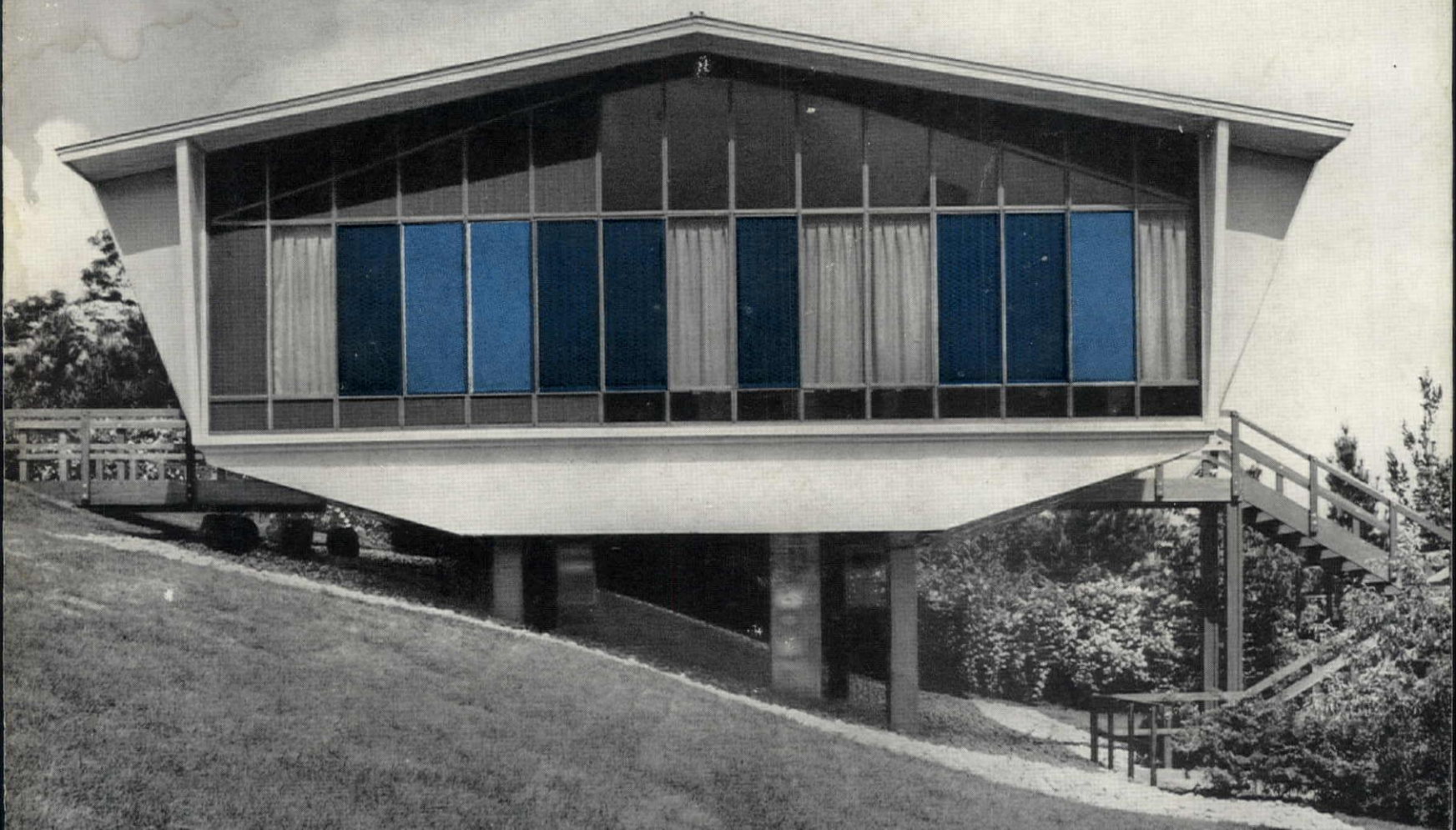


THE MANAGEMENT MAGAZINE OF AMERICA'S BIGGEST INDUSTRY*

SEPTEMBER 1962 SIX DOLLARS A YEAR—ONE DOLLAR A COPY

House & Home



Four-piece house on a hill
Cape Canaveral's other boom
AIA's five best houses
What price overhead?
35 ways to save at the site

COMPLETE CONTENTS, PAGE 3



Breccia™ Vinyl is worth talking about! And Kentile's continuous national advertising is promoting this exciting new style in tile. Feature it in your model homes!

How to light up prospects' eyes: Install a new Kentile Breccia Solid Vinyl Tile Floor in your model homes. Let its deep, dimensional beauty do the rest! Nothing helps accelerate sales like solid vinyl tile. And Breccia has Kentile quality, too...to eliminate costly call-backs. Speak to your flooring man about Kentile Breccia!

There's a Kentile Floor for every home, in every price range. Over 250 decorator colors in 5 types of tile.

VINYL KENTILE FLOORS

House & Home

SEPTEMBER 1962

EDITOR-IN-CHIEF: Henry R. Luce
CHAIRMAN, EXEC. COMM.: Roy E. Larsen

CHAIRMAN OF THE BOARD: Andrew Heiskell
PRESIDENT: James A. Linen
EDITORIAL DIRECTOR: Hedley Donovan
ASSISTANT DIRECTOR: Albert L. Furth

EDITORIAL ADVISER:
Perry Prentice

MANAGING EDITOR
Joseph C. Hazen Jr., AIA

EXECUTIVE EDITOR
Carl Norcross

ASSISTANT MANAGING EDITORS
Gurney Breckenfeld, John F. Goldsmith,
Walter F. Wagner Jr.

ASSISTANT EXECUTIVE EDITOR
Edward Birkner

ART DIRECTOR
Jan V. White

ASSOCIATES
Jonathan Aley, Kenneth D. Campbell,
James P. Gallagher, Maxwell C. Huntoon Jr.,
Robert W. Murray Jr., Richard W. O'Neill,
Richard Saunders (Washington),
Natalie F. Siegel, Ron Taylor

ASSISTANTS
Marcia Frank, Cecile G. Steinberg,
Jenepher Walker

CONSULTANTS
Carl Boester, Miles L. Colean, FAIA,
Thomas P. Coogan, Leonard Haeger, AIA,
James T. Lendrum, AIA

PUBLISHER
Ralph Delahaye Paine Jr.

GENERAL MANAGER
John J. Frey

BUSINESS MANAGER
Lawrence W. Mester

MARKET RESEARCH DIRECTOR
Walter R. Browder

ADVERTISING DIRECTOR
Anthony Ernst

ASSOCIATE ADVERTISING DIRECTOR
John C. Austin

Published by TIME Incorporated

Volume XXII No. 3

LAND PLANNING

- 122 *How "Planned Unit Development" creates community amenities*

DESIGN

- 91 *Five top winners in AIA's Homes for Better Living contest*

CONSTRUCTION

- 110 *TAMAP progress report: Industrial engineering uncovers ways to save at the site and puts price tags on them*
- 130 *New approach to factory-built house cuts field labor to 10%*

MARKETING

- 104 *Lessons for the housing industry from Canaveral's other boom*
- 116 *Virginia Builder Bill Witt sells more houses by selling them in more places, at more prices, to more people—a case study*

MANAGEMENT

- 136 *What price overhead? Most knowing builders say higher overhead means higher profits*

DEPARTMENTS

- 7 *NEWS: Can too much optimism bring overbuilding? . . . The day FHA approved discounts—by mistake . . . California S&Ls break ground for new lending patterns*
- 63 *WHAT THE LEADERS ARE DOING: How to make small back yards a sales asset . . . How a builder uses sophisticated signs to stress his experience . . . How unusual design attracts renters*
- 73 *LETTERS*
- 143 *TECHNOLOGY: Twin buildings—but one went up twice as fast . . . Houses cantilevered from three-story cores to fit any site . . . Common faults found by FHA construction inspectors*
- 163 *NEW PRODUCTS*
- 183 *TECHNICAL LITERATURE*
- 216 *ADVERTISING INDEX*

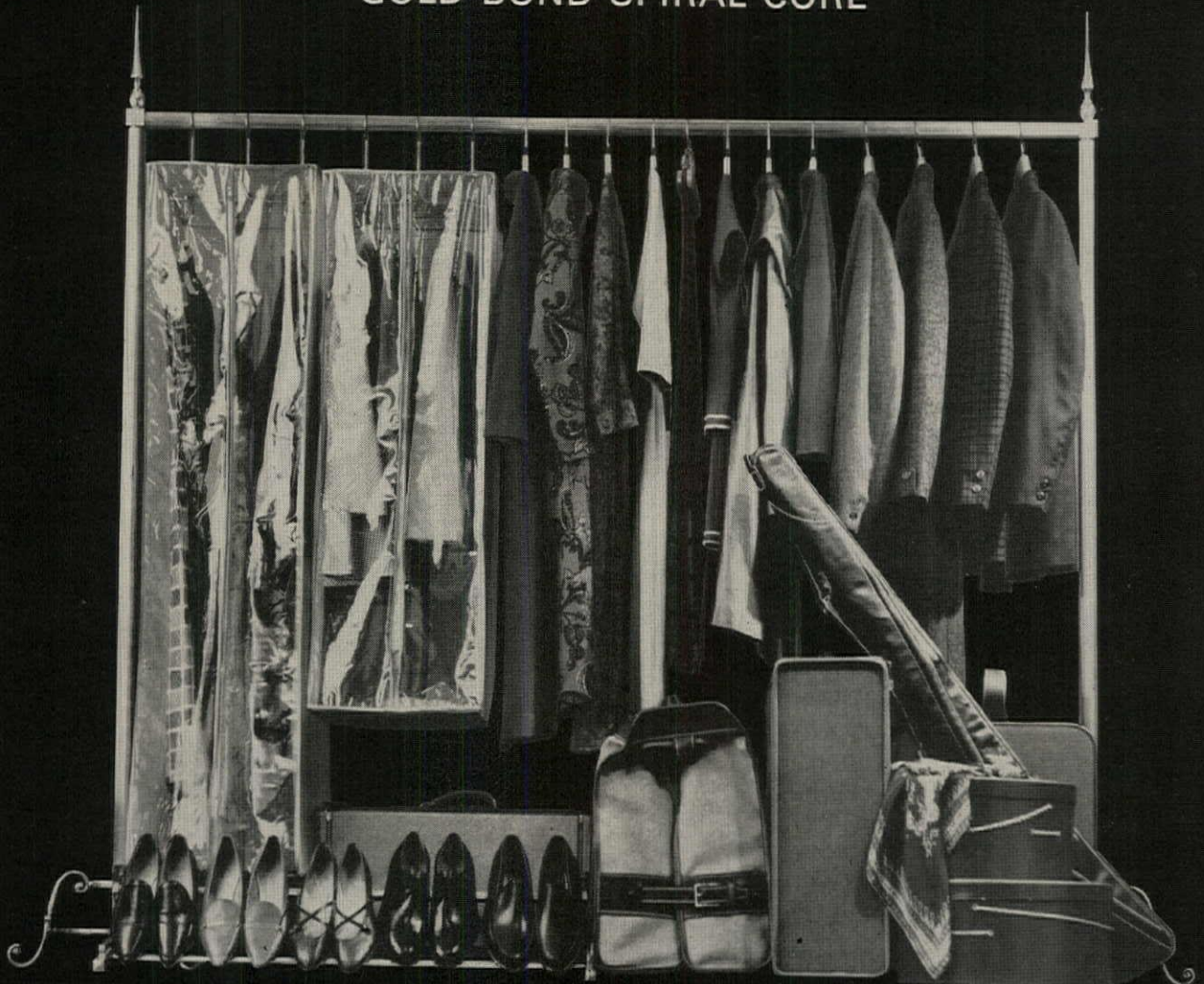
COVER

Factory-built house in Newark, Ohio by Builder-Designer John Slayter (story, p 130). Photo: Jack Sterling

COMING NEXT MONTH

48 pages of built-for-sale houses including AIA award winners and a portfolio of best-sellers

YOU GIVE HOME BUYERS
THIS MUCH EXTRA
CLOSET SPACE . . .
WHEN YOU INSTALL
GOLD BOND SPIRAL-CORE



Home buyers are
demanding more space!
You can give it to them!
You save money
when you do!

THAT'S WHAT THEY WANT More room for closets, or more living area. Spiral-Core gains up to 33 extra square feet in an average-size house. Because 4' x 8' Spiral-Core panels are only 2 $\frac{3}{8}$ " thick. 50% of the floor area taken up by conventional partitions can be saved.

IT SELLS ITSELF Despite its thinness, Spiral-Core acts a foot thick. Let a prospect thump it. The sound is solid . . . no hollow or "drumming" effect. And it has strong impact resistance . . . several times greater impact than between-stud areas of conventional partition construction. Because the core of each Spiral-Core panel consists of sturdy hardwood spirals. And exterior surfaces are tough gypsum wallboard.

IT'S EASY TO INSTALL All interior non-load-bearing partitions in an average-size house go up in only a few hours. Older methods, using wood studs, took up to two days. Since partitions are non-load bearing, Spiral-Core panels permit uniform construction of all partitions after the gypsum wallboard ceiling is erected.

OFFERS CHOICE OF METHODS Spiral-Core panels can be erected panel by panel, or by pre-assembling entire wall sections (including electrical wiring) before erection. Short runs of wiring, in any direction, can be made merely by pushing the cable through the spirals. For longer runs, the curls will puncture easily to permit $\frac{1}{2}$ " x $\frac{3}{32}$ " "fish" wire to be fed through, and to pull the cable through the panel.

HOLDS DOWN COSTS Spiral-Core is another in a long line of quality developments from Gold Bond designed to hold down building costs. For samples and technical information, see your Gold Bond® Representative. Or write Dept. HH-92, National Gypsum Company, Buffalo 13, New York.



These illustrations in full color will dramatize Spiral-Core in a full-page advertisement in LIFE, November 16 issue.



SCHOLZ CHOOSES

Goodyear Lifetime Guaranteed* Vinyl Floors



Photo Courtesy of Scholz Homes, Inc., Toledo, Ohio

for EXTRA SALES VALUE in their homes!

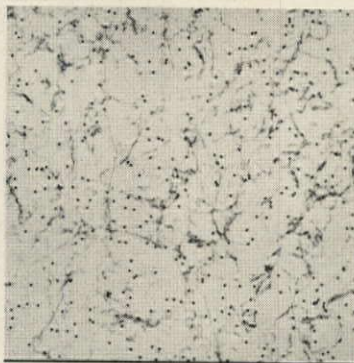
Scholz Homes, Inc., now put extra value—and sales appeal—into each of the thousands of quality homes they build. How? By installing, or specifying, Goodyear Vinyl Floors—backed by the exclusive Lifetime Guarantee.*

Goodyear Floors are solid vinyl compounds throughout. No paper or felt backing. No excessive fillers. They're tough and wear-resistant, yet easy to care for. Don't require waxing. Resist most household stains and abuse.

They come in 9" x 9" tiles or 72"-wide sheet. Can be installed on- or above-grade. Available in residential or commercial gauges.

See your nearest Goodyear Flooring Dealer or Distributor for further details. Or write Goodyear Flooring Department, Akron 16, Ohio.

Also see Goodyear's new IDEA KITCHEN at the National Design Center, 415 E. 53rd St., New York, N. Y.



*LIFETIME GUARANTEE FOR GOODYEAR VINYL FLOORING

Goodyear will replace flooring that wears out in normal use in home, under these conditions:

1. Flooring must be installed and maintained according to Goodyear recommendations.
2. Flooring must be in home which was continuously occupied by flooring purchaser since installation.
3. Purchaser must present original guarantee certificate.
4. Claim must be approved by Goodyear, prior to replacement.

NOTE: replacement offer does not extend to installation costs.

GOODYEAR

FLOORING PRODUCTS

ROUNDUP:

| | |
|--|----|
| Housing market | 8 |
| <i>Are housing forecasts too high?..</i> | 8 |
| <i>Builder decisions in eight cities...</i> | 8 |
| <i>New look into sales, unsold homes</i> | 9 |
| Local markets | 9 |
| <i>The space boom: Houston and Las Vegas</i> | 9 |
| Urban Renewal | 11 |
| <i>FHA reverses itself on discounts..</i> | 11 |
| Public Housing | 11 |
| <i>140 new housing agencies</i> | 11 |
| Housing policy | 13 |
| <i>Budget cut forces FHA slowdown</i> | 13 |
| <i>Big boost for elderly housing loans</i> | 13 |
| Zoning | 16 |
| <i>Plea for freedom from humdrum fails</i> | 16 |
| Codes | 16 |
| <i>Builders write own rules in Houston</i> | 16 |
| Labor | 17 |
| <i>NLRB cools 'hot cargo' issue</i> | 17 |
| Associations | 17 |
| <i>NAHB loses its tax exemption</i> .. | 17 |
| People | 18 |
| <i>Shell maker buys producer</i> | 18 |
| <i>Difford of DFPA retires</i> | 18 |
| Mortgage money | 25 |
| <i>Discounts reach plateau</i> | 25 |
| <i>Can a private FNMA work?</i> | 27 |
| <i>New lending patterns in California</i> | 29 |
| Stock market | 31 |
| <i>New rules for realty trusts</i> | 31 |
| <i>Housing stocks sag</i> | 31 |
| Statistics & indexes | |
| <i>Housing trends</i> | 8 |
| <i>Residential construction costs</i> | 17 |
| <i>Mortgage quotations</i> | 27 |
| <i>Housing stock prices</i> | 31 |

Labor goes on the offensive for the 35-hour week

The merged labor movement is planning a nationwide drive to shorten the work week to 35 hours. The move flies in the face of President Kennedy's announced favor for a 40-hour week. But the new goal of the AFL-CIO shows how powerfully the 25-hour week won by the New York City electricians earlier this year (NEWS, Feb) has influenced labor's goals.

The AFL-CIO will aim at having Congress set the 35-hour week as the point beyond which employers would be required to pay double-time. And there will be new pressure at the bargaining table for the shorter week to combat unemployment.

Builders and contractors say the shorter hours make little sense as a device to spread the work for unemployed in housing and building. In most crafts there is a shortage of skilled tradesmen. Thus a 35-hour week could mean only more overtime (and higher total wages) for craft unions.

About 85% of builders do the bulk of their work through subcontractors and an across-the-board change to the 35-hour week would mean these subs would have to raise their job rates to keep up. If labor is successful, homebuilders will likely try to cut their on-site labor costs by turning more and more to preassembled units and components.

Those private FHA's get stronger and busier

Private companies to insure conventional mortgages appear to have tapped a housing field more fertile than any one suspected. The midyear reports just in from Mortgage Guaranty Insurance Corp of Milwaukee, the first of the private companies, and two new and smaller rivals give encouraging news.

MGIC which started business in 1956, shows a 217% increase in earnings to \$1,020,000 in the first half of 1962. The company insured loans at a rate of \$34.5 million a month. The company topped off its booming first half by winning the race to do business in California where 20% of all US homes are now built. California opened doors to private insurers last year (NEWS, July '61) and MGIC was challenged by newly formed (and still inoperative) First Home Loan Insurance Co of Los Angeles for the advantage of entering that state's rich market.

Two of MGIC's baby brothers are doing well, too. Continental Mortgage Insurance Inc of Madison, Wis. (NEWS, Feb) is optimistic because it has met a year's goal in six months by signing to do business with 156 approved lenders. Nevada has also opened its doors to CMI, and June commitments topped \$1 million for the first time. CMI shows an operating loss of \$70,000 for its first six months but slim earnings are expected in getting underway.

American Mortgage Insurance Co of Raleigh, N. C. (NEWS, Dec) reports earning \$700 in the half year after allocating \$28,000 to reserves. President William Granberry says the company is now getting over 400 applications monthly, and June volume of insurance sought was nearly \$6 million. AMI operates in North Carolina, South Carolina, and Virginia.

Buoyed by this vigor, a group of businessmen is now trying to start a private secondary market for conventional mortgages (see p 27).

WASHINGTON INSIDE: A military construction bill is moving through Congress that will 1) replace the Capehart program of insured housing with units built from direct appropriations, and 2) give new impetus to developing movable housing.

In approving 10,998 units for continental US bases, a House committee admonished the Pentagon to give "full consideration to the rapid progress being made in the construction and design" of relocatable housing which can be moved in sections.

The Air Force pioneered relocatables and now has 137 units for personnel. The bill gives Air Force 473 more units at \$19,000/unit.

Relocatables may solve an overseas housing pinch caused by cutbacks in overseas building

to hold down the US balance of payments deficit. Perhaps 2,000 relocatables may be sent abroad.

Plans are also afoot to use relocatables at an Army gunnery range in Arizona and an observatory in New Mexico.

- Seating of John deLaittre, a former savings bank president, on the Home Loan Bank Board insures a stronger-than-ever push next year for federal charters for savings banks.
- Real estate experts are advising their clients to forget about the Treasury's new rules on depreciation (NEWS, Aug). They say apartment owners can get a better break under the old system of separate depreciation schedules for equipment like elevators and air conditioning. The new rule permits lumping of equipment into the total project.

HOUSING MARKET

Will over-optimism sweet talk builders into overbuilding?

Yes, argues Economist Nathaniel Rogg of the Natl. Association of Home Builders.

Rogg and other responsible economists last month began challenging the Commerce Dept's glowing mid-year forecast for 1,475,000 total housing starts (1,425,000 private) this year, a 2% hike over their earlier prediction (NEWS, Aug). The forecast is "over-optimistic," says Rogg.

Rogg, a savvy economist who has gained stature by his consistently realistic readings of the housing market, decided the forecast was an attempt to use official "happy-face" reports to stimulate building activity when June housing starts turned down 12% (see graph). And Rogg feels that playing up housing as a booming part of the economy, while economists are saying other parts of the economy are in doldrums, does a disservice to builders and lenders.

How? "Over-optimism can be stimulated by over-forecast and for such a complicated industry as home building it could be more damaging than excessive pessimism," he argued in an unusual press release which NAHB distributed to get the widest possible public notice.

The over-optimism in turn could bring "erroneous decisions by builders, materials pro-

ducers, and other elements of the homebuilding industry, the government, and the public." And the long lead times needed for house construction make bad decisions practically irreversible and thus lead to wider swings between boom and recession in housing.

Rogg says Census reported 720,000 public and private housing starts in the first half of this year. "If the Commerce forecast were to be achieved, there would have to be more housing built in the second half of the year than in the first. But the realities of the situation are that we will almost certainly produce less."

Rogg gained support in other quarters. "He's exactly right," said Economist Miles Colean. "Commerce is too high and we will have a psychological let-down at the end of the year because we didn't meet its forecast."

All the debate masks the strong showing of one-family house building.

Colean notes that one-family starts are remarkably steady at 10% ahead of last year's pace (which was a disappointing 937,000). He predicts builders will end the year 50,000 to 60,000 houses ahead of 1961 and says flatly, "This will be the biggest year for one-

family houses since 1959" (when builders started a record 1,210,000 homes).

Much of the current pulse-and-temperature reading for housing stems from the erratic ups and downs of the Census Bureau's monthly key statistic, the seasonally adjusted annual rate for housing starts.

More and more economists are taking the view that the monthly figures mean less and less. Even the Census Bureau cautioned against placing too much emphasis on the June figure, saying, "Such drastic month to month changes should be taken at less than face value unless confirmed over a longer period. Technical problems persist in plaguing the housing starts series."

One problem singled out by Rogg: With apartments now running 31% of all starts, relatively few builders can swing the series wildly by deciding to start large projects.

The apartment surge is accompanied by disquieting thoughts about rental vacancies and the quality of mortgage credit which could bring even higher delinquency and foreclosure rates (see p 25).

Rogg notes too that some builders were complaining of slow sales in June, due partly to a drop in consumer interest in higher-priced houses after the stock market drop.

In eight met areas dog days disappoint some, elate others

For builders, mid-summer is decision time. Builders want to know if lookers are in a mood to be buyers and how business compares to year-earlier paces so they can button down plans for the rest of the year. This year the questions hovering over housing's health (see above) give special import to the decisions builders made in normally-slow dog days of mid-summer.

HOUSE & HOME correspondents in eight bellwether growth areas watched builders make their decisions this year and found a curiously mixed picture.

As always, some areas are up and some down as local conditions set the tone. San Francisco builders, for instance, are optimistic about sales if they can find available land and stay clear of more labor troubles. Philadelphia builders worry about the effect of their year-old state anti-discrimination law. Los Angeles builders are heartened by a sales surge (after the threat of an aerospace-industry strike lifted) and took out 29% more permits in July than a year earlier. Miami is still going slowly under FHA's speculative building ban (NEWS, Apr.).

Building permits taken out in seven of these city areas show one-family homes are

still the steadiest part of the total housing picture. [And permits have seemed to be a steadier barometer of housing's health than the housing starts series (see graph) of the Census Bureau.]

Overall the seven cities show a 4.7% gain in July permits over year-ago figures and 3.1% over June, when many builders (especially of higher-priced houses) say the stock market slide dampened buying (see table).

Multi-family permits in these same cities recorded much wider swings. The July total is 13.9% over year-ago figures but little more than half of June. For the first six months of 1962 apartments were over half of all units in both the six-county Chicago met area (the first time in 30 years) and in 11 counties of southern California for the first time ever (although apartments topped homes in the LA area in 1957). (See Table).

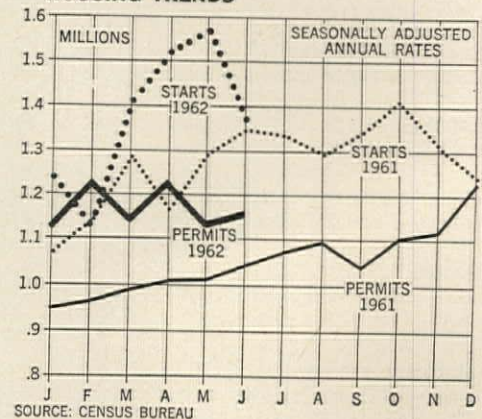
In comparison FHA applications for July dropped 13.8% below last July but the seasonally-adjusted rate of FHA starts rose 9%. VA appraisal requests jumped 16% over June and 13% above July 1961.

Builders in most cities are planning more cautiously than a year ago. Some, like Robert Fox of Fox Bilt Homes in Plymouth Meeting,

Pa. and Wallace Arters of Media, Pa. peg their plans for the rest of the year solely on sales. "Right now we are very quickly eating up our backlog of sales and unless sales pick up, we will be caught up," says Fox.

"We are cautious to the point where we feel we can't afford to have merchandise sitting there with no return," confides Builder Frank Maroon of St Louis. President Warren Jones of Greater St Louis homebuilders predicts fewer starts in his area in the last months of 1962. "In my opinion some builders went a little overboard last spring."

HOUSING TRENDS



SOURCE: CENSUS BUREAU

Private nonfarm housing starts declined in June, halting the upward surge that began in March. The seasonally adjusted annual rate of private starts dropped 11.7% during June to 1,361,000; but this was a slight 0.7% improvement over June of last year. For the first six months, the annual rate of starts is 13.5% ahead of 1961.

The seasonally adjusted annual rate of building permits again moved in the opposite direction from starts and rose 2.0% to 1,150,000.

ONE-FAMILY HOUSES

| AREA | PERMITS | % | |
|-------------------------------|--------------|----------------------|----------------------|
| | | CHANGE FROM JULY '61 | CHANGE FROM JUNE '62 |
| St. Louis city & co.... | 443 | -9.3 | -9.9 |
| Dallas co | 780 | +11.4 | -14.1 |
| Philadelphia city | 371 | +10.4 | +95.3 |
| Los Angeles & Orange co | 3,404 | +29.5 | +19.2 |
| Miami & Dade co | 256 | -58.2 | -4.1 |
| Chicago & six co* | 2,215 | -6.9 | -12.2 |
| Denver city | 74 | 0.0 | -8.6 |
| Total | 7,543 | +4.7 | +3.1 |

APARTMENTS

| AREA | PERMITS | % | |
|-------------------------------|--------------|----------------------|----------------------|
| | | CHANGE FROM JULY '61 | CHANGE FROM JUNE '62 |
| St. Louis city & co .. | 54 | -64.9 | -83.2 |
| Dallas co | 1,180 | +237.1 | +66.2 |
| Philadelphia city | 322 | -65.8 | -85.9 |
| Los Angeles & Orange co | 2,915 | +8.5 | -32.1 |
| Miami & Dade co | 150 | +94.8 | -30.9 |
| Chicago & six co | 2,217 | +40.7 | -46.8 |
| Denver city | 104 | -66.6 | +700.0 |
| Total | 6,942 | +13.9 | -42.1 |

*Compiled by Bell S&L.

But Baltis-Built Homes in Chicago is so enthusiastic about sales there that it is starting 40 to 50 homes in the \$50,000 to \$80,000 price range—all speculative. Lee Construction Co of Dallas has stepped up its plans for building the latter part of this year—but at prices below its \$17,000 bracket now. Fox & Jacobs Construction is cutting back its third-quarter plans by 10% because of softening markets.

Builder Sam Primack of Denver's Perl-Mack Construction Co reports sales trailing 40 to 50 houses behind last year's pace—and all in his higher price ranges. Primack figures his volume will equal last year's 1,300 houses—"at worst we'll do 1,200 houses."

In Southern California, Market Analyst Sanford Goodkin says, "In our area anyone who is building a good package is selling." Builders many times echo Goodkin's phrase. Vice-President Dick Weiss of Larwin Corp says his company expects to build 1,550 houses this year, up 150. But sales are down from 20 a week to 14 a week. One LA market analyst says his figures show a sharp decline in the number of completed but unsold homes, meaning that houses are being sold faster than they are built.

The stock market dip caused a temporary slowup in sales of higher-bracket houses in all cities, and even affected the middle price ranges in parts of Los Angeles. Now most

builders report prospects—and buyers—are returning to the model homes.

And builders say recession auguries from Washington are cutting deeply into consumer moods—even though consumer spending was strong in July. Goodkin has surveyed buyers for several large Los Angeles builders and reports: "What influences them most is talk of recession because then you're possibly talking about their job."

Adds Builder Maroon of St. Louis: "In the past 15 years I have never seen people so alarmed over the economy. They will buy if you give the house to them. But they tend to hang onto their money—they want to be able to pay their obligations if things get worse."

From Census: new insight into housing

The Census Bureau has just started a new quarterly series of statistics that promises to illuminate some shadowy nooks of the housing market.

Census is attempting to find out at the request of HHFA just when in the building cycle housing sales are made, how many built-for-sale houses remain unsold at any one time, and what price ranges and financing plans are favored by buyers.

Researchers are interviewing builders of a sample 5,000 homes each month from the time permits are issued (or construction started in non-permit areas) until the date the house is sold. The data are then projected to give a national picture.

The first study points up the fact that the trends of housing starts (the most-quoted statistical measure of housing's health) and housing sales do not go hand in hand since sales can be made months before or months after a house is started.

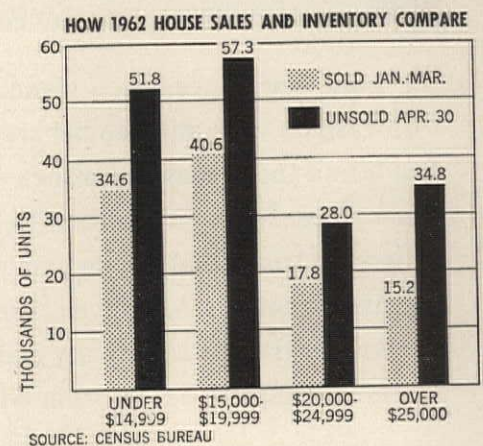
In the first three months of 1962, operative builders started 118,000 homes built for sale. Census followed sales through April and re-

ports 110,100 known sales in that time. About half the first-quarter sales were of homes started in 1961. By April's end, 213,000 homes remained unsold, including 55,000 completed houses, 138,000 under construction, and 20,000 not yet started.

Through March, 28% of all built-for-sale homes were either pre-sold or sold during the month construction began. In those same three months builders sold 13.8% of the 61,700 houses they started in April.

For the first time builders can see which price ranges are selling best and the brackets where unsold inventory is building. On April 30 (see graph), over-\$25,000 homes had the biggest unsold inventory in relation to first-quarter sales. Unless more experience with the Census data proves otherwise, housing men are inclined to regard the unsold overhang as normal for a spring building period.

The 118,000 built-for-sale homes are 64% of the 185,000 one-family houses started through March. Another 16.4% were built on contract, and 14.8% were built for rental or by an owner acting as contractor.



FIRST MATCHING of sales and unsold inventory by price ranges gives this picture. The 110,100 sales include homes sold between January and March and started through April. Unsold inventory of 193,000 does not include 20,000 houses authorized by permit but not under construction by April 30.

LOCAL MARKETS

Space and defense spending boost housing in Houston

Area home builders hope they are watching the start of a boom. But a big question is whether the eager industry will react too much and produce a mountain of homes to meet a molehill demand. This kind of boomlet-and-bust has characterized many another defense-oriented housing market in recent years (eg Wichita, San Diego, Aiken, S.C., and Cape Canaveral . . . see p 104).

The housing-boom trigger is the \$90 million Manned Spacecraft Center 22 mi southeast of town. This National Aeronautics & Space Administration installation will design and test the Apollo moonshot spacecraft and train the men who hope to land on the moon by 1970.

The first 1,000 of a scheduled 3,500 NASA people are at work in Houston. Still to come are the hundreds of private industrial and scientific firms that will serve the center, and the highly paid specialists they will employ. Another prop to a strong housing market is the relocation into Houston of large major oil company staffs (Humble, Gulf, and Texaco), which were in scattered cities.

Best indicator of market strength comes

from the April semi-annual inventory conducted by the Home Builders Research Corp. Unsold houses are down to their lowest level since 1957—a drop of 36% since April 1961 (from 1,932 to 1,238). At the same time, 1,622 single-family houses were under construction, up 60% over a year earlier.

But there are words of caution too. The April builder survey points out that electrical connections (families moving in) are not keeping pace with permits, which doubled their year-earlier pace (from 3,005 to 6,138). This indicates a slow buildup of inventory.

Warns the report: "Very, very careful analysis is needed, almost day by day, by every builder so that excess building over sales does not result in a glut of unsold new homes." Soaring land prices in the NASA area promise to handicap homebuilding. Some acreage that sold for \$300 to \$500 a year ago is now quoted at \$3,000 to \$5,000. Realty men fear many of the announced multi-million dollar housing projects are finance-shy moonshots that will not get off the ground but which will distort land prices for years. One solid project is the \$500-million, 15,000-acre development announced by Del Webb and Humble Oil for a city of 25,000.

Las Vegas parlays cold war, tourism into boom

As a result the gaudy gambling oasis is donning a respectable, home-owning tone.

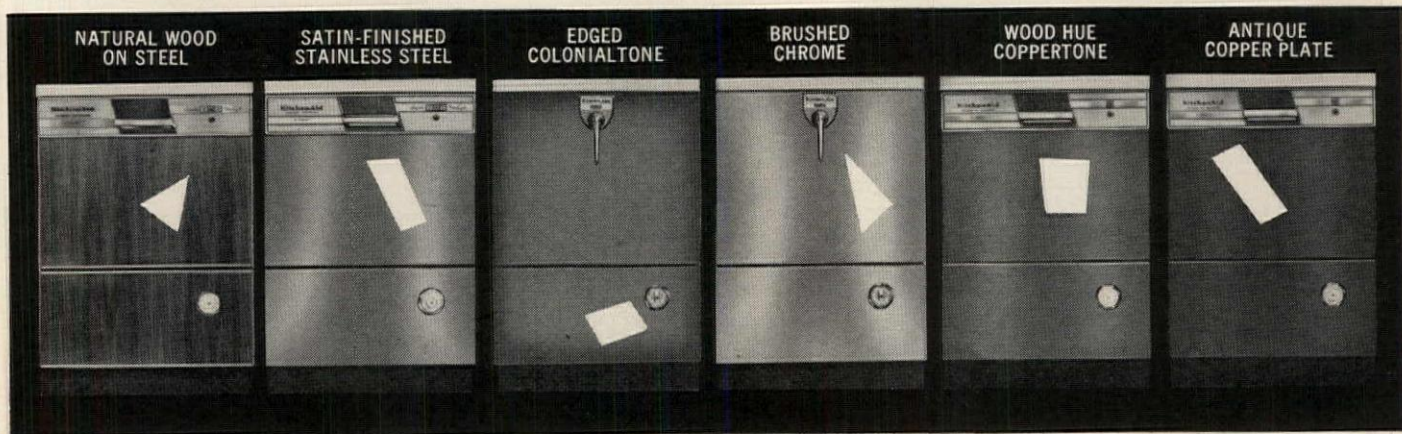
Between 10 and 12 million tourists now pour into town each year, making the gaming capital one of the nation's top two or three tourism spots as well. City fathers woo conventions with a handsome new hall.

All this brings new croupiers, entertainers, and motel help who form a substantial market for \$14,000 to \$20,000 homes.

Vegas builders are getting an extra lift from the Nevada Proving Ground of the Atomic Energy Commission 65 mi northwest. There employment nearly quadrupled (to 8,388) in one year. Many new employees live in Vegas.

On the edge of town closest to the test site, Sproul Homes says sales are 15% ahead of last year and buyers are moving in so fast the company has no unsold inventory. Sproul expects to add 800 houses this year to 1,200 built since May 1960. At nearby Desert Hills only 12 of 411 new houses are unsold, and Miranti Construction Co has only 18 unsold homes out of 1,000 built.

We'll send you sample pieces of 6 KitchenAid dishwasher fronts *Free of course!!*



We want you to see the 6 standard front-finish choices you can use to match or coordinate KitchenAid Dishwashers with any cabinet style, color or finish you're building into your kitchens. Send in the coupon. You'll find these sample finishes useful in kitchen planning, whether you choose KitchenAid or your customer does. Note: In addition to these 6 finishes (and white) you can get KitchenAid Dishwashers with unfinished fronts that can be painted any color you choose. For exact matching of wood cabinets, wall covering, plastic counter tops, even fabrics, we also provide stainless steel trim-kits which permit you to finish the dishwasher front in almost any material you could want. KitchenAid gives you the broadest dishwasher line ... three complete series from which to choose. There's a KitchenAid for every kitchen—every budget.

KitchenAid Home Dishwasher Division

The Hobart Manufacturing Company, Department KHH-2, Troy, Ohio

I'd like a KitchenAid front-finish sample kit (Free Of Course)

Name _____

Company _____

Title _____

Address _____

City _____ Zone _____ State _____

KitchenAid is easy to install. A "U" tube is included with each pump drain model and ground wire and clamp are provided with all built-ins. These are real time savers and assure proper hookup. Removable feet permit low-counter installation. And here's a real money-saving feature: gravity-drain models are available in all series.

All KitchenAid built-in models can be serviced from the

front—you'll never have to disconnect the plumbing lines or remove the unit for service. KitchenAid Dishwashers have the reputation for service-freedom, performance and long-life that make them the first choice of quality builders . . . and quality-conscious home buyers.

Call your KitchenAid distributor today about special builder promotions you can use.

KitchenAid®

PORTABLE • CONVERTIBLE • DISHWASHER-SINK • BUILT-IN DISHWASHERS

URBAN RENEWAL

FHA trial (by error) balloon sanctions first discounts on fix-up loans—almost

For months the pressure has been building on Commissioner Neal Hardy to "do something" to pump life into FHA's most celebrated flop, \$10,000, 20-year home improvement loans under Secs 203k and 220h.

Lenders have complained the 6% interest rate was too low, and contractors complained of slow processing time (NEWS, Aug). With only 574 commitments issued in its first year, the loans trail the older Title One loans (maximum \$3,500 over five years) by wide margins.

Last month FHA did something—it published mistakenly (and thereby made effective immediately) an order permitting lenders to collect "discounts in a reasonable amount" from borrowers under both sections.

For a week it was the best kept secret in Washington. Then word reached newsmen that a letter from Hardy was going to all district offices telling them of the change.

Opening the doors to borrower discounts was an historic change for FHA: The agency forbids buyer discounts in all but a few special cases under its insurance programs (ie, for persons borrowing for a custom-built house or refinancing an existing mortgage). The discount ban preserves the fiction that interest rates can be set by administrative fiat, a view widely held in Congress.

Newsmen began asking Congressmen what they thought of FHA's new rule on discounts. "What new rule?" they answered. They hadn't been briefed about any change.

Rep Albert Rains (D, Ala.) chairman of the House housing subcommittee, fired a protest letter (its contents were not made public) to HHH Administrator Rober Weaver.

"I have registered a strong objection to FHA's recent policy change," Rains said. What rankled Rains most was that FHA's order recognizing the realities of the market clashed with the illusion of interest control. "In effect this is saying that there should be no ceiling on the interest rate of FHA's insured loans, a policy diametrically opposed to the expressed will of Congress."

Hardy responded by "deferring" the effective date of the new regulation. The official explanation: inquiries from field offices, builders, and lenders "indicated a general confusion about the problem."

But a bureaucratic snafu appeared to be the real gremlin. The rule had been mistakenly published in the Federal register (making it effective immediately) before officials could confer with Congressmen. Reports persisted that Hardy had been set to reveal the ruling in a speech but a subsequent change in plans prevented him from doing so.

FHA's trial balloon stirred some interest in its brief life. "Don't tell me," one mortgage banker moaned when he heard about FHA's flip-flop. "The new rule interested me so much that I just had a big meeting with the staff to get going on this. We're definitely interested if we can get the yield. Now I'll tell them to forget it."

FHA insisted its delay will give agency leaders time to convince Rep Rains before Congress adjourns that discounts are needed to provide new incentives to lenders and to protect borrowers. "The change was designed to insure that borrowers will be fully informed as to all charges connected with the making of the home improvement loans and will be subject only to reasonable charges."

Until now the most successful Sec 203k operators like John Pergola of Levittown, N. Y. (NEWS, July) have charged extra fees to improvement contractors. The contractor presumably then includes the fee in his price for remodeling—but the customer seldom knows what the fee is.

H&H staff



REHABILITATOR HAAS
"Volume is insignificant"

The housing rehabilitator: who he is and what he does

"The housing rehabilitator is not only a highly professional businessman but also, to a degree, a public servant—without pay, without operating manual, and often without recognition or acknowledgement."

Thus does Rehabilitation Consultant John Haas of Washington describe the man federal housing officers for years have plugged as the logical saviour of aging homes.

But official efforts to create an industry

PUBLIC HOUSING

PHA's accent on age works: 140 new agencies

The roster of public housing authorities thus grew 9% in the year ending June 30, and local agencies now are doing business in 1,700 US towns and cities.

These dramatic statistics underscore the runaway success Commissioner Marie C. McGuire has had with the accent on age she brought to the Public Housing Administration (NEWS, Apr '61).

Public housing units designed for the elderly were unknown before 1956, and PHA ruled out one-person families (ie, widows and widowers) over 65. But Mrs McGuire helped change this attitude by building a pacesetter high-rise while she headed San Antonio's housing agency.

Named head of PHA last year, she consistently plugged for units for the elderly. Five measures of her success last year: 1) 53% of the 23,000 units given federal subsidies last year were for aged. 2) In one six months, 48 of 62 new authorities came up with plans for senior citizen units. 3) One-third of all US agencies are now planning apartments with subsidized rents for aged persons. 4) In New England, New York and New Jersey, nearly 75% of all agencies are on the bandwagon. 5) Only seven of 45 states with public hous-

ing have no housing planned for the aged. Fresh evidence suggests that housing for the elderly may eventually dominate PHA building because units for other low-income families are nearing the saturation point in some cities. Already vacancies in public housing hit 44% in some cities (NEWS, Aug).

In Chicago last month, the Housing Authority suggested it would build only apartments for the elderly after it completes 3,063 family-size units now underway. After that the authority would only manage the 30,000 units built (at \$375 million cost) over 25 years.

Chief reason: its waiting list has shrunk to only 12,000 families from 20,000 in 1960 and only 7,000 of these are estimated to be eligible. The annual turnover of 3,000 units, plus those underway, should meet any expected demand in Chicago.

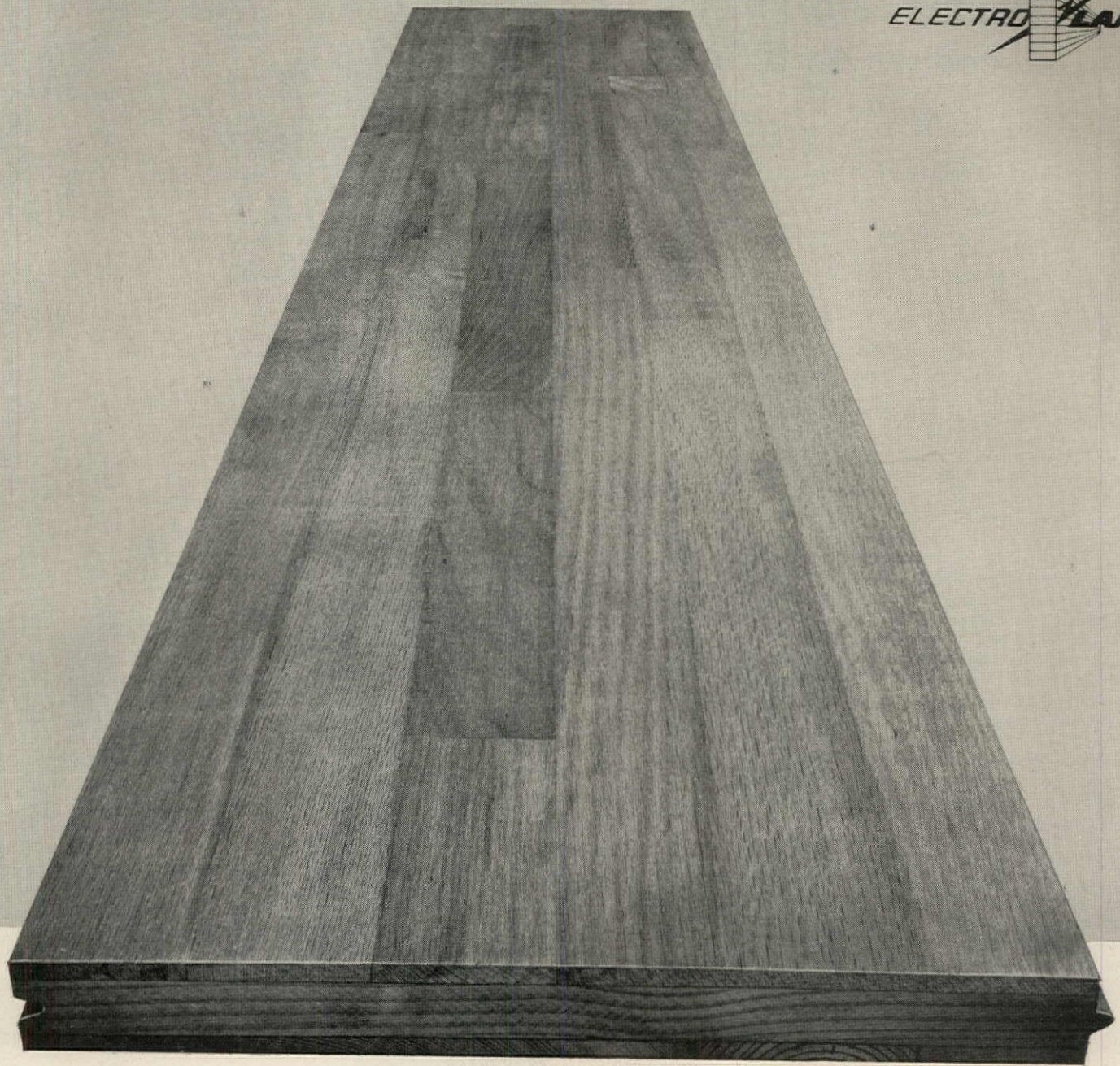
"Except for the elderly, I think the majority of commissioners feel it's time to start putting on the brakes," says Commissioner Theophilus M. Mann of the nation's second largest (behind New York City) public housing empire. Adds Commissioner Joseph P. Sullivan: "The 30,000 units will be 'sufficient for the time being. I am of the opinion we have reached the saturation point.'"

• "The rehabilitator need not store, buy, or pledge to buy minimum quantities of merchandise over a limited period of time, needs no large warehouse."

• "The greatest challenge to the efficiency of the operator lies in his task to deal with restricted incomes and marginal credit standings." To help rehabilitators Haas includes a sample income calculator based on his experience with Sec 221 financing, and has created an "experimental" rating chart as a quick check to whether renovation is economically feasible."

* *3 Rs of Housing*; a guide to housing rehabilitation, relocation housing, refinancing; 104 p; \$7.50, from General Improvement Contractors Association, 1522 Connecticut Ave NW, Washington, D. C.

Product Leadership from Potlatch



We'll lay you 2 to 1!

Plylumber Flooring will save you days . . . and money on installation time. It is the new combination sub and finish flooring. Plylumber Flooring is made of three plys, with the top ply being hardwood. *The Flooring is laid directly on the floor joists.*

Manufactured at the Bradley-Southern Division, at Warren, Arkansas, each individual piece of stripped hardwood has been cut, fitted and laminated to softwood layers to form a tight-fitting, tongue-and-groove plank. Plylumber Flooring is the practical, new approach to economical, longer-lasting hardwood flooring.

MAIL TODAY:

Potlatch Forests, Inc.
Bradley Southern Division
Warren, Arkansas

Send me more information on Plylumber Flooring.

Name _____

Firm _____

Address _____

City _____ State _____

Architect

Builder

Dealer

Wholesaler

Other

POTLATCH FORESTS INC.

Lewiston, Idaho • Warren, Arkansas



symbol
of quality
since 1906

See Sweet's Insert File No. $\frac{8C}{PO}$ for further details, or mail the coupon.

HOUSING POLICY

House cuts FHA funds after disputing budget estimates

The action forced FHA officials to trim operations immediately and to face the bleak prospect of spending \$2,950,000 (or 3.9%) less in fiscal 1963 (ending next June 30) than they had to spend last year.

Commissioner Neal Hardy last March asked Congress for permission to spend \$82.2 million of the money FHA gets from fees and charges (\$206 million last year). The request was \$7,750,000 over last year's appropriation.

But the House appropriations committee (which insists on treating FHA like other agencies which draw money from the US Treasury) turned down the request. FHA had not spent about \$2 million of the \$74,450,000 appropriated to it last year, the committee said.

"The agency is becoming a little top heavy in its estimates," observed the committee. "The increase in workload doesn't justify the increased request in appropriations . . . the committee will expect more economy in 1963."

But FHA's current expenses are running

\$5 million a year ahead of the committee's reckoning, part of it paying for a larger staff which has helped cut processing time to two weeks in all offices. Now backlogs could begin.

Hardy in mid-August asked a Senate committee to restore \$6.3 million of the House cuts from his first budget request and got no immediate decision. Significantly, he trimmed his early estimates of 1963 work 8.5% (from 1,077,000 to 985,000 applications) because "new programs have not developed as rapidly as was expected at the House hearing in March." Meanwhile he cut expenses in August by 1) not hiring fee appraisers, 2) not working FHA staff men overtime, and 3), not filling any vacancies.

All other parts of the sprawling HHFA and the Federal Home Loan Bank Board came through the House budget mill with requests trimmed but still above 1962.

HHF Administrator Weaver's office got \$14.5 million, about \$1.5 million over 1962 and enough to hire 65 men to administer renewal programs. He got \$375,000 for re-

search, the same as last year, but had asked \$1,450,000.

The Urban Renewal Administration got \$300 million to subsidize local projects, well over the \$175 million spent last year. The Public Housing Administration got \$180 million for annual contributions to local agencies, \$15 million more than last year, but \$5 million below its request. The Federal Natl Mortgage Association can spend \$8.3 million of its income from fees, a \$250,000 increase. And the HLBB gets a handsome \$1.3 million increase to \$13.5 million.

HHFA also gets these loan and grant funds:

| PURPOSE | 1962 | 1963 |
|--|-------------------------|--------|
| | BUDGET (000 omitted) | AMOUNT |
| College housing loans | \$17.7 | \$18.0 |
| Mass transit loans, grants | 42.5 | 32.5* |
| Open space grants | 35.0 | 15.0* |
| Low-income housing dem | 2.0 | 3.0 |
| Public works planning advances | 7.0 | 12.0 |
| Housing for elderly loans | 60.0 | 45.0* |

*A separate bill proposes adding to these amounts.

Low-interest loans to house elderly nearing 160% boost

HHFA's direct loans at a subsidized interest rate are proving so popular a device that Congress is looking favorably upon a double-barrelled bill increasing these loans and adding two new types for rural areas.

The total bill: \$200 million, or 160% over the \$125 million authorized for the original loan plan set up in 1959 under Sec 202. Congress has appropriated only \$80 million of this for spending, however.

Applications are now pouring in so fast HHF Administrator Weaver forecasts loans could hit \$250 million by the end of 1963. So at his behest Rep Albert D. Rains (D, Ala.) sponsored a bill to increase the loan ceiling by \$125 million to \$250 million.

Weaver told Rains' housing subcommittee the Community Facilities Administration (CFA) which processes loan applications has already loaned or earmarked \$62.2 million (at 3½% interest last fiscal year and 3½% now) for 66 projects with 5,500 units. Another 69 projects with 8,770 units are under "active review" and could take \$97.1 million.

So far, said Weaver, over half—53%—of projects are sponsored by non-profit organizations. Church groups sponsor 36%, while consumer co-ops, labor unions, and public agencies (other than public housing authorities) have 11%. But labor unions are becoming more active in housing elderly and soon "should make an important contribution."

GOP members tried to involve the bill in a hassle over integration—and leave Alabaman Rains backing an open occupancy program.

Did borrowers have to pledge no segregation in their units, they asked, and if so, wasn't Weaver, a Negro and former chairman of the NAACP, being inconsistent by not imposing similar rules on FHA mortgages?

Said Weaver: no-discrimination policies for Sec 202 were put into effect by his Eisenhower administration predecessor, and he felt a moral commitment not to change them without orders from the President.

The Kennedy Administration has made only two loans in the South, and the one

completed project in Shreveport, La., has no Negro occupants. "None have applied," says the sponsor and Shreveport observers point out this is only natural in the sharply segregated city. Two weeks after the hearing, CFA approved three more loans in the South, two in Georgia and one in Louisiana.

The committee finally trimmed the Administration request for new money to \$100 million, but not before Rep William Widnall (R, N. J.) won an amendment limiting the loans to new construction.

Two new loan plans for aged persons in rural areas would be set up.

The committee combined a second bill putting the Farmer's Home Administration (part of the Agriculture Dept) in direct competition with the Federal Housing Administration (part of HHFA).

Other government aids to elderly "have not reached the millions (estimated at half the 15 million over-65 persons) living on farms and in small rural towns and villages," testified Farmers Home officials.

Agriculture's FHA, formerly limited to lending money for individual farm homes, could insure private loans up to \$100,000 for elderly rental housing under the bill.

And Farmer's Home would also get two \$50 million loan funds of its own to pass out in low-interest loans. Private non-profit corporations, consumer co-ops, and public agencies could borrow at 3½% interest from one \$50 million to build rental homes for aged. Elderly persons themselves could borrow at 4% interest from the second \$50 million to buy an existing home or site for a house.

Rains' committee approved the bill unanimously, virtually assuring safe passage.

S&Ls face higher taxes and dividend reporting in Senate

After a final month of closed-door maneuvering, the Senate finance committee headed by economy-minded Sen Harry Byrd (D, Va.) reported out a tax bill little resembling that passed by the House in March (NEWS Apr).

The bill, scheduled for Senate action after Labor Day, increases the income taxes 6,200 S&Ls and 513 savings banks would pay by an estimated \$10 million from \$200 million a year in the House plan. The Senate plan calls for stock S&Ls to absorb all of the increase, and the Senate left unchanged the House formula of taxing 40% of the earnings of mutual S&Ls at the 52% capital gains rate—a net rate of 20% of earnings. Stock S&Ls could put 50% of earnings into reserves and pay tax on the remaining half. This plan means they would pay \$35 million (vs \$25 million under the House plan).

Worried industry sources still find in the final Senate version a possible divide-and-conquer tactic. By putting stock S&Ls in a less favored position, the new tax act could in time force these stock S&Ls to band together on their own outside the two existing S&L leagues.

The controversial dividend withholding was shelved in favor of dividend reporting.

The Kennedy Administration's controversial plan to force S&Ls and savings banks to withhold 20% of the dividends it pays never really had a chance in the Senate.

The committee voted 11-5 against the House-passed withholding plan and Sen Byrd predicted a 3-1 Senate defeat for the plan if Administration supporters, lead by Sen Robert S. Kerr (D, Okla.), try to revive it on the Senate floor.

In place of withholding the committee substituted much stricter reporting of dividends. Under present law S&Ls must report to the US Treasury dividends over \$600. The committee trimmed this to \$10, and applied it to all dividend-paying institutions.

A key reason for committee acceptance: its staff estimates this will yield \$200 million yearly (vs. \$600 million under withholding).

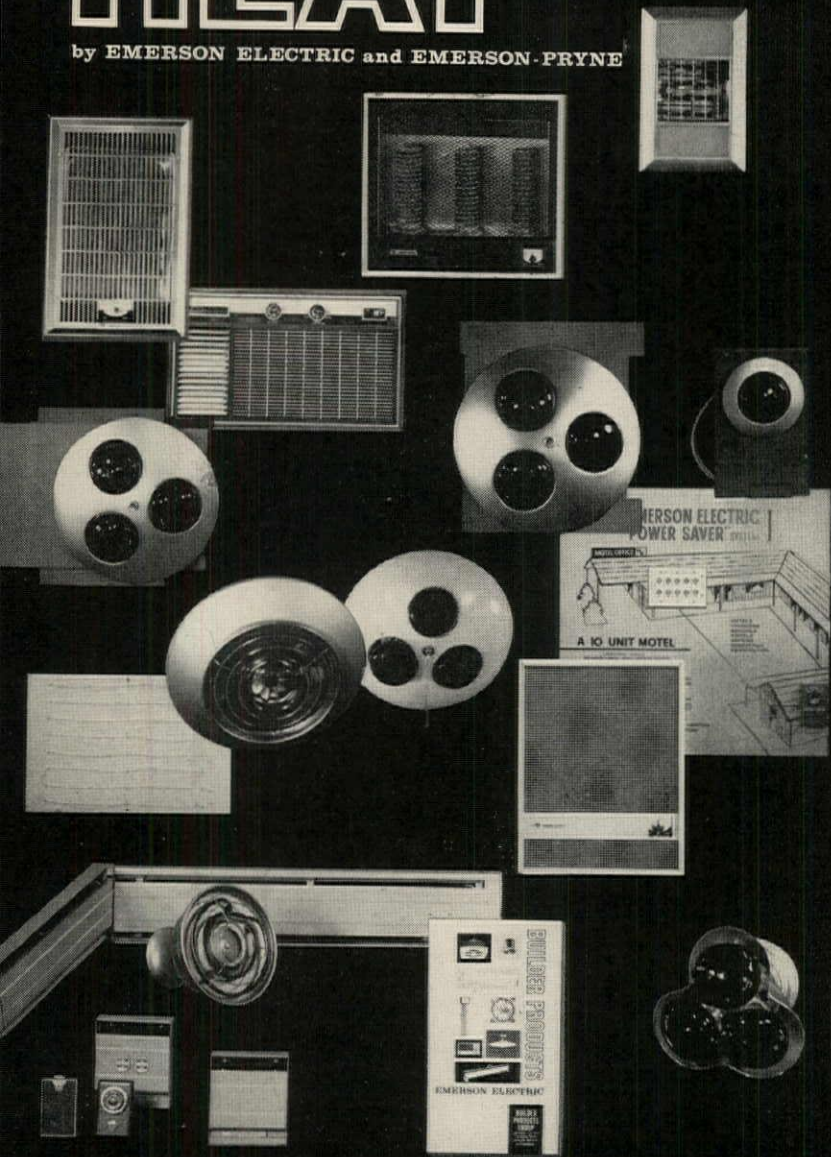
The rule could bring a flood of 250 million information reports to Treasury each year. Treasury officials aren't any happier with this paperwork than thrift institution leaders.

But thrift men see one advantage: taxpayers seldom withdraw savings to pay taxes on dividends, and presumably will not change even if their dividends are now reported.

EMERSON

HEAT

by EMERSON ELECTRIC and EMERSON-PRYNE



LIGHT

by EMERSON-IMPERIAL and EMERSON-PRYNE



ALL THE ELECTRICAL COMFORTS OF HOME IN ONE PACKAGE

There's a good deal in The Package for you!

Over 600 items styled to help you make homes that look alike look different.

All kinds of lighting, electric heat, range hoods, chimes, intercom systems, fans.

All in one catalog. A regular supermarket. Makes it easier for you to select exactly what you want for each home you build.

All from one source. Makes purchasing easier. Cuts paperwork.

Whether you build five homes or 999, big houses, little houses, apartments or you're remodeling... the Emerson Electric Heat-Light-Air-Sound Package will do a job for you!

ELECTRIC

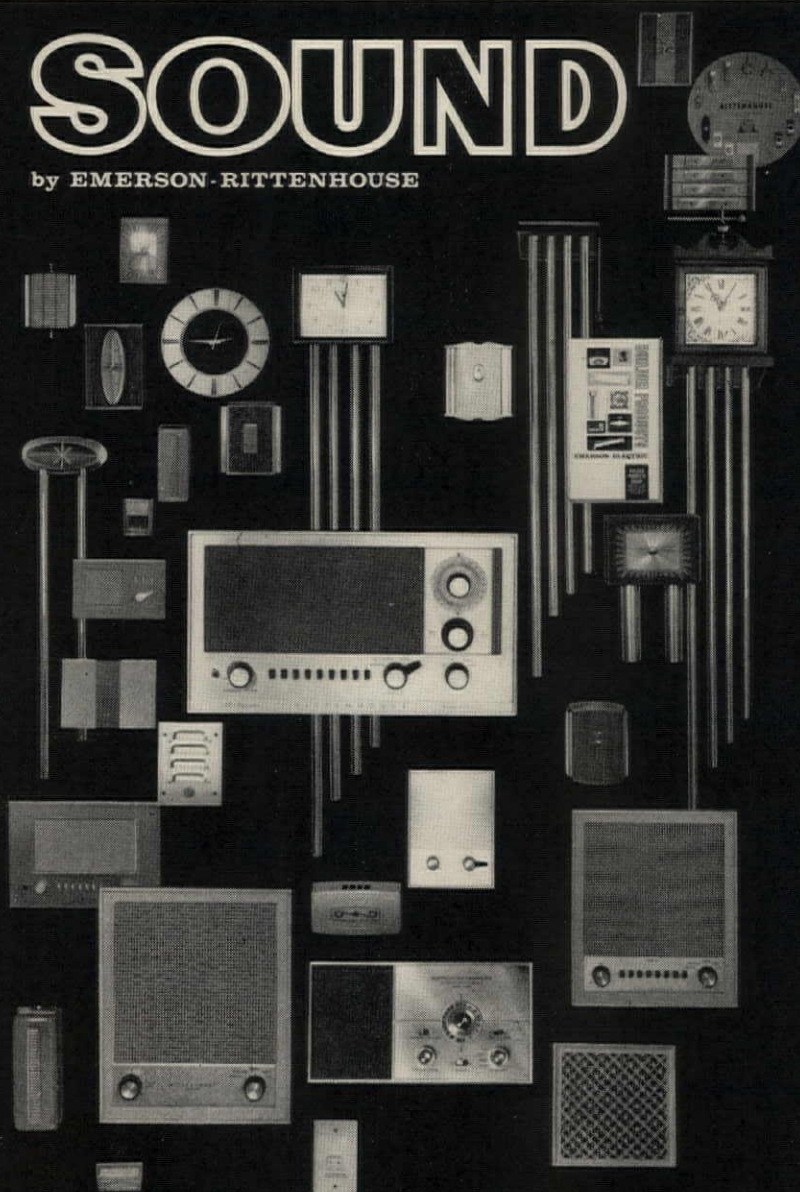
AIR

by EMERSON ELECTRIC and EMERSON-PRYNE



SOUND

by EMERSON-RITTENHOUSE



IF YOU DON'T SEE IT HERE ◆
LOOK FOR IT HERE ◆

The "one-stop" Emerson Electric Catalog makes all your Heat-Light-Air-Sound products easier to locate . . . easier to select . . . easier to buy.

THIS IS THE ONLY COMPLETE HEAT-LIGHT-AIR-SOUND PACKAGE IN THE BUILDING INDUSTRY



Emerson Electric—Dept. HH-9
8100 Florissant Avenue—St. Louis 36, Missouri
PLEASE RUSH The Heat-Light-Air-Sound Catalog

Name _____
Firm _____
Street _____
City _____ Zone _____ State _____

EMERSON  **ELECTRIC**
BUILDER PRODUCTS GROUP
EMERSON ELECTRIC • EMERSON-PRYNE • EMERSON-IMPERIAL • EMERSON-RITTENHOUSE

ZONING

Pleas for new zoning freedom fail in Philadelphia

Builders have long complained that the dead hand of some zoning rules, especially rigid setback and side-yard requirements, has forced them to build cookie-cutter subdivisions.

So, in 1955, when Philadelphia started to update its 1933 zoning code, builders and housing men seized the opportunity to talk zoning sense to city officers.

They concentrated upon an idea called both "flexible zones" and "planned development districts"—a variant of planned unit development (see p. 122). It means simply that in certain areas a developer could build any combination of houses or apartments on a tract just so the number of units did not exceed a specified density of units per acre.

To show how it worked, the Philadelphia Housing Association assigned land planners to come up with alternate plans for subdividing 37 acres if present zoning rules were thrown out the window. The planners reported three novel layouts, all taboo under the old code, and the Housing Association argued this study "clearly shows that these regulations do interfere with good neighborhood design." Then the prestigious Citizens Council for City Planning took up the cudgel and supported planned development districts in 1960. The citizen group renewed its cry at public hearings last April.

Organized homebuilders backed the flexible zoning idea because "it would eliminate the sea of roofs which some sections now require," said Builder Leonard N. Caplan, zoning chairman. Commissioner Barnet Lieberman of the licenses and inspections department (and a vice president of the Natl Association of Housing & Redevelopment Officials) supported the idea. Hopes soared when Pittsburgh adopted a similar ordinance.

But last month, as the new zoning ordinance was signed after eight years of effort, flexible zoning backers were disappointed.

Planners say 23 housing zones give adequate freedom of site layout.

"There was no need for it (the planned development district) to be included," maintains Executive Director Edmund N. Bacon of the City Planning Commission. "The same



PLANNER BACON

For flexibility, a flock of zones

result can be obtained through other provisions in the code."

Despite the Housing Association demonstration, Bacon says none of the citizen groups came up with an ordinance that was assured of working. All drafts placed before the zoning advisory committee created problems of land value, he says (although courts have historically held that land value should not affect zoning decisions).

Instead of experimenting, Bacon says builders will now have greater flexibility than ever before because the zoning code recognizes 23 separate zones for housing, almost double the 12 districts before. Some new zones:

- A town house district in the center of the city.
- Three zones for converting large homes into apartments.
- Six apartment zones using the new technique of "floor area ratios" for zones. Thus total floor area may not exceed certain percentages (ranging from 30% to 500%) of lot area. Builders are given bonuses for setting buildings back farther from the street than the minimums.

All these, argues Bacon, give builders more flexibility than ever before to locate buildings on different parts of a site.

Builder Caplan disagrees. The added complexity and red tape of the new ordinance will only make building more difficult, says Caplan. Philadelphia's 23 zones for housing appear to set a record (New York City has

nine zones, Chicago eight).

City officials say the zoning code does change the amount of land devoted to housing (a new zoning map has not yet emerged) but Caplan disputes this. The code bans multi-family housing in wide areas where it is now permitted, especially in the northeast section where most new housing is built. Thus many builders may be forced to build single-family homes or duplexes on land they bought for apartment use, he claims.

New York builders compile dossier of zoning outrages

For most builders, their growing problem with suburban upzoning to thwart both apartments and middle-priced homes is like the old wisecrack about the weather: Everybody talks about it but nobody does anything.

Now, New York State builders are doing something specific to cope with what they call their new No. 1 problem. This month, the association expects to complete a summer-long, \$2,000 survey to document how municipalities are obstructing new housing. The results will be laid before the State Office for Local Government headed by Frank Moore, former lieutenant governor. "If you can document your case," Moore has told builders, "we'll take action."

The state association hired Raymond M. Urquhart, 34-year-old village manager of Bronxville (Westchester County) to do the survey. He is immediate past president of the City Managers Association of New York—which means his views should command attention among the local officialdom builders most want to reach. He has covered some 30 municipalities.

"We don't expect to be surprised at what turns up," says Association President John E. Marqusee. He predicts the survey will uncover instances of deliberate upzoning of residential areas, arbitrary delays in processing subdivisions and permits, obstructions to creating sewer districts, abnormally high specifications for roads, sewers, and other facilities, excessive open space requirements.

CODES

'Write-it-yourself' rules win approval in Houston

The new building code, effective this month, ends 13 years of frustration and struggle for officials and builders in Texas' boom city (see p. 9) which produced not one but two codes.

The nation's seventh largest city turned to the "write-it-yourself" formula when its first try at reforming its 1942 code turned into a how-not-to-do-it demonstration. The fiasco started in 1949 when city officers set a single design engineer to writing a new code. During nine years of toil he scissored together sections from codes in 15 cities into a 1,300-page, 4¼"-thick volume which city fathers promptly adopted in 1958 without a public hearing—and before builders and construction men had even seen a copy.

When copies became available, builders screamed. The code specified what materials had to be used—and outlawed materials widely used in Houston and other cities. It would add

a minimum \$750 to the price of a house, cried the Home Builders Association.

Council listened, quickly suspended the "cross referenced pandemonium," and took up the builders' offer to write a new code.

Builders invited other building trade groups to join in a construction industry committee to begin the job. Twenty-seven associations, from the Air Conditioning Council of Greater Houston to Texas Structural Steel Institute, sent representatives. Lumber Dealer Russell W. Nix became chairman.

"City officials gave us a free hand to come up with a code," recalls Builder James S. (Micky) Norman Jr, a trained lawyer and engineer who represented homebuilders along with Builder James Webster. "We did."

No big city has given housing professionals such a vote of confidence.

Indeed code rewriting often brings a civic free-for-all as in St Louis (News, May '61).

But for all its freedom, the committee steered clear of radical experiments and anything-goes rules. The final version, says Nix, follows the International Conference of Building Officials uniform code but is adapted to Houston's climate. Plumbing sections draw from the Southern Building Code. And Nix says special care is taken to avoid "gimmicks" for special interests.

Norman estimates builders may be able to cut \$200 from typical house costs with the new code. Builders can now use new gypsum-faced component interior partition systems. Foundation costs may decrease. Substantial plumbing savings are expected; the old code required hand caulking of drain and vent pipe joints on the site, while the new code permits preassembly of plumbing trees and utility cores.

But economy-grade lumber is no longer acceptable, and all lumber must be grade marked. Wood is permitted in places where it was taboo before. The committee urges higher permit fees for more inspectors.

LABOR

NLRB gives builders new protection against 'hot cargo' strikes by unions

A "no man's land" in labor practice was filled last month by a Natl Labor Relations Board ruling that a union cannot picket to force contractors to sign a master labor contract banning non-union subcontractors.

Though Congress banned most "hot cargo" agreements in the Landrum-Griffin Act of 1959, an exemption was made for the construction industry at the demand of then-Senator John F. Kennedy. In its final form, the act permitted labor contracts ruling out the use of non-union subcontractors. But a union could not strike to enforce the provision and could only sue for breach of contract if an employer violated such a clause.

But the law left a gaping loophole: Could a union strike to force a contractor to sign such an agreement in the first place? Construction unions said yes, arguing that by legalizing such agreements in the building industry, Congress also intended to give the right to strike to them.

The NLRB, which has been under criticism for siding with labor too often since the Kennedy Administration took over, ruled that

Congress only included the exemption on the assumption that the employer's acceptance of such agreements would be voluntary. A strike to force such a clause would be coercive conduct, and the agreement non-voluntary.

Said NLRB: "The law contains a strongly declared Congressional purpose to prohibit the use of secondary pressure and economic force by unions to secure an objective such as was sought here."

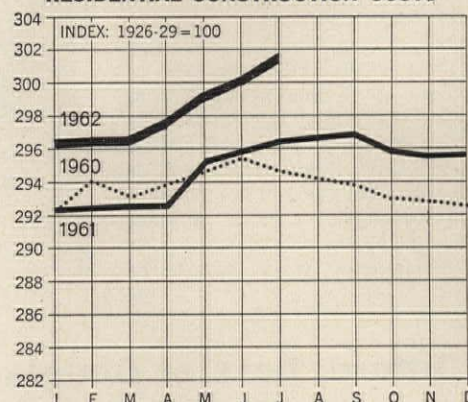
Biggest relief was felt by non-union subcontractors who look for work from the big contracting companies. Union-contractor agreements against the use of non-union subs have already limited the jobs available to them, and they feared if unions were permitted to strike they would be squeezed into an even tighter box to increase the number of such clauses.

Contractors should now feel freer to use non-union labor where it would bring cost savings. And strikes, such as one called last month by Essex County (N.J.) carpenters because the contractors will not include a "hot cargo" clause, should grow rarer.

parallel program for any builder-customer of its 20,000 dealers. Other material producers have in the last year offered material and plan packages for shell houses.

Complete house packages will be offered to builders to sell for \$14,900 to \$19,900, plus land under a Gold Bond Home program. Designed and engineered by BAH, the houses will be air conditioned, and will have many of the appliances and features announced for the BAH franchised builder program. Cost to the builder: 5% of the sales price, with half of this rebated if he provides his own mortgage financing. Chairman Melvin H. Baker estimates that savings on materials and appliances, plus plans and promotional material, would more than equal the service fee.

RESIDENTIAL CONSTRUCTION COSTS



New wage contracts sent residential construction costs up 0.5% in July to 301.7 on Boeckh's index. This figure is 1.9% over the index for last July. Says Col. E. H. Boeckh, "There were no material price changes which you could put your finger on; everything's been pretty dormant." Over the year, higher labor rates have generally outweighed softening prices. "Lumber is way off; cement and brick are weak, and you can buy steel over the counter," says Boeckh.

ASSOCIATIONS:

NAHB settles tax status in favor of Internal Revenue

The end of its three year fencing match with the Internal Revenue Service costs the Natl Association of Home Builders its tax-exempt status as of January 1, 1961.

In return, NAHB will be permitted to offset all costs of operating the organization against profits from the Chicago Builders Show, except for lobbying outlays.

Executive Vice President John Dickerman estimates the trade association still will have no tax liability after annual lobbying costs of \$75,000 are subtracted from operating expenses. Because so little of the budget (about 5%) goes for influencing legislation, members' dues are still tax deductible.

If NAHB had been forced to separate the Builders Show from other operations and pay separate taxes, staff cuts, severe retrenchments, or dues raises might have followed, maybe all three. Now, President Len Frank is satisfied that operations will not be affected. Two other revenue producers, the magazine *Journal of Homebuilding* and the Housing Center, are at breakeven points and IRS did not consider them profit making.

MATERIALS & PRICES

Price-fixing charges hit building materials firms

In two separate cases on opposite sides of the country, four major building materials producers are being charged by federal grand juries with conspiring to fix prices.

In Philadelphia, a jury indicted Johns-Manville and Keasbey & Mattison on charges of fixing prices and attempting to monopolize trade in asbestos pipe and couplings. Five individuals were named, headed by Vice President Robert F. Orth of J-M, and K&M President and Chairman Robert R. Porter.

In Seattle, Owens-Corning Fiberglas and a subsidiary of Armstrong Cork were indicted for price fixing and bid rigging in sales of insulation in the Northwest. Four insulation supply firms were also indicted.

The Philadelphia indictments charge: 1) the defendants met in various places to agree on prices, terms of sale, and price zones, 2) they imported their own "fighting brands" (low priced lines used to combat competition) to discourage foreign makers, and 3) they submitted collusive bids. The two companies account for 95% of the \$80 million domestic market in asbestos pipe and couplings for water and drainage systems. (Coincidentally, K&M sold its pipe facilities to Certain-Teed Products Corp effective the day the indictment was revealed. Certain-Teed is not a party to any charges.)

The Justice Department followed the indictment by asking the district court to order J-M to sell off enough productive capacity to create a competitive market in asbestos-cement pipe. (J-M has 70% of the market.)

Both companies vigorously deny guilt. Says Herbert M. Ball, secretary and general counsel of J-M: "There is no basis for the charges". Remarks Sales Vice President Norman L. Barr, of K&M: "We are not aware of any offenses we have committed."

The insulation charges by the Seattle jury

are regional in scope and allege meetings to fix terms and prices, and to decide who would submit low bids on specific projects in Washington, Idaho, Montana and Alaska.

Seattle District Manager A. J. Stream, of Armstrong Contracting & Supply Corp, says his division acted completely on its own in the matter. "We did not tell the home office about these activities, and if the things we did were wrong, the fault is ours and not that of anyone in the home office."

New vigor in ceramic tile as producer plans new plant

In 1959 US ceramic tile makers were in a dither about rising imports from Japan and Italy. They appealed to the Tariff Commission and the Commission urged higher tariffs under a law providing this relief for industries periled by foreign imports.

But this spring President Kennedy denied the request. Tile employment was steady, he said, and the predicted flood of imports hadn't materialized. (Foreign tile took 22% of square footage and 10% of dollar volume last year.) And Japan has agreed to limit exports to the US voluntarily.

With this brightening picture, one of the biggest US producers, American-Olean Tile Co, division of National Gypsum Co, last month unveiled plans for a second, 200,000 sq ft tile plant in Jackson, Tenn. Tile represents 10% of National Gypsum's sales (\$218 million last year) and Chairman Melvin Baker points to increasing use of tile on building exteriors as the reason for expanding.

Producer sets up new homes marketing plan

National Gypsum Co, already deep into the marketing of new homes through its sponsorship of the controversial Bureau of Advanced Housing (NEWS, July '62), is setting up a

PEOPLE

Shell maker turns the tables, buys into materials producer

In the last year three materials producers—US Gypsum, Certain-teed Products, and Celotex—had leaped into the booming but increasingly crowded shell homes market. All offered material and plan packages for shells and some added financing tie-ins as well.

Last month **James Willis Walter**, just turning 40 and the man who fathered the shell home industry almost single-handedly, proved that two can play the game. In a brilliant financial coup, pleasant-faced Walter and his Jim Walter Corp of Tampa bought 40% (or 400,000 shares) of the stock of Celotex Corp of Chicago. The price: about \$12 million.

Walter promptly asked and got a seat on Celotex's board, along with two trusted aides, executive Vice President **James O. Alston** and Vice President **Ernest M. Knapp**. Departing from the board in the shuffle: **Carl G. Muench**, who helped found Celotex in 1920.

Tight-lipped Walter says he has

no immediate plans to merge the two companies, although he says that Jim Walter Corp will begin "buying all the Celotex products we can." That could put up to \$4 million in Celotex's till annually.

George Sweets-St Petersburg Times



SHELL BUILDER WALTER
His credit was good

Walter was the third man to take a run at buying Celotex in the short span of three months.

Edward M. Gilbert tried last spring but was kayoed financially by the stock market slide in May and forced to flee to Brazil (NEWS, July). He now is under indictment for misuse of funds of E. L. Bruce, Inc, which he had headed. Next Ruberoid Corp offered to buy Celotex shares.

But fast moving Walter spied an unusual opportunity: the collapse of Gilbert's takeover plan had driven Celotex stock to bargain-basement levels, and the jittery market in turn made the supply of stock extra large.

Walter acted: he asked and got a \$10 million unsecured loan from a syndicate of banks headed by First Natl City Bank of New York City. Walter does credit business for his shells with about 40 banks around the country and his credit reputation is excellent. Then he assigned a broker to gather the massive block of stock. In ten days he was the major stockholder. He bought 50,000 shares on the open market

and added another 350,000 from sources "other than in the open market," he told SEC. At the same time Bruce Co told stockholders the company had sold 69,200 Celotex shares (at a \$400,000 loss) which Gilbert had bought in Bruce's name.

On the surface Celotex is an ailing corporation. Sales have been slipping from a 1956 high of \$76.5 million, and the company lost \$1.2 million in the first half of its fiscal year.

But Walter (and Gilbert) were attracted by some hidden assets carried on company books at very nominal figures. The assets: 240,000 acres of Michigan timberland; 48.3% of the stock in New Orleans' South Coast Corp, whose 89 sq mi of Louisiana sugar land include 4,000 acres of potential industrial land along the new Houma Canal to the Gulf.

For the moment Walter plans to buy stock quietly until he owns 51% of Celotex.

Difford, boss of Douglas Fir Plywood Association, retires

When **W. (for Wallace) E. (for Ellsworth) Difford** became managing director of the Douglas Fir Plywood Association in 1938, the plywood industry was sick. Its 17 mills were running only two days a week. Its big markets were automobile running boards, panel doors, and drawer bottoms. The product was unstandardized. Mill owners were trying to maintain depression-struck prices by cutting production. Sales amounted to only 650 million sq ft a year.

This month, as Difford retires at 72 (his title was changed to executive vice president two years ago), he leaves an industry grown to a lusty giant thanks in great part to his foresight and salesmanship. Plywood production will probably reach a record 9.2 billion sq ft this year. Housing is plywood's No. 1 market. The product—at Difford's insistence—has long been so standardized that a DFPA grade stamp is plywood's badge of building code approval or FHA acceptance.

Overcapacity still plagues plywood's 120 mills in the Pacific Northwest (they could turn out 20% more than the market will absorb). But Difford's DFPA is tooling up new marketing plans to double its domestic sales in the decade ahead and simultaneously invade worldwide markets.

Among uniquely trade groups, DFPA is unusually well financed. Its 1962 budget of \$7.3 million, for instance, is more than three times that of NAHB. It has a staff of 287, including 80 field salesmen who are all architects or engineers.

DFPA's 85 member companies and subscriber mills get up that much money by assessing themselves \$1 per 1,000 sq ft of production (including a temporary 25 cents to sponsor a television series).

They get a lot for their money. DFPA not only enforces quality control for its industry, but also acts as its sales promotion and research arm. One big reason this is possible is that no small group of giants dominates fir plywood: The five major producers account for only 36% of output. And rising costs (of both labor and trees) have forced nearly every big lumber company into the plywood field to reduce log waste.

Diff Difford, though trained as a lawyer, turned to promotion and advertising early in his career and this background led desperate plywood men to hire him in 1938. But Difford balked at spending DFPA money on advertising at the time. He felt the product wasn't ready. Instead, his first act at DFPA was to abandon the grading system that still lingers on in the obsolete "good-one-side" description of plywood in some specification sheets. He fired DFPA's 21 inspectors (who chiefly checked panel surfaces to make sure one side was blemish-free) and replaced them with specialists. Inspection emphasis shifted from appearance to glue quality and strength. Plywood's No. 1 problem at that time, recalls Difford, was public skepticism that it would hold together.

The system Difford set up in the late 30s to regulate plywood qual-

ity has been refined, but is basically the same today. Roving inspectors may pop up in a plant at any hour of day or night and take a sample back to DFPA's laboratory to test the glue. One inspector is assigned to only five plants. Before a mill can use DFPA's grade stamp, it has to prove itself during a probationary period. "This police power," says Difford, "is one of the keys of the plywood business."

Only after he felt the industry had a standardized product did



PLYWOOD'S DIFFORD
In 25 years, an industry revolutionized

Difford move into promotion. Until 1938, plywood promotion had been aimed mainly at consumers. Difford changed that. Plywood didn't have enough distribution to warrant consumer campaigns, Dif-

ford told the industry. So he shifted to ads calculated to build dealer outlets. It worked. Today, says DFPA, about 97% of lumber dealers stock plywood.

Difford left DFPA in 1946 to set up a wholesale plywood and lumber company in Seattle with his two sons, home for the first time as adults after World War II. He was persuaded to come back in 1952 and immediately began pointing plywood into its ten years of greatest growth (from 3 billion to today's 9 billion sq ft a year)—a growth so great it confounds the 1955 forecast of Stanford Research Institute that plywood sales would reach 7.5 billion sq ft by 1970.

First came a giant new promotion. Full-page ads in national magazines persuaded 8,000 lumber dealers to participate, stimulated demand for two million folders DFPA mailed to consumers. Then DFPA bought ads in 1,648 dailies in what was then, says Difford, the biggest newspaper ad campaign ever used for a building material.

"We must invest in more technological and market development," Difford once warned plywood men, "or face the possibility of eventual and disastrous decline." DFPA developed the stressed-skin panel and box beam, sponsored research that produced single-wall construction and new products like 2.4.1 and Texture One-Eleven. In 1959, Difford set out to create a plywood component industry by setting up a subsidiary Plywood Fabricator Service

continued on p 23

PEOPLE *continued*

to maintain standards for engineered building components made from plywood. After what even DFPA concedes was a shaky start, PFS has become a nationwide organization and the only agency FHA lets pass on the quality of pressure-glued parts.

The same year, Difford began DFPA's second-home campaign (slogan: "Every Family Needs Two Homes"). It was laughed at. Difford shrugged off critics with a cloud of cigar smoke. "They don't need two cars, either," he said. "Or two bathrooms. Or two suits. But they buy them." In 1960, Difford gave DFPA an early start in the then infant retirement housing market by building a demonstration house for the White House Conference on Aging (H&H, Feb '61). This year, a model home at the Seattle Fair is keeping plywood before a huge public.

New marketing ideas are near:

- DFPA is pondering setting up a separate but affiliated mortgage company with \$1-million capital (to be subscribed by member mills) to offer financing on a new

line of small (under 1,000 sq ft) homes to sell for less than \$10,000.

- In July, at DFPA's annual meeting, Difford unveiled a more ambitious plan. Now that this side of the ocean is pretty well under control, he wants to invade the Common Market and to win a piece of the "\$1 billion a year housing market in South America." This will mean "the difference between growth and stagnation" for plywood, Difford prophesies.

- At home, plywood makers must "move into package selling—components, building parts, and whole buildings," counsels Difford. "That's what your competitors (eg steel and aluminum) are doing. Eventually, you must develop ways to stockpile these packages so you can compete with the stock builders who already are stealing business in markets you pioneered."

The man who has become the guiding genius of the \$750-million softwood industry is a 6' dynamo with penetrating dark-brown eyes and white hair still sprinkled with black. Illinois-born, Difford went

to the University of Chicago on a \$300 scholarship from the Sons of the American Revolution, won his law degree from Chicago's Kent College. He practiced law in Texas for six months in 1914, then got a job selling ads for the Philadelphia *Inquirer*. At 29, he was Firestone Rubber's youngest branch manager. He switched to sales manager for the ailing Louisville Firebrick and, later, for Anderson Manufacturing (cabinets and millwork), acquiring a reputation as a doctor of sick businesses. Anderson loaned him to the Louisville Retail Lumber Dealers Association, then reeling under depression pressures. He put the association on its feet, then did much the same thing as president of W. J. Hughes & Son, big Southern sash and door jobbers. After competitors bought W. J. Hughes, Difford became managing director of the Fir Door Institute in Tacoma and simultaneously helped the then-infant DFPA with its promotion.

Difford runs DFPA's Tacoma headquarters (which has now spread out into six downtown buildings) with a mixture of dis-

cipline and kindness. He is a meticulous dresser and insists that his staff do likewise. He admits to a prejudice against hiring small men. Self-taught, he has become an eloquent speaker. Staff turnover is small. Difford hates to fire a man. But he is a stern taskmaster. "An employee is the length and shadow of the boss," he says. "If you're weak, they're going to be weak."

Unlike many other trade association executives, Difford didn't have to clear every move with a brace of committees. "I don't ask them. I tell them 'Here's what I am going to do with your money.'"

At a time when many men might be resting on past accomplishments, Difford continues to plan for plywood's future with the zest of a man 20 years his junior. He forecasts domestic sales of plywood will soar to 18.5 billion sq ft by 1972. Housing looms large in his figuring. In 1950, the home-building industry bought 500 sq ft of plywood per new home start. In 1960 the average new home had 2,500 sq ft of plywood. Difford calls 9,000 sq ft per house a reasonable goal.

Economist Rogg takes year's leave to lecture

After eight years at the helm of the economics department at the Natl Association of Home Builders, **Nathaniel H. Rogg**, 49, is taking a break to become visiting lecturer in economics at the Littauer School for public administration at Harvard. Details have not yet been released by Harvard.

Phi Beta Kappa Nat Rogg joined NAHB in 1954 (when it virtually

economic facts. Rogg supplied this and over the years has been so consistently accurate that he is now one of the most respected economists in housing. Nor is he afraid to speak out, and this month challenged the Commerce Dept's estimate of housing starts (see p 8).

One 1959-vintage prediction stands out in light of this year's soggy markets. Prophesied Rogg: "This population explosion [of the 1960s] will not automatically guarantee golden years for everybody connected with building.

OFFICIALS: **Lester P. Condon**, 39, is leaving FHA to take over as Inspector General of the Dept of Agriculture's new office of Internal Audit and Inspection. He reports directly to Secretary Orville L. Freeman.

An ex-FBI agent and good friend of Attorney General Robert Kennedy, trouble-shooter Condon is generally given much credit for FHA's Title One cleanup as assistant commissioner for audit and inspection. At Agriculture he is expected to crack down on any loose operating and investigative procedures.

Condon has been with HHFA and FHA since 1955 and was deputy commissioner under **Julian Zimmerman**.

Benjamin Saltzman, president of the Building Officials Conference of America, was transferred by New York City Buildings Commissioner Harold Birns from his post as Borough Superintendent in Brooklyn to the same post in the Bronx. Saltzman had been ques-

tioned by grand juries about "sinking" foundations under new houses on reclaimed ground in Brooklyn, but no charges were brought. His transfer came in a shakeup of New York's building inspection brass.

APPOINTED: As expected (NEWS, Aug) **John deLaitre** gets a \$20,000 post on the Home Loan Bank Board from the President. The Senate quickly approved President Kennedy's choice of the president of the Farmers & Mechanics Savings Bank in Minneapolis. He will succeed **Ira A. Dixon** for a term expiring June 30, 1966.

BUILDERS: **William J. (for Laird) Levitt, Jr.** is resigning as vice-president of Levitt & Sons, effective Sept. 1, but will remain on the board of directors. A terse, six line statement said only that he will head his own real estate investment firm in Trenton, 20 mi from Levittown, N.J.

DIED: **George H. Patterson**, 70, retired secretary-treasurer of the Mortgage Bankers Association, July 11, at Largo, Fla. Patient and tireless Patterson took the reins of MBA in 1931, when it was a 180-member organization whose main business was holding an annual convention.

A Chicago native who had studied law, Patterson began with the credo that associations should "render service". Over the years he helped MBA develop some notable services: a senior executives conference, an education and research department, and mortgage banking

seminars at Northwestern University in 1948. When he retired in 1957, grateful MBA members gave him a check for \$11,400 and the accolade "Mr Mortgage Banker".

OTHER DEATHS: **Homer L. Travis**, 54, sales vice president for the Kelvinator Division of American Motors Corp and, at the time of his sudden death, president of the National Electrical Manufacturers Association, July 1 in Detroit; **Ernest J. Semmig**, 76, retired builder of many large multi-family developments, among them Metropolitan Life's Stuyvesant Town and Peter Cooper Village in New York, July 20 in New London, Conn; **Arthur Bristow Hood**, 68, chairman of the board of the National Lumber Manufacturers Association and retired vice president and general manager of the Ralph L. Smith Lumber Co (division of Kimberly-Clark), who, as chairman of the National Wood Promotion Committee of the lumber manufacturers, brought together the various segments of the industry into one single promotional organization, July 20, at San Francisco; **Carl R. Megowen**, 63, chairman of the executive committee and board vice chairman of Owens-Illinois Glass Co who was the company's president for eleven years, July 21 in Detroit; **Harold W. Balay**, 59, Albuquerque homebuilder for 19 years and a director of Sandia S&L, after falling from a mezzanine while constructing part of a church, July 25 in Albuquerque.



H&H staff

ECONOMIST ROGG

A record of consistency

had no economic conning tower for housing) fresh from a 14-year stint as researcher for HHFA.

Pipe-smoking Rogg helped organize NAHB's Builders' Economic Council in 1956 to get "reliable data on the conditions and trends in the home building industry" by sampling builder thinking and planning every six months.

But the council's findings needed interpreting in relation to other

**The
MGIC
man
knows the score**



His advice to Builders, Lenders, and Realtors makes sense:

The service your *MGIC* Representative represents is a result of the private enterprise approach to the problem of helping lenders make high-ratio loans safely. Yes, your *MGIC* Representative knows the score. What's more, he's ready to help you better serve the home buying public — *now*. Call on him for advice and counsel — with no obligation whatsoever!

WRITE TODAY and we'll have the nearest *MGIC* Man call you for an appointment.

Mortgage Guaranty Insurance Corporation

600 MARINE PLAZA • MILWAUKEE 2, WISCONSIN • BRoadway 2-8060

THE NATION'S LARGEST PRIVATE GUARANTOR OF MORTGAGES

*CALIFORNIA is now the 42nd State (plus D. C.) in which *MGIC* service is available through over 2,200 qualified mortgage lenders

MGIC

MORTGAGE MONEY

Mortgage yields test new resistance point as decline in discounts tapers off

Solid evidence comes this month that the end may be near for the decrease in discounts that began seven months ago when commercial banks got permission to pay 4% interest on deposits.

In sharp contrast to the earlier across-the-board assault on mortgage yields through reduced discounts, this month only four cities report smaller discounts in HOUSE & HOME's regular survey of mortgage prices in 18 cities.* Apartment mortgages continue in favor with investors, and discounts on Sec 207 loans shrank by ½ point in Chicago, Philadelphia and Los Angeles.

New house conventional loan rates are unchanged at 6.06%, reports the Home Loan Bank Board survey of S&Ls with assets over \$50 million. But 6% money is disappearing in Chicago S&Ls (where savings inflow slowed drastically in July), and the competitive rate is now 5½-5¾%. Some limited 5¾% money is available in Atlanta, down ¼% from last month.

**House
Home**
exclusive

Mortgage men say the US Treasury offering of long-term bonds yielding 4.19% sets a strong floor on mortgage prices.

The Kennedy Administration's first venture into direct cash sale of long term bonds drew subscriptions for only \$316 million of \$750 million offered. The Treasury will seek about \$7 billion in new money in the October-December quarter and mortgage men are watching to see if the August sale is a straw in the wind signaling more long-term issues.

The treasury bond yield (trading lowered the yield to 4.13% by mid-August) is less than 100 basis points below the 5.12% that East Coast Savings banks have set as the lowest yield they will accept.

"A strong point of resistance has been reached," confides one mortgage banker. "We've reached it, period," agrees First Vice President Robert E. Morgan of the Colwell Co, Los Angeles.

"The spread between bonds and mortgages is so thin that I think the mortgage market is going to be hurt," says Bernard Dill of the Massachusetts Purchasing Group of savings banks. "The minute you see a change in the interest on governments, you will see people move to the bond market."

President John Halperin of J. Halperin & Co, New York City, predicts the mortgage market will turn toward tighter money after October. "It will take a few months, but it will happen," he asserts. One mortgage banker predicts pension funds may be the first to move out of mortgages. Others say traditional mortgage investors will stay in mortgages as long as possible.

Among these investors, commercial banks are running 19% ahead of 1961 in mortgage recordings through May as all investors jockey to invest the torrent of new savings. Savings banks are 17% ahead; S&Ls are 16% over 1961, but their \$781 million dollar-advance is the largest.

The long-term Treasury bonds may drain off just enough money to reduce investment pressure and thus cut slipshod credit practices.

Mortgage delinquencies eased downward in the April-June quarter for the second consecutive quarter, says the Mortgage Bankers Association. Overall, 2.67 of each 1,000 loans are one to three months delinquent, down from 2.68 the preceding quarter and well below the 3.10 six months earlier.

But as the foreclosure picture eases, the competition for loans is exerting new pressure for more liberal loan terms and credit practices. The Massachusetts Purchasing Group reports a sharp rise in FHA 35-year loans and Bernard Dill says. "The 35-year loan is the real competition for S&Ls (who are lending with 10% down)." Adds Morgan of Los Angeles: "Some of the investors have got to take 35-year loans in order to get anything else."

Economist Saul Klamon of the Natl Association of Mutual Savings Banks believes the long-term Treasury bonds can only help this worrisome situation by "tapping funds in the long-term capital market and draining off some of the pressures to invest funds."

*Prices for FHA Sec 203b minimum down, 30-year loans for immediate delivery go from 96½-98 to 97-98 in Chicago; from 98-99 to 98½-99½ in New York City; from 96½-97½ to 97-97½ in Houston; and from 95-97½ to 95-98 in St. Louis.

TO MEET YOUR INVESTMENT NEEDS...

we have
commercial
and
industrial
loans
in the
Southwest

To this area's history of steady growth and a recognized vast potential can be added the excitement and stimulation of our nation's "space" program. Now, therefore, more than anytime in the past, the investor who needs diversification should be thinking of buying loans in the Southwest area.

The Lumbermen's Investment Corporation can meet your needs. This year alone, we will originate over \$25,000,000 commercial and industrial loans and something in excess of \$30,000,000 FHA and VA loans. We have six offices, 73 employees, and 661 retail lumber dealer-stockholders, insurance and real estate agents, all originating quality residential mortgage loans for us. Our capital and surplus is two and five tenths million dollars, an unusual financial strength sufficient to support substantial sub-division development and construction finance.

Of equal interest to you is our servicing record. We are completely IBM equipped, for we look upon efficient servicing as being of great importance to us because of its importance to you. Our delinquency rate on \$75,000,000 servicing has been consistently lower than national or regional averages.

We would like an opportunity to confer with you in person about your investment needs. May we suggest that you telephone or write for information, as we are confident we can serve you.



**Lumbermen's
Investment
Corporation**

Julian H. Zimmerman

President

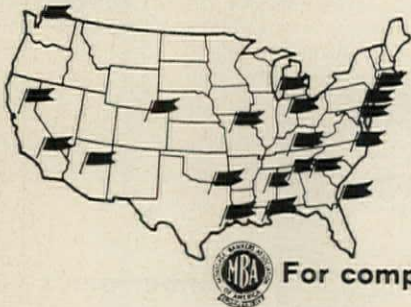
2501 North Lamar • Austin, Texas •
Phone GReenwood 7-9417



Some things are too big to handle alone!

When you need mortgage financing or seek mortgage investments— You need a Mortgage Banker

Sponsored on behalf of the more than 2,000 MBA members from coast to coast.



A mortgage banker is a "professional by experience." His years of specialization in this unique field enable him to know more about the national money market than any builder, realtor, developer, architect or attorney can take time to learn. He knows more about the local construction market than any national lender can take time to learn.

Knowing the right money-source for the right loan and vice versa makes a mortgage banker an invaluable ally for mortgagor and investor alike.

For complete mortgage information or financing, contact any of the firms listed below:

ALABAMA
Cobbs, Allen & Hall Mortgage Co., Inc.
Birmingham

DELAWARE
T. B. O'Toole, Inc.
Wilmington

LOUISIANA
First National Mortgage Corporation
New Orleans

TENNESSEE
Guaranty Mortgage Co. of Nashville
Nashville

ARIZONA
A. B. Robbs Trust Co.
Phoenix

FLORIDA
Stockton, Whatley, Davin & Co.
Jacksonville

MISSISSIPPI
Reid-McGee & Co.
Jackson

TEXAS
Southern Trust & Mortgage Co.
Dallas

CALIFORNIA
Pacific States Mortgage Co.
Oakland

GEORGIA
Tharpe & Brooks, Inc.
Atlanta

MISSOURI
City Bond & Mortgage Co.
Kansas City

T. J. Bettes Co.
Houston

The Colwell Co.
Los Angeles

ILLINOIS
Dovenmuehle, Inc.
Chicago

NEW JERSEY
Jersey Mortgage Co.
Elizabeth

WASHINGTON
Carroll Mortgage Co.
Seattle

COLORADO
Mortgage Investments Co.
Denver

INDIANA
H. Duff Vilm Mortgage Co., Inc.
Indianapolis

NORTH CAROLINA
Cameron-Brown Co.
Raleigh

WASHINGTON, D. C.
The Carey Winston Co.
Washington, D. C.

MORTGAGE MARKET QUOTATIONS

(Sale by originating mortgagee who retains servicing.) As reported to HOUSE & HOME the week ending Aug. 10, 1962.

| City | Conventional Loans | | Construction Loans ^W | | FHA 207 | FHA 220 | FHA 203b |
|--------------|-----------------------------|-----------------------|---------------------------------|---------------------------------------|----------------------|--------------------------|---------------------------|
| | Comm. banks, Insurance Cos. | Savings banks, S & Ls | Banks, Ins Cos. & Mtg. Cos. | Interest + fees Savings banks, S & Ls | Firm Commitment | Firm Commitment 35 years | Min. Down 35 year futures |
| Atlanta | 5½-6 | 5¾-6 | 6-6½+2-2½ | 6-6½+2-2½ | a | a | 96 ^b |
| Boston local | 5½-5¾ | 5¾-5¾ | 5¾ | 5¾ | a | a | a |
| out-of-st. | — | — | — | — | a | a | 96-96½ |
| Chicago | 5½-5¾ | 5½-6 | 5¾-6+1-1½ | 5¾-6+1½ | 97½-98½ ^b | 97½-99 ^b | 94-95½ ^b |
| Cleveland | 5½-5¾ | 5¾-6 | 6+1-1½ | 6+1-1½ | 98-98½ | 97-98 | a |
| Dallas | 5¾ | 6 | 6+1 | 6+1 | 97 | a | 96½ |
| Denver | 5½-6 | 5¾-6½ | 6+1½-2½ | 6+1½-2½ | 97-98 | a | a |
| Detroit | 5½-5¾ | 5¾-5¾ | 6+0 | 6+0 | 99 | a | a |
| Honolulu | 6-6½ | 6-7 | 6+1-2 | 6+1-2 | a | a | a |
| Houston | 5½-6½ ^h | 5¾-6½ | 6-6½+1 | 6-6½+1 | 97-98 ^b | 98 ^{bd} | 96-96½ ^b |
| Los Angeles | 5¾-6 | 5¾-6.6 | 6+1½ | 6-6.6+2-3½ | 98-98½ | 98 | 97½ |
| Miami | 5½-5¾ | 5½-6 | 6+1 | 5¾-6+0-1 | a | a | 96 |
| Newark | 5½-6 | 5½-6 | 6+1 | 6+1 | 98 | par ^e | a |
| New York | 5¾-6 ^r | 5¾-6 ^r | 6+0-1 | 6+0-1 | 98½-99½ | 98½-99½ | 98½-99½ ^b |
| Okla. City | 5¾-6 | 6-6½ | 6+1-2 | 6+1-2 | a | a | a |
| Philadelphia | 5¾-5¾ | 5½-6 | 5¾+1 | 5¾+1 | 99 | 99 | a |
| San Fran. | 5¾-6 | 6-6.6 | 6+1½ | 6-6.6+2-3 | 97½-98 | 99½ ^k | 97 |
| St. Louis | 5½-6½ | 5½-6½ | 5¾-6½+1-2 | 5¾-6½+1-2 | a | a | a |
| Wash. D.C. | 5½-5¾ | 5½-5¾ | 5¾+1-1½ | 6+1-1½ | 98 | 98 ^b | 97½ |

FHA 5¼s (Sec 203) (b)

| City | FNMA Sctry Mkt ^{xy} | New Construction Only | | | | Existing ^r Min Down 25 year Immed |
|--------------|------------------------------|-----------------------------|---------|--------------------------------|--------------------|--|
| | | Minimum Down* 30 year Immed | Fut | 10% or more down 30 year Immed | Fut | |
| Atlanta | 96½ | 96½-97 | 96½-97 | 97-97½ ^b | a | 96½-97 |
| Boston local | 97½ | par-101 | par-101 | par-101 | par-101 | par-101 |
| out-of-st. | — | 96½-97 | 96½-97 | 96½-97 | a | 95½-96½ |
| Chicago | 96½ | 97-98 | 96½-97½ | 97½-98½ | 97-98 | 97½-98½ |
| Cleveland | 96½ | 97-98 | 96½-97½ | 98-98½ | 97½-98 | 97½-98 |
| Dallas | 96½ | 97-97½ | 97 | 97½ | 97½ | 97 |
| Denver | 96 | 97-98 | 97-98 | 97-98 | 97-98 | 97½-98 |
| Detroit | 96 | 97½-98 | a | 98-98½ | a | 97½ |
| Honolulu | 96 | 96½ | 96 | 97 | 96½ | 96-96½ |
| Houston | 96½ | 97-97½ | 96½-97½ | 98-98½ | a | 97-97½ |
| Los Angeles | 96 | 97½ | 97½ | 98½-99 ^{cb} | 98½ | 97½ |
| Miami | 96½ | 96-96½ | 96-96½ | 98 ^b | a | 96-96½ |
| Newark | 97 | 98 | 98 | 99 | 98 | 99 |
| New York | 97½ | 98½-99½ | 98½-99½ | 98½-99½ | 98½-99½ | 98-99 |
| Okla. City | 96 | 96½-97½ | 96½-97½ | 97-97½ | a | 96½-97½ |
| Philadelphia | 97 | 99½ | 99½ | 99½ | 99½ | 99 |
| San Fran. | 96 | 97½-98 | 97-97½ | 97½-98½ | 97-98 ^b | 97-97½ |
| St. Louis | 96½ | 95-98 | 95-98 | 95½-98 | 95½-98 | 94½-98 |
| Wash. D.C. | 97 | 98 | 98 | 98 | 98 | 98 |

*3% down of first \$13,500; 10% of next \$4,500; 30% of balance.

Sources: Atlanta, Robert Tharpe, pres, Tharpe & Brooks Inc.; Boston, Bernard Dill, Massachusetts Purchasing Group; Chicago, Robert Pease, vice pres, Draper & Kramer Inc.; Cleveland, David O'Neill, vice pres, Jay F. Zook Inc.; Dallas, Aubrey M. Costa, pres, Southern Trust & Mortgage Co.; Denver, Allen C. Bradley, asst vice pres, Mortgage Investments Co.; Detroit, Harold Finney, exec vice pres, Citizens Mortgage Corp.; Honolulu, Howard H. Stephenson, asst vice pres, Bank of Hawaii; Houston, Everett Mattson, vice pres, T. J. Bettes Co.; Los Angeles, Robert E. Morgan, first vice pres, The Colwell Co.; Miami, Robert J. Shirk, vice pres, Lon Worth Crow Co.; Newark, William W. Curran, Franklin Capital Corp.; New York, John Halperin, pres, J. Halperin & Co.; Oklahoma City, M. F. Haight, first vice pres, American Mortgage & Investment Co.; Philadelphia, Robert S. Irving, vice pres, First Pennsylvania Banking & Trust Co.; St. Louis, Charles A. Keller, vice pres, Mercantile Mortgage Co.; San Francisco, William McGowan, vice pres, Bankers Mortgage Co. of Calif.; Washington, D.C., Hector Hollister, exec vice pres, Frederick W. Berens Inc.

- Immediate covers loans for delivery up to 3 months, future covers loans for delivery in 3 to 12 months.
- Quotations refer to prices in metropolitan areas, discounts may run slightly higher in surrounding towns or rural zones.
- Quotations refer to houses of typical average local quality with respect to design, location, and construction.

Footnotes: a—no activity, b—limited activity, c—for local portfolios, d—on spot basis, e—FNMA is only purchaser, f—lower price is for loans under 80%, g—occasionally, h—mostly 5¾-6%, k—with construction loan, x—FNMA pays ½ point more for loans with 10% or more down, y—FNMA net price after ½ point purchase and marketing fee, plus 2% stock purchase figured at sale for 75¢ on the \$1, z—on houses no more than 30 years old of average quality in a good neighborhood.

NEW YORK WHOLESALE MORTGAGE MARKET

FHA 5¼s
Immediates: 98-99

FHA, VA 5¼s
Immediates: 96½-97
Futures: 96-97

FHA 5¼ spot loans
(On homes of varying age and condition)
Immediates: 95-97

Note: prices are net to originating mortgage broker (not necessarily net to builder) and usually include concessions made by servicing agencies.

Prices cover out-of-state loans, reported the week ending Aug 17 by Thomas P. Coogan, president, Housing Securities Inc.

CONVENTIONAL S&L LOANS

(national average, weighted by volume)

| | July | June | July 1961 |
|--------------------|------|------|-----------|
| New homes | 6.06 | 6.06 | 6.01 |
| Existing homes | 6.19 | 6.26 | 6.20 |
| Construction loans | 6.16 | 6.33 | 6.23 |

Source: Home Loan Bank Board. Based on reports for the first ten days of the month from 187 insured S&Ls with \$22.5 billion in savings (one-third of all FSLIC-insured S&Ls).

NET SAVINGS DEPOSIT CHANGES

(in millions of dollars)

| | June '62 | % change from May | Year to date | % change from 1961 |
|-------------------------------|----------|-------------------|--------------|--------------------|
| Mut sav banks ^a | \$ 422 | +129 | \$1,361 | +25 |
| S&Ls ^b | 1,495* | +10 | 4,701* | +6 |
| Commercial banks ^c | 1,050* | -37 | 9,630* | +25 |

*preliminary figures, ^aNational Association of Mutual Savings Banks, ^bUnited States Savings & Loan League, ^cFederal Reserve Board.

Second VA sale of mortgages again brings listless bidding

In late July the Veterans Administration put \$188 million of mortgages carrying from 5% to 6% interest on sale. The loans were on homes which VA had repossessed after foreclosure and then resold.

The agency said it was accepting bids for only \$75 million, the same percentage as in its first sale last May when it sold only \$40 million of \$100 million offered (News, June). This time average sale price crept up to 100.6 from the 100.04 of last spring.

VA says it will no longer put blocks of mortgages out for bids. Instead VA will post prices in each of its 54 offices and let buyers come and get them.

New group enters race to start private 'Fanny May'

For over a year a special committee of the American Bankers Association has appeared to be the only group interested in setting up a private company to buy and sell conventional (non-FHA and VA) mortgages. Deciding that a private secondary market facility needed government blessing, the committee went so far as to ask Congress to set up a new agency to charter and oversee one or more such companies (News, Aug).

Now competition is appearing. Energetic Julian Zimmerman, former FHA commissioner who now heads Lumbermen's Investment Co of Austin, Tex., unveiled at a New York City meeting last month an amazingly detailed plan—worked out in months of private talks—to start a secondary marketing company called Central Mortgage Investment Corp.

Both groups seek to fill a void for conventional lenders, who have no ready resale market for their loans comparable to the Federal Natl Mortgage Association which limits its buying to FHA and VA loans. Both proposed companies would buy mortgages and then use the portfolio as collateral for bonds to be sold to such institutional investors as pension funds which are usually unwilling to buy conventional mortgages individually.

The newcomers hope for a fast start by not requesting federal help.

Zimmerman is adamant about skirting tortuous Congressional action. "Compare the innocuous language setting up FHA and see how complex it is now," he says, "and you'll understand why I say you don't have a chance of getting this (the ABA committee plan) without strict control, including some control of interest rates—and that would be fatal."

The ABA committee argues federal chartering is the quickest way to prod states into letting banks, savings banks, and state S&Ls lend money up to 90% of a home's appraised value. Federal charters would also simplify the dealing in mortgages from different states.

Zimmerman proposes a simple way around this: Central Mortgage would buy all its loans at its headquarters in Austin (where data processing equipment would be shared with Lumbermen's). Thus Central Mortgage would not have to qualify to operate in many states.

In foreclosure cases, Central Mortgage would re-assign the mortgage to a contract servicer in the state. The servicer would then foreclose and assign proceeds from the settlement to Central Mortgage.

Zimmerman hopes his no-federal plan can get a fast start: He is calling a follow-up

“Title insurance is selling insurance”

Mr. Thomas Perine
Perine Corporation
Indianapolis, Indiana

Mr. Perine adds:

“In today’s buyers’ market we are appealing to more and more second home buyers who understand the complexities of home ownership. Today these buyers not only question our sales personnel about inherent house features, but inquire about those aspects of home ownership, which a few years ago they didn’t begin to understand.

“Title insurance is one of our most important selling points when stressing that we are not just thinking of them as a home purchaser, but rather as a happy home owner, living for many satisfied years in one of our homes.

“In today’s hard-sell market, a knowledgeable builder will use title insurance as a valuable feature that helps insure the selling of his homes.”



Lawyers Title Insurance Corporation

Home Office ~ Richmond, Virginia

LAWYERS TITLE SERVICE AVAILABLE IN 44 STATES, INCLUDING HAWAII, AND IN THE DISTRICT OF COLUMBIA, PUERTO RICO AND CANADA.
NATIONAL TITLE DIVISION OFFICES: CHICAGO • DALLAS • DETROIT • NEW YORK
REPRESENTED BY LOCAL TITLE COMPANIES IN MORE THAN 275 OTHER CITIES. THOUSANDS OF APPROVED ATTORNEYS LOCATED THROUGHOUT THE OPERATING TERRITORY.

**HERE'S HOW LAWYERS TITLE HELPS BUILDERS
SPEED UP SALES OF QUALITY-BUILT HOMES!**

Lawyers Title service to builders starts long before the actual sale of a home. For example, Lawyers Title consumer promotion in home planning magazines, plus informative booklets, pamphlets; builders display cards; Merchandising Aids for Model Homes, and our highly successful “Secure Homes Program” pre-conditions home buyers on the importance of title insurance protection—and spotlights the fact that one of the outstanding features of Quality-Built homes is safe, sound, reliable Lawyers Title insurance protection. For information about Lawyers Title “Secure Homes Program” for builders, mail the coupon today.

Lawyers Title Insurance Corporation
3800 Cutshaw Avenue
Richmond, Virginia

Please send us information about Merchandising Aids for Model Homes.

NAME

ADDRESS

CITY STATE

meeting in September to begin raising \$3 million initial capital (vs a minimum \$5 million under the ABA committee plan) to start operations. An offering of 30,000 shares at \$100/share (par value \$80) is planned, with \$2.4 million for capital and \$600,000 for surplus. Zimmerman already has incorporation papers, suggested by-laws, and operating forms ready and waiting approval by investors.

Central Mortgage at first would buy only mortgages insured by Mortgage Guaranty Insurance Corp of Milwaukee, first and most successful of the private mortgage insurers. MGIC has made Senior Vice President C. William Smith available to help Zimmerman's organizing effort. MGIC cannot start a secondary-market facility, says Smith, because the mortgage insurer and marketer must operate at arm's length, "but we intend to give all the help possible to Julian."

Central Mortgage will aim for a 5.75% yield (after 0.5% servicing) on its mortgages

Walter Bennett



MORTGAGE BANKER ZIMMERMAN
"Check the innocuous language"

by buying high-ratio (up to 90%) loans and purchasing from areas where the demand for mortgages (and the interest rate) is above average.

Mortgages would be pledged as security for collateral trust bonds. The bonds would be secured by Central Mortgage's pool of mortgages, not individual loans. Zimmerman will try to sell the first bonds privately to pension funds and other institutional investors. Pension fund trustees have told Zimmerman these bonds should pay 5.25%, leaving Central Mortgage a 0.5% spread between portfolio yield and bond interest.

The money from bond sales would be re-invested in mortgages. At first the company would aim at selling securities up to ten times its capital, surplus, and reserves, bringing the portfolio to \$30 million. (The ABA committee plan and FNMA both operate under maximum 20:1 debt to equity ratios.) Zimmerman says there is no economic reason why Central Mortgage eventually cannot work on a 40:1 or 50:1 ratio. Said Zimmerman: "We feel confident there are investors who would want to use this as an investment."

S&Ls bring new look to home finance in southern California

Not all are going the same route but they are using every tool available.

Says one homebuilder: "Every day we're seeing new patterns, new kinds of deals, new ways for builders and lenders to work together."

This isn't altruism. S&Ls are facing a profit squeeze—thanks to sliding mortgage rates while dividends are at a record 4¾%. So these things are happening:

- State-chartered S&Ls are buying raw land up to 2½% of their assets as the legislature authorized last year.* They do it not so much for profit as to create a dependable outlet for loans to builders whose operations they can half control.
- Federal S&Ls, which may not buy land outright, have stepped up loans to let builders buy land. Nationally, S&Ls loaned some \$16 million for land purchases in the first three months of this year. That is peanuts—but it is double the rate of a year earlier. Two-fifths of all land loans last year were in Western states—261 loans for \$34 million.
- Some state-chartered S&Ls are going the route pioneered long ago by Howard Ahmanson's giant (\$1.1 billion assets) Home Savings. They are buying land and participating in the profits (and risk) of a tract with a builder.
- Most S&Ls have loosened appraisals—so much so that some builders confide that with an 80% construction loan they can buy land, build houses, and have only their overhead and profit invested in a project.

To state it another way, a builder with a reasonably good reputation and a sound proposal can find an S&L which will tailor a deal to fit any requirements he specifies.

How much money state S&Ls are pouring into land purchases is unknown. The state does not tabulate figures although every S&L must report them. And data reported does not include S&L holding companies.

Here is a rundown on what seven S&Ls around Los Angeles are doing to compete:

Financial Federation, S&L holding company, buys land for investment steadily. Says President Ed Thompson: "We make it available to any builder who will pay the going price. Sometimes the builder may initiate the deal and ask us to buy the land and warehouse it

for him. We'll do that too." FinFed itself held \$4.5 million in land in July; its 11 S&Ls held \$6 million worth.

FinFed likes to make mortgage loans on houses built on land it warehouses but it's not a condition of deals.

Great Western S&L, unlike Financial Federation, buys no land for investment only. Says Vice President Elwood Teague: "A builder comes to us and tells us of a piece of land he's found that he'd like to build on sometime. We buy it and hold it for him."

At the time of purchase the builder takes an option to rebuy the land at a specified price—Great Western's price plus interest—at a specified time. In return, Great Western asks first refusal rights on mortgage financing of homes built on the land—if it can meet terms offered by competitive lenders.

Lytton S&L does not warehouse, but buys occasional pieces for investment. Biggest current holding—the 650-acre Virginia Dare vineyard east of Los Angeles. Lytton paid \$650,000, leased the land to growers.

Home Savings has done a turnabout, asserts President Kenneth Childs. Once it was known for maintaining a stable of builders with whom it participated in tract building. Now, Home still buys an occasional parcel for investment but Childs says it no longer builds houses. Why? Builders don't need front money as they once did.

Some builders are sharing their profits from building, notably with smaller S&Ls. State Mutual in Santa Ana buys land, gives a builder 30 to 50% of the profit on the sale of houses—more if he puts up a pledge account to reduce the S&L's risk (and boost its yield). The S&L gets a cut of the profit plus loan fees on every home sold in the tract. Metropolitan S&L in Los Angeles works much the same way.

Trans-World Financial Corp, another S&L holding company, builds and sell homes—108 last year, 300 projected for this year. (But it must finance through S&Ls other than its own under a ruling of California S&L Com-

missioner Preston Silbaugh.)

T-WF buys land for other builders and shares in the profits from the house sales. Its associations buy land and resell it for profit—they actually finance very little construction on it, says Assistant Vice President M. R. Lefkoe. Reason: its associations specialize in refinancing of existing properties, so T-WF has a portfolio yielding 6.8% today. Land buying loans are so popular one S&L man says, "We could lend ten times our legal limit."

Some builders complain that S&Ls are bidding up the price of acreage. Joe Eichler is one. And former NAHB President David Bohannon says he quit homebuilding because S&L-sponsored tracts "threw markets out of balance."

Federal S&Ls are envious and a bit worried by state S&Ls' land deals.

State and federal S&Ls alike are giving more generous appraisals to builders—though no official admits it.

Observes one Los Angeles mortgage banker: "What the savings & loans are doing today is to project the improved value of the property as a subdivision. They make it a substantially higher appraisal this way. For example they can take raw land appraised at \$10,000 an acre—\$3,000 per improved lot and figure that when the subdivision is completed the lot will really be worth \$5,000, not just \$3,000. So they give 80% of \$5,000."

"If you give a builder 80% of his projected sales price rather than his actual cost, he's not going to need much of his own money. He should be grossing at least 15% and if he isn't netting 8 to 10% he had better go back to selling shoes."

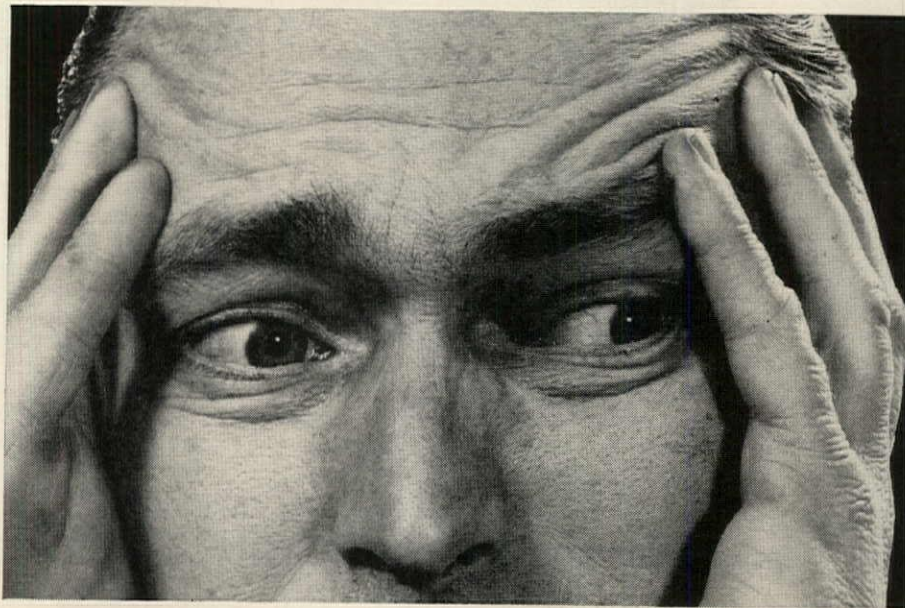
A big Orange County builder cites these figures as examples of the deal he gets:

| | |
|----------------------------------|----------|
| Cost of improved lot | \$ 2,000 |
| Cost of house and financing..... | 14,000 |
| Total | \$16,000 |
| Sales price | 20,000 |
| S&L appraisal | 18,000 |
| 80% conventional loan | 16,000 |

Says the builder: "As long as these figures are based on sound appraisal practice, it makes sense. The S&Ls are careful who they deal with now. Once, they weren't."

* Fifteen states let state-chartered S&Ls buy and/or develop land, says the Nat'l League of Insured Savings Assns.

If you have any of these problems...



HOW MUCH RUBBISH TO BURN?

BURNING FREQUENCY?

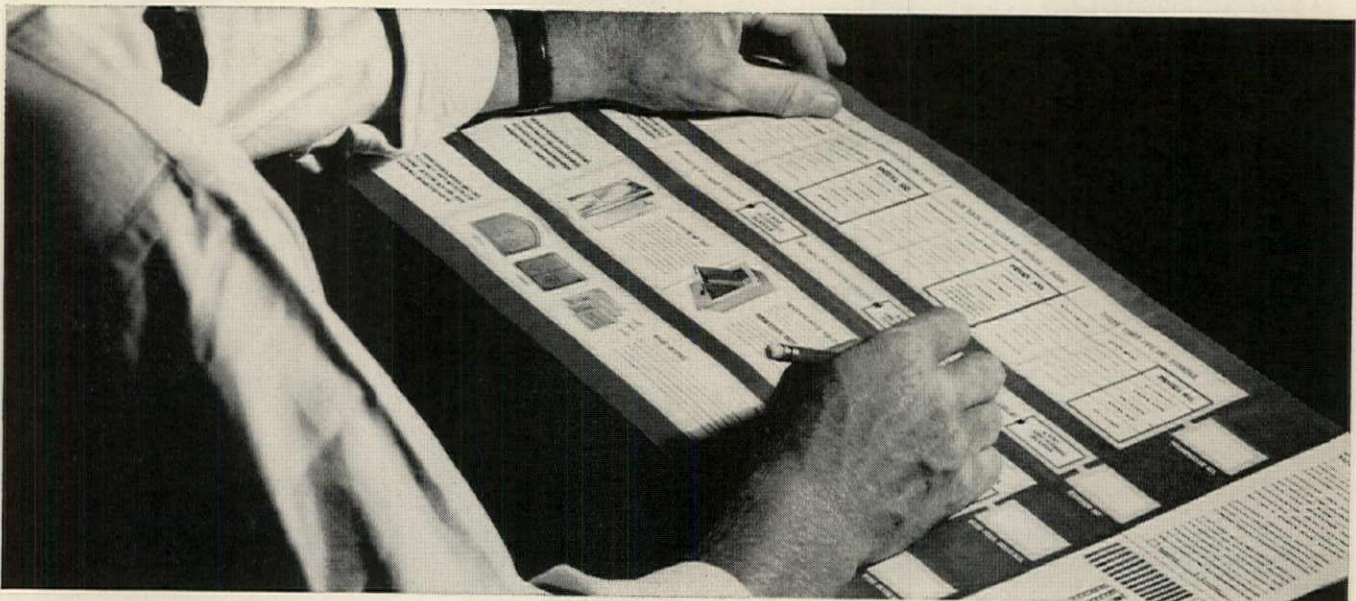
TYPE OF BURNER?

HOW MUCH FLOOR
SPACE REQUIRED?

WHAT SIZE FLUE?

TYPE OF FEED DOOR?

in selecting the right incinerator for the job...



10669-DB

*let the **Donley Selector Chart** give you the facts!*

More and more builders can now handle incinerator jobs previously built exclusively by specialists. Donley's New Incinerator Selector Chart shows you how to choose the right size and type of incinerator to serve the number of rooms or offices specified by the architect. In four easy steps you can figure all the parts you need right down to the number of bricks to finish the job. Before you order, you know exactly how much it will cost to the last penny. Your Donley dealer will deliver all the parts and materials complete with drawings and instructions.

*Send for your copy of Donley's
**INCINERATOR SELECTOR
CHART** today. It shows you how
to specify a complete incinerator
installation in four easy steps.*

Donley
BROTHERS

THE DONLEY BROTHERS COMPANY

13981 Miles Avenue
Cleveland 5, Ohio

STOCK MARKET

Redeemable shares may be barred for realty trusts

The redeemable share, which can be resold by a shareholder to the company issuing the share of stock, would be forbidden to real estate investment trusts by a new rule proposed by the Securities & Exchange Commission. The redeemable share is the foundation of the mutual fund industry because it permits

small investors to liquidate their holdings easily. Now several proposed realty trusts have asked permission to sell redeemable shares. But the SEC looks askance at real estate investment companies using such shares. Chief objection: it is virtually impossible to

determine the immediate day-to-day value of real estate owned by the company, while mutual fund share value is easily obtained from daily stock and bond market quotations. SEC says its new rule would apply to all companies that do not have the bulk of their assets in cash and securities "for which market quotations are readily available and which are readily marketable."

None of the realty trusts which have already gone public are offering redeemable shares, "as far as we know," says an SEC official. Leaders of existing realty companies, organized under a 1960 law (NEWS, Oct '60), are studying the rule change. SEC will accept comments for or against the regulation until Sept 28, after which SEC can adopt, alter, or reject the rule.

HOUSING'S STOCK PRICES

| Company | Offering Price | June 11 Bid | June 11 Ask | July 9 Bid | July 9 Ask | Aug 10 Bid | Aug 10 Ask |
|--------------------------------------|----------------|-------------|-------------|------------|------------|------------|------------|
| BUILDING | | | | | | | |
| Adler-Built Ind. e | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| Cons Bldg (Can) d | 12 3/4 | 13 | 14 | 14 1/2 | 15 1/2 | 16 | |
| Dev Corp Amer 3 | 1 3/4 | 2 1/4 | 1 3/4 | 1 3/4 | 1 3/4 | 2 | |
| Dover Const. 6 1/2 | 5 1/4 | 6 1/4 | 4 3/4 | 5 1/4 | 4 3/4 | 5 1/2 | |
| Edwards Eng. e | 4 3/4 | 5 1/4 | 6 | 6 3/4 | 5 5/8 | 6 1/4 | |
| Edwards Inds. 4 1/2 | 1 3/4 | 1 3/4 | 1 3/4 | 1 3/4 | 1 3/4 | 1 3/4 | |
| Eichler Homes. e | 7 3/4 | 8 1/2 | 7 1/2 | 8 1/4 | 7 3/4 | 8 | |
| First Natl Rlty. 2 | 4 1/2 | 3 3/4 | 3 3/4 | 3 3/4 | 3 3/4 | 3 3/4 | |
| Frouge. 10 | 8 1/2 | 9 1/2 | 8 1/2 | 10 | 7 | 8 3/4 | |
| General Bldrs. e | 4 3/4 | 5 | 3 3/4 | 3 3/4 | 3 3/4 | 3 3/4 | |
| Hawaiian Pac Ind 10 | 4 1/2 | 5 | 3 | 3 1/2 | 2 3/4 | 3 3/4 | |
| Kavanagh-Smith 5 | 5 | 5 3/4 | 5 1/4 | 5 3/4 | 5 3/4 | 6 1/4 | |
| Kauf & Bd. 10 1/2 | 12 3/4 | 12 3/4 | 11 3/4 | 11 3/4 | 11 3/4 | 11 3/4 | |
| Levitt. 10 | 4 | 4 1/2 | 3 3/4 | 4 1/2 | 3 3/4 | 4 1/2 | |
| Lusk Corp. d | 3 | 3 3/4 | 2 3/4 | 3 3/4 | 2 3/4 | 3 3/4 | |
| US Home & Dev e | 1 | 1 3/4 | 3 3/4 | 4 1/4 | 1 3/4 | 1 3/4 | |
| Del E. Webb. e | 10 | 10 3/4 | 8 3/4 | 9 3/4 | 10 1/4 | 11 1/4 | |
| Webb & Knapp. e | 1 3/4 | 1 3/4 | 1 3/4 | 1 3/4 | 1 3/4 | 1 3/4 | |
| Wenwood. e | 1/4 | 3/4 | 1/4 | 1/4 | 1/4 | 3/4 | |
| S&Ls | | | | | | | |
| American Fin. e | | | | | 16 1/2 | 17 1/2 | |
| Calif Fin. e | 10 3/4 | | 11 1/4 | | 10 3/4 | | |
| Emp Fin. e | 16 1/4 | 17 1/4 | 16 1/4 | 17 1/4 | 16 | 17 1/4 | |
| Equitable. 23 | 35 1/2 | 37 1/4 | 36 | 38 | 37 3/4 | 38 1/2 | |
| Far West Fin. d | 22 3/4 | 23 3/4 | 26 1/4 | 28 1/2 | 25 | 27 | |
| Fin Fed. e | 64 1/4 | | 70 3/4 | | 67 | | |
| First Charter Fin e | 33 3/4 | | 35 | | 31 3/4 | | |
| First Fin West. e | 10 1/2 | 11 1/4 | 11 | 11 1/2 | 9 3/4 | 10 1/4 | |
| Gibraltar Fin. e | 31 3/4 | | 33 1/4 | | 32 3/4 | | |
| Grt Western Fin e | 20 3/4 | | 22 3/4 | | 18 3/4 | | |
| Hawthorne Fin. e | 10 1/2 | 11 1/4 | 11 1/4 | 12 | 9 3/4 | 10 1/2 | |
| Lytton Fin. e | 22 3/4 | 23 3/4 | 23 3/4 | 25 3/4 | 23 | 24 3/4 | |
| Midwstrn Fin. 4 3/4 | 9 3/4 | | 9 3/4 | | 9 3/4 | | |
| San Diego Imp e | 9 3/4 | | 11 3/4 | | 11 3/4 | | |
| Trans Cat Inv. 15 | 17 3/4 | 18 3/4 | 20 3/4 | 22 3/4 | 16 | 17 3/4 | |
| Trans World Fin 8 3/4 | 20 3/4 | | 23 3/4 | | 22 3/4 | | |
| Union Fin. 15 | 8 3/4 | 9 3/4 | 10 | 11 | 14 3/4 | 16 | |
| United Fin of Cal 10 | 30 | | 33 3/4 | | 28 1/2 | | |
| Wesco Fin. e | 32 3/4 | 33 3/4 | 33 | 35 3/4 | 34 3/4 | 37 1/4 | |
| MORTGAGE BANKING | | | | | | | |
| Charter. e | | | 4 3/4 | 5 1/2 | 4 1/2 | 5 | |
| Colonial. 9 | 10 | 11 | 11 1/4 | 13 | 10 1/2 | 11 1/4 | |
| Colwell. 10 | 15 | 17 | 15 1/2 | 17 | 14 | 15 1/2 | |
| FNMA. e | 72 1/2 | 74 | 71 | 72 1/2 | 75 | 79 1/4 | |
| MGIC. 27 1/2 | 32 | 34 | 28 | 29 | 29 1/4 | 30 | |
| Palomar. e | 9 3/4 | 9 3/4 | 8 3/4 | 9 | 10 1/4 | 10 3/4 | |
| Stockton Whatley e | 13 1/4 | 15 | 13 | 14 | 12 3/4 | 13 3/4 | |
| REAL ESTATE INVESTMENT TRUSTS | | | | | | | |
| Contl. Mtg. Inv. 15 | 11 1/2 | 12 1/2 | 11 3/4 | 12 3/4 | 12 1/4 | 13 1/4 | |
| First Mtg Inv. 15 | 13 | 13 3/4 | 12 3/4 | 13 3/4 | 12 3/4 | 14 3/4 | |
| First Natl. 10 | f | 10 | 8 1/2 | 9 1/4 | 9 | 9 1/2 | |
| Liberty. 10 | 7 | 7 1/2 | 7 | 7 1/2 | 7 | 7 3/4 | |
| US Realty Inv. 10 | 8 3/4 | 9 1/4 | 9 3/4 | 10 | 9 3/4 | 10 | |
| REALTY INVESTMENT | | | | | | | |
| Brookbridge Dev. e | 1/4 | 3/4 | 1/4 | 3/4 | 1/4 | 3/4 | |
| Gt Amer Rlty. e | 5 1/4 | 5 3/4 | 5 3/4 | 5 3/4 | 5 1/2 | 5 3/4 | |
| Herman & Appley. 5 1/4 | 5 1/4 | 5 3/4 | 5 | 5 1/2 | 4 7/8 | 5 1/4 | |
| Income Props. 9 3/4 | 8 3/4 | 9 | 7 3/4 | 8 1/2 | 8 1/2 | 9 | |
| Kaymarq. 6 | 5 | 6 | 2 | 2 1/2 | 15 1/4 | 50 1/4 | |
| Kratter A. e | 22 3/4 | | 20 3/4 | | 21 3/4 | | |
| Mensh Inv & Dev. d | 14 | 15 1/2 | 13 1/2 | 14 1/2 | 14 | 15 | |
| Presidential Rlty 6 3/4 | 9 3/4 | | 8 3/4 | | 9 1/4 | | |
| Rlty Equities. 5 1/4 | 5 3/4 | 6 | 5 3/4 | | 6 | | |
| Wallace Inv. 10 | 10 3/4 | 11 3/4 | 9 3/4 | 11 | 9 1/2 | 10 1/2 | |
| LAND DEVELOPMENT | | | | | | | |
| All-State Prop. e | 4 3/4 | | 3 3/4 | | 3 3/4 | | |
| Amer Rlty & Pet e | 4 3/4 | 4 3/4 | 3 3/4 | 4 3/4 | 4 3/4 | 5 | |
| Arvida. e | 5 3/4 | 6 3/4 | 5 3/4 | 5 3/4 | 5 3/4 | 5 3/4 | |
| Atlantic Imp. 13 1/2 | | | 13 3/4 | 14 3/4 | 15 | 15 3/4 | |
| Canaveral Intl. 5 | 19 3/4 | | 17 3/4 | | 9 3/4 | | |
| Cons Dev (Fla) 5 | 3 3/4 | 4 3/4 | 3 3/4 | 4 3/4 | 3 | 3 3/4 | |
| Coral Ridge Prop e | 1 3/4 | 1 3/4 | 1 3/4 | 1 3/4 | 1 3/4 | 1 3/4 | |
| Fla Palm-Aire. e | 1 1/2 | 2 | 1 1/2 | 1 3/4 | 1 3/4 | 1 3/4 | |
| Forest City Ent. 10 | 8 3/4 | | 7 3/4 | | 7 1/2 | | |
| Garden Land. 6 1/4 | 2 3/4 | 3 1/4 | 2 3/4 | 3 3/4 | 2 3/4 | 3 3/4 | |
| Gen Dev. e | 9 3/4 | | 7 3/4 | | 7 3/4 | | |
| Grt Southwest. 18 | 17 | 18 | 17 | 18 | 17 3/4 | 18 1/2 | |
| Gulf American. e | 9 3/4 | | 7 3/4 | | 7 3/4 | | |
| Horizon Land. e | 8 3/4 | 9 3/4 | 6 3/4 | 7 3/4 | 8 3/4 | 9 | |
| Laguna Niguel. e | 7 3/4 | 8 3/4 | 9 | 10 | 10 1/2 | 11 1/2 | |
| Lake Arrowhead. 10 | 4 | 5 | 3 3/4 | 4 | 3 3/4 | 4 | |
| Lefebvre. e | 1 3/4 | | 1 1/4 | | 1 3/4 | | |
| Maceo Rlty. 10 | 11 1/4 | 11 3/4 | 5 3/4 | 6 3/4 | 6 3/4 | 7 | |
| Major Rlty. e | 1 3/4 | 1 3/4 | 1 3/4 | 1 3/4 | 1 3/4 | 1 3/4 | |
| Pac Cst Prop. 10 | 6 3/4 | 7 3/4 | 6 3/4 | 6 3/4 | 7 3/4 | 7 3/4 | |
| Realiste Inc. e | 3/4 | 1 1/4 | 3/4 | 1 | 3/4 | 1 | |
| So. Rlty & Util. d | 5 3/4 | | 4 3/4 | | 4 3/4 | | |
| United Imp & Inv e | 7 3/4 | | 5 3/4 | | 5 3/4 | | |
| PREFABRICATION | | | | | | | |
| Admiral Homes. e | 1 3/4 | 2 1/4 | 1 3/4 | 2 1/4 | 1 3/4 | 2 1/4 | |
| Crawford. 13 | 5 | 5 3/4 | 4 1/2 | 5 3/4 | 4 | 4 1/2 | |
| Harnischfeger. e | 18 | 18 1/2 | 18 1/2 | | 18 1/2 | 19 | |
| Hileo Homes. 3 | 1 1/4 | 1 3/4 | 1 | 1 1/4 | 1 3/4 | 1 3/4 | |
| Inland Homes. e | 9 3/4 | | 8 3/4 | | 9 | 9 1/2 | |
| Madway Mainline 10 | 8 3/4 | 9 3/4 | 8 3/4 | 9 1/2 | 11 | 12 | |
| Natl Homes A. e | 7 | 7 3/4 | 6 3/4 | 7 3/4 | 5 3/4 | 6 3/4 | |
| Richmond Homes. e | 1 3/4 | 2 1/4 | 1 3/4 | 1 3/4 | 2 | 2 1/2 | |
| Scholz Homes. e | 2 | 2 1/4 | 1 3/4 | 2 1/4 | 1 1/2 | 1 3/4 | |
| Seaboard Homes e | 1 3/4 | 1 3/4 | 1 | 1 1/4 | 3/4 | 1 | |
| Steel Crest Homes 2 | 2 1/4 | 3 1/4 | 3 | 3 3/4 | 3 | 3 3/4 | |
| Swift Homes. 9 | 3 3/4 | 4 3/4 | 4 | 4 1/4 | 4 3/4 | 4 3/4 | |
| Techbilt Homes. e | 3/4 | 3/4 | 3/4 | 3/4 | 20 1/4 | 60 1/4 | |
| SHELL HOMES | | | | | | | |
| Albee Homes. 16 | 16 | 18 | 13 1/2 | 15 3/4 | 17 | 18 3/4 | |
| Bevis. d | 1/4 | 3/4 | 5 1/4 | 3/4 | 15 1/4 | 25 1/4 | |
| Morris. d | 3/4 | 1 1/4 | f | 1 3/4 | f | 1 3/4 | |
| Nationwide. d | 2 | 2 3/4 | 2 | 2 1/2 | 2 | 2 3/4 | |
| US Shell. e | 8 | 11 | 6 | 8 | 1 1/4 | 1 3/4 | |
| Jim Walter. e | 11 1/2 | 12 1/2 | 11 1/4 | 12 1/4 | 12 1/2 | 13 3/4 | |
| Western Shell. 2 1/2 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | |
| Wise Homes. e | 1/4 | 1 | 1/4 | 3/4 | 3/4 | 3/4 | |

* stock newly added to table.
 a stock not yet marketed.
 b closing price (ASE).
 c closing price (NYSE).
 d issued in units.
 e stock issued before Jan 1, 1960.
 f no bids.
 g reflects 2-for-1 split during month.

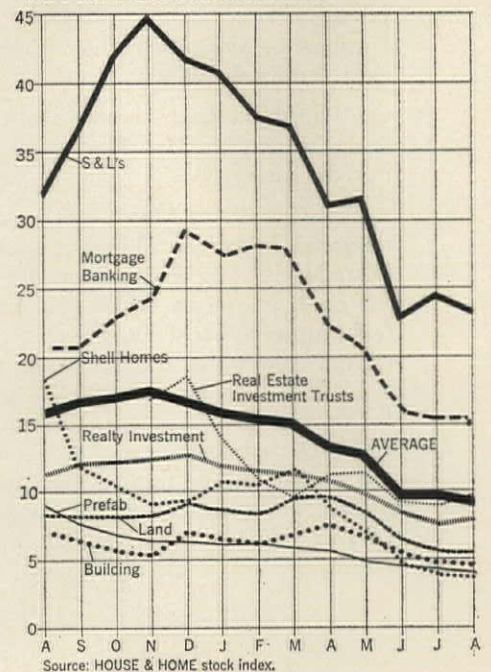
Sources: New York Hanseatic Corp; Gardiner & Co; American Stock Exchange; New York Stock Exchange.
 Listings include only companies which derive a major part of their income from housing activity and whose stocks are either listed or actively traded.

Market firms in August, but housing stocks sag

Nagged by persistent weakness in S&L stocks, the HOUSE & HOME housing stock average was off 1.7% from its July figure. At the same time, both Dow-Jones and the National Quotation Bureau's industrial averages were up slightly (2.0% and 1.8% respectively).

In the financial category, Great Western (off 5 3/8 points) and United Financial of California (off 5 1/4) led the group to an overall loss of 5.7%, representing Wall Street's judgment of the effects of the tax bill (p. 13). Land issues had the best month and showed general strength throughout the list. Shell houses were weak, but Albee breasted the tide with a 3 1/2 point jump to 17 bid.

HOUSING STOCK AVERAGES



Here are HOUSE & HOME's averages, combining closing prices for listed stocks with bid prices for over-the-counter issues:

| | June 11 | July 9 | Aug 10 |
|-------------------|---------|--------|--------|
| Building | 5.03 | 4.94 | 4.91 |
| Land development | 6.22 | 5.57 | 5.89 |
| S&Ls | 22.57 | 24.40 | 23.17 |
| Mortgage banking | 15.95 | 15.30 | 15.33 |
| Realty investment | 8.42 | 7.56 | 7.68 |
| REITs | 9.58 | 9.54 | 9.63 |
| Prefabrication | 4.47 | 4.30 | 4.28 |
| Shell homes | 4.91 | 4.20 | 4.18 |
| AVERAGE | 9.77 | 9.76 | 9.04 |

NEW ISSUES

| Date | Company | Proceeds to company ^a | Offering price of securities ^c |
|---------|-----------------------|----------------------------------|---|
| July 23 | Gulf American Land... | \$9,500,000 ^b | |
| July 24 | Lehigh Industries... | 2,550,000 | \$10.00 |
| Aug 1 | Drew Props. | 1,574,300 | 10.00 |
| Aug 9 | Financial Federation | 5,082,875 | 67.50 |

^a after underwriting discounts and commissions. ^b maximum; minimum proceeds of \$9,200,000. ^c 6 1/2% convertible subordinated debentures offered at par to common stockholders at the rate of \$200 of debentures for 60 common shares held. Issue was oversubscribed.

REGISTRATIONS WITHDRAWN

| Date | Company | Amount sought | Proposed price of securities |
|---------|----------------------|--------------------------|------------------------------|
| July 17 | Income Properties... | \$2,400,000 ^a | \$12.00 ^a |
| July 18 | US Realty & Inv. ... | 1,200,000 ^a | 8.00 ^a |
| July 24 | Zeckendorf Prop. ... | 1,600,000 ^a | 16.00 ^a |
| July 26 | Midwestern Mtg Inv | 5,000,000 | 10.00 |
| July 26 | Frouge Corp. | b | b |
| Aug 9 | Paragon Homes ... | b | b |

^a maximum. ^b no price had been set in preliminary registration.

"The Moe Lighting made up our minds..."

*Builder's effective use of
Moe Lighting accents charm
of house—helps close sale to
Joliet, Illinois, couple*

The friendly glow of a well-lighted house made home buying easier for Mr. and Mrs. Sammy Berk of Joliet, Ill. "I knew this was the house the minute I turned on the lights," says Mrs. Berk. "They give the house a personality all its own."

"I liked the dining room immediately," she continues, "it's soft, yet regal at the same time." Accenting the room's formal atmosphere, Builder James Butterwick installed a dramatic brass Moe Light chandelier. Its six white candles spread deep highlights to the traditional mahogany furniture. In contrast, a contemporary Moe Light opal glass cluster emphasizes the informality of the adjacent family room.

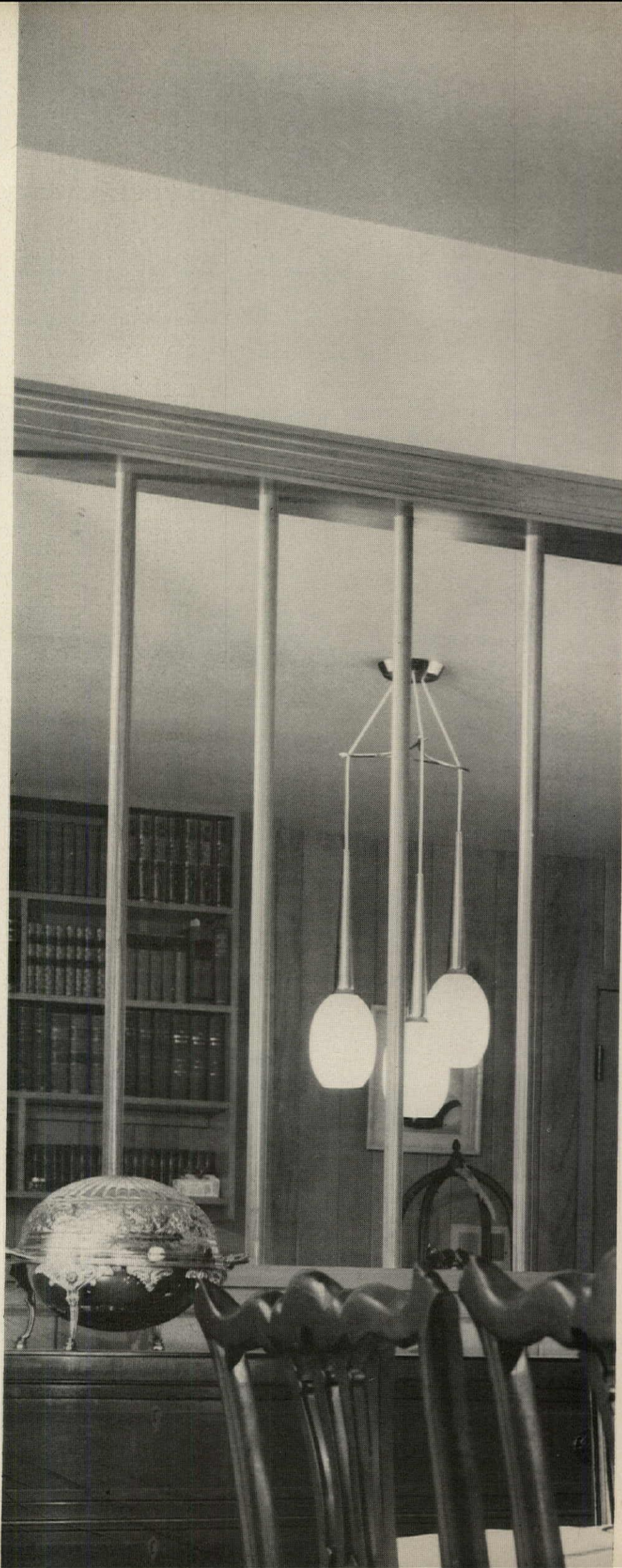
"Throughout, the house has a cordial look," concludes Mrs. Berk. "That made our decision easy."

Creative use of Moe Lighting can add personality to your home designs, too. Your Moe Light Distributor and electrical contractor can show you advanced techniques to accent any style . . . traditional, colonial or contemporary; incandescent or fluorescent. They have the technical know-how, too. Call your Moe Light Distributor soon . . . he's listed in the Yellow Pages under "Lighting Fixtures." Or write for a free copy of the 78-page full-color lighting booklet, "Symphony of Lighting Styles."



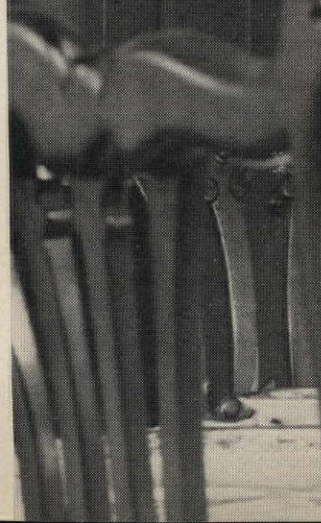
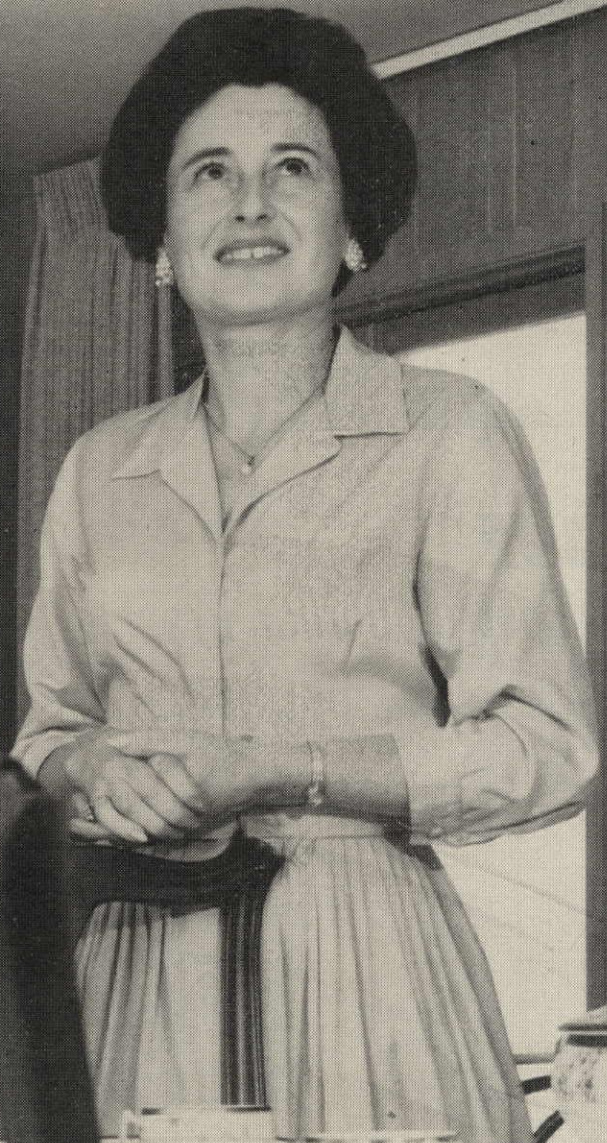
**MOE LIGHT DIVISION
THOMAS INDUSTRIES INC.**

207 E. Broadway, Louisville 2, Ky., Dept. HH9
Moe Light • Benjamin • Enchante • Starlight

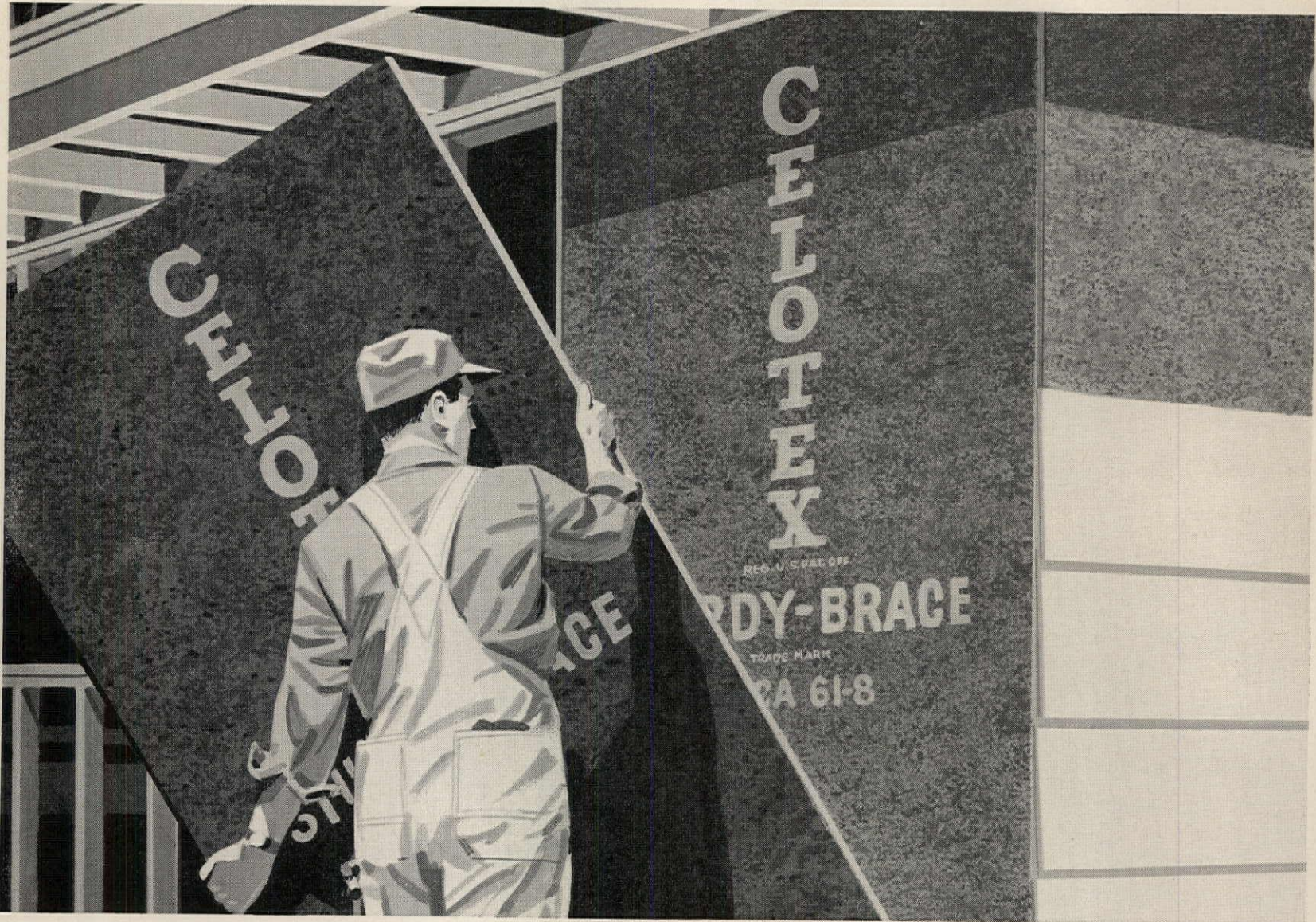




**NEWS FROM
THOMAS
INDUSTRIES**



HOW TO CUT COSTS...



CELOTEX *STURDY-BRACE*[†] *Insulating Sheathing Saves Cost of Corner Bracing!**

Exceeds FHA bracing strength requirements . . . nailed OR stapled . . . without corner bracing! Rugged, ½" asphalt-impregnated STURDY-BRACE Sheathing provides about 1½ times the insulating value of nominal 1" thick wood sheathing . . . about 3 times the insulation value of ½" thick gypsum sheathing.

Goes up fast! Strong, rigid, yet light, STURDY-BRACE Insulating Sheathing is easy to lift. Your men can handle it all day long without tiring. Panels are 4' x 8', or 4' x 9' to cover sill and plate. All panels are nail-marked at stud locations.

Your Celotex Dealer inventories this and other famous Celotex insulating sheathings: ½" STRONG-WALL® nail-base . . . Double-Waterproofed, and Asphalt-Impregnated ½" and ¾" sheathings.

***SAVES \$20.00 per M sq. ft.!** Average cost of corner bracing (labor and materials) is \$20.00 per thousand square feet—reported by contractors and builders in a nationwide survey. Can be much more in 2-story and multi-level construction.

CELOTEX
REG. U. S. PAT. OFF.
BUILDING PRODUCTS

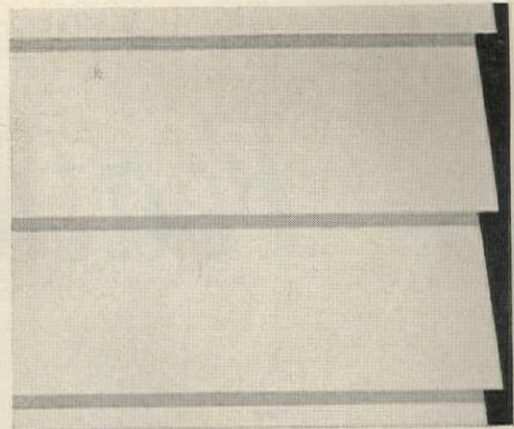
YET BUILD BETTER



CELOTEX *SHADOWCAST*[†] ***Hardboard Siding...Goes Up Fast... Nails Without Dimpling!***

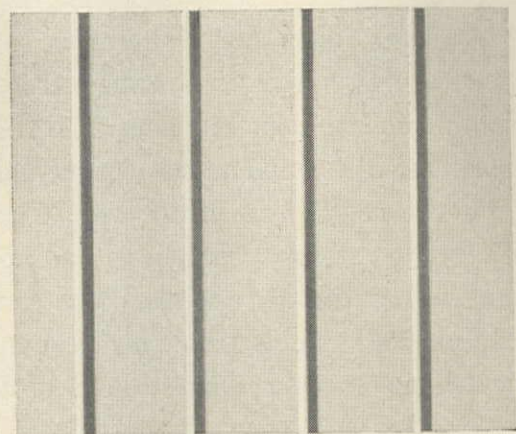
SHADOWCAST Hardboard Sidings save time—cut costs—put more sell into your homes! Smooth, tough, hard-to-dent surface resists bumps, scuffs, hail. Prime-coated at the factory—you can wait two months to apply finish coat. Back-sealed. Cuts and nails like wood, but doesn't splinter, split or crack. Nails drive flush without surface dimpling or fracturing. All three types sold by your Celotex dealer.

THE CELOTEX CORPORATION • 120 S. LA SALLE ST., CHICAGO 3, ILLINOIS



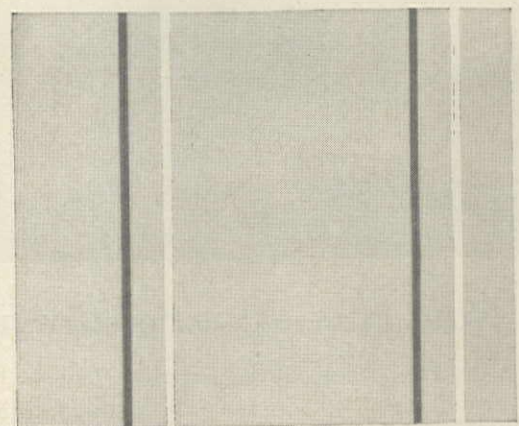
SHADOWCAST HORIZONTAL LAP

Long lengths for fast coverage, fewer joints. $\frac{3}{16}$ " thick; 12" wide by 12', 16'; also 9" wide by 12'. Guide lines on both long edges simplify alignment, save time, minimize waste.



SHADOWCAST V-GROOVE PANELS

$\frac{1}{2}$ " wide V-grooves, $5\frac{1}{3}$ " o.c., $\frac{7}{16}$ " thick; 4' wide by lengths to 10'. Shiplapped edges. With 16" stud spacing, needs no corner bracing to meet FHA strength requirements.



SHADOWCAST WIDE-BOARD PANELS

For use with battens. Ideal for fast, economy construction. $\frac{3}{8}$ " thick; 4' wide; lengths to 16'. At 24" stud spacing, no corner bracing necessary to meet FHA strength requirements.

[†]Trade Mark

Now! A new feature for the 2nd and 3rd-time buyer!

Feature a home that itself with the whole-house

Of all the features you've used in the past to help sell your homes (like built-in kitchens, hi-fi, inter-coms, etc.), none has the tremendous closing potential of this new development from Honeywell. What woman wouldn't like to cut down on dusting and housework? And, that's what you can promise! You can also tell the prospects that the electronic air cleaner will *keep* their new home modern longer—help protect their

investment. And, remember, you will have the Honeywell reputation for quality working for you, too!

Before you start another home, get the facts on how this Honeywell development will help you. See your heating/cooling contractor, the nearest Honeywell office or Honeywell, Dept. HH9-46, Minneapolis 8, Minnesota. We have a complete merchandising program to help you sell prospects.

TWO OF THE ADS APPEARING IN CONSUMER MAGAZINES IN 1962.



Now, clean your entire home of dust & pollen...electronically

New Electronic Air Cleaner from Honeywell removes up to 95%* of airborne dust and irritants

What's a home with almost no dust? Paradise! That's what.

And now your home can be virtually dust-free with the new Honeywell Electronic Air Cleaner. It fits in the return air duct work of any forced air heating, ventilating or air conditioning system. With powerful electronic-magnet action, it removes up to 95% of airborne dust and other irritants from the air passing through the system—air not from just a single room—but from all through the house.

It catches the millions of particles so tiny that they pass right through ordinary filters (the kind you probably have on your present heating or cooling plant).

And these tiny particles—bits of smoke, grease and grime—carry most of the soiling power to smudge your furnishings, begrime your curtains, put a dingy haze over your windows, mirrors, crystal.

The principle of electronic air cleaning has been proved for years in hospitals and other buildings where clean air is vital. Now the same benefits are available to you in a system of practical home-size and price. On a 3-year FHA loan, it

costs as little as \$14.38 a month, installed. It's a natural companion for your heating system—even better with air conditioning.

And what a wonderful difference it makes! Air passing through the system is freed of up to 95% of the pollen that aggravates allergies**—cleaned of tobacco smoke and odors, other irritants. Dusting is cut to a fraction. Mirrors and crystal stay sparkling—draperies and slipcovers, fresh and clean—far longer than ever before. You cut cleaning bills.

You'll probably find the Honeywell Electronic Air Cleaner pays for itself in what you save on cleaning and decorating, too.

And even if you don't have a forced air system in your home, you can still enjoy cleaner air in single rooms with the Honeywell Portable. Also, ideal for your office.

So why dust and polish all the time, when there is now such a practical way to trap the dust in the air? The coupon above makes it easy to take a long step toward a dust-free home.

**As measured by National Bureau of Standards Dust Spot Method.

**Electronic air cleaning is a preventive measure, not a treatment. Be sure to consult your doctor. Ask him what it may do for you.



This handsome control panel in your living area is the new sign of a modern home! It shows your Honeywell Electronic Air Cleaner is working at peak efficiency... signals you whenever the unit needs cleaning.



With a forced air heating or cooling system, it is easily installed in duct work of either new or existing homes, with little interruption of the heating or cooling. It is backed by Honeywell, home comfort leaders for over 76 years.



Easy for you to clean. Three or four times a year is usually enough. And this may surprise you: It uses no more current than a 40-watt bulb, yet the Honeywell Electronic Air Cleaner cleans the air clean—all through your house!

New whole-house **Honeywell** 
Electronic Air Cleaner 
traps the tiny bits of grime that ordinary filters miss

helps clean new Honeywell Electronic Air Cleaner

During 1962, air cleaner advertising is appearing in these national magazines: TIME • HARPER'S • THE ATLANTIC • AMERICAN HOME • NEWSWEEK • HOUSE BEAUTIFUL • HOLIDAY • NATIONAL GEOGRAPHIC • HOUSE & GARDEN • GOOD HOUSEKEEPING plus these building annuals: HOME MODERNIZING • NEW HOMES GUIDE

Honeywell



First in Control

BIGGEST ELECTRONIC AIR CLEANER CAMPAIGN EVER!

Another electronic advance from Honeywell!

*Now...clean your entire home
of airborne dust and pollen...
with a new Honeywell Electronic Air Cleaner*

Fits in duct work, traps up to 95%* of airborne irritants...electronically!

In a shaft of sunlight, you can often see a cloud of dust particles in search of a victim—you. Dust that settles on furniture, soils freshly cleaned draperies; smokes up windows, mirrors, crystal—making work and more work.

You dust, dust, dust. If you're allergic to dust or pollen, you sneeze and suffer. Yet—until now—there has been little you could do to get rid of dust.

But—hosanna!—now you can virtually eliminate damaging dust!

A new advance in electronics makes it possible. Now, a remarkable new home-size Electronic Air Cleaner from Honeywell extracts dust and pollen from the air—before they can smudge up your home or aggravate allergies.

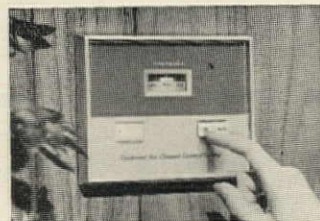
Fitting in the duct work of any forced air heating or air conditioning system, it cleans the air CLEAN—not in just a single room, but all through the house.

It traps the tiny bits of grime that ordinary filters can't stop!

The ordinary filters you probably have on your heating or cooling plant depend on a tangle of fibers that screen out the

bigger particles, can't stop millions of smaller impurities—dust, ash, greasy smoke, similar irritants.

The tiny particles are the stickiest—clinging to walls and windows, smoking up crystal, dirtying draperies. They're so small you can't see them, only notice the damage they've done when you move a picture on the wall. This is the grime with nine-tenths of the soiling power. And the Honeywell cleaner traps it electronically—removes up to 95%* of all particles passing through the system. The result—



This handsome control panel in your living area is the new sign of a modern home—with the air cleaned of dust and pollen by electronic action. It's a conversation piece with a purpose: The panel shows your Honeywell Electronic Air Cleaner is working at peak efficiency, signals you whenever the unit needs cleaning.

Cleanest house you ever lived in, cleanest air you ever breathed! Does this sound almost too good to be true? The fact is, the principle of the Honeywell Electronic Air Cleaner has been proved for years in hospitals and comparable buildings where clean air is vital. It's the most effective practical system known for trapping airborne dust and dirt.

What Honeywell has now done is to package these same benefits for your use in an appliance of practical home-size



With any forced air heating or cooling system, it's easily installed in duct work. Backed by Honeywell, home comfort leaders for more than 76 years.

Easy for you to clean. Three or four times a year is usually often enough. And this may surprise you: it uses no more electric current than a 40-watt bulb.

and price, easily installed in the central forced-air system of either a new or existing home. It costs no more than a good refrigerator. It uses no more current to operate than a 40-watt bulb.

And what a wonderful difference automatic air cleaning makes!

Air passing through the system is freed of 99% of the pollen that aggravates allergies—cleaned of tobacco smoke and odors, other irritants. Dusting is cut to a fraction. Mirrors and crystal stay sparkling—draperies and slipcovers, fresh and clean—far longer than ever before.

And you'll probably find the Honeywell Electronic Air Cleaner pays for itself in savings on cleaning and decorating, to say nothing of all its other benefits.

So why dust and polish all the time, when there's now such a practical way to keep dust out of the air to begin with? The coupon below makes it easy for you to take the next step into this new era of modern living.

*As measured by National Bureau of Standards Dust Spot Method.

Take a long step toward a dust-free home

MAIL FOR FREE BOOKLET

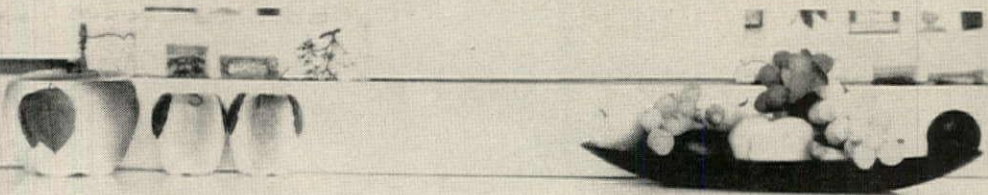
Honeywell, Dept. 108A
Minneapolis 9, Minn.

Please send me detailed brochure on new residential Honeywell Electronic Air Cleaner.

NAME _____
ADDRESS _____
CITY, ZONE, STATE _____

New Honeywell Electronic
 traps the tiny bits of grime that

Air Cleaner
ordinary filters miss

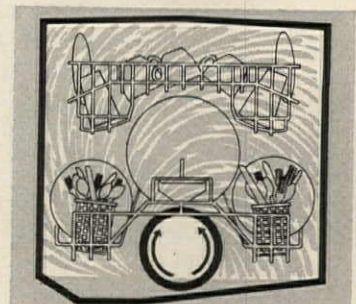


America's
NEWEST
 dishwasher
 starts with
 America's
FINEST
 name...



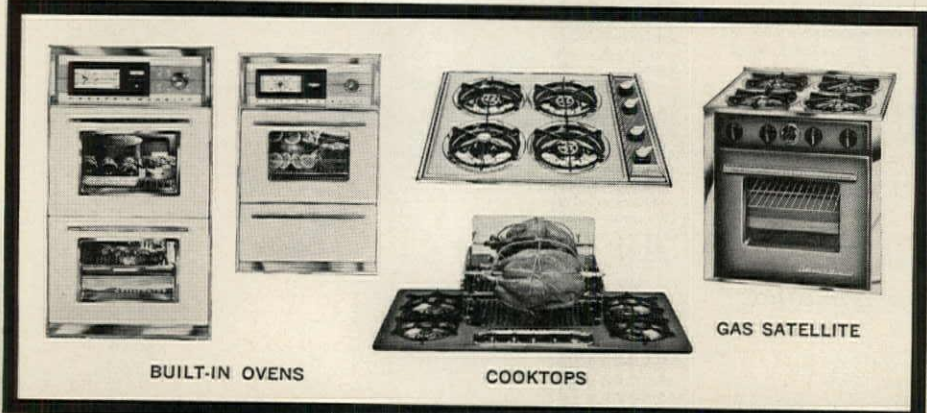
O'Keefe & Merritt

You can almost guess what's in this one before you see it. Just look at the O'KEEFE & MERRITT touches. Exclusive whisper-quiet 5-cycle action washes everything 5 full times through 7 water changes... giving personal attention to every knife, fork, spoon, saucer, dish, glass, plate, bowl, platter, pot and pan (12 complete place settings). Unique alternating roller impeller drenches dishes first from one side, then the other. No pre-rinse needed. Shuts off automatically *only* when everything's bone-dry. The trim new unit can be completely serviced from the front and is available in 6 striking decorator colors or wood. This is the one that'll stop Mrs. Homebuyer in her tracks. She knows she can count on O'KEEFE & MERRITT. And you do, too!



Roller impeller with forward and reverse action washes better, brighter!

Offer your quality-minded homebuyers a complete, fully-coordinated O'KEEFE & MERRITT kitchen!



BUILT-IN OVENS

COOKTOPS

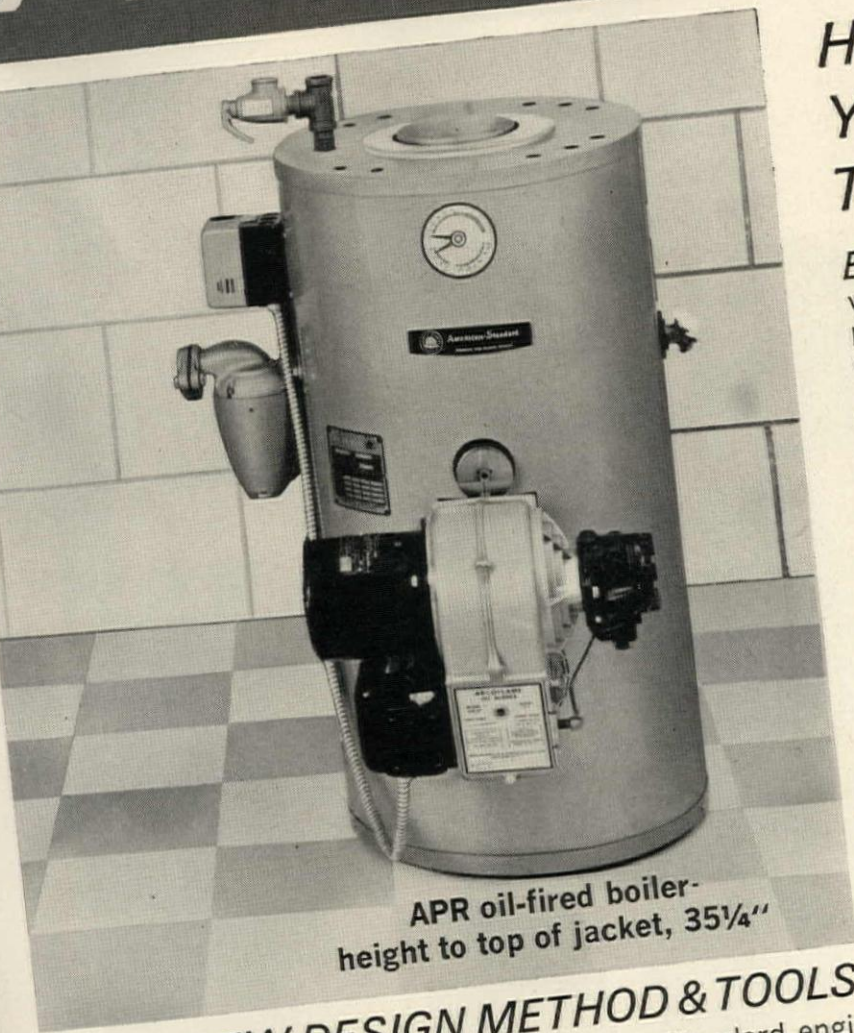
GAS SATELLITE

O'KEEFE & MERRITT H&H-9-62
 3700 East Olympic Blvd., Los Angeles, Calif.

Tell me more!

NAME _____
 FIRM _____
 ADDRESS _____
 CITY _____ ZONE _____ STATE _____

TANDARD HEAT AIR PRICES!



APR oil-fired boiler—
height to top of jacket, 35¼"

3. NEW DESIGN METHOD & TOOLS

To increase savings further, American-Standard engineers have developed a new Economy Design Method. Each circuit is automatically engineered for the best and most economical balance of water-flow rates.

Two exclusive new tools—a Tube-Bending Jig and a Heatrim Template—whittle down the number of operations in installation.



SEPTMBER 1962

HYDRONIC HEAT GIVES YOU SO MUCH MORE TO SELL

EVEN HEAT. Hydronic heat is a combination of convected and radiant heat. Like the rays of the sun, it warms people and objects. There are no sudden blasts of heat or chilly drafts. Rooms are uniformly warm from floor to ceiling.

CLEANLINESS. Draft-free hydronic heating does not depend on forced circulating air. Therefore a minimum of dust or dirt is blown about to cling to walls and furnishings.

ECONOMICAL OPERATION. It is general knowledge that hydronic heating—encircling rooms with a wall of warmth—gives better-balanced heating on less fuel. And cast iron boilers will outlast other heating plants up to 2½ times.

DECORATING FREEDOM. Carpeting can be laid wall to wall, draperies hung to the floor. Panels can be painted to fit décor, and furniture can be placed anywhere.

SPACE SAVING. The new compact boilers free basement space for a playroom or workshop. In basementless homes, they can be tucked into almost any small area. Heatrim panels are installed in place of conventional baseboards. Every inch of floor space is livable.

SMALL PIPES not ducts, carry the heat. No duct framing, no openings in the interior walls.

YOU'VE GOT SO MUCH MORE TO SELL with hydronic heating, and it's available now at warm-air prices. Get the complete story from your American-Standard plumbing and heating contractor. Or write to American-Standard, Plumbing and Heating Division, 40 West 40th St., New York 18, N. Y.

AMERICAN-Standard and Standard® are trademarks of American Radiator & Standard Sanitary Corporation



AMERICAN-Standard
PLUMBING AND HEATING DIVISION

HOW TO INSTALL A HOMEOWNER

Add a custom touch to your homes:
General Electric's
new 54-inch laundry center



A utility tray forms the top of the washing machine — a feature only General Electric offers you. A non-splashing mixer faucet puts hot and cold water at your fingertips.

General Electric's laundry center is so helpful to housewives, it's going to be a valuable extra selling point for the homes you build. Let's see how it holds those prospective buyers in place.



The big 12-lb.-load washer is in itself a veritable catalogue of extra features: two wash cycles, two wash and two spin speeds, three wash and two rinse temperatures, Filter-Flo® washing system, water-

saver for small loads, illuminated controls and full-length fluorescent light. Most important, this washer washes those huge 12-pound loads truly clean. Available in G-E mix-or-match colors.



By any measure... There is nothing just as good as General Electric



It's a complete, built-in laundry center in only 54 linear inches. With a Utility Top washer and Under-Counter dryer, it adds to the evaluation of the home as only a true built-in can. Install it in the

recreation room, utility room, mud room, breezeway or garage. A steel wall box supports back of washer between studs. Location of knock-outs permits variation in plumbing to meet local standards.



Starch or dye clothing in the utility tray. Fill ice-cube trays or wash hands under the mixer faucet. There are many uses for this General Electric innovation which will enchant prospective buyers.



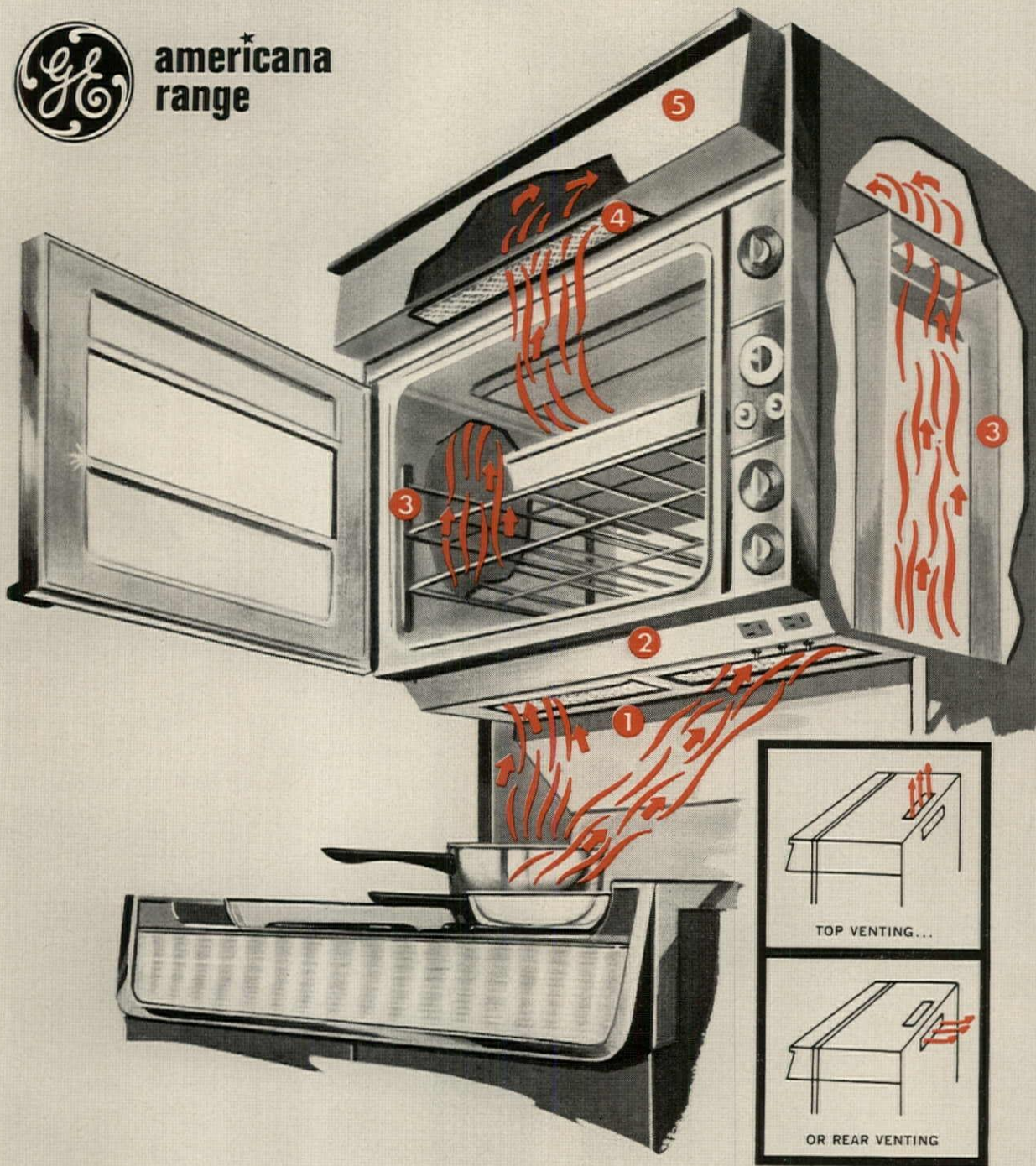
Undercounter dryer completes the 54-inch laundry center. It automatically adjusts drying time to type of fabric, water control, size of load and room temperature. It is the final custom touch.

Progress Is Our Most Important Product

GENERAL  **ELECTRIC**



americana
range



Now a unique exhaust system that's built right into Americana

It's new and exclusively Americana.® In fact, it's built right into the two new vented Americana ranges from General Electric. It's more effective than a separate hood because it vents both the oven and the cooktop. And this is how it works:

(1) Cooking vapors are drawn through (2) filtered openings above surface-unit and carried away by (3) ducts on both sides of oven. Another filtered opening

Single-oven vented Americana J-763. Double-oven vented Americana J-791.



(4) carries away both baking and broiling vapors when (5) built-in hood is pulled out.

Note: 2-speed centrifugal blower exhausts heat and vapors through either top or rear vent. Operating switch is conveniently placed below control panel. Permanent metallic filters may be removed for washing.

Now a single installation provides a compact eye-level oven range and complete ventilation system. It's exclusively Americana by General Electric.

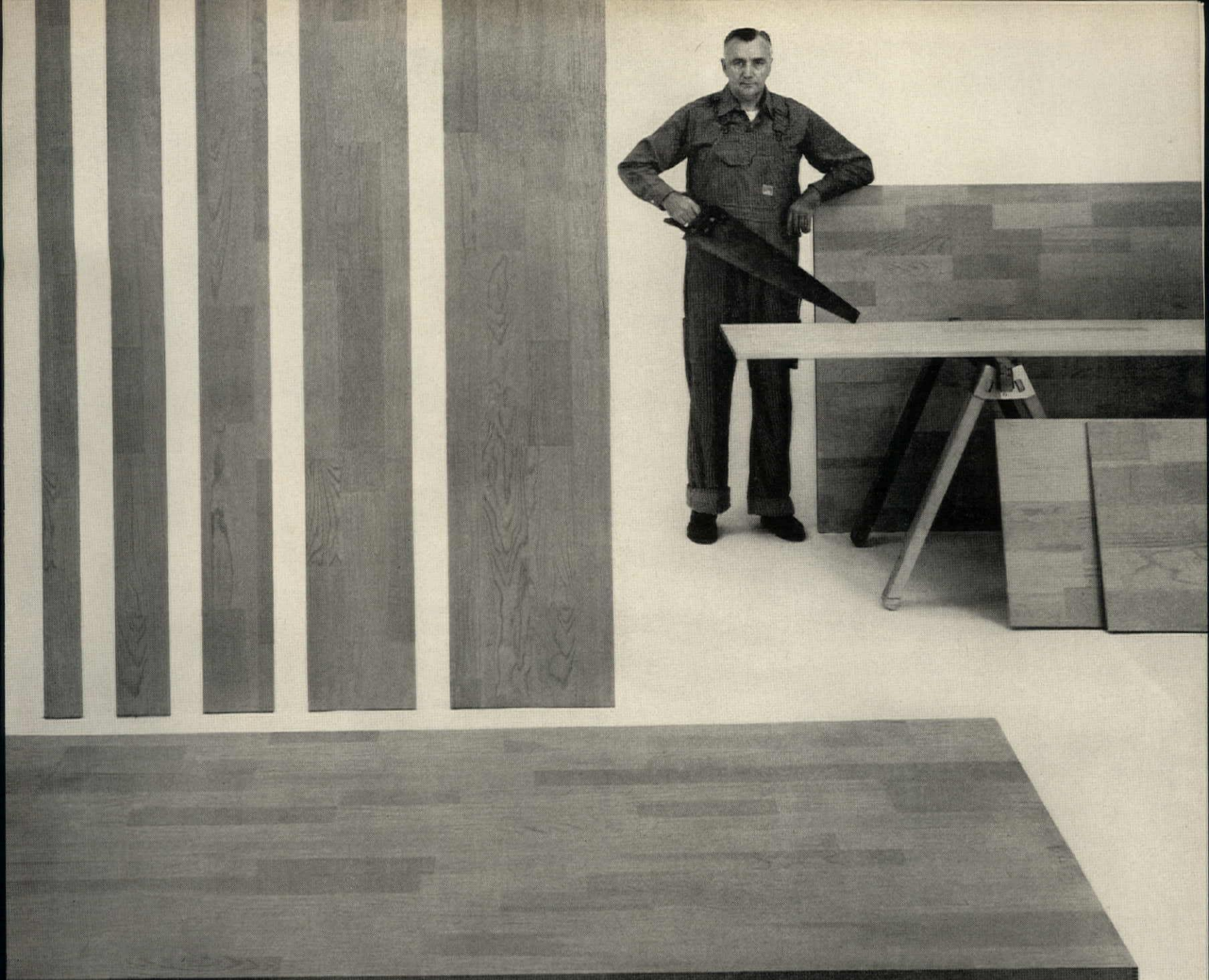
By any measure...

There is nothing "just as good as" General Electric



Progress Is Our Most Important Product

GENERAL  ELECTRIC



HINES CLEARWOOD

Every inch clear lumber...no waste...gives you 25% more profit!

Not a knot in a carload. Hines Clearwood is made of the finest slow-growth, soft-textured Ponderosa Pine. Perfectly clear pieces are precision joined and electronically bonded into planks and panels. Ideal for any use where it is advantageous to have beautiful, sanded wood that is 100% clear on face and edges. Cost, considering both material and labor savings, is about $\frac{1}{5}$ less than that of a comparable grade of lumber.

Clearwood is available in all standard lumber sizes from 1 x 4 to 1 x 12. Panels up to 48" wide and up to

24' long. Either planks or panels in any size up to 4" thick, including odd measurements, can be ordered specially. Panels offer two important advantages over plywood...satin-smooth *sanded* grain and surface, plus solid lumber edge that holds nails or screws and requires no tricky finishing.

Hines Clearwood has been used for myriad purposes, from soffits and valances to cabinets, counter tops, wall paneling and even church pews. Use the coupon to find out more about it today.

HINES
EDWARD HINES LUMBER CO.

FREE SAMPLE!

Edward Hines Lumber Co.
200 S. Michigan Ave., Chicago 4, Illinois


Please send me information and free sample of Hines Clearwood

Name _____

Clip coupon, write your name, attach to letterhead and mail to above address.

©1962, Edward Hines Lumber Co.

7105



**MASSEY
FERGUSON
INDUSTRIAL
EQUIPMENT**

GET IN AND OUT FAST WHILE THE OTHERS SHIFT & CLUTCH

Touch a foot pedal and *zip* . . . away you go with Massey-Ferguson's Instant Reverse. The first and still the only automatic reversing transmission—with torque converter—that lets you go forward . . . back . . . all at the touch of your toe!

No Shifting! No Clutching! No Stopping! How's it done? Take a demonstration ride on either a new Massey-Ferguson 205 Diesel or 204 gasoline-powered tractor. First, step on the forward pedal (see inset at right). Instantly, multiple disc clutches are hydraulically actuated and you feel the smooth power flow of the torque converter as the tractor rolls ahead. Now, press the reverse pedal. Just as quickly, the tractor moves backward. Going forward or reverse, if you want to go faster, you simply depress the pedal a little more. It's your accelerator, too!

Now wheel into a stockpile of earth or materials with the 102 Loader. Touch the center pedal for additional engine power and get a really full bucket. And quick as you came in, push the reverse pedal and away you go! No stopping to shift . . . to clutch . . . simple and fast! Your hands are always free to steer the tractor or handle the loader's hydraulic controls.

40 HP MF 204 and 205 Take More Power-Matched Attachments. When the MF 204 or 205 is equipped with the 102 Loader, any excavating, loading or material handling job is finished quickly and easily. Why? You get over 4400 lbs. of breakaway capacity. Plus big carrying capacity. Over 3800 lbs. at 3-foot carry height! And with more than ten other M-F power-matched tools to choose from, you'll bid every job at a much lower cost and do them at top speed with more efficiency and precision.

World's Largest Manufacturer of Tractors Invites Your Inquiries. Massey-Ferguson's recognized leadership in tractor design is your proof the MF 204 and MF 205



M-F's Instant Reverse gets you in . . . out . . . fast!

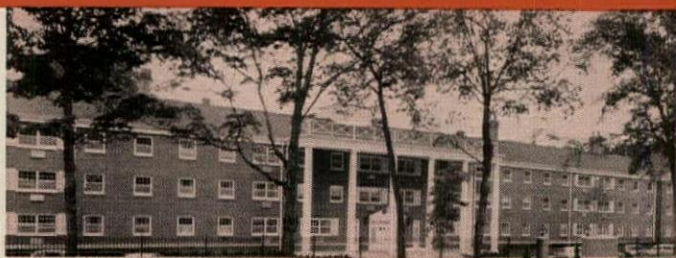
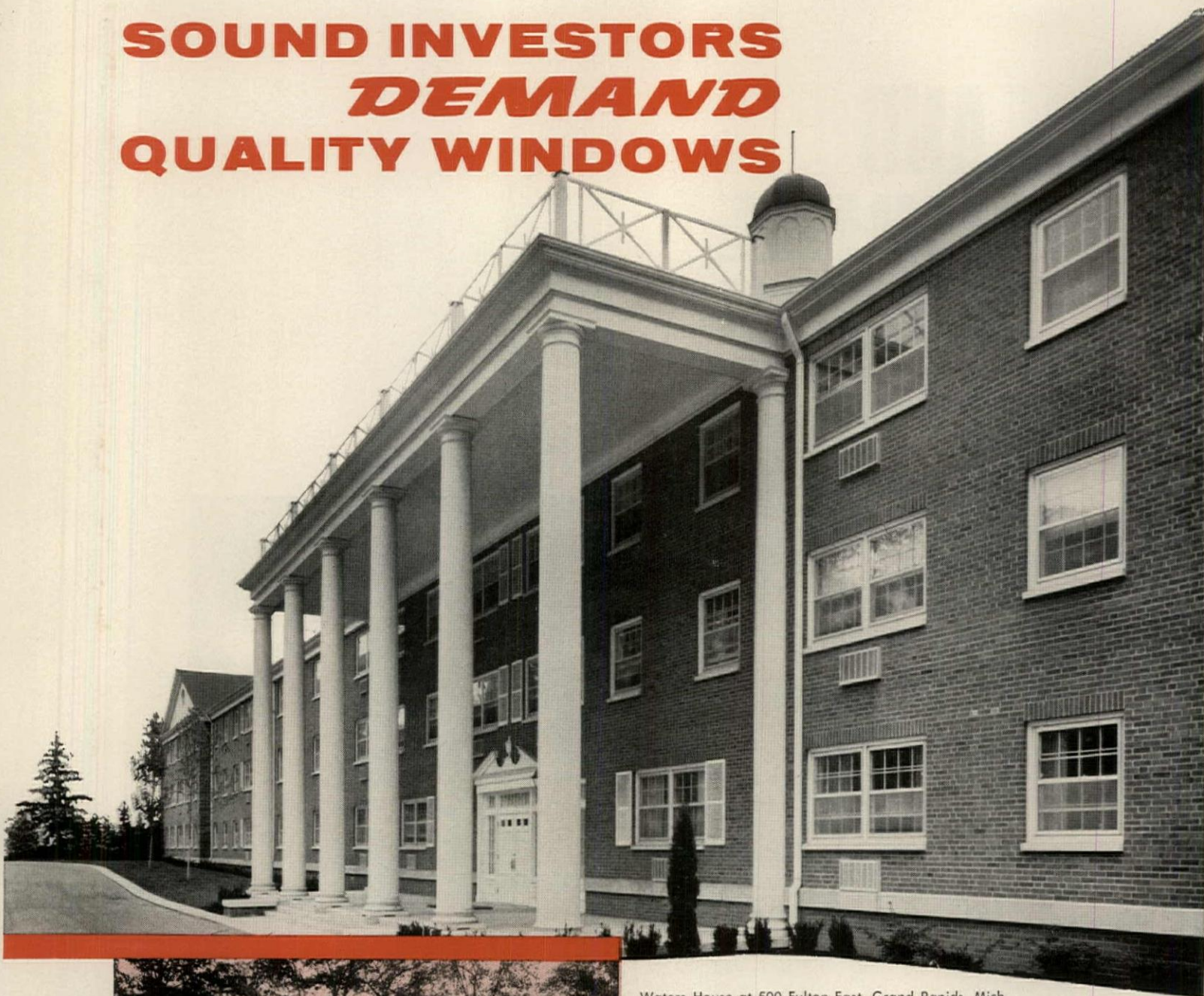
Diesels are engineered to specifications years ahead of the rest. Call your nearest Massey-Ferguson Dealer for an immediate demonstration of all the important features on these power units and their attachments. It can mean more jobs done at a higher margin of profit for you.

And, of course, Massey-Ferguson's liberal and convenient time payment plans—tailored to *your* needs and growth—are always available.

Massey-Ferguson Industrial Division • 12601 Southfield Road, Detroit 32, Michigan

MORE AND MORE PEOPLE RELY ON THIS NEW KIND OF ENGINEERED DEPENDABILITY

SOUND INVESTORS *DEMAND* QUALITY WINDOWS



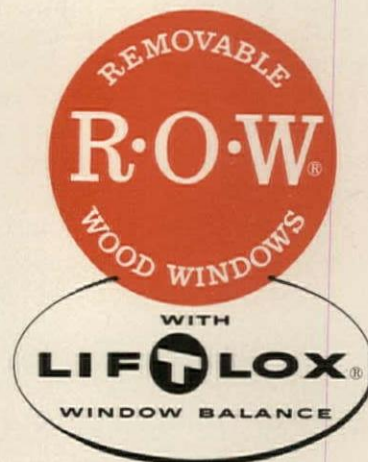
Waters House at 500 Fulton East, Grand Rapids, Mich.
Sarafis Associates, Inc. (Developers)
Wold & Bowers AIA (Architects)
Aalsburg Construction Co. (Builders)

ALL REMOVABLE WINDOWS are easier and more economical to maintain. They can be washed or painted in half the time. Cleaning accounts for about 85% of all window maintenance costs.

WOOD WINDOWS provide greater year 'round insulation. Heating and air-conditioning costs are big factors in apartment house expense. Color harmony and flexibility are easily and economically achieved with wood windows.

ONLY R·O·W removable wood windows provide R·O·W exclusive trouble-free mechanism, finger-pressure Lif-TLox balancing and America's finest millwork. Nothing less than R·O·W windows would have been suitable for the outstanding WATERS HOUSE.

R·O·W WINDOW SALES CO. 1365 HH ACADEMY AVE.
FERNDAL 20, MICH.





VAULTED SUNSCREENS of 2x2s nailed to built-up ribs and supported on pipe columns shelter the rear patio of this model house.

**These backyards are so glamorous
that no one notices how small they are**

When a buyer pays from \$45,000 to \$60,000 for a house he usually expects a good-sized rear yard. While the fronts of these six model houses by April Builders at Sunset Mesa near Los Angeles face spectacular views of the Pacific, the shallow backyards are only 30' deep because they are against a hill. So Architect John Sjoberg designed an enclosed patio with sun screens,

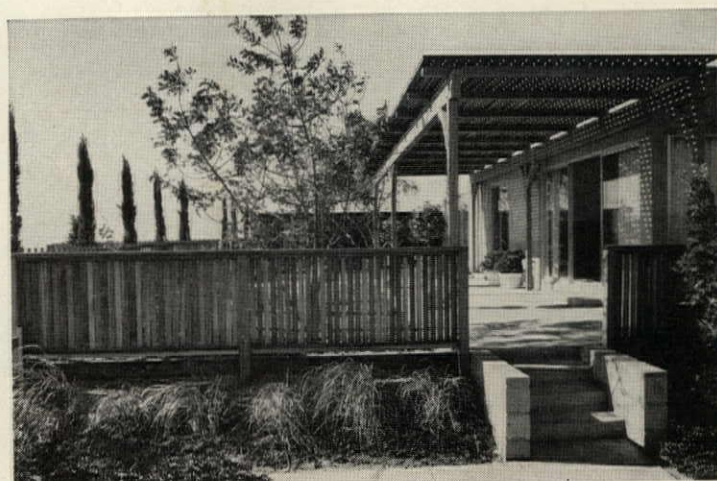
fences, and garden structures for each model. Several of the landscaped patios were furnished as outdoor rooms by Interior Designer Dean Reynolds, who also did the model interiors. The result has turned the small yards into sales clinchers. Question: Would these ideas work equally well in the shallow rear yards of apartments and townhouses?



SMALL GARDEN with decorative fence, seen through glass doors of a dining room, is typical of the project's landscaping.



ROMAN GENERAL'S TENT against a whitewashed concrete block wall makes a sheltered, outdoor room. Travel posters add interest and color.



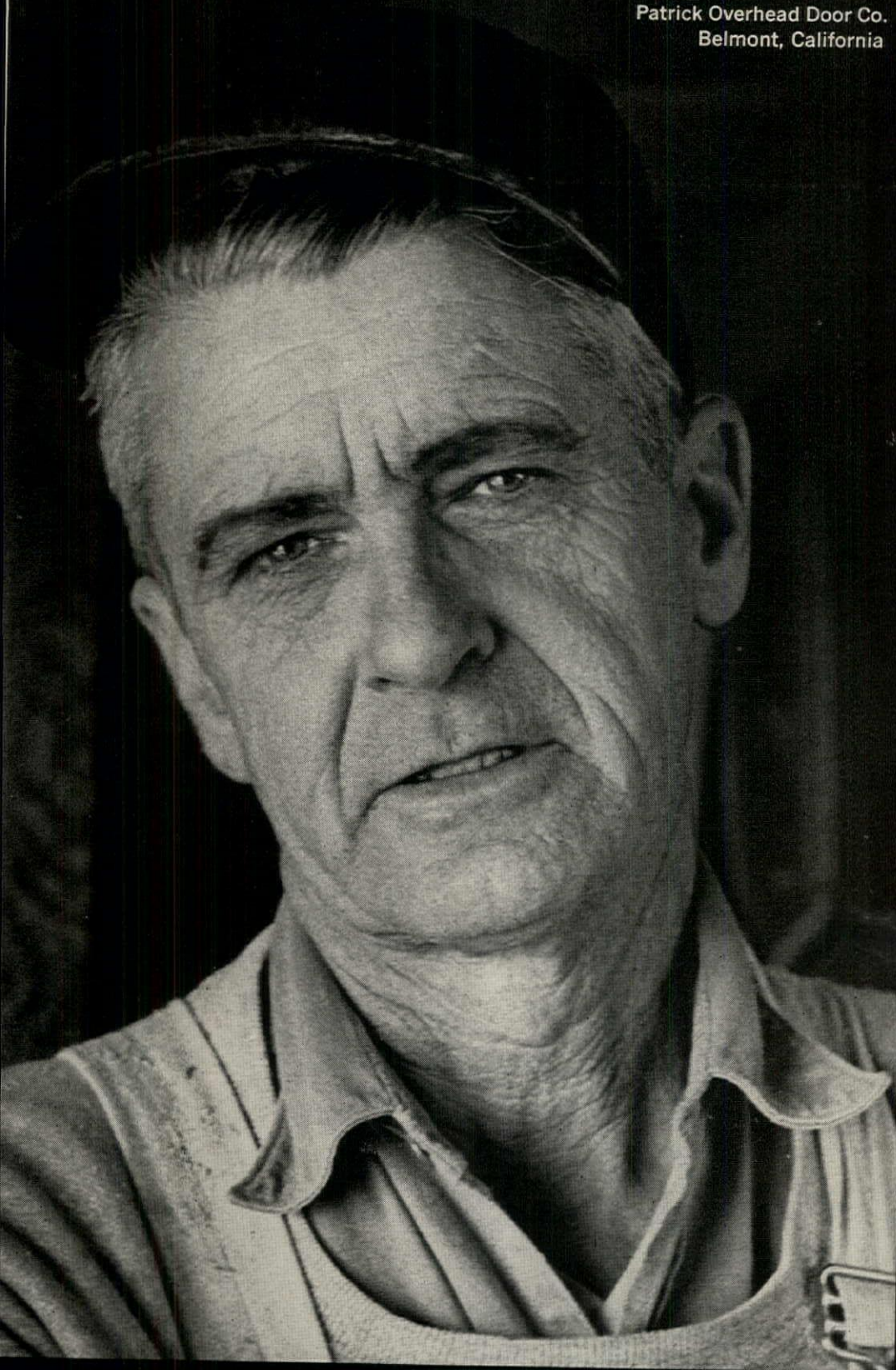
LANDSCAPED PATIO, sunshade, and fences suggest ways for buyers to finish their own rear yards. House prices do not include patios.

Leaders continued on p 65

"CreZon overlaid plywood pays for itself

-I'm sold on it"

—Lawrence Patrick, co-owner
Patrick Overhead Door Co.
Belmont, California



Here's a man who specializes in the manufacture of overhead garage doors for new housing developments. He uses CreZon overlaid plywood exclusively. Here's why:

"CreZon's overlaid surface holds paint better and there's no checking, splitting or grain rise. We've used it consistently for 4 or 5 years. It's about as weatherproof a wood product as you can find. We've given it many tests ourselves—soaked it in tubs of water, left it in the sun—nothing fazes it. I'd say it pays for itself in the trouble you save."

Whether you use CreZon overlaid plywood for doors, siding, soffits or dozens of other applications, you'll find it works easily, leaves no splintered edges, takes paint beautifully. It helps you keep your construction costs way down.

These leading manufacturers use CreZon to produce the highest quality overlaid plywood:

ANACORTES VENEER, INC.
Armorite

DIAMOND LUMBER COMPANY
Super Siding
CreZon Overlaid Plywood

EVANS PRODUCTS COMPANY
Evanite CreZon Overlaid Plywood

GEORGIA-PACIFIC CORPORATION
GPX Yellow Panels
GPX Green Panels
GPX Yellow
Bevelled Siding

ROSEBURG LUMBER COMPANY
CreZon Overlaid Plywood

SIMPSON TIMBER COMPANY
Medium Density Overlaid Plywood

ST. PAUL & TACOMA LUMBER CO.
Plyaloy

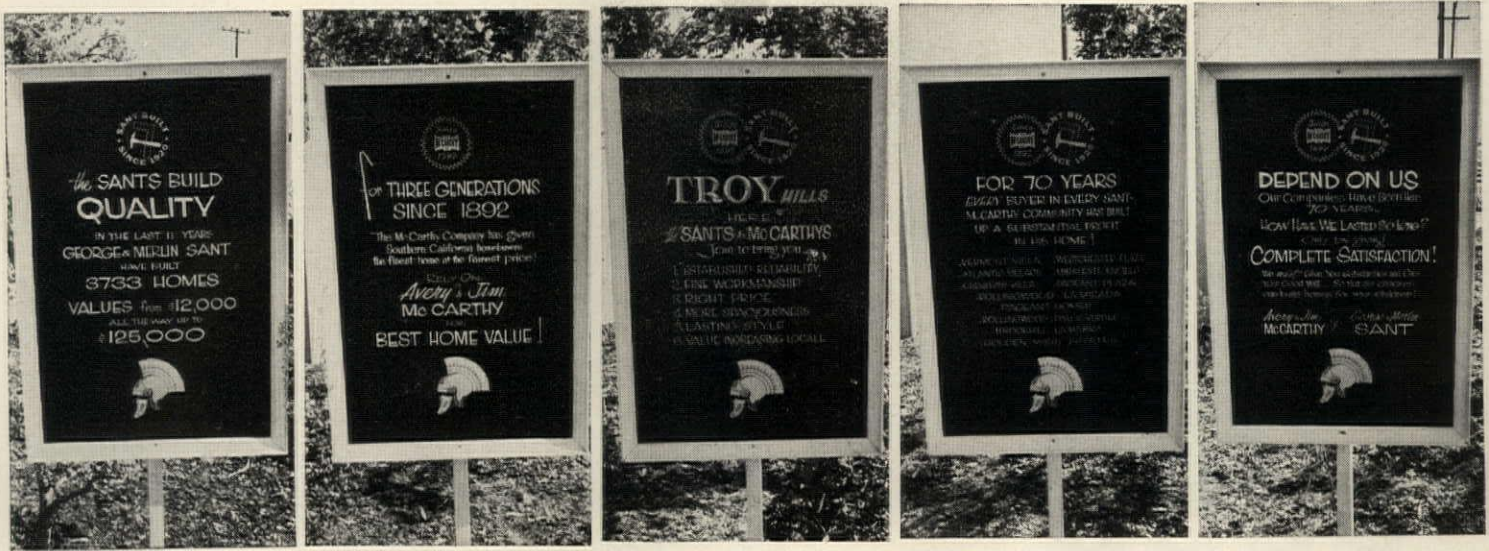
UNITED STATES PLYWOOD CORP.
Duraply


**CROWN
ZELLERBACH**

CREZON SALES

One Bush Street • San Francisco



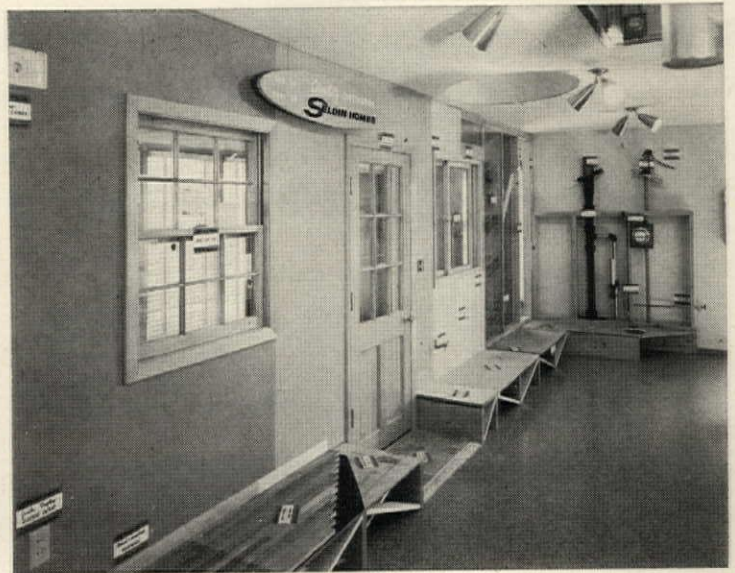


Distinctive signs help sell houses by stressing the builder's and developer's experience

For buyers who are particularly concerned about whether builders are dependable, the signs shown above tell a powerful story for Troy Hills at Fullerton (Orange County), Calif. Located along the approach (right) to model houses, the signs develop confidence by pointing out how long the McCarthy Co, developer and owner, and Sant Construction Co, which built the houses under contract, have been in business (McCarthy since 1892, Sant since 1920).

Signs are black with yellow lettering and carry short, punchy messages and Troy Hills' Trojan helmet trademark. Copy was written by Max Tipton of the Coleman-Parr advertising agency in cooperation with Sales Manager Glen Swoverland of Pageant Realty, which sells the houses. Inside the model houses and in rear patios, other signs carry additional sales messages including details of Pageant Realty's trade-in program.

Troy Hills opened in April. The first month, 65 houses (prices: \$19,350 to \$23,750) were sold. Since then, sales have been "better than we expected," according to Sales Manager Swoverland.



Compact cut-away display shows almost as much as a complete X-ray house

Without using up a lot of sales-office space, this cutaway wall reveals most of the construction details of houses built by Seldin Homes of Omaha.

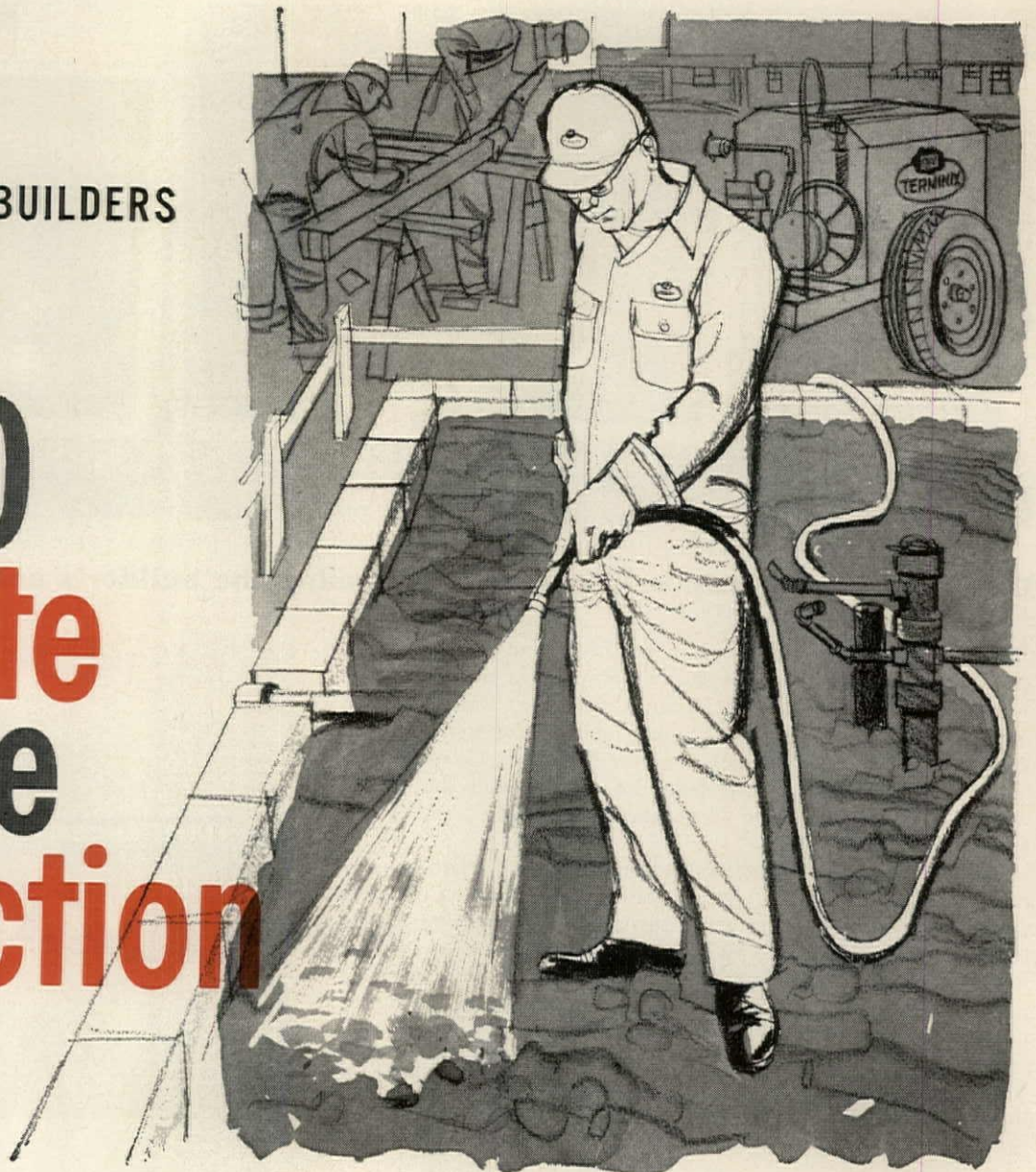
On the outside wall (left) visitors see more than a dozen phases of construction—each identified by a neatly lettered sign. The

front door opens and closes, so people can walk through to examine inside construction (right). Interior details include wall construction; flooring of the living room, bath, and kitchen; and plumbing and wiring. Prices of Seldin Homes models range from \$14,950 to \$17,950.

Leaders continued on p 67

NEW SALES AID FOR BUILDERS

\$5000 termite damage protection



Bruce-Terminix pre-treating system includes \$5000 guarantee against termite damage

Regardless of type of construction, no house containing wood or other cellulosic material is "termite proof." Actually, many slab-on-grade houses are termite traps because it's an easy matter for termites to gain entry through tiny cracks in concrete, expansion joints or around plumbing.

Bruce-Terminix has had vast experience in the protection of slab, basement and crawl-space houses. Let this nation-wide organization relieve you of the labor and responsibility of termite protection for your homes. Then you can offer home buyers maximum protection, including periodic reinspections, treating

when found necessary, and a \$5000 guarantee against damage to the structure and its contents. Performance is guaranteed by the Bruce Company and insured by Sun Insurance Office, Ltd.

Look in the phone book under Bruce-Terminix or Terminix and call your local company. You'll find their advice helpful on any problem involving termite protection for new homes, old homes, and homes under construction.

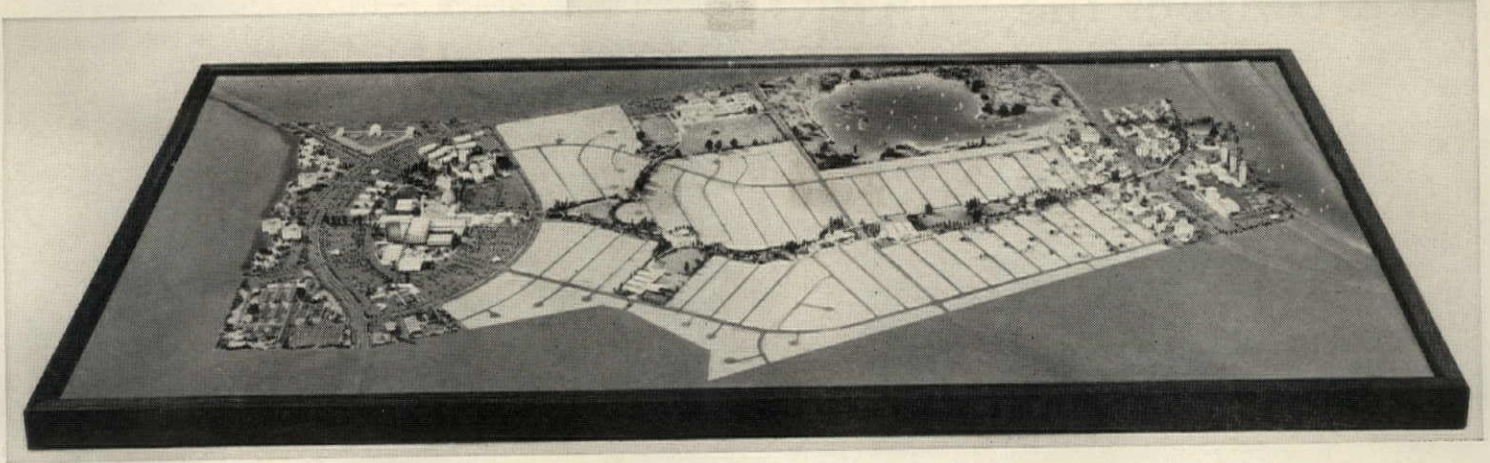
TERMINIX DIVISION, E. L. BRUCE CO. Incorporated
P. O. Box 397-S, Memphis 1, Tenn.

Chemical treatment during construction
Protection without treatment for qualified termite-free structures
Treatment as required for infested structures



THE NATION-WIDE TERMITE PROTECTION SERVICE

HOUSE & HOME



Developers spend \$10,000 for a model to show how their community will look in 1970

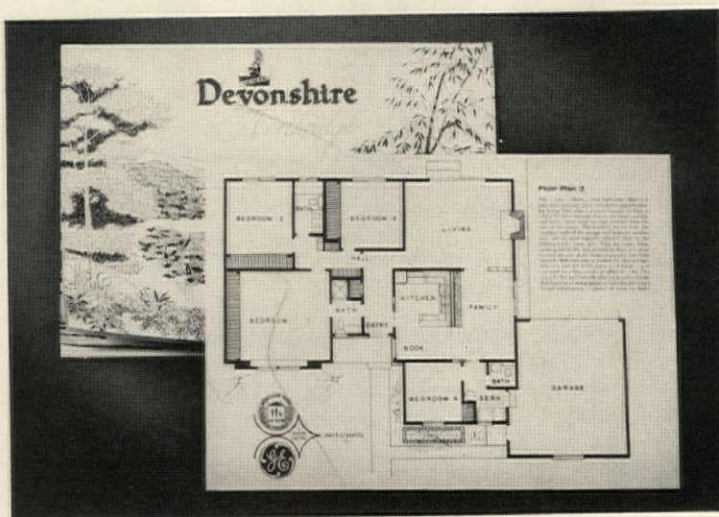
This model is a "tremendous sales asset," according to Kermit Lincoln and Harold Parker, developers of the 700-acre Greenhaven subdivision in Sacramento. Made to scale and in several colors, the model shows apartments and a shopping center (left),

single-family houses (center), a long greenbelt (running from left to right), pedestrian underpasses for children going to school, a marina, the absence of overhead wiring, and other community features which will make this a good place to live.



French Provincial design attracts renters in Texas

Apartments and townhouses like those at left are out-drawing nearby rental units because their design is different from anything in the area. So reports Builder Daniel Kobbe who offers the French Provincial design at his 100-unit "Maison de Ville" project in Houston. Designed by Architect Lucian T. Hood Jr, "Maison de ville" has wide, landscaped streets, a central plaza featuring a bronze fountain made in Paris, a swimming pool and clubhouse, and a nursery school. Rents: \$130 for one-bedroom apartments, \$195 for two-bedroom apartments and townhouses, and \$295 and up for three-bedroom, two-bath townhouses including carpets and curtains.



Plans are promoted by showing them 8" x 12"

At Devonshire Northridge in the San Fernando Valley, Builder Hugh Temple is especially proud of his floor plans. So he publishes them at 1/8" scale in his sales brochure. A copy block on each page explains advantages of the plan. Temple's three-, four-, and five-bedroom houses are priced from \$25,650 to \$31,250.



Night lighting dramatizes Chicago houses

When Centex added three new models and improved four old ones at its Elk Grove subdivision, it also added outside lighting. Spotlights in the shrubbery light the landscaping as well as the houses, which are arranged around a grass circle. House prices range from \$18,950 to \$27,990. /END

"The HOME of the YEAR"

... says Good Housekeeping Magazine

Good Housekeeping

In September Issue ...
a 12 pg. full color
feature on Concord
Home's "Fairlawn"
model.
See pgs. 114-124

SEE FOR YOURSELF:
FAIRLAWN on display in ...
Towne South, St. Louis County, Mo.
Round Hill, Overland Park, Kan.

House Home

In August Issue ...
Concord's "Fairlawn"
featured on pgs.
88-91, "A Promotion
House of Sales
Tested Design."



A Concord Home

is the best "sales staff"
your subdivision could
have, so go ahead...

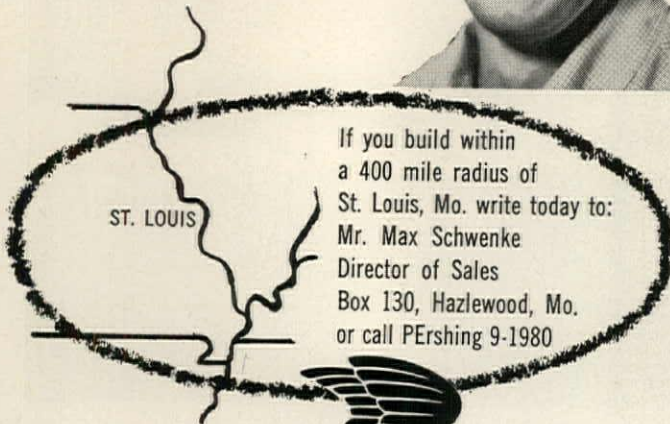


FIRE YOUR SALESMEN!

WELL...MAYBE THAT IS A LITTLE DRASTIC, but even if you keep your salesmen, they'll find their job so much easier once you start selling Concord Homes. The fresh *buy*-appeal of every Concord design (created by our top talent architects) stops traffic by the hundreds and perks up sales by the score.

It's no accident either that Concord homes, displayed by builders in the Mid-West, have received recognition by such magazines as Good Housekeeping, House & Home, American Home, and McCall's. Every Concord design is completely researched and market tested... actual in-place costs show proof positive profits!

And Concord's staff provides expert help in advertising, merchandising, and sales training to keep your sales at peak performance. Add to that the convenience of building precision engineered homes with fewer workmen, in less time, and with half the headaches, and you can understand why profit-minded builders are joining the Concord Home family every day. Why not find out how easy it is for you?



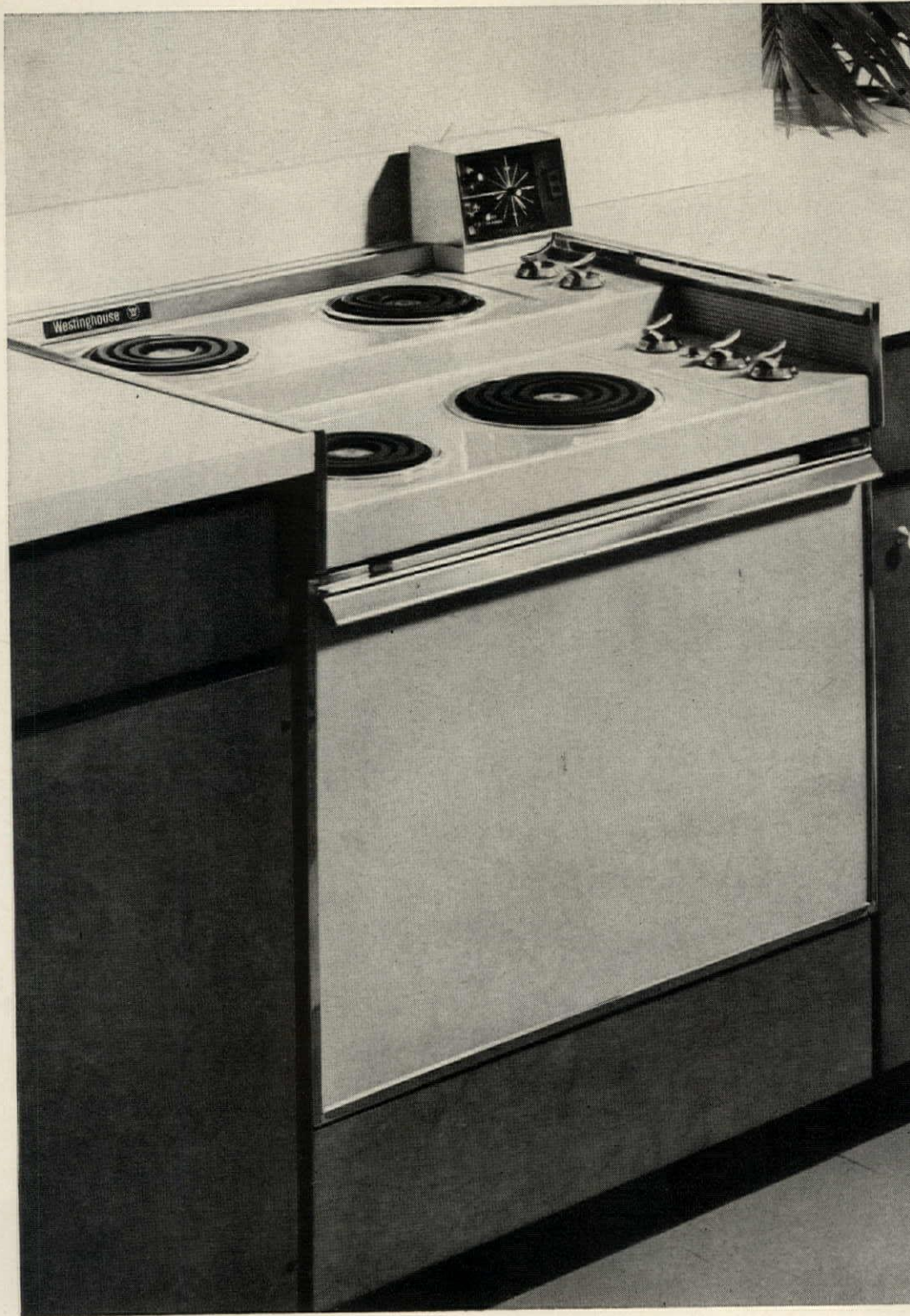
If you build within a 400 mile radius of St. Louis, Mo. write today to:
Mr. Max Schwenke
Director of Sales
Box 130, Hazelwood, Mo.
or call PERshing 9-1980

Concord Homes

THESE FAMOUS NAMES ARE

TYPICAL OF CONCORD QUALITY... ANDERSEN Windowalls, LAWSON Accessories, TAPPAN Appliances, OWENS-CORNING FIBERGLAS, FRY Roofing

Only from Westinghouse ...so many completely coordinated Kitchens



- ▲ New Continental gives kitchens an exciting look. Has Magic Mirror Oven Door and Pantry Shelf. Surface Units plug out to clean.
- ◀ Many prospects will find the Terrace Top 30 an ideal range. Its split level platform makes pots and pans easier to reach. Big 23" oven.
- ▼ This built-in oven and range platform combination gives smart design to any kitchen. Other matching combinations available.



Three ways to give your range area a built-in look

Only Westinghouse gives you so many ways to handle the range area. Because only Westinghouse gives you three types of built-in ranges to design around—plus a complete line of free-standing models. Now you can select the type of range that goes best with the shape, size and design of any kitchen. You get this same design flexibility with every Westinghouse appliance. Because only Westinghouse offers such a complete selection of major appliances—coordinated in design, style, colors and features. *You can be sure . . . if it's*



Westinghouse

Westinghouse Electric Corporation
Contract Sales Department
Mansfield, Ohio



Please send me catalogue with complete details on Westinghouse major appliances.

Name _____

Address _____

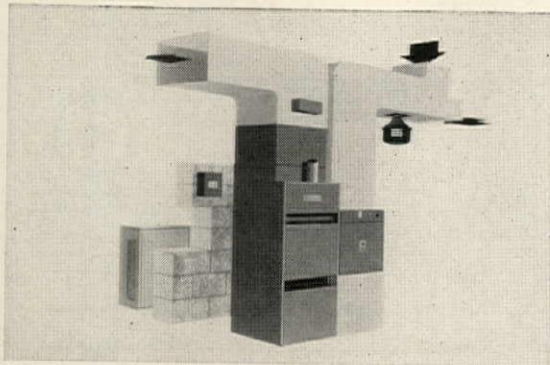
City _____ Zone _____ State _____

These appliances plus Heating & Air Conditioning, Wiring Devices, Micarta® Counter Tops, Apartment Elevators are all available through one point of contact. See your Westinghouse Residential Sales Manager, or write Westinghouse Electric Corporation, Contract Sales Dept., Mansfield, O.

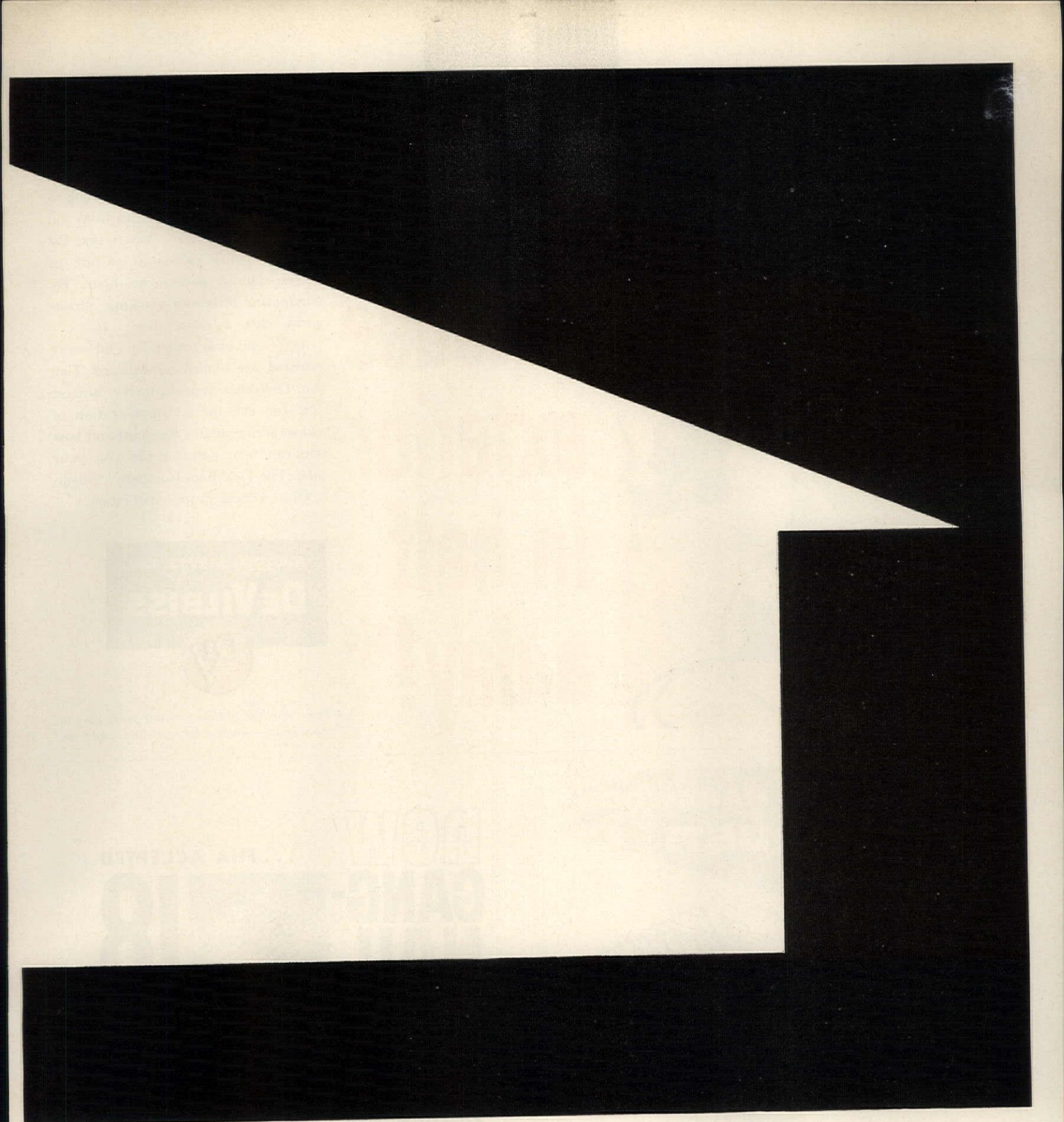
Sell the house that "cleans itself"

New Westinghouse Precipitron[®] lets you offer electronic air cleaning in lower cost homes

What a selling feature! Imagine the appeal to a woman. With dust, smoke and grease gone from the air, her whole home—rugs, drapes, furniture, everything—stays cleaner much, much longer. She gets more free time, cuts cleaning costs—and has a healthier home in the bargain. Precipitron removes up to 98.5% of the dust and pollen from the air in the system.



New low-cost Precipitron lets you include a Westinghouse **TOTAL COMFORT SYSTEM** in all of your completely equipped homes . . . a single system that heats, cools, cleans, humidifies and dehumidifies the air.



Versatile! The new Westinghouse Precipitron installs easily in a duct. So light you can set it right on the furnace. Or suspend it. Completely self-contained, it requires no plumbing, no remote accessories. Oversize plate design gives high continuous efficiency between cleanings. Costs no more to operate than a 60 watt bulb. Made to fit any forced air system.

Seeing is believing! Until you see it work, you can't imagine how thoroughly Precipitron cleans the air—how much dust and grit it removes! Your Westinghouse representative can give you a quick demonstration. For more information on this newest salesman from Westinghouse, write or wire (collect): Westinghouse, Staunton, Virginia. *You can be sure . . . if it's*

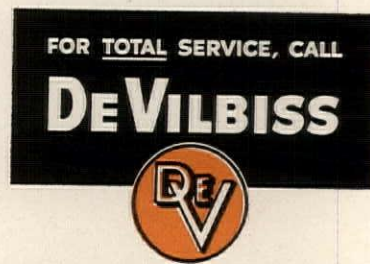


Westinghouse



spray paint a house exterior in half a day!*

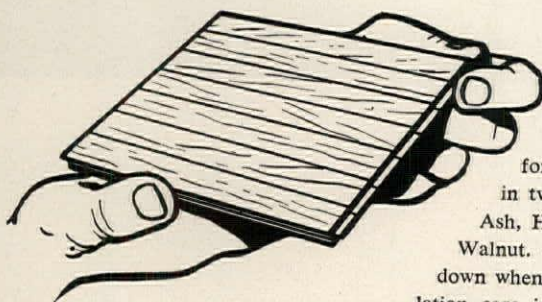
One man can do it using the new DeVilbiss high-production 5-gallon portable *airless* spray outfit. It's *easy to use*. Painters can spray all surfaces while the paint pail stays on the ground. It's *compact*. You don't need a truck to move compressor and pump from job to job. It *saves time*—two ways. By spraying house paints at a rate of better than 5 gallons an hour. By eliminating elaborate masking (airless spray cuts a clean edge). It *saves materials* because overspray and spray rebound are almost nonexistent. Call the DeVilbiss representative nearest you and ask for a demonstration of airless spray outfits. See firsthand how you can trim painting time on your jobs. The DeVilbiss Company, Toledo 1, Ohio. Offices in principal cities.



*Paint application time for average one-story 6-room house—single color over siding and trim.

PREFINISHED HARDWOOD PARQUET!

Solid Appalachian Hardwood parquet tile, 5/16" x 6" x 6". Fourteen stage baked-on factory finish saves costly on the job finishing. For homes, churches, institutions and commercial installations.



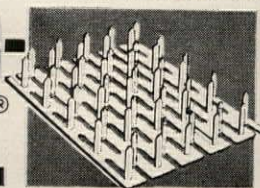
Precision milled tongue and groove for easy installation in two grades of Oak, Ash, Hard Maple, Black Walnut. Guaranteed to stay down when reasonable installation care is used.

WRITE FOR FREE SAMPLES AND LITERATURE

TIBBALS FLOORING COMPANY
DEPT. H-2 ONEIDA, TENNESSEE

new GANG-NAIL® 18

... FHA ACCEPTED



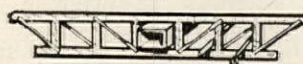
for the greatest savings in

cuts truss plate costs almost... 1/2!

new BUILDING COMPONENTS

A major break-through in truss plate engineering, and it's exclusive with Gang-Nail Fabricators. It's the first and only 18 gauge ALL NAIL connector plate requiring no hand-nailing!

GANG-NAIL
FLOOR TRUSSES



Satisfy today's demand for large clear-span areas. Simplify ductwork and plumbing problems. Floors, ceilings cost less to install.

GANG-NAIL
BOX BEAMS



One of the 'money-savingest' components. Excellent for picture windows, garage doors, beamed ceilings and many other uses.



Automated Building Components Inc.
P.O. BOX 47-836 • MIAMI, FLA. • OX 6-0930

Taxes . . . bathrooms . . . money . . . injustice . . . politics

Taxes and land

H&H:

There has been much speculation about tax policies on land (H&H, June). Much of the discussion centers around increasing the tax on undeveloped land, thus making it unprofitable to hold for speculation.

Suppose this were done in one fell swoop. Builders and speculators would gobble up all available land at low prices, continue their over-building, resulting in a cure which is worse than the ailment.

I see these alternatives:

1. Enforce the housing code. While every utterance of officials and housing experts includes this phrase, little is done to place the blame where it belongs—on the shoulders of our politicians.

2. Spot clearance, especially in high-density areas—leave it green! Prohibit re-building, so that a little light and sunshine can enter. If the owner plants a green spot, eliminate his taxes as long as he does so.

3. Take a lesson from Europe, and reverse your procedure. It's not necessary to penalize one group (the owners of land); it is possible to reward another group and obtain the same result. This is by using tax incentives. For each substantial improvement, waive the tax bill for a period of time. Or apply a formula: If the property is worth \$20,000 before improvement, and \$5,000 is spent, reduce taxes by 25% for seven years. Income tax incentives should also be added.

4. Improvements seldom add to the cost of community services in the same proportion as do existing buildings. Therefore, the politicians have no right to additional taxes from this source. Let them get along without this windfall, at least for a moderate period of time.

ALFRED HUMBERT, JR
A. Humbert & Co, realtors
Chicago.

Misplaced baths

H&H:

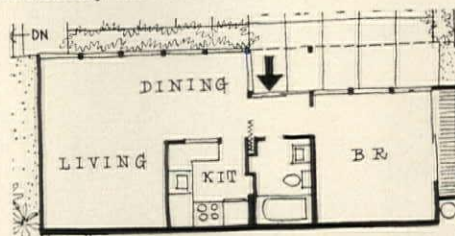
I was very much interested in the article in your July issue concerning the AIA award-winning apartments.

I was gratified to see included in the list the garden apartments in Davis, Calif., designed by Architect John L. Field. Our company made the permanent mortgage loan on these units through the Sacramento office of our Mortgage Loan Correspondent for Northern California, the Marble Mortgage Co.

However, three of the other apartments selected for awards contained examples of

what we have always felt were undesirable floor plans.

In two of them the bedroom is separated from the bath by the entrance hallway, thus making it necessary to traverse the hallway to gain access to the other. In the third [plan below], the entrance doorway is directly opposite the bathroom so that on entering the front door, one looks immediately into the bath.



Apparently your jury did not find these situations objectionable. In the interest of educating ourselves and perhaps correcting an erroneous concept on our part, I wonder if you care to comment further on these floor plans.

Incidentally, we find your magazine an extremely interesting and useful one to us in our work.

EDWARD STANLEY, vice president
Provident Mutual Life Insurance Co
Philadelphia.

• *While a hall bathroom has the advantage of being directly available to guests, we see no advantage to a bathroom being so directly available that guests walk or look into it upon entering the apartment.—Ed.*

Money vs demand

H&H:

I was very interested in your report on the Pacific Coast builders conference (News, July) and was particularly impressed with the warning that Assemblyman Hanna gave builders about becoming overly inspired with construction programs merely because money is available.

We have found over the years that advising and sometimes insisting that builders not start more units than the market will absorb is one of the most important and kindest functions a lending institution can perform. Those of us in mortgage lending have a very definite responsibility to the community and to the builder in this respect. History has shown time and again that no builder can afford the luxury of complete and unsold houses.

HOWARD EDGERTON, president
California Federal S&L Assn
Los Angeles.

H&H:

The statements made at the Pacific Coast conference could be made about the

situation in other parts of the US. We are certainly building multi-family buildings too rapidly at the present time. I am quite concerned about the future.

ROY WENZLICK, real estate analyst
St Louis.

Injustice in Kansas City

H&H:

In a News article in your July issue, you quote a Kansas City developer who said "Uranium stock would be only slightly less risky than building an apartment here right now." The article makes a general situation out of the specific situation concerning luxury buildings.

Kansas City developed too many luxury units in a concentrated area. You state that some apartments in top locations are less than 35% filled. This applies to the luxury buildings. New garden apartments are being well received, and each new project seems to command a little higher rent.

Your article does an injustice to the overall apartment-occupancy situation in Kansas City.

MALCOLM BLISS, president
Wilson D. Wood Mortgage Co
Kansas City, Mo.

H&H:

Anything that provides good housing for lower-income families on an equitable basis is surely to be welcomed. I certainly hope Dick Hughes and his associates can make a contribution in their Tulsa program.

BEN FISCHER, director, Arbitration Dept
US Steel Workers of America
Pittsburgh.

Tulsa plan panned

H&H:

I cannot agree that the Tulsa home-builders' plan for combining 221d3 and HHFA financing [News, July] is a proper answer to the provision of housing for low-income families. It presupposes that families of low-income are entitled to brand new housing, a concept with which I cannot agree.

The Tulsa plan represents a fatal compromise with the basic fundamental principles of private enterprise and constitutes a first-time industry step in support of socialized housing. Its disadvantages are:

1. The 3.8% submarket interest rate FHA 221d3 loans purchased by FNMA at par with Treasury cash involve a subsidy and postponement of the hoped-for day when FNMA might become privately owned.

2. Waiver by FHA of the usual 1/2%

continued on p 74



SHE'LL BUY...

without question

F

mortgage insurance premium on riskier loans could impair FHA's reserves.

3. The difference between what lowest income tenants can pay, and the arbitrary "economic" rent of 20% of income would be made by grants from HHFA's \$5 million experimental fund for five years. This is a taxpayer subsidy.

If we believe in the philosophy of private initiative, and I do, then housing must be based on ability to pay and not desire. Where there is a genuine need by reason of unemployment, incapacity, or some other element over which the family has no control, then this temporary or permanent condition should be met by welfare payments locally administered and carefully controlled.

ROBERT E. SCOTT, realtor
Elizabeth, N. J.

Politics and renewal

H&H:

We have read, with interest, your article on urban renewal consultants (H&H July, News). There were, however, a number of statements made in regard to our organization and T. Brooks Brademas, president of our firm, that were misleading and untrue.

In May of 1958, T. Brooks Brademas organized City Planning Associates, and the firm was retained by LaPorte, Michigan City, and Kingsford Heights, Ind. between June and September, 1958. All of these cities are in the 3rd Congressional District of Indiana which as of Jan. 1959 has been represented in Congress by John Brademas. Of the other two cities in Congressman Brademas' district which have retained City Planning Associates, Elkhart had a Republican mayor and Plymouth had a politically divided council which voted unanimously to hire City Planning Associates.

All contracts which City Planning Associates executes, which involve federal urban renewal, carry a clause which states: "No member of or delegate to the Congress of the United States, and no Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit to arise herefrom." It would clearly be a violation of federal law if Congressman Brademas had any interests whatsoever in City Planning Associates. He has none.

Your article quotes the executive director of the State (Indiana) Department of Commerce complaining that many Indiana cities are having redevelopment crammed down their throats and are getting ill-conceived comprehensive plans. The position of the executive director is a political patronage job appointed by and directly responsible to the Lieutenant Governor who is a Republican. The Republican platform in Indiana has come out in complete opposition to the federal urban renewal program.

It should be readily understandable then why the politically appointed director of the State Department of Commerce has made this statement.

After an urban renewal plan has been prepared it must be approved by the Plan Commission, the City Council, and the Redevelopment Commission after a public hearing has been held. It may be that this procedure is what the director of the Department of Commerce considers cramming it down the people's throats.

Many local Chamber of Commerce groups are supporting the local federally assisted urban renewal programs because they are finding that it is the only solution to the problems their cities are facing.

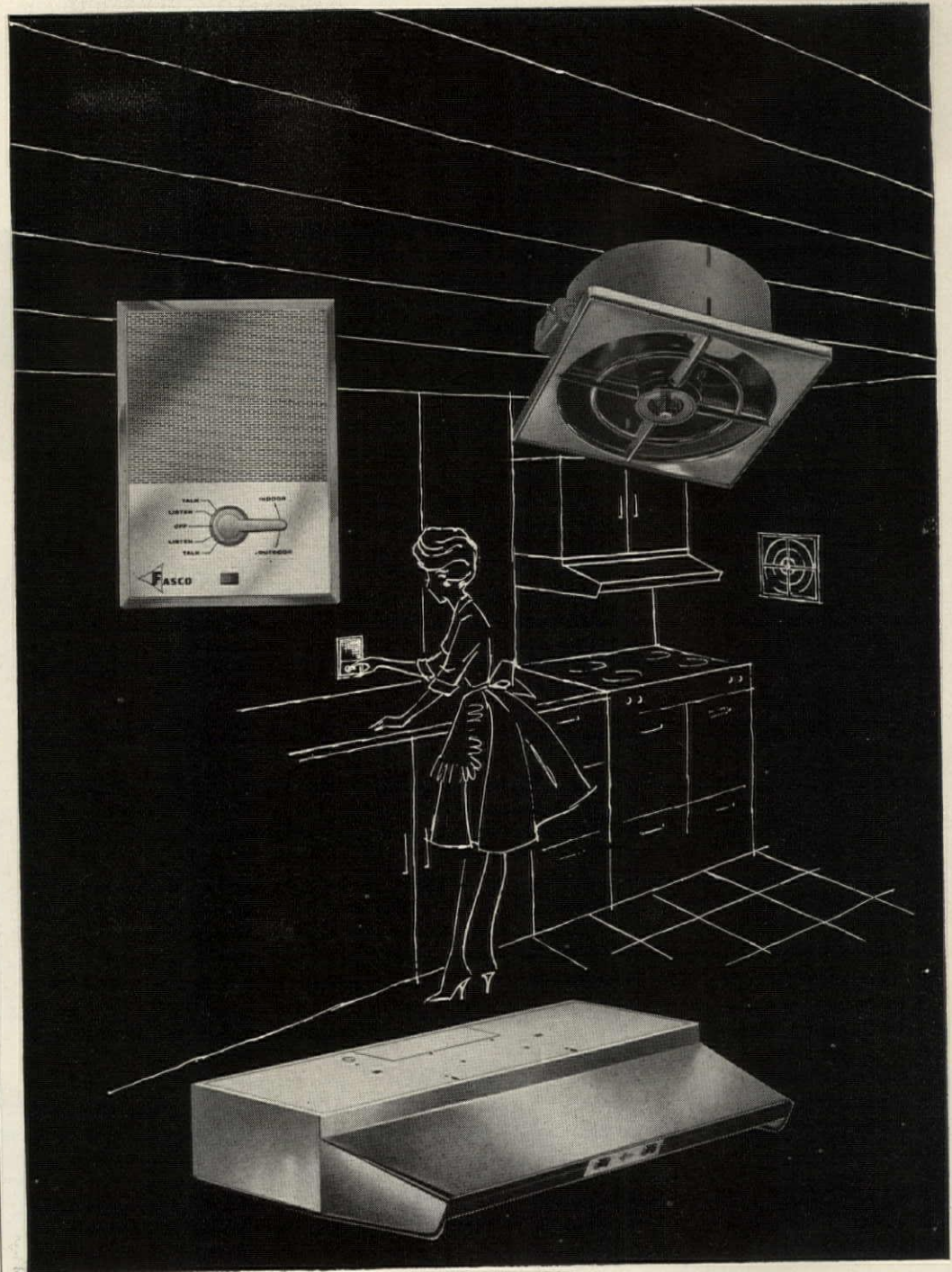
FREDERICK G. CECCHI
City Planning Associates Inc
Mishawaka, Ind.

• These statements help clarify the politically difficult renewal situation in Indiana and reinforce this statement in the original HOUSE & HOME article: "Planner Brademas says that Politician Brademas has no business connection with his firm."

Reader Cecchi also corrects certain details in HOUSE & HOME's brief paragraph on the status of renewal in five Indiana communities served by his firm. Batesville: Renewal is going ahead in the first neighborhood surveyed by CPA which has received \$4,500 in fees to date. Logansport: CPA has completed a comprehensive plan, including subdivision regulations and a revision of the zoning ordinance map, but rejection of its housing code (News, Apr) has stopped renewal. Marion: The renewal project was halted because of the city council's refusal to authorize low-rent housing. Plymouth: Urban renewal is moving ahead. New Albany: The renewal program was halted by disagreement between the mayor and city council.—Ed.

HOUSE & HOME is published monthly by TIME INC., 540 N. Michigan Ave., Chicago 11, Illinois; principal office Rockefeller Center, New York 21, N. Y. Yearly subscription payable in advance. To individual or firms (and their employees) engaged in building—design, construction, finance, realty; material distribution, production or manufacture; government agencies and supervisory employees; teachers and students of architecture and trade associations connected with the building industry; advertisers and publishers: U.S., U.S. Possessions, Canada, \$6; elsewhere, \$9.50. Single copies, if available, \$1. All copies mailed flat. Please address all subscription correspondence to HOUSE & HOME, 540 N. Michigan Ave., Chicago 11, Illinois. When ordering change of address, please name the magazine and furnish an address label from a recent wrapper, or state exactly how the magazine is addressed. Both the old and the new addresses are required. Allow four weeks for the change. © 1962 by TIME INC. All rights reserved.

TIME INC. also publishes TIME, LIFE, FORTUNE, SPORTS ILLUSTRATED and ARCHITECTURAL FORUM and with its subsidiaries the International editions of TIME and LIFE. Chairman of the Board, Andrew Heiskell; Chairman, Executive Committee, Roy E. Larsen; Chairman, Finance Committee, Charles L. Stillman; President, James A. Linen; Executive Vice President and Treasurer, D. W. Brumbaugh; Senior Vice President, Howard Black; Vice President and Secretary, Bernard Barnes; Vice President and Assistant to the President, Arnold W. Carlson; Vice Presidents, Bernhard M. Auer, Edgar R. Baker, Clay Buckhout, R. M. Buckley, Allen Grover, Jerome S. Hardy, C. D. Jackson, Arthur R. Murphy, Ralph D. Paine, Jr., P. I. Prentice, Weston C. Pullen, Jr.; Comptroller and Assistant Secretary, John F. Harvey; Assistant Comptroller and Assistant Secretary, Charles L. Gleason, Jr.; Assistant Treasurers, W. G. Davis, Evan S. Ingels, Richard B. McKeough.



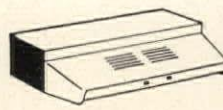
YOU'LL SELL...

when you fill your kitchen with Fasco

Fasco has all the versatility and value you'll ever want in ventilators and range hoods... add to this the solid appeal of Fasco's new built-in intercom and you have kitchen selling features that just reach out for convenience-minded customers.

Consider this, too: For today's time-and-money-conscious builders Fasco means one "buy", one stop, one source of product responsibility. It all adds up to uniform quality and performance in a "kitchen package" you can't afford to overlook.

THIS IS FASCO'S "HOME COMFORT" LINE



FASCO
INDUSTRIES, INC.
ROCHESTER 2, N.Y.

9 FAN MODELS 46 HOODS 21 VENTILATORS 14 ELECTRIC HEATERS

the house that builds sales

When is the time to buy? ...

Some details are overlooked when people buy a home the first time. But not the second time. Little things are important. Like electrical outlets (will there be enough?). And windows (will they open and close easily, are they weather-tight?). Today's new homes feature the little details that save you steps and money later. That's why now is the time to buy! Mortgage rates are better than ever today, too... and

CARADCO

second-time buyers do give a hoot about little things ... property value ... the up and ... home you w ... one illustr ... builder us ... View W ... CARADCO ... houses ... of extr ... your r ... windo ... skillful ... accent ... and air ... dow perfectly ... its interior. ... When ... that new home ... values. Like ... Creative View ... Windows ...

YOU ASKED FOR ADVERTISING PROGRAMS THAT SELL CONSUMERS ON REASONS WHY THEY SHOULD BUY A NEW HOME.

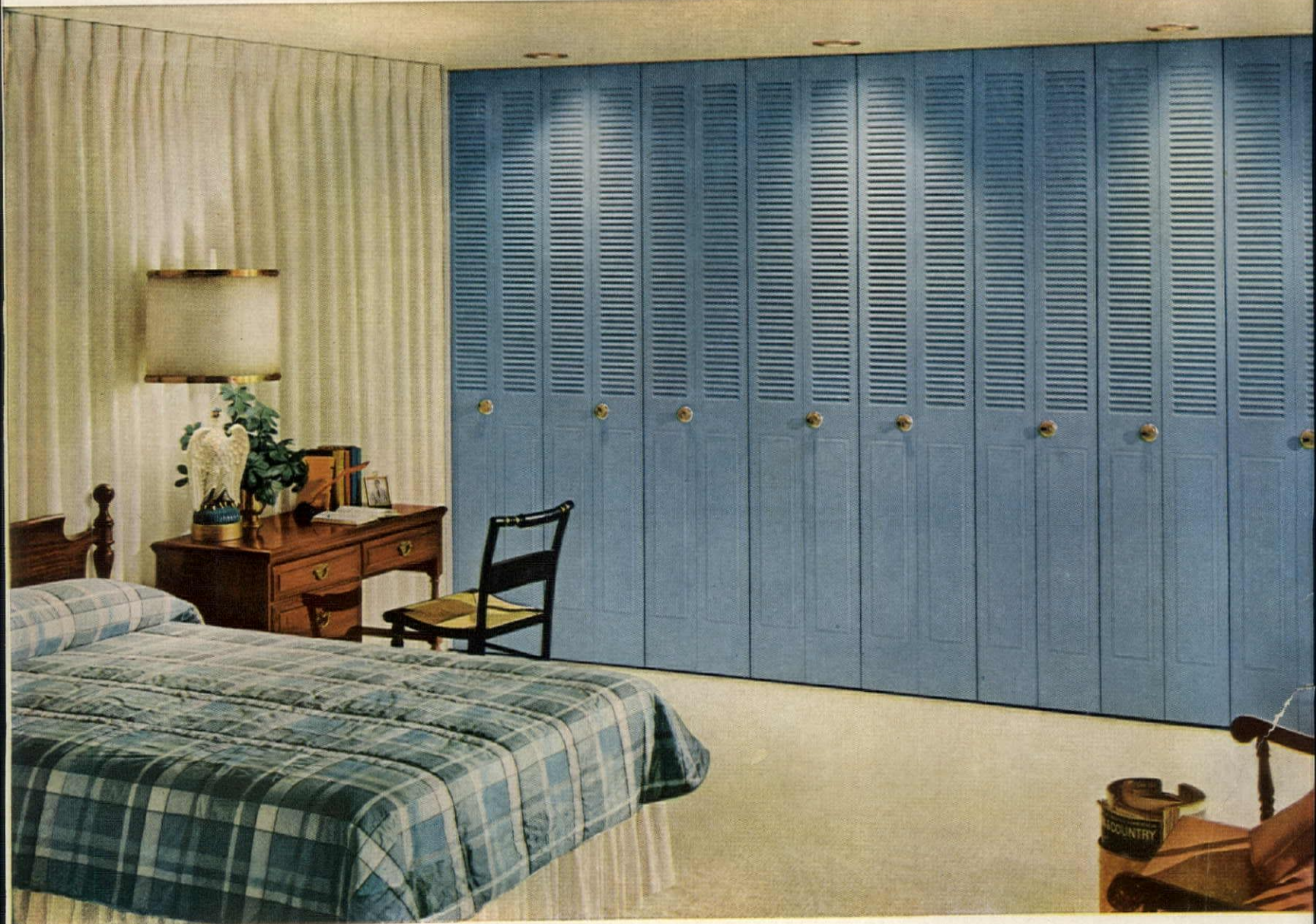
CARADCO'S ANSWERING WITH THIS SERIES OF ADS RUNNING CURRENTLY IN HOUSE & GARDEN MAGAZINE DESIGNED TO HELP YOU SELL HOMES.

"Excuse me, madam, but I couldn't help admiring that very handsome *kwikset*—America's largest selling residential lockset—on your door. I should like to compliment you on choosing that elegant filigreed rosette to enhance the beauty of both your *kwikset* lock and your charming entranceway. Am I correct in assuming that you and your spouse selected this particular rosette from the wide variety that *kwikset* offers, basically for its compatibility with the design of your home?"

"Basically I don't live here at all, chief. What I do is rent the shower."



APARTMENT BUILDERS NOTE...



No Other Closet Door Gives You All The Features Guaranteed by® Float-Away

Before considering *any* closet door, *know* all the plus features of Float-Away. *Know* your investment and reputation are safeguarded through quality material and unsurpassed engineering skill—an assurance Float-Away offers without qualification.

IMPORTANT: You are very possibly missing rentals or sales, and opportunities for construction savings by not using Float-Away metal closet systems.

Only Float-Away assures you of these and other
problem-solving features:

UNLIMITED FLEXIBILITY—Any width, any height can even be Job-measured

ON SITE DISTRIBUTION AIDS—Proper labeling and loading for apartments can save up to \$1000

WARP PROOF—Dimensionally stable under all conditions

RUST PROOF—Zinc coated and bonderized 24 gauge steel

PAINT SAVINGS—Superior prime coat may be left for later redecoration or we will supply finish coat

TRIM SYSTEM—All trim furnished—no door frames are necessary

SHHH—Unique sound-proofing system

Write for 12-page catalog and architectural tracing details.

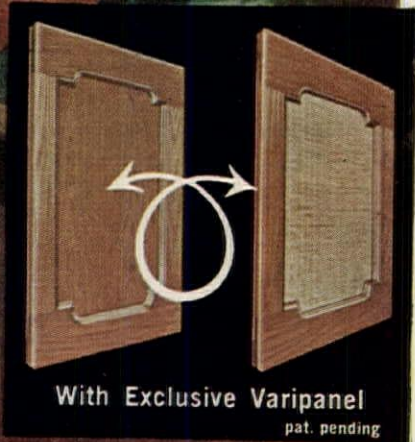
®FLOAT-AWAY DOOR COMPANY
Dept. H-962
1173 Zonolite Road, N.E., Atlanta 6, Georgia
®Registered Trademark





*for greater sales appeal
and design flexibility*

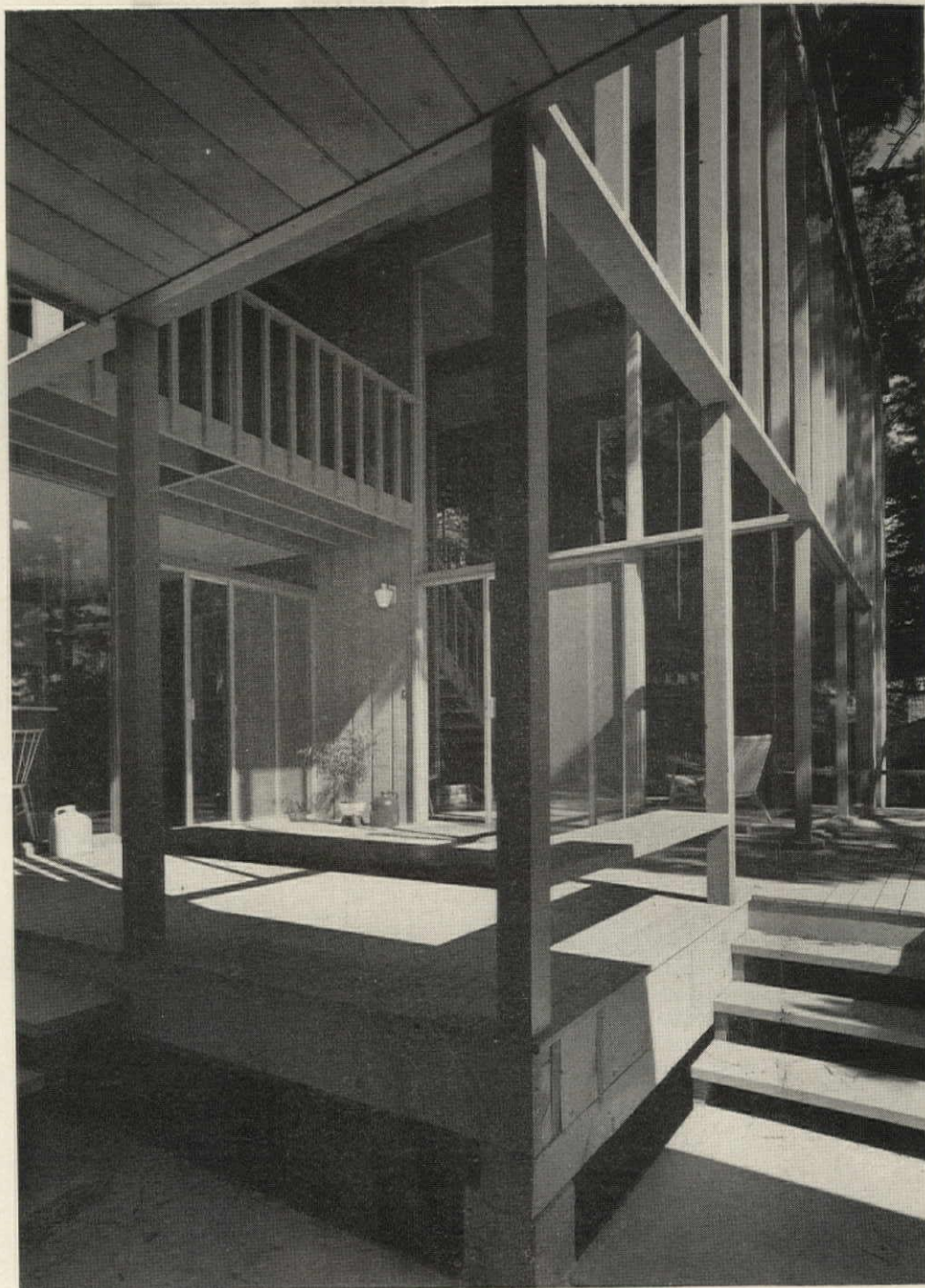
beautiful
**KEMPER
RIVIERA
KITCHENS**



Authentic provincial styling, unmatched quality and a truly competitive price make Kemper's New Riviera Line your best buy in wood kitchens. Kemper's exclusive Varipanel feature gives your homes a sales appeal other cabinets can't duplicate. The recessed Varipanel easily reverses to provide a myriad of kitchen decors. The Fruitwood kitchen shown here, features the Varipanel doors in a standard woven grass cloth design and a matching wood grain in the base cabinets. Indiana craftsmen build the Riviera Kitchen to exacting standards from select Appalachian Maple and White Birch. Choose from complete stocks of cabinet styles and sizes located near you. Your Kemper Dealer offers the Riviera Kitchen in both popular French Walnut and warm, glowing Fruitwood. Literature on request.



Kemper Brothers Inc., Richmond, Indiana



Roger Sturtevant

Two-story porch marks entry of house designed by Roger Lee Assocs (see p 92).

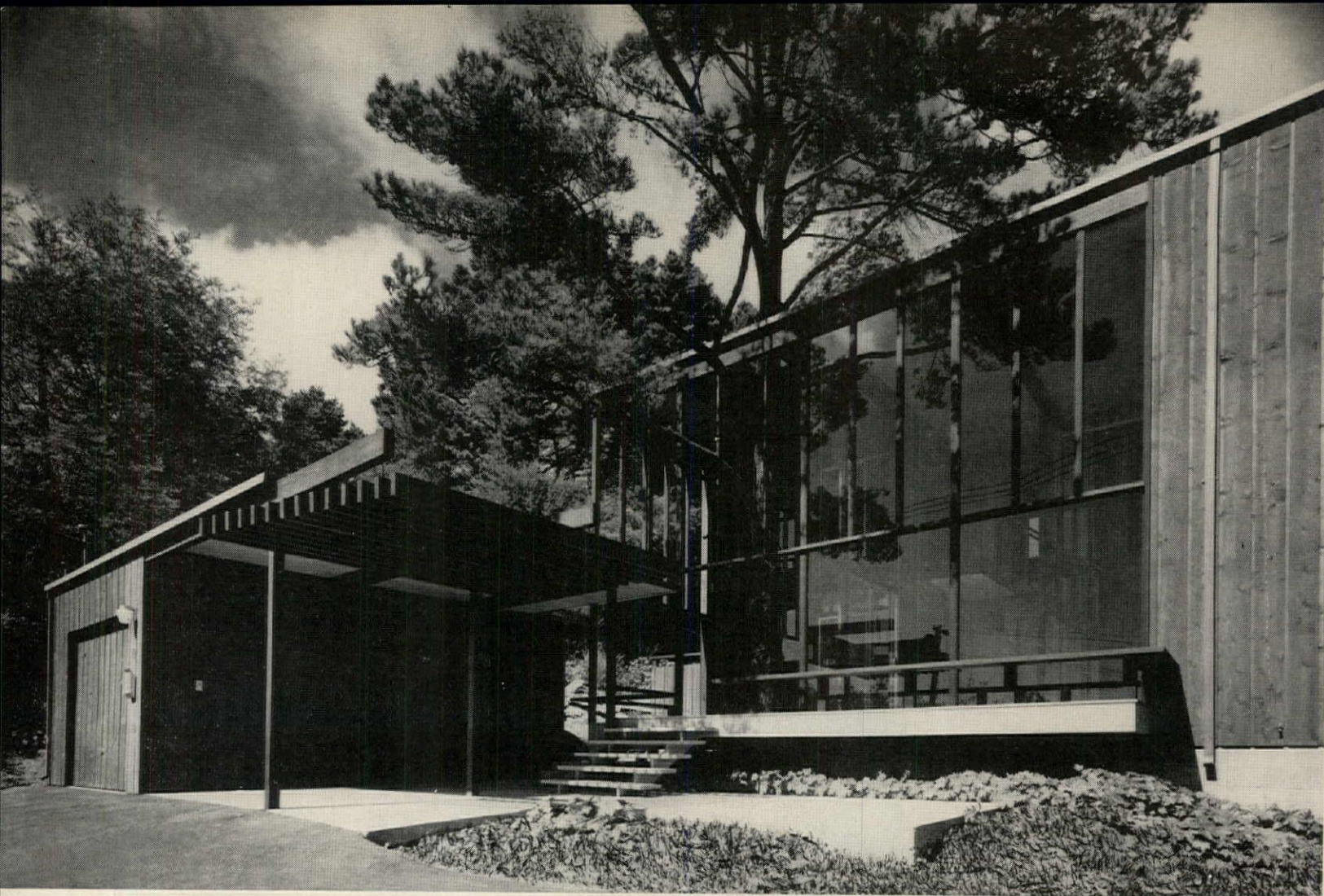
Five AIA award-winning houses

Custom-house jury: Chairman Henry L. Kamphoefner, dean of School of Design, North Carolina State College; Henry Lyman Wright, president of AIA; Architect Samuel E. Homsey; P. I. Prentice, HOUSE & HOME; Mary Hamman, LIFE.

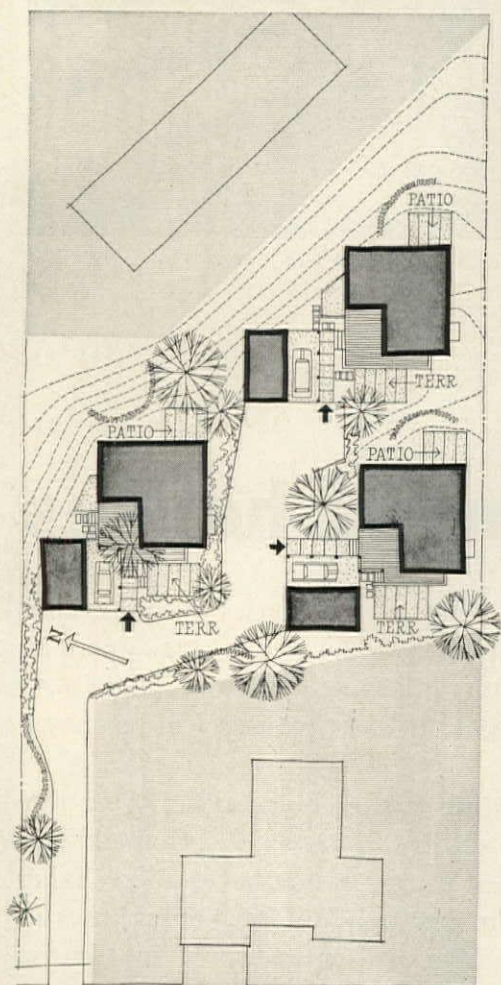
Merchant-house jury: Chairman James T. Lendrum, head of Department of Architecture, University of Florida; Architects Francis D. Lethbridge, Dahlen K. Ritchey, and Gilbert H. Coddington; Richard J. Canavan, assistant commissioner for technical standards, FHA; Perry Willits, vice president and secretary, NAHB; Robert W. Chastney Jr, H&H.

On the next 12 pages are shown the honor award houses in the seventh annual Homes for Better Living competition sponsored by the American Institute of Architects in collaboration with HOUSE & HOME and LIFE. (Twenty-eight other houses which received lesser awards will be shown in subsequent issues.)

Four of the honor award winners are custom-built houses. One was merchant-built. All five are on out-of-the-ordinary and often difficult sites which have been expertly handled to create superior outdoor living areas. Four of the winners present interestingly different approaches to the arrangement of rooms within a two-story framework. In the use of materials, the houses vary from wood to steel to concrete; in size, they range from 1,132 sq ft to more than 2,800 sq ft, and in cost, from \$17,500 to more than \$50,000.



Framing of two-story glass wall is carried across two-story porch. Garage, carport, and trellis extend lines of house. Siding is stained cedar.



Cluster of three identical houses (except for carport and garage locations) is on a secluded site in an established neighborhood.

1. Flowing space within a tight cube

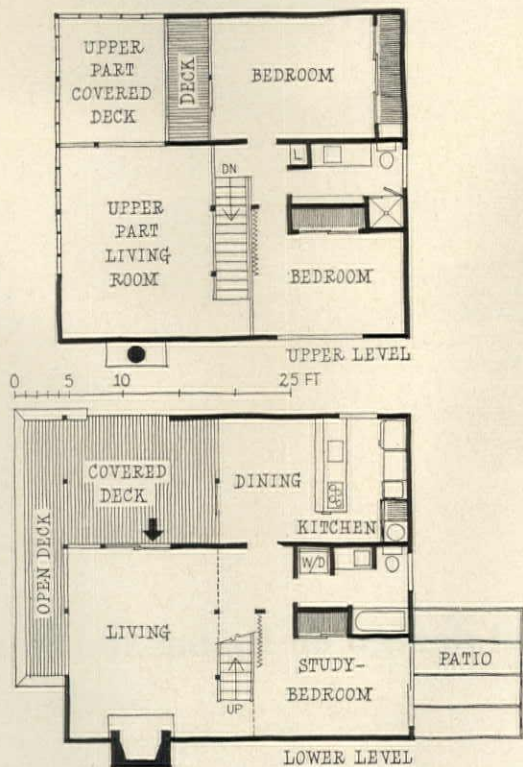
This house has 1,132 sq ft of indoor space but seems larger because its rooms borrow space from each other and because it has a two-story living room.

Glass walls bring space into the living and dining rooms from a covered porch, into the master bedroom from a balcony, and into a downstairs study from a rear terrace. The living room gains added visual space when opened by folding partitions to the study and an upstairs bedroom. And all through the house this flow of space is accented by what one AIA juror called "the minimum use of a few good materials."



Three houses, seen here from entry road, were placed at different levels on sloping land but sited so that all glass walls face north and west.

Photos: Roger Sturtevant



Flexible plan is almost square (32'x29'), permits alternate use of two bedrooms as studies, guest rooms, or extensions of the living room.



Master bedroom is extended visually by enclosed balcony overlooking two-story porch and by roof beams that are carried to far end of porch.

CATEGORY: merchant built
CLASS: over \$25,000 including land
BUILDER: A. L. Muzzini
ARCHITECT: Roger Lee Assocs
LOCATION: Berkeley, Calif.

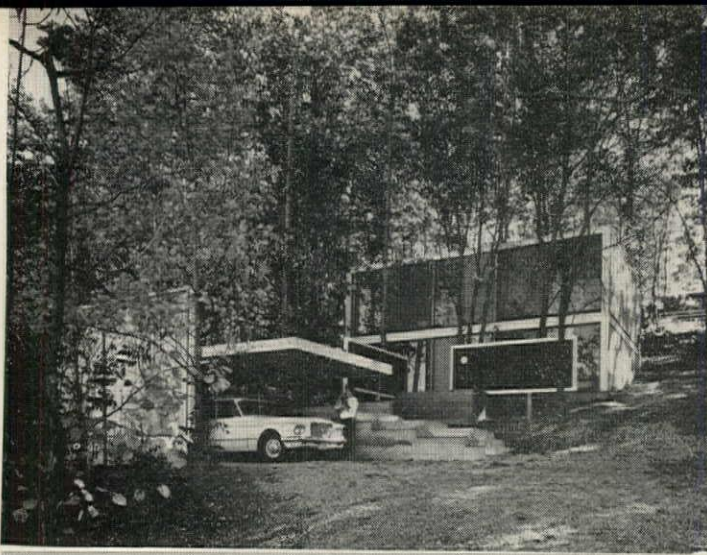


Two-story glass walls bring daylight and vistas into living room which, like dining room, far right, opens to covered porch (see also p 91).

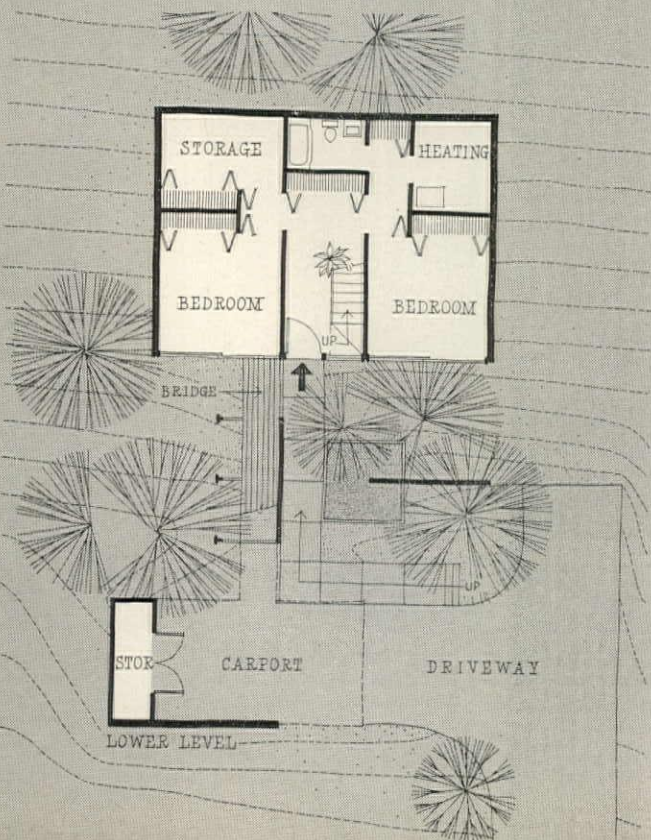
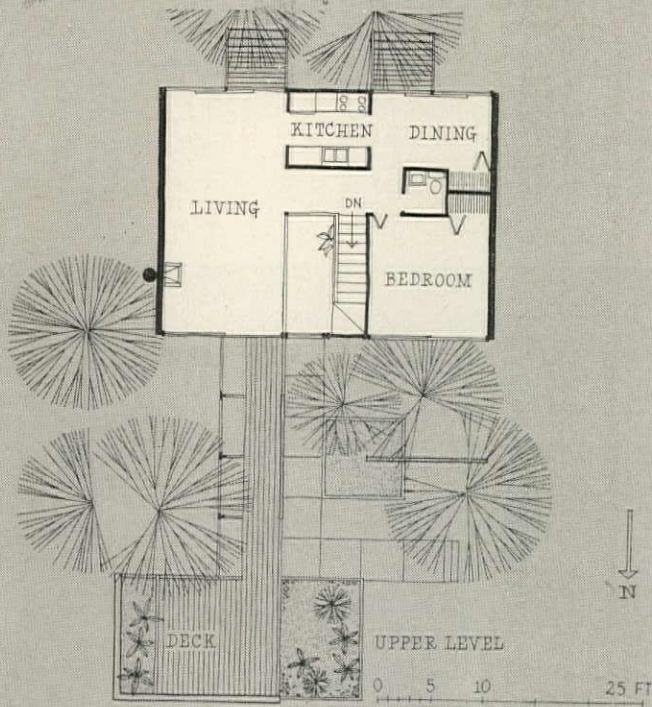
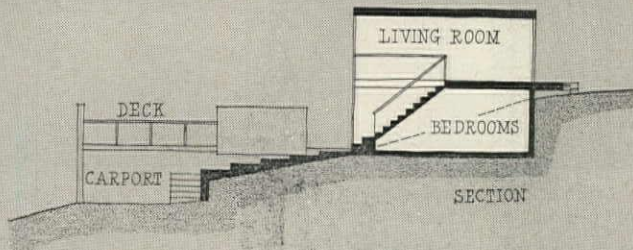


Open stairway separates living room from study which, like bedroom above it, can be closed off with accordion partition. Walls are wood-paneled.

continued



CATEGORY: *custom built*
 CLASS: *under 1,600 sq ft*
 ARCHITECTS: *Crites & McConnell*
 BUILDER: *Berger Construction Co*
 LOCATION: *Cedar Rapids, Iowa*



2. Low-cost design on by-passed land

This house was built for only \$11.05 a sq ft even though the site is so steep it had been passed over by the merchant builder who previously owned the land.

The architects set the house into the steepest and most heavily wooded part of the 50' x 150' lot. As a result, it is shaded by large trees, its glass walls face a north view, its first and second floor both open to grade, and its carport roof serves as a convenient deck for outdoor living.

Designed for clients who wanted space without frills, the handsome 1,584-sq ft house was built for \$17,500 (the lot cost \$2,600). The floor plan is a neat variation on the old center hall theme. The structural system is simple—a combination of conventional and post-&-beam framing. Conventionally stud-framed end walls are almost entirely floor-to-ceiling fixed glass and sliding glass doors. The checkerboard geometry of the house contrasts well with the natural forms of the heavily wooded hillside.

Photos: Julius Shulman

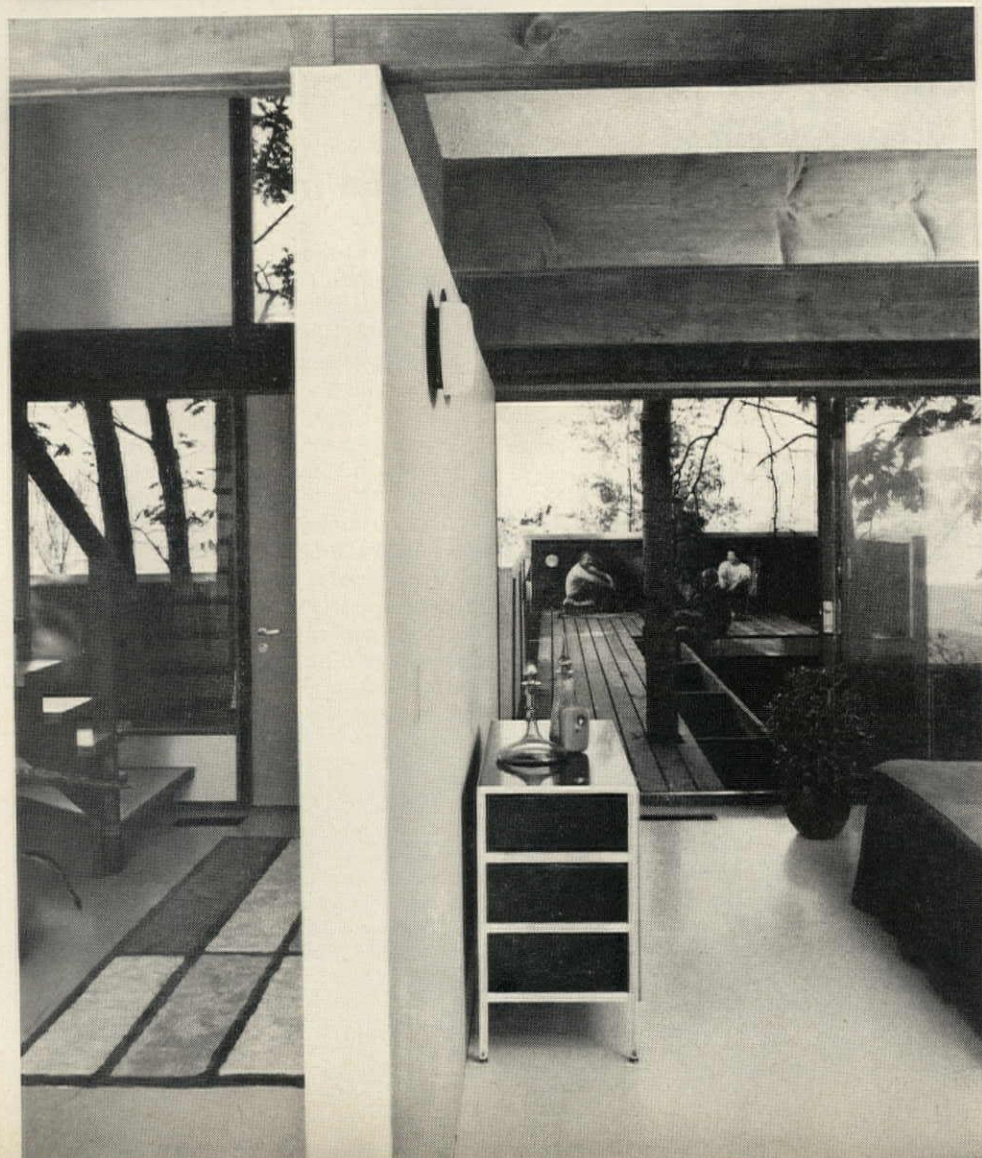


Upper floor of house opens to grade at rear. Dining room is at left, kitchen in center, living room at right. Siding is unfinished t&g cedar.

Hillside plan puts carport roof at same level as lower floor of house, so roof is used for outdoor living and connected to house by wooden walk.



Glazed west wall is a mirror held up to the landscape which softens the house's geometric lines. Freestanding panel of plastic-coated plywood separates walk to master bedroom, left, from entrance steps. A similar panel, right, screens child's room from the street.



Second-floor landing, seen here from living room, has open railing (like sliding glass doors, a possible hazard to children). Kitchen is at right center, dining room at right.

Master bedroom gains privacy from high wall of deck on carport roof. Entrance hall and stairs to upper level are at left of partition.

continued



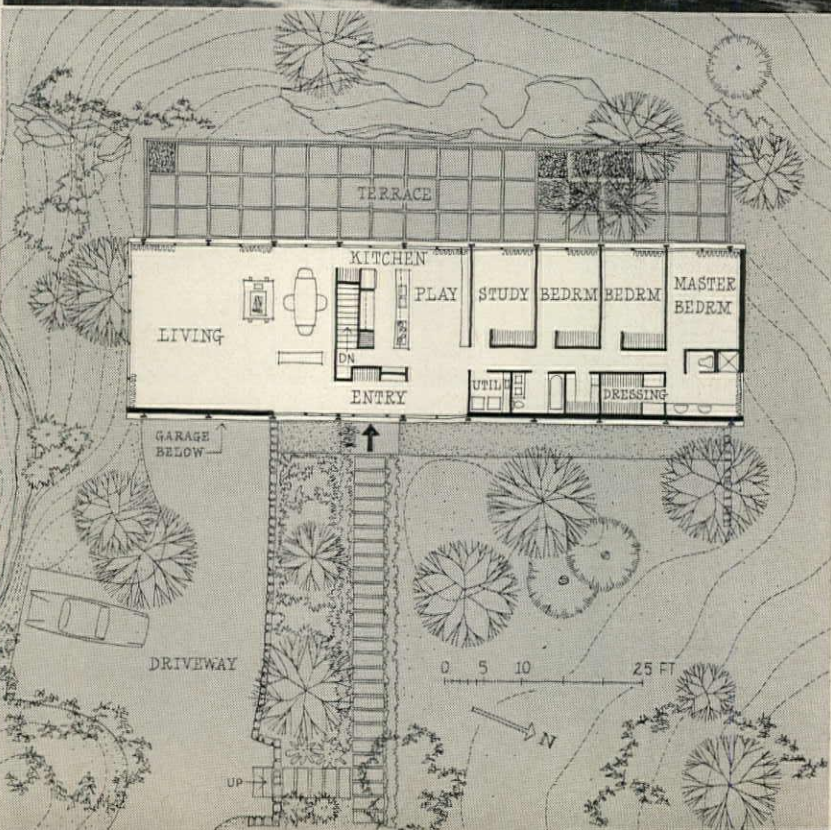
Glass doors across rear of house open every room to 90' terrace. Trees shade rooms in summer. Southwest orientation gains solar heat in winter.

3. Precision in a steel frame

Exposed steel framing, painted black, and fill-in panels of white glazed brick, laid up in Flemish bond, accent the modular design of this long (95') low house. The contrast is repeated inside with white walls, ceilings, and floors and black trim.

This is in a sense a component house very rationally assembled. Steel framing set on 10' centers to span the small bedrooms permits column-free space in the 25' x 32' living and dining area. Within this frame, prefabbed sliding glass doors enclose most of the house. The only structural use of wood is for joists on 2' centers which connect the roof beams. Despite the single-glazing, heating is no problem because warm air from a three-zone perimeter system blankets the glass.

In-line plan puts laundry, baths, and storage along closed front wall. House has 2,370 sq ft plus lower-level garage, shop, recreation room. Ends of house are cantilevered 2'6" to add space to the master bedroom and living area.



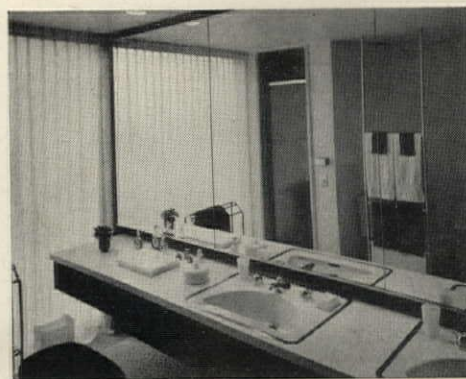
Photos: Alexandre Georges



Compact kitchen is open to informal dining area and playroom. Cabinets are teak. Floor is white, matt-finish ceramic tile in 1½" squares.



Master bedroom (like other bedrooms) opens to rear terrace. It needs no closets or bureaus because dressing room has 20 lin ft of storage.



Large master bathroom is white with black trim and cabinets. It has floor-to-ceiling glass at one end, wall-to-wall mirror, and double sink.

CATEGORY: *custom built*

CLASS: *1,600 sq ft to 2,800 sq ft*

ARCHITECT AND BUILDER: *Arthur Witthoefft*

INTERIOR DESIGNER: *Ellie Witthoefft*

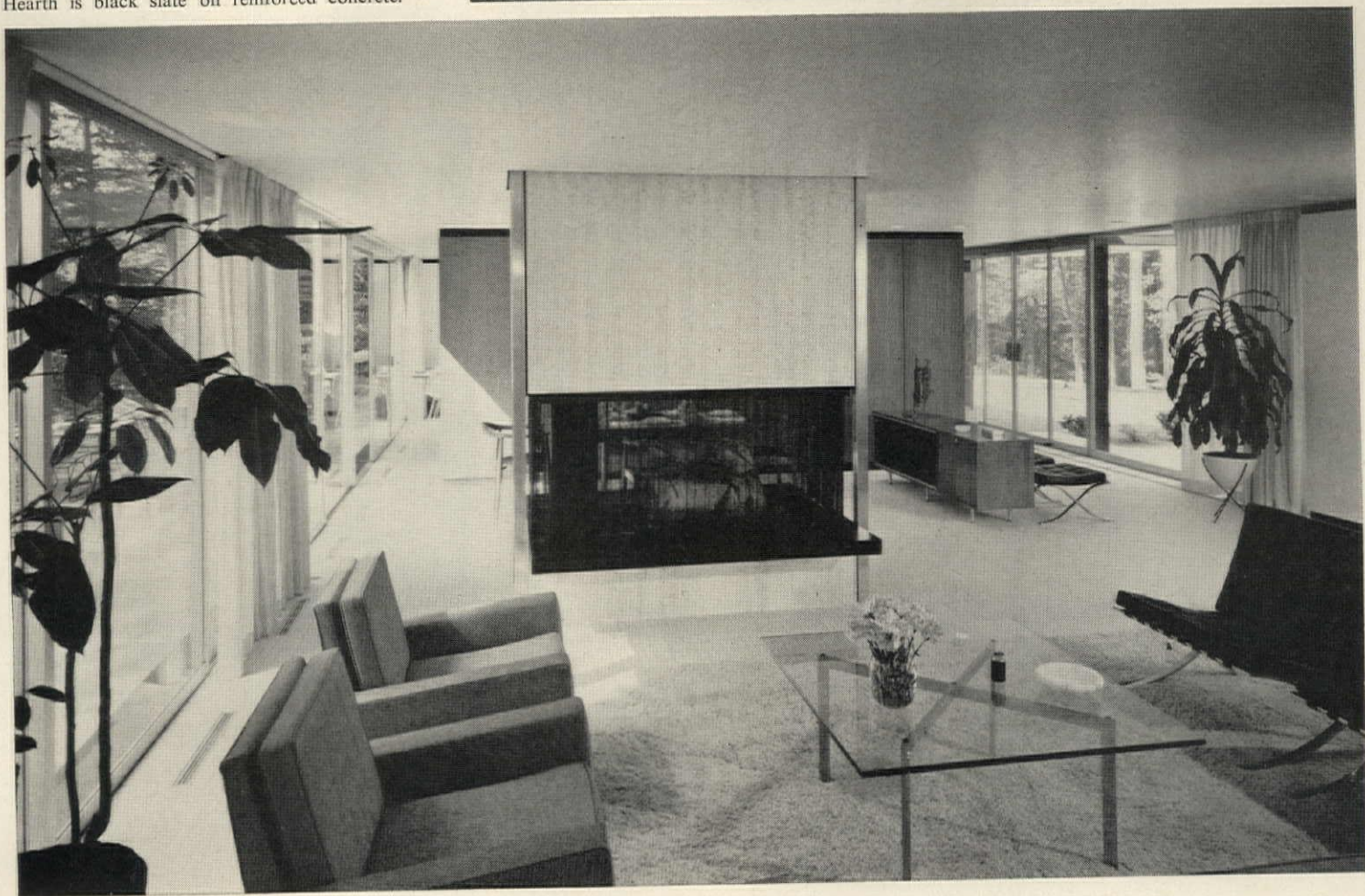
STRUCTURAL ENGINEER: *Harry Kaufman*

MECHANICAL ENGINEERS: *G. L. Smith & Assoc*

LOCATION: *Armonk, N. Y.*

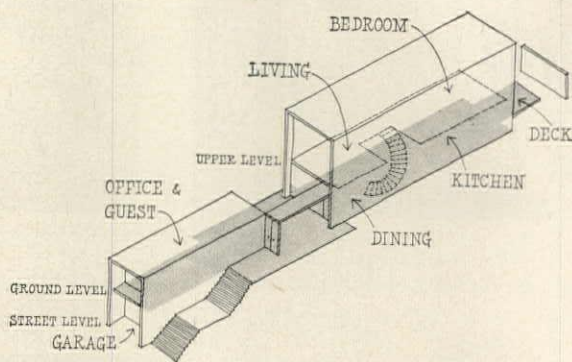
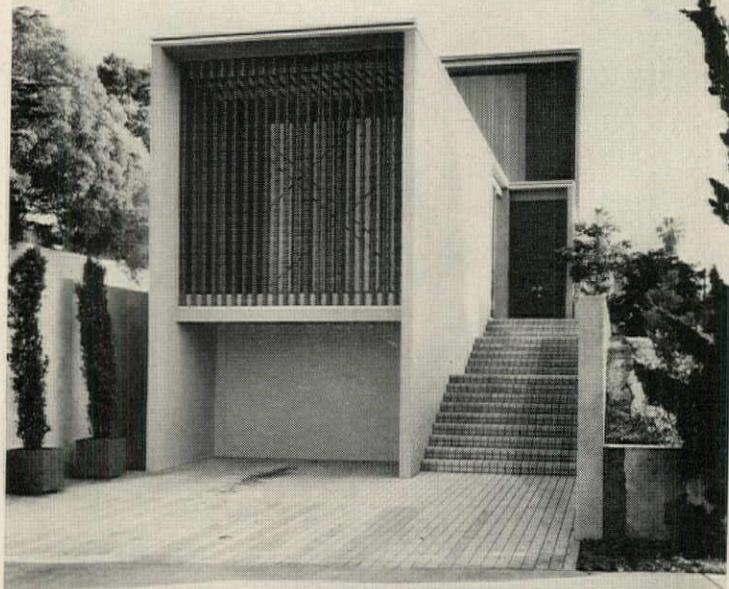


Freestanding fireplace of Travertine marble and stainless steel divides living and dining area. Hearth is black slate on reinforced concrete.



continued

CATEGORY: custom built
 CLASS: 1,600 to 2,800 sq ft
 ARCHITECT: Henry H. Hester
 BUILDER: Carl Mueller
 LOCATION: La Jolla, Calif.

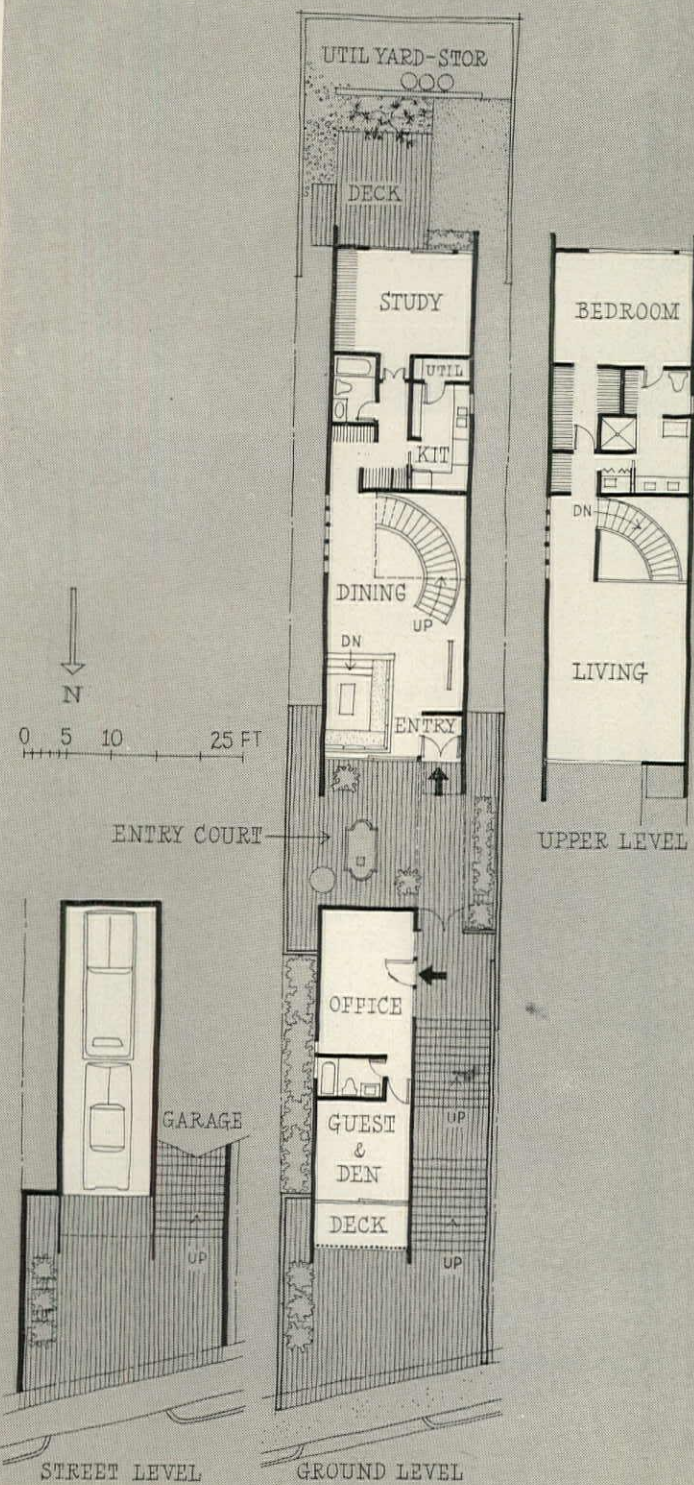


4. Three levels on a narrow lot

As the drawing above shows, the three levels of this unusual house are in two structures—one in front of the other—that are separated by an entry court (photos at right) and yet tied together by a slim roof slab.

This in-line arrangement suits the lot, which is 25' wide and 150' deep. It also suits the owner, who uses the smaller front building for guest accommodations and an office at home.

Though confined by the narrow lot, the house avoids a boxed-in feeling with its break in the middle, its glass end walls, and its extra-high ceilings—14' on the upper level, 10' on the middle level. Raising the mid-level ceiling puts the upper-level living room about 20' above the street and capitalizes on an ocean view.



Upper-level living room, seen here from stairway, has floor-to-ceiling glass facing the ocean. Below is the conversation pit off dining room.

Three-level plan puts garage, guest room, and office in 10'-wide front building and living quarters in 16'-wide building at rear.



Entry court, seen from front door (shown in photo at right), is also reached through glass doors from conversation pit and dining room.



Slender roof slab with decorative cut-out spans court from front door to main building (foreground). Walls are machine-applied plaster.



Study at rear of main building opens to patio. Floors throughout house are wood block, paneling is walnut, ceilings are textured plaster.



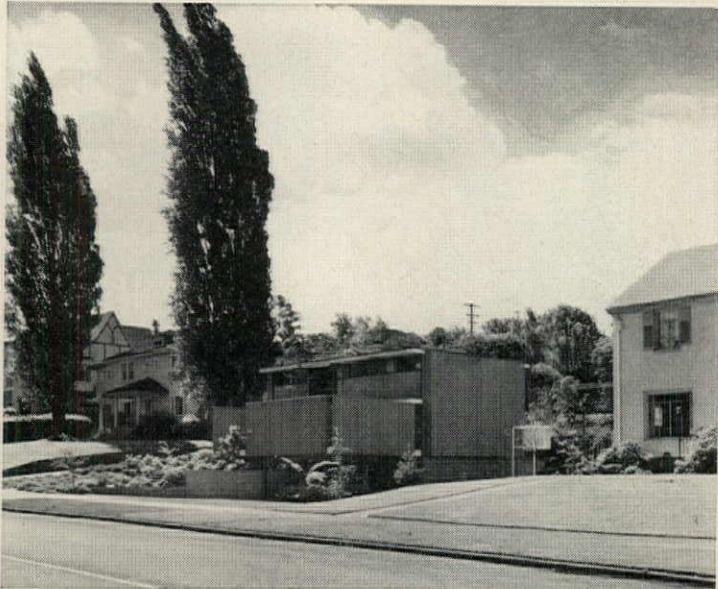
Rear patio, seen from upper-level bedroom, is enclosed by high fence, has gravel beds, simple planting, and slightly raised wood deck.

continued



High walls of redwood screen a big front deck from street and neighbors. Carport is tucked under deck. Floor-to-roof glass lets light into interior stairway shown on *p 103*.

Richards



House is set forward on its low site to provide more outdoor living space in rear. Large neighboring homes are a mixture of Colonial, English cottage, and Victorian architecture.

5. Seclusion on a suburban street

This contemporary house shows how imaginative planning—inside and out—can cope with a small and not particularly desirable site among large older homes of polyglot design.

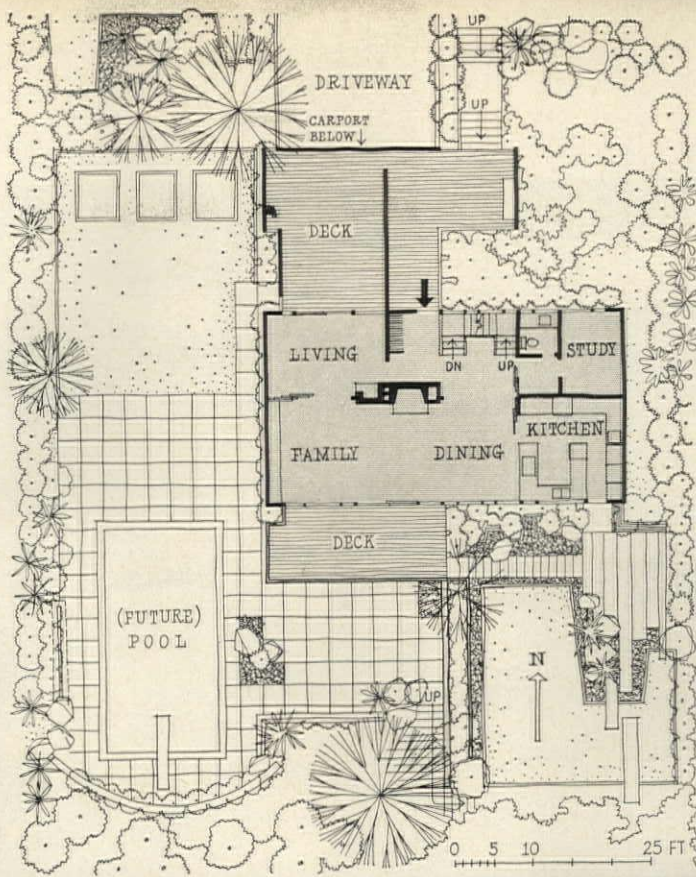
Although the lot is not large (90'x120'), although it is the lowest lot on the block, and although the street is heavily traveled, the house and its carefully planned garden are surprisingly private.

To achieve privacy, the architects oriented the main living areas to an enclosed rear garden. They also felt the house must relate to the neighborhood in bulk and placement ("although it could not possibly conform in style"). So they raised the main floor one story above grade and, incidentally, provided a partly daylighted basement. Said the AIA jurors: "Fences, inspired planting, and imaginative entrance stairs make the view from the street [left] both handsome and quiet."

CATEGORY: custom built
 CLASS: over 2,800 sq ft
 ARCHITECTS: Liddle & Jones
 BUILDER: Rushforth Construction Co
 LANDSCAPE ARCHITECT: Robert Chittock
 LOCATION: Tacoma, Wash.

Site plan provides space for future swimming pool in lowest corner of two-level rear garden (photo below) enclosed by fences and planting.

Rear of house faces south and opens every level to outdoor living—on balconies off the bedrooms, on a deck off the family room, on a paved terrace off the recreation room. Deep overhangs keep sun and rain off big sections of glass.



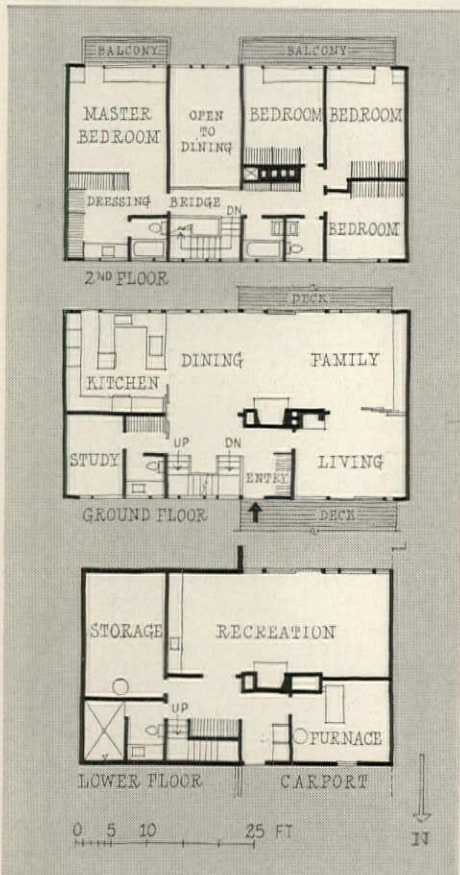
Photos: Dearborn-Massar



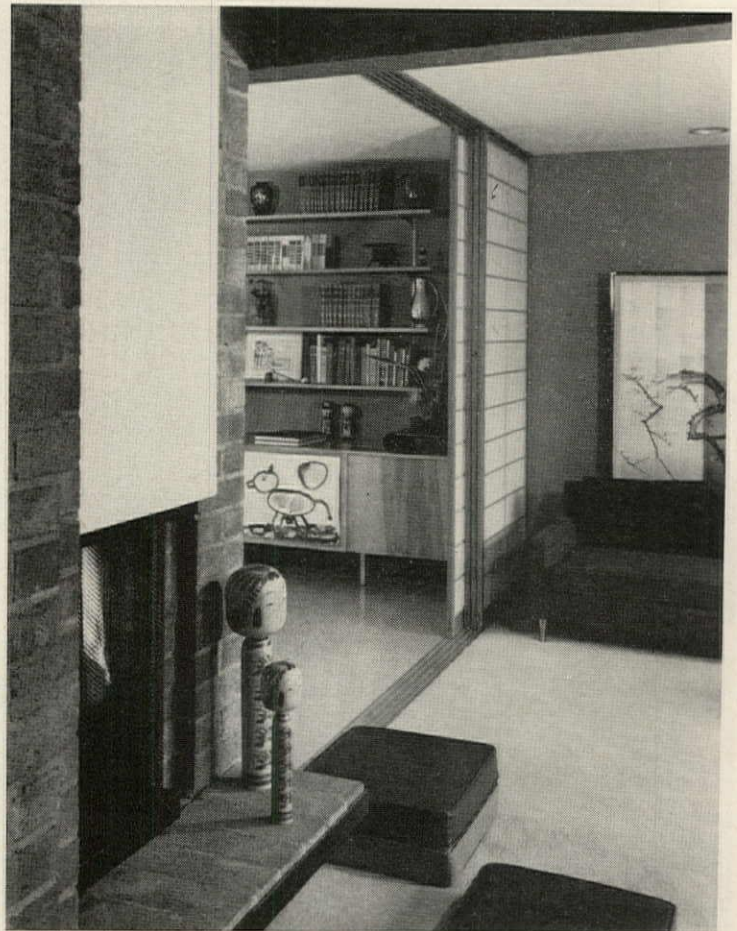
For floor plans and interior photos, see overleaf



Big family room (13'6"x23'), seen here from dining area, has shelves and cabinets along one wall. Glass doors to deck are opposite fireplace.



Three-level plan puts most of its space into informal living areas because family's activities center around children. Study is in quiet corner.



Small living room (11'x16') can be closed off from family room by sliding screen and opened to front deck by sliding glass doors.

Open stairway and open bridge between master bedroom and children's bedrooms let light into the two-story dining area. AIA jurors called detailing of the house "delicate and refined."



View from second-floor bridge shows the dining area and its two-story glass wall facing the rear garden. Dining area is 10'6"x13'6".

Dining area, viewed from front hall, can be closed off from kitchen with sliding screens. Change of ceiling height adds visual interest.





Canaveral's other boom

Project Apollo—putting men on the moon and getting them back—has been called the largest single undertaking the US has ever attempted. Its sponsor, the National Aeronautics & Space Administration, will use 5,000 firms to do the job in 17 areas throughout the country. Nowhere will the impact be greater than around Cape Canaveral in Brevard County, which has yet to recover from its Project Mercury boom.

“Ever see a whole county going into orbit?” asks the *N. Y. Times*’ columnist James Reston. “Take a look at Brevard County. It has been spinning in space ever since the rocket boys took over in 1950 and is now the fastest growing county in America.”

On the next five pages is a critical look at the Cape’s past and present booms.

When the missile project began in 1950, Brevard County, Fla. consisted of three or four small towns, some beach houses, and about 24,000 people. Then almost overnight all Florida roads led to Canaveral as Air Force personnel, technicians, construction workers, and commercial opportunists swarmed in. Boom No. 1 was under way. As new workers and their families poured in, "People moved into dog houses and cattle sheds," recalls one real estate man. "There was no place else to live. When we had houses, we didn't have to sell them. We just signed up the first people who came along." By 1960 the county's population had expanded some 371%.

Canaveral was not only the biggest growth area of the last decade, but also its biggest mess. All the planning was directed toward the ultimate moon colony; none toward the earth colony around the launching pads. The term "suburban sprawl" might very well have been invented here, for large and small subdivisions hop-skip-and-jumped all over the county.

To make matters worse there was no zoning ordinance, building code, or building inspection until 1958 in the unincorporated section of the county where much development took place. Developers could do pretty much what they wanted, and they laid out their streets on old-fashioned gridiron plans because this was the easiest and fastest way to do it. Much of the county was spoiled by poor subdivision layout and lack of zoning. "In some areas big and little houses alternate," says Col Paul Siebeneichen, NASA's community planner whose duties include worrying about future housing. "A shack hardly worth \$2.50 is right next to a big house, and this is a crime."

The absence of all controls rubbed off on homeowners too. Properties were poorly maintained. It became commonplace to see automobiles junked and abandoned in front yards. In some neighborhoods deterioration set in early.

At first housing developed slowly because builders had trouble getting financing. "The big problem in our first boom was to convince insurance companies that the housing need would be permanent," says Financier Burton Smith. "It took NASA to convince them that it was here to stay."

When builders did get financing, lending institutions paid too little attention to planning and construction. "A lot of the houses FHA is repossessing today (see p 109), are just shoddy, li'l, old houses," says one house salesman. "Builders used hill pine instead of the treated redwood we use now. What those poor builders did is still fouling up the good builders today." Inspection of buyers' credit was not very good either, as witness today's flood of foreclosurers. And, of course, some families should have rented and not bought.

Worse than the housing were Canaveral's trailer camps. State of Florida officials and Chambers of Commerce still cringe at the word "trailers." Some of the worst camps in the State were built in Brevard County. But trailers were the only solution for thousands of construction men who built the dozens of new buildings at Patrick Air Force Base, the huge rocket installations at the Cape, and the motels, stores, and houses that were needed. There were trailers in almost every woods, vacant lot, and backyard. They were crowded together along dirt roads often with no power, water, or sanitation facilities. At one time, there were 23,000 people living in trailers.

In the absence of county zoning, the confusion spread along the highways. The free enterprise system was so free a man could build almost anywhere. Along the roads there sprang up motels, restaurants, bars, honky-tonk strip joints, and the dozens of service stores that quickly move into a boom area. Automobile junk yards were put next to flourishing commercial properties. And everywhere there were roadside signs, enormous, garishly colored, and brightly lighted at night.

The roads themselves were equally congested. Each morning the thousand of workers headed for the air base and missile sites all met by appointment on a narrow two-lane causeway leading to the outer island. Throughout the day commuters waited at a dozen bottle necks, made still more congested by families using the same narrow roads to get to the beaches. And every after-

Boom I: "Biggest mess ever seen"



Gridiron streets: rape of virgin land



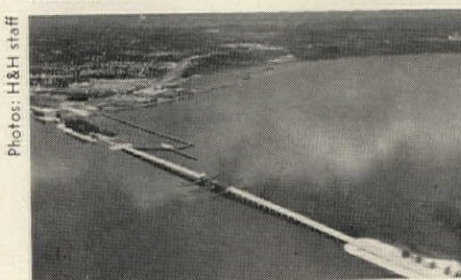
Rundown houses: front yards or junk yards?



Shoddy trailer camps: fit for dogs or people?



Roadside chaos: uncontrolled commercialism



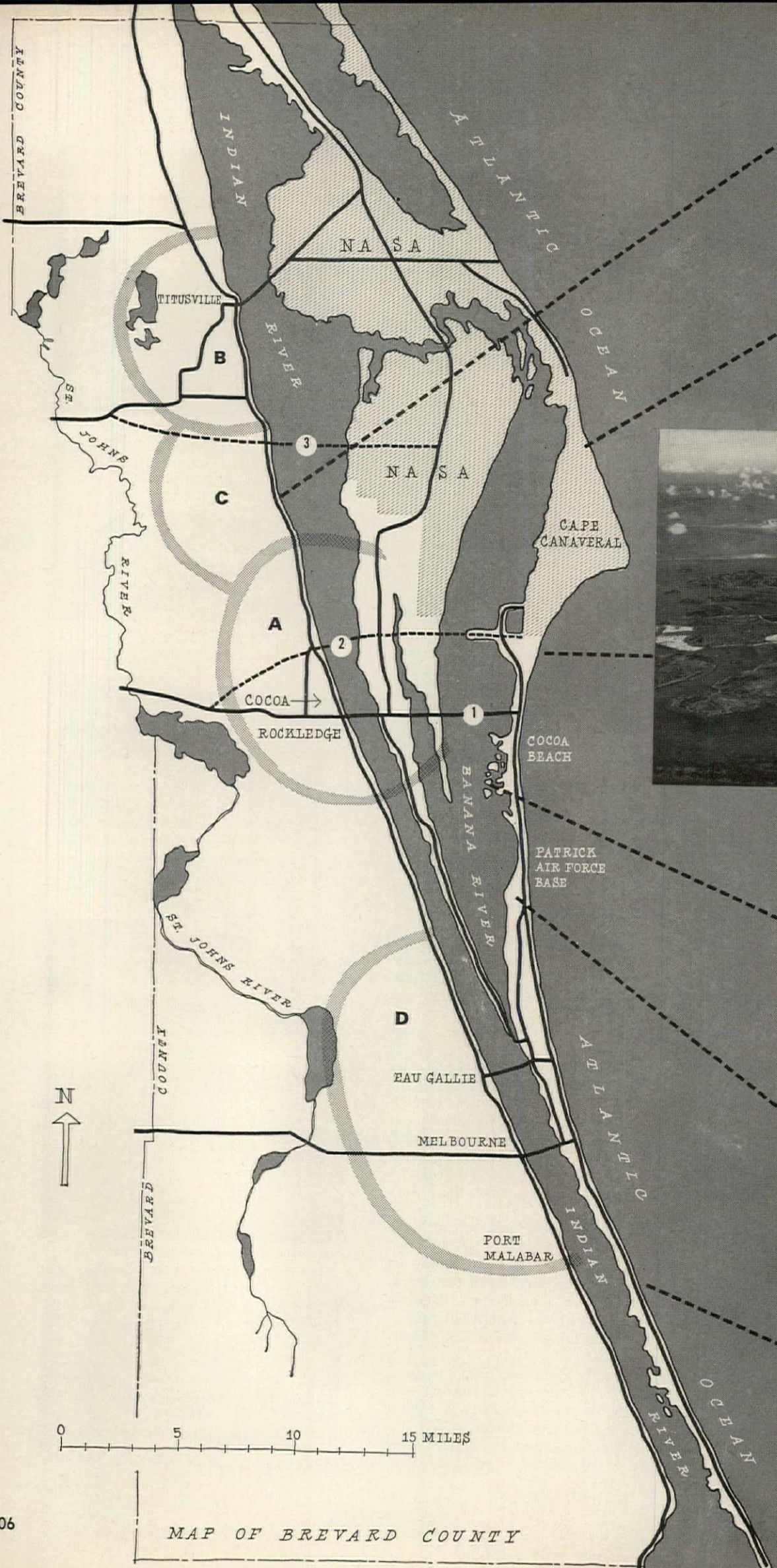
Narrow bridges: bottlenecks for 27,000 cars



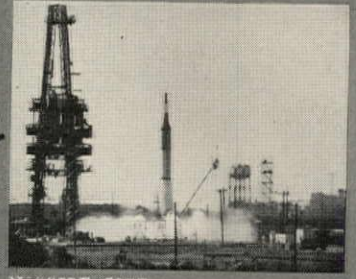
Congested roads: bumper-to-bumper frustration

Photos: H&H staff

Lynn Pelham, LIFE



ROUTE US 1



MISSILE SITE



AIR VIEW NORTH



MAN-MADE LAND



PATRICK AIR FORCE BASE



BROAD BEACHES EVERYWHERE

noon, as the traffic direction reversed, cars and trucks backed up for miles at the same bottle necks. Boom No. 1, according to a real estate broker who lived through it, "was the biggest mess I've ever seen."

In fairness it must be said that Canaveral's disorder, bad as it was, was no worse than in many other boom towns. The sad thing here was that this community was a favored child of the federal government which, presumably, is the fountain head of good planning. Yet at Canaveral the government did little or nothing to plan for the boom it had created.

Builders are go

Today, in a lull between two booms, Canaveral is contemplating the messy aftermath of the first and bracing itself for the second.

Having lived through hundreds of missile launchings and two astronauts' round-the-world flights, people living at the Cape are now almost excitement-proof. With project Apollo under way, they know they are in for even greater expansion than before. But they take the approaching boom in stride.

Today's real estate and building activity takes place quietly behind closed doors as brokers, developers, and entrepreneurs buy and sell choice land or jockey for position. Results are announced daily on front pages of local newspapers: "Dream City Site Purchased," "Cocoa Beach Skyline Headed Upwards," "Council Clears Way for New Apartments," "New City Maps Master Plan."

Calm as the natives may be, a visitor to the Cape is immediately impressed by the boom in the making. Motels are full, restaurants crowded, commercial construction is going on everywhere. The narrow causeway linking Cocoa to Cocoa Beach (the main road to the missile sites) carries some 27,000 cars a day. The demand for new houses is building up.

But, the actual building of houses is for the moment slow, as it has been for a year or so in all of Florida. Behind this inactivity lies the over-building of recent years and the fact that personnel presently assigned to the missile project and to the air base found houses two or three years ago. When 1,000 Capehart housing units were built near the air base several years ago military families moved in and created vacancies elsewhere. While newcomers continue to arrive to work at new shopping centers, motels, and dozens of other commercial establishments, they are spread so thinly over the county that they still have not taken up all the housing slack. "Permanent housing is in ample supply," says NASA's Col Siebeneichen. "In early June there were 1,062 houses for sale or rent." However many of these are of the wrong size, the wrong price, or in the wrong place to fit tastes and pocketbooks.

Of the 140 homebuilders in the county, the biggest three or four builders are producing only 100 houses a year each, and it is clear that with respect to housing activity the Cape is not like Phoenix or Los Angeles.

Land supply is go

Unlike other boom areas where good land is scarce, in Brevard County only 12% of the land is occupied. There are well over 5,000 vacant lots in incomplete subdivisions and huge pieces of untouched land. But many of the best tracts have been bought or optioned by big developers who are waiting for Boom II to develop. Burton Smith's group owns more than 3,000 acres, Dryden Jones and Bill Deutsch have well over 1,000, Canaveral-Princeton has 3,000, Shuford Mills has over 800, the Wuesthoff Co of Minneapolis now owns Sun Valley's 2,000 acres, the Magnassen interests are reported to hold some 2,000 acres, members of the Reynolds (aluminum) family own 900 acres, and General Development has 4,000 acres in Port Malibar.

Of the several factors that make for desirable land, proximity to water is the most important. "People who come down here want to be as close to the water as they can get," says Realtor Hugh Snyder. "They want to be near the beach or on a waterway.

Developers can't make new-water-front lots fast enough, for people buy on these fingers of land from blueprints."

Highest price residential land is in Cocoa Beach, on the west side facing the inland waterway. Here developers are creating water-front lots by pumping up sand (photo left) around lagoons. Choice lots 85'x120' sell for \$80 a front foot or around \$7,000; inside lots bring \$55 a foot.

At first glance there seem to be hundreds of acres of under-water land, but this is a delusion. A builder cannot buy off-shore land unless he owns the adjoining land, and he has to get approval of local and state officials to create the new land. This is not easy. He also may have to build expensive causeways and bulkheads. This off-shore property is priced at around \$500 an acre, but developers must spend \$1,500 per lot pumping sand to raise the grade 7' to 8' above water level.

Beach property is scarce because the various government operations have occupied much of the best of it. Moreover, the beach itself, south of the missile bases, is public, and its hard sandy stretches are open to cars. There is still some desirable land near the beaches on the thin strip of peninsula running south of the air base (map opposite) but it commands \$4,000 to \$5,500 an acre. It is already dotted with dozens of small subdivisions, and within a few years it will be solid houses and apartments.

Underwater Florida land has been the subject of many a joke about stupid out-of-towner buyers. But it is no longer a joke; some of the best buys today are low, marshy ground. It is just a question of drainage and perhaps fill. If a developer knows what he is doing he comes out all right. Some under-water land between Cocoa and the beach sold recently for \$5,000 an acre.

Best locations on the mainland are those relatively near the existing and proposed causeways. Eventually the thousands of new workers for NASA will have a choice of three routes to get to the Cape: the existing public causeway (No. 1 on map opposite), a public causeway now under construction (No. 2) to be finished by Jan 1964, and a proposed causeway (No. 3) to be finished in Jan 1965 and reserved for NASA and other official personnel.

There also is a vast amount of buildable land to the west of the Indian River, but much of it needs water, sewers, utilities, flood control, and other improvements.

The highest priced commercial property is in Cocoa Beach along route A1A, which runs north and south along the outer beach. Land in "motel row" that had sold for \$190 per front foot a short time ago is now priced beyond \$800. One lot in Avon-by-the-Sea suitable for a small apartment was sold at \$9,000 six months ago. It resold for \$12,500, sold again for \$19,000, and the present owner has turned down \$33,000 for it.

Impact area is go

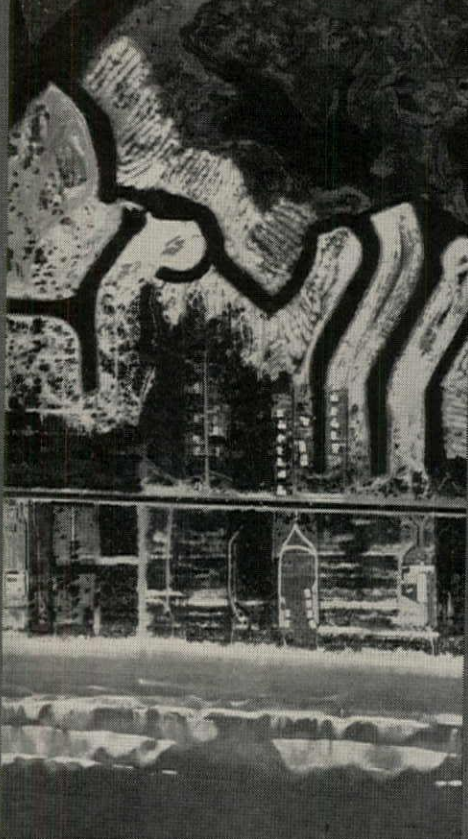
When the second boom comes, County Zoning Director O. D. Peavy, who has watched the area grow for a number of years, believes that future growth will occur first in the four areas circled on the map, opposite. The first (marked A) is in the Cocoa-Rockledge area, including part of Merritt Island just south of the government-owned land. The next causeway to be completed will cut across this area.

The second area (B) is around Titusville. It will grow because, NASA's expanding construction and permanent staffs can drive north over existing roads and an existing causeway. NASA's projected private causeway will further stimulate this area.

The third area (C), lying between these two, has some excellent high land. Several developers have bought large parcels here. General Development's Port St John is here, as well as Sun Valley. The private NASA causeway will lead to this property.

The fourth area (D) is at the south. At its upper limit it includes Princeton-Canaveral's 3,000 acres and the Magnassen property. At the lower end it reaches General Development's Port Malibar which is considered to have the best land planning and community facilities in the entire county (photos next page). This is farther from NASA's operations than almost any other big subdivision, but as roads to the south are widened and traffic conditions improve, the area will grow.

continued

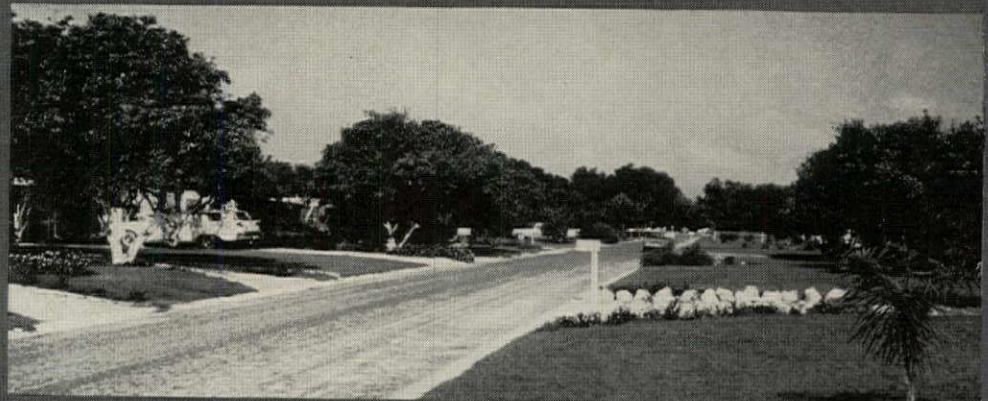


Sterling's



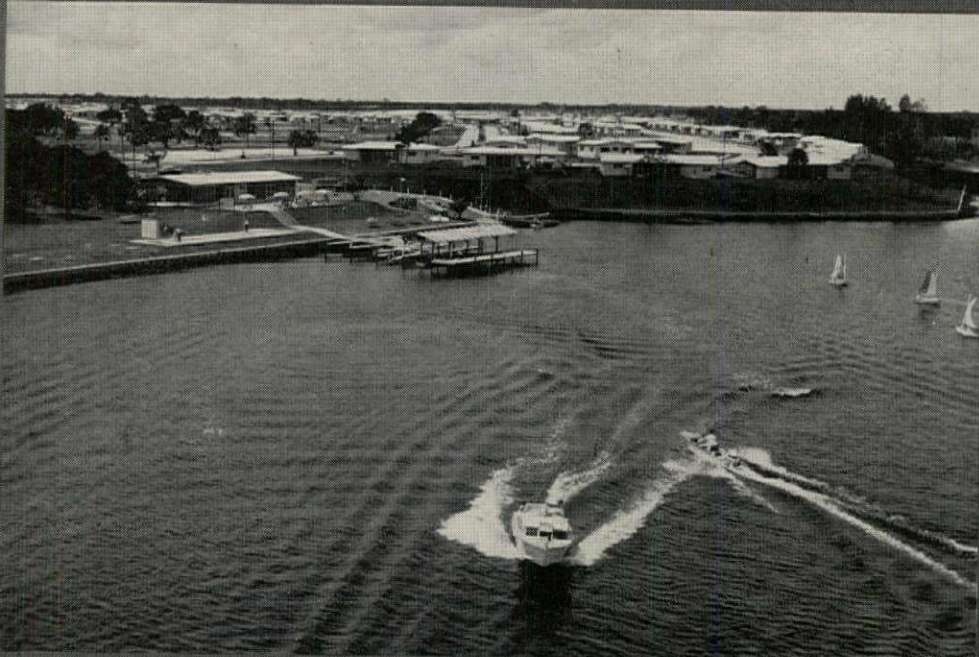
Well-planned subdivision, surrounded by orange trees, is located south of NASA on Merritt Island.

Under-water land is converted to deluxe site.



Landscaped trailer community has permanent streets, good sanitation, and each family owns its lot.

Boom II: better planning, better housing, more amenities



William M. Spire

Yacht club, community parks, good planning, and schools are among attractions at Port Malabar.



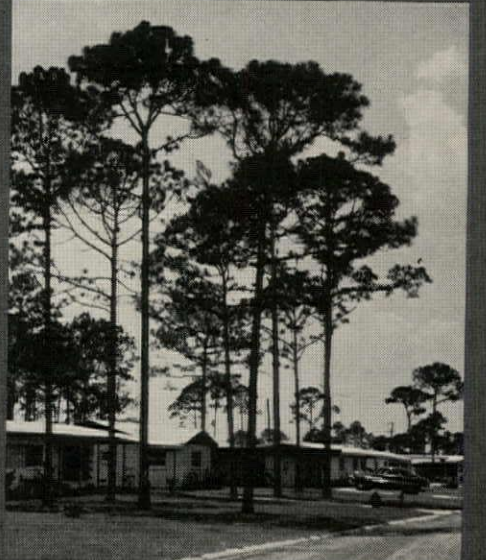
\$24,990 house typifies Port Malabar's new models.



\$16,500 house is part of Vetter Isles Estates.



Pleasant street of \$14,000 to \$16,000 houses in Pine Ridge was developed by the Trafford Realty Co.



Silver Pine Estate houses sell from \$13,470 up.

Count down for Boom II

It is fortunate that Canaveral has room for expansion, for expand it must—and soon. The count-down for Boom II, the Apollo boom, is already under way. It is measured not in seconds but in months and in thousands of people.

There are now some 2,300 construction men working for NASA, the Air Force, and major contractors. By next June 30 this number will grow to 14,000, and then taper off slightly to 13,000 a year later, and gradually drop to 7,500 by June 1967.

Providing housing for these men will be a great problem. Construction men sometimes come alone, sometimes bring their families, and no one knows for sure just how many of each type there will be. Many will have little if any money for down payments on houses. Few can qualify for a mortgage under FHA, although some can qualify at savings & loans. Says Earl Gray, president of Cocoa's First Federal S&L: "We will make loans to some construction men even though we recognize there is a big turnover among them. The risk we take is that no one will want to move in if the first family moves out. I don't believe that will happen."

Another solution to the problem of housing construction workers is the 200 to 300 repossessed houses FHA now owns in the Eau Gallie area. Says Realtor James Pruitt, who sells them for FHA: "Construction men can qualify for these houses. Lowest prices are \$8,100, and the top is \$13,600. Buyers can save from \$1,000 to \$1,500 by buying these houses, and we can close them in about one-third the time of the usual FHA sale."

Local planners believe that many construction men will either bring trailers or buy them after they arrive. No one in authority particularly likes trailers, but what other housing solution is there? There are neither motels, rooming houses, nor apartments to take care of the influx. "Within the next 12 to 24 months," says the Air Force's Lt Col Clifton McClelland, "we anticipate a critical shortage of rental housing caused by construction workers."

In the next five years permanent NASA, Department of Defense, and suppliers' personnel will grow some 14,000. About 4,000 of the new people will be at work by next mid-summer. Many will prefer to rent an apartment, if they can find one, while they look for a house. So FHA has approved between 1,000 and 1,200 apartments of which only a few hundred are now built.

The permanent families are far less of a problem to government officials and planners than the construction workers. "There will be housing available which we judge is adequate," says one NASA housing expert, "but it may not all be in locations that people want. If a shortage develops, we are in a position to ask for fast action, as the liaison is very close between NASA and FHA."

Will the price be right?

Biggest single problem of builders moving to Florida in recent years has been to get their house prices geared to local incomes. Wages in Florida are less than in northern states. Most builders working at the Cape are Florida builders and know what incomes are, but even they are inclined to over-estimate the salaries of NASA employees. "These are going to be civil service workers," Col Siebeneichen says, "and average wages will be around \$7,000. As the numbers go up, we will get more administrative people rather than technical people, so the proportion earning under \$7,000 will rise. We'll have a lot more indians than chiefs. The big market for housing will be between \$12,000 and \$20,000."

Along with the civil service personnel will be hundreds of men and women running the commercial establishments, as well as the higher paid men representing North American, Lockheed, Boeing, RCA, and other NASA suppliers. There will clearly be a demand for many houses above \$20,000, but no one will know how many until two or three years from now.

Will there be more overbuilding?

FHA's biggest headache since the 608 scandal has been its repossession of thousands of Florida houses (H&H News, Aug). Aided and abetted by FHA and the lenders, Florida builders in the

past obviously overbuilt. In Brevard County there have been less than 300 repossessions, nearly all \$10,000 to \$12,000 houses in three subdivisions in Eau Gallie. Realtor James Pruitt, who is selling the houses, believes they will be cleared up by year end. In the future there will be fewer walk-away owners, because the market for lower-priced houses will pick up. And who will walk away if he can sell?

But FHA's Tampa office, which controls Brevard County, has many more repossessions in other mid-Florida cities and is still scared. It clamped down on Brevard builders, even though Brevard was not one of the real problem counties. FHA is not letting builders go ahead on a speculative basis; there must be a customer whose credit has been approved before a builder can even start his house. As repossessions are cleared up and as a need for houses is demonstrated, FHA will probably relax its tough rules near the Cape. But FHA's conservatism may help prevent the kind of overbuilding that has nearly always followed a boom in other defense or missile-making areas.

Will Boom II also be Mess II?

Last fall NASA administrator James Webb hired Housing Expert Carrol Towne away from the Atomic Energy Commission. A veteran of 30 years of shortages, booms, overbuilding, and other housing crises with the federal government, he is now working closely with HHFA, FHA, the Air Force, and other people on Canaveral's housing problems. (He also handles housing in other NASA areas: Las Vegas, Houston (see News), New Orleans, and Huntsville, Ala.) "We are going to try, for once in our lives, to do a coordinated job," says Towne. "We have a task force at work with a lot of good people on it. I have great hopes that local planners will stay ahead of the job."

FHA is also optimistic. According to Carter McFarland, who represents FHA on the NASA Committee: "Good planning is the master ingredient that is needed, and that is taking place. The issue is not just is there enough housing for the permanent people (I think there will be); the main problem is one of orderly growth. There won't be a crisis here, as in some World War 2 boom areas. The big challenge is between mediocrity and excellence."

Another potential mess is the trailer situation, but County Zoning Director Peavy has the benefit of his first-hand experience in this field. "The 1957 boom was bad," he says, "because of poor trailer camps, narrow lots, lack of paved streets, and other facilities. Now we have standards and methods for compliance. I'm not worried about the old trailer parks. They are substandard—we know it and they know it. Competition will force them to improve. The standards for trailer living must be the same as for any single-family houses. Lots should be 75'x100', as at Coquina Ridge (photo opposite). These lots sold originally for \$1,200; now they bring \$1,800 and will go to \$2,400 later. Our biggest accomplishment in the last few years has been understanding our county problems and knowing where to go with them."

Most encouraging is the fact that several of the new land developers are bringing good land planners with them. Dryden Jones and Bill Deutsch who are buying a large piece of waterfront land in Cocoa Beach from Burton Smith and who also have 800 acres in Rock Ledge, are using Planner Charles Clayton of Harland Bartholomew's Atlanta office. Other big developers will also have well-planned subdivisions: The 800 acres of Shuford Mills Inc will have a diversified community of houses, apartments, and motels for a reported 50,000 people. Burton Smith has almost 2,700 acres at the north end of Lake Poinsett which is to be well planned. These developers will set a standard that others must follow to sell their houses.

Finally, Brevard County is not alone in facing its problems. It is part of a six-county organization that is getting HHFA financial support for planning research and a master plan.

It's not every boom town that has a second chance to plan and control its development. Canaveral does, and hopefully it will make the most of it before 1970 when it expects to start developing the moon.

—CARL NORCROSS

Final results of Project TAMAP—NAHB's nail-by-nail study of a single house—are due in December. But even this preview makes it clear that industrial engineers can show builders a new and highly profitable approach to an old problem:

How to save at the site

Some of the cost-saving methods on the following pages are startling because they are unorthodox. Others are equally startling because, to many builders, they will seem so obvious. But all the methods emphasize the key result of Project TAMAP: Even an efficient builder can profit enormously by scrutinizing every method, material, tool, and technique in his operation.

In this case, the efficient builder is Bob Schmitt of Berea, Ohio. Schmitt, in fact, is so efficient that even before his standard \$16,700 model (photo and plan opposite) was chosen for study by a team of industrial engineers, he was selling it for \$1,200 under its mortgage-appraised value.

TAMAP has recorded every step in Builder Schmitt's construction of two basically identical study houses. Problems were identified during construction of the first house. Solutions were then tested in the construction of the second house. Final results—a step-by-step cost comparison between the two study houses—will be presented at the NAHB convention in December.

The study has already proved there is "fat" in almost every cost element of homebuilding—"fat" that can be identified and trimmed off by specialists like the TAMAP engineers. Says Schmitt: "It was quite a jolt to have the study engineers, most of whom had no experience in homebuilding, spot 219 problems that we didn't even know existed. They put a dollar sign on things we thought we were doing efficiently—a dollar sign that said we were throwing money away.

"But it really set me on my ear when I found that the first study house, which is one of my standard models, had been built in 300 man-hours less than I normally budgeted for it. And, of course, this was before we had made any changes in methods, tools, materials, engineering, or design. It was obvious that at least half of the 300 man-hours were saved by better management and supervision. The work on the study house was better planned by the foremen, and the labor was better supervised—both by the foremen and by the work-study analysts who exerted a mild form of supervision simply by watching each man do his job."

TAMAP showed Schmitt he could cut his costs most by radically changing the way he managed his men

"Even when my business was quite small," recalls Schmitt, "I knew how important it was to have good management at all levels. But TAMAP showed me that I needed to give my men even more chance to be independent and creative in their jobs. And it also showed me some new and refined ways to motivate both my supervisors and the men on my work crews."

So Schmitt has reorganized his operation and improved his management in six ways.

First: General Superintendent Ed Gustavus has been given overall responsibility for all construction. Foremen and crew chiefs now report to him rather than to Schmitt.

Second: Each foreman has been given full authority to run one step of the operation (ie: foundations and slabs, framing, dry-wall, etc). Men on the crews sense this change and take problems to their supervisors instead of to Schmitt. And the foremen have better control—they have become managers. For example: George

Cottingham, foreman of site preparation and slabs, now manages 15 to 20 men as easily as he used to manage seven. He plans his work ahead and assigns responsibility, so he no longer needs to work with the crew to get a job done.

Third: Each foreman now breaks his operation into smaller work areas which are assigned to specialized crews. Men on these subcrews take pride in their work because job responsibility has been specifically delegated to them.

Fourth: Foremen have been freed of purchasing responsibilities—and can thus concentrate on training, supervision, and scheduling—because Schmitt has set up a separate purchasing and pre-fabricating corporation.

Fifth: Weekly staff meetings have been organized for foremen, crew chiefs, engineers, and purchasing agents. Says Superintendent Gustavus, who runs the evening meetings: "These 'brainstorming' sessions develop all sorts of solutions and new ideas that benefit the whole organization. Everybody has a chance to gripe about everything that's bothering him and, because the whole staff [except Schmitt] is there, the interrelationship of problems can be brought out." A report of each meeting goes to supervisors, staff people, and Schmitt the next day.

Sixth: A formal suggestion system has been set up. Its purpose is two-fold: to improve methods and to develop "esprit" by seeing that men who submit ideas get recognition for them. Says Gustavus: "Between the suggestion system and the weekly brainstorming sessions, we have come up with more new ideas and changes than the TAMAP engineers suggested in their original analysis."

Most noticeable result of these six management changes is the attitude of Schmitt's workers. Almost every man, down to the least helper, seems to feel a strong interest, purpose, and identification with his job. Each man seems to realize that his year-round employment is the result of Schmitt's efficiency—and that anything making it possible to build better houses for less money will make his own job more secure. This attitude is so strong that anyone who doesn't pull his own weight on the job is ostracized by the rest of his crew and rarely stays with the organization.

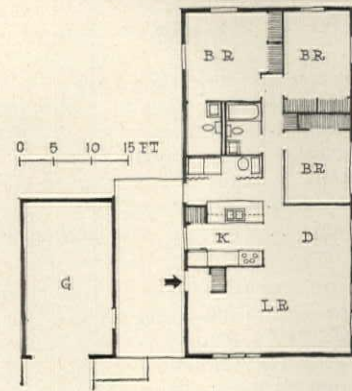
What do the six management changes mean in dollars and cents? Says Schmitt: "It looks as if improvements in supervision

What is TAMAP?

The name: stands for Time And Methods Analysis Program.

The purpose: to reduce homebuilding costs by 1) recording every step in the construction of a standard house (study house No. 1), 2) identifying problems, 3) proposing solutions with new methods and materials to reduce costs, 4) testing the solutions in a basically identical house (study house No. 2) and recording every step, 5) comparing costs between study house No. 1 and study house No. 2.

The sponsors: National Association of Homebuilders, The Stanley Works (a building products manufacturer) of New Britain, Conn., and Builder Robert Schmitt of Berea, Ohio.

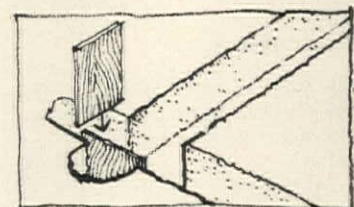


70 cost-cutters from TAMAP'S study

Tabulated below and on the following pages are the most significant cost-cutting ideas revealed by the TAMAP study of Bob Schmitt's house (above). Savings are based on preliminary estimates of costs with labor figured at \$3 an hour. Of course, some of these ideas might not make sense for builders in other parts of the country because of differences in materials costs, labor rates, climates, and local practices and prejudices. But all of them are examples of what the industrial-engineering approach can do for homebuilding.

Footings

- Footings had far greater load-bearing capacity than was required by design or code.



Solution: Footing thickness was reduced from 8" to 6" on the basis of soil-bearing test results presented to local building authorities. Also, sloped ends of footing trenches, where trencher changes direction, are now plugged with scrap plywood to prevent waste of concrete. Savings **\$66.25**

- Laborer with shovel had to follow trencher to keep dirt "crumbs" from falling into footing trench.

Solution: Trencher was fitted with plow to push crumbs aside, so one man can trench without a helper. Savings **\$5.35**

Foundation

- One man carried foundation blocks from a pallet all around the perimeter of the foundation. Since this was a two-at-a-time-

alone will save close to \$1,000 on the second TAMAP house. We can't match these savings in normal production because there is always more lost-motion on a group of houses than on a single house. But we are reducing costs on all houses significantly."

Schmitt's second biggest opportunity for savings is in reducing the cost of his materials

"On the first study house we got the feeling that the men were so indoctrinated with the idea of saving time that they ignored materials costs," says TAMAP Project Manager James Shequine (chief engineer of Stanley Works Construction Research Department). "But the fact is that materials and products accounted for 80% of the cost of the house. So this is where we found it easiest to make big savings."

Schmitt agrees: "We expect materials savings to run between \$700 and \$1,000 on the second house." For example: A saving of \$163 (or 19%) is anticipated in the materials used for foundations, slabs, drives, and paths.

Materials costs are being cut because of a major management move by Schmitt and because of changes suggested by TAMAP's engineers.

Schmitt has organized a separate corporation to buy all his materials and to prefabricate exterior wall sections, gable ends, and trusses. The new corporation—called JALFCO (James Land Development Co, Fabricating Div)—can buy many products for less than Schmitt's other companies could buy them because it is set up as a manufacturing company.

JALFCO has tightened cost control because all purchasing is now centralized. It has reduced waste because stock control is now centralized and because less cutting is done on the site (most framing is shop-fabricated). It has eliminated on-site delays due to unexpected materials shortages because specific employees have been made responsible for deliveries. And it has reduced the initial cost of many materials because all buying is now handled by purchasing specialists who shop around for the best price.

The principal changes suggested by TAMAP's engineers were these: 1) Re-engineer structural elements so that they meet—but do not exceed—load requirements. 2) Revise designs to make better use of available sizes of materials. 3) Eliminate waste by making workers conscious of materials costs—every man now gets a price list showing the cost of materials he uses. 4) Break cost data down into labor, materials, and other factors so that intelligent choices can be made between different products that achieve the same results. 5) Use less material by using more labor (see grading, p 112). 6) Use less-finished and less expensive materials by using more labor (see kitchens, p 115). 7) Look for cheaper materials that do the job as well as those now being used (see sheathing, p 113).

Although the TAMAP team has finished working with Schmitt, Schmitt has not finished with industrial engineering. He will continue to apply the management techniques and the cost cutting ideas he has learned. And, what is more significant, he plans to add an industrial engineer to his staff. Says TAMAP's Jim Shequine: "Any builder who builds over 25 houses a year should seriously consider hiring an industrial engineer. It could well be the most profitable decision he ever made."

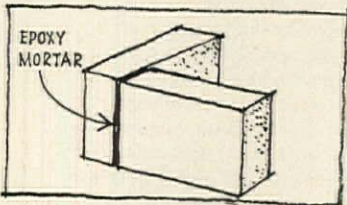
—JONATHAN ALEY

How to save at the site *continued*

by-hand job, much time was spent getting the blocks in place.

Solution: Fork-truck with pallet load of blocks drives around the foundation. Laborer walks beside fork-truck and distributes blocks. Savingsnot calculated

• Foundation corners were formed at the site by mortaring two standard 4"x9"x16" blocks together as the blocks were being set into position on the footings. Since each corner had to be accurately positioned in two directions (as well as for height), much time was spent juggling the two blocks into final position.



Solution: Corners are now formed at supply yard by joining two standard blocks with epoxy mortar. L-shaped blocks are easier to position accurately. Savings\$2.10

• Hand mixing of mortar at the site took too much time.

Solution: Small portable concrete mixer is set up at the site during early stages of construction. Savingsnot calculated

Slab preparation

• Excess fill was required to bring base for slabs up to proper height because initial grading was careless.

Solution: Men grade earth carefully because the cost of fill material — \$3/yard — has been pointed out to them. Also slab preparation is now assigned to a specific two-man crew that takes pride in its work instead of to concrete finishers who were more interested in pouring concrete. Savings\$10

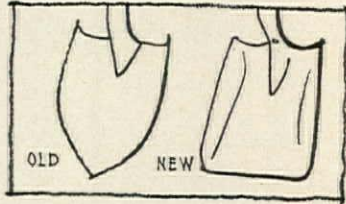
• Crushed rock, used under the house to create a capillary break with the earth, was also used under walks, driveway, and breeze-way.

Solution: Sand fill is used under walks, driveway, and breeze-way. It costs less than crushed rock, also has no voids into which concrete can seep. Savings\$7

• Men on slab preparation work spent too much time waiting and "getting in each other's way."

Solution: Slab preparation crew was reduced from five men to two. Savingsnot calculated

• Spreading limestone fill—after it was dumped in one spot by truck—took too much time.



Solution: 1) Truck spreads fill as much as possible while dumping it. 2) Front-end loader rough grades fill. 3) Men finish the job with shovels designed for stone spreading (see drawing). Savingsnot calculated

• Men did not check levels of fill, so grades were not accurate and more concrete was used than was specified.

Solution: Grades of fill material are checked with string stretched between forms (or block walls) so concrete slabs will be no thicker than specified. Savings\$81.15

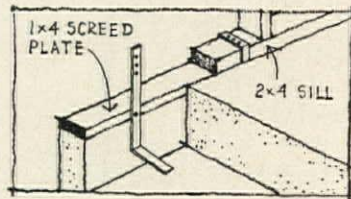
• Fire-resistant slab insulation was used even though fire-resistance was not required.

Solution: (not yet adopted): Buy cheaper, non-fire-resistant insulation. Savings\$5.60

• Slab edge insulation was carelessly treated on the site and damaged beyond re-use.

Solution: Men no longer waste material because its cost—19¢/1 ft—has been pointed out to them. Savings\$3.18

• Sill screed plate was unnecessarily heavy.



Solution: Sill screed plate has been reduced from 2x4 to 1x4. Savings\$9.93

• Cost of nailing sill screed plate to foundation was unnecessarily high.

Solution: Fewer nails are used. Savings\$2.63

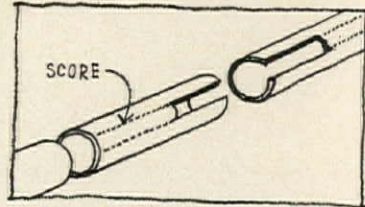
Heating

• Tape for heating-duct joints in the heat-distribution system was too costly.

Solution: Lower-priced tape is used. Also men cut lengths more

accurately, so overlaps at joints are shorter. Savings.....\$5

• Many heating duct tiles had to be cut to fit so special scored tiles (for registers) would fall precisely under center of windows.



Solution: Two scored tiles are set end-to-end under windows so registers can be centered without cutting duct tiles. Savings.....\$12.42

• Form box for plenum in slab was fabricated from boards for each house, then destroyed when it was removed from the slab. It was also necessary to fill form with sand to keep it from collapsing and then to remove the sand before the form could be pulled.

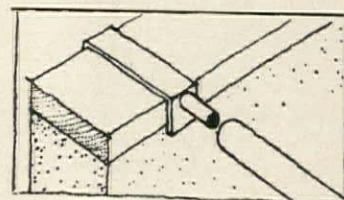
Solution: Slab foreman had a tapered steel form made. It is reusable and needs no sand reinforcing. Savings\$4.78

Slab pouring

• Slab was thicker than design called for because fill was not properly graded.

Solution: Men now know cost of concrete, so they take more care to grade fill accurately. Savingsnot calculated

• Stakes for screed pipes had to be accurately set before slabs were poured. Also stakes were not reused.



Solution: (not yet tried): Hang screed pipes from foundation walls with special hooks so no stakes will be needed. Estimated savings\$5.04

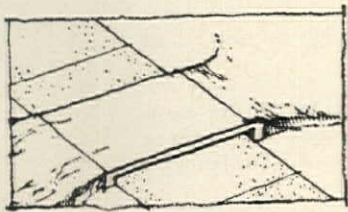
• Five-man concrete finishing crew stood idle if concrete trucks were late.

Solution: Foreman now schedules concrete deliveries accurately. Savings\$15

• While scoring drives and walks, concrete finisher sat on a plank which was held up over concrete by a helper.

Solution: Concrete finisher works from scaffold bridging drive, no longer needs unproductive helper. Savingsnot calculated

- One section of sidewalk at study house had to be replaced three times because it was cracked by heavy delivery vehicles. (Schmitt likes to finish sidewalks and streets before houses go in so he can sell lots anywhere in the subdivision and so buyers won't have to wade through mud.)



Solution: Sturdy portable wooden bridges were made to spread wheel load of delivery trucks to earth beside sidewalks. Savings\$18

- Commercial expansion-joint materials, used in walks and driveways, was unnecessarily expensive. Purpose of joints was to let slabs heave slightly in the winter without cracking—not to overcome expansion problems.

Solution: Strips of 15-lb felt are used at joints. Savings.....\$6.45

Exterior walls

- Trimming each stud to proper length with a portable saw in the field cost 4¢. Scrap was not usable elsewhere.

Solution: Schmitt now buys precut studs for his exterior walls. He also has switched from field to shop fabrication of wall sections. Savings (on cutting studs).\$4.40

- Materials had to be moved several times to make room for fabrication of tilt-up walls on the slab.

Solution: Wall sections are now prefabricated in Schmitt's shop. Savings\$1.40

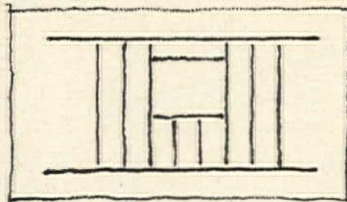
- Headers over windows in gable ends were not needed because load on gable-end wall was so light.

Solution: Gable-end windows are now framed without headers or cripples. Savings.....\$4.24

- Extra studs were needed in outside walls because window edges and interior partitions did not always align with studs set on 16" centers.

Solution: Change to a modular house plan. (This was not adopted because Schmitt felt buyers would not like rooms with windows even slightly off center.) Savings (in outside wall studs only).....\$11.76

- Jack studs beside gable-end-wall windows and doors were not needed because load on gable-end wall was so light it required no headers (see above).



Solution: Window openings in end walls are framed with single studs on each side. Savings.....\$11.26

- Wall sheathing added far more structural strength than was needed for Schmitt's one-story houses.

Solution: Eliminate all wall sheathing and use diagonal corner bracing to prevent racking. (This was not adopted because it was felt buyers—and competitors—might accuse Schmitt of "cutting corners.") Estimated savings\$160

- Cost of sheathing was high—\$118.97 or 29% of total framing cost.

Solution: Schmitt will replace plywood sheathing with asphalt-impregnated sheathing which not only costs less but also eliminates the need for a 15-lb felt dust shield. Savings\$65.44

- Factory-made louvers for gable ends were costly.

Solution: Redwood louvers are now made in jigs in Schmitt's shop. Savings\$12

- More than 30 sq ft of siding cut-offs were scrapped.

Solution: Men now use up most cut-offs because they know material costs 25¢/sq ft. Savings\$5

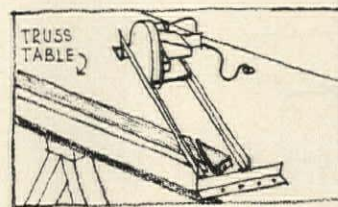
- Storm door, installed as part of prehung exterior door, was always in the way (as men moved in and out of house).

Solution: Install storm door at the same time as interior finish work. Savingsnot calculated

Roof trusses

- Trusses were fabricated on the floor in unsophisticated jigs, and each piece of lumber was handled five times while it was being cut

to size and positioned in the jig. After they were assembled, trusses were handled four times: 1) from jig to stack, 2) from stack to trailer, 3) from trailer to house slab, 4) from slab to tops of walls.



Solution: 1) Commercial truss jig is mounted waist-high on a work table. 2) Separate cutting jigs for bottom chord members have been added to the table so chords can be miter-cut right on the table (eliminating one extra handling operation). 3) Table is also designed so men can work with the least movement and without stretching. 4) Separate jig is used for mass cutting truss web members. 5) Large dollies move raw materials and finished trusses to and from the jigs. 6) Fork-lift moves finished trusses to the site and delivers them to the top of the house walls. Savings\$37.45

- Special truss plates for one-sided nailing were a major factor in total truss cost.

Solution: (under development): One-sided nailing system will use simple flat plates with self-clinching nails on each side of truss. Savings\$50.75

- Stringers along bottom chords of trusses were unnecessarily sturdy.

Solution: Stringers have been reduced from 2x4 to 1x4. Savings.....\$5.76

- Positioning shingles on roof took too much time, and crew speed was keyed to the slowest man because shingles were laid across roof.

Solution: Each man lays shingles straight up the roof instead of across. Men now lay five shingles as fast as they used to lay three. Savings.....\$29

Roof sheathing and roofing

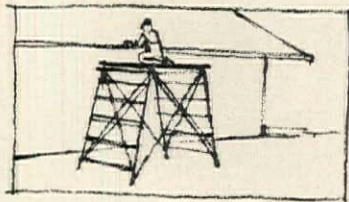
- Truss spacing was allowed to go off the 24" module to fit in a folding stairway and avoid a plumbing stack. As a result, many sheets of roof sheathing had to be cut to fit and unusable short ends of plywood were wasted.

Solution: A 22 3/8" wide stairway that fits between trusses 24" oc is used. Plumbers tilt the stack

How to save at the site *continued*

slightly if a truss is in its way.
Savingsnot calculated

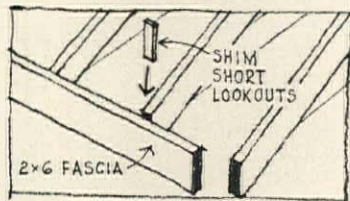
- Man who cut roof sheathing on ground spent two-thirds of his time carrying plywood from ground to roof or waiting for second man (on roof) to relay measurements to him.



Solution: Forklift sets bundled roof sheathing on an eave-high horse, so cutting and measuring is all done at roof level by one man. Savings\$3

Eaves and fascia

- Fascia was kept straight by carefully aligning ends of lookouts before nailing them to trusses. Then a 1 x 4 was nailed to the ends of the lookouts and covered with a 1 x 6. All of this required excessive on-site labor.



Solution (not adopted): Use rabbeted 2 x 6 fascia and shim short lookouts out to it. Savingsnot calculated

- Lookouts were nailed to trusses after the trusses were in place. Lumber was lapped 2' at joints.

Solution: Lookouts are made as part of the top chords of trusses—top chords are 2' longer.

Savings\$16.95

- Man who installed soffit spent too much time fitting edges.

Solution: Foreman assigns finishing work to skilled carpenters only. Savingsnot calculated

Breezeway

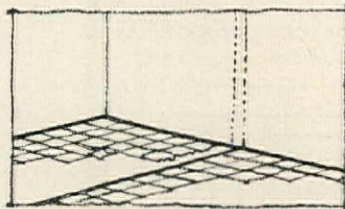
- Width of breezeway—10'2"—caused excessive waste of ceiling material which only comes in 8', 10', or 12' lengths.

Solution: Breezeway was redesigned to 9'10" width to reduce waste. Savingsnot calculated

Flooring

- Cutting and fitting floor tiles around edges of rooms took too much time.

Solution: 1) Schmitt buys easier-to-cut tile (vinyl asbestos). 2) Large paper cutter is used for straight cuts. 3) Tiles are stacked on dolly so crew won't have to move back and forth to get them from boxes. 4) Mastic is spread with a larger spreader. 5) Mastic is spread over three-fourths of floor before any tiles are laid.



6) Full tiles are laid flush along two sides of each room to reduce cutting. 7) Quick "sloppy" joints are made where partitions will cover changes in pattern. Savings....\$17.70

Plumbing

- Clay sewer tile had to be cemented together every 3'.

Solution: Schmitt now uses 10' lengths of 4" ABS plastic sewer pipe joined by solvent welding, which is less expensive per foot than 6" clay pipe. Savings.....not calculated

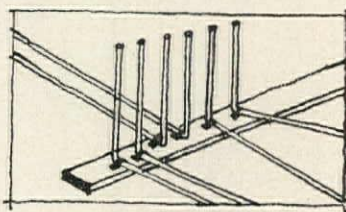
- Bathtub trap-drain boxes had to be set in slab before pouring.

Solution: End-drain tubs are used so traps are above the floor. Savings\$4

- Plumbers often had to return to supply truck and search out a single fitting. (Note: Not all houses are identical, so plumbing layout varies somewhat.)

Solution: Plumbers now carry a little more material into each house than they think they will need for the job. It takes less time to carry back a few "overs" at the end of a job than it takes to get a single "short" fitting during the job. Savingsnot calculated

- Plumbers spent too much time blowing through pipes in slab to find out which pipes went where.



Solution: Plumbers are trained to install pipes in specific order in all houses. Savingsnot calculated

- Plumbers had difficulty assembling water and drainage lines in plumbing-wall space provided.

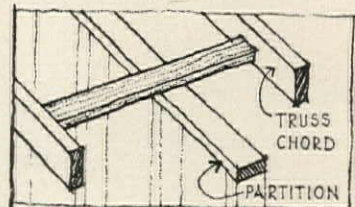
Solution: Plumbing is made up into subassemblies before delivery to site. Savings.....not calculated

Interior partitions

- With big-room finishing technique, foreman had to lay out partition locations three times: 1) for partition backers, 2) for floor tile color change, and 3) for partitions.

Solution: Big-room finishing technique has been abandoned. Foreman lays out twice because framing is a continuous operation (floors are tiled after hours so house can be worked on all day). Savingsnot calculated

- Continuous 2x4 interior partition backers took too long to install and wasted lumber.



Solution: Interior partition backers are now set like blocking on 2' centers between trusses wherever needed. Even though backers must be laid out more carefully, less labor and lumber are needed. Savings.....\$15

- Interior partitions were framed with 2x4s turned flat for two reasons: 1) to save 12 sq ft of floor space and 2) because studs warp least along the flat face. Also partitions rested on a separate sub-plate to simplify shimming at floor level.

Solution (used only in second study house): Partitions were framed with 2x3s and corners were redesigned to reduce amount of lumber used. The sub-plate was eliminated: Shims were used between the partition top plate and the ceiling backers. Savings\$26.50

- Excessive framing was needed in split plumbing walls.

Solution: Prewired, surface-mounted medicine cabinets are used in bathrooms. Results: 1) Both sides of the plumbing wall are identical, 2) no headers are needed in wall, and 3) wiring for separate lighting fixtures is eliminated. Savingsnot calculated

- Men scrapped or wasted 19% of the drywall used in the first study house.

Solution: Men no longer sacrifice material to do job faster because they know its cost. Waste is reduced significantly. Savingsnot calculated

- Time and material were wasted by drywall crew trying to make butt joints in ceiling fall where partitions would cover them.

Solution: Big-room finishing technique was abandoned, so problem no longer exists. Savingsnot calculated

- In-place cost of five prehung interior doors seemed high at \$137.31.

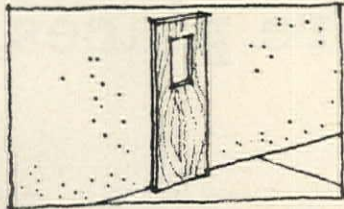
Solution (not adopted): Set up jigs in shop to prehang doors. Savings\$35

Wiring

- Heavy-duty circuits were unreasonably long.

Solution: Heavy-duty wiring runs are shortened by moving service entrance equipment from a bedroom to the utility room. Savings\$7.14

- Electrician had to measure wall to locate each outlet or switch box position.



Solution (not adopted): Use a jig to locate outlet box heights. Savingsnot calculated

- Shallow electrical switch and outlet boxes in partitions could not be used as junction boxes because they could accommodate only a single 2-wire or 3-wire cable. (Shallow boxes had to be used because partitions were framed with 2x4s set flat.) All major wiring circuits had to run in ceilings.

Solution (used only in second study house): Partitions were framed with 2x3s on edge. This permitted use of deeper outlet boxes that could serve as junction boxes. Most wiring circuits were run in walls instead of in ceiling. Eliminated: 497' of wire and five junction boxes. Savings\$34.08

Painting

- Interiors were spray-painted with fleck paint, which cannot be retouched with a brush. So it was necessary to install fixtures and cabinets in kitchens and baths before painting to minimize possible chipping of the paint. Cost of masking fixtures and cabinets was excessive.

Solution: Solid color paint has replaced fleck paint so that it may be brush-retouched if damaged during installation of kitchen cabinets and bathroom fixtures. Cabinets and fixtures are no longer masked because they are now installed after the house is painted. Savings (for masking only)\$9.61

- Much of the total exterior painting time was spent masking areas that were not to be sprayed the house color. (Note: Trim and gable ends are usually white; siding is painted a pastel.)

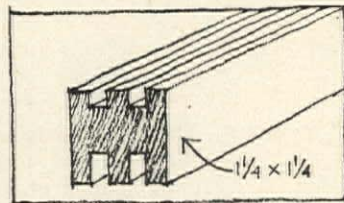
Solution: Painters now use a roller to paint siding, so windows, trim, and gable ends need no masking. Savingsnot calculated

- Paint was purchased at too high a price.

Solution: Schmitt's purchasing agent shopped around and found he could buy an equivalent paint at lower cost. Savings.....\$32

Kitchen cabinets

- Prefinished kitchen cabinets were costly in terms of their contribution to total house value.



Solution: Engineers developed modular cabinets built from a single milled shape (in Philippine mahogany) that serves as both exposed framing and tracks for sliding doors. Doors are made of prefinished hardboard. Shelves are made of medium-density overlaid plywood. Savings\$155

- Sink rims were not purchased at a competitive price.

Solution: Sink rims are purchased from a new supplier. Savings\$1

Clean up

- Clean-up time at the end of each phase was excessive.

Solution: Scrapped dump-truck bodies, bought at a junk yard, are dropped in back of each construction site by a forklift. Scrap, cartons, wrappings, etc are dumped in the truck bodies and burned periodically. Savings\$15

Scheduling

- Men lost time because they did not always know exactly what they were meant to do.

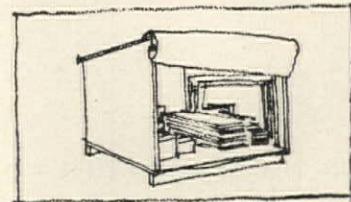
Solution: Foremen preplan each crew member's work the day before. Savingsnot calculated

- Because Schmitt used big-room finishing technique, framing crew, electricians, and drywall crew were scheduled in and out of house too often, and much time was lost making ready, moving in, and moving out.

Solution: Big-room technique was dropped. Now all partitions are framed before drywall is installed. Framing, electrical rough-in, and drywall are each finished in one continuous operation. Savingsnot calculated

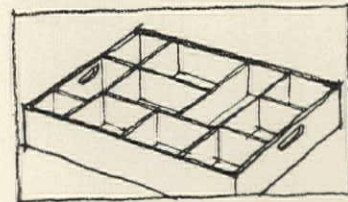
Materials handling and delivery

- Unexpected shortages of materials during all phases of construction caused delays while trips were made back to supply area for missing items.



Solution: Responsibility for material delivery has been assigned to one person. Materials for each phase of construction are loaded into an organized "phase box" which is then delivered to site by a forklift. Leftover material is returned to the supply area in the phase box. Savingsnot calculated

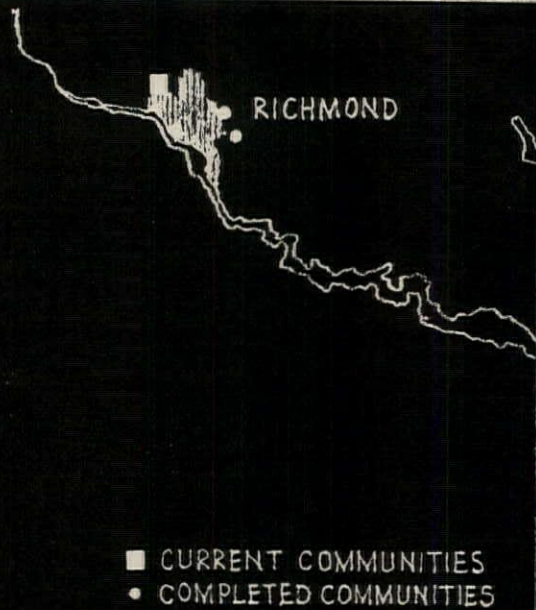
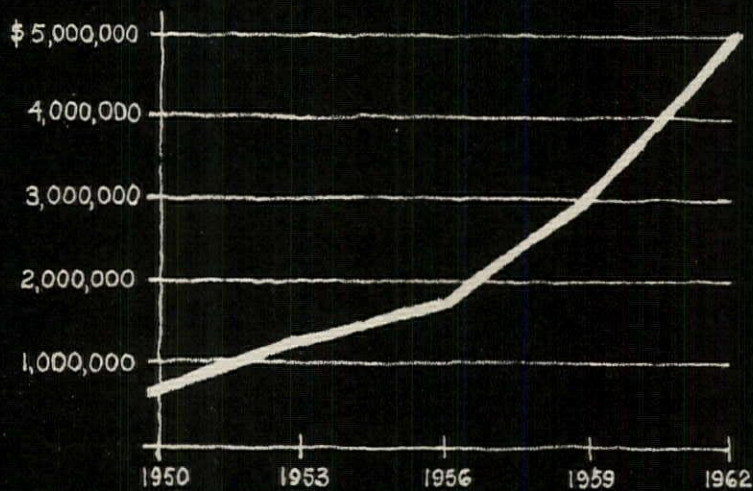
- Electricians, plumbers, and painters spent too much time trying to find the parts, fixtures, or paints needed for each house.



Solution: Plumbers, electricians, and painters have organized neat supply rooms and storage bins for their materials. Now there is a place for everything and no part, fixture, or type of paint is ever hidden by other material. Savingsnot calculated

- Concrete-mix truck spent too much time backing into its dumping locations.

Solution: Concrete work is planned so truck can drive around each house counter-clockwise. Then driver can spot dumping location from his seat. Savingsnot calculated



How to increase sales volume today:

“Sell in more places,

That is the three-point precept of Virginia Builder Bill Witt whose Viking Construction Co has increased its sales volume more than fivefold in the last 12 years (see graph).

Witt’s company will sell as much as \$5 million worth of housing this year because:

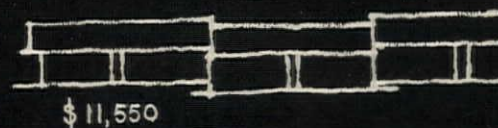
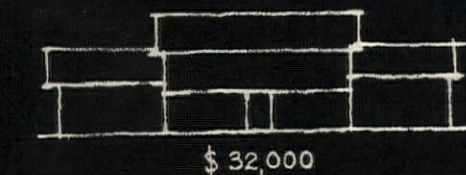
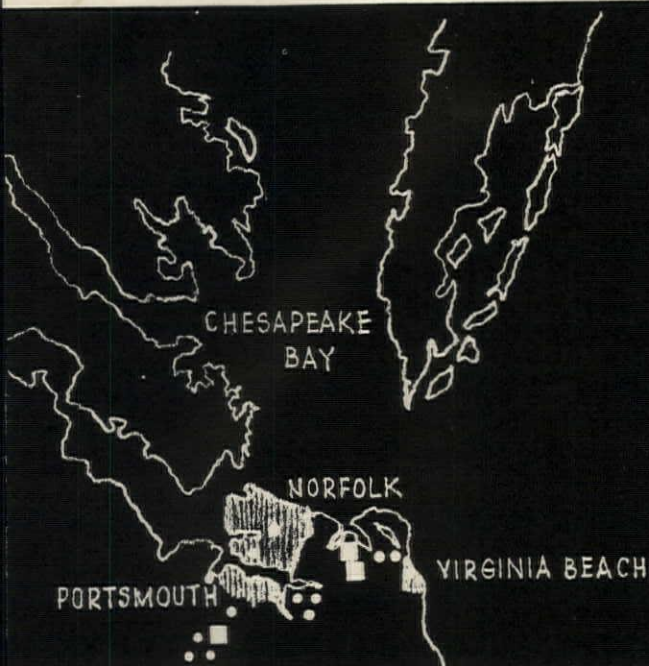
He is building in four different cities (map above)—Virginia Beach, Norfolk, Portsmouth, and Richmond. Based in Virginia Beach, Viking also has a permanent office in Portsmouth (35 miles away) and temporary offices in Richmond (115 miles away).

He is spanning a broad price range—from \$11,500 to \$32,000. When Witt moved into the Tidewater area of Virginia in 1953, he concentrated on a narrow price range—from \$6,500 to \$9,000. Gradually, he crept up to \$12,000 and \$15,000 houses. Then in 1961 he moved into an area where land costs dictated houses priced at \$20,000 and up. Meanwhile, he filled in his price range and broadened his market by opening a community of \$16,000 and \$17,000 houses.

He is tapping the neglected Negro market as well as the usual markets. Witt has built both minority and white housing in separate communities for the last 12 years. He started building houses for Negroes when he was offered financing for this purpose by the North Carolina Mutual Life Insurance Co, the largest Negro-owned and operated insurance company in the world (1961 assets: \$71 million). In the minority market (as in other markets) Witt has been steadily broadening his appeal to buyers and steadily increasing the size, quality, and prices of his houses. His top price was \$9,950 in 1954. This year it is \$19,850, and he is custom-building some houses for as much as \$28,000. His buyers range from blue-collar families to upper-income business and professional people.

“White or Negro—all buyers want essentially the same things,” says Witt. “As we move up the price scale, we find they all want

Diversified broadly within the home-building field, William Witt’s four projects span a 115-mile area, an \$11,500-to-\$32,000 price range, and both the white and Negro markets.



at more prices, to more prospects”

more baths, a complete kitchen, a family room, a fireplace, more brick on the exterior, and air conditioning. The chief differences between buyers appear at different economic levels. For example, low-income buyers want to be close to town and public transportation, but higher-income buyers are more concerned about the prestige of their address. They couldn't care less about public transportation.”

Witt says he can sell in more places at more prices to more prospects because he concentrates on housing to the exclusion of other kinds of building. The housing market itself offers so many opportunities, he says, that he doesn't have to diversify into commercial or industrial work to broaden his sales base. In addition to detached houses, Witt builds apartments and townhouses and does urban-renewal and urban-rehabilitation work.

How can Witt handle so many kinds of housing in so many different places? The answer, as he sees it, is threefold:

1. He isn't afraid to have partners. "I've never done a housing job without a partner," he says. "Partners broaden my capital base and make it more flexible. They also provide a sound background on local markets and conditions."

In a minority housing project in Portsmouth and in luxury-priced and medium-priced communities in Princess Anne county, Witt's partner is George T. McLean, a prominent Portsmouth subdivider and businessman. In an urban-renewal project in Richmond, his partner is Reynolds Aluminum Service Corp of Richmond. And in several previous developments, he has teamed up with Ed Richards of Wachovia Building Co, Raleigh, N.C. who also builds in Greensboro, Winston-Salem, Goldsboro, and Chapel Hill and who, like Witt, concentrates on housing only.

2. He gives his construction superintendents wide authority. "Get a good super and you have a job licked," says Witt. "They're the men who have to build a job at the costs you're committed to." He has three construction chiefs—one in Virginia

Beach, one in Richmond, and one in Portsmouth. Two of them had been builders themselves, and two have been with Witt close to ten years. Witt and his superintendents estimate job costs independently, then cross-check each other. Once a job is underway, he only checks to be sure it is on schedule.

3. He never tackles a market without researching it. His preliminary research is often based on what he reads—and he reads a lot—about market and economic conditions in Virginia. If he spots a likely market, he hires professionals to research it in depth. And after he has started building, he checks his research simply by taking time to talk with his buyers.

Witt spent \$3,000 on a market survey before he began his luxury-priced King's Grant community (see p 118). One finding: Not a single merchant builder of accountable size was meeting the demand for higher-priced houses in the Tidewater area. The finding was borne out by King's Grant sales—30 houses priced up to \$32,000 in the first three weeks after the opening.

Witt also spent heavily on research before buying up 18 old townhouses in downtown Norfolk and converting them into 74 air-conditioned apartments (H&H, Sept 61). Results: Within a year, the apartments were 100% rented.

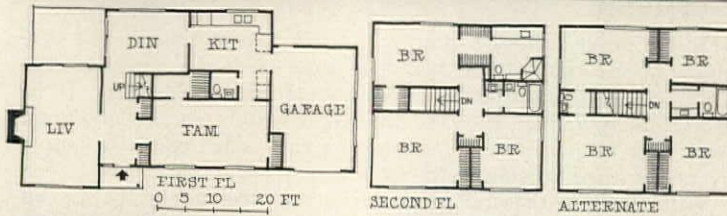
Credit reports from his mortgage company (Virginia Mortgage & Investment Co) are a frequent source of market information. When reports showed that many Negro buyers could afford better homes than Witt was offering, he began to build bigger, more expensive houses: "Every time I moved into a higher price range, I was told the houses wouldn't sell. But they always have." Credit reports also revealed a rental market among Negroes who couldn't qualify to buy a house. So last year Witt started a 100-unit rental project. Today it has a waiting list.

To see how he keys his community planning, house designs, and marketing to each of four different markets, turn the page.



UPPER-PRICE LAKEFRONT SITES are in Witt's top-bracket King's Grant community in Virginia Beach where houses sell for up to \$32,000 with land.

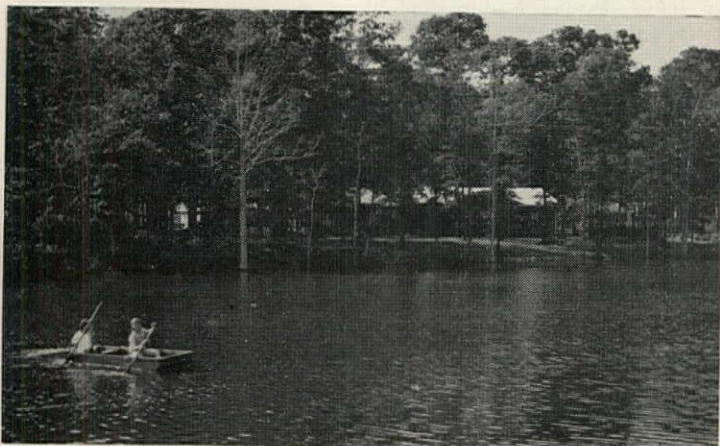
1. Witt sells high-priced houses by promoting individual design and a prestige area



TWO-STORY MODEL has 1,990 sq ft, sells at \$24,950 and up. Witt's best seller, it won *American Home's* "Best Home for the Money" award.

All of the houses in Witt's King's Grant community are on wide, wooded lots, and many are on waterfront lots. Witt saved trees, dredged and stocked streams, and left the land more attractive than he found it. Then he put his 20 model houses on scattered lots "to avoid the feeling of a mass-built subdivision and to project a custom-community image." Similar thinking underlies the sophisticated promotion of King's Grant. Its ads emphasize the attractive location and appeal to a desire for status and a relaxed way of life. Its first brochures (so successful Witt still uses them) show no houses—only color photos of parents and children in autumn settings at King's Grant. And on opening day Witt had costumed messengers deliver parchment-like announcements to influential people in the Tidewater area. Result: more than 30 sales in the first month and an average of eight to ten sales a month since then (sales to date: 120).

Witt offers 11 basic models and subcontracts the building of houses as lock-and-key jobs to several small-volume builders who are willing to make custom changes. Architects: Leif Valland, James W. McElroy, Herman York, and Melvin M. Spence.



COMMUNITY LAKE, a private recreational area, is stocked with bass and waterfowl, permits buyers to boat and fish from their own backyards.



SOPHISTICATED PROMOTION features script type and lion symbol. Ad shows brick entrance; brochure shows color photos of the community.



MIDDLE-PRICE LAKEFRONT SITES are in Witt's medium-bracket Rolling Meadows community where three-bedroom, 1½-bath houses average \$17,000.

2. In his medium-price project he relies on more design standardization

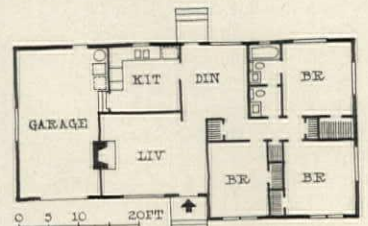
Instead of offering a wide range of houses in what is merely an acceptable location, Witt builds repeat-plan houses in an exceptionally attractive location. His medium-priced Rolling Meadows community is directly across a lake from his higher-priced King's Grant community (opposite). Except for smaller lots (minimum: 10,000 sq ft), fewer waterfront sites, and fewer trees, Rolling Meadows has much the same location appeal as the high-priced community.

Witt builds up to 50 houses with the same plan (but varied elevations), changes plans about every six months, and is now using the third basic plans since Rolling Meadows opened in May 1961. Sales to date: 100 houses.

By standardizing his plans, Witt gains economies that let him add value and sales appeal to his houses. For example: Consumer surveys show that buyers prefer his houses because, unlike those of many of his competitors, he uses brick veneer and high-quality windows on all sides instead of on the front elevation only. Says Witt: "Today you can't sell false fronts and cheap sides. People want a good buy all around a house—and inside as well."



REPEAT-PLAN HOUSE with 1,260 sq ft sells for \$16,950. Price includes built-in range and oven, dishwasher, garbage disposer, exhaust fan and hood, fireplace, finished garage, paneled wall in living room, and landscaped lot. Trees felled when clearing sites are cut into fireplace-size logs for buyers of each house.



DUCK POND—formed by inlet on lake shown at top of page—is "stocked" with white decoys to attract ducks to shore where children can feed them.

Rolling Meadows

3 Bedrooms — 1½ Baths — Separate Dining Room — Electric Range and Oven — Garbage Disposal — Dishwasher

Financing Available — V.A. (No Down Payment) — F.H.A.

Financing Available — F.H.A. — V.A. (No Down Payment) — In Service and Commercial

16,950

Furnished Model Home Open Daily
11:00 A.M. to 7:00 P.M. Call 341-3070

SALES LITERATURE, featuring price and location, directs its appeal to families with smaller children who can afford medium-priced houses.

continued

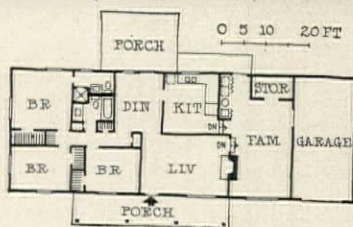


BRICK-VENEER HOUSES in a wooded section of Witt's Cavalier Manor are built on crawl spaces, sell for \$12,350 with a one-car garage.

3. Witt sells the minority market by upgrading his houses to meet rising incomes



BIGGEST MODEL has 1,790 sq ft, three bedrooms, two baths, family room, and fireplace, sells for \$19,850. Virtually a duplicate of a model Witt builds in his upper-price King's Grant community (p 118), it sells for less because it is on a less expensive lot. Same house is also offered with a two-car garage and a hip roof.



When Witt started his Cavalier Manor community in 1958, he bought up old Lanham Act houses, moved them a mile, added rooms to them, and sold them under FHA Sec 203b. Prices: \$7,600 to \$9,300. Today Witt builds a variety of houses—all with all-around brick veneer, most with garages (instead of carports), and many with two-car garages, family rooms, and fireplaces. Prices: \$11,150 to \$19,850 (Witt is also doing contract jobs for as much as \$28,000).

The swift upgrading of Cavalier Manor houses reflects a swift rise in buyers' incomes. Recent credit reports on Cavalier Manor buyers pegged the average earnings of heads of families at slightly over \$4,600—and this average is heavily weighted on the low side by buyers of the community's early low-priced houses.

Witt's houses for Negroes—sold, incidentally, by Negro salesmen—are like his houses for whites ("We build the same houses for both markets in all price ranges"). Biggest problem is qualifying buyers for mortgages. Says Witt: "We lose them on credit rating—not on income. Three of ten buyers don't qualify because of bad credit, but we have the same problem in similarly-priced white housing communities."

Photos: H&H staff



SWIMMING POOL, shown here with an athletic director teaching children to dive, is close to community's early part-brick houses (background).

Cavalier Manor
an address of distinction

GREENWOOD

ALL MODELS INCLUDE:
 - 10' x 10' Porch
 - 1/2" Hardwood
 - 1/2" Hardwood
 - 1/2" Hardwood
 - 1/2" Hardwood
 - 1/2" Hardwood
 - 1/2" Hardwood
 - 1/2" Hardwood
 - 1/2" Hardwood
 - 1/2" Hardwood
 - 1/2" Hardwood

SOME WITH WOODED LOTS

VA LOANS \$11,150⁰⁰ to \$12,450⁰⁰

PROMOTION projects status and prestige in brochure at left, emphasizes prices, terms, and what's included with the houses in ad at right.

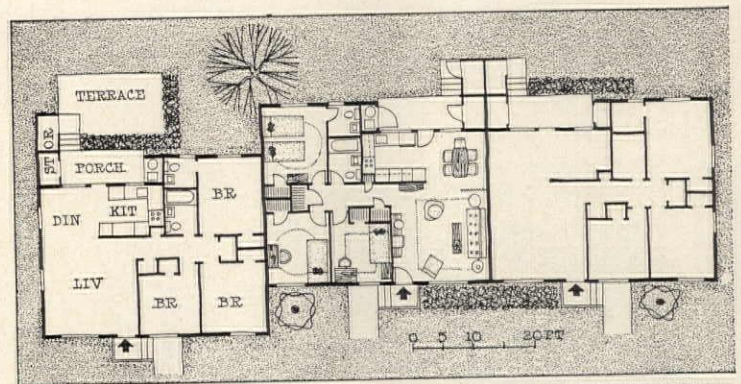


ATTACHED HOUSES in Hartshorn Homes urban-renewal project have brick and aluminum exteriors. Buyers own small yards, share community land.

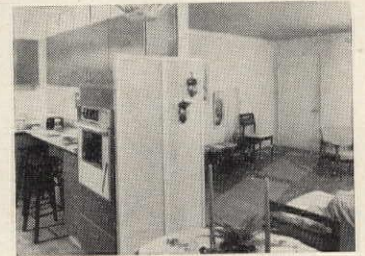
4. In his urban-renewal project, Witt sells fully equipped townhouses

Looking over a proposal for rental apartments in a Richmond urban-renewal area, Witt said that if they were built to meet both the local code and HHFA's rental schedule of \$55 to \$60 a month, they would be so unattractive that "old slums would simply be replaced by new ones." Instead, he proposed built-for-sale townhouses, which like apartments, make intense use of the land and thus keep prices (\$11,500) and carrying charges (\$82.50 a month) within reach of low-income families.

With the help of the Richmond FHA office and Architect W. B. van Bakergem, Witt developed a land plan that puts 98 townhouses in groups of two to seven units on a 13½-acre site. Each buyer gets a 15'-deep front yard and a 25'-deep back yard. All buyers share ownership of community land, including a large commons, a swimming pool, and a bath house. Witt built the urban-renewal houses under FHA Sec 220 (he was granted a special exception permitting joint land ownership). He added VA no-down financing when he found many prospects could not afford FHA's \$410 down payment and, as a result, sold almost as many houses in six weeks as in the previous six months. Sales to date: 65 units.



THREE-BEDROOM UNITS have 1,000 sq ft. Kitchen equipment includes range, oven, refrigerator, waste disposer in double sink with spray, and rough-in for washer-dryer. Outside storage closets off back porches help provide privacy between houses. Photo (right) is view of kitchen and living room from dining room.



Taylor Lewis



COMMUNITY FACILITIES include swimming pool and bath house jointly owned by residents. Buildings in background are not part of the project.

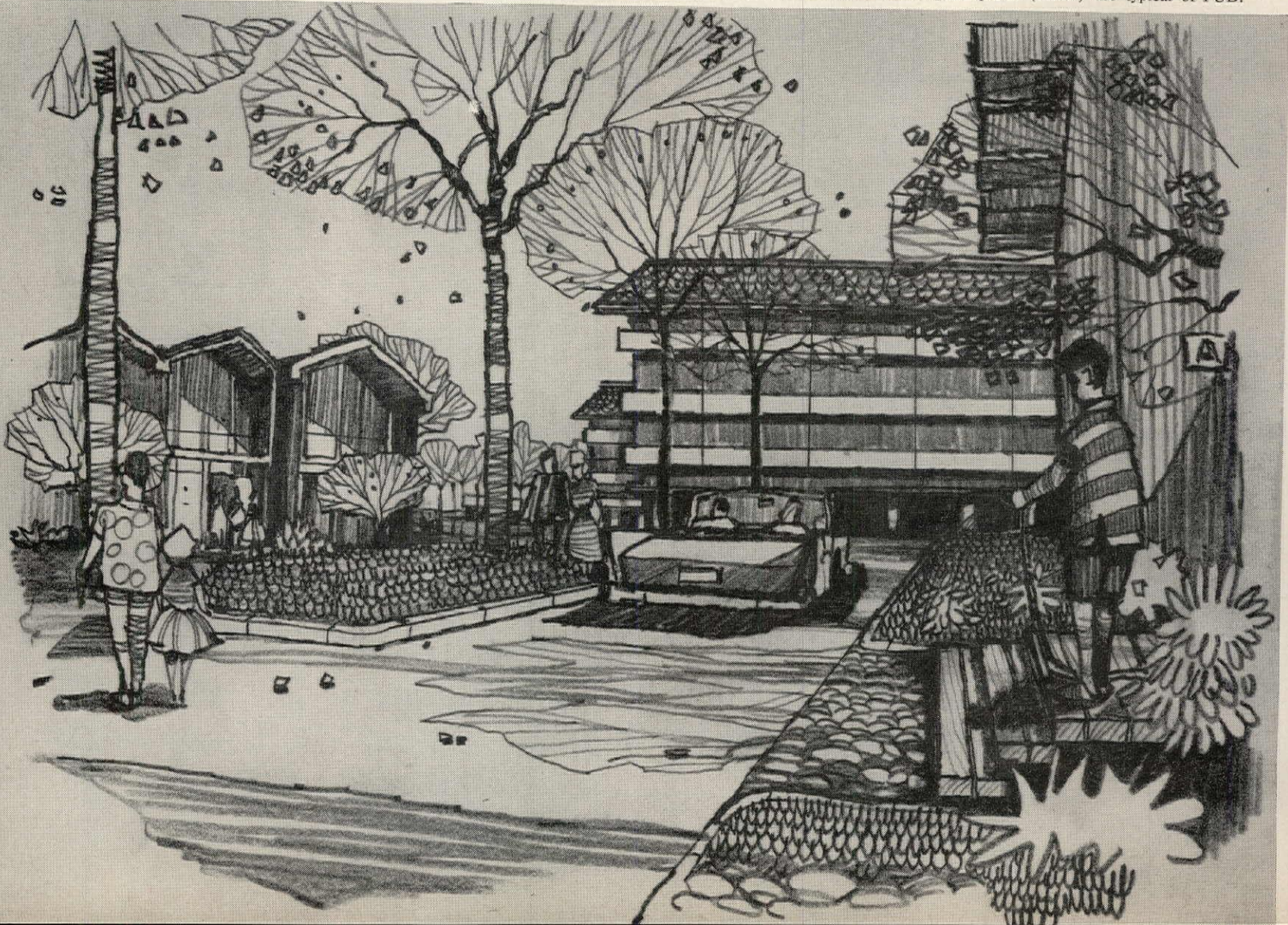
HARTSHORN HOMES
NOW HAS
V.A. LOANS
NO DOWN PAYMENT
TO VETERANS

Call 359-0654
For Further Information

SALES TOOLS include newspaper ad, right, and single-sheet circular. Both sell hard, stressing price, down payments, and community features.

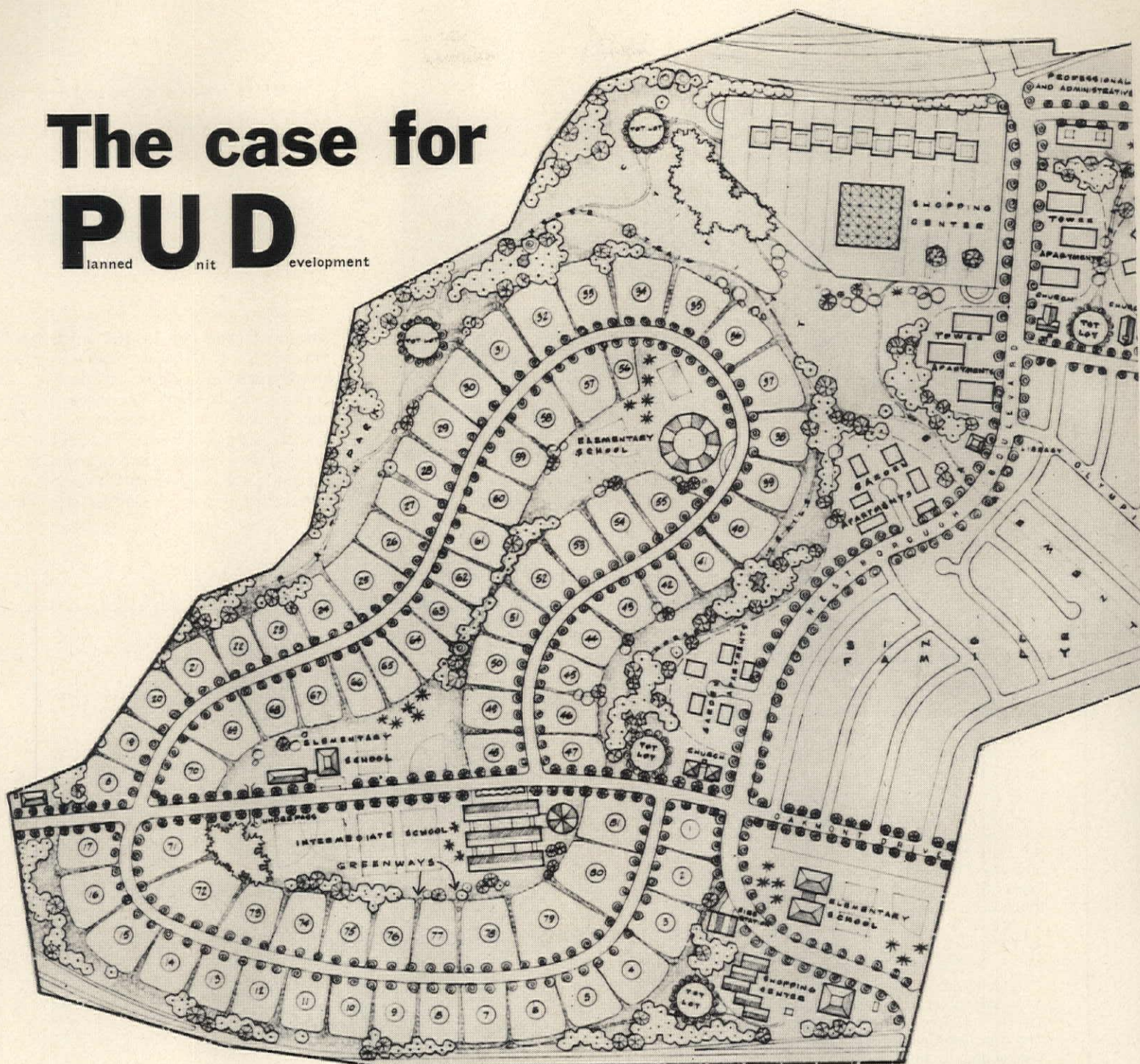


Continuous parks separating pedestrians from cars (above) and clusters of townhouses and apartments around landscaped squares (below) are typical of PUD.



The case for PUD

Planned unit development



Planned unit development is the practice of mixing high-density neighborhoods of different types in the same project and of separating them with landscaped community facilities, buffer strips, and parks.

by **Herman D. Ruth**
Ruth + Krushkhov
City and regional planning consultants

and **Peter Walker**
Sasaki, Walker & Associates, Inc
Site planning consultants

Builders deserve two cheers for improving the quality of the home. They have yet to earn a third cheer for improving the quality of residential environment.

Increased land and improvement costs are the twin restraints to innovation. Still, there are enough profit-motivated examples to indicate that an improved environment is possible. Look at the popularity of the country club or marina development. Or look at cluster developments.

They are popular because, in addition to providing housing, they have woven permanent open space into the fabric of the environment. (Their limitation is their relatively high price range and narrow market.) They have, to use the correct word, *amenity*.

Amenity is a word widely used by professional planners, but it has yet to find general acceptance among builders. It means to make attractive or possessing desirable features. This can be done through PUD: planned unit development. How PUD creates improved residential livability is the substance of this article.

continued



High-rise apartments and townhouses add visual interest and a three-dimensional variety to a residential area, especially when grouped around open space on rolling terrain as shown above.

PUD offers developers and

Residential neighborhood design, concerned only with free-standing, single-family houses, is elementary land planning. Design opportunities increase enormously the moment other building types are added. For each additional type, the possibilities expand greatly, so that design opportunities appear infinite.

Planned unit developments may contain one- and two-story houses, single-family, two-family, multi-family, and townhouses; town apartments, garden apartments, and high-rise apartments. The larger the site, the greater the diversification can be. Cluster arrangements of buildings of different forms, heights, and intensity of use permit three-dimensional diversity, roof line variation, interior courts, interlinkage

Everyone gains from Planned Unit Development

Developer-builder benefits:

Increased density. By using PUD he may increase his density by 10% to 50% per acre. Thus he can justify paying more for his land and he can support higher labor and improvement costs.

A broader market. In addition to building one-family houses that appeal to his usual market, he can build one or more types of multi-family housing that appeal to young married couples and the elderly. These two groups are the fastest growing segments of our population. Our society is not composed of neatly categorized families. Life and death create widows, widowers, divorcees, and other such households. All require shelter, which PUD provides.

Added stability. He can stabilize his operation by building a wide variety of housing and building types, including such non-typical structures as a nursing home or houses for the elderly. He can also build-for-sale or rent, including co-operative or condominium units. The combination of single-family and multi-family units permits a builder to generate some cash or hold rental units for long-term investment.

Better land use. Land regarded as difficult to develop because of terrain, rock out-croppings, or swamps can take on new possibilities. Instead of destroying these natural features, the elite design may enhance them to provide open space and amenities. The builder has no need to use every square foot of land for development, if he can obtain a reasonable density.

Open space without taxes. A builder who wants to provide a park, pool, community center, or other such facility without long-term tax responsibility can do so. Under PUD planning, both the municipality and the public become more interested in open areas and are more likely to accept responsibility for them. FHA has made it possible to collect a maintenance charge for these facilities as long as it does not take precedence over the mortgage. This device is more effective than a home improvement association, where recalcitrant homeowners may refuse to pay for facilities or services. (Editor's note: The Urban Land Institute and FHA are now making a study of the financing, maintenance, and taxing of open areas.)

Lender and investor benefits:

They are concerned with marketability and resale value of the housing on which they take mortgages. With its variety, flexibility, and amenity, PUD promotes a sound basis for long-term investments. Financial organizations should study the profit-making potential of such planning and support it.

Buyer benefits:

He achieves a higher standard of living and greater amenity for the same price he would pay in a conventional subdivision. His long-term investment is better in a community which improves as time goes by. His investment is enhanced because community facilities and open space are provided when he moves in—not at some indefinite time in the future.

PUD permits a change in housing type for a buyer as his family changes. He does not have to give up his long-established residence as his family or income grow larger or smaller. Parents and grandparents may remain near their children. Older people may live in a normal community where there are families of all ages and a variety of social activities. Job opportunities for semi-retired people are another asset.

Greater concentration of services and facilities are available in a comprehensively planned development. Social costs of commuting can be reduced. Greater opportunity for personal satisfactions in the life of the community become possible.

Municipality benefits:

In addition to amenity, planning has as other antecedents economy and efficiency. Economies that grow out of paying more attention to municipal requirements will result in lower municipal costs and lower property taxes. PUD can reduce street and utility requirements, and reduce maintenance and services that can provide economies not obtainable in single-family housing. Planned unit developments are better prepared for assimilation in planned communities, annexation into cities, or incorporation as cities themselves.

PUD also makes a municipality more attractive to desirable types of employers (which most new communities are looking for) such as research laboratories or other white-collar firms. These companies often look first for areas that have good neighborhoods for their people.

builders new design opportunities

of public and private open spaces, and a "common green."

Inclusion of non-residential uses such as shopping, civic and cultural areas, and other non-industrial places of employment can be tied into residential groupings in an architecturally harmonious and pleasing fashion. Pedestrian and vehicular traffic and off-street parking can be integrated to achieve greater interest and flexibility than in conventional subdivisions.

When several housing types are planned with permanent open space around them, additional design opportunities are created, for advantage may be taken of natural topography, geological formations, foliage, drainage, climate, sun, wind, and view orientation. Instead of mutilating the ter-

rain to achieve maximum density, the terrain can be incorporated as a major design feature and a higher density assured by including several housing types.

With the use of open space of different sizes one other variable is also added: variety in function. Amenity is given a new meaning by adding riding, hiking, and bicycle trails integrated into the pedestrian walkway system separate from vehicular traffic. Open space can be coordinated with other open areas outside the site to extend a chain of parks. In addition to parks, woodlands, trails, and densely planted areas, there can be small secluded parks, tot lots, places for court games, and a plaza to add design flexibility. Such ingredients are enough to create variety of

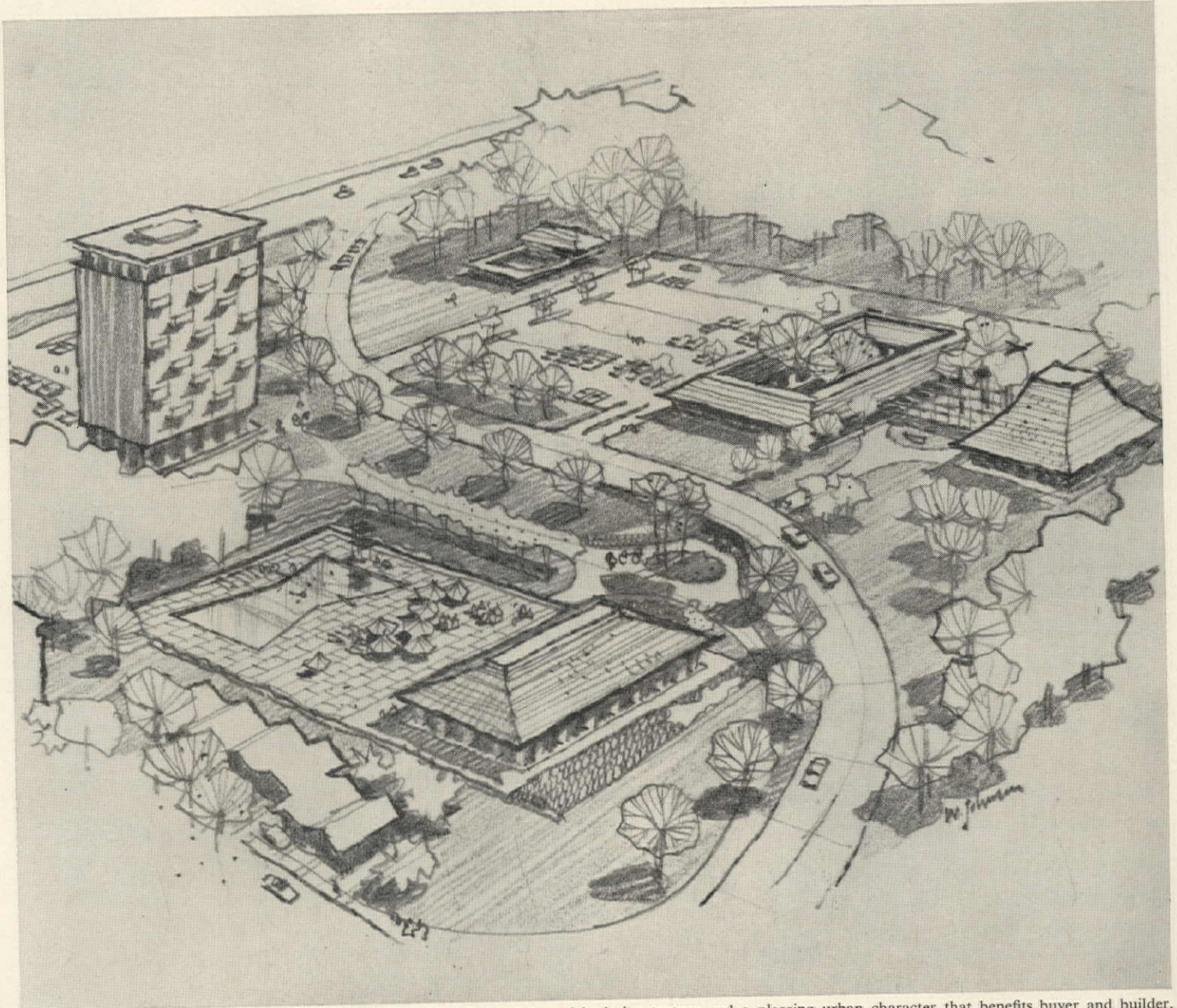
form, a richness of texture, and diversity of character. The three-dimensional relationship of buildings to vistas, panoramas, and skyline is basic to the design.

An increased concentration of people, services, facilities, and variety of open spaces can provide a more urban character than is possible in a single-family subdivision. The richness which can be achieved through variety, the satisfactions which come from interpersonal contacts, the increased opportunities to participate in civic and cultural activities—all expand the potentialities of PUD design.

Along the way urbanity and amenity are created, but the real significance of the entire design process is that it takes a step toward fulfillment of the democratic ideal.

continued

Renderings by W. Johnson



Combining apartments with recreation areas and civic buildings adds a rich design texture and a pleasing urban character that benefits buyer and builder.



Visual delight resulting from pleasant vistas like this is often a convincing argument in getting planning boards to accept townhouses or apartments as part of a new subdivision plan.

PUD experience in two cities

Among cities that have adopted planned unit development, the experience of two, Fremont and Milpitas, is significant for builder-developers elsewhere. Most developers asking approval for more liberal planning regulations assume that once it is granted all their problems are over. Experience in these two cities shows a trial-and-error process may go on for two years.

Fremont has approved 15 PUDs

A new city some 30 miles south-east of San Francisco, Fremont was incorporated in 1956 from five small towns which had a total population of 22,443 and an over-all area of 96 sq miles. In six years it has grown to nearly 60,000. The city

The big problem:

How builder-developers can sell Planned Unit Development to local municipalities

Few communities are prepared to consider PUD because they lack the proper ordinances. Here are a few guideposts for town officials who want to draw up new regulations.

1. Keep the ordinance short and simple.
2. Do not detail all provisions. (If too long, their length and complexity will discourage developers.)
3. Offer some inducement to developers to encourage their use of PUD, such as increased density or a reduction in required public improvements.
4. Ask developers to include permanent open space. (A rough

rule of thumb is 10% to 20%.)

5. Divide the processing of plans into two steps, so developers will know whether or not they are on the right track with their first submittal.
6. Require that developers demonstrate how their proposed PUD fits into the general plan of the community, or why the general plan should be changed to accommodate PUD.
7. Fix a time limit for review by the planning or zoning staff, similar to time limits for tentative subdivision maps.
8. Employ a review and inspection procedure that will require conformity with submitted plans.

How to present a new Planned Unit Development to a local planning or zoning board

Developers should anticipate all questions that may be asked about a plan and submit the PUD in sufficient detail to answer typical questions which will confront PUD builders:

- How does the builder's proposal relate to the general plan?
- How will it effect traffic on adjacent streets?
- What is the price range of houses. (If lower than for adjacent properties, how can the lower prices be justified?)
- What guarantee is there that planned parks will be provided?
- Who will maintain parks and open space?
- What guarantee is there that the development will look like the pictures?
- How much land is being dedicated? Why not more?
- What advantages are there to the city?
- If the land in question is now used for farming, and is intended for industry, why should it be zoned residential?
- Will increased density overload the schools?
- Is there a market for that many apartments?
- Who would live in townhouses in the suburbs?

- Why is a shopping center included?
- Who will maintain private streets?
- Will the plan overload the utilities?

A cost analysis which shows that PUD will pay its own way will go a long way in convincing a municipality that PUD is desirable. Increased density may provide additional revenue through state or federal grants, many of which are figured on a per capita basis. Generally, multi-family dwellings cost less to service. The increased population will spend some of its income in the municipality—how much can be determined by a market analysis. This combination of greater revenue, less service per dwelling unit, and added purchasing power may be attractive to the municipality.

Another factor that may help a developer in getting his plan approved is to provide space for park, cultural, and other interests that are of special concern to the community. Are families devoted to the Little League and do they need more baseball diamonds? Perhaps a bird sanctuary, a golf course, or (as was found in one city) a pond for a high school biology class to study wild life, or an old barn for amateur theatrical performances can be provided for the community.

in California reveals several problems

prepared a master plan with zoning and subdivision regulations to guide its growth but these regulations and plans failed to bring planned development. In an attempt to turn a regulatory ordinance into an instrument for better city development, Fremont adopted planned unit development provisions and under the leadership of Planning Director Roy W. Potter, 15 subdivisions have been approved, three of which are shown at the right.

A municipal bulletin states: "The planned unit development concept was adopted by the Fremont Planning Commission and City Council to give more flexibility to the development of residential, industrial, and commercial areas. The city was keenly aware of sterility in today's residential development and felt that the planned unit development would provide the means whereby the developer could exert creative efforts in the preparation of his plans.

"The purpose of the PUD is to allow diversification in the relationships of various buildings, structures, and open spaces in planned building groups and the allowable heights of the structures and buildings, while insuring substantial compliance to the district regulations. These regulations and standards are to be observed without unduly inhibiting the advantages of modern large-scale planning. The first steps in the use of this concept permitted certain lot-size reductions below the minimum zoning requirement. These reductions resulted in small neighborhood parks adjacent to school sites."

Some developers reduced lot size by 10% to 20%, although over-all densities for each parcel remained the same and over 65 acres of park land was given the city.

While city officials are greatly pleased with results of the program, developers have mixed feelings. Developers found time consumed in processing was long, savings in improvement costs were not as great as was expected, townhouses did not sell as well as hoped, and some thought the city tried to solve too many problems at the expense of the developer. When pushed too hard, the developers retreated to the routine processing of an ordinary subdivision map, convinced that there were too few advantages in PUD.

Fremont has, however, been a proving ground for PUD. The short-comings experienced by builders can be overcome. In some cities, for example, PUD provisions offer the developer an inducement by permitting the maximum population density to be increased by not more than 10% on a site of 20 acres or more. Other limitations may be overcome by ordinance and policy statements.

Milpitas took another approach

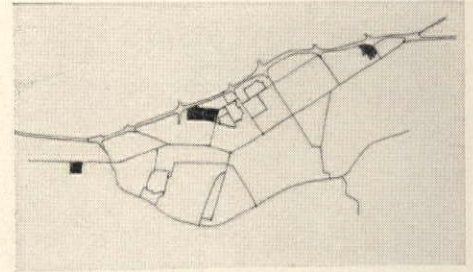
The city of Milpitas, Calif., wanted to stop its urban sprawl, virtually the only type of development it had seen. To encourage a comprehensive planning approach to the 520-acre Murphy Ranch, the city adopted this policy statement:

1. The property shall be developed for residential and related community uses: shopping centers, schools, parks.
2. Residential area shall include mixed housing types: one-family, townhouses, and apartments.
3. Total dwelling units of all types shall not exceed 3,300.
4. Owners and/or developers shall dedicate for parks one acre for each ten gross acres used for residential use.
5. Elementary school sites shall be provided to accommodate anticipated school enrollment at full development. An intermediate school site shall be provided.
6. Major streets shall be provided in alignments to serve through traffic and such local traffic as may reasonably be assigned.
7. All major streets shall have a 90° right-of-way and meet accepted city standards.
8. Park land shall be in a substantial parcel and not fragmented so that it can be developed as a community or city-wide facility.

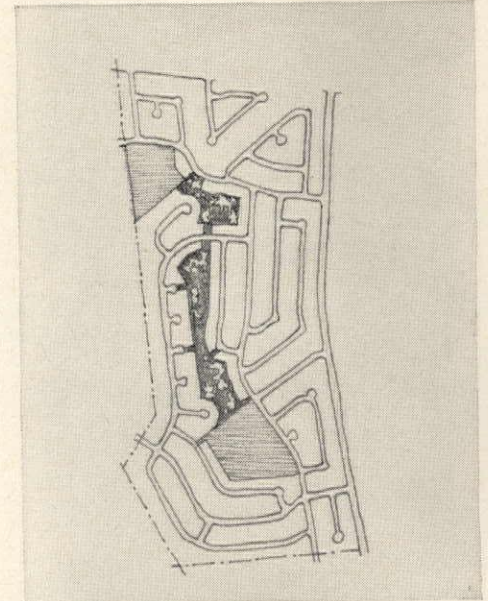
The 3,300 dwelling-unit provision involved a 50% increase over the 2,200 provided by an earlier plan. The city was willing to increase the density providing the schools were not over-taxed and providing that the park was big enough to serve the entire city.

The thinking of Milpitas city officials has been influenced by a significant shift throughout all of Santa Clara County (in which Milpitas is located) from a demand for single-family residences to a demand for apartments. In 1961, of all housing in the county, over 46% was in multi-family units.

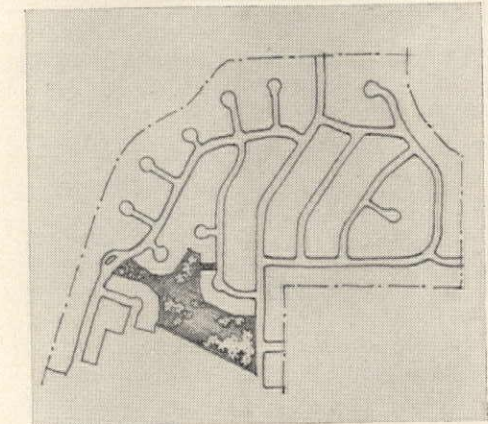
Milpitas zoning ordinances now provide for PUD. The city council has gone one step farther and established guide lines for development by a resolution of policy. Milpitas is ready to encourage PUD, hopeful that such new planning will improve residential environment and ease the overloaded schools by attracting apartment families not having as many school-age children as families in detached houses.



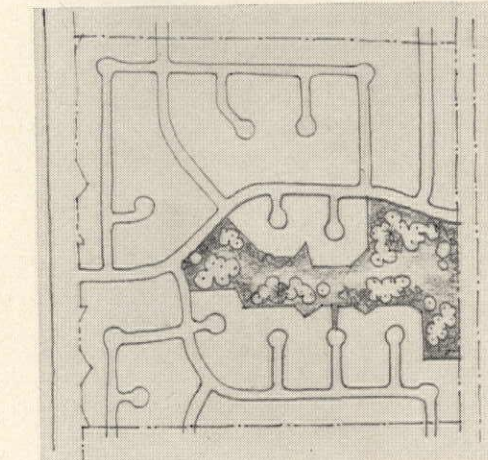
Fremont map shows location of the first of some 15 PUD subdivisions that have been approved. Details of three typical plans are shown below.



Greenbelt park is continuous between two schools.

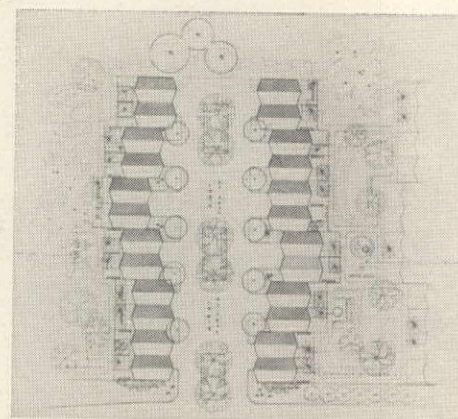
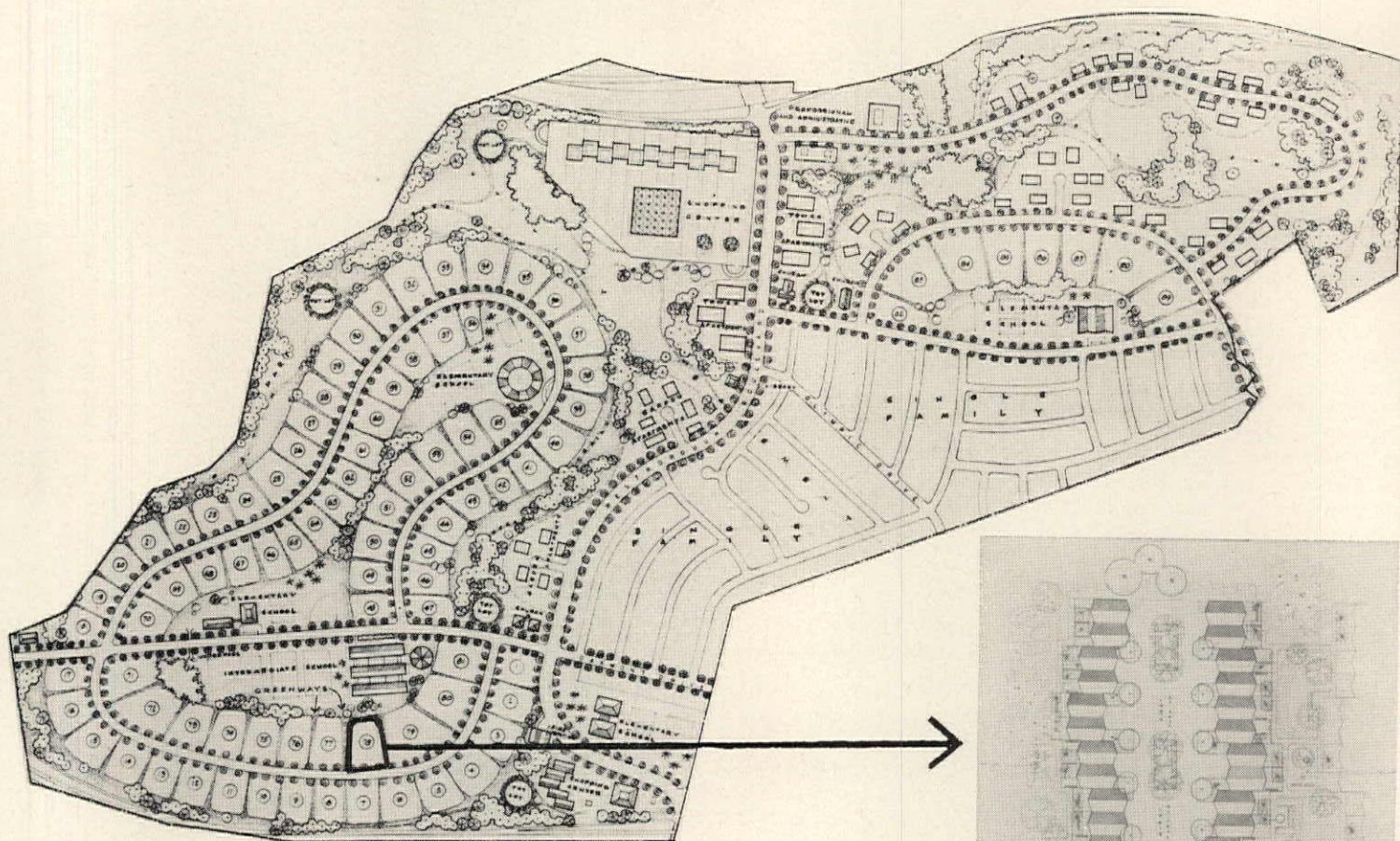


Cul-de-sacs and 5.3-acre park are amenities here.



68-acre site has 9-acre park given by builder.

continued



Basic site plan by planner Herman Ruth and Sasaki & Walker for Westborough suggested townhouse groups as above. Revised group plan by Architect Edward Fickett is shown opposite.

A case study in planned unit development: Westborough Homes

This \$125-million community, now being developed by Mike Callan and Bert Williams just south of San Francisco, embodies the principles of PUD. It will have all the amenities described earlier and should be an unusually pleasant place to live for the 15,000 to 18,000 people who, in the next few years, will call it home.

Throughout the 660 acres of rolling land there will be 124 green acres for young and old to walk and play in. Children will walk safely to school on park paths separated from auto traffic, and the limited-access street layout will protect residents from the nuisance of traffic.

Perhaps the most significant aspects of the community will be its visual change of pace. The rough hill-and-canyon terrain (a major problem for the planners) will be preserved as a community asset: It will provide interesting views from almost every part of the site. But visual interest will also be created by the construction of many different kinds of buildings.

Instead of long rows of one type of house, Westborough will have a variety of dwelling types which will attract families of different sizes, ages, and incomes and thus avoid social monotony as well as visual monotony. There will be some 735

detached one-family houses (of which the first 450 have already been sold) priced at \$24,000 to \$28,000. But more of the dwelling units (2,000) will be in clusters of townhouses around cul-de-sacs or loops (details opposite), occupying about 25% of the land. These clusters of 25 to 50 houses are to be built on land of 10% grade in any direction and will be arranged around small courts which will open onto separating greenways which, in turn, will connect with the larger interior parks. (San Mateo County's Service District is empowered to receive the dedication of such park land and to improve and maintain it.)

Garden apartments will be located in three different parts of the site—each surrounded by park land. They will not be more than three stories tall and will probably have basement garages. All together, the 1,500 to 1,945 garden apartment units will occupy 7.4% of the land.

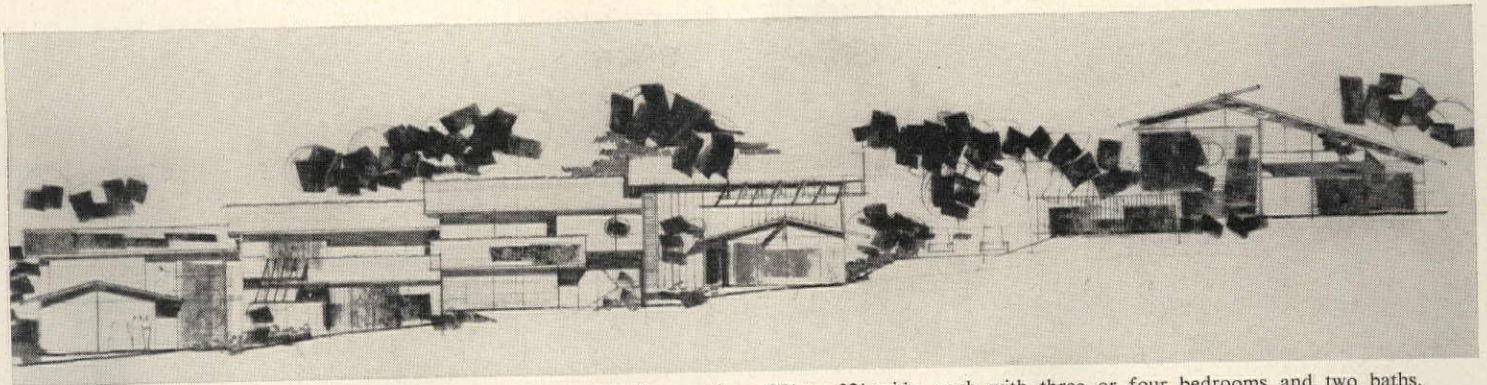
Several tower apartments, varying in height from 10 to 12 stories (and perhaps going up to 20 stories) will serve as beacons for the community by day and night. They will occupy 9.6 acres near the shopping center and will accommodate from 400 to 1,000 families.

Despite this concentration, the density of Westborough's 4,600—5,840 dwelling units of all kinds will be only 13 to 17 units per gross residential acre.

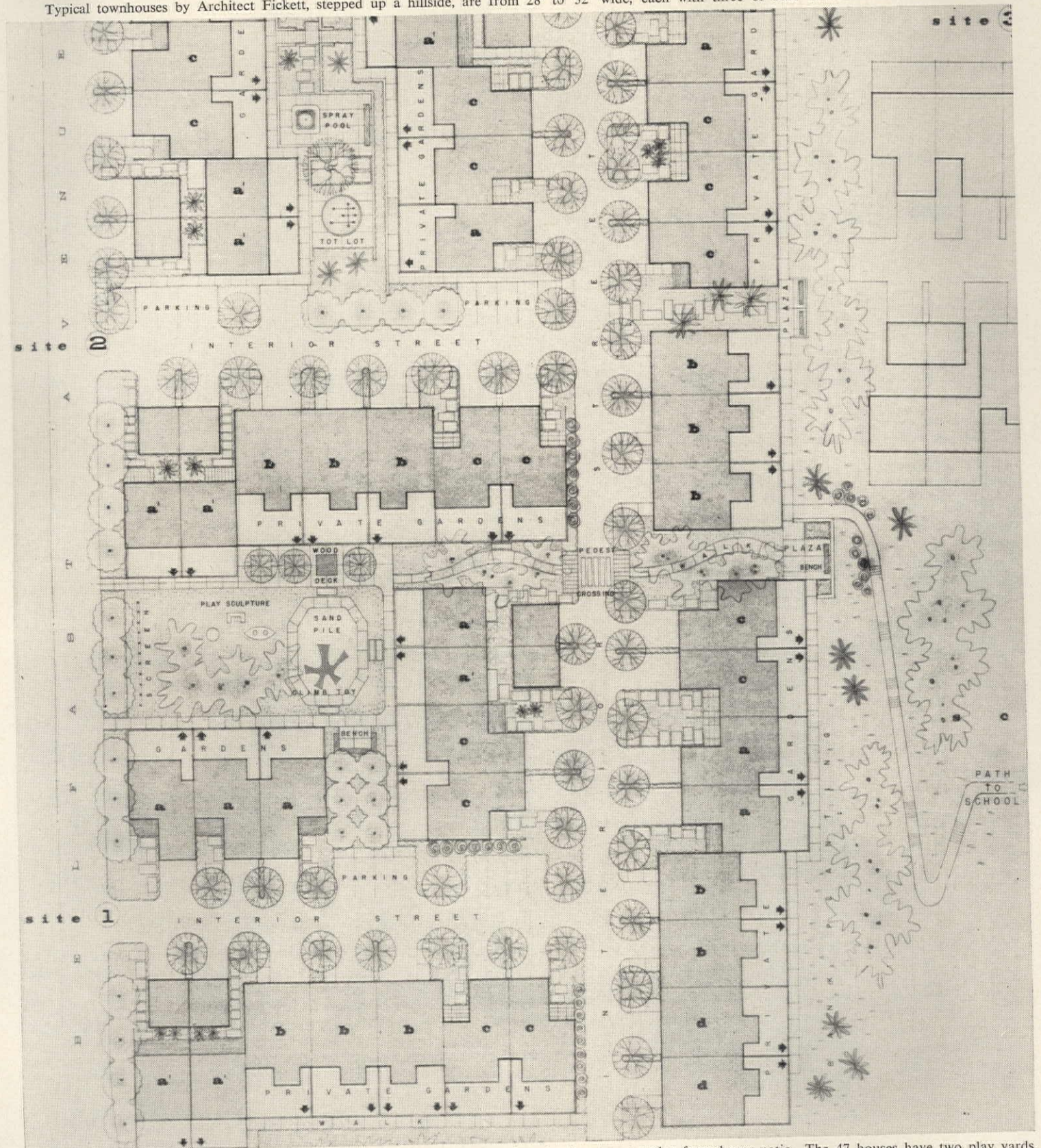
Provision has also been made for non-residential building in Westborough. There will be five schools, each in the midst of ample playgrounds, four churches, a library, a fire station, and nine acres for office buildings. As the result of a market survey, there will also be a large, regional shopping center at the north of the tract (to serve all of Northern San Mateo County) and a small center at the south.

Because Westborough is planned as a complete, almost self-sufficient community—rather than as a typical subdivision of one-family houses—and because the plan meets the county requirements as well as those of the four adjacent towns, it could some day be annexed by one of them or incorporated as a separate city.

Although Westborough will be five to ten years in the building, even now—on paper—it demonstrates the opportunities which PUD offers to developer-builders, homeowners, lenders, and municipalities in the creation of improved residential livability and greater amenities for all segments of the population.



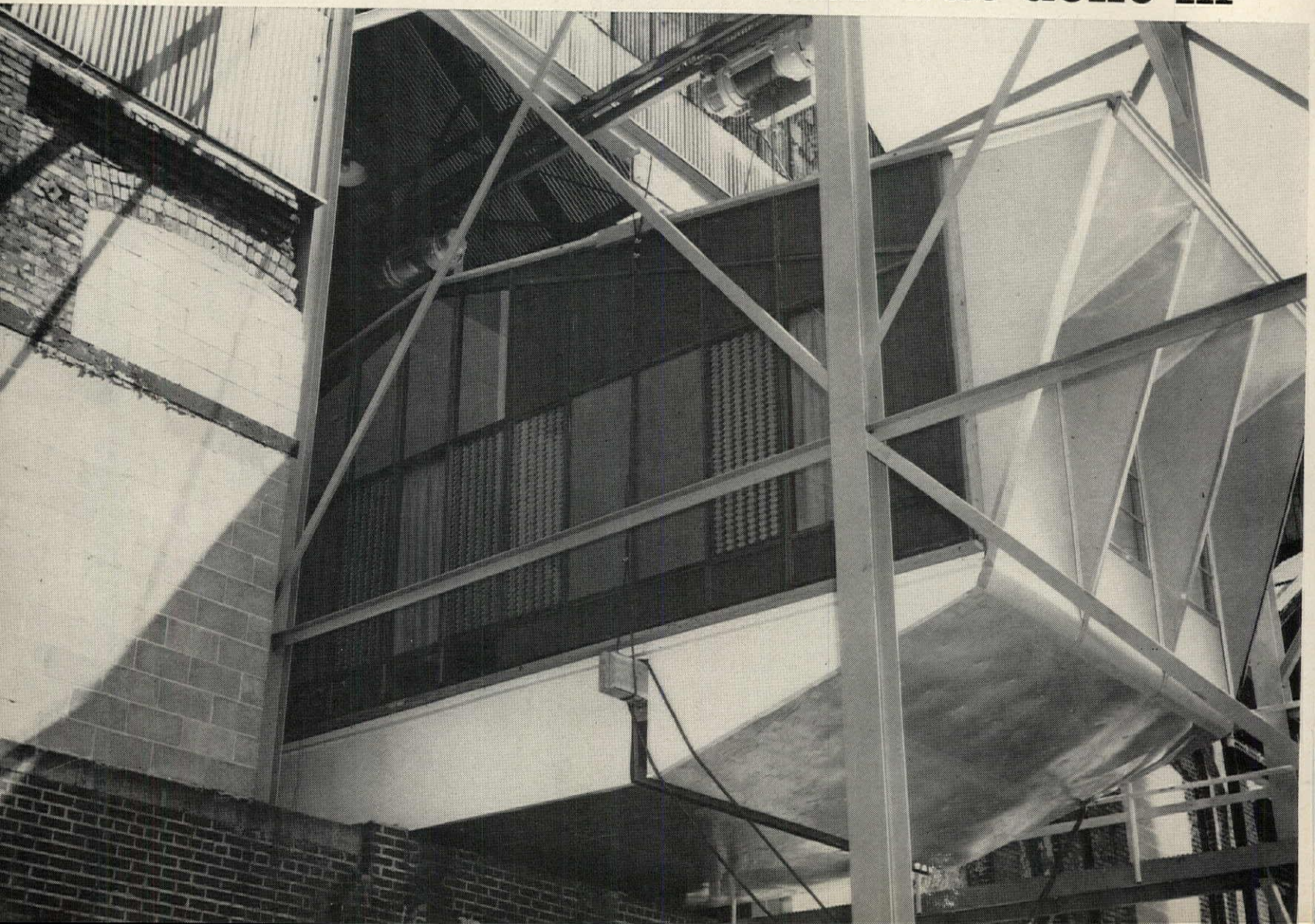
Typical townhouses by Architect Fickett, stepped up a hillside, are from 28' to 32' wide, each with three or four bedrooms and two baths.

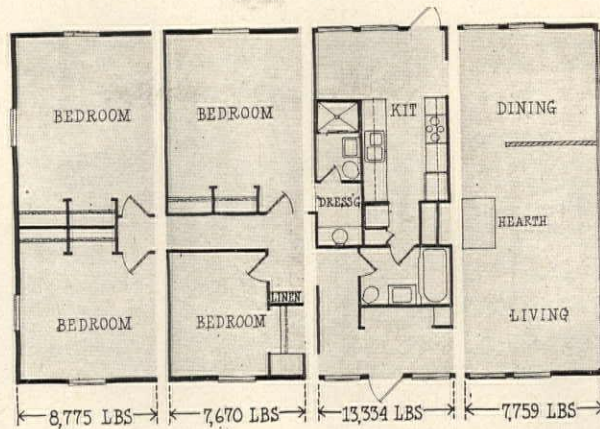


Group of townhouses is served by landscaped interior streets. Each house has double garage and a fenced rear patio. The 47 houses have two play yards.



90% of all labor in this house was done in





This house, by Builder-designer John Slayter, of Newark, Ohio, may be the most useful experiment in prefabrication ever made. Slayter's objective was to cut field labor, including site preparation and foundation, to less than 10% of total labor. This meant that the floor system had to become an integral part of the house, and the foundation—designed for any site—had to require no site preparation other than digging (or drilling in frozen ground) for footings for precast piers.

The final design, called the X-1, is a space frame—a house enclosed within a three-dimensional truss that sits on two steel rails balanced on four piers.

The X-1 was finished in four sections and assembled in Slayter's plant—Building Components Research, Inc—before it was disassembled to be hauled to the site. Each section measures 12'x30' inside (1,440 sq ft house) and is 36'6" long outside, including overhang. All mechanical elements—even the hi-fi—are in one section (see plan). Kitchen and baths are inside rooms, so don't use premium outside wall space.

Because the mechanicals are all in one section and the sections are transverse, the house is one of the first truly expandable houses. It has no longitudinal limit. It can expand to any length just by adding more living or mechanical sections on new piers and rails.

The four sections (see plan) are held together against 1/2" foamed-plastic gaskets with ten longitudinal cables spaced around the house circumference. Each cable is tensioned to 1,600 lb. They are spring-loaded (see p 134) to let house contract or expand with the weather.

The space frame is also engineered to take stresses imposed by over-the-road hauling. Each section is slightly flexible, and at no point is an interior partition rigidly connected to the frame. Partitions ride in channels connected to the frame. This allows the frame to deflect without transmitting any stress to the partition. All inside faces of exterior walls are prefinished plywood that can flex with the frame. In final position the frame takes all wind and dead loads without interior partitions acting as bracing. Fullest deflection is 1" at roof peak. Roof design load is 55 lb per sq ft, floor design load is 45 lb (see details, p 134).

The house is all-electric, heated and cooled by a heat pump, and heavily insulated. Heat that might be lost to the outside from kitchen and bath exhaust systems is returned by ducting exhaust air past the heat pump's evaporator coil before venting it outside.

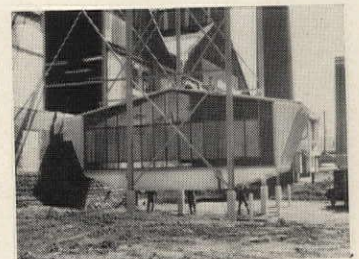
How much would the X-1 cost? Slayter says that if he were producing one a day right now and with no more improvements, the X-1 would be 25% cheaper than a conventional house with the same floor plan and equipment. He got the comparison from bids by local builders on the same plan and equipment.

The X-1 will undergo a year's testing before being sold. Slayter does not expect to market it. But he is working on the X-2, a steel space-frame house. It will have a conventional appearance because welded steel makes possible a flush wall in a space frame. Plans call for a price of \$8,000 (for 1,080 sq ft) at the plant—and perhaps for delivery by helicopter.

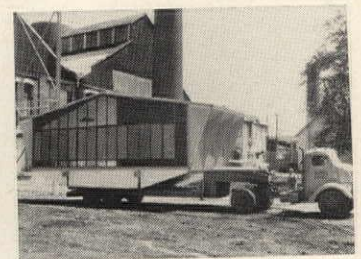


MODEL of one section shows how house will "float" on two steel rails at the site. Trusses 4' oc span 30', are framed with 2x4s, metal gussets.

the factory



SECTION, completely finished, is swung out of plant on crane.



LOW-BOY TRAILER, with section lashed on, keeps load height down.



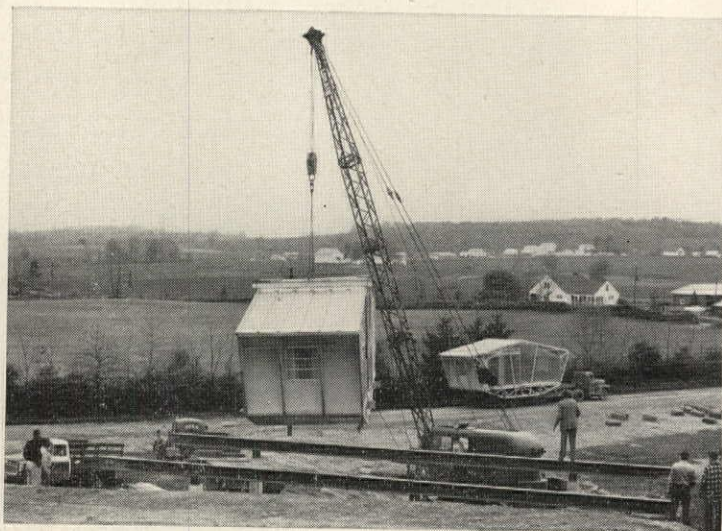
ENROUTE: Section is designed to stand road bumps on way to site.

continued

At the site factory-finished sections are assembled in one day



1 Tractor helps trailer back up slope to put first section in position for crane. Difficult sites would call for a tractor tow like this.



2 Mobile crane, rented at \$20 per hr, picks up section with slings on I-beam lifting yokes. Two I-beam rails will carry house on four piers.



5 Ready for joining, first unit has had lifting beams cut off flush and polyethylene stripped off. Air supply duct is over bedroom hallway.



6 Gaskets to keep weather out when house expands and contracts are placed around trusses before one section is jacked against another.



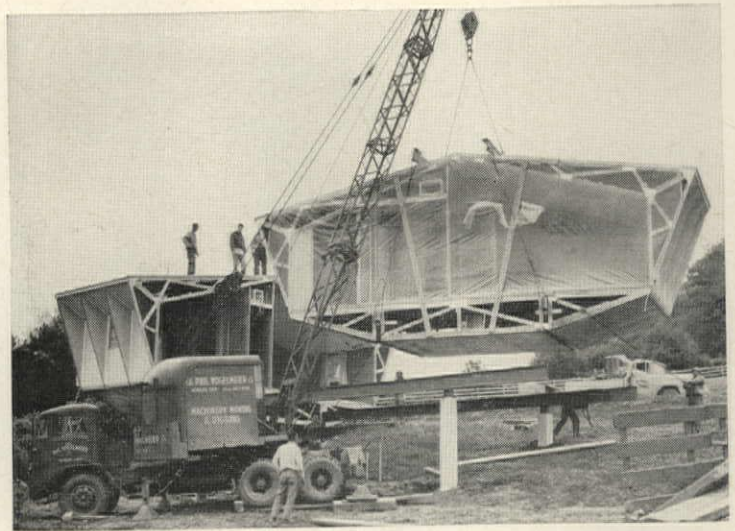
9 Cap strips of aluminum cover gasketed joints between sections after ten cable ties have been tensioned to 1,600 lb apiece.



10 Power hookup between sections is made with a twist lock plug. Underground service in conduit enters belly of mechanical section.



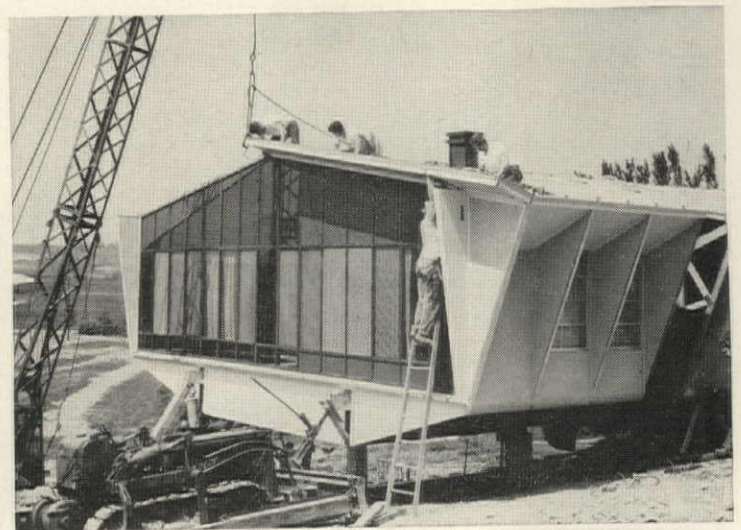
3 Positioning first unit must be exact so next one can be jacked against it. Lifting beams, two 2x8s, are cut off flush, become part of house.



4 Next section is swung in position. Prefinished interior is protected from weather by plastic film. Entire belly of house is return air plenum.



7 Last section is swung into place, and major part of field work is done. Power is now on, and cables to tie sections together are being placed.



8 Overhangs and corner pieces being set here are box beams that will distribute the load of cables that tie house sections together.



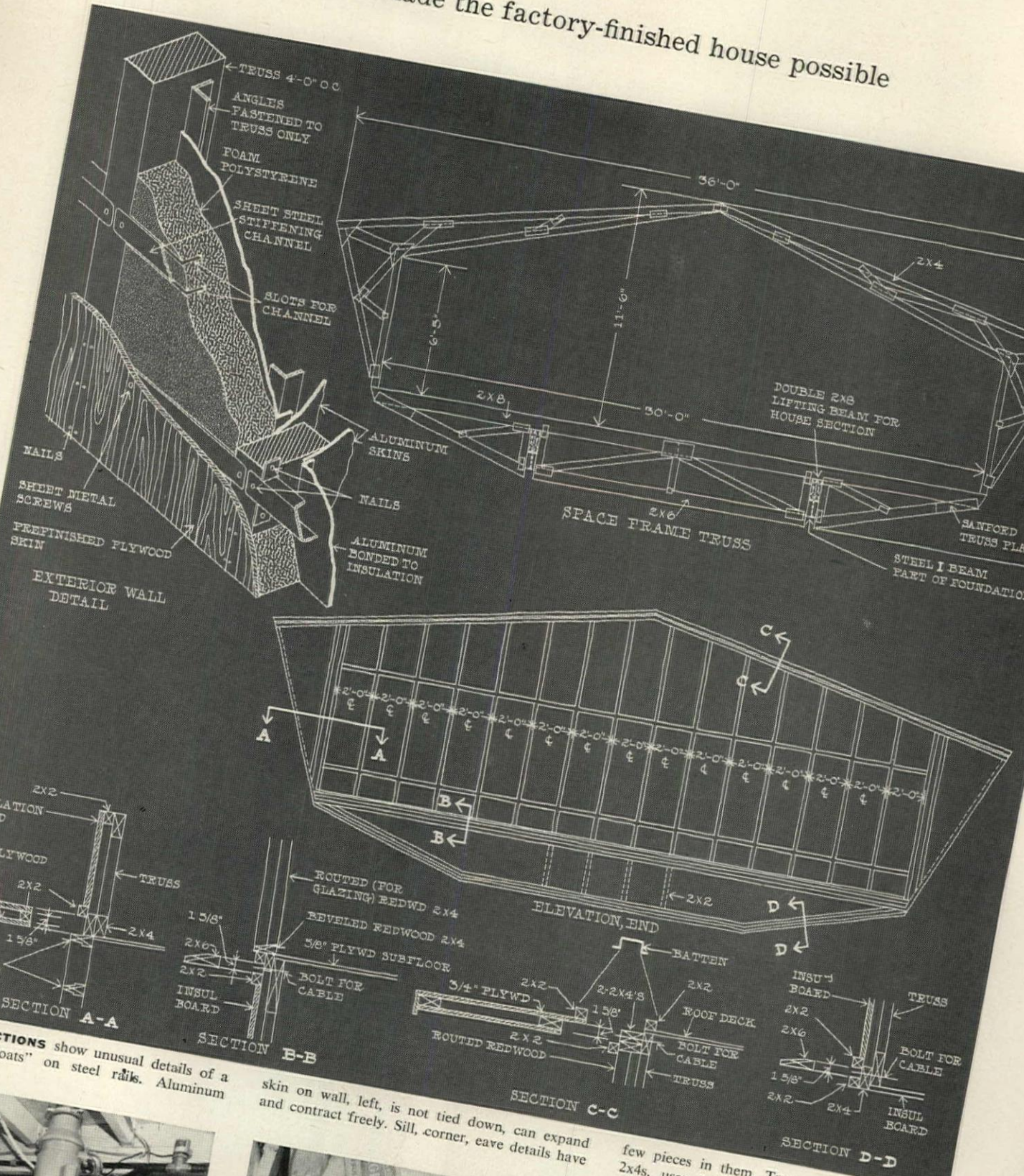
11 Fireplace is finishing touch. Steel tiles reflect heat, and flue heat exchanger ties into central system to boost warm-air supply.



12 Finished house seems to float on hillside. Except for acrylic and hardboard panels on end wall, unglazed exterior is all aluminum.

continued

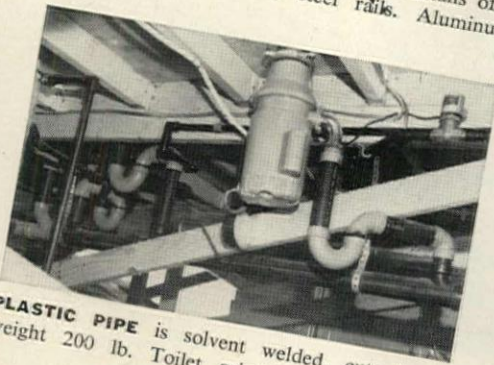
New technical details made the factory-finished house possible



FRAMING SECTIONS show unusual details of a house that "floats" on steel rails. Aluminum

skin on wall, left, is not tied down, can expand and contract freely. Sill, corner, eave details have

few pieces in them. Truss, top, a 30' span with 2x4s, uses 2x8s and 2x6s only in floor.



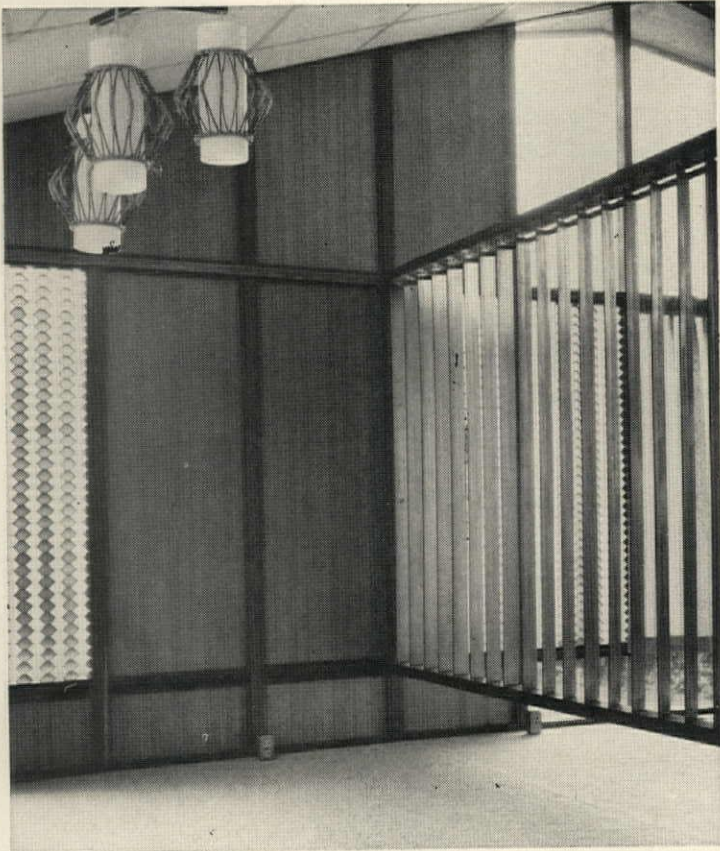
PLASTIC PIPE is solvent welded, cuts house weight 200 lb. Toilet grinder has 1 1/2" pipe.



HOUSE TIES—ten spring-connected cables—let house expand, contract under 16,000-lb loading.



PLASTIC DOMES daylight kitchen and baths. Caps cover seams of 2'-wide aluminum roofing.



DINING ROOM has prefinished plywood paneling, translucent acrylic glazing. Ceiling is 2'x2' vinyl-faced acoustic panels in suspended aluminum grid.



BEDROOM has prefinished paneling throughout. Master bath, left, is only 4' wide—tankless grinder toilet placed in corner makes narrow width work.

These are prefinished interiors—photographed at the factory



KITCHEN has luminous ceiling panels in aluminum grid. Skylights (opposite) daylight ceiling. Bathroom wall, right rear, is prefinished hardboard.



LAUNDRY is off bedroom hall. Bathrooms (hall bath, rear) have a single dial control for tub, shower, basin faucets. Vanities are molded plastic.

What price overhead?

Does higher overhead mean lower profits? Most knowing builders argue just the opposite: You've got to spend money to make money.

"We have the biggest overhead in the housing industry, and that's why we make the highest profit. . . ."

"The builder with a 2% overhead isn't going anywhere. We have overhead of 11% of sales price, and with it we employ 70 people to help drive down costs, improve product, and increase profit. . . ."

"We in housing are babes in the woods about overhead. We have no conception of how much it must grow. Within five years it will be double what it is now. . . ."

Collected by HOUSE & HOME during conversations with 30 leading builders last month, these comments reflect the industry's growing concern with the understanding and proper use of overhead— one of the most mis-used words in the builder's vocabulary.

Actually, overhead is everything spent on building a house except the cost of labor, materials, land, and land development. It includes staff salaries, sales and advertising expenses, interest and mortgage-discount money, insurance, the cost or rental of office machinery and construction equipment, taxes, depreciation, design fees, office expenses, etc.—"period expenses," as accountants say.

Cost Expert C. J. Lewis of Wright Assocs, New York management consultants, puts it another way: "Overhead," he says, "is money paid out solely on the basis of the passage of time."

Builders themselves rarely agree on a definition. For example: Some of them budget selling expenses, construction supervision, and small tools as overhead while others budget these items as direct costs. This is one reason why overhead as a percentage of gross dollar volume varies widely among builders (chart opposite).

However it's defined, overhead is becoming an increasingly important item in builders' budgets and an increasingly frequent topic of discussion.

Today's aroused interest in overhead is a reflection of changing market and management conditions

- It reflects the growing maturity of the housing professional. Says Managing Consultant Lewis: "Interest is swinging away from direct materials and labor costs toward indirect overhead costs because mature housing managers are learning about all the benefits to be derived from analyzing and controlling these indirect costs."

- It reflects the rising proportion of indirect to direct costs. Indirect costs are being boosted by the need for harder and more skillful selling, more and better advertising, more management personnel to supervise multi-location operations, more specialists, and more business controls. Meanwhile, increased supervision and tighter control, plus better methods and materials, are reducing direct costs. Says Builder Ed Bennett of Bethesda, Md.: "Many builders have fried most of the fat out of their direct costs and must now put their indirect costs on the fire."

- It reflects management's current emphasis on more field supervision. Says Bob Schmertz, fast growing New Jersey builder: "The TAMAP findings (see p 110) so impressed us with the effect

of overhead supervision on reducing direct labor cost that we immediately increased our supervision."

- It reflects the leveling off of the housing boom. Says Jacksonville Builder Paul Lazeau of Meyers & Lazeau: "Single-family housing starts have been fairly constant in the last few years, so we know that we can only expand our business at the expense of the competition. In this kind of a market, we must be on constant guard against unwarranted or excessive overhead spending."

- It reflects the grow-or-die philosophy of many of today's tough-minded builders, like Howard Binkow of Rose-Hill Builders, Detroit, who builds in seven different Michigan cities: "Today you either spread out or get wiped out. The only way you can spread out is to hire more good people, and they cost money."

Many builders admit they are confused about overhead. Their confusion is largely the result of their past concentration on direct labor and materials costs. Since they don't get bills for overhead the way they get bills for 2x4s, they seldom know what their indirect costs are. For example: The builder hauling cement, hardware, or millwork on a truck often forgets that depreciation charges on his truck, plus the cost of gas, oil, and repairs, are part of his building cost. And often he doesn't know how or where to charge off these indirect costs to his business.

Other builders are afraid to examine their overhead. Says Lewis: "Decisions about overhead are solely management's prerogative. But many builders may not wish to examine overhead too closely, because in doing so they would be challenging their own decisions as owners and chief executives of their companies. What they must understand clearly is this: Manufacturers, suppliers, subcontractors, trade associations and labor unions, as well as they themselves, tend to drive direct costs up or down. On balance, most of these groups tend to cut direct costs by the introduction of new methods, new materials, and new machinery. But management alone is left to drive down its indirect or overhead costs."

Before setting out to cut their indirect costs, builders should understand three basic facts about overhead

1. High overhead is not necessarily bad. But it must be soundly proportionate to direct costs. Generally speaking, as volume grows, overhead grows. Increased overhead becomes burdensome only when it is accompanied by inefficiency, lack of planning, empire building, lack of direction (from no clearly defined lines of responsibility and authority), and lack of delegation.

"Although many builders refuse to believe it," says Joe Vohlers of V&L Construction Co in Columbus, "there is a point where increasing overhead begins to make money. And, of course, at a certain volume, overhead [as a percentage of sales price] gets cheaper." V & L builds about 600 houses a year in Columbus, also frames 600 houses for other builders.

A builder who is organized to build 300 houses a year but manages to sell 600 is in the fortunate position of making a profit on 300 additional houses without adding to his fixed overhead. Three

case for increasing overhead after—or simultaneously with—increased volume: “If we increase our volume, we expect to increase our overhead. But if our overhead increases without volume, that’s stupidity.”

In actual practice, of course, many a builder plays it safe by overworking his existing staff to increase volume and then adding more staff when the pressure gets too high.

Unhappily, many builders with dreams of expansion have been unable to build and sell enough houses to justify their investment in increased overhead. “The builder who takes a blood bath today is the builder who fails to keep on top of his indirect costs or fails to budget them properly,” says Ed Bennett. On the other hand, Builder Leon Panitz of Panitz Bros in Baltimore points out: “If a builder takes the trouble to forecast his market accurately, he can set a sales price that is commensurate with that volume and estimate how much overhead he will need to get the job done.” He cites the case of his 3,000-house Joppatowne community which got off to a good start this summer (H&H Aug): “We based our profit margin on a projection of 500 sales this year. Our overhead charges will be about \$600 a house. Contrast this with a builder who does only ten houses with a \$10,000 overhead [which he thinks is low]. He’s spending almost twice what we spend on overhead. Builders must realize that they can increase profits tremendously if they can go beyond their projected volume without increasing their overhead.”

The two most effective ways to control overhead are to retain people and to lease equipment

When a builder sees the prospect of increasing his volume substantially in the near future, Consultant Lewis advises him to determine how much volume he can reasonably forecast and how long it might last: “Only then can he determine if it is wise to ‘rent’ people and equipment on a fee basis or to ‘buy’ them, ie, put them on his payroll. And, of course, the relative cost of ‘renting’ vs ‘buying’ will affect his decision. By retaining people instead of hiring them outright, the builder keeps from committing himself too far into the future.”

Undercapitalized builders (and few will admit that they are not) will often find it wise to analyze the acquisition of office machines, trucks, and earth-moving equipment the same way. Whether builders buy or lease, they increase their overhead. If they buy, their overhead is increased by the yearly depreciation they are allowed on the equipment. If they lease, their overhead is increased by the annual charge for the equipment. So the decision to buy is determined, not by considering overhead, but by considering the best use of capital.

What are the most important staff additions for the builder who wants to grow?

According to H&H’s survey of 30 builders who increased their staffs, architects (designers and draftsmen included) and production or construction vice presidents (chief superintendents and field supervisors included) were considered the most important men who were added to the payroll when the decision is made to expand.

Some builders now employ as many as three registered architects and several draftsmen, and others are in the process of setting up their own design departments. Addition of construction experts is an indication of the importance builders place on the hard-to-control direct costs of building, but, more than that, it is evidence of their willingness to replace themselves as construction experts in

the field. Observes Consultant Lewis: “Many builders today realize they can control direct materials and labor costs in the field by comparing construction costs and progress with estimates and schedules. They check deeply only when costs top estimates or when progress falls behind schedule. This frees them to perform other more important management functions like organizing, planning, motivating, and controlling.”

After architects and construction experts, administrative or operational executives (assistants to the president, junior executives, executive assistants, included) and marketing managers are the most frequent additions to staff overhead. Chief reason for the addition of operational executives is that more and more builders are expanding their operations into several different cities and finding they need help in running far-flung jobs. As for the marketing manager, a distinction is made between him and a sales manager. Duties of the marketing manager include supervising the sales manager and handling advertising, public relations, publicity, and promotion.

Next in line for hiring is a purchasing agent. One builder, who had broadened his price range and the type and number of his houses, considers his addition of an assistant purchasing agent as one of his most important recent decisions: “I don’t know how more money could go down the drain more quickly than if our chief purchasing agent were swamped by increased buying.”

Several expanding builders agreed that an engineer was also an important addition to their staffs, and one builder has hired an industrial engineer to help set up shop-fabrication of components. Accountants and sales managers were seldom mentioned—probably because most big builders have employed accountants and sales managers for many years.

Advice to expansion-minded small builders: Retain specialists on fees instead of adding them to your payroll

The advice comes from big builders who point out that until a builder reaches sufficient volume, he cannot afford the services of a full-time specialist. Some suggest that the small builder try to get an all-round man who can wear several hats, but all agree that such men are hard to find.

Perhaps the classic example of a builder who retained specialists to do all his work is Bethesda’s Bennett whose annual output has grown from six to 100 houses in five years. Bennett retained architects, accountants, land planners, interior designers, landscape architects, and engineers until his capital and volume allowed him to hire some full-time executive help.

Tacitly admitting their own early weaknesses, big builders almost invariably suggest that an accountant be the first man to be retained or hired. Says Vern Donnay, biggest Minneapolis builder: “Don’t waste time. Hire a sharp CPA who wants to get away from routine work.” Says Harvey Furgatch of American Housing Guild, which builds in San Diego, San Francisco, and Los Angeles: “Don’t even bother to retain an accountant; hire one outright.”

The fear of losing control of costs haunts all builders. Most of them are confident of controlling their direct labor and materials costs because these costs are directly related to producing houses, at which most builders believe they are experts. Many overhead costs, on the other hand, are incurred to produce sales, which are not always predicted with great accuracy. When sales volume fails to materialize as anticipated, many builders make less profit per house. Builders with the biggest profit margins are learning to control their overhead as skillfully as they control their direct costs.

—EDWARD BIRKNER

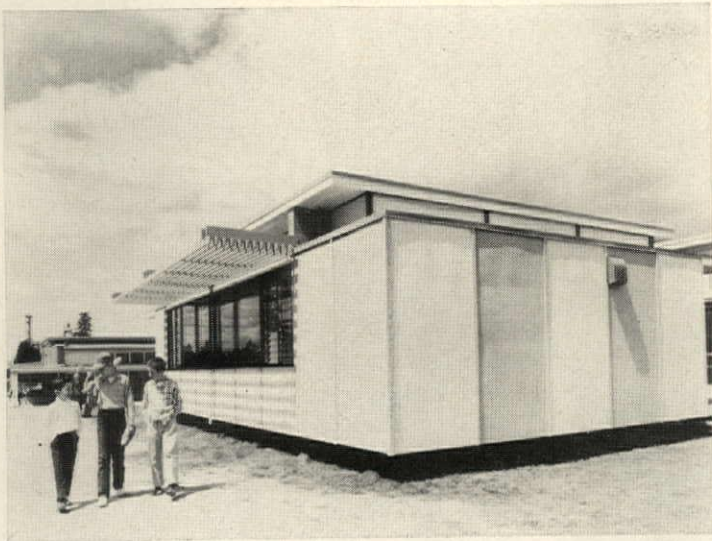
HOUSE & HOME thanks the following 30 builders who contributed their time, advice, and ideas to this story:

Edmund J. Bennett, Bethesda, Md.
Howard Binkow, Detroit
Vern Donnay, Minneapolis
Edward and John Fischer, St Louis
Gene Fisher, Miami
Robert Fox, Plymouth Meeting, Pa.

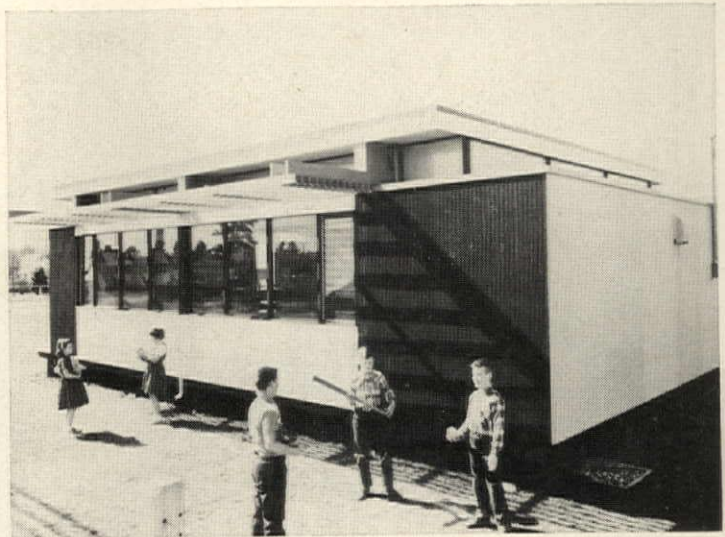
Harvey Furgatch, San Diego
Donald L. Huber, Dayton
John Klein, Portland
Paul Lazeau, Jacksonville
Harlan J. Lee, Los Angeles
Edward Lewis, Birmingham

Ray Murphy, Cincinnati
Leon Panitz, Baltimore
James Pearson, Minneapolis
Dave Perlmutter, Denver
Samuel Primack, Denver
Albert E. Riley, Chicago
Lawson Ridgway, Dallas
Edward M. Ryan, Pittsburgh
Herman Sarkowsky, Portland

Millard R. Seldin, Omaha
Robert Schmertz, Lakewood, N.J.
Robert Schmitt, Berea, Ohio.
Joseph F. Slavik, Oak Park, Mich.
James Strauss, Lincoln, Neb.
J. W. Underwood, Jackson, Miss.
William E. Witt, Virginia Beach
Joe Vohlers, Columbus
Robert W. Wood, Bountiful, Utah



COMPONENT SCHOOL is a portable unit made of stressed-skin panels.



CONVENTIONALLY BUILT SCHOOL, also a portable unit, is 40'x24'.

Identical buildings . . . but one was built twice as fast as the other

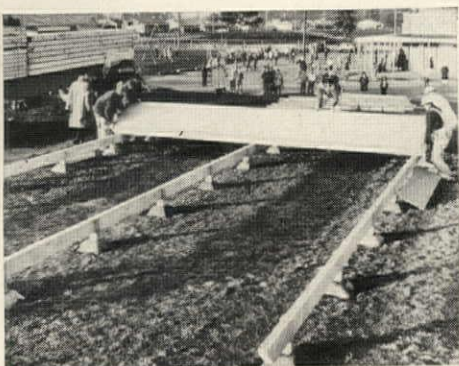
Built with components, the portable classroom at left was closed in in one day and finished in ten days or 13,231 man-minutes. Built conventionally, the classroom at right was closed in in six days and finished in 14 days or 20,885 man-minutes. Costs: \$7.35/sq ft for the component building, \$7.55/sq ft for the conventionally built one. So, though the cost dif-

ferential is relatively small, the demonstration—by the Douglas Fir Plywood Assn—is a clear case for components when time must be saved in the field.

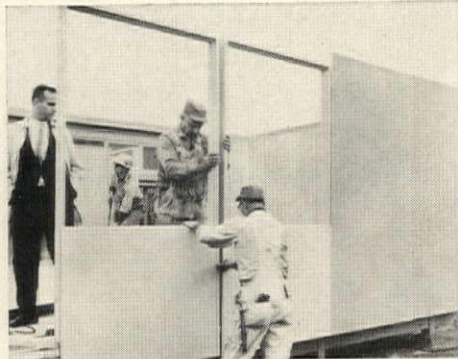
DFPA had time and motion studies made of both units and, to eliminate as many variables as possible, used the same crew—two mechanics and two helpers—on both. The portable buildings were built

this spring for Tacoma's Franklin Pierce School district, which needed classrooms fast and faced a choice of ordering units like these or tackling a major building program on a crash basis. Architect Robert Waring designed the classrooms. Horace J. Whitaker & Assocs, engineers made the time studies. The work crew was from Berrens Construction Co.

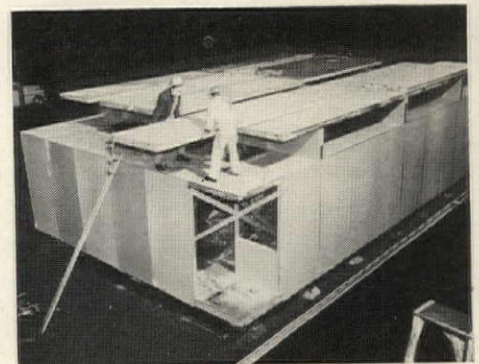
Component school house was closed in in one day



7 AM: Component building's 4'x24' floor panels with t&g joints are placed on doubled 2x8s on 1'-high concrete piers at 6' centers.



11 AM: Last of 4'x8' wall panels are placed. These window units are butt-jointed; solid panels are t&g. Plywood has Hypalon, epoxy finishes.



5 PM: Last of roof panels are placed over clerestory box beams. Joints between Hypalon finished panels are caulked with elastomer.

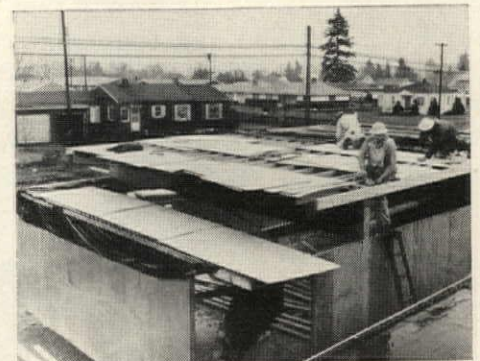
Conventionally built school house was closed in in six days



FIRST DAY: Conventionally built unit's plywood floor deck goes down in 35 minutes. Floor framing members 4' oc support 5/8" thick t&g deck.

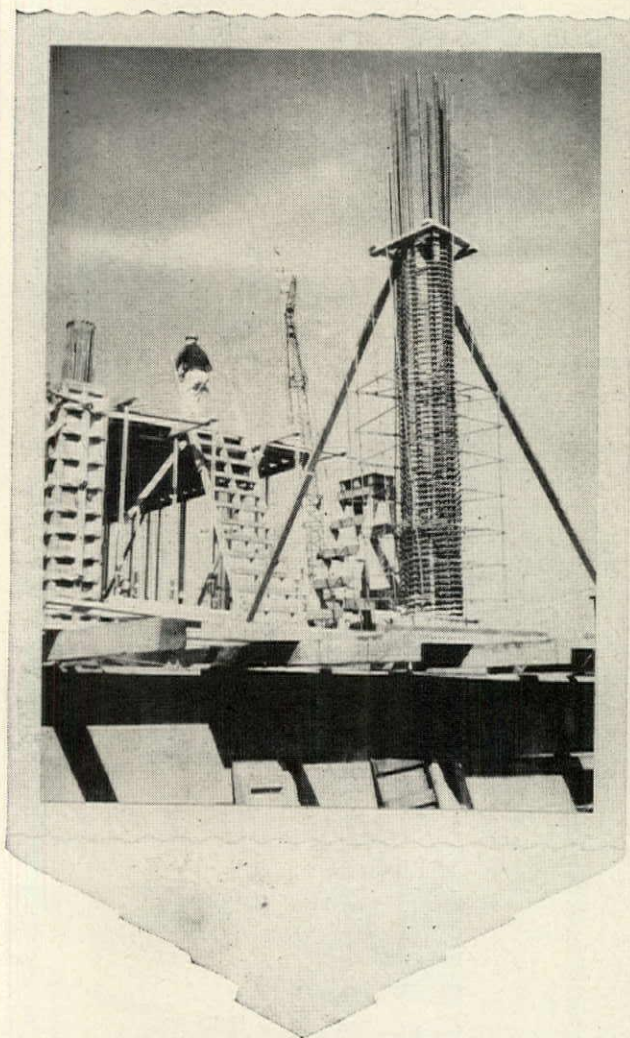


THIRD DAY: 2x4 wall framing assembled on floor deck is sided with textured plywood. Black polyethylene sheet protects deck from weather.



SIXTH DAY: Roof sheathing, 3/8" plywood, is nailed to 2x6s on 16" centers. Metal clips replace blocking at unsupported edges of sheathing.

Technology continued on p 145



WEEK



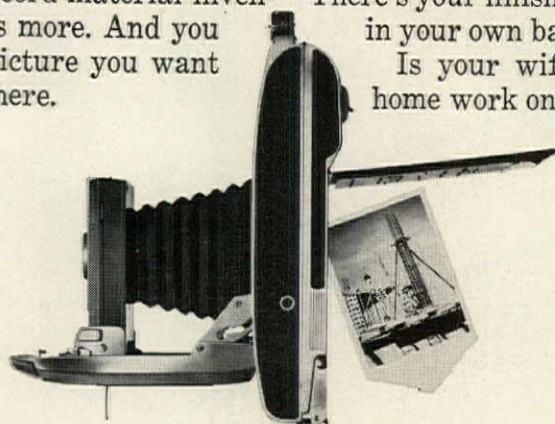
WEEK-END

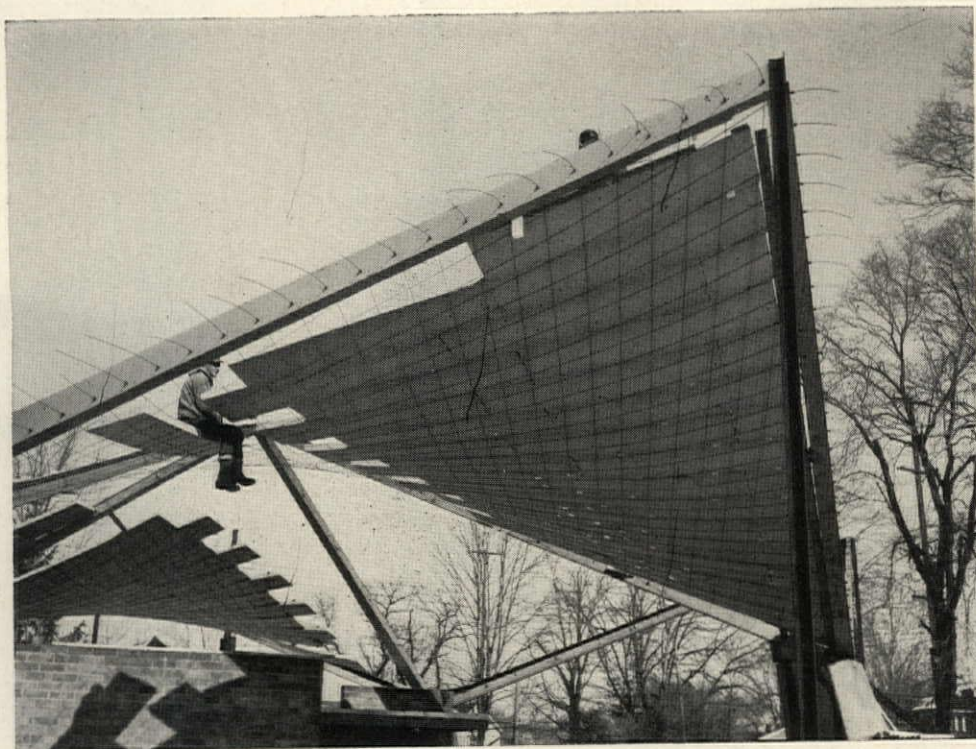
A Polaroid Land Camera is one business machine that's fun to take home Friday night.

Monday through Friday, a Polaroid Land Camera can save you time (and that's money) in your business. You can document construction progress in ten seconds . . . record material inventory on the job in ten seconds more. And you always know you have the picture you want because you see it then and there.

Comes the week-end, and you have a camera the whole family will enjoy. Push a button, pull a tab. Wait ten seconds and open the back of the camera. There's your finished picture, ready to enjoy, right in your own back yard.

Is your wife complaining that you bring home work on week-ends? Try one of these.





PRESTRESSING WIRES are locked to center beams and tensioned at edge beams.



REINFORCING is set on chairs on mortar screed.



FINISHED ROOF floats on its four supports.

Wire lattice and rigid insulation replace forms for concrete gas station

Over 60 tons of concrete were placed on 4,200 sq ft of wire-supported foam planks in the four-section hyperbolic paraboloid roof above.

The roof gets its unusual strength from its geometric shape. Built for a gas station in Midland, Mich., it went up like this: 1) Steel channels—the edges of the roof—were placed and braced; 2) a lower lattice of wires at 1' centers was threaded through the edge beams, tensioned to 600

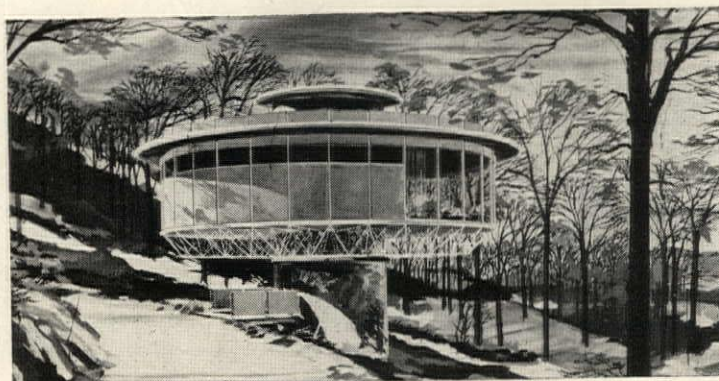
lb per wire, and locked to the beams with prestressing clamps; 3) planks of rigid foam insulation were placed and H-clipped edge-to-edge to help twist them into the roof's double curvature; 4) a top lattice of wires was installed at 2' centers and tensioned to 400 lb per wire to finish forming the curvature; 5) foam wedges were driven between the planks and edge beams to force the planks together; 6) a 1/2" crust of mortar was

placed to stiffen the shell while a crew set a grid of 3/8" reinforcing bars at 1' centers; 7) concrete was placed symmetrically on all four quadrants of the roof to prevent any undue shifting of its form.

The roof, designed by Architect Alden Dow, is the first commercial use of this building method engineered by Prof Joe Waling of Purdue's School of Civil Engineering (H&H, July '60). It was built by Branson Builders of Midland.

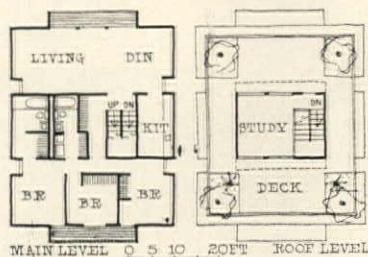


FIRST HOUSE will cantilever on steel floor beams, have a brick facade.



SECOND HOUSE will cantilever its round living area on exposed space frame.

These houses will cantilever from three-story cores that fit any site



PLAN of first house puts stairs, mechanicals, and study in three-level core (first level not shown).

The first of these faculty houses will go up on the University of Pittsburgh campus this fall, the second probably in the spring. If the faculty likes the homes, Pitt, assisted by Alcoa, will build perhaps 68 more like them over a five-year period.

Entry to the first house will be by foot bridge from the street. First level of the core will contain a hallway flanked by utility room, coat closet, and stairwell leading down to a small basement storage

room and up to the living area.

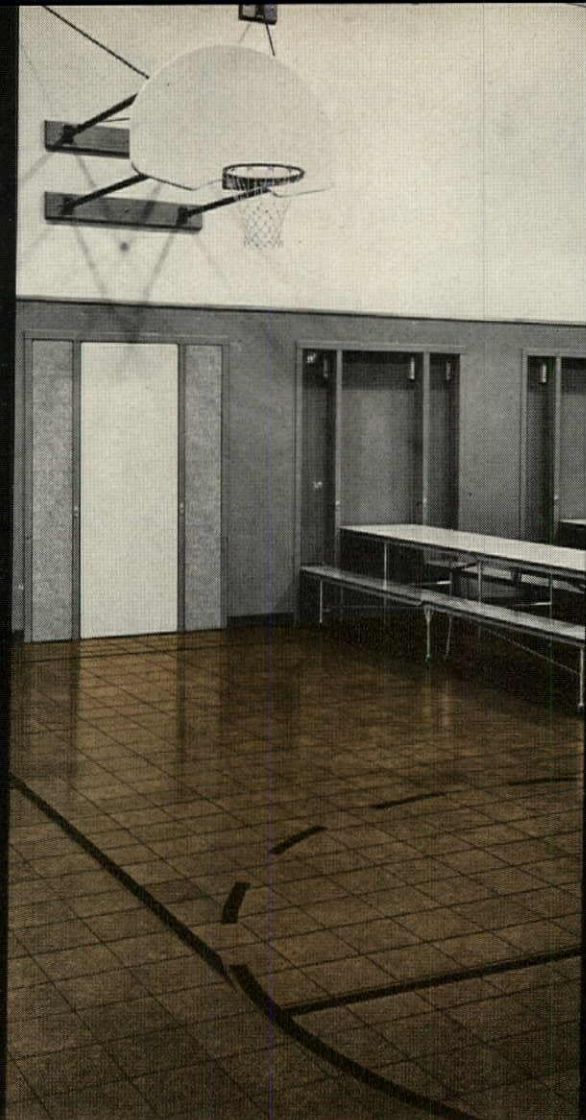
The house will be built of brick, steel, prestressed and precast concrete, and experimental sandwich wall panels with foam polystyrene cores, aluminum exterior skins, and plywood or drywall interior skins.

Pittsburgh Architects Deeter & Ritchey designed the houses with the University of Pittsburgh's architectural consultant, Max Abramovitz.

Technology continued on p 147



The congregation of this church chose Par-Tile for its rich warmth of texture, low initial cost, and because it isn't damaged by women's spike heels. Par-Tile is guaranteed for 15 years.



Forrest Par-Tile was used to hold the line on building cost in this school multi-purpose room. Par-Tile is not damaged by women's spike heels, kids boots, roller skates, heavy furniture. Will not check or splinter.



In this family room Forrest Par-Tile provides a warm, clean, durable floor for kids to play on. Par-Tile makes an excellent dance floor, too.

PROBLEM HOW TO HOLD THE LINE ON COST AND STILL PROVIDE A QUALITY WOOD-BLOCK FLOOR

SOLUTION SPECIFY **FORREST PAR-TILE*** WOOD-BLOCK FLOORING... IT'S BEAUTIFUL, YET COSTS ONLY ABOUT 40c PER FOOT, APPLIED



The pressure is on you every day to design a quality school or home or office building, but to **hold the line on cost**. You know, too, that, in nearly every instance, when quality is improved, cost jumps.

However, in the case of wood-block flooring this is not necessarily true. Forrest Par-Tile wood-block flooring is a quality product . . . yet it can be applied for approximately 40c per square foot. And—it is prefinished at the factory. No sanding or finishing on the job.

True, it lacks the conventional wood grain. But look at the advantages: • When applied, it is rich and warm. Really

beautiful • Par-Tile is uniform, smooth, harder than oak or maple. Women's spike heels, which ruin other floors, won't leave the slightest dent • Par-Tile is tongue and groove, forms one solid floor • Easy and fast to lay • Prefinished at the factory with twin coats of vinyl • **Par-Tile is guaranteed for 15 years** • Exceeds FHA requirements.

Par-Tile is proving successful in churches, schools, offices, bowling alleys, ballroom floors. In homes for family room, and party room, Par-Tile is perfect.

Builders tell us that Par-Tile in the family room, study, party room, make it much easier to sell "spec" homes.

OTHER FORREST FLOORING



FORREST
2BY-FLOR®

2' x 4' panels, 4 to a carton, nails included. Easy to handle. Easy to put down over old floor or on new construction.



FORREST
QUIK-FLOR®

4' x 4' panels for fast application over old floor. Goes down fast on new construction. Makes ideal new floor.



FORREST
RANSOM PLANK®

The same quality material as Forrest Par-Tile in plank width and random lengths. Tongue and groove. Simulated wood pegs optional.

For complete information, ask your floor covering or building material dealer, refer to A.I.A. File No. 19-E-92, or write to Forrest Industries, Inc., P. O. Box 78, Dillard, Ore.

*Pat. No. 3001902

FORREST
INDUSTRIES



FHA office lists common faults found by inspectors

San Antonio homebuilders, who wanted a guide to prepare for FHA inspections and to speed paperwork, recently asked C.P. MacLeod, local FHA director, what mistakes he found most often when inspecting houses. *The San Antonio Home Builder* printed this answer in its June issue.

Among common faults listed on the first inspection:

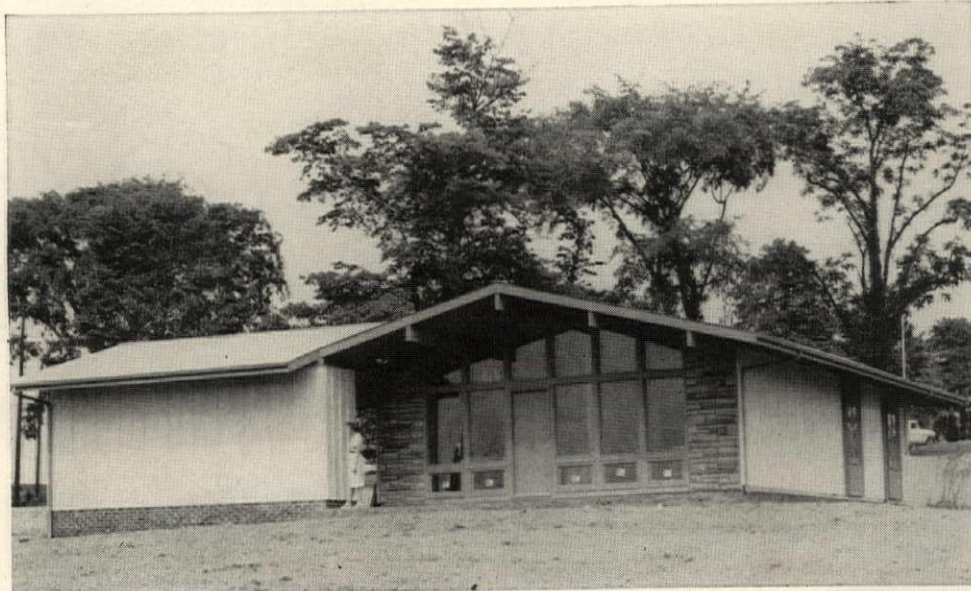
1. Top of slab form is set too low.
2. Interior beams (necessary in expandable soils) do not extend down into undisturbed soil.
3. Vapor barrier has holes and tears.
4. Stirrups and slab steel are improperly positioned.
5. Slab steel is inadequately spliced (it should be spliced 30 diameters or 15" minimum).
6. Copper tubing in slab contacts steel.

Second inspection:

1. Roof-gravel stop and other exposed galvanized sheet metal are not primed (they should be primed with zinc oxide).
2. Base flashing is improperly installed over edge of slab (when felt is omitted over sheathing, base flashing should lap up 6" behind sheathing).
3. Plywood roof sheathing at eave overhang is inferior.
4. Window sill flashing is made of two short pieces (it should be one piece).
5. Studs near kitchen sink are excessively notched for plumbing (they should be reinforced with 16-gauge strap).
6. Several studs are cut too short (all short studs should be replaced).
7. Bolts anchoring soie plate are too far from end of plate (they should be 12" from end).
8. Tub trap cut-out is not sealed against termites (seal should be poured hot asphalt).
9. Lead shower pan is coated on only one side (it should be asphalt-coated on both sides)
10. Return-air grill is too small.
11. Vapor barriers on ducts are not sealed at joints.
12. Electric convenience outlets at kitchen counter are not grounded (they should be grounding-type outlets).

Third inspection:

1. Topsoil is too thin in front yard (depth should be 4").
2. Lot is improperly graded.
3. Outside refrigeration piping for air conditioner is unprotected.
4. Lavatory is too close to side wall (center line of lavatory should be at least 15" from side wall).
5. Built-in appliances are not hooked up.



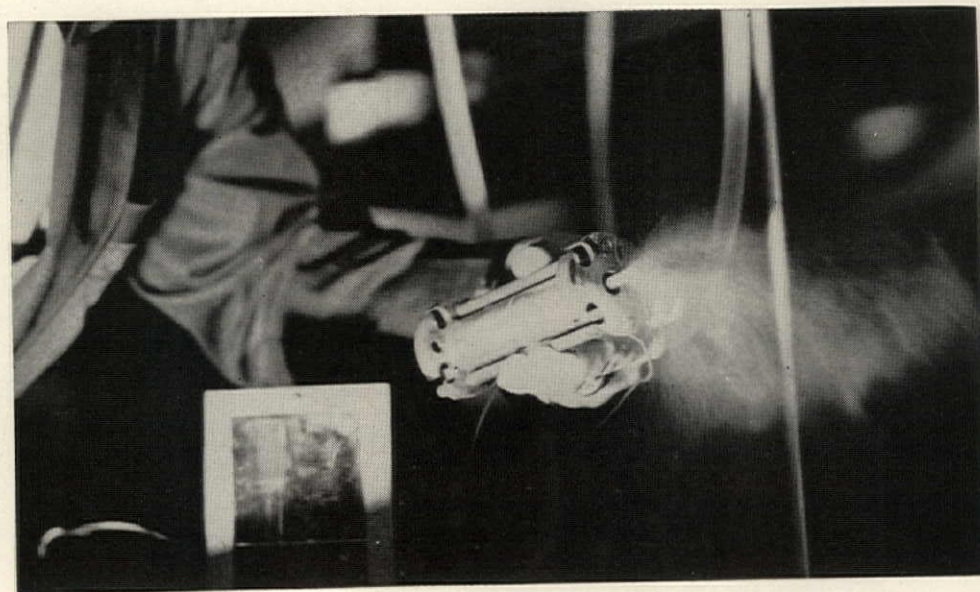
New porcelain-enamel wall is tight and trim

The wall of porcelain-enameled-steel sandwich panels in Ferro Corp's second research house (above) has two major improvements over a similar wall in Ferro's first research house (H&H, Sept '60):

1. A 1"x2" strip of fiberglass seals the joints between panels against air flow because it is squeezed down to 1/8" thickness when the panels are joined. In the first house, this space was left open.
2. Inside the house, joints between panels are barely visible because they are

finished with a putty-like vinyl that sets up in eight hours. Vinyl is applied like caulking and smoothed down with a pallet knife. In the first house, vinyl extrusions accented the joints.

Stainless-steel spring clips hold the panels together. Outside joints are finished with snap-on battens of porcelain-enameled steel. The second house was designed by Ferro Engineer Fred Schlensker and built by Cleveland Builder Paul McNeil at his Inverness Highlands development.



Ultrasonic oil burner could cut size of home units a third

That's what the inventors—Esso Research & Engineering Co—say of this unit which atomizes oil with high-frequency sound.

When the liquid oil is vibrated by sound, tiny crisscross veins appear at the surface. As vibration increases, the wave peaks break loose from the surface in a mist and combine with the air to burn.

The conventional way to atomize fuel is to force it through tiny openings in a gun burner nozzle. Minimum flow of oil

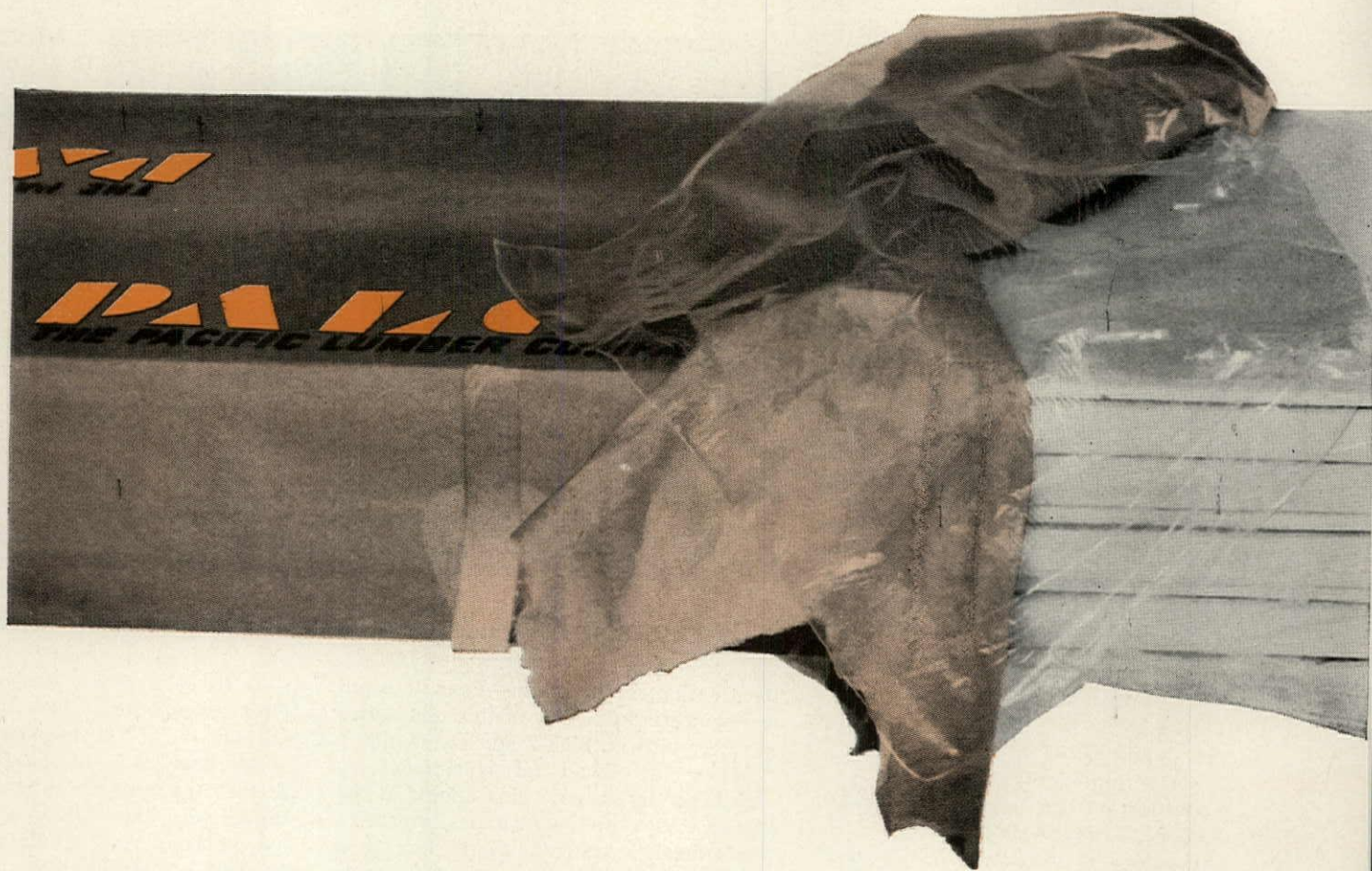
is 6/10 of a gallon per hour. Esso engineers say a lesser flow in conventional burners might be desirable for low but steady heat but would plug the swirl slots in the burner nozzle. The new ultrasonic burner gets flows as low as 2/10 of a gallon per hour. And its relatively large-bore passages are self-cleaning ultrasonically.

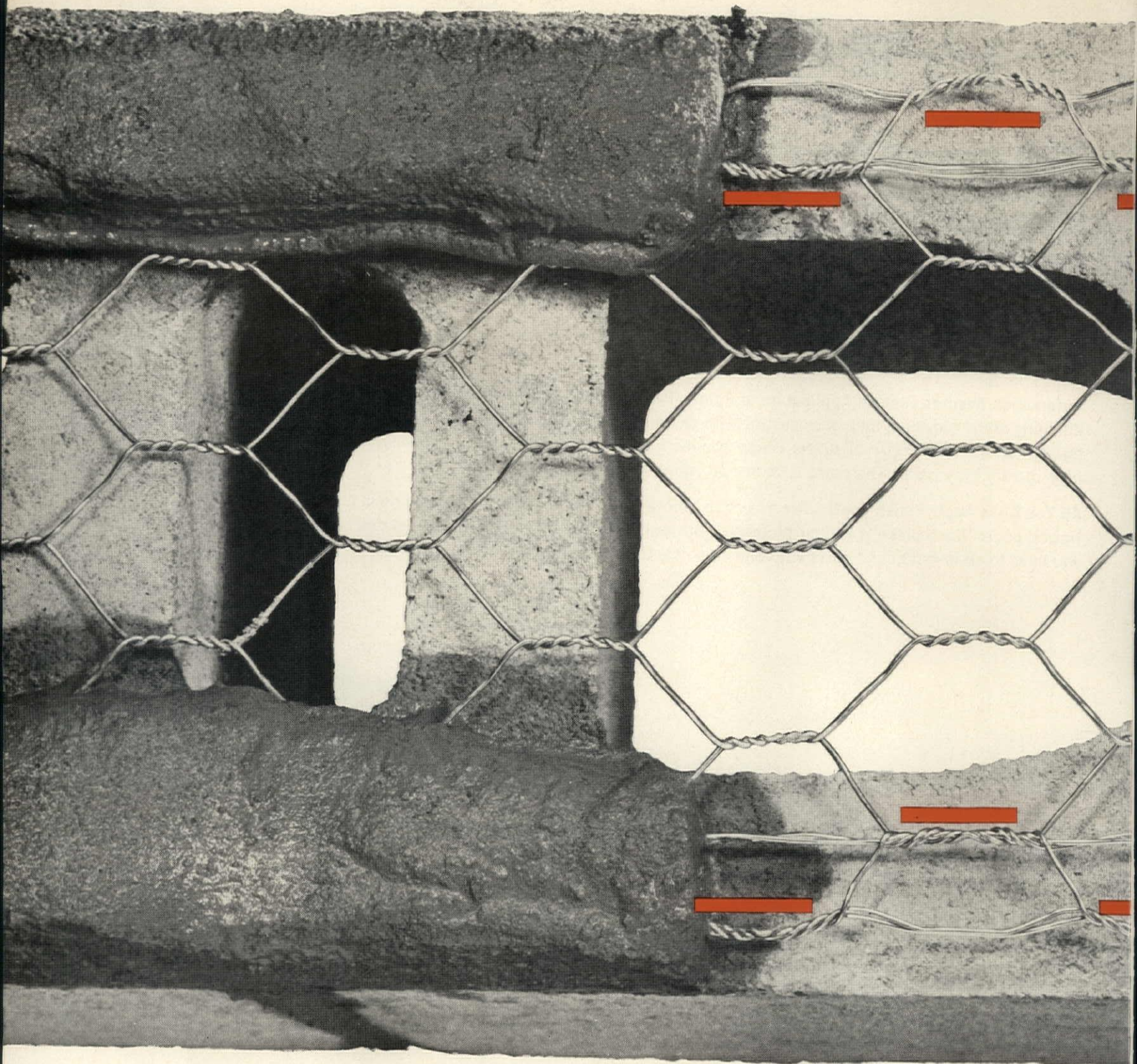
Esso is now developing a commercial ultrasonic model and expects to license it to equipment makers. /END

PALCOTE

**MILL PRIMED
REDWOOD SIDING
CUTS YOUR
FINISHING
COSTS**

40%





KEYSTONE STEEL & WIRE COMPANY Peoria, Illinois

Savings Proved In Factual Cost Comparison—Fact sheet itemizes in detail how you save up to 40% on labor and material by using Palcote mill primed redwood. Send for the sheet, and we'll include a sample showing the superior paint coating, ready for just the finish coat — assuring you a smoother, longer lasting paint job!

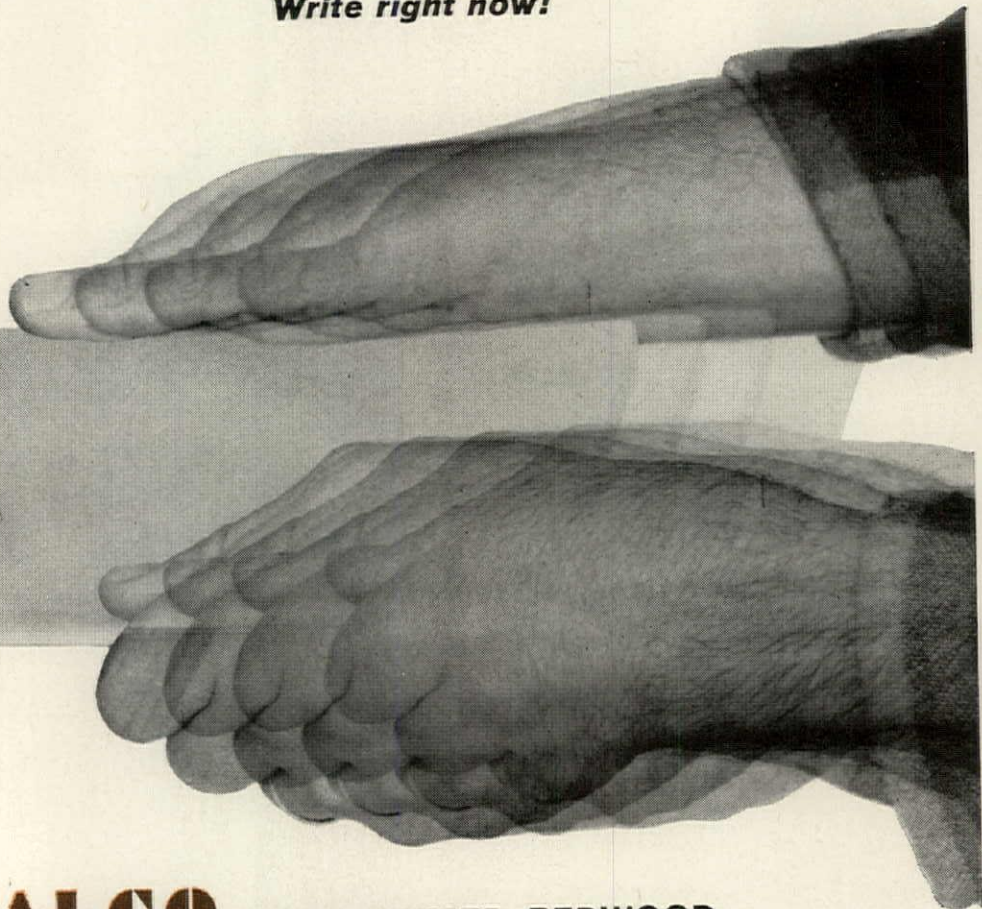
What Is Palcote Paint Primed Redwood?—First, it's Palco Architectural Quality vertical grain redwood. Second, it's precision primed and back sealed to save you money and time. Palcote paint prime protects against bad weather, also gives your homes a "finished look" as soon as the siding is placed!

Palcote Siding, Fascia and Trim—Palcote mill prime is available in standard CRA siding patterns, and lumber for fascia and trim (all vertical grain).

Automation Assures Precise Application of Paint—Palco's modern processing includes heat pre-conditioning of the redwood, then back-sealing with Woodlife. The redwood then moves at controlled speed through an actual *curtain of prime* which applies a uniform, smooth, precisely measured coating of high quality gray paint. The paint is then oven dried.

All You Do Is Apply Finish Coat!—The final step before shipment is protective packaging in tough, plasticized paper. Each piece is further protected with a sheet of polyethylene over the painted surface. All you have to do is install and cover with one finish coat!

Write right now!



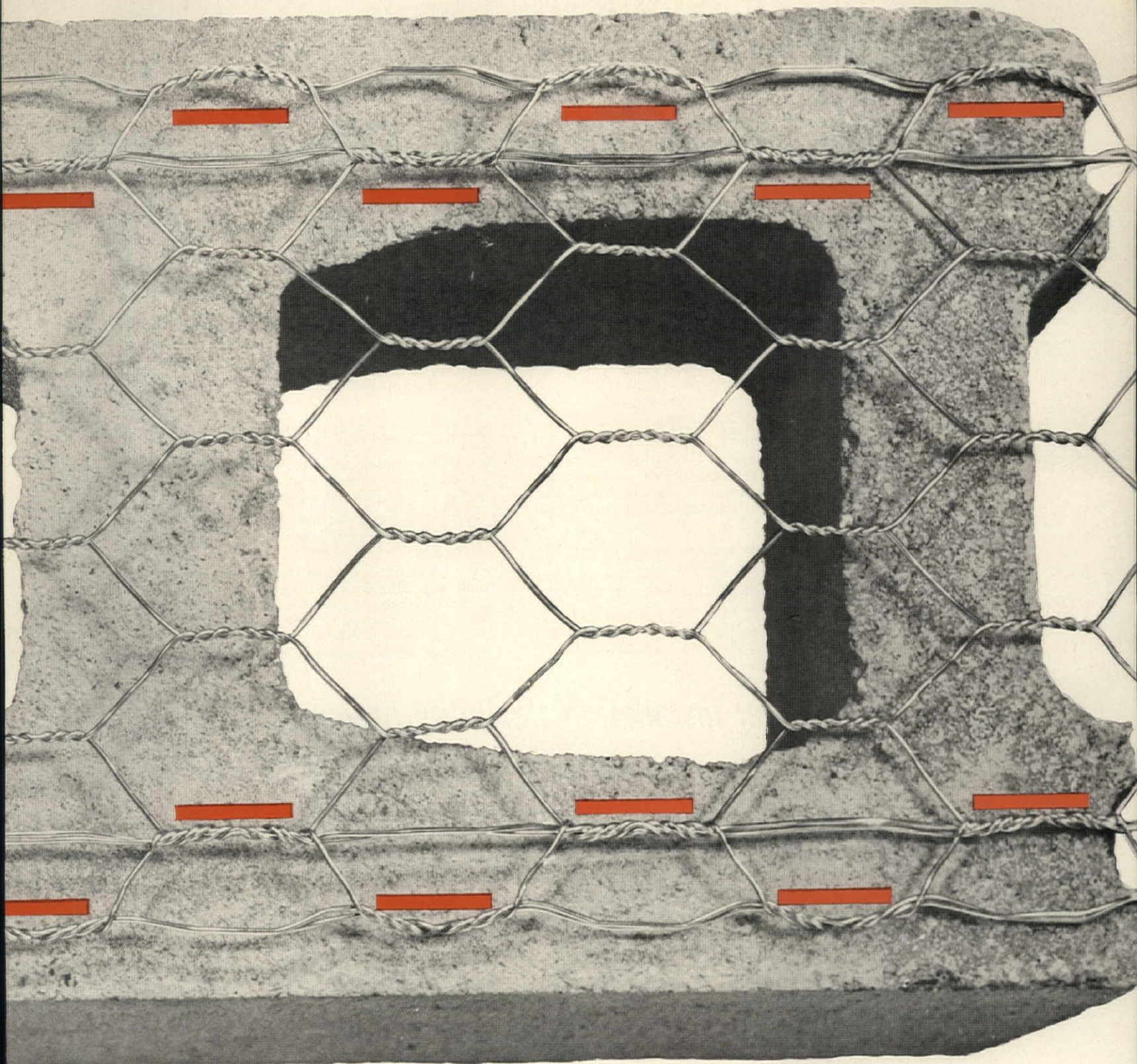
PALCO PAINT PRIMED REDWOOD

ARCHITECTURAL QUALITY REDWOOD

THE PACIFIC LUMBER COMPANY

100 Bush Street, San Francisco, California

35 E. Wacker Drive, Chicago 1, Illinois • 2540 Huntington Drive, San Marino, California



14 inches of mechanical anchors per block foot. Besides the bond between metal and mortar, reinforcement needs mortar locks and mechanical anchors to effectively control thermal movement. Keywall has 28 mortar locks per block foot (one at each twist end) and 14 inches of mechanical anchor. That's how Keywall keeps a tight, restraining grip on thermal movement. That's why it's being used on more and more major construction jobs around the country.

MORE INCHES OF ANCHOR TO THE BLOCK WITH KEYWALL

MAKERS OF KEYCORNER • KEYSTRIP • KEYWALL • KEYMESH® AND KEYMESH PAPERBACKED LATH • WELDED WIRE FABRIC • NAILS

NOW FROM TRANE!

Central home air conditioning competitively priced...and

Whether you build 10 homes or 1,000, here's the complete line of air conditioning that gives you a quality installation for any size, shape, style home you build . . . at a competitive price.

Built with the skill that has made TRANE a leader in big building air conditioning, new Climate Changers give you all of these important advantages:

UNMATCHED SIZE SELECTIVITY!

With TRANE you're not limited by an incomplete line. There's a Climate Changer cooling unit or heat pump to meet exact capacity requirements for any home. Puts an end to unsatisfactory under-sizing and costly over-sizing.

- Split-system cooling units are now available in 2, 2½, 3, 4, 5, 7, 10, 12½ and 15-ton sizes.
- Horizontal self-contained cooling units in 2, 2½, 3, 4, 5 and 7-ton capacities.
- Heat pumps, both split-system and horizontal self-contained, in 2, 2½, 3, 4, 5 and 7-ton sizes.

GREATER INSTALLATION FLEXIBILITY!

There's a Climate Changer to be installed any way you need it. Outside, inside, through-the-wall . . . at ground level, in the attic, on the roof . . . combined with TRANE furnaces . . . tucked away in closets, crawl space or under the stairs.

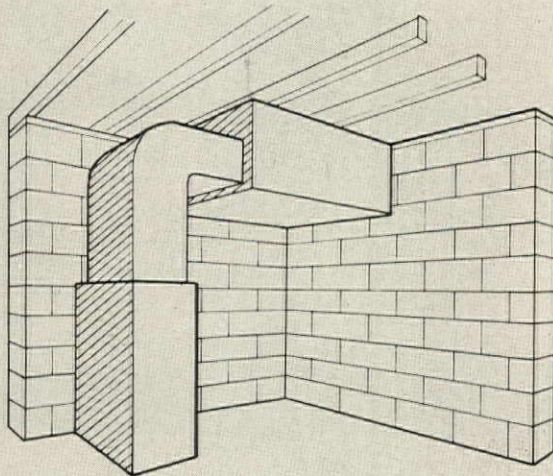
MORE COMPACT!

Up to 50% more compact than other makes of comparable capacity. Results in more installation flexibility, better appearance for outside installations.

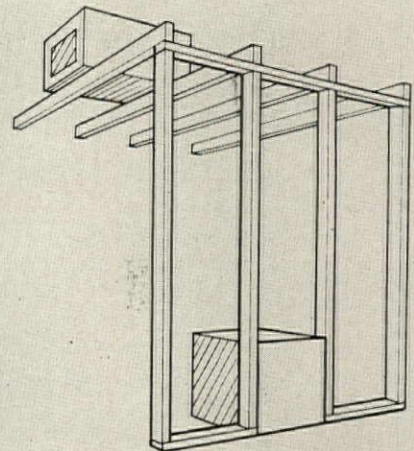
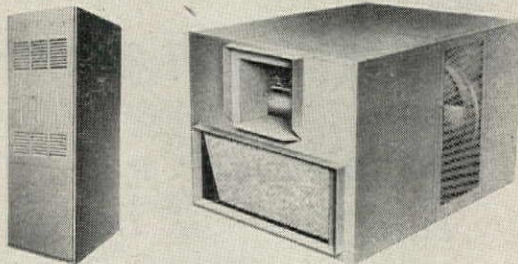
QUIETER OPERATION!

Every Climate Changer fan is carefully selected to provide top efficiency with minimum sound. Fans are accurately balanced before installation . . . are belt driven for quieter operation. Both fan motors and compressors float on rubber. Where even greater sound reduction is required, an accessory sound attenuator is available.

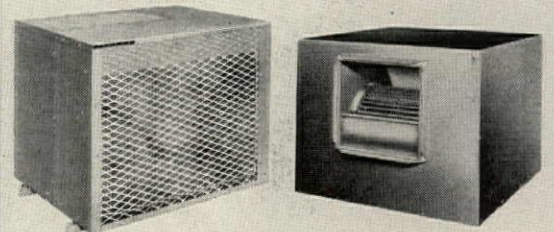
Now for greater installation flexibility in your air conditioned



Horizontal self-contained cooling unit installed through-the-wall, ducted into central heating and cooling system.



Split-system cooling unit. Condensing unit installed inside, or outside, connected to a horizontal fan-coil unit that can be installed in attic, basement, utility room or garage.



that's built with "big system" skill, backed-up by local service!

QUALITY EQUIPMENT COMPETITIVELY PRICED!

With TRANE you get all the experience and know-how of an established leader in air conditioning everything from skyscrapers to jet planes to subway trains. In the multi-million dollar TRANE plant in Clarksville, Tenn., top-grade materials, skilled workmen and careful testing and inspection procedures work to efficiently produce the kind of high-quality, competitively priced air conditioning equipment you want in the homes you build.

LOCAL TRANE SERVICE!

Your TRANE Dealer is a hand-picked expert in the field of air conditioning. He's your assurance that your homes are equipped with the right sized unit, that it's installed right and serviced right. And he's supported by the qualified air conditioning engineers located in the local TRANE Sales Office in your area.

Starting now . . . let TRANE Climate Changers help you build and maintain your reputation as a quality builder. Discover how you can begin offering quality air conditioning at down-to-earth prices. Call your local Authorized TRANE Dealer or TRANE Sales Office today!

homes . . . specify Trane

COMPLETE LINE OF MATCHING TRANE FURNACES
DESIGNED FOR EASY ADDITION OF AIR CONDITIONING!

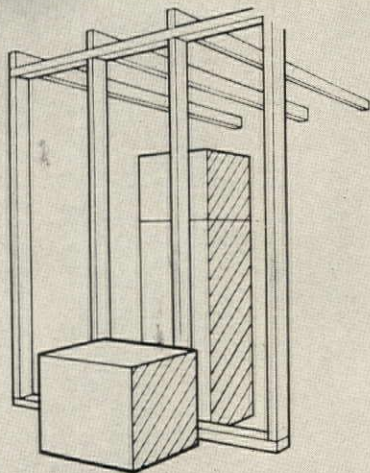
Air conditioning can be included from the start with TRANE furnaces, or your home buyers can add it later . . . easily and economically. Gas-fired furnaces available from 77,000 Btu to 154,000 Btu . . . oil models from 84,000 to 140,000 Btu.

TRANE

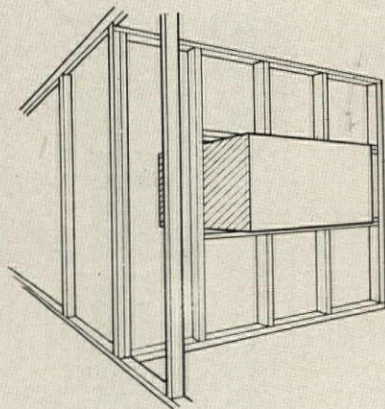
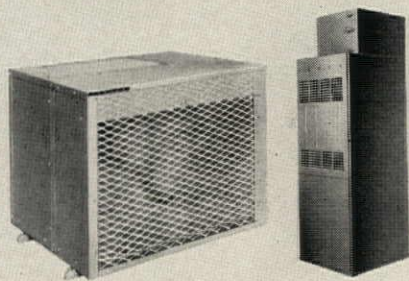
AIR CONDITIONING AND HEATING

*Manufacturing engineers of air conditioning,
heating, ventilating and heat transfer equipment*

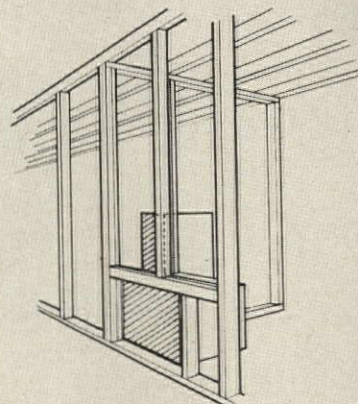
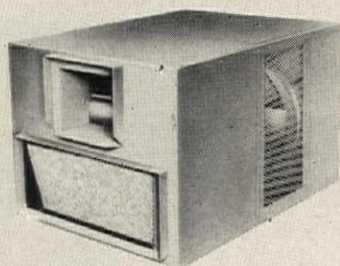
The Trane Company, La Crosse, Wis. • Scranton Mfg. Plant, Scranton, Pa. • Clarksville Mfg. Plant, Clarksville, Tenn. • Salt Lake Mfg. Plant, Salt Lake City, Utah • Trane Company of Canada, Limited, Toronto • 109 U.S. and 20 Canadian Offices.



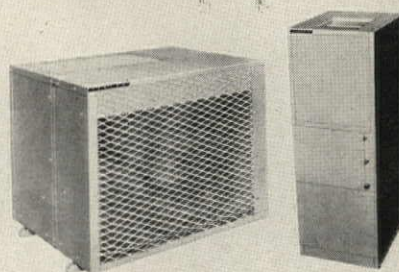
Split-system cooling unit with outside condensing unit and furnace-mounted evaporative coil.



Horizontal self-contained heat pump can be installed through-the-wall of a standard frame house by cutting just one stud. Offers both heating and cooling from one compact package! Also can be installed completely outside.



Split-system heat pump. Condensing unit, here installed through-the-wall, is connected with vertical fan-coil unit that installs anywhere to distribute conditioned air throughout the house. Condensing unit also can be installed completely outside.



New Hotpoint 24" drop-in

HERE'S HOW YOU SAVE ON COUNTERTOPS:



USUAL
DROP-IN
METHOD

Other drop-ins waste this much countertop
(and the labor to cut it out)

NEW
HOTPOINT
DROP-IN

Rear control panel eliminates need for back-
splash (you buy only the countertop needed)

Hotpoint
ACCENT
ON VALUE

New Hotpoint Town and Country Range
Perfect for apartments • Ideal for homes

cuts your costs an extra \$15

Rear control panel eliminates 24" of counter-top backsplash...saves 4 sq. ft. of material

Another first from Hotpoint—a truly modern built-in range that also offers important installation advantages of free-standing models. The built-in rear control panel serves as a backsplash, so there's no buying 4 extra square feet of countertop (at \$3.75 a foot) and no extra charges for cutting it out.

You simply slide the new Hotpoint Town and Country range in place between the ends of the countertops on either side, then make a few fast adjustments for tight fit. And what a fit:

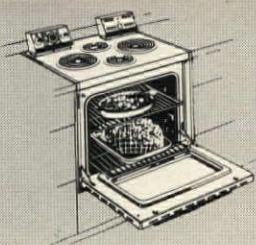
Adjustable Control Panel—the beautiful, full width control panel is adjustable to match countertops that vary in depth from 22" to 25¼". It can be lined up with any countertop backsplash. Both the side filler strips for the oven and the caps on either end of the control panel are spring loaded and mounted at the factory, assuring a perfect fit

with just a quick and easy adjustment.

This new range is only 24" wide—just right for apartments or homes where space is at a premium. And it's loaded with important features. There are four surface units, and a full-size oven that holds a 30-lb. turkey. Removable oven door makes cleaning easy. All switches are located on the control panel, away from food splatters. Top and front of control panel are brushed chrome. Door is available in seven finishes—change color scheme by changing doors.

The new Hotpoint Town and Country range can save at least \$15.00 on every installation. And it gives the smart built-in appearance that makes a kitchen look expensive and impressive. Get full specifications and prices from your Hotpoint distributor today!

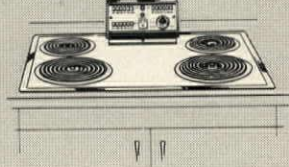
THE INDUSTRY'S MOST COMPLETE LINE OF BUILDER APPLIANCES



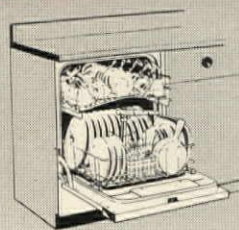
6 DROP-IN RANGE MODELS
in 24" and 30" widths.



9 BUILT-IN OVEN MODELS
in 30" and 24" widths.



6 SURFACE SECTION MODELS
with remote or integral controls.



3 DISHWASHER MODELS
all 24" wide, front loading.



New low-cost DISPOSALL®
you can add to economy homes.

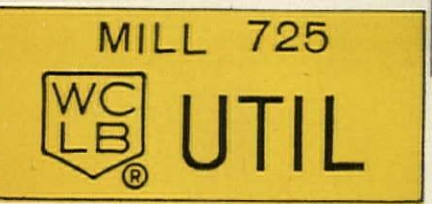
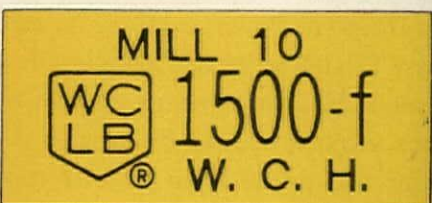
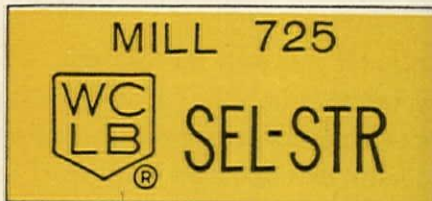
Hotpoint

A Division of General Electric Company Chicago 44, Illinois

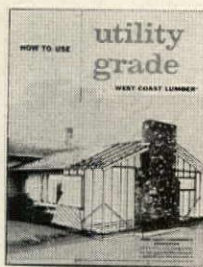


ELECTRIC RANGES • REFRIGERATORS • AUTOMATIC WASHERS • CLOTHES DRYERS • DISHWASHERS • DISPOSALLS®
CUSTOMLINE® BUILT-INS • WATER HEATERS • FOOD FREEZERS • AIR CONDITIONERS • ELECTRIC BASEBOARD HEATING

THESE GRADE
STAMPS ARE USED
ONLY ON
**COAST
REGION**
WEST COAST
LUMBER



For WCLB lumber grading
information write:
West Coast Lumber
Inspection Bureau
1410 S. W. Morrison Street,
Portland 5, Oregon



FREE TECHNICAL BUILDING FACTS

Utility Grade applications are illustrated... contains easy to understand span tables.

For your **FREE** copy, write Room 84
WEST COAST LUMBERMEN'S ASSOCIATION
1410 S. W. Morrison Street, Portland 5, Oregon



"I build profitable multiple dwelling units with UTILITY GRADE WEST COAST LUMBER,"



reports
DON MYRICK
of Trend Homes, Inc.
Indianapolis, Indiana

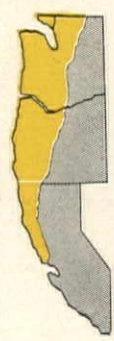
"I am building and selling homes and multiple dwelling units framed with Coast Region Utility grade West Coast Lumber. It does a good job for me and saves me money on lumber costs. I use 2"x4", 2"x6" and 2"x8" for joists, studding and rafters in homes that sell from \$14,000 to \$30,000. Use of Utility grade is a sound building practice that maintains quality and helps make money."

Coast region Utility grade West Coast Lumber has the grown-in quality to meet the requirements for many types of modern construction . . . residential, commercial and industrial. Use it for joists, studding, rafters, sheathing and sub-flooring, roof decks and laminated applications.*

Ask your retail lumber dealer about "Coast Region" West Coast Lumber . . . he's your local supply source.

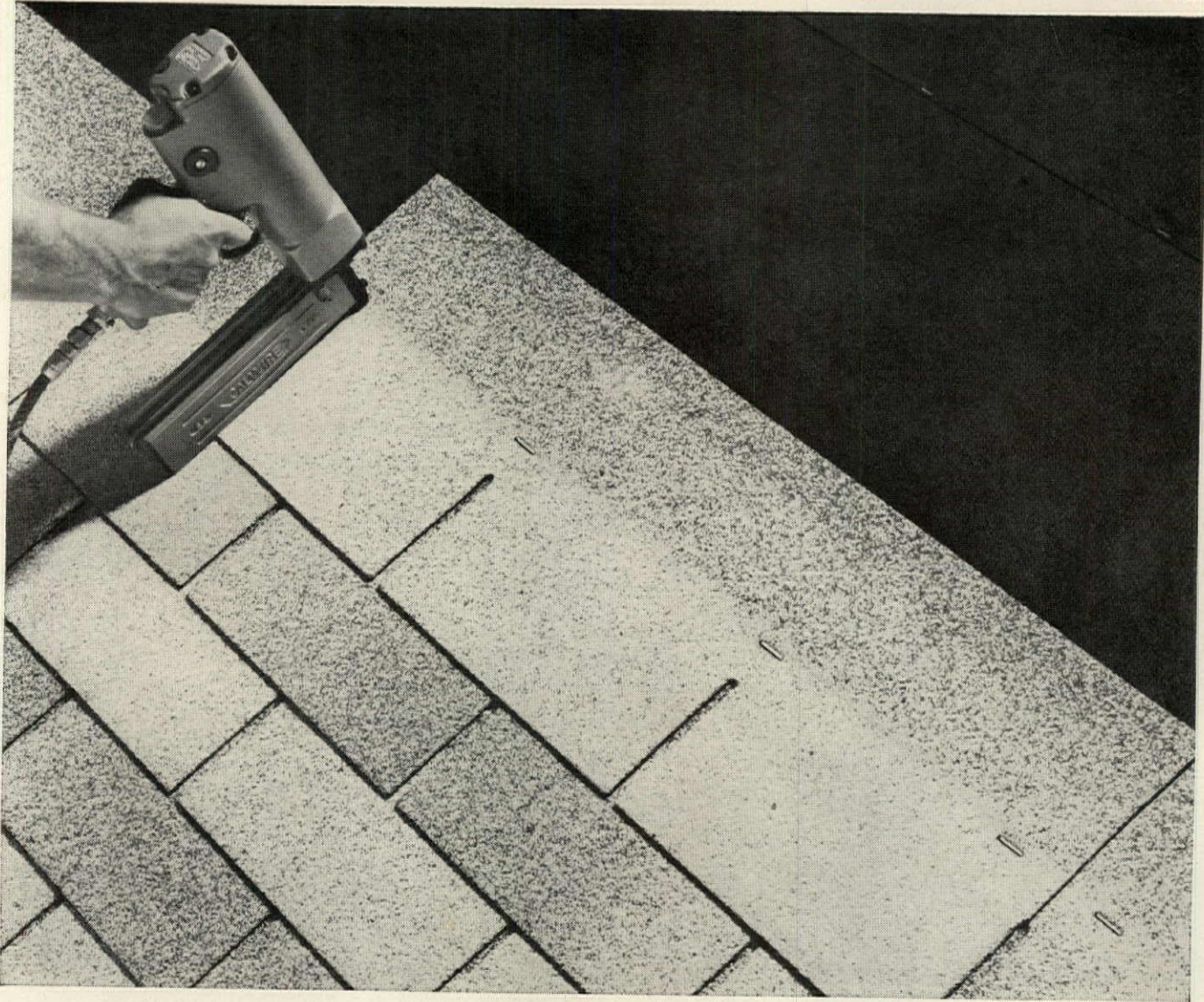
**When used in accordance with FHA Minimum Property Standards for One and Two living Units, FHA Bulletin No. 300.*

**WEST
COAST
LUMBER**
MADE IN U.S.A.



- WEST COAST DOUGLAS FIR**
- WEST COAST HEMLOCK**
- WESTERN RED CEDAR**
- SITKA SPRUCE**
- WHITE FIR**

NOW YOU CAN PROFIT EVEN MORE FROM BOSTITCH STAPLING



New FHA Ruling Permits Four 1" Crown Staples for Installation of 36" Sections of Strip Shingles

You'll be able to handle these jobs more economically and faster than ever with this recent FHA acceptance. This now requires only four 1" crown staples instead of the previous practice of using six 1/2" crown staples. Your jobs will go faster and you can save money and manpower with Bostitch air-operated tools.

Ask your Bostitch Representative about the dependable Bostitch line of builders' tools. In the meantime, send in the coupon and get the official FHA booklet from Bostitch.

BOSTITCH

529 Briggs Drive
East Greenwich, R. I.

Please send the FHA Bulletin UM-25a and the facts on how I can save money with Bostitch staplers and nailers.

Name _____

Address _____

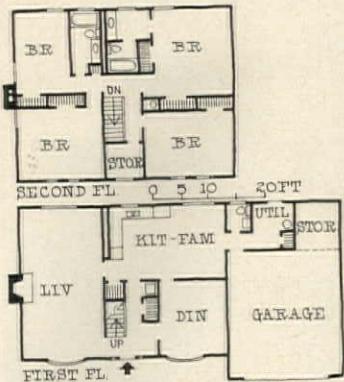
City _____ Zone _____ State _____

Fasten it better and faster with

BOSTITCH[®]
STAPLERS AND STAPLES

529 Briggs Drive, East Greenwich, R. I.

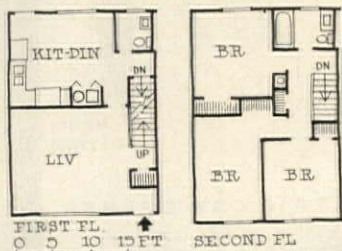
Manufactured homes



Two-story Colonial, called the Lowell, is one of 50 models introduced by National Homes for 1963. Part of National's top-priced "Luxury Line," the Lowell has 2,158 sq ft of living area, is priced to sell for about \$23,000 including land. For the first time National has grouped low-priced (\$9,000-\$11,000) models in separate "Young America" line.

National Homes, Lafayette, Ind.

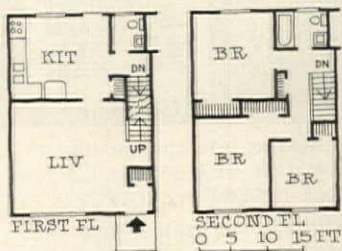
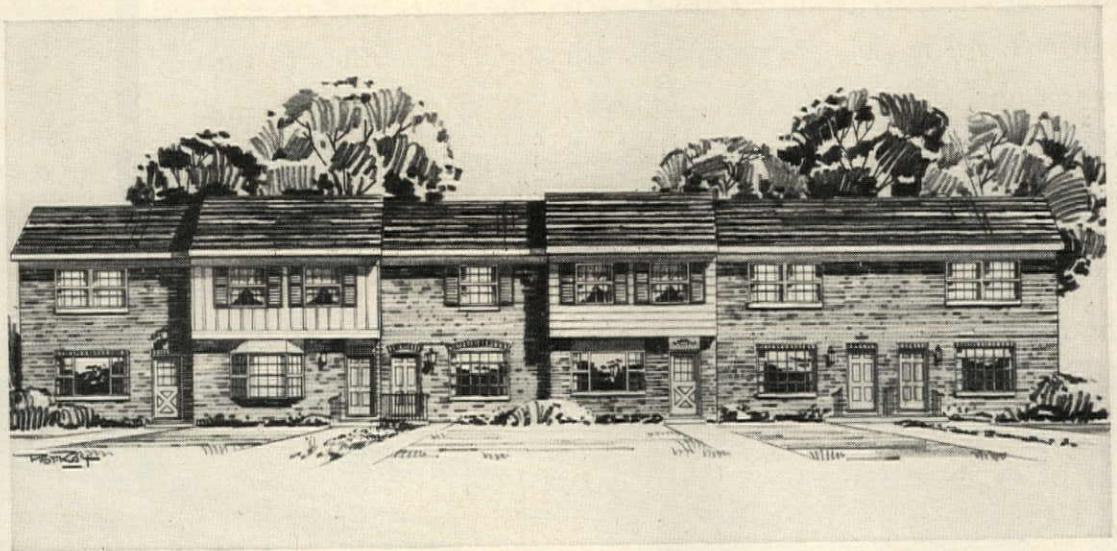
For details, check No. 1 on p 194



Townhouses are being offered for the first time by Richmond Homes. The two-story units have 890 to 1,100 sq ft of living area, sell for \$8,000 to \$10,000 with land. Models can have one or two bedrooms and the living room on the same level or three bedrooms over the living area. Styles include "Colonial" (shown here) and "contemporary."

Richmond Homes, Richmond, Ind.

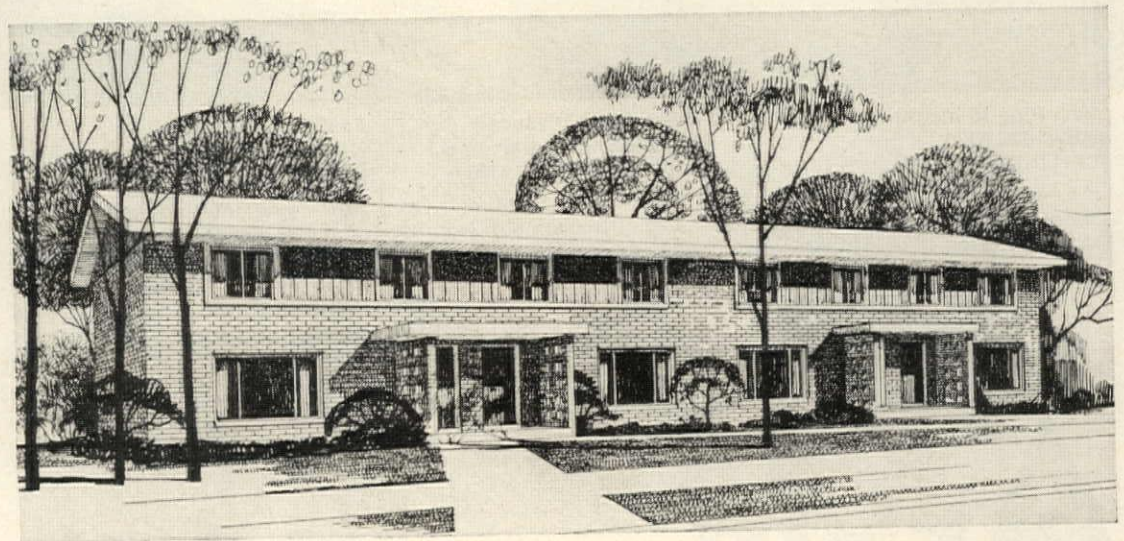
For details, check No. 2 on p 194



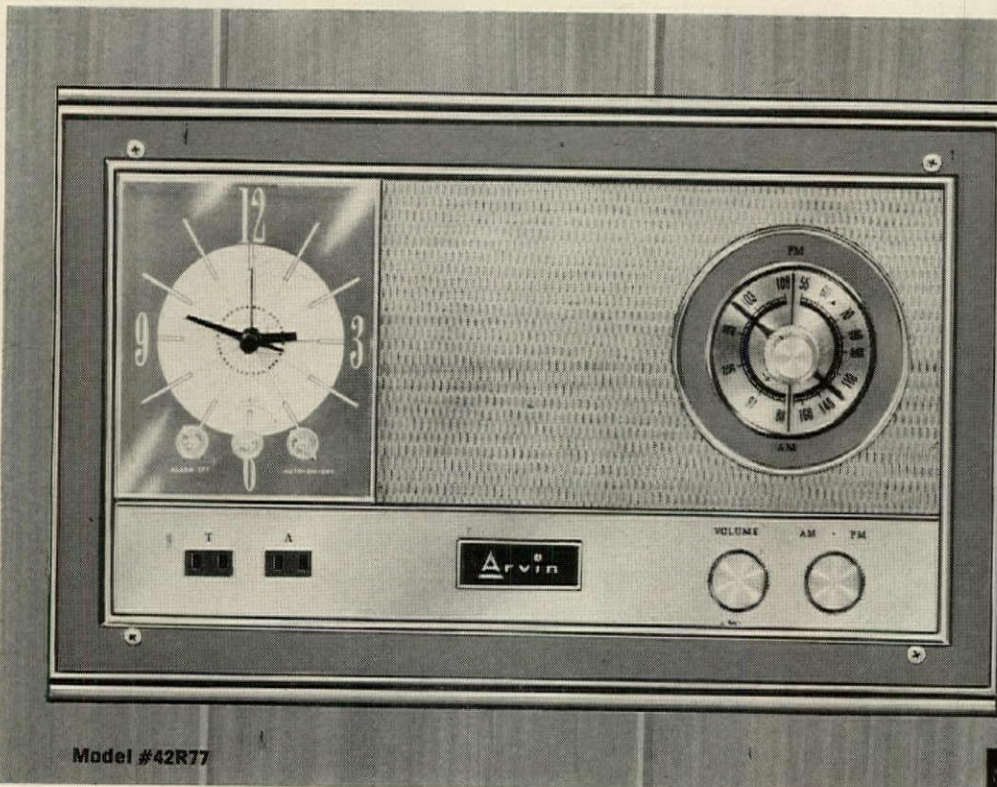
Garden apartments have been redesigned by Harnischfeger Homes for 1963. Buildings have two or four apartments (a four-apartment building is shown at right). Sales price per apartment: \$19,900, including land. Harnischfeger will custom-design exterior style for each builder.

Harnischfeger Homes, Port Washington, Wis.

For details, check No. 3 on p 194



New products continued on p 165



Model #42R77

NEW Arvin® BUILT-INS COST LESS!

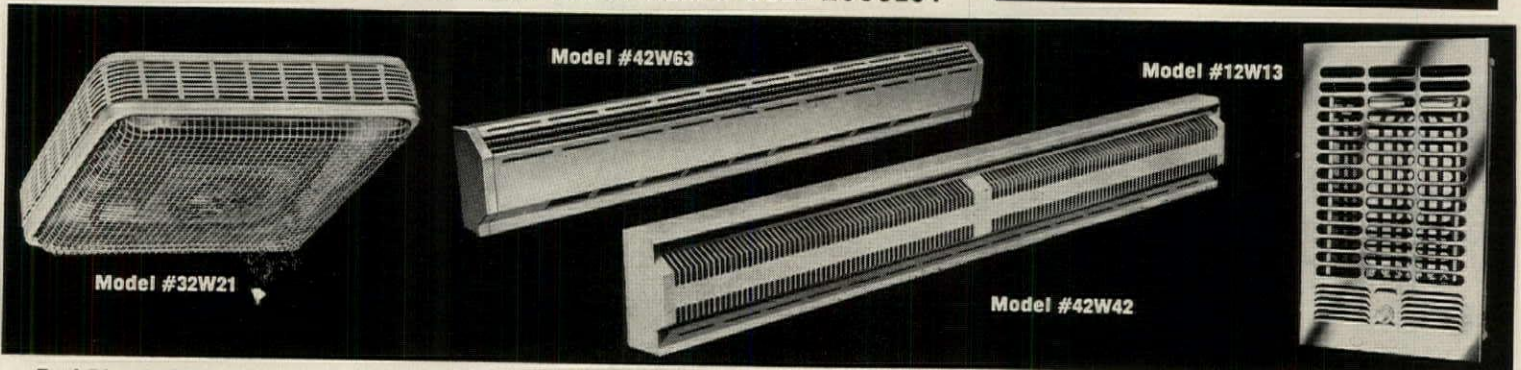
NOW YOU CAN BUILD IN MUSIC FOR APPROX. 1/3 THE COST OF MOST BUILT-IN INTERCOMS! And you save more than original cost with this new line of Arvin wall radios. You save space and service headaches, too. By removing just 4 screws, the entire unit lifts from wall box. All models are equipped with appliance outlets to turn on toasters, coffeemakers, etc., automatically at pre-selected time. Choose from three handsome models, all with polished zinc die-cast front: Model 42R77—AM-FM Clock Radio; Model 42R53—AM Clock Radio; Model 42R63—AM-FM Radio.



Model #62W30

NEW ELECTRIC CAN OPENER
Designed for built-in beauty and low-cost installation, made possible by exclusive Arvin rough-in components. Protrudes only 1 3/8" when installed! Precision cutting blade operates automatically, opens cans of every shape, leaves smooth, safe edges. Lids lift off magnetically, motor shuts off automatically.

THE BEAUTY OF ARVIN ELECTRIC HEAT . . . IT HELPS SELL HOUSES!



Model #32W21

Model #42W63

Model #12W13

Model #42W42

Fast Plug-In Mounting NEW GALAXY CEILING HEATER

Rough-in plate mounts separately. When ready to install unit, just plug it in! Quality rod-type element for fast heat and trouble-free service. Fan keeps entire unit cool. Aluminum reflector. Attractively styled fixture matches any decor. 10 7/8" square.

Finest, Most Advanced NEW GALAXY LOW DENSITY BASEBOARD

New spiral element and improved air movement. No high temperature wire needed. Completely disassembled by removing two screws. Pre-wired at both ends. Compact: only 2" thin, 6" low. 3, 4 1/2, 6, 9 ft. sections.

Fastest Installation NEW CUSTOM LOW-COST BASEBOARD

New fastening brackets — just "hang & tack"! Installation speed increased by symmetrically-styled unit: can be "flipped over" so either end faces left or right. New junction box serves as fixture for thermostat or outlet. Beige enamel finish. 2, 4, 6, 8 ft. lengths.

All Models Interchangeable NEW 12W SERIES WALL-INSERT HEATERS

Features separate rough-in box for a variety of heating capacities. One-piece stainless steel fronts. Nickel and chrome plated steel reflector; rod-type heating element. Available with automatic thermostat or switch controls.



For complete information on new Arvin Built-Ins and Electric Heat, write, wire or call
ARVIN INDUSTRIES, INC. • COLUMBUS, INDIANA



Kitchen equipment



High-level dishwasher simplifies loading and unloading because bottom rack slides out at counter-top level. Unit is mounted on double-door steel cabinet 18" high. Overall height of the machine and cabinet is 54", width is 24", depth is 24½".

Top, front, and sides are available in white, stainless steel, and copper. Front and side panels are also available in prime coat for on job finishing or with trim kit for wood or plastic inserts.

KitchenAid, Troy, Ohio.
For details, check No. 4 on p 194



40" gas range, the "Contempo," looks like a built-in but can be wall-mounted or set on a base cabinet in 28 minutes. Oven includes a rotisserie. Broiler converts to a roasting oven. Surface units are set on pull-out drawer with a maple cutting board in

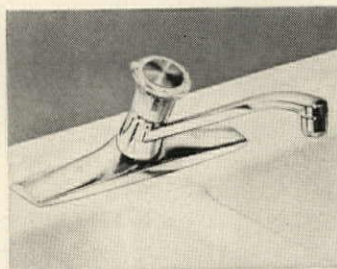
front of them. Features include low-temperature oven controls and a thermostatically controlled burner. Oven doors are gold-ceramic patterned glass.

O'Keefe & Meritt Co, Los Angeles.
For details, check No. 5 on p 194



Compact surface range fits into cabinets 24" wide, is especially suited to apartment and other small kitchens where counter space is at a premium. Right- and left-hand models are available. Rangetop is removable for easy cleaning.

Caloric, Tipton, Pa.
For details, check No. 6 on p 194



One-handle kitchen faucet has been redesigned to include manufacturer's "Dialcet" cartridge (formerly used only in bathroom units). Cartridge is in self-lubricated, sealed cylinder. Knob pulls to control flow, turns to control temperature.

Moen Faucet, Bellwood, Ill.
For details, check No. 7 on p 194



"Electro-sink-center" has push-button faucet controls, dish-washing brush, and ultraviolet deodorizing lamp, installs on any standard sink. Power attachments include blender, mixer, salad maker, and juicer. Price with all attachments: \$289.50

Electro-Way, Los Angeles.
For details, check No. 8 on p 194

Multi-cycle dishwasher includes new "Hygenic Rinse" on its longest washing cycle. Two washes and three rinses are followed by an extra-hot rinse, which is said to produce cleaner, more germ-free dishes than usual. Other cycles include a wash-and-hold to remove food particles without actually washing, a rinse-and-hold for light preliminary cleaning, and a rinse-and-dry to clean dusty glasses and dishes.

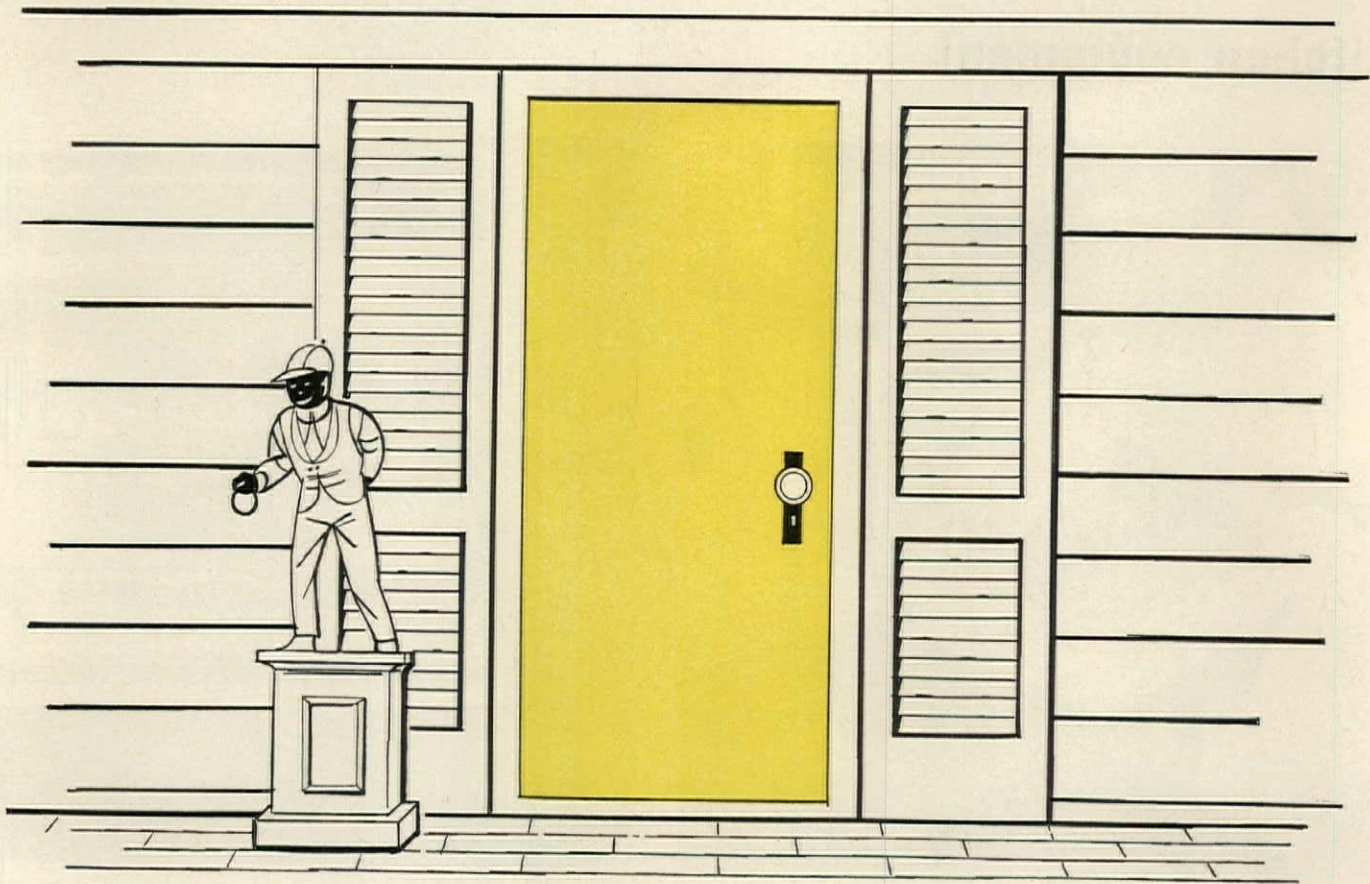
Modern Maid, Chattanooga.
For details, check No. 9 on p 194

Early American trim has been incorporated in this manufacturer's new line of dishwashers, ovens, and ranges. Control panels are overlaid with ornate scroll work; oven doors are etched with a diamond-paned pattern and have decorative turned wood handles. Even plates with buyers names engraved on them are available for those who wish to merchandise the kitchen still more.

Waste King, Los Angeles.
For details, check No. 10 on p 194



New products continued on p 167



Doors you can paint and forget

Weldwood Duraply® Exterior Doors end call-backs for adjustment—make a good paint job last up to five years

An exterior door is a showpiece as well as a utility. Used and seen constantly, it is a source of either pride or exasperation. If sun, rain, snow or sleet make it stick or warp, you are called back for adjustments. If the paint fails prematurely, your reputation and pocketbook suffer further.

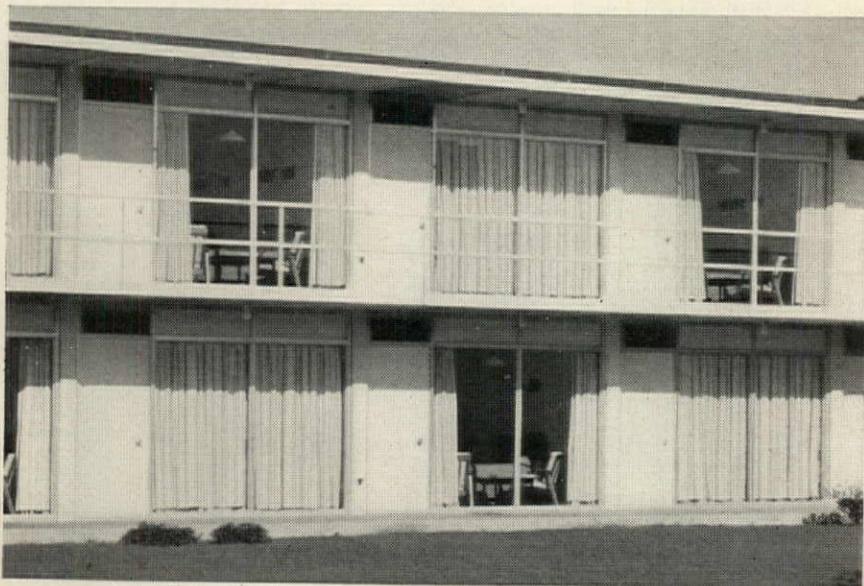
Weldwood Duraply Exterior Doors are

specifically designed to remain a source of pride. For extra protection from the elements, they have a special resin-fiber overlay. This is the same "skin" used for painted boat hulls. Two coats of quality paint can last up to 5 years. In addition, Duraply doors have edges of factory-sealed cedar heartwood, which has outstanding resistance to rot and decay.

These special construction features give Duraply doors the great dimensional stability that prevents the need for adjust-

ments. Properly maintained, these doors are guaranteed for the life of the installation. You simply hang them, paint them, and forget them.

There's a Weldwood door for every opening—interior as well as exterior; wood and high-pressure laminate faces, acoustical, and fire doors for commercial and public construction as well as residences. Each has a construction engineered to fit its function. Each is backed by United States Plywood. Get the full information today.



Weldwood Duraply Exterior Doors are ideal for commercial and institutional use. They stand up under heavy traffic and heavy weather—keep maintenance costs low. They are shown in the Connecticut Yankee Inn, Niantic, Connecticut.

WELDWOOD®

DOORS

Products of United States Plywood

SEND FOR FREE WELDWOOD DOOR BOOKLET

United States Plywood

HH9-62

55 West 44th Street, New York 36, N.Y.

Please send me your new 20-page catalog, "Weldwood Doors," #2240

Name.....

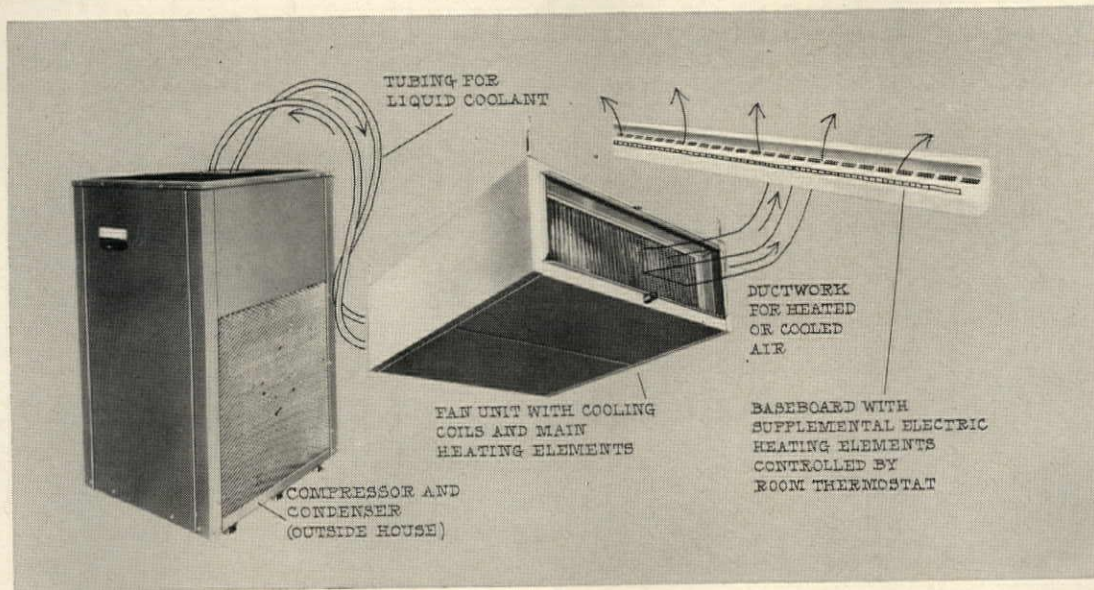
Firm.....

Address.....

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

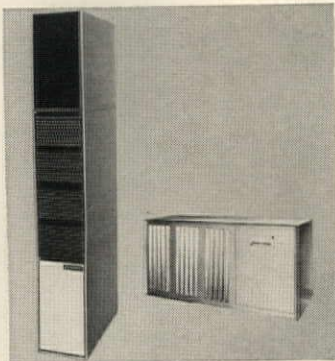
HOUSE & HOME

Heating and cooling



Electric heat and cooling are combined in this new Chromalox central forced-air system. System has three basic elements: Main fan unit (center in picture) is hung from the ceiling, so it takes little space. Fan unit houses the blower, electric heating plates, cooling coils, an electrostatic air filter, an activated charcoal filter, a humidifier, and, if desired, a fresh-air in-take. Baseboard diffusers (right in picture) distribute warmed or cooled air in a broad pattern. In addition, the diffusers contain separate electric heating elements so rooms can have individual thermostatic control. Cooling unit (left in picture) is set up outdoors and has a compressor rated at 3 hp.

E. L. Weigand Co, Pittsburgh.
For details, check No. 11 on p 194



Compact heater-cooler (left) —12" wide and 28" deep—is designed for multi-family units and small houses where floor space is at a premium. The air-cooled condensing unit (right) is available in 16,000 Btuh and 24,000 Btuh capacities.

Janitrol, Columbus, Ohio.
For details, check No. 12 on p 194



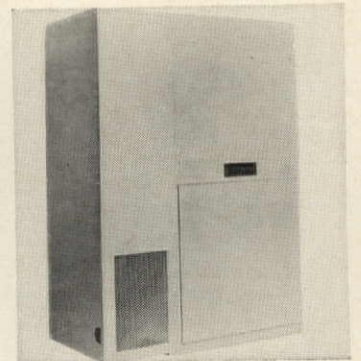
Packaged boilers offered for the first time by this manufacturer include all heating and circulating equipment. Permaglas units have gas burners and are available in capacities from 64,000 to 336,000 Btuh. Cabinets are round or square.

A. O. Smith, Kankakee, Ill.
For details, check No. 13 on p 194



Combination room unit cools with electricity and heats with gas. Heating capacity of the "Dyna-Temp" is 20,000 Btuh; cooling capacity is 13,500 Btuh. Unit is 23 3/4" wide, 15 1/2" high, 21 3/4" deep.

Suburban Appliance Co, Whippany, N. J.
For details, check No. 14 on p 194



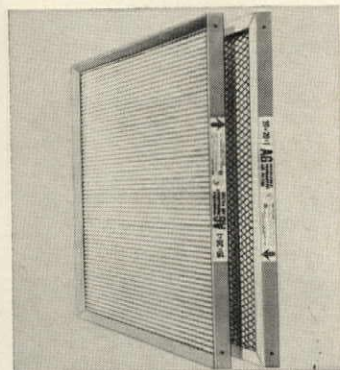
Gas heater-cooler is designed for small residences. Called the "Sun Valley," the new absorption unit has a 2.8-ton cooler (34,000 Btuh output from a 67,000 Btuh input) and a heater input of 90,000 Btuh. It uses 8 sq ft of floor space.

Arkla, Little Rock.
For details, check No. 15 on p 194



Central humidifier is a self-contained unit that attaches to furnace plenum and adds up to 10 gal. of water a day to air. Blower draws air into unit; vapor wheel adds moisture without adding lime particles to air. Unit is shipped ready to install.

Lau Blower, Dayton.
For details, check No. 16 on p 194

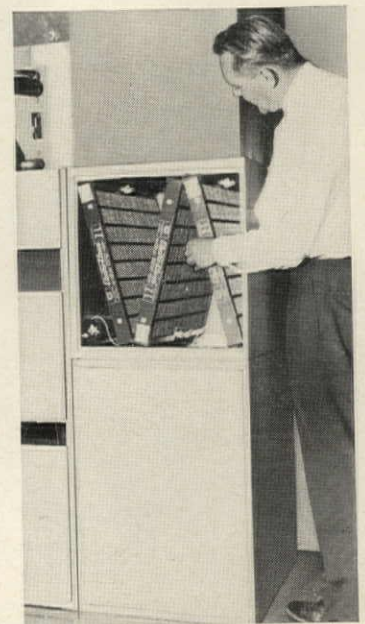


Permanent air filter can be removed from housing and washed or vacuumed or water flushed in place. Filtering is through a foam media pad treated with bacteria retardant. All standard filter sizes are available.

American Air Filter Co, Louisville, Ky.
For details, check No. 17 on p 194

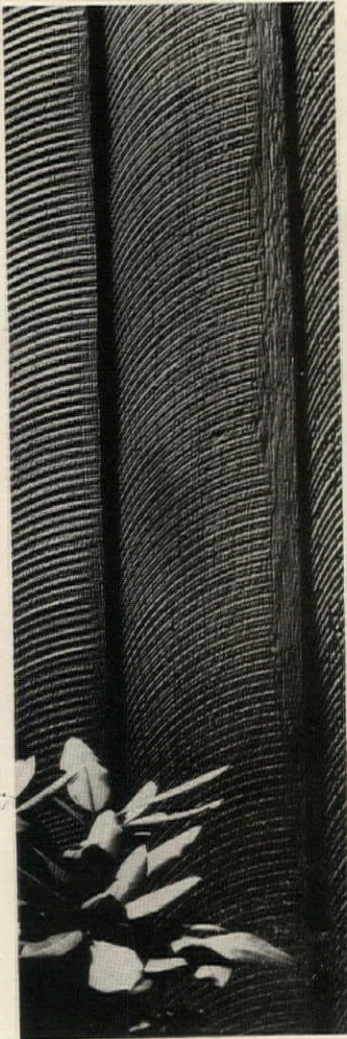
Electronic air filter is only 22" high, will work with up-flow, down-flow, or horizontal furnaces. Cells are disposable or can be cleaned by tapping off the trapped dirt. Unit is said to remove 90% of dust, pollen, and bacteria.

American Furnace, St Louis.
For details, check No. 18 on p 194



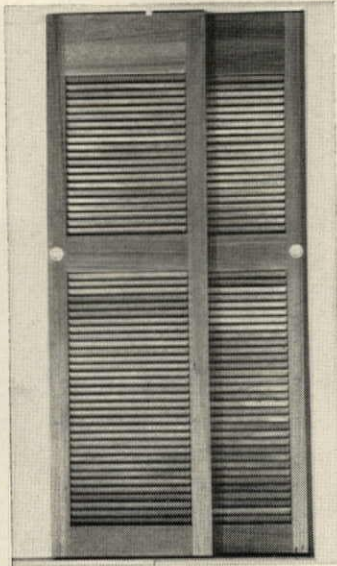
New products continued on p 169

Textures and finishes



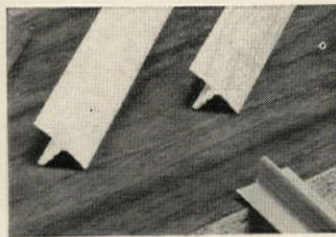
Rough-sawn siding is now available as exterior plywood finish. Called "Planktex," it is $\frac{3}{8}$ " thick, comes in sheets 8', 9', or 10' long. Edges are shiplapped for weathertight joints.

US Plywood, New York City.
For details, check No. 20 on p 194



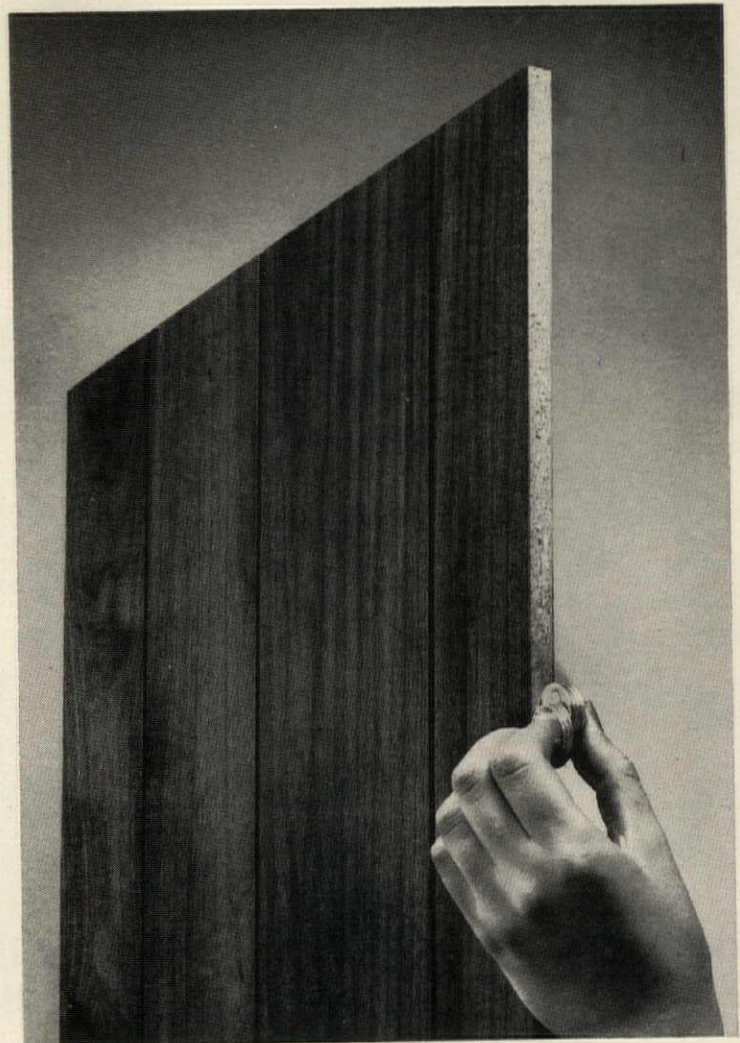
Louvered by-pass doors are offered in ready-to-install packages which include attached nylon rollers, extruded aluminum track, and frames. No valence is required for installation.

Rock Island Millwork, Ill.
For details, check No. 19 on p 194



Plastic T-moldings—in a wide variety of colors, grains, and patterns—can be used to finish edges of countertops, bars, and furniture. They are pushed into sawn grooves.

Plastiglide, Santa Monica.
For details, check No. 21 on p 194

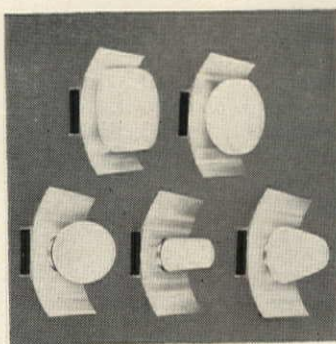


New hardwood paneling is $\frac{7}{16}$ " thick, can be applied directly to studs without backing or furring strips. Price of the pre-finished "Craftwall" paneling, according to the manufacturer, is comparable to that of ordinary $\frac{1}{4}$ " plywood paneling. Available

finishes: elm, oak, cherry, mahogany, birch, maple, and walnut, plus four color tones. Sheets are 4' wide, up to 10' long, either random V-grooved or V-grooved, cross-scored, and pegged.

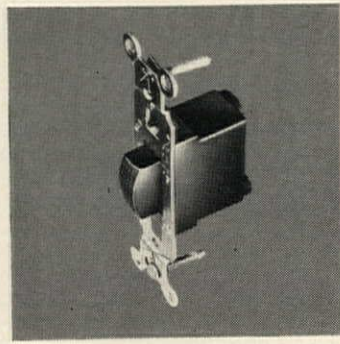
Weyerhaeuser, Tacoma.
For details, check No. 22 on p 194

Lighting



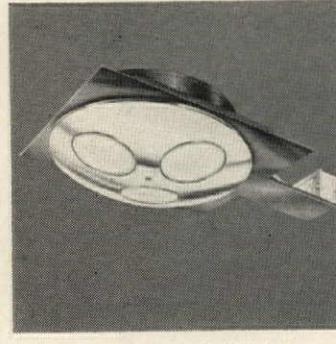
Modern bracket designs are featured in manufacturer's new line of lighting fixtures. Called "Space Shapes," they are made of anodized extruded aluminum, can be used with a choice of five interchangeable globes. UL listed for ceiling or wall mount.

Emerson Electric, St Louis.
For details, check No. 23 on p 194



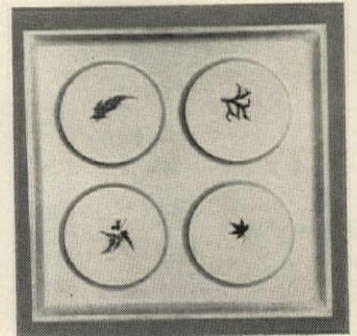
Neon pilot light lasts 20 times as long as conventional tungsten lights, according to GE. It fits into standard boxes and because its shape is rectangular, it is used with switch wall plates. Pressure-Lock terminals take No. 12 or No. 14 wire.

General Electric, Providence.
For details, check No. 24 on p 194



Recessed heat light is a pre-wired fixture which contains three 250-w infra-red heat lamps. Basic unit is made of 20-gauge steel. Cover plate is available in either plated chrome or with eggshell paint finish. Frame size is 16".

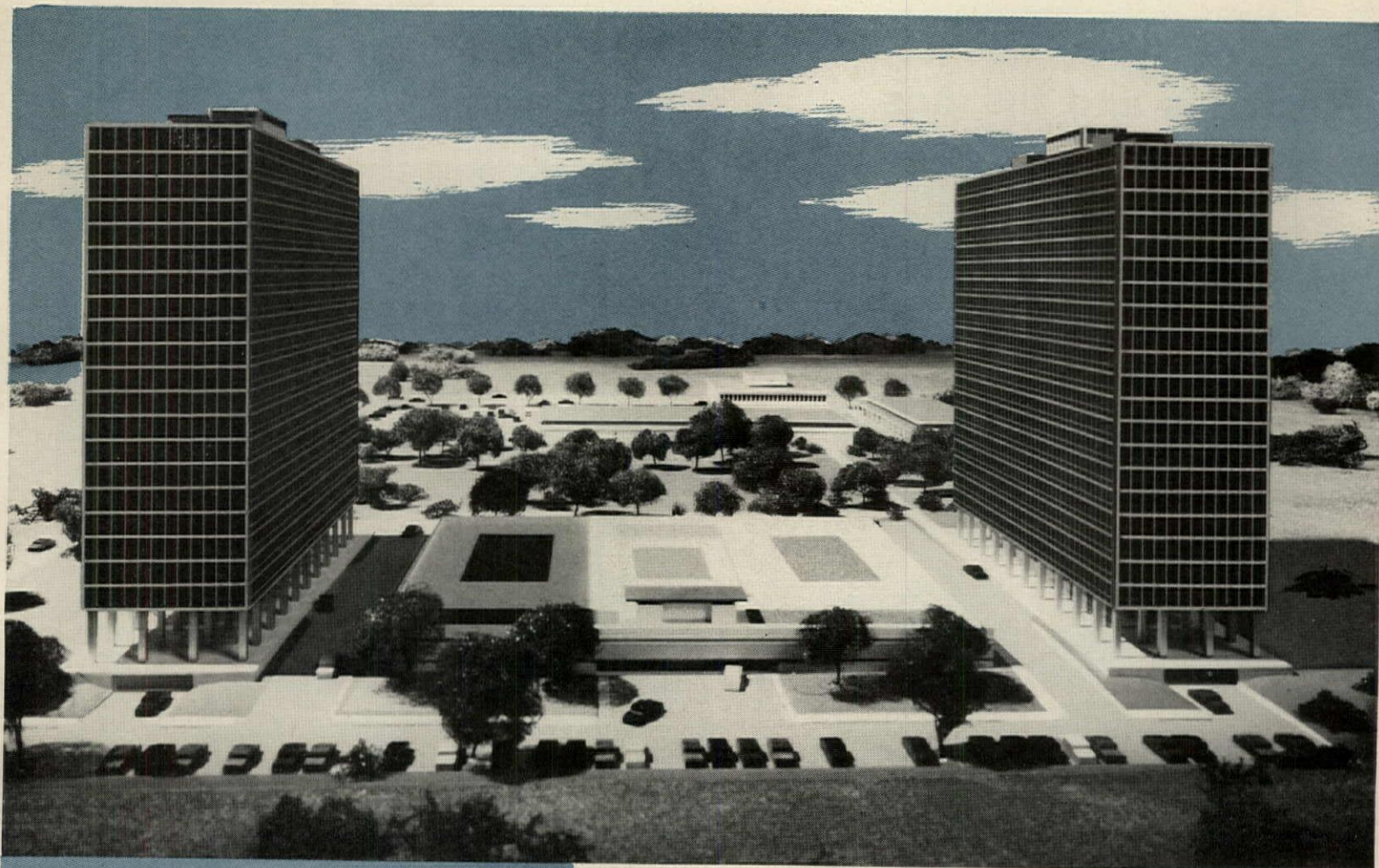
Halo Lighting, Chicago.
For details, check No. 25 on p 194



Decorative diffusers are made of laminated translucent plastic, with actual leaves and butterflies embedded in the plastic. Flat pan diffusers are $2\frac{3}{8}$ " square, vacuum molded pans are $2\frac{3}{4}$ " square. Both are available in vinyl or polystyrene.

Sinko Mfg & Tool, Chicago.
For details, check No. 26 on p 194

New products continued on p 171



Lens-Art Photo

Architect: Mies van der Rohe, FAIA, Chicago
 Shopping Center Architect: King & Lewis, AIA, Detroit
 Mechanical Engineer: William Goodman, Chicago
 General Contractor: A. J. Etkin Construction Co., Oak Park, Mich.

“For Our New Apartments by Mies van der Rohe, We Looked at Many Appliances . . . then selected **KELVINATOR**”

*says Robert E. Johnson, General Partner,
 Lafayette Towers*

“Before we decided on any appliances for our new Detroit apartments, Lafayette Towers,” says Mr. Johnson, “we wanted to make sure we were getting the most modern available to fit in with the modern design by Mies van der Rohe.

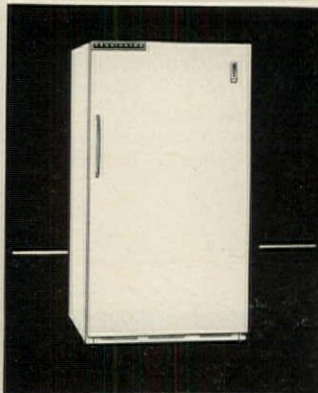
“After researching carefully all those available, we selected Kelvinator Appliances.

“Their many innovations provided exactly what we were looking for. For example, we were particularly impressed with Kelvinator’s recessed-top range and its aluminum oven lining feature that protects the oven from spill-overs. We also liked the built-in appearance, it gives at a fraction of built-in cost.”

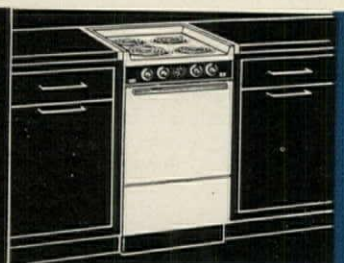
When completed, Lafayette Towers is expected to set the future pattern for apartment house building in Detroit. It will cover 15 acres and contain 600 apartments (300 in each tower), including two-bedroom and one-bedroom units and efficiencies. In addition, it will provide 62,000 square feet of shopping facilities, including a bank and a restaurant, and a parking garage for 370 cars.

All apartments will have Kelvinator refrigerators, disposers and ranges, and some will also have Kelvinator dishwashers.

When you want the most modern and up-to-date appliances — for apartments or individual homes — select Kelvinator. Modern builders do.



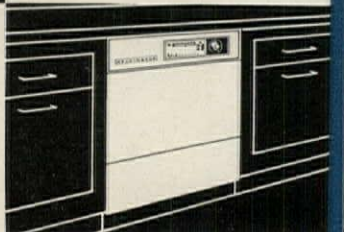
KELVINATOR REFRIGERATOR offers all the conveniences, including automatic defrosting for far less than refrigerators with other types of defrosting systems.



KELVINATOR “SLIDE-IN” RANGE provides built-in look without excessive installation cost, has aluminum foil oven liner and convenient recessed top with microtube units.



KELVINATOR DISPOSER provides fast, extremely fine grinding with diamond-hard shredders that far outlast those of ordinary units.



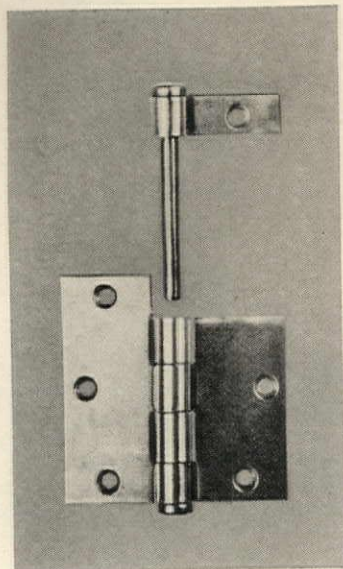
KELVINATOR DISHWASHER with two power washes and four power rinses outwashes other makes . . . cascades more water over dishes.

Kelvinator

Division of American Motors Corporation, Detroit 32, Michigan

KELVINATOR  RAMBLER

Hardware

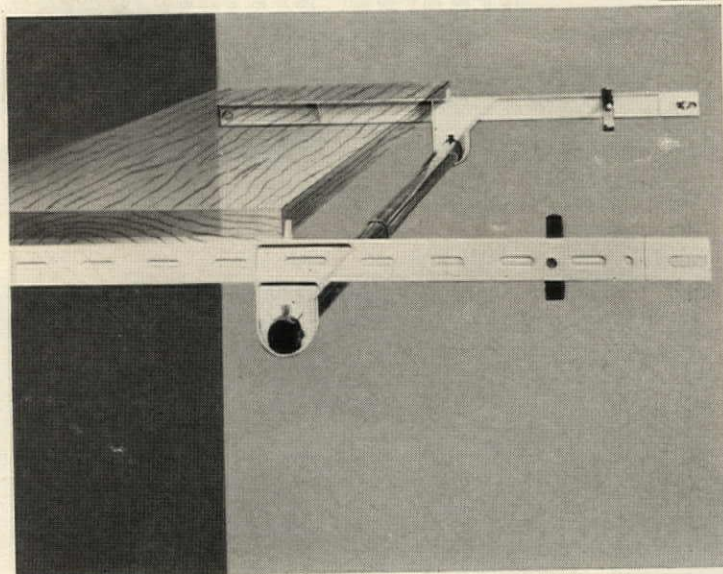


Burglar-proof hinge (left) has pin fastened to detachable section of butt. Section is screwed in place after pin is pushed down, so pin cannot be removed while door is closed. Device also prevents pin from riding up in normal operation.

R. K. Industries, Allentown, Pa.
For details, check No. 27 on p 194

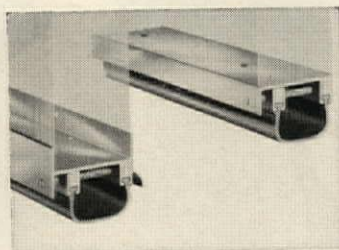
Wardrobe fixture kit (right) fits closets of any width or depth. Kloset King includes two wall brackets with knock-out mountings 1" apart, double coat and hat hooks, and sockets for wooden poles, steel pipe, or steel extension poles.

Raymond Products, St Paul.
For details, check No. 28 on p 194



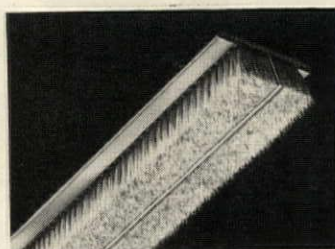
Header-track assembly for by-pass sliding closet doors has aluminum flange track recessed into wood nailing strips. So there is no need for a fascia or door trim. Redi-Mount package includes Scotamatic adjustable door hangers.

Kennatrack, Elkhart, Ind.
For details, check No. 29 on p 194



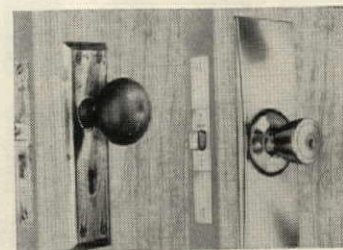
Adjustable weatherstrip has vinyl seal which can be set to conform to threshold irregularities. Two models are available: one (right) is flush mounted for interior doors; the other (left), for exterior doors, has an integral drip rail.

Cenco, Chicago.
For details, check No. 30 on p 194



Combination weatherstrip called "Fin-Seal" has plastic fin set in center of woven pile. Wool pile is water repellent, resilient, and treated with silicone to minimize friction. Plastic is set just below pile surface so it will not drag on threshold.

Schlegel, Rochester, N. Y.
For details, check No. 31 on p 194



Lock modernizing set has extra-large trim plates for covering old-style mortise locks. New plates are 3½" x 10½", eliminate need for filling holes left by old set. Locksets are the manufacturer's "400" line, are available in brass or bronze.

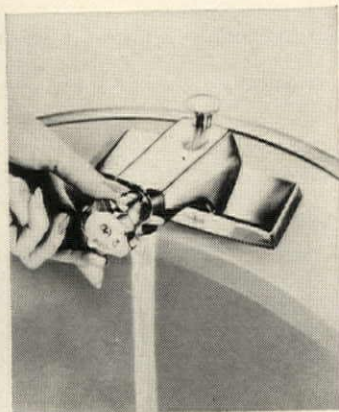
Kwikset, Anaheim, Calif.
For details, check No. 32 on p 194

Bathroom fixtures



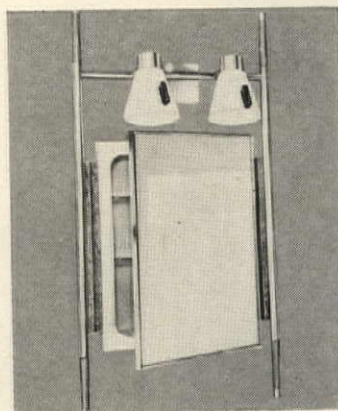
One-piece toilet, newest addition to this manufacturer's line, is competitively priced. Called the "Statesman," it features a silent flush and a standard seat connection which allows the contractor to install any type of seat in any price range.

Briggs Mfg, Warren, Mich.
For details, check No. 33 on p 194



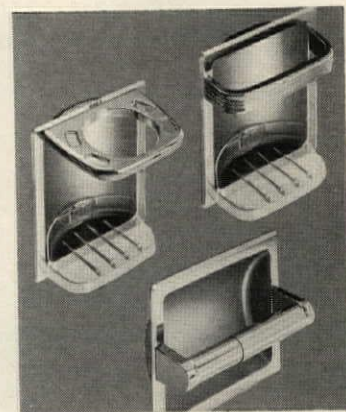
Single-control faucet operates on tilt principle shown in drawing. Washers don't turn, so they won't wear from grinding. Water pressure keeps valves from leaking. Faucet is pulled out to turn on water and turned to adjust temperature.

American Standard, New York.
For details, check No. 34 on p 194



Medicine cabinet is face-mounted, comes with decorative poles that run up to ceiling and lights on cross bar above mirror. Larger model has three lights, operated by a three-way switch, and a shelf that runs across poles below the mirror.

Natl Steel Cabinet, Chicago.
For details, check No. 35 on p 194



Modular accessories for bathrooms are designed to reduce tile work. Their dimensions—4¼" x 5¼"—require cutting only one tile. Line includes bathtub grab bars and holders for soap, tumblers, toothbrushes, and toilet paper. Finish is chrome.

Hoover, Fowlerville, Mich.
For details, check No. 36 on p 194

New products continued on p 174

Ordered expressly for
PLACE & COMPANY

*“HELPED
SALES...”*

JONES



*“Our buyers
really like the
beautiful Jones
hardwood panel-
ing in our models”
Andy Place*

Mr. ANDY PLACE of PLACE & COMPANY, South Bend, Indiana, one of the midwest's best known quality home builders tried JONES PANELING. He checked installation costs and sales appeal in all models . . . HE LIKED THE RESULTS!

BUILDERS everywhere are experiencing healthy sales results with the wide variety of Jones low-cost-luxury prefinished wall paneling. Home buyers are responsive to the custom-quality maintenance free wall paneling manufactured by JONES.

DEALERS . . . Get in on the PROFIT-LINE of JONES LAKESHORE SERIES wall paneling. Now is the time to stock these low-cost prefinished panels and enjoy a fast and profitable inventory turn-over. These beautiful easy-to-handle, labor-saving panels will bring traffic to your store.

IN-PLACE COSTS ARE COMPARABLE TO FINISHED DRYWALL . . . AND NO COSTLY DELAYS.



GENUINE HARDWOOD PLYWOOD

Pre finished

WALL PANELING

RETAIL... from

16¢
PER
SQ. FT.

LAKESHORE SERIES

GENUINE WALNUT, CHERRY, BIRCH. Selected from the choicest hardwoods, each 4' x 8' panel is carefully graded, scientifically dried and milled to a superb quality. The natural phenomena of burls, swirls, knots, grains and textures are retained for added interest.

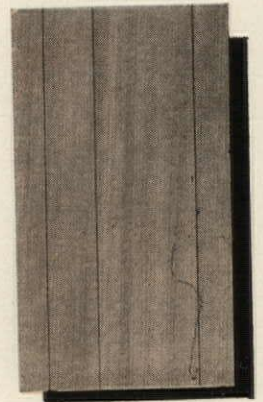
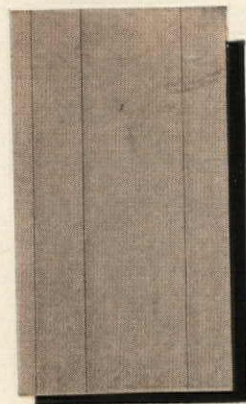
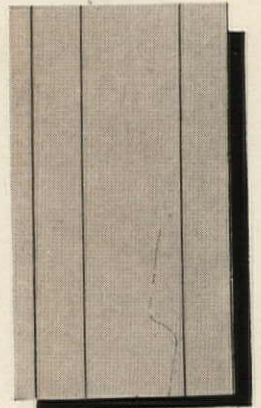
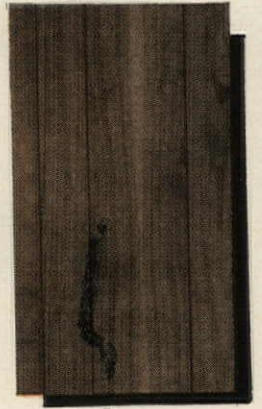
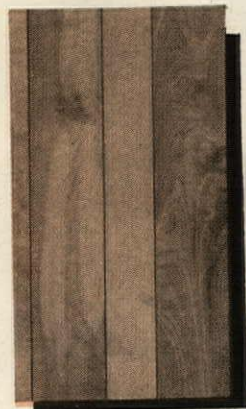
Each panel is Custom hand-V-grooved and hand-stripped with a non-fading, non-chipping color dye. These prefinished panels offer unsurpassed charm to any priced home. Ideal for business and institutional buildings too.

LAKESHORE PRINT SERIES . . . Lakeshore Print panels are available in a wide variety of flawless true-wood grains. The clear, smooth, lifetime prefinished surface reflects the deep etched authentic pattern. Available in Walnut, Cherry, Winter Teak, Rosewood and Oak. The 4' x 8' panels are ready for installation, V-grooved or plain. The nine separate production processes assure you of exceptionally high quality and uniform finish throughout.

LAKESHORE TROPICAL-COLOR MAHOGANY . . . Genuine Philippine Mahogany adds a touch of luxury and quality to any room. The Jones Vinl-Tone factory finished surface captures and permanently seals in the distinctive colors of the Far-East, producing a panel that belies its low cost. The V-grooves are shadow-toned in a contrasting color. Five different color tones are available, Dove Grey, Natural, Tusk Ivory, Charcoal and Frosted Ramin.

All Jones panels have Douglas Fir cores and backs adding structural strength, enabling the panels to be applied directly over studs on homes being built under F.H.A. provisions.

As members of the Hardwood Plywood Institute, all Jones production carries the grade stamp of this inspection agency.



JONES VENEER AND PLYWOOD COMPANY
P. O. BOX 789, EUGENE, OREGON

DEPT. H

SEND LITERATURE _____

NAME OF NEAREST DEALER _____

TYPE OF BUSINESS _____

FIRM NAME _____

ADDRESS _____



Have

You Met This Couple?

They'll Be Selling This Porch Idea to Your Customers in '62

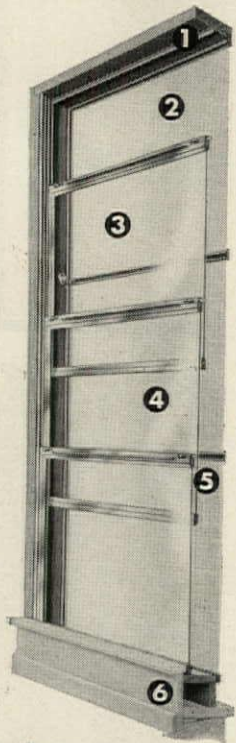
If you build new homes, or remodel old ones, DeVAC GlassWalls can make your work more profitable.

Many of your customers will soon be sold on the values of a DeVAC porch enclosure by the young couple above, who are seen this year in the pages of *American Home*, *House Beautiful*, *Popular Science* and *Better Homes & Gardens*.

This advertising and the inquiries it produces is aimed at helping you sell more houses and increase your profits on remodeling jobs.

By including a DeVac porch in your home designs, you can actually increase space and lower the overall cost per square foot!

Check these features . . . then write or call for complete details.



- ① Packaged, floor-to-ceiling unit is ideal for porches, breezeways and as prime window.
- ② The unit is modular, making installation fast and easy.
- ③ Three glass panels slide in individual channels. All panels remove from inside for easy cleaning.
- ④ Full length Fiberglas screen is rustproof and resilient.
- ⑤ Anodized aluminum will not tarnish.
- ⑥ Hollow box sill can be cut for adjusted height and provides space for electrical and heating service.

AS ADVERTISED IN . . .

Builders are invited to write for information on prices and installation details.

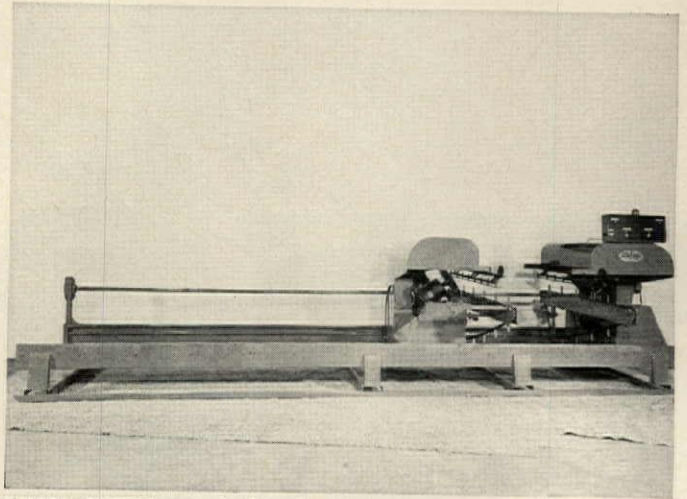
DeVAC, Inc.

DEPT. HH • 10130 STATE HY. 55 • MINNEAPOLIS 27, MINNESOTA

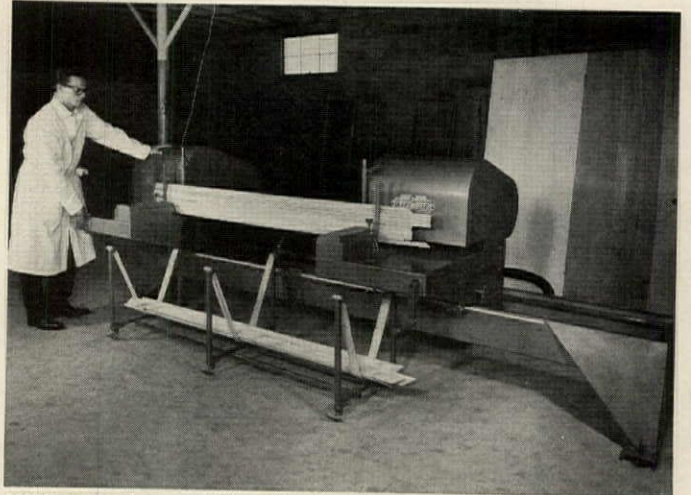


New products

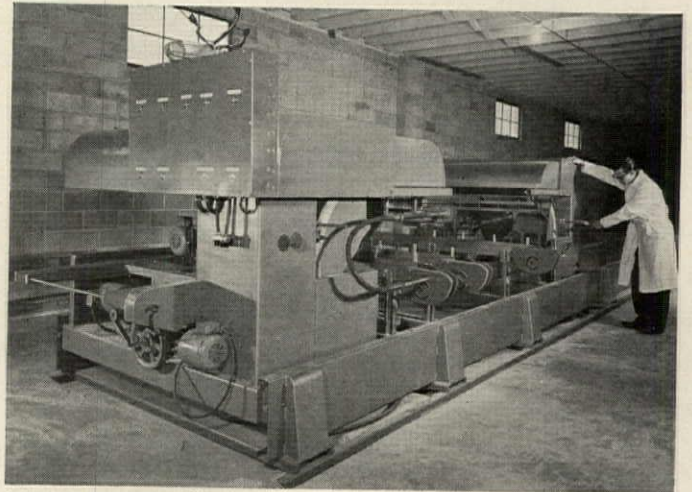
start on p 163



SMALL CUTTER cuts both ends of pieces up to 16' long.



MITERSAW is especially useful in cutting trim for prehung doors.



LARGE CUTTER will mass-produce any common size of framing lumber.

These automatic lumber precutters speed high-volume production

Small double-headed component cutter (top photo) will cut up to 600 pieces an hour with an accuracy of 1/32". It makes compound angle cuts as well as square and simple angle cuts and will cut lengths from 13 5/8" to 16'.

Double-headed mitersaw, the "Trimmaster" (center photo), is designed to make 45° cuts for door and other trim. It will handle widths up to 4", thicknesses up to 1 1/4", and lengths

from 1' to 9'. Angle cuts can be made from 45° to 90°. There is a special adjustment for cutting headers.

Large component cutter (bottom photo) can handle almost all framing lumber used in a house. It will cut dimension lumber up to 2x10, in lengths of from 20" to 24'. A special stop set-up is available for cutting even smaller pieces.

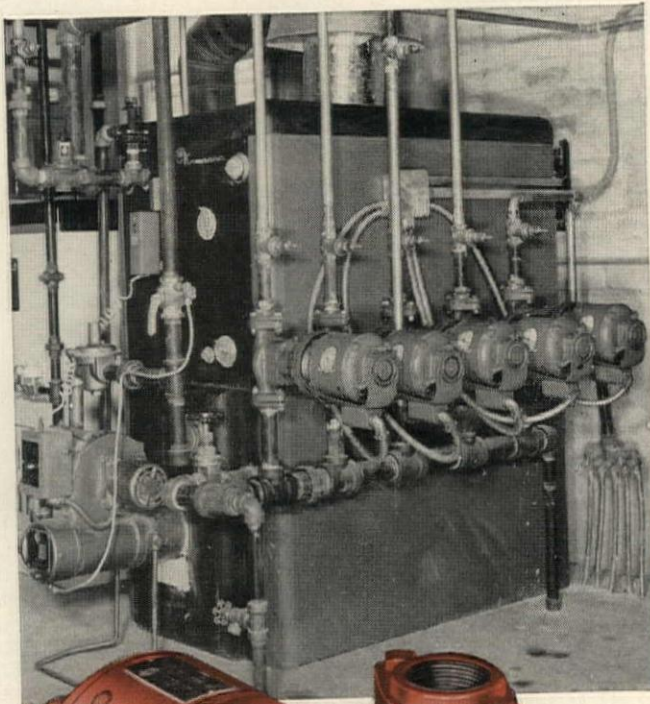
Clary Corp, Ft Worth, Tex. For details, check No. 37 on p 194

New products continued on p 176

HOUSE & HOME



TENANTS SELECT THEIR OWN TEMPERATURE IN 25 APARTMENTS ZONED BY **B&G Hydro-Flo®** SYSTEM



Stratford Manor Apartments, Schiller Park, Ill., attracts tenants with such luxury features as *individually controlled Hydro-Flo Heating* for each apartment.

Five buildings, each with five apartments, are heated with one boiler in each building. Five B&G Boosters, together with auxiliary *Hydro-Flo* equipment, are installed on each boiler to provide thermostatically controlled circulation to individual apartments. Tenants receive all the comforts of *radiant hydronic* heating plus their own choice of temperature. Only a forced hot water heating system can provide zoning so effectively and economically.

The B&G *Hydro-Flo* Systems installed in these apartments have proved so satisfactory that the builder plans to install the same system in 92 additional housing units to be built.

B&G BOOSTER®...key unit of the B&G Hydro-Flo System

Engineered for compactness, silent operation and years of service, this electric pump circulates boiler water for heating. It is built by precision manufacturing methods which translate good design into a superior product. This key unit and other auxiliary *Hydro-Flo* equipment can be installed on any hot water boiler.



B&G BOOSTER



BELL & GOSSETT

C O M P A N Y

Dept. HG-10, Morton Grove, Illinois

Canadian Licensee: S. A. Armstrong, Ltd., 1400 O'Connor Drive, Toronto 16, Ontario



"no call-backs at all" with Pease Ever Strait Doors

says R. Corwin Pauly, President of L. C. Homes, Inc.,
manufactured home builders of Cincinnati

Want to stop call-backs and cut expense without cutting corners? Take a tip from R. Corwin Pauly. Pease Ever-Strait* exterior doors helped him put a stop to call-backs, saved him the expense of replacing warped doors at nearly double the cost of initial installation. That's why he says:

"We searched a long time for an exterior door that wouldn't warp . . . a door that would end the need for call-back repairs or replacement. Now, with Pease Ever-Strait Door Assemblies, our problems are over—we've had no call-backs at all. Best of all, we've been able to do this at no increase in cost!"

Pease Ever-Strait Doors are designed to enhance

any architectural style. The 24 striking designs range from a flush model to styles with molded trim and glazed light inserts. And every model is your lowest cost guarantee of quality and warp-free service. Yes, Pease exclusive Ever-Strait design gives top strength and insulation, because it's engineered with a rigid Koppers Dylite** foam core between two steel panels. Results? . . . the substantial sound and "feel" of conventional doors, yet with one-third less weight. Pease Ever-Strait Doors save on installation time, too, because they come complete as Pease-fit units—primed and pre-hung in a weather-stripped frame. For straight savings from beginning to end, use Pease Ever-Strait Doors. For more information, write:

Pease Ever Strait Doors

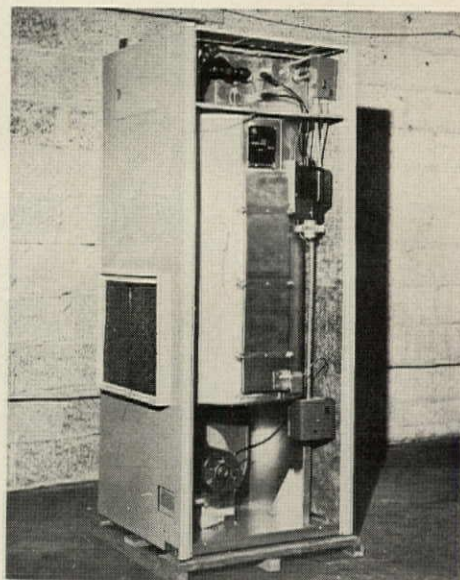
*Patents Pending
**Reg. Tm.

Pease Woodwork Company • Hamilton, Ohio

Note: Distributor inquiries invited

New products

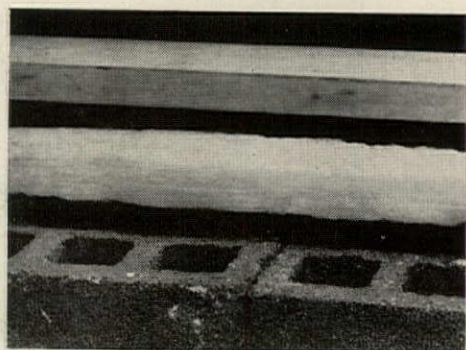
start on p 163



High-velocity warm-air furnace is now offered with gas burners as well as oil burners. New gas unit is electrically ignited, needs no pilot light. It has been approved by A.G.A. for use with all gas fuels. Furnace delivers hot air at a velocity of 2,000 fpm to thermostatically controlled registers.

Jet-Heat, Englewood, N.J.

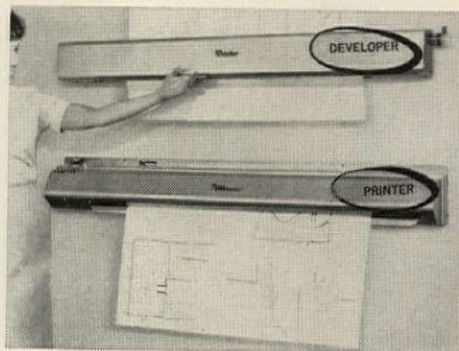
For details, check No. 38 on coupon, p 194



Fiberglass sill sealer, designed to fit between foundation wall and sill, closes voids caused by rough masonry surface. It is 4" wide and 1" thick, and compresses to 1/32" thick when in place. Sealer can be installed in the average 1,200 sq ft house for about \$10, according to the manufacturer.

Owens-Corning Fiberglas, Toledo.

For details, check No. 39 on coupon, p 194



High-speed diazo developer unit has a heated roller which speeds the action of the ammonia developer. develops prints up to 42" wide at a rate of 48" per minute. Thermomatic unit weighs only 30 lbs, is designed for wall mounting.

Rotolite, Stirling, N.J.

For details, check No. 40 on coupon, p 194

New products continued on p 178

HOUSE & HOME



6236

Frank Blair and host HUGH DOWNS of NBC-TV's "TODAY" Show
"We'll be selling Marlite to your clients"

Starting October 2, the best home building and remodeling prospects in your city will see dramatic Marlite commercials on America's most popular daytime TV show—NBC's TODAY. Throughout the fall, this powerful campaign will sell Marlite's beauty, durability, and unlimited decorating possibilities to millions of homeowners and businessmen. Nationally advertised Marlite means beautiful maintenance-free interiors, more satisfied customers. It makes good sense to recommend Marlite plastic-finished paneling for dry wall construction that adds permanent new beauty to any building or remodeling project. Marlite Division of Masonite Corp., Dover, Ohio

Marlite[®]
 plastic-finished paneling

ANOTHER QUALITY PRODUCT OF MASONITE[®] RESEARCH

MARLITE BRANCH OFFICES AND WAREHOUSES: 204 Permalume Place N.W., Atlanta 18, Georgia • 18 Moulton Street, Cambridge 38, Mass. • 4545 James Place, Melrose Park, Illinois (Chicago) • 8908 Chancellor Row, Dallas 7, Texas • 1657 Powell Street, Emeryville, California (Oakland) • 3050 Leonis Blvd., Los Angeles 58, California • 39 Windsor Avenue, Mineola, L.I. (New York) • 2440 Sixth Avenue So., Seattle 4, Washington

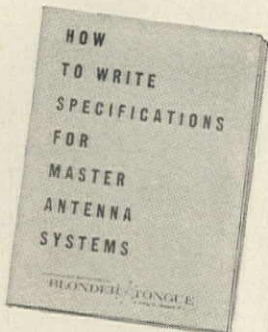
FREE

from

BLONDER-TONGUE



1 an invaluable guide to selection of the proper system • 12 packaged systems covering 80% of all master TV installations • basic principles of master TV installations to increase your know-how • handy slide-rule for DB to voltage conversion; calculate distribution system losses.



2 An indispensable aid to consulting engineers, architects and to all who must write master TV specifications for the growing market among schools, motels, hotels and apartment buildings.

• • • USE CONVENIENT COUPON • • •

BLONDER-TONGUE LABS. HH-9
9 Alling Street, Newark 2, N. J.

Please send me:

- Planning Master TV Systems—FREE (normally \$1.00).
- How to Write Master TV Specifications—FREE

Company _____

Name _____

Address _____

City _____ Zone _____ State _____

Occupation—please check:

- architect consulting engineer installer

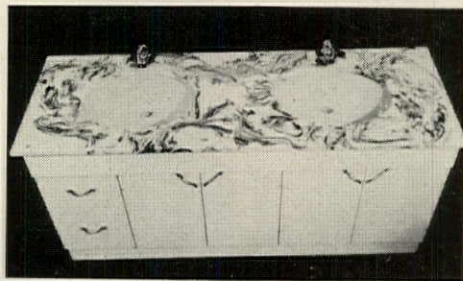
New products

start on p 163



Preformed pipe insulator is locked onto pipes by a simple hand squeeze. Made from paper pulp, it is preformed to fit 1/2", 3/4", and 1" pipe. Packages include twenty-four 1' sections, two elbows, and two tees.

Kreiding Paper Products, Milwaukee.
For details, check No. 41 on coupon, p 194



Synthetic marble vanity tops are offered in six color combinations: black and white, gold and black, beige and white, pink and white, white and gold, and gold and pink. Tops are 3/4" thick. They are available for 17"x14" bowls or with basic cutouts in one- and two-bowl sizes from 24" to 60".

Standard Steel Cabinet Co, Chicago.
For details, check No. 42 on coupon, p 194



Miniature electric "boiler" — only 14"x16 1/2"x6" — supplies 82,000 btuh. The Micro-Therm can be hung on a basement wall, needs no chimney, and requires only two plumbing and one electric connection to be ready for use. Cold water enters the unit, is instantly heated, then circulated through convectors as in a standard hydronic heating system. All controls are included in the package.

Dunham-Bush Inc, West Hartford, Conn.
For details, check No. 43 on coupon, p 194

House & Home

is the management magazine of America's biggest industry... it reaches the men whose help you need to get more of your products into more housing...



designed in



delivered in



financed in



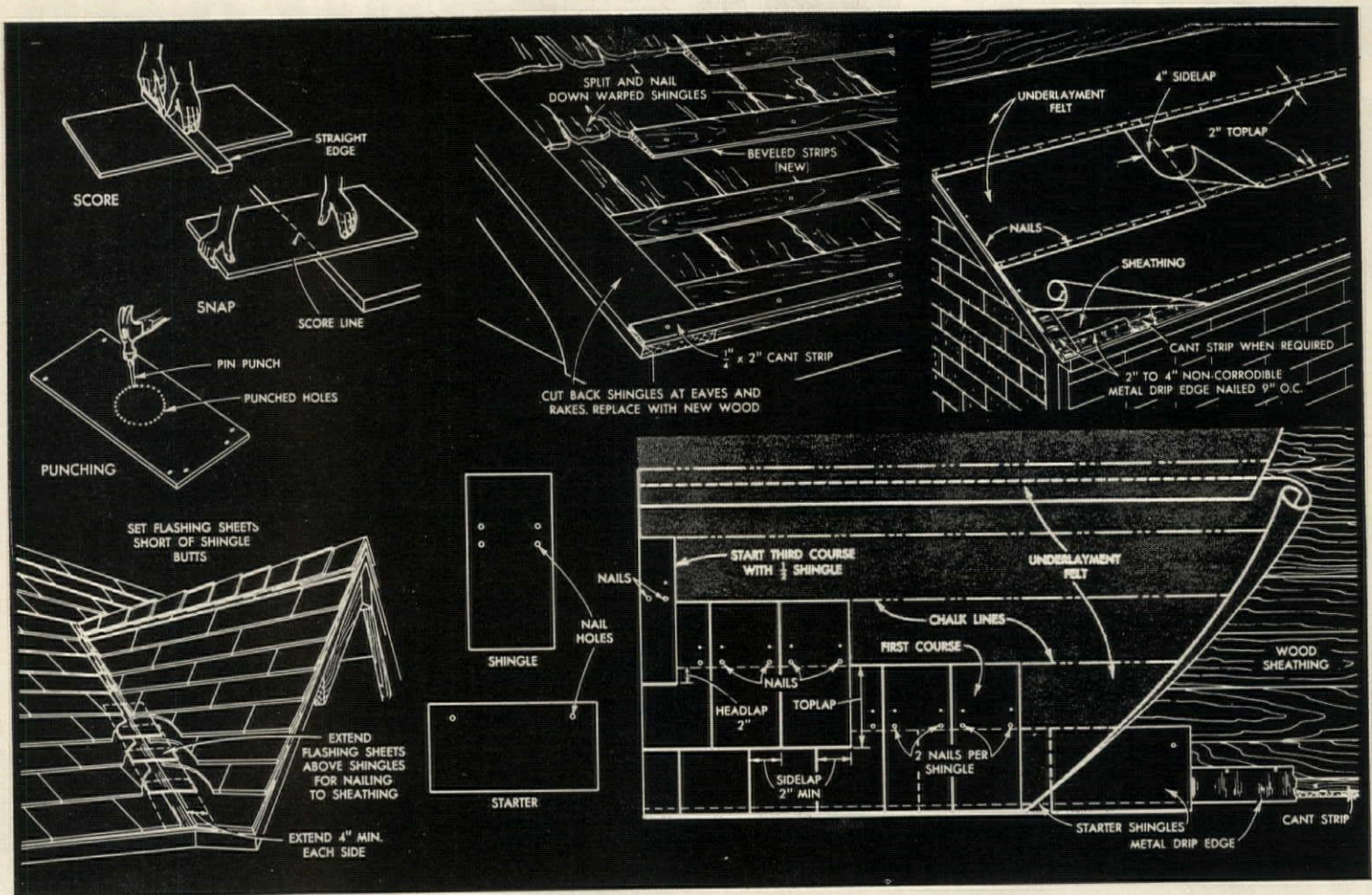
built in



sold in

House & Home

is published by TIME INC.



New manual shows how to install asbestos-cement roof shingles

In text and drawings like those above, the 12-page booklet explains the tools and techniques for handling this durable but brittle material. Sections include: types and sizes of asbestos-cement shingles; special tools for cutting it; storage require-

ments; job preparation; methods of installing the shingles on new roof decking and of reroofing with cement-asbestos over an existing roof; methods of flashing in valleys; ridge and hip-ridge finishing; and methods of application for single and mul-

ti-ple-unit shingles. There is also a section which explains how to replace shingles that have been damaged.

Asbestos-Cement Products Assn, New York City.

For copy, check No. P1 on coupon, p 194

For copy of free literature, check the indicated number on the coupon, p 194.

More technical literature

CONTROL SYSTEMS. Three booklets from Minneapolis-Honeywell, Minneapolis: Automatic fire protection, 26 pages. (Check No. P2)

Electronic air cleaning, 18 pages. (Check No. P3)

Automatic temperature control, 22 pages. (Check No. P4)

PERFORMANCE DATA FOR HEATING FUELS. 18 pages. Efficiency ratings and equipment life expectancies. Natl Oil Fuel Institute, New York City. (Check No. P5)

LUMBER COMPONENT SYSTEM. 12 pages. Brief description of the Unicom method of house construction. Natl Lumber Mfrs Assn, Washington. (Check No. P6)

MULTICOLOR ENAMELS. 16 pages. Specs on outdoor and interior paints, selecting

and operating spray equipment. Marbon Chemical Div, Borg-Warner Corp, Washington, W.Va. (Check No. P7)

MODULAR COMPONENT HOMES based on Unicom system. Design file of 50 plans with elevation drawing and floor plan showing room dimensions for each. \$2. Home Planners Inc, 16310 Grand River Ave, Detroit 27, Mich.

HOW TO BUILD POLE BUILDINGS. 64 pages. Drawings and charts give latest design and construction data. Detailed descriptions and cost figures. \$1.50. For copy, write American Wood Preservers Institute, 111 W Washington St, Chicago 2, Ill.

HEAT REMOVAL TROFFERS. 8 pages. Comparison shows advantages of heat removal troffer over standard troffer. Benjamin Div, Thomas Industries, Louisville. (Check No. P8)

TRUSS CUTTING SCHEDULE. Complete breakdown of angle cuts and member

lengths for W-pattern trusses. Timber Engineering Co, Washington. (Check No. P9)

LIGHTING DESIGN. 16 pages. How the lumen method works with a typical problem and its step-by-step solution. Tables on recommended illumination levels, room ratios, coefficients of utilization. General Electric, Cleveland. (Check No. P10)

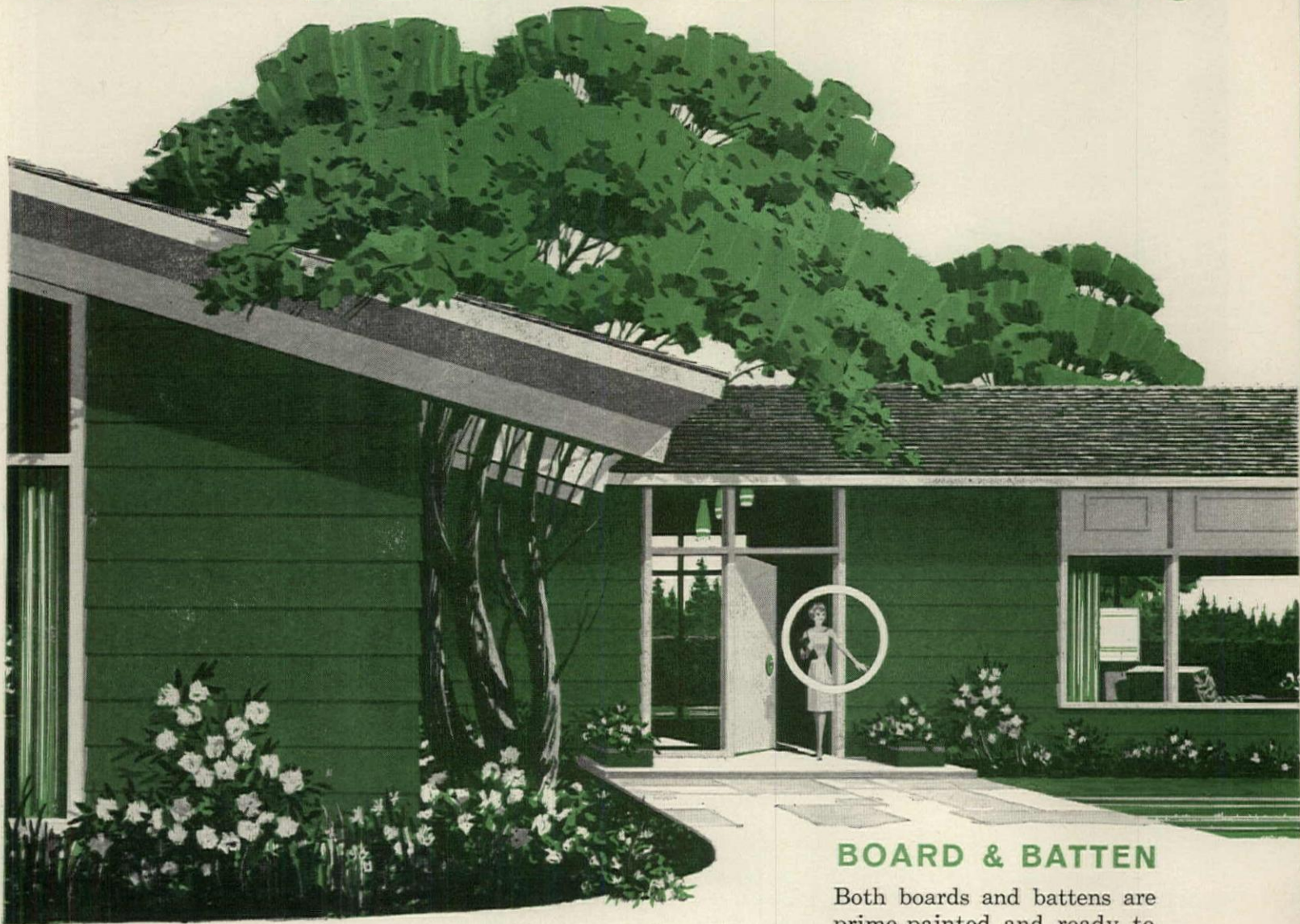
INSULATION: glass fiber batts and blankets. 8 pages. Thermal resistance factors, specs, heating-cooling cost analysis, recommended applications. US Mineral Wool Co, Stanhope, N.J. (Check No. P11)

NAILED PLYWOOD BOX BEAMS for garage door headers. 24 pages. Advantages, selection, nailing, construction, load-span tables, installation details. Douglas Fir Plywood Assn, Tacoma. (Check No. P12)

THIOPHOXY CONCRETE ADHESIVE. 10 pages. Properties, preparation, and application for surfacing and patching. Sun Chemical Corp, N Bergen, N.J. (Check No. P13)

Publications continued on p 186

What's your choice in SIDING STYLES?

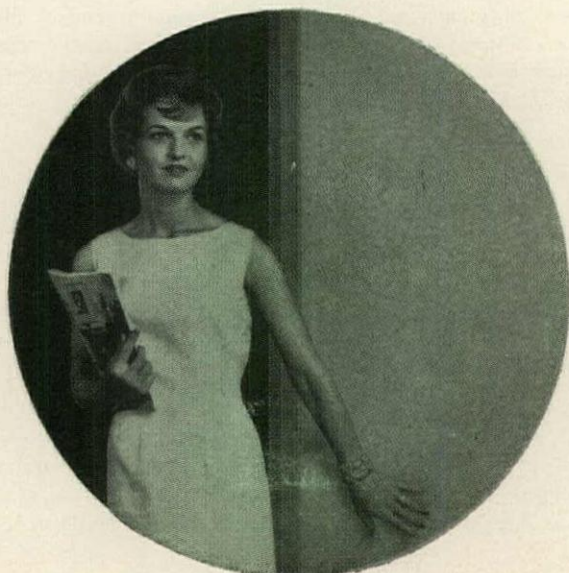


BOARD & BATTEN

Both boards and battens are prime-painted and ready to apply.

SMOOTH

A beautifully finished, perfectly flat panel that never checks or cracks.





VEE-GROOVE

V-grooves of 6" or 8" centers with hidden shiplap joints.

THE NEW HORIZONTAL SIDING

The newest member of the big family of sidings by Evans. *Horizontal* completes the full line and presents the classic "drop-siding" appearance to any home. Manufactured with beveled drip-lap edge for full weather protection.

CHANNEL GROOVED

A handsomely accented vertical texture with grooves on 4", 6" or 8" centers.



Evanite™

HAS THEM ALL IN 2-COAT PRIME-PAINTED OVERLAY PLYWOOD

Take your choice of the patterns and textures in the broad Evanite line. They are all available in prime-painted overlay plywood, the finest exterior plywood with a *super-tuf overlay face* and two coats of prime paint *baked on!* AND, they save you money in several ways . . .

● SINGLE WALL CONSTRUCTION

Apply Evanite prime-painted siding directly to studs. No underlayment or sheathing required.

● CUTS PAINTING COST IN HALF

The prime coats are on. Just apply the finish coat and the exterior is done.

● SAVES LABOR

Evanite prime-painted siding comes in large, handy pieces . . . applies in a hurry. No priming, filling, puttying or sanding is necessary.

● APPLIES IN ANY WEATHER

Surfaces, edges and ends are sealed. Apply Evanite prime-painted siding when *you* want to, not "when weather permits."

PACKAGED . . . VEE-GROOVE, SMOOTH, BOARD & BATTEN and CHANNEL GROOVED packaged in 4' x 8', 9' and 10' panels. HORIZONTAL cartons contain both 8' and 16' lengths.

There is an Evanite dealer near you. See prime-painted siding samples in his Evanite Siding Center, or write today for free samples and literature.



Evanite Building Materials include: SIDINGS • HAR-BORITE • CreZon • TEXTURE 1-11 • FIR PLYWOODS • HARDBOARD • HARDWOOD PLYWOODS

BUILDING MATERIALS DIVISION

EVANS PRODUCTS COMPANY

1029 S.W. ALDER STREET • PORTLAND 5, OREGON

NEEDED FOR YEARS...to prevent perplexing predicaments in the bathroom...AND HERE IT IS

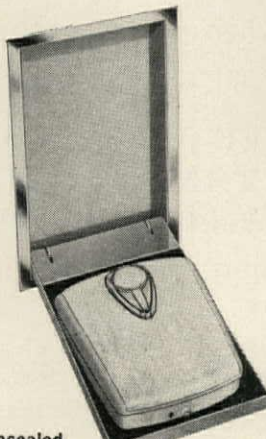


A NEW BATHROOM CONVENIENCE Just a cover-opening away is the spare...insurance against embarrassment. Closed it's one of the most attractive accessories a modern bathroom can have. Beautifully chromed and precisely made in every detail, it combines a new and original idea with Hall-Mack's fine styling.

The smoothly operating door which conceals the extra roll is a sparkling, chrome plated brass panel—compact and flush with the wall—that blends pleasingly with any decor.

For new homes or remodeling, you're sure to make friends and influence new customers when you specify, sell or install built-in features by Hall-Mack—especially Conceal-A-Roll with the "spare" compartment that solves a delicate problem,

shower recess unit



concealed scale — built in the wall for utmost safety and convenience



— handy, safe spot for shampoo bottles, etc.



HALL-MACK COMPANY

a **textron** company

HH-962

1380 W. Washington Blvd., Los Angeles 7, California

- Please send free color booklet on bathroom planning.
- Include complete information on Conceal-A-Roll.

Name _____

(PLEASE PRINT)

Address _____

City _____ Zone _____ State _____

Sold by leading plumbing, tile and hardware dealers everywhere.

Catalogs

REINFORCED FIBERGLASS PANELS for skylighting, side lighting, drop ceilings, and interior partitions. 6 pages. Barclite Corp, New York City. (Check No. P14)

MOVABLE PARTITION DESIGNS. 30 pages. Shows six basic types with diagrams and specs. Also sound-control data. Aetna Steel Prods Corp, New York City. (Check No. P15)

VALVES for copper tubing and threaded pipe. 14 pages. Cleveland Brass Mfg, Kinsman, Ohio. (Check No. P16)

WEATHERPROOF WIRING DEVICES. 8 pages. Bell Electric Co, Chicago. (Check No. P17)

CONCRETE AGGREGATE. 8 pages. Specs, mixing procedure, installation and curing data are covered. Perma Prods, Great Lakes Carbon Corp, Los Angeles. (Check No. P18)

GLUE-LAMINATED BEAMS AND ARCHES. 8 pages. Typical load tables. Wood Fabricators Inc, Cambridge, Mass. (Check No. P19)

STEEL DOORS. 4 pages. Specs. Door frames shown in typical wall sections. Amweld Building Prods. Niles, Ohio. (Check No. P20)

ELECTRICAL BUILT-INS. 54 pages. Diagrams, specs, and prices on hood fans, exhaust fans, bathroom heaters, door chimes, stereo intercoms, intercom radios, charcoal and electric barbecues, and food center. Nutone Inc, Cincinnati. (Check No. P21)

TRUCKS. 54 pages. Types of dump and mixer bodies and drives, mixer body operation, weight distribution charts, cement tank trailers and discharge equipment, specs, selection charts. Ford Motor Co, Dearborn, Mich. (Check No. P22)

INTERIOR HARDBOARD PANELS. 20 pages. Application diagrams, selection chart. Masonite Corp, Chicago. (Check No. P23)

HARDBOARD SIDINGS. 16 pages. Construction and finishing data. Masonite Corp, Chicago. (Check No. P24)

LIGHTING. 12 pages. Includes decorative interior fixtures in all styles, kitchen and bath fixtures, recessed fixtures, and outdoor lanterns. John C. Virden Co, Cleveland. (Check No. P25)

AC SWITCHES. 12 pages show types, design, construction, operation, and applications. Harvey Hubell Inc, Bridgeport, Conn. (Check No. P26)

OUTDOOR AREA LIGHTING: for sports and recreation; building facades and signs; malls, walks, and drives; shopping centers and parking lots. 48 pages. Also data on fixture types, lamps, ballasts, controls, adapters, and poles. General Electric, Schenectady, N.Y. (Check No. P27)

Publications continued on p 194

THE NEW LOOK OF REPUBLIC AND WHAT IT MEANS TO BUILDERS

As of June 1, 1962, four major divisions of Republic Steel: Berger, Container, Culvert, and Truscon, were combined into a single, new "MANUFACTURING DIVISION" with centralized responsibility for the manufacture and sale of Republic Products for Builders. Here is what this new organization means to you:

SAVES YOU TIME

Now one expert Builder Products Salesman can take care of all your needs, provide information, quotations, and follow-through. He understands your problems, and can help you in many ways.

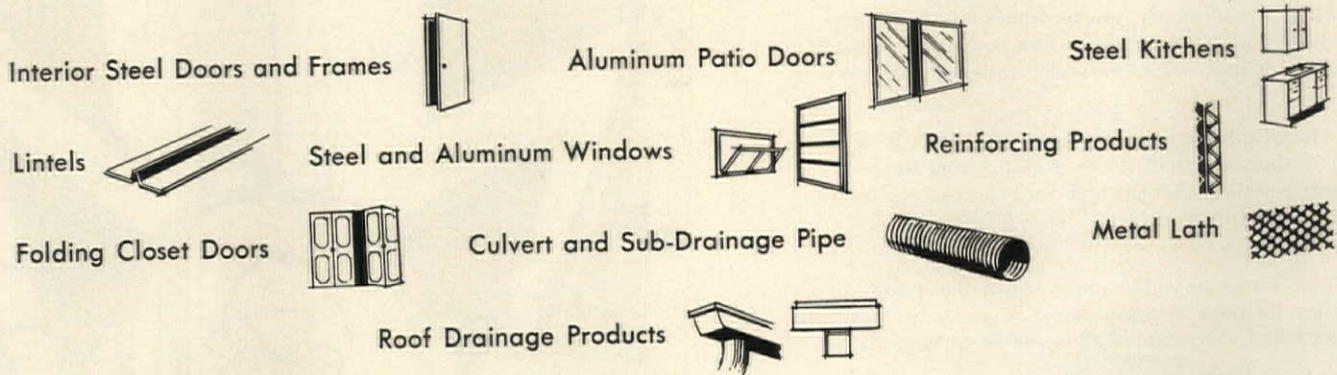
SAVES YOU MONEY

Less paperwork from start to finish means less expense for you, and one-stop shopping can mean appreciable savings in shipping and delivery costs.

BETTER SERVICE

Delivery of all metal building products can now be coordinated to meet your building schedules. Order changes can be handled more quickly and efficiently, and overnight delivery from 19 warehouses is available on most products.

Look to Republic for all of these Metal Building Products



REPUBLIC STEEL
CORPORATION
MANUFACTURING DIVISION
Berger • Container • Culvert • Truscon
Youngstown 5, Ohio

REPUBLIC STEEL CORPORATION
MANUFACTURING DIVISION
DEPT. HO-4829-A • YOUNGSTOWN 5, OHIO

- Please have your representative call and explain how the Manufacturing Division can serve me better.
- Please send me additional information on the following products of the Manufacturing Division.

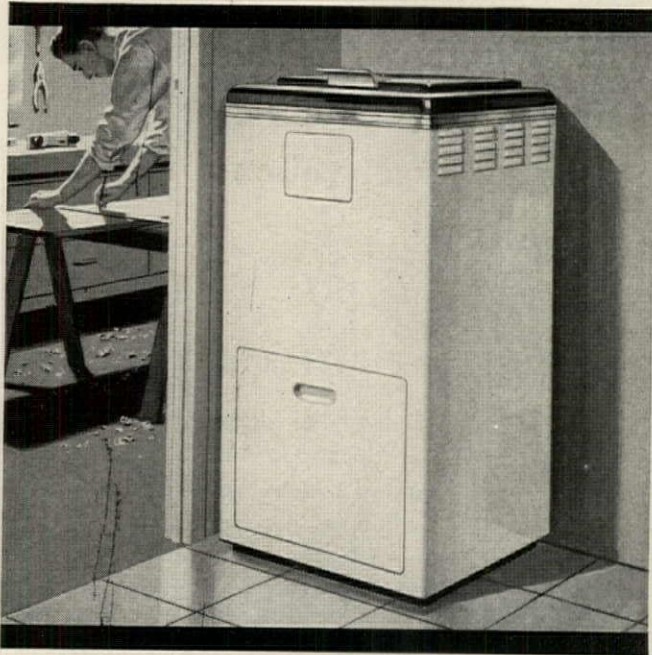
Name _____ Title _____

Company _____

Address _____

City _____ Zone _____ State _____

Why it pays to include
**MODERN GAS
 INCINERATORS**
in your homes



In the highly competitive business of selling homes, the smart builder is ever alert to new features—to *pluses* that will impress potential buyers. A modern Gas incinerator is just such a plus.

🔥 Homes in a cleaner, quieter, more modern setting . . . this important selling point can be yours with a modern Gas incinerator that eliminates noisy, unsightly garbage cans.

🔥 An obviously attractive point to housewife prospects—and to their husbands, too—is eliminating the mess and nuisance of daily garbage and trash carrying, by installing modern Gas incinerators.

🔥 Your prospects will be impressed by the fact that it will cost less for trash disposal, thanks to a modern Gas incinerator which takes care of all burnable garbage and trash.

🔥 Economical to buy and install, and operate, modern Gas incinerators are smokeless, odorless, automatic.

AMERICAN GAS ASSOCIATION

Check your local Gas company for full details.

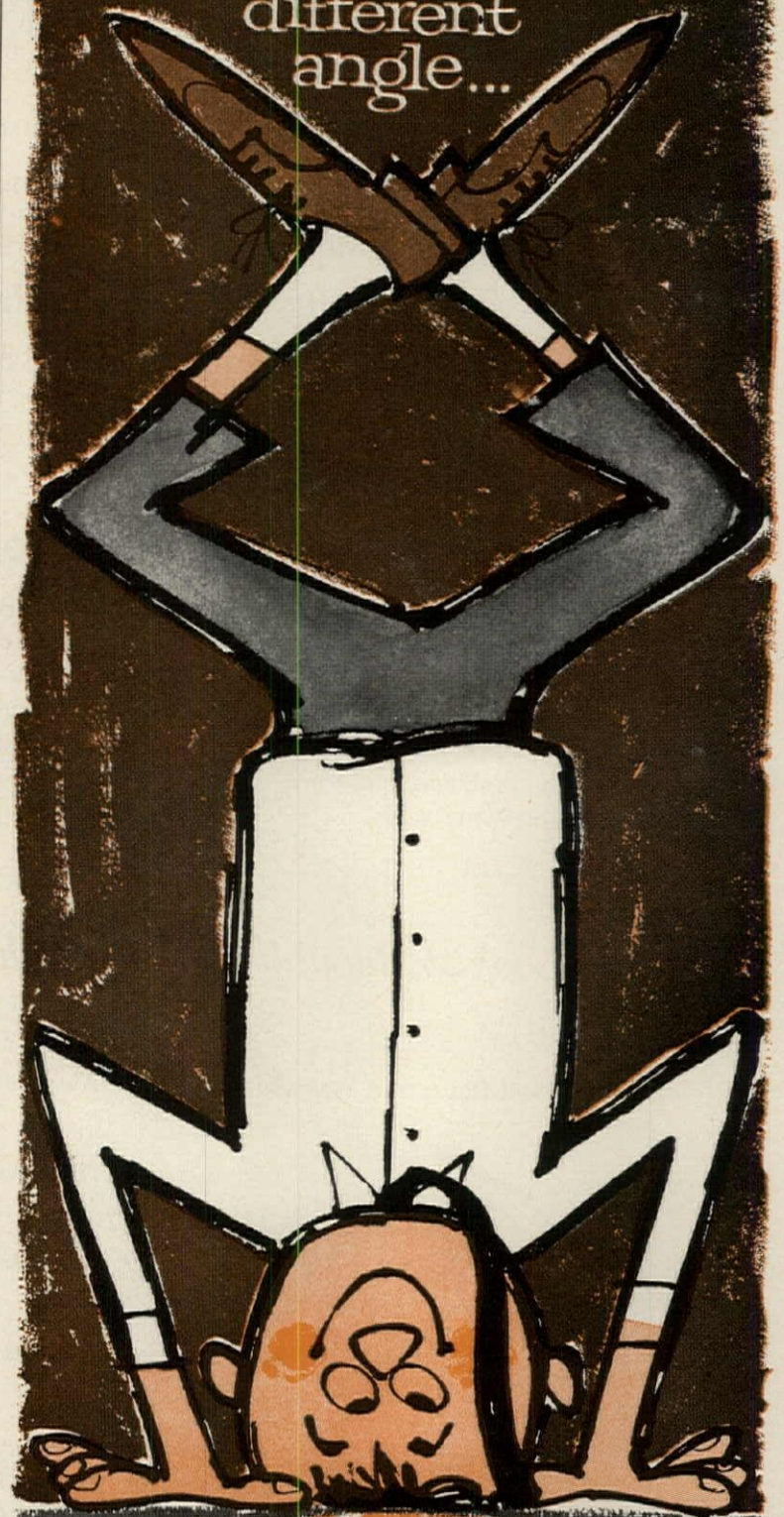
House hunters know they can



**LIVE MODERN
 FOR LESS
 WITH...**

GAS

look
 at your bathrooms
 from a
 different
 angle...



BRIGGS DOES

YOU'LL RECOGNIZE BRIGGS EXTRAS WITHOUT STANDING ON YOUR HEAD

Many leading home builders and plumbing contractors know the BRIGGS brand . . . know that its widespread acceptance does make a difference in sales appeal. They recognize that seemingly little things loom large in customers' eyes and often make or break the sale. Take the high-styling of the quality brass fittings with that instant-impact of real quality for example. The stunning beauty of design plus the interchangeable inserts available in chrome, white or six Beautyware colors, to match or contrast with the fixtures, are typical BRIGGS extras that speed your sales.

BRIGGS MANUFACTURING CO.

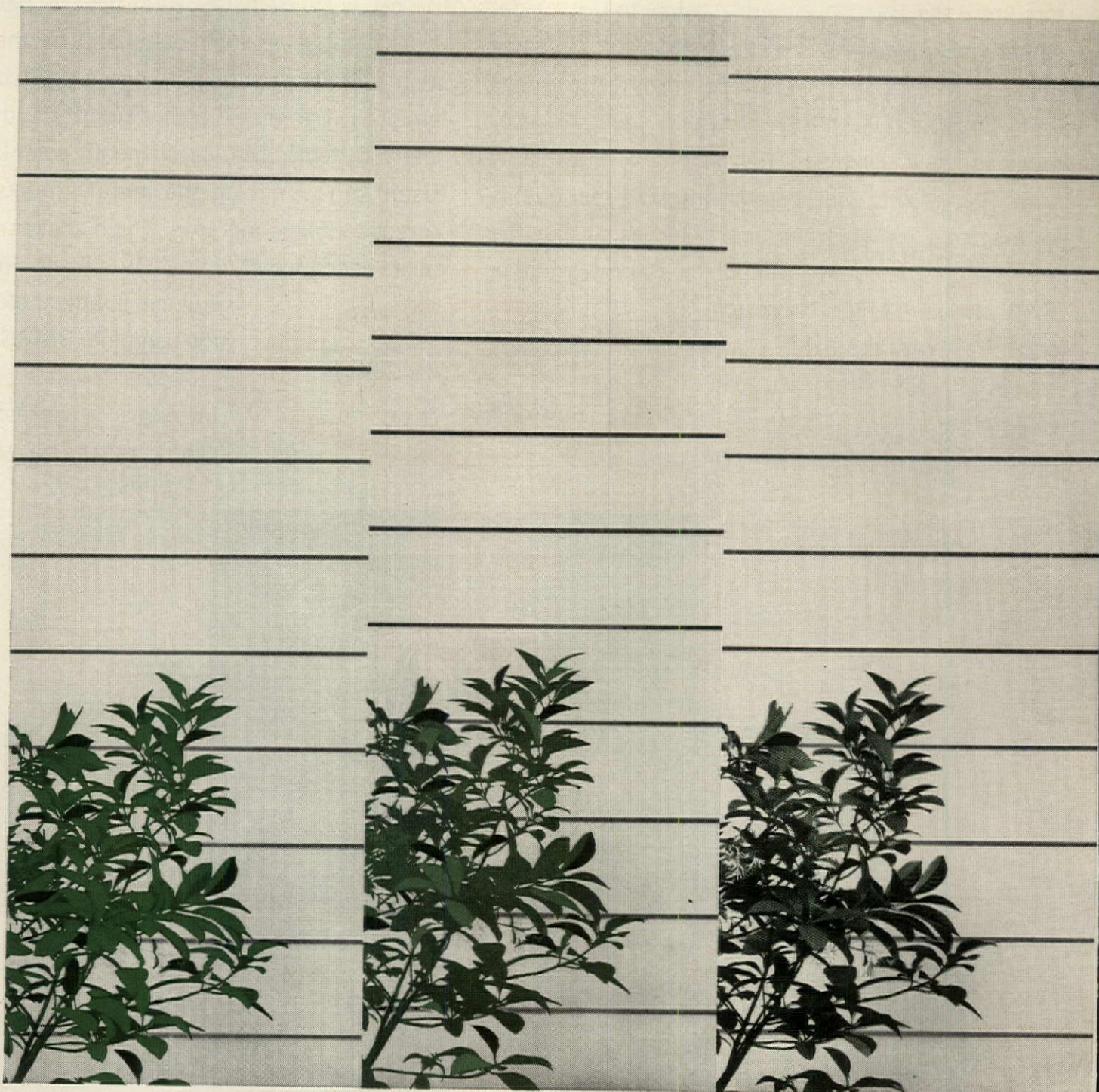


When you figure all the angles, you'll find you're better off with BRIGGS Beautyware because: the BRIGGS tub gives you more quality for the dollar with such salable features as one-piece construction, leakproof flanges, H-frame rigidity and serpentine safety bottoms. The glass-smooth porcelain finish is fused into . . . not on the metal, thanks to special Vitreous Enameling Iron which makes Beautyware colors become part of the fixture itself. The same con-

vincing quality holds true with the complete BRIGGS line of lavatories and water closets. Write for name of nearest distributor.

6600 E. 15 Mile Rd., Warren, Mich.





Let's face it. All types of siding

It takes about a year to see how a siding installation holds up. Then you've got one of two things—a callback or a happy customer who speaks well of you.

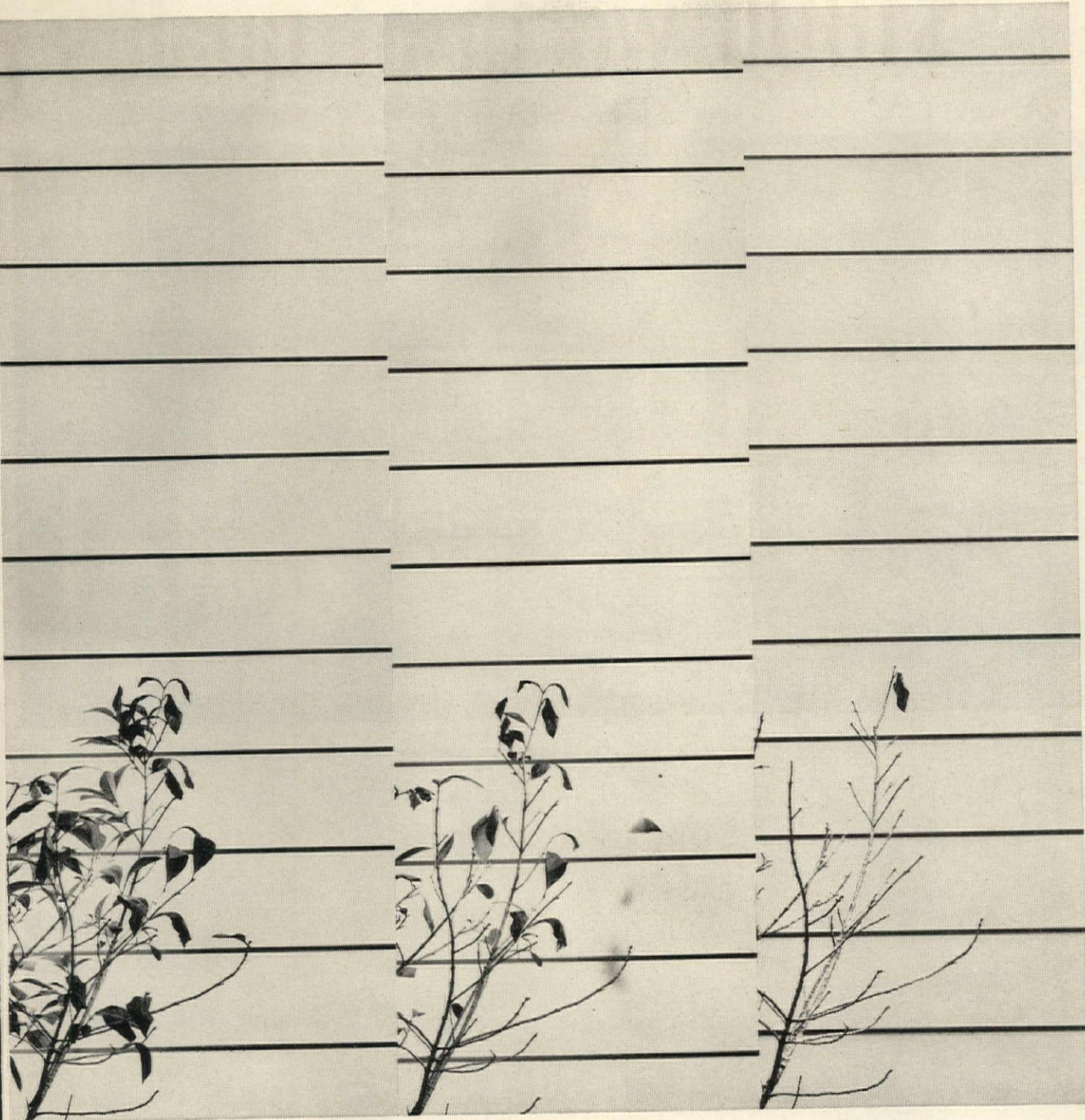
Here's why all your customers will be glad you chose Alcoa® Aluminum Siding. Alcoa's Alumalure® finish is the big plus! Low gloss with no shine or artificial look—and it's there to stay. That figures. Because Alcoa, who has worked longer with aluminum, knows more about aluminum, knows best which paint to pick, how to put it on so that it stays on.

Another thing, Alcoa Siding is 75 per cent stronger than FHA minimum requirements, 20 to 30 per cent

stronger than other aluminum siding. Of course it won't chip—peel—split—rot—or warp. Right down to the tiniest detail, Alcoa quality shows. There's even a drip bead on every panel so that water doesn't run or streak the panel below it.

Your customers have already been presold on television and in national magazines. Send for the whole story, send for Alcoa's special siding book. Write to: Alcoa Building Products, Inc., 1850-J Grant Building, Pittsburgh 19, Pa.

National Distributors: Bird & Son, Inc.; The Philip Carey Mfg. Co.; The Flintkote Co.; Mastic Corp.



look good

the first year

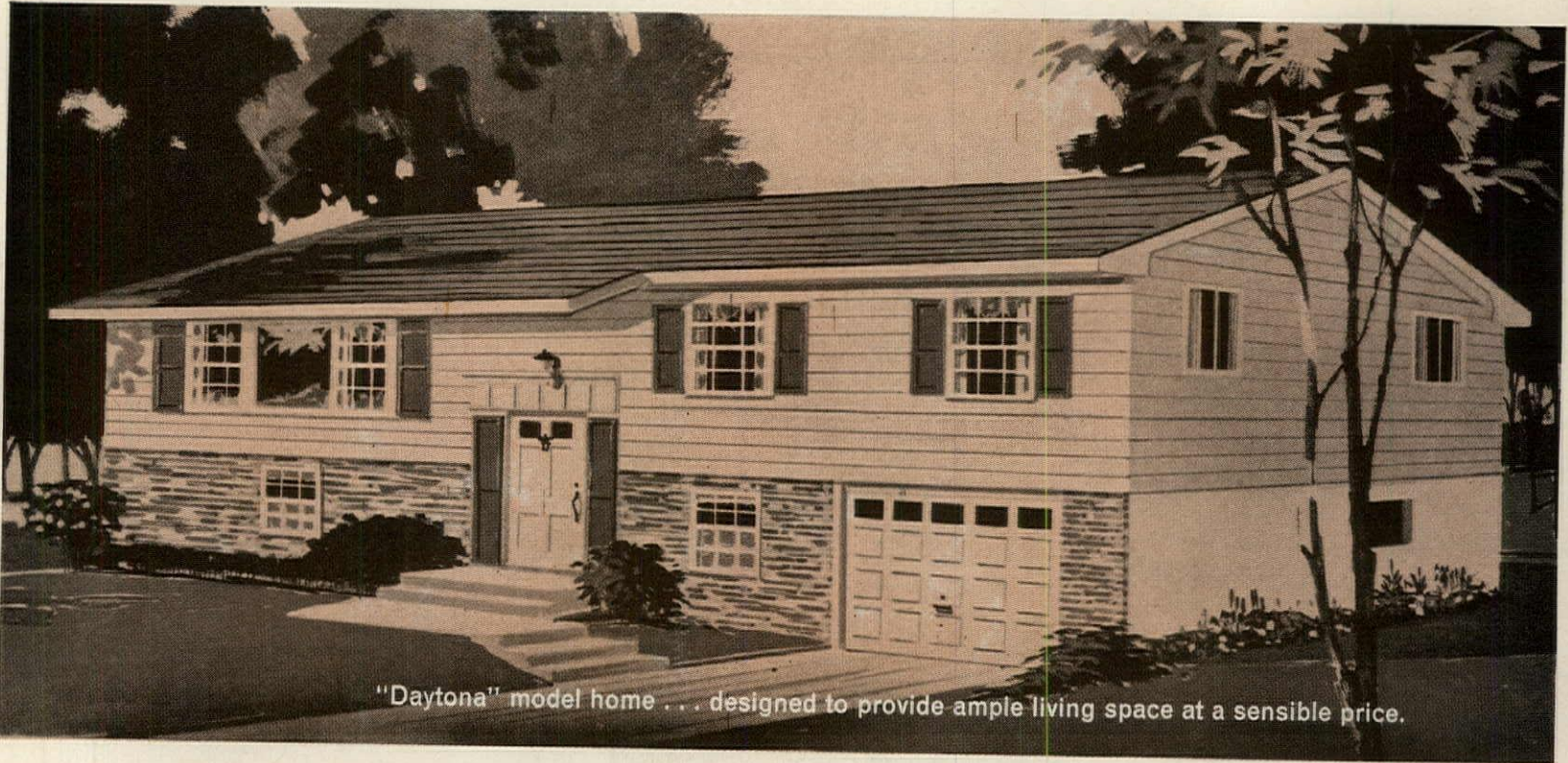


MADE BY ALCOA

Entertainment at Its Best...
ALCOA PREMIERE with Fred Astaire as Host
...Tuesday Evenings, ABC-TV

Paul N. Belmont, prominent New Jersey seaside developer, says

"\$1800 worth of quality



"Daytona" model home . . . designed to provide ample living space at a sensible price.



See how practical design plus quality RCA WHIRLPOOL appliances combine to make this kitchen most livable.

RCA WHIRLPOOL appliances in every home is a major selling tool for us!"

*Berkeley Shore Estates in Bayville, N.J., sells homes
faster by offering extra values... in houses and locations*

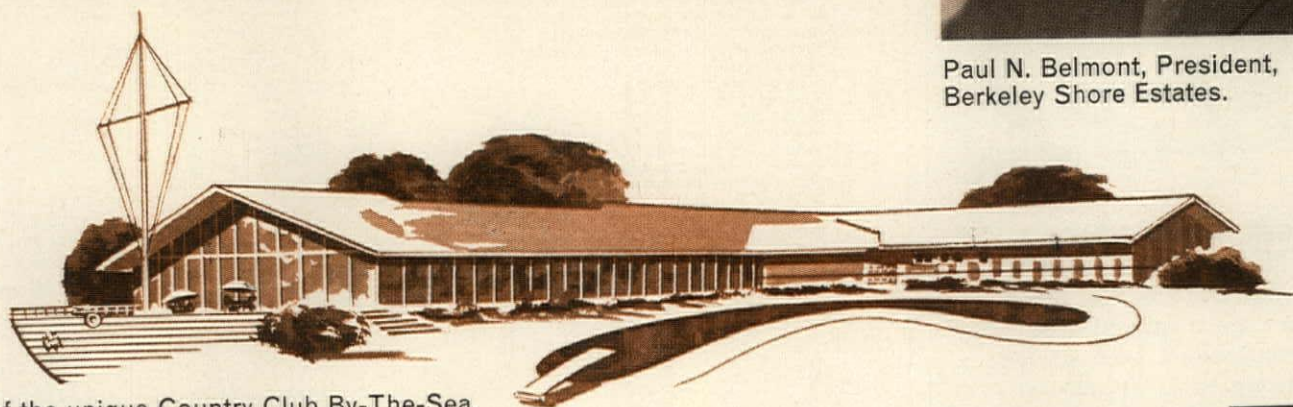
Located only an hour-and-a-half's drive from New York City and even less to Philadelphia, Berkeley Shore Estates have brought the pleasures and benefits of seaside living within reach of a large new market. The development extends over 1000 acres; miles of paved roads form the land sinews of the community, while nearly fifteen miles of waterfront bring the sea close to every resident.

Five house models are available, priced from a basic \$9,900 to \$13,990, with a variety of options in space and trim to fit the requirements of almost any family. Each house has one common feature, however: a complete kitchen that's designed with every modern convenience a housewife could want. Included are RCA WHIRLPOOL built-in oven and range top, dishwasher, 13 cu. ft. refrigerator, matching automatic washer and dryer. According to Mr. Belmont, the completeness of equipment in his Berkeley Shore homes has been a vital factor in the development's high rate of sale.

How about letting RCA WHIRLPOOL appliances help *your* homes sell faster? A call to your RCA WHIRLPOOL distributor is all it takes, so join up... it's easier to sell homes with RCA WHIRLPOOL appliances than sell against them!



Paul N. Belmont, President,
Berkeley Shore Estates.



View of the unique Country Club By-The-Sea,
innovation in gracious seaside living.



*Your greatest asset
is our quality performance!*



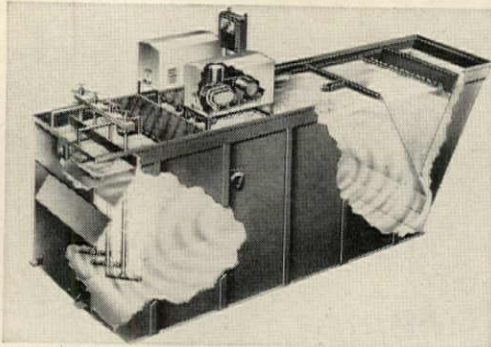
Contract and Builder Sales Division, Administrative Center, Benton Harbor, Michigan

Manufacturer of RCA WHIRLPOOL Automatic Washers • Wringer Washers • Dryers • Washer-Dryers • Refrigerators
• Freezers • Ice Cube Makers • Ranges • Air Conditioners • Dishwashers • Food Waste Disposers • Dehumidifiers

Use of trademarks and RCA authorized by trademark owner Radio Corporation of America



Sewage Treatment

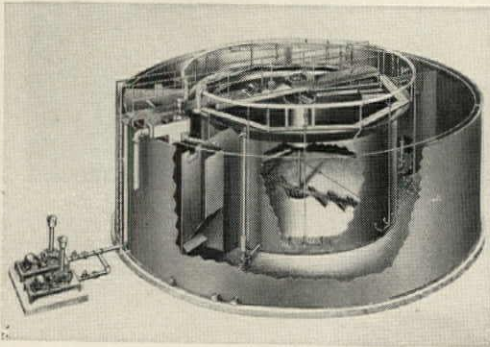


FOR OUTLYING SUBDIVISIONS

Smith & Loveless Factory-Built "Oxigest" Sewage Treatment Plants provide dependable treatment of domestic sewage in outlying areas not served by municipal sewer facilities... for subdivisions, motels, schools, factories, apartments, mobile home parks and other applications.

FOR GROWING SUBDIVISIONS

"Oxigest" plants can be installed in parallel, as needed, to serve a growing subdivision or development. Available in standard-size, single units or larger, bolt-together units.



FOR LARGER SUBDIVISIONS

Smith & Loveless Field-Erected "Oxigests" are capable of handling the sewage treatment needs of larger subdivisions, even small communities up to 5,000 persons.

Write for new product bulletin on Smith & Loveless equipment. Just write Department 70.

Smith & Loveless



P. O. BOX 8884
KANSAS CITY 15, MISSOURI
PLANT: LENEXA, KANSAS

(3001)

Publications

start on p 183

Product bulletins

PLASTIC SEWER AND DRAIN PIPE. 4 pages. Where and how to install. Fittings available. Gering Plastics Co, Kenilworth, N.J. (Check No. P28)

PACKAGED PUMP STATIONS. 4 pages. Construction diagram, cutaway drawings, and specs. Tex-vit Mfg, Mineral Wells, Tex. (Check No. P29)

SWIMMING POOL HEATERS. Data sheet. How to figure heater sizes. Edwards Engineering Corp, Pompton Plains, N.J. (Check No. P30)

ADHESIVES: fast-dry contact cement and spray-mix contact cement. 4 pages. Application instructions. Formica Corp, Cincinnati. (Check No. P31)

HAND RAILING PARTS. 50 pages. Drawings of stock components for pipe and ornamental types. Julius Blum & Co, Carlstadt, N.J. (Check No. P32)

VINYL PANELS for roofing, siding, partitions, etc. 4 pages. Properties, sizes, installation details. Barrett Div, Allied Chemical, New York City. (Check No. P33)

ELECTRONIC DIMMER. Folder. Full-range controls. Lutron Electronics Inc, Emmaus, Pa. (Check No. P34)

BATH ACCESSORIES: grab bars, soap dishes, etc. Data sheet. Grote Mfg, Madision, Ind. (Check No. P35)

INTERCOM AND FIRE DETECTION. 4 pages describe parts and accessories. Fasco Industries, Rochester, N.Y. (Check No. P36)

For more information check the numbers below (they are keyed to the items described on the New Products and Publications pages) and send the coupon to: HOUSE & HOME, Rm 1960, Time & Life Building, Rockefeller Center, New York 20.

NOTE: HOUSE & HOME's servicing of this coupon expires Nov 30, 1962. If you contact manufacturers directly, it is important that you mention the issue of HOUSE & HOME in which you saw the item.

New products

1. National Homes Colonial
2. Richmond Homes townhouses
4. Harnischfeger garden apartments
3. Kitchenaid dishwasher
5. O Keefe & Merritt gas range
6. Caloric range
7. Moen Kitchen faucet
8. Electro-Way sink center
9. Modern Maid dishwasher
10. Waste King early American line
11. Weigand electric heat and cooling
12. Janitrol heater-cooler
13. Smith packaged boilers
14. Suburban heating-cooling unit
15. Arkla gas heater-cooler
16. Lau central humidifier
17. American Air Filter permanent filter
18. American Furnace electronic air filter
19. Rock Island louvered doors
20. US Plywood siding
21. Plastiglide T-moldings
22. Weyerhaeuser hardwood paneling
23. Emerson bracket designs
24. GE neon pilot light
25. Halo recessed light
26. Sinko decorative diffusers
27. R. K. Industries burglar-proof hinge
28. Raymond wardrobe fixture kit
29. Kennatrack header-track assembly
30. Cenco weatherstrip
31. Schlegel weatherstrip
32. Kwikset lock set
53. Briggs one-piece toilet
34. American Standard faucet
35. National Steel medicine cabinet
36. Hoover bathroom accessories
37. Clary lumber precutters
38. Jet-Heat warm-air furnace
39. Owens-Corning sill sealer
40. Rotolite high speed developer
41. Kreidling pipe insulator
42. Standard Steel Cabinet vanity
43. Dunham-Bush electric boiler

Publications

- P1. Asbestos-Cement roof shingles
- P2. Minneapolis-Honeywell fire control
- P3. Minneapolis-Honeywell air cleaning
- P4. Minneapolis-Honeywell temperature control
- P5. Nat'l Oil Fuel Institute performance data
- P6. Nat'l Lumber Mfg Assn Unicom system
- P7. Marbon Chemical multicolor enamels
- P8. Thomas Industries troffers
- P9. Timber Engineering truss cutting
- P10. GE lighting design
- P11. US Mineral Wool insulation
- P12. DPFA nailed box beams
- P13. Sun Chemical concrete adhesive
- P14. Barclite fiberglass panels
- P15. Aetna Steel partition designs
- P16. Cleveland Brass valves
- P17. Bell Electric weatherproof wiring
- P18. Great Lakes Carbon concrete aggregate
- P19. Wood Fabricators beams and arches
- P20. Amweld steel doors
- P21. Nutone electric built-ins
- P22. Ford Motor trucks
- P23. Masonite interior panels
- P24. Masonite hardboard siding
- P25. John C. Virden lighting
- P26. Harvey Hubbell AC switches
- P27. GE area lighting
- P28. Gering Plastic piping
- P29. Tex-vit packaged pumps
- P30. Edwards swimming pool heaters
- P31. Formica adhesives
- P32. Julius Blum hand railings
- P33. Barrett vinyl panels
- P34. Lutron electronic dimmer
- P35. Grote bath accessories
- P36. Fasco intercom systems

September

Name

Position Firm Kind of business

Street

City State

I wish to enter a subscription to HOUSE & HOME for 1 year, \$6; 2 years, \$8; new; renewal (US and possessions and Canada only)

Name

Position Firm Kind of business

Street

City State



KAY VEE SAYS:

"Real Smo-o-oth!"

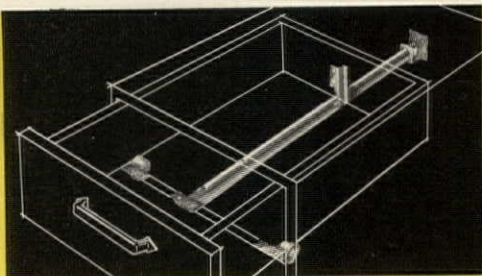
**KV DRAWER SLIDES ALWAYS OPERATE SMOOTHLY,
QUIETLY, NEVER STICK, JAM OR SAG!**



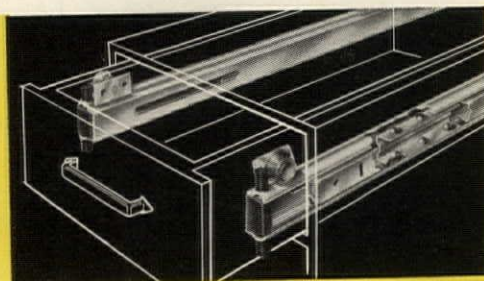
No. 1300. For loads to 50 pounds. Only $\frac{1}{2}$ " clearance required each side. Nylon ball bearing wheels for noiseless, smooth lifetime operation. Economical, easy to install. Bright zinc-plated finish. Sizes from 12" to 28". Most widely used drawer slide on the market.

The distinctive advantages of K-V drawer slides may be one of the features that will convert a good prospect into a satisfied buyer. K-V drawer slides are made to please—both you and your prospective buyers. K-V drawer slides are easy to install. They're sturdy, smooth operating, dependable. And, low-cost. The drawer slides shown here, plus nine more not illustrated, meet demands of heavy or light loads, full extension, under-drawer location, single or double-track construction and self-closing conveniences. Isn't it time you started to build extra value in your homes with K-V drawer slides?

SEE OUR
CATALOG
IN S
SWEET'S



No. 1175. For loads of 30 to 50 pounds. Fits any width or length drawer. No measuring or templates required. One inch needed between drawers for track. Zinc plated. Standard track length: 22 $\frac{1}{8}$ ".



No. 1400. Full extension slide designed for loads to 100 pounds. Super Oilite bearings give trouble-free operation even at full extension. $\frac{3}{4}$ " clearance required each side. Heavy gauge, zinc-plated steel. Sizes from 12" to 38".

KNAPE & VOGT MANUFACTURING COMPANY GRAND RAPIDS, MICHIGAN

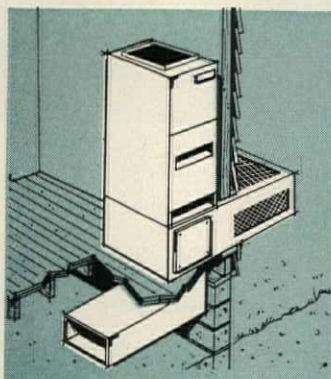
Manufacturers of adjustable shelf hardware, sliding and folding door hardware, closet and kitchen fixtures, Tite-Joint Fasteners and Handy Hooks for perforated board.

FROM GM-DELCO **NEW** ANSWERS TO BUILDERS' NEEDS

THIS IS THE NEW GM-DELCO THRIFT-PAK!

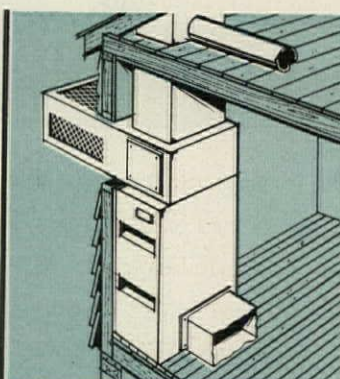
- THRIFT-PAK is builder-designed to air condition new homes in the low-price range, and multiple-unit dwellings, too.
- THRIFT-PAK is a self-contained packaged unit that can save up to \$200 in installation costs over conventional systems.
- THRIFT-PAK is a thru-the-wall system that can be installed by two men in just sixty minutes.
- THRIFT-PAK is factory charged and sealed, all ready for operation.
- THRIFT-PAK is completely circuited to make hook-up faster than ever.
- THRIFT-PAK meets cooling needs up to 32,000 BTU/HR—guaranteed General Motors certified ratings.

THRIFT-PAK INSTALLS EVERYWHERE... QUICKLY, ECONOMICALLY!



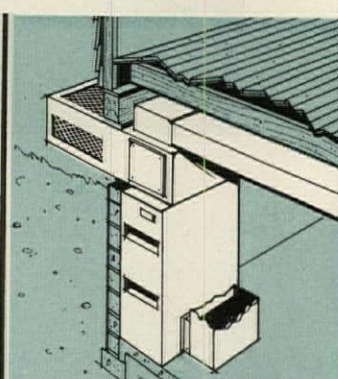
CRAWL SPACE

The Thrift-Pak fits through the wall, connects to distribution duct work underneath the house for economical installation.



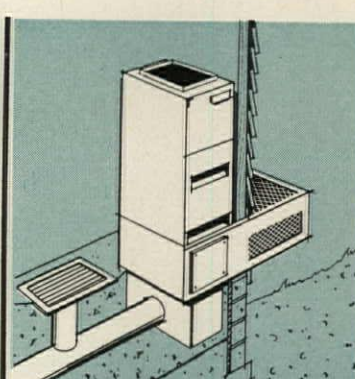
OVERHEAD DUCTS

Popular overhead distribution system uses the Thrift-Pak mounted through the wall and over the heating unit.



BASEMENT

Conventional basement heating installation easily made into a year-round Delco-365 system by locating the Thrift-Pak directly above the furnace.



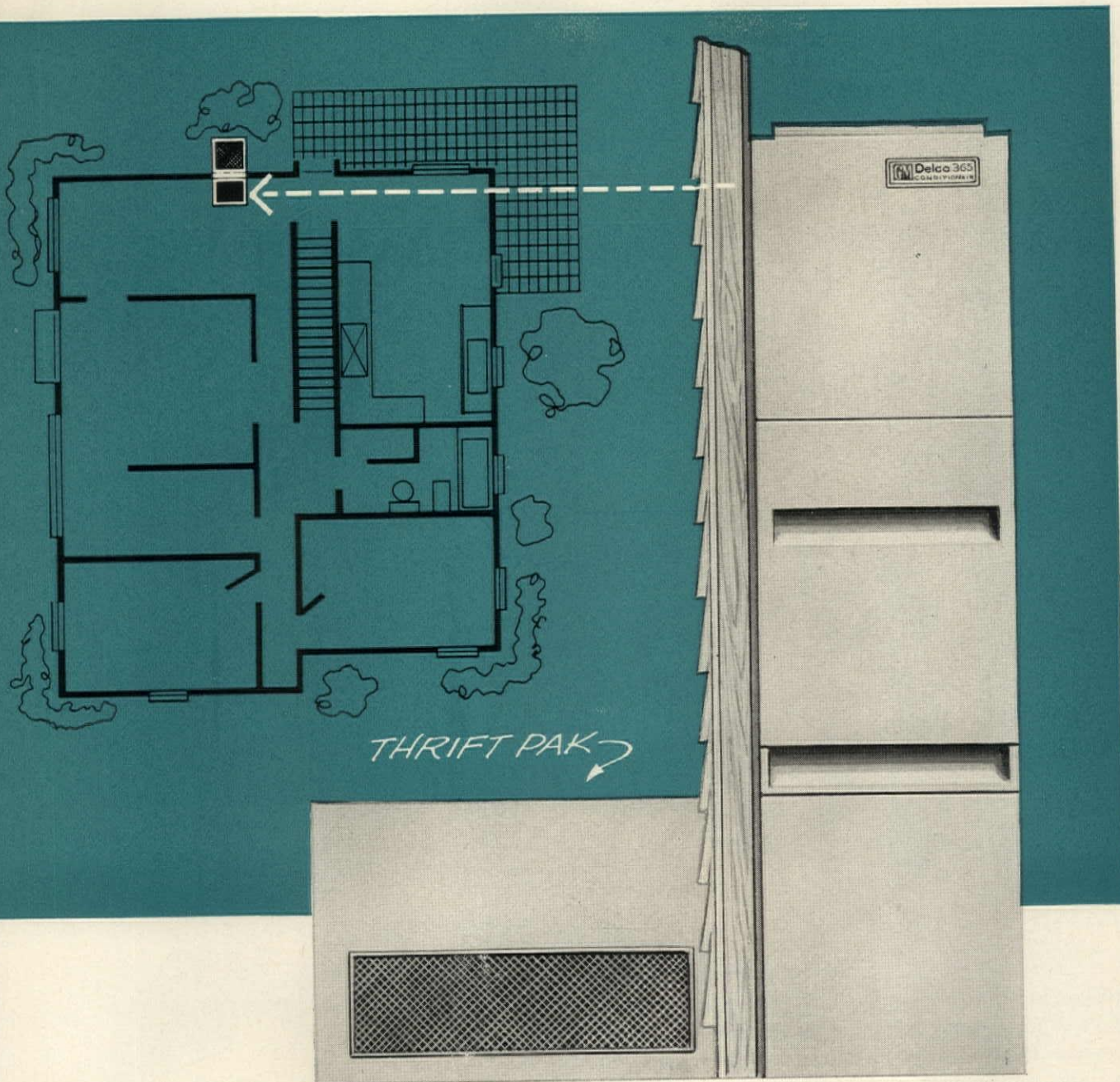
SLAB CONSTRUCTION

Thrift-Pak puts fast, easy air conditioning into slab type houses by installing through the wall and over the supply plenum.



NEW GM-DELCO "DESIGNER'S PLANNING BOOK"

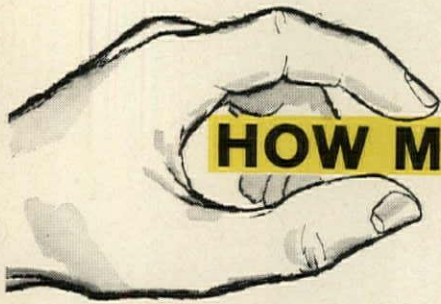
gives architects and home designers a complete "worksheet" on home conditioning installations. There's everything an architect needs with detailed applications, specifications, architect's layouts—clearly, concisely explained. For a free copy write Dept. XB-1.



THRIFT-PAK adds the extra sales power of central air conditioning to help make your homes more desirable, move them faster! By giving your home buyers a year-round "comfort-climate" in their homes, THRIFT-PAK gives you a powerful plus feature to place your homes head and shoulders above competitors. Get the facts on THRIFT-PAK's sales leverage . . . write Delco Appliance Division, Dept. XB-1, General Motors Corporation, Rochester 1, New York.

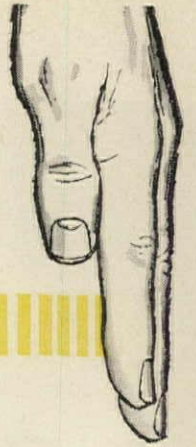
GM Delco 365 CONDITIONAIR

DELCO APPLIANCE DIVISION • GENERAL MOTORS CORPORATION • ROCHESTER, NEW YORK



HOW MUCH

do
circuit breakers
help sell homes?



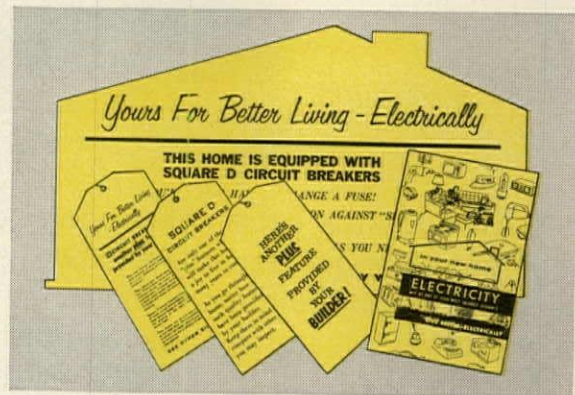
That all depends on how much you merchandise them. Some builders wouldn't think of using anything but circuit breakers—simply because they offer by far the most in modern electrical safety and convenience. But having provided this quality feature, too many of these builders fail to tell their prospective buyers about it.

Other builders, taking full advantage of the fact that today's home buyers are electrically-minded, make an effective and profitable selling point of circuit breaker safety and convenience.

When your electrical contractor tells you that circuit breakers help sell homes, he speaks from observation. When he recommends **Square D's QO** circuit breakers, he speaks from experience...which tells him that **QO** is the finest breaker ever built. It will cost you nothing to put **QO** on your sales force. Why not drop us a line?

*Write for samples of merchandising helps
and for the complete QO story*

Square D Company • Mercer Road, Lexington, Kentucky



Here's How We Help You Sell

- Yours for the asking—attractive, informative selling tools for use in your model and demonstration homes...Folders, imprinted to your specifications. Display cards. Jumbo tags for merchandising various features in your homes.



SQUARE D COMPANY

wherever electricity is distributed and controlled



ARCHITECT: BENJAMIN GINGOLD



WOOD CASEMENT WINDOWS

PELLA ALSO MAKES QUALITY WOOD
TWINLITE AND MP WINDOWS,
WOOD FOLDING DOORS AND PARTITIONS,
SLIDING GLASS DOORS
AND ROLSCREENS

Modern as tomorrow—these windows star in the traditional role

PELLA WOOD CASEMENT WINDOWS feature Rolscreen . . . the original "instant screen" that rolls down in the spring, rolls up in the fall. Little wonder, women applaud them. And, self-storing storms and screens with stainless steel, spring-type weather stripping give year 'round comfort. For traditional themes, muntin bars snap in and out to speed up painting and glass cleaning. PELLA offers 18 ventilating units to 24" x 68" glass size plus a wide range of fixed units. Call the PELLA distributor listed in your classified telephone directory or mail coupon.

THIS COUPON ANSWERED WITHIN 24 HOURS

ROLSCREEN COMPANY, Dept. NB-43, PELLA, IOWA

Please send illustrated catalog on PELLA WOOD CASEMENT
WINDOWS with the exclusive Rolscreen feature.

Name _____

Firm Name _____

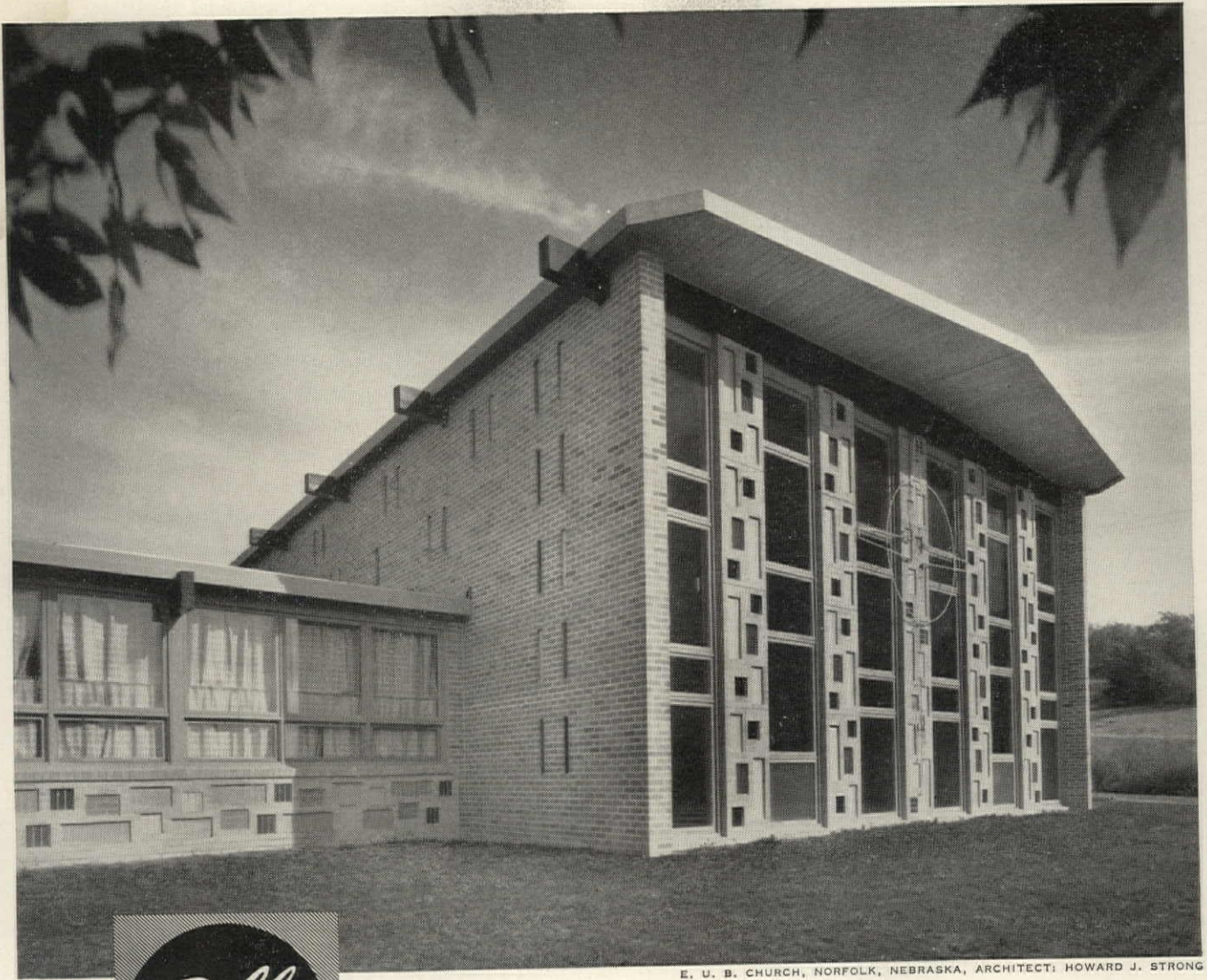
Address _____

City & Zone _____ State _____

MAIL THIS COUPON TODAY

1

of a series



E. U. B. CHURCH, NORFOLK, NEBRASKA, ARCHITECT: HOWARD J. STRONG



WOOD MULTI-PURPOSE AND TWINLITE® WINDOWS

PELLA ALSO MAKES QUALITY WOOD
FOLDING DOORS AND PARTITIONS,
WOOD SLIDING GLASS DOORS,
WOOD CASEMENT WINDOWS AND ROLSCREENS

Stock size M-P units star in this "Window Spectacular"

PELLA WOOD MULTI-PURPOSE WINDOWS adapt readily to today's building methods and architectural designs. 20 ventilating and fixed sizes provide almost unlimited arrangements, accented by handsomely proportioned mullions. All-weather efficiency and reduced maintenance are ensured by self-storing storms and screens, stainless steel weather stripping and exclusive GLIDE-LOCK® underscreen operator. Call the PELLA distributor listed in your classified telephone directory or mail coupon.

THIS COUPON ANSWERED WITHIN 24 HOURS

ROLSCREEN COMPANY, Dept. NB-44, PELLA, IOWA
Please send catalog on PELLA WOOD MULTI-PURPOSE
and TWINLITE WINDOWS.

Name _____

Firm Name _____

Address _____

City & Zone _____ State _____

MAIL THIS COUPON TODAY

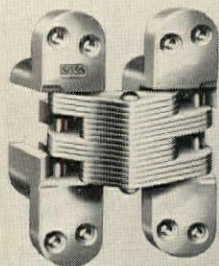


of a series

Naturally You'll Find...

SOSS INVISIBLE HINGES

in homes that reflect the smooth, uncluttered beauty of today's architecture. In the S. Sterling residence, Bloomfield Hills, James Conn, AIA, specified SOSS INVISIBLE HINGES wherever he needed complete unity of design.



Unique aquarium chest featuring SOSS INVISIBLE HINGES on top access door.



Elegant bathroom cabinet with doors hung on SOSS INVISIBLE HINGES.



For complete information & prices, write:

SOSS MANUFACTURING CO.

HH-112, P. O. Box 38, Detroit 13, Michigan

STAIN... OR PAINT?

Often a new home is simply painted with no consideration given to staining. Experienced builders find it pays to know the advantages and limitations of each... the effect, performance, and cost on wood surfaces inside and outside the home. Cabot's Stains, for example, answered all requirements for the home shown at the right. Here's why more and more builders are specifying...



Architect: Pietro Belluschi, Cambridge, Mass.
Builder: Eichler Homes, Palo Alto, Cal.
Cabot's Ranch House Hues

Cabot's STAINS

- Economical — 1/2 the cost of paints.
- Require no priming coat; are easier to apply and maintain.
- Need no thinning; surfaces need no scraping or sanding.
- Trouble-free — no cracking, blistering, or peeling.
- Penetrate deeply, dyeing and preserving the wood fibers.
- Enhance the beauty of the wood grain; leave no brush marks.
- Offer unique color effects in a wide color range.
- Grow old gracefully, may be stained or painted over later.

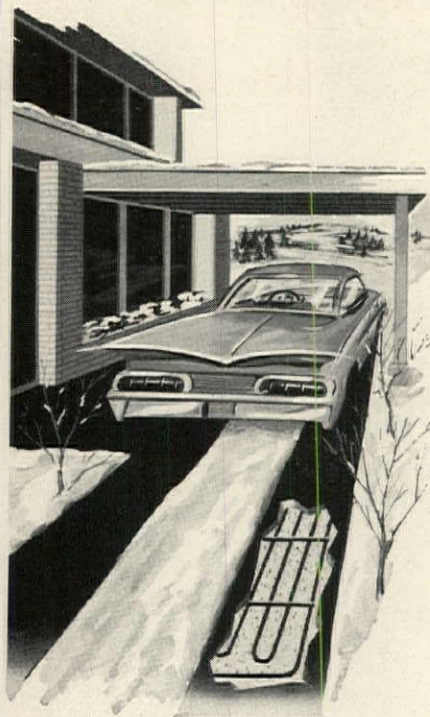
For best results, the best in Stains...
Cabot's Oil-base or Creosote Stains.



SAMUEL CABOT INC.

930 South Terminal Trust Bldg. Boston 10, Mass.
Please send brochure and color cards on Cabot's Stains.

now you can offer automatic snow-melting in asphalt and concrete driveways with...



CHROMALOX ELECTRIC snow-bar

Here's a key to faster, more profitable new home sales — rugged, tubular electric Chromalox Snow-Bar units for banishing snow and ice from all asphalt, macadam and concrete surfaces. Installs easily under surface in preformed heat patterns, or coiled for bending into special patterns. Homebuyers favor Snow-Bar economy: 15¢ per hour to clear tracks on 50-foot driveway! Make your better homes better sellers with electric Snow-Bar. Send coupon today.

WM-26

send coupon...

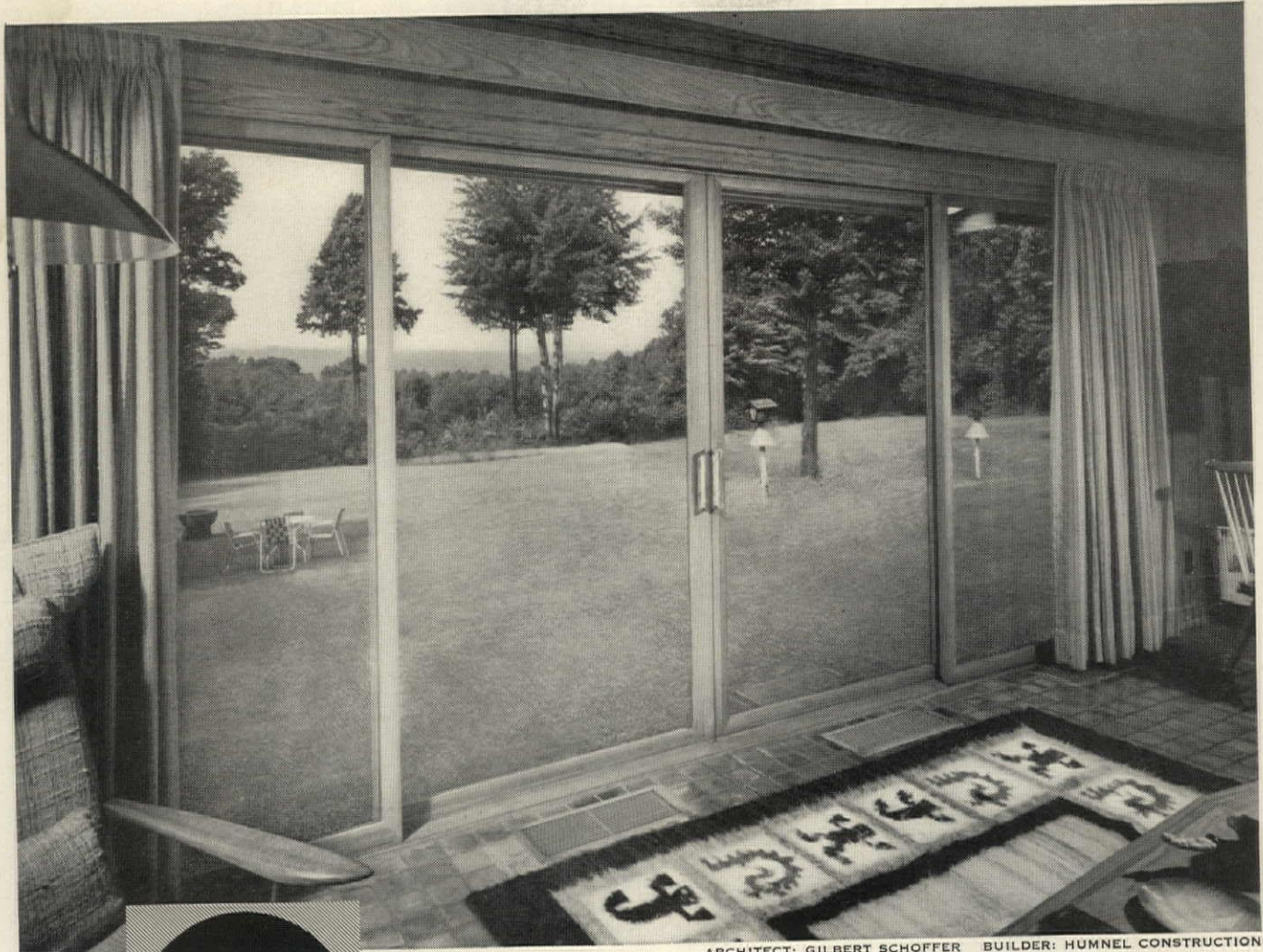


**CHROMALOX
ELECTRIC SNOW-BAR**

EDWIN L. WIEGAND COMPANY
7770 Thomas Boulevard • Pittsburgh 8, Pa.
FIRST Name in Electric Heat

CHROMALOX
7770 Thomas Blvd. • Pgh. 8, Pa.
Please send FREE Snow-Bar facts:

Name _____
Address _____
City _____ State _____



ARCHITECT: GILBERT SCHOFFER BUILDER: HUMNEL CONSTRUCTION



WOOD SLIDING GLASS DOORS

PELLA ALSO MAKES QUALITY WOOD
FOLDING DOORS AND PARTITIONS,
WOOD TWINLITE® AND M-P WINDOWS,
WOOD CASEMENT WINDOWS AND
ROLSCREENS

Outdoor "living rooms" look better framed in wood

PELLA SLIDING GLASS DOORS with frames of WOOD say "home" to house buyers. And, wood frames can be painted or finished to match interior decorating schemes. The natural insulating quality of wood, plus stainless steel and wool pile weatherstripping, makes these doors completely weathertight . . . eliminates condensation. *Screens close automatically.* Removable muntins in diamond or regular styles offer design variations. Available in 33", 45" and 57" glass widths with transoms to match. Also custom sizes. For details call your PELLA distributor listed in the Yellow Pages or mail coupon.

THIS COUPON ANSWERED WITHIN 24 HOURS

ROLSCREEN COMPANY, Dept. NB-45, Pella, Iowa

Please send full color literature on PELLA WOOD SLIDING GLASS DOORS and name of nearest distributor.

Name _____

Firm Name _____

Address _____

City & Zone _____ State _____

3
of a series

MAIL THIS COUPON TODAY

ANNOUNCING NEW GOLD BOND VINYL-SURFACED GYPSUM BACKER BOARD



...a waterproof drywall base for ceramic tile

Now, you can use gypsum drywall construction with ceramic tile in bath and shower areas with complete confidence . . . and save up to \$70 over conventional methods.

This new 1/2"-thick backer board has a gypsum core, surfaced with a continuous vinyl coating. This factory-sealed board has a waterproof coating . . . permits foolproof inspection before tile is set. One of America's finest tile manufacturers has been continuously testing it for over one year . . . the equivalent of thousands of showers . . . with excellent results.



Each panel is 4' wide by 11' long. One panel is usually adequate for a bathtub installation. Just score the back, snap board in two places and slip "U-shaped" panel into place. Nail heads require no spotting. Pressure-sensitive tape seals all joints and openings where gypsum core is exposed. Gold Bond Vinyl-Surfaced Backer Board is available through your Gold Bond® Building Supply Dealer. Ask him for technical information. Or write National Gypsum Company, Dept. HH-92, Buffalo 13, New York.

The RUBEROID Co. Announces the 4th Annual
\$25,000 Awards
Ruberoid/Matico
Design Competition



THE JURY, left to right, James J. Hurley, Taylor-Hurley Assoc., New York, N. Y.; Prof. Vernon DeMars, A.I.A., Chairman, Dept. of Arch., Univ. of Cal., Berkeley, Cal.; William L. Stayton, Commissioner, Urban Renewal Admin., Wash., D.C.; B. Sumner Gruzen, F.A.I.A., Professional Advisor, New York, N. Y.; Ralph Rapson, A.I.A., Head, School of Arch., Univ. of Minnesota, Minneapolis, Minn.; Edmund N. Bacon, A.I.A., (Chairman) Exec. Dir., Phila. City Planning Comm., Phila., Pa.

*“Improved Human Environment
 through Urban Renewal”*

The 4th Annual Ruberoid/Matico Competition was designed to stimulate the interest of architects in urban renewal. The winning submissions, in each group, were most excellent. In the Grand National Award category, the Jury decided to combine the first three prizes and make equal awards. The prize winning plans will be reproduced in a brochure to be available before the end of the year. If you desire a copy write to the Ruberoid Company on your letterhead.

AWARD WINNERS

GRAND NATIONAL AWARDS (3)

Stephen N. Abend, Kansas City, Mo.
 Ralph Lewis Knowles, Auburn, Ala.
 Stuart Kenneth Neumann, Chicago, Ill. and
 Donald L. Williams, Fern Creek, Ky.

NATIONAL MERIT AWARDS (6)

J. D. F. Boggs, Jr., Herman F. Goeters and
 Robert F. Lindsey, Houston, Texas
 Jean-Michel Charnet, St. Louis, Mo.
 John C. Dyer, Boston, Mass., Thomas S. Marvel,
 Puerto Rico and John W. Shenefield, Jr.,
 Cambridge, Mass.
 Jan Lubicz-Nycz, San Francisco, Cal.
 F. Kempton Mooney, Columbia, S. C. and
 Joseph L. Young, Clemson, S. C.
 Minoru Takeyama, New York, N. Y.

SPECIAL STUDENT AWARDS

FIRST PRIZE

Edward Z. Jacobson, Pittsburgh, Pa. and
 Kenneth Schwarz, Kew Garden Hills, N. Y.

SECOND PRIZE

Michael Marczuk, Minneapolis, Minn.

THIRD PRIZE

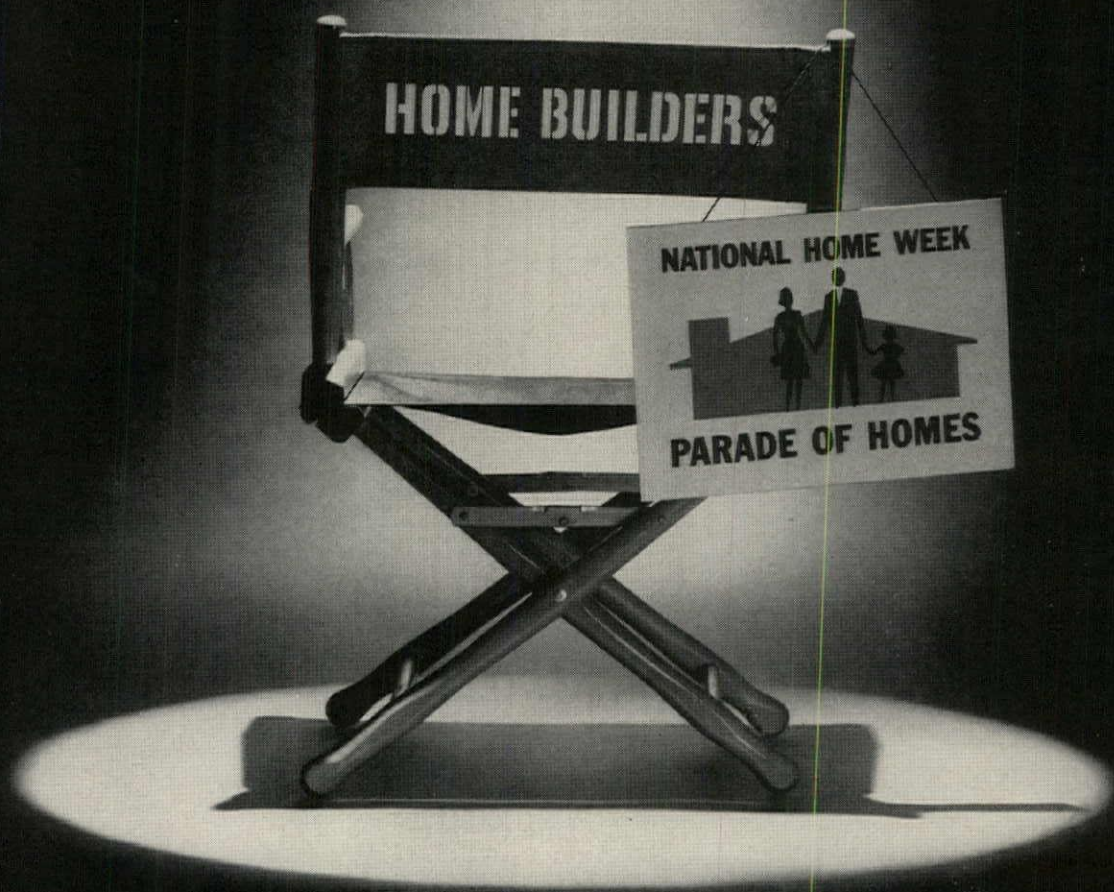
Daniel E. Green and Eugene J. Mackey, La Due, Mo.

STUDENT MERIT AWARDS (4)

H. Stow Chapman and Richard A. DeVine, Champaign, Ill.
 R. Alan Forrester, Tadeusz M. Janowski, Ilmar Reinvald
 and Donald E. Sporleder, Urbana, Ill. and Elam L. Denham
 and Anthony Pellicchia, Champaign, Ill.
 Melvin Leon Ford, Glendale, Cal.
 Duk Won Lee, Edward Richard Niles and
 Jay Barton Walter, Los Angeles, Cal.
 Terrence Andrew McCormick, Champaign, Ill. and
 Ilmar Reinvald, Urbana, Ill.

The RUBEROID Co. Manufacturers of Ruberoid/Matico Floor Tile and **RUBEROID** Building Products

733 THIRD AVE., NEW YORK 17, N. Y.



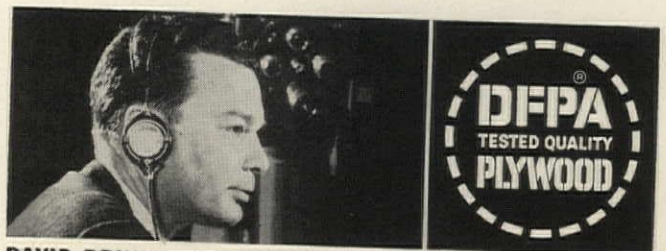
DFPA PLYWOOD SPOTLIGHTS BUILDERS

DFPA kicks off National Home Week on Oct. 1st with the biggest home ownership promotion ever presented on TV. "Better Living Begins When You Own a New Home" is the theme of commercials on the special 1-hour premiere of the 1962-63 edition of David Brinkley's Journal. DFPA's plywood spokesman, George Fenneman, will show your prospects exactly how and why today's homes are a better buy, and sell

them on the quality homes you build with DFPA quality-tested plywood. And every succeeding week, the Douglas Fir Plywood Association will continue this powerful promotion to 13 million active, adult prospective home buyers. Again this year DFPA presents David Brinkley's Journal—highest rated show of its kind on the air, winner of all of last year's major TV awards. Every week, George Fenneman will give your

OCTOBER 1st ON NATIONAL TELEVISION

prospects ideas that will make them want to buy your homes. He'll demonstrate how today's better builders use plywood construction—for example, siding, sheathing and built-ins; building systems like Sturd-i-wall and Insta-Floor—to give today's home buyers more house for the money. Send for information on how you can tie in with this powerful advertising. Write Douglas Fir Plywood Association, Tacoma 2, Wash.



DAVID BRINKLEY'S JOURNAL — MONDAY NIGHTS, NBC/TV
PRESENTED BY THE DOUGLAS FIR PLYWOOD ASSOCIATION
10:00 P. M. Eastern and Pacific, 9:00 Central, 8:00 Mountain Time

HOW TWO DAYS BACK

Carrier



LOOK NATIONAL AWARD recognizes builder Canna's progressive approach to quality design and construction.



"OPERATING COST ESTIMATES close the sale for us," Canna says, as he confers with George Carter of The United Illuminating Company, and daughter Matilda Friscoe, promotion director.



"CUSTOMER SATISFACTION CUTS CALLBACKS," Canna says, shown with homeowner Mrs. Agostino Gambardella.

"I sold 53 homes in 38 days by installing electric home heating"

East Haven, Connecticut, builder James J. Canna tells how electric home heating speeds sales of his \$16-22,000 homes

"New England winters are no problem for our electrically heated homes," builder Canna says. "And the new concept of total electric living has powerful appeal for my market."

James Canna has been building homes in the New Haven area for 50 years. Before him, his family were specialists in church building in Italy for 722 years! Today his wife, brother, two daughters, a son-in-law and nephew assure family attention to every detail.

The Canna family's newest development is six miles from New Haven on 80 acres of rolling woodland. Each home has a 3/4-acre lot on a winding street complete with paving, walks, and curbs. Mr. Canna prides himself on the landscaping of each home and the careful preservation of natural foliage that presents an attractive community atmosphere.

James Canna also feels that consumer acceptance of total electric living and enthusiastic support from his electric utility have been of invaluable help to his sales success.

With flameless electric heating, Canna's homes have an evenness of warmth that's free of cold drafts and hot blasts. Proper insulation also helps keep his homes cooler in summer. And there is positively no fuel grime for the homemaker to clean off walls, windows or draperies. "These are powerful aids to overcome sales resistance," says Mr. Canna.

The number of electrically heated homes in the U.S. has grown to over one million in remarkably few years. And the prospect is for over five million

by 1970. It's no wonder that progressive builders in every state of the nation are capitalizing on this profitable trend.

How about you? Find out now how you can profit by installing and promoting flameless electric home heating in your market. Ask your local electric utility representative about it soon.



THE TOTAL ELECTRIC HOME that displays this Gold Medallion helps you to capitalize on the fast-growing consumer acceptance of total electric living. The Gold Medallion tells prospects that the homes you build have a *single source of energy* for light, heat and power.

LIVE BETTER ELECTRICALLY

Edison Electric Institute, 750 Third Avenue, New York 17

How many of these services are you getting from your present insulation source ?

| | |
|--|---|
|  <p>Qualified technical counsel . . . the know-how and willingness to provide reliable counsel on the technical aspects of insulation (performance values, etc.).</p> |  <p>Unbiased recommendations . . . the integrity to do a thorough job of problem analysis, then suggest the best type or types of insulation for your specific needs.</p> |
|  <p>Comprehensive packaged bids . . . the ability to provide a really complete estimate, including more than one type of insulation, where indicated.</p> |  <p>Certified installation service . . . the professional competence to assure an on-schedule, fully-approved job of application in every installation.</p> |

You can get them all from your . . .



Yes, all of the above services are now available to you . . . through Borg-Warner's comprehensive new A. C. T. program. Without extra cost, your Alfol Consulting Technician is now geared to offer you total insulation service . . . from accurate problem-analysis . . . right through scheduling and installation. Why not find out now how this professional kind of service can save you real money.

Send today for a free brochure outlining the benefits you receive through Borg-Warner's new A. C. T. program. There's no cost or obligation.



REFLECTAL CORPORATION
A Subsidiary of Borg-Warner Corporation
200 S. Michigan Ave., Chicago 4, Illinois

ADVERTISERS INDEX:

This advertisers index published by HOUSE & HOME is an editorial service to its readers. HOUSE & HOME does not assume responsibility to advertisers for errors or omissions in preparation of these listings.

* Denotes Western Edition

| Page: | |
|---------------|--|
| 190, 191 | Aluminum Co. of America |
| 188 | American Gas Assn. |
| 170 | American Motors Corp. (<i>Kelvinator Div.</i>) |
| 46, 47 | American Standard Corp. |
| 214 | American Telephone & Telegraph Co. |
| 164 | Arvin Industries, Inc. |
| 72 | Automated Bldg. Components, Inc. |
| 175 | Bell & Gossett Co. |
| 215 | Bestwall Gypsum Co. |
| 178 | Blonder-Tongue Laboratories |
| 158 | Bostitch, Inc. |
| 188, 189 | Briggs Mfg. Co. |
| 88 | Broan Mfg. Co., Inc. |
| 79 | Bruce Co., E. L. |
| 66 | Bruce Co., E. L. (<i>Terminix Div.</i>) |
| 55, 56 | Bryant Mfg. Co. |
| 206 | Cabot, Inc., Samuel |
| 219 | Caloric Appliance Corp. |
| 76, 77 | Caradco, Inc. |
| 201, 202 | Carey Mfg. Co., The Philip |
| 212, 213 | Carrier Corp. |
| 34, 35 | Celotex Corp., The |
| 60 | Coleman Co., The |
| 68 | Concord Homes, Inc. |
| 62 | Connor Lumber & Land Co. |
| 84 | Crane Co. |
| 64 | Crown Zellerbach Corp. |
| 61 | Daryl Products Corp. |
| 196, 197 | Delco Appliance Div. (<i>General Motors Corp.</i>) |
| 174 | De Vac, Inc. |
| 72 | DeVilbiss Co., The |
| 30 | Donley Brothers Co. |
| 210, 211 | Douglas Fir Plywood Assn. |
| 216, 217 | Edison Electric Institute |
| 14, 15 | Emerson Electric Mfg. Co. |
| 184, 185 | Evans Pdts. Co. |
| 74, 75 | Fasco Industries, Inc. |
| 86 | Fastener Corp. |
| *82W2 | Fibreboard Paper Pdts. Corp. |
| 89 | Float-Away Door Co. |
| *82W1 | Formica Co., The |
| 146 | Forrest Industries, Inc. |
| 48-50 | General Electric Co. |
| 154, 155 | General Electric Co. (<i>Hotpoint Div.</i>) |
| 196, 197 | General Motors Corp. (<i>Delco Appliance Div.</i>) |
| 6 | Goodyear Tire & Rubber Co. (<i>Flooring Div.</i>) |
| 186 | Hall-Mack Co. |
| 85 | Harris Mfg. Co. |
| 10 | Hobart Mfg. Co., The |
| 154, 155 | Hotpoint Inc. (<i>Div. of General Electric Co.</i>) |
| 178 | HOUSE & HOME |
| 199, 200 | Janitrol Heating & Air Conditioning (<i>Div. of Midland-Ross Corp.</i>) |
| 159-162 | Johns-Manville Corp. |
| 172, 173 | Jones Veneer & Plywood Co. |
| 170 | Kelvinator Div. (<i>American Motor Corp.</i>) |
| 90 | Kemper Bros., Inc. |
| 2 | Kentile, Inc. |
| 150, 151 | Keystone Steel & Wire |
| 195 | Knape & Vogt Mfg. Co. |
| 78 | Kwikset Sales & Service Co. |
| 81 | Lawson Co., The F. H. |
| 28 | Lawyers Title Insurance Corp. |
| 168 | Lennox Ind. |
| 87 | Libbey-Owens-Ford Glass Co. |
| 133-142 | Long-Bell Div. (<i>International Paper Co.</i>) |
| 25 | Lumbermens Investment Corp. |
| 177 | Marsh Wall Pdts., Inc. |
| 52, 53 | Massey-Ferguson Ltd. |
| 36, 37 | Minneapolis-Honeywell Regulator Co. |
| 82 | Minnesota Mining & Mfg. Co. (<i>Adhesives, Coatings & Sealers Div.</i>) |
| 32, 33 | Moe Light (<i>Division of Thomas Ind., Inc.</i>) |
| 26 | Mortgage Bankers' Cooperative Advertising Group |
| 24 | Mortgage Guaranty Insurance Corp. |
| 4, 5, 208 | National Gypsum Co. |
| 220 | National Homes Corp. |
| 2A, 2B | Nutone Inc. |
| 38 | O'Keefe & Merritt Co. |
| 148, 149 | Pacific Lumber Co., The |
| 176 | Pease Woodwork Co., The |
| 144 | Polaroid Corp. |
| 8 | Potlatch Forests, Inc. |
| 19 | Progress Mfg. Co., Inc. |
| 204 | Red Cedar Shingle Bureau |
| 218 | Reflectal Corp. |
| 20, 21, 187 | Republic Steel Corp. |
| 83 | Roberts Mfg. Co. |
| 203, 205, 207 | Rolscreen Co. |
| 54 | R. O. W. Window Sales Co. |
| 209 | Ruberoid Co., The |
| 80 | Scheirich Co., H. J. |
| 179-182 | Simpson Timber Co. |
| 194 | Smith & Loveless |
| 206 | Soss Mfg. Co. |
| 198 | Square D Co. |
| 59 | Structural Clay Pdts. Institute |
| 72 | Tibbals Flooring Co. |
| 152, 153 | Trane Co., The |
| 166 | United States Plywood Corp. |
| 43-45 | United States Steel Homes, Inc. |
| 22 | Waste King-Universal |
| 156, 157 | West Coast Lumbermens Association |
| 69-71 | Westinghouse Electric Corp. |
| 39-42 | Weyerhaeuser Co. (<i>Lumber & Plywood Div.</i>) |
| 192, 193 | Whirlpool Corp. |
| 206 | Wiegand Co., Edwin L. |



Exclusive. free Color-Coordination by Beatrice West blends ranges with paint, flooring, wallpaper, counter top . . . matches hood, sink, splashplate with range colors.

the man who installed it stayed for dinner



Naturally he stayed . . . it was *his* home. What's more, he knew all about Caloric Built-in gas ranges from the very best homes. You see, he's a builder. He and his wife wanted a Caloric for the same reasons that are exciting and attracting so many home-buyers these days.

Those reasons include Caloric's handy-height wall ovens . . . the convenient counter-top range, with illuminated and simplified control panels.

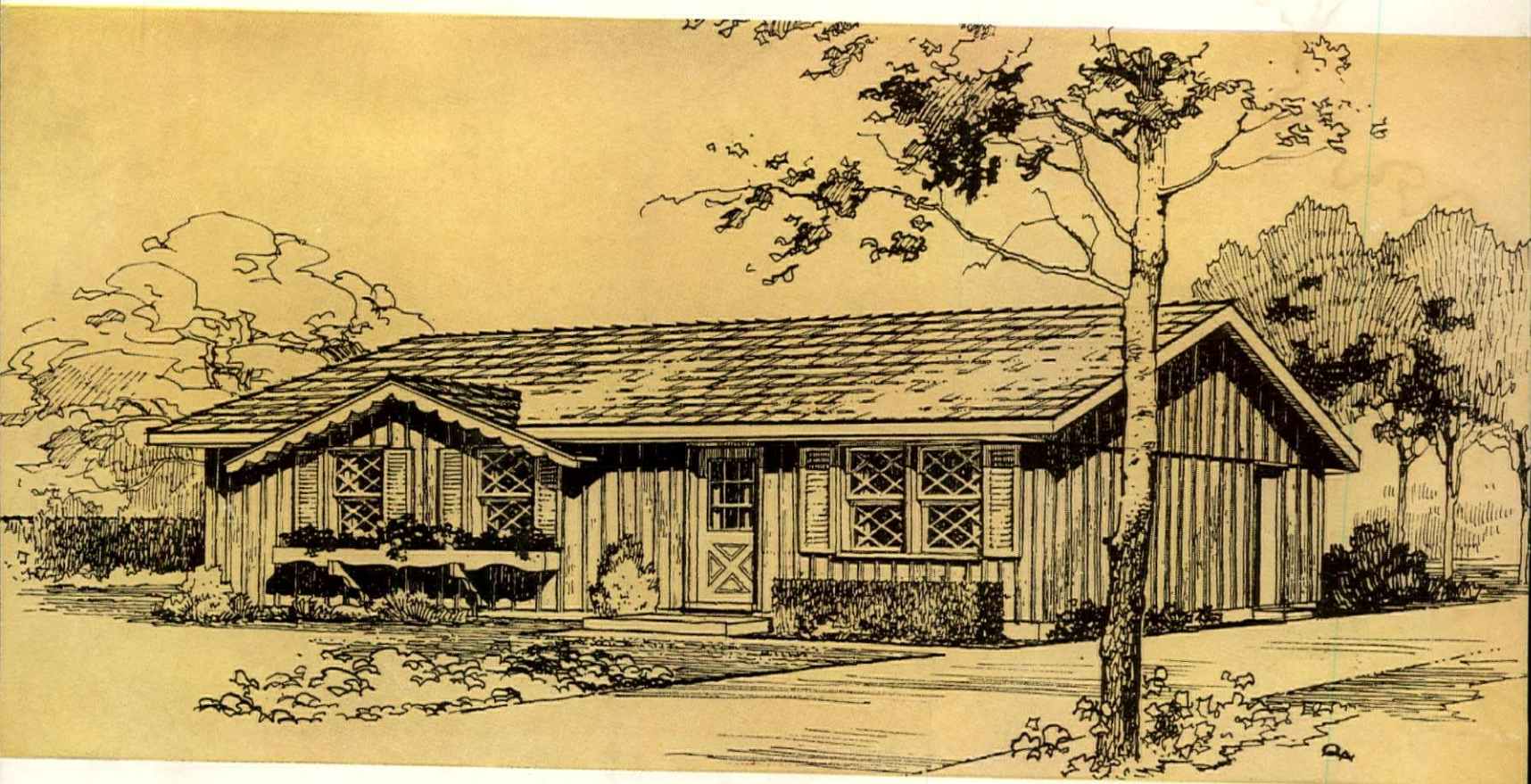
Plus Gold Star Award features—thermoset top burners, Roto-Roaster rotisserie. Meat thermometer cooks food for time required . . . then the Keep-Warm oven system automatically takes over to hold meals dinner-ready for hours.

Naturally home buyers want to move in and "stay to dinner" the instant they see the new Caloric Built-ins. Put them in *your* homes, and make sure of more sales! Write for full information.

BETTER BECAUSE IT'S GAS
 . . . BEST BECAUSE IT'S

Caloric®
 Caloric Corporation, Topton, Pa.

Syracuse, N.Y., dealer sells 88 "Young Americas"



here's the house that pulled them in:

3-Bedroom "Young America": \$13,400

INCL. LOT
AND AT
GARAGE

Also: "YA" 4-bedroom all brick \$13,990 • "YA" split foyer 1750 sq. ft. \$14,500

INCL. LOT

INCL. LOT

● Cappy's of Syracuse—with 88 sales of "Young Americas" alone—topped their entire 1961 sales total of 80 with a single promotion introducing this triple-threat entry in the low-cost market. With the economy of the three-bedroom . . . the four-bedroom option for larger families . . . and the 1750 sq. ft. of the split foyer . . . Cappy's is drawing crowds that have produced an unusually high percentage of sales. Equally important, profits are substantial because these homes are being built with construction money turning at top speed. *Buyers actually move in on the fourth day after the homes arrive on the building site!* Because of the technical advances National offers in these "Young America" homes (see box at right) . . . the following time table is possible:

FIRST DAY: Put the house under roof, set interior panels and trim out completely.

SECOND DAY: Electrical, heating and plumbing work.

THIRD DAY: Tile ceilings and get final FHA inspection.

FOURTH DAY: Buyer moves in!

On top of all this, you can offer buyers a complete range of "Young America" models that can be built for maximum profit! Write for full details.

New! Maintenance-free vinyl interior walls

● Now you can offer "Young Americas" with maintenance-free interiors as well as exteriors with National Homes new vinyl sidewall finish . . . the surface that wipes clean with a damp cloth, keeps its beauty for years without painting. This latest bonus in builder sales assets is fully approved by FHA and offers the added benefit of a top safety rating in flame-spread resistance. In addition, each "Young America" model gives you precision floor system . . . pre-built closets . . . pre-finished tile ceilings . . . no on-site taping . . . and complete packages for heating, wiring and plumbing . . . all designed to hold down man hours of labor and supervision.



NATIONAL HOMES CORPORATION
LAFAYETTE, INDIANA

Plants in: Lafayette, Ind., Horseheads, N.Y., Tyler, Texas

National Homes Subsidiaries: National Homes of California, Newark, California • American Homes, Inc., Allentown, Pa.; Lumberton, N. C. • Lester Brothers, Inc., Martinsville, Virginia • Knox Homes Corporation, Thomson, Georgia • Fairhill Homes, Memphis, Tennessee • W. G. Best Homes Corporation, Effingham, Illinois • Thyer Manufacturing Corp., Toledo, Ohio; Collins, Mississippi.



BIG NOISE FROM LITTLE PEOPLE... can be effectively reduced with glass fibered, All-Gypsum Drywall partitions from Bestwall Gypsum Company. The Hummer Semi-Solid System, using 5/8" Firestop and erected by licensed Hummer applicators, provides: noise reduction, one-hour fire rating, stronger walls, additional livable space in homes and apartments of all sizes. Bestwall Gypsum Co., Ardmore/Pa. Plants and Offices throughout the United States





"I TESTED A GOLD MEDALLION HOME FOR TWO YEARS," says James Canna, center. "I lived in it myself to prove that total electric living can be applied to quality low-cost homes." Brother Frank Canna, right, supervises construction and nephew Owen Di Verniero, left, is in charge of electrical installation.



PROPER INSULATION ASSURES COMFORT AND HEATING ECONOMY. The C and C Construction Co. puts polyethylene vapor barriers over 3½" insulating batts before installing wallboard.

IN SCHOOL CAN PUT NEW VITALITY IN YOUR HOME SELLING

The 2-day Carrier *Home Salesmaker* training program is a practical course in the art of selling homes with the benefits of air conditioning. But the air conditioning part is only 25% of the course. The rest of the time is devoted to good selling practices as outlined by your industry's leaders. Sessions are conducted by Carrier training specialists, field representatives and distributor salesmen who are well informed on local market conditions.



First step in the *Home Salesmaker* training program is an intensive session in the fundamentals of home salesmanship, jammed with solid selling ideas for new salesmen and veterans alike. A Carrier sales training specialist is shown here getting a meeting started.

Would you like to help your salesmen sharpen their ability to qualify and evaluate prospects? To help them identify the various buying motives? To learn how to use the most powerful appeals for each type of home buyer? To learn more about air conditioning . . . and how to make it a sales-getting tool?

Just ask your Carrier Distributor about the *Salesmaker* program. It's available to every builder who installs Carrier air conditioning. And the sessions are conducted right in your area.

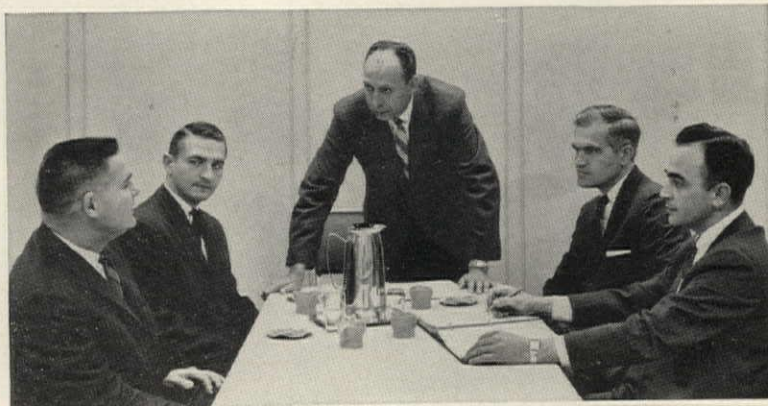


Table discussion groups give the salesmen a chance to exchange ideas. Here, a Carrier Field Man leads a discussion of different sales appeals. Each salesman is asked to prepare his own list of benefits and appeals and then to relate them specifically to the homes he is actually selling.



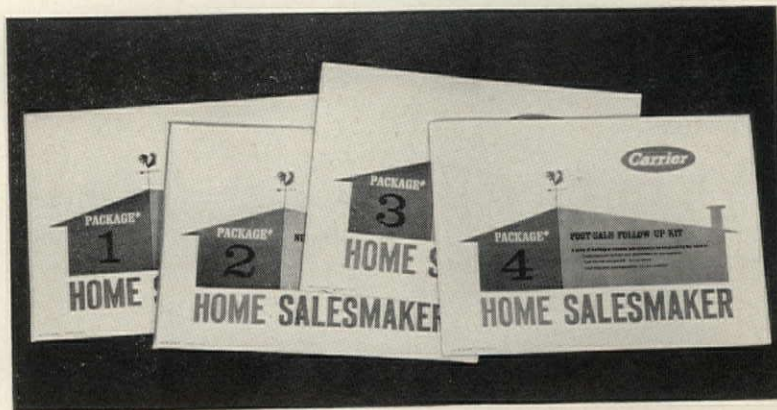
Air conditioning as a selling tool is an important subject of the second day's work. Here, right in a typical model house, salesmen practice how to use the benefits of air conditioning as a selling tool. Now they're well primed with information on the fundamentals of air conditioning.

The Carrier *Home Salesmaker* program costs you nothing, but the payoff is big. Here, for example, are just a few of the remarks from salesmen who participated in the first sessions:

"In my many years of sales, this was the best and most interesting program."

"An excellent sales course . . . very interesting."

"This session has given us a lot of excellent ideas . . . it's helped us to improve in some areas where we'd gotten rusty . . . I would recommend it for any sales group."



A complete 4-part promotion package to back up your well-trained salesmen includes preprinted handout literature you can personalize, customized publicity prepared for you by Carrier, tips on setting up a model home, display materials, and even a post-sale follow-up kit.

"Now we'll go into the field with more confidence in ourselves and our products."

Your sales force and your sales can benefit from the Carrier *Home Salesmaker* program. Your Carrier representative has all the information. Call him; he's listed in the Yellow Pages. Or write Carrier Air Conditioning Company, Syracuse 1, New York.

Carrier Air Conditioning Company



Natural wooded settings and dramatic indoor-outdoor lighting ideas are features of the Kenwood Gardens homes in the Cleveland suburb of Gates Mills.

In Cleveland, Ohio, this house sells for \$40,900

"... and convenience features like concealed telephone wiring help me sell it," says John Koerber of Kenwood Builders)

"Concealed telephone wiring is one of the best investments a builder can make in gaining the confidence and respect of his prospective customers," says John Koerber, Kenwood Builders, Inc.

"The Telephone Company comes in and makes a clean, quick installation while the home is being built. There's no trouble or time loss for

the builder—and telephone rewiring is a great convenience for the buyer. Having concealed telephone wiring in our homes gives us a real sales talking point."

Kenwood Builders is currently constructing 54 custom homes in the Kenwood Gardens suburb of Cleveland, Ohio. The homes range in price from \$38,000 to \$60,000.



Your Bell Telephone Business Office will help telephone-plan your homes. For details on home installations, see Sweet's Light Construction File, 11c/Be. For commercial installations, Sweet's Architectural File, 33a/Be.



BELL TELEPHONE SYSTEM