

# House & Home

MANAGEMENT PUBLICATION OF THE HOUSING INDUSTRY

SEPTEMBER 1966



**Recreation: How to provide today's biggest sales extra**

**Also: Are you offering your buyers what they really want in kitchen design?**

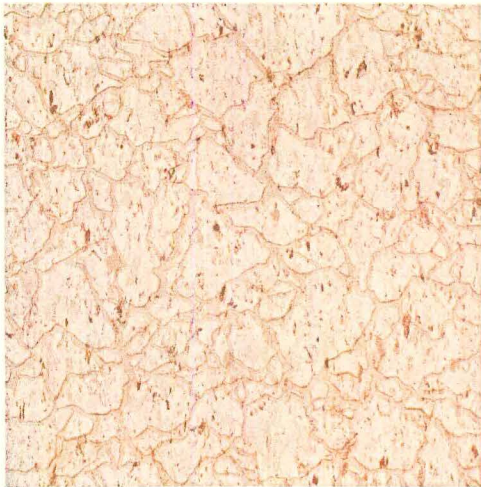
**NOW FROM AZROCK...**

# "VC" group

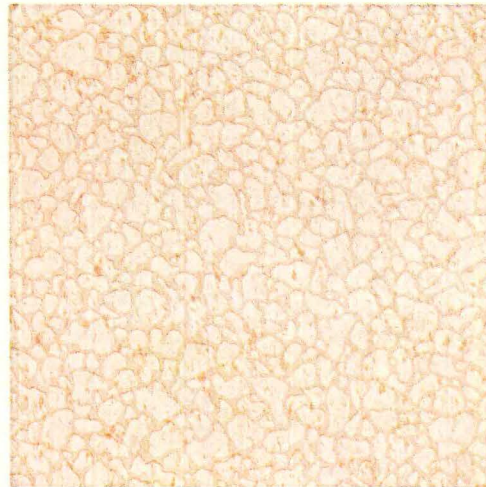
embossed vinyl asbestos floor tile

**at a price approximately 8½% under "D" group asphalt tile!**

Never before such a great opportunity to build more house for less money — with extra profit protection for you. The same, finest quality vinyl asbestos floor tile for which Azrock is famous — at new, low prices made possible through exclusive production techniques developed by Azrock. Four elegantly styled embossed patterns in 1/16" gauge, 9"x9" size. And here's more good news — 12 other smooth-surface VC Group colors are available at an even lower price! For free samples, write Azrock Floor Products, 500B Frost Building, San Antonio, Texas 78205.



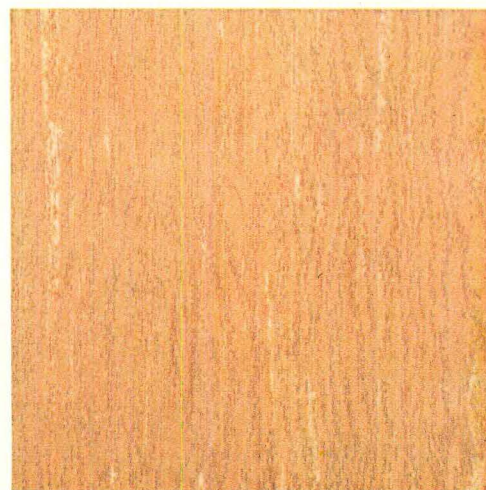
**VC-902E Embossed Marble**



**VC-904E Embossed Pebble**



**VC-901E Embossed Travertine**



**VC-903E Embossed Wood**

An original floor styling by **AZROCK**®

Nationally advertised in American Home, Better Homes & Gardens, House Beautiful, House and Garden and others.

*You Get More for Your Money with...*  
**NUTONE HOOD-FANS**

**Higher  
Power**

(SUPERIOR AIR DELIVERY)

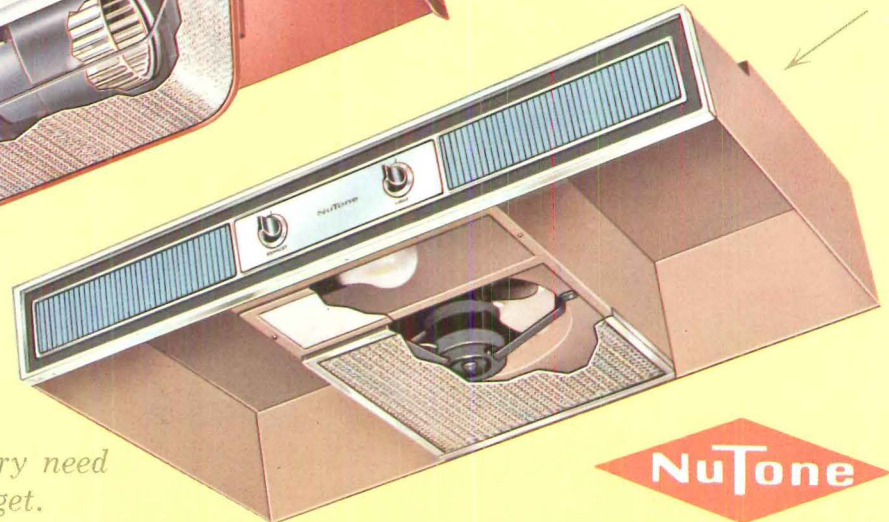
Every NuTone Hood-Fan, regardless of cost, is engineered to exceed code requirements! This means you get **POWER TO SPARE** . . . to give your clients trouble-free performance that will stand up with constant daily use.

NuTone engineers have spent many years in developing and improving motor-power, proper blade pitch and housing efficiency . . . to provide maximum air velocity under different types of installation conditions.

*Cut-away view of NuTone's  
Select-A-Matic Hood-Fan  
V-30 Series*



*Cut-away view of NuTone's  
Vertical or Horizontal  
V-19 Series Hood-Fan*



*NuTone offers you a style for every need  
. . . at a price to fit any budget.*

**NuTone**

Now with the trend to the "Quiet House", it's especially important to **CONTROL** the sound of the air pressure and motor vibration.

This is why NuTone tests every fan in the laboratory as well as the field . . . for **QUIET** operation . . . adding features such as spring-mounted motors, electronically balanced fan blades and sound-resisting housings.

(REDUCED NOISE LEVEL)

**Lower  
Sound**

SEE  
NEXT  
PAGE

*Only NuTone Gives You...*  
**MAXIMUM STANDARDS**

SPARK UP YOUR SALES with NUTONE HOOD-FANS . . for

# *Sparkling Beauty in Your Kitchens!*

● Women love the classic lines of NuTone's V-30 Series Hood-Fans



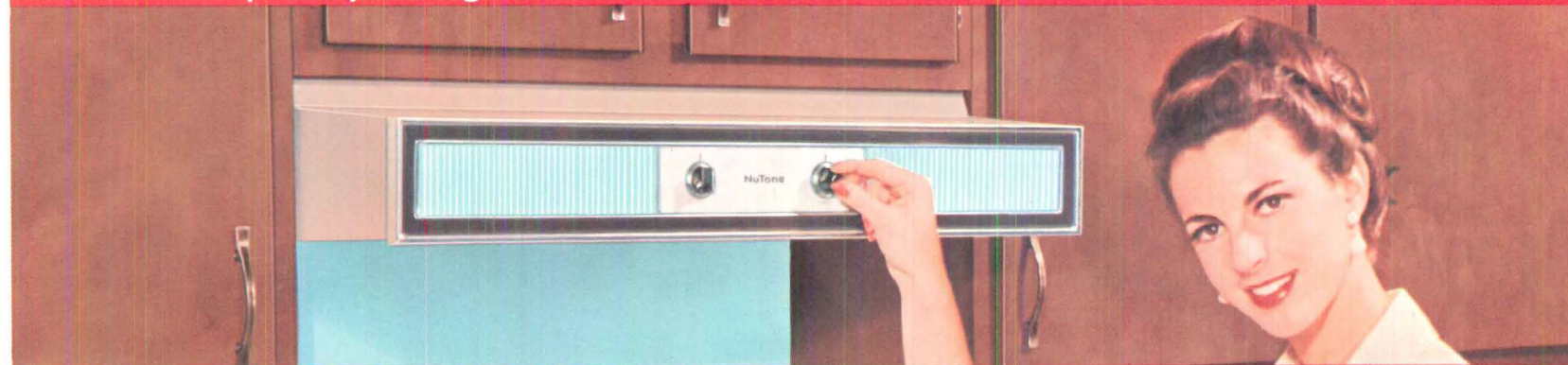
● A "luxurious look" . . at a budget price . . with NuTone's V-19 Series



● "Appliance-Matched" styling . . with NuTone's V-34 Non-duct models



● Contemporary design at its best . . with NuTone's V-11 Series Hood-Fans



● Almost two hundred different NuTone Hood-Fan models to select from!



NEW 144 PAGE BOOK • NUTONE, INC. DEPT.9, CINCINNATI, OHIO 45227

[See Previous Page](#)

**EDITOR**

Richard W. O'Neill

**MANAGING EDITOR**

John F. Goldsmith

**SENIOR EDITORS**

Kenneth D. Campbell  
James P. Gallagher  
Maxwell C. Huntoon Jr.

**ASSOCIATE EDITORS**

Edwin W. Rochon  
H. Clarke Wells

**ASSISTANT EDITORS**

Michael Baybak  
Frank Lalli  
Jenepher Walker

**ART DIRECTOR**

Howard R. Berry  
Susan J. Land, Assistant

**EDITORIAL ASSISTANTS**

Patricia Betz  
Grace P. Micciola  
Gail B. Sclar

**EDITORIAL CONSULTANTS**

Jonathan Aley, building  
Carl Boester, technology  
George A. Christie, economics  
James T. Lendrum, AIA, architecture  
Carl Norcross, marketing

**McGRAW-HILL WORLD NEWS**

John Wilhelm, director; Jules Abend, domestic news editor; Alyne Elias, foreign news editor. Domestic News Bureaus—Atlanta: Frances Ridgway, chief. Chicago: Reck Johnson, chief; James Rubenstein. Cleveland: Arthur Zimmerman, chief. Dallas: Marvin Reid, chief; Mary Lorraine Smith, Kay Gallagher. Detroit: Nicholas Hunter, chief; Marianne Friedland. Houston: Ron Lovell. Los Angeles: Michael Murphy, chief; Barbara Lamb. San Francisco: Margaret Drossel, chief; Jenness Keene. Seattle: Ray Bloomberg, chief. Washington: Arthur Moore, chief; Charles Gardner, newsdesk; John Nicholson.

**PUBLISHER**

Eugene E. Weyeneth

**ASSISTANT TO PUBLISHER**

Blake Hughes

**CIRCULATION MANAGER**

Henry G. Hardwick

**ADVERTISING SALES MANAGER**

Richard H. Freeman



McGRAW-HILL



HOUSE & HOME Sept. 1966, Vol. 29, No. 9 Published monthly by McGraw-Hill Inc. Founder: James H. McGraw (1860-1948). Subscription rates for individuals: U.S. and possessions and Canada, \$6 per year; single copy, if available, \$1; Latin America & Philippines, \$15; elsewhere, \$20. Executive, Editorial, Circulation and Advertising offices: McGraw-Hill Building, 330 West 42 Street, New York, N.Y. 10036. Telephone: 971-3333. Second class postage paid at New York N.Y. and at additional mailing offices. Title ® in U.S. Patent Office. Copyright © 1966 by McGraw-Hill Inc. All rights reserved. The contents of this publication may not be reproduced either in whole or in part without consent of copyright owner. Officers of McGraw-Hill Publications: Joseph H. Allen, president; Bayard E. Sawyer, executive vice president; vice presidents: Robert F. Marshall, operations; John R. Callahan, editorial; Donald C. McGraw Jr., marketing; John M. Holden, marketing services; Huber M. Gemmill, circulation; Angelo R. Venezian, production; Robert M. Wilhelmy, Controller. Corporation Officers: Donald C. McGraw, chairman of the board; Shelton Fisher, president; L. Keith Goodrich, Hugh J. Kelly, Robert E. Slaughter, executive vice presidents; John J. Cooke, vice president and secretary; John L. McGraw, treasurer. Postmaster: Please send form 3579 to House & Home, 540 North Michigan Ave., Chicago, Ill. 60611. Member: Audit Bureau of Circulations and American Business Press. This issue of House & Home is published in national and separate editions noted or allowed for as follows: Western W1-W12B; Eastern E1-E8; Mid-western M1-M4; North Central N1-N4; Southern S1-S6; Swing SW1-SW6.

# House & Home

A McGRAW-HILL PUBLICATION

VOL. XXIX NO. 9

SEPTEMBER 1966

## EDITORIAL

**Our urban future . . . . . 85**

U. S. cities must house 150 million more people in the next 30 years—an impossible task unless private industry and government learn to work together

## MARKETING

**Recreation: today's fastest-growing market demand . . . . . 86**

Today's buyer wants not just houses, but an active and sociable environment. Builders who offer recreation facilities find them an invaluable sales asset

## DESIGN

**Do your kitchens offer the excitement that today's buyers want? . . 96**

Eight pages of design and planning ideas that can make the all-important difference between an ordinary kitchen and one that prospects will remember

## TECHNOLOGY

**What construction method is best for low-cost housing? . . . . . 104**

There are many new systems that will produce houses for as little as \$7 a square foot. But none will succeed unless it offers buyers good financing

## SUBCONTRACTORS

**Air conditioning: quality can be worth the extra cost . . . . . 110**

An air-conditioning subcontractor whose \$500,000 annual volume is based on top quality tells what makes a good job—and why it pays off

## MANAGEMENT

**Six ways to lick the problems of land and money . . . . . 114**

All builders want to grow, but growth can bring trouble. The president of Canada's fastest growing building company tells how he avoids growing pains

## NEWS

**New mortgage money flows into housing via FNMA, pension funds . . 6**

Congress is rushing aid to homebuilding after a big lobbying push by homebuilders. The outlook: a little more money at high discounts

*Also:* Housing bias ban faces uncertain fate in Senate . . . Rental vacancy drops below 7% for first time since 1959 . . . Deane Bros. takes over S. V. Hunsaker

## DEPARTMENTS

<b>Mortgage market quotations . . 6</b>	<b>Letters . . . . . 74</b>
<b>Housing stock prices . . . . . 18</b>	<b>New products . . . . . 135</b>
<b>Business in the making . . . . 44</b>	<b>New literature . . . . . 156</b>
<b>What the leaders build . . . . 56</b>	<b>Reader service card . . . . . 143</b>
<b>Advertising Index . . . . . 160</b>	

**Cover:** Neighborhood swimming club in Fullerton, Calif. Architect: Hai C. Tan & Assoc. Builder: Lakeside Partnership. Photo: Julius Shulman. *For story, see p. 86.*

## NEXT MONTH

Nine pace-setting houses designed for the merchant-built market . . . New approach to the vacation-house development . . . What the experts say about open-space planning . . . Do total-energy systems make sense for apartment projects?



THE MAN FROM  
MANUFACTURING\*

# WHAT'S IN THE BAG?

# PROOF!

## Conclusive Proof!

## Republic Steel Doors and Frames are superior.

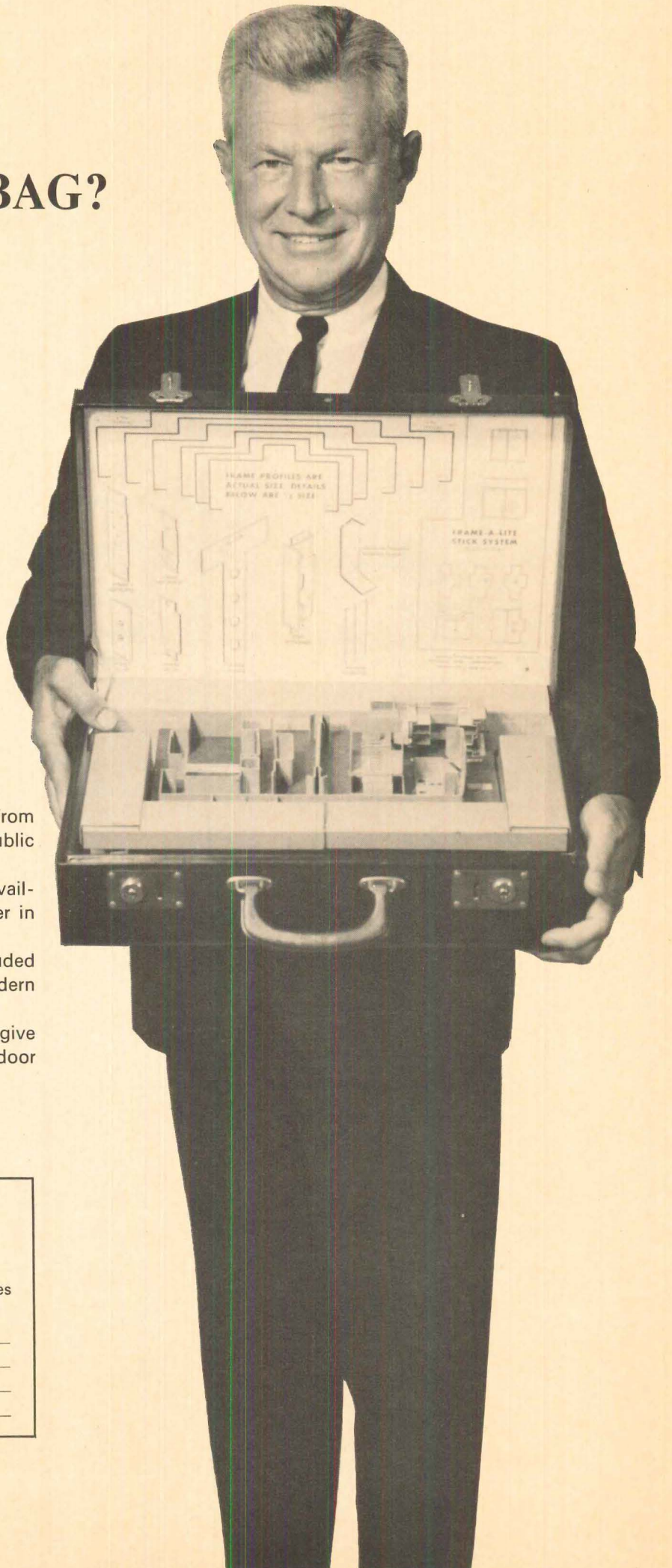
### Convince yourself in 10 minutes.

Now—a new demonstrator kit makes it possible for the Man From Manufacturing to show you—in your own office—why Republic has the strongest standard door package you can specify.

See why interlocking frame corners provide strength not available in other designs. See why these frames assemble easier in the field . . . look better, more modern in place.

The complete Republic Frame-A-Lite stick system is included in the demonstration kit, too . . . a system ideal for any modern exterior glazing treatment.

Call the Man From Manufacturing. In 10 minutes he can give you proof, conclusive proof, of why Republic's standard door package is the strongest you can specify.



This STEELMARK of the American Steel Industry on a product assures you it is modern, versatile, economical Steel. Put it on products you sell; look for it on products you buy.

## MANUFACTURING DIVISION



REPUBLIC STEEL CORPORATION

Youngstown, Ohio 44505

I'd like a demonstration of why Republic Standard Doors and Frames are superior.

Name \_\_\_\_\_

Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

\*A Trademark of Republic Steel Corporation

Circle 30 on Reader Service Card

Photos: Pat Young



**WORRIED NAHB PRESIDENT** Larry Blackmon exhorts 700 builder-lobbyists to collar their congressmen and seek remedies for tight money.



**BUSLOAD OF BUILDERS** heads toward Capitol Hill to see congressmen. H&H Washington correspondent John Nicholson is second from left.



**FULL-DRESS GRIPE SESSION** lets Pennsylvania builders air their plight. Housing subcommittee Chairman William Barrett (D., Pa.) presides.

## Worried builders take their tight money woes to Congress

By the busload, they went up to Capitol Hill to lobby their congressmen. They came down from the Hill sure of support for bills to pump more money into housing (see next page), even though Congress could do little more than give FNMA more money.

"They" were more than 700 builders who trooped into Washington last month in the midst of the airline strike—for a massive assault on Congress that impressed blase Washington with its size and

intensity. The cost of the demonstration was high (several groups came in chartered planes) but so were the stakes. So they visited 81 senators and 350 congressmen on one day—no mean feat.

NAHB's "Call To Action" was a remarkable demonstration of what an aroused industry can do. It was also eloquent testimony to the deep concern felt by builders over tight money.

The gathering—it had the aura of a carnival—was staged by NAHB almost on

the spur of the moment. President Larry Blackmon has been overwhelmed by the tight money situation and what to do about it. He called this "historic meeting" after June housing starts dropped to demonstrate that something could, in fact, be done.

The builders impressed Congress, although there were skeptics like the congressman who muttered: "I just wish they would take off their diamond rings before they ask me to help."



**IMPASSIVE OFFICIALS**, though sympathetic, can only listen. FHA's Philip Brownstein is flanked by Philadelphia Congressmen Barrett and Green.



**BIG CITY MAYOR** James Tate of Philadelphia pleads builders' cause.



**CONGRESSMAN** Fuqua (left) greets Florida Builder John Koelemij.



**NATIONAL EXPOSURE** is given to homebuilding problems as Chicago builders meet Sen. Everett Dirksen in front of TV and press cameras.

# Homebuilding's money-go-round starts turning a bit

The extra mortgage money housing men have been seeking all year is suddenly materializing, from both old sources and new.

In mid-August Congress suddenly stirred from its lethargy and moved to pump upwards of \$3.6 billion into FHA and VA loans via the Federal National Mortgage Assn. The action—coming after months of haggling over ways to cool the battle for savings between commercial banks, s&ls and mutual savings banks—made business-page headlines because it came within days after 700 builders descended upon Congress (see p. 5).

Optimistic notes have begun to sound. "Somewhat more money may move toward the mortgage money," HLBB Chairman John Horne told Wisconsin homebuilders. "Mortgage yields are nearing a peak and the availability of mortgage funds is nearing a bottom," predicted Economist Miles Colean of the Mortgage Bankers Assn.

Chief reason for such optimism is that new long-range help seems to be in the offing. Homebuilding's desperate search for new long-term capital (NEWS, July) has succeeded in catching the interest of a number of pension funds. For years housing has eyed these funds because they were growing faster than any other type of financial institutions. But the pension funds have never become a source of new mortgage money because trustees kept their funds in bond and stock markets.

**New contacts.** Now, in tight-money 1966, pension fund trustees are taking a second look at mortgages and liking them.

Faced with a decline in starts of almost 50% (H&H, Aug.), Golden State homebuilders put aside traditional animosities and joined with labor unions and mortgage bankers in an industry committee. Los Angeles mortgage man Milton M. Gordon, a consultant to the state Building and Construction Trades Council, and Chet Bartolini, president of the state Council of Carpenters, led the committee in pressing the industry's case on Gov. Edmund (Pat) Brown. Convinced, Gov. Brown invited representatives of public and private pension funds to a Los Angeles meeting last month.

Builders brought sales pitches instead of crying towels to the meeting. Committee member William Leonard, executive vice president of the Associated Home Builders of Greater East Bay, passed out manuals containing every form and procedure the funds would need to start buying mortgages immediately. The packet included a three-page analysis of mortgages by the national investment counseling firm of Lionel B. Edie & Co.

The professional approach worked, and five pension funds pledged themselves to put a minimum of \$173 million into mortgages in the next 12 months. "No miracles, but the die is cast for substantial increased availability of mortgages," said Leonard.

To top off the success, the \$970 million



HANNA



LEONARD

H&H staff

State Teachers' Retirement System—which until now has exported its funds to the New York City bond market—has set a special three-man committee to work studying a shift into mortgages. "We'll get them," says Leonard confidently.

The California success is spreading: HOUSE & HOME mortgage correspondents in Los Angeles and Honolulu report new interest by out-of-state pension funds. But these funds are aiming at high-yield areas and bypassing the East and Midwest.

**Old friends.** Congress, following the script of tight-money 1958, is channeling aid to builders through FNMA along lines suggested by two housing wheelhorses, Sen. John Sparkman (D., Ala.) and Rep. William Widnall (R., N.J.), together with a new ally, Rep. Richard Hanna (D., Calif.).

Hanna, who comes from California's fastest-growing area, Orange County, has succeeded in getting both House and Senate to agree to add \$2 billion to FNMA's buying power by letting the agency borrow up to 15 times its capital base instead of the current ten-to-one ratio.

Sparkman pushed through the Senate without a dissent his bill reviving the 1958-vintage Program 10 to pump another \$1 billion into FNMA buying under special assistance provisions. The money would be borrowed from the Treasury, and loans would have to be less than \$15,000.

Widnall won inclusion in the House bill of a provision to raise FNMA buying power by \$1.6 billion by adding \$110 million to the agency's capital base.

At press time House and Senate differences were being resolved, and observers gave all three plans good chances of being wrapped into \$4.6 billion aid package.

**Rate reluctance.** But the legislators are showing less and less enthusiasm about stepping into the hot battle for savings by clamping ceilings on s&l and commercial bank dividend rates.

The reason: Bonds and some other investments with uncontrolled rates currently yield even more than the highest s&l and bank rates. Bank and s&l leaders now agree on one thing: "A dividend ceiling would merely augment the recent drop in savings inflow," as the U. S. S&L League put it.

The money hemorrhage at savings banks and s&ls, the biggest suppliers of conventional mortgage money to smaller builders, is showing signs of abating. Savings banks actually gained \$175 million in the crucial July reinvestment month, down only slightly from last year's levels. The s&l's lost about \$1.1 billion, estimates Horne, but the U.S. S&L League terms this "considerably less than expected."

## HOMEBUILDER'S MORTGAGE MARKET QUOTATIONS

Reported to HOUSE & HOME in week ending August 12.

City	FNMA Scdry. Mkt. % FHA-VA	FHA Sec. 203b Discount paid by builder Min.-Down* 30-year Immed. w		FHA 207 Apts. Firm Commit.	Conventional Loan Rates Comm. banks, Ins. Cos.			Savings banks, S&Ls 80% Over 80%	Construction Loan Rates Interest+fees All lenders
		5 3/4s	Trend		6 3/4-7	6 3/4-7	6 3/4-7		
Atlanta	6	6-8	Up 2	a	6 3/4-7	6 3/4-7	6 3/4-7	6 1/2 + 1 1/2-2	
Boston	5	1-2	Up 1	a	6 1/4-6 1/2 <sup>c</sup>	6-6 1/2 <sup>c</sup>	a	6 1/2	
Chicago	5 1/2	5-7	Steady	5-5 1/2	6 1/4-6 1/2	6 1/4-6 1/2	6 1/4-6 1/2	6 1/2-6 3/4 + 1 1/2	
Cleveland	5 1/2	7	Steady	5-5 1/2	6 1/2-6 3/4	6 1/2-6 3/4	6 1/2-6 3/4	7-7 1/2 + 1-2	
Dallas	6	6-8	Steady	a	6 1/2-6 3/4	6 1/2-6 3/4	6 1/2-6 3/4	7 + 1	
Denver	6	6 1/2-7	Up 1/2	a	6 1/2-6 3/4	6 3/4	7	6 3/4 + 1-2	
Detroit	5 1/2	5-7	Down 1	a	6 1/4-6 1/2	6 1/2-7	6 3/4-7	6 3/4-7 + 1	
Honolulu	6	6 1/2-8	Steady	a	6 3/4-7 1/4	6 3/4-7 1/4	6 3/4-7 1/4	7-8 + 1-3	
Houston	6	5 1/2-7 1/2	Steady	a	6 1/2-6 3/4	6 3/4-7 <sup>b</sup>	7 <sup>b</sup>	6 1/2-7 + 1 1/2-2	
Los Angeles	6	6 1/2-7	Up 1/2	a	6 1/2-7	6 3/4-7.2	b	6 1/2-7 + 1 1/2-3	
Miami	6	7-8	Up 1	a	6 1/2-6 3/4	6 1/2-6 3/4	6 1/2-6 3/4	6 1/2-6 3/4 + 1-1 1/2	
Newark	5	5-6	Steady	6	6 + 1	6 + 1	b	7 + 2	
New York	5	3-3 1/2	Up 1/2	6	6 + 1-2	6 + 1-2	6 + 1-2	6 1/2 + 1 1/2-2	
Okla. City	6	6-8	Up 1	5-7	6 1/2-6 3/4	6 1/2-6 3/4	6 1/2-6 3/4	6 1/2-7 + 2	
Philadelphia	5	7	Steady	a	6 <sup>b</sup>	6-7	6-7	6 1/2 + 1	
San Fran.	6	7-8	Up 1	5	7-7 1/2 + 1	7-7 1/2 + 1	7-7 1/2 + 1	6 1/2-7 + 1 1/2-2	
St. Louis	6	5 1/2-8	Steady	a	6-6 3/4	6 3/4-7	6 3/4-7	6 1/2-7 + 1-2	
Wash., D.C.	5 1/2	6-7	Up 1	a	a	a	a	6 1/2 + 2-2 1/2	

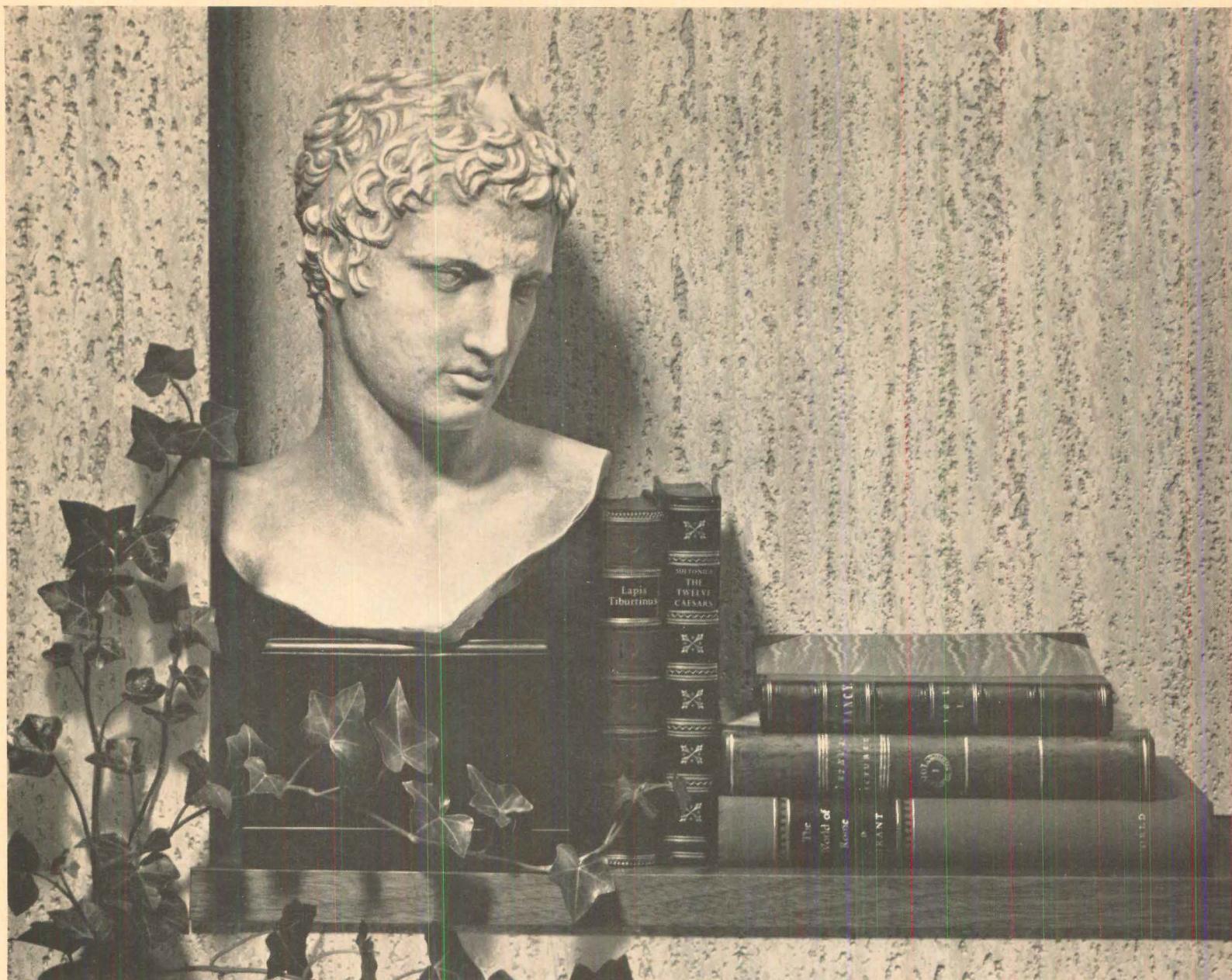
\* Immediate covers loans for delivery up to three months, future covers loans for delivery in three to twelve months.  
 • Quotations refer to prices in metropolitan areas, discounts may run slightly higher in surrounding towns or rural zones.  
 • Quotations refer to houses of typical average local quality.  
 \* 3% down on first \$15,000; 10% of next \$5,000; 25% of balance.

Footnotes: a—no activity. b—limited activity. c—Net yield to investor of 6% mortgage plus extra fees. w—for comparable VA loans also. x—FNMA pays 1/2 point more for loans with 10%. y—discounts quoted are net after seller pays 1/2% marketing fee and 1/2% adjustment for stock purchase. Seller must pay 1% of mortgage for stock calculated in \$120 units, of which \$20 is contribution to FNMA capital and \$100 is for a share trading at about \$71. z—applies to 66% loans.

Sources: Atlanta, Robert Tharpe, pres., Tharpe & Brooks Inc.; Boston, Robert Morgan, pres., Boston 5¢ Savings Bank;

Chicago, Robert H. Pease, pres., Draper & Kramer Inc., and Robert H. Wilson, pres., Percy Wilson Mortgage & Finance Corp.; Cleveland, David E. O'Neill, vice pres., Jay F. Zook, Inc.; Dallas, M. J. Greene, pres., Southern Trust & Mortgage Co.; Denver, Clair A. Bacon, pres., Mortgage Investments Co.; Detroit, Sherwin Vine, vice pres., Citizens Mortgage Co.; Honolulu, H. Howard Stephenson, vice pres., Bank of Hawaii; Houston, Everett Mattson, vice pres., J. Bettles Co.; Los Angeles, Christian M. Gebhardt, vice pres., Colwell Co.; Miami, Lon Worth Crow Jr., pres., Lon Worth Crow Co.; Newark, William W. Curran, vice pres., Franklin Capital Corp.; New York, John Halperin, J. Halperin & Co.; Oklahoma City, B. B. Bass, 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, John Jensen, vice pres., Bankers Mortgage Co. of California; Washington, James C. Latta, sr. vice pres., Frederick W. Berens Inc.





6640

# New Textured Travertine Marlite



**New Textured Wormy Chestnut Marlite**, another Textured Marlite Paneling, adds a dramatic new dimension to walls anywhere.

## Another Marlite Decorator Paneling with texture you can see and feel

Touch it—you can feel the texture of magnificent new Textured Travertine Marlite. Wash it—you can't harm the beauty of Marlite's exclusive soilproof plastic finish. New Textured Travertine Marlite captures the luxury of rare imported marble. And protects it with a satin-stone finish that stays like new for years.

Textured Travertine is just one of the exciting new products in Marlite's complete Decorator Paneling line. You'll find dozens of ideas to add new beauty and sales appeal to your homes—turns visitors into buyers.

For complete details on Marlite Decorator Paneling, see your building materials dealer, consult Sweet's File or write Marlite Division of Masonite Corporation, Dept. 922 Dover, Ohio.

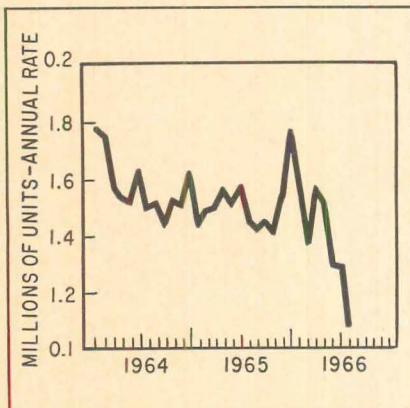
**Marlite®**  
plastic-finished paneling

ANOTHER QUALITY PRODUCT OF MASONITE® RESEARCH

## WASHINGTON WIRE

**Starts hit the skids**

July housing starts plunged to the lowest annual rate since the 1960 recession and a decline in permits for future construction dimmed recovery prospects. Total starts, including farm (see graph), declined to 1,064,000. That was a drop of about 16% from June's revised figure of 1,273,000 and 28% from the 1,473,000 of July 1965. Private non-farm starts fell to a rate of 1,044,000, off 16% from June's 1,249,000 and 28% from the 1,447,000 of July 1965. Said NAHB Economist Michael Sumicharst: "This is the beginning of a sharp decline. The industry is in more than a recession now." Commerce Secretary John Connor says building won't revive until mid-'67.

**Rent supplements**

Congress has agreed to provide \$20 million more this year to use toward building commitments for the rent supplement program. The \$12 million approved last spring has been used up.

**Code study—at last**

HUD will soon appoint a national commission to study building codes, zoning, and land taxation policies just as President Johnson promised in March 1965. Congress has appropriated \$1.5 million for the study, half of what HUD Secretary Robert Weaver said was needed. Congress okayed the program last year but provided no money.

**Vacation houses**

Congress is once again considering FHA insurance for second homes. It's included in one of four Senate housing bills (right) but not in the omnibus house bill. If the two versions are passed by their respective houses, the Senate clause on vacation homes could prevail when last-minute differences are ironed out.

**A slide for the S&Ls?**

Three savings-and-loan failures within five weeks have aroused fears in the capital that this is only the beginning. Sources close the Home Loan Bank Board say Nevada is now the state to watch. Arizona has just seized the \$37-million Gibraltar S&L in Phoenix, (no relation to the \$400-million Gibraltar S&L of Beverly Hills, Calif.) Illinois took over the \$7.5-million Old Reliable S&L in the Chicago suburb of Berwyn and Idaho seized the \$19-million Idaho S&L in Boise.

## Congress stymies LBJ's log-rolling tactics, dimming chances for 'demonstration city' aid

History is made in small tidbits—at least, that's how Congress seems to approach housing legislation this year.

For the first time in over a decade, Congress is taking up various housing proposals piece by piece rather than lumping them into one omnibus bill.

Result: the mass transit program will continue, some tinkering with the federal money agencies will be passed to help the housing industry, but President Johnson's "demonstration cities" bill is not expected to get the votes.

**Log-rolling.** In the past, legislative strategists in the federal housing establishment planned to pick up enough support for an omnibus bill by including in it certain bits and pieces that were known to be pet causes of various congressmen.

This year Administration strategists again hoped to log-roll some votes by tying the extension of mass transit aid onto the "demonstration cities" bill. But the LBJ glue came unstuck in the House—mass transit was unyoked and dropped into a separate bill.

At the same time, thanks to Rep. Wright Patman's (D., Tex.) concern about tight money, a separate bill was being rushed through Congress to provide more money for Fanny Mae (see p. 6).

**Lumberjack tactics.** Rep. Patman's committee also was considering LBJ's "demonstration cities" bill. Ducking the fight, Rep. William Barrett's (D., Pa.) housing subcommittee decided to let the Administration have all it wanted—from the subcommittee—and then try to get enough votes on the House floor to pass the proposals.

HUD's experts were heavy-handed in their approach, forgetting that the art of log-rolling is a delicate thing. For instance,

after they won committee approval of the controversial \$25 million loans for new towns, they told the city lobbyists to take it or leave it since the "demonstration cities" provision for urban centers was also in the bill.

One after the other, the various lobbying groups lost interest. When the S&L interests saw what was happening, they asked their friends in Congress to pull out pet S&L provisions such as letting them finance mobile homes.

**Tim-m-ber!** Meanwhile, key senators were watching, and the whole concept of an "omnibus bill" came crashing down in the Senate banking committee.

The Senate committee last month decided to approve four bills, not one. "Demonstration cities" is there, all by itself. Mass transit is there, by itself. Special money aids to ease the tight mortgage market are there, alone. And there's a fourth, catchall bill, sans "new towns."

This was the story at press time:

- A House-Senate conference had passed a bill holding the mass transit outlay to \$150 million, the amount requested by the President for fiscal 1968.

- Passage of LBJ's "demonstration cities" plan appeared doubtful despite Senate approval. Headcounts of probable votes in the House showed an extremely close margin.

- Approval of the various bits and pieces woven into the "demonstration cities" bill in the House, and in a separate bill in the Senate, depended in part on what happened to "demonstration cities."

The Administration thought it could salvage some of its technical amendments, but "new town" legislation did not have wide support.

—JOHN NICHOLSON

## Top drawer business committee hits overlap of local governments, asks for super-counties

The super-county concept of local government as a means of slashing overlapping layers of administration got the blessing of an influential, blue chip segment of the nation's business community last month.

The Committee for Economic Development, a nonprofit research organization of 200 business executives and educators, proposes to reduce local governments from 80,000 to 16,000. Such a revolutionary pruning not only would give new efficiency to area administration, but also would counter-balance mushrooming federalism, CED says.

**Tax troubles.** The study especially scores property-tax administration.

"Real property tax administration suffers from two major sources of inequity: unequal assessment and under-assessment," declares the statement.

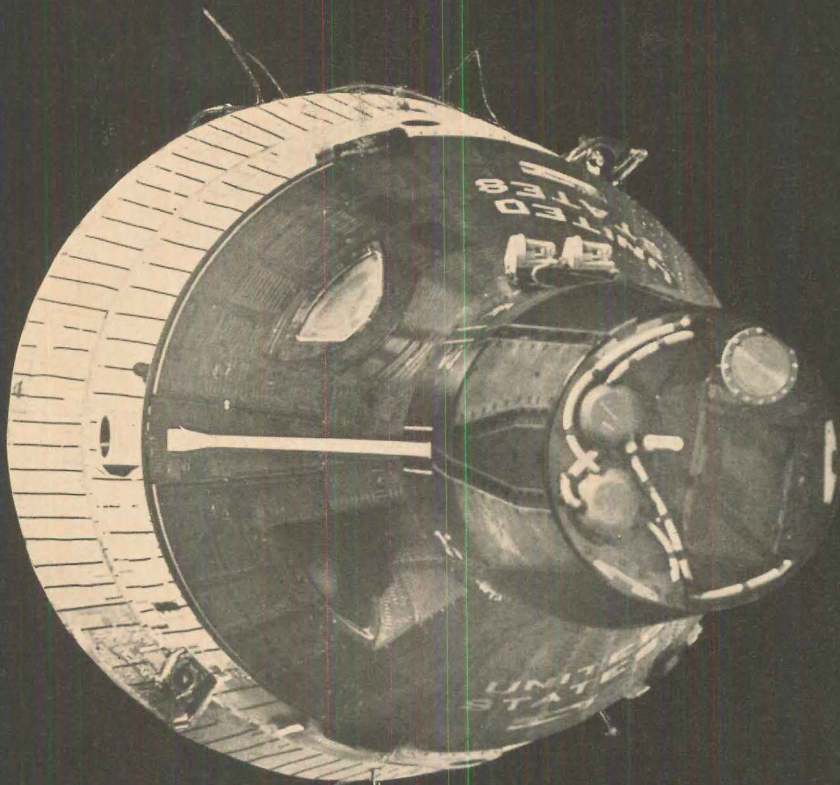
"In view of the primary reliance on real

property taxes, it is quite shocking that in most parts of the country—urban or rural—its administration may be accurately described as inequitable, inefficient, incompetent, or corrupt."

Most of the "injustice and waste" could be eliminated if administration were given to strong local units, the CED now maintains.

"Small, overlapping tax assessment and collection districts, with their amateur elective assessors and collectors, must give way to professionally competent personnel under incorruptible supervision."

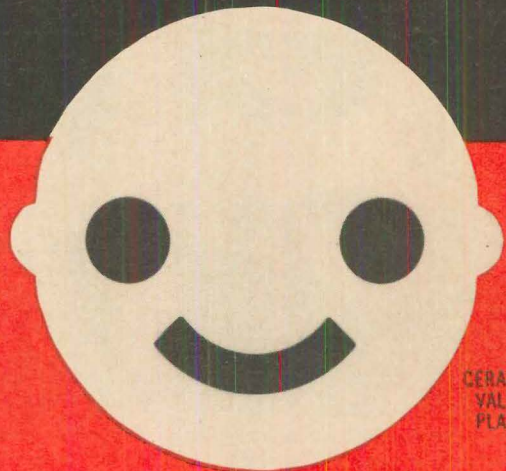
**Super-county?** As a solution for these and myriad other ills afflicting local government, CED offers the new, larger, and stronger county units. Serving a population of at least 50,000, the remodeled county government would wipe out 80% of the present counties, municipalities, townships and a variety of special districts.



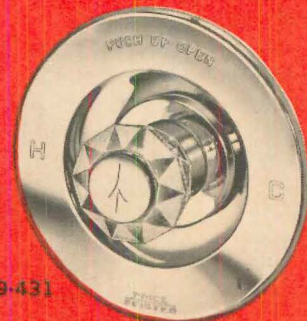
*Space-age ceramics  
withstand the  
burning hell  
of blast-off  
and re-entry.*

*Price Pfister uses the identical  
Space-Age Ceramic Materials  
in its Flow-Matic single-handle  
water-control devices.\**

For our astronauts, *each* performance must be a *perfect* performance. That's why super-tough ceramic heat shields are used to guard their space capsules from the destructive heat of rocket flames and the searing re-entry. For Price Pfister's Flow-Matic single-handle products, *each* performance must also be *perfect*. The surfaces of our ceramic valve plates maintain tolerances within 25 millionths of an inch — and therefore require *no lubricants, no springs, no washers and no "o" rings that are subjected to friction*. Flow-Matic ceramic valve plates assure corrosion-free use under the most adverse water and atmospheric conditions for years and years and years.



CERAMIC  
VALVE  
PLATE



Established 1970

PRICE PFISTER BRASS MFG. CO.  
13500 Paxton Street, Pacoima, California 91331  
Sold only through wholesalers.  
Warehouses in these principal cities:  
Birmingham, Alabama; Chicago  
Illinois; Dallas, Texas; Pacoima,  
California; Elizabeth, New Jersey.

09-431

*Price Pfister Products — Install Easier — Work Better — Last Longer*

\*Ceramic Plates manufactured by Duors Porcelain Co. using Alcoa Alumina — developed by Aluminum Company of America

## Housing bias ban in Senate: 'We don't have votes unless...'

The "unless" is the formidable opposition of Sen. Everett Dirksen (R., Ill.).

As the civil rights bill which bans race bias in housing limped into the Senate last month fresh from a hairbreadth passage by the House, Senate leaders faced the chance that their members might not pass a housing sanction.

"There's no use kidding ourselves," Senate Majority Leader Mike Mansfield (D. Mont.) told questioners. Unless Sen. Dirksen decides to change his position, "we don't have the votes" to get a housing section passed in the Senate.

Sen. Dirksen is the Republican majority leader who has joined Democrats in enacting every major civil rights bill in recent years. But Dirksen denounced the Administration's original proposal for a bias ban that applied to all housing as "unconstitutional" and "an invasion of property rights."

The House applied enough water to the Administration bill to justify new efforts

to win Sen. Dirksen to the cause.

"The chair votes . . ." Even watered down, however, the housing section barely squeaked past the House of Representatives. The crucial vote ended in a tie, so Rep. Richard Bolling (D., Mo.), then the acting speaker, cast the deciding vote in favor of an amendment exempting real estate agents from the discrimination ban if a homeowner specifies that his home is not to be sold to Negroes. The practical effect is that the House-passed version outlaws discrimination for new house builders and apartment owners only.

**Double-barrel.** The anti-bias section would give an aggrieved party the right to go to court directly for an injunction, or to appeal to a new federal board, similar to the NLRB, which could issue cease-and-desist orders.

But the aggrieved person could only use the law when a new home was involved (and the builder had sold more than two homes in the previous year), or when a

more-than-four-unit apartment house was involved.

The four-or-less exemption, nicknamed the "Mrs. Murphy" rule, obtains only when the apartment building is owner-occupied.

**Builders' bid.** The National Association of Home Builders opposed the anti-bias section because it "would be detrimental to the growth of the American economy and home building activity at this time."

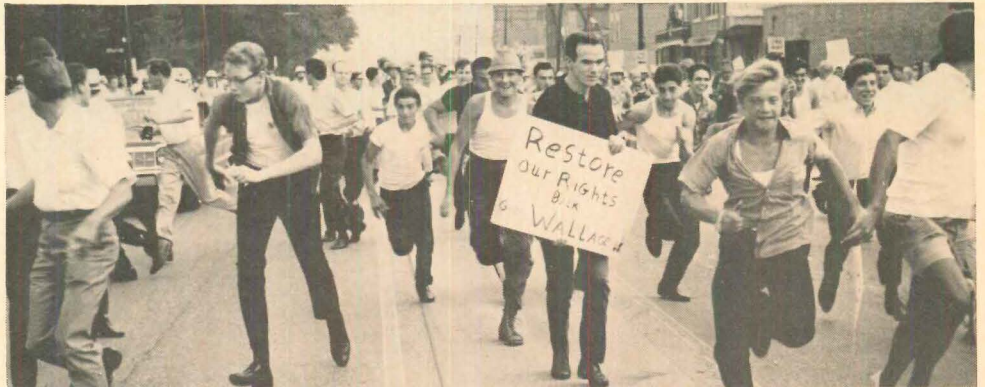
In effect, said NAHB President Larry Blackmon, the section as approved by the House places "the major emphasis in promoting non-discrimination upon new construction, and bypasses the existing housing supply. Said Blackmon: "I need scarcely emphasize the unfairness of this to the home building industry."

Real estate men have been even more vigorous in their protests. Their storm of protest to Congress was what set the stage for the amendment exempting them.

Photos: Chicago Sun-Times



**UNRULY DEMONSTRATOR** is subdued by police during disturbances over segregated housing drive.



**PROTESTING YOUTHS**, carrying placard supporting Alabama's segregationist Gov. George Wallace, flee police after attacking civil rights marchers during widespread disturbances in Chicago.

## Housing bias riots in Chicago: 'We don't want to integrate'

To civil rights leaders, Chicago's neat but all-white neighborhoods have long stood as shining symbols of Northern prejudice. Hence it was only natural that when the Rev. Martin Luther King picked a target for his most massive drive yet against segregated housing, he should make those Chicago neighborhoods his target.

But when King led marchers into the segregated neighborhoods last month, he was met with rocks, jeers, and placards favoring Alabama's segregationist Gov. George Wallace, and crowds chanting, "Two, four, six, eight, we don't want to integrate." One rock hit King and drove him to his knees.

Later, the veteran of civil-rights strife expressed dismay at the force of his reception: "I have seen many demonstrations in the South but I have never seen any so hostile and so hateful as here today."

But to those familiar with Chicago's ex-

plosive feelings on race, the outcome was not unexpected. For King chose neighborhoods heavily populated by second generation Poles, Lithuanian, Germans, and Italians. To these people, a home of their own represents the ultimate possession; they have poured their savings and labor into owning and maintaining their houses. Furthermore, many of them earn their living in low- and semi-skilled jobs where they compete with Negroes.

Finally, many of those families have moved out of city neighborhoods because Negroes moved in; they vow they will not move a second time.

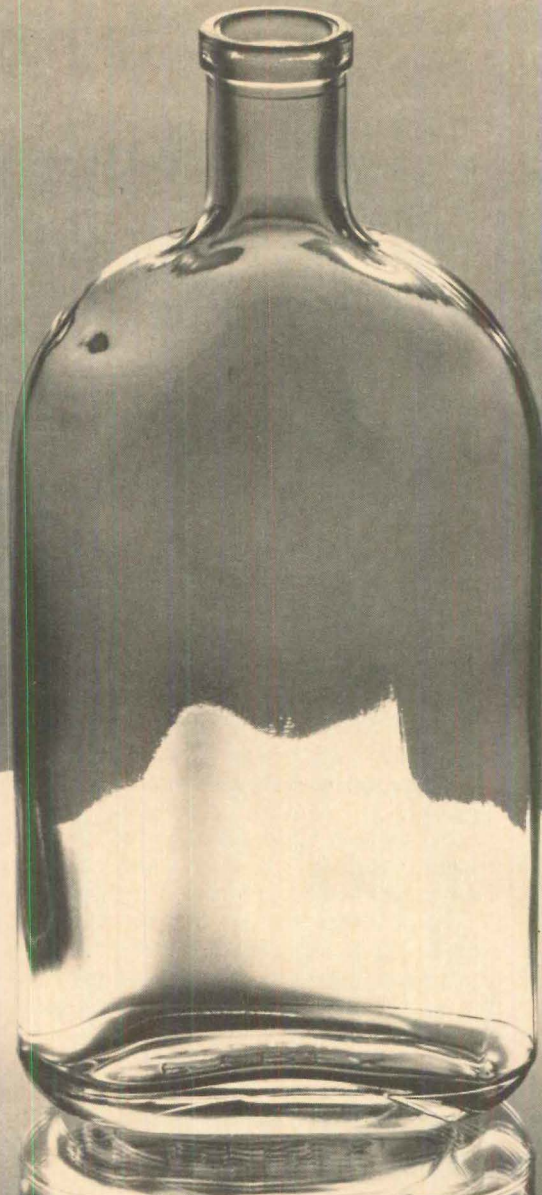
**Cross currents.** Out of the riots emerged ideological and religious stresses which could damage some white support of the civil-rights cause.

A delegation of white homeowners and businessmen pressed Mayor Richard J. Daley to appeal to Attorney General Nic-

holas de B. Katzenbach "to rid the civil rights movement of Communist agitators."

Mayor Daley remained noncommittal on this plea, but the appeal gained some credence when a Cleveland grand jury charged that race violence in that city (News, Aug.) "was organized and exploited" by "trained and disciplined professionals at this business." Evidence of the new mood—the U. S. House of representatives shouted through an amendment to the civil rights bill (above) making it a federal crime to cross state lines to incite racial violence.

**Anti-bias order.** Before the uproar, Illinois Gov. Otto Kerner signed an executive order penalizing realty brokers who discriminate. President Robert Steger of the Illinois Association of Real Estate Boards termed the order as "an arbitrary action which will seriously damage the real estate industry in Illinois."

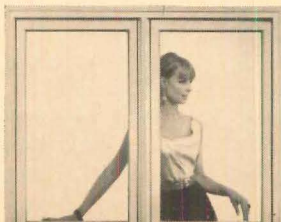


## The kind of bottle Libbey-Owens-Ford makes you can put in every window of your houses.

The kind of bottle made by L·O·F is a skinny, flat one that goes into windows and takes the place of old-fashioned storm windows.

It's called Thermopane<sup>®</sup> insulating glass with the GlasSeal<sup>®</sup> edge.

It's made of glass fused to glass.



It's filled with dry air. It's sealed to keep the dry air inside and dirt and moisture out.

Then we etch our trademark Thermopane in the corner where you and buyers of your houses can see it.

When you order materials, ask your supplier to put Thermopane

Only Libbey-Owens-Ford makes Thermopane in the U.S.A.

in every window you buy. (The leading wood window manufacturers already offer it as a standard option.)

Have a bottle put in your windows. The one with the name Thermopane in the corner.

You know it's a selling point.

*Thermopane*<sup>®</sup> by **LOF**  
INSULATING GLASS **GLASS**

## Housing slowdown tightens apartment market; vacancies below 7% for first time since 1959

The graph at right tells the dramatic impact of the cutback in apartment starts: Rental vacancies in the second quarter dropped below the 7% mark for the first time since the apartment boom began seven years ago.

The Census Bureau put nationwide rental vacancies at 6.8% in the latest quarter, down from 7.5% in both the preceding quarter and the year-ago level. Census cautions that one quarter does not set a trend. But Economist George Christie of F. W. Dodge Co., a division of McGraw-Hill, calls the break below the 7% barrier "a really significant decline," since vacancies had been holding steady at 7% to 8% since the fourth quarter of 1959.

Reports from builders and H&H mortgage correspondents tell of young families filling apartments as a temporary measure until the mortgage market eases.

Suburban apartments are filling fastest, and the vacancy rate for suburbs plummeted from 7.8% to 5.9% in the first quarter of 1966. Center city apartments are slightly less affected, showing a 6.7% vacancy while units outside metropolitan areas have a still-high vacancy of 7.5%.

**Western spurt.** The 11-state western region, where population mobility has made above-average vacancies a way of life, is benefiting most—vacancies there plunged from 12% a year ago to 9.9%.

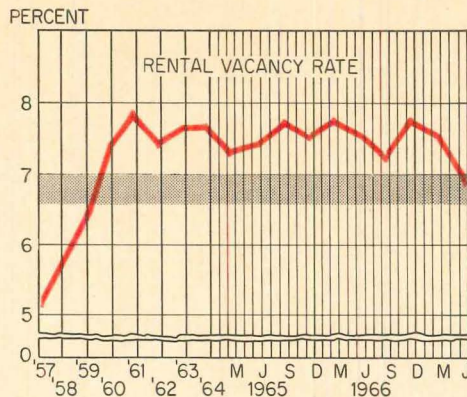
## St. Louis builders meet hard labor line hear-on: 'Stop erosion of our product in the market'

Model houses were shuttered in St. Louis last month as builders virtually quit building in a dramatic new hard line against unions.

The builders were demonstrating their support for sheet metal contractors who have been resisting a union shop demand. Sheet metal workers have been on strike for more than seven weeks and there is no sign of a settlement. The bitter dispute could be a prelude to tough bargaining in 1967, when contracts covering 750,000 tradesmen expire.

The shutdown decision by St. Louis builders came as a result of a split in contractors' ranks. After 1,200 sheet metal workers went on strike early in July, about 80 small shops, employing about 400 workers, signed interim contracts agreeing to the union hiring hall.

The larger contractors remained adamant, and after the sheet metal workers rejected a three-year \$1.25 hourly wage hike (over a \$4.91½ base), St. Louis Homebuilders Assn. President Fred Kemp urged his members "to continue to refrain from pressuring your sheet metal contrac-



**RENTAL VACANCIES** dipped to 6.8% in April-June quarter after staying above 7% since 1960.

Western apartment starts are off 31% through June, reports F.W. Dodge.

One northern California apartment owner says occupancy has shot from 50% to 98% in the past six months in his 200-unit project which, he notes, is in a prime location." Southern California apartments are filling with similar rapidity.

**Assumptions, anyone?** In many cities checked by H&H the used house market has switched to assumptions of existing loans. Houston reports many second mortgages being taken back by sellers, too.

As a result the used-house market—important to new house builders because it helps families move up to new houses—is holding near 1965 levels in many cities.

tor." The "pressure" was coming from "many apartment and home builders" who were using signed-up sheet metal men. Kemp advised builders to "adjust your plans realistically" because builders could not continue starting houses which couldn't be delivered to buyers without heating plants. This inventory, he cautioned, could cause builder bankruptcies as interest charges on undelivered houses kept mounting.

"Unreasonable demands from labor... require a new hard policy" by builders, said Kemp, because they threaten to price housing out of the reach of more and more buyers. "Stop erosion of our product in the market place," said Kemp, adding that the hiring hall in other crafts has cost buyers "a great deal of money."

But sheet metal workers charged that the builders found it "expedient" to slow operations because they are faced with "excessive inventories," and tight money is preventing completion of many sales. Furthermore, the union says, employers could reject any worker referred by the proposed hiring hall.

## The great mail case: city bans boxes at curb, sues U.S.

The Post Office Dept. is finding the little California city of Pleasanton anything but pleasant.

Pleasanton (pop. 7,925) filed suit in federal court in San Francisco to force U.S. postal authorities to rescind an order requiring curbside mailboxes—instead of doorstep deliveries—in new subdivisions.

Pleasanton complains that Postmaster General Lawrence O'Brien's directive is discriminatory and violates the rights of 300 Pleasanton householders. The reason:

Last May Pleasanton passed an ordinance prohibiting installation of curbside mailboxes. The measure had the effect of forcing 300 families in new houses to go to the Post Office to get their mail because they have no curbside boxes and the Post Office refuses delivery to their doorsteps. The city also contends that curbside boxes are more easily pilfered, and critics call them a safety hazard for children.

City Attorney William A. Struthers Jr. says several neighboring cities have indicated they will enter the case as "friends of the court." The Home Builders Assn. of Greater Eastbay supports the case.

In Washington the National Association of Home Builders is pressing the Post Office to modify its ruling, which is aimed at saving money.

At the urging of NAHB, a bill has been introduced in the House of Representatives to provide \$40 million for door-to-door delivery service in new residential areas.

"With utility wires going underground, why should builders be required to sprout mailboxes at the curb?" asks NAHB.

## Levitt expands again—best bet is in the Midwest

Levitt & Sons, the nation's largest home-building company, is moving into its eighth local market. The company has picked a major city—as yet unidentified—for its new operation; industry sources speculate it will be either Chicago or Detroit, two booming industrial areas.

Levitt, headquartered in Lake Success, N. Y., reported a \$74-million sales volume last year in seven metropolitan areas, including Paris and San Juan, Puerto Rico.

To head the new venture as vice president and general manager, Levitt picked Richard L. Weiss, 42, an attorney-turned-builder who has been vice president for real estate for Sunset International Petroleum (now a division of Sunasco) in Los Angeles. In that position he headed development of eight communities covering 25,000 acres.

A former vice president of Larwin Companies, Weiss is a University of Michigan law graduate who practiced law in Los Angeles before turning to housing.



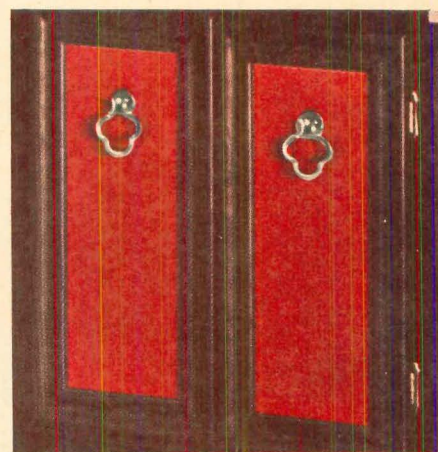
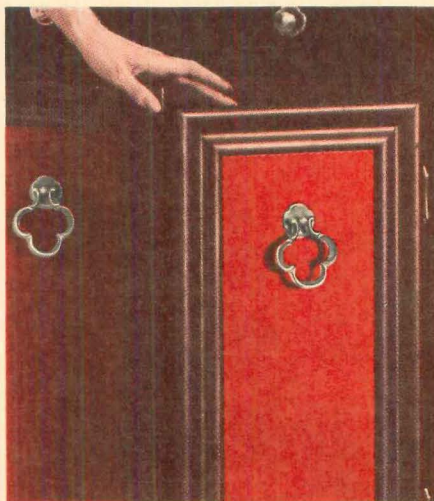
# “Let me see the kitchen”

She's bound to ask. Here's how to capture her taste for elegance with a kitchen you can both be proud of.



Fresh new designs from Formica Corporation to start your kitchen plans. Colorful, carefree cabinets and counters surfaced with FORMICA® brand laminated plastic emphasize convenience and style. Your customers will take it from there.

New FORMICA® brand cabinet moldings and laminate surfaces can turn ordinary cupboards into high style furniture for the kitchen. Choose from a full range of beautiful woodgrains that radiate sell-power . . . never need refinishing.



The cabinet fabricators of FORMICA® brand laminated plastic are prepared with plans and specifications, ready to build real excitement into your kitchens. Whatever your style of architecture and interior, there's a just-right cabinet design from Formica Corporation.

Contact your local Formica District Office or write direct for complete information on cabinet designs with sell-power. FORMICA® is our brand name for laminated plastic, molding, flakeboard, adhesives, wall paneling, industrial plastics, doors and toilet compartments.



laminated plastic

## Found: a builders' paradise with cheap land and no codes

St. Petersburg Times

Going, going. . . but not quite gone—the \$5,990 two-bedroom home complete with garage and lot.

This dream-priced dwelling, aimed at budget-minded retirees, has spawned a construction boom in a builders' paradise along central Florida's Gulf Coast and survives even in the midst of today's escalating prices.

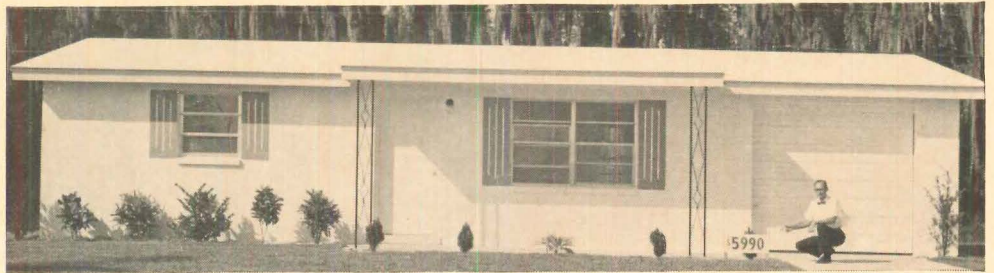
The builders' wonderland is located along a ten-mile strip of U. S. 19, 20 to 30 miles north of St. Petersburg, from the Pasco County line to Port Richey. The chief attractions: cheap land, no building codes, and low taxes. As a result population has boomed from 8,000 in 1960 to an estimated 35,000 today.

Elizabeth Whitney, writing in the *St. Petersburg Times*, calls the stretch the most exciting ten miles in Florida.

Last month she visited the "Terrific Ten's" 70 subdivisions adjoining each other on both sides of the road expecting to scoff.

"I expected cheap cracker-boxes on rutted dirty roads," she wrote, "but I returned filled with admiration."

"I found nicely laid out communities, some with hundreds of houses, on paved streets, with manicured yards and flowers." Many subdivisions have shuffleboard courts and recreation centers, she reported.



**\$5,990 HOUSE** comes complete with two-bedrooms, garage and landscaping in Pasco County, Fla.

Ironically the 70 subdivisions are booming while neighboring Pinellas County and its major city, St. Petersburg, are afflicted by a housing slump.

In general, the low cost retirement home market, which highlighted a Pinellas construction boom of the late 1950s, has now migrated north along the highway. A few Pinellas builders have moved there too; Wadsworth Homes is selling in the widely advertised Flor-A-Mar subdivision but in a higher price range (\$15,000 to \$20,000).

**End of boom?** But time, economics and government are catching up with happy Pasco. Part of its attraction has been lower taxes because the county has been assessing property at only 40% of value. Neighboring Pinellas assesses at 100%.

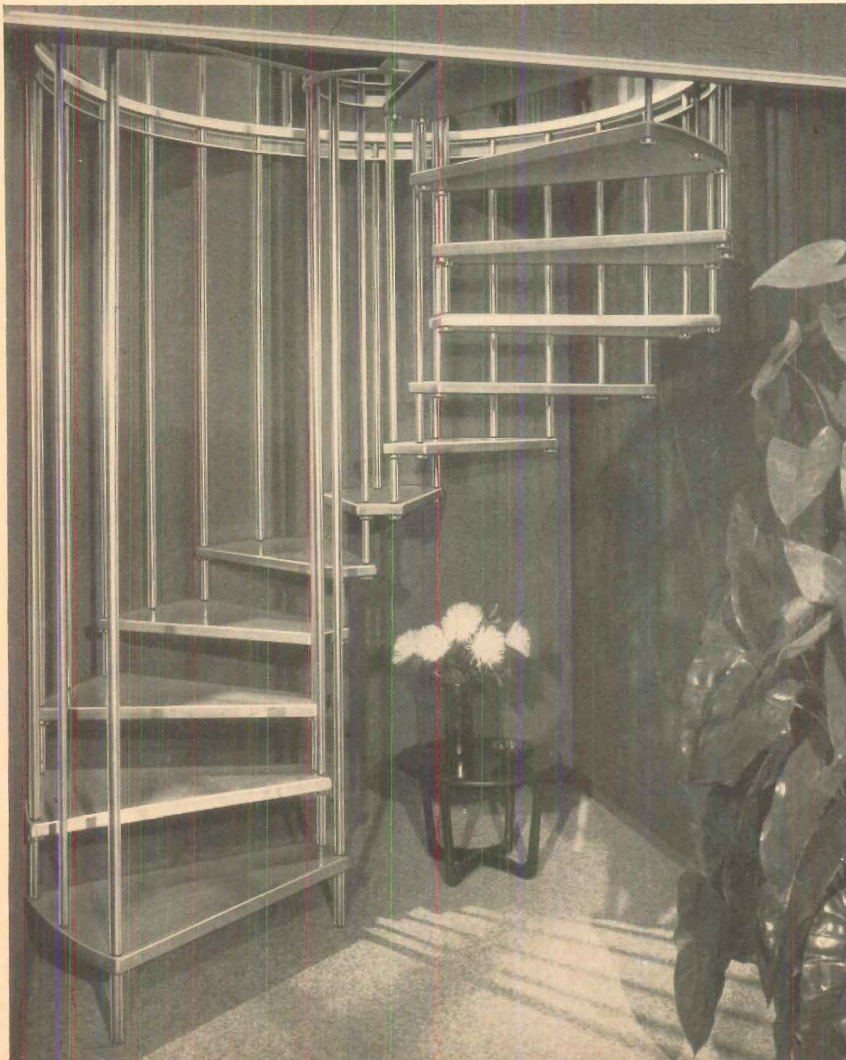
In July State Comptroller Fred O. Dick-

inson ordered all counties to assess real property at 100% of true market value. A new appraisal in Pasco County has been started to bring assessments to full value.

Under Florida's homestead exemption law, the first \$5,000 of the assessed value of home is not taxable. Combined with 40% assessments, this meant tax-free living for most buyers.

Many who have gone tax-free in Pasco will find themselves billed for an estimated \$10 to \$50 while most others will have to pay even higher tax bills.

But though New Port Richey builders still fly the \$5,990 flag, these prices may soon fade out for yet another reason: the demand for better housing. For the past two years, most retirees have been buying in the \$8,000-and-up range.



Pease

**SPIRA STAIRS™**  
Patent Pending

### NEW! Complete Decorator Stair Package

Never before have you had such complete flexibility, architectural beauty and ease of installation in a spiral stairway. You get custom beauty . . . without a custom price tag! The rich, wide oak treads are supported on handsome gold anodized tubing. The entire Spira-Stairs unit is suspended from its own structural steel ring assembly, making it independent of walls for side support and assuring design freedom at both floor levels. The eye-appealing spiral can run clockwise or counterclockwise. What's more, the basic spiral design itself saves valuable floor space in many planning situations. Write today for complete details.

**PEASE WOODWORK COMPANY**

900 Laurel Ave., Dept. H-9, Hamilton, Ohio 45012





**5 ways—count 'em—5 ways  
to heat and cool your garden apartments  
with Carrier equipment!**

Plus variations on each of the five ways. And with good reason. Apartment air conditioning is a subject with many answers—each right for a particular set of conditions.

The answer to your problem can come directly from a Carrier Dealer. He's an air conditioning specialist with access to a broad equipment line.

From it, he can select and team up the Carrier products to give you the *one* air conditioning system

... that best meets your requirements of space, construction, initial and operating cost  
... and that gives your tenants indepen-

dence in both temperature selection and payment of utility bills.

The five ways—plus variations:

1. Room Air Conditioners: Install through the wall. Reverse cycle with electric resistance heat for use in mild climates.
2. Condensing unit: One for each apartment. Fan coil with electric resistance heat... gas furnace with coil... or oil furnace with coil.
3. Gas-electric unit: For ground or rooftop installation. One for each apartment.
4. Heat pumps: One for each apartment. Self-contained... or split system.

5. Central chilled and hot water supply with single, ducted fan coil in each apartment or individual fan coils in each room. Choice of 2-pipe system, or 3- and 4-pipe systems with heating and cooling *always* available in each apartment.

We suggest you get in touch with your Carrier Dealer *before* plans have narrowed your air conditioning options. That way he can do the best job for you. You'll find him in the Yellow Pages.

Carrier Air Conditioning Company, Syracuse, N. Y. 13201. Represented in Canada by Carrier Air Conditioning (Canada) Ltd.

**Carrier** Air Conditioning Company

More people put their confidence in Carrier air conditioning than in any other make

## New towns: an appliance giant seeks a shimmering dream . . .

Larry R. Spitzer

General Electric Corp. has parted the veil a bit on one of housing's hottest guessing games of 1966: how the industrial giant plans to approach the new-town market.

The answer: G.E. will combine its engineering and executive talent to undertake the most technologically advanced community in the nation. The company is talking in terms of a community of 30,000 units built over 15 to 20 years to house 100,000 persons.

G.E. touched off speculation on its intentions by forming a community systems research division last December.

Last month George T. Bogard, the division's general manager, went before a conference on "The Next Fifty Years," convened in Portland, Ore. by the American Institute of Planners, to sketch the company's decisions to date:

"We believe that General Electric can develop a modular concept of components in electro-mechanical systems which can reduce in-place costs of all essential services provided in new construction."

G.E. does not plan to engage in construction itself but the company has (and presumably will use) "the necessary financial staying power to undertake a 15 to 20 year development program." In Bogard's view the long financial commitment is essential to improve the physical product: "Regardless of what a builder-developer might want to do, he could not risk a \$5 or \$10 million mistake because, in all likelihood, it would put him out of business."



G.E.'s BOGARD  
"A modular concept of components"

In the housing industry, technological change has been hampered by this high risk, as well as building codes, union work rules, and the reluctance of lenders to finance innovation, said Bogard. Along with its financial commitment, G.E. expects its research and engineering expertise to speed improved technology.

"Without added product features which appeal to customers, without cost reduction programs which result in lower prices and higher values, the building industry is pricing itself out of business at a rate which has stymied any growth in volume for a period of more than ten years."

Bogard cited G.E.'s existing manufacturing facilities covering "almost the complete spectrum of community services," from power distribution to waste treatment to educational systems to climate control.

Hence G.E. will concentrate on developing electro-mechanical systems to provide better answers to air and water pollution, waste and sewage disposal, transportation and municipal services with lower per capita operating costs.

"An information utility performing essential functions for municipal operations and sharing time with commerce, industry, schools and hospitals in the community," is one possibility, said the G.E. executive.

**Accent on environment.** Bogard's "prototype model community" will have to be more than "physical planning, mechanics and aesthetics," he said; "it must incorporate economic and social planning to make it a viable self-defined, self-sufficient city."

G.E. will try to "create basic employment for the majority of the residents and be within easy commuting distance to a wide variety of other employment."

But Bogard admitted that social planning is still rudimentary for builders and developers. G.E. will call upon "experienced planners, sociologists, anthropologists and psychologists for guidance," said Bogard. "I am sure no one has all the answers, but by the process of trial and—I hope—not too many errors, we should be able to achieve large scale improvements."

## . . . while a once-burned oil producer grapples with reality

Ever since the Del E. Webb Corp. quit building in Clear Lake City, a 15,000-acre development in Houston, officials of landowning Humble Oil Co. have been trying to recapture the project's original bright promise (H&H, June).

The latest in a series of salvage moves\* came this month when Humble's subsidiary, Friendswood Development Co., appointed First Mortgage Co. of Houston to manage residential sales in the 4,000 acres under initial development.

"First Mortgage is not taking over Clear Lake City" says President John Turner of Friendswood, "only the sales management of single family dwellings." Friendswood will retain control of apartment, commercial and light industry.

Turner says the arrangement has two levels:

1. First Mortgage and Friendswood will jointly finance two new developments in the area, El Dorado West (\$22,000 to \$26,000) and Clear Lake Forest (about \$30,000). Friendswood will make the land available to First Mortgage, who will de-

velop the lots, sell them to other builders who have been operating in Clear Lake City since 1964, and administer builder sales by controlling house quality and organizing sales forces.

2. Friendswood will continue to develop the remaining lots in the initial portion of Clear Lake City and a new subdivision called El Camino South (\$15,000 to \$20,000), but will retain First Mortgage to manage lot sales.

In making what he acknowledges is his first major decision as president of Friendswood since taking over March 15, Turner is asking First Mortgage to do the complete residential sales job the planners of Clear City thought Del E. Webb Corp. could perform.

**Coop selling.** "We hope to establish a comprehensive building and sales program to exploit the market fully and build a real city," says FM Vice President Richard Basden.

First Mortgage will start by policing builders already operating in Clear Lake City. It will administer building codes, approve plans, rule on aesthetics, and decide on marketability. In addition it will contract with each builder to provide his sales force. Selling "from a car trunk or a garage" will not be permitted, says

Basden. "You've got to have the best salesmen in attractive sales offices."

First Mortgage will open two new sales offices in Clear Lake City and staff them with three salesmen each. Only builders operating in the \$20,000-or under price-range will be permitted to continue with their own salesmen and models.

**Drawback?** Basden says initial builder reaction has been favorable, although he expects resistance from a few. "Any who pull out will do so at our urging," he says. "Some of the stuff is not up to the quality we want."

Most builders are cautious, but aren't too unhappy with the arrangement. Guy Odom, of Norwood Homes, says the change has not affected his company's operations in Clear Lake City. Norwood has already built about 150 homes there in a year and is on the verge of committing for more.

A second builder, who was asked to go in but declined, is doubtful about the arrangement.

He also objects to the joint sales force. "I agree that the quality of the sales forces should be upgraded, but we're not going to operate out of the same office as a major competitor. We have our own selling team and we would lose it under the new plans."

\* The developers have committed \$2 million to build a four-lane highway linking the housing areas with NASA and Bayport, a Humble industrial area nearby, and have planted 700 trees since June to ease the bald prairie look of the project.

**It's Smart  
to use Windows as  
Cost Cutters!**

*We make a Window to  
help You Do It!*

**The CARADCO C-100'  
double-hung wood window offers:**

**Fully Primed Frames**

Mean less job-site labor, better protection during construction.

**Removable Sash**

Easier painting and cleaning.

**Can Be Full-bound Trimmed**

Saves job-site labor and material costs.

**Factory Installed Storms,  
Screens, Grilles**

Avoids costly job-site labor.

**Factory Applied Stops**

More job-site labor saved.

**Machined-in Finger-groove**

Eliminates cost of hardware lift and installation.

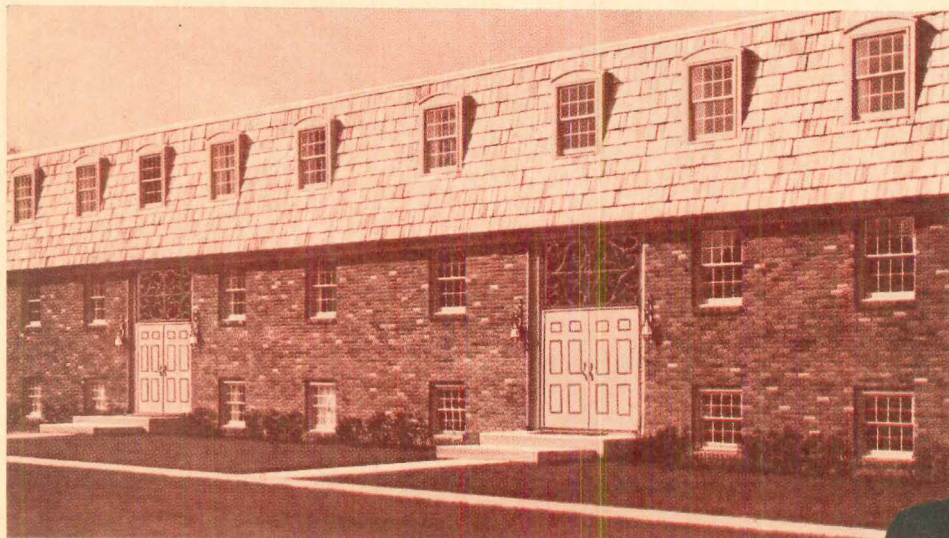
**Built-in Jamb Adjusters**

Speed installation and assure superior operation.

**Stainless Steel Jamb Strips**

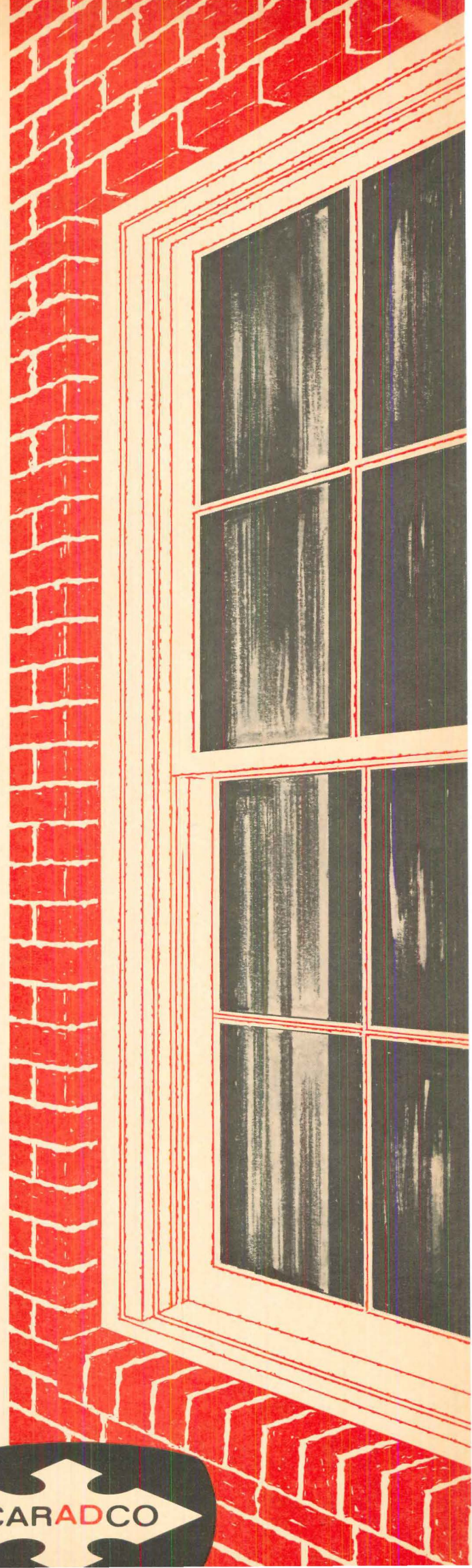
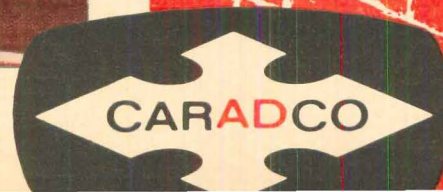
Resist accidental damage, give long-lived, trouble-free service.

**ALL OF THIS AT TRULY  
COMPETITIVE PRICES!**



**CARADCO Inc.** Dubuque, Iowa

Manufacturers of Creative Building Products



# Housing executives: tight money hurt first half net but worst may be over

The flow of mid-year earnings statements by housing's public companies reflected the impact of the mortgage money drought on 1966 operations. But a scattering of housing executives now look for a break in the money shortage.

Among the optimists was Allen Edwards, who said, "So far tight money hasn't hurt and we don't expect it to last too long." His Edwards Industries of Portland, Ore., a diversified homebuilder, boosted profits 33% in the March 1966 year on a 23% rise in income to \$5,350,000.

Presidents of the nation's two largest private insurers of home mortgages expect more mortgage money soon. "We already see indications there will be a growth in funds available for mortgage lending during the next six months," said President Max Karl in reporting a 45% jump in net to \$1.8 million for his Mortgage Guaranty Insurance Co., Milwaukee. President Bruce Thomas of Continental Mortgage Insurance Co., Madison, Wis., agreed, saying "the eye of the storm has probably passed." CMI profit rose 41% to \$140,000.

Tight money had no discernible effect at American Realty & Petroleum, New York City-based merchant of Southwest land. AMREP doubled profits to 1.2 million on a 33% gain in revenue to \$7.6 million.

**Dissenters.** However, National Homes Chairman James R. Price said he expects "the full impact of the tightness of mort-

gage money will be felt by the housing industry during the second half." National's profit plummeted from \$834,000 to \$5,000 in the June quarter, and the nation's biggest prefabricator posted a \$385,000 loss for the first six months.

A weak realty market, rather than tight money, hurt First National Realty & Construction, of New York City. The Company lost \$1,755,594 on sales of properties, and this caused a \$1,469,000 loss before depreciation in the March 1966 year.

Most savings and loan holding companies reported profits down sharply on slightly higher revenues. Any government action to aid housing "will not be felt during the balance of 1966," said President John J. Peters of California Financial Corp. Results through June:

Company	Revenue	% change	Earnings	% change
American S&L	\$3,431	+22	\$357	-5
Calif. Fin.	8,776	+4	625	-37
Equitable S&L	8,049	+18	934	+11
Far West Fin.	10,464	-8	39	-67
Fin. Corp. Santa Barb.	5,196	+7	521	+5
Fin. Fed.	35,344	+2	899a	-74
First Charter Fin.	63,748	+5	7,846	-23
First Linc. Fin.	13,622	+4	539	-72
First West. Fin.	7,989	b	(653)	b
Gibraltar Fin.	14,058	+11	1,185	-32
Great West. Fin.	51,360	+3	3,628	-53
Hawthorne Fin.	2,776	+6	538	+4
Imperial Corp. of Amer.	30,147	+5	3,259	-7
Lytton Fin.	24,181	+3	(84)	c
United Fin. Calif.	11,696	NC	661	-32

a—Special non recurring credit of \$391,734 not included.  
b—No comparisons because of change in accounting procedure. c—Compared to profit of \$2,252,672 in 1965. NC—Less than 1%.



DEVELOPER FROUGE gets on with the job.

## A new town gets started, but has to fight off new charges

Builder Thomas Frouge had to overcome bitter zoning hearings, doctored photos (News, Sept. '65), and a referendum petition before bulldozers began work in late June on his new town of Marinello, north of San Francisco's Golden Gate Bridge.

But the bulldozers sputtered a bit last month when columnists Drew Pearson and Jack Anderson alleged Frouge had enlisted Sen. Thomas Dodd (D., Conn.) to press Marinello's cause upon government higher-ups like California Gov. Edmund Brown and Interior Sec. Stewart Udall. A Senate committee is already looking into Dodd's activities.

But Frouge protested he merely was calling upon his home-state senator, (Frouge Corp. is based in Bridgeport, Conn.) who was also a personal friend and former lawyer. The bulldozers kept churning.

## Wall Street knocks down housing stock prices again

Housing stock prices sank in August for the fourth consecutive month. HOUSE & HOME's average of 73 operating companies fell 4.6% to a new low for the year of 6.22. Only 13 of 94 listed issues showed gains.

The decline continued an investor disinterest in housing stocks that has been unabated virtually all year. The index of these 73 stocks is now 24.6% lower than the 8.25 reading in mid-January. During that same span the Dow-Jones Industrial Average has dropped only 15%.

Homebuilding companies have best withstood the battering, showing only a 9% loss for the year. Levitt & Sons, Presidential Realty and Kaufman & Broad are all above their January levels. But last month only Jim Walter Corp. managed a gain in this category, rising 7/8 to 19 on an \$8 million sales gain.

The averages:

	June 13	July 11	Aug. 9
Building	5.15	5.45	5.33
Prefabrication	2.48	2.34	2.17
S&Ls	7.67	7.20	6.83
Mortgage banking	11.20	10.35	10.04
Land development	6.94	6.47	6.04
Average	6.83	6.52	6.22

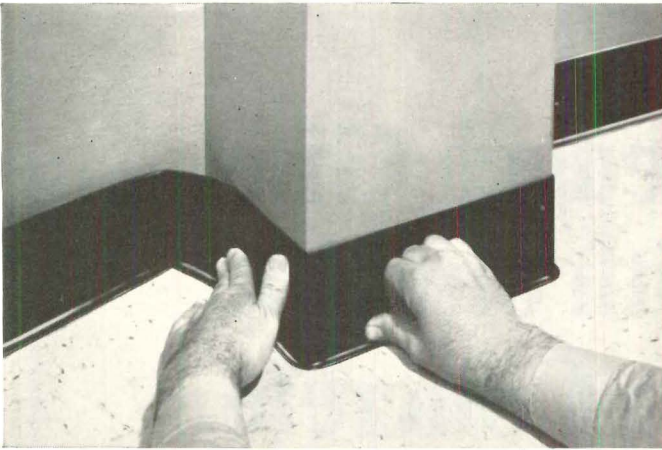
## HOUSING'S STOCK PRICES

COMPANY	Aug. 8 Bid/Close	Chng. Prev. Mon.	COMPANY	Aug. 8 Bid/Close	Chng. Prev. Mon.	
<b>BUILDING</b>			<b>BUILDING</b>			
• Adler-Built Inc.	3/8	+ 1/8	Canaveral Intl. <sup>b</sup>	4	- 1/8	
• Capital Bld. Ind.	55¢	- 1¢	Christiana O. <sup>b</sup>	33/8	- 1/4	
Cons Bldg. (Can.)	1	-35¢	Coral Ridge Prop.	45/8	- 7/8	
• Dev. Corp. Amer.	5/8	- 1/4	Cousins Proprs.	141/4	- 3/4	
Edwards Inds.	13/8	.....	Crawford	23/4	+ 1/4	
Eichler Corp. <sup>b</sup>	3	.....	Deltona Corp. <sup>b</sup>	107/8	- 5/8	
• First Hartford Rty	57/8	- 1/4	• Disc Inc.	21/8	- 1/8	
First Nat. Rty. <sup>b</sup>	11/8	+ 1/8	Fla. Palm-Aire	17/8	- 1/4	
• Frouge	41/4	.....	Forest City Ent. <sup>b</sup>	41/2	- 1/4	
General Bldrs. <sup>b</sup>	2	- 1/8	Garden Land	43/4	+ 1/2	
Kaufman & Bd. <sup>b</sup>	123/4	- 11/4	Gen. Devel <sup>b</sup>	53/8	- 7/8	
Levitt <sup>b</sup>	105/8	- 21/8	Gulf American <sup>b</sup>	91/8	- 15/8	
Lou Lesser Ent. <sup>b</sup>	33/4	.....	Holly Corp. <sup>b</sup>	113/8	+ 1/8	
Lusk	5¢	.....	Horizon Land	33/4	- 1/2	
• Nationwide Homes.	11/4	- 1/2	Laguna Nig.	2.90	-35¢	
Pres. Real. A. <sup>b</sup>	101/4 <sup>d</sup>	- 1/2	Lake Arrowhead	5	+ 1/2	
• Sproul Homes	11/8	- 1/8	• Macco Rty.	121/4	+ 11/2	
U.S. Home & Dev.	7/8	- 1/8	• Major Rty.	25¢	-10¢	
Jim Walter <sup>c</sup>	19	+ 7/8	• McCulloch Oil <sup>b</sup>	9	- 3/8	
Del. E. Webb <sup>c</sup>	31/2	- 3/8	Son. Rty. & Util. <sup>b</sup>	27/8	- 3/8	
			Sunasco <sup>c</sup>	161/4	-21/4	
<b>PREFABRICATION</b>			<b>MORTGAGE BANKING</b>			
Admiral Homes	1/2	- 1/4	Advance	53/4	- 7/8	
Albee Homes	1	.....	• Amer. Mort. Ins.	53/4	k	
• Continental Homes	3	- 1/8	Associated Mtg.	51/4	- 1	
Gt. Lakes Homes	1	.....	Charter	25/8	+ 3/8	
Inland Homes <sup>b</sup>	33/4 <sup>d</sup>	- 3/4	Colwell	8	- 1/2	
Modern Homes	27/8	- 1/2	Cont. Mtg. Inv. <sup>c</sup>	227/8	- 1/2	
Natl. Homes A. <sup>g</sup>	3	- 1/8	• Cont. Mtg. Ins.	41/8	- 1/2	
• Scholz Homes	31/8	- 7/8	• FNMA	711/4	- 1/4	
• Seaboard Homes	11/8	- 1/8	First Mtg. Inv.	141/2	+ 13/4	
Steel Crest Homes	31/4	- 3/4	• Kissell Mtg. <sup>b</sup>	33/8 <sup>c</sup>	- 3/4	
Swift Industries	2	.....	Lomas & Net. Fin. <sup>p</sup>	31/8	- 1/8	
			MGIC <sup>b</sup>	227/8	- 15/8	
			• Mortg. Assoc.	31/2	- 3/4	
			• Palomar Mtg.	21/8	.....	
			• Southeast Mtg. Inv.	87/8	+ 11/8	
			United Imp. & Inv. <sup>b</sup>	31/4	- 1/4	
			<b>LAND DEVELOPMENT</b>			
			All-State Prop.	26¢	.....	
			• American Land	7/8	- 1/8	
			Am. Rty. & Pet. <sup>b</sup>	31/2	- 3/8	
			Arvida	65/8	- 3/8	
			Atlantic Imp.	19	+ 13/4	
			<b>SHORT-TERM BUSINESS LOAN RATES</b>			
			Percent interest and (net change) in year			
			<b>LOAN SIZE</b>	<b>New York City</b>	<b>7 other Northern &amp; Eastern cities</b>	<b>11 Southern &amp; Western cities</b>
			\$1-10	6.14 (+.52)	6.32 (+.44)	6.52 (+.52)
			\$10-100	6.11 (+.72)	6.35 (+.77)	6.28 (+.57)
			\$100-200	5.87 (+.80)	6.08 (+.76)	6.08 (+.66)
			\$200 and over	5.57 (+.95)	5.74 (+.89)	5.84 (+.78)

S&Ls

American Fin.	133/4	- 1
Calif. Fin. <sup>c</sup>	4	.....
Empire Fin.	43/4	- 1/8
Equitable S&L	131/8	- 1/8
Far West Fin. <sup>c</sup>	53/4	- 3/4
Fin. Fed. <sup>c</sup>	111/2	- 13/4
First Char. Fin. <sup>c</sup>	115/8	- 7/8
First Fin. West.	41/4	.....
First Lincoln Fin.	61/8	- 1/4
First Surety	33/8	+ 1/2

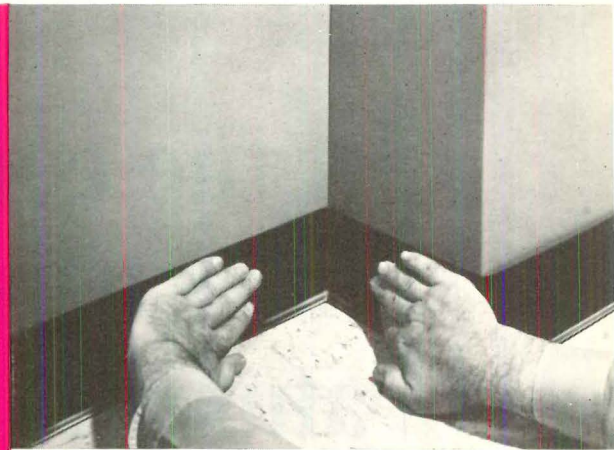
Source: Federal Reserve Board, June 1966.



**1.** Forming corners right on the job with KenCove eliminates unsightly corner seams.

# KENCOVE

FULL-THICKNESS  
VINYL  
WALL BASE



**2.**  $\frac{1}{8}$ " thickness of KenCove Vinyl Wall Base hides wall irregularities ... for a better-looking job.

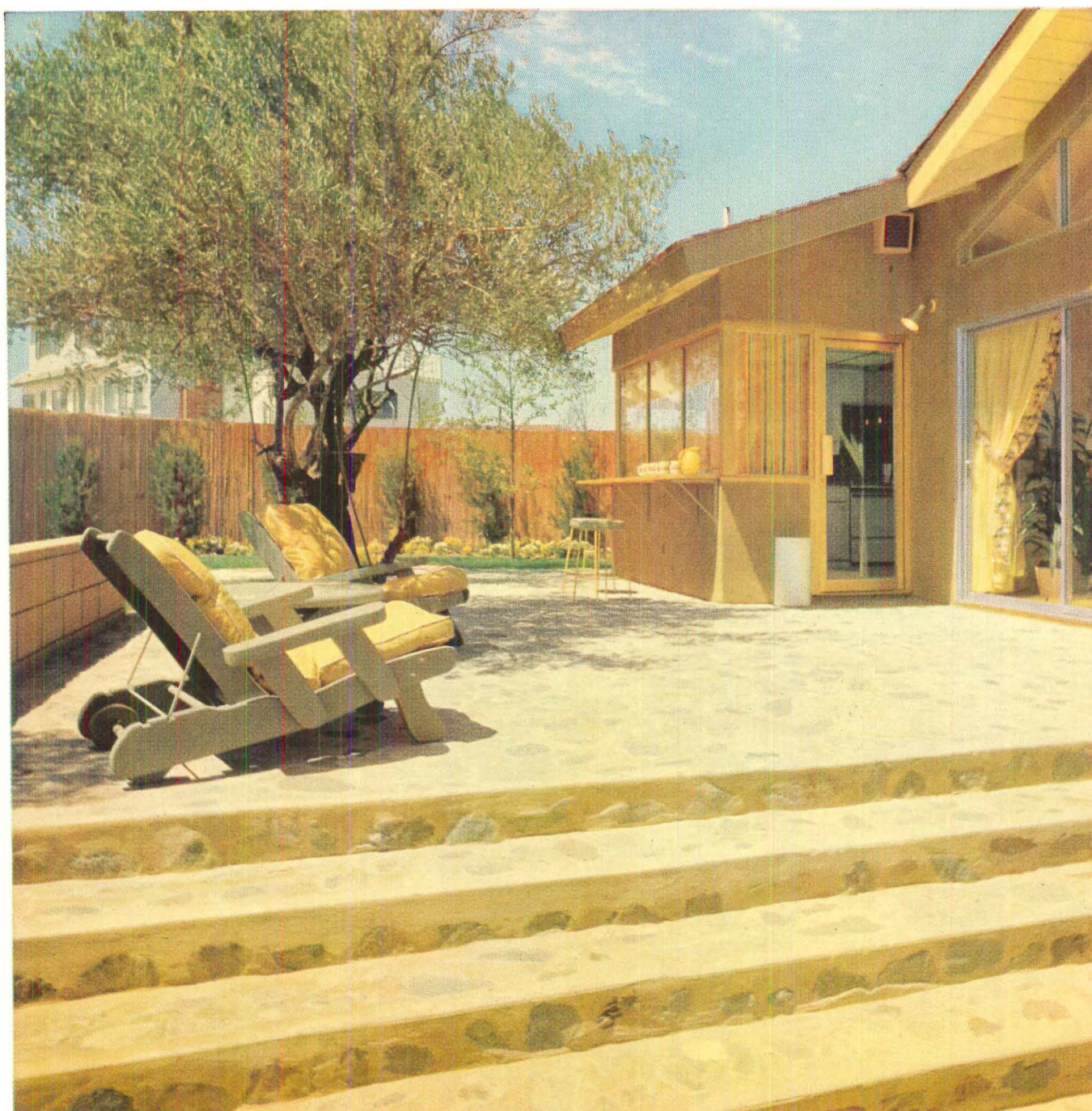


**3.** No accidental kicking off of corners, because base and corners are one piece. KenCove Vinyl Wall Base colors: 10. Heights: 2½", 4", 6". Length: 48".

**KENTILE**  
**FLOORS**

KenCove® Vinyl Wall Base adds quality to any resilient floor. KenCove's accurate cut and uniform shading assure ends that meet together perfectly, quickly. No unsightly seams at corners either, because corners are easily formed right on the job ... are part of the base itself, not separate pieces. No shrinkage problem. And  $\frac{1}{8}$ " thickness hides possible wall irregularities.

# Get the competitive edge! Give homes new appeal with outdoor features in Decorative Concrete



**New-style patios—put colors, textures and patterns to work for you.** Here, the builder offers not simply a patio, but a beautifully integrated extension of the home for outdoor living. Appropriate atmosphere is created with a concrete patio surface patterned by partly-buried rocks in muted colors. Yet

the floor-level patio relates effectively to both living room and kitchen. An open planter saves an existing, and handsome, tree. Decorative concrete won the builder credit for being different. Concrete's versatility is so broad that it permits decorative effects at any materials-labor cost level.

Buyers today want more distinctiveness in their home setting. This trend offers progressive builders a selling opportunity that can be exploited to the fullest with decorative concrete—in driveways, patios, walks, pools and other outdoor features.

Concrete can be shaped, patterned, colored, textured almost endlessly. It permits “decorator” effects to fit practically any home, any builder’s budget.

Decorative concrete turns outdoor installations into sales “features.” It’s worth looking into. For more information, ask your ready mix or concrete masonry suppliers, or simply contact the PCA office nearest you. *Portland Cement Association, 33 W. Grand Ave., Chicago, Ill. 60610. (An organization of cement manufacturers to improve and extend the uses of portland cement and concrete.)*



**Driveways with a difference—double as entry walk and play area.** This colorful driveway provides drama for the total landscaping theme. Beige Mexican beach pebbles are exposed, treated with a concrete sealer to bring out color and sheen. Stained dividers form irregular modular units to bring driveway into scale. Such decorative effects with concrete, today, are unlimited. And even measured solely by the special buyer appeal that’s added, the extra investment is reasonable.

**Fresh-flair stairs—concrete shapes up to unusual ideas.** A decorative treatment in concrete like this can make a big difference in luring house shoppers through the front door. The idea: use oversize precast discs surfaced in exposed aggregate and set on standard curved units of concrete masonry. Of course, surface treatment, color, shape, size can be fitted to your home style and site. Decorative concrete puts your money where it shows—right where buyers like to put theirs, too!



**Decorator entry walks—with stones and a simple design.** What could have been ordinary is here made strikingly different with decorative concrete. Exposed aggregate surfacing and black, brushed concrete are used in a pattern of alternating wedges that is repeated by the stairs. A fine design idea carried to full effect by bold exposure of black San Quentin pebbles on both treads and risers. Imaginative use of decorative concrete can make any home look “more for the money.”

# SWINGING NEW IDEAS BY KWIKSET

# EVERYTHING'S COMING UP ROSETTES

## MUSIC TO DECORATE DOORWAYS BY

Doorways can be easily decorated with a wide selection of handsome Kwikset trim rosettes fashioned to enhance traditional, provincial or contemporary architecture.

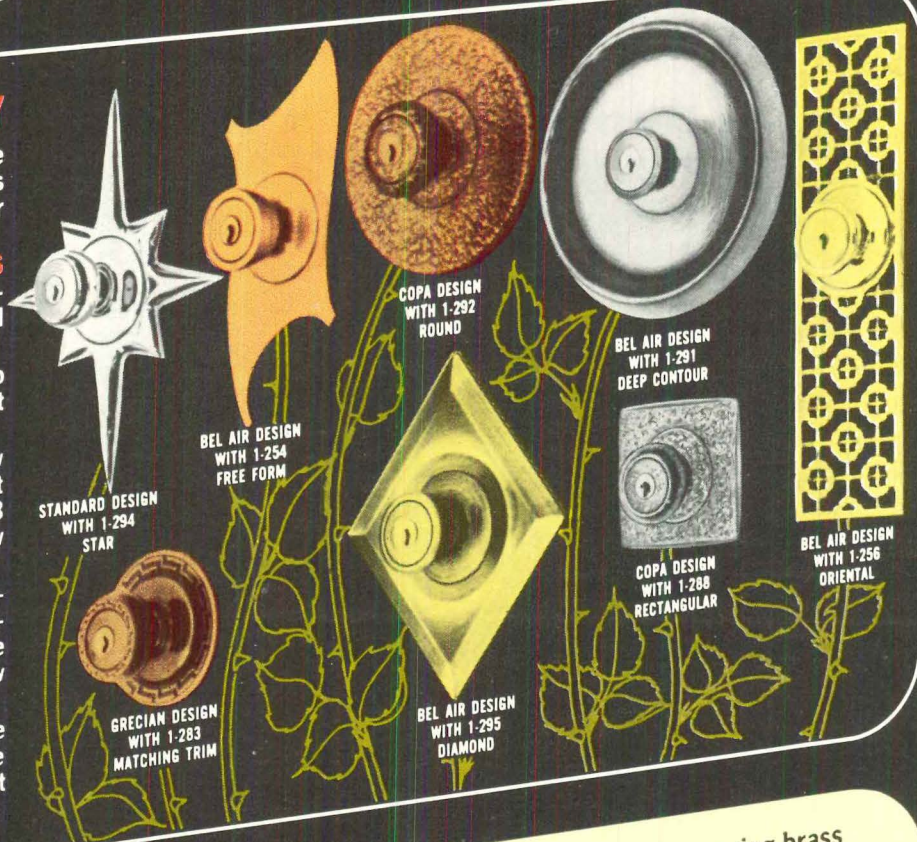
★ **WHAT A DIFFERENCE A ROSETTE MAKES** (Kwikset knob designs look great by themselves but many times greater when accented with a dramatic trim rosette.)

★ **ROOM FULL OF ROSETTES** (It's a sight to behold to see doorways dressed throughout the house with Kwikset trim rosettes.)

★ **THE YELLOW ROSETTE OF KWIKSET** (Yellow or brass is the most popular finish but Kwikset trim rosettes come in a luxurious line-up of 13 other fashionable finishes including the new etched and antique.)

★ **ROSETTE OF WASHINGTON SQUARE** (Kwikset trim rosettes set the tune for every doorway in Washington Square... or anywhere else. They're the easy way to decorate for new or old homes.)

★ **ONLY A ROSETTE** (Maybe so, but install one behind any Kwikset "400" or Custom Line lockset and see what a distinctively different appearance is created.)



STANDARD DESIGN WITH 1-294 STAR

BEL AIR DESIGN WITH 1-254 FREE FORM

COPA DESIGN WITH 1-292 ROUND

BEL AIR DESIGN WITH 1-291 DEEP CONTOUR

GRECIAN DESIGN WITH 1-283 MATCHING TRIM

BEL AIR DESIGN WITH 1-295 DIAMOND

COPA DESIGN WITH 1-288 RECTANGULAR

BEL AIR DESIGN WITH 1-256 ORIENTAL

There is no easier, more inexpensive way to add a touch of elegance to doorways than with a Kwikset trim rosette. Kwikset trim rosettes have been smartly styled by leading designers to create that important first impression that will last. They are available in all shapes and sizes from delicate filigrees, sleek stars, captivating contours, graceful circles... some massive and bold, others compact and

unobtrusive. You can choose from a gleaming brass with the brilliance that a jeweler would be proud to display, or one of the newest antique or etched finishes for something dramatically different in doorway decor. They're permanently protected with Kwikset's famous plastic coating for lasting beauty. Whatever the style, decorative trim rosettes play much prettier with the Kwikset label. (A long selling record.)

**kwikset**  **locksets**

America's Largest Selling Residential Locksets

KWIKSET SALES AND SERVICE COMPANY A SUBSIDIARY OF EMHART CORPORATION ANAHEIM, CALIFORNIA



SWING ALONG WITH KWIKSET'S RECORD YEAR!



John Young, Dallas News



**PARTNERS POST (L.) AND ANDERSON**  
From plush houses to plush hotels

## Hal Anderson teams with millionaire to chase jet-set tourist dollars

Two Texans, financial giant **Troy V. Post** and apartment builder **Hal Anderson**, have joined forces in a bid to capture a fat slice of the luxury tourism market in the Western Hemisphere.

Their new Dallas venture, Intercontinental Realty Corp., is aiming at the heavy-spending international jet set. The ambitious enterprise, owned 60% by Post and 40% by Anderson, is ready to announce its first major project, a huge, plush resort hotel in one of the favored spas of the well-dollared impulse travelers. Anderson, IRC president, isn't saying where the million-sq.-ft. hotel will be built, but Acapulco is an educated guess.

Post is president and chairman of Greatamerica Corp. one of the nation's largest life insurance and financial management companies. It controls companies with assets of more than \$2.25 billion, including an airline, Braniff International.

Braniff is the only U. S. carrier to serve Mexico's Acapulco with 12 flights a week, which suggests a mutuality of interests. And the Civil Aeronautics Board has approved a proposed \$30 million purchase by Braniff of Panagra, its competitor on the west coast of South America.

The new company, of which Post is chairman, absorbed Hal Anderson Properties, a solely-owned firm, and several subsidiaries. Included in the transaction were all of Anderson's apartment properties—some 1,500 units—and much undeveloped land. Anderson shied from putting a price tag on property he contributed but called an estimate of \$60 to \$75 million "remarkably accurate."

Major apartment projects owned by Anderson were the famed "behind the pink wall" properties in Dallas which included town houses and high-rises, the 30-story Preston Tower,

and the 20-story Athena to be completed late this year.

"The partnership with Mr. Post has at least quadrupled the capability of our firm," Anderson asserts. Anderson's organization of about 100 includes from 25 to 30 architects, engineers and technicians.

Post, born 61 years ago on a farm near Haskell, Tex., amassed his fortune in insurance and banking. Yet he remained almost unknown, even in Dallas, until about five years ago.

Anderson, no stranger to publicity, built one home with a bathtub lined with Italian tile, trimmed with gold leaf, and filled through a gold-plated gargoyle faucet. Another dwelling boasted an air-conditioned doghouse and a third flaunted a television set in a bedroom ceiling.

A fourth generation Texan, Anderson is a 47-year-old civil engineer who built airfields, military installations, and some industrial facilities after World War II. He turned to the residential field in 1947 and since 1954, has built no houses under \$100,000.

To protect his housing ideas from prying competitive eyes, Anderson blankets them in secrecy. His \$100,000 homes were always locked and the windows painted during construction.

**OFFICIALS: Morton J. Schussheim**, one of the original team assembled by **Robert C. Weaver** when he became the top federal housing official in 1961, has shifted to professor of city planning at the University of Pennsylvania.

**Jason R. Nathan** is new renewal commissioner of New York City, a post created by Mayor **John Lindsay's** reorganization.

**Charles L. Farris** has quit after 12 years at the helm of St. Louis's housing and renewal program to become president of Urban Planning Corp., also in St. Louis.

NEWS continued on p. 26

# DREAMS COME TRUE with Garlinghouse

Your dreams for a new home of your own can come true. Let Garlinghouse, America's Finest Home Plan Service help you find your dream house. Each Garlinghouse home is beautifully designed and skillfully engineered to make the perfect blend of charm and efficiency.

Each of the plan books below has at least 120 designs from which to choose your dream home. Blueprints and material lists can be ordered at reasonable prices.

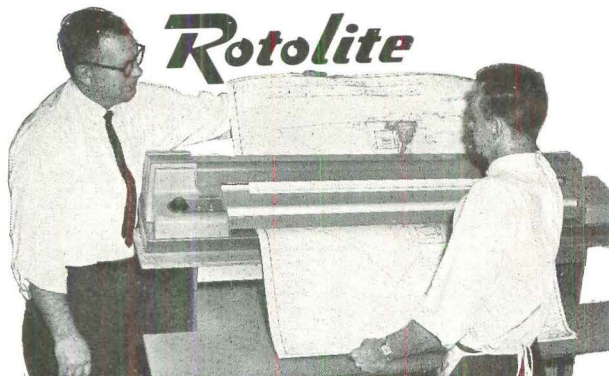
Cut out this ad, check the Plan Books you desire, attach your check or money order and mail it today.

- ALL NEW HOMES—120 of our latest designs in all styles, each in full color—\$1.00
- HOMES IN BRICK—120 contemporary, traditional and ranch designs in brick, stone and masonry ----- \$1.00
- TRADITIONAL HOMES—Very fine selection, incl. Cape Cod, Colonial, Provincial, New England and many others----- \$1.00
- RANCH and SUBURBAN—Over 120 ranch-type designs—the very latest in conventional and contemporary ----- 50¢
- INCOME PROPERTY and RETIREMENT HOMES—Over 125 designs for duplex, multiple units, residential income property and small retirement-type homes ----- 50¢
- DELUXE SMALL HOMES—Our largest selection of small modern homes—2 and 3 bedrooms ----- 50¢
- LAKESHORE and MOUNTAIN COTTAGES—Designs suitable for year around homes or summer use only ----- 50¢
- All seven books above — if you buy them all — SPECIAL ----- \$4.00
- Complete library of 16 books-----\$8.00

*Garlinghouse* Name \_\_\_\_\_

DEPT. HH 96      BOX 299      Address \_\_\_\_\_  
TOPEKA, KANSAS  
66601

Amount Enclosed \$ \_\_\_\_\_ City/State \_\_\_\_\_ Zip \_\_\_\_\_



## SAVED \$170.28 on One Copying Job . . .

Gerald Heullitt, architect in Pompton Lakes, N. J. required 750 prints for a set of plans. Sheets were 24" x 36". Using the Rotolite Diazo-Jet, his direct costs were as follows:

3 packs paper -----	\$62.16
12 hrs. labor @ \$2.63 -----	31.56
Ammonia -----	1.00
Electricity -----	1.00

Total cost ----- \$99.72

If sent outside at 6¢ per sq. ft. the job would cost \$270.  
Summary: Cost if done by an outside shop -- \$270.00  
Cost in his own shop ----- 99.72  
Savings on this one job ----- \$170.28

Three jobs like this and he has almost saved the cost of his Diazo-Jet.  
He also uses the Rotolite for all his office forms such as job sheets, applications, time sheets, certificates, etc.

Four years ago he started with an Economy Model Rotolite. During that time he tried other machines but they did not meet his standards for speed or ruggedness.

Prices start at \$129.50.

## WRITE FOR FREE CATALOG and PRICES OF 7 MODELS

ROTOLITE SALES CORP., 328 Essex St., Stirling, N. J.



Andersen Windows can save you even more in a condominium than they do in a cottage.

(And you might be surprised to know why)



One reason shouldn't be surprising at all: the more window openings you have, the greater the chance for costly, time-wasting callbacks.

And the higher the "callback potential," the more reason for using windows that are designed to keep you off the premises.

Like Andersen Windows that promise freedom from binding. From sticking. That are pre-assembled for lifetime **smooth, trouble-free operation.**

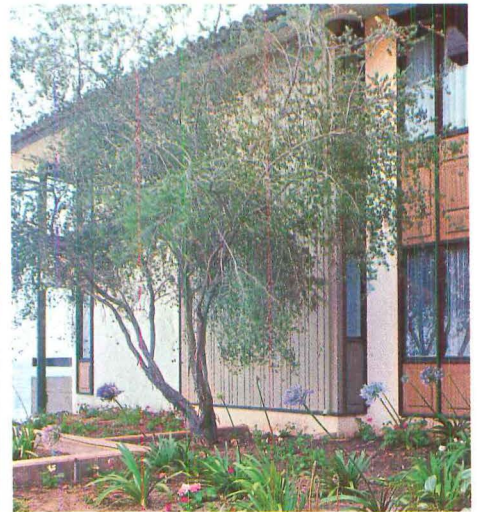
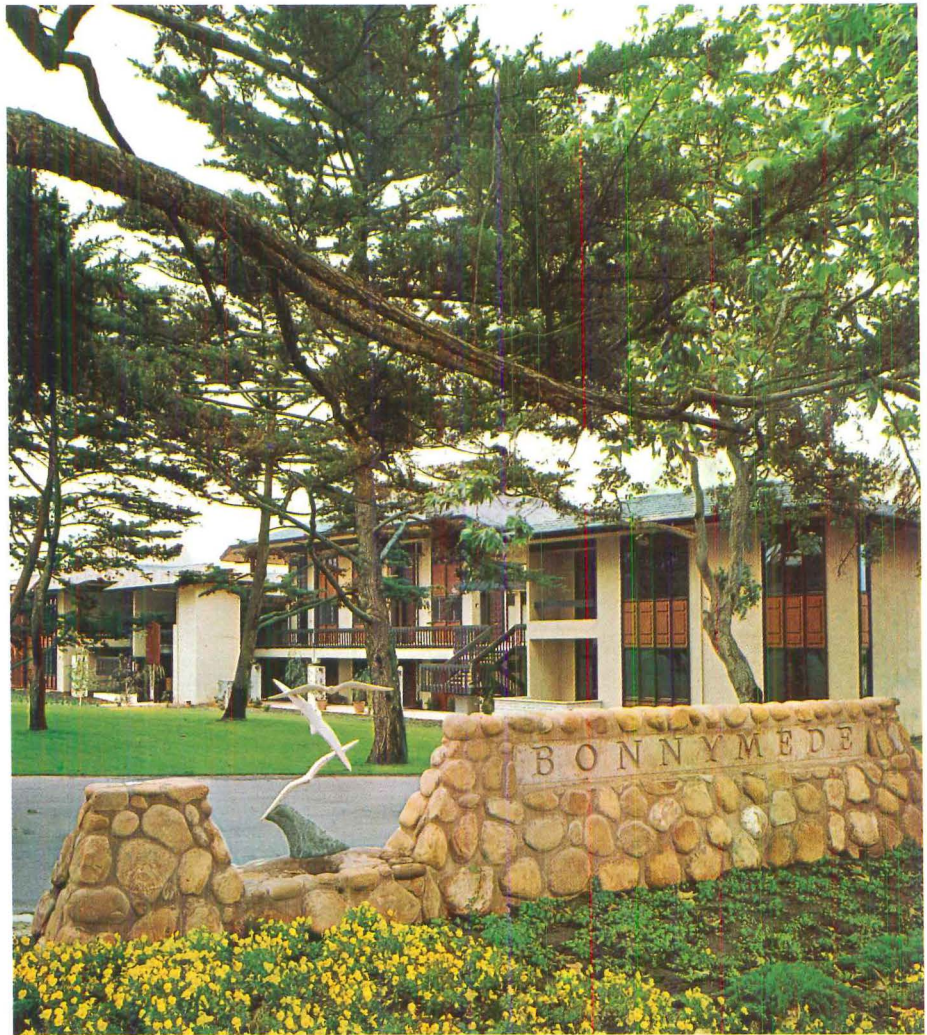
Windows so well built that Andersen can stand behind their performance with the **industry's only comprehensive service policy . . .** the only staff of field-based window specialists ready to help you with any major application problems.

Of course, builders who use Andersen Windows know about other advantages. Like **easier, faster installation** using their regular crew (no window specialists needed). Or selling points like 15% fuel savings. Or **customer-pleasing convenience features** like welded insulating glass or removable grilles. And many more.

And now, there's a **completely new** Andersen Window line for you to choose from . . . new Perma-Shield™ Windows and Gliding Doors. They combine the insulating value of wood and the lifetime maintenance savings of a rigid vinyl shield. Their armor-like finish **won't pit nor corrode.** They don't need painting. Nor scraping. Nor rubbing down. Wood and vinyl work together to minimize heat loss, control condensation and sweating. And they come in a full range of styles and sizes.

How about it? Why don't you consider Andersen Windows for your next job? Your Andersen dealer or distributor can show you the full line, and give you the complete savings story. **Call him today.** Andersen Corporation, Bayport, Minnesota 55003.

**Andersen**   
**Windowalls™**  
*Window Beauty is Andersen*



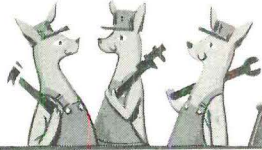
Bonnymede at Montecito, California, represents condominium-style living at its finest. Windows: Andersen Gliders and Casements in several sizes.

Printed in U.S.A.

## Get extra manpower without hiring extra men!

Good men hard to find? Add the extra workpower of a READING Utility Body to your operations. READING's job-planned compartments keep tools and parts easy to find, eliminate the hours your men lose every day rummaging through equipment haphazardly piled in

pickup and panel trucks. Contractors using READING Bodies report increases in man-hour output equal to up to \$750 to \$1500 per yr. per truck. They more than pay for themselves!



Don't  
Pile it...  
FILE It in a

## Reading Job-Planned Utility Body

Made by master mechanics for master mechanics. See your local truck dealer... or for name of local distributor send this advertisement with your name and address.

READING BODY WORKS, INC., Dept. H-96 420 Gregg Avenue, Reading, Penna.

Circle 40 on Reader Service Card



SPECIAL  
OFFER!

MUTOH  
DRAFTER

popular  
NM 24" model

~~\$116.00~~

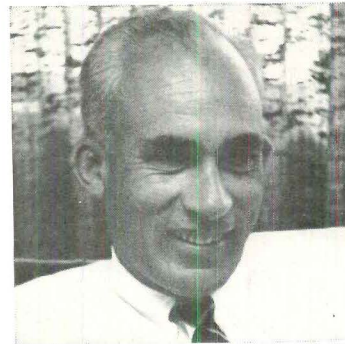
\$99.00

*Designed* with exclusive "swing-free" hinge clamp; super-sensitive Disk Brake; Dual Action Index Control and other unique features. *Built* to provide rugged dependability... unexcelled precision. *Backed* by a two-year unconditional guarantee against defects in parts or workmanship.

30" model also available... Write TODAY for complete information, specify Bulletin 1511-J110, Consul & Mutoh, Ltd., 518-26 Davis Street, Evanston, Illinois 60201.

**MUTOH** ... world leader in  
precision drafting machines.

Circle 41 on Reader Service Card



OCCIDENTAL's BEN DEANE  
"The fruition of all our efforts"



OCCIDENTAL's JIM DEANE  
A production expert who helped

## West Coast housing giant emerges as Deane Bros. takes over Hunsaker

A two-way deal last month climaxed persistent talk in Los Angeles circles that Occidental Petroleum Co. was about to "do something" with S. V. Hunsaker Co., its homebuilding subsidiary.

The "something" was this: Occidental acquired Deane Bros. of Huntington Beach in an exchange of stock and then merged Hunsaker, acquired in 1964, into Deane Bros.

The net result made Ben Deane, a 53-year-old ex-carpenter who rode the post-war housing boom to success, and his brother Jim Deane the leaders of an organization that accounted for \$67 million in sales last year. Together they are operating in 16 southern California subdivisions and own 3,200 acres of undeveloped land.

Richard Hunsaker, last of the Hunsaker family with the company founded by his father, is resigning. Ben Deane has closed Hunsaker headquarters in Irwindale and is transferring key personnel to Huntington Beach.

Armand Hammer, Occidental president who has guided the oil producer into housing, said the merger brings Deane Bros' "experience and highly capable management abilities" into Occidental's real estate operations.

Occidental's reservations about Hunsaker operations have been apparent for months, provoked mainly by a flood of houses that Hunsaker was forced to repossess under terms of sales contracts and second trust deeds signed before Occidental acquired the company (and discontinued conditional sales contracts).

The repos came in such numbers—435 last year—that Hunsaker salesmen had to sell nearly four used houses for each ten new houses. Last year they moved 391 repos and 1,004 new houses, but still the inventory of repos grew by 44 houses to reach 179 houses at year-end.

Hunsaker lost \$1,679 on each resale. This, plus a decline in

new house sales, forced retrenchment last spring. S. V. Hunsaker Jr. left the company (NEWS, May). In June Dick Hunsaker said inventory of new and used houses was dropping and expressed confidence he could ride out the declining housing market.

But in late June Occidental began talks with Deane—first seeking a joint venture and then a merger. In five weeks the stock swap was signed.

"We are concerned with orderly growth," says President Ben Deane. "We will phase out some of the Hunsaker deals and expand as we feel the need to do so."

He points out that Occidental recently marketed \$60 million in debentures and says the capital available gives the combined company great staying power.

He regards the merger as "the fruition of all our efforts of the past few years."

Those efforts have been substantial. Ben, an Oakland native, became an apprentice carpenter while studying at the University of California at Berkeley. The war cut off graduation but took Ben to war construction in Canada and Alaska.

After the war Ben headed for the booming San Fernando Valley north of Los Angeles and built 12 houses in 1946. He has been growing since. In 1958, when production problems became too big for one man, he asked brother Jim, now 45, to leave the general managership of a furnace company and join him. Jim did. Last year Deane Bros. sold just over 1,000 houses valued at \$25 million in four tracts. An innovator, Ben Deane developed the copyrighted garden kitchen (H&H, May '65) and is constantly tinkering with new house layouts.

"Some new idea may look expensive at first," he says, "but you often find it is cheaper in actual production."

NEWS continued on p. 31

## Former NAHB leader Bill Blackfield quits building until money eases

Fred Schnell

Bill Blackfield has been forced to halt the homebuilding part of his operations by tight money.

"I'm out of the homebuilding business for the duration of the tight money situation," he told the *Honolulu Advertiser*. The 1964 NAHB president said he had been forced to lay off all but seven of his 240-man field force. He built 350 houses in 1965.

Other parts of his Blackfield Enterprises continue at full strength. They include his mortgage banking subsidiary (Realty Mortgage Co.), a mortgage trust (Western Mortgage Investors), and an airplane distributorship.

"Money isn't just tight; it's non-existent," said Blackfield. He pointed out that Hawaii, where his building operations are centered, imports about 75% of its mortgage money from the mainland. "But it's not coming here any more," he said. "It has dried



HONOLULU'S BLACKFIELD  
"Money isn't tight; it's non-existent"

up completely."

"Construction loans are very hard to obtain," agrees Vice President Howard Stephenson of the Bank of Hawaii. Housing permits are down 32% through July, and Stephenson notes, "Borrowers are being turned down on deals with firm takeout commitments."

## John Hall Pushes two-way expansion

John Hall, long one of Phoenix' largest volume builders, has picked both mergers and franchises to expand his operation.

His Hallcraft Homes last month moved into the big California market by merging with Ashton & Kies, a Phoenix building company with a San Diego branch. The reorganization under Hallcraft's name makes Ashton & Kies President J. R. Ashton the new executive vice president and general manager.

John Kies becomes a Hall-

craft vice president and general manager of San Diego operations, which include a 286-unit townhouse development and two other projects in planning.

Hall has also started franchising his townhouse concept, which has sold well in Phoenix and Denver. A Hall subsidiary, Data Core, has franchised a 1,600-unit Houston project to open in September. Data Core is negotiating similar projects in Dallas, New Orleans, Kansas City, Chicago, and Detroit.

## Earl Bennett to head Producers' Council

Earl F. Bennett, veteran executive of Koppers Co., Pittsburgh, has been nominated as president of the Producers' Council, national association of manufacturers of building products.

Election of Bennett and other officers is virtually certain late this month at the Council's annual meeting in New York City.

Bennett will succeed Charles F. Stock, marketing vice president for American Air Filter Co., Louisville.

Bennett, manager of architectural sales for Koppers, has also served as product manager of building sales.

He holds civil engineering degrees from the University of Maine and the Massachusetts Institute of Technology.

**BUILDERS:** Bill Brangham is

the new marketing vice president for Robert E. Simon's new town of Reston near Washington. He formerly headed sales for Ross Cortese's retirement complexes.

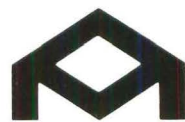
Pede Worth and David Stone have teamed up to become marketing consultants for homebuilders. Stone, author of *How to Operate a Real Estate Trade-in Program*, retains control of the San Jose, Calif. realty firm of Stone & Schulte, marketing adviser for 48 Bay Area subdivisions.

**DIED:** Douglas W. Orr, 74, champion of closer ties between architects and homebuilders during two terms (1947-49) as president of the American Institute of Architects, July 29 in New Haven, Conn.; Maurice G. Read, 60, homebuilder, mortgage banker, and 1965 president of the National Association of Real Estate Boards, July 29 in Berkeley, Calif.

# FMI has mortgage money

for Construction loans,  
Land development loans,  
financing Residential,  
Commercial &  
Industrial properties,

FMI has invested over \$250,000,000 through 150 mortgage correspondents in 43 states. If you need mortgage money, telephone the nearest regional office.



## First Mortgage Investors

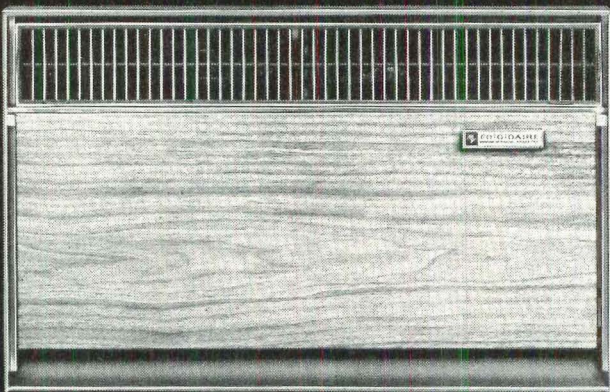
Regional offices of First Mortgage Advisory Corporation, investment advisors to FMI:  
825 Forty-First Street, Miami Beach, Florida—Phone 305 JE 2-7361  
120 La Salle West, South Bend, Indiana—Phone 219 232-1345  
612 Petroleum Club Bldg., Oklahoma City, Okla.—Phone 405 CE 6-3487  
27777 Silver Spur, Palos Verdes Peninsula, Calif.—Phone 213 377-6580  
2964 Peachtree Rd., N.W., Atlanta, Georgia—Phone 404 237-4000

# Trudy Baxter practices

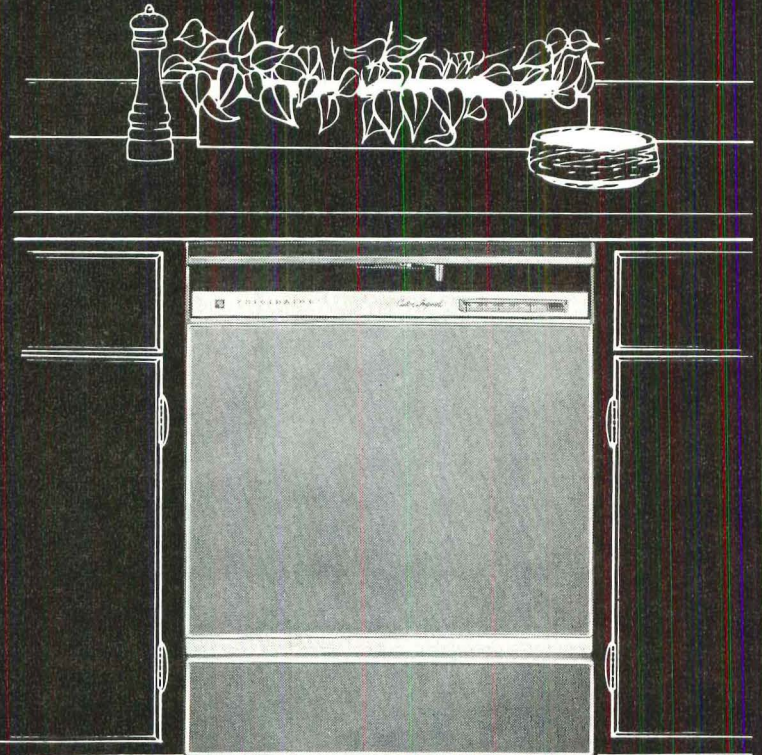


TODAY'S AFFLUENT HOME BUYERS WON'T SETTLE FOR JUST ANY APPLIANCE

# THEY WANT QUIETER HOMES



Through-the-wall Frigidaire Prestige Room Air Conditioner, Model AWP-12K.



Frigidaire Undercounter Dishwasher, Custom Imperial Model DW-CIUK.

## FRIGIDAIRE MEETS THE CHALLENGE

Today's home buyers are on the lookout for sound-conditioned homes. *Quiet* homes. Frigidaire recognized this trend in modern living by creating undercounter dishwashers and room air conditioners specifically engineered to keep sound way down.

The Frigidaire Custom Imperial Undercounter Dishwasher, for instance, operates with amazing quietness because of its special sound-deadening features. A homemaker can arrange a club meeting on the kitchen phone while her

Frigidaire Undercounter Dishwasher is running full force.

New Frigidaire Prestige Room Air Conditioners with Pin-Drop Quietness provide cool comfort without a lot of clatter in a bedroom, a rec room, the kitchen, or anywhere. The family works, plays and sleeps better. *This* is added value with a meaning.

Before you settle for just any appliances, look into appliances by the people who know and build for *today's* kitchen buyers. Frigidaire.

Want to tune in on the thoughts of today's buyers? Get the complete story of "The Home Buying Affluentials." Wire, phone, or write your Frigidaire District Office today.

Cater to the taste of the "Affluentials"  
with the plus of



**FRIGIDAIRE**  
APPLIANCES  
PRODUCT OF GENERAL ELECTRIC





INTERIOR DESIGNERS SAY:

# Today's style trend calls for Oak Floors



**HIMMEL**

"I like to use Oak Floors because of their adaptability to every color scheme and their easy maintenance." Richard Himmel, A.I.D., Chicago.



**CRAWFORD**

"Oak Floors are the ideal background for today's return to elegance in interior design. I can think of nothing more sophisticated than area rugs set off by highly polished hardwood floors." Kathryn Crawford, A.I.D., Los Angeles.



**SMITH**

"We use Oak Floors frequently, because they are so beautifully at home in any setting. Oak Floors give the decorator complete design freedom." Ving Smith, A.I.D., New York.

The "natural look" of beautiful exposed Oak Floors is a favored trend among today's top interior designers. Most of all, these decorators appreciate Oak's marvelous versatility, the charming way in which it complements any color scheme, any furniture style. Take advantage of this trend to good taste and good sense in floors. Use the floor that's both beautiful and practical, the floor that most people prefer . . . genuine Oak. For added value, use flooring certified to meet the quality standards of N.O.F.M.A.

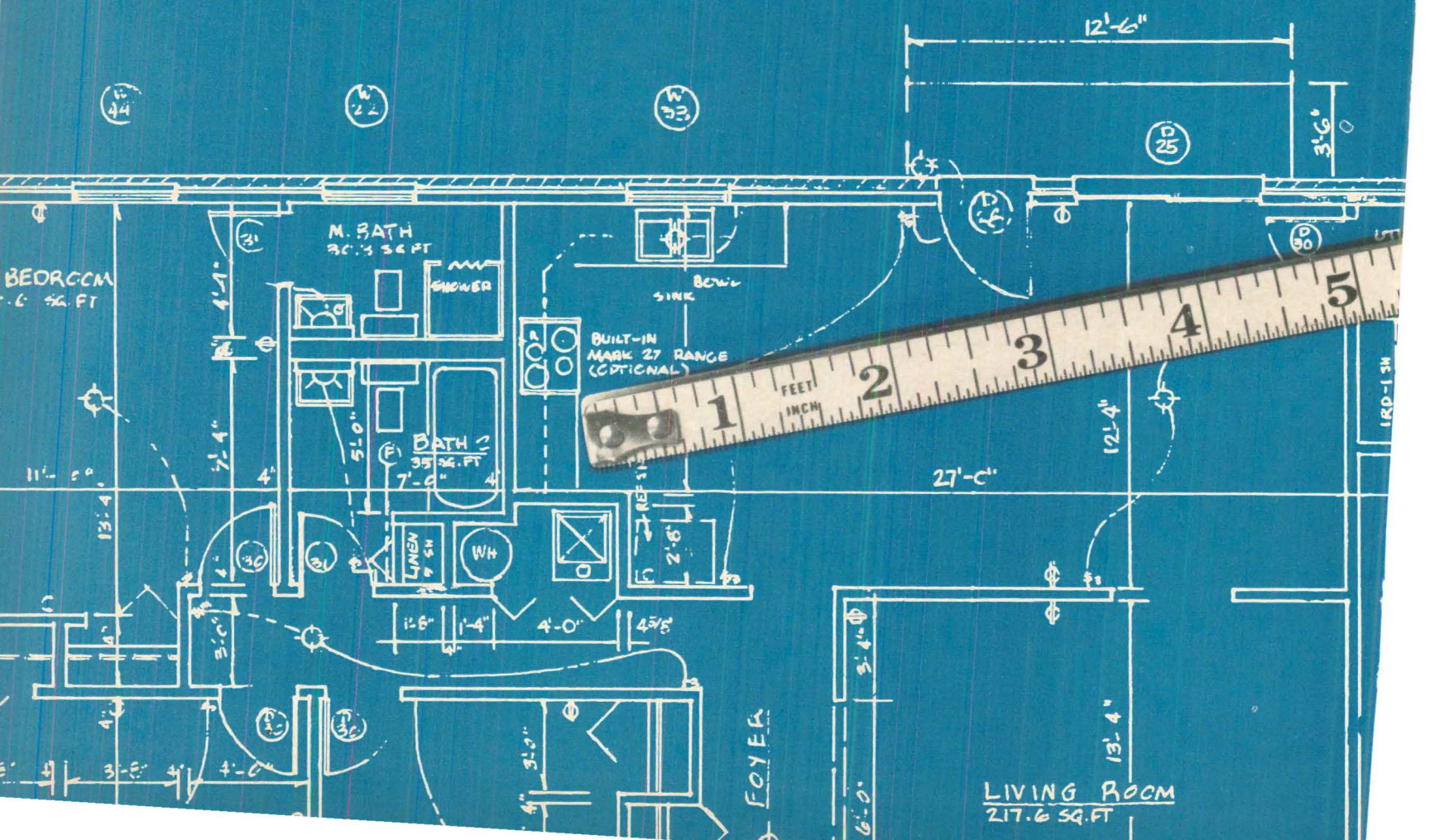
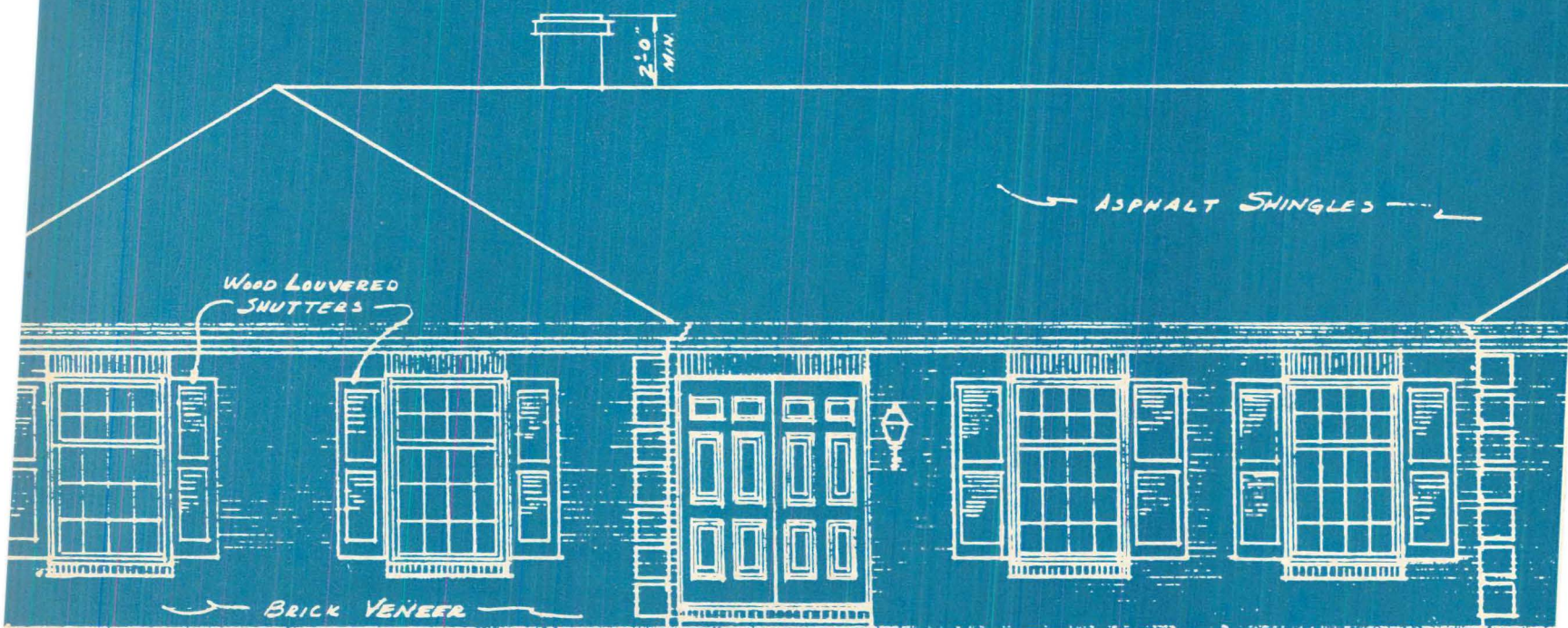


**N·O·F·M·A Oak Floors**

*Richer looking · Longer lasting · More comfortable*

National Oak Flooring Manufacturers' Association  
814 Sterick Building, Memphis, Tennessee 38103

# How to improve your chances start your building program.



# of making a profit before you

There are six big advantages to becoming a dealer for U. S. Steel Homes' products, and all of them have to do with improving the profit and efficiency of your operation. Check *your* present building operation to see if it measures up to these six advantages.

**1. A broad and flexible line.** A U. S. Steel Homes' dealer can build what his local market dictates from a broad line, multi-family housing to a wide range of single family homes, in a price range to fit the market. Complete plans, with accurate price and package descriptions, allow him to move rapidly from one type of housing into another with very little lost motion.

**2. Quality structural system and quality components.** Only U. S. Steel Homes' products have a steel structural system that adds greatly to their stability. The structural system is the basis for a component system of construction that is uniform throughout the product line. Regardless of the product he builds, the U. S. Steel Homes' dealer doesn't have to change his method of construction. U. S. Steel Homes' packages feature many other quality steel components: steel siding, gutters, downspouts, soffits, fascia, and doors, plus name brand kitchen appliances and heating systems.

**3. Lower labor costs.** U. S. Steel Homes' dealers save on labor costs because they need fewer skilled workmen and smaller crews to erect the product. The component system of construction makes possible maximum manpower efficiency with a minimum of training problems.

**4. Precise scheduling.** U. S. Steel Homes' in-plant manufacturing takes the guesswork out of a building schedule. A U. S. Steel Homes' dealer orders a shipment to arrive on a given day at a given time. The site is ready; his crew is ready. There are no costly delays. Closing in the structure is fast, too, with finishing time cut to a minimum.

**5. Close cost controls.** Costs can be accurately predetermined, so profit goals can be set and met. Speed of erection plus known package costs means faster capital turnover and less interest at a time when interest rates are increasing. Labor costs can be more accurately controlled, too, because there is less on-site labor.

**6. Collateral services.** U. S. Steel Homes' dealers get valuable assistance in financing, programming, advertising and marketing, and engineering.

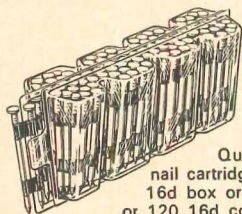
How does your present building operation check out? If it lacks any of these 6 elements, you can improve your chances for greater profit potential by writing or calling U. S. Steel Homes for more information. Do it today. United States Steel Homes, 2549 Charlestown Road, New Albany, Indiana 47150. USS is a registered trademark.



**United States Steel Homes**  
Division of

Announcing  
another major  
Paslode first!

# Drive 16d nails with one blow!



Quick loading  
nail cartridge holds 125  
16d box or sinker nails,  
or 120 16d common nails.

## New STALLION portable pneumatic nailing tool



■ Now the advantages of fast single-blow pneumatic nailing with a portable magazine-fed tool are available wherever 16d nails are used. Another Paslode first!

The Stallion saves time and effort, eliminates waste of nails, makes every nail count, with power to pull boards tight. You can drive 4,000 to 5,000 nails per hour, including reloading time. Write for price and where-to-buy information.



**PASLODE**  
COMPANY, DIVISION OF SIGNODE

8080 McCormick Blvd., Dept. HH Skokie, Illinois  
In Canada: Paslode Canada Reg'd, Scarborough, Ont.

Circle 52 on Reader Service Card

HOUSE & HOME presents locations, sponsors, architects and estimated costs of representative new projects costing over \$500,000 as gathered by ENGINEERING NEWS-RECORD and F. W. Dodge Co., division of McGraw-Hill Inc. to alert builders, lenders and contractors to new business.

**CALIFORNIA**—CANOGA PARK: 28 houses, \$506,500. Builder: Briarwood Homes, Beverly Hills. GRANADA HILLS: 48 houses, \$1,680,000. Builder: Alro Homes. Plans: Corwell, Fernandez & Barr, Monticello. LOS ANGELES: Apartments, \$600,000. Sponsor: Elliott Maltzman. Plans: Robert J. Coles; Apartments, \$3 million. Sponsor: Stabler Construction; Condominium apartments, \$750,000. Sponsor: Flagstaff Land Co., Venice. Plans: Richard D. Stoddard, Sherman Oaks. MALIBU: 176 houses, \$5.2 million. Builder: Oriole Construction, Camarillo. Plans: McBird & Crowder Assoc., Santa Ana, Calif. PACIFIC GROVES: Condominium apartment, \$700,000. Sponsor: Trojan Properties Los Altos. Plans: Garcia & Cole, Los Altos. SAN FRANCISCO: Housing for the elderly, \$1.3 million. Sponsor: Bethany Methodist Church, c/o Norris M. Gaddis, architect, Oakland. VENTURA: 81 houses, \$1.6 million. Builder: Pacesetter Homes, Newport Beach. Plans: Morris Lohrbach, Tustin, Cal.

**FLORIDA**—BOCA RATON: Apartment, \$1 million. Sponsor: Itevenus Development. Plans: Thomas Mitchell. HIALEAH: Apartments and stores, \$1 million. Sponsor: Lake Allison Corp., Miami Beach. HOLLYWOOD: 16 condominium apartments, \$2.1 million. Sponsor: Tallwood. Plans: John E. May, Hallandale. LAUDERDALE LAKES: Houses, \$3 million. Builder: Oakland Estates. Plans: Frank J. Rowland and Richard Mitchell. MIAMI: Apartment, \$1 million. Sponsor: Jerome Weinkle & Alan Kessler. Plans: Samuel M. Puder, South Miami; apartments and swimming pool, \$1.5 million. Sponsor: Silver Blue Lake Apartments. Plans: Jules P. Channing; Apartment, \$1 million. Sponsor: Martin Fine, Morris Burke, Robert Bookbinder. Plans: Pancoast, Ferendino, Grafton & Skeels; Apartment complex and shopping center, \$1 million. Sponsor: c/o Ferguson & Glasgow Assoc., Coral Gables. MIRAMAR: 50 houses, \$750,000. Builder: Miramar West. ORLANDO: Apartments, \$700,000. Sponsor: c/o Hill Stiggins. PALM BEACH: Condominium apartments and swimming pool, \$1 million. Sponsor: c/o George Baumgarten, architect. ST. PETERSBURG: Apartment for senior citizens, \$2.7 million. Sponsor: Presbyterian Towers. WEST PALM BEACH: Condominium apartment, \$600,000. Sponsor: Crest Haven Villas. Plans: Don & Josef Reiff Assoc.

**ILLINOIS**—CHICAGO: 165 houses, \$5 million. Builder: William J. Pulte Inc., North Brook. Plans: William D. Murphy & Assoc., Northfield; Apartment, \$4 million. Sponsor: c/o Dubin-Dubin-Black & Moutoussamy, architect; Apartment, \$2.3 million. Sponsor: c/o W.B. Cohan Corp., GLENVIEW: Houses and apartment building, \$650,000. Builder: North Shore Valley Development. Plans: Werner Assoc., Chicago. LAKE FOREST: 350 houses, \$35 million. Builder: Kennedy Development, Deerfield; Apartments, \$4 million. Sponsor: c/o Koerner Assoc., architect, Milwaukee, Wis. NORTHBROOK: Apartment, \$670,000. Sponsor: Cherry Lane Apartments, c/o Guy Fishman, architect. PEORIA: Apartment, \$800,000. Sponsor: Mitchell Maloof. RIVER FOREST: Condominium apartment, \$550,000. Sponsor: c/o Charles E. Petrungero, architect, Elmwood Park. VILLA PARKS Apartments, \$1.5 million. Sponsor: Kaufman & Broad Homes, Hillside. Plans: Jay Hondenvoogt, Hillside. WAYNE: Subdivision, \$10 million. Sponsor: Dunham's Inc.

**MARYLAND**—ABERDEEN: Apartment project, \$2 million. Sponsor: c/o Daniel Neumayer, architect, Towson. COLUMBIA: Apartments and garden apartments, \$4 million. Sponsor: c/o Collins & Kronstadt & Assoc., architect, Silver Spring. EASTON: Apartment, \$500,000. Sponsor: c/o Elder & Angell, Bedford Village, N.Y. HILLENDALE: Garden apartments, and swimming pool, \$2

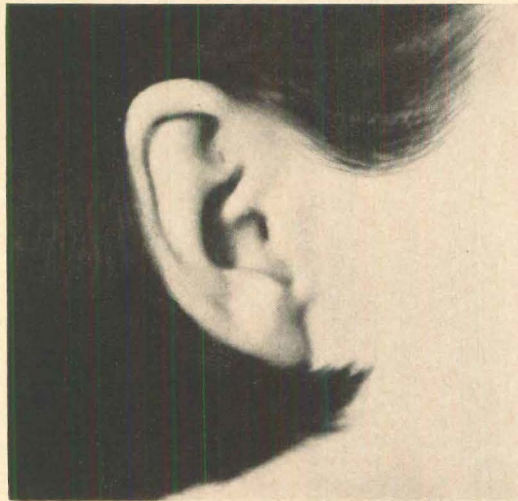
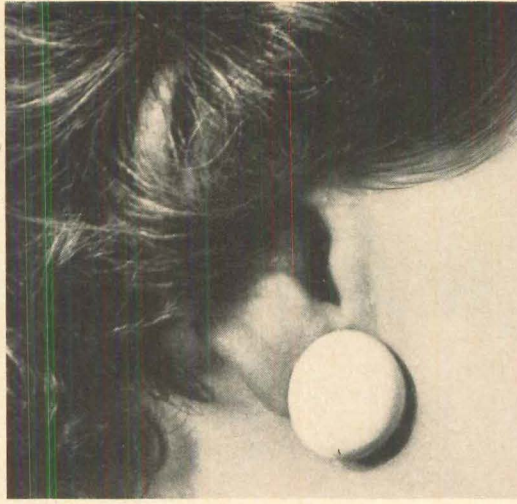
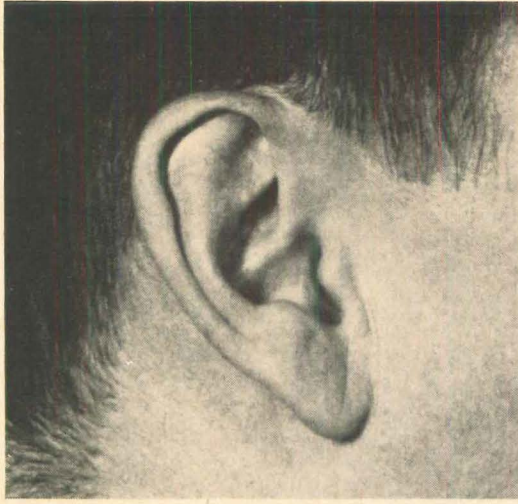
million. Sponsor: Kay Construction, Silver Spring. Plans: Bartley, Davis & Assoc., Wheaton. ROCKVILLE: Townhouses, shopping center, swimming pool, and tennis courts, \$4.2 million. Sponsor: Bennett Construction, Bethesda. Plans: Keys, Lethbridge & Condon, Washington, D.C. SCOTLAND: 100 low-income housing buildings, \$1 million. Builder: Scotland Development Corp., c/o Rurik F. Ekstrom, architect, Potomac.

**NEW JERSEY**—COLONIA: Garden apartments, \$4.5 million. Sponsor: Middlesex Builders, c/o Thomas H. Carr, Perts Amboy. FLORENCE TOWNSHIP: Apartments, \$1.3 million. Sponsor: Morris E. Keating, Roebing. JACKSON TOWNSHIP: Garden apartment project, \$840,000. Sponsor: Joseph J. Randazza, Brookwood. MORRISTOWN: Garden apartments, \$5 million. Sponsor: Frank H. Taylor & Son, East Orange. Plans: Walter Pfeiffer. MOUNT HOLLY: Apartments, \$1.8 million. Sponsor: Samuel Alloway. NORTH BRUNSWICK: Garden apartments, \$1.5 million. Sponsor North Brunswick Village. Plans: William G. Chirgotis, Springfield. RIDGEFIELD PARK: Garden apartments, \$680,000. Sponsor: 55 Teaneck Road Apartments, Kenilworth. Plans: Harold Kent, East Orange. POMPTON LAKES: Garden apartments, \$870,000. Sponsor: Morlot Enterprises, c/o Seiler, Nakorsis & Kerner, architect, Kearny. TRENTON: 25 garden apartment buildings, \$2 million. Sponsor: Maple Shade Assoc., Princeton. Plans: Lester H. Weckesses, Erlton.

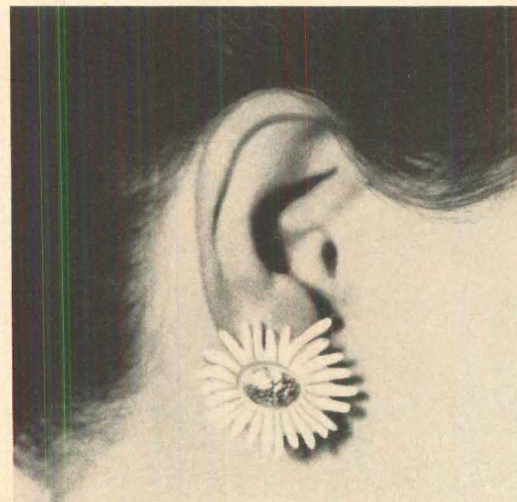
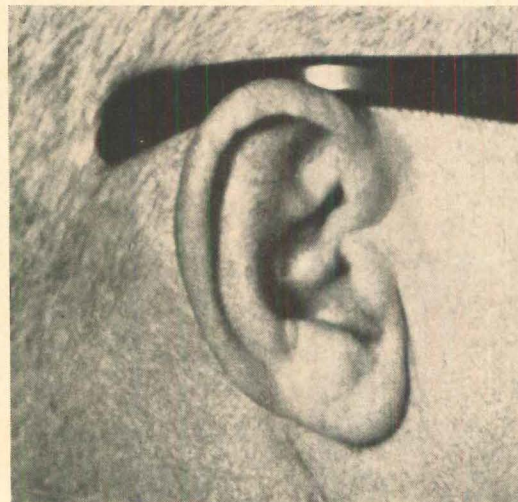
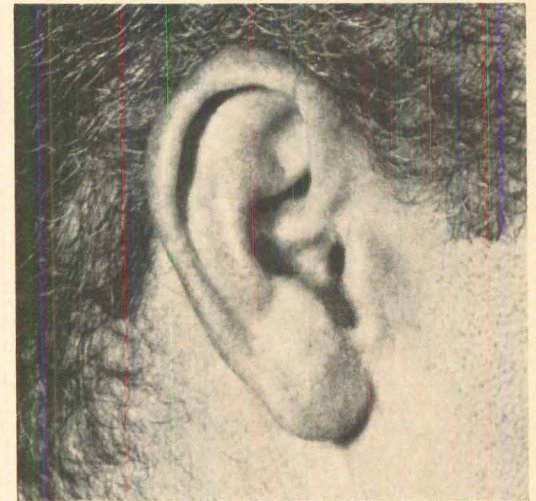
**NEW YORK**—AURORA: Garden apartments, \$750,000. Sponsor: Harold C. Foss, North Tonawanda. BROOKLYN: 33 houses, \$660,000. Builder: Magas Realty, c/o Stanley J. Shaftel, architect, Jamaica. CLAY: Garden apartments, \$1 million. Sponsor: Davison Assoc., Syracuse. Plans: Abraham W. Geller, New York. FLUSHING: Apartments for the elderly, \$4 million. Sponsor: United Help Inc., New York. Plans: Kelly & Gruzen, New York; Apartment, \$1 million. Sponsor: Diplomat Estates, Rego Park. Plans: Jack Brown, Rego Park. GREECE: Apartment, \$750,000. Sponsor: Lakeshore Apartments, c/o Malone Builders, Rochester. HAMPTON BAYS: 40 houses, \$800,000. Builder: Orchard Land Corp., Bethpage. HUNTINGTON: 33 houses, \$750,000. Builder: Roundtree Estates, Babylon. MELVILLE: 54 houses, \$1.2 million. Builder: Holly Hills Realty, Huntington. MONTICELLO: Garden apartments, club house, and swimming pool, \$3 million. Sponsor: c/o Martin Gebhardt & Di Paola, architect, Fairview, N.J. NEW YORK: Apartment, \$1 million. Sponsor: Dee Realty. Plans: George G. Miller; Apartment, \$2.5 million. Sponsor: Elmont Realty, Elmont. Plans: Robert L. Bien. SALINA: Apartment, \$2 million. Sponsor: F. H. Mattison & D. J. McGinnis, Syracuse. Plans: Durea & Wilhelm, Syracuse. SARATOGA SPRINGS: Garden apartments, \$3.2 million. Sponsor: Amco Land Development. TARRYTOWN: Low and middle-income apartments, \$2.5 million. Sponsor: Methodist Church of Tarrytown. TROY: Garden apartments, \$1.4 million. Sponsor: Miron Valley & Jack Pinellas, Plainfield, N.J. Plans: Gerber & Pancani, Newark, N.J.

**OHIO**—CHILLICOTHE: Apartments and swimming pool, \$4 million. Sponsor: Dandale Corp., Waynesville. Plans: Sullivan, Isaaca, Sullivan, Reading. COLUMBIANA: Apartments, \$800,000. Sponsor: John Yereb. COLUMBUS: Houses, and apartments, \$2 million. Builder: Brookside Sales, Gahanna; 50 houses, \$1 million. Builder: Larry Bertram. Plans: Rex Vion; Apartment, \$900,000. Sponsor: Baker Construction. Plans: John P. Gibboney & Assoc. CUYAHOGA FALLS: Apartment, \$750,000. Sponsor: Thomas J. Dillon & Co., Akron. DAYTON: Apartment, \$700,000. Sponsor: James Geisenfeld. EASTLAKE: 110 houses, \$2 million. Builder: Sunrise Development, Brooklyn. FAIRBORN: Apartments, \$550,000. Sponsor: Deema Development, Columbus. HAMILTON: Housing development, \$1 million. Builder: Dixie Development, Middletown; housing for the elderly, \$1 million. Sponsor: The Franciscan Sisters of the Poor, St. Clare Convent, Cincinnati. MAYFIELD VILLAGE: Apartments, \$2 million. Sponsor: Aintree Park Apartments, Independen-

Business continued on p. 48



**Some people never  
hear about  
Day & Night  
air conditioning**



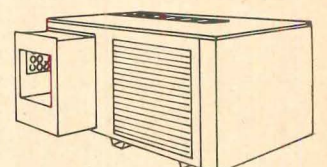
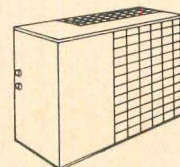
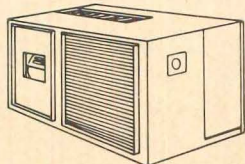
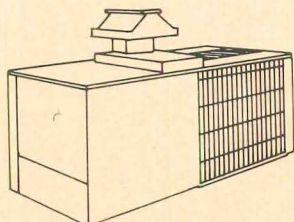
**(Like builders  
who install it)**

Grumbles hardly ever happen when you install trouble-free Day & Night air conditioning. There's too much dependability built in.

Want proof? Examine a unit part by part. You'll find quality right down the line, not just in a few "talking spots." Check the overall design. You'll see reflected the advanced designing and engineering skills that enabled Day & Night to create a brand new industry within our industry — the first compact gas-and-electric combination air conditioner

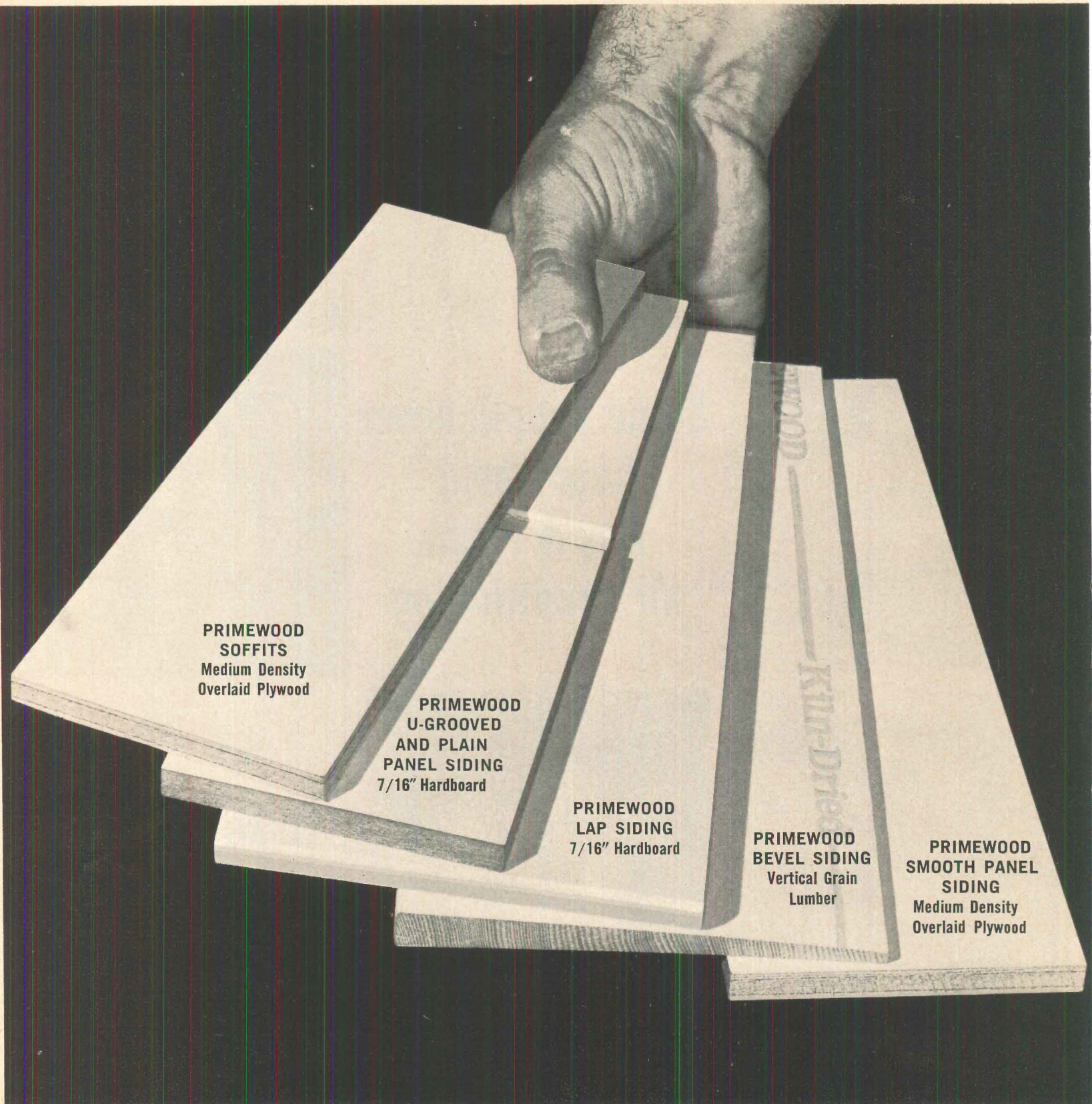
for outside installation, the famous Duopac.

There's a Day & Night system to fit virtually any air conditioning job, in homes, apartments, office and commercial structures. One and a half to fifteen ton units, conventional, heat pump (with or without supplementary heating coil), heating and cooling together or separate, inside or outside, electric or gas-and-electric. For happy facts on complaint-free air conditioning for your next job, call your Day & Night distributor. Or write:



*Day & Night Manufacturing Company / 855 Anaheim-Puente Road, La Puente, California  
3359 W. 39th Street, Chicago, Illinois / Distributors in principal cities.*

**CREATOR OF NEW DIMENSIONS IN AIR CONDITIONING, HEATING AND WATER HEATING**



## This combination could cure all

Think about it! A complete line of exterior wood products and a no-nonsense performance guarantee that eliminate the on-site priming problems you've had. What's more, you'll save money on in-place costs.

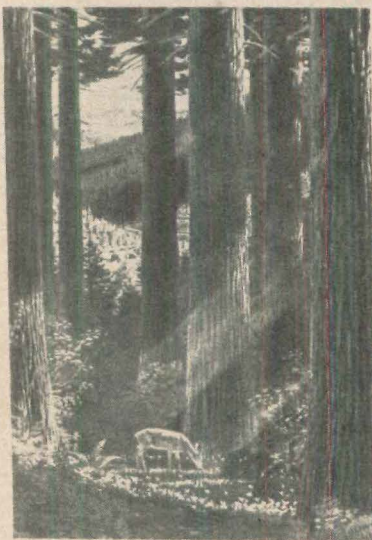
Primewood siding comes in a broad range of styles and materials so you can use it with any kind of house you build. Also available: pre-primed trim, fascia and door jambs.

The special primer we use is baked on in infra-red ovens right at the factory. The result is a tough, uniformly smooth base. Paints last longer, look better and cover more area faster on Primewood.

The biggest single saving you'll make with Primewood is the elimination of job-site priming. But the nickels and dimes you'll save other ways add up fast. You can knock off *one* whole scaffolding operation.



**Weyerhaeuser**



### **Weyerhaeuser PRIMEWOOD EXTERIOR PRODUCTS PERFORMANCE GUARANTEE**

**Lumber:**  
Bevel siding

**Hardboard:**  
Lap siding  
grooved panels

**Plywood:**  
Medium density overlaid

The factory-applied primer on all Weyerhaeuser Primewood exterior products is guaranteed for **FIVE YEARS** after initial installation to be peel-proof and blister-proof, provided a finish paint coat is applied within 60 days after initial installation and thereafter maintained in good condition.

Also, the entire product is guaranteed for the same period to give satisfactory performance as exterior siding when installed in accordance with instructions accompanying each shipment and when finished as indicated above.

Should any Primewood product not comply with this guarantee, Weyerhaeuser will, at its option, repair, replace, or make a fair allowance for same, up to the original price of the material as delivered for the installation. However, Weyerhaeuser must be given written notice within 90 days after discovery of such noncompliance and a reasonable opportunity to inspect the product prior to any alteration or repair.

*Weyerhaeuser's sole responsibility is as stated herein, and it shall not be liable for consequential, indirect or incidental damages.*

This performance guarantee automatically extends to purchasers from Weyerhaeuser of Primewood products. It may be reissued upon resale of such products, in which case any claims are to be processed through the intermediate party or parties.

This guarantee is in addition to the standard product quality guarantee set forth in the Weyerhaeuser general Terms of Sale.

**Weyerhaeuser Company • Tacoma, Washington**

GM 139 9-65

## **your job-site priming headaches**

There aren't any culls or defects, every inch is usable. You may even save a little on the cost of the finish paint cover because the paint goes farther on Primewood.

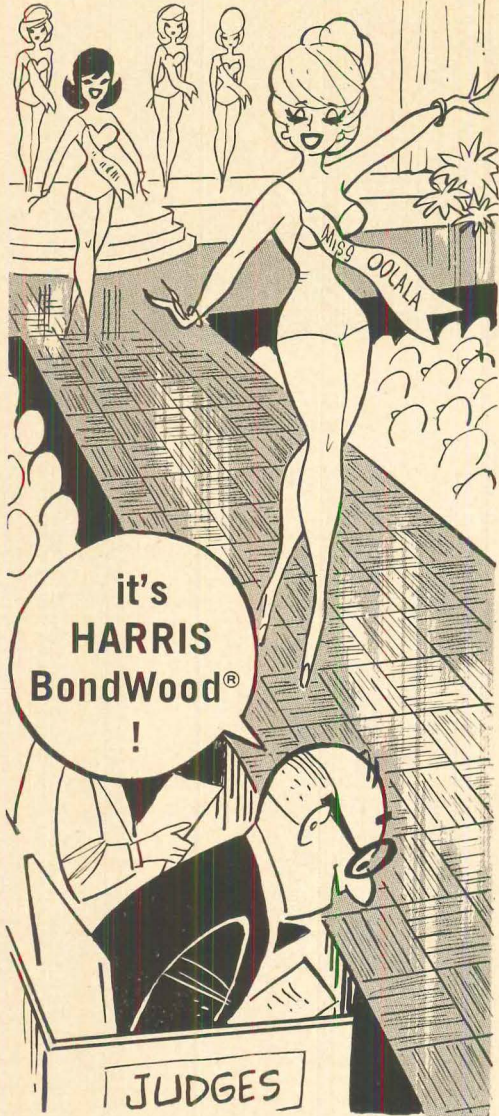
You can pocket these savings without cutting corners on quality. Weyerhaeuser backs up their product line with an unbeatable performance guarantee that will protect you against any kind of failure in the prime coat for a full five years.

Ask your nearest Weyerhaeuser dealer for information on price and delivery. And for more details, write us at Box B-2343, Tacoma, Washington, 98401.



**Weyerhaeuser**

You can't help  
but notice . . .



And no wonder. Thick, solid hardwood all the way through, BondWood parquet is designed for adhesive installation over concrete or wood. It's permanent, too. After years of hard wear, BondWood is restored to original beauty with inexpensive refinishing. There's nothing to replace. And no other parquet on the market offers so many different woods and patterns. Best of all . . . BondWood is just one of the "beauties" in the exciting Harris line. Mail the coupon below for a FREE full color brochure that gives all the facts about versatile Harris Flooring!

HARRIS MANUFACTURING COMPANY  
DEPT. HH-96, JOHNSON CITY, TENN.

Please send me FREE FULL COLOR  
BROCHURE.

NAME \_\_\_\_\_

COMPANY \_\_\_\_\_

TITLE \_\_\_\_\_

STREET \_\_\_\_\_

CITY \_\_\_\_\_

STATE \_\_\_\_\_ ZIP \_\_\_\_\_



**HARRIS FLOORING**

Hardwood Flooring Since 1898

Parquet • Colonial Plank • Strip • Stairwork

**BUSINESS**

starts on p. 44

dence. Plans: Andre Buehler, Cleveland. SEVILLE: 28 houses, \$784,000. Builder: Merrell Swartz & Merle Hewit, Wadsworth. TIFFIN: Townhouse and swimming pool, \$1 million. Sponsor: Sycamore Valley Co., c/o Edwards N. Porter, architect.

**OKLAHOMA**—MIDWEST CITY: Apartments, \$1-250,000. Sponsor: c/o Bishop & Quinn. NORMAN: Apartment and swimming pool, \$750,000. Sponsor: c/o Tevault-Thompson & Kelly, Beaumont, Tex. TULSA: Houses, apartments, townhouses, multi-story apartments, \$20 million. Sponsor: Cambridge Hills Community Development. Plans: Rudgins-Thompson-Ball & Assoc.; YMCA Building and swimming pool, \$1.5 million. Sponsor: YMCA, Philtower Building. Plans: Charles Ward; apartments, \$1.5 million. Sponsor: Kansas Quality Construction, Kansas City, Kansas. Plans: Robert E. Newell, Kansas City, Mo.; Townhouses, \$1 million. Sponsor: Capetown Inc.; apartment and office building, \$8 million. Sponsor: Pioneer Mortgage & Investment Co.

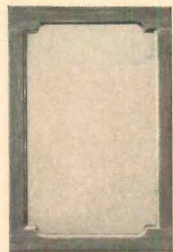
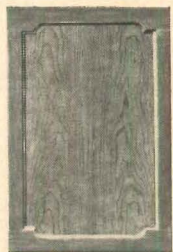
**PENNSYLVANIA**—AVALON: Apartment, \$700,000. Sponsor: c/o Robert Calhoun Smith, architect, Washington, D.C. BALDWIN: Apartments, townhouses, and walkup apartments, \$1.5 million. Sponsor: Edward Holowka, Pittsburgh. Plans: Lorenzi, Dodds & Gunhill, Pittsburgh. CENTER VALLEY: Residence hall, \$600,000. Sponsor: American Missionaries of the Sacred Heart, Aurora, Ill. Plans: George E. Yundt, Allentown. FALLS TOWNSHIP: Apartments, \$1 million. Sponsor: Bond Building & Construction, Philadelphia. Plans: A. R. Hyman, Philadelphia. HARRISBURG: Apartment, \$750,000. Sponsor: Frank Crispo. Plans: Anthony Orefice, Philadelphia. HAVERFORD: Apartments, \$800,000. Sponsor: Foley McManus, Drexel Hill. Plans: Leon Clemmer, Philadelphia; Garden apartments, \$800,000. Sponsor: c/o Leon Clemmer, architect, Philadelphia. HAZELTON: Garden apartments, \$1 million. Sponsor: c/o Charles N. Gilbert, architect, Philadelphia. PHILADELPHIA: Apartments, \$750,000. Sponsor: c/o Frank Weise, architect; Apartments, \$1.5 million. Sponsor: c/o Charles N. Gilbert, architect; Garden apartments, \$750,000. Sponsor: Henry H. Jefferson, c/o Louis A. Manfredi & Assoc., architect. PITTSBURGH: Apartments and townhouses, \$750,000. Sponsor: Sandra Corp., c/o Thomas L. Simons, architect.

**TEXAS**—AUSTIN: Apartment and swimming pools, \$1.5 million. Sponsor: Owner. c/o Bernard Brady, architect, Houston. CORPUS CHRISTI: Townhouses and swimming pool, \$1.8 million. Sponsor: Peerman Corp. Plans: A. F. Marshall; Apartment complex, \$1.8 million. Sponsor: Sage Investment c/o Morgan Spear, architect. DALLAS: 500 houses, \$12.5 million. Builder: A. Pollard Simons Mortgage Co., Plans: Gershon Canaan. DENTON: Apartment complex, townhouses, and shopping center, \$1 million. Sponsor: Southridge Corp., c/o Robin Llewellyn, engineer, Fort Worth. FORT WORTH: Apartment, \$1 million. Sponsor: Miller Manor Apartments. Plans: Grossman & Haberman; Apartments, \$1 million. Sponsor: First Continental Enterprises, Dallas. Plans: James O. Dixon. HOUSTON: Apartments, \$1.5 million. Sponsor: Marvin Finger. Plans: Lucian T. Hood; Apartments, \$1.5 million. Sponsor: Arthus W. Beck Jr. Plans: Richard C. Wallace, Dallas; Apartment, \$1.7 million. Sponsor: Jenard Gross. Plans: Brooks & Brooks. LUBBOCK: Apartments, \$960,000. Sponsor: B. M. Smith, Dallas. SAN ANTONIO: Apartment and swimming pool, \$1.3 million. Sponsor: Earl N. Jackson, Dallas. Plans: Harwood K. Smith, Dallas.

**WASHINGTON**—BELLINGHAM: Housing for the elderly, \$4.5 million. Sponsor: Bellingham Housing Authority. PASCO: 52 units, type unspecified, \$650,000. Sponsor: Benton-Franklyn Central Labor Council. Plans: R.H. Ohasi, Richland. SEATTLE: Row houses and apartments, \$7 million. Builder: Glen Acres. Plans: Robert E. Cooper; Apartment, \$1.5 million. Sponsor: W.N. Campbell and Harbor, West Assn.; Apartment, \$1 million. Sponsor: Volotin Investment Co. Plans: R.D. Anderson; Apartment, \$1.5 million. Sponsor: Harbor West Assn. Plans: W.N. Campbell. SPOKANE: Apartment, \$750,000. Sponsor: Cranco Inc. c/o M.J. Hemovich.

Leaders start on p. 56

There is a  
quality built  
competitively  
priced  
**Kemper**  
kitchen to fit  
every  
architectural  
style or deco-  
rating theme



See them all at your nearby Kemper Distributor or write for your free, full color catalogs on Kemper's complete line of wood Kitchens and bathroom vanities and lavanettes.

**Kemper**

KEMPER BROTHERS, INC., RICHMOND, IND.



# Wood windows vs. metal windows:

## here are the facts about heat loss.

A metal window frame is cold. Cold to touch. Cold to be near. It's the nature of metal, caused by what heating engineers call excessive thermal conductivity.

**Are metal windows really "refrigerators?"  
Unfortunately, it's true.**

*Findings listed below show heat loss of various materials 1" thick, 12" square, with only 32 degree difference between inside and outside temperatures:*

<b>HEAT</b>	Wood . . . 25 BTU's per hr.
	Glass . . 186 BTU's per hr.
<b>LOSS</b>	Steel. . . 9,984 BTU's per hr.
	Aluminum . . . 45,312 BTU's per hr.

Data derived from: ASHRAE Guide and Data Book 1965, Chapters 4 and 24. By permission.

The chart tells the whole sad story. Aluminum conducts heat over 1770 times as fast as wood.<sup>1</sup> Thus a wood window frame is over 1770 times as effective in preventing costly heat losses through radiation as aluminum, the most common type of metal window.

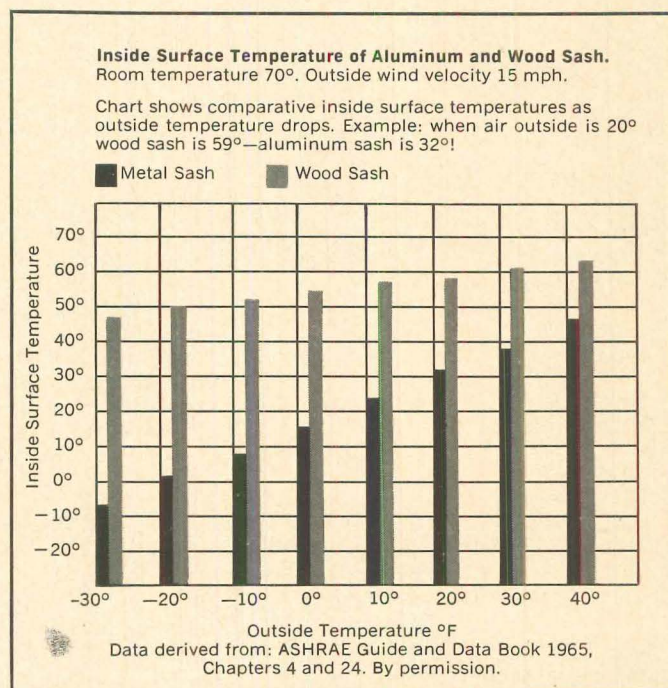
Cold metal surfaces, as they conduct heat from a room, also conduct heat from the body, causing chills. In addition, as warm air comes against a cold surface, it cools and drops rapidly to the floor. This creates a cold draft.

In fact, these metal-caused cold drafts can reach velocities of 12 feet per second.<sup>2</sup> Pretty windy for a family living room, don't you think?

1. ASHRAE Guide and Data Book 1965, Chapters 4 and 24.
2. Electricity in Building Magazine, September, 1964.

Wood by its very nature is a superior insulator. This chart gives you the facts. Quality windows with wood sash are plainly more comfortable to live with. See for yourself.

**Here are the cold hard facts about  
metal windows.**



**Free:** For the facts on window condensation send for the exclusive Window Condensation Calculator. This unique slide rule, based on ASHRAE data, lets you determine condensation problems in your area before you build. Just mail your request on your letterhead to:



### PONDEROSA PINE WOODWORK

and the Western Wood Products Assn.

Dept. HH-6, 39 South La Salle Street  
Chicago, Illinois 60603

# ***WITH BUILDING STARTS DOWN*** ***WHY ARE LEVITT'S UP?***



The answer in a word is—value.

From the beginning, Levitt & Sons, Inc. has operated on the premise that quality housing at moderate cost was a powerful sales inducement.

To implement the strategy, Levitt has relied perhaps more heavily than some builders on the magic of familiar brand names like G.E. Levitt homes are equipped with many G-E appliances the home buyer has already

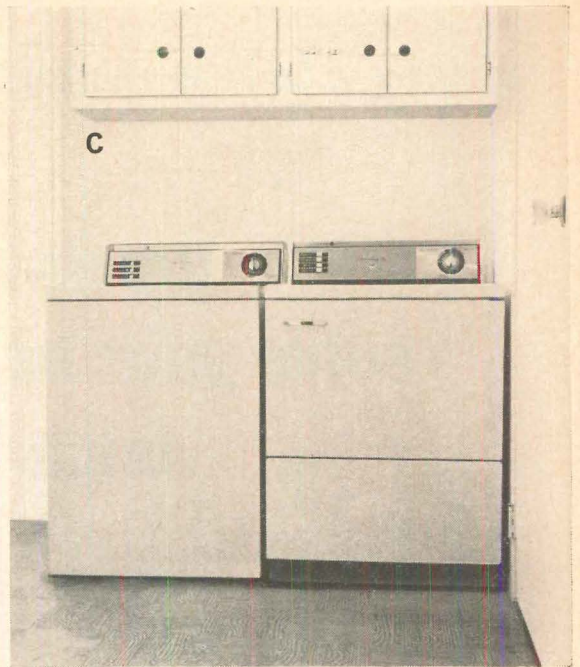
learned to trust.

For example, all these tastefully appointed homes feature G-E kitchens and laundries, equipped with built-in ovens, dishwashers, refrigerators, washers and dryers.

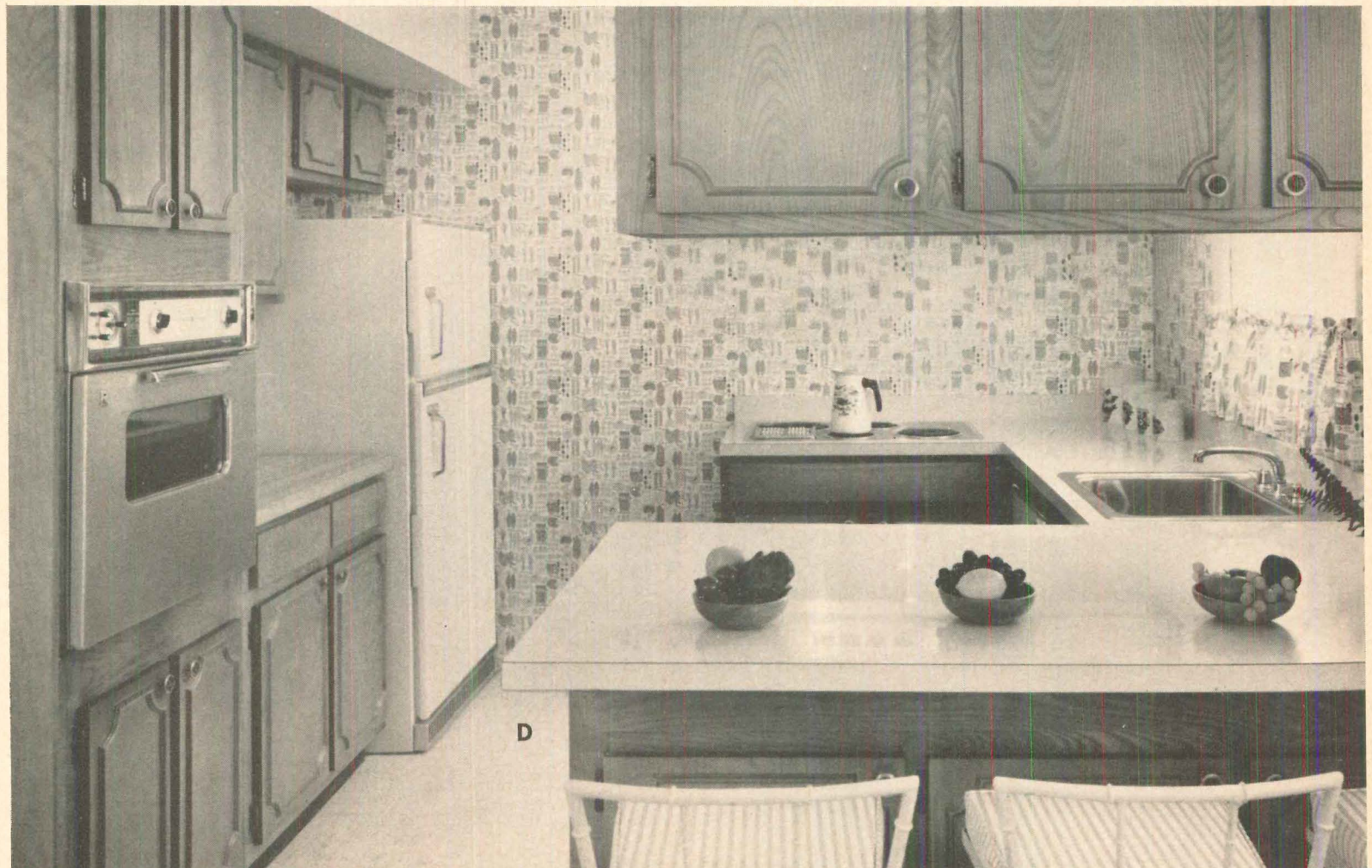
Levitt's heavy emphasis on quality and the success of its numerous communities carry a lesson for everyone who builds homes to sell. The advanced design and legendary dependability of General Electric appliances can work to your great advantage if you'll only let them.



A



*Kitchen A*, the Jamestown Model, features the following G-E appliances: JD-14 Oven, SD-200 Dishwasher, JP-76 Surface Plate. *Kitchen B*, the Hampshire Model, features the TB-14S Refrigerator-Freezer. *Laundry Room C* features the WA-650 Washer and the DE-620 Dryer. Complete G-E equipped laundry rooms are in all Levitt houses. *Kitchen D*, The Eton Model, features the JD-14 Oven, TB-14S Refrigerator-Freezer and JP-76 Surface Plate.



Your General Electric distributor will tell you why and show you how. He'll work right along with you to plan, promote and sell. Give him a chance. Levitt did.

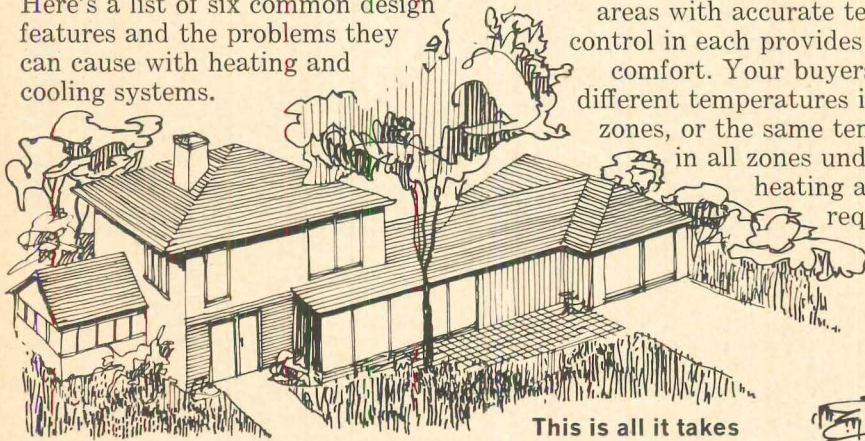
**GENERAL**  **ELECTRIC**

## Here's how zone control can solve your heating and cooling problems with little additional cost

Successful builders are finding that a slightly unusual feature or floor plan makes their homes stand out from the competitive homes. It can capture the prospect's imagination and often is just enough to clinch the sale. But these same features can create heating and cooling problems, too. And of course, no matter how exciting the feature, if the home is uncomfortable, you'll have a dissatisfied customer.

Chances are, you have some of these features in the homes you are building now.

Here's a list of six common design features and the problems they can cause with heating and cooling systems.



- 1. In any two or three level home**, warm air tends to rise, leaving cooler air in the rooms on the lower level.
- 2. Special activity rooms.** It is obvious that bedrooms call for cooler temperatures than living areas for real comfort, but game rooms and family rooms can create comfort problems, too.

- 3. Large glass areas** provide a great view, but they cause inside temperatures to vary with the outside weather changes . . . even with double-pane windows.
- 4. With a spread-out floor plan**, sun, shade and wind in different areas cause widely differing heating and cooling needs.
- 5. Rooms over unheated areas**, such as garages, often have cold floors and walls.
- 6. A finished basement**, because it is below ground level, places unusual demands on heating and cooling systems.

Lots of potential problems, but zone control solves 'em all

Dividing your homes into two or more areas with accurate temperature control in each provides maximum comfort. Your buyers can have different temperatures in different zones, or the same temperatures in all zones under varying heating and cooling requirements.

This is all it takes

With a forced air system, all it takes is a Honeywell thermostat, damper and damper motor to control air distribution to each zone. With a hydronic system, zone valves control the water flow.

You will be pleasantly surprised at the cost of zone control

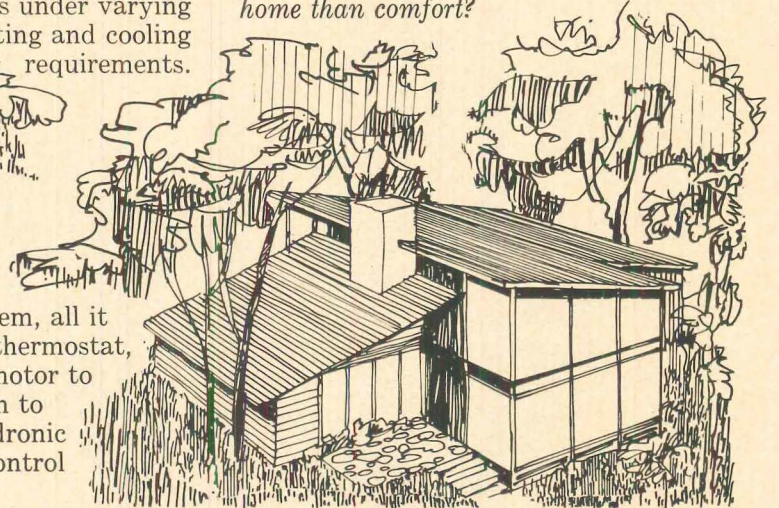
As you can see, zone control makes a lot of sense, and it isn't very complicated. The cost of additional equipment is nominal.

Compare the cost with the problem it solves, such as cold floors or uncomfortable bedrooms, and zone control becomes a necessity.

Speaking of unusual features . . . you've just added another one

Honeywell zone control not only solves problems connected with unusual features—it is one all by itself. It's an interesting talking point and attracts attention.

After all, what's more important in a home than comfort?



SEND ME THE NEW BOOKLET on Honeywell zone control systems.

Honeywell,  
Dept. HH9-402  
Minneapolis,  
Minnesota 55408



Name \_\_\_\_\_  
Firm \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_


# Honeywell

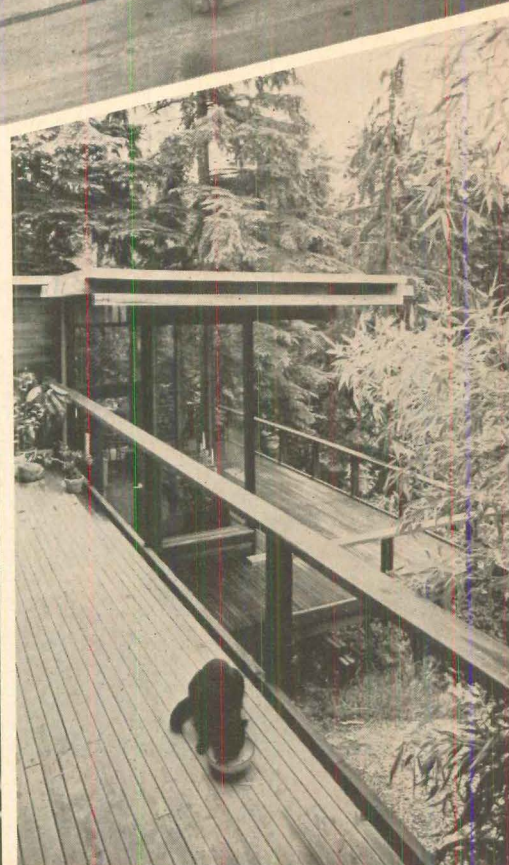
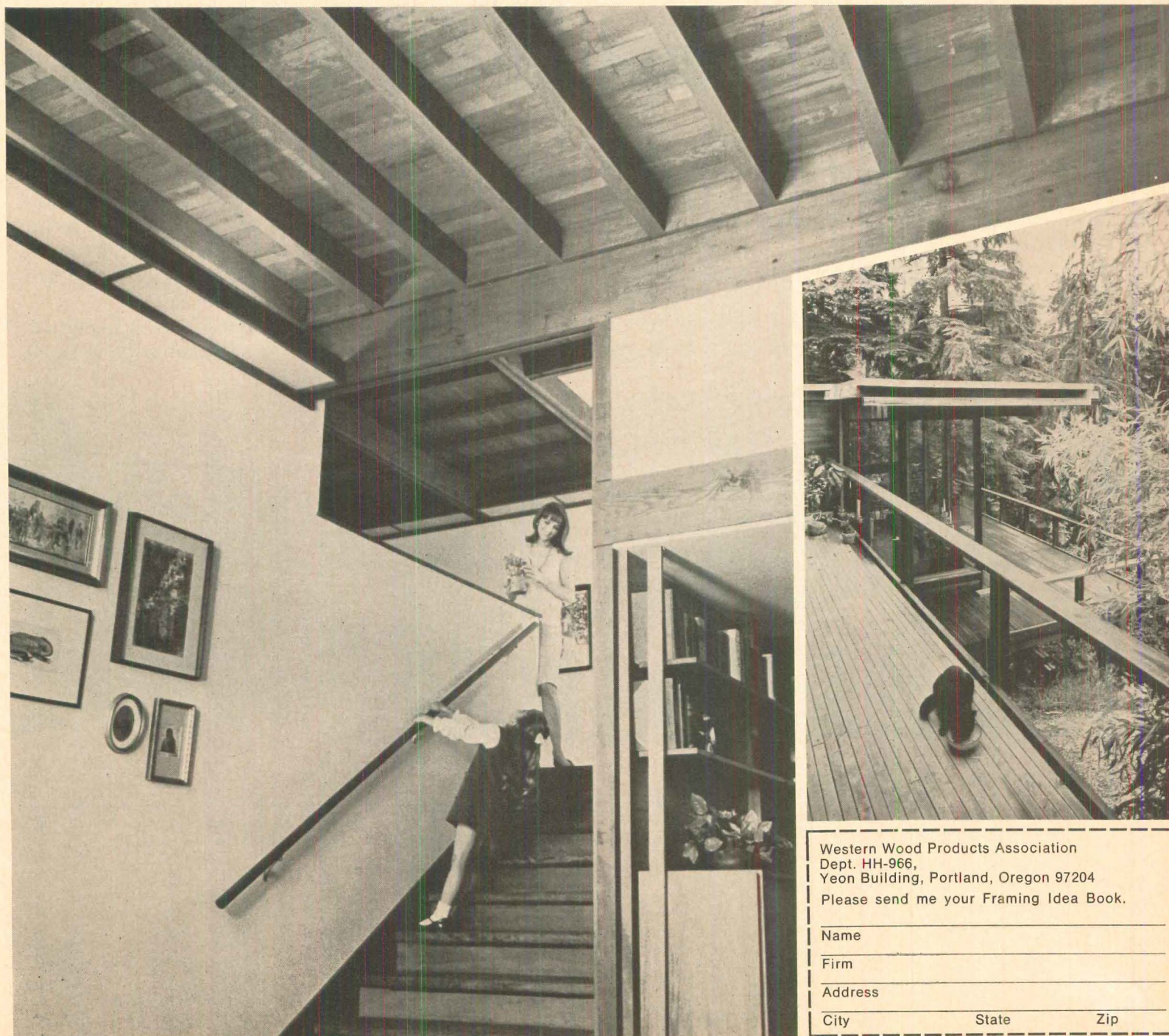
# Show your framing for all it's worth... faster home sales!

When buyers walk into a home like this, the handsome, open joists and decking of Western Wood expose real strength and beauty. Builders across the country are turning to exposed framing, bringing it out of hiding from behind ceilings and walls. Framing now contributes to the overall feeling and design of the home

... and to its sales appeal. Exposed framing of Western Wood can take many forms. It can be brawny beams that turn an ordinary model home into a manor at low in-place cost. Or, it can be a room divider of studs that defines space. Outside, posts, railings and decking of framing stock withstand weather

beautifully and lend a distinctive appeal. Want more ideas in exposed framing and how it can help you sell more homes faster? Clip the coupon and we'll send you a full-color framing idea book. It's free, of course.

 **Western Wood Products Association**



Western Wood Products Association  
Dept. HH-966,  
Yeon Building, Portland, Oregon 97204  
Please send me your Framing Idea Book.

Name \_\_\_\_\_  
Firm \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

# You're looking at 49 Reynolds Aluminum building ideas... all under one roof!

*More than 8000 pounds of strong,  
lightweight, rustfree aluminum  
add value to this custom home*



The home above, located in Wilmette, Illinois, is dramatic proof of the many uses of Reynolds Aluminum. More conventional aluminum building products—49 in all—were used here than in any other known single-family residence in the world!

Take a look at the accompanying pictures. See how many opportunities you have to put Reynolds Aluminum to work for you, opportunities to show prospects that you've built extra quality, convenience

and value into your homes.

Wherever it's used, Reynolds Aluminum means easy living. It won't rust, crack, rot or warp; it's highly corrosion resistant and requires little or no maintenance.

Design flexibility is greater, too. Reynolds gives you a large choice of configurations, thicknesses and finishes.

And of course, aluminum's reflectivity is higher, so you can often promise lower heating and cooling costs.

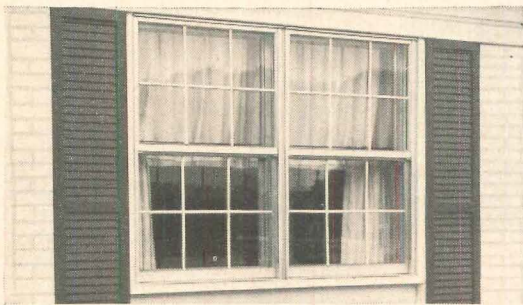


## WEIGHT OF ALUMINUM IN HOME

ITEM NO.	ITEM	ACTUAL LBS. ALUMINUM **
1.	Shingles & Accessories	1911
2.	*Ductwork	1861
3.	Horizontal Siding & Accessories	960
4.	Windows (Double Fenestration)	903
5.	Gutter & Accessories	212
6.	Flashing	201
7.	Shutters	199
8.	Sliding Doors	166
9.	Columns	144
10.	Garage Door	114
11.	*Hand Railing	114
12.	*Utility House	80
13.	Fascia	78
14.	*Frieze (Reynoply)	78
15.	*Storm Doors	75
16.	Soffit	73
17.	*Rake	64
18.	*Condenser	60
19.	*Conduit	54
20.	*Closet Rods	51
21.	Window Screens	48
22.	*Air Conditioner Covers	44
23.	*Ceiling	43
24.	*Frieze Moulding	41
25.	*Grill (Supplied by Gas Co.)	40
26.	*Areaway Covers	38
27.	*Lawn Edging	36
28.	Thresholds	34
29.	*Gutter Guards	31
30.	*Nails (22,650)	31
31.	*Louvers	30
32.	Cupola	28
33.	*Clothes hangers	24
34.	*Foil Backed Insulation	23
35.	*Insulation Sheathing (Thermoply)	22
36.	*Outside Lamp Post	21
37.	*Car Stop	20
38.	*Air Filter	18
39.	*Fountain	16
40.	*Sliding Screens	16
41.	*Door Mats	13
42.	Spandrel Panels (Reynoply)	12
43.	*Foundation Vents	12
44.	Screen Door	10
45.	*Plancier (Reynoply)	9
46.	*Weather Vane	7
47.	*Cupola Base (Reynoply)	6
48.	*Sill Cocks	3
49.	*Screws	3

\*Not Visible \*\*Excluding glass, wood, paint, fiberboard, insulation, etc.

**TOTAL ALUMINUM WEIGHT 8077 lbs.**



Double fenestration windows with 2" air lock cut heat loss to absolute minimum. Inside windows stay practically same temperature as walls.



Four extruded aluminum columns add classic beauty to this custom home. The 8" aluminum siding with long lasting Colorweld® finish gives years of service and beauty without repainting.



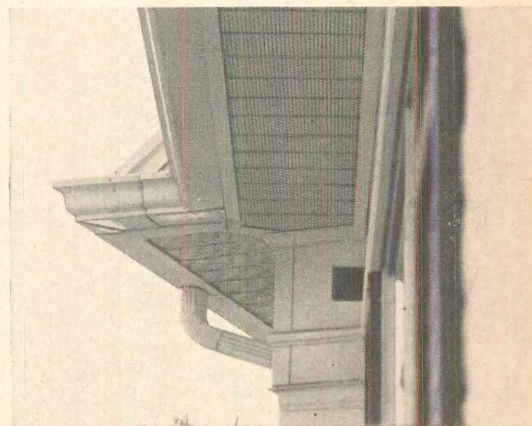
Matching charcoal gray Colorweld® shutters and shingles beautifully and protect. These Colorweld building products won't rust, rot, chip or peel. (Colorweld is available in a variety of colors.)



All the ductwork throughout this home—for both heating and cooling—is made from Reynolds Aluminum.



Closet rods may not be uppermost in your mind, but they are one more example of how aluminum can add extra low-maintenance convenience in the most unexpected places.



One of the most popular uses of aluminum is in the soffit. Reynolds Aluminum Roll Soffit slides right into place, easily and quickly. This cuts labor costs, speeds completion of work.



# REYNOLDS ALUMINUM

*Building Products*

Watch "HIPPODROME", Tuesdays, CBS-TV  
(The "Red Skelton Hour" returns September 13)

REYNOLDS METALS COMPANY  
Building Products and Supply Division  
Dept. HH-966  
325 W. Touhy Avenue  
Park Ridge, Illinois 60068

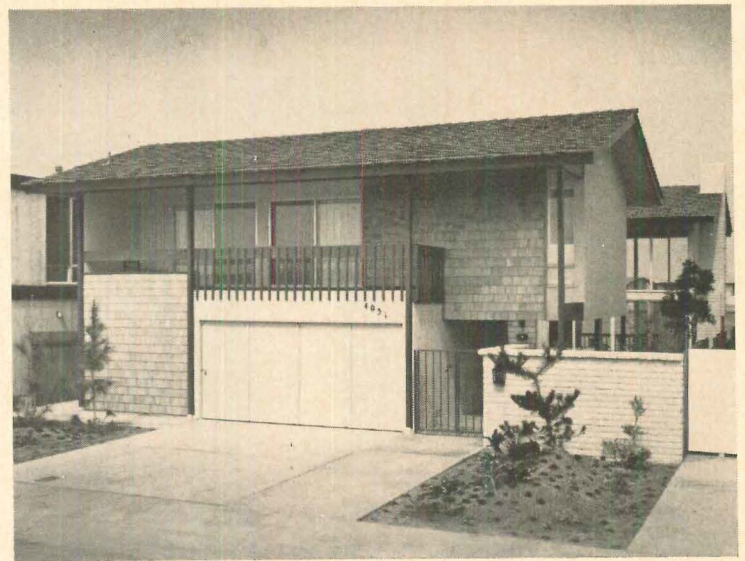
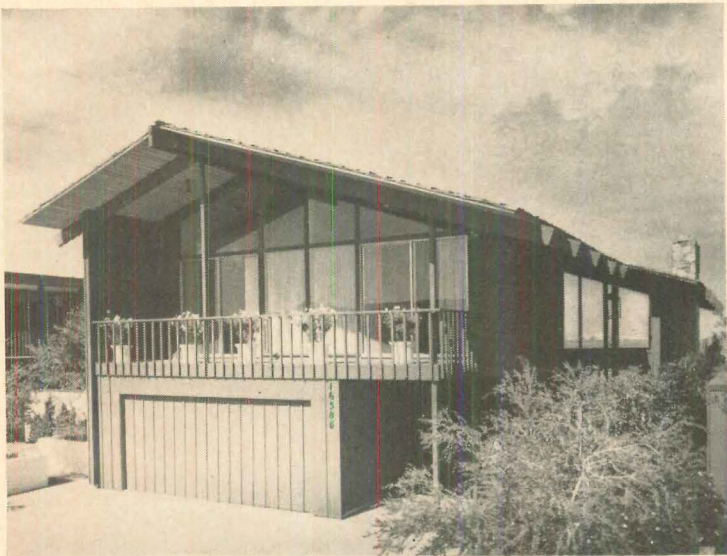
Please send me free literature on the Reynolds Aluminum Product Line.

NAME \_\_\_\_\_

COMPANY NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

# Two houses for narrow—and expensive—waterfront lots

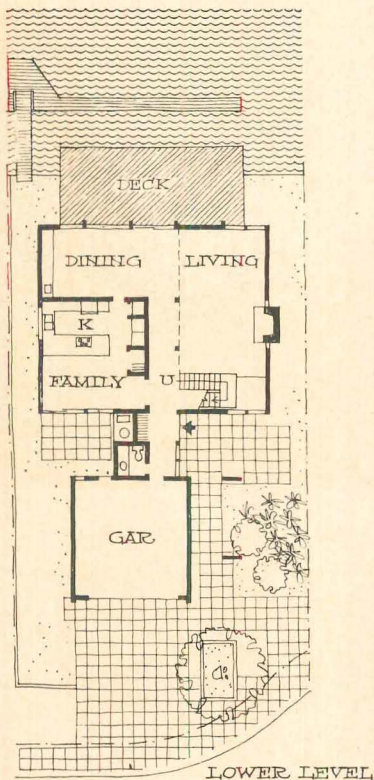


This is one of seven plans designed for irregular cul-de-sac lots in a waterfront community being developed by Huntington Harbour Corp. This particular plan has accounted for eight of 60 sales in a newly opened section of the project. Prices range from \$82,700 to \$111,000 and include lots costing from \$41,700 to \$67,000.

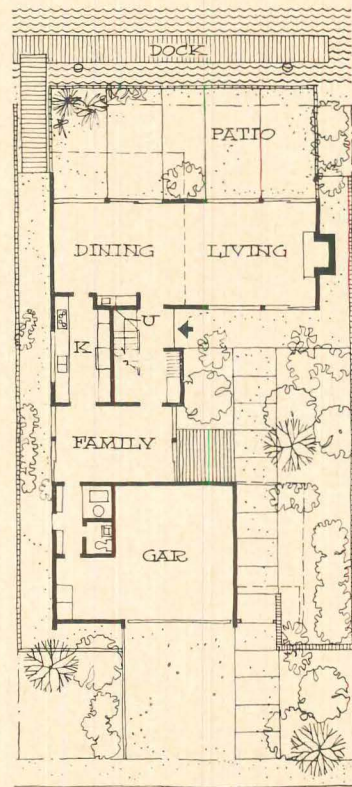
Architect Robert E. Jones divided the 2,696-sq.-ft. house into two completely separate sections, connected only by the entrance gallery and an upper hallway. One section contains the living areas and two bedrooms; the other contains the garage and two more bedrooms.

This model was designed for rectangular waterfront lots (50'x 100') in other areas within the same Huntington Beach project. One of ten plans by Architects Thomas & Richardson, the house currently accounts for 18 of 175 sales. Priced at \$84,500 on a \$42,500 lot, it is available in three elevations.

The living room, dining room and master bedroom open to decks that face out over the waterfront. The two-story, glass-walled living room also looks out onto a side court, around which the U-shaped plan is wrapped. This entrance court can also be reached from the central family living areas.



**H-SHAPED PLAN** puts formal living areas and master bedroom facing water, other bedrooms over garage. Entrance gallery connects sections.

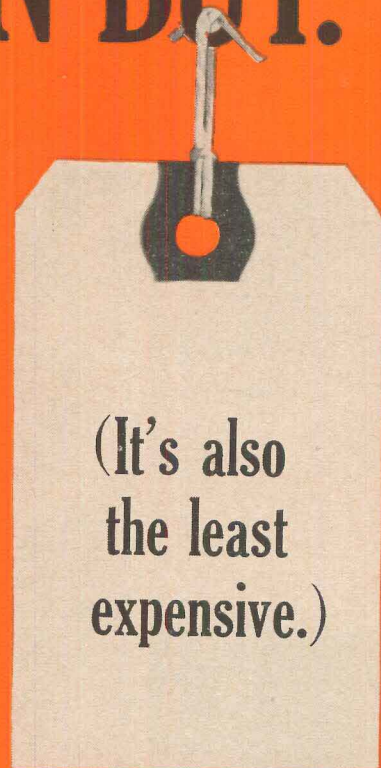


**U-SHAPED PLAN** uses central family areas below, back-to-back baths and stairwell, above, to divide adult living from children's bedrooms, garage.

Letters start on p. 74



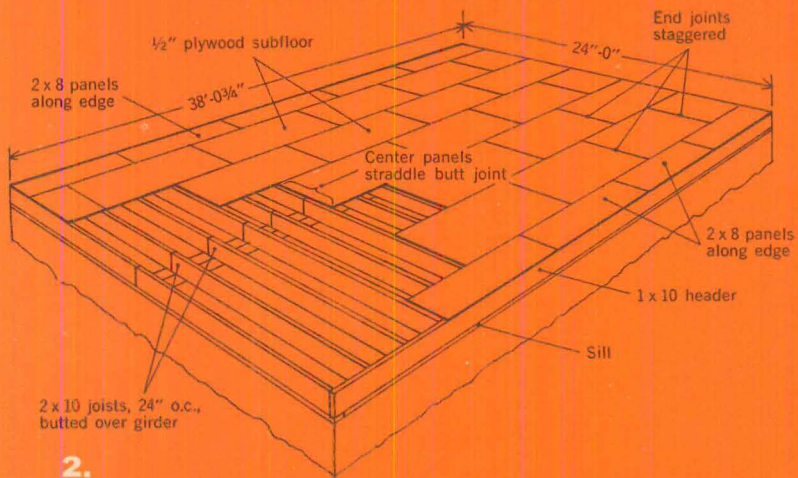
# PLYWOOD SHEATHING AND SUBFLOORING IS THE FINEST CONSTRUCTION MONEY CAN BUY.





1.

**LOWEST COST PLYWOOD FLOOR SYSTEM**



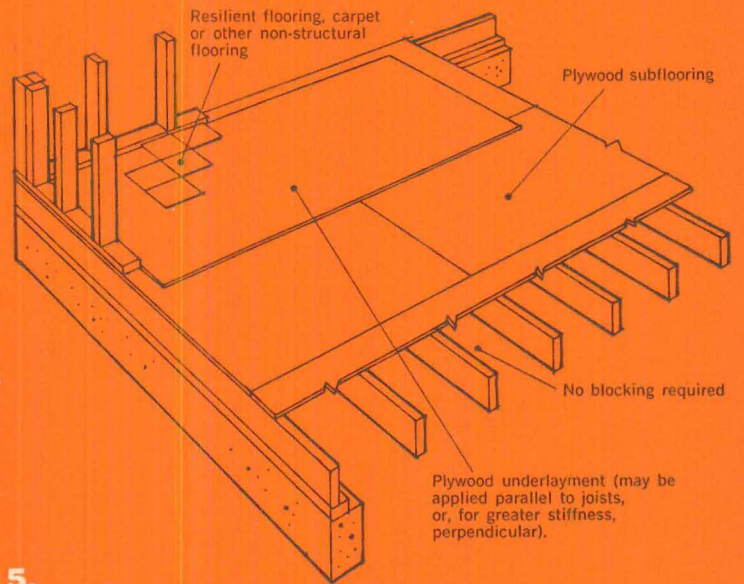
2.

3.

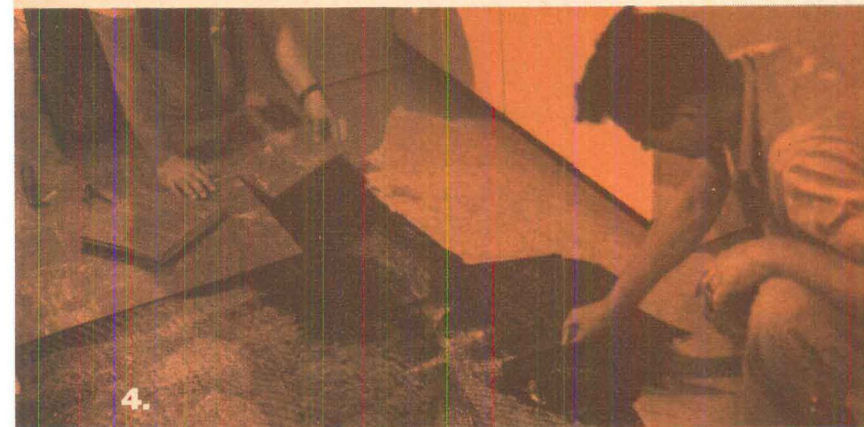
**COST BREAKDOWN FOR LOWEST COST SYSTEM**

Item	Shop Labor	Field Labor	Total Labor	Total Mtl.	Total
Framing	6.20	11.22	17.42	124.47	141.89
Subfloor	1.45	9.48	10.93	116.00	126.93
Subtotal	7.65	20.70	28.35	240.47	268.82
Bridging		9.36	9.36	5.22	14.58
<b>TOTAL</b>	<b>\$7.65</b>	<b>\$30.06</b>	<b>\$37.71</b>	<b>\$245.69</b>	<b>\$283.40</b>

**PLYWOOD UNDERLAYMENT APPLICATION**

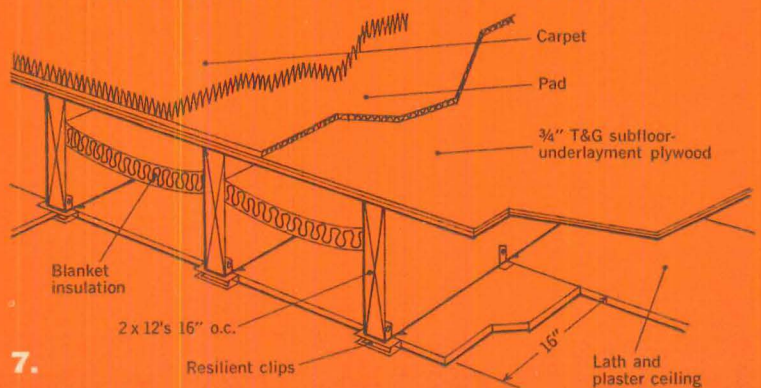


5.

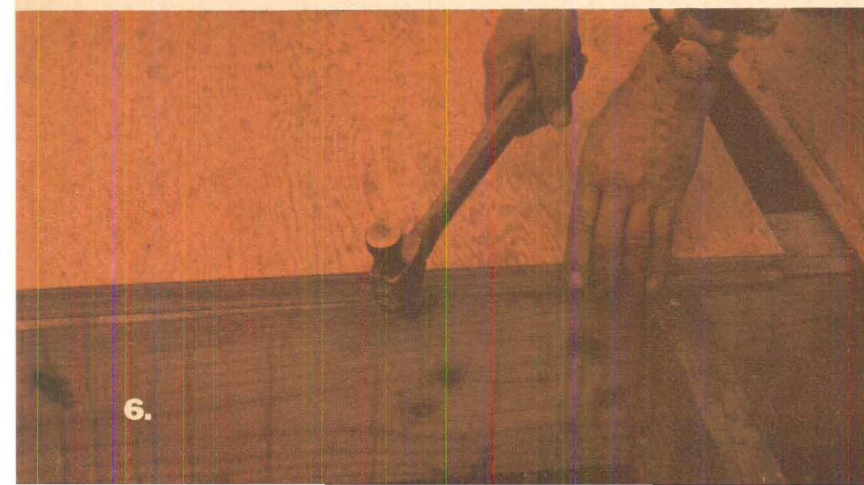


4.

**SOUND-CONDITIONED PARTY FLOOR WITH PLYWOOD SUBFLOOR-UNDERLAYMENT**



7.



6.

# Boards or plywood?

## New cost study proves what most builders already know: Plywood subfloors cost less for both labor and materials.

(And plywood underlayment does the best job under any kind of resilient flooring.)

Plywood won hands down when the Small Homes Council-Building Research Council of the University of Illinois recently took a look at the costs of five floor systems.

All five were installed by the same crew, under the same conditions. Builder was William Lechliter, Longmont, Colorado.

**(1)** Plywood over butted joists (rather than lapped) was used for both the lowest cost systems.

**(2, 3)** The lowest of all (\$283 for the 912-sq.-ft. floor) used 1/2" plywood over 2x10's, 24" o.c.

Other systems used plywood over 2x8's, diagonal and T&G boards, and preframed plywood panels.

Builders may obtain the complete report for \$1.50 from the Small Homes Council, University of Illinois, Urbana, Ill.

All the floor systems included in the above study were designed for the type of hardwood flooring which doesn't call for separate underlayment. As a base for resilient floor coverings, use plywood underlayment (*not* ordinary plugged Interior sheathing).

**(4, 5)** Underlayment-grade plywood with a smooth sanded face and a special second ply will resist bumps, concentrated loads, jabs and blows. It comes in thicknesses from 1/4" on up.

**(6)** Extra-strong, 1 1/8-in. 2·4·1® plywood is subfloor and underlayment all in one panel. It has T&G edges, needs support only at 4-ft. intervals.

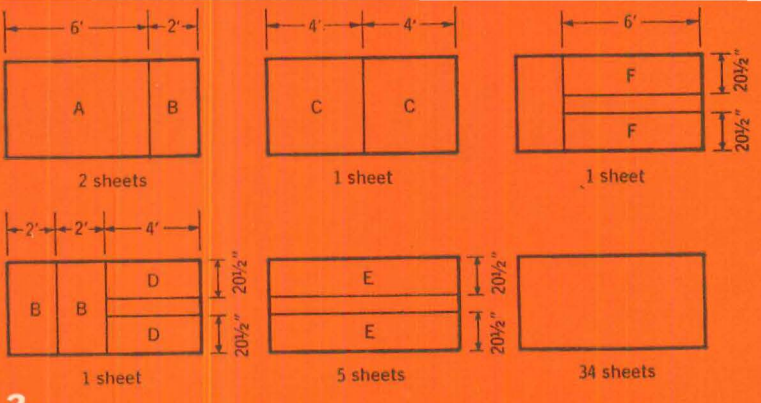
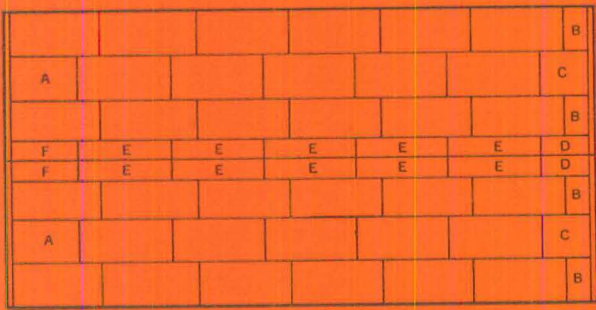
**(7)** This plywood floor system with 3/4" T&G subfloor-underlayment was specified in a Livonia, Michigan, apartment because it proved less expensive than a competitive fiberboard system, and gave superior control of airborne sound. Architects: Melvin H. Sachs & Associates. General Contractor: K & C Associates.

**Send for free booklets** on plywood floor systems, with recommendations on grades, application methods. Write (U. S. only): Floors, P. O. Box 951, American Plywood Association, Tacoma, Washington 98401.

(Continued)

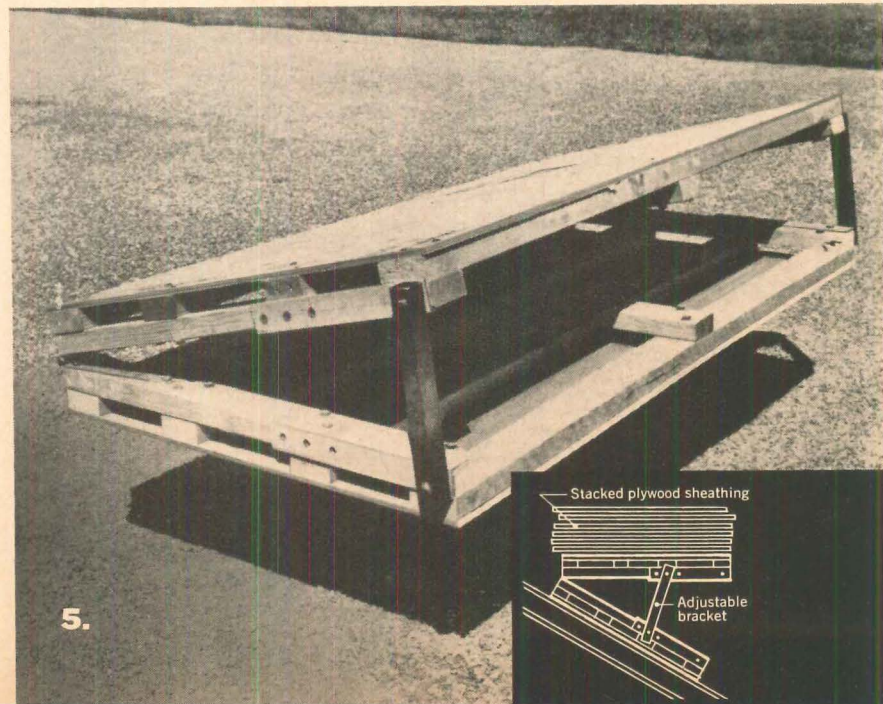
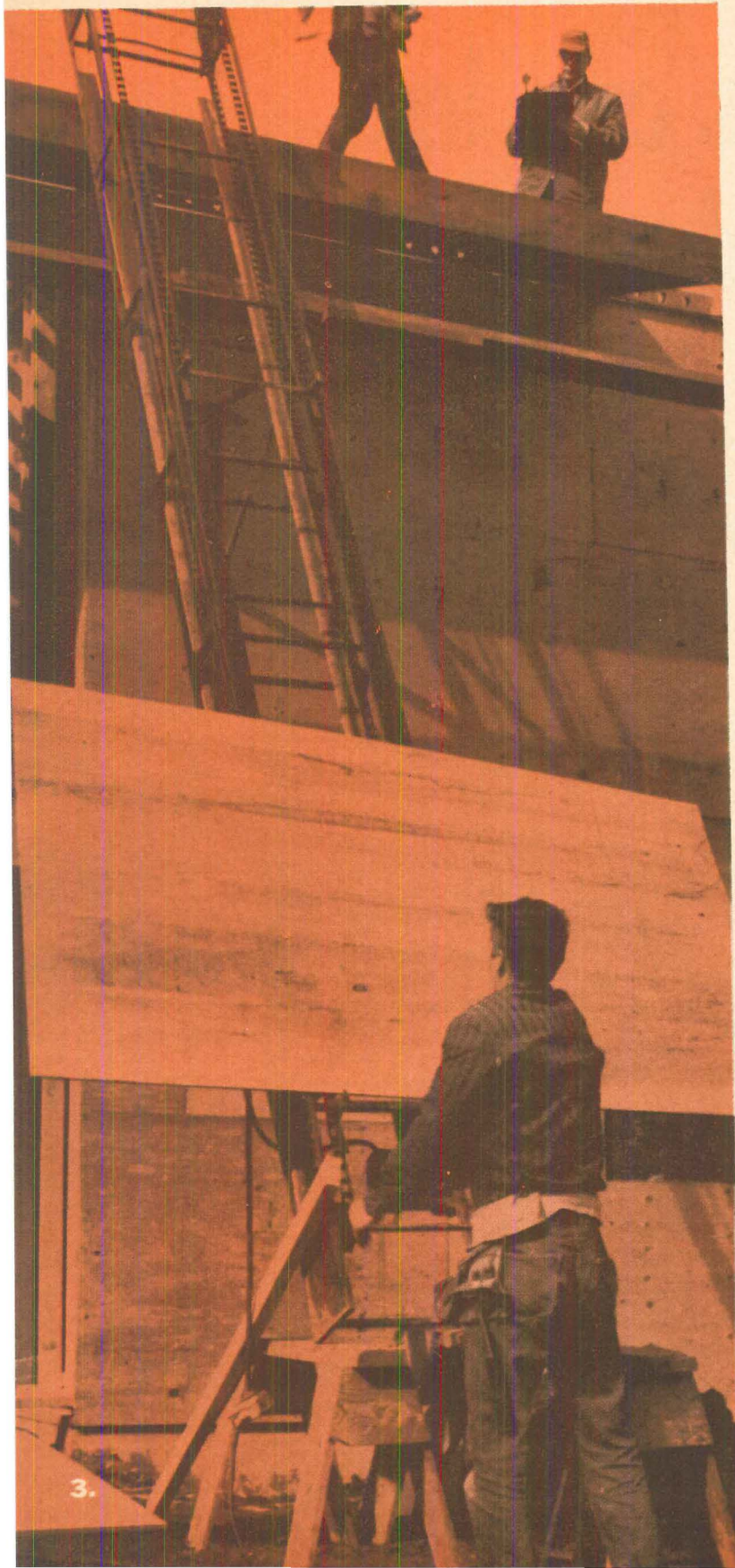


(Pitched Roof, 50' x 27'-5"; trusses 2' o.c.)



1.

2.



3.

5.

# Even though you're already saving money with plywood roof sheathing you can probably save still more.

## New research shows dozens of ways to cut in-place roof costs.

A recent study by the NAHB Research Foundation for the American Plywood Association pinpointed areas of biggest material and labor savings by using plywood roof sheathing more efficiently. Up to 15 per cent savings can be realized on most roof sheathing jobs.

The study used the Time and Methods Analysis Program (TAMAP) approach. Here are the recommendations that promise biggest savings:

**(1)** Pre-plan framing or truss placement to take advantage of plywood's 4-ft. module. Draw a roof plan allowing for use of as many full sheets as possible.

The diagram at left shows layout for a 1,371-sq.-ft. roof. If the 44 sheets in this layout are cut and used as shown, there's only eight square feet of scrap.

**(2)** Then work out a cutting plan so leftover pieces can be used elsewhere.

**(3)** Save labor by minimizing handling. Use conveyors or forklifts to get sheathing to the roof.

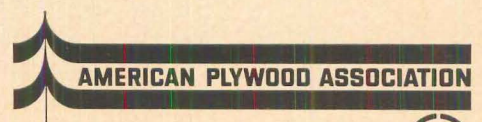
**(4)** Or for smaller jobs, a simple lean-to rack may be the answer.

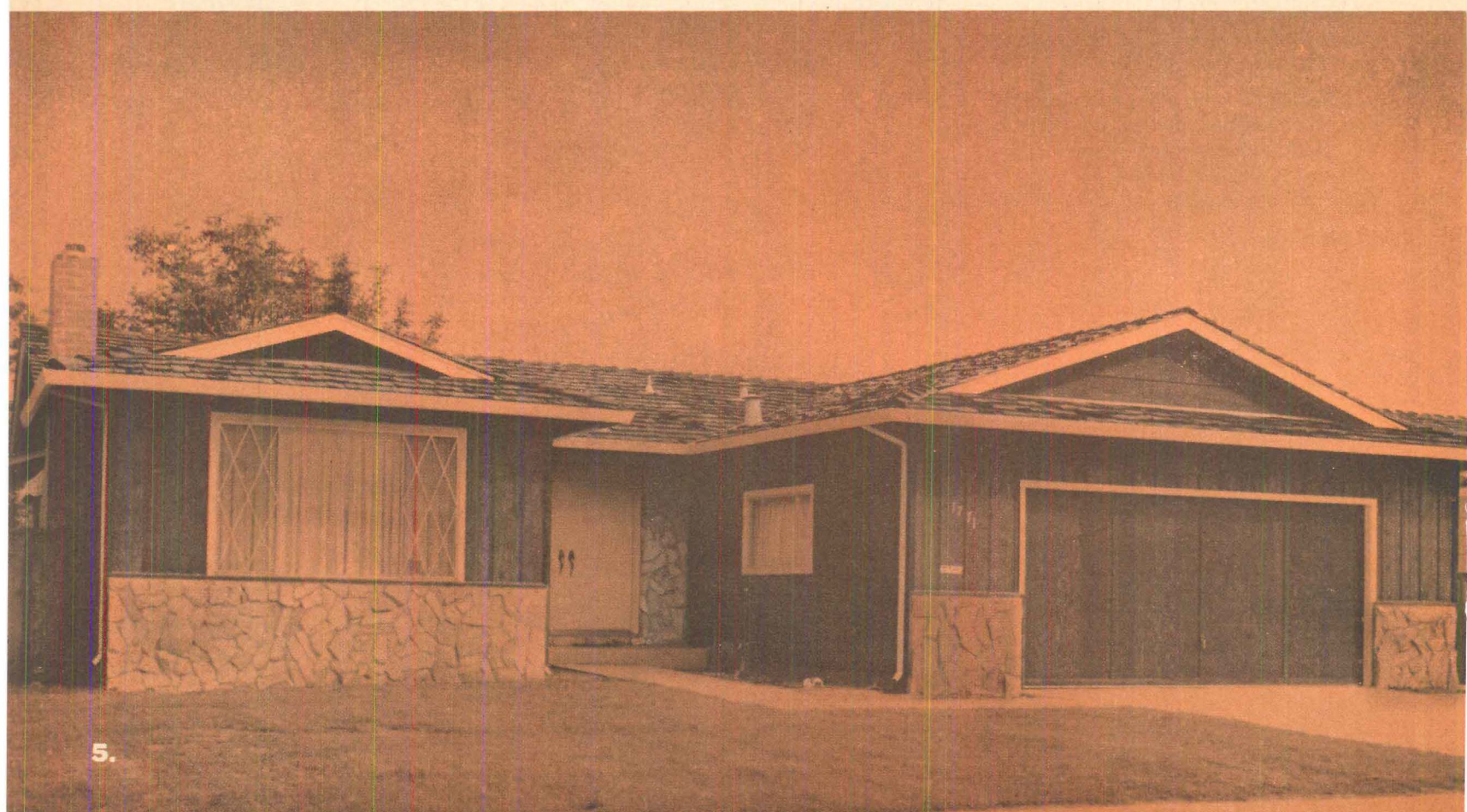
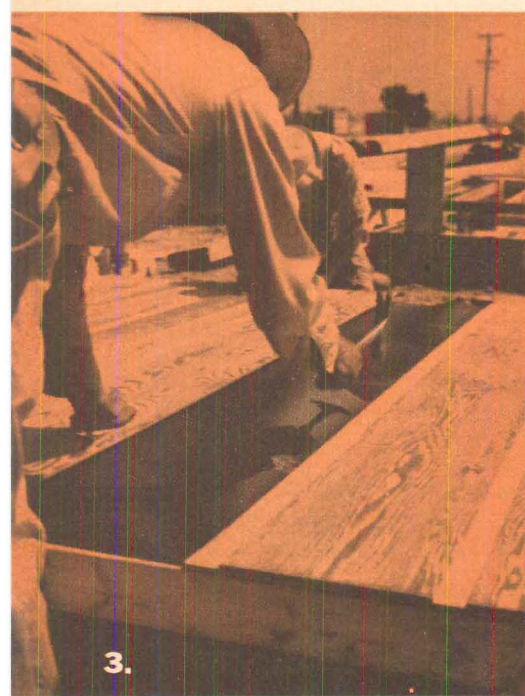
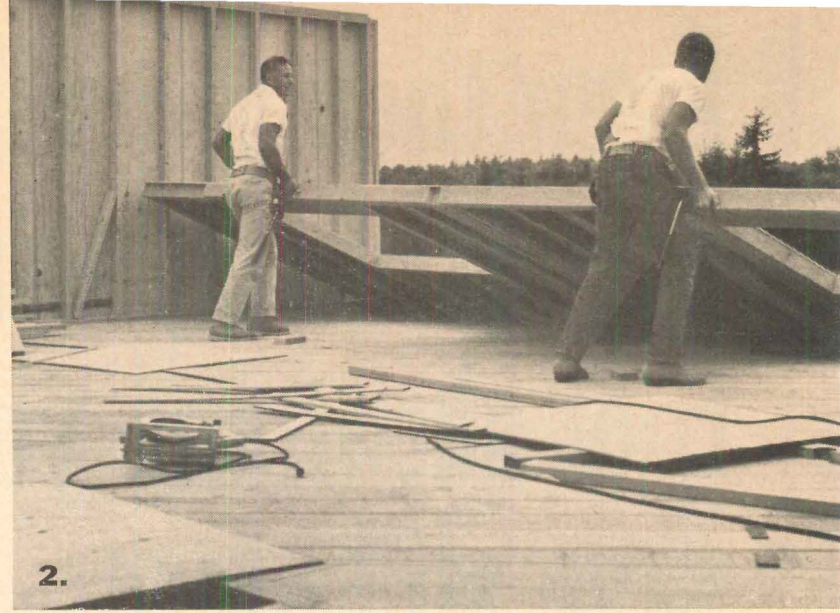
**(5)** An adjustable platform to keep stacks of plywood level on pitched roofs can save a surprising amount of labor.

The report also covers other areas of potential savings, from comparison of fastening methods to tips on tool storage.

**For your free copy** of the TAMAP report, see coupon at end of this section.

*(Continued)*





# Half-inch plywood is the strongest wall sheathing you can use, but if costs are really important, try $\frac{3}{8}$ " or $\frac{5}{16}$ ".

And if you want to save even more, try Exterior plywood that serves as siding and sheathing too.

Bert Lenting, partner in Vista View Builders, Renton, Washington, switched to  $\frac{3}{8}$ " plywood wall sheathing eight years ago.

"It costs a good deal less than half-inch," he says, "and it's plenty strong." Lenting's firm (like Schulte & Blackwell, below) saves time with tilt-up.

**(1)** Wall sections are sheathed on the job, then **(2)** tilted up into place. Siding and plywood accent panels are applied later.

Lenting uses plywood roof sheathing too, and figures that altogether he saves at least \$100 a house with time-saving plywood applications.

Vista View builds about 24 quality homes per year in King County, Washington. Most are in the \$24,000-\$30,000 range.

Single-wall plywood construction saves two weeks per house for Schulte & Blackwell, Santa Clara County, California builders.

**(3)** They use rough-sawn grooved plywood, applied directly to the studs. (In this area, insulation between studs isn't necessary.) **(4)** They assemble entire walls on the deck slab, then tilt them into place. The wall system cuts labor costs so much that it compares with stucco—the most inexpensive surfacing in the area.

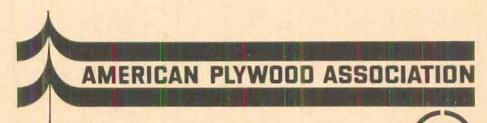
**(5)** Blackwell says, "This means we can offer homes in the same price range with stucco, but with the extra beauty of wood siding." They were worried

at first about public reaction to a non-stucco house, but sales have been ahead of building schedules from the start.

**For free booklets** on plywood wall sheathing and new plywood sidings, write (U.S. only): Walls, P. O. Box 869 American Plywood Association, Tacoma, Washington 98401.

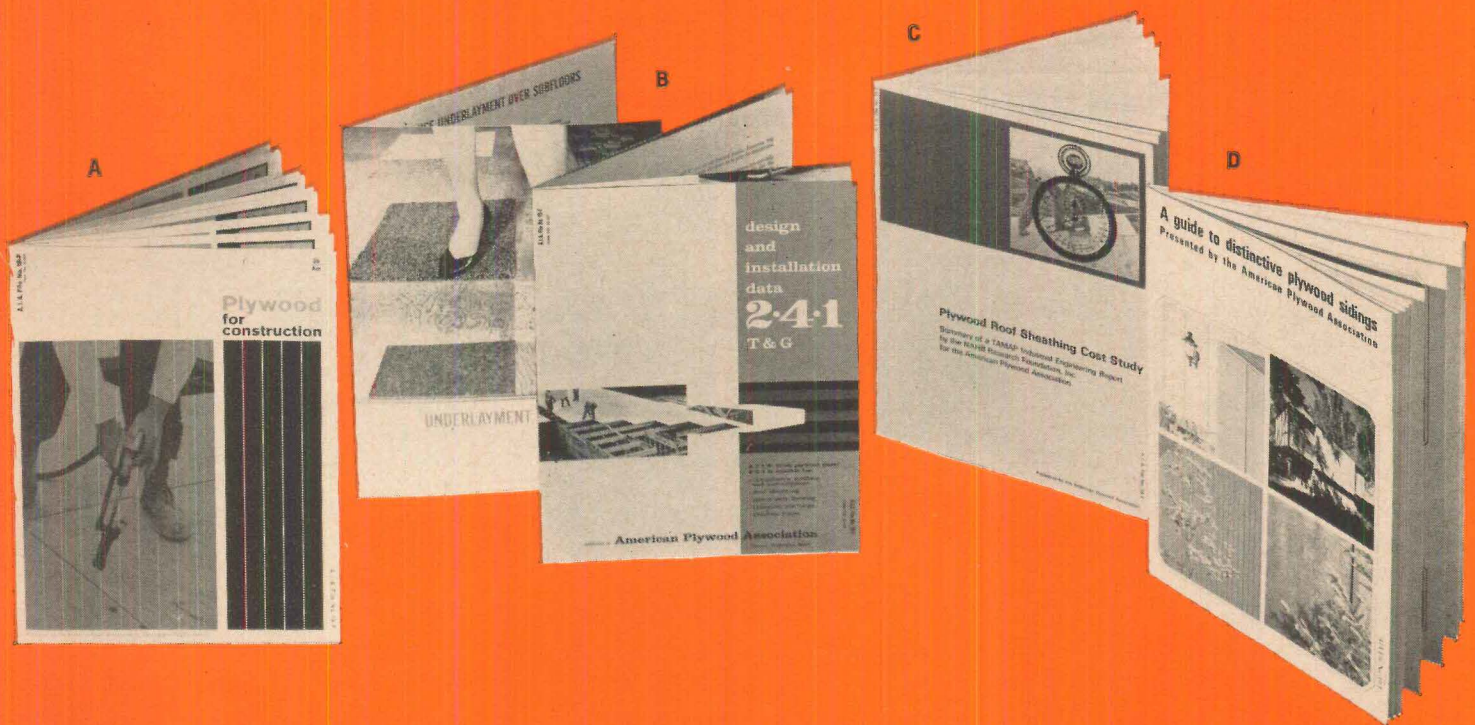
**The DFPA grade-trademark is your assurance of quality plywood.**

It's essential to use highest quality plywood sheathing—whether for roof, wall or floor. You must be able to assure your customers of quality construction, and you want to avoid costly callbacks. So it pays to insist on the American Plywood Association's DFPA grade-trademark whenever you buy or specify plywood. That means it was manufactured according to the high standards of the Association's testing and inspection program. Always look for this grade-trademark on every panel.



# Send for these helpful plywood booklets.

They're new. They're fully illustrated. They're free.



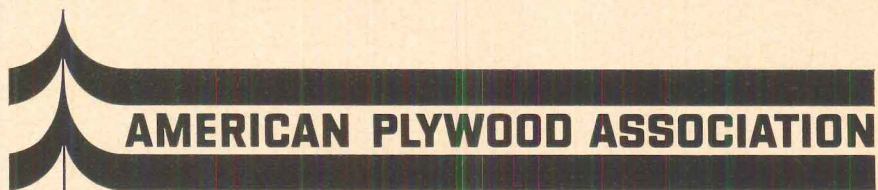
(A) **Plywood for Construction** — Application and specification guide to plywood wall, roof and floor systems.

(B) **2.4.1 Subflooring** — Latest on T & G 2.4.1 with installation notes, load-span tables. **Underlayment Grade Plywood** folder includes plywood underlayment grades and applications.

(C) **Plywood Roof Sheathing Cost Study** — Summary of TAMAP sheathing research.

(D) **Guide to Plywood Sidings** — Standard and specialty sidings guide.

For more facts, contact us in Tacoma or at any of our regional offices: Atlanta, Chicago, Dallas, Detroit, Los Angeles, Minneapolis, New York, San Francisco, Washington, D. C.



American Plywood Association  
Tacoma, Washington 98401, Dept. H



Please send me the free booklets I have checked at left.

Name \_\_\_\_\_

Firm \_\_\_\_\_

Address \_\_\_\_\_

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

(USA only)





*The finest manufactured cabinet of them all  
makes the most beautiful kitchen of them all*



H. J. SCHEIRICH CO.

P.O. BOX 21037 LOUISVILLE, KY. 40221

BRONZEGLOW® BIRCH ROYAL® BIRCH HEATHER® BIRCH MOONGLOW® VANITIES



**Open occupancy**

H&H: Your editorial on open-occupancy housing [July] was excellent. It is about time that a responsible publication within our industry started to publish the practical points involved. Your four points are the practical reality of the situation.

I hope your editorial is a starting point from which you will expand the theme, give coverage to the available examples, and generally help our industry more from a position of ignorance, fear, and passiveness to a position where it will not write off a growing and major segment of our rightful market.

It will interest you that a group of developers, real estate brokers, mortgage bankers, and attorneys responded to a call from the Chicago Conference for Religion and Race, and have formed a housing task force that is involved with the obvious obligations of our industry toward this problem. Thus far we have aided nonprofit sponsors, are helping to create a development trust, helping to implement integration in nonwhite suburbs, and supporting positive legislative goals. At the least we have begun in our own way within our city. At the most we have begun to build a bridge of confidence between our industry and the major religious groups involved.

MARVIN B. MYERS  
Marvin B. Myers Real Estate Development  
Chicago

H&H: Congratulations on your editorial on open-occupancy. You have presented the issue very fairly and are to be commended for your conclusions.

JAMES L. PEASE JR.  
Pease Woodwork Co.  
Hamilton, Ohio

H&H: After reading your editorial I am certainly disappointed in your attitude toward forced housing.

I do not see why forced housing should be inevitable, and it is impossible for me to comprehend why a long established and cherished right of ownership should be taken away from the majority in order to grant a so-called right to a minority group. Surely the right to own property includes the right of freedom to dispose of this property.

I truly hope and pray that your opinion and those of others in positions of influence will change after giving further thought to this drastic proposal.

ROBERT P. ALBERGOTTI JR.  
Norfolk, Va.

H&H: It was really refreshing to read your editorial on open-occupancy housing. It is always good to know there are men like you who will write what they believe.

May you have the courage to continue to write such articles in support of our drive toward full equality of opportunity.

FREDERICK D. GAINES  
Frederick D. Gaines Real Estate  
Philadelphia

**Tight-money squeeze**

H&H: Congratulations on your June editorial. I quite agree that the low and lower-middle income housing is being hardest hit as a result of the current tight money market. It could lead to more direct government lending as private rates have to go up and also to more public housing since private industry can't meet this need.

As an economist I agree with the reasons for the present Federal Reserve action. But as a private lender, I feel that the savings and loan industry, and in turn the building industry and the homeowner, have been caught in the middle of a squeeze resulting from the lack of coordination of policies to which you referred. Using monetary policy as the only instrument to meet the problems of inflation and the balance of payments is like trying to shoot an elephant with a B-B gun.

I think you are doing a fine job with HOUSE & HOME. Somehow the editorial and articles reflect more realism and a greater attention to all segments of housing than was previously the case.

KARL L. FALK, president  
First Federal Savings and Loan Assn.  
Fresno

H&H: Your editorial on the housing and mortgage situation makes a great deal of sense. It is a most timely interpretation of our present crisis.

P. L. GREENAWALT, president  
The Kissell Company  
Springfield, Ohio

**Planned unit development**

H&H: I have read with interest your article on planned unit development [July]. It will be helpful to planning boards and governing bodies of the numerous municipalities throughout our metropolitan area.

D. DAVID BRANDON, director  
Herkimer-Oneida Counties  
Comprehensive Planning Program  
Utica, N. Y.

**Publicly held companies**

H&H: Your July article on publicly held companies is very timely. I consider it about the best analysis of the whys and hows of building companies so far as the financial community is concerned.

I would like to call your attention to one error. You show Continental Homes with \$96,000,000 debt. If you will look at our statement again, you will see that our debt is \$96,000. You have given us too much credit there.

RALPH C. LESTER, chairman of the board  
Continental Homes Inc.  
Roanoke

*Reader Lester is right H&H apologizes for a proof-reading slip.—ED.*

**Heating-System Rivalry**

H&H: My compliments on your roundup of heating and cooling [June]. Your article was certainly comprehensive and struck me as being objective—no mean task with the pressures you must feel in today's competitive market.

RAY SCHUMACK, executive director  
Better Heating-Cooling Council  
New York

**New towns**

H&H: Your analysis of new-town concepts and problems [June] was most incisive, cutting through the veil of glamour with which such massive operations are cloaked and exploring the fundamental obstacles with which they are confronted.

PAUL G. GILL, management consultant  
Stony Brook, N. Y.

H&H: . . . an excellent job.

W. LAWRENCE PREHN JR., director  
Department of Applied Economics  
Southwest Research Institute  
Houston

**Compact sewage treatment**

H&H: I am interested in contacting anyone interested in designing a compact, electrically operated sewage disposal unit which would be affixed to an individual toilet or to several toilets.

It should be no larger than a household washing machine and should use only a quart of water or less each time the toilet is flushed.

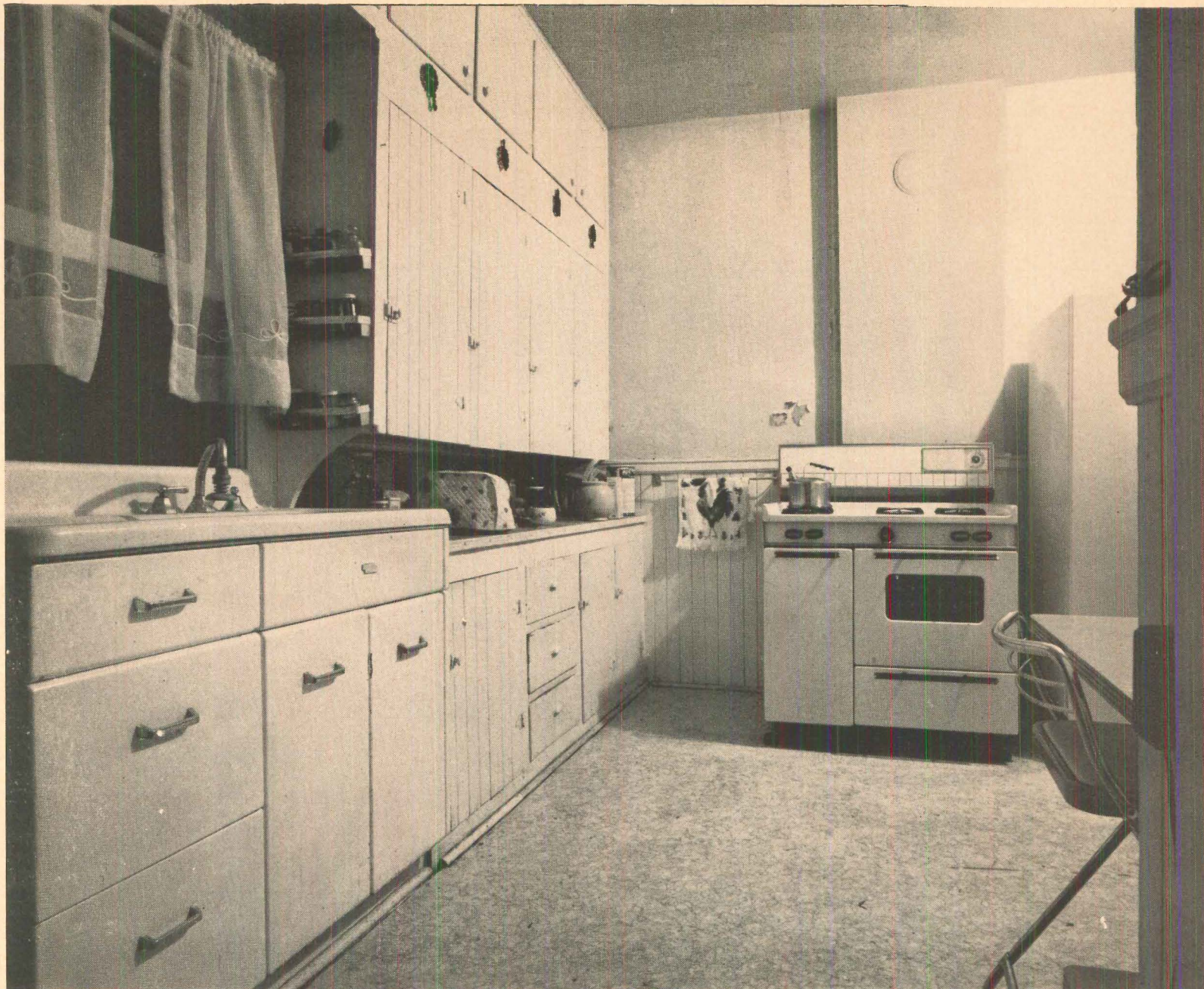
The unit would separate solids from liquids. Separated liquids would be treated chemically and disposed of through the system carrying off other household water. Separated solids would be chopped into small particles and consumed by an electric or gas-fired burner. Resultant gases would be forced through a deodorizer, then vented to the outside.

Pressed from plastic or light-gauge steel, the unit should cost no more than \$200 installed. Operating costs should be no higher than those of a clothes washer or dryer.

Use of such a unit could eliminate the need for packaged sewage treatment plants [H&H Apr.] and even of large sewage disposal plants, with their land requirements for settling basins, lagoons, etc.

F. ODELL WELBORN  
1108 Oakdale Road NE  
Atlanta, Ga.

<p><b>CHANGING YOUR ADDRESS?</b></p> <p>name _____</p> <p>address _____</p> <p>city _____ zip code _____</p>	<p><b>ATTACH LABEL HERE</b></p> <p>Please give five weeks notice before change of address becomes effective. Attach mailing label here and print your new address below. If you have any question about your subscription, include address label with your letter.</p>	<p>Subscribers: HOUSE &amp; HOME is available only by paid subscription. The publisher reserves the right to refuse nonqualified subscriptions. Position and company connection must be indicated on subscription orders forwarded to address shown at left. Unconditional guarantee: The publisher, upon written request, agrees to refund the part of the subscription price applying to the remaining unfilled portion of the subscription if service is unsatisfactory.</p>
	<p><b>MAIL TO</b></p> <p>House &amp; Home, 540 N. Michigan Ave., Chicago, Ill. 60611</p>	
	<p>_____</p>	
	<p>_____</p>	



# Someone's going to hear about it if you put a KitchenAid dishwasher in this remodeling job.

The folks that get a KitchenAid dishwasher in their remodeled kitchen are pleased because it works so well.

So naturally they tell their friends about it. Even brag a little.

And all this happy talk leads to more referral business for you.

You might wonder what we've done to get KitchenAid talked about like this.

Plenty. We build high-quality home dishwashers, just as well as the commercial models we've been building for the last 80 years.

They work dependably for years and years, and look as good

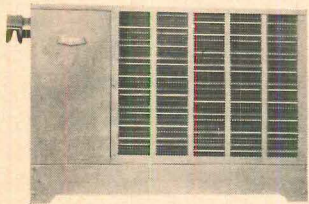
as they work. (Vari-Front panels make it easy to match any kitchen decor.)

There are three built-in models to choose from, three price ranges. And the only dishwasher-sink combination on the market.

Let us help you make your remodeling jobs the talk of the town. See your distributor. Or write KitchenAid Dishwashers, Dept. 6DS-9, The Hobart Manufacturing Company, Troy, Ohio 45373.

**KitchenAid<sup>®</sup>**  
Dishwashers

After introducing  
4-ton unit, then  
the 7½-ton unit  
unit, the 15-ton  
the 20-ton unit



## Bryant quietly introduces the 3-ton

Sound a little anticlimactic? Really it isn't.

For Bryant now has a full line of rooftop heating and air conditioning units. To fit the big jobs. To fit the small jobs. To fit the in-between jobs.

Our new 3-ton unit has a heating capacity of 100,000 Btu/hr. and will operate on either natural or propane gases.

The unit is shipped completely assembled, fully charged

and ready for simple, time-saving installation on a roof or a slab. It's compact: 45¼" wide x 33¼" high x 50¼" deep.

On natural gas units, if the pilot goes out, it relights automatically.

For quiet cooling operation, the Bryant compressor is mounted in an insulated compartment.

Further quietness is achieved by using low-speed con-

cing the  
e 5-ton unit,  
, the 10-ton  
n unit, &  
it,

## **all-weather heating and cooling unit.**

denser fans in conjunction with an over-sized condenser coil.

The 2-in-1 condenser coil provides almost 20 degrees of sub-cooling with increased operating efficiency.

In addition to our 3-ton unit, we have 4-ton, 5-ton, 7½-ton, 10-ton, 15-ton and 20-ton units that do the same kind of job.

On your next light industrial or commercial job, look into the Bryant line of heating (warm air, hot water, steam)

and air conditioning (gas or electric). You may be pleasantly surprised with the quality, pricing and flexibility of the Bryant line.

Call the local Bryant dealer, distributor or Factory Branch.

Bryant Manufacturing Company, Indianapolis, Ind. 46207.



# The fullest line in the business

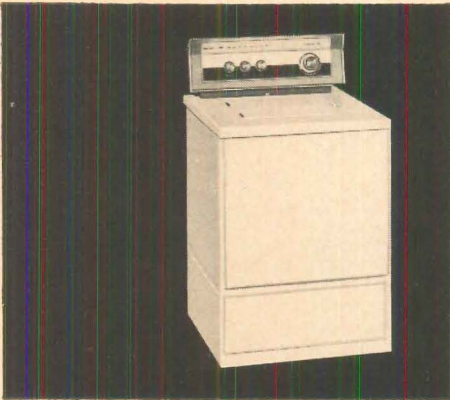
Hotpoint  
**SINGLE**  
**SOURCE**  
Builder Program

Now you can have true freedom of choice... Hotpoint's Single-Source Builder Program offers every kind of builder appliance, plus an almost unlimited selection of models to fit your cost, size and style requirements perfectly. It's the *fullest* line in the business! And it's backed by Hotpoint's 90-Day Replacement Guarantee of Satisfaction, in addition to the standard parts and labor warranties.

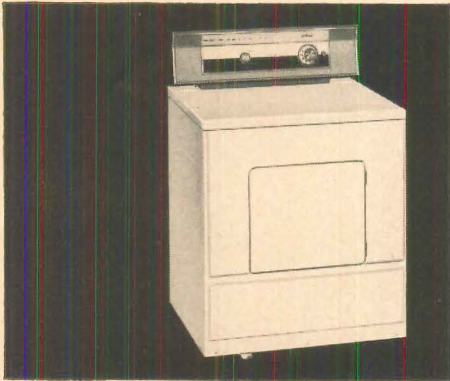
## Hotpoint

*first with the features women want most*

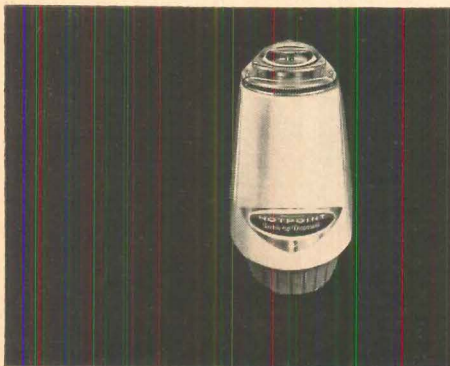
Hotpoint—General Electric Company • Chicago, Illinois 60644



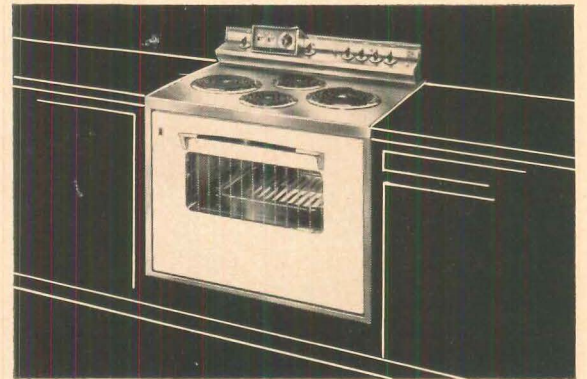
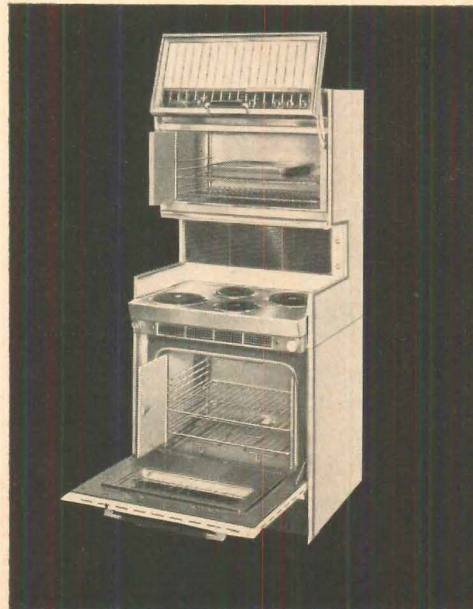
11 Washers



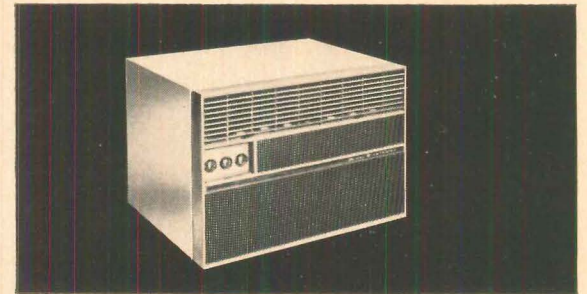
10 Dryers  
6 Food Waste Disposers



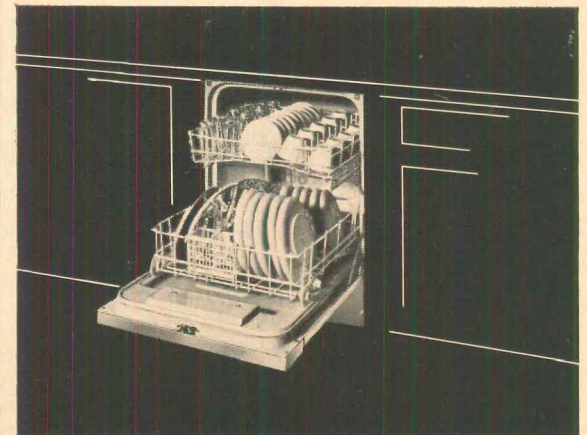
22 Refrigerators  
37 Ranges/Ovens/Surface Units



6 Drop-in Ranges



8 Air Conditioners plus a  
full line of Electric Heat Products



4 Dishwashers

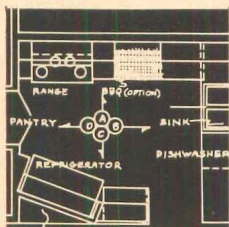
# ...the best in professional builder services

And Hotpoint helps you keep costs low with a full range of expert technical and building services. Example? A builder was planning to install a U-shaped kitchen in the homes of one of his major subdivisions; he called in Hotpoint early and our Kitchen Planners showed him how a corridor-kitchen plan could be substituted. This eliminated costly corners and more than 100' of countertop, saving the builder more than \$45.00 on each unit.

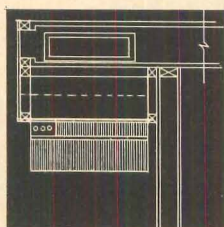
You'll sell better with Hotpoint, too. Because it's a name customers know and

respect. Over a million dollars in dramatic TV and magazine advertising is pre-selling prospects on Hotpoint's outstanding features — like Teflon-coated oven walls, No-frost refrigerators on wheels, and an automatic washer that does hand-washing better than hands.

Your local Hotpoint distributor stocks the full-line. So, call him today to get the full story on our Single-Source Builder Program. He wants your business, and can deliver the products and services to earn it!



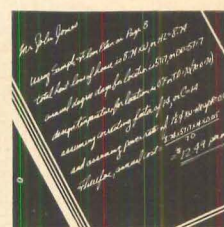
Kitchen and Laundry Planning



Air Conditioning Calculation and Layout

No.	Room	Sq. Ft.	Room Type	Room Use	Room Temp.	Room Adj.	Room Load	Room Load	Room Load	Room Load	Room Load
1	Bedroom #1	120	B	1	65	0.5	1.0	1.0	1.0	1.0	1.0
2	Bedroom #2	120	B	1	65	0.5	1.0	1.0	1.0	1.0	1.0
3	Hall	30	H	1	65	0.5	1.0	1.0	1.0	1.0	1.0
4	Bathroom	50	B	1	65	0.5	1.0	1.0	1.0	1.0	1.0
5	Kitchen	100	K	1	65	0.5	1.0	1.0	1.0	1.0	1.0
6	Living Room	200	L	1	65	0.5	1.0	1.0	1.0	1.0	1.0
7	Dining Room	150	D	1	65	0.5	1.0	1.0	1.0	1.0	1.0
8	Office	100	O	1	65	0.5	1.0	1.0	1.0	1.0	1.0

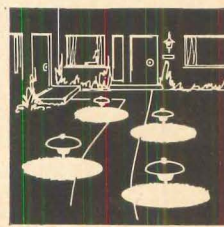
Heating Calculation and Layout



Heating and Cooling Cost Estimates

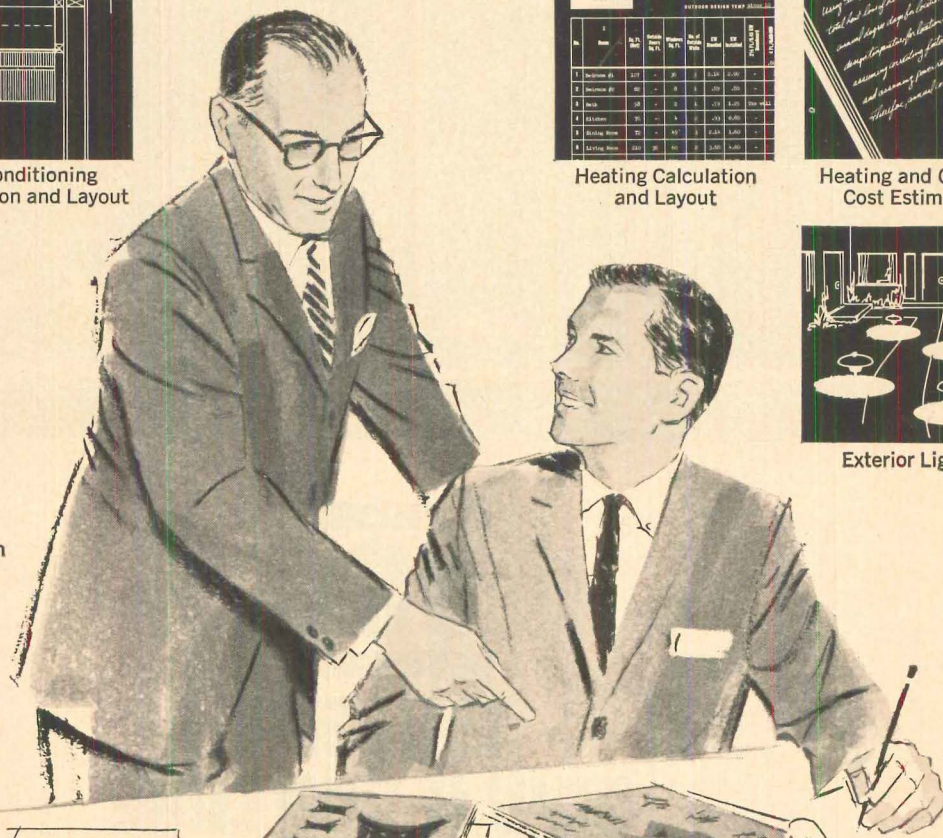


Interior Lighting



Exterior Lighting

Sales Promotion Assistance



# Hotpoint

first with the features women want most

Hotpoint—General Electric Company • Chicago, Illinois 60644



★ ★ ★  
**USO**  
 ★ ★ ★  
**IS THERE...**  
**ONLY IF YOU CARE**

The USO is a marine's chance to unwind over a cup of coffee 200 yards from the barbed wire edge of trouble. If you care.

The USO is a warm American greeting for a lonely sailor away from the teeming streets of a foreign port. If you care.

The USO is a smile lighting up a soldier's tension-creased face as Bob Hope entertains on a Southeast Asian battleground. If you care.

The USO is there, only if you care. Only your donations enable the USO to bring a little touch of home into the

lives of our 2,300,000 citizens in uniform—lives they are pledged to risk wherever freedom is threatened. Someone you know needs the USO. Someone you know wants a choice of conduct during his off-duty hours. Someone you know wants a haven in a hostile world. Someone you know needs a reminder that folks back home really care.

Show him you care. Give to the civilian-supported USO through your local United Fund or Community Chest.

USO is there, only if you care.







LAZY SUSANS—The 45-degree wall Lazy Susan and the 90-degree base Lazy Susan are two of the action conveniences in this Long-Bell kitchen

## The 21 conveniences of Long-Bell action kitchens give profitable eye and buy-appeal to your homes

You've seen it happen time and time again. Invariably, homebuyers head for the kitchen and start opening doors and drawers. In most other rooms they just stand and look — but the kitchen is an *action* center. That's why Long-Bell action kitchens pack such sales power. They have the conveniences your customers want.

Take the Lazy Susans shown above. They are strong and sturdy, yet turn effortlessly. The shelf edges are banded for elegance. The 90-degree base corner unit has a full-width bi-fold door which opens wide for full access. No pinched fingers, no unsightly gaps because the door is not attached to the shelves. When closed, the door rests on the

face frame, and the front of the Lazy Susan cabinet looks the same as the adjoining cabinets. Popular? You bet. So are the self-closing drawers, sliding shelves, two-way access cabinets, lid and tray racks and other Long-Bell conveniences.

### Wide choice of styles and finishes

Available in Shadowline, Provincial and Contemporary styling; and birch tone, walnut tone, white and gold, and natural finishes. A network of plants assures quick delivery nationwide.

### New Vanity Cabinets

The beautiful *new* line of Long-Bell vanity cabinets now being introduced is a traffic-

stopper, too. Better fill out and mail the coupon below right away. Long-Bell is where the "action" is — nice money-making action for you!

INTERNATIONAL PAPER  
P.O. Box 8411, Dept. 612  
Portland, Oregon 97207

Tell me more about Long-Bell Kitchens and Vanities.

- Please send literature and specifications.  
 Please have a representative call.

I am a  Builder  Architect  
 Dealer  Distributor  
 Other: \_\_\_\_\_

Company \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_  
State \_\_\_\_\_ ZIP \_\_\_\_\_  
Attn. of \_\_\_\_\_



**INTERNATIONAL PAPER**  
LONG-BELL DIVISION

# Eljer's Planter Top... another proven attention-getter for display homes!

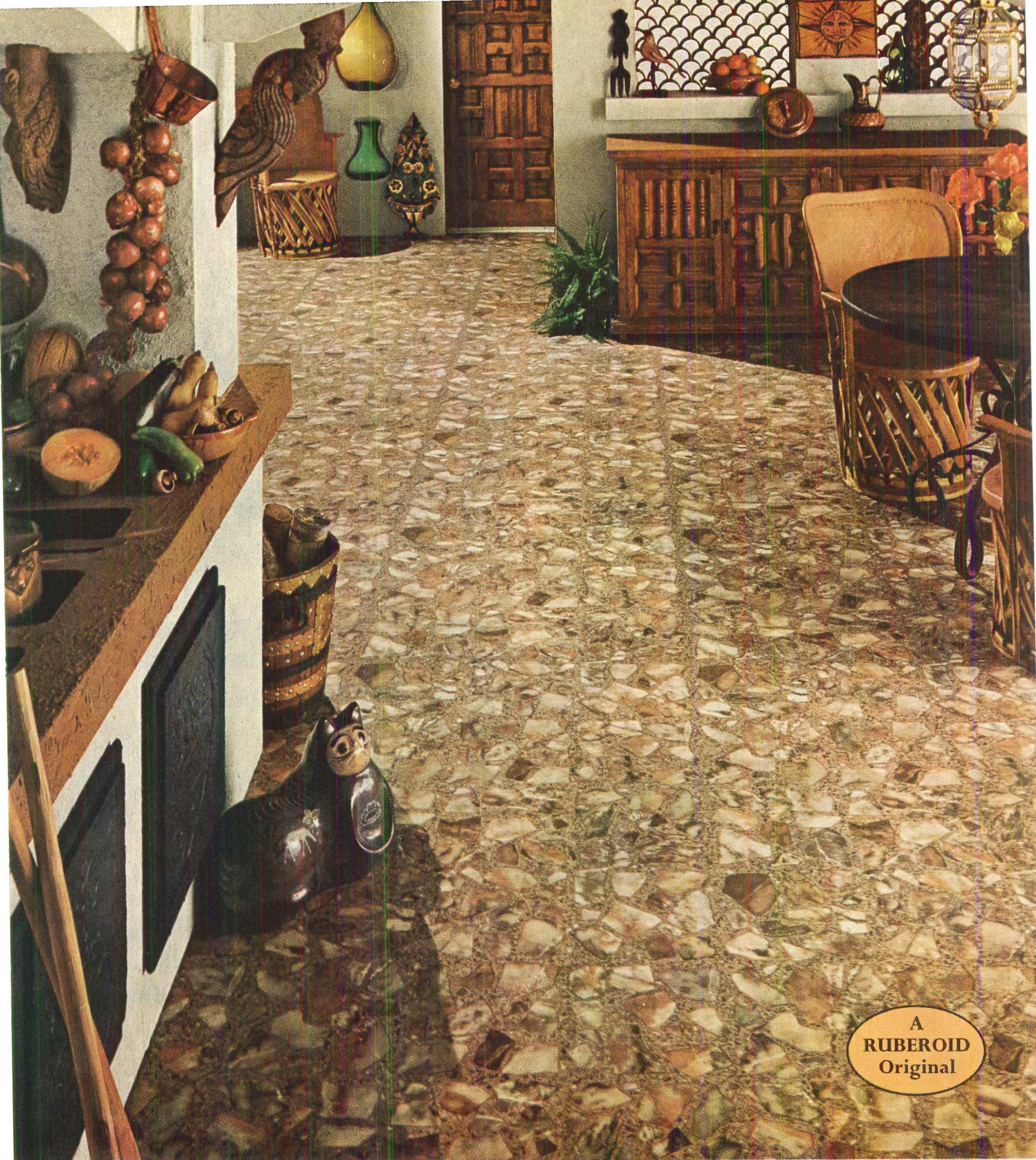
Prospective buyers like the "extra touch" of beauty Eljer's Planter Top adds to model-home bathrooms. They appreciate its handy recessed shelf for storing toilet articles and books... and built-in planter that holds live or artificial greenery. Eljer's Planter Top is decorative and useful, features sure to please your most discriminating customers.

Increase your sales with Planter Top, available in Eljer pastels and white. Fits Eljer's Emblem, Ellis, Walford, Estate and Orlando toilets. For information on more Eljer plumbingware traffic stoppers, call your Eljer representative, or write Wallace-Murray Corporation, Eljer Plumbingware Division, Dept. HH, P.O. Box 836, Pittsburgh, Pa. 15230.



**MASTER**  
CRAFTED  
**ELJER**  
SINCE 1904 FINE PLUMBING FIXTURES

Circle 75 on Reader Service Card



A  
RUBEROID  
Original

**The mood is Mexican. The comfort is Luran<sup>®</sup> vinyl.**

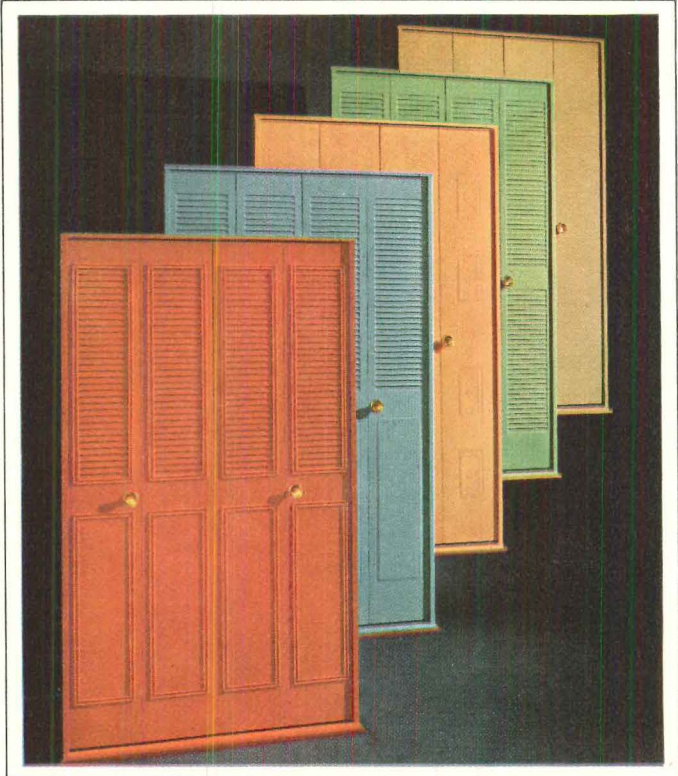
This is Mexican Agate—a Luran Airtred™ vinyl flooring, richly veined as translucent marble. A RUBEROID Original! Extra-heavy vinyl wear surface is suitable for many commercial installations as well as fine homes. Tiny foam pillows under the surface resist indentations, help hide subfloor irregularities...subdue noise, give underfoot comfort. Luran comes in rolls 6' wide—easy to cut and fit. Seam expertly fused with Vinylweld<sup>®</sup> is almost invisible. Use on, above or below grade. Ask your RUBEROID flooring dealer to show you other RUBEROID Originals—vinyl flooring and vinyl asbestos tile. Want more information? Write RUBEROID, Fullerton, Pa., Dept. HH-96.



**RUBEROID<sup>®</sup>**



**Building?  
Economy Budget?  
Intermediate?  
Luxury?**



**We aren't just whistling  
Dixie when we say Float-Away  
has the best X #\*! metal closet  
doors on the market.**

**We've got a metal door  
that is designed, engineered  
and priced for your needs,  
in three price ranges. So why  
install anything but Float-Away  
when you can get better value  
from our single source operation?**

**Quality-for-quality,  
dollar-for-dollar,  
Float-Away doors  
can't be beat anywhere.**

**We want your closet door business!**

We welcome direct inquiries from makers of manufactured and mobile homes.

A few choice territories are open for qualified dealers.

Write or phone for full information:

**FLOAT-AWAY DOOR CO.**  
1173 Zonolite Road, N. E., Atlanta, Ga. 30305  
Dept. H-966 AND London-Lenscrete Ltd.  
Queen's Circus, London S. W. 8, England



**EDITORIAL**

*Our urban future*

**No 1984 awaits us, if we work towards a profitable, meaningful melding of public and private sectors**

Few of us today doubt that the U.S. faces an urban, even a suburban crisis in physical environment. The violent events of this summer show clearly that despite massive federal aid to urban areas, not many answers to the problems of urban living have been found. The government has done a creditable job with interstate highway systems, flood control, agriculture, defense, and the like. But when it comes to improving the very fabric of our urban plant, we are still stymied. Our cities pollute the air and water. They are choked with traffic. And their rotting cores are increasingly abandoned by business and the affluent and the middle class.

One reason for this crisis: Entrepreneurs and private enterprise have traditionally stuck to the blind faith that out of economic motivation would come an unplanned but functional beauty. That, needless to add, is not true.

As Harvard Economist John Kenneth Galbraith told the American Institute of Architects, "There is no reason to believe that an unplanned metropolis will have any better chance of beauty than an unplanned office building, and it won't be any more functional."

In Galbraith's words, "The problem of environment . . . is that we have for long assumed that it must be subordinate to economics. Accordingly, questions of beauty, livability, even health, have been of secondary importance. Cities, it has been assumed, must grow. That is economic progress. They are ugly but that is the price of progress."

Obviously, the trouble with relying only on economic progress is that it does not provide public services, area-wide planning, open space, adequate educational facilities, pleasant and healthy environments, medical facilities, or an opportunity for everyone to make his own contribution to society.

We know from our past experience with urban sprawl that public services must grow if private enterprise is to continue to thrive in the cities, the suburbs, and the whole megapolis. Public control of water, air, and transportation must expand if private growth is to be even possible, let alone profitable.

There are those who would confine government's function to controlling predatory elements in society. But all predation does not consist of police-blotter crime. Slums are predation; air and water pollution is predation; and unfettered land use can be predation. Clearly, government's function is also to promote the general welfare and the goals that indi-

viduals cannot achieve unaided: education, parks, clean water, sewage disposal, flood control, adequate transportation, etc.

Whether these public services are provided by local communities (where builders have more of a chance to make a contribution) or by the federal government is really a matter of how well the communities use their tax base.

Well-managed communities — those with good financial control, realistic assessments, imaginative planning — will probably pay for improved services through resultant increases in property values, and without necessarily raising taxes.

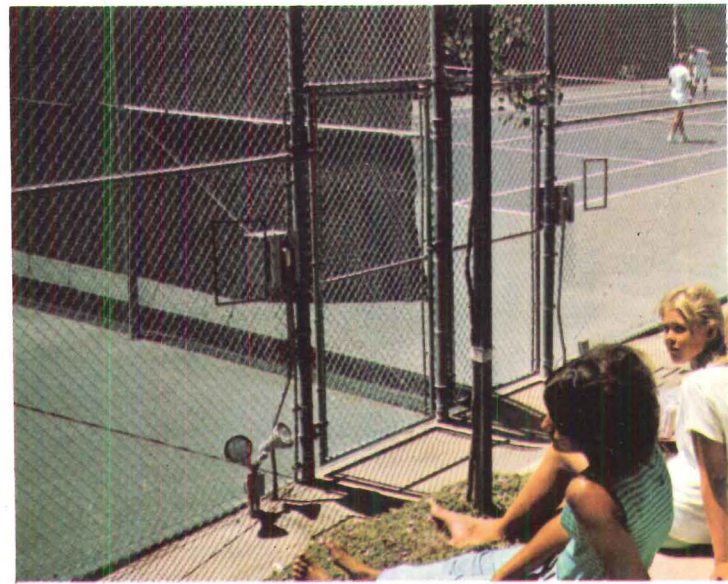
On the other hand, communities which have suffered from decades of political mismanagement are caught in a fiscal bind. Obsolescence plus failure to maintain basic services have eroded the tax base so that the community not only must raise its tax rates but also needs plenty of revenue sharing from higher levels of government. The Committee of Economic Development, a council of national business leaders, suggests that a breakdown in local services is simply a crisis in local government. For builders and developers, running the gantlet of local-planning, zoning, and building officials defeats all but the most ambitious effort toward innovation and beauty.

These problems are as common in small towns as they are in many large metropolitan areas. And in both places the housing industry must learn more about working effectively with state and federal bodies.

The need for closer cooperation between private enterprise and government is particularly urgent because our metropolitan areas will have to accommodate 150 million more people in the next 30 years. The task ahead: completely rebuild our urban environment in the next four decades.

It's clear that housing will be deeply involved with governmental bodies controlling the necessary public services for that phenomenal growth. While we study the prospect of closer alignments with bureaucracy, let's hope the bureaucrats will know full well how closely they will have to work with us. For instance, while urban renewal has recreated a viable tax base in many downtown areas, it has also lost most of private enterprise's goodwill. Waiting an extra three months to get a project moving, while some civil servant pushes paper around a desk, has bankrupted many a builder and ruined many excellent plans.

—RICHARD W. O'NEILL



# RECREATION

## *It's today's fastest-growing market demand*

And if you think this demand is still in the optional-extra class, you're shutting your eyes to the most important housing trend of the decade. Today's buyer wants — and is usually able to pay for — not only a home but also an active and sociable way of life. This can take many forms: swimming clubs, community centers, golf and tennis clubs, marinas, etc. But whatever the form, the record shows that when well-conceived, well-run recreation facilities are part of a project, they pay off in sales for the builder.

Says Max Okun, builder and owner of the 246-unit Kenilworth Apartments in Kansas City, Kan.: "We are forcing other builders in our area to provide recreation facilities like ours as a competitive necessity."

Says President Philip Stollman of Biltmore Development Co., developer of Detroit's 2,400-unit Somerset Park: "We consider our recreation areas the No. 1 reason we can't build apartments fast enough to meet the demand."

Says Sales Vice President Don L. Byrnes of Huntington Harbour Corp., which is developing a 2,500-home community south of Los Angeles: "Our beach club is the most important sales tool I've ever had. It is absolutely essential to our operation."

But while recreation is selling houses now, its implications for the future are even more significant. Says Emil Hanslin, whose 3,000-acre New Seabury community on Cape Cod is based on recreation (H&H, Apr. '62, Feb. '66): "Recreation is just one aspect of people's growing need for self-expression. The time is coming when recreation will be just one part of a full-scale cultural center, and this center will be the focal point of the entire community."

Recreation facilities are the housing industry's first major step towards this goal. *To see how the best of them are designed, built, and operated, begin on the next page.*

Recreation facilities, left, are all part of year-round developments. Photos are by Julius Shulman (top), Karl Reik (center and bottom left), and Joe Clark (bottom right).



## Swimming pools: most popular facility, and readily tailored to any type of project

In larger projects the pool may be just one part of a big recreation complex. But if the size or the budget of a project is limited, the swimming club invariably gets first call. According to Leon Panitz, developer of Joppatowne, Md., "Homebuyers just plain expect a pool, even if they don't use it."

### In lower-priced projects, the big community pool is usually best

Lower-priced projects tend to have more small children, and they can be more easily and less expensively supervised if they are in one place. In the absence of private clubs, the pool, together with some form of community center, is the social heart of the project. And perhaps most important, one big pool is a much less expensive proposition than a string of smaller neighborhood pools.

Typical of the community pool is one installed by Builder Andy Place of South Bend in Scottsdale, a project of 600 homes with an average price of \$18,000. Part of a community center, the L-shaped pool is 25 meters (Olympic distance) by 25 yards and has one- and three-meter diving boards. Price, including patio area and a children's wading pool, was \$43,000 — slightly lower than usual because Place dug his own excavation and poured his own concrete apron.

High-income buyers don't mind community pools if they don't serve too many families. At Builder Ed Bennett's Carderock Springs in Maryland, where the average house price is \$45,000, one pool complex serves 350 families. It includes a 25-meter by 43-foot main pool, a junior pool and a wading pool. Cost: \$8 a sq. ft., or a total of \$125,000 including decks and equipment.

(The increasing popularity of competitive swimming makes the Olympic distance important, and the irregularly-shaped pool a problem. For this reason an odd-shaped pool at Huntington Harbour, Calif., has created difficulties. But a Z-shaped pool at Joppatowne works out well because its design includes six 25-meter racing lanes.)

Kenilworth Apartments in Kansas City offers tenants year-round swimming in a 50'x80' outdoor pool (cost: \$23,000) and a 30'x50' indoor pool whose price tag of \$15,000 does not include that portion of the community building which houses it.

### Higher-income families prefer smaller neighborhood pools

In Fullerton, Calif., for example, Lakeside Partnership has two pools for a project

of 29 houses in the \$50,000 range (H&H, Apr.). Each 1,000-sq.-ft. pool cost \$4,500 (anything larger would be classed as commercial, with more expensive specifications), and the whole area, including cabana (*see cover photo*) cost \$18,000.

These neighborhood pools solved another problem: California buyers in this bracket are used to private pools. Lakeside's small lots precluded this, but buyers liked the idea — stressed by Lakeside salesmen — that neighborhood pools would give them most of the advantages of private pools without maintenance worries.

In Detroit, 2,400-apartment Somerset Park, with a rental range of \$155 to \$290, will have seven 1,200-sq.-ft. neighborhood pools. Cost, with appurtenances: \$26,000 apiece. The high family-to-pool ratio takes into account the fact that the project will include few children, and most of those will probably use an eighth Olympic-sized pool which will be built later as part of a big recreation center.

### Buyers or tenants foot the bill for both building and maintaining

In house subdivisions, the original cost of the pool — and other communal facilities as well — is hidden in the price of the house. In Andy Place's Scottsdale, the added cost for the pool was about \$70 per house; in Lakeside, about \$1,200.

Operating costs are usually paid by homeowners through membership dues for using the pool, as well as other community facilities. At Scottsdale, the \$8,000 annual operating cost of the pool takes 80% of the \$39 to \$46 each family pays to belong to the community center. And at Lakeside, dues of \$72 a year for each of the 29 families cover all operating and maintenance costs for the two swimming clubs.

Most builders retain ownership of the pool or pools until at least half, and sometimes all, the project is built. The reason: If the pool is badly run it could adversely affect the sales of remaining houses. Then the pool, together with contiguous facilities, is turned over to a community association, usually for a nominal \$1.

In apartment projects, both original and operating costs are carried through higher rents. At Somerset Park, the annual cost of running each pool is projected at \$7,000. This makes but a small dent in the average of \$10 per month added to each rental to cover maintenance and operation of all recreation facilities.

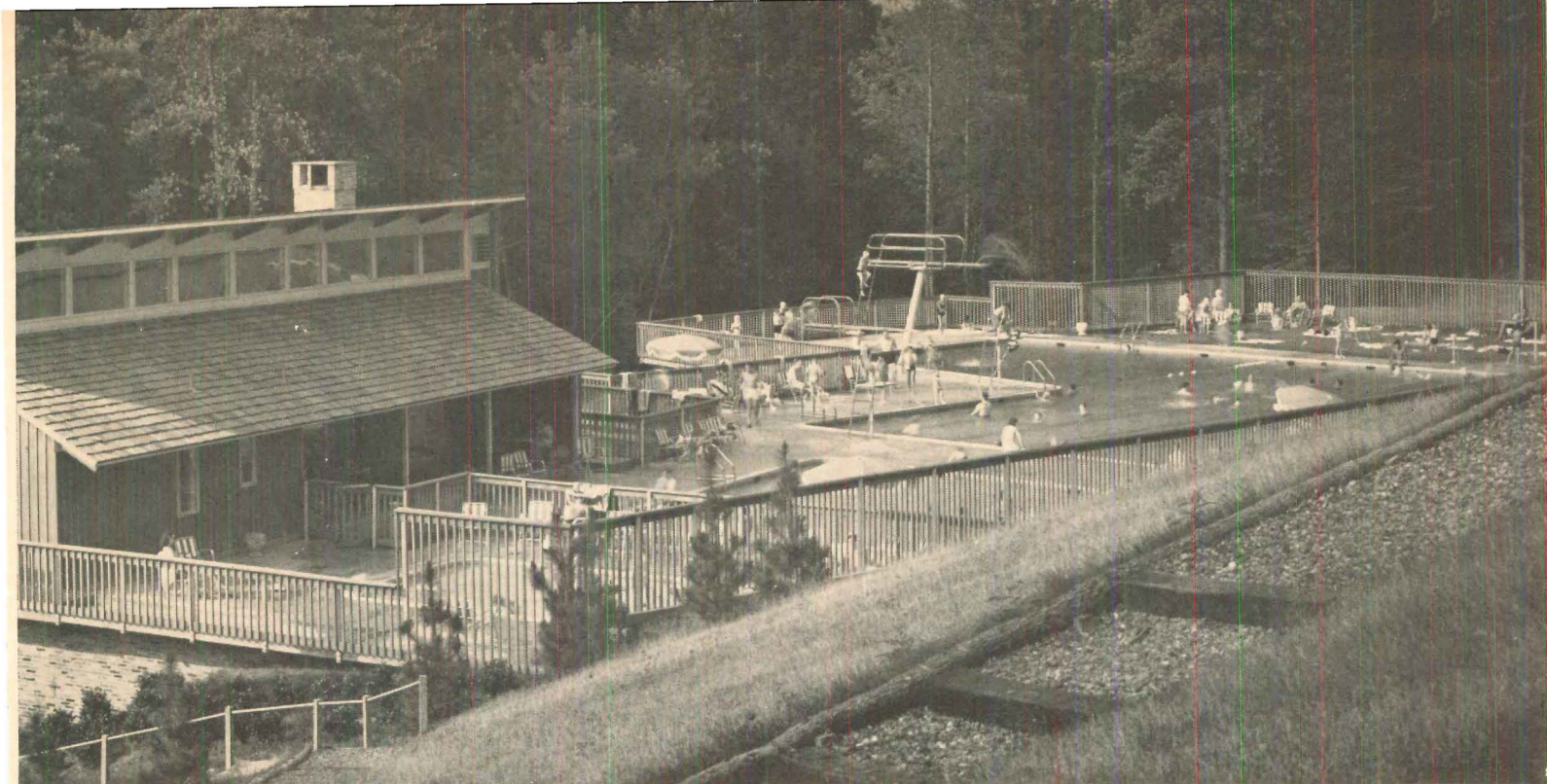


**COUNTRY-CLUB POOL** is part of Carderock Springs Swimming and Tennis Club near Washington, D.C. Homebuyers, who pay an average of \$45,000 for a house, will accept a centrally located pool because of its luxurious country-club setting. All homebuyers automatically become members; added cost per house to build the club: \$700.



**INDOOR-OUTDOOR POOL** at the Plantation Club is part of Sea Pines Plantation, Hilton Head Island, S.C. One-third of the heated pool is sheltered, two-thirds is surrounded by a patio. Cost, excluding the building: \$25,000.





J. Alexander

Cloetingh & Deman



**COMMUNITY POOL** is part of recreation center in a community of 18,000 houses. Section with marked swimming lanes is Olympic length—25 meters. Builder: Place & Co., South Bend, Ind.

Wayne Wright



**APARTMENT POOL** is in Kenilworth Apartments, a 246-unit Kansas City project with rentals from \$137 to \$385. A second pool is inside a community clubhouse.

Benyas-Kaufman



**NEIGHBORHOOD POOL** is one of seven in Somerset Park, a 2,400-unit apartment project in Detroit. Clubhouse is shown beyond pool at left.

## Community centers: a way to offer new residents quick entry into social and civic activities

Most Americans are gregarious. Finding themselves in a completely new neighborhood, their first thought is to meet other people. Because it provides an immediate answer to this need, the community center can be an even more important sales asset for a builder than his houses.

The center also has long range advantages. If it is well run it creates a thriving community life, hence a reputation that will improve sales as the project grows. And residents who later move up to more expensive houses will automatically turn to an upgraded project by the same builder.

### There are three basic types of community center

*The small community house* is the simplest to set up and operate, and it may actually be nothing more than a house. In Joppatowne, Leon Panitz has two such centers—one a \$22,000 house (formerly a sales office), the other a new addition to a local church that Panitz leases for \$424 a month.

*The large community center* is usually part of a full-scale recreation complex. At Scottsdale, Place & Co. has a \$77,000 center adjoining the swimming pool. It includes a kitchen, dressing rooms for the pool, and a 40' x 80' hall that is booked up year-round by Girl Scouts, bridge clubs, community dances, etc. Max Okun gave Kenilworth Apartments a \$268,000 center which includes, besides an indoor pool, a lounge, billiard tables, sauna and exercise facilities plus a private bottle club. And giant Somerset Park will have five community centers which will cost \$130,000 apiece, including pools.

*The country club* serves the same basic functions as the community center; the difference is that it is private, almost always part of a high-income project, and often keyed to a particular activity: golf, boating, or a beach. Huntington Harbor's \$750,000 beach club, for example, serves the community in much the same way as Scottsdale's community center. But it has more elaborate recreation facilities, plus private dining and meeting rooms, a cocktail lounge, and a staffed main dining room.

### Community centers are usually a bargain for project residents

Scottsdale's center, including the pool, added only \$200 to house prices. As noted

earlier, each family pays about \$40 a year in dues, but just 20% of this covers the \$2-3,000 operating costs of the community building itself. And Kenilworth Apartments adds less than \$10 to each tenant's rent to cover its annual operating costs of \$20,000.

The full-fledged private country club carries the heaviest dues structure. Huntington Harbor's beach club charges an initiation fee of \$100 and annual dues of \$240. The club, which is owned by the developer, currently has 450 members and an annual gross income of about \$250,000; it will pass the break-even point with another 100 members.

Some community centers in higher-priced projects are very nearly private clubs in their price structure. Builder Ed Bennett's Carderock Springs Tennis and Swimming Club requires a \$700 premium on each house, and its operating costs—about \$38,000 a year—call for annual dues of \$87 per family.

### Here are four tips from developers who have built community centers

1. *Build it early.* Buyers or tenants won't really believe in a recreation center unless they see it. Both Kenilworth Apartments and Huntington Harbor benefited from having their centers built before anyone moved into the projects.

2. *Promote it.* Particularly in the early stages when there are few members, centers need programs—and money—to get them rolling. Leon Panitz has established a loan and gift fund to support the community activities at Joppatowne; it is administered by a committee of residents and one member of Panitz & Co.

3. *Don't turn it over to residents too soon.* Without sound financing and management, a center could turn into a liability rather than a sales asset. Most developers maintain control until the project is at least half sold out; Ed Bennett is holding on to his club until Carderock Springs is completely sold out.

4. *Create separate facilities for teenagers.* This is especially true in apartments and higher-priced projects. Both Kenilworth and Huntington Harbour have belatedly found they need separate teenage areas in response to adult demand. And Somerset Park is anticipating the problem by building a completely isolated teenage recreation center (p. 95).



**MAIN CLUBROOM** is in one of five clubs planned for Somerset Park. Each club features large all-purpose room and kitchen. Open beams and fireplace add intimacy. Cost: \$100,000.

Paul S. Kivett



**CLUBHOUSE LOUNGE** at Kenilworth Apartments is built of materials selected for low maintenance and warmth. Wood staircase leads to indoor-outdoor mezzanine overlooking pools.

Benyas-Kaufman



Benyas-Kaufman



**EXTERIOR VIEWS** of Somerset Park club show house-like scale of building. In front is a large entrance canopy; in rear a roofed porch, walled patio and swimming pool.

Andrew Pine



**COUNTRY CLUB** at Sea Pines Plantation on Hilton Head Island, S.C., cost \$800,000. Low profile and heavy overhangs fit in with the semi-tropical surroundings.

Fred M. Hublitz



**GOLF AND COUNTRY CLUB** at Tantallon in southern Maryland is colonial in design, serves as recreation center for the development. Club was completed a year ago for \$300,000.

Cloetingh & Deman



**RECREATION CENTER** at Scottsdale combines function of civic center and clubhouse. Place & Co., South Bend, built the entire complex, including pool, for \$120,000.

## Golf courses: costliest facilities, but also potentially profitable investments

As a form of recreation, golf is enjoying an enormous growth in popularity. (At Somerset Park, more than half of the 700 tenants who have moved in say the golf course was the project's chief attraction for them.) As a symbol of prestige, the golf club has always been at the head of the list. For both of these reasons, a golf course can be a tremendous sales asset for those builders who can afford the high initial outlay. And in the long run, the initial cost can be returned—and then some.

### Golf courses offer both immediate and long-range profits

*The immediate gains are better sales and considerably higher lot prices and rents.* A golf course attracts not just golfers, but all who like plenty of open space. So the course raises the value of all lots in a project, and especially those on fairways. Fairway lots bring 25% to 50% more than off-course lots at Tantallon, a 750-lot development in southern Maryland. A typical fairway lot at Charles Fraser's Sea Pines Plantation on Hilton Head Island, S.C., sells for \$11,000, while lots separated from the course by only a roadway sell more slowly at just \$7,900. And at Somerset Park, fairway apartments add from \$50 to \$75 to rents—and are the ones most in demand.

*In the long run a golf course can turn a handsome profit for itself,* although it usually takes three to five years to get into the black. Fraser's first golf course, for example, was built in 1960. It broke even three years ago and will gross about \$250,000 this year, showing a profit of \$70,000 to \$80,000. Fraser is now completing a second golf course on the island and plans to build two more sometime within four years.

Golfers spend money not only on the golf course, but on food, drink and entertainment. So a golf course can become the nucleus for a whole host of ancillary facilities which sometimes earn more than the course itself. Fraser, for example, has built an \$800,000 club, plus a \$2.5-million inn and cottage complex that operates in the black almost entirely because of the golfing trade. Hamilton Crawford, developer of Crofton, Md., is now building a \$5-million private-club complex. And Phil Stollman

plans a \$500,000 club for Somerset Park's golf course.

### The typical golf course costs about \$500,000—plus land

But this figure can vary greatly depending on the type of course, the terrain, and the financing. And since a typical course needs about 100 acres of land, the total package can easily reach \$1 million.

At Somerset Park, Stollman laid out \$350,000 to build a nine-hole, 45-acre golf course in a low-lying marshy area. But land costs came to another \$850,000 because to acquire all 45 acres, Stollman had to buy and raze 26 homes ranging in price from \$6,000 to \$50,000.

Most courses aren't that expensive. Crawford paid only \$380,000 to construct an 18-hole course at Crofton; the land cost about \$600,000. Swampy terrain complicated the construction of Charles Fraser's first course at Hilton Head, but it still cost only \$600,000, less land. Fraser is keeping costs down to \$450,000 on his second course by employing his own construction crew. But the land on which the course is laid out, valued at \$300 an acre only a few years ago, is now worth from \$3,000 to \$5,000 an acre.

### Operating costs run from \$40,000 to \$100,000—plus debt service

The precise cost depends on the size of the course and the quality of care it gets.

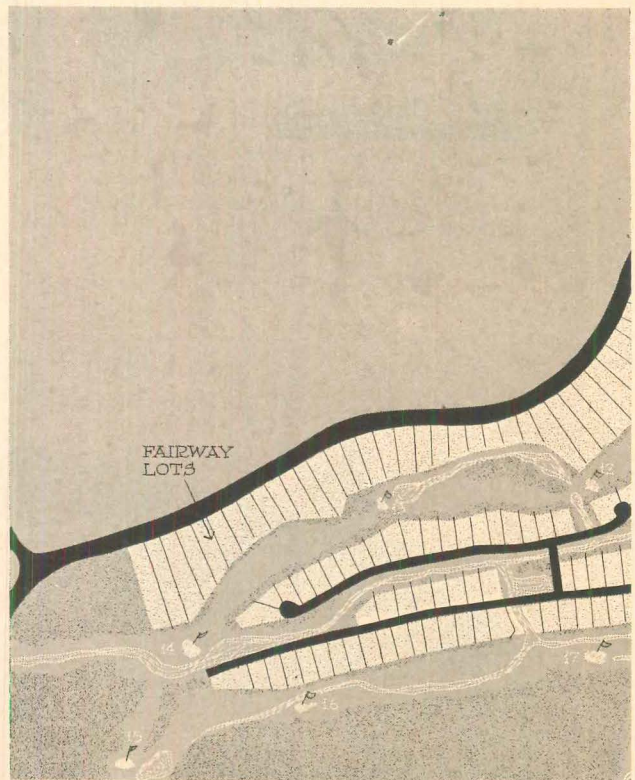
Stollman estimates that his annual costs, not allowing for mortgage payments, will come to \$60,000, including salaries of six full-time staffers.

Crofton's golf course, which completed its first full year of operation last year, cost \$150,000 to run. Of this sum, \$94,000 went into course maintenance, and the balance was for interest and loan repayment. The course employs 24 employees in summer and 14 in winter. (Management estimates that this year maintenance costs can be cut to \$80,000.)

At Hilton Head, operating expenses for a ten-month period through June came to \$137,000. Of this figure, \$80,000 went for course maintenance (including salaries of 20 employees), \$37,000 for pro-shop maintenance, and \$20,000 for taxes and administrative and promotional expenses.



**FAIRWAY APARTMENTS** are set around Somerset Park's 45-acre, nine-hole course. Course manager Leo Bishop tees off in foreground. Landscape architects: Eichstaedt & Grissom.



**FAIRWAY SITE PLAN** for first golf course on Hilton Head Island shows how 350 prime-view lots can be fitted around course. Designer: George W. Cobb, Greenville, S.C.

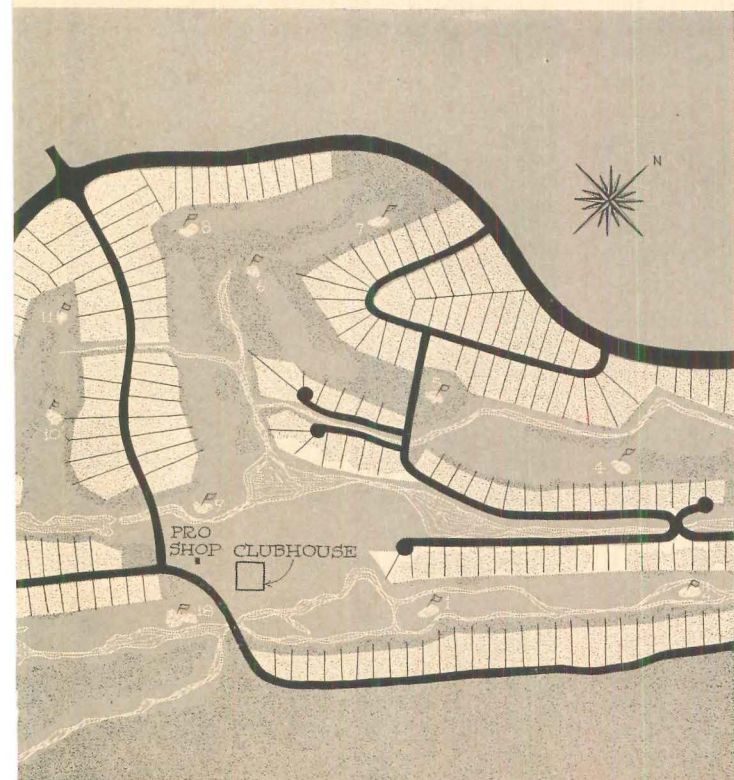
Benyas-Kaufman



Fred M. Hublitz



**FAIRWAY HOUSE LOTS** at Tantallon in Maryland bring 25% to 50% more than off-course sites. Prestwick, Inc., the developer, has 200 sites around its 135-acre course.



**GOLF CLUBS** were built by Mackle Bros. at Deltona (*above*) and Marco Island (*below*), Fla. Deltona club, with nine holes, cost \$225,000; Marco Island club, with 18 holes, cost \$500,000.



## **... In fact, almost any form of recreation can be turned into a community asset**

And in most cases, a site's natural assets can be turned into recreation facilities. Some facilities—boating marinas, for example—are expensive. But if the area is at all wooded, hiking trails can be cleared for relatively little cost. Wider trails will serve as bridle paths for riding. And natural ponds can be stocked for fishing.

### **Water sports are second only to golf in popularity**

As much as a year before the opening of Joppatowne's \$560,000 marina, a sample survey of 190 residents showed that almost half either already owned or were planning to buy boats. "Today," says Leon Panitz, "our marina and waterways are the most compelling attraction we have."

*Buyers will pay even more for waterfront lots than for fairway lots.* At Joppatowne and Tantallon, both on Maryland's eastern shore, waterfront lots with private mooring docks are most in demand. At Joppatowne, these lots sell for \$13,000, vs. \$5,000 for interior lots. Tantallon's waterfront sites sell for up to \$45,000—four times the price of inland lots and twice the price of fairway lots. And at Huntington Harbour, a waterfront site may bring up to \$20,000 more than an inland lot.

*Marinas are both an immediate sales asset and a long-term profit maker.* The marina, with its boat storage and repair facilities, is the focal point of the water-oriented recreation community; it may cost anywhere from \$50,000 to \$500,000 depending on its size. (Joppatowne's \$560,000 marina was costlier than usual because it required channel dredging and extensive bulkheads.) It usually takes a year and a half for a marina to break even. During the first ten months of operation, for example, Joppatowne's marina rented year-round storage space for 88 boats and took in \$26,000—a deficit of \$15,000. But, foreseeing a profitable future, Panitz is already planning to add additional piers, another boat storage building, a major repair shop, and a restaurant. Charles Fraser, who began with a \$75,000 marina on Hilton Head Island, is now adding a \$380,000 marina with wet and dry facilities for 200 boats. And Tantallon plans to have a 350-slip marina within three years.

*Inland communities can provide water sports by means of artificial lakes.* At

Tanglewood Lake, a project near Cleveland planned for 500 homes in the \$40,000 class, Bainbridge Development Co. has put in a 30-acre artificial lake for swimming, sailing and fishing. Cost: \$100,000. And Philip Stollman built a 5-acre lake in Somerset Park. (Part of the golf course budget, it cost \$78,000.)

### **Horseback riding and hiking are increasingly popular**

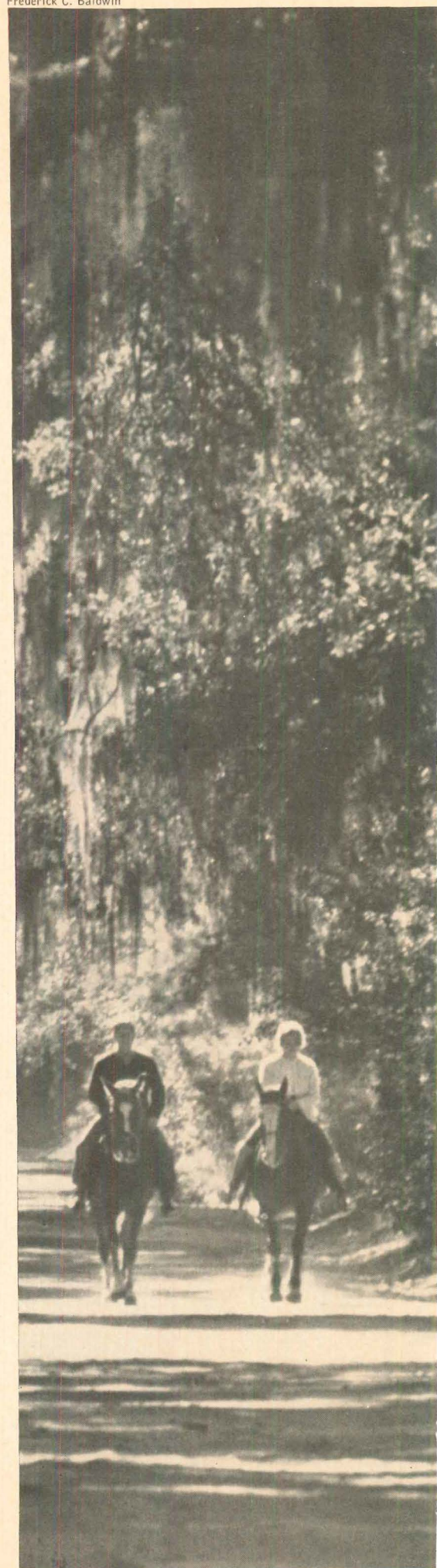
At new Seabury on Cape Cod, Builder Emil Hanslin has cleared 5½ miles of riding trails and built a stable, corral and show ring. He leases these facilities, which cost about \$35,000, on a break-even basis to a private riding academy. The academy currently cares for several privately-owned animals, rents out 20 horses, and expects its stable to expand to 30 or 40 horses within the next five years. And at Tanglewood Lake, Bainbridge Development is converting an existing barn into stables and expects that it will operate with from 20 to 40 horses within four years.

To meet a growing interest in hiking, Leon Panitz is clearing trails in a wooded 62-acre section of Joppatowne. About 600 homes will go up in 300 acres surrounding this area; they will be interconnected primarily by footpaths. And at Hilton Head, \$70,000 is being put into hiking trails within the development's 1,280-acre forest preserve.

### **Tennis courts have become staples in many communities**

The courts are usually part of a larger recreational complex that includes a club and swimming pools. But if the recreation budget is limited they are often constructed as individual facilities. Their cost may run anywhere from \$4,000 to \$10,000 apiece, depending on how much grading is necessary. At Carderock Springs the first two courts cost \$12,000. Now the project needs two more, and they will cost \$22,000 because heavy grading will be required.

Tennis is so popular that many developers have found the number of courts they have installed is inadequate to meet the demand. Huntington Harbour, for example, built two courts a few years ago. So many people wanted to play that lights had to be put in for evening play; and now the demand has increased to the point where two additional courts are needed.



Fred M. Hublitz



**BACKYARD BOATING** is available at Tantallon on Maryland's eastern shore. Waterfront lots like this one command prices of up to \$45,000, four times price of interior sites.

**HORSEBACK RIDING** (left), an increasingly popular sport, is an attraction in many new communities. This trail was built in Sea Pines Plantation, Hilton Head Island, S.C.

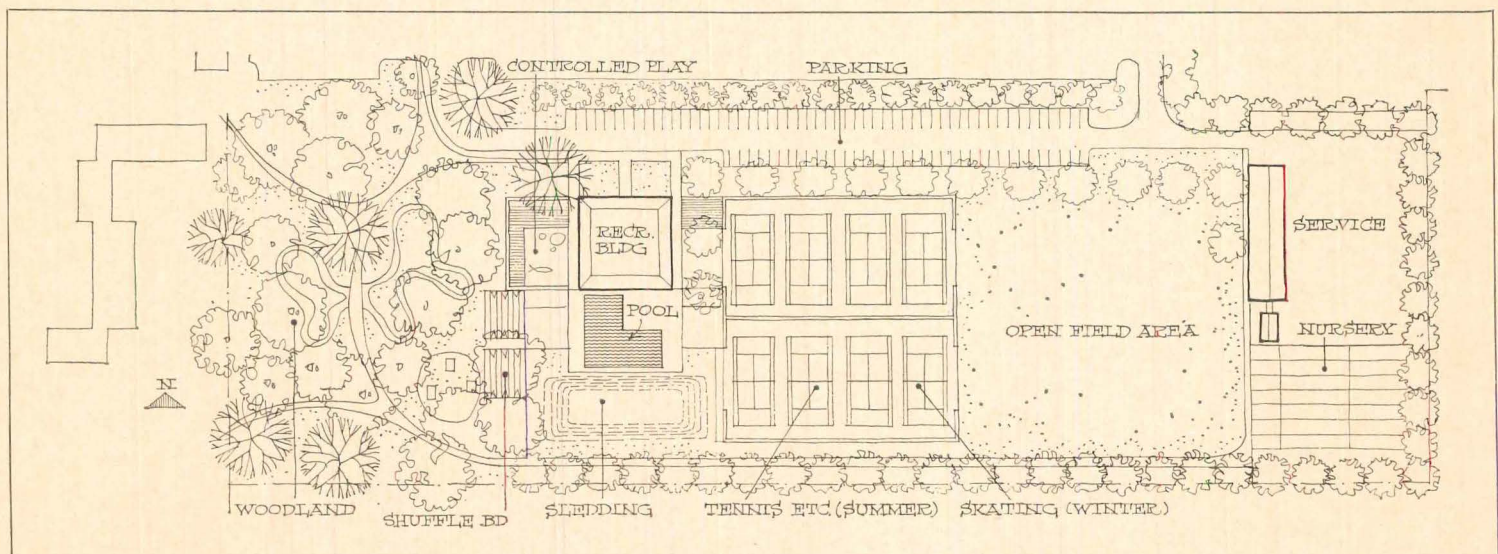
Robert de Gast



**FISHING** is recreational pastime for both children and adults at Crofton, Md. Two existing lakes in the large development were cleaned up and stocked with gamefish.



**WATER SPORTS** are a popular feature at Joppa-towne, Md. Shore-front homes in background have their own docks for boats. Here, residents come by land and by sea to hear a concert.



**Here's a plan for a 12-acre recreational park built primarily for children**

Builders of upper-income projects have found that adults demand separate recreational facilities for their children. This park is Philip Stollman's

answer to the problem in his 2,400-unit Somerset Park apartment project in Detroit. The park, to be completed this fall at a cost of about

\$500,000, will serve all children in the project. It includes a \$200,000 teen-age center (twice the size of adult centers in the project) and an Olympic-sized

pool. There will also be eight tennis and six shuffleboard courts, a sledding hill, baseball field, and a four-acre wooded picnic area.



**STRIKING KITCHEN** has outsized counter, partial ceiling for better lighting, and cook-top island. Arch.: Gordon & Gordon. Location: Altadena, Calif.

## Do your kitchens have the extra excitement that buyers want?

*The sad fact is that most builder houses have dull kitchens. Buyers may not have a clear idea of what they want in a kitchen, but when they see new and exciting ideas, they'll respond. Here are six pages devoted to just those kinds of kitchen ideas.*



## Do your kitchens offer the same outdoor views as the rest of your rooms?

There's no reason why they shouldn't, and in fact, a strong case can be made for opening them more to the outdoors than even living or family rooms. The housewife may spend the majority of her day in the kitchen; she'll appreciate its being made a bright, pleasant room to work in, and she won't feel cut off from the rest of the world. And she'll never again be happy with the traditional single undersized window over the kitchen sink.

Ralph A. Goodhill



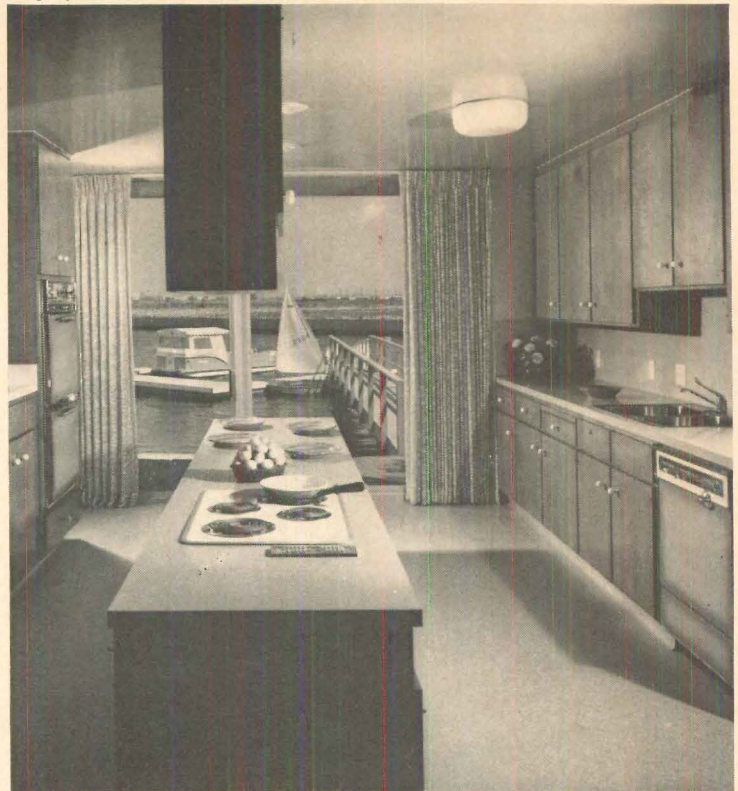
**PICTURE WINDOWS** run along entire length of the counter. Door, left, leads to deck. Arch.: Kuhn & Drake. Location: Watchung, N.J.

Rondal Partridge



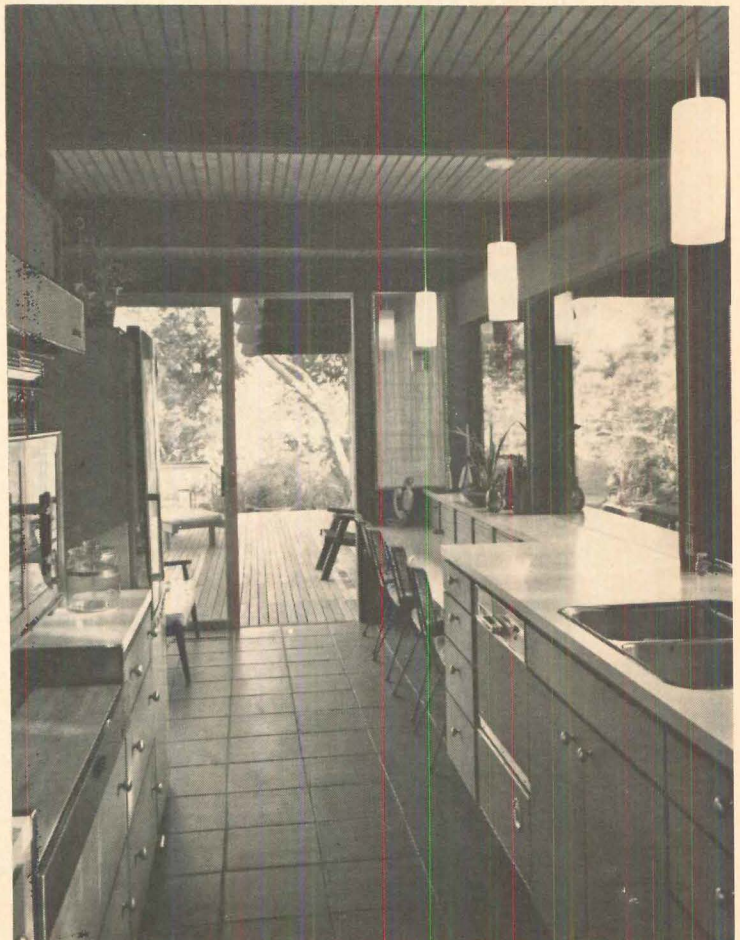
**WIDE-SPACED CABINETS** offer overhead storage without compromising view. Arch.: J. Martin Rosse. Location: Mill Valley, Calif.

George Lyons



**WINDOW WALL** opens one entire end of kitchen to view of lagoon. Arch.: Robert E. Jones. Location: Huntington Beach, Calif.

Julius Shulman



**WOOD DECK** has glass doors that add a feeling of space to kitchen. Arch.: Cooke, Frost, Greer & Schmandt. Location: Santa Barbara, Calif.



**HANGING BOARD** above range has heavy movable wood pegs. Spice rack is at bottom. Arch.: Dennis, Whitaker & Slavsky. Location: Hawaii.

## Do your kitchens put food and utensils within easy reach?

Every housewife knows the annoyance of trying to find a particular pan or can that is hidden in the back of a cabinet or under a sink. So if you show her convenient built-ins like the ones on this page she will recognize their usefulness immediately.



**OPEN SPICE RACK** is close to cooking area, fits in an otherwise useless corner. Arch.: Dennis, Whitaker & Slavsky. Location: Hawaii.



**SLANTED CABINETS** make top shelf easy to reach because narrow bottom shelf isn't in the way. Builder: Kaiser Ind. Location: Hawaii.

Leland Y. Lee



**TWIN PANTRIES** offer space for food near kitchen, and china near dining area. Arch.: Marvin Beck. Location: Beverly Hills.

## Do your kitchens turn every possible cubic inch into useable storage space?

You don't have to limit yourself to standard overhead or under-counter cabinets. Any stretch of wall is a potential spot for a shallow cabinet or closet, and the resulting storage may be the roomiest and easiest to reach in the entire kitchen.

R. Wenkam



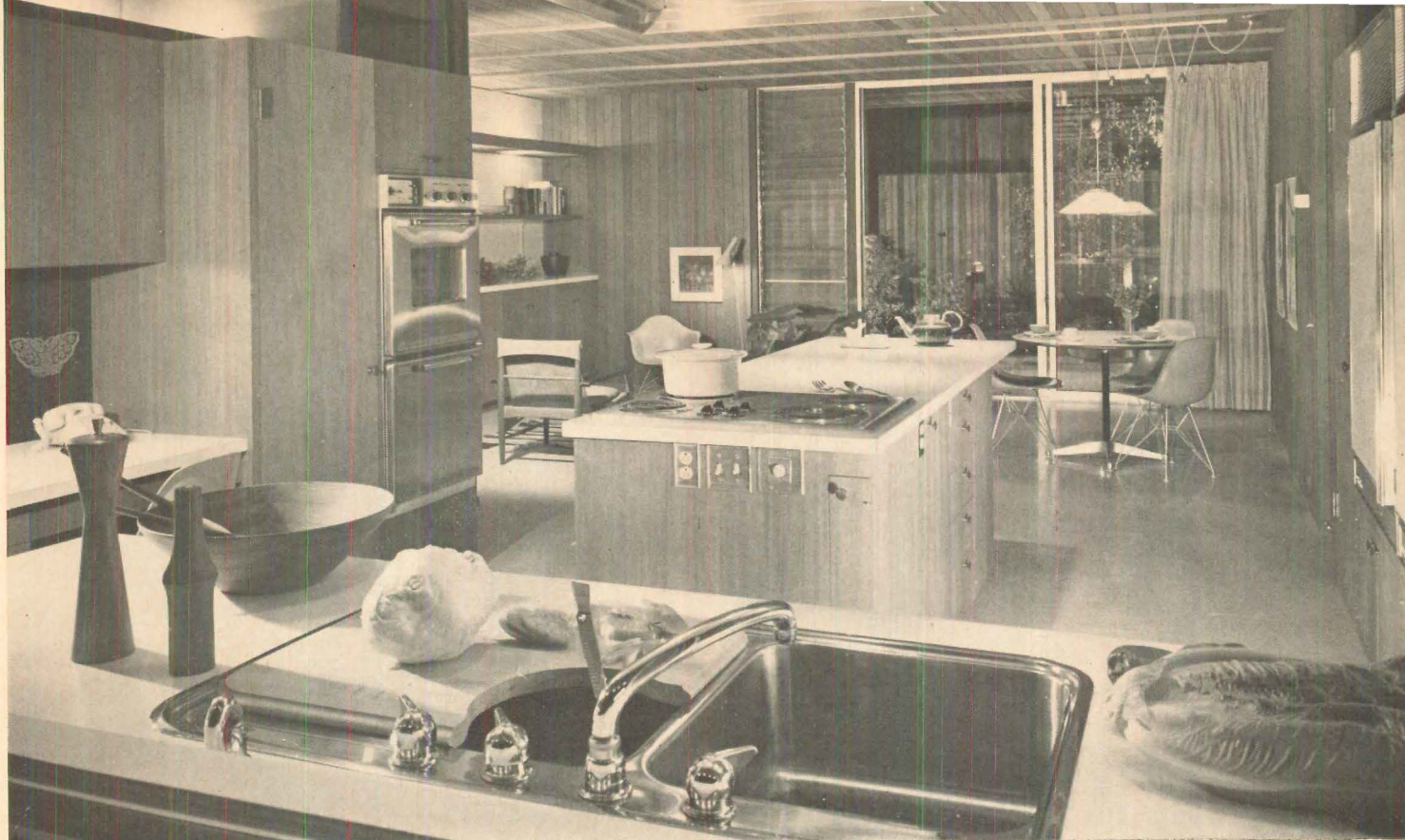
R. Wenkam



**RECESSED CABINETS** bring overhead storage right down to counter level. Arch.: Dennis, Whitaker & Slavsky. Location: Hawaii.

**STORAGE WALL** includes shallow pantry, left,

*continued*



**MULTI-PURPOSE ISLAND** has cook-top, plus room for food preparation and eating. Arch.: Liebhardt & Weston. Location: San Diego.

R. Wenkam



**FOOD-PREPARATION ISLAND** with stainless steel sink can double as a bar. Builder: Kaiser Ind. Location: Hawaii.

Ernest Braun



**ROOM-DIVIDER ISLAND** has range plus a wet bar near adjacent family room. Arch.: James Levorsen. Location: Foster City, Calif.

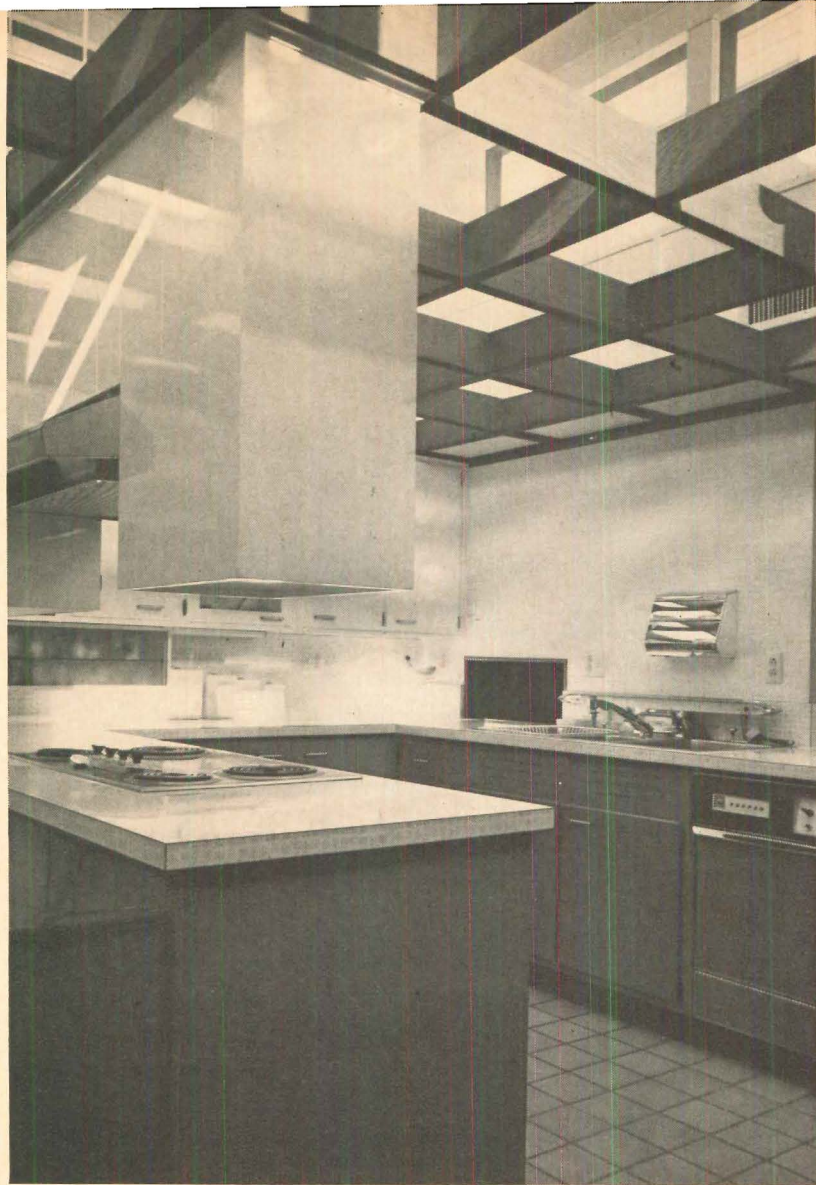
## Do your kitchens include the extra counter area that islands can provide?

The important thing about extra counters is that they offer flexibility. An island can turn useless floor space in a big kitchen into a cooking, food-preparation, or all-purpose area positioned so that it becomes an integral part of an efficient working layout.

R. Wenkam



**COOK-TOP ISLAND** is near oven, concentrates all cooking in one area of kitchen. Arch.: Johnson & Perkins. Location: Hawaii.



**EGG-CRATE CEILING** admits lights from clerestories, keeps room height in scale. Arch.: Laszlo Aranyi. Location: Chesapeake, Va.

Fariss Pictures, Inc.

Kenneth Missar

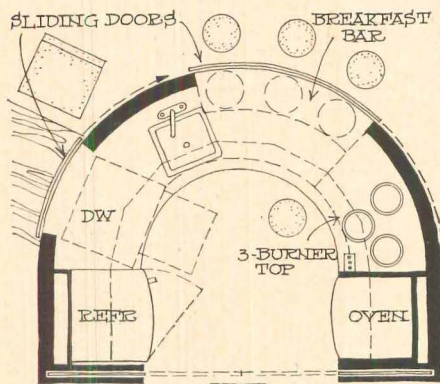
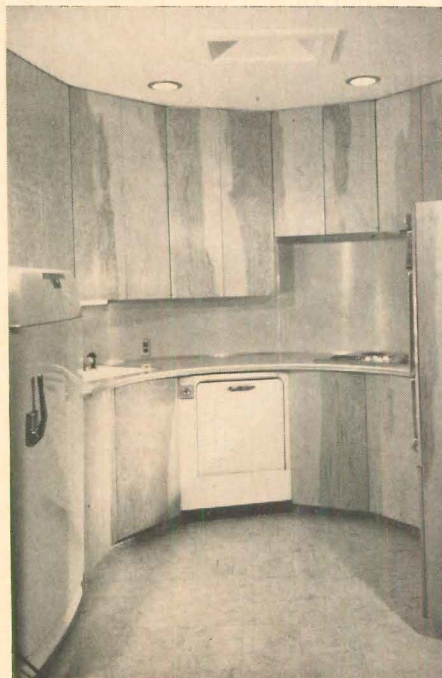


**LUMINOUS CEILING** is dropped over this small but windowless kitchen. Arch.: Matthew Warshauer. Location: Spring Valley, N.Y.

## Do your kitchens have the general illumination needed in a work room?

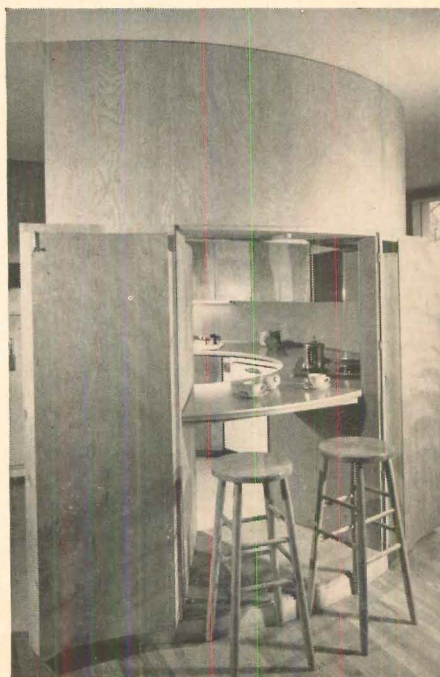
Good general lighting means both a pleasant kitchen and a kitchen that is less fatiguing to work in. Big windows (see p. 97) can be a partial answer, but they don't help at night, and in many houses and apartments the kitchen is not on an exterior wall. Two possible solutions to these problems are shown in the photos at left and above.

Photos: Ben Schnall



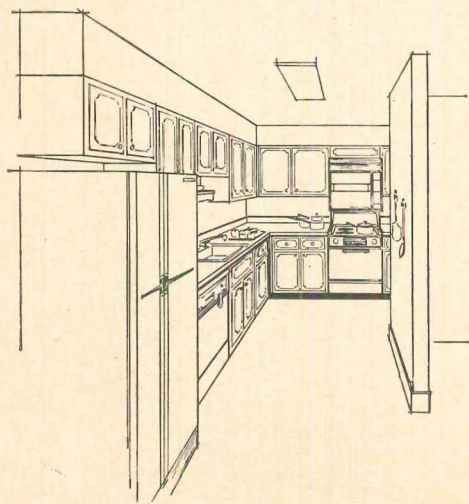
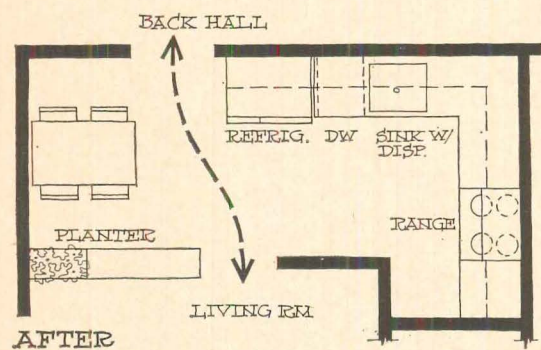
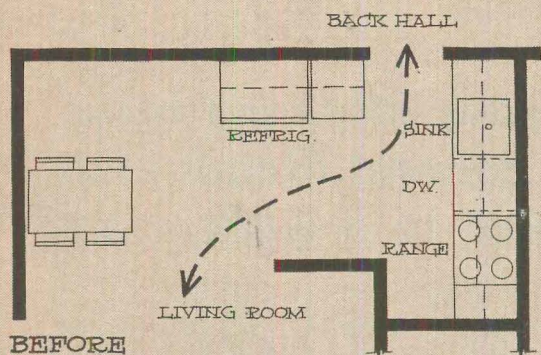
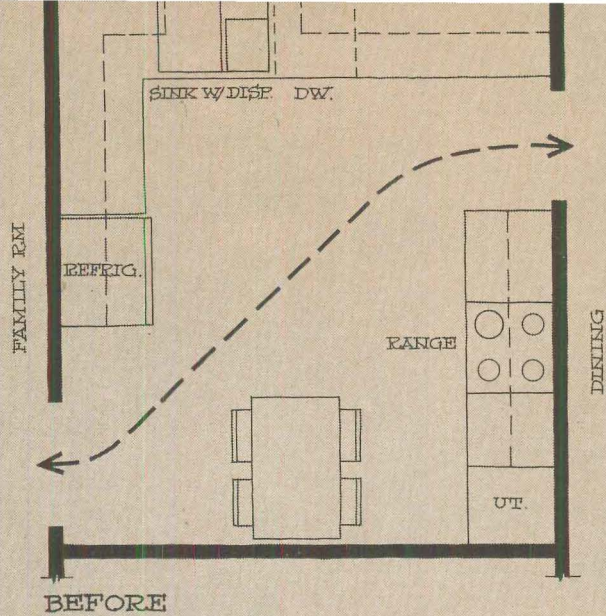
### Do your kitchens necessarily have to have square corners?

No, indeed. This kitchen, designed by Otto Kolb Associates for a house in Watchung, N.J., is basically a semi-circle. And while it would give most production builders the cold shivers, it is, nevertheless, a highly efficient small galley-type kitchen. There is counter space next to every work area, and everything can be reached with a minimum of steps.

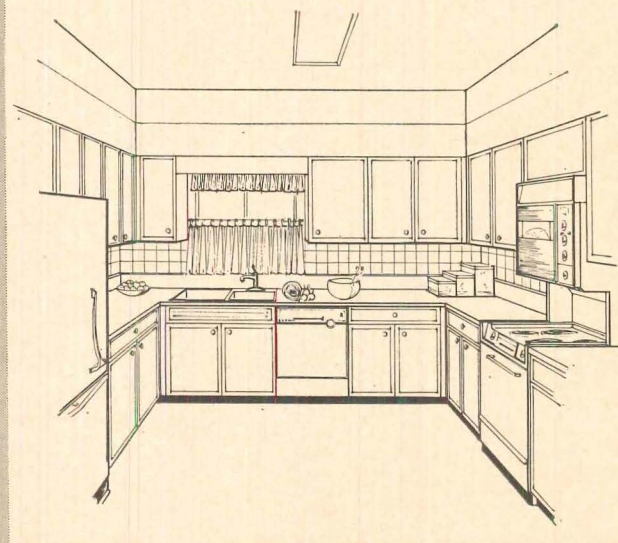
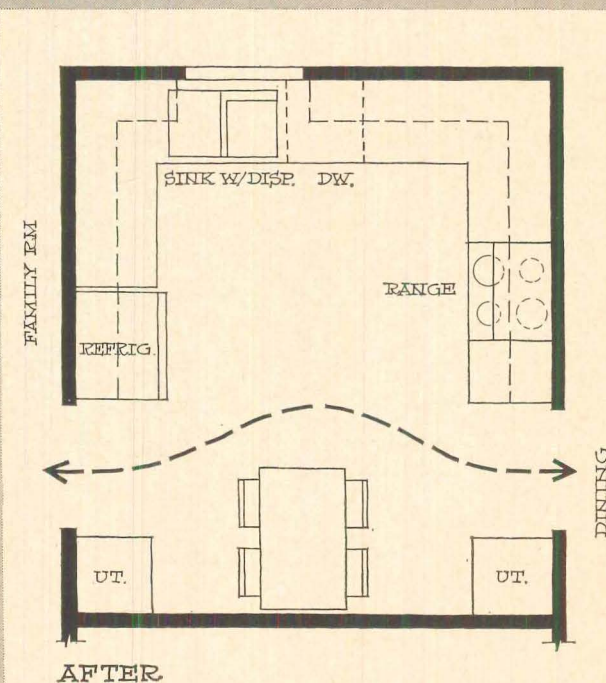


# Are your kitchens built around traffic patterns that make work easier?

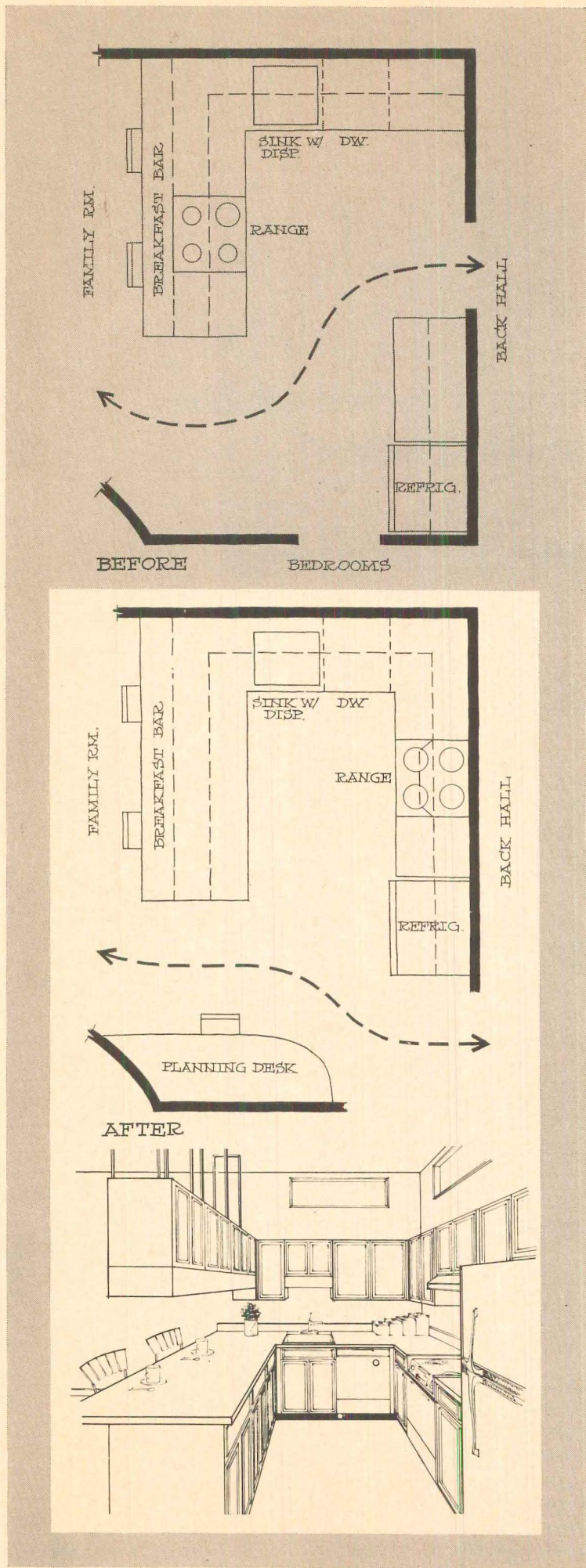
"Good traffic flow is the key to an efficient kitchen," says George Warren, head of General Electric's kitchen design department. And as these drawings show, it's relatively easy to turn a poor traffic pattern into a good one. Warren's department took builders' original plans, reworked them, and then made renderings to show the final result: better—and more salable—kitchens.



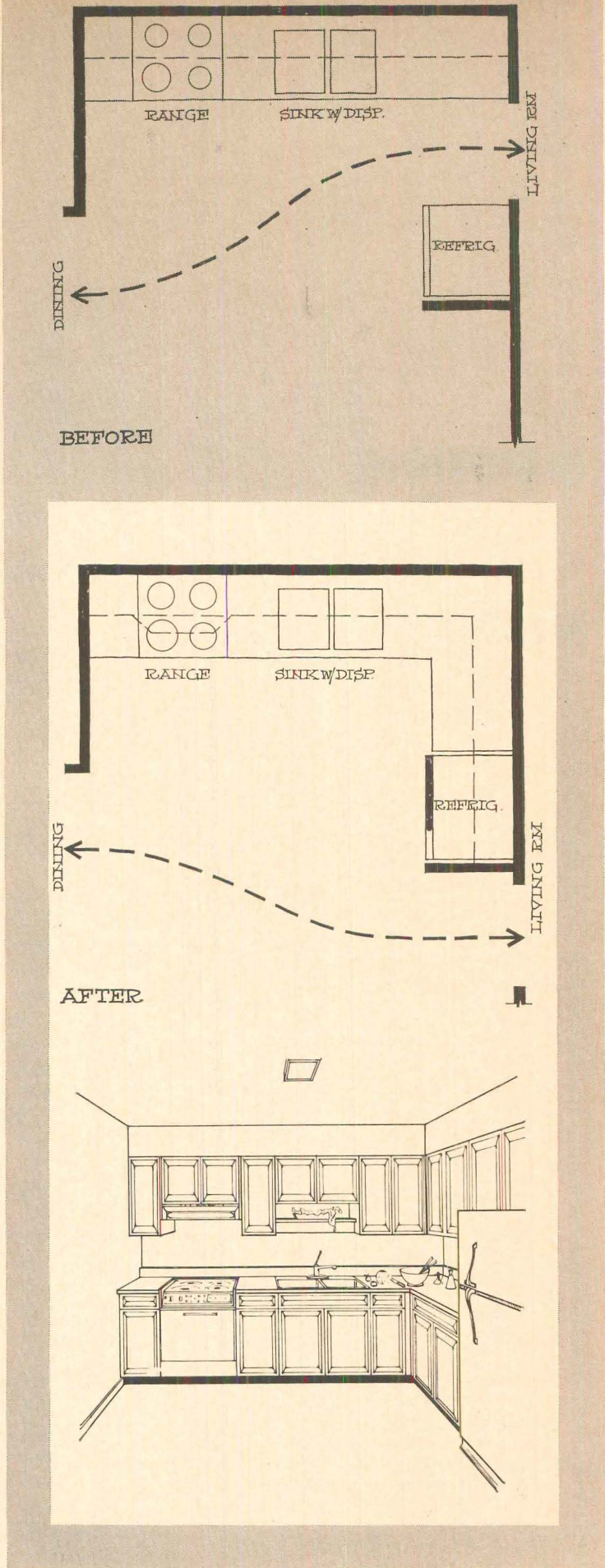
A badly placed hall door produced a traffic aisle in the original kitchen's work area. The door was relocated to shift the aisle nearer the eating area. And the new L-shaped kitchen now has room for about three feet of extra counter length.



The eating and working areas of the original kitchen were not clearly defined. But by moving both doors, traffic was pulled out of the work area and a separate eating area was created. The new plan also has room for an extra utility closet.



The original work areas of this kitchen were sprawled out all over the room. With the shifting of one counter the kitchen was turned into a compact U which eliminated cross-traffic. And the snack bar was made much



The refrigerator in the original plan was isolated from all counter space. To correct this, one door was moved. The kitchen was thus turned into an L, which also eliminated a traffic lane through the work area and added corner cabinet space.

## QUESTION:

Which of these construction types is the best solution to the country's low-income housing problem?

## ANSWER:

The one that can offer the most feasible financing

In simpler terms, the big deterrent to low-income housing isn't technology—it's financing.

Whenever government agencies talk about ways to house our nine-million families with annual incomes of less than \$3,000, or the 20-million who make less than \$6,000, they usually offer two solutions: 1) lower the cost of new construction, and 2) lower the cost of rehabilitating the country's existing housing supply. Yet a survey of what's going on in low-income housing around the country shows there are plenty of construction systems that get costs down to \$7 to \$8 per square foot.

Good financing, however, is something else again. Items:

1. Builder Phil Emmer, known nationally for his successful low-income projects in Gainesville and Pensacola, Fla., is abandoning low-income building because the financing programs he had depended on—the 40-year mortgage for 221d2 buyers and FNMA's Special Assistance program—have been curtailed. Those changes, along with higher interest rates and an increase in Florida property taxes, have pushed up monthly mortgage payments a critical \$25 for Emmer's low-income buyers.

2. Inland Homes, for years one of the biggest suppliers of prefabricated low-cost houses, is going to expand out of that market and into houses approaching the \$25,000 range. Inland is being acquired by a new owner who feels the company's long experience with low-income houses can't pay off adequately without a dramatic improvement in their financing possibilities.

3. Boise Cascade tried for a year to market a technologically advanced low-cost house in Washington and Alaska (p. 108). Last month it dropped the house because, as a spokesman put it, "It's not feasible in today's market."

*But while one segment of low-income construction is coming to a standstill because financing is unfavorable, another is booming because financing is abundant.*

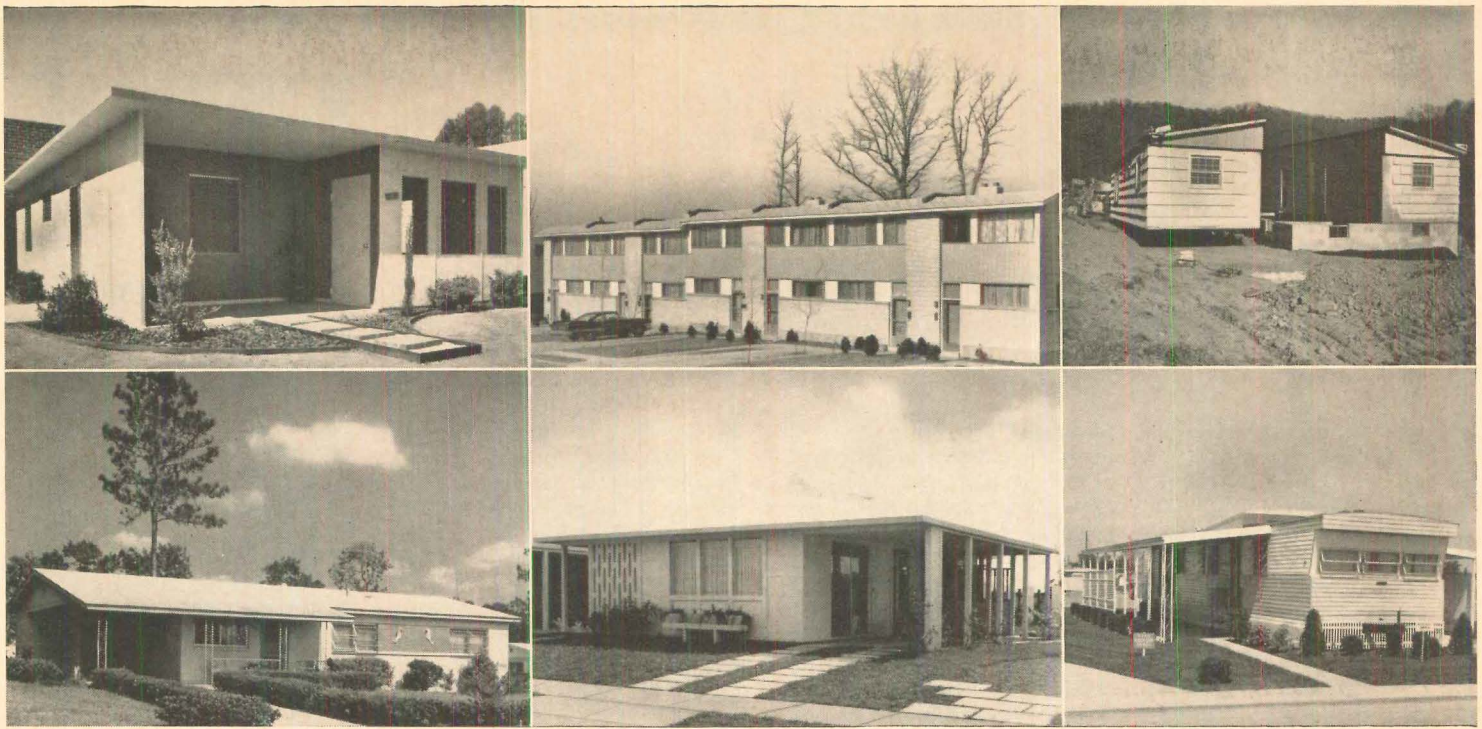
### **Federal grants concentrate on low-low incomes—and experiments**

Low income, to the Low Income Housing Demonstration branch of HUD, is generally defined as under \$3,000. To get housing for these lowest income families, the demonstration department—in operation since 1961—hands out grants for housing research, experimental models, and pilot housing projects. Examples:

*Migrant-laborer housing.* A HUD demonstration grant financed a two-year research project at the University of California (p. 109) that produced three starkly contemporary wood houses for West Coast farm workers. (The workers themselves had mixed feelings about whether they wanted to live in the units.) The program ended with the construction of the houses. Now HUD is financing a new program for the State of California to find other ways to house the workers. This time, ten manufacturing and construction companies have been invited to build demonstration models emphasizing masonry.

*Indian housing.* To demonstrate the economics and the feasibility of self-help homebuilding, HUD, working with the Office of Economic Opportunity, is financ-





**LOW-COST HOUSES** come in a wide choice of designs and materials. Left to right, top: Lockheed Aircraft aluminum-framed concrete house proposed for California; Leon Weiner townhouses in Wilmington, Del.;

Continental Homes sectional house in Kentucky. Bottom: Lincoln Estates (Phil Emmer) conventionally built house in Florida; Novoa system precast-concrete house proposed for Miami; Richardson mobile home.

ing pilot projects on Indian reservations. Using simple construction systems (p. 107), Indians will build their own houses and man component assembly shops. The cash value of their labor will be deducted from the cost of their new houses.

*Slum rehabilitation.* In big-city apartment demonstrations—which have tended to draw emphasis away from single-family low-income housing—HUD is financing attempts to streamline heavy remodeling work (H&H, Aug.).

The money spent on these programs has little direct benefit for homebuilders, although it may prove the feasibility of some new construction methods and house designs. But in the absence of feasible buyer-financing programs, the work—except that being perpetuated by non-profit institutions—eventually reaches a dead-end.

*The best evidence that feasible financing is what makes low-income housing successful comes from a part of the market that doesn't share in the demonstration grants.*

#### **Mobile homes don't offer cheap financing—but it's easy to get**

And that's why mobile-home sales have been increasing 20% a year despite housing slumps, tight mortgage money and all the other evils that beset conventional homebuilders.

Over half of mobile-home buyers are low-income families earning less than \$5,000 a year. They aren't buying the home because it's mobile, but because it's the only kind of housing for which they can get easy financing. Most of the so-

called mobile homes are only moved once—when they are first delivered from the factory.

Banks won't touch mobile homes, so finance companies handle them. The homes are on wheels, so the lenders finance them like cars, at high interest rates. Monthly payments average \$65 to \$85. Lot rental—for water, sewers and electricity—ranges from \$12 to \$22. Total carrying charges: \$77 to \$107 a month, for a house including complete furnishings and a lot.

Those prices aren't for the low-low income group, but they are within reach of the majority of unsubsidized low-income buyers.

*Only two restrictions—zoning and physical size—keep mobile homes from making even greater strides. And these are being overcome by another kind of mobile house that also is only moved once.*

#### **Sectional houses make low-income financing work in rural areas**

They solve two problems that have always hindered rural financing:

1. High costs for getting subcontractors to travel great distances to scattered rural housing sites.
2. Long waits for inspectors to come out from far-away lending agencies.

Sectional houses solve these problems with the same assembly-line methods used by mobile-home manufacturers. Over 90% of their construction is done in the factory, eliminating the need for subcontractors at the site. And preliminary house inspections are also made in the factory instead of at the site.

Judging by the rate at which manufacturers are entering sectional housing, these aids to financing make a big difference. For the sectional house has nothing new to offer in the way of construction. It is simply a conventionally framed house, shipped by road in two pre-finished halves that can be joined in about a day on a foundation. Its design is severely limited by width and height requirements. And its cost—usually about \$8 a sq. ft.—is no lower than many other kinds of low-cost houses.

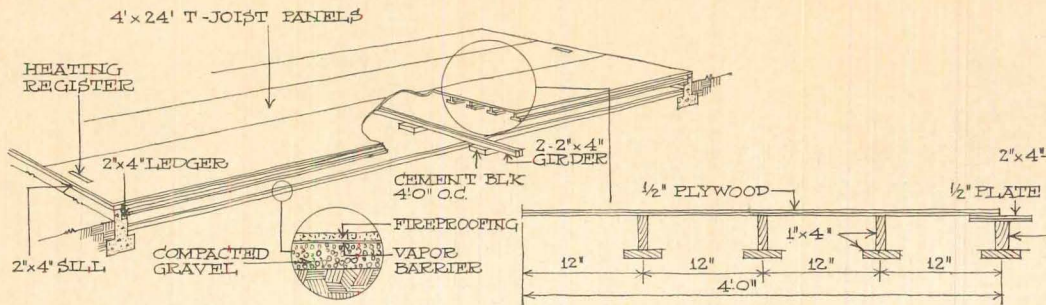
*But the same can be said of most low-income housing technology—there are few dramatic cost differences, and little likelihood that any are forthcoming.*

#### **No need to wait for breakthroughs—low-cost systems are plentiful**

In fact, some homebuilders feel that low-cost technology is already super-refined. There are systems available in every kind of material—the latest is loadbearing asbestos-cement—and with all kinds of fastening methods, from neoprene zippers to slots. They have a greater or lesser degree of design flexibility, depending on their material and how much factory-engineering has gone into them. Some seem unusually inexpensive, but these generally have drastic shortcomings that restrict them to a special market or environment.

*For a sampling of recently developed low-cost systems—from building-material manufacturers, government demonstrations, a university, and an architect—plus a study of how 16 available systems compare, see the following four pages.*

## T-joists glued to plywood make a cheaper stressed-skin floor system



Precise savings, says this system's sponsor—Potlatch Forests—are 11¢ a sq. ft. compared with a conventional floor system. Assuming field labor at \$5 an hour, Potlatch estimates the conventional system costs 45¢ a sq. ft., while the new T-joist system costs 34¢.

Joists consist of two 1"-thick members—a web and a flange—glued together. They are bonded to the underside of plywood subflooring like inverted "T's," 12"

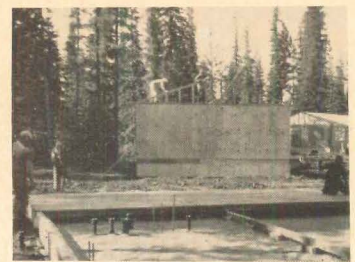
apart, and the flange bears directly on ledgers and girders.

Potlatch has installed the system in two experimental houses in Pierce, Idaho. The test panels are 1/2" plywood on 1"x4" T-joists, and measure 4'x24' over two 12' spans (*drawings above*). Span limits could be increased by thicker plywood and deeper webs.

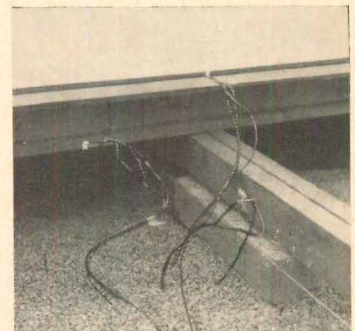
Besides lowering costs, the panels can also help to lower floor lines. Reason: The adhesive that holds them together is unaffected

by the effects of temperature and moisture. Thus, in both its test houses, Potlatch has set the panels only 8" above ground and is using the under-floor space as a heating plenum, eliminating the need for ducts. Heat rises through register holes in the panels, and a vapor barrier on the ground beneath is fireproofed with a layer of sand (*detail above*).

FHA is insuring mortgages on both Potlatch houses under its experimental design program.

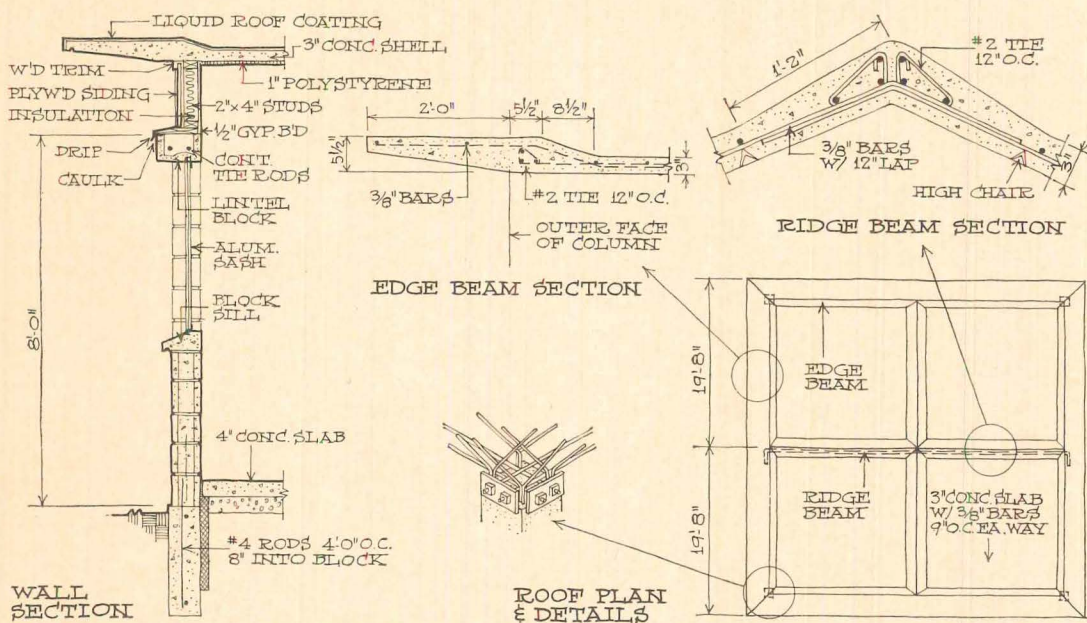


T-joist floor panel bears on foundation-wall ledger and low girder.



Panel edges rest on extra T-joist plus plate. Wires are for testing.

## Concrete-and-masonry shells minimize subcontracting problems



Subcontracting this Portland Cement Assn. design is made easy in two ways:

1. A single sub erects the entire house shell including foundation.

2. The interior is finished with preassembled components. It requires just three additional steps—installing a plumbing core, erecting prefinished storage-wall partitions, and wiring.

If Portland Cement's estimating is correct, the house will cost less than \$7 a sq. ft. including kitchen

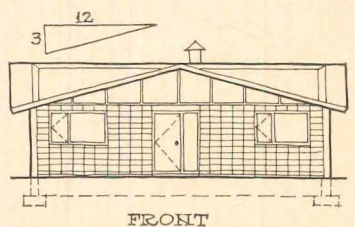
and laundry appliances (but not land). Finished construction cost is expected to be under \$7,000 for a plan of more than 1,100 sq. ft.

The roof is poured in place on block walls. But unlike most low-cost concrete roofs, it is sloping rather than flat. This design feature is made economical by symmetrical house design (*elevations right*) that simplifies engineering and layout.

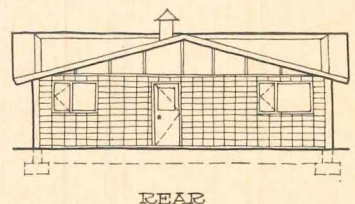
Roof construction is further simplified by using 3/8" reinforcing bars throughout, instead of

1/2" bars. The lighter bars are easier to place and bend.

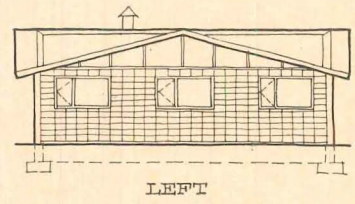
Portland Cement designed the house specifically for migrant farm laborers in Yakima County, Wash. Income level: less than \$3,000. The county needs some 8,000 units of durable, extremely low-maintenance housing for families that average six people. Builders and manufacturers work through a local non-profit corporation that draws 90% of its administrative expenses from federal funds.



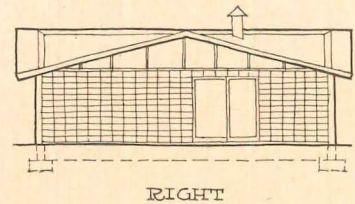
FRONT



REAR

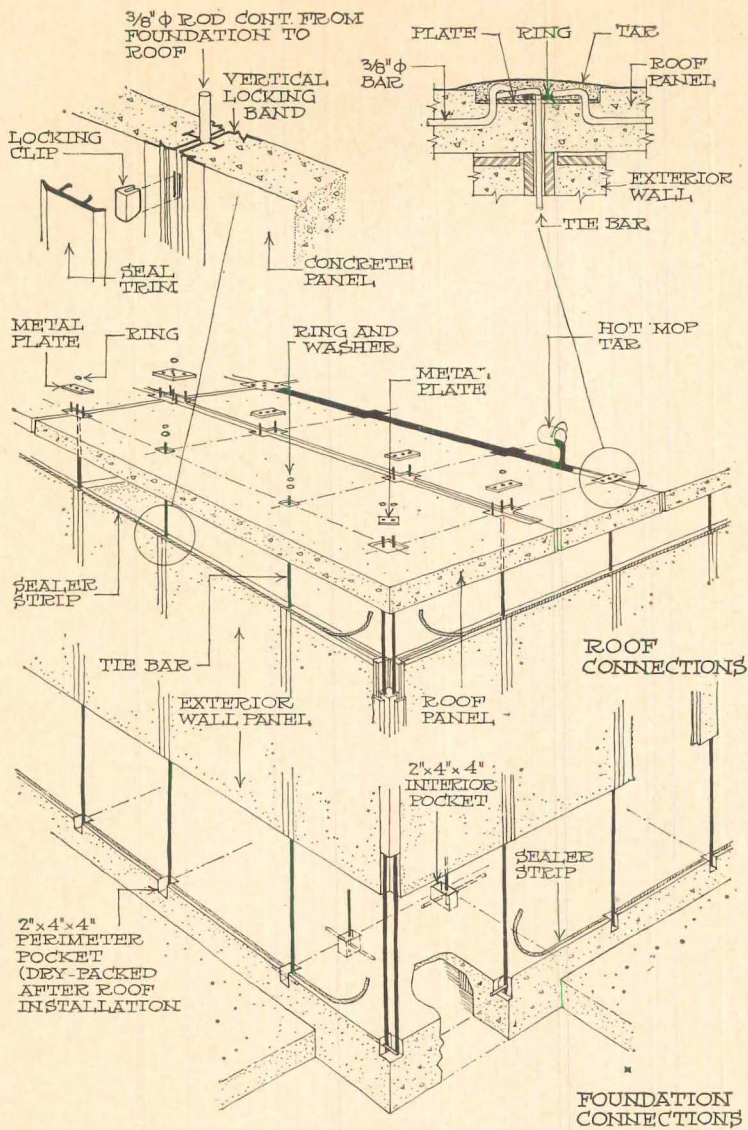


LEFT



RIGHT

## Concrete panels in metal frames produce a foolproof house shell



Unskilled workmen mastered this system in Puerto Rico, and now it will get a tryout in California. The attractions are 48-hour construction (with six men), and a sales price of under \$7 a sq. ft. with appliances and heating.

Key to the system: a fastening method — Panel-Lok — designed and patented by Lockheed Aircraft Corp.

Concrete is poured into extruded aluminum frames that serve first as forms, then as load-bearing columns when the cured panels are erected. The frames contain integral locking bands so designed that panels can be connected by clips driven into joints at 2' intervals. A strip of trim is fastened over the locking bands to cover wall seams (*details left*).

Roof panels, also joined by the clip method, are sealed at

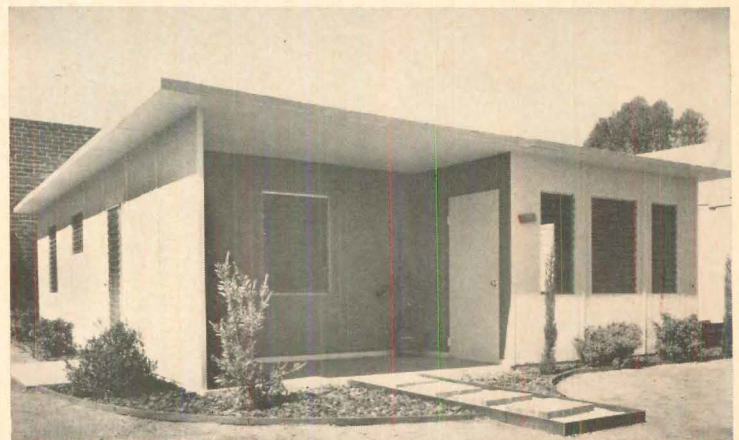
joints with bitumen—the only finish applied to the otherwise bare concrete roof.

The house shell is held together by tensioned tie-rods. They run continuously through roof panels, down each vertical wall joint, and are connected to floor-slab reinforcing at open pockets that are later covered.

Wall panels are 2" thick, 8' high and 4' wide, with a broom finish outside and steel-trowel finish inside. Roof panels are 3½" thick, 13' long, and—because they weigh 1,600 lbs.—must be placed by crane.

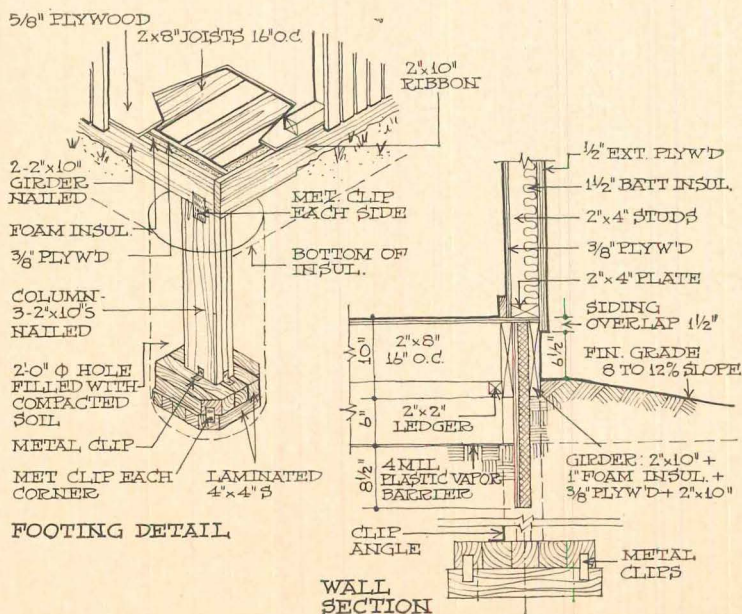
Cost varies with design, which is flexible. The under-\$7 price mentioned above is for migrant-farmer triplexes—785 sq. ft. per unit—to be built in Wasco, Calif., by Myers Bros. Construction Co., with a grant from HUD.

Gordon Ayers



Flat-roof design is standard for Lockheed's house. Roof panels can span 12'.

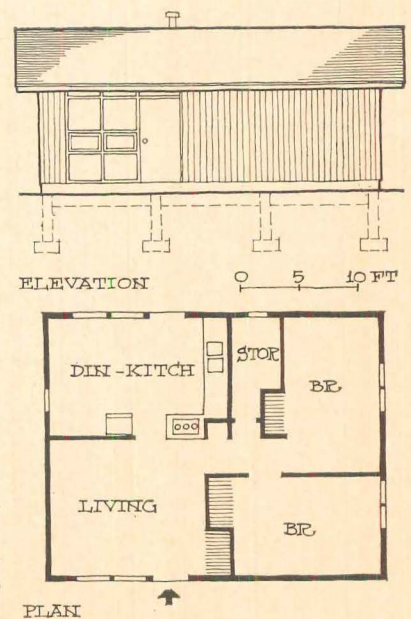
## All-wood foundations simplify do-it yourself-houses for Indians



By eliminating masonry foundations, Battelle Memorial Institute has come up with a house that can be prefabbed and erected entirely by amateur carpenters. The foundation is just a nailed-together column on a wood pad, set in a post hole (*details left*).

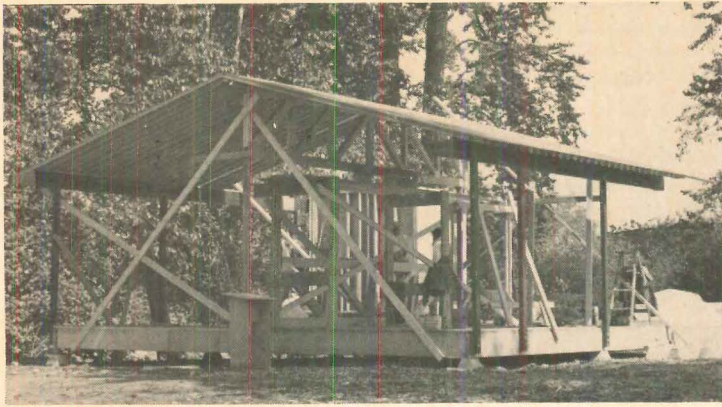
Indians on South Dakota's Rosebud Reservation—average income, \$1,500—will build the house under the guidance of Battelle and four federal agencies that are backing it with \$1.7-million. House cost, less labor: \$3,000 for 620 sq. ft. (*plan right*).

How good is a wood foundation? It could last 100 years, say researchers at Washington State University—provided it's pressure-treated. Their recommendation: a pentachlorophenol system developed by Koppers Co. It leaves wood odorless and paintable.



## Foam-core curtain walls make a packaged prefab easier to handle

Photos: Carl Holsted



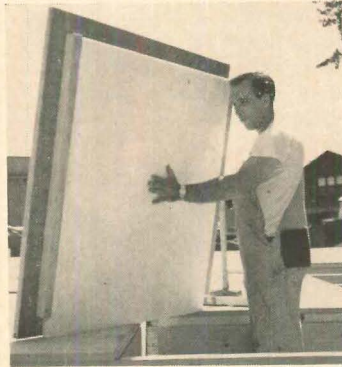
Roof of 22-gauge steel panels is erected on posts and beams before walls.



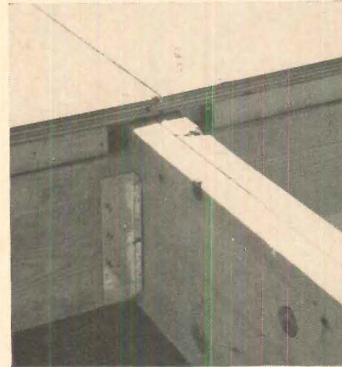
Exposed posts and beam ends serve as trim highlights in exterior design.



Framing post is joined to double 2x12 sill with two 9"-long bolts.



Floor panel of 1 1/8" t&g plywood is backed with polystyrene slab.



Joist connection is designed so floor-panel joint bears on girder.



Sandwich-panel walls are prefinished skins glued to polystyrene.

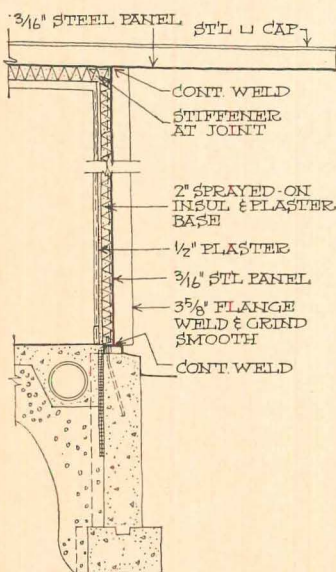
Boise Cascade designed this system primarily as a way to get Poly/Bord polystyrene into homebuilding. But after experimenting for over a year, Boise announced last month that it would not be selling the house after all, because efforts to market Poly/Bord as residential

insulation had been abandoned. An 864-sq.-ft. model was built at Renton, Wash., with a sale price of \$8,900 including appliances and wall-to-wall carpet. It combines steel, wood, and plastic. The roof is 22-gauge corrugated steel stiffened by closely spaced 2x4s, and bolted together in

2' x 14' panels. It is erected before the walls on a simple post-and-beam frame: 3x4 posts topped by 3x10s at outside walls and a 4'-deep girder truss at the center. The truss—double 2x6 chords and 2x4 webs—creates the ridge line and simplifies interior bearing-wall construction.

Wall panels combine 3/8" cedar plywood and 1/4" marble-tone hardboard laminated to 2 1/2" thick polystyrene. All the components can be moved by hand except one: a 1,500-lb prebuilt bathroom, requiring at least a fork-lift or truck crane.

## Welded steel panels are a possible answer to lower costs



Standard steel beams and columns are used for center bearing wall.

A shell built entirely of one basic steel panel is how Detroit architects George and William Keck would approach low-income housing. The panel is channel-shaped—4' wide with 4" flanges—and lightweight because it is made of thin 3/16" plate. A welder joins the flanges in one pass, creating structural



Cutout wall panels—for windows or doors—are welded at flanges.

"T"s, and the welds are ground smooth. Estimated construction time for a typical low-cost house: two days.

But the Kecks haven't applied the system to low-income housing yet. They tried it out in a higher-cost custom home—using a fabricator and workmen who were encountering the panels

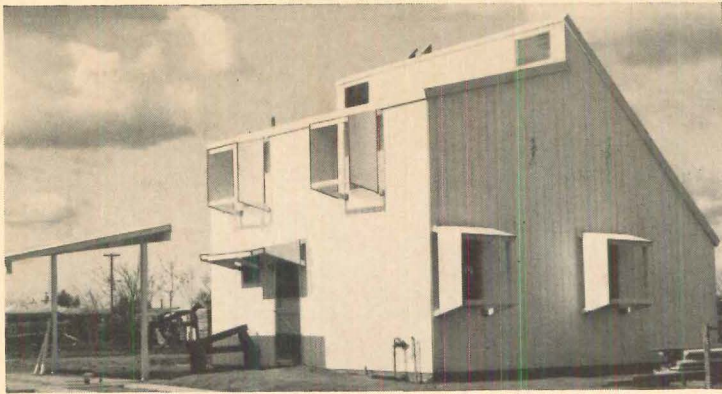


Lightweight roof panel is welded to adjoining roof and wall panels.

for the first time—and found that square-foot cost equaled that of conventional construction. The architects are certain that volume production could cut costs to the low-income range.

The system produces a distinctive contemporary house, and its flexible fastening method—welding—offers unlimited plans.

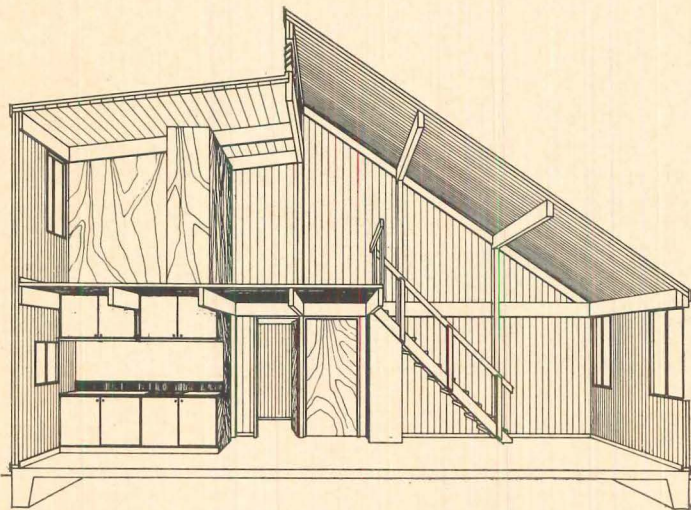
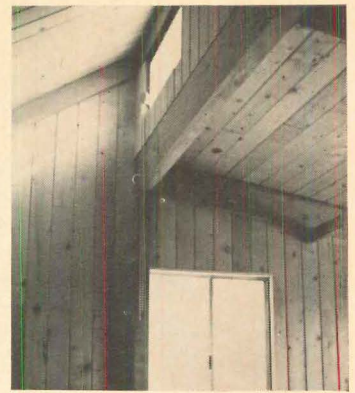
## Wood decking for walls, floors and roof cuts out finishing materials



Plank walls are painted white and windows are screened to reflect sunlight.



All-wood interior is provided by exposed surfaces of load-bearing decking.



A shell built entirely of t&g planks finished on two sides gave the University of California's architecture department an easy-to-build—and very distinctive-looking—low-cost house.

The university architects tried two kinds of plank walls. One is a sandwich made of two layers of white-pine t&g 2x6s—one layer vertical, the other horizontal—with vapor barrier between. The other wall is a single thickness of red cedar 4x8s. Both walls are fully loadbearing with the aid of lateral bracing at critical intersections. In the case of the sandwich wall, the bracing is sheetmetal concealed between

the two layers of decking.

Decking for floors and roof—which also serves as a finished ceiling—is as thick as use and loading requires. The finished roof is overlapping plywood panels— $\frac{3}{8}$ " exterior grade, painted white.

The university's choice of construction was determined by comparing the merits of every possible system (*box, below*). But its design is an architect's attempt to give low-income houses more interest and variety inside, and to make them serve large families more efficiently.

First-time cost—without volume production—was \$9 a sq. ft.

### Systems scorecard: How pure research rates ways to build low-income houses

Only one system passed every requirement set by the University of California's architecture department. The requirements:

1. Minimum labor and materials cost.
2. Adaptability to a variety of house designs.
3. Adaptability to all kinds of climate.
4. Suitability for small houses (about 900 sq. ft.).
5. Feasibility for self-help projects—i.e., minimum skills, minimum construction operations, and easily handled components.

*The system that passed: The single-skin shell of t&g planks finished on both sides (see above).*

Other wood systems rated almost as high, but the university found them less than ideal on one or more counts. Double-skin western frame takes too much skill and too many construction operations. Single-skin

western frame is not suitable to all climates. Post-and-beam and stressed-skin systems were judged not flexible enough in design, and not cheap enough.

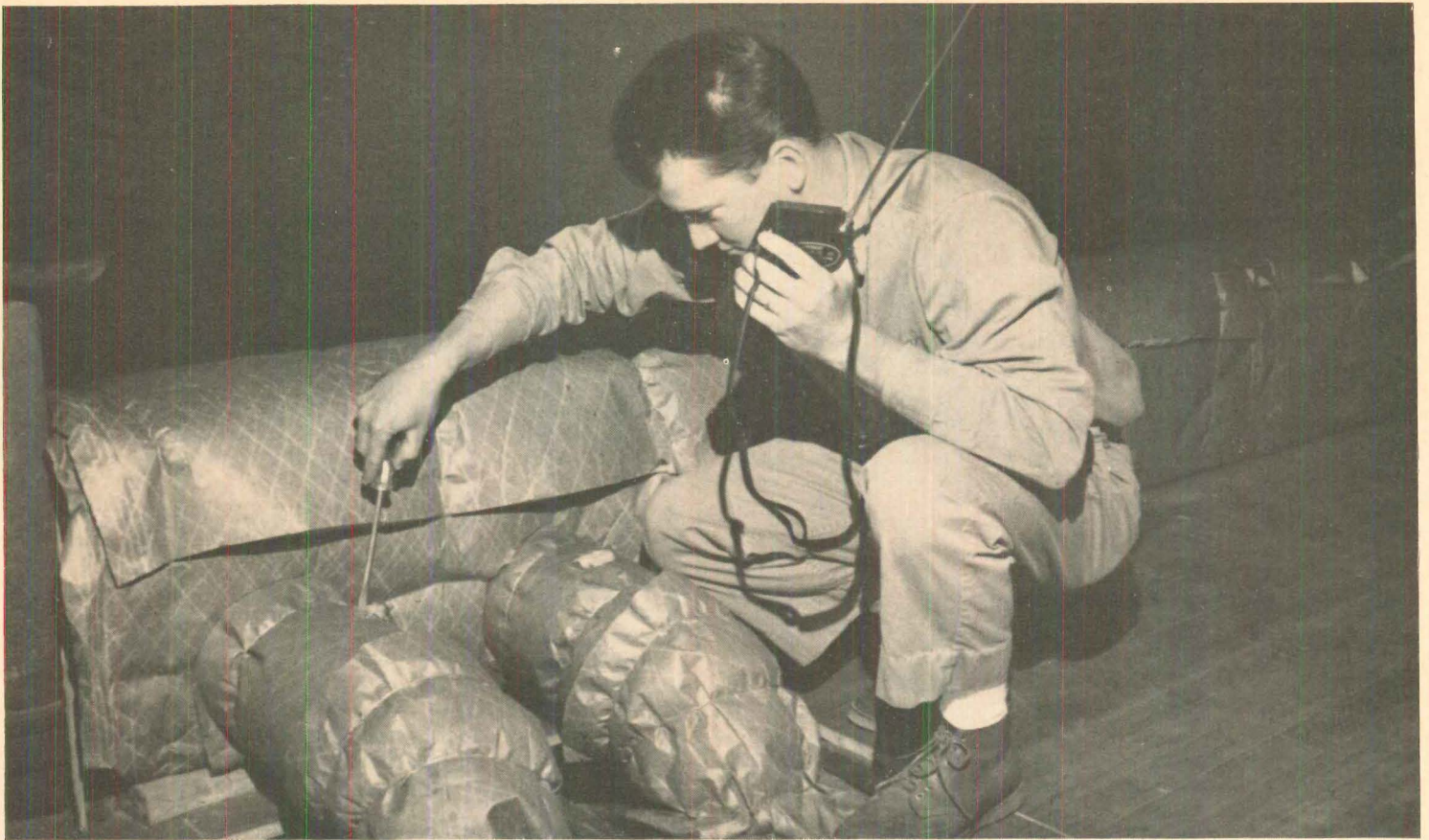
Systems that scored lowest on the university's scale were thin-shell concrete, space-frame, and triangular networks. They were unsatisfactory on all counts except materials cost.

*One non-wood system—cellular-core panels—surpassed some of the wood scores.* But the cellular panel—resin-impregnated core with skins of plywood, asbestos cement, aluminum or enameled steel—was rejected because its module is too rigid to permit variety in house design.

The scorecard is shown at the right (note: low score wins). On the basis of these ratings, university architects built three demonstration houses in Fresno, Calif.—two of plank and one of double-skin western frame.

CONSTRUCTION TYPE	MINIMAL COST		ADAPTABILITY		SUITABILITY FOR SMALL HOUSES	MINIMAL SKILLS	TOTAL RATING
	Labor	Materials	Design	Climate			
Western frame double skin	1	1	1	1	1	2	7
Western frame single skin	1	1	1	3	1	2	9
Post and beam	1	2	2	1	1	2	9
Vertical plank single skin	1	1	1	1	1	1	6
Cellular core	1	2	2	1	1	1	8
Stressed skin	1	2	2	1	1	1	8
Folded plate	3	2	2	1	3	3	14
Metal panel	1	1	3	2	1	2	10
Portable systems	2	1	2	2	1	1	9
Concrete (poured or precast)	2	2	2	1	3	2	12
Masonry	2	2	2	1	1	2	10
Tilt-up	1	2	3	2	1	3	12
Thin shell	3	2	3	2	3	3	16
Membrane	3	2	2	2	2	3	14
Network systems	3	1	3	3	3	3	16
Space frame	3	1	3	3	3	3	16

1 = Ideal; 2 = Average; 3 = Unsatisfactory



# AIR CONDITIONING

## A top-quality job can be worth its extra cost

The workman above is adjusting a damper in response to radioed instructions from a second man, who is checking the system with an air flowmeter in another room. This sort of precision has given Contractor Watson Marlowe (*left*) of Summit, N.J., an air-conditioning business that grosses \$500,000 a year, and a reputation for quality that brings in 85% of that business through referrals.

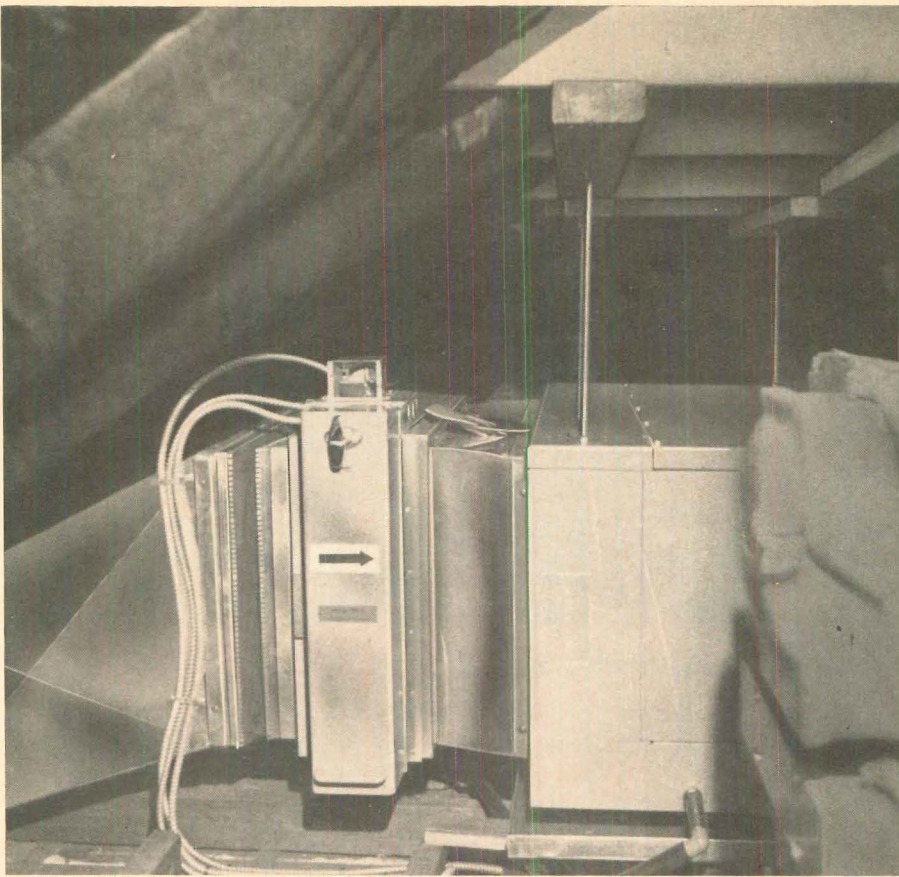
Needless to say, such precision is hardly typical of most air-conditioning systems in merchant-built houses. The reason is price: Marlowe's systems cost an average of 20% more than a minimal system, and so few builders are willing to pay this premium that Marlowe's work is confined almost entirely to new systems in older houses.

But it can be argued that a builder—particularly one in the higher-priced market—would find the 20% premium well worthwhile. He could offer his buyers a quieter and more comfortable system; its appeal is shown by Marlowe's rate of referrals. He would have fewer callbacks; Marlowe finds he needs to schedule only one routine service call a year. And his scheduling would not suffer; even a big remodeling job takes Marlowe less than three days, and new construction would be much faster.

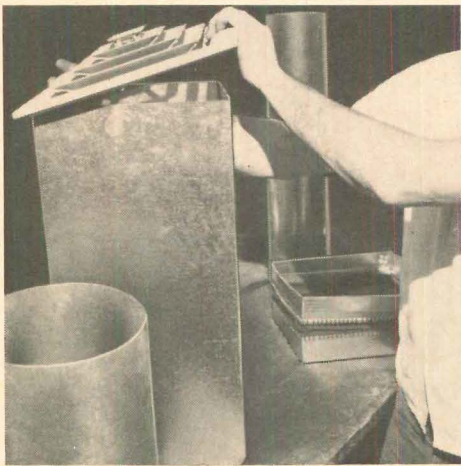
The following three pages show where—and why—Marlowe's extra money is spent. The figures are based on a new \$2,300 system in a 3,200-sq.-ft. house (*the plan is on p. 112*) and do not include remodeling costs.



**AIR-CONDITIONING CONTRACTOR** Watson Marlowe, president of Suburban Refrigeration, says careful engineering is the key to quality. His plans and specs are so detailed that it takes four pages to tell customers exactly what he proposes.



### For \$160 more: a well-soundproofed air conditioning system for a big house



The size of the house required a very big cooling system—58,000 Btus and 2,400 cfm of air flow—and so a potentially noisy system. Here's how Marlowe quieted it down:

Vibration noise was confined to its source—the machinery. The heat exchanger and fan unit was hung from stringers (fastened to the attic collar beams) by means of spring-mounted rods (*photo top left*). And a prefabricated vinyl connecting joint was put between the fan unit and the main duct to keep vibration out of the duct system. Cost: about \$50.

Marlowe uses three devices to cut down air noise. Specifically:

1. Where takeoff ducts are at the end of feeders, the feeder is extended about a foot past the takeoff (*above*). Result: Air trapped in the feeder extension acts like a shock absorber. Cost: \$20.

2. Oversized registers (*left*) are installed in every room. Result: Air flow slows down as it enters the register box and makes less noise as it leaves the register grille. Cost: \$60.

3. Extra dampers are installed in the attic portion of the takeoff ducts. Result: Most of the damping action, with its attendant noise, takes place in the attic instead of at the register damper. Cost: about \$30 for three dampers.

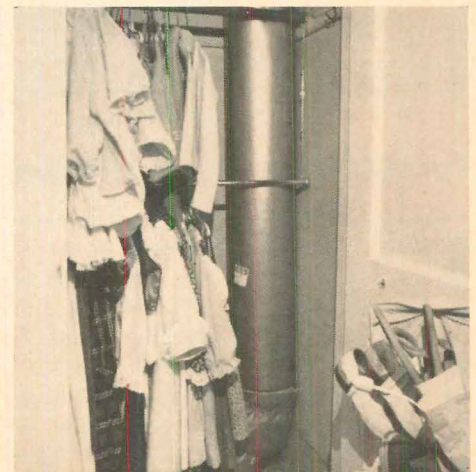
### For \$190 more: a moistureproofed system

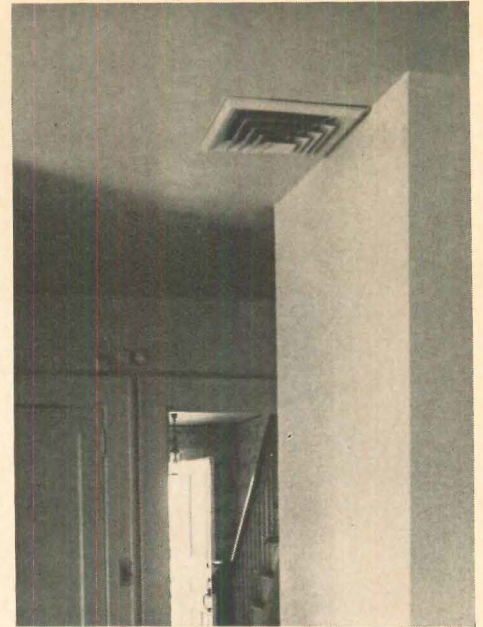
Sweating anywhere in an air-conditioning system can not only ruin the effectiveness of duct insulation but also cause damage to the house. To guard against this, Marlowe insulates every inch of his systems, and in many areas, uses extra insulation. Specifically:

The main duct, which is in the attic and hence very vulnerable to sweating, is wrapped with extreme care in a heavier blanket than usual. Its cost: 40¢ a square foot. And instead of taping duct sections together, Marlowe screws them. Reason:

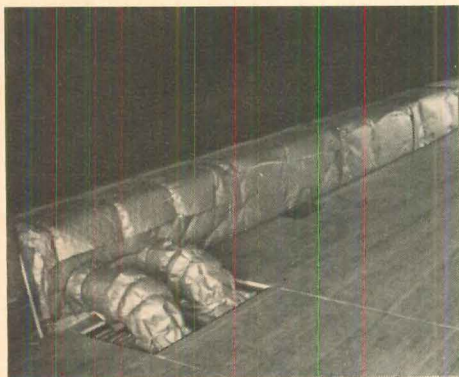
taped joints could rattle loose, causing an air leak and a potential sweat area. Cost of insulating and joints: \$90.

Fiber-glass ducts, which are self-insulating, are used for all feeders, and where metal ductwork is necessary—for dampers or takeoff stubs, for example—the fiber-glass is fitted around the metal like a sleeve. As a result, feeders are so sweat-proof they can be run right through closets (*right*) without danger of dampness and resultant damage to clothes. Cost: about \$100.





**For \$21 more: the kind of extras that make call-backs a rarity**



Marlowe has found that call-backs can result from inattention to the most routine installation details.

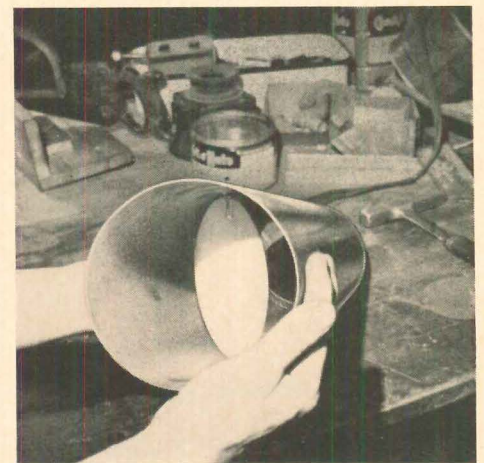
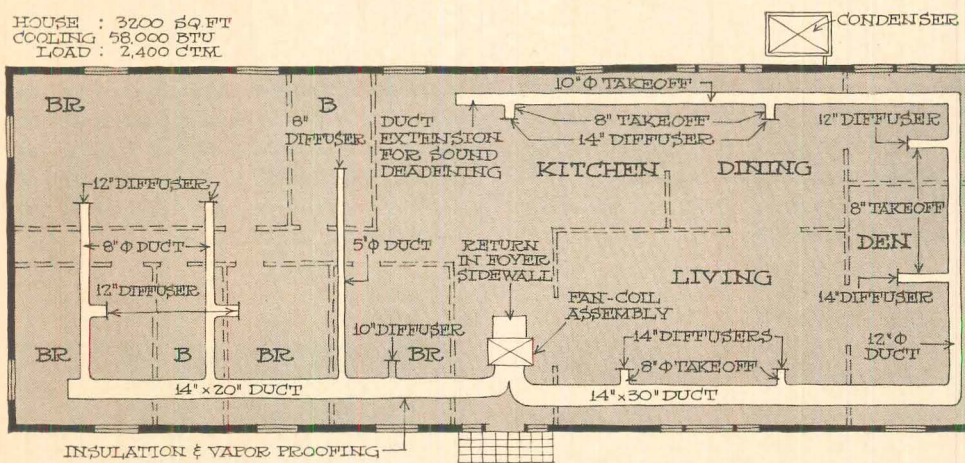
For example, ordinary diffusers, which blow air in all directions, would have caused the picture window shown in the photo above to fog. Marlowe anticipated the problem and installed three-way diffusers which do not exhaust on the side nearest the window.

He also used three-way diffusers for ceiling outlets placed right next to a wall (*above right*). Otherwise the cool air

would bounce off the wall and onto anyone sitting or standing below. In all, 7 three-way diffusers were used in the split level. Cost: \$3 apiece.

Two other touches which are typical of Marlowe's jobs: Two small diffusers were used instead of one large one in the living room to help balance the long room. And in another job (*left*), the ducts were jammed up against attic knee walls and takeoffs were run under the floor. Result: The owners can finish off extra rooms in the attic.

HOUSE : 3200 SQ FT  
COOLING 58,000 BTU  
LOAD : 2,400 CFM



**For \$120 more: an air-conditioning system sized exactly to suit each room**

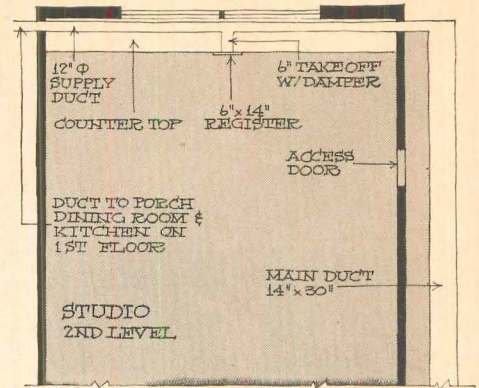
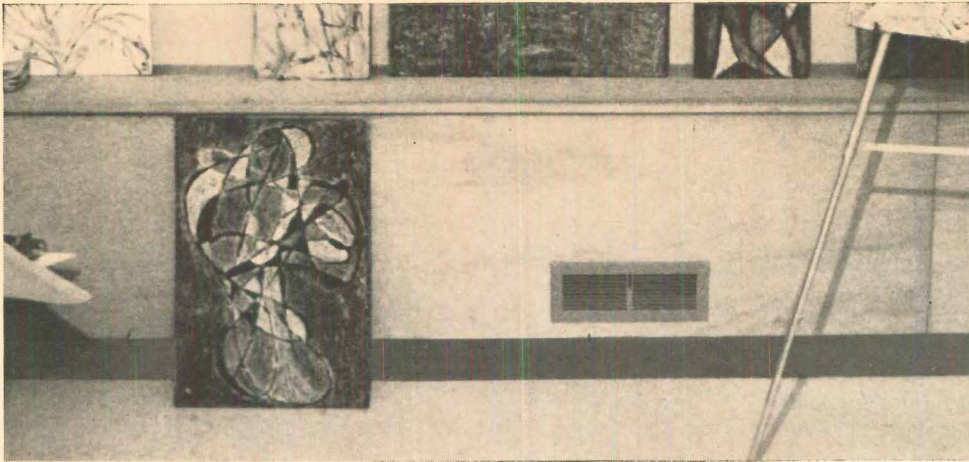
Comfort is the *raison d'être* of air-conditioning, and Marlowe doesn't want his customers complaining that one room is too cold while another isn't cool enough. Careful engineering allows him to call for—and receive—flows as accurate as 225 cfm in one room and 250 cfm in the next.

The first step is a meticulous study of the house. Marlowe went over this split-

level twice before drawing his air-conditioning plan (*above*). He specified oversized ducts to insure that more than enough chilled air was available (an existing air-conditioning system had to be removed because its ducts were too small). "I didn't use a room outlet with a diffuser or a takeoff smaller than eight inches," says Marlowe.

Next, the system is adjusted precisely by means of extra dampers in each room's takeoff. Two mechanics with walkie-talkies and air-measuring instruments adjust the flow to Marlowe's exact specifications. Then each damper (*above*) is locked into position with two nuts. There are 12 such dampers, and they cost \$10 each.





## And for \$73 more: a system that is well hidden inside and outside

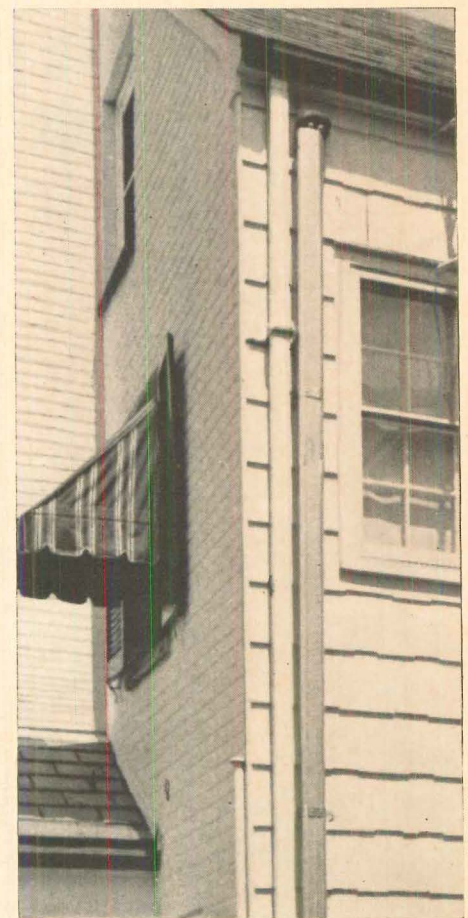
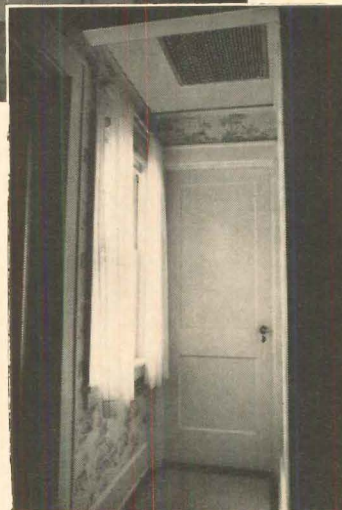
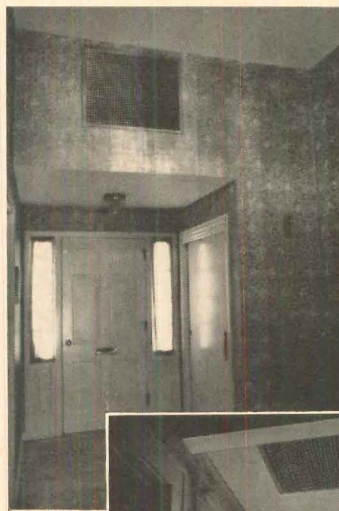
The trick is to keep the system out of sight without hiding it so thoroughly that its effectiveness is compromised.

For example, Marlowe had to run an unsightly main duct through a small room to get from one side of the split-level to the other. He hid it inside a functional work bench (*above*), but he also provided a large enough outlet to make the once-stuffy room livable (*plan above*). Total cost: \$70.

An air return must be centrally located to draw evenly from all parts of a house. Thus, the return in the split-level was placed in the central entry foyer. But instead of cutting it into the ceiling, where the return would have been visible from the living room, Marlowe built it into the wall (*right, top*).

In another job (*right, bottom*), Marlowe kept the return in an efficient spot but out of sight by placing it in a hallway ceiling at the top of a central flight of stairs.

On the house exterior, it is usually simple to hide feeder lines from condenser units. Marlowe runs the lines next to the downspout, then covers them with ordinary downspout pipe (*far right*) which costs about 14 cents a foot. Total cost of hiding lines in the split-level: \$3.



## Here is Marlowe's advice to builders who want to offer quality air-conditioning

The advice is based on 30 years of air-conditioning experience. And it is of special interest to builders because it comes from a successful contractor who, although he will gross nearly \$500,000 this year, has consistently refused to work for builders. He has preferred to grow by building a solid reputation for top quality—something he says he couldn't have done by working with overly-cost-conscious builders. Says Marlowe:

1. Find the best possible air-conditioning contractor well ahead of time. "Good contractors are busy enough to be sched-

uled up to six months ahead." Marlowe adds, "If you find some one at the last minute who isn't busy—watch out."

2. Keep the house close to schedule. "A busy subcontractor can't afford to work for a builder who keeps him waiting."

3. Use brand-name equipment. "And make sure the manufacturer has replacement parts available locally."

4. Put adequate electric service in every house that might later be air-conditioned. Marlowe prefers 150-amp. service. "The buyer won't mind paying the extra \$25 or so when he realizes that it

would cost him \$150 to boost the service later on."

5. Always install warm-air ducts that are big enough for the cooling load. "Builders often try to cut corners by using four-inch ducts, and before long customers are complaining about the air-conditioning. I rarely use anything less than six-inch round ducts—each with air-balancing dampers."

6. In a forced-air heated house, install a circulating fan big enough to handle cooling. "I recommend a fan with 2,000 cfm for an 1,800-sq.-ft. house."

*'Success can kill you if it catches you unprepared,' says the president of Canada's mushrooming Alcan Design Homes. 'And the killers are money and land.' Here he offers . . .*

## Six ideas to help the growing builder lick his land and money problems

"The most dangerous time for any home-builder is that interval between smallness and largeness." So says John C. Neely, whose Alcan Design Homes, a wholly-owned subsidiary of giant Alcan Aluminum Ltd., is Canada's fastest growing homebuilder.

The danger is that when a small builder starts to expand, problems in financing and land inventory force him to spend so much time chasing money and land that he has no time for buying, building, and selling—the things he does best.

Statistics point up the perils of expansion. In the first three months of this year, 224 U.S. building contractors failed. Their liabilities averaged only \$163,000, indicating that most failures occurred during early growth.

Jack Neely's credentials for giving how-to-grow advice are unusually solid. Alcan Design Homes has gone from a standing start in 1963 (fewer than 100 units for a volume of \$2.5 million) to a predicted \$19 million volume in 1966 (650 houses at an average price of just under \$30,000).

The company is now building in five major markets spread over 2,500 miles—Montreal, Toronto, Edmonton, Calgary, and Vancouver—and in 14 different subdivisions (the smallest consists of five townhouses in a high-income Montreal neighborhood). It builds conventional houses (p. 116) with conventional methods (everything is subbed out) and conventional mortgage financing.

All this work is done with a small staff—40 employees, including 11 at Montreal headquarters. Nevertheless ADH turns over working capital 20 times annually, and last year earned 20% on invested capital.

*The same management foresight that gave ADH its healthy growth, says Neely,*

*can be adapted by any medium-size builder to stave off the problems that stem from booming sales and sudden growth. Here are Neely's four basic financial rules:*

### 1. 'Don't get yourself locked in with a single banking source'

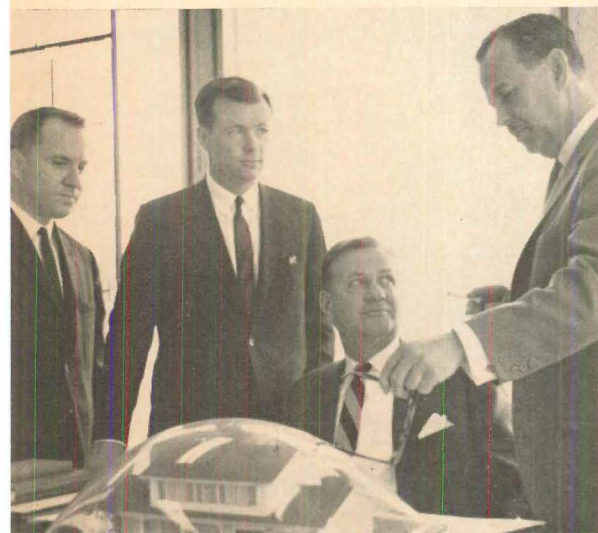
The builder who develops at least two different sources for his commercial banking is protected against the chance that one of them may be temporarily unable to meet his needs. And when money is not as tight as it is today, competition between lenders will help him hold down his financing costs.

"Like building materials, money is a commodity," Neely notes. "You can shop for the best buy."

ADH uses six Canadian commercial banks in the five markets where it builds, and these bankers are already aware of possible financing demands by the company in the next few years.

Neely also advises builders to use separate sources for their construction financing and permanent mortgaging. The reason: "If all your borrowing is through one source, and money tightens up for him, you get cut off from both temporary and permanent financing. With different lenders, you might be able to get temporary bridging money while you shopped around for your takeout mortgages. Or if you had takeouts from one lender, you could go looking for construction funds with these commitments as security."

Although ADH places mortgages with every major permanent mortgagee in Canada, it does not look to them for construction money. Instead, it does all its interim financing through commercial banks, taking short-term business loans like any other commercial enterprise.



**TOP ECHELON OF ADH** includes President John C. Neely, seated, and, left to right, Vice Presidents Steven J. Majko (design, product, and merchandising), Thomas R. Barwick (general manager), and Kenneth Cross (planning and finance).

## **2. 'Your signed contracts are the key to lowest-cost borrowing'**

Builders should remember, says Neely, that a signed contract from the homebuyer, backed up by a firm mortgage commitment from a permanent lender, can be almost as much a receivable as a General Motors order for auto parts or a Macy's order for men's shirts. Banks can be persuaded to make short-term business loans against collateral, and the builder will not have to make draws against the mortgage, which normally carries a higher interest rate.

ADH uses all its signed contracts (its houses are pre-sold from models) as receivables and borrows the full amount of each mortgage at the current Canadian prime rate of 6%. The loan is a revolving one—new contracts are credited, and any cancellations are debited from the total.

Since mortgages in Canada now carry a 7½% rate, it is 1½% cheaper for Neely to borrow this way. In the U.S., the spread is similar but smaller—conventional mortgage rates range from 5¾% to the West Coast's 7%, and the prime business rate is now 5¾%.

Neely points out that this method of interim financing applies only to pre-sold houses—it cannot be used for models or speculative houses, which are not true receivables because they are built without a signed contract or a mortgage commitment. What's more, it demands an informed, confident, banker-builder relationship (see below).

An extra advantage of this financing method is freedom from the delays and extra costs of the inspections and certifications that go with construction loans or draws against the mortgage. And, depending on the credit rating of the builder, a short-term loan may escape the fees charged to construction loans.

## **3. 'Tell your bankers everything they must know to help you'**

Advises Neely: "I would bring to these lenders a thought-out program for the next three to five years, including an estimate of my financing needs at every step along the way. Bankers should not only understand your program but also sympathize with it and feel confident of your ability to carry it out."

Confidence comes from performance, of course, and the best proof of performance is a monthly profit and loss statement given voluntarily to the lender. Says Neely: "A series of favorable statements will come in handy after you have had a few bad ones and need money. But for some reason, many builders hate to make full disclosure to their lenders unless they are in trouble, and then the more they tell, the worse it looks. A banker likes to be in on the flight plans, not just the crash

landings. Since undercapitalization is going to be a way of life with you as long as you are a homebuilder, your relationship with your banker will be continuous. And he has a right to know as much about your affairs as you do."

Most builders find that a monthly profit-and-loss statement has a second value: It forces them to straighten out their own problems before serious trouble develops.

Neely practices what he preaches. Each of the five ADH divisions is a so-called "profit center" with its own separate profit and loss statement. These running scorecards are checked constantly by the headquarters auditing staff. Actual cost figures are compared with previous estimates, and wherever the projections have been exceeded, they must be explained. For example: If a house is using more material than was budgeted, the manager must know if this represents a bad estimate, wasteful installation, or theft, and he must take the necessary corrective steps.

## **4. 'Don't be afraid to sell equity to get the capital you need'**

Borrowing on the best possible terms depends partly on credit rating but more heavily on a strong equity capital position. Neely admits the advantage of his Alcan backing but insists that many builders ignore possible sources of equity capital.

"Friends, family, suppliers, syndicates and partners are all possible sources of money," he says. "And the builder should tap them if such extra capital will permit a profitable growth that would not otherwise be possible."

Although builders historically have resisted any watering down of their ownership and authority, it is getting harder and harder to build capital out of retained earnings. The extra strength given to a balance sheet by an infusion of equity money is a great convincer to potential lenders, and no businessman should object to sharing profits with outside capital that made those additional profits possible.

Adds Neely: "Having partners also forces your operation to be more efficient and profitable. One common weakness in homebuilding is unprofitable construction that is hidden by a profit on land. It's easy for a builder to fool himself about where his profit is coming from.

"Of course, taking in outside capital means accountability to the other owners, plus a rein on your own freedom. But an unwillingness to accept other opinions or compromises may well be a sure sign of eventual failure."

*As important as money is, the hardest raw material for any builder to replace is developed land.* And, says Neely, if a growing builder runs short of land, a boom in sales can put him out of business.

Neely has two suggestions for builders

who want to assure themselves of a steady supply of finished lots at prices they can afford:

## **'Draw up a land-need blueprint for several years ahead'**

To the objection that it is difficult to predict land requirements three to five years in advance, Neely replies, "You must schedule your growth, not let it schedule you."

Since most builders cannot tie up the capital needed for long-term land buying and developing, Neely advises them to form combinations with other builders, lenders, syndicates, or investors to option, buy, and develop land on a schedule geared to the building operation. The individual builder doesn't have to be big enough to buy all the lots in the developed land; what he doesn't need can be sold off to other builders. But the development company has his firm takeout as the backbone of sales success.

Alcan Design Homes did just that. Rather than pour huge amounts of Alcan capital into land buying and development, Neely formed a land development company, Markborough Properties Ltd., and enlisted the backing of some 20 of Canada's leading institutional and commercial companies. (The parent aluminum company owns only a minority interest.) Markborough buys and develops land for sale to ADH and other builders at negotiated prices and on schedules the builders have agreed to. Right now, ADH has its finished lots guaranteed for the next three years.

## **'Help the land developer get the financing he needs'**

Neely urges builders to cooperate closely with their land developers in the initial stages of land purchase. A firm commitment from the builder to take a certain number of finished lots at a certain price can be the very guarantee that will clinch a development loan for the land owner. If other builders add their commitments, the developer will have an assured market that will give him access to funds and terms that he never could get if the subdivision were completely speculative in approach.

An example: ADH recently committed itself to buy \$6 million worth of finished lots from a Toronto owner of raw acreage. With the agreement in writing, ADH went with the developer to his bank and helped him negotiate a \$4 million development loan to put in improvements. The loan was at a better interest rate than the owner could have gotten without the commitment, and the saving in financial costs was reflected in a lower price per lot to ADH. And the guaranteed supply of lots at fixed prices gives Neely a basis for planning several years ahead.

Another sweetener to the lender: Neely

agreed that as he took up his options he would remit a percentage of each lot price directly to the lender, thus reducing the indebtedness on the remaining property.

Admits Neely: "I realize that a contract to buy backed by the Alcan name carries extra weight. But a contract to buy finished lots from any responsible builder

should be proportionately negotiable by a land developer. Of course, this will depend partly on the builder's degree of financial responsibility."

## Why Alcan is succeeding where other product manufacturers failed

The litany is long and sad: Alside, Union Carbide's Qualstan, U.S. Steel Homes, Koppers, Alcoa, Reynolds, and Armco—all of them leading producers and all disappointed in their efforts to market single-family houses.

By contrast, the growth of Alcan Aluminum's homebuilding subsidiary has been steady and impressive. Much of this success stems from differences in approach between Alcan Design Homes and other producers. For example:

*ADH is not a subsidized operation that is justified by the sale of aluminum.* Says President Neely: "We see homebuilding as a way of creating a favorable environment for aluminum building materials and products, but our division stands or falls on its own balance sheet. We are expected to give Alcan a normal—or better—return on the capital it has invested in us."

*ADH uses the parent company's product—in this case aluminum—only where it makes economic and marketing sense.* "We're not confused by the fact that Alcan owns us," says Neely. "Of the 1,500 houses we have built, some 95% have been solid masonry homes that the local markets demanded."

But wherever siding is used, it is aluminum, as are gutters, downspouts, flashing, soffits, windows, and sliding doors. And, as a matter of fact, ADH now uses an average of 2,000 lbs. of the metal per house against a previous average of only 40 lbs. (Fabricators supplied by Alcan must compete against fabricators who use other aluminum companies' output.)

Where the metal is not competitive, there is no demand that it be given preference. In part of Canada, for example, aluminum heating ductwork is a specialty item, while galvanized steel is standard. Since the homebuyer will not pay the extra cost, ADH uses galvanized. When aluminum becomes competitive, it will replace steel.

*ADH keeps its corporate overhead low.*

Each of the five ADH divisions budgets 1.8% of sales as its share of corporate overhead, a figure that is revised each year to insure its accuracy. Since ADH is an autonomous subsidiary of Alcan, it does not bear a proportionate share of the parent company's overhead, but needs only to return a profit on invested capital. Although Neely is accountable to the Alcan board, the building operation does not require the time and attention of Alcan executives on a day-to-day basis.

Overhead of the five divisions (including an ad budget of only \$143,000) is 2.2% of sales, and direct sales costs are another 1.2%. So total sales and overhead costs come to only 5.2% of sales.

*ADH pushes authority and responsibility to their furthest limits.* Each division is set up as a profit center under a manager who is almost as independent as a self-employed builder. He hires all subcontractors, buys all materials (although company headquarters negotiates for some standard, nationally distributed products), oversees all work, handles sales, and hires and fires everyone below him. In return he is paid a salary plus a share of his division's profits. (In fact, all ADH employees, even down to stenographers, share the profits of their own operation.)

Says Neely: "We give our managers everything they say they want or need to do the job. Then we demand from them strict accountability for performance. If you jam something down a guy's throat, he has an excuse for nonperformance."

Headquarters provides most design services. But, Neely points out, the local manager has "about a 90% voice" in the models and floor plans for his projects. Reason: He has to do the selling, and he should know what his buyers want and need.

*ADH builds conventional houses for buyers with average tastes in design and plan.* None of its designs are strongly con-

temporary. And, except for some models with a distinct French-Canadian flavor, most of the company's houses would be at home in most U.S. cities. In fact, Neely and his staff travel widely to U.S. subdivisions to keep abreast of changing styles and amenities. One result of these trips is a Spanish-style model which, though previously unfamiliar to the Canadian market, is already a favorite with ADH buyers.

*ADH holds its capital investment in land to a minimum.* The company's land buying and developing arm, Markborough Properties, is owned by a long list of blue-ribbon financial and industrial giants, including Air Canada, T. Eaton (department stores), Canadian National Railways, and all of the major Canadian life insurance companies.

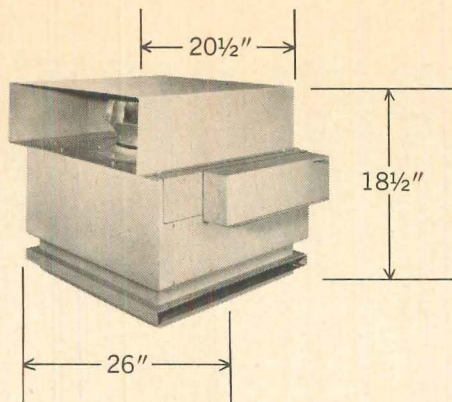
Markborough uses ADH's contracts to buy lots to get development loans (*see above*); the building company does not have to tie up huge amounts of capital in land. Instead, land is bought as it is needed, and working capital is turned over fast in the construction and sale of houses.

*What about ADH's future?* Within weeks, eight prototype prefab houses will be delivered to Toronto and Montreal sites (NEWS, July), with price tags under \$10,000, not including land. Public housing authorities in Ontario and Quebec are obvious markets for the units, as are lower-middle-income families. If Neely can deliver these appliance, carpeted, and large-furnished houses at the projected prices, if he can solve union and/or code problems, if he can get the cooperation and acceptance of the communities that need low-income housing, ADH may be entering a growth period that will make the first four years look modest. Perhaps it will become the first Canadian company to enter the charmed circle of homebuilders who build more than \$30 million in new housing each year.

Photos: Panda associates



**TYPICALLY CONVENTIONAL ALCAN MODELS** are four-bedroom, hip-roofed house (\$25,325 on \$5,000 lot), four-bedroom colonial with sunken family room (\$27,308 on \$5,000 lot), and entry-court one-story that shows heavy use of masonry to satisfy local tastes (\$35,900 on \$9,000 lot).



**SMALL PACKAGE  
FOR A**

# BIG HOUSEWARMING

Imagine an electric central heating system the size of a portable TV, yet able to heat 2000 square feet of house! You can stow it anywhere — closet, crawl space, basement nook — without special space arrangements or fear of fire hazards.

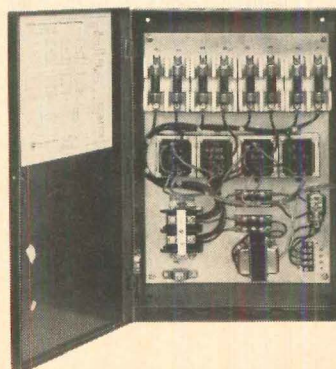
No longer do you have to plan around obstacles. There's no cluttering of living areas, no floor or head-room problems.

CHROMALOX WAF-10 and -20 units are just 26" narrow, 18½" low, 20½" shallow — and are easily adapted to add-on air conditioning.

These compact 60-lb. units are housed in rugged, heavy-gage steel cabinets, furniture-styled to make them fit better into home decor.

WAF-10 and -20 models come in three capacities 10, 15 and 20 KW. A lot of heating in a little package — for new or remodeled homes.

Write for Bulletin R25700.

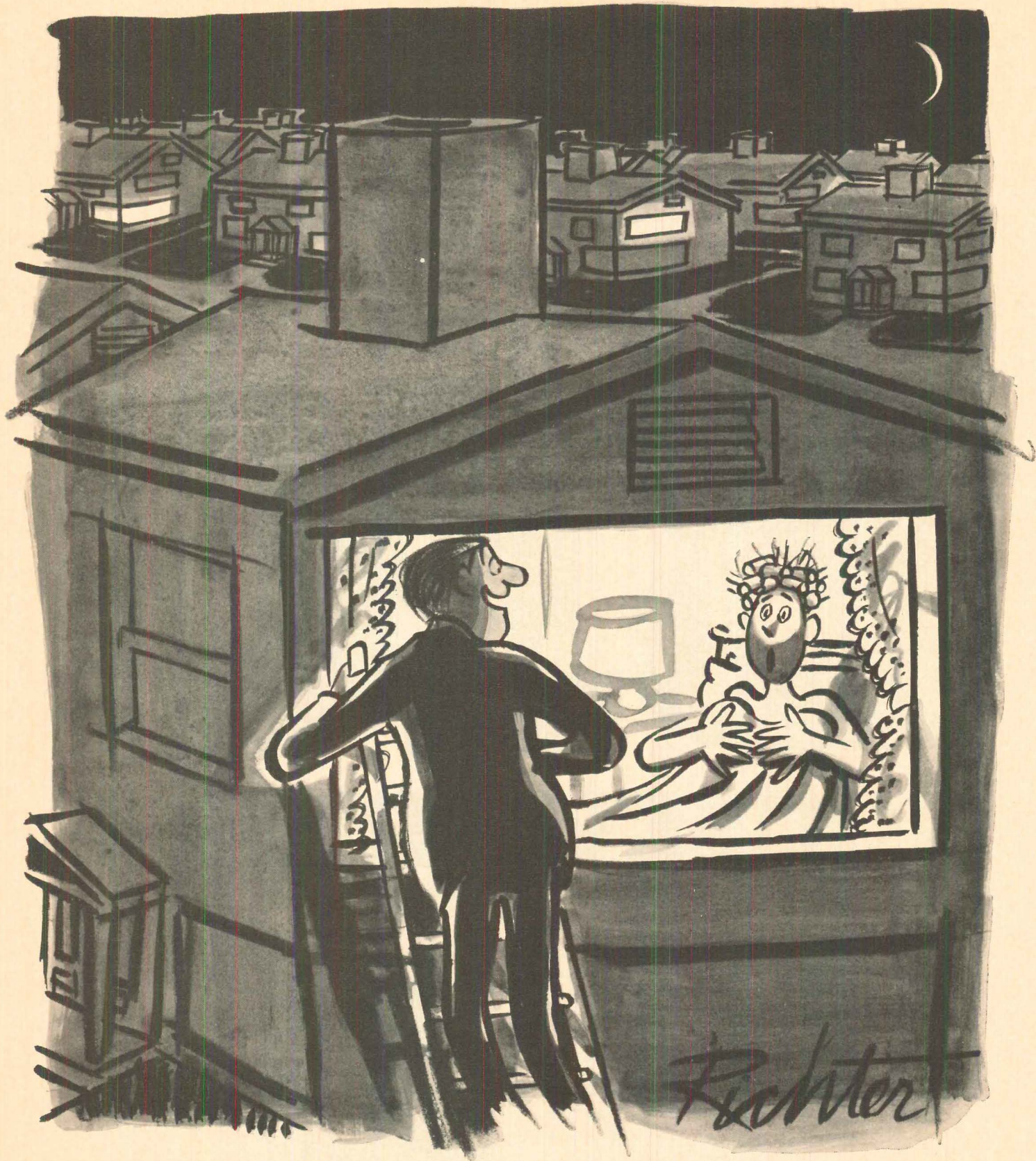


Here's a feature *your* customers will like: A simple Sequencer Control automatically regulates heater operation. All you do is set your thermostat. And, there's no power surge to dim lights or interfere with TV.

WR-96B



**CHROMALOX**  
ELECTRIC HEATING/COOLING  
**Edwin L. Wiegand Co.**  
7770 Thomas Blvd., Pittsburgh, Pa. 15208



*"Yoo-hoo. Remember me? I'm the builder. Just checking to see how you like your new carpet of Herculon"*

**Will homeowners love you for installing carpet of**

**Herculon\* olefin fiber?** Yes. Because Herculon is the easiest-to-clean of all carpet fibers. It's so chemically inert, so moisture resistant, stains and soil tend to stay on the surface until they are wiped clean.

**Will carpet of Herculon stand up under kids, dogs, frug parties and inconsiderate guests?** Yes. Carpet of Herculon is

exceptionally long wearing even under the heaviest traffic. Lab and "in use" tests show that Herculon matches nylon in long wear and abrasion resistance. And is far more abrasion resistant than acrylics or wool.

**Do you have to be a rich builder to install carpet of Herculon?**

No. Herculon can save you as much as \$3 per square yard below competitive carpet fibers of comparable bulk and construction.

**Does carpet of Herculon look like your tenants are rich?**

Yes. It looks like a million dollars. In beautiful colorfast solids, multicolors and patterns. And a pile so densely packed, you'll find it hard to believe this is contract carpet. Of course all carpet of Herculon is practically static-free.

**Is carpet of Herculon today's most brilliant, low-cost promotional idea for builders?** Yes. And it's available at the best carpet mills in the country.

**Why didn't the builder in the cartoon ring the bell?**

His contractor wired it to the telephone.

Why not surprise your new homeowners with carpet of Herculon?

To find out anything you want to know about this great new commercial carpet or for a free copy of the new Architect/ Designer's Guide to Carpet of Herculon, simply call, write or visit Fibers & Film Department, Hercules Incorporated, 380 Madison Ave., New York, N.Y. 10017. OX 7-0010.

**Is there a carpet that has all the answers? Yes.**

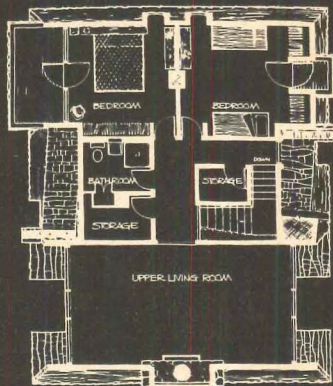
**Since when? Since Herculon.\***

**The No. 1 polypropylene fiber for contract carpets.**

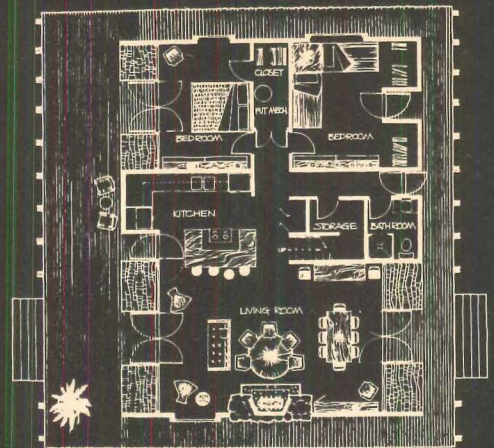
\*Registered trademark of Hercules Incorporated, Wilmington, Delaware for its olefin fiber.



*Beachhouse, Manistee, Michigan  
Architects: Meathe Kessler and Associates, Inc.  
Certigrade Shingles, #1 Grade Perfections, 18" long  
with 5½" to the weather on the roof, varied  
exposures 1" to 8" on the sidewalls.*



SECOND FLOOR



FIRST FLOOR FOUR FEET



## Red Cedar Shingles never cramp your style.

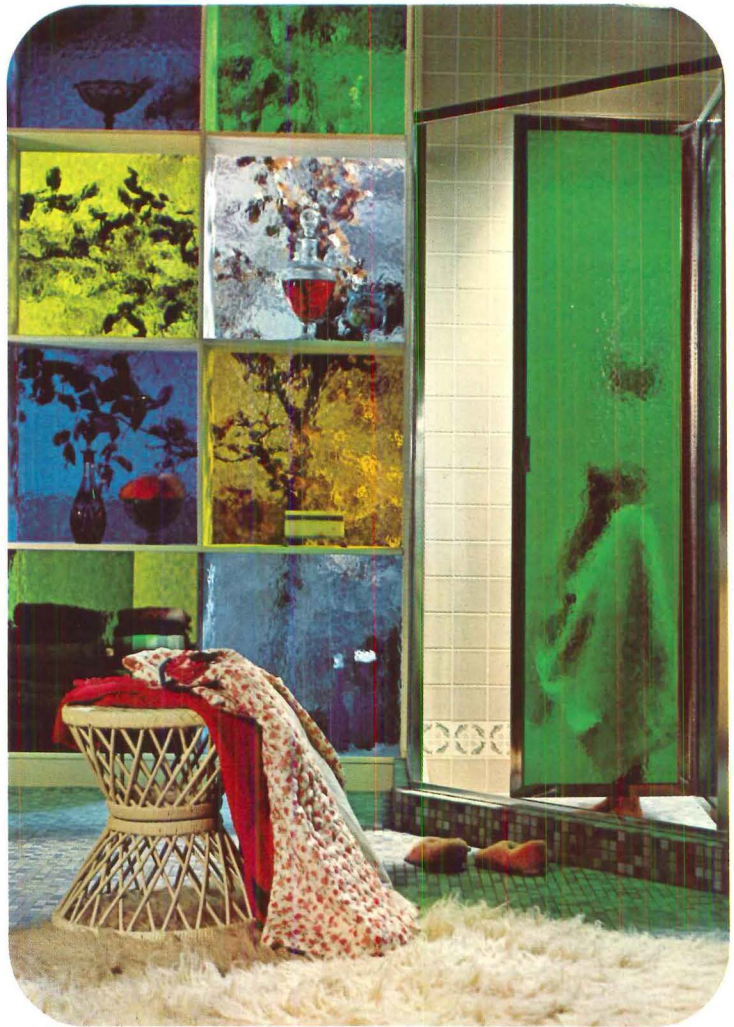
Red cedar shingles can be applied with die-like symmetry. Or with butt lines that wander and weave at random. Either way, they preserve their dignity. Red cedar combines all the freshness and flexibility of fine grain with the toughness and reliability of one of the most durable forest species to be found on earth. And, red cedar shingles and handsplit shakes

look rich. You'll find more detailed information on Certigrade shingles and Certi-Split handsplit shakes in our Sweet's catalog listing, 8d/Re. Or give us a call, or write.

### RED CEDAR SHINGLE & HANDSPLIT SHAKE BUREAU

5510 White Building, Seattle, Washington 98101  
(In Canada, 1477 West Pender Street, Vancouver 5, B.C.)





# Flair

**new patterned Plexiglas®  
adds dramatic sales appeal to homes**

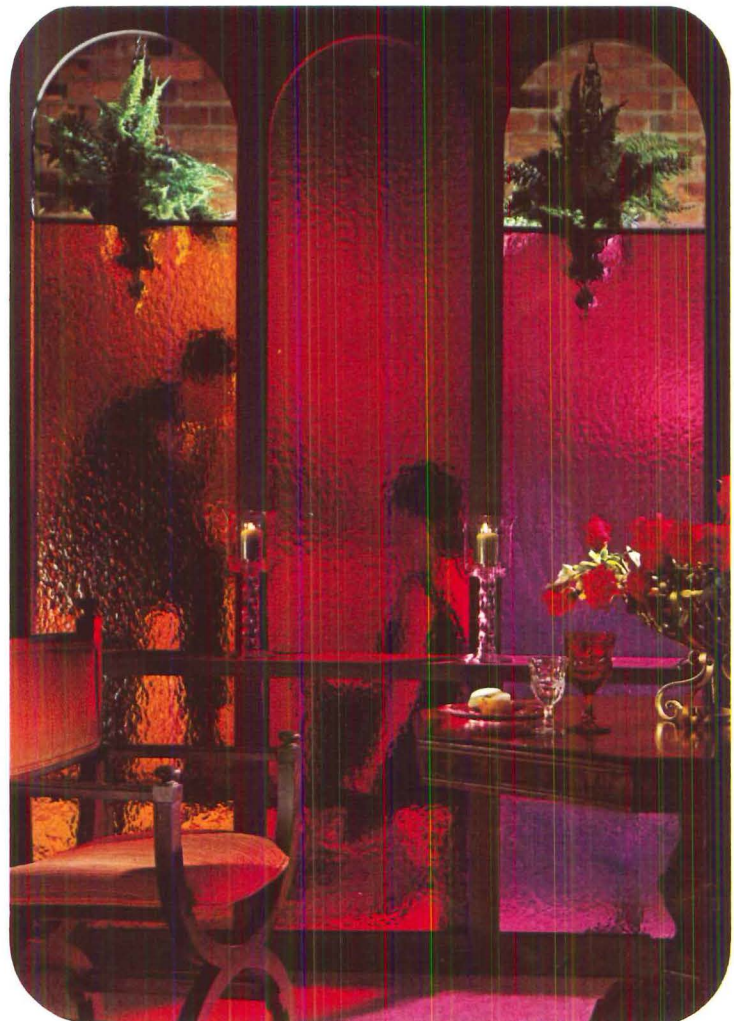
Colorful stained glass effects such as those shown in the illustrations make new homes distinctively different . . . turn prospects into buyers . . . produce quick sales for the home builder. The material that makes it possible? FLAIR patterned PLEXIGLAS acrylic plastic.

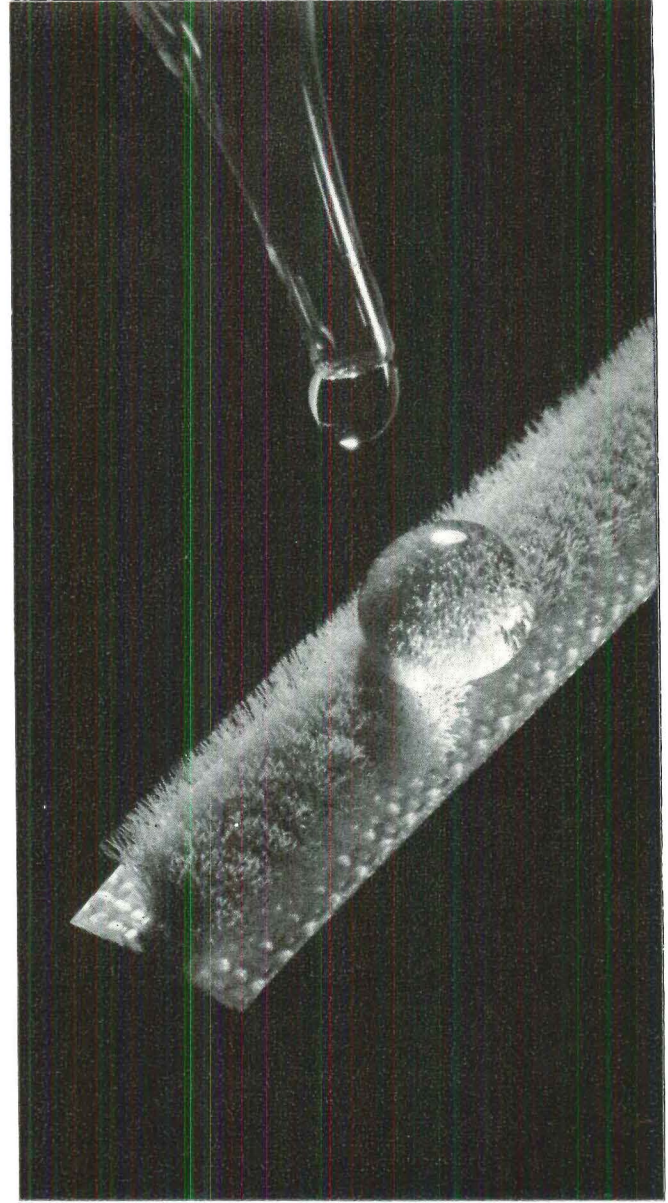
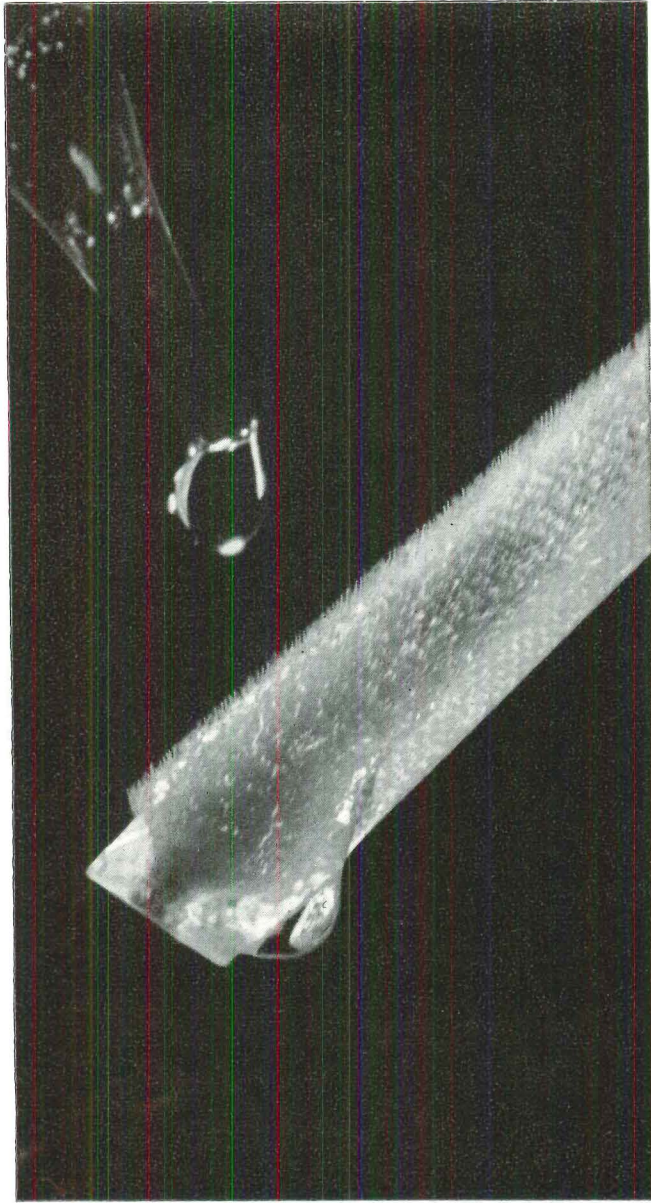
FLAIR comes in a radiant spectrum of 17 transparent colors and colorless . . . is available in sheet sizes up to 4 by 8 feet. This beautifully textured material is safe and easy to handle and install because of its light weight and great resistance to breakage. And its breakage resistance is a sales feature for the homeowner. PLEXIGLAS, a slow burning plastic, is generally subject to the same regulations as untreated wood in building-installations.

Learn how FLAIR can enhance the homes you build. Write for your copy of our brochure, color samples, and the names of Authorized PLEXIGLAS Distributors in your area who stock FLAIR for immediate delivery.



®Trademark Reg. U.S. Pat. Off., Canada and principal Western Hemisphere countries. Sold as OROGLAS® in other countries.





## The only difference is silicone treating

The polypropylene pile on the right, with silicone, is water resistant enough to hold that bead for 15 minutes or more. An identical sample without silicone won't hold a bead at all. Water resistance like this could make the difference in meeting AAMA and ASA specifications.

In a recent series of tests by an independent laboratory, two pieces of our weatherstripping like those above were placed in a sliding glass door and subjected to water infiltration according to AAMA testing procedures. The silicone-treated Poly-Pile\* sample prevented seepage in the door track *twice as long* as the untreated one.

A second set of samples was subjected to 20,000 strokes with an aluminum abradant in a Stoll Wear Tester. After this kind of wear, silicone-treated Poly-Pile weatherstripping still held a bead of water for 15 minutes. The untreated sample absorbed water immediately.

In the standard AAMA resiliency test, silicone-treated pile held only a 2.0% set after compression, compared with an 8.0% set on the untreated sample.

Pretty conclusive evidence, isn't it? Silicone treating dramatically affects the performance of synthetic-pile weatherstripping. That's why every foot of prime window Poly-Pile weatherstripping by Schlegel is silicone treated and will continue to be.

Write us if you'd like full details of the test results. We'll even send you an eyedropper to make your own test.

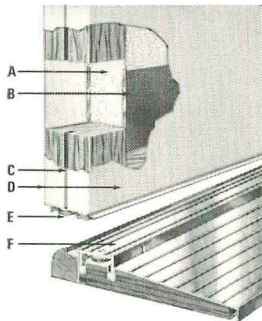
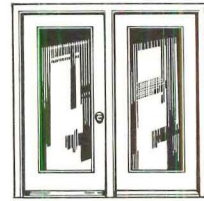
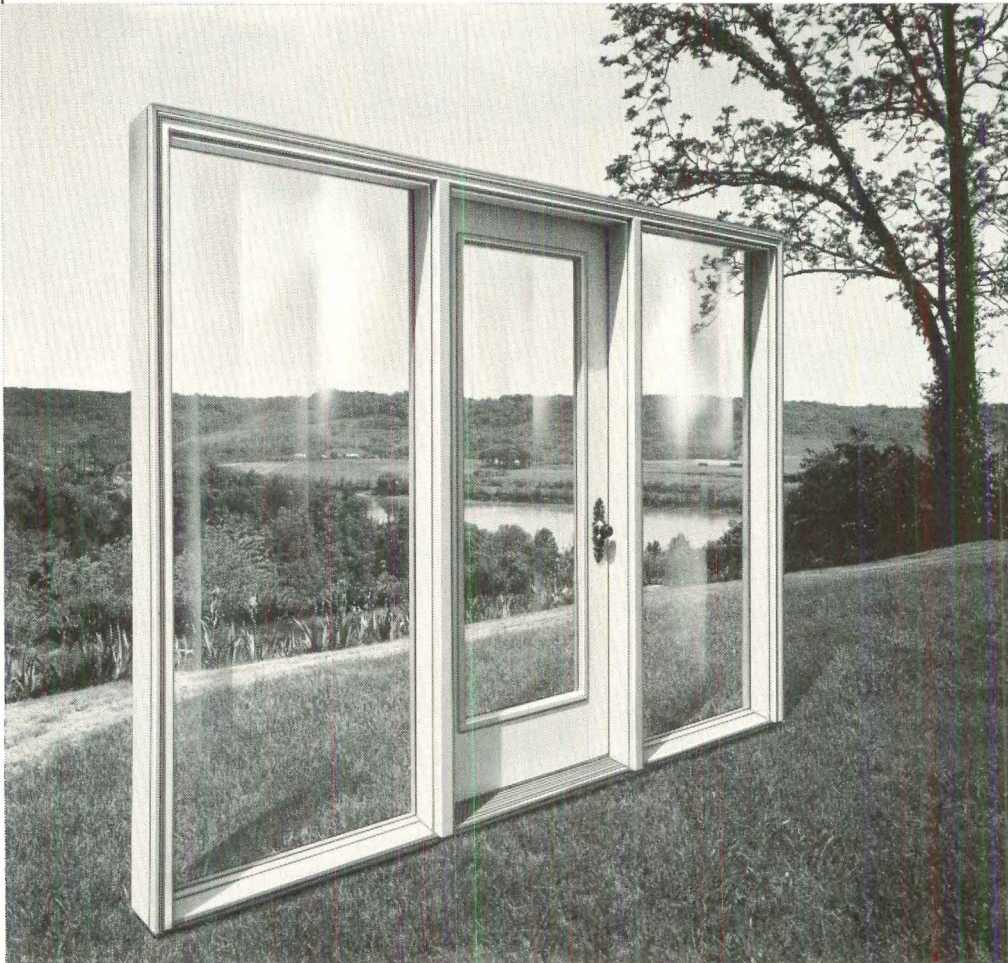
Better yet, send for silicone-treated Poly-Pile weatherstripping. It doesn't cost you anything extra.

**Schlegel** \*Trademark of The Schlegel Manufacturing Company  
**WOVEN PILE WEATHERSTRIPPING**



THE SCHLEGEL MANUFACTURING COMPANY • P. O. BOX 197 • ROCHESTER, N. Y. 14601

# This patio door is a real swinger!



- A. Rigid Dylite foam core insulates
- B. Internal "kick" strip
- C. Thermal break—ends condensation
- D. Galvanized steel facings
- E. Seal strip on door—not walked on
- F. Adjustable universal sill

The new Pease Ever-Strait Patio Door swings open—the natural, convenient way to open a door. Can't be blocked by ice in tracks like sliding doors, either. Best of all, the Pease Ever-Strait Door **can't warp**. Stops call-backs.

And, thanks to a positive magnetic weather seal, there are no drafts or air leaks. Choice

of single glaze or insulating glass.

Pease Ever-Strait Patio Door Units are available in Colonial and Contemporary styling to complement the architecture of your home. Like to find out more? See your nearest distributor, or write for free brochure and full details.

## Pease Ever-Strait Doors®

Dept. H-9, 900 Laurel Ave., Hamilton, Ohio

Patents No. 3,153,817 and 3,238,573. Other patents pending.

### PEASE EVER-STRAIT DOOR DISTRIBUTORS

Springfield Builders Supply Co., Inc.  
Springfield, Illinois

Imperial Components, Inc.  
St. Charles, Illinois

Components, Inc.  
Hammond, Indiana

Home Lumber Co.  
New Haven, Indiana

Alco Structures, Inc.  
Easton, Maryland

Western Mill & Lumber Co.  
Baltimore, Maryland

L. Grossman Sons, Inc.  
Braintree, Massachusetts

O'Connor Lumber Co., Inc.  
Westfield, Massachusetts

Johnson Door & Specialties, Inc.  
Kalamazoo, Michigan

Acorn Distributing Co.  
Walled Lake, Michigan

Minnesota Wood Specialties, Inc.  
St. Paul Park, Minnesota

Rust Sash & Door Company, Inc.  
Kansas City, Missouri

Sealrite Mfg. Co.  
Lincoln, Nebraska

Sklar Door Corporation  
Bound Brook, New Jersey

Gerrity Company, Inc.  
Albany & Syracuse, N. Y.

Iron City/Whitjax Co.  
Lancaster & Rochester, N. Y.

Sam Palevsky Hardware Co., Inc.  
Bedford Heights, Ohio

Iron City/Whitjax Co.  
Cleveland, Massillon & Lima, O  
Hamilton, Ohio

Pease Woodwork Co., Inc.  
Hamilton, Ohio

Iron City/Whitjax Co.  
Pittsburgh & Johnstown, Pa.

Marling Lumber Company  
Janesville, Wisconsin

CANADA: Whitjax, Ltd.  
Montreal North, P. Q.  
Toronto, Ontario

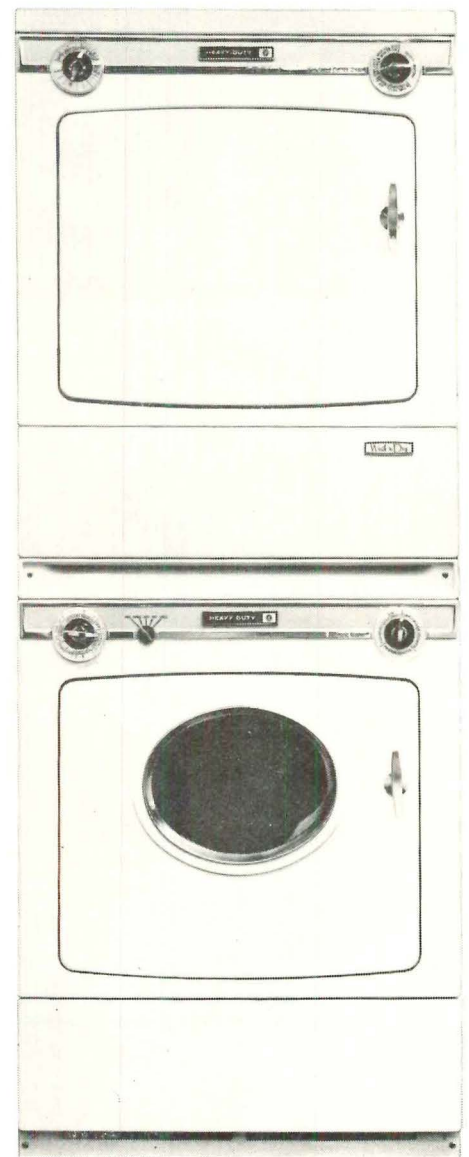
# Only Westinghouse gives you a washer and dryer in the space of the washer alone.

## **The Laundry Twins.**

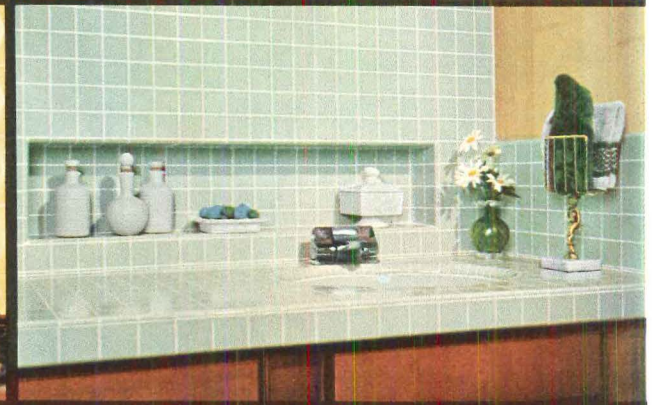
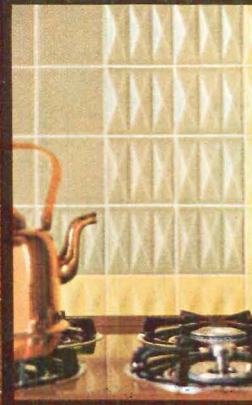
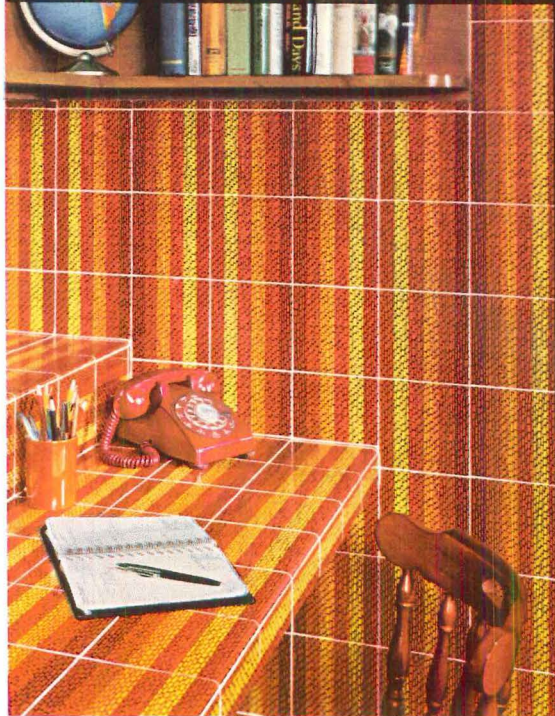
You can put the Laundry Twins most anywhere. In a linen closet, bathroom, or kitchen, for instance. Or set side-by-side under countertops. Or even built right into a vanity table. They'll show up well, no matter where you put them. And they'll help you sell. Because they have advantages your prospective customers can see... features you can show.

Exclusives like the Laundry Twins make your homes a real standout. And you can always save a bit on construction costs to put them in. We call it Westinghouse 'showmanship.'

You can be sure if it's Westinghouse



# Hard Sell



Pomona puts more "that's for me" excitement into a home... for so little cost. Potential buyers have a sales-proven soft-spot for Pomona's quality and warm-sell charm. Women love its richly accented beauty, durability and ease of maintenance. Designers love Pomona's fantastically complete line of sizes, textures, shapes

and colors... plus floor tile, wall tile, pavers and mosaics. Name it... Pomona has it. Builders "buy" it, because Pomona triggers buyer action... puts floor-to-ceiling salesmanship in any room. That's hard sell! **Pomona Tile Manufacturing Co.** 216 South Reservoir Street, Pomona, California (91766)



# Why Build Complicated...



## When It's Easier To Build Simple!

...with Fuller's Tuff-Lite® Epoxy Matrix.

This new, lightweight, economical construction material was specifically formulated as a base for exposed aggregate. It may be applied to almost any building without causing structural problems. Because it has exceptionally strong bonding powers more of the aggregate—stone chips, metal, glass—is exposed to give greater depth and dimensional effect.

In some areas contractors are applying Tuff-Lite on the job. It trowels on smoothly and evenly. Just a  $\frac{3}{8}$ " layer is all that's necessary. Will adhere to practically any substrate—concrete, brick, wood or other surface. Aggregate can be seeded immediately. And Tuff-Lite holds aggregate in place until matrix has cured. Conforms to almost any surface shape whether

round, flat or square. Can even be troweled overhead. Available in any color, Tuff-Lite retains that color, remains clean and bright. Requires no maintenance. Withstands temperatures from  $-40^{\circ}\text{F}$  to  $120^{\circ}\text{F}$  and higher.

In other areas of the country, contractors are using pre-formed lightweight panels (as below) to give completely finished exterior or interior walls to homes and other buildings. These pre-fabricated panels are available from licensed Fuller Tuff-Lite applicators.

*Give your homes a distinctive look, a 'selling' look. Check into Fuller Tuff-Lite Epoxy Matrix. You'll find it the key to a totally new construction technique. Write for more information.*

*Leader in Adhesive Technology*



**H. B. FULLER COMPANY**

1150 Eustis St., St. Paul, Minn., 55108 Dept. 19436



# Focus on Steel: Focus on Style

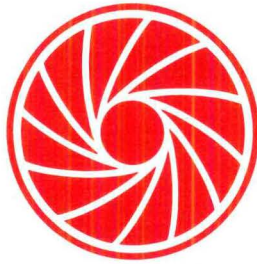


**This is a steel door.  
It's solid, silent, and trouble-free.  
It is very much at home in this \$60,000 house.**



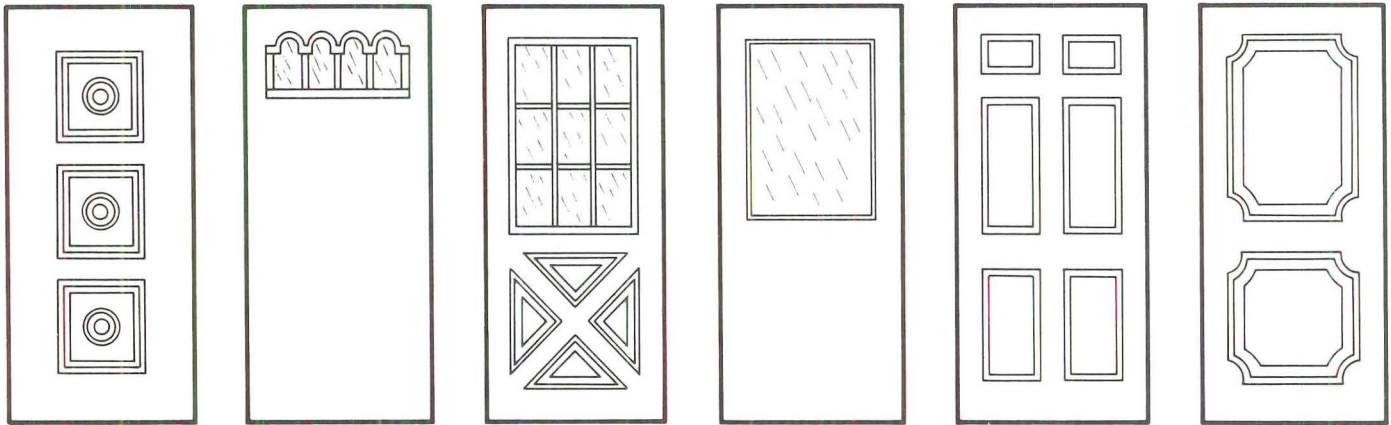
Builder: Tri City Builders, Inc., Cincinnati, Ohio

**Over, please**



## Focus on Steel

### Focus on stylish steel doors.



Solid, silent, warp-free steel doors combine a storm door and an exterior door in one unit, because they are so well insulated. They were innovated by U. S. Steel and a leading door manufacturer. Steel doors weigh  $\frac{1}{3}$  less than conventional doors, and install in 20 minutes, because they come pre-hung. They're prime-coated, too.

Research figures show that builders average 3 expensive callbacks, per home, for doors alone. Foolproof steel exterior doors eliminate those trips. Your customers get a door with a solid sound and "feel," because of the door's unique rigid foam insulating core. Magnetic, refrigerator-like weatherstripping and a flexible vinyl sweep bar seal out drafts and keep heat in.

No matter what price range you build in, steel exterior doors will help you sell because they are *quality* components. United States Steel does not produce steel exterior doors, but sells steel sheets to manufacturers of these fine doors. We will be glad to pass along your inquiry.

United States Steel  
Room 9130, 525 William Penn Place  
Pittsburgh, Pennsylvania 15230

Please send me more information on steel exterior doors.

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_



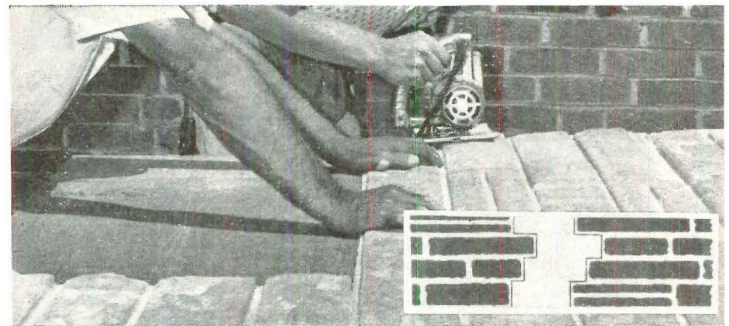
TRADEMARK

## United States Steel



## NEW PRODUCTS

For more information, circle indicated number on Reader Service card p. 143.



**CUTTING AND FITTING** panels of fiberglass split-face stone is done with a carbide-tipped saw and finger-joints formed by removing end stones.



**APPLYING AND FINISHING** fiberglass stone involves adhesive, shingle nails and matched-color compound which can also be used to repair damage.

### Fiberglass masonry saves money—but not because it's cheaper than the real thing

The savings lie in the installation cost—not in the cost of the material. Items:

1. Fiberglass masonry is lightweight—0.9 to 1.5 lbs. per sq. ft.—so unlike real brick or stone, it requires no footings or special wall construction.

2. Fiberglass masonry doesn't use up critical wall space—it adds only a fraction of the thickness ( $\frac{3}{8}$ " to 2", depending on the style) of real masonry.

3. Fiberglass masonry can be applied in any kind of weather because it isn't dependent on mortar consistency.

4. Fiberglass masonry can be prefabricated in a shop.

*But perhaps the most important advantage is that fiberglass*

*masonry requires no job-setup time.* It is ready to apply as soon as the panels—roughly 4'x8'—are delivered to the job site. Carpenters apply it with  $1\frac{1}{4}$ " shingle nails, then hide the nail heads and joints with a matching-color compound activated by a catalyst.

The lack of setup time is a big cost-saver on small jobs. Example: Two sheets of fiberglass brick contain 488 bricks—a day's work for two masons if setup time is included—but can be installed and finished in less than an hour.

*As job size increases, however, fiberglass masonry becomes less competitive with real masonry.* Reason: masons' setup time is absorbed in a big job, so the

cost of the material becomes the deciding factor—and brick generally costs less than a fiberglass imitation.

Fiberglass masonry becomes very competitive in stone-face styles (photos). In Connecticut, for example, in-place costs for fiberglass field stone are as low as \$3.25 a sq. ft.—compared with \$5.50 to \$6.50 a sq. ft. for the real thing.

And to make fiberglass masonry still more desirable in terms of both installation cost and feasibility, the manufacturer is adding a new kind of panel adhesive that stays resilient down to minus-40°F. Cavrok, Hartford, Conn.

Circle 295 on Reader Service card



**FIELD STONE** fiberglass panels come in a self-blending pattern.



**SINGLE-LAYER RADIANT DRYWALL** goes up just like any other drywall job. Advantage in winter: Heat can be turned on before joints are taped.

### Radiant-heat drywall—one layer does the job

As the photos show, this simple heating system consists of  $\frac{5}{8}$ " gypsum wallboard applied to ceilings with conventional wallboard-hanging techniques. The board, which has electric heating cables embedded in its core, is nailed directly to ceiling joists—no insulated nails required—and joints and nail heads are finished in the usual manner.

Each wallboard panel is a self-enclosed, separate heating unit with a 12' non-heating lead. Leads are connected in parallel to a

240-volt circuit during installation, and wired to a single thermostat. Conventional  $\frac{5}{8}$ " wallboard panels are used side by side with the radiant panels to distribute heating surface and keep it to required minimums.

Panels come in seven models with guidelines for nailing. All panels—except the 4'x4' size—have up to 15" of trim area at sides and 32" at ends. Brand name: Rayboard. National Gypsum, Buffalo, N.Y.

Circle 296 on Reader Service card

NEW BEAUTY IN LOW-COST HARDWOOD PANELING

# BrucePly<sup>®</sup> Lauan Panelings

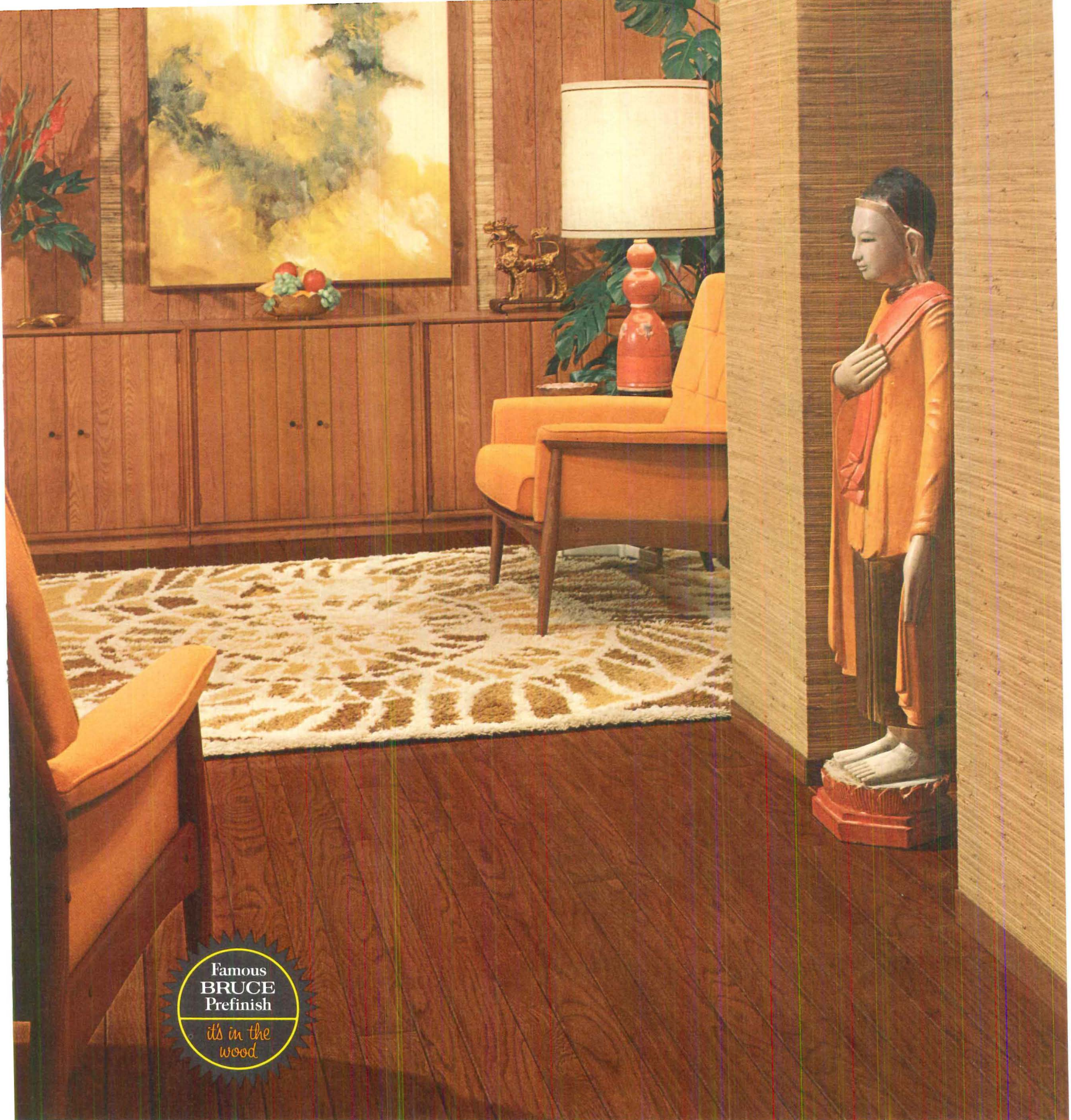
Here's magic from the Islands—genuine Philippine Mahogany with beauty far beyond its low cost. Choose from three lovely Lauan woods: soft, ivory-toned MINDORO; warm, sand-colored LAGUNA; dark, rich BACARRA. All three have wide grooves that

add depth and produce the look of much more expensive paneling. And all are protected by the famous Bruce Prefinish baked into the wood to give mellow beauty that won't chip, crack or wear away. E. L. Bruce Co., Memphis, Tenn.

Pictured below: Three new BrucePly Lauan Panelings: Laguna, Bacarra, Mindoro. Prefinished moldings to match.



Famous  
**BRUCE**  
Prefinish  
*it's in the  
wood*



Famous  
**BRUCE**  
Prefinish

*it's in the  
wood*

**DARK-FINISHED BEAUTY GIVES STYLISH, EXPENSIVE LOOK**

## **Bruce Fireside Plank® Floors**

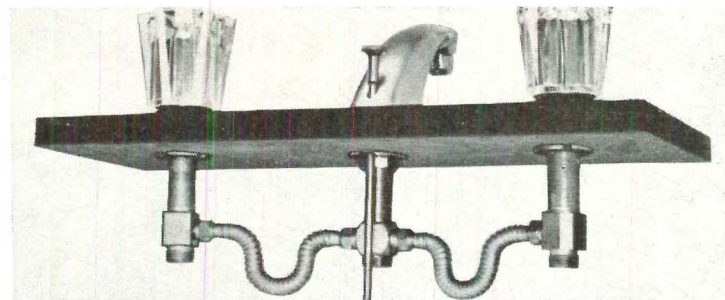
It's most unusual, most exciting—Bruce Fireside Plank. The alternating  $2\frac{1}{4}$ " and  $3\frac{1}{4}$ " widths with dramatic dark finish glamorize any room. Yet this extravagant-looking floor costs you little more than regular strip flooring. You're spared the

expense of on-the-job sanding and finishing, too, since Fireside Plank is prefinished. The remarkable Bruce Prefinish is baked into the wood to give this distinctive floor lasting beauty that resists marring and fading. E. L. Bruce Co., Memphis, Tenn.

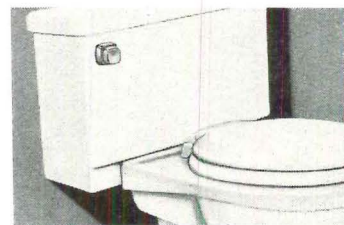
**Baths**



**Counter-top lavatory** of enameled cast iron incorporates concealed front overflow drain. Diameter: 18". Colors include apricot, tomato, larkspur, avocado, fern, butterscotch, cocoa and five pastels. Universal-Rundle, New Castle, Pa. *Circle 260 on Reader Service card*



**Wide-spread faucet fitting** with acrylic crystal handles is adjustable from 8" to 15" centers, and can be mounted on marble tops up to 2 1/4" thick. Also available for tub and shower combinations. Harcraft Brass, Torrance, Calif. *Circle 261 on Reader Service card*



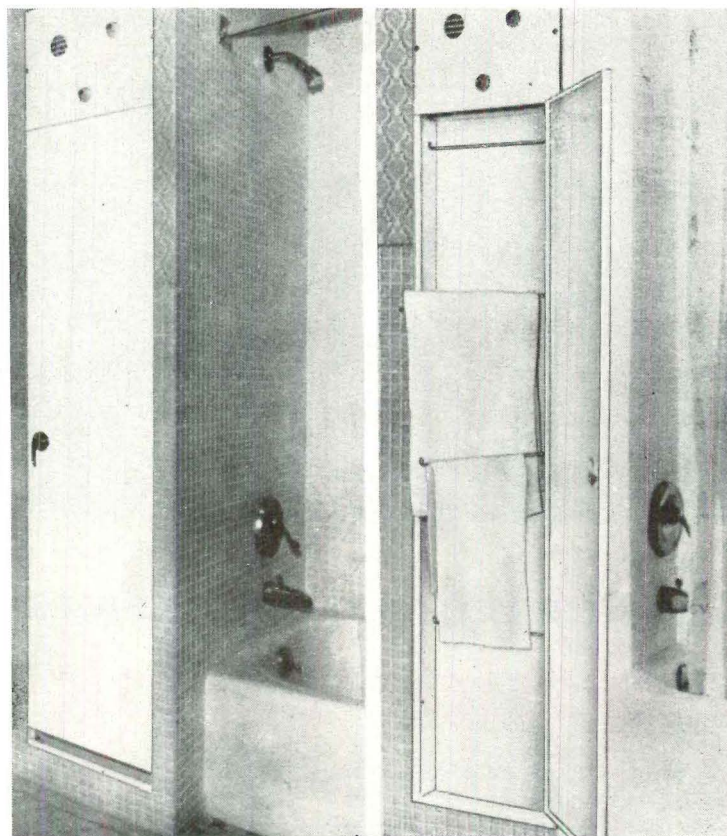
**Low water closet** incorporates pushbutton flushing action. The saddle tank syphon jet model is only 26 1/2" high, has an anti-syphon ballcock, and requires 12" rough-in space. Comes in white and choice of colors. Briggs Mfg., Warren, Mich. *Circle 266 on Reader Service card*



**Bathroom vanity**—36"—encloses oval porcelain-on-steel basin in molded plastic countertop. It has solid core door and drawer fronts with one-piece maple faces. Fixtures are chrome-plated brass. Finish: tawny maple. Brammer, Davenport, Iowa. *Circle 263 on Reader Service card*



**Self-rimming lavatories** accommodate any 4" center-set fittings. Available in three models: 19" round (top), 20"x17" oval (center), and 20 1/2"x16 3/4" rectangle (bottom). Colors include pink, blue, turquoise, jade, and yellow. Crane, Chicago. *Circle 264 on Reader Service card*



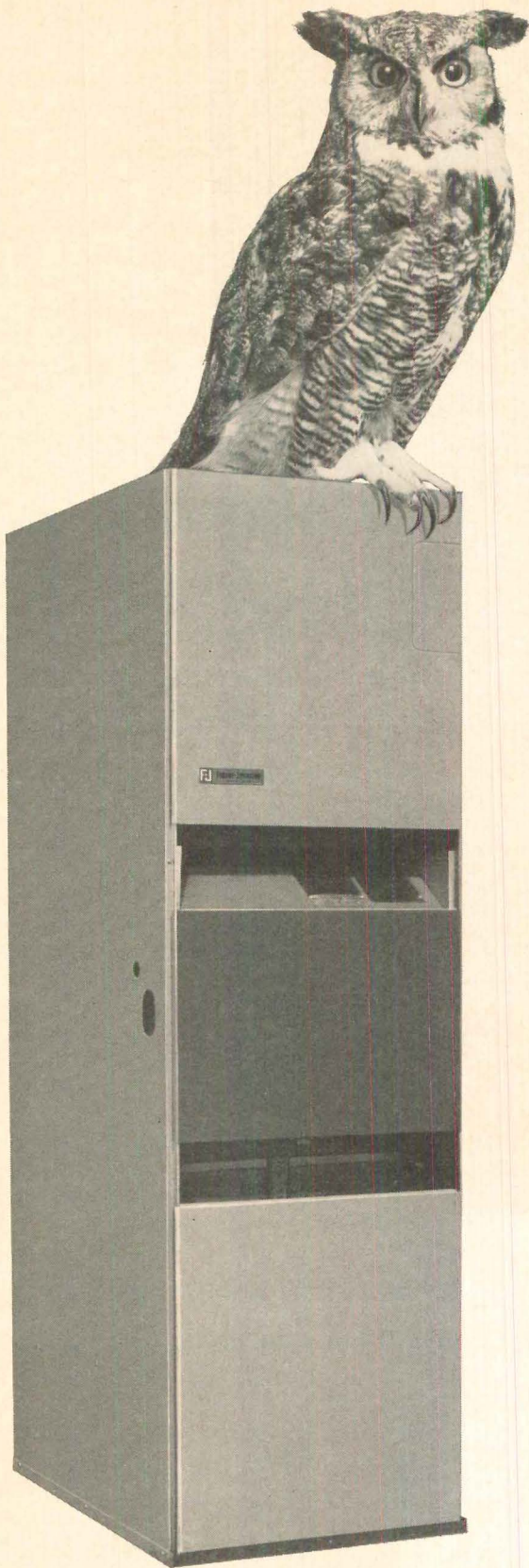
**Electric built-in clothes dryer** fits flush with finished wall in standard stud space. Dimensions of all-steel cabinet: 4"x14"x60". Equipment includes fan, electric motor, timer and thermostat. U.S. Metalite, Lafayette, Ind. *Circle 262 on Reader Service card*



**Cultured marble surface** for countertops, floors, and walls has colorful imbedded finish. Manufactured surface resists stains because it is not porous. It is less likely to break than quarry marble, and is easily repaired. Polykrystalon, Houston. *Circle 265 on Reader Service card*

New products continued on p. 145

Circle 90 on Reader Service Card ➤



Illustrated: F-J's "Silent 67" air conditioning furnace with built-in coil compartment. Heating to 200,000 BTUH, cooling to 6 nominal tons.

# value-wise

## it's FRASER-JOHNSTON heating and cooling

Who? Fraser-Johnston, that's who!

Why? Because Fraser-Johnston quality-engineered heating and cooling products are built better . . . last longer. They're easier to install and call backs are almost unheard of (F-J works hard to make it easy for you). And speaking of "unheard" . . . F-J units are the absolute quietest, thanks to exclusive sound conditioning features like: the unique new Control-A-Flame burner with its safe, noiseless ignition and extinction . . . and the patented expansion joint that eliminates contraction/expansion noise (whether it's heating or cooling, F-J's quiet operation always impresses prospective home buyers).

There are dozens of other extra-value features that Fraser-Johnston builds in to help you sell. Take F-J's revolutionary new "Silent 67", for example . . . it's the *only* furnace that comes completely pre-engineered for all-season air conditioning! To add a precisely balanced cooling system—now *or* later—simply slide an F-J cooling coil into the built-in compartment and hook up to an F-J condensing unit (there just isn't a better way to offer your buyers the joy of year-round comfort!).



Chances are, you can have F-J quality for no more than you're now paying. For complete details on the benefits of buying the best in heating and cooling equipment, contact your local F-J distributor or Fraser & Johnston Co., 1900 17th Street, San Francisco, California 94103.



# Fraser-Johnston

SAN FRANCISCO, CALIFORNIA

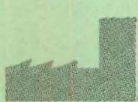
Industry leadership in heating and cooling — since 1928



RESIDENTIAL

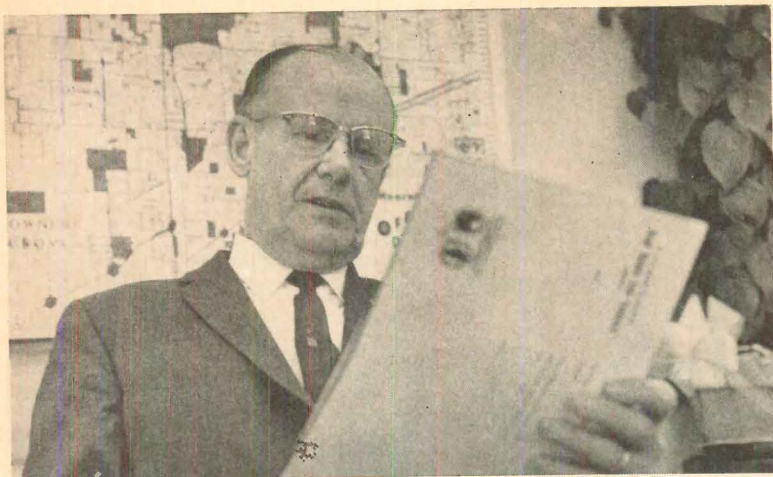


COMMERCIAL



INDUSTRIAL

There is a quality-engineered F-J heating/  
cooling product for every application



## who needs title insurance?

Everyone who buys real estate or who lends money on real estate. And if you are assisting in any real estate transaction, it's a good idea to recommend Title

Insurance to the buyer—to protect him and your client-customer relationship. Only Title Insurance affords the best possible protection for all kinds of real estate investment.

**Why Louisville Title Insurance?** Because Louisville Title is backed by years of Title Insurance experience. Because Louisville Title has sold hundreds of thousands of Title Insurance Policies. Because Louisville Title has a reputation for quick and satisfactory handling of claims. Because Louisville Title gives fast, friendly and accurate service . . . coast to coast. Why not let us help with your next investment. See the nearest Louisville Title Agent.



**LOUISVILLE TITLE INSURANCE COMPANY**  
223 S. Fifth St., Louisville, Ky. 40202 • Phone 502/584-0211  
Member American Land Title Association

### Contact one of these Louisville Title Agents:

#### ALABAMA

**Anniston**  
Louisville Title Agency  
Main Fl., Radio Bldg. 36202  
Louisville Title Agency  
Commercial National Bank  
Building 36202

**Birmingham**  
Alabama Title Co., Inc.  
615 N. Twenty-first St. 35203

**Clanton**  
Gerald Abstract Company  
314 Chestnut Street 35045

**Decatur**  
Louisville Title Agency  
108 Second Ave., N. E. 35601

**Demopolis**  
Louisville Title Agency  
105 South Walnut Street  
P. O. Box 338 36732

**Dothan**  
Louisville Title Agency  
210 Farmer-Porter Bldg. 36302

**Fort Payne**  
Louisville Title Agency  
107 Main Street, West 35967

**Gadsden**  
Louisville Title Agency  
312 Chestnut Street 35901

**Guntersville**  
Louisville Title Agency  
Blount Street 35976

**Huntsville**  
Louisville Title Agency  
208-210 Struve Bldg. 35801  
Louisville Title Agency  
315 Franklin Street 35801  
Louisville Title Agency  
208 West Side Square 35801  
Louisville Title Agency  
314 Terry-Hutchens  
Building 35801  
Louisville Title Agency  
512 Terry-Hutchens  
Building 35801  
Louisville Title Agency  
408 Clinton Ave. West 35801  
Louisville Title Agency  
2407 Memorial Parkway, S.W.,  
Suite 8 35801  
Louisville Title Agency  
810 Memorial Parkway, N.W.  
35801  
Louisville Title Agency  
217-221 Uptown Bldg. 35804  
Louisville Title Agency  
814 N. Memorial Pkwy. 35801  
Louisville Title Agency  
208 Eustis Ave., S. E. 35801  
Louisville Title Agency  
208 Uptown Building 35801

**Montgomery**  
The State Abstract Company  
23 South Perry Street 36104

**Opelika**  
Louisville Title Agency  
902 Avenue A 36801

**Ozark**  
Louisville Title Agency  
P. O. Box 700 36361

**Phenix City**  
Louisville Title Agency  
1408 Broad Street 36867

**Scottsboro**  
Louisville Title Agency  
Court House Square 35768

**Sylacauga**  
Louisville Title Agency  
City National Bank Bldg. 35150

**Talladega**  
Louisville Title Agency  
119 West Court Square 35160

#### ARKANSAS

**Augusta**  
Woodruff County  
Abstract Company 72006

**Mountain Home**  
Alley Abstract Co. 72653

**Searcy**  
Strother Abstract Company  
302 West Arch Avenue 72143

**Yellville**  
Berry Land and Abstract Co.  
P. O. Box 567 72687

#### FLORIDA

**Bradenton**  
Louisville Title Agency  
1107 Sixth Ave., West 33506

**Brooksville**  
Gulf Coast Abstract Company  
111 North Main Street 33512

**Fort Lauderdale**  
Allied Title Company  
400 First Federal Building  
301 E. Las Olas Blvd. 33301  
P. O. Box 1302  
Louisville Title Agency  
601 Court House Square Bldg.  
P. O. Box 480 33301  
Louisville Title Agency  
405 Bayview Building  
1040 Bayview Drive 33304

**Fort Myers**  
Moseley Title and Abstract Co.  
1802 Broadway 33901

**Key West**  
Monroe Land Title Company  
517 Whitehead Street 33041

**Miami**  
Land Title Division of  
Commonwealth Land Title  
Insurance Company  
3001 Ponce de Leon Boulevard  
33134

**New Port Richey**  
West Pasco Title and Abstract  
Company  
722 West Main Street 33553

**Orlando**  
Mid-Florida Title Service  
Company, Inc.  
c/o Rush, Reed and Marshall  
55 East Livingston 32802

**Perry**  
Louisville Title Agency  
Dixie-Taylor Hotel Bldg. 32347

**Quincy**  
Louisville Title Agency  
4 East Washington St. 32351

**St. Petersburg**  
Guarantee Abstract Company  
571 First Avenue North 33731

**Tallahassee**  
Louisville Title Agency  
200 East College Ave. 32302

**Wauchula**  
Wauchula Abstract & Title Co.  
111 South Eighth Ave. 33873

**West Palm Beach**  
Palm Beach Abstract and  
Title Company  
121 South Narcissus St. 33402

#### GEORGIA

**Albany**  
Louisville Title Agency  
302 Flint Street 31702

**Athens**  
Louisville Title Agency  
502 Sou. Mutual Bldg. 30601

**Atlanta**  
Louisville Title Agency of  
Atlanta, Georgia  
423 Standard Federal Savings  
Building 30303

**Augusta**  
Louisville Title Agency  
523-525 The Five Hundred  
Bldg. 30902

**Dalton**  
Louisville Title Agency  
108½ S. Hamilton St. 30720

**Gainesville**  
Louisville Title Agency  
516 First Federal Building  
311 Green Street, N. E. 30501

**Marietta**  
Louisville Title Agency  
114 Roswell Street 30061

**Rossville**  
Woods-Christian Title Agency  
110 Howard Street 30741

**Savannah**  
Louisville Title Agency  
114 E. Oglethorpe Ave. 31401

**Tifton**  
Louisville Title Agency  
P. O. Box 355 31794

**Valdosta**  
Louisville Title Agency  
505 N. Patterson St. 31601

#### LOUISIANA

**Alexandria**  
Louisville Title Agency  
601 Guaranty Bank Bldg. 71302

**Baton Rouge**  
Louisville Title Agency  
301 Downtown American  
Bank Building  
352 Florida Street 70801

**Lake Charles**  
Louisville Title Agency  
1901 Oak Park Blvd. 70601

**New Iberia**  
Louisville Title Agency  
211 East Main Street 70561

**New Orleans**  
Louisville Title Agency  
1212 American Bank  
Building 70130

**Opelousas**  
Louisville Title Agency  
122 North Market St. 70570

**Shreveport**  
Louisville Title Agency  
830 Giddens-Lane Bldg. 71102

**Slidell**  
Louisville Title Agency  
150 Cleveland Avenue 70458

**West Monroe**  
Louisville Title Agency  
P. O. Box 153 71291

#### MISSISSIPPI

**Greenville**  
West Mississippi Title Co.  
338 May Building 38702

**Gulfport**  
Louisville Title Agency  
2213 Fifteenth Street 39502

**Hattiesburg**  
Louisville Title Agency  
316 Forrest Street 39402

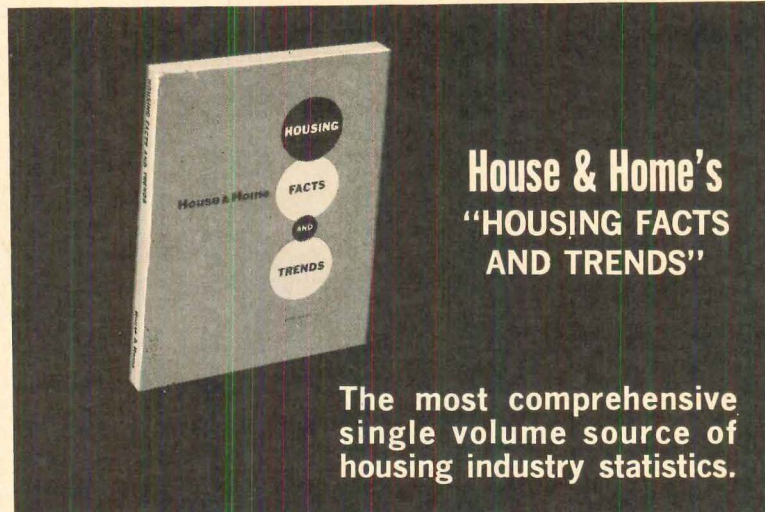
**Jackson**  
Magnolia State Title Company  
431 Tombigbee Street 39201

**Meridian**  
The Southern Title Ins. Co.  
306 Lamar Building 39301

**Natchez**  
Louisville Title Agency  
133 South Commerce Street  
P. O. Box 1335 39121

#### TENNESSEE

**Jackson**  
Louisville Title Agency  
308 East Main Street 38302  
For other areas in Tennessee  
consult Home Office



## House & Home's "HOUSING FACTS AND TRENDS"

The most comprehensive  
single volume source of  
housing industry statistics.

"Housing Facts and Trends" meets the long-felt need for quick and easy access to basic housing market data heretofore available only from a multiplicity of private and governmental sources.

This time-saving reference book includes:

- 200 pages of housing industry statistics — plus interpretive comment
- Hundreds of detailed tables and illustrative charts specially prepared for this volume
- Eight major reference sections:  
Background Data  
Trends, Structural  
Trends, Geographic  
Trends, Economic  
Trends, Labor and Materials  
Building Types  
Characteristics of Buyers, Sellers, Builders  
Projections

Prepared by House & Home with the assistance of its McGraw-Hill associate, the F. W. Dodge Company, "Housing Facts and Trends" puts at your fingertips the hard-to-dig-out housing market information you need.

ORDER YOUR COPY NOW. MAIL COUPON BELOW TO:

Research Dept.  
House & Home  
330 West 42nd St.  
New York, N. Y. 10036

Please send me a copy of House & Home's "Housing Facts and Trends"

Please send check with order.

(Single copy price \$15.00\*)

NAME \_\_\_\_\_

TITLE \_\_\_\_\_

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

\*Quantity discounts available.



*Gown and Coat courtesy Sakowitz, Houston*

## FOR THOSE WHO CARE ABOUT QUALITY...

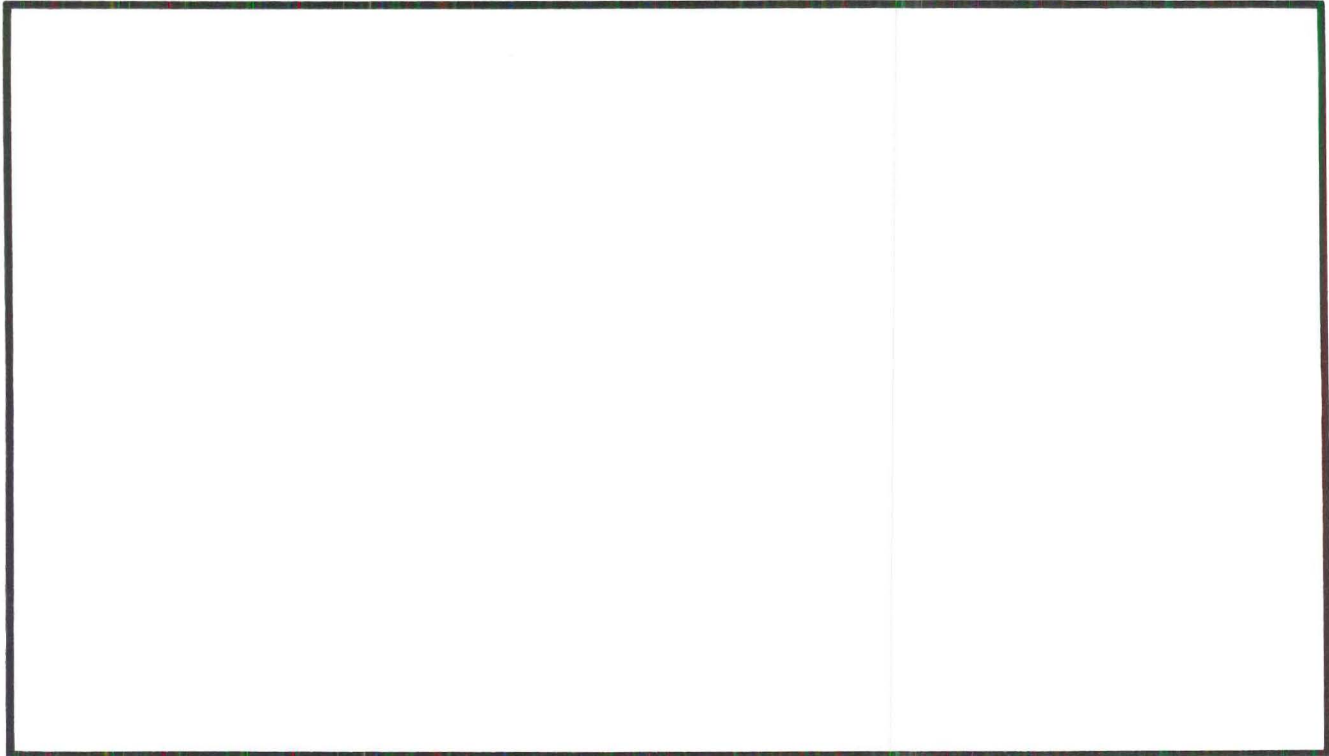
There's always "that certain quality" ingrained in the fine things of life that are "unmistakably the best." Recognizing this, more and more of the nation's leading builders, dealers and architects are specifying Kirby pine plywood and lumber products. Kirby's famous qualities of straightness, strength and dryness assure maximum performance in all residential and commercial environments. Builder and dealer inquiries are invited. Kirby Lumber Corporation, P. O. Box 53029, Houston, Texas, 77052. Phone: 713-225-0421.



THE HONORED NAME IN LUMBER  
AND PLYWOOD

PLYWOOD • PANELING • TIMBERS • DECKING • DIMENSION • SIDING • BOARDS • FINISH

# MEET MR. ZIP



## OOPS!...HE WAS THERE A MOMENT AGO

SPEEDY LITTLE FELLOW, ISN'T HE?

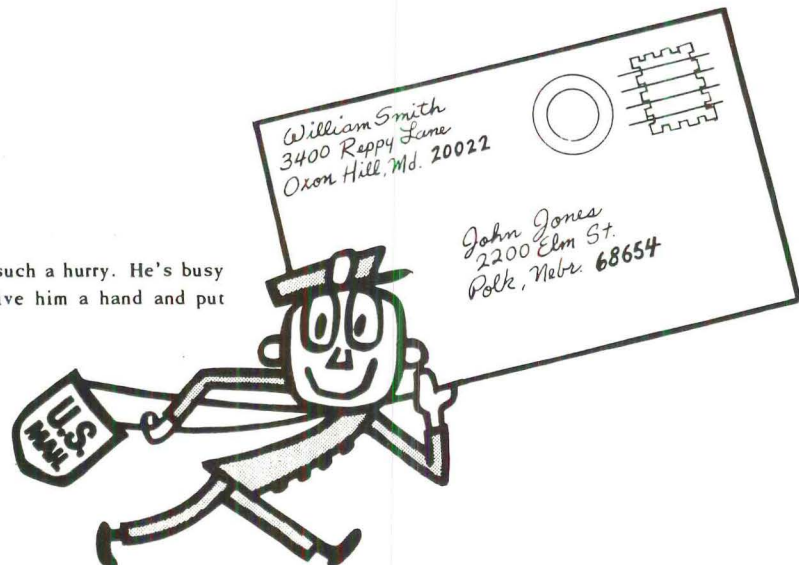
Here's how he works. There are 34,000 post offices in the United States. No one could be expected to know the exact location of every one. So, mail often must be sorted several times . . . first by section of the country, then by state, then by different areas of the state, then by city, etc.

However, an address with ZIP Code immediately tells the mail clerk which major post office (or

sectional-center) is closest to the final destination. This can eliminate several time-consuming and expensive sortings.

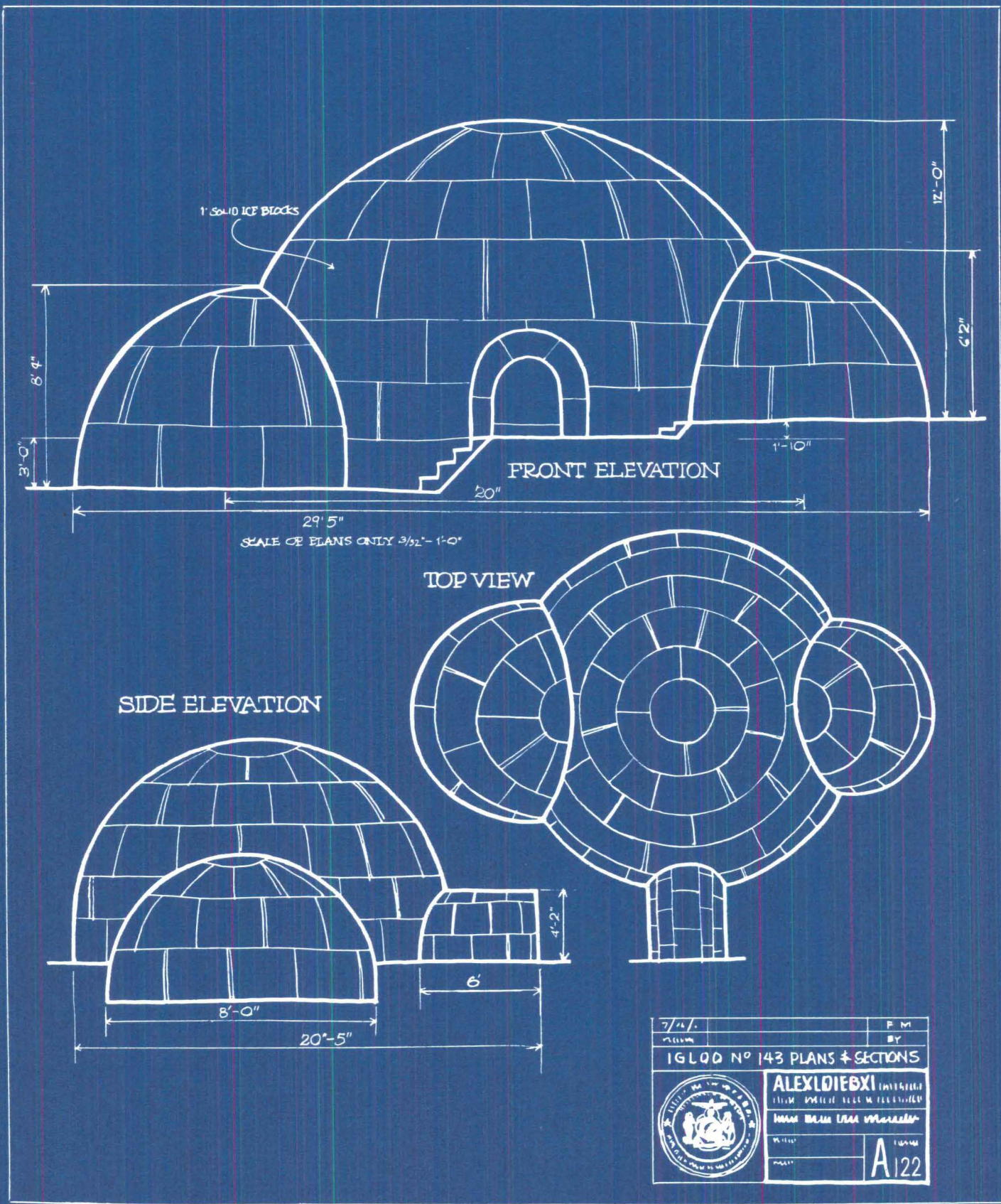
With fewer sortings, mail moves faster and more efficiently . . . and at less cost too. Cost and efficiency are important because the U.S. is in the midst of a mail explosion. Seventy-two billion pieces of mail will be delivered this year.


That's why Mr. ZIP is in such a hurry. He's busy saving time and money. Give him a hand and put ZIP into your mail.





# PRIZE-WINNING BLUEPRINT FOR A SPLIT-LEVEL IGLOO.



7/26/51	P. M.
IGLOO NO 143 PLANS & SECTIONS	BY
	<b>ALEX DIEBIXI</b>
	MAN MAN MAN MAN
	<b>A122</b>

**BUT YOUR PROSPECTS WILL BE MIGHTY LIMITED!**



**TODAY, 85 MILLION PEOPLE KNOW ABOUT OIL HEAT.  
AND EXPECT IT IN THEIR NEW HOME.  
OUR NATIONAL ADS MAKE SURE OF THAT!**

True, our national ads haven't captured much of the Eskimo market.

But they're powerful stuff with the more likely prospects.

Like the 85 million comfort lovers tuned in to oil heat advertising, month after month, in *Life*, *The Saturday Evening Post*, *American Home*, *Reader's Digest*, and *Better Homes and Gardens*.

They know oil heats better. Faster. Heats water three times faster than any other fuel. They know oil heat is safe. Clean. Dependable. Economical. Makes a house better to live in—and a better value if they ever sell.

That's why oil-heated homes sell faster.

Everybody profits!

The buyer.

And the builder!

With oil heat you build where you want: you're not tied to high-priced land. Build when you want: no waiting for mains or laterals to be run. Save \$40-\$50 per house: when unsold homes must be heated in cold weather. Avoid expensive call-backs: the oil dealer takes over service and maintenance.

Your oil dealer's a good man to know. Know him! And know what oil heat can do for you! Write National Oil Fuel Institute, Inc., 60 E. 42nd St., New York, N.Y. 10017.



HEAT HOT WATER AIR CONDITIONING TOTAL ENERGY

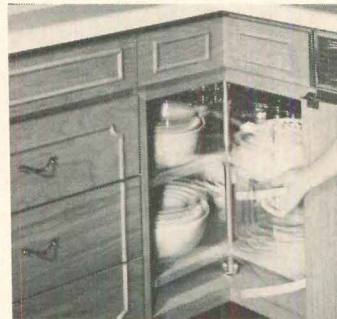
**Kitchens**



**Built-in oven and range top** come in seven colors including avocado and coppertone. Oven has a removable bottom. Surface units range from 26" to 33" (plus a 42" model with barbecue grill). Tappan, Mansfield, Ohio. *Circle 238 on Reader Service card*



**Washer/dryer combination** has special cycles for permanent-press fabrics. Washer has four spins and seven cycles; dryer has two-speed tumbling and automatic heat-minding system. Colors include two-tone green. Frigidaire, Dayton, Ohio. *Circle 230 on Reader Service card*



**Corner cabinet**—a 90° lazy susan—has bifold door that swings open free of the shelves. The open door lies flat in front of adjacent cabinets. Features: adjustable, sliding shelves; self-closing drawers. Long-Bell, Portland, Ore.

*Circle 240 on Reader Service card*



**Range hood**—with 200 cfm impeller fan—may be ducted horizontally or vertically through 3¼"x10" duct. Hood has aluminum mesh filter and enclosed light. Colors include copper, white, turquoise, yellow, and beige enamel. Nutone, Cincinnati.

*Circle 231 on Reader Service card*



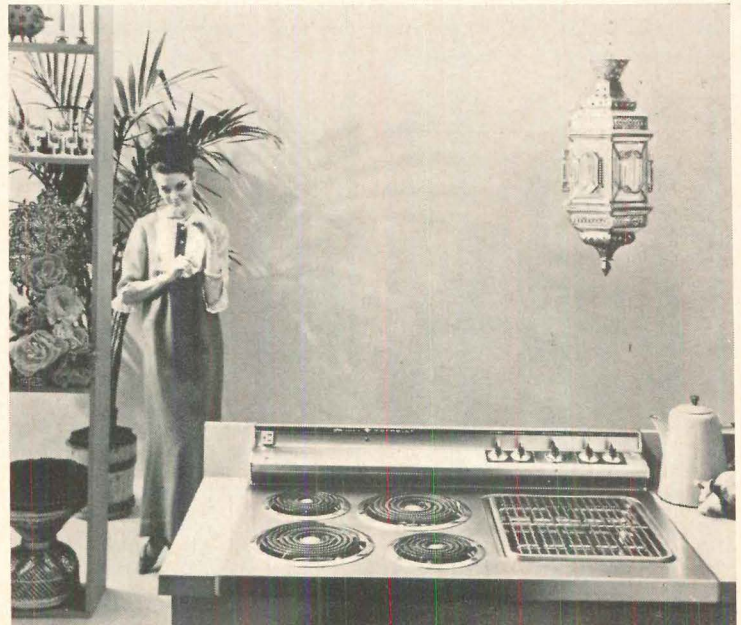
**Pilotless gas range** remains cold when off, yet ignites top burners, oven, and broiler electronically within two seconds after range is turned on. Model is available in white, shaded coppertone, and walnut-veneer finish. Sears, Chicago.

*Circle 232 on Reader Service card*



**Eye-level gas range**—36" wide—features two ovens, three broilers, rotisserie, and Teflon griddle. Burner in top oven can be adjusted to broil or bake. Unit can be left free-standing or built-in. Four models, six colors. Wedgewood, Culver City, Calif.

*Circle 233 on Reader Service card*



**Surface range**—36" wide—incorporates a barbecue well with grill, and griddle. Also: infinite-heat rotary controls, two 8" high-speed 2,700-watt surface units, and an appliance outlet. Finish: brushed chrome. Hotpoint, Chicago. *Circle 234 on Reader Service card*

**Tools & equipment**



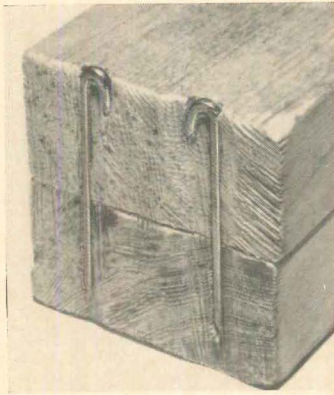
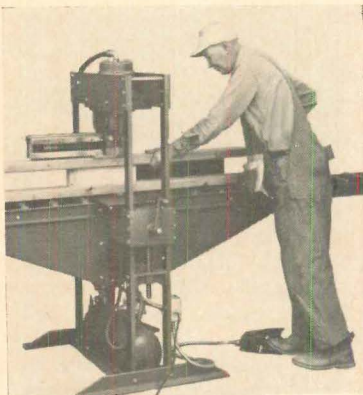
**Compact backhoe** for narrow places digs a 5'6"-deep trench 16" wide, and weighs slightly more than 1,000 lbs. so it can be transported on a pickup truck. Controls are operated by hydraulic pump. Gravely, Dunbar, W. Va. *Circle 212 on Reader Service card*



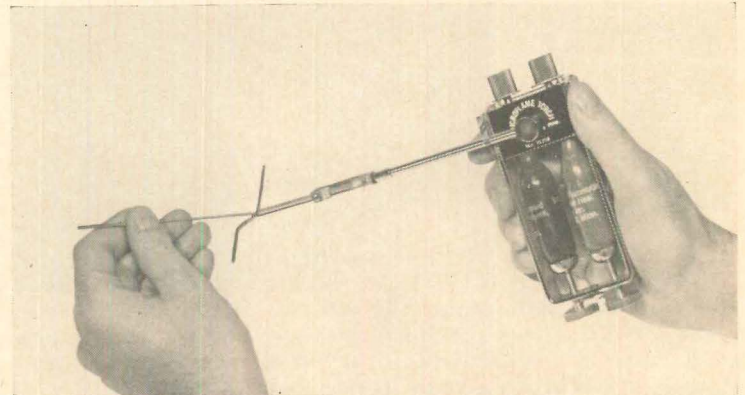
**Framing hammer** for heavy-duty nailing comes in three weights—20, 28, and 32 oz.—with plain or checkered face. Extra-long hickory handle comes in choice of 14", 16" or 18". Leather holster is extra. Stanley, New Britain, Conn. *Circle 213 on Reader Service card*



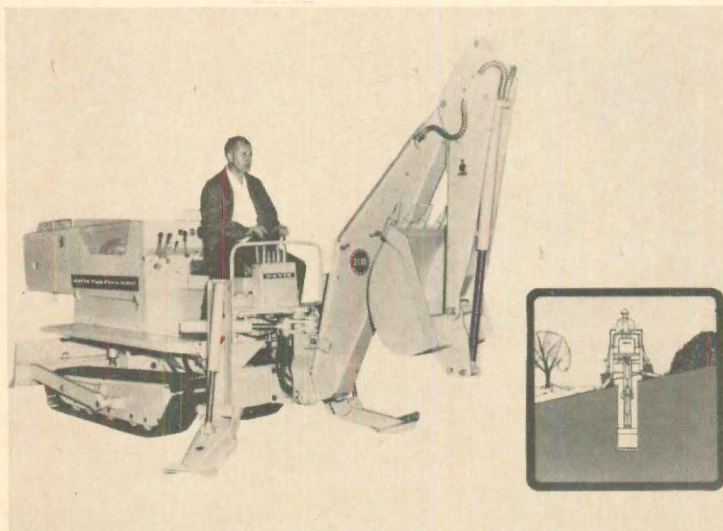
**Long hand pump**—for removing liquids from post holes, catch basins, and underground utility vaults—has a pumping length of 6' and removes a gallon of liquid with each stroke. Constructed of polyvinyl chloride. Beckson, Bridgeport, Conn. *Circle 214 on Reader Service card*



**Spike driver** for prefabbing wood subassemblies takes 10d or 16d "J" spikes (closeup, right) in taped clips of up to 180. Air-powered driving head nails one or two spikes at a time. Lumber is automatically straightened. Triad, Minneapolis. *Circle 215 on Reader Service card*



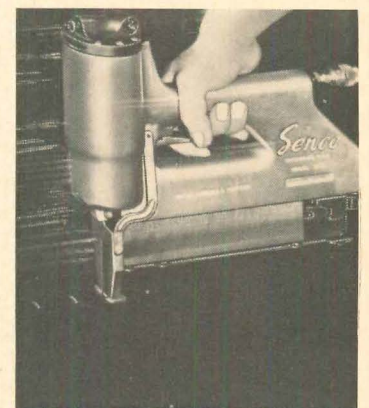
**Portable soldering torch** uses self-contained, miniature compressed-gas cylinders. Using standard-size soldering tips held in tip adapter, it produces a pinpoint flame of more than 5,000° that also welds. Microflame, Minneapolis. *Circle 216 on Reader Service card*



**Self-leveling backhoe**, designed for the manufacturer's own crawler tractor, has hydraulic cylinders that tilt the tractor's upper structure to a level position on slopes of up to 20%. Digs to 11' deep. Davis, Wichita, Kans. *Circle 217 on Reader Service card*

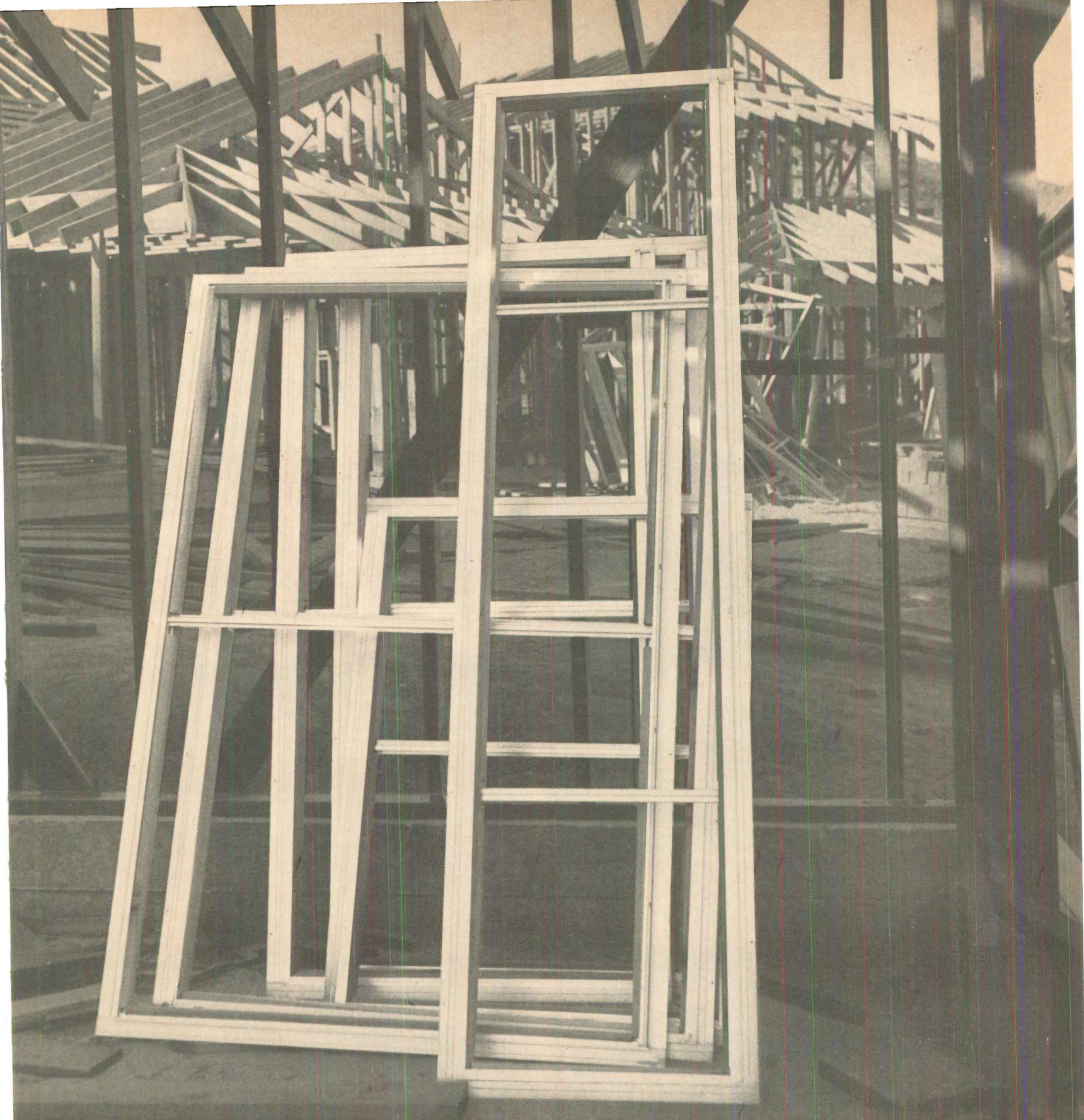


**Lightweight tamper**, hydraulic-powered, is an attachment for the manufacturer's trenching machines. Hookup is accomplished by snap-lock hose fittings. The tamper comes with three quick-change shoes and weighs 25 lbs. Brown, Omaha, Neb. *Circle 218 on Reader Service card*



**Machine-gun stapler** drives a complete magazine load of staples automatically when the trigger is pressed once. Fires from one to seven staples per second. Spacing of staples depends on how fast stapler is moved across work. Senco, Cincinnati. *Circle 219 on Reader Service card*

*New products continued on p. 148*



## HILITE IS READY WHEN YOU ARE

Wherever you are. Coast-to-coast. Three huge main plants, half a dozen secondary plants, a dozen warehouses, fleets of trucks. A thousand stocking dealers.

And they aren't about to lose your business for lack of service. They know everything else is going for them: Hilite volume, Hilite price-options, the full range of quality\* Hilite aluminum products, from sliding glass doors to windows of all kinds, to

wardrobe doors and tub or shower enclosures. Champagne Pale Gold and other protective finishes, adjustable handles, convertible after installation, you name it, Hilite has it ready for you. Hilite dealers can make you a package price, produce exactly what you want exactly when you want it. They can't afford to do any-

thing less; it's their own business. Get a Hilite package price... it's your profit.

**ADOR/HILITE WESTERN**  
2401 W. Commonwealth Ave., Fullerton, California 92633

**AIRCO/HILITE CENTRAL**  
900 West Central Avenue, Toledo, Ohio 43610

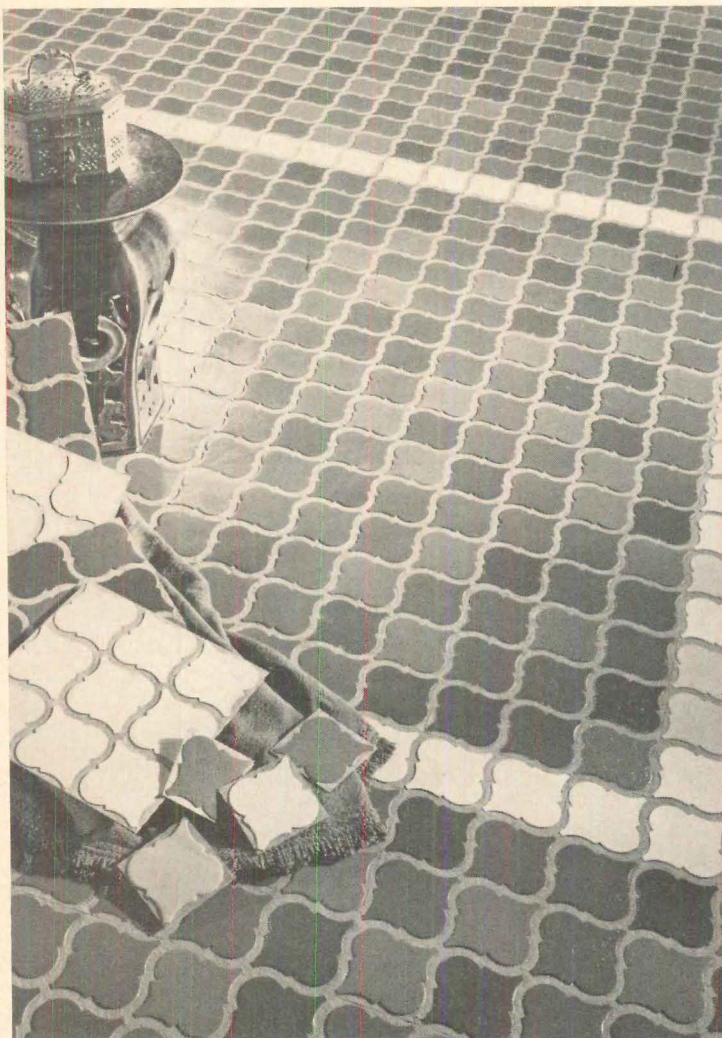
**LOOK/HILITE SOUTHERN**  
P.O. Box 911, Millen, Georgia 30442

\*Made of quality Reynolds aluminum.



Write for Hilite catalogs and product infor-

**Floors**

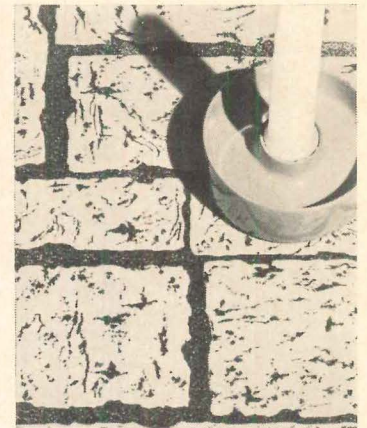


**Solid vinyl tile** combines Spanish, Moorish, and Roman themes, and blends with traditional or contemporary settings. Tile— $\frac{1}{8}$ " thick—comes in 12" squares, and five colors: beige, red, brown, gold, and white. Kentile, Brooklyn. *Circle 200 on Reader Service card*



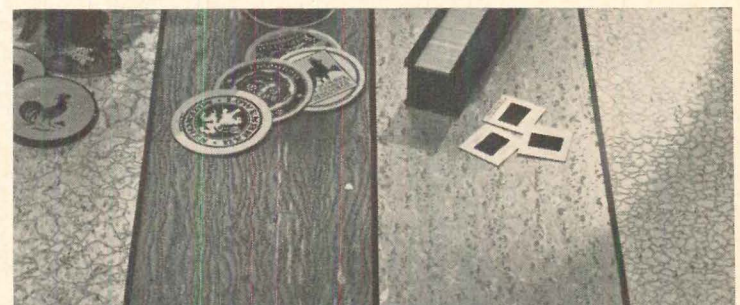
**Low-cost linoleum** comes in a series that simulates natural vein of marble. In three colors—beige, ivory, and white—with blue and green accents. Series comes in 6'-wide sheet form and in 12" square tiles. Armstrong, Lancaster, Pa.

*Circle 201 on Reader Service card*

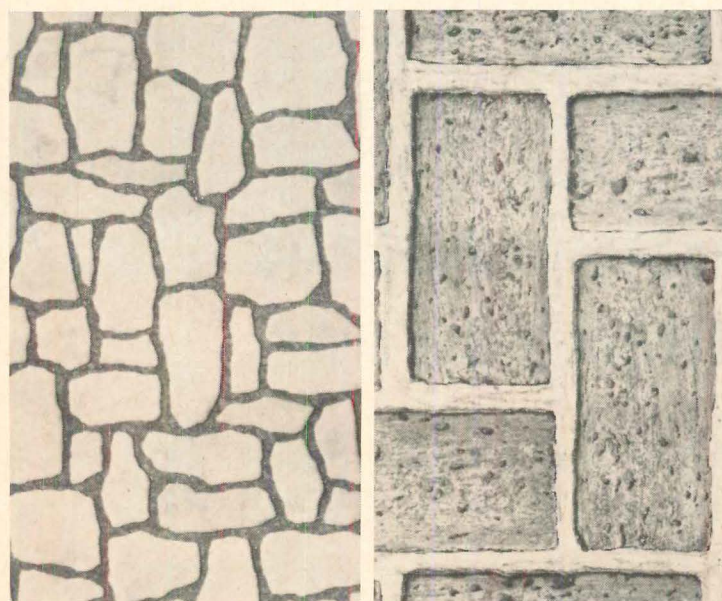


**Vinyl flooring** features sculptured brick design in a variety of colors. The design is available in 72" sheet with special backing, and in solid-vinyl 12" square tiles. Flooring can be used above or below grade. Goodyear, Akron, Ohio.

*Circle 203 on Reader Service card*



**Vinyl asbestos tile** comes in four embossed patterns: travertine, wood, marble, and pebble. Pattern is enhanced by background mottling of the tile as well as by the embossing. All four are available in 9" squares. Azrock, San Antonio. *Circle 202 on Reader Service card*

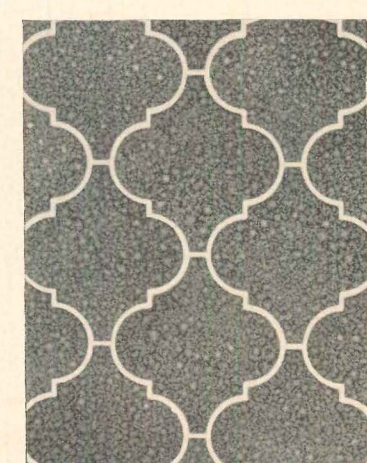


**Cushioned vinyl flooring**—with inner layer of foam vinyl and clear vinyl surface—requires no adhesive. Flooring—in 6', 9', and 12' widths—comes in large stone pattern and in herringbone bricks. Mannington Mills, Salem, N.J. *Circle 204 on Reader Service card*



**Vinyl runner** for model houses is  $\frac{1}{16}$ " thick, lightweight, and resistant to wear. It is offered in a mosaic non-skid pattern in black, brown, green, beige, and gray. Standard width is 36", in rolls 25 yards long. Robbins, Tuscumbia, Ala.

*Circle 205 on Reader Service card*



**Ceramic floor tile** is recommended for use in entrance halls, lobbies, dining areas, and enclosed patios. Tile's glazed surface needs no waxing. Interlocking design comes in five colors: gold, sage, blue, rose, and silver. Cambridge, Cincinnati.

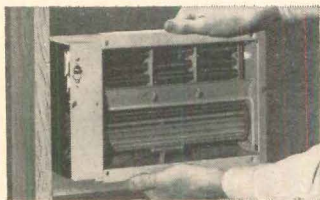
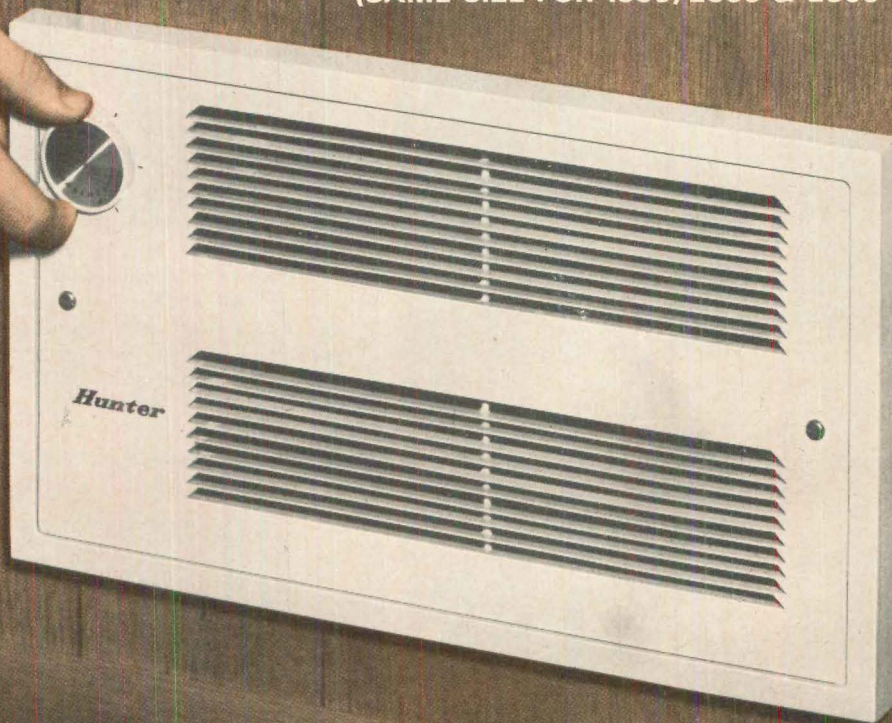
*Circle 206 on Reader Service card*

*New products continued on p. 150*

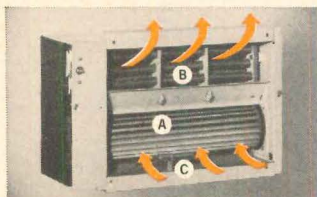
*New from Hunter!*

# HIDE-AWAY Electric Heater fits between studs

(SAME SIZE FOR 1500, 2000 & 2500 WATTS)



Slips right in between wall studs 16" on center. Or can be surface-mounted using accessory kit. Grille is detachable for easy cleaning.



Cross-flow blower (A) pulls in cool air at bottom and pushes it out through heating element (B) at top. Sensing bulb (C) on thermostat models.

**Compact unit produces up to 8533 BTU/H. while grille temperature averages 30° lower than competitive heaters.**

- Very quiet; ideal for homes, apartments, motels, offices
- Available with or without thermostat (bulb-type line voltage)
- Beige finish blends with any decor
- Budget priced—economical to operate
- Easy to install; fan motor wired in series with heating element
- Rough-in size: 14¼" x 8¼" x 4¼" deep. Grille: 15¼" x 9"
- Guaranteed 5 years. 240 volt or 208 volt.

**Hunter**  
ELECTRIC  
HEAT  
*It's Matchless!*



#### MAIL TODAY FOR DATA

Hunter Division, Robbins & Myers, Inc.  
2721 Frisco Ave., Memphis, Tenn. 38114

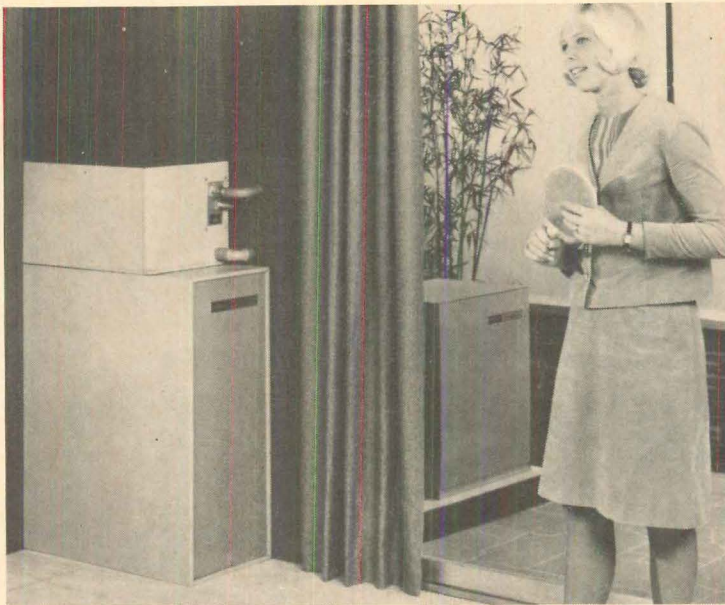
Please send full information on the new Hunter HIDE-AWAY Electric Wall Heater to:

Name \_\_\_\_\_

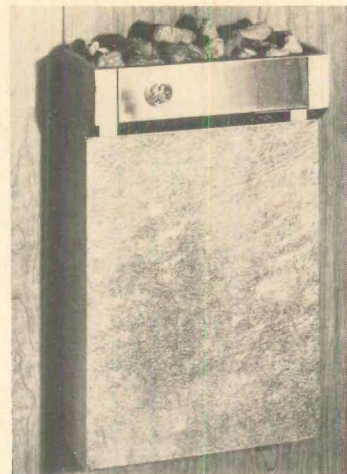
Address \_\_\_\_\_

*Hunter makes a complete line of installed and portable electric heaters, as well as residential, commercial and industrial fans.*

**Heating, cooling, ventilating**

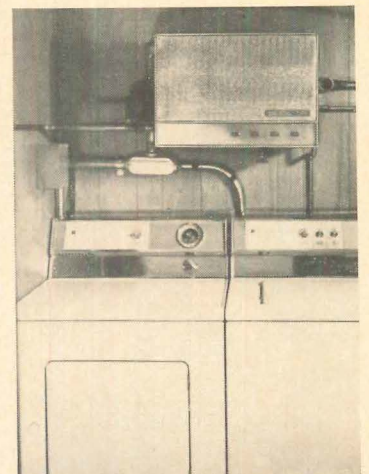


**Compact electric furnace** comes in four models—34,000 to 85,000 Btuh—in a universal cabinet 36" high, 15" wide, 28" deep. Cooling may be added quickly by installing matched coil and outdoor condenser. Airtemp, Dayton, Ohio. *Circle 280 on Reader Service card*



**Sauna heater** hangs on a wall bracket and can be connected directly to 120-volt house current. The unit contains two thermostatically controlled heating elements with enough capacity for rooms up to 4'x4' in size. G.E., LaGrange, Ill.

*Circle 281 on Reader Service card*



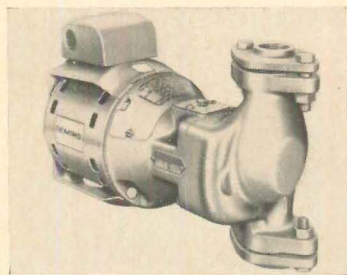
**Wall-hung boiler** for hot-water heating systems takes no more space than a small television set. Core of the unit is a heavy-duty 1/4" boiler-plate heat generator. Available model capacities: 20,472 to 68,260 Btuh. Electromode, Auburn, N.Y.

*Circle 282 on Reader Service card*



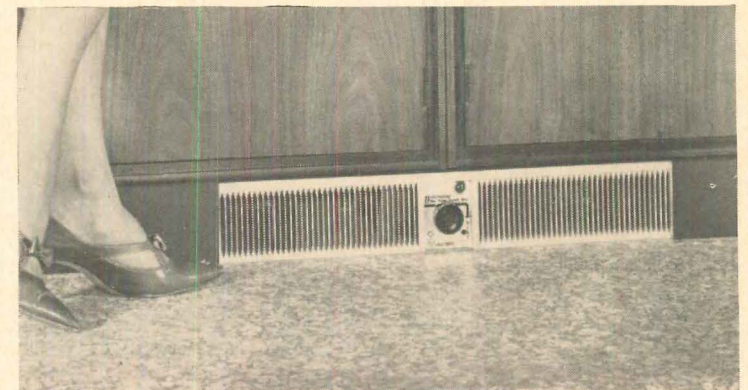
**Air-cooled condenser** for low-silhouette roof-mounting comes in two sizes with direct-drive fans. Unit consists of three fans with independent motors, and two-section condenser coil. For 7½- to 30-ton air-conditioning. McQuay, Minneapolis.

*Circle 283 on Reader Service card*

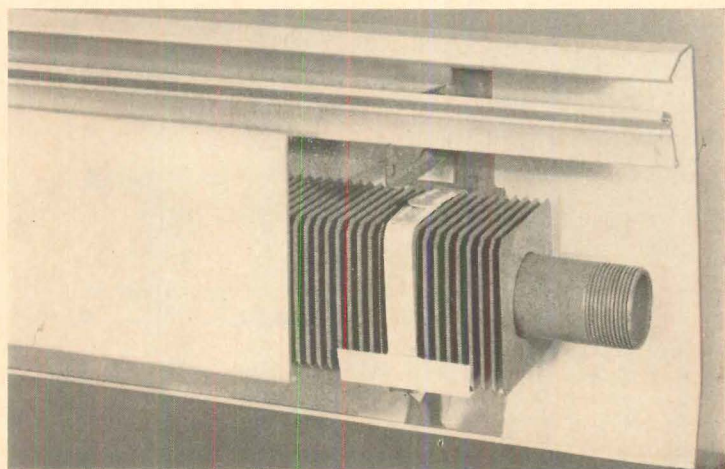


**Hot-water circulator** for hydronic heating systems contains a unitized shaft housing that can easily be removed for servicing or replacement. Other features: an over-sized pump shaft and a flexible coupled motor. Deming, Salem, Ohio.

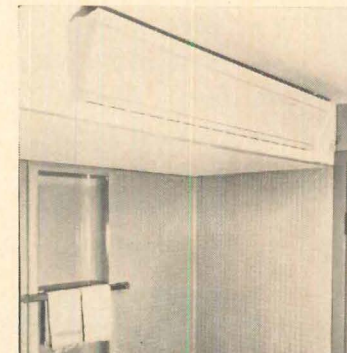
*Circle 284 on Reader Service card*



**Under-cabinet heater** is a plug-in hot-water unit only 3½" high, 22" wide, 14" deep. It slips into the toe space beneath kitchen cabinets or bathroom vanities. Electric heating element is sealed in copper tubing. Int'l Oil Burner, St. Louis. *Circle 285 On Reader Service card*

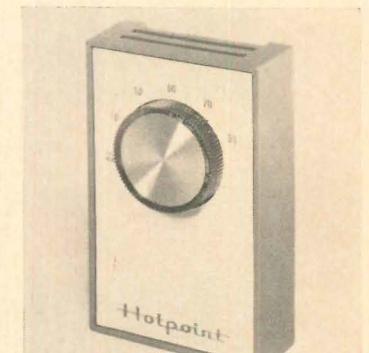


**Steam radiator** for baseboard mounting consists of 1¼" steel pipe with steel fins, costing much less than cast-iron baseboard. It offers room-by-room damper control. Rating per linear foot: 980 Btu. Slant/Fin, Greenvale, N. Y. *Circle 286 on Reader Service card*



**Electric cornice heater** fits into the angle of wall and ceiling. Suggested uses: over kitchen cabinets, over window walls, over doors. Unit consists of 850-watt steel element in 40" housing. Vitratherm, South Norwalk, Conn.

*Circle 226 on Reader Service card*



**Electric-heat thermostat** mounts flush to the wall and offers simple hook-up options that permit easy matching to wattage loads. Snap-action switching eliminates burning of contacts and reduces television interference. Hotpoint, Chicago.

*Circle 227 on Reader Service card*

*New products continued on p. 152*



# YESTERDAY:

Floors were laboriously  
laid tile by tile.

# TODAY:

Torginol experts  
pour entire floors  
out of cans!



Torginol seamless-waxless flooring — a product of space-age chemistry — offers classical beauty and 20th century practicality.

Competitively priced with conventional flooring it is easily installed by trained applicators.

It appeals to the modern homemaker because it offers her complete decorating freedom with unlimited colors and designs. And, because it's seamless and waxless it reduces her maintenance time to the quick swish of a damp mop. It's easy on her feet, will outlast other flooring and in addition is virtually scuff, stain and skid proof. She can use it in her entry way, kitchen, bath, rumpus room and on her patio and sundeck — even poolside. Because its broad expanse is completely seamless she never has to worry about spilling anything. Even after years of use in heavy traffic areas it will retain its deep-set brilliance.

Builders, flooring dealers, applicators and salesmen like it because there is nothing else that does the job as well. It sells faster at a higher profit. There are 5 Torginol plant facilities coast to coast and over 15,000 trained Torginol applicators to help you with your flooring problems. For detailed information without obligation and a FREE full color brochure, fill in the attached coupon.



*Aristocrat*  
of seamless-waxless flooring

TOGINOL OF AMERICA, INC. D-4  
1708 Gage Road  
Montebello, California 90640

Name \_\_\_\_\_

Street \_\_\_\_\_

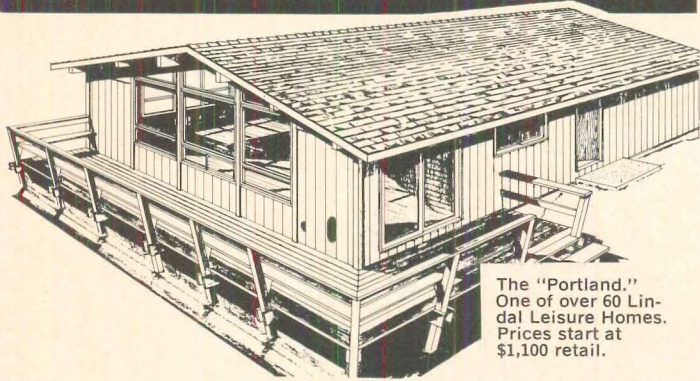
City \_\_\_\_\_ State \_\_\_\_\_

CODE D

Montebello, Calif. • Long Island, New York • Atlanta, Ga. • Chicago, Ill. • Dallas, Texas

# Q: HOW CAN ANYONE MAKE A 50% MARKUP ON HOMES?

# A: EASY— BECOME A LINDAL CEDAR HOMES DISTRIBUTOR



The "Portland."  
One of over 60 Lindal Leisure Homes.  
Prices start at \$1,100 retail.

The world's most complete line of pre-cut Cedar "A" Frames  Chalets  Motels  Lodges  Apartments  Year Around Homes

### OVER 100 SALES-PROVEN MODELS!

- Quality you'll be proud to sell
- Highest profits in industry — low investment
- 100% financing on your sales
- Leads — Sales Aids furnished
- Pre-sold with dynamic nat'l. advertising
- Featured in International Home Shows
- Unlimited market — year 'round sales
- Patented designs — unlimited flexibility
- Company in business over 1/4 Century

Every Lindal Structure is precision pre-cut from fine Canadian Red Cedar, packaged for quick assembly — shipped anywhere in the world.

### QUALIFICATIONS

#### for a Select Lindal Distributorship

1. Sound business background. Previous home sales experience helpful, but not necessary. We'll train the right man. Real estate license not required.
2. Applicant must be financially secure. Model home investment required.
3. Applicant must be willing to devote necessary time to guarantee success of distributorship.



"A" Frames  
from \$1,590



Chalets from \$2,550



Year Around Homes  
from \$3,910



Apartments-Hotels-Motels — Unlimited flexibility



Lodges  
New opportunity in the leisure market

MAIL THIS COUPON TODAY FOR COMPLETE DETAILS ON THIS OPPORTUNITY

- I am interested in a Lindal distributorship. Information requested is enclosed
- I am interested in a Lindal home for my own personal use. Enclosed find \$1.00 for complete color brochures and information on the entire line.

Name \_\_\_\_\_  
Address \_\_\_\_\_ Phone \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Direct Inquiries To:

**LINDAL Cedar Homes**

(American Factory)

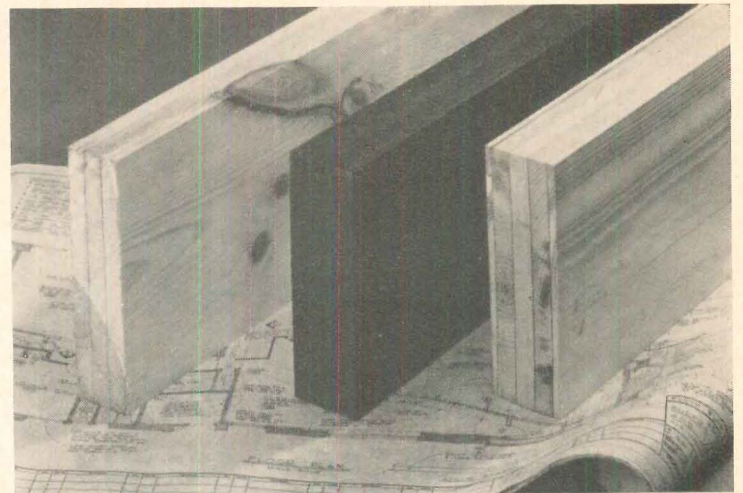
9004 South 19th St., Tacoma, Washington 98465

Other plants in England-Ireland-Canada

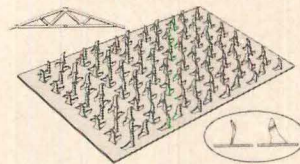
## NEW PRODUCTS

start on p. 135

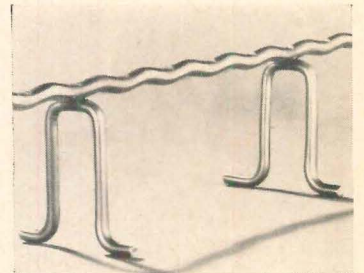
### Construction materials



**Vertically laminated beams** of Idaho white pine come in three grades and a wide choice of depths and widths. The selection above includes rough-sawn with stain (center) and a five-ply premium beam. Potlatch, San Francisco. Circle 207 on Reader Service card



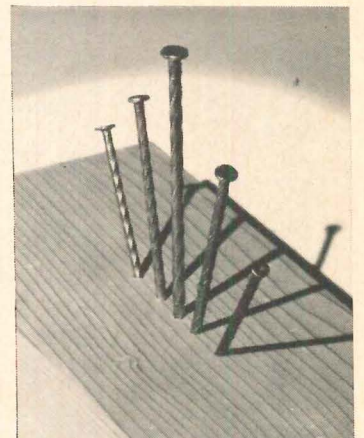
**Truss connector** of 19-gauge galvanized metal is designed for trusses of 20' to 50' span. Teeth are angled 20° to compensate for directional load factors. Must be applied by hydraulic press, available from manufacturer. TECO, Washington, D.C. Circle 208 on Reader Service card



**Stainless-steel rebar** for supporting concrete reinforcing offer an advantage over plastic-coated rebar. They permit grinding of concrete surfaces without danger of rust stains appearing at a later date. Dayton Sure-Grip, Miamisburg, Ohio. Circle 209 on Reader Service card



**Under-slab vapor barrier** of reinforced plastic fabric is unusually strong compared with average plastic films. It resists rips, tears and punctures under the weight of both workmen and wheelbarrows. In flat sheets and rolls. Griffolyn, Houston. Circle 210 on Reader Service card



**Helical nails** have a fully twisted shank that gives up to three times more holding power than smooth shanks. Available in all sizes and five types, including bright general purpose, quench hardened flooring, and truss. U.S. Steel, Pittsburgh. Circle 211 on Reader Service card

New products continued on p. 154

## URETHANE FOAM PROJECT REPORT

# Builder News III

Part of a series of product-use bulletins published by Mobay to keep architects, engineers, builders and contractors informed on new developments in urethane foam materials for the commercial and residential construction industries.

MOBAY

BN-3

## RIGID URETHANE FOAM UNIFIES PLASTIC AND METAL STRUCTURAL COMPONENTS INTO STRONG, EASILY ERECTED, INSULATED MODULE

Using rigid urethane foam-filled prefabricated aluminum wall and roof sections, two men reportedly can erect a complete 432 sq. ft. building or add a 12' x 36' room to an existing structure in less time than it usually takes to put in the wall studs by conventional building methods.

Developed by the Security Aluminum Co., Detroit, the wall system is composed of foam-core sandwich panels, 4 ft. wide and up to 16 ft. long. The thickness of 5 $\frac{1}{3}$  inches was chosen as a coordinate module of the standard 16-inch building dimension on which all the structural design features are based.

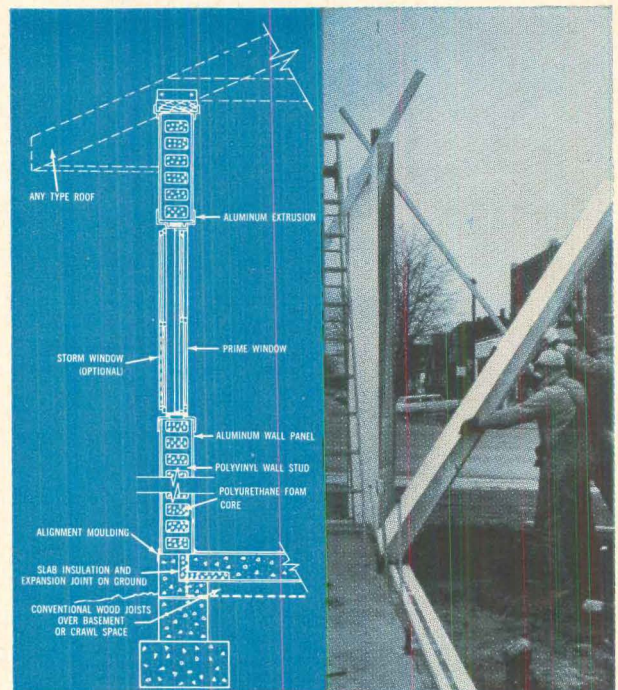
The panel skin is 0.032-inch vinyl-coated aluminum sheet, finished on exposed sides. The studs or cross members are of extruded vinyl, specially slotted to interlock with the aluminum sheet to maintain uniform spacing between the skins prior to foaming, and to impart some rigidity to the finished panels.

But the essential element of the whole idea, according to the manufacturer, is the rigid urethane foam core which provides structural properties that exceed building code requirements for snow and wind loads in any part of the country and a U factor of 0.03—equal to 16 inches of glass fiber.

Other advantages of the urethane foam contribute measurable benefits to the end user. The owner gains by elimination of maintenance expenses caused by corrosion, rotting, rusting, cracks, leaks or termites; lower insurance rates owing to the nonburning classification of urethane foam (ASTM 1692-59T); and lower heating and cooling costs due to its near-perfect insulating properties.

Using factory mass production methods, the panels are fabricated in 10 to 12 minutes each. The metal skins and plastic cross members are assembled in forms with doors and windows set in place. The urethane formulation is then injected into the box void formed by the facing skins.

As the urethane foam expands, it envelops the internal bracing members and completely fills every space. As the foam hardens, it forms a permanent bond with the aluminum skins to create a strong, fully insulated, monolithic structural unit.



(Left) Cross section shows structural detail of typical modular panel unit positioned on pre-installed footings and floor.

(Right) Wall panels are aligned and fitted into pre-caulked and drilled metal channel, secured with self-tapping screws.

During the initial foaming operation, a 2 $\frac{1}{2}$ -inch void is left on either side of the panel. When the panels are connected at the job site, plumbing, wiring and other fixtures are installed in the 5-inch space, which is then filled with urethane foam to unify the entire wall.

### Advantages of Foam Core Wall

- Adaptable to residential and commercial buildings
- Stronger, more rigid than conventional structures
- Offers architect complete design freedom
- Provides excellent sound barrier
- Erected easily, quickly and economically
- Excellent barrier for heat, cold, moisture
- Eliminates maintenance problems

Further information on this application may be obtained from Security Aluminum Co., 385 Midland Ave., Detroit, Mich.; or Callery Chemical Co., Callery, Pa., manufacturer of chemical system.

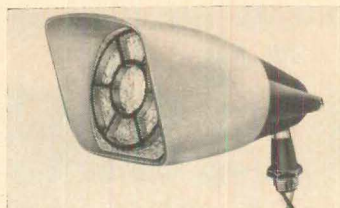
For additional information on the use of urethane foam in other insulation and construction jobs, write on your letterhead to:

MOBAY CHEMICAL COMPANY, CODE HO-8. PITTSBURGH PA 15205

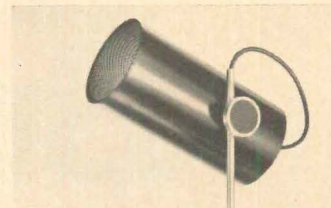
**Lighting**



**Hand-forged wrought-iron chandelier** has six flame-shaped candelabra lamps. Chandelier is 25" in diameter, with a 23"-high body and an overall height (including chain) of 42". Lighting Corporation of America, Philadelphia. *Circle 270 on Reader Service card*



**Adjustable unit** for 250-watt single-ended iodine quartz lamp features a cast or spun aluminum shade. Threaded stem unit has spring-tension swivels that stay put at any angle. In silver glow or brushed satin aluminum. Swivelier, Nanuet, N.Y. *Circle 271 on Reader Service card*



**Side-mounted spotlight**—constructed of extruded and die-cast aluminum—can rotate in a full circle around its vertical and horizontal axis. Two diameters: 5" and 6". Exposed parts are brushed aluminum. Prescolite, San Leandro, Calif. *Circle 272 on Reader Service card*



**Wall-mounted fluorescent fixture**—designed as an illuminated showcase—is one of six fixtures in a decorator line that adapts to a variety of residential applications. Fixture features simulated-walnut wood trim. Sylvania, New York. *Circle 273 Reader Service card*

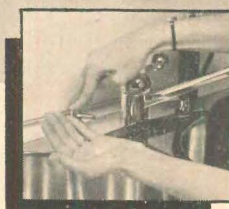
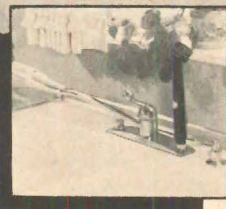
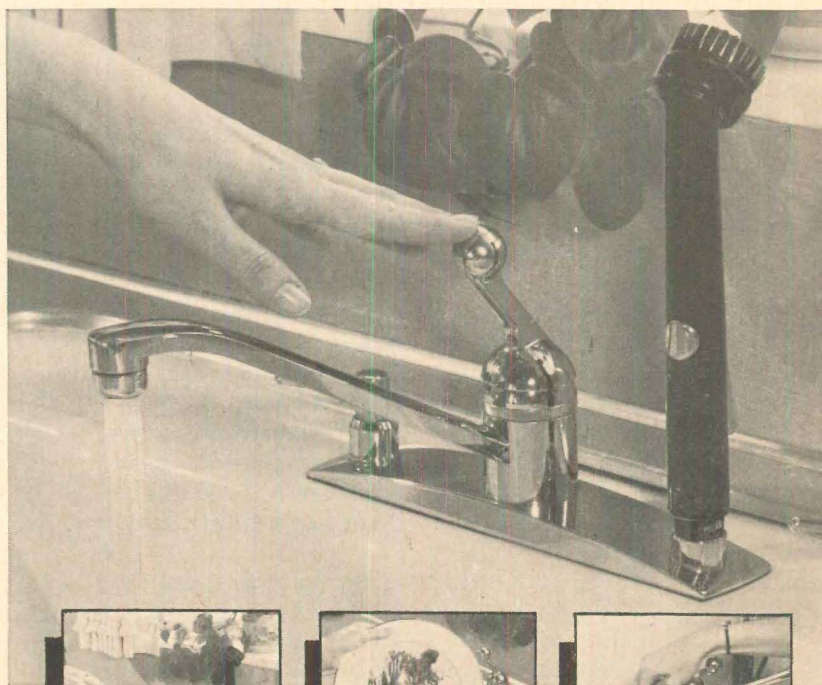
*New literature starts on p. 156*

**DELTA<sup>®</sup>**

**SINGLE HANDLE BALL FAUCETS**

Created for those who prefer the absolute finest in dependability, style, convenience and variety. Delta faucets are proven in millions of installations throughout the country. There are over 450 model applications to satisfy your every exigency. Specify DELTA . . . the greatest name in faucets.

*free literature upon request . . .*



**DELTA FAUCET COMPANY**

GREENSBURG, INDIANA

Division of MASCO Corporation

IN CANADA: Delta Faucet of Canada Ltd.

Rexdale, Ont.



## How Geon vinyl helps Andersen Perma-Shield Windows promise “lifetime maintenance savings”

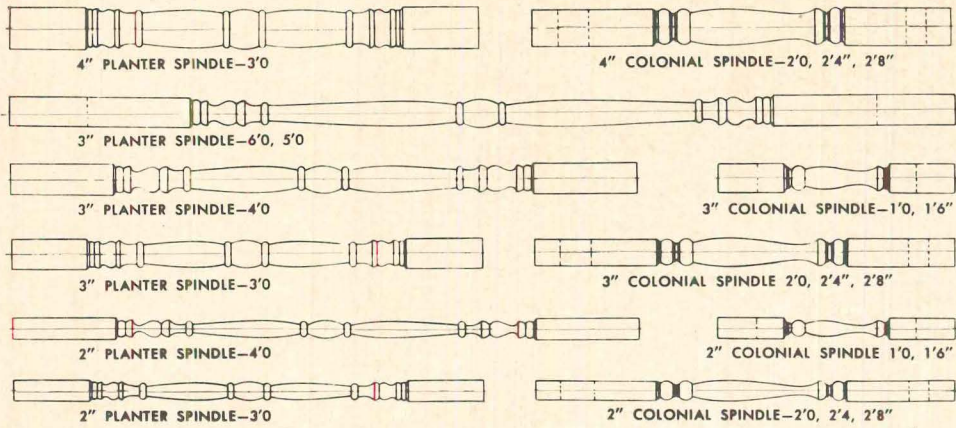
They call this the window “that does not need painting. Nor scraping. Nor rubbing down. With a finish that won’t pit. Won’t corrode. Won’t dent. Won’t warp. Can’t rust. And stubbornly resists scratching.” □ Geon vinyl makes it true. Thick rigid vinyl is extruded directly over a wood core, giving the finished window an all-vinyl exterior. Maintenance problems are almost totally eliminated. □ As manufacturers of

building products discover the advantages of Geon vinyl, you find them using it more and more — in siding, electrical conduit, pipe, baseboard raceways, built-in vacuum tubing, shutters, and many others. For additional information on the use of Geon vinyl in building products, write B.F. Goodrich Chemical Company, Dept. H-3, 3135 Euclid Avenue, Cleveland, Ohio 44115.



**B.F. Goodrich Chemical Company**

a division of The B.F. Goodrich Company



**Colonial and planter spindles offer new ideas for interiors**

And many are included in a folder for architects from E.A. Nord Co. Sketches show spindles used as fences and gates, wainscoting, stair rails, ballustrades, island counters, and bathroom dividers. The spindles—of straight-grain, kiln-dried Western hemlock—come in a wide range of lengths in three sizes: 2"x2", 3"x3",

and 4"x4". Turned areas are sanded, ready for stain, paint, or other finish. To make it easy for architects to draw the right size spindle into a sketch, Nord offers a free tracing template (reproduced above) that can be slipped between drawing and tracing. E.A. Nord, Everett, Wash. Circle 375 on Reader Service card.

For copies of free literature, circle the indicated number on the Reader Service card, page 143.

**LIGHTING FIXTURES.** Twelve-page catalog illustrates manufacturer's line of pendant fixtures and includes price list. Glowtex, Erie, Pa. Circle 354 on Reader Service card

**SCALE MODEL ARCHITECTURAL SIDING.** Display card shows line of plastic siding and roofing materials molded in colored plastic. It can be cut, cemented, shaped, and painted. In three scales: 1/8", 1/4", and 1/2" equal to 1 ft. Holgate & Reynolds, Evanston, Ill. Circle 301 on Reader Service card

**FLOOR UNDERLAYMENT.** Installation guide details six elements in a floor system—joists, sub-floor, underlayment, fasteners, floor covering, adhesives—and enumerates the advantages of underlayment. Recommended procedures include how to store and handle underlayment, how to prepare subfloor, and how to nail and staple. National Particleboard Assn., Washington, D.C. Circle 300 on Reader Service card

**BASEBOARD HEATING.** Guide—with typical layouts, diagrams, and schematics—illustrates and describes how to figure out material requirements, plan your piping, nail it up, and locate and install expansion couplings. Slant-Fin, Greendale, N.Y. Circle 380 on Reader Service card

**LIGHTING PRIMER.** Basic electrical and lighting text covers lamps, lighting principles and layout design, and includes information on incandescent, fluorescent and mercury lamps. For a copy of this book—written as the text for a home-study course—send \$6 to Sylvania Electric Products Inc., 1100 Main Street, Buffalo, N.Y. 14209.

**CONCRETE CEILING COVER COAT.** Information sheet tells how to apply ready-mixed drywall compound to concrete ceilings as well as to columns. It is designed especially for drywall contractors in commercial work. U. S. Gypsum, Chicago. Circle 344 on Reader Service card

**PRECAST CONCRETE.** Full-color brochure illustrates exterior and interior uses of brick and stone patterns, and summarizes properties. Miami Stone of America, Indianapolis, Ind. Circle 360 on Reader Service card

**ELECTRONIC LIGHT DIMMERS.** Product sheet illustrates and outlines properties of several models for both incandescent and fluorescent lighting. Electronic Controls, Dayton, Ohio. Circle 361 on Reader Service card

New literature continued on p. 159

**NEW ... for Cement, Masonry, Flagstones**



**Cabot's CEMENT FLOOR STAINS**



Not a dye; not a paint

- For concrete, cement, all masonry surfaces inside or out . . . basement floors, walks, steps, patios, sun decks.
- Resists moisture and abrasion, will not crack, peel, or scale. Detergents and beverages will not mar the finish. It is alcohol-proof.
- Easy to apply with brush, roller, or spray . . . great covering power. Provides a uniform flat finish.
- Eight colors: Mint Green, Brownstone, Brick Red, Quarry Gray, Evergreen, Cobblestone Gray, Sandstone, Pipstone Red . . . plus White and Black.



**SAMUEL CABOT INC.**

930 S. Terminal Trust Bldg., Boston, Mass. 02110  
Please send color card and information on Cabot's Cement Floor Stains.

\_\_\_\_\_

\_\_\_\_\_

**built-in four-slice toaster**

choose *Swanson*

**built-ins for better kitchens**



**FREE . . . SEND TODAY!**  
Complete catalogs, including product specifications, to help you design better, more beautiful kitchens.

**SWANSON MANUFACTURING CO.**  
607 S. Washington St. • Owosso, Mich. 48867

**Dunn & Snoddy Real Estate gets the Action-People\*  
and this ad brings them!**



**“This ad sold a home for us,”** says Charles Dunn, Jr., Dunn & Snoddy Real Estate, Bloomington, Ind. “A new family moved into our town and was looking to buy a house. They saw our Yellow Pages ad, called, and that phone call ended in a sale.

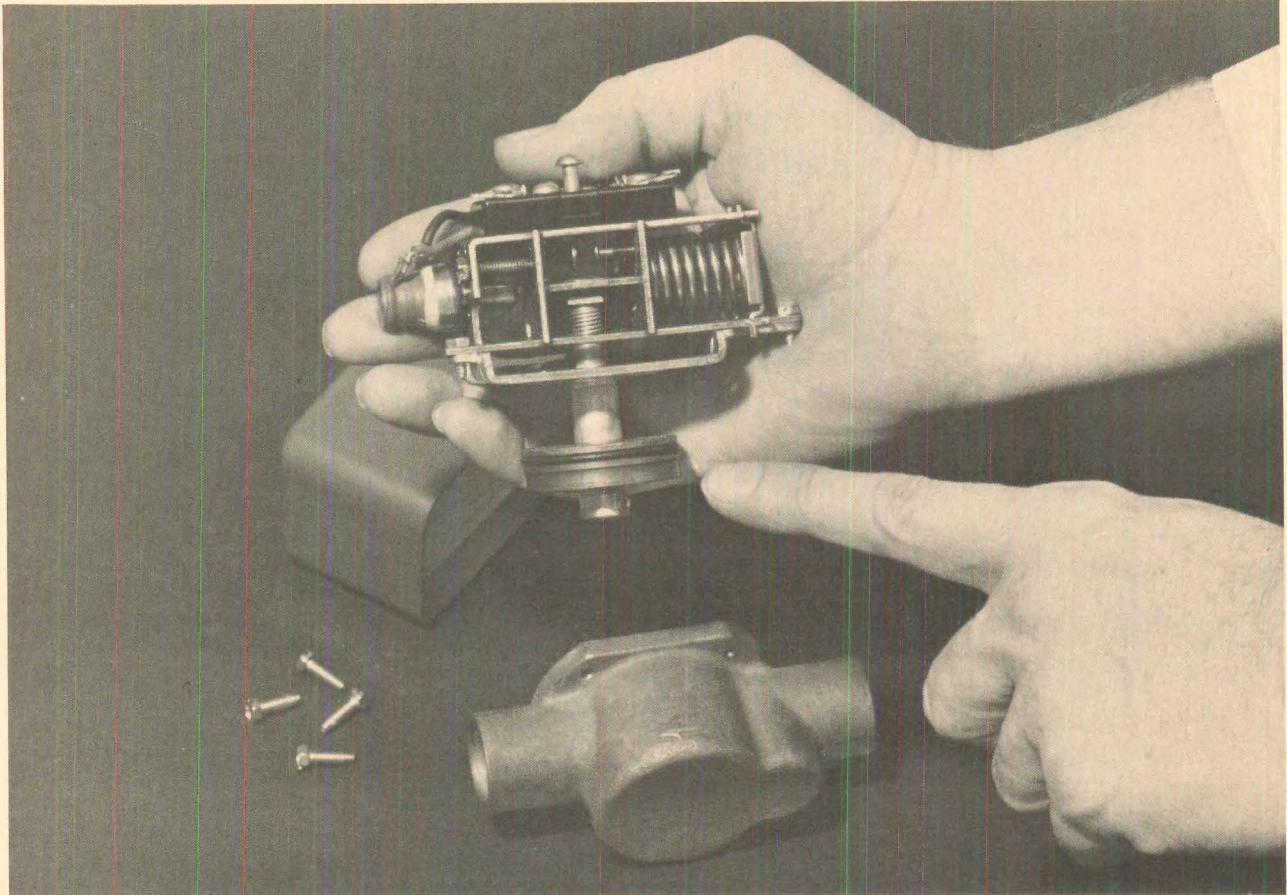
The Yellow Pages is the best way we know of reaching new people in town. These new people are the lifeblood of our business. They're the hottest prospects. They generally buy more expensive homes. As you can see, the Yellow Pages really does a big job for us.”

Yellow Pages ad (shown reduced) runs under REAL ESTATE. Call your Yellow Pages man to plan your program. He's in the Yellow Pages under: ADVERTISING — DIRECTORY & GUIDE.

Advertise for action...



\*The 3 out of 4 busy Americans who shop the Yellow Pages way.



## No hammering with B&G smooth zone control

The uniform operating characteristics of B&G Zone Control Valves assure the quiet, dependable control a good hydronic system deserves. A unique thermal expansion heat motor provides controlled "slow opening" to minimize expansion noises by eliminating abrupt changes in water temperatures. "Slow closing" to eliminate noise due to water hammer.

These valves provide positive shut-off against differential heads of 60 feet and system pressure up to 125 psig. No gears or cams to wear. This compact Zone Control Valve can be easily installed. Virtually

leakproof, yet it can be very readily serviced without draining the system.

Here's a truly low cost way to achieve quality zone control... for modern comfort conditioning. Available in 1/2", 3/4", 1" or 1 1/4" solder connections for operating temperatures up to 240° F. Contact your local heating wholesaler. Or, for free copy of Bulletin A-417, write ITT Bell & Gossett, Fluid Handling Division, Morton Grove, Illinois, Dept. 10Q.



*"50 Years of Quality, Leadership and Service"*

# BELL & GOSSETT **ITT**

A Division of International Telephone and Telegraph Corporation  
In Canada, contact ITT Industries of Canada, Ltd., Guelph, Ontario



## NEW LITERATURE

starts on p. 156

**SAUNA PLANS.** Guide shows how to build complete Sauna rooms and tells how to install equipment. Also includes manufacturer's line of prefabricated rooms, heaters, and accessories. Normandy Products, Pittsburgh. *Circle 304 on Reader Service card*

**CURTAIN WALLS AND ALUMINUM WINDOWS.** Fully illustrated 25-page catalog includes specifications for installing projected, reversible, double-hung, and awning windows in single and multi-story curtain walls. Stanley Building Specialties, Summerville, S.C. *Circle 305 on Reader Service card*

**UNDERGROUND WIRING.** System for total underground residential distribution permits pole-type loadability in the hole. Bulletin examines pole-type unit consisting of a transformer, grate, chimney baffle, and hole liners. General Electric, Schenectady, N.Y. *Circle 306 on Reader Service card*

**BUDGET LIGHTING.** Thirty-two-page, full-color catalog illustrates an expanded line of decorative and functional fixtures. More than 200 designs include Mediterranean styles in black wrought iron, Early American crystal and candelabra chandeliers, and multi-colored Tiffany glass designs. Virden Lighting, Cleveland. *Circle 307 on Reader Service card*

**HYDRONIC OIL BOILERS.** Cast-iron boilers in five capacities (175,000 to 385,000 Btu), supply heat and hot water for large homes and apartments. Product sheet—with specifications and diagrams—includes application recommendations. Hydrotherm, Northvale, N.J. *Circle 308 on Reader Service card*

**SUSPENSION FASTENERS.** Guide illustrates—with more than 100 product and application sketches—uses for fasteners. Twelve-page catalog also includes complete line of a variety of drive pins and threaded studs, plastic and vinyl anchors, metal snap-off anchors, and wire loops. Fastway Fasteners, Lorain, Ohio. *Circle 309 on Reader Service card*

**CUSTOM HARDWARE.** Elaborate 78-page catalog includes complete selection of brass, bronze, and aluminum builder's hardware. Included: powder room accessories, entry door pulls, lever door handles, door grilles, bell buttons, and accessories. Sizes, weights, specifications, and price lists. Peabody, Los Angeles. *Circle 310 on Reader Service card*

**RANGE HOODS.** Product sheet examines advantages of ducted and ductless hood units. Dimensions and installation suggestions are included. Leigh Products, Coopersville, Mich. *Circle 311 on Reader Service card*

**TWO-WAY RADIO.** Sixteen-page bulletin includes operating characteristics of manufacturer's line, and discusses power outputs and frequency bands. Also: advantages of heat-resisting silicon transistors. General Electric, Lynchburg, Va. *Circle 312 on Reader Service card*

**REPEAT WALL COVERINGS.** Four-page brochure illustrates 12 varied patterns in a collection by Donald Soderlund. Special colorings are available for every design. James Seeman Studios, Garden City Park, N.Y. *Circle 313 on Reader Service card*

**WALL AND PARTITION PANEL.** Abrasive-resistant plastic film bonded to 1/8"-thick tempered hardboard can be installed over slightly irregular surfaces with special mastics—no furring needed. Six-page brochure shows how to apply 15 wood-grain patterns and 34 colors in panels of 4'x8' and 4' and 10'. Good year, Akron, Ohio. *Circle 314 on Reader Service card*

**CERAMIC TILE.** Sixteen-page color brochure shows how designers use ceramic tile in almost every room of a house. Decorating ideas are supplemented by a section that keys color

schemes to bathroom fixture colors. For a copy, send 10¢ to American Olean Tile Co., Lansdale, Pa. 19446.

**DRYWALL ACCESSORIES.** Reference catalog shows corners, jamps, tape, and cement. Featured: new rounded corner moldings that reduce maintenance requirements by resisting corner damage. Both cement-on and nail-on accessories are included. Beadex, Seattle. *Circle 322 on Reader Service card*

**WELDING ALUMINUM.** A 96-page technical handbook in cartoon form illustrates how workmen—who have never welded light metal before learn how to do it. An appendix includes details of recommended joint designs, filler wires, speeds, arc voltages, welding currents, gas volumes, porosity standards, and U-bend tests. Reynolds Metals, Richmond, Va. *Circle 323 on Reader Service card*

**CONCRETE CURING COMPOUND.** Non-membrane silicate curing concentrate cures, hardens, and dustproofs concrete in one application. Brochure enumerates advantages and gives application instruction. Jahn Concrete Forming Products, Denver. *Circle 324 on Reader Service card*

**CONSTRUCTION EQUIPMENT.** More than 80 gasoline, electric and air-powered tools—plus accessories—are presented in a fully-illustrated 32-page catalog. Included: concrete vibrators, gas and diesel generators, concrete finishing screeds, power trowels, rammer and plate soil compactors, and paving breakers. Skil, Chicago. *Circle 325 on Reader Service card*

**FIBERGLASS INSULATION.** Four-page folder shows where and how to insulate. Information covers vapor barrier, electric heat and air-conditioning, sidewall insulation and sound control. Also: Standards for all-weather comfort, reasonable comfort, and minimum acceptable comfort. Philip Carey, Cincinnati. *Circle 315 on Reader Service card*

**DISPOSABLE AIR FILTERS.** Design and construction information on filters in a choice of three efficiency ranges is contained in an eight-page illustrated bulletin. Charts show the rated capacity for each basic size. Installation data for flat, single 'V' and double 'V' filter banks is included. Farr, Los Angeles. *Circle 316 on Reader Service card*

**AIR CONDITIONING.** Sixteen-page catalog—with diagrams and schematics—gives complete specifications for full air-conditioning line: 12 condensing sections, 24 evaporator sections, and three single-package units. Armstrong Furnace Co., Columbus, Ohio. *Circle 317 on Reader Service card*

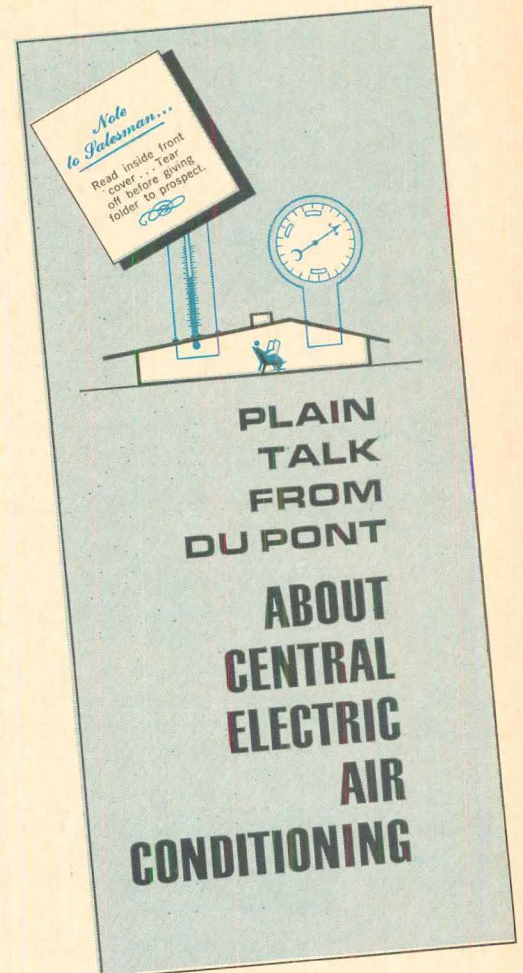
**HARDBOARD.** Suggestions for hardboard uses in paneling, built-ins, remodeling, outdoor living, and siding are among 27 ideas presented in a product information folder. Weyerhaeuser, Tacoma, Wash. *Circle 318 on Reader Service card*

**GRAB BARS.** Full-line catalog illustrates heavy-duty brass bars for nursing homes. Includes installation specifications, drawings, suggested method of attachment. Miami Carey, Cincinnati. *Circle 319 on Reader Service card*

**PLASTIC COATED WINDOWS.** Steel windows with polyvinyl chloride polymer coating are described in a 24-page brochure which explains benefits and gives architects specifications. A sample of the coating is included, along with results of standard salt spray, water immersion, and abrasion tests. Ceco Corp., Chicago. *Circle 320 on Reader Service card*

**STAIRBUILDER INSTALLATION MANUAL.** Twenty-four-page pocket-size manual—illustrated with photographs and diagrams—outlines installation methods for prefabricated steel stair forms for concrete and terrazzo. Also: tips on concrete mixing and pouring. Stairbuilders, McCook, Ill. *Circle 321 on Reader Service card*

## Free booklet tells you how to use central air conditioning to close more sales



Selling more homes more quickly is important to you... air conditioning can help you do it. Central electric air conditioning is a reality of modern living. Almost one out of every four new residences constructed in 1965 was centrally air conditioned. Make sure you are armed with the facts you need to cash in on all the sales advantages central air conditioning has to offer. Get the booklet "Plain Talk From Du Pont." For your free copy, mail the coupon.

**FREON®** **DU PONT**  
refrigerants REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING... THROUGH CHEMISTRY

Du Pont Co., Room 4221B  
Wilmington, Delaware 19898

Please send me a copy of your booklet on central residential air conditioning.

NAME \_\_\_\_\_ TITLE \_\_\_\_\_

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

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

