalls

ANDERSEN CORPORATION • BAYPORT, MINNESOTA



Add traditional distinction . . . with wood's warm beauty and natural insulation. Brighter, cleaner exterior appearance because screen panels are *inside*. Strutwall gives you the full selling power of the famous brand name, Andersen . . . all at lowest installed cost!



Fits all frame wall and panel construction! Here unit is set in standard stud wall construction. In multiple openings just butt Strutwalls against each other for large economical glass areas. Absence of separate casings provides clean, trim lines. Note narrow meeting rail gives more glass area.

PRE-TESTED SALES APPEAL!

Andersen Strutwall Divided Light Windows proved their sales appeal in these test homes:

John Fiser, Knoxville, Tenn.: "We have never had any trouble selling our quality homes, and the addition of this new 'consumer demand' product makes the job even easier."



Charles Conry, Grimes & Conry, Louisville, Ky.: "We first chose Strutwall for superior design and workmanship. The addition of the divided light unit makes it even easier to satisfy customers with a top quality product."



"This unit is far superior in appearance to the conventional double hung with its cumbersome storm and screen. The small, trim, self-storable storm panel on the Strutwall is a real favorite."

FOR FULL DETAILS CLIP AND MAIL TODAY!

Andersen Corporation • Bayport, Minnesota

Please send me complete information on Strutwall
 new box header.

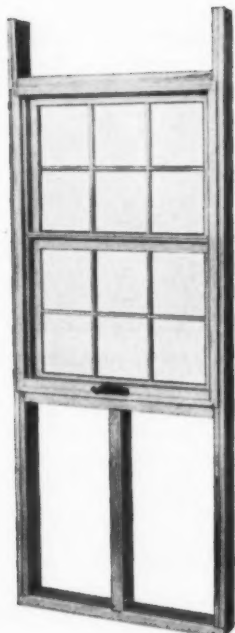
AB-60

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FIRM NAME _____

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**New Strutwall
Divided Light
Window**

Save hours! Save dollars! Cut conventional window installation steps two-thirds. Assembled complete, including operating hardware, Strutwall eliminates: Cripples over header, insulation and blocking around unit, sill plate, jack studs, cripples below window. Saves ordering, cutting, fitting. Waste is practically eliminated.

New! Strutwall box header! This optional feature further simplifies window installation in either conventional or panelized construction. Plywood box header is precision-nailed and glued at factory. Eliminates double 2 x 6 header construction.

HYDRONIC HEATING

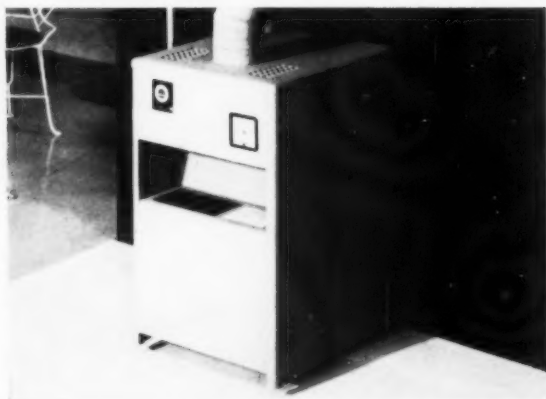
if these 6 money-saving steps are followed!

When you work with a progressive contractor, you can save hundreds of dollars per house, yet offer the quality sales features of hydronic heating. Use this 6-point program as a check list to be sure you get the most modern American-Standard equipment and that the latest installation methods are used.

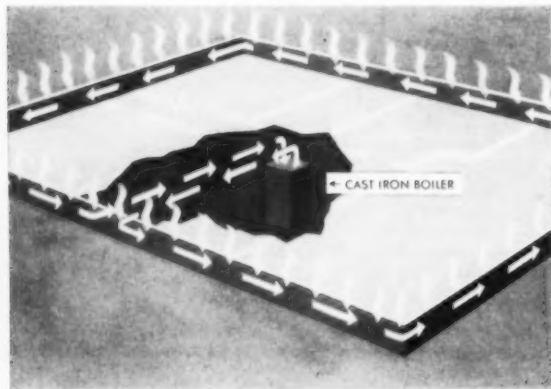


1 An accurate heat loss calculation developed by I-B-R* makes it unnecessary for your contractor to add the wasteful safety margins used in many rule-of-thumb methods.

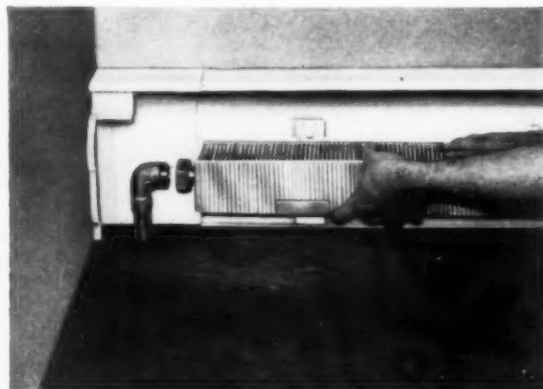
*Institute of Boiler and Radiator Mfrs.



2 Accurate sizing of the boiler to heat loss calculated for the house eliminates need to oversize boiler—a costly practice inherited from hand-fired-coal-boiler days.



4 Accurate sizing of pumps and piping is simple when the I-B-R guide is used. Depending on the size of the house, many builders save as much as \$100 through accurate sizing.



5 Organized labor procedures slash costs. Using the American-Standard "rhythm of installation" two men install packaged G-2 gas boiler and Heat-rim panels for 6-room house in a day. Boiler arrives with accessories, controls, tankless water heater factory-installed.

can be installed in almost any price range



Builder of \$11,000-\$15,000 homes finds hydronic heating system helps him sell

Connecticut builder Henry Murphy says, "People who bought Sherwood Park houses are more than willing to pay small price differential for hot water heating in order to get advantages of better performance and savings over the long run." Murphy is convinced that the system impressed buyers because they associate hydronic heating with more costly houses.

Extra advantages of Hydronic Heating help sell houses

House can be zoned economically with only one boiler.

Built-in water heater delivers abundant hot water—saves cost and space of separate water heater.

Snow-melting system for driveways, sidewalks, porches is a sales-making benefit.

Compact American-Standard boilers can be installed in basement, utility room, garage . . . need little space.

Heating panels replace ordinary baseboards to provide decorating freedom . . . furniture can be placed against walls, wall-to-wall carpeting can be laid, draperies can hang to floor. Panels can be painted to match walls, if desired.

For more information see your local American-Standard representative or write AMERICAN-STANDARD, PLUMBING AND HEATING DIVISION, 40 W. 40 St., New York 18, N. Y.



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AMERICAN-Standard

PLUMBING AND HEATING DIVISION



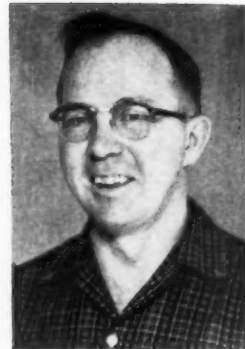
3 Accurate sizing of baseboard based on 215° water, instead of 170°, saves 47 feet of heating panels in a 60,000 Btu/hr. house when you use American-Standard N85-L Heatrim.



6 I-B-R test-rated equipment insures that these cost-cutting steps work. American-Standard boilers and radiation are I-B-R rated. With this equipment, you offer the comfort and health advantages of hydronic heating without increasing the cost of your house.



Russel G. Erikson
John A. Erikson & Sons, Quincy, Massachusetts



John S. Erikson
John A. Erikson & Sons, Quincy, Massachusetts

“TWINDOW® insulating glass units help keep our customers satisfied,” say the Erikson brothers of Quincy, Massachusetts. The Eriksons custom build 12 to 15 homes a year around Quincy. “We put in TWINDOW for the same reason we insulate the walls. No home is really well insulated without it.” TWINDOW, with its sealed-in layer of dry air, keeps a home warmer in the winter, cooler in the summer—saves on heating and cooling bills year ’round. With TWINDOW there are no storm windows to put up, take down and store away. TWINDOW *is* a permanent storm window. And TWINDOW minimizes window steaming, frosting and sweating—a big point with the lady of the house. She doesn’t have to worry about water stains on her walls or mopping up water from her floors. Help sell and satisfy your customers, too, with TWINDOW.



There are two types: TWINDOW Glass-Edge and TWINDOW Metal-Edge. Both come in all popular sizes for a wide variety of window styles. Our free booklet will give you the full story. Write to Pittsburgh Plate Glass Company, Room 0162, 632 Fort Duquesne Blvd., Pittsburgh 22, Pennsylvania.

... the window pane with insulation built in



TWINDOW[®]



Pittsburgh Plate Glass Company

Paints • Glass • Chemicals • Fiber Glass

In Canada: Canadian Pittsburgh Industries Limited

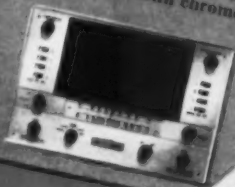
These
Trade-Wind
values
are writing
sales history

BATHROOM TRIO Sales are way up on the Light-Ventilator-Heater combination. Why? Striking flush grille design in chrome and glass—almost 5000 BTUs in quick heat—plus the exclusive electrically reversible axial flow fan. These features really sell.



Trade-Wind

RADIO INTERCOM MUSIC SYSTEMS The TRUE FIDELITY reception of these versatile systems has shot the sales curve right off the chart since they were introduced. AM and FM radios, inside and outside speakers and stunning master control panels in antique copper or satin chrome.



Trade-Wind

BUILT-IN CANOELECTRIC AUTOMATIC ELECTRIC CAN OPENER Automatic can openers are the cash register filling idea for '60 and the Trade-Wind Canoelectric is the hot item of them all. Opens any size can to your waiting hand with just the press of one button. The only built-in electric can opener—ideal for new construction or when remodeling. Stainless steel or antique copper.



Trade-Wind

VENTLESS HOODS Again Trade-Wind stole a march on the industry with dual filters (dual grease filters and dual activated carbon filters) to get BIG results—both in performance and in snowballing sales. The ventless really does the job and requires no ductwork. 30", 36" and 42" lengths in coppertone or satin chrome.

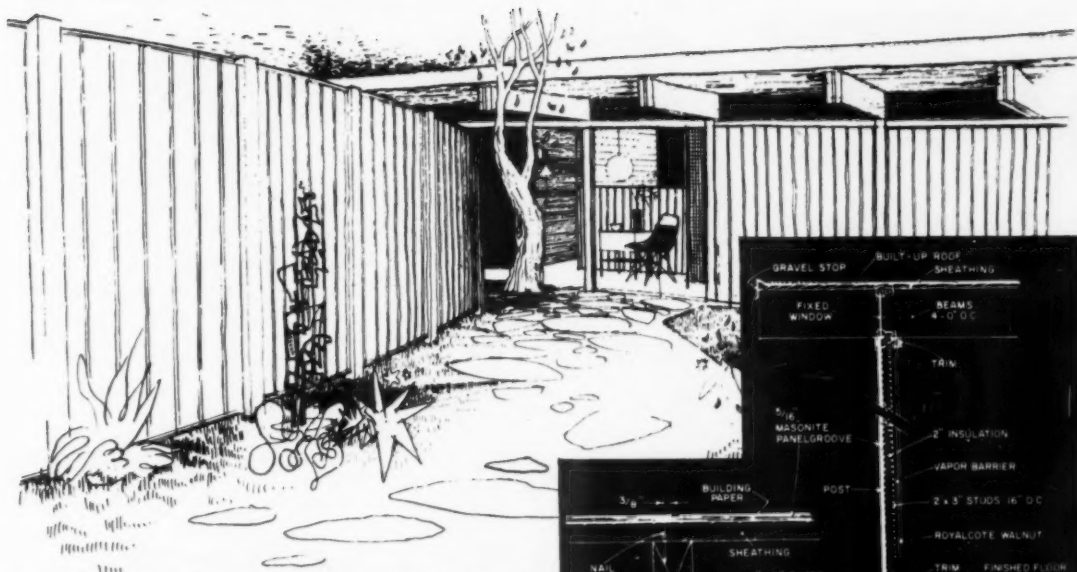


Trade-Wind

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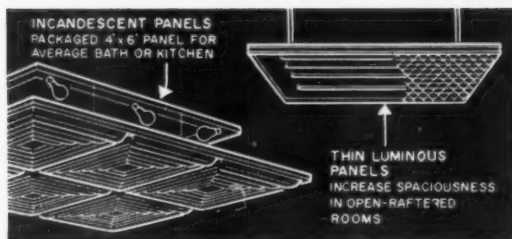
Trade-Wind

DIVISION OF ROBBINS & MYERS, INC.
7755 Paramount Place, Department AB
Pico Rivera, California

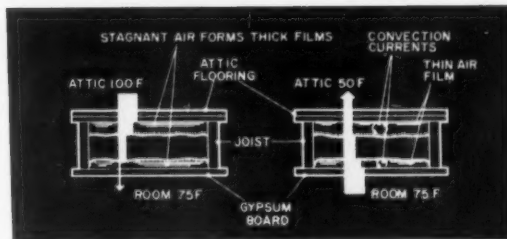


HARDBOARD APPLICATIONS in detail—full-page sketches, plus construction drawings in a 24-page booklet. Interior and exterior uses for Masonite products. Covers both commercial and residential. (No X1, p. 117.)

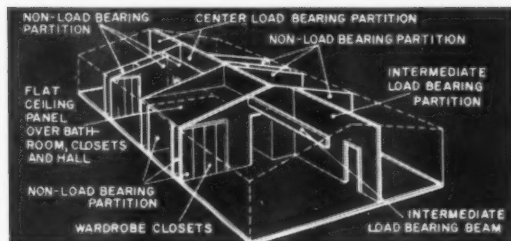
Five catalogs—packed with details



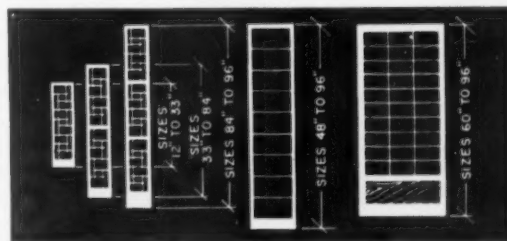
LIGHTING, FROM A TO Z in a 38-page "Live Better Electrically" manual. Lighting systems covered, with drawings, charts, and details. Price: \$.50. (For more information, Circle No. X2, p. 117.)



DESIGN DATA for insulating. From Owens-Corning Fiberglas: 24 pages of design principles, design standards, application standards, tabulated data, and product information; "how to" sketches. (No. X3, p. 117.)



MODULAR COMPONENTS and how to use them. "Dylite" foam-core panels presented in a 34-page booklet. Filled with house plans and details on how to use panels for exteriors, interiors. Koppers Co. (No. X4, p. 117.)



SHOJIS—how to make them, install them, use them. Complete fact-packed catalog from Paul Heinley presents all this information with drawings, construction details, sizes, etc. (No. X5, p. 117.)

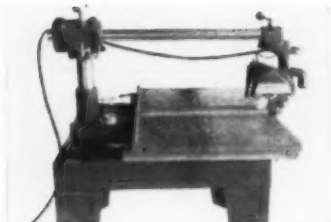
NEW PRODUCTS



Does a bigger job

Two-oven, six-burner arrangement provides efficient, pleasant cooking for large families or frequent entertaining. Baking oven is supplemented by "MicroRay" oven with new thermostatically-controlled live-flame rotisserie. Divided top units provide six surface burners.—Hardwick Stove Co.

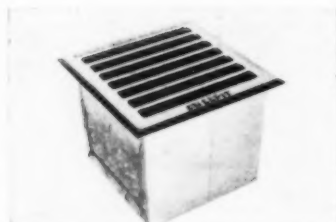
Circle No. X6 on reply card, p. 117



Saw has many uses

"Cabinet Wood Worker" offers cutting power, high-speed routing and shaping with 26 $\frac{5}{8}$ " cutoff through 1" wood. Cuts 20 per cent faster. Tool ploughs, shapes, bores, and grinds. Works cabinets and table tops (after lamination) easily. Equipped with adjustable saw guard.—Comet Mfg. Co.

Circle No. X9 on reply card, p. 117



Pan cleans fireplace

"Sweepit" is a 9 $\frac{1}{2}$ " square galvanized pan with removable cast-iron grate. Stores fireplace ashes for subsequent removal. Unit fits into 7 $\frac{1}{2}$ " to 8"-deep recess in hearth. Resists intense heat. Simplifies chimney construction by eliminating masonry ash pit.—Bennett-Ireland, Inc.

Circle No. X12 on reply card, p. 117



Has sculptured lines

New 36-in. range has futuristically styled lines, chrome top, and oven door liner. Gold Star Award winner features "Dial-a-Magic" roasting and clock-controlled oven. High broiler and thermostat burner are among range's many conveniences.—Magic-Chef Div., Dixie Products

Circle No. X7 on reply card, p. 117



Louver installs easily

One-piece midget louver has griled face, eliminates separate screen unit. Louver is anodized aluminum, resists corrosion. To install: drill hole and press in; wedges on side hold unit in place. Comes in six diameters: 1", 1 $\frac{1}{2}$ ", 2", 2 $\frac{1}{2}$ ", 3", and 4".—Midget Louver Co.

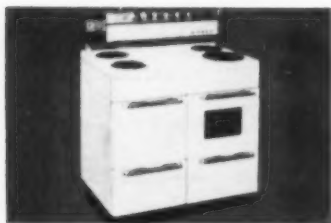
Circle No. X10 on reply card, p. 117



Admixture waterproofs

"Arid-Mix," a mild chemical hydrate, is used in mixing masonry products containing Portland cement. Result is a dense, hard concrete, plaster, or mortar mixture. End product is impervious to water, resistant to light acids, dustproof.—American Sta-Dri Co.

Circle No. X13 on reply card, p. 117



Range is extra efficient

The "Smart Set" Vesta range features four micro-tube surface units with seven-heat rotary switches. Rod-type 2,400-watt bake unit has hinge connector and lifts up for easy cleaning. Range is 36" with 16"x13"x19" oven dimensions. Extra large storage space.—Athens Stove Works, Inc.

Circle No. X8 on reply card, p. 117



Hammer changes heads

Sixteen-oz. claw hammer has three interchangeable heads, one optional. Has nail head for regular carpentry, ball peen for sheet metal, soft head for finish work. Hatchet head is extra. Heads hold tighter the more tool is used, yet knockout pin ejects them easily.—Dumas Co., Inc.

Circle No. X11 on reply card, p. 117



Nails match wall colors

Tiny-head, colored nails are used in application of predecorated interior hardboard. Nails come in 70 colors, measure 1 x 3/32". Product is packed in 1-, 5-, and 50-lb. bulk cartons, count 1,391 per pound. Nail color is specified by naming panels to be matched.—W. H. Maze Co.

Circle No. X14 on reply card, p. 117

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Help yourself . . . to the latest in new products and new catalogs shown on the pages ahead. You don't have to write, just circle the numbers on one of the cards below. Then drop the card in the mail (no stamp needed). AMERICAN BUILDER will forward your request to each manufacturer and he'll send you complete data, free of charge. So . . . get out your pencil and help yourself.

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American Builder Reader Service

JUNE 1960 ★★

CATALOGS	X12	X26
X1	X13	X27
X2	X14	X28
X3	X15	X29
X4	X16	X30
X5	X17	X31
X6	X18	X32

NEW PRODUCTS	X19	CATALOGS
X7	X20	X33
X8	X21	X34
X9	X22	X35
X10	X23	X36
X11	X24	X37

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Signature _____

X38	X43	X48	X53	X58	X62-W
X39	X44	X49	X54	X59	X65-W
X40	X45	X50	X55	X60	X64-W
X41	X46	X51	X56	WESTERN	X65-W
X42	X47	X52	X57	X61-W	

American Builder Reader Service

JUNE 1960 ★

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X11	X24	X37

NAME (Please print) _____

STREET _____

CITY _____

ZONE _____

STATE _____

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Signature _____

X38	X43	X48	X53	X58	X62-W
X39	X44	X49	X54	X59	X65-W
X40	X45	X50	X55	X60	X64-W
X41	X46	X51	X56	WESTERN	X65-W
X42	X47	X52	X57	X61-W	

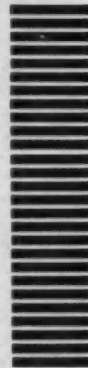
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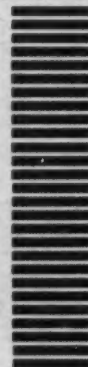
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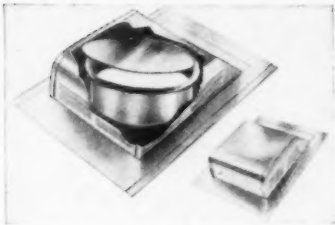
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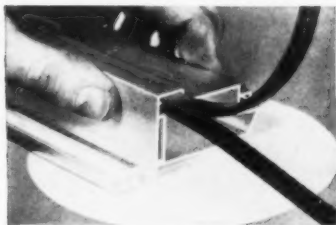
NEW PRODUCTS



Vent is more efficient

New exhaust-fan vent hood has back-draft damper located in a rolled stack, reduces damper clatter. Hood is louvered on three sides, increases weather protection, eliminates clogged screens. Has one-piece, watertight bottom. Designed for use on hip, pitched, or gable roofs.—Louver Mfg. Co.

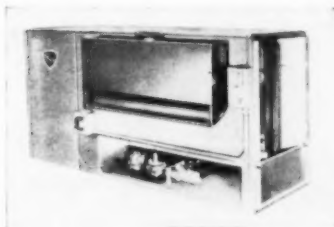
Circle No. X15 on reply card, p. 117



Door shuts itself

Vinyl magnetic strips run full height of aluminum storm screen door. Causes door to shut itself when accidentally left open. One strip fits into channel extruded into latch side of door; matching strip fits on jamb liner. Called "Weather-Seal." doors come in 18 styles—Weather-Seal, Inc.

Circle No. X16 on reply card, p. 117



Fits in small places

Horizontal gas-fired unit for central heating systems is compact, fits in small places. Can be installed in attics, under floors, in attached garages, or suspended from joists. Installation requires only gas hookup, thermostat, power-line and vent. Comes in four models.—Bar-Brook Mfg. Co.

Circle No. X17 on reply card, p. 117

MAZE NAILS

Modern Nails for Today's New Building Materials

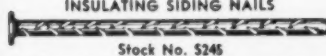
Featuring **STORMGUARD NAILS**

STRONG STEEL NAILS DOUBLE-DIPPED IN MOLTEN RUST-RESISTANT ZINC!

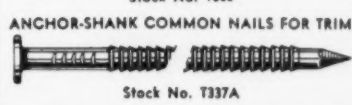
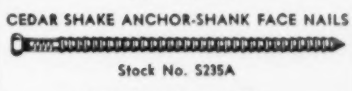
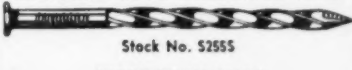
(NOTE: In a zinc coated nail, F.H.A. requires the hot-dipped type for all exterior work . . . and now specifies threaded nails for application into plywood roof and wall sheathing.)

- FOR
- ROOFING
 - SIDING
 - TRIM

ASPHALT SHINGLE ANCHOR-SHANK NAILS



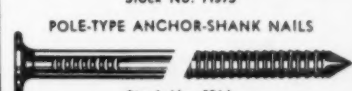
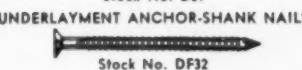
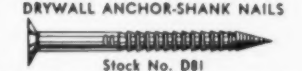
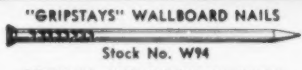
HARDBOARD SIDING SPIRAL-SHANK NAILS



SIDING NAILS IN COLORS TO MATCH ALL POPULAR SIDINGS

MAZE

INTERIOR NAILS



MAZE

CORRUGATED METAL ROOFING NAILS

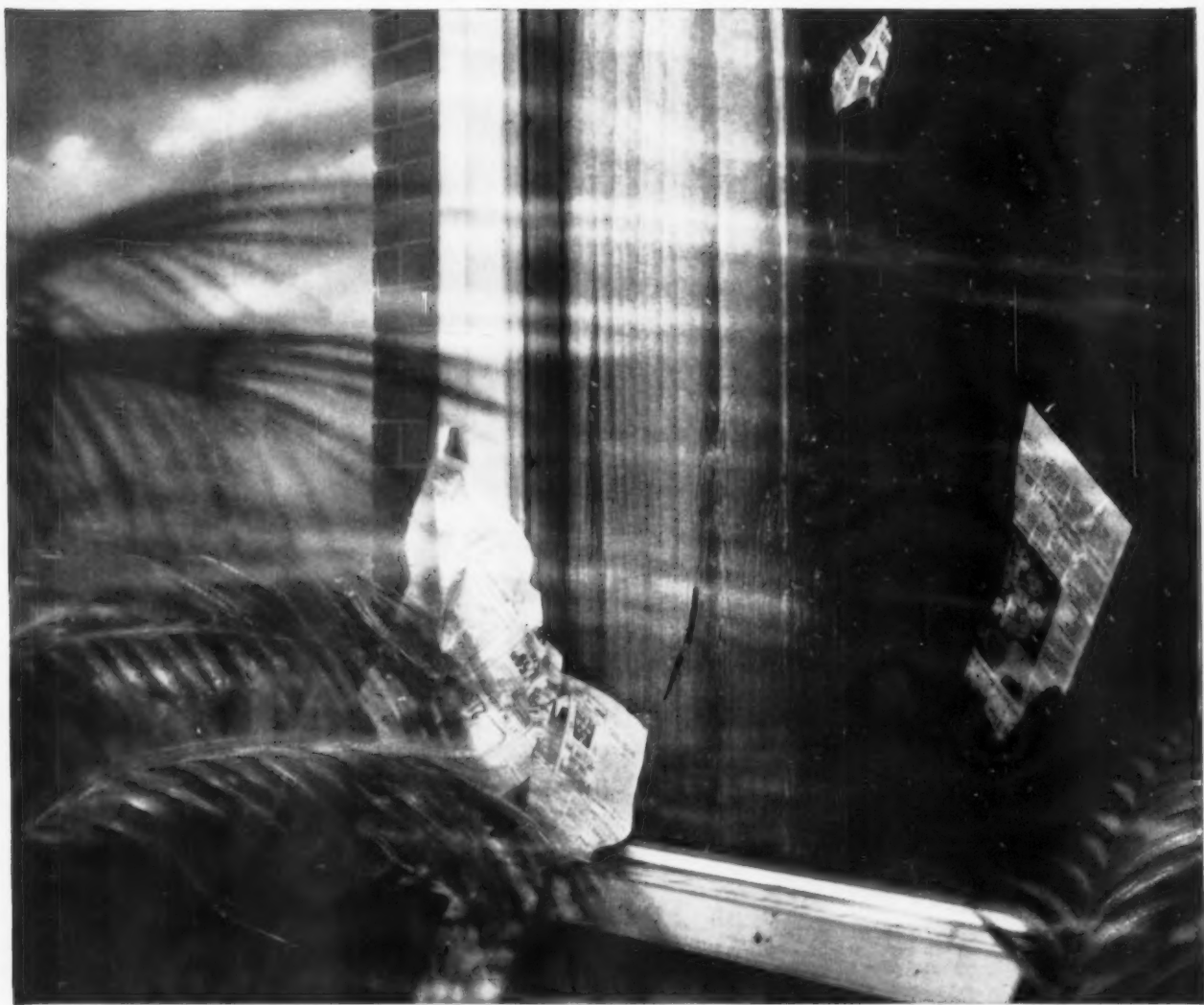


FOR MORE INFORMATION SEE YOUR DEALER, OR WRITE TO



W. H. MAZE COMPANY

PERU 3, ILLINOIS



Even 140 mph winds can't

WEATHERBAN[®] BRAND SEALER

When Mother Nature goes on the rampage, curtain wall sealers have got to take it. At those times, buildings with conventional caulking compounds can literally come apart at the seams.

But not so when you use WEATHERBAN Sealer based on polysulfide rubber. It adheres strongly, cures without shrinkage to a durable, solid rubber seal that flexes, stretches, compresses with wall movement. Even winds of 140 mph can't break the seal. WEATHERBAN Sealer also

cushions glass areas against breaks and cracks, resists torrential rains and other weather factors for years without losing its seal of flexibility.

That's why WEATHERBAN Sealer is the preferred choice to seal new buildings or to replace worn-out conventional sealers. Its three colors—aluminum, black, off-white—give you the variety of choice required for any glass, stone or metal installation.

You can build greater durability and strength into your constructions with 3M Adhesives, Coatings and Sealers. For further information, see Sweet's Catalog. For free literature, see your 3M Distributor, or write: AC&S Division, 3M Company, Dept. SBE-60, St. Paul 6, Minn.



News about other 3M products



EASY DOES IT when you bond with 3M Vinyl and Rubber Tile Adhesive. This water-dispersed, heavy bodied adhesive remains flexible when dry, it is tough enough for use on radiant-heated floors, and on other floors that are above grade. 5 to 20 minutes open time speeds you through work.

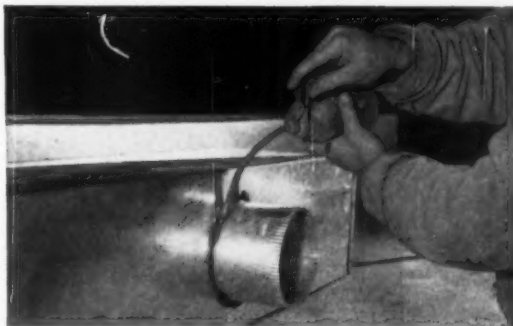


NO WARPING OR PEELING when you bond sink and countertop laminates with ROLTITE® Brand Contact Cement. Simply coat both surfaces, let dry, position laminate, then hand roll to finish the bond. Highly water resistant. Exceptionally high bond strength.

break the seal!

VIBRATION-DAMPENER. Rubber-based Duct Sealer 800 seals heating and air conditioning ducts, dampens vibrations, can be stretched twice its length before breaking when dry. Sets up firmly at duct joints; won't flow out under pressure. Can be readily applied with brush, flow gun or putty knife.

"WEATHERBAN" and "ROLTITE" are Reg. T.M.'s of 3M Co.



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MINNESOTA MINING AND MANUFACTURING COMPANY

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SEWAGE TREATMENT SYSTEMS

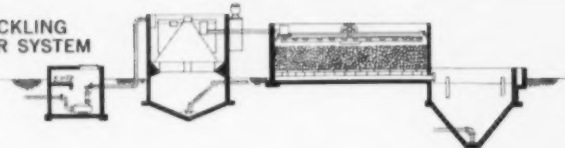


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SLUDGE PROCESS



TRICKLING FILTER SYSTEM

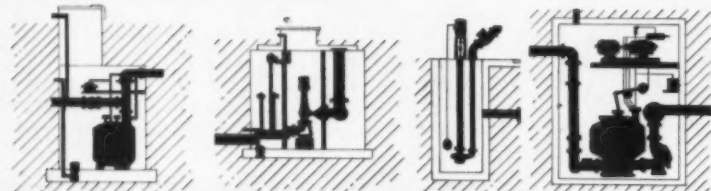
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For 1 home or 10,000 . . . whatever the economics, degree of treatment required, topographical conditions, expected life of installation or expandability, Yeomans offers you the equipment to solve any sewage-handling problem. It is the world's most extensive line and backed by the experience of a specialist. The booklet offered below brings you some of that experience right away.

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"Package" design including structure. Easy to service, sanitary, low maintenance.

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NEW PRODUCTS



Has one-lever mixing

The "Hyka," a one-lever mixing faucet, responds instantly to fingertip pressure on volume and temperature controls. Hot, tempered, and cold mixing is guaranteed. Valve cartridge assures positive shutoff. All-brass construction gives maximum resistance to wear, corrosion.—Kohler Co.

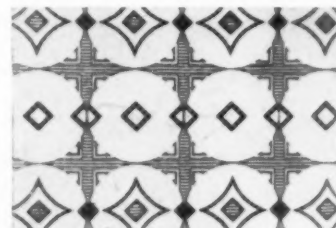
Circle No. X18 on reply card, p. 117



Metallics are locked in

Inlaid linoleum has "locked-in-to-stay" gold, silver, and copper metallics. Product combines qualities of vinyl and linoleum. Has "Clear Cushion" backing; smooth surface to assure easy maintenance. Comes in antique white, turquoise on white, greige and gold.—Congoleum-Nairn, Inc.

Circle No. X19 on reply card, p. 117



Laminate is distinctive

"Quadrille," a dramatic design, is latest in line of decorative laminates. Adaptable to countertops, tables; also cabinets, walls, and other vertical surfaces. Available in 4'x8' sheets. Colors: blue on aqua, white on gray, gold on white, white on beige.—Formica Corp.

Circle No. X20 on reply card, p. 117



LONGER LENGTHS OF COPPER TUBE MEAN FEWER JOINTS! Anaconda Copper Tube for sanitary drainage systems comes in standard 20-foot lengths. You can install long runs with fewer joints and fittings—save installation time and cost. *Work is easier*, too, particularly overhead, because a 20-foot length of 3" Type DWV copper drainage tube weighs only 34 lb. *And you save space*. A 3" copper tube stack with fittings will fit inside a 4" partition. Solder-joint fittings make installation in tight quarters easy—for compact, space-saving assemblies. For more information on copper tube, write: The American Brass Company, Waterbury 20, Conn. In Canada: Anaconda American Brass Ltd., New Toronto, Ont.

ANACONDA® COPPER TUBE AND FITTINGS for soil, waste, and vent lines
 Available through plumbing wholesalers. Products of The American Brass Company



Easier remodeling



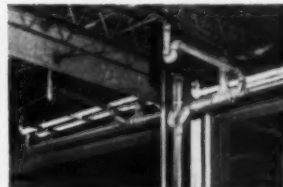
Preassembly—saves time



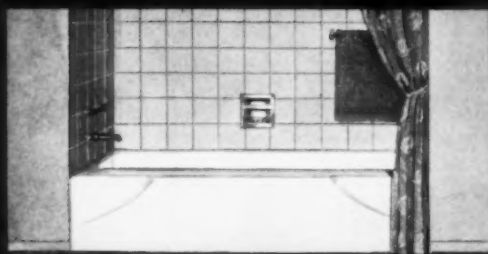
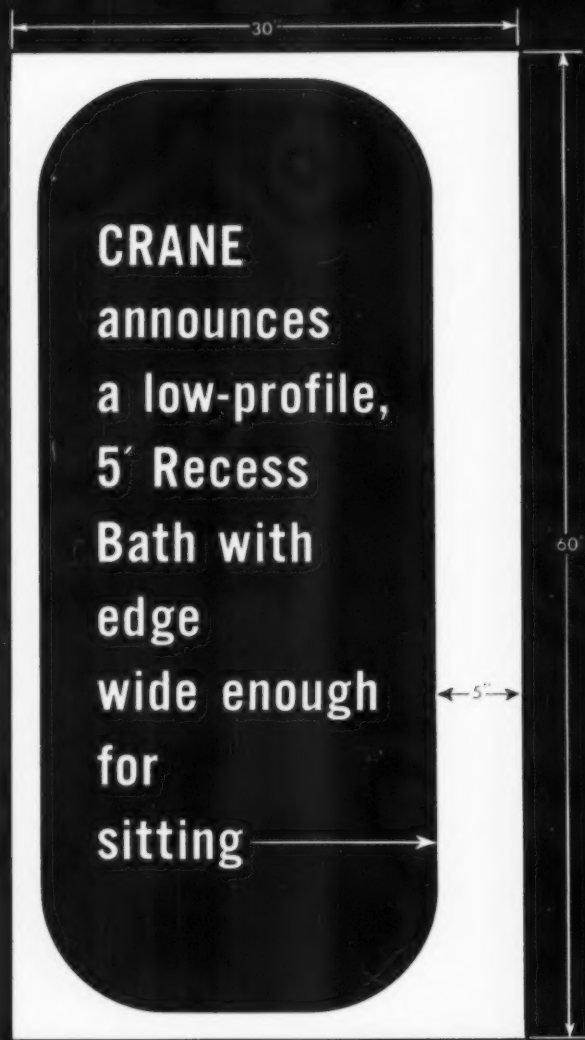
Lightweight—easier installation



Compact connections—save space



CRANE DIRECTION '70



NOTE STRAIGHT FRONT. NO TILE CUTTING AROUND BASE TO INSTALL.

THE FAIRFAX Designed by Henry Dreyfuss

Crane quality—a Dreyfuss design—yet priced in the medium range. The floor to top height of the Fairfax is only 14", for easy entry and exit... a full two inches lower than most baths. Available in regular or acid-resisting porcelain enameled cast iron. Trim is exclusive Crane *Dial-ese*. You can specify the Fairfax in any of the full range of Crane colors and white.

The Crane Fairfax—Length: 5'; Width: 30"; Seating Edge Width: 5"; Height: 14"

New Crane *Star*Lite* Accessories and Fairfax Bath are available through your Crane Distributor who also has a complete line of Crane quality plumbing ware for every installation. Call him for full facts on these new Crane products.



**IMPORTANT NEW DEVELOPMENTS FROM CRANE
TO MEET THE CHALLENGE OF THE SOARING SIXTIES**

The Soaring Sixties have begun. This is predicted to be the biggest decade for America's biggest industry—building—and everyone associated with it.

There's the booming population growth—a 34 million net gain, or a 16% increase.

There will be more households. We need homes and schools and hospitals—and buildings of all kinds. We have to provide new construction for the newcomers...

and also to replace those made obsolete.

Crane announces Direction '70... to help you meet the challenge of the Soaring Sixties. These are products to improve building quality. These are products to increase efficiency. These are products to help curb rising costs.

On these pages are the first of these new Crane developments... the first of many you'll be seeing in Crane's Direction '70.

Announcing

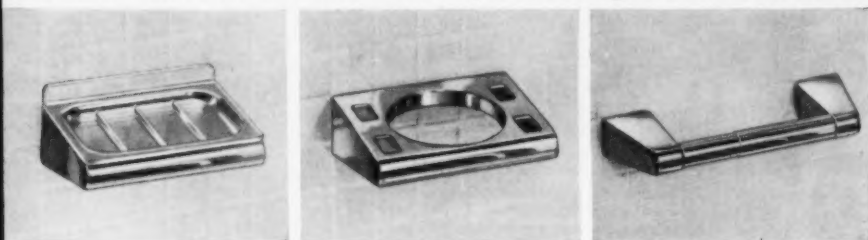
CRANE

Starlite

Bathroom

Accessories

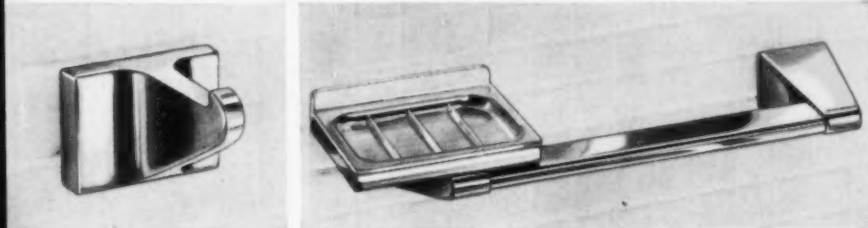
Beautifully designed with polished chrome plating... Solidly Built... Moderately Priced... Easily Installed. Metal accessories are preferred by over half your clients



2-900 Soap Holder with Plastic Tray

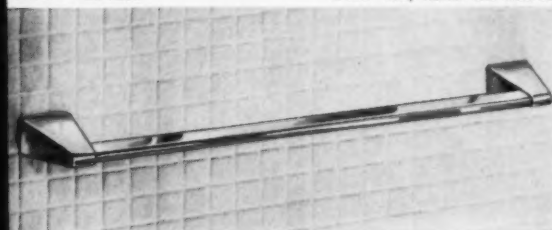
2-902 Tumbler and Toothbrush Holder

2-904 Paper Holder with Metal Roller




2-910 Robe Hook

2-906 Soap Holder and Grab Bar with oval-shaped Metal Bar and Plastic Tray

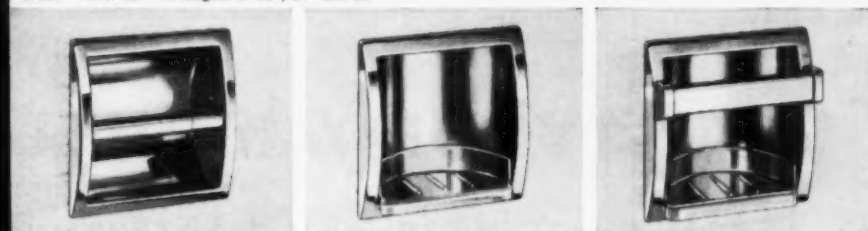


2-908 Towel Bar—in lengths of 18", 24" and 30"

 Cross-section of bar shows unique oval shape. This provides greater separation for faster drying. Gives unit a distinctive modern appearance.

RECESS ACCESSORIES

Overall Size: 6 1/8" x 6 1/8".
Wall Opening: 5 1/4" x 5 1/4" x 2 1/4".
Recess Accessories are regularly furnished for wood screw installation.



2-915 Paper Holder with Metal Roller

2-917 Soap Holder with Plastic Tray

2-919 Soap Holder and Grab Bar with Plastic Tray

VALVES • ELECTRONIC CONTROLS • PIPING
PLUMBING • HEATING • AIR CONDITIONING

Crane Co. Plumbing-Heating-Air Conditioning Group
Box 780, Johnstown, Pa.





BUILDING PRODUCTS



Stanley R. Stapleton, Rutenberg vice president for sales, shows prospects how Styrofoam is used in wall construction. A "fish bowl" of Styrofoam demonstrates its effectiveness as a moisture barrier.



Rutenberg workmen prepared walls for plastering in two-thirds the time required by ordinary methods. Styrofoam bonds directly to wall with portland cement . . . plaster is applied directly to Styrofoam.



STYROFOAM® HELPS SELL

Rutenberg Construction Company reports that Styrofoam acting as a combination insulation-plasterbase not only speeds construction—it keeps walls dry, cuts heating and cooling costs 20-25%.

In and around Clearwater, Florida, where Rutenberg Construction Company is the largest home builder, humidity is a problem, and there's a preference for solid masonry construction. "Thanks to Styrofoam," says Daniel Rutenberg, the company's executive vice president, "for the first time in Florida, we can offer customers a completely dry house and one in which heating and cooling costs will be cut by as much as 25%. And the response to these benefits from home-buyers in the

Clearwater area," he adds, "has been overwhelming."

One inch of Styrofoam* is bonded directly to the concrete block walls of Rutenberg homes with portland cement mortar. Wet plaster is then applied *directly* to the Styrofoam. Styrofoam provides a permanent moisture barrier because water and water vapor do not penetrate. Since Styrofoam eliminates furring and lathing, there's no air space where condensation can occur—no wood framing to rot. Also eliminated are problems of blistering wall paint, mold, mildew and musty smell. And with Styrofoam, workmen make a wall ready for plaster in two-thirds the time required by conventional methods.

The permanent insulating efficiency of Styrofoam also holds down heating and cooling costs. Rutenberg homes



Daniel Rutenberg, executive vice president of Rutenberg Construction Company, in front of the "Rainier" model home.

500 NEW FLORIDA HOMES

offer an electrically-operated heat pump that both heats and cools as weather dictates. A study by the Florida Power Company of a Rutenberg home with Styrofoam wall insulation indicates that heat pump operating costs (in a normal year) would run \$243.81 without Styrofoam and \$195.68 with it—a savings in electricity of almost \$50 yearly or 20-25% over homes with no wall insulation.

For more information about Styrofoam, contact the Dow sales office near you. Or write THE DOW CHEMICAL COMPANY, Midland, Michigan, Plastics Sales Dept. 1612D6.

*DOW'S REGISTERED TRADEMARK FOR ITS EXPANDED POLYSTYRENE.



Other Dow Building Products

ROOFMATE*—Rigid, lightweight insulation for built-up roofs —serves as own moisture barrier.

*Trademark

SARALOY® 400—Durable, elastic flashing material that's cut to size right on the job, conforms to irregular shapes.

SCORBORD® (patent applied for)—Pre-scored, rigid insulation that "snaps off" for easy installation around foundation perimeters, under slabs.

POLYFILM®—High-quality polyethylene film for use as a vapor barrier, temporary enclosures.

THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN

GUARANTEED FOR LIFE

Murray "MP" fully magnetic
circuit breakers help you



TURN MORE LOOKERS INTO BUYERS... AT NO EXTRA COST



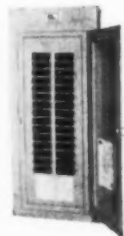
PROSPECTS know that only the best is GUARANTEED FOR LIFE. Show them you use only the best with this lifetime guarantee on competitively priced Murray "MP" circuit breakers.

Your electrical contractor will leave visible proof of quality on every installation: a GUARANTEED FOR LIFE sticker and an official warranty in every load center. These instill confidence in the whole wiring job, give you that extra talking point to clinch the sale.

Look at these "MP" sales features:

- Modern circuit breaker convenience and safety
- Finest branch circuit protection possible
- Installs anywhere for maximum wiring economy
- No nuisance tripping saves you customer gripes

Ask your electrical contractor to install GUARANTEED FOR LIFE, fully magnetic Murray "MP" circuit breakers on your next job. Ask him also about the *Model Home Promotional Aids* he has available for you. For further information, write Murray directly for bulletin which tells how national GUARANTEED FOR LIFE promotion can help make sales for you. Murray Manufacturing Corporation, 1250 Atlantic Avenue, Brooklyn 16, N. Y.



Model Home
Promotional Aids



murray

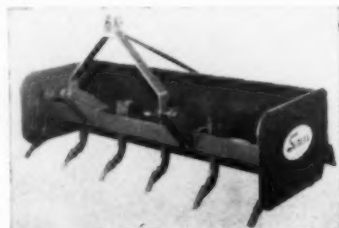
NEW PRODUCTS



Makes installing easy

Air conditioners are installed quickly using new "Easy-Mount" kit. Sets up for all low-type Thin-line models. Kit features aluminum side panels which slide out to fit in sash track. Four screws complete installation. Requires only screwdriver and pair of scissors.—General Electric Co.

Circle No. X21 on reply card, p. 117



Scraper fits varied needs

"Seco, Jr." soil scraper costs less, can fit varied needs. Has heavy-duty qualities except scarifier teeth assembly is optional. When specified, scarifier is put on by hand. Purchaser can save 25% (with assembly) to 40% (without) under prices for box-type scrapers.—Servis Equipment Co.

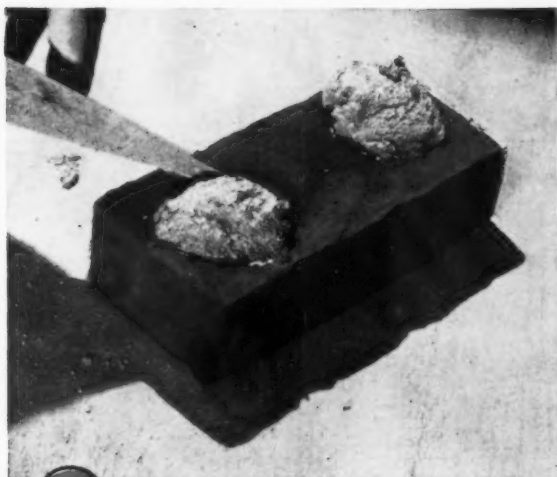
Circle No. X22 on reply card, p. 117



Tile cuts labor costs

Mesh-mounted ceramic tile called "Perma-Bak" cuts labor costs, sometimes up to 50%. Mesh binds tightly to tile back; will absorb slight masonry movements. Uses standard setting methods. Patterns come in 1⁹/₁₆"x³/₄" and 2³/₁₆"x1¹/₈" series.—American Olean Tile Co., Inc.

Circle No. X23 on reply card, p. 117



1

Place a dab of Brixment mortar and a dab of 50-50 cement-and-lime mortar on a brick or concrete block. Wait a minute, then feel each mortar.



2

The mortar that stays plastic longer will be the one having the highest water retention. Notice the greater plasticity of the Brixment mortar!

BRIXMENT mortar has better WATER-RETENTION!

Water retention is the ability of a mortar to retain its moisture longer, and hence its plasticity, when spread out on porous brick or block.

Because of its inherent physical characteristics, plus the air-entraining agent intermixed into Brixment during manufacture, Brixment mortar has very high water-retaining capacity. It resists the sucking action of the brick. It gives the bricklayer more time to bed the brick properly before the mortar stiffens, thus helping to secure a *good bond*.

But greater water retention is only *one* of the

characteristics in mortar necessary to produce top-quality masonry at lowest cost. Several others are listed below—and *no other mortar combines ALL these characteristics to such a high degree as Brixment mortar.*

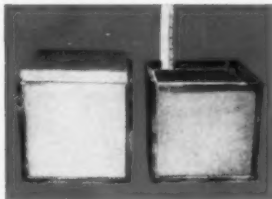
It is this combination of advantages that makes Brixment superior to any mixture of portland cement and lime—and which also accounts for the fact that Brixment has been the leading masonry cement for over 40 years.

Louisville Cement Company, Louisville 2, Ky.

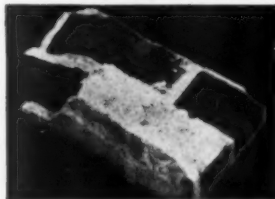
BRIXMENT MORTAR ALSO COMBINES THESE 8 OTHER ESSENTIAL CHARACTERISTICS



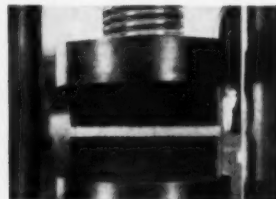
PLASTICITY



YIELD



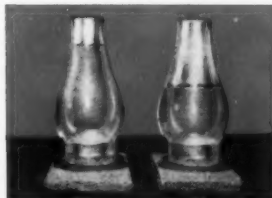
BOND



STRENGTH



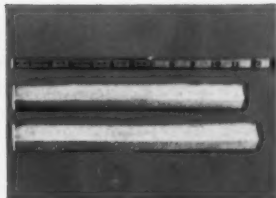
LOW EFFLORESCENCE



IMPERMEABILITY



DURABILITY



SOUNDNESS



**"I
SAVED
\$40
TO \$50
A
HOUSE!"**

says Jim Pearson, Pearson Bros. Builders, Minneapolis, Minn.

Part of the Pearson Bros. Project at 83rd and West River Road in Brooklyn Park, Minn., Minneapolis suburb, where they saved \$40 to \$50 a house by using Barrett "Rigidwall" Sheathing. Homes are in the \$13,600 to \$14,800 price range.



BARRETT RIGIDWALL[†] SHEATHING UPS PROFITS for well-known Minnesota builder!



"We switched to Barrett 'Rigidwall' Sheathing for our new project—Pearson Park," Jim Pearson says. "Smartest move we ever made. The lower cost of the 1/2" 'Rigidwall' helped save us \$40 to \$50 a house over the standard 25/32" sheathing we had been using. Lower labor costs were part of the big saving, too. We've had such success with 'Rigidwall' that we're going to use it 100% on a new project of over 300 homes we now have under construction."

Barrett "Rigidwall" is stronger than FHA requirements for application without corner bracing. No nailing strips needed when siding shingles are applied. Handles easily, scores and snaps cleanly, saves time on every start, gives you less waste.

"Rigidwall" is made by Barrett's exclusive CHEM-FI process that brings the fiber strength of natural wood to insulating board, and is asphalt-treated to provide protection from weather during application. These large panels go up fast. Despite their economies, they produce a more soundly constructed and a more rigid wall than most other types of sheathing, and have two to three times the insulating value of plywood! Jim Pearson is just one of many big builders who are switching to "Rigidwall" to cut building time and application costs. No reason why you can't do the same! Call your Barrett representative or contact us direct *today*.

[†]Trade Mark of Allied Chemical Corporation

BARRETT DIVISION

40 Rector Street, New York 6, N. Y.



New nation-wide program helps



Today, your prospects know:

ONLY GAS  **does so**

®A.G.A. Mark © Am. Gas Assoc., Inc.

builders Build Better...Sell Sooner!

There's Big Money for YOU in the Big "BLUE STAR HOME" Promotion

You make your own selling easier when you get in on the nation-wide "Blue Star" home-building program. The "Blue Star" is the American Gas Association's award to quality new homes that feature the advantages of modern Gas. The coast-to-coast "Blue Star" promotion helps you put over a real sales campaign in your community.

The A.G.A. "Blue Star" home program includes: hard-hitting ads to put in your local papers; scripts for local radio and TV broadcasts or spots; plus all the "extras" to make your promotion successful! Everything from signs and banners, truck & bus cards, balloons, pennants, aprons and matches to bracelets, key rings, lighters and money-clips—all designed especially for "Blue Star" home-builders, to tie your program to the national one, so the national program pays off for you.

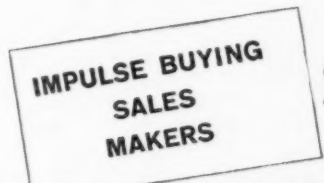
So build your sales by building with Gas. Let us help you sell your "Blue Star" homes with "Blue Star" advertising, publicity and promotion.

In the home building trade, this is the year of the "Blue Star"—This is the year you've been waiting for. Get all the facts at your Gas company, right away.

AMERICAN GAS ASSOCIATION

YEAR-ROUND AIR-CONDITIONING

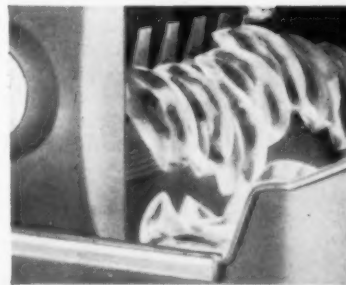
Today, 8 out of 10 new homes use dependable Gas heat! One unit heats and cools the entire house—comfortably, economically. Or air-conditioning can be added easily, economically, to a modern Gas heating system—for year-round comfort, a cleaner house, a healthier family!



Check these
"Blue Star" features
and build in
all you can!

BURNER-WITH-A-BRAIN

When the lady-to-be of the house sees the amazing Gas Burner-with-a-Brain® turn itself up and down *automatically*, she'll never settle for less. Clinch it by telling her the truth—9 out of 10 restaurants use Gas for cooking, and wouldn't use anything else!



ICE CUBE MAKER

All home-buyers are thrilled by the magic ice-maker, featured in this modern Gas refrigerator. No trays to fill or spill—it's completely automatic. And it can really help *you* make the sale.



FASTER, MORE ECONOMICAL, MORE ABUNDANT HOT WATER

She'll appreciate the constant, quick hot water supply... He'll be pleased by the money that's saved when you heat water with fast, economical Gas.

much more...for so much less!

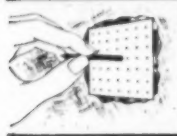


QUICK, EASY FURRING

of masonry walls for paneling

USE GEMCO ANCHOR NAILS AND TUFF-BOND ADHESIVES

Dip Tuff Bond from can with putty knife and spread on base of Gemco Anchor Nail



Push Gemco Anchor Nail in place with sliding, twisting motion; remove briefly; then replace. Let dry.

Tap furring strips on Gemco Anchor Nails and bend nails over to secure strips.



Nail planking, paneling or wallboard to furring strips. Gemco Anchor Nails and

waterproof Tuff Bond Adhesives have ample strength to support sidewall loads.

Result—a professionally finished room. Tuff Bond Adhesives and Gemco Anchor Nails are available at better dealers everywhere. For complete information on use of Gemco Anchor Nails with Tuff Bond Improved General Purpose Adhesive (for rough textures) or with Tuff Bond Quik Set (for smooth surfaces), ask your dealer or write to...

GOODLOE E. MOORE
INCORPORATED
DANVILLE 34, ILLINOIS

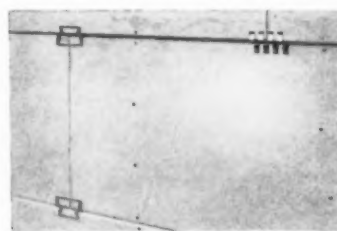
NEW PRODUCTS



Backhoe is versatile

"Utility" backhoe-loader trenches and excavates down to 14'. Loads out 2,000 lb. bucketloads of spoil. Foot-pedal 180° hydraulic swing gives dig-dump speed and accuracy. Loader bucket lifts to over 9' for fast dump-and-go. Includes accessories for materials handling.—J. I. Case Co.

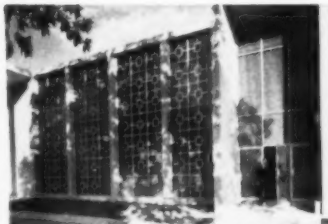
Circle No. X24 on reply card, p. 117



Assures strong assembly

Connector clip for gypsum lath assemblies protects lather's hands, assures strength. Flange prongs are eliminated; edges are rounded. Application is speeded by installing with either flange over lath joints. Number of clips required remains same.—United States Gypsum Co.

Circle No. X25 on reply card, p. 117



Glass reduces glare

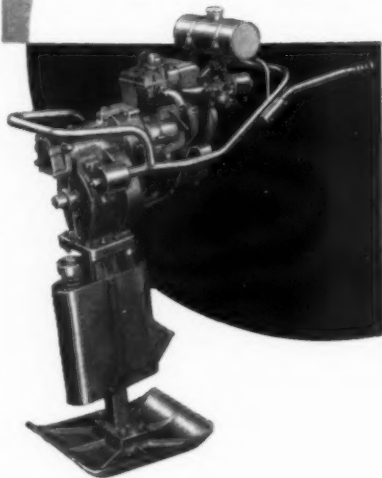
Wall panels of laminated glass cut glare and amount of heat radiated by window area. Construction is Monsanto's polyvinyl butyral film sandwiched between two layers of glass. Interlayer can be pigmented or printed for decorative effect. Glass is shatterproof.—Dearborn Glass Co.

Circle No. X26 on reply card, p. 117

Designed with you in mind . . .

ONE COMPACTOR FOR ALL JOBS

the new improved
Racine
Rapak portable
one man compactor



A versatile tool designed to reduce the cost of tamping all kinds of soil—from granular to the toughest cohesives. Ideal for Foundations, Pipe Lines, Sewers, Concrete Slabs and Utility Lines. This one man, self-propelled machine will tamp ditches down to 4 inch widths.

Design and operation features

- Self-Contained Unit
- 4-Cycle 3 h.p. Engine for Easier Starting and Longer Life
- One-Shot Lubrication System Correctly Oils Necessary Parts
- Centrifugal Clutch Used for Easier Starting
- Interchangeable Shoes for All Types of Jobs
- Extensions Available for Deep Trench Work
- Simplicity of Design Reduces Maintenance
- Lightweight for Ease of Handling





Write for name and address
of your nearest
Racine Rapak distributor

RACINE HYDRAULICS & MACHINERY, INC.
Machinery Division • Racine, Wisconsin

AMERICAN BUILDER

Lawson medicine cabinets

 *designed for America's
smartest bathrooms*

 *used by America's
smartest builders!*



Builders look to Lawson to provide medicine cabinet styling that is at home in today's most beautiful bathrooms. Families need the security of storage out of the reach of small children—the convenience of really generous size cabinets. Informed home buyers are attracted to the house whose builder is wise enough to use the sales appeal of the Lawson luxury look in safe medicine storage.

Lawson Quality Features

- + One-Piece Drawn Seamless Steel—easy-to-clean, rounded inside corners
- + Bonderized After Forming—resists rust and paint flaking
- + 5-Year Mirror Guarantee—no silver spoil
- + Lighted Cabinets Factory Wired—easy installation—U.L. Label

FREE! Comprehensive catalog of medicine cabinets and bathroom accessories includes full specifications. Write Dept. 1, The F.H. Lawson Company, Cincinnati 4, Ohio.



Illustrated: #7880-35 Slide Door Cabinet, #780 Overhead Light Fixture, #355 and #365 Soap, Tumbler, Toothbrush Holders, #3118 Towel Chain. Bathroom designed by Harry Backus NSID Cincinnati.

LAWSON *the fashionable name in home medicine safety*

KNOWN FOR QUALITY SINCE 1816



BEST BOILER BUY!

New! **ROBERTS-GORDON**
"Petite" Gas-Fired
CAST IRON
HOT WATER BOILERS



Builders everywhere are saying, "We didn't think we could ever get so much boiler at such a low price!" Roberts-Gordon "Petite" Boilers are compact, ready-to-install "packages". Perfect for space-saving installations in new homes and multiple apartments. Can be used singly, or in tandem for low-cost zone control. Easy to install, tops in efficiency. Ruggedly-built for dependable, trouble-free performance. 50,000, 70,000 and 90,000 BTU/Hr.

GORDONEER

CAST IRON GAS HOT WATER BOILERS

These trouble-free units utilize the famous Roberts-Gordon "Spreader-Flame" principle, which insures maximum heating efficiency. Ideal for all gravity or forced circulation hot water heating systems. Wet base greatly increases efficiency and adaptability. Easy installation, minimum maintenance. 78,000, 115,000 and 150,000 BTU/Hr.

"GORDON Lampadaire" GAS LAMPS

Offers an outstanding opportunity for **EXTRA PROFITS** to Builders!



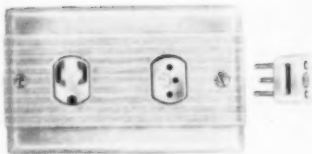
WRITE FOR
FULL DETAILS
TODAY!

• Gas Furnaces • Air Conditioning • Unit Heaters
ROBERTS-GORDON
APPLIANCE CORP.

44 Central Ave. • Dept. AB • Buffalo 6, N. Y.



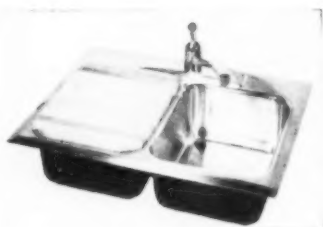
NEW PRODUCTS



Hide TV wiring

One-gang, two-unit TV flush receptacles install easily, hold exposed wires to minimum. Provides for UHF and VHF connections. Unit incorporates interchangeable grounding receptacles with one TV outlet. Fits all standard outlet boxes. —Arrow-Hart & Hegeman Electric Co.

Circle No. X27 on reply card, p. 117



Board fits small sinks

Cutting board is designed as cover for small-size sinks. Formed out of edge-grained rock maple. Resists heat, water; will not warp. Cleans under faucet. Turns sink into efficient home bar. Dimensions about 10"x12". Fits neatly into kitchen drawer or cabinet.—Carrollton Mfg. Co.

Circle No. X28 on reply card, p. 117



Wall has insulating value

Glass curtain wall admits light, has insulating value of 8-in. masonry wall. Blocks diffuse and direct daylight. Colored blocks provide variety, have fired-on ceramic finish. They are scratch- and abrasive-resistant. Wall is unaffected by industrial atmospheres.—Pittsburgh Corning Corp.

Circle No. X29 on reply card, p. 117

Wedge-Tight
calder

GARAGE DOORS

HELP SELL HOMES

for Albee Homes, Inc.

NILES, OHIO



Because they incorporate a fine combination of smart, good looks with excellent construction and workmanship, they find that Calder Wedge-Tight doors help to make home sales easier and their list of satisfied customers grow.

Every Calder Wedge-Tight door . . . the door that floats on lifetime bearings . . . fits like part of the wall, yet even a child can raise and lower it easily.

Discover for yourself how Calder doors can help to sell your houses. Our trained salesmen will be glad to create interest at your Demonstration Homes with radio controlled doors . . . provide free, colorful literature . . . demonstrate famous Calder quality to help sell the house!



FREE CATALOG...

illustrates full line of residential and commercial garage doors, many more top quality features.

DEALERSHIPS AVAILABLE

calder MANUFACTURING CO.

LANCASTER 12, PENNA.

ANTIQUÉ WHITE

GREEN

GRAY

PINK

AUTHENTIC BEAUTY OF COSTLY MARBLE

Florentine
 new laminated plastic pattern by
CONSOWELD

"How beautiful! . . . So different, too!" That's the reaction of prospective buyers everywhere to homes featuring Consoweld's exclusive new Florentine pattern. And no wonder! Never before have they seen the colorful richness of costliest Italian marble so accurately reproduced in a laminated plastic.

Used on counter tops, bathroom vanities, shower walls, wainscoting or wherever marble is appropriate, it imparts the flair of custom styling without the cost . . . appeals with equal force to the most sophisticated tastes or the simplest. It adds the distinctive touch that makes any home you build the kind buyers will live in with pleasure and show to their friends with pride . . . the kind of home that's easiest of all to sell.

But, see for yourself. Get the full effect of Florentine's true marble pattern in its full range of popular colors . . . gray, green, pink and antique white. Contact your Consoweld distributor now.



Consoweld Florentine here used on a vanity imparts a look of distinguished beauty. Yet it has all the durability and service properties that have made Consoweld a leader in its field. Its mirror-smooth surface cannot be harmed by cosmetics, alcohol, hot water, or even cigarette burns. Easy to clean. Easy to keep clean.



Look under Plastics in the Yellow Pages of your telephone directory.

CONSOWELD CORPORATION
 Wisconsin Rapids, Wisconsin



89

CONSOWELD CORPORATION
 Wisconsin Rapids, Wisconsin

Dept. AB-66

I'm interested in using Consoweld's laminated plastic products. Please send me name of my nearest distributor for dealer contact.

Name _____

Firm _____

Address _____

City _____ Zone _____ State _____



It's sprinkled with stars

Fantasy

New laminated plastic pattern by

CONSOWELD

Myriads of tiny starbursts make Fantasy glitter and gleam with color excitement. It's a gay, new pattern. Rich! Warm! Inviting! It opens the way for you to achieve striking new decorator effects. Four high-preference colors complement any room decor.

Fantasy is a pattern with *proven* consumer acceptance. Market-testing reports consistently give it the highest acceptance ratings.

Use it in your model homes to add "buyer appeal" . . . on countertops, walls, wainscoting and showers. It adds the value of beauty. Makes your homes easier to sell.

Samples of Fantasy are available from dealers and fabricators. Free merchandising aids are also available to help you in your model home promotions.

84



Look under Plastics in the Yellow Pages of your telephone directory.

Sold through retail lumber yards, floor-covering dealers, and cabinet shops

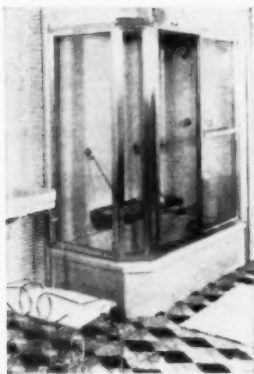
CONSOWELD CORPORATION
Wisconsin Rapids, Wisconsin



Consoweld Fantasy has the delightful look of luxury. Yet, the beautiful laminated plastic surface cannot be harmed by boiling water, alcohol or fruit juices. Easy to clean. Easy to keep clean.

Cabinets by Youngstown Kitchens

NEW PRODUCTS



Converts to steam room

"Thermasol" is name of new home steam room. It is installed in existing tub or shower enclosures, has wall-hung seat. Three-switch unit controls steam and light. Air blower is optional. Steam room is available in two tub, two shower, one economy model.—Thermasol, Ltd.

Circle No. X30 on reply card, p. 117

Waterproofs roof deck

"Fiberguard" is name of silicone additive that coats long wood fibers in Tectum roof deck. Protects material in storage and during construction, from staining due to water absorption. Additive is integral part, but does not affect price of roof decking.—Tectum Corp.

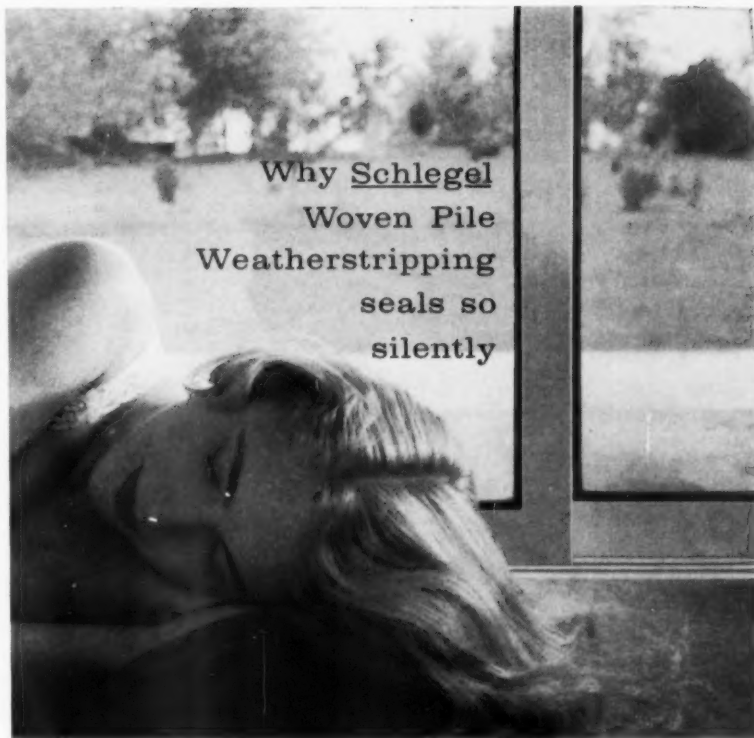
Circle No. X31 on reply card, p. 117



Heater fits in kitchen

Electric water heater is of kitchen cabinet dimensions. Has glass fiber insulation to maintain water temperature and keep kitchen cool. Heating elements are sealed in copper tubes which contact water. Controlled by positive contact thermostat. Tank capacities are 30, 40, or 50 gallons.—Rheem Mfg. Co.

Circle No. X32 on reply card, p. 117



Why Schlegel
Woven Pile
Weatherstripping
seals so
silently

For sheer soundlessness, nothing matches Schlegel Woven Pile Weatherstripping. Its dense, soft pile won't squeak (like plastic), screech or rasp (like metal). Windows and doors won't bang or rattle—even in a storm. Seals weather out, seals heat and conditioned air in.

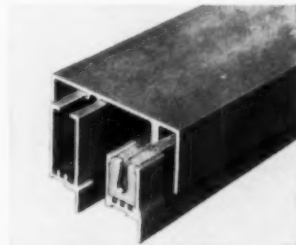
SMOOTH ACTION. Doors and windows ride smoothly on Schlegel Woven Pile Weatherstripping, under *all* weather conditions. They never stick or bind. Schlegel Woven Pile is friction-free.

GIVES SURE PROTECTION. Schlegel Woven Pile compresses, is truly resilient. It cushions doors and windows snugly and compensates for irregular metal or wood surfaces.

WEATHERPROOF. Neither air, rain, wind, nor dust can seep in. Only Schlegel Woven Pile is silicone treated to insure complete weatherproofing. Schlegel performance has been proven by rigid FHA tests for air infiltration.

For a comprehensive list of manufacturers using Schlegel Weatherstripping, write for our new booklet, "Your Guide to Windows—Doors—Screens."

Cross-section view showing Schlegel Woven Pile Weatherstripping installed in the aluminum frame head section of Arcadia Sliding Doors, Arcadia Metal Products, Fullerton, Calif.



SEE US AT:

THE NAHB SHOW—BOOTH 442
THE HIP SHOW—BOOTH 412
THE NERSICA SHOW—BOOTH 226

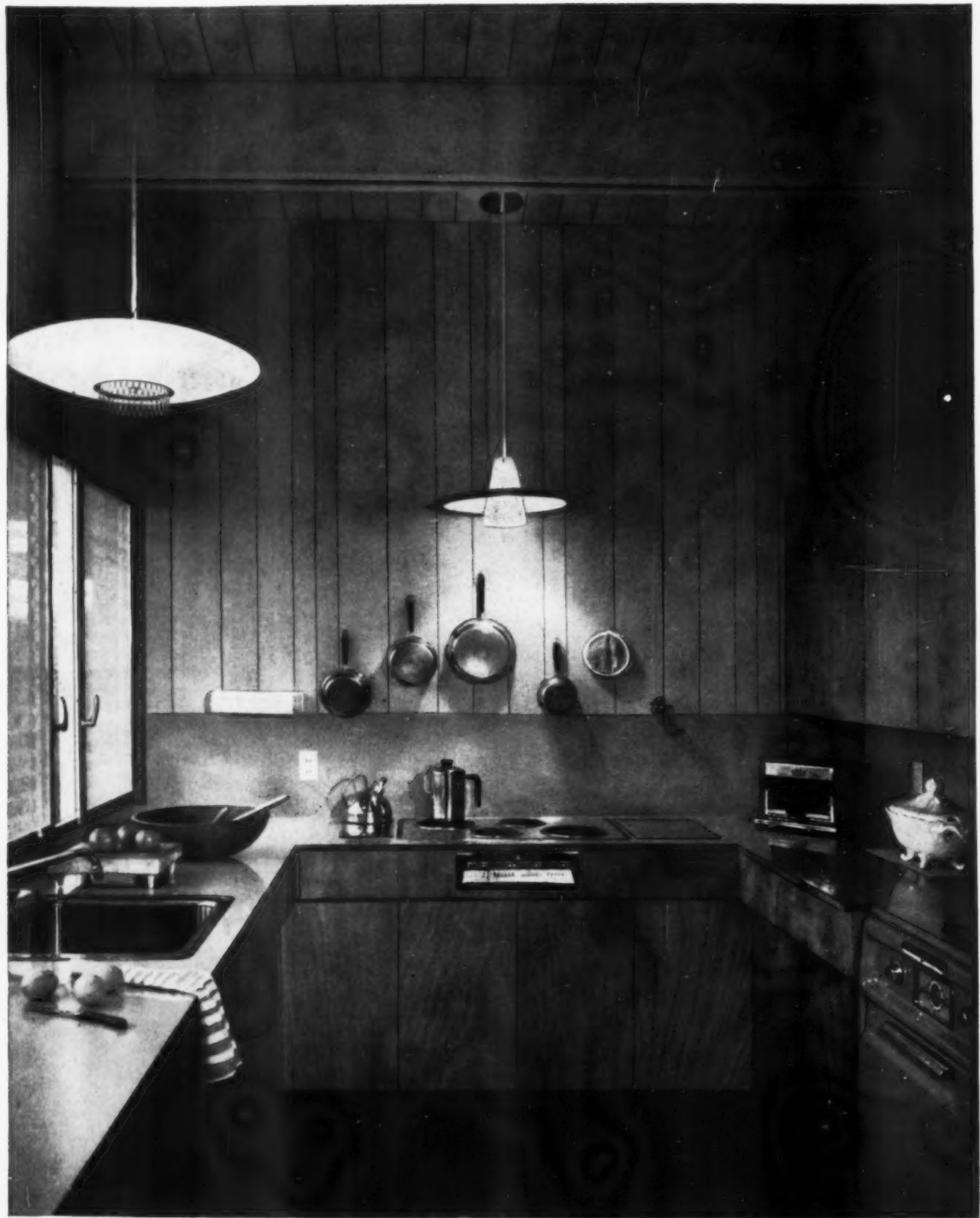
for protection that's silent, smooth and sure

Schlegel 

WOVEN PILE WEATHERSTRIPPING

SCHLEGEL MANUFACTURING COMPANY

P. O. Box 197, Rochester 1, N. Y. In Canada: Oakville, Ontario



Wood built-ins are always in good taste in the kitchen. Ample and attractive cabinet space, a fun-inviting snack bar, or out-of-the-way storage units for household implements are wonderful with wood.

There's built-in beauty in built-ins of wood...

built of WOOD means built to sell



The wood cupboard and shelving unit adds elegance and efficiency. Dining accessories are handy and the countertop can be used as a serving bar or buffet, leaving window-walls uncluttered.



This room will grow as the family grows, and change as its needs change. Wood built-ins never go out-of-date. With wood, you build for the present and plan for the future of growing families.

With built-ins of wood, you can change a house into *their* house. A little time, a little thought and a little wood add so much warmth, wished-for individuality and convenience that any house will have the custom look and feel. Built-in bookshelves, magazine racks and cabinets . . . all of easy-to-work-with and easy-to-finish wood . . . make a home more distinctive, more desirable. Wood is wanted and wood sells, because wood excels in so many ways. For more information on better homes of wood, write:

NATIONAL LUMBER MANUFACTURERS ASSOCIATION
Wood Information Center, 1319 18th St., N. W., Washington 6, D. C.



For built-in sales appeal, nothing takes the place of

wood



Where there's wood, there's a way to add individuality at low cost. By turning wasted wall space into a highly usable wall, you give more prospective buyers more home for their money.

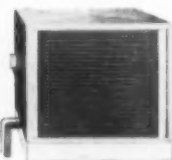
BAR-BROOK®...the Quality Line

For Year 'Round Comfort



VERTICAL CLOSET TYPES FOR HEATING-COOLING

Proved economy and whisper-quiet operation. Standard unit has cooling coils, heater, blower and filter, in slim good-looking, fully insulated cabinets. 3 models with heating input of 75,000, 100,000 or 125,000 BTU and cooling capacities of 3 tons and 5 tons. Also available without cooling coils but with space provided for later installation.



REMOTE AIR-COOLED CONDENSERS

Available in 4 models and 2 sizes, 36,000 and 60,000 BTU input. Extra-large quiet-tested fan. Tecumseh or Bendix-Westinghouse compressors. Cabinets for all models are the same size and finished in Sage Green Duracron backed acrylic enamel—the ultimate in corrosion protection even in salty-air coastal areas.



HORIZONTAL HEATER UNITS

Highly efficient gas heater-blower units compactly designed to fit small spaces. 4 models—60,000, 80,000, 100,000 and 120,000 BTU input. Safety tested and A.G.A. approved. 10-year warranty.



Write for Catalog of entire BAR-BROOK Line

BAR-BROOK®
 BAR-BROOK MANUFACTURING CO., INC.
 6135 Linwood Avenue • P. O. Box 6638 • Shreveport, Louisiana

SYMONS Steel Stake

Can Be Reused Indefinitely

Drives easily into hard earth. Can be used for practically any type of stake work. This popular item is available in 12", 18", 24", 30", 36" and 42" sizes.



FREE!

Stake Puller with order of 100

Sizes can be mixed

Prices and items shown are net F.O.B. Chicago, Illinois factory and subject to change without notice.

TERMS: (check one) Check enclosed; if satisfactory mercantile rating or reference is furnished, net 30 days; C.O.D.

Symons CLAMP AND MFG. CO.

4261 Diversey Avenue Dept. FO Chicago 39, Illinois

Please ship the following Steel Stakes:

Quantity	Size	Price Each	Total Price	Quantity	Size	Price Each	Total Price
	12"	\$1.00			30"	\$1.30	
	18"	1.10			36"	1.45	
	24"	1.20			42"	1.60	

PLEASE PRINT

Firm Name _____
 Address _____
 City _____ Zone _____ State _____
 By _____
 SIGNATURE _____

NEW PRODUCTS

"SAFETYBREAKER" is name of circuit breaker presented in series of brochures. Covers circuit protection from shorts and buildup overloads. Example installations are shown in color. Shows how unit adapts to remodeling.—Cutler-Hammer, Inc.

Circle No. X33 on reply card, p. 117

STANDARDS OF QUALITY for heating and air conditioning are completely covered in 16-page book. Discusses forced warm-air furnaces, evaporators, condensing coils, others. Excellently diagrammed in two colors.—Lennox Industries, Inc.

Circle No. X34 on reply card, p. 117

WOOD CASEMENT windows are handsomely illustrated in booklet. Section one deals with variety of installations. Section two contains complete construction details and unit specifications.—Rolscreen Co.

Circle No. X35 on reply card, p. 117

ELECTRIC BASEBOARD heating panels are detailed in foldout brochure. Shows advantages of room by room customized heating. Four-step installation method is illustrated. Cutaways show construction of units.—Hotpoint

Circle No. X36 on reply card, p. 117

BUILT-IN REFRIGERATOR, operated by gas or electricity, is subject of brochure. Shows easy three-step installation. Cites custom effect and versatility of unit. Appliance is chip-resistant white, walnut. Also in pre-paint finish.—Astral Div., Morphy-Richards, Inc.

Circle No. X37 on reply card, p. 117

CERAMIC VENEER grilles in 12 standard designs are shown in eight-page catalog. Sun control, privacy, ventilating aspects of grilles are discussed. Diagrams show unit dimensions.—Federal Seaboard Terra Cotta Corp.

Circle No. X38 on reply card, p. 117

BUILT-IN BATHROOM scale is feature of series of brochures. Explains fold-away action, shows installation between studs. Lists two models in aluminum and steel; gives all dimensions and prices.—NuTone, Inc.

Circle No. X39 on reply card, p. 117

NEW HOUSE IDEAS YOU CAN MERCHANDISE...

NO-FROST REFRIGERATOR-FREEZER

with IceMagic® ice maker
replaces every cube... automatically!



Here are important "extras" in a refrigerator-freezer that really appeal to modern home buyers. First, there's exclusive IceMagic that makes distinctive, half-moon shaped ice cubes, then stores them in a convenient ice bucket. As cubes are used, they are automatically replaced. Then, objectionable frost problems are gone forever! Frost never forms in either the refrigerator or freezer section because all frost-gathering coils are located outside the food storage areas. In addition, there are many other outstanding features . . . all to help sell your homes easier!

ELECTRIC OR GAS

RCA WHIRLPOOL refrigerator-freezers are made in both electric and gas models . . . in a wide variety of sizes. They fit flush . . . can be built in. Another powerful sales feature!

MAIL COUPON TODAY

Contract Sales Division,
Whirlpool Corporation, St. Joseph, Michigan

AB-3-0

Please send complete information on the new line of
RCA WHIRLPOOL gas and electric refrigerator-freezers.

Name _____

Firm Name _____

Firm Address _____

City _____ Zone _____

County _____ State _____




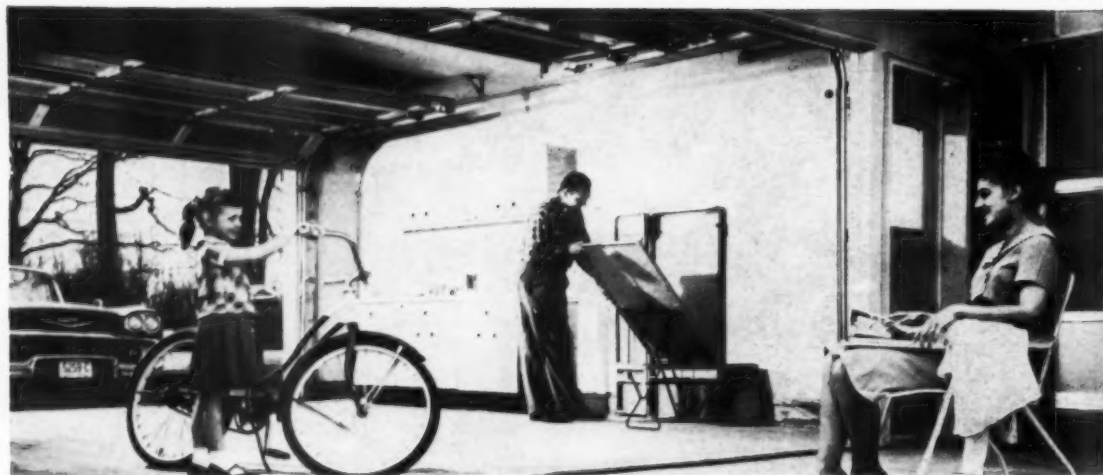
Your family will love our family of home appliances

RCA Whirlpool

Products of WHIRLPOOL CORPORATION St. Joseph, Michigan

It's easier to sell RCA WHIRLPOOL equipped homes!

Use of trademarks  and RCA authorized by trademark owner Radio Corporation of America



Today's garage—your biggest bargain in space

More and more builders are turning to the profit and sales potential so evident in the garage. The reason is space—the extra storage, work and play space homebuyers are demanding. It's space a garage provides at the lowest cost per square foot.

It's no secret to you — today's homebuyers want more space . . . for privacy, activity, storage. They need more space to raise growing families. Unfortunately, this extra space in a home also raises the price.

For a homebuyer, the alternative to this space-price problem is to buy an older home, and that's what the majority do. For you, the alternative to losing these sales is to offer more livable space at less cost, and you can. You can develop and sell the extra living space, the extra storage space offered in the most neglected area of your home — the garage. It's your biggest bargain in space!

1. The garage is a bargain to build. Consider the worth of a garage. In addition to storing the car, it's an excellent place for a home workshop, a rainy-day place for children to play, an out-of-the-sun place for summer barbecues. It supplies room for

storage of bicycles, lawn mowers, garden tools, and for activities the house cannot supply. Best, it's a bargain to build.

Extra-use space costs $\frac{1}{3}$ less to build. If you're an average builder, your *square foot* cost for building a garage is only one-third the cost of building the rest of the home — \$3 to \$5 per square foot, compared with \$9 to \$15. An analysis by Len Haeger,¹ architect, estimates the building cost of an attached garage at about \$2.00 a square foot. This does not include land cost, overhead or profit. Compared on the same material-and-labor-only basis, the cost of a three-bedroom home is \$6.72 per square foot. It adds up to this: you can build 300 to 400 square feet of extra space in your homes at approximately *one-third of the square foot building cost.*

What about down payment? Down-payment-wise the garage is *still a bargain to sell*, especially for homes priced near \$15,000 without garage. The down payment of a \$15,000 home with FHA financing is \$705. You add only \$260 for a *double garage* evaluated at \$1200. The total down payment for this more livable, more *salable* home would still be less than \$1000. Even for a home costing \$16,000 — a double garage adds only \$360 to the down payment.

Builders who have recognized the sales significance of the garage testify that the average homebuyer *can and will* put down an extra \$200 to \$300 for the space he needs in a garage. One of the first things most new homeowners do is add a garage. In fact, a study of 1957 Chicago area building revealed that the number of permits issued for garages was approximately two-thirds of those issued for new homes.²

Extra usability ups FHA evaluation. Not only is a garage cheaper to build per square foot, but also it gets an *even higher evaluation* when offered as multi-use space. A builder in Ohio reports his garage evaluation was increased from \$950 to \$1060 when he used Overhead Door Corporation's "Convertible-Garage-Room" plan to make the garage more attractive as *livable* space. He gained \$110 in evaluation for only \$40 cost.

2. The garage is bargain space homebuyers want and need.

Buying and building trends favor the garage. Surveys show the garage, competing with carports or built-in features, is the heavy favorite with homebuyers. A study made by PRACTICAL BUILDER¹ found 62% of homes now being built include a garage. A survey by the National Association of Real Estate Boards² reveals that 53% of realtors believe a garage to be a strong influence in the sale of a home. In a study made by ARCHITECTURAL RECORD³ architects cited the low-cost extra space offered by a garage as one of the important reasons for garage popularity. Of course, a substantial share of this preference for extra space in the garage has grown with the increase in non-basement construction.

Extra space is essential in non-basement homes. The total space in the average three-bedroom home just doesn't offer enough storage space, work space, play space. HOUSE AND HOME reported⁴ recently that, according to the Small Homes Council, The Cornell Kitchen Study, and the mortgage department of Metropolitan Life, FHA standards require *less than half* the storage space needed by most young families.

Trend favors 2-car garage. The fact that homebuyers favor the garage as the solution to their space problem is underlined by the trend to the two-car garage. Surveys show only 15% of families actually have two cars, yet 61% of garages being built are two-car or larger.⁵ For one-car families, the double garage means ample room to open the car door, easier loading and unloading; it offers space for storage and play; it adds structural size that enhances the appearance of their home.

3. Unique "OVERHEAD DOOR" ideas open garage for work, play.

Overhead Door Corporation has taken the lead in developing plans to help you *sell* this bargain space as multi-use space. One especially exciting idea is the "Convertible-Garage-Room"—a garage that converts in seconds to a livable room. All it takes is a second

"OVERHEAD DOOR" to replace the blank back wall (or side wall) to open the garage to bright, inviting living space.

Garages using this sales-provoking idea have been built all over the country, winning a tremendous response from space-hungry homebuyers.

"Convertible-Garage-Room" adds multi-use space at lowest cost. Before designing the "Convertible-Garage-Room," Overhead Door Corporation engaged a market research company to interview homebuyers on their need for extra space.⁷ This research revealed that seven out of 10 homebuyers want and need the multi-use space a "Convertible-Garage-Room" offers. It also showed that over half of those interviewed would pay \$400 and more for this feature. Yet a "Convertible-Garage-Room" adds less than \$100 to the cost of a conventional two-car garage. Materials and labor saved in the backwall make up most of the cost of the second door.

4. The "OVERHEAD DOOR"—your biggest bargain in satisfaction.

Ideas that make the most of the garage multi-use space are endless. And they are *practical*, thanks to the high product quality and reliable service included in every "OVERHEAD DOOR" installation. You're guaranteed that the "OVERHEAD DOOR" will fit tightly against weather and intruders, that it will open easily. There are no call-backs. If trouble should develop, it will be efficiently handled by the same factory-trained expert who installed the door—your local "OVERHEAD DOOR" distributor.

Style, too, is an important part of the sales appeal you get with famous "OVERHEAD DOOR." New 1960 models are available with a wide selection of flush, panelled, and carved doors to give you distinctive design as a valuable sales closer.

See your "OVERHEAD DOOR" distributor. Get the full story on the tremendous sales potential in extra living space. Your "OVERHEAD DOOR" distributor has full information on the "Convertible-Garage-Room," including plans, bills of materials, and color sketches; also builder sales tools that include wall banners, newspaper ad layouts, colorful handout idea booklets and publicity releases. Look for your distributor in the *white pages* under "OVERHEAD DOOR," or write to Overhead Door Corp., Dept. AB-6, for new idea booklet, "Discovered—Extra Living Space."

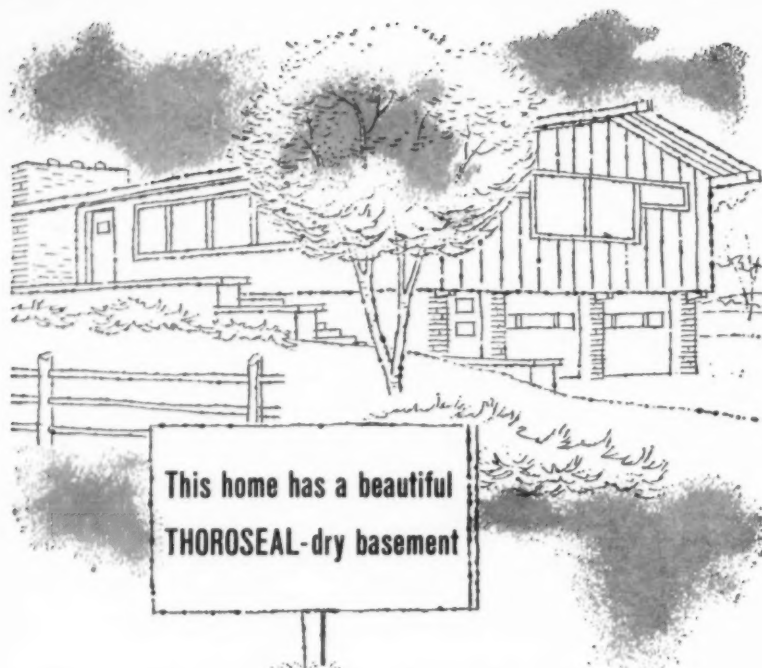
Overhead Door Corporation, General Offices: Hartford City, Indiana—Manufacturing Distributors: Cortland, N.Y.; Hillside, N.J.; Lewistown, Pa.; Nashua, N.H.—Manufacturing Divisions: Dallas, Tex.; Portland, Ore.—In Canada: Oakville, Ontario.



the original
upward-acting
sectional door

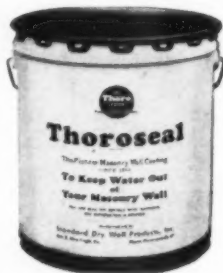
OVERHEAD DOOR CORPORATION

¹—Consultant to FHA, National Housing Center, Time Life, Inc. • ²—Study by Bell Savings and Loan Association of permits issued, Metropolitan Chicago area, 1957 • ³—Garage door study, August, 1959 • ⁴—December, 1959 issue, "Headlines" • ⁵—Garage and carport study, September, 1954 • ⁶—May, 1959 issue • ⁷—United States Interviewing Corp., March, 1959



A good name and an inexpensive sales point to help you move more houses

In all parts of the country, builders are finding that attractive, guaranteed-dry basements coated with nationally-advertised *Thoroseal* become good sales features to help them sell houses. And inexpensive ones too, because using Standard Dry Wall's new long-handled broad brush, one man can coat the average new basement in less than one hour. A single coat will do except in extreme moisture conditions. *Thoroseal* is available in a variety of attractive pastel colors, plus white and gray. There is a dealer in every area to insure prompt supply. Write for our new 20-page specification guide.



Please send me your free new specification guide.

Name _____

Company _____

Address _____

Standard Dry Wall

Box X-16 New Eagle, Pa. Products, Inc.

Plants at New Eagle, Pennsylvania and Centerville, Indiana

CATALOGS

ALUMINUM ENTRANCES, store fronts, wall facings and windows described in series of detailed catalogs. Also covers wall systems, canopies, and louvers. Cutaways show constructions, photos show variety of installations.—Kawneer Co.

Circle No. X40 on reply card, p. 117

DECORATED DOOR KNOBS of ceramics and metal are presented in colorful booklet. Elegantly designed switchplates, drawer pulls, coat hooks and door knockers are covered. Lists all measurements and ordering numbers.—The Yale and Towne Mfg. Co.

Circle No. X41 on reply card, p. 117

SEAMLESS TERNE roofing is concisely outlined in folder. Diagrams show Bermuda and batten, standing, flat locked seam systems. Describes tensile strength, color, weight, expansion of terne roofing.—Lead Industries Assn.

Circle No. X42 on reply card, p. 117

MASONRY CEMENT is well presented in 20-page booklet. Contains information on composition, properties, characteristics of products. Reference tables list mortar mixes, quantities required for masonry construction.—Universal Atlas Cement Div., U.S. Steel Corp.

Circle No. X43 on reply card, p. 117

BUILDER'S MERCHANDISING aid highlighting cabinet hardware is described in literature. "Emblem of Quality," exhibited in the home, is recognized by home buyer from national magazine ad campaign.—Amerock Corp.

Circle No. X44 on reply card, p. 117

BASEBOARD HEAT is covered in colorful catalog. Installation data is offered. Gives complete explanation of accessories and their use. Some technical data sheets are included.—Slant/Fin Radiator Corp.

Circle No. X45 on reply card, p. 117

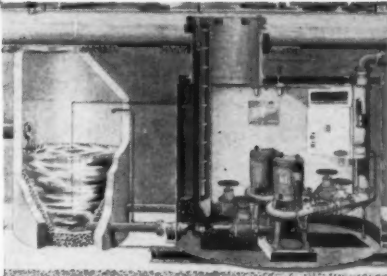
LIGHTING DESIGN is beautifully and clearly defined in 66-page catalog. Photos and diagrams show wide variety of wall- and ceiling-hung light installations. Includes all specifications and a complete price list.—The Heifetz Co.

Circle No. X46 on reply card, p. 117

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... Factory-Built Quality,
Dependability Into Your
Projects... and Save!

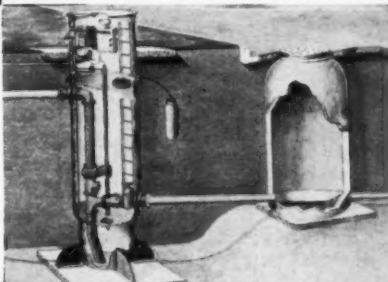
... About our
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Sewage Pump
Stations for
installation in
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Suburban
Sewerage
Systems



SMITH & LOVELESS pump stations available in standard sizes for capacities from 100 GPM to 4500 GPM per pump with two or three pumps per station. Even larger capacity stations are built to order. Proved in over 1200 installations from coast to coast. Alaska and Canada.

Write
S&L

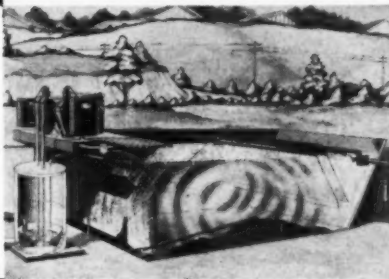
... About our
complete line
of factory-built
Pneumatic
Ejector Lift
Stations for
installations
requiring low
capacities



SMITH & LOVELESS pneumatic ejectors like the "Mon-O-Ject" offer you a universal selection of lift stations to meet your requirements. Our complete line of ejector lift stations ranges from small, single-dwelling sewage ejectors for the home to large, duplex units like the "Du-O-Ject" for stand-by dependability.

Write
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... About our
factory-built
Treatment
Plants for
Motels and
Factories,
Schools and
Small Sub-
divisions



SMITH & LOVELESS factory-built "Oxigest" sewage treatment plants provide a low-cost, dependable treatment facility with minimum annual maintenance. Available in single units to serve from 10 to 100 homes—or can be installed in parallel, as needed, to serve a growing subdivision.

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Write today for our Free Engineering Data Manual
on Sewage Lift Stations and Sewage Treatment Plants
Address: Department 100 for Details

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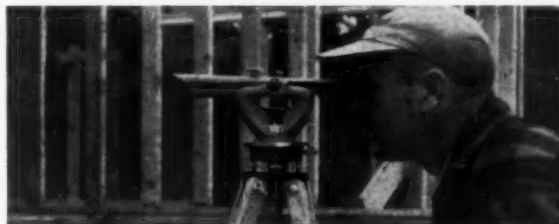
—there's a BERGER instrument
for every builder...every budget



MASTER BUILDER CONVERTIBLE TRANSIT-LEVEL. Big instrument performance at a moderate price. Fast, accurate laying out of horizontal and vertical angles, leveling, plumbing, with horizontal circle and vertical arc and verniers. Rugged instrument yoke frame. 22-power internal focusing telescope; coated optics; 3-ft. short focus. Model 320 with stiff-leg tripod and field case \$229.50



12" HEAVY DUTY DUMPY LEVEL. For setting grades and lines, measuring or laying off horizontal angles, setting batter boards, establishing foundation elevations. 12" internal focusing telescope, 24-power coated optics. Model 150 with stiff-leg tripod and carrying case \$174.95



SPEED-A-LINER BUILDERS TRANSIT-LEVEL. New 18-power interior rack and pinion focusing telescope. Built-in sunshade. Fully protected telescope vial. Lever lock for dependable leveling. For setting construction grades and building lines, aligning foundations, brickwork, leveling floors, etc. Model 200 with stiff-leg tripod and carrying case \$112.50

Other Berger low cost, easy-to-use instruments:

SPEED-A-LINER Dumpy Level \$69.95; Service Transit-Level \$99.95;
Service Dumpy Level \$59.95; Duplex Tilting Level \$79.95;

SIGHT 'n' SURFACE Pocket Level \$3.85

Prices F. O. B. Factory

C. L. BERGER & SONS, INC., 47 Williams St., Boston 19, Mass.

Send me literature on

Convertible 12" Dumpy Level SPEED-A-LINER Transit-Level
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NEW UNI-CREST *insulation*

Installs Faster, Easier
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Now, through the combination of modern chemistry and the experience of United's 50 years as a leading manufacturer of insulating material, comes Uni-Crest. A unique and thoroughly proven foam plastic insulation of outstanding thermal properties... labor saving and cost cutting benefits. Highly recommended for walls, ceilings, floors and around foundations or under slabs. Readily adheres to masonry, eliminates furring or lathing, provides an excellent surface for plaster, cement or other finishes. Easy to work with, light, non-dusting, odorless, non-toxic, can be cut with all standard cutting tools. Will not shrink or rot and retains its insulating value indefinitely. Regular and self-extinguishing types available in a wide variety of sizes and thicknesses.

Write for complete installation instructions and an actual sample.



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CATALOGS

"**FUNDAMENTALS** of Building Insulation" is title of award-winning book. Tells how building insulation works, why and where it should be used in modern structures. Compiled to aid builders, architects, lumber yard personnel.—The Insulation Board Institute.

Circle No. X47 on reply card, p. 117

BUILDING MATERIALS and prefab homes are completely covered in 109-page catalog. Section One deals with packaged homes. Others show siding, insulation, tile, shingles, etc. Includes three other forms.—Pease Woodwork Co.

Circle No. X48 on reply card, p. 117

REFLECTING and transparent sliding glass doors are illustrated in two brochures. Shows how mirror doors add dimension to rooms. Gives data for swinging doors on sliding frames, multiple track and pocket sliders.—Miller Sliding Glass Door Co., Inc.

Circle No. X49 on reply card, p. 117

TRANSLUCENT FIBER GLASS building panels are outlined in folder. Presents drawings of typical installations. Cutaways show construction methods. Technical data covers permanence, impact resistance of panels.—Chemold Co.

Circle No. X50 on reply card, p. 117

"**WHERE TO BUY**" California redwood is information in booklet. Directory specifies products such as siding, panels, expansion joints, and shows which company makes them. Lists brand trade marks and complete company addresses.—California Redwood Assn.

Circle No. X51 on reply card, p. 117

DOOR MACHINES, tab sizers, chop saws are among fabricators pictured in series of brochures. Includes operating photos of end trim saw and automatic truss cut machine. Describes jamb and stop tool. Gives brief specifications—Turn-A-Bore Equipment Co.

Circle No. X52 on reply card, p. 117

WOOD PRODUCTS promotion program is covered in booklet. Complete description of technical activities, literature preparation, data development projects. Describes aids being used in promoting wood to public.—National Lumber Mfrs. Assn.

Circle No. X53 on reply card, p. 117

Bostitch Staplers Save Maryland Builder \$55.13 per House

\$33.75 SAVED ON ROOF ALONE

Stapling a 24' x 48' roof is a three-hour job for four men and a carrier. The same size roof was a six-hour job with hammer and nails. At \$2.25 per man, savings come to \$33.75. Stapler is Bostitch H4 Heavy-duty Hammer.



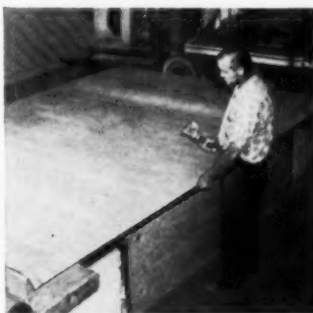
STAPLING CUTS SCREENING JOB \$4.50

Screening goes up 50% faster using a Bostitch T5 Tacker to fasten it to soffit supports. Hammer and tacks were used before. There's less fatigue with the powerful, spring-driven T5—and one hand is always free to position screening precisely on soffit supports.

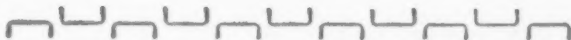
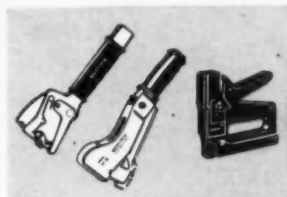


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CATALOGS

FORK LIFT TRUCK that operates in 6' aisles is subject of 18-page brochure. Shows how lifting unit can pivot 90° to right and left, permitting right-angle stacking. Can create 16 "extra" storage rows.—Towmotor Corp.

Circle No. X54 on reply card, p. 117

AUTOMATIC TRUSS machine is described in new literature. Shows how device can produce up to 260 trusses a day. Discusses machine's construction, and details truss fabrication. Can be bought or leased.—Penhurst Machine Co.

Circle No. X55 on reply card, p. 117

TILE APPLICATION with new adhesive is outlined in punched brochure. Cartoons show step-by-step setting methods. Suitable surfaces for adhesive are listed. Includes mixing instructions, grouting, tile cleaning.—Pecora, Inc.

Circle No. X56 on reply card, p. 117

FOUR-WHEEL DRIVE vehicles are illustrated in folder. Pictures all types of Jeeps including well-known

"Universal," pickup, panel, delivery trucks. Lists engine, body and chassis specifications.—Willys Motors, Inc.

Circle No. X57 on reply card, p. 117

PATTERNED GLASS panels used in commercial and public building are excellently illustrated in booklet. Shows how interior partitions and panels can be taken apart and re-assembled, salvaging of materials.—American-St. Gobain Corp.

Circle No. X58 on reply card, p. 117

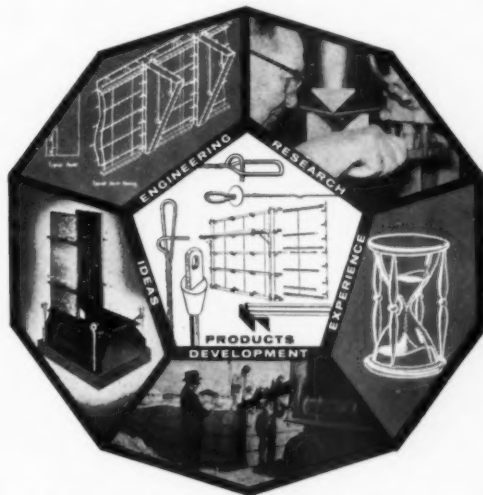
CONCRETE ADHESIVE is explained in 32-page "Handbook of Application Methods." Details field-tested concrete bonding and surface preparation, equipment required, mixing procedures. Facts on uses in repair and maintenance.—International Epoxy Corp.

Circle No. X59 on reply card, p. 117

EARTHMOVING with the new D4 series C diesel tractor is subject of two-color, 12-page booklet. Cutaways show engine, clutch, undercarriage features. Gives clear, condensed specifications.—Caterpillar Tractor Co.

Circle No. X60 on reply card, p. 117

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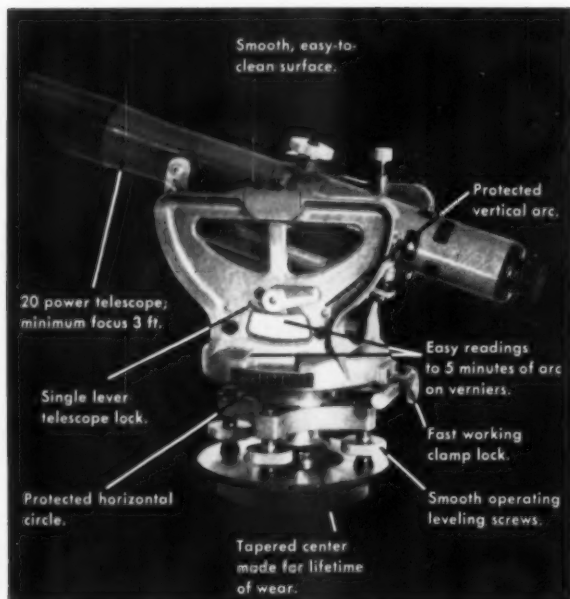
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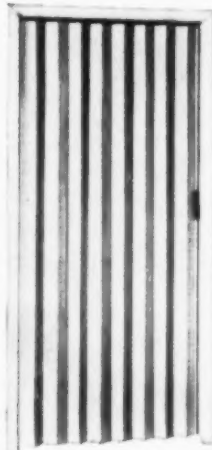
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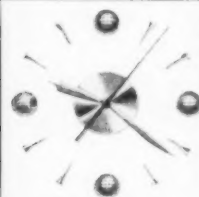
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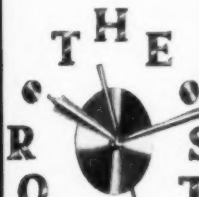
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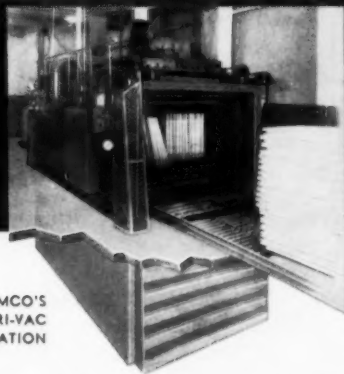
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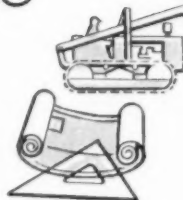
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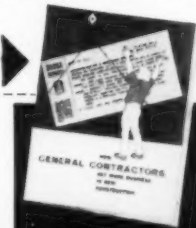
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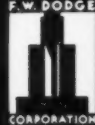
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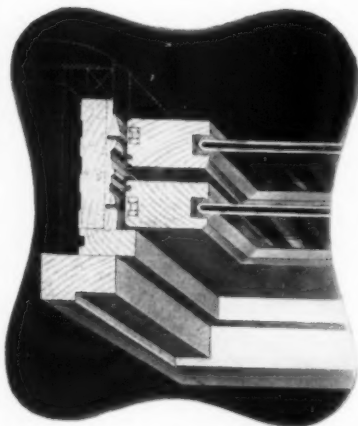
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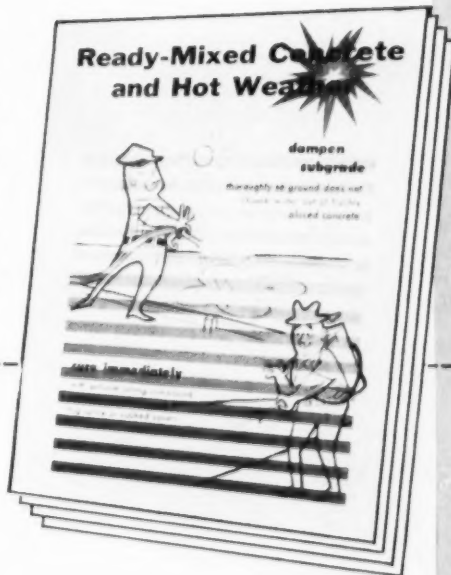


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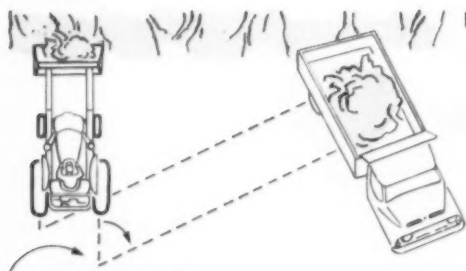
Working with small tractors

This is the first of a series of three articles designed to show the smaller builder how to operate a tractor with front-end loader and backhoe attachments efficiently. This part tells how to load trucks from a bank or pile and how to peel and scrape. The reader should keep in mind

that operating techniques shown apply primarily to smaller machines. Larger machine methods may differ somewhat. More articles will appear in July and August. Material comes through the courtesy of the Industrial Tractor and Implement Division, Ford Motor Co.

1 How to LOAD trucks from a bank or pile

BANK Step 1

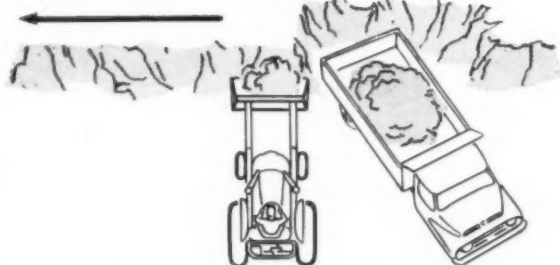


About 45° angle of turn

Tractor works in relation to truck at about a 45° angle of turn. To speed loading, operator should minimize the angle of turn and length of runs between the bank being excavated and the truck being loaded.

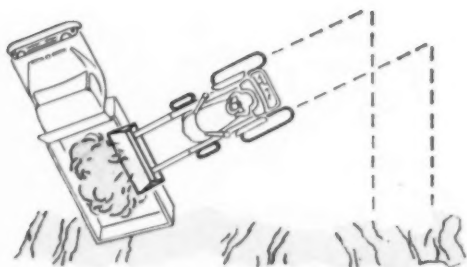
Step 2

Excavate in this direction



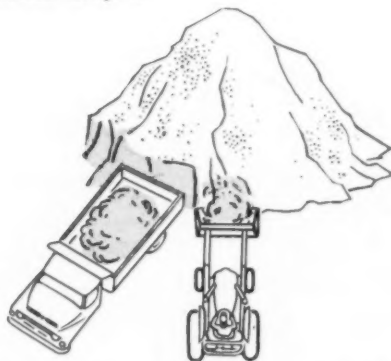
Always excavate away from the truck. This gives the tractor the most efficient swing cycle. And always keep the truck being loaded close to the operation, and the excavation depth about 2/3 length of truck bed.

Step 3



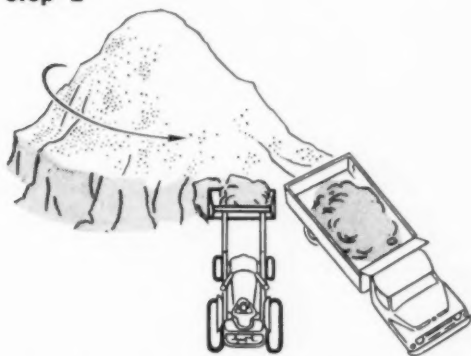
Operators should take care to keep the working surface free of ruts and holes. This can be done by backgrading with the bucket occasionally or by approaching bank with bucket flat, letting it serve as a float.

STOCKPILE Step 1



While digging stockpile, operator first cuts out a drift from one side, to let truck move in close to tractor, shortening dig cycle. Truck can approach pile from opposite side as digging continues.

Step 2



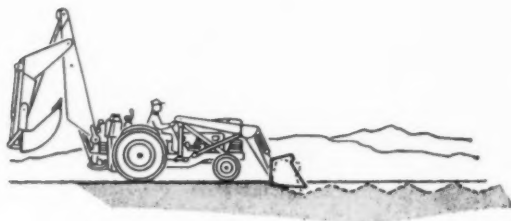
When digging from bank or stockpile, tractor should be operated at an engine speed of 1,500 to 1,700 rpm. Operator should be careful to select a forward gear that allows safe ground travel and loading speed.

Step 3



Exercise caution while undercutting high banks. Dirt slides can be dangerous. Load from as low as possible for maximum efficiency; loader break-away and lift capacities diminish as loading height increases.

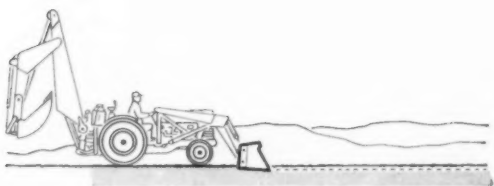
2 How to PEEL and SCRAPE



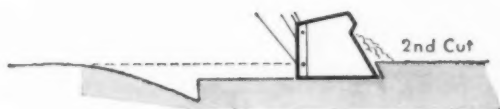
Frequently the builder will put the loader to work in precise peeling and scraping operations. This may be done with or without use of the float position of the lift valve. If float position is used, precise control of bucket lip must be maintained. Otherwise, cut will tend to undulate, making new passes difficult.



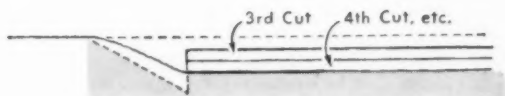
To start long cuts (such as for walks, driveways, aprons) the operator should exert down pressure on the bucket. He then should make a short (5 ft.-8 ft.) sharp angle cut and break the burden out cleanly. This will execute 4-in.-deep starting notch without placing too great a strain on machine or bucket.



To run a shallower, continuous lift the operator starts a cut at the notch approximately 2 in. deep, keeping the bucket bottom level. Depth is held by quick, short valving of bucket cylinders. This angles the bucket lip to maintain depth of cut. Adjust lift cylinders to maintain proper bucket depth.



Additional cuts then can be made to increase depth. Operator can count on a 5/8-yd. bucket cutting at a 2-in. depth to dig a distance of 17 ft. before being filled. This insures an efficient, speedy cycle time.



Some things to remember when making the cuts: keep the tractor in gear when going down steep hills or grades; reduce ground speed before turning or breaking. Low drive speed should insure safe operation.



TRANSIT MIX TRUCKS move swiftly alongside freshly cut trench and pour concrete over unique forming device that lays

How to make "instant" concrete

The trucks move slowly, steadily along the freshly cut ditch. Concrete from transit-mix trucks chutes down over what appears to be an oversized sausage. Someone explains the phenomenon: they're laying "instant" concrete pipe at a rate of 12 fpm.

The process, developed by the Fullerform Continuous Pipe Corp., Phoenix, Ariz., currently is building conduits for irrigation water on Arizona farms. But builders are eyeing the process as a fast, economical way of building storm sewers.

Key to the process is an inflatable rubber and fabric form designed by Goodyear Aircraft Corp. engineers from blimp-type materials. With only two 300-ft. inflated forms that require

only 3 psi of air pressure, as much as 600 ft. of concrete pipe can be poured at a time.

The construction process—developed over the past nine years—involves the use of a double-hoppered forming machine that is pulled along the rounded bottom of a ditch while enveloping an inflated inner form.

While concrete pours down from transit mix trucks, the "outer" form picks up the inflatable "inner" form so tamping devices literally can tuck concrete underneath. Half of the double hopper, activated by electrically driven tampers, shoves concrete into the bottom of the ditch. The other half, meanwhile, forms the top of the pipe.

The hoselike inflatable form, constructed of two plies of cot-

ton fabric coated with neoprene rubber, is open at both ends to hold airtight bulkheads through which air pressure is applied.

The new continuous pipe process is faster and more flexible than previous methods.

The inflatable form is easy to handle and can be deflated for extraction about two hours after the concrete has been poured. This makes possible use of the same form several times a day.

Machinery that contains the "outside" form for concrete pipe is set in the ditch. One end of the inflatable form is passed through it with bulkheads at both ends.

When air pressure in the inner form reaches 3 psi, the pipe-laying process begins.

Concrete pours into the ma-



concrete sewer pipe at a rate of 12 fpm.

pipe

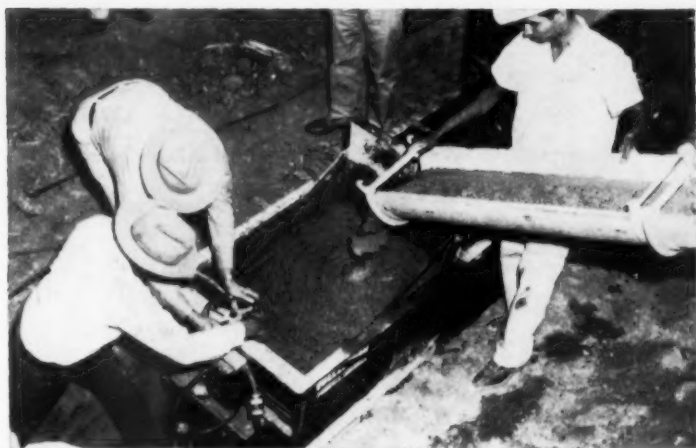
chine's double hopper. A winch draws the forming machine forward, while an electric motor on top of the machine operates the tamping devices that distribute concrete uniformly and tightly around the inner form. Once the run is completed, the inner form is deflated and retracted.

Commercial work on irrigation pipe was started about a year ago on Arizona farms and ranches. The concrete conduit, made with the first inflatable-deflatable pipe form, exceeded Bureau of Reclamation standards by 4 tons and 520 psi.

Developer of the process, R. Fuller, currently is working with the city of Phoenix on plans to lay storm sewers with his new system.



WORKMEN PLACE FORM—Inflatable rubber and fabric hose-like concrete form is lowered into freshly dug trench. Designed by Aircraft engineers, the inflatable form shapes the inside of the pipe for runs of 300 ft. in length.



TRUCKS POUR CONCRETE—Concrete flows from transit-mix truck into new pipe-forming machine. Double hopper is activated by electrically driven tampers that literally shove concrete into bottom of the ditch and over form.



CORD EXTRACTS TUBING—Once concrete has set the inner form is then deflated. A nylon rope attached to grader blade pulls it free from concrete pipe. Patented process belongs to Fullerform Continuous Pipe Corp., Phoenix.



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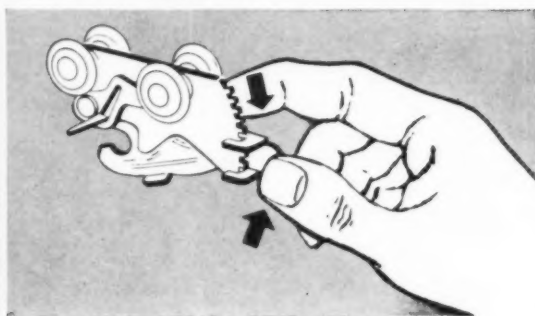
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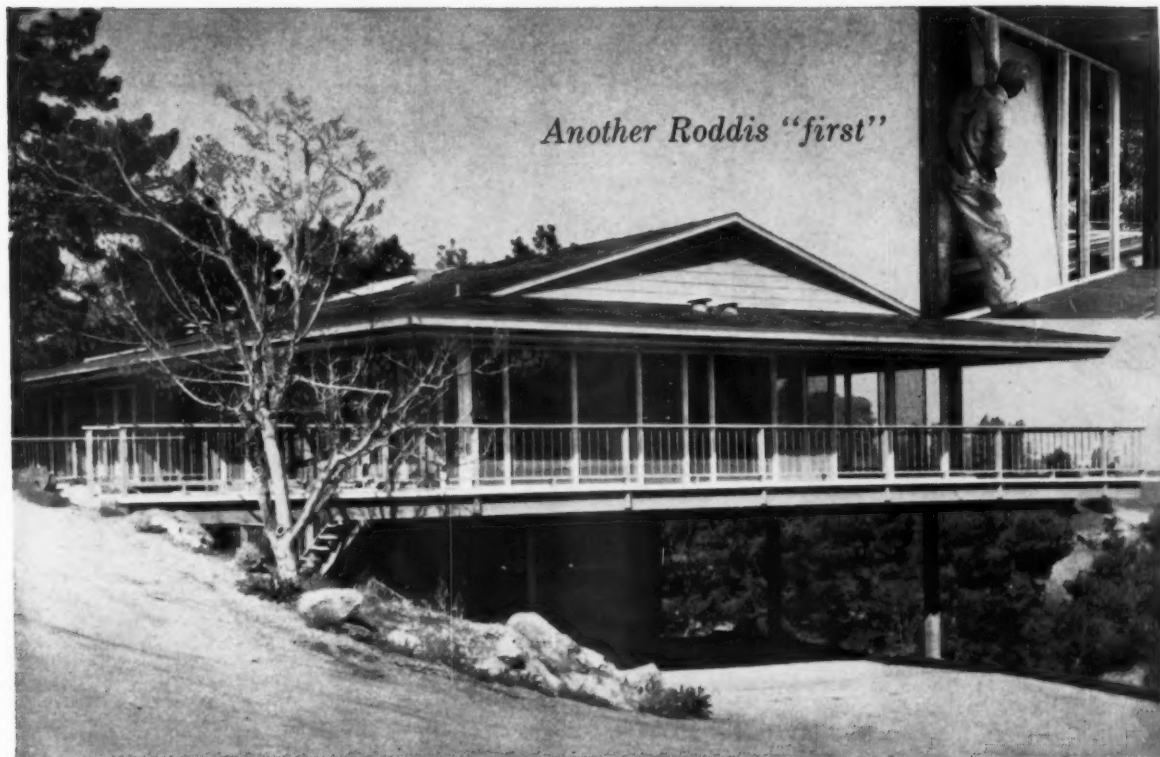


NEW 900FA KENNAFRAME "Custom" series, prefabricated assembly for 1" to 1 $\frac{3}{4}$ " pocket doors, easily installed by one man in half the usual time. Four screws lock entire unit; simple adjustments for perfect header and jamb alignment. Save time; assure lasting, trouble-free performance. Note ratchet-type adjuster; mere finger-touch permits easy, time-saving alignment. New instant door mounting eliminates millwork. These exclusive features available in pocket and by-passing hardware. Write TODAY for details! Kennatrack Corporation, Elkhart, Indiana. *Pat. Pend.



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Another Roddis "first"

"House on stilts," Los Altos Hills, California

New house has no outside walls

"Weather screens" of a remarkable new structural material—Roddis Phenolic Timblend—are used instead!

This remarkable "house on stilts" seems poised in the air as it juts out from its California hillside site. But it's solidly supported by a special steel framing system.

Builder, William Roth, and Architectural Firm, Johnson-Hawley & Associates, wanted a feeling of spaciousness inside too. So they dispensed with conventional outer walls. Instead they used a unique screening of weatherproof Phenolic Timblend (Roddis' exclusive man-made board) that protects against wind and rain. Without adding bulkiness or excess weight.

Phenolic Timblend was chosen for other reasons too. It's exceptionally strong and dimensionally stable. Virtually warp-free. It takes and holds paint . . . beautifully. With Phenolic Timblend there's no checking, no knots, no grain raise.

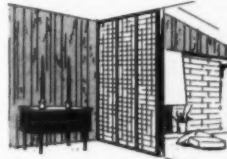
If you are interested in learning more about this amazing new wood product send for a *free* sample and our Phenolic Timblend bulletin. Write: **Roddis Plywood Corporation, Marshfield, Wisconsin.**



Use for siding



Cabinets, underlayments



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take out the "bugs"

... before you build

"Bugs" which develop during construction can be ironed out. It's after the building is erected and real honest-to-goodness bugs, such as termites and other wood destroying insects, show up . . . that problems really start.

Factors which set up the conditions conducive to insect and decay attack may be moisture, high humidity, nearness to soil or masonry contact.

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Pittsburgh 19, Pa.

W-92



PRESSURE-TREATED LUMBER

TERMITE AND DECAY RESISTANT • CLEAN
PAINTABLE • ODORLESS • FIBER-FIXED



Small fork-lift truck handles materials on high school job

Versatile Kwik-Mix Hi-Lifter fork truck with 22½-ft. lift working atop 6-ft.-high timber platform proves a standout performer on a high school job near Syracuse, N. Y.

John G. Alibrandi Construction Corp., of Syracuse, during construction of West Genesee Junior High School, put the combination to work to solve a construction problem. Alibrandi's job involved hoisting ribbed-steel flooring to three levels of the school building. Third floor stood 28 ft. above grade. Only solution, at first, seemed to be erection of a mechanical hoist.

But Alibrandi solved the problem by first erecting a wooden platform 6 ft. high at the base of the building. He

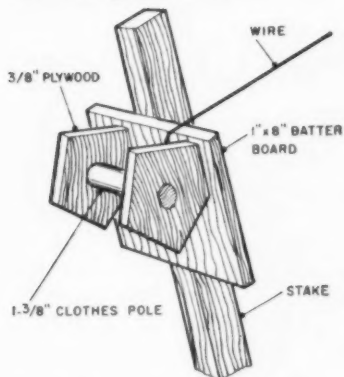
then built a timber ramp leading from the ground to the platform.

This platform combined with the Hi-Lifter and its 22½ ft. of lift to make a speedy work team.

The truck easily picks up palletized loads of roofing dumped near the work spot. And it more easily moves back and forth between platform and stockpile. The truck travels at speeds up to 18 mph, can lift up to 6,000 lb., and climbs a 70% grade fully loaded.

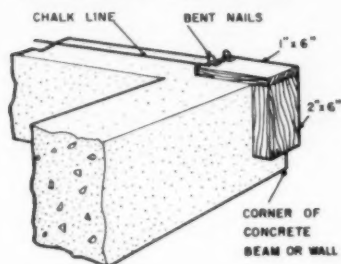
The truck serves contractor Alibrandi in more ways than one. In addition to the pallet fork, the truck boasts a concrete hopper attachment, a combination lift arm and hook, and vertical arm clamps.

How to make a tightener for wire grade lines



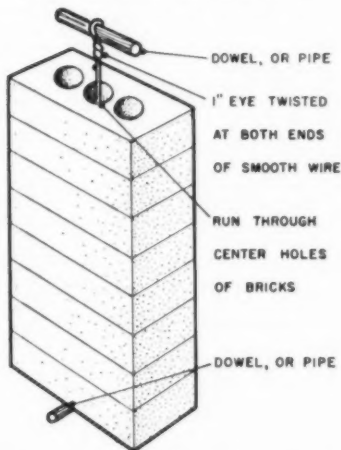
Cut 2 plywood pentagons to fit in a 5-in. circle. Fasten to ends of a length of clothes pole. After wire is taut, place pentagon against batterboard and drive stake into the ground.

Let one man strike a line



Two holders like this, easily made from scrap lumber, will let one man strike a line.

An emergency brick carrier



This handy device lets a man carry eight bricks up a ladder.



PRECISION Parts Corporation has built its **QUALITY** folding stairway business on 20 years of standing behind all products 100%—and giving builders a dependable product. The nationally-advertised brand-names **PRECISION & SIMPLEX** mean quality to your prospective home buyer. *Paul V. Harmon*

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The Super Simplex Stairway is stronger... bigger... (30" x 54" ceiling opening). It's especially built to enable home owners to take full advantage of the attic for safe, dry storage of large equipment and furniture. This Precision-Built Stairway is a symbol of quality to home buyers everywhere... a positive sales feature for you!

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- Double hinges for ruggedness and strength
- Concealed door hinges
- Full width safety treads
- Two steel rods under each tread
- Highest quality materials throughout
- No attic space required
- Shipped in one package.

Precision and Simplex Stairways stocked for your convenience by more than 200 jobbers in leading cities of the U.S.



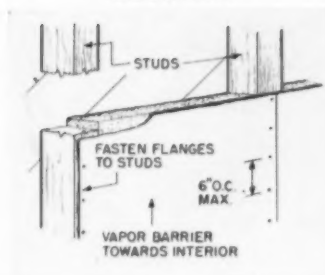
PRECISION PARTS CORPORATION

400-AB North First St., Nashville 7, Tennessee

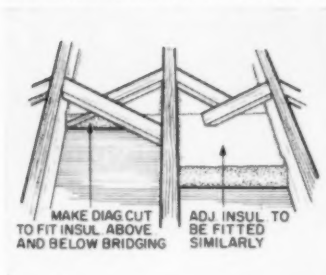
NAME _____
 ADDRESS _____
 CITY _____ ZONE _____ STATE _____

Insulation: Which type? Where? How much?

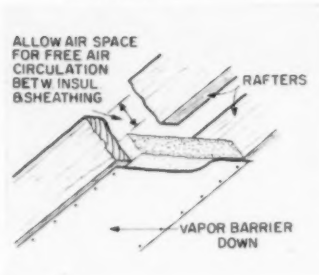
SIDEWALLS



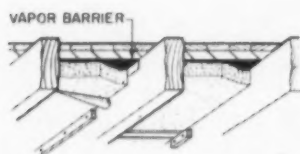
CEILING JOISTS (over heated areas)



RAFTERS (pitched roof)

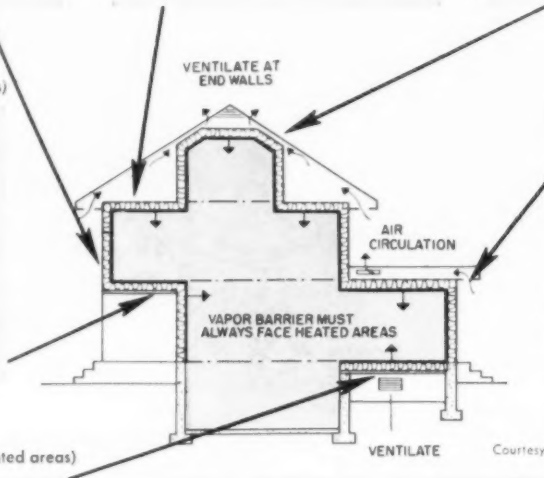


CEILING JOISTS (over unheated areas)

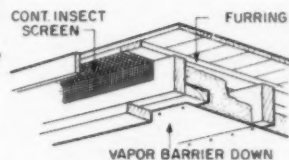


EITHER VAPOR PERMEABLE ASPH FELT, WOOD STRIPS OR LACING WIRE, TO HOLD INSUL. AGAINST FLOORING

VENTILATE AT END WALLS

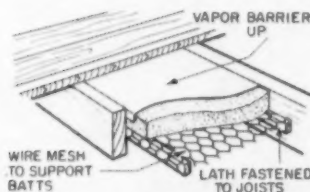


RAFTERS (flat roof or ceiling)



INSTALL FURRING AND SCREEN AS SHOWN IF FREE AIR CIRCULATION PARALLEL TO RAFTERS CANNOT BE PROVIDED

FLOOR JOISTS (over unexcavated areas)



ALTERNATIVES: LACE BAILING WIRE BETW. JOISTS SECURED WITH STAPLES, OR ARCH. II GAUGE WIRE BETWEEN JOISTS

Courtesy Insulation Board Institute, Chicago, Ill.

Where heat is lost or gained in a building

Heat loss in winter*

Walls	32.9%
Ceilings & roof	22.2%
Floors	0.3%
Glass and doors	29.9%
Infiltration	14.7%

Heat gain in summer*

Walls	33.6%
Ceilings & roof	24.2%
Floors	3.7%
Glass and doors	26.4%
Infiltration	12.1%

*based on typical two-story homes with basements

QUESTION: There is such a variety of insulating materials on the market that I often find myself wondering just which type to use in various parts of the house. Please tell me where I can get information on insulation; which types to use; where to use it; and how much is necessary. Any installation details would also be helpful, particularly on placement of vapor barriers.

James McKenna
Builder
Newark, N.J.

ANSWER: "Fundamentals of Building Insulation," prepared by the Insulation Board Institute, 111 West Washington St., Chicago 2, Ill., is a concise and informative treatment of currently available insulation. It gives the fundamentals of heat transfer, basic heat-loss calculations, when, where, and how much insulation to use, suggestions on application, and facts on condensation control—in language intended for the man who will be

(continued on page 168)

If you have a problem in ...

- planning
- financing
- remodeling
- framing
- wiring
- heating
- other

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c/o AMERICAN BUILDER
30 Church St. N.Y. 7, N.Y.

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RESEARCH PRODUCTS *Cooperative*
Madison 1, Wisconsin

RESEARCH PRODUCTS

Dept. 960, Madison 1, Wisconsin

Send me complete information on the Aprilaire Humidifier.

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Address _____

City _____ State _____

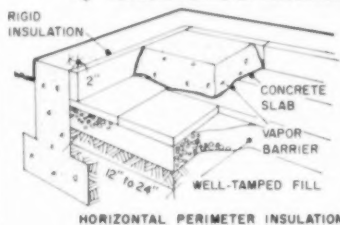
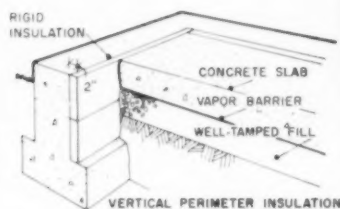
ASK THE EXPERTS

(Continued from page 166)

using and installing insulation materials.

Basically—insulation retards heat flow out of a building during winter, and into a building in summer. Properly installed insulation permits maintenance of comfortable air temperature, as well as warm wall and ceiling temperatures in winter. In summer, it will maintain indoor comfort by keeping wall and ceiling surface temperatures lower than the outdoor temperature.

Where to insulate—In new construction, the general rule is, insulate the walls, ceilings, and floor immediately surrounding the area to be heated in winter (see sketch). If the attic is not being used, place the insulation in the attic floor. Where the attic is to be used, insulate the walls and ceiling, following the outline of the room.



Where a full basement is used, it is not necessary to insulate the first floor joists. Where the house is built over a crawl space, insulation should be placed in the floor (see sketch). Where the first floor is slab-on-grade, rigid polystyrene slabs, 2" thick, are advisable around the perimeter.

When finishing off basements, wall insulation is recommended. In attics, follow the outlines of the new rooms outside walls and ceilings. When adding new rooms or closing in porches, insulate as you would in any new construction.

How much insulation—The amount of insulation used in a house varies widely, depending on

(Continued on page 170)

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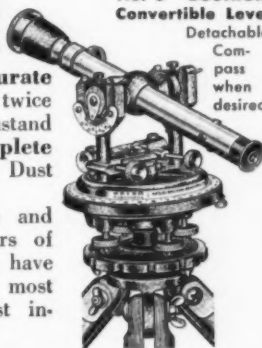
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Dept. AB-60

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- Horizontal planking supports every 16 in.
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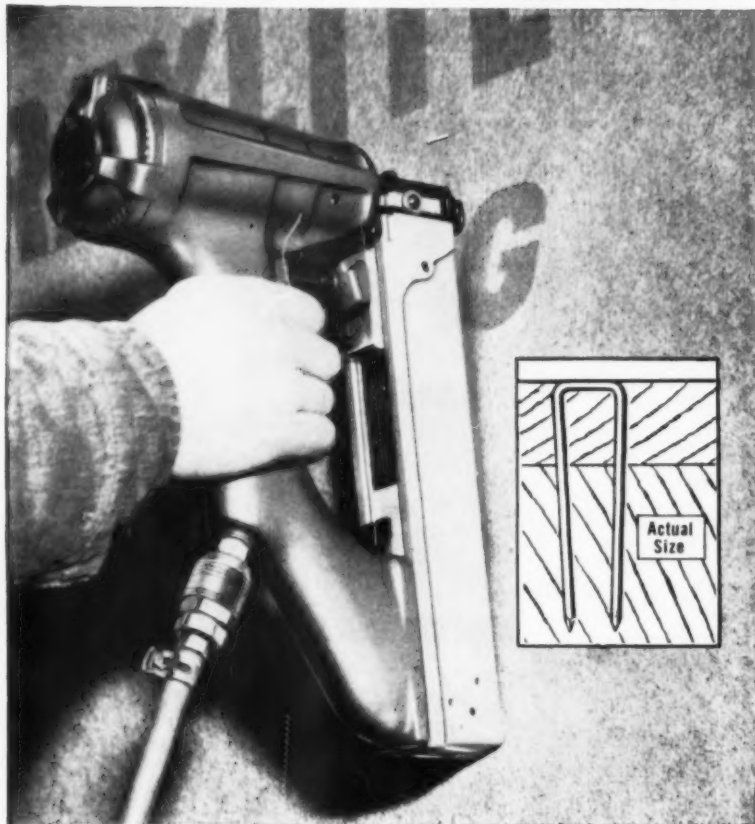
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ASK THE EXPERTS

(Continued from page 168)

location and orientation of the house, type of construction, size of heating and cooling equipment, type and cost of fuel, etc. In general, the industry's rule of thumb is rapidly becoming 6-4-2. That is, 6" in the ceiling, 4" in the walls, 2" in floors over crawl spaces, and 2" of rigid perimeter insulation where slab-on-grade construction is used. These amounts fulfill normal requirements for insulating electrically heated, and cooled houses, and apply as well where other heating and cooling systems are used.

Types of insulation—Here are the five major types of insulation and their applications:

• **Structural insulation board**—made from wood, cane, and other organic fibers. Combines structural rigidity with insulating properties. Used as interior finish for walls and ceilings, roof-deck slab in open-beam construction, roof insulation, sheathing, shingle backing, and insulating formboard.

• **Blankets and batts**—made from processed mineral wool and vegetable fibers. Usually installed in the sidewalls of new buildings, in attics and roofs or building additions. Blankets and batts usually have the added advantage of an integral vapor barrier.

• **Loose fill**—bulk materials, like mineral wool, wood fiber, perlite, vermiculite. Used to fill in wall cavities in existing buildings, and as ceiling fill in new construction. Can also be poured into concrete block cavities, or into air spaces in cavity-wall construction.

• **Slab or block insulation**—most commonly used of these in home construction is rigid polystyrene for perimeter insulation. Installation techniques vary—check manufacturers specs.

• **Reflective insulation**—normally aluminum foil. Used in stud, rafter and joist spaces to insulate walls, roofs, ceilings, and floors.

Vapor barriers—The basic rule in using vapor barriers is to keep the barriers toward the heated side. In walls, this means next to the finished interior surface; in ceilings, under the blanket or bulk insulation.

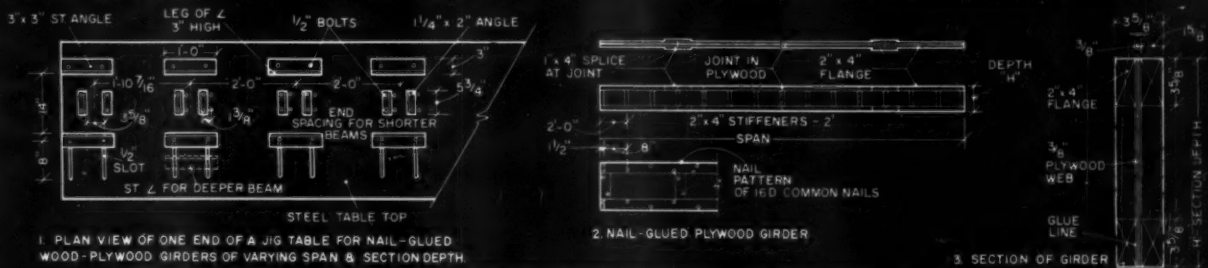
Vapor barriers should be used under slabs poured on grade, on the floor of crawl spaces, and around the exterior of concrete-block basement walls.

Editor

AMERICAN BUILDER

AMERICAN BUILDER

BETTER DETAIL PLATE



1. PLAN VIEW OF ONE END OF A JIG TABLE FOR NAIL-GLUED WOOD-PLYWOOD GIRDERS OF VARYING SPAN & SECTION DEPTH.

2. NAIL-GLUED PLYWOOD GIRDER

3. SECTION OF GIRDER

SPAN-DEPTH-SPACING TABLE FOR WOOD-PLYWOOD GIRDERS LIMITED TO A DEFLECTION OF SPAN/360

GIRDER SECTION DEPTH (Inches)	GIRDER SECTION (Feet D.C.)	SPAN (FEET)—GIRDERS SIMPLY SUPPORTED—VALUES IN TABLE IN PSF UNIFORM LOADING																											
		8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28							
14	1	1150	1020	922	835	768	669	536	436	358	300	251	213	184	158	138	120	107	93	84	76	67							
	2	575	510	461	418	384	355	268	218	179	150	126	107	92	79	69	60	54	47	42	38	34							
	3	382	340	308	276	256	278	178	145	119	100	84	71	61	53	46	40	36	31	28	25	22							
	4	278	255	231	207	192	157	134	109	90	75	63	53	46	40	35	30	27	23	21									
	5	230	204	184	167	154	154	107	87	72	60	50	43	37	32	28	24												
	6	192	170	154	139	128	112	90	73	60	50	42	36	31	26	23													
	7	164	146	132	119	109	96	77	62	51	43	36	30	26	23														
	8	144	127	115	104	95	81	67	55	45	38	31	27	23															
15	1	700	640	590	427	358	300	267	229	189	164	144	127	111	100	89	80	72	64	56	49	40							
	2	354	320	290	275	179	130	128	110	95	82	72	64	56	49	42	35	29	25	22									
	3	236	213	173	143	119	100	85	73	63	55	48	42	37	33	30	27												
	4	177	160	130	107	90	75	64	55	47	41	36	32	28	25	22													
	5	142	128	104	86	72	60	51	44	38	33	29	25	22															
	6	118	107	87	72	60	50	43	37	32	27	24	21																
	7	101	91	74	61	51	43	37	31	27	23	21																	
	8	89	80	65	54	45	38	32	28	24																			
16	1	656	612	504	420	353	300	258	222	193	169	149	131	118	104	93													
	2	329	301	252	210	177	150	129	111	97	85	75	66	59	52	47													
	3	213	200	168	140	118	100	88	74	64	55	48	41	36	31	27													
	4	164	151	126	105	88	75	65	56	48	41	35	30	26	23														
	5	131	121	101	84	71	60	52	44	39	34	30	26	24															
	6	110	100	84	70	59	50	43	37	32	28	25	22																
	7	94	86	72	60	50	43	37	32	28	24	21																	
	8	82	75	63	52	44	38	32	28	24	21																		
17	1	575	499	411	251	305	250	227	198	173	153	138	122	109															
	2	288	245	205	176	130	130	114	99	87	77	69	61																
	3	191	163	137	117	100	87	76	67	58	51	46	41																
	4	141	122	103	88	75	65	57	50	43	38	35	31																
	5	115	98	82	70	60	52	45	40	35	31	28	24																
	6	96	85	72	60	52	45	38	33	29	26	23																	
	7	82	70	59	50	43	37	32	28	25	22																		
	8	72	61	51	44	38	33	28	25	22																			
18	1	540	473	404	347	298	260	227	200	178	158	140	123																
	2	270	237	202	174	149	130	114	100	89	79	70	64																
	3	180	158	135	110	99	87	76	67	59	53	47	42																
	4	135	118	101	87	75	65	57	50	45	40	36	32	28	25														
	5	108	95	81	69	60	50	45	40	36	32	28	25																
	6	90	79	67	58	50	43	38	33	30	26	23																	
	7	77	68	58	50	43	37	32	29	25	23																		
	8	68	59	51	43	37	33	28	25	22																			
19	1	540	440	480	396	340	296	260	229	202	180	160	144																
	2	270	270	230	198	170	148	130	115	101	90	80	72																
	3	180	180	153	122	113	99	87	76	67	60	53	48																
	4	135	135	115	99	85	74	65	57	51	45	40	36																
	5	108	108	92	79	68	59	52	46	40	36	32	28																
	6	90	90	77	66	57	49	43	38	34	30	27	24																
	7	77	77	66	57	49	42	37	33	29	26	23																	
	8	68	68	58	50	43	37	33	29	25	23																		
20	1	575	487	447	367	326	292	258	229	202	182	162	142																
	2	270	255	242	224	194	168	147	129	115	101	91	81																
	3	171	161	149	129	112	98	86	76	67	61	54																	
	4	128	121	112	97	84	73	65	57	51	46	41																	
	5	102	97	89	77	67	59	52	46	40	36	32																	
	6	85	81	75	65	56	49	43	38	34	30	27																	
	7	73	69	64	55	48	42	37	33	29	25	23																	
	8	64	61	56	48	42	37	33	29	25	23																		
21	1	481	433	378	331	291	258	229	204	182																			
	2	231	217	189	166	148	129	115	102	91																			
	3	154	144	125	110	97	86	76	68	61																			
	4	113	108	95	83	73	65	57	51	45																			
	5	92	87	76	66	58	52	46	41	36																			
	6	77	72	63	55	49	43	38	34	30																			
	7	66	62	54	47	42	37	33	29	26																			
	8	57	54	47	41	36	32	28	25	23																			
22	1	422	369	324	283	258	229	204	182	162																			
	2	220	211	185	162	144	128	115	102																				
	3	146	141	123	108	96	85	76	68																				
	4	110	106	92	81	72	64	57	51																				
	5	88	84	74	65	57	51	46	41																				
	6	74	70	62	54	48	42	37	33																				
	7	63	60	53	46	41	37	33	29																				
	8	55	53	46	41	36	32	29	26																				

Data courtesy Bryan Radcliffe, Professor, Michigan State University, East Lansing, Mich.

Note: Values to left of heavy line limited by bearing; those to right, by flexure.

How to plan and build plywood girders

Plywood girders or wood I-beams can reduce the cost of lintels and/or structural beams in residential roof and floor systems.

Andy Place (South Bend, Ind.), for example, uses them instead of costlier fitch plates over 16-ft. garage door openings. When making

beams, use the jig shown above. Drive nails home to ensure a good glue bond. (For more on gluing see page 70.)

6-IN-ONE

"BIG SIX" NEWS FOR BUILDERS

GENERAL CHEF combines six kitchen-essentials in one compact, efficient unit:

REFRIGERATOR • OVEN • SINK STOVE • FREEZER • STORAGE

Every model available in white or several wood-grain finishes. Entire base unit factory-assembled and shipped in one crate. Available on all units: garbage disposal; one-piece stainless steel tops. And don't forget: GENERAL CHEF is the only Complete Kitchen Unit with factory-owned, nation-wide sales and service.



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Dept. J-14, 4542 E. Dunham St.
Los Angeles 23, California

GENERAL CHEF

World's largest-selling
COMPLETE KITCHEN UNIT

BLUEPRINT HOUSE

(Continued from page 81)

AMERICAN BUILDER HOUSE No. 274

FIRST FLOOR LEVEL ONLY	335 sq. ft.
SECOND FLOOR LEVEL ONLY	700 sq. ft.
THIRD FLOOR LEVEL ONLY	760 sq. ft.
TERRACE AREA ONLY	165 sq. ft.

—EARTH EXCAVATION & GRADING—

Topsoil 6" Grade Exc. & Pile	4,690 sq. ft.
Earth Basement Excavate	3,615 cu. ft.
Earth Floor Excavate	240 cu. ft.
Earth Foundation Exc. & B'fill	1,215 cu. ft.
Earth Hand Footing Exc. & B'fill	480 cu. ft.
Exc. Mater. Floor Soffit	1,030 cu. ft.
Exc. Mater. Surplus Disposal	2,825 cu. ft.
Gravel 4" Floor Subfill	1,020 sq. ft.
Water Encountered Drainage	Sum

—CONCRETE CONSTRUCTION & FINISH—

2500# Conc. Wall Footings	295 cu. ft.
2500# Conc. Wall Footings Forms	370 sq. ft.
2500# Conc. 4" Floor & P.H. Slab O.G.	1,020 sq. ft.
2500# Conc. 4" Terrace Slab O.G.	165 sq. ft.
2500# Conc. 4"x2'6x3'6" Furn. Pad & Fms.	1 unit
2500# Conc. Floor Haunch	12 cu. ft.
2500# Conc. 12x7" Step, Forms & Finish	7 lin. ft.
2500# Conc. 9x7" Step, Forms & Finish	25 lin. ft.
P.C. Conc. 2'x1'6x4" Splash Block	4 units
Monolithic Floor Finish	440 sq. ft.
Monolithic Floor Subfinish	570 sq. ft.
Monolithic Terrace & P.H. Float Finish	170 sq. ft.
Kraft Paper Floor & Terr. Prot. & Curing	1,185 sq. ft.
Rigid Fiber 1" Perimeter Insulation	95 sq. ft.
Com. Mortar 3/4" Base Plate Grouting	3 units
Premolded 1/2x4" Perim. Expan. Joint	80 lin. ft.
Trade Items Set-In	Sum

—BRICK & BLOCK CONSTRUCTION & VENEER—

Face Brick 4" Foundation C.B. Veneer	145 sq. ft.
Face Brick 4" Ext. Wall C.B. Veneer	1,130 sq. ft.
Face Brick 4x8" Wall Cap	30 lin. ft.
Face Brick 4x7" Window Sill	40 lin. ft.
Conc. Block 12" Foundation Wall	845 sq. ft.
Conc. Block 8" Foundation Wall	270 sq. ft.
Conc. Block 8" Foundation Backing	145 sq. ft.
Conc. Block 4" Ext. Wall Backing	1,130 sq. ft.
Conc. Block 4x8" Floor Fill-In	35 lin. ft.
Acid & Mort. Exposed Brick Clean & Point	1,320 sq. ft.
Acid & Mort. Exposed Block Clean & Point	530 sq. ft.
W.P. Com. Mort. 3/4" Foundation Parging	820 sq. ft.
Mastic 1 Ct. Ext. Wall Dampproofing	885 sq. ft.
Oakum & Mast. Door & Window Calking	365 lin. ft.
Trade Items Built-In	Sum

—GYP. BOARD T.J. WALL & CEIL. BOARDING—

Gypsumboard 1/2" T.J. Wall Boarding	3,580 sq. ft.
Gypsumboard 1/2" T.J. Ceiling Boarding	1,675 sq. ft.
Gypsumboard 1/2" Wall Lining	375 sq. ft.
26-ga. Metal Corner Beads	315 lin. ft.

—METAL ORNAMENT & MISC. WORK—

12 WF Steel 27# Floor Beam	14 lin. ft.
3x4x3/8" St. 8.5# Dr. & Wind. Lintel	58 lin. ft.
3 1/2"-d. Steel 20# Lally Column	7 lin. ft.
12x10x3/8" St. 12.69# Bearing Plate	2 units
5 1/2x5 1/2x1/4" Stl. 2.15# Bearing Plate	1 unit
Steel 1/2x12" Found. Anchor Bolts	51 units
1 1/2"-d. Galv. St. 30# Area Guard Railing	15 lin. ft.
1 1/2"-d. Galv. St. Stair Hand Railing & Support	10 lin. ft.

—CERAMIC FLOOR & WALL TILING—

Ceramic Floor Tiling	100 sq. ft.
Ceramic Wall Tiling	350 sq. ft.
Ceramic Seat Tiling	10 sq. ft.
Ceramic 6" Cove Wall Base	65 lin. ft.

—ASPHALT FLOOR TILING—

Asphalt 1/8" Floor Tiling	395 sq. ft.
Gr. Prf. Asp. 1/8" Floor Tiling	175 sq. ft.

—OAK 25/32— FINISH FLOORING—

Oak 25/32" Finish Flooring	950 sq. ft.
Machine 3 X Floor Sanding	950 sq. ft.
Seal & Varn. 3 Ct. Floor Protection	950 sq. ft.

—LUMBER FRAMING & CONSTRUCTION—

4x12" Fir 18" Soffit Outrigger	1 unit
4x12" Fir Roof Ridge Beam	65 lin. ft.
4x10" Fir Door Lintel	15 lin. ft.
4x8" Fir Roof Beam	20 lin. ft.
4x8" Fir 18" Soffit Outrigger	7 units
4x6" Fir Wind. & Door Lintel	60 lin. ft.
3-2x8" Fir Ceiling Beam	25 lin. ft.
2-2x8" Fir Door Lintel	5 lin. ft.
2x8" Fir Bolted Wall Plate	160 lin. ft.
2x8" Fir Joist Header	80 lin. ft.
2x8" Fir Floor Joists	1,130 lin. ft.
2x8" Fir Roof Rafters	1,675 lin. ft.

2-2x5" Fir Roof Opening Blocking	5 lin. ft.
2-2x6" Fir Door & Wind. Lintel	60 lin. ft.
2-2x6" Fir Wall Plate	15 lin. ft.
2x6" Fir Wall Sill	15 lin. ft.
2x6" Fir Roof Ridge Board	45 lin. ft.
2x6" Fir Wall Studs	120 lin. ft.
2-2x4" Fir Door Lintel	10 lin. ft.
2-2x4" Fir Part. & Wall Plate	300 lin. ft.
2x4" Fir Part. & Wall Sill	265 lin. ft.
2x4" Fir Wall Studs	1,165 lin. ft.
2x4" Fir Partition Studs	1,370 lin. ft.
2x4" Fir Soffit Framing	45 lin. ft.
1x3" Fir Floor Joist Bridging	350 lin. ft.
1x2" Fir Wall Furring	885 lin. ft.
1x6" T&G Floor Lining	1,130 sq. ft.
1x6" T&G Fir Roof Lining	1,675 sq. ft.
Fir Plywood 1/2" Ext. Wall Lining	1,000 sq. ft.
Fir Plywood 1/2" Floor Lining	395 sq. ft.
15# Felt Floor Isolation	950 sq. ft.
15# Felt Ext. Wall Isolation	1,000 sq. ft.
15# Felt Roof Isolation	1,675 sq. ft.
Blanket 4" Roof Soffit Insulation	1,255 sq. ft.
Blanket 4" Wall Insulation	1,000 sq. ft.
Asphalt 210# Roof Shingles	1,675 sq. ft.
Wood Misc. Furring & Grounds	Sum
Metal Structural Hardware	Sum

—WOOD EXT. & INT. MILLWORK—

1 1/2" Wh. Pine 3'x6'8" Glaz. Ext. Dr., F.T.H.	1 unit
1 1/2" Wh. Pine 2'8x6'8" Glaz. Ext. Dr., F.T.H.	2 units
1 1/2" Wh. Pine 2'6x6'8" Flu. Ext. CDr., F.T.H.	5 units
1 1/2" Wh. Pine 2'4x6'8" Flu. Ext. Dr., F.T.H.	2 units
1 1/2" Wh. Pine 2'x6'8" Flu. Ext. Dr., F.T.H.	1 unit
1 1/2" Wh. Pine 4'3x2'6" Fold. Pass. Dr., FT&H	1 unit
1 1/2" Wh. Pine 6'x6'8" Flu. Fold. Door, F.T.H. & Trk	2 units
1 1/2" Wh. Pine 5'x6'8" Flu. Fold. Door, F.T.H. & Trk	1 unit
1 1/2" Wh. Pine 4'x6'8" Flu. Fold. Door, F.T.H. & Trk	1 unit
1 1/2" Wh. Pine 3'x6'8" Flu. Fold. Door, F.T.H. & Trk	1 unit
Birch Veneer 5'6x2'x3' Base Cabinet	1 unit
Birch Veneer 6'3x2'x3' Sink Cabinet	1 unit
Birch Veneer 6'x2'x3' Island Cabinet	1 unit
Birch Veneer 2'x1'x6'6" Bm. Cabinet	1 unit
Birch Veneer 2'x2'x4'9" Oven Cabinet	1 unit
Birch Veneer 6'6x2'x1' Wall Cabinet	1 unit
Birch Veneer 3'x2'x1' Wall Cabinet	1 unit
Birch Veneer 2'6x2'x1' Susp. Cabinet	1 unit
Birch Veneer 3'6x1'6x1' Susp. Cabinet	1 unit
Birch Veneer 4'x16'x3' Sink Vanity Table	1 unit
Birch Veneer 3'6x1'6x3' Sink Vanity Table	1 unit
Hardwd. & Pine 9x3" Stair	2 units
Hardwd. & Pine 8x3" Stair	1 unit
Hardwd. & Pine 15"x13" Platf. Riser	1 unit
Hardwd. & Pine 10"x7"x6'6" Platf. Step	1 unit
Hardwd. & Pine 1 1/4"-d. Hand Rail & Bracket	15 lin. ft.
Hardwd. 1 1/2"-d. Closet Pole & Support	35 lin. ft.
White Pine 1x12" Closet Shelf	45 lin. ft.
White Pine 1x10" Roof Fascia	120 lin. ft.
White Pine 1x6" Gable Rake	110 lin. ft.
White Pine 1x4" Ext. Wall Fascia	20 lin. ft.
White Pine 1x2 1/2" Gable Rake Molding	110 lin. ft.
White Pine 1x3" Shelf Cleat	70 lin. ft.
White Pine 4"x2'x2' Dwarf Partition	2 units
White Pine 1/2"x5 1/2" Wall Base	420 lin. ft.
White Pine 4" Platform Guard Rail	40 lin. ft.
Redwood Ext. Wall Siding	175 sq. ft.
Cedar Ext. Wall Shakes	825 sq. ft.
Plywood 1/2" Soffit Boarding	310 sq. ft.
Mesh 4" Cont. Soffit Screen	120 lin. ft.
Metal Finish Hardware	Sum
1/2" D.S.A. Class Door Panes	10 sq. ft.

—METAL SHEET WORK—

16-oz. Copper 8" Termite Shield	170 lin. ft.
16-oz. Copper 8" Base Flashing	20 lin. ft.
16-oz. Copper 6" Base Flashing	12 lin. ft.
16-oz. Copper 4x5" Roof Gutter	115 lin. ft.
16-oz. Copper 3x4" Rain Leader	50 lin. ft.
16-oz. Copper 18x4" Roof Vents	2 units
Copper Leader Strainer	4 units

—ALUM. & GLASS SLIDING DR. & WIND. & ACC.—

Alum. & Glass 8x7' Sliding Door & Acc.	2 units
Alum. & Glass 6'6x9'6" Slid. & Fix. Wind. & Acc.	1 unit
Alum. & Glass 8'x4'2" Slid. Window & Acc.	1 unit
Alum. & Glass 8x4' Slid. Window & Acc.	1 unit
Alum. & Glass 6'x4'2" Slid. Window & Acc.	1 unit
Alum. & Glass 6x3' Slid. Window & Acc.	2 units
Alum. & Glass 4x3' Slid. Window & Acc.	2 units
Alum. & Glass 3'3x2'3" Sliding Window & Acc.	4 units
Alum. & Glass 6x2' Sliding Window & Acc.	1 unit
Alum. & Glass 3x3' Sliding Window & Acc.	1 unit
Alum. & Mesh Door Screens & Hdws.	170 sq. ft.
Alum. & Mesh Window Screens & Hdws.	215 sq. ft.

—PAINT EXT. & INT. FINISH—

Lead & Oil Ext. Millwork 3 Coats	1,575 sq. ft.
Lead & Oil Gypbd. Wall 3 Coats	3,580 sq. ft.
Lead & Oil Gypsumbd. Cell. 3 Coats	1,675 sq. ft.
Lead & Oil Ext. Doors 3 Coats	75 sq. ft.
Lead & Oil Metal Work 3 Coats	50 sq. ft.
Stain & Varn. Int. Millwork 4 Coats	2,425 sq. ft.

—METAL & GLASS TOILET ACCESSORIES—

Metal & Glass 2'9x24" Medium Cabinet & Acc.	1 unit
Metal & Glass 1'6x24" Medium Cabinet & Acc.	1 unit

(Continued on page 176)

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Addition to Northwest Junior High, Kansas City, Kansas. Contractor: Haren & Laughlin Construction Company. Heating Contractor: Mulner Plumbing & Heating. Heating Sub-contractor: Blake Heating & Air Conditioning Co. Architect: Radolinski-Meyn-Deardorf.

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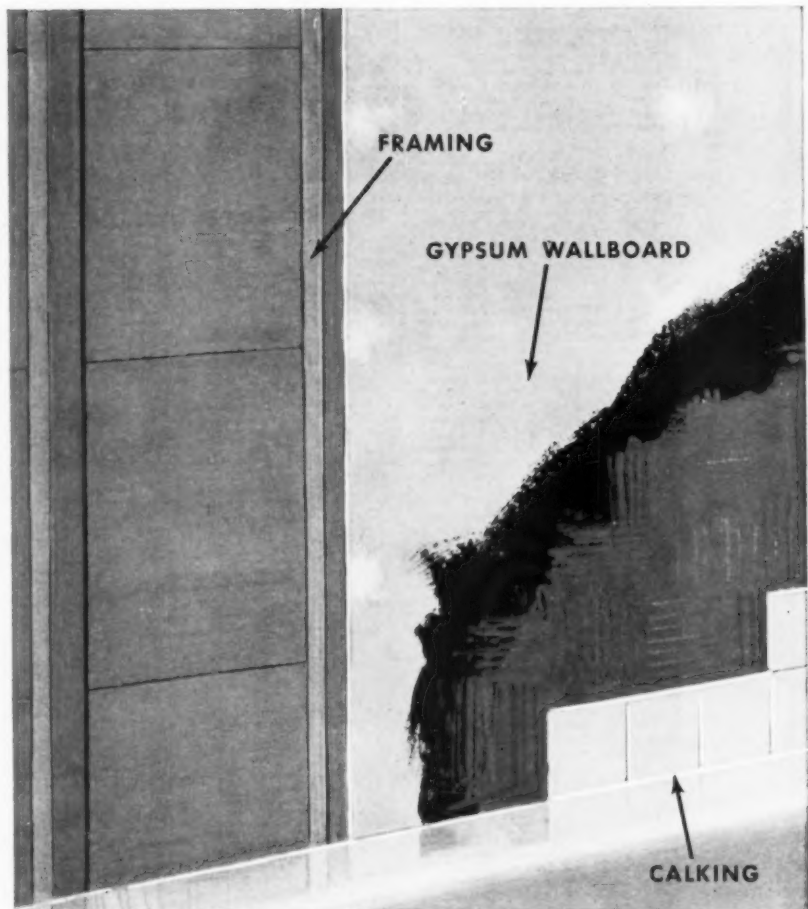
How to use gypsum wallboard

Here's what the Gypsum Association recommends to help you avoid callbacks for tile-on-wallboard bathroom installations:

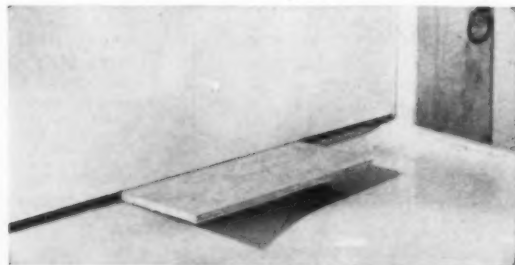
- **Framing**—All framing must permit the inside lip of the tub, prefabricated shower receptor, or shower pan to be flush with the outside face of the wallboard. Use furring where necessary to meet this requirement.

- **Installation**—Full-size sheets of wallboard should be used, to eliminate butt joints. Never use scraps of wallboard in the bathroom. Make sure that paper-bound edge of the wallboard faces down over the tub receptor or pan, and allow 1/4-in. clearance between edge of wallboard and the fixture. All joints should be treated with tape and two coats of adhesive joint cement.

- **Sealing**—Apply a waterproof sealer to the entire surface of the wallboard and all edges or cutouts made for pipes or fixtures. This *must* be done before applying tile or tile adhesive. A rubber-base or varnish-type sealer is recommended. Where a waterproof-type tile adhesive is used as a sealer, it's applied in a separate operation, 1/16-in. thick and independent of the application holding the tile.



Three simple steps prevent capillary water action, avoid



CAPILLARY ACTION of water is prevented by maintaining a 1/4-in. space between edge of wallboard and tub rim. Wood wedge is temporary. Most callbacks for tile-on-wallboard result from failure to take this measure.

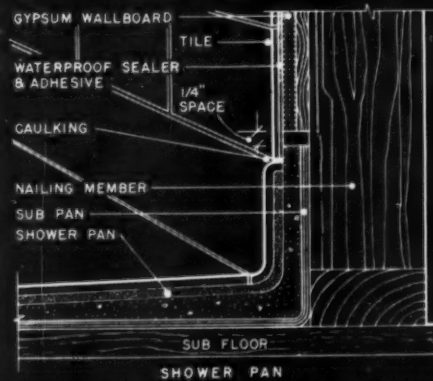
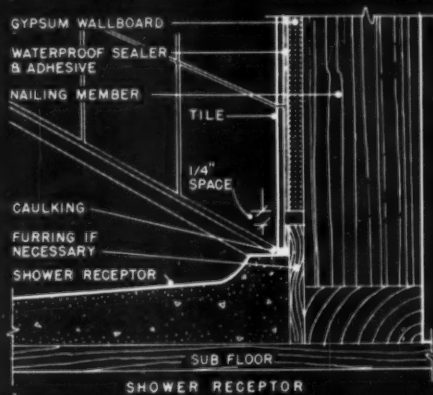
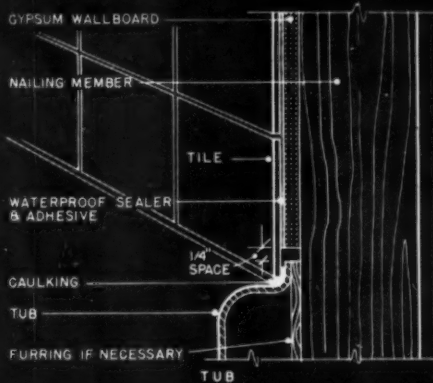


CALKING ALL OPENINGS around plumbing fixtures insures watertight installation. A notched trowel should be used to apply the adhesive, to insure an even layer. Follow the manufacturer's specs on application.

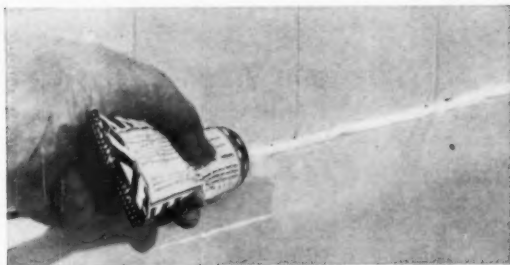
in bathroom installations



Framing installation details for tile-on-wallboard in tubs and showers



decomposition of wallboard



FIRST ROW OF TILES should be placed down over the 1/4-in. space to meet rim of the tub (see detail). Area between fixture and tile should then be properly caulked. Care in this operation is critical in eliminating callbacks.

Courtesy Gypsum Assn.

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BLUEPRINT HOUSE

(Continued from page 173)

Metal & Glass 4'x24" Wall Mirror & Fr.	1 unit
Chrome Metal Toilet Paper Holder	3 units
Chrome Metal Soap Holder	3 units
Chrome Metal 30" Towel Racks	3 units
Chrome & Cloth 3" Shower Rod & Curtain	1 unit

—PLUMBING SYSTEM & FIXTURES—

Water Service Connection & Piping	1 unit
Sanitary Service Connection & Piping	1 unit
Gas Service Connection & Piping	1 unit
Gas Furnace Connection & Piping & Acc.	1 unit
Hose Bibb Connection Piping & Acc.	2 units
Lavatory Piping & Accessories	3 units
Bathub Piping & Accessories	1 unit
Water Closet Piping & Accessories	3 units
Kitchen Sink Piping & Accessories	1 unit
Shower Head Piping & Accessories	2 units
Elec. H.W. Heat. Piping & Accessories	1 unit
Shower Recep. Piping & Accessories	1 unit

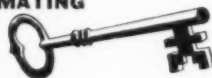
—HEATING SYSTEM & FIXTURES—

Gas Warm Air Furnace & Accessories	1 unit
Gas Warm Air Ducts & Registers	21 units
Gas Warm Air Temp. Control Equipment	1 unit
Gas Warm Air Vent Flue & Connections	1 unit

—ELECTRICAL SYSTEM & FIXTURES—

Electric Service Connection	1 unit
Electric Service Panel & Switch	1 unit
Telephone Service Connection	1 unit
H.W. Heater Connections & Wiring	1 unit
Gas Furnace Connections & Wiring	1 unit
Oven Furnace Connections & Wiring	1 unit
Exhaust Fan Connections & Wiring	1 unit
Range Connections & Wiring	1 unit
Single Switch Outlets Wiring	14 units
3 Way Switch Outlets Wiring	8 units
Convenience Outlets Wiring	31 units
Telephone Outlets Wiring	3 units
Television Antenna Wiring	1 unit
Entry P. Butt. Chime Wiring	2 units
Ceiling Fixtures & Bulbs	13 units
all Fixtures & Bulbs	2 units
Ext. Weathpf. Fixtures & Bulbs	2 units
Ext. Weathpf. Outlet & Wiring	2 units

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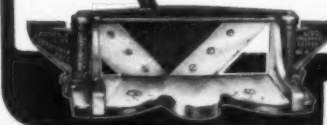
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Advertiser's Index "The better you buy—the better you build—the better you sell"®

A	Albitibi Corporation	21	I	Inland Homes Corporation	65
	Allied Chemical Corporation			In-Sink-Erator Manufacturing Co.	32, 33
	Barrett Division	130, 131		Insulite Division, Minnesota and	
	American Brass Company, The	123		Ontario Paper Company	52, 53
	American Gas Association	132, 133		I-T-E Circuit Breaker Co., Bulldog	
	American Radiator & Standard			Electric Division	43
	Sanitary Corp.	110, 111	K		
	American Siskrafft Corporation	155		Keasbey & Mattison Company	20
	American Telephone & Telegraph Co.	3		Kennatrack Corporation	162
	Andersen Corporation	108, 109		Kentile, Inc.	12
B				Keuffel & Esser Company	152
	Bar-Brook Mfg. Co., Inc.	142		Keystone Steel & Wire Company	48, 49
	Barrett Division, Allied Chemical			Kitchen Compact Inc.	106
	Corporation	130, 131		Knape & Vogt Mfg. Co.	54
	Berger & Sons, Inc., C. L.	147		Koppers Company, Inc. Wolman	
	Berry Door Corporation	Cover 2		Preservative Dept.	164
	Black & Decker Mfg. Co., The	169	L		
	Bostitch	149		Lawson Company, The, F. H.	135
	Bostrom-Brady Mfg. Co.	159		Louisville Cement Company	129
	Briggs Manufacturing Company	58	M		
	Bruce Co., E. L.	19		Macklanburg-Duncan Co.	44, 45
	Bulldog Electric Products Division,			Mastic Tile Corporation of America ..	24
	I-T-E Circuit Breaker Company	43		Maze Company, W. H.	119
C				Minnesota and Ontario Paper Company,	
	Calder Manufacturing Co.	136		Insulite Division	52, 53
	CARADCO, Inc.	156		Minnesota Mining and Manufacturing	
	Celotex Corporation, The	6		Company, Adhesives, Coatings and	
	Classified Advertisements	168		Sealers Div.	120, 121
	Columbia Mills, Inc., The	152		Moore Incorporated, Goodloe E.	134
	Condensation Engineering Corporation ..	167		Morgan-Wrightman Supply Co.	151
	Congoleum-Nairn, Inc.	Cover 3		Mortgage Exchange Company of	
	Consowid Corp.	137, 138		America, Inc.	168
	Construction Costs Institute	176		Murray Manufacturing Corp.	128
	Crane Co.	124, 125	N		
	Crown Zellerbach Corporation	57		National Lumber Manufacturers	
D				Association	140, 141
	*Day & Night	40F, 40G		National Manufacturing Company	Cover 4
	Delco Products Division, General Motors			National Oak Flooring Manufacturers'	
	Corporation	61		Association	59, 60
	Dodge Reports, F. W. Dodge			NuTone, Inc.	1, 2
	Corporation	154	O		
	Dow Chemical Company, The	126, 127		Orangeburg Manufacturing Co., Inc.	107
	Duo-Fast, Fastener Corporation	170		Overhead Door Corporation	144, 145
E			P		
	Eljer Division of The Murray			Paragon Electric Company	176
	Corporation of America	22		*Pioneer	40B
F				Pittsburgh Plate Glass Company	112, 113
	*Fabrieon Products, Inc.	40A		Plywall Products Company, Inc.	41, 42
	Fasco Industries, Inc.	4		Pootatuck Corp.	176
	Fastener Corporation, Duo-Fast	170		Portland Cement Association	39, 157
	Firestone Tire & Rubber Company	18		Portlatch Forests, Inc., Bradley-Southern	
				Division	16
G				Precision Parts Corporation	165
	Gates & Sons, Inc.	151	R		
	General Air Conditioning Corp.	172		R & H Guarantee Products	152
	General Electric Company, Room Air			Racine Hydraulics & Machinery, Inc.	
	Conditioners	56		Machinery Division	134
	General Motors Corp., Delco Appliance			*Radco Products, Inc.	40H
	Div.	61		*Red Cedar Shingle Bureau	40J
	Graham Door Company	10		Research Products Corporation	168
	Grant Pulley and Hardware			Roberts-Gordon Appliance Corp.	136
	Corporation	40		Roberts Mfg. Co., Rangaire	46, 47
H				Rock Island Millwork Company	153
	Hall-Mack Company	29		Roddis Plywood Corporation	163
	Homasote Company	62		Rowe Manufacturing Company	34
	Hotpoint	50, 51		Ruberoid Co., The	150
	*Appears in Western editions only.				

S	Safway Steel Products, Inc.	169
	Samuel Stamping & Enameling Co.	23
	Schlegel Manufacturing Company	139
	Skil Corporation	8
	Smith & Loveless	
	Division-Union Tank Car Co.	147
	Sonoco Products Company	173
	Standard Dry Wall Products, Inc.	146
	Symons Clamp & Mfg. Co.	142
T		
	Thermo-Rite Mfg. Co.	176
	Trade-Wind Motorfans, Inc.	114
U		
	Union Tank Car Co., Smith &	
	Loveless Div.	147
	United Cork Companies	148
	*United States Gypsum Company	401
	United Steel Fabricators, Incorporated ..	177
W		
	Westinghouse Electric Corporation	14
	Weyerhaeuser Company	30, 31
	Whirlpool Corporation	143
	Winter Seal Corporation	167
Y		
	Yeomans Brothers Co.	122

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MONTH AHEAD

Let's look at your market

We opened this issue of AMERICAN BUILDER by talking about research, and the dramatic changes it promises for home-building in the years ahead. We're going to close by talking about another less spectacular but equally important area of change: your market, and the houses you should design to meet it.

Let's start with some questions. How long is it since you changed the basic design of your houses? Are you still building the same three-bedroom ranch that was your standard model five years ago? Have you made any changes other than adding another half bath and some more built-in appliances?

Buyers don't stand still

The point is that while buyer preferences usually change slowly, they do change. And unless you keep a close eye on these changes, you may find yourself offering a 1955 house to a much-different 1960 market.

Let's look at a case in point. FHA reports that last year the typical house they insured had three and a half bedrooms. This means that roughly half of them had four bedrooms. So if you're still building nothing but three-bedroom models, maybe it's time for a fast re-appraisal. Maybe you're missing half of the market.

A lift for a bad year

Here's another reason why you should look for changes in your market. If present indications are correct, 1960 will see better than a 15-per cent drop in housing

starts, compared to 1959. By adding a fourth bedroom, or making some similar basic change to attract new groups of buyers, you may be able to more than make up for any sag in your usual output.

Be your own marketing expert

The best way to discover how your buyers' tastes are changing is simply to ask your buyers. Find out what are the features they like in your houses, and find out also what additional features they'd like to see. Some of the answers may surprise you, and open the way for better sales in the coming months.

The 1960 Model Home Contest

All of this leads us quite naturally into the subject of AMERICAN BUILDER's Quality Model Home Contest for 1960. The rules and regulations you need to know to enter the contest are spelled out on page 93, and we urge you to read them carefully, and, naturally, to start preparing your entry.

You can help the whole industry

By entering this contest, you will, of course, be working toward the prestige and promotional values that go with an award. But even more than that, you'll be helping the whole industry. The winning models that we publish during the year will help pass around the best of the industry's ideas. Your houses will give ideas to others, and you in turn will have the ideas of the country's best builders to use yourself. Everybody wins.

NEXT ISSUE: Whats and hows of remodeling for profit...the country's biggest remodeler tells how he sells, estimates, and carries through all phases of his operation..."Building's Coming Breakthrough" spotlights need for a better and more stable source of mortgage money...a special report on the newest products and ideas on wall and ceilings...what's new in electric heat.

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