


House & Home

MANAGEMENT PUBLICATION OF THE HOUSING INDUSTRY

SEPTEMBER 1965



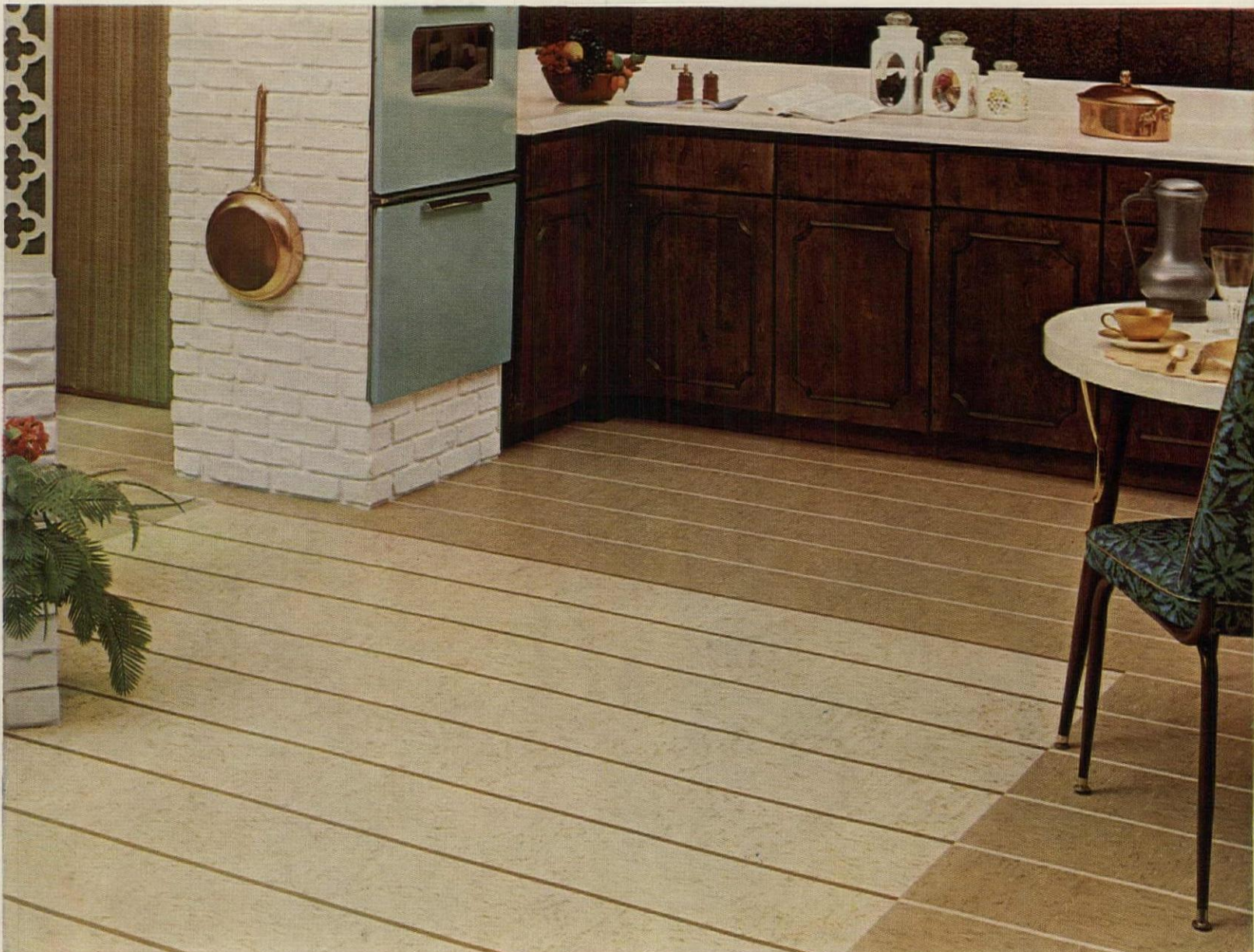
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A MCGRAW-HILL/DODGE PUBLICATION VOL. XXVIII NO. 3 SEPTEMBER 1965

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HOUSE & HOME, Sep. 1965, Vol. 28, No. 3. 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. Printed in New York, N.Y. Second class postage paid at New York, N.Y. and at additional mailing offices. Title ® in U.S. Patent Office. Copyright © 1965 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: Shelton Fisher, President; Vice Presidents: Robert F. Marshall, operations; Robert F. Boger, administration; John R. Callahan, editorial; Ervin E. DeGraff, circulation; Donald C. McGraw Jr., advertising sales; Angelo R. Venezian, marketing. Corporation Officers: Donald C. McGraw, 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: National 116A-B Western W1-W8; Eastern E1-E3; Midwestern M1-M3; North Central N1-N6; Southern S1; Swing SW1.

EDITORIAL

Plain-vanilla house design is no way to cover the market. 61
Some buyers are bored to death by innocuous, often ugly, house design. They want something distinctive—and until they find it, they won't buy

DESIGN

Award-winning built-for-sale houses. 62
Eight models picked as the best of this year's Homes for Better Living program stress more custom-house features in production house design

Builder-architect teamwork: an H&H Round Table report. 74
Better-designed houses depend on better relationships between the builders and the designers. A two-day, 39-man discussion found approaches to both

MARKETING

New boost for lumber dealers—a warranted wood house. 82
A national lumber manufacturer shows dealers how to produce and market the house, then backs it for 20 years. Object: a new leadership role for dealers

MANAGEMENT

A shortcut to estimating garden apartment feasibility. 84
Contrary to what many builders think, it doesn't take an expensive survey to find out whether a new rental project will be in the financial ballpark

LAND PLANNING

Patio houses on 30-ft. lots win everybody's approval. 86
Buyers like them because they're private and easy to care for. Officials like them because they're well planned. The builder likes them because they sell

NEWS

Medicare signals big changes for retirement housing. 5
Also: Housing Act helps builders in five ways . . . Land speculation goes scientific as a package . . . Unsold housing inventory hits two-year low . . . Census Bureau points out hottest housing markets . . . Antibias laws score biggest gains since 1961 . . . Prefabber offers no-interest construction loans
Complete NEWS index on p. 5.

DEPARTMENTS

Business in the making.	47	New products	101
What the leaders build.	50	New literature	127
Letters	58	Reader service card	117
Technology	92	Advertising index	134

Cover: House in Bethesda, Md. Builder: Edmund J. Bennett Assocs. Architect: Keyes, Lethbridge & Condon. Photo: J. Alexander. *For story see p. 64.*

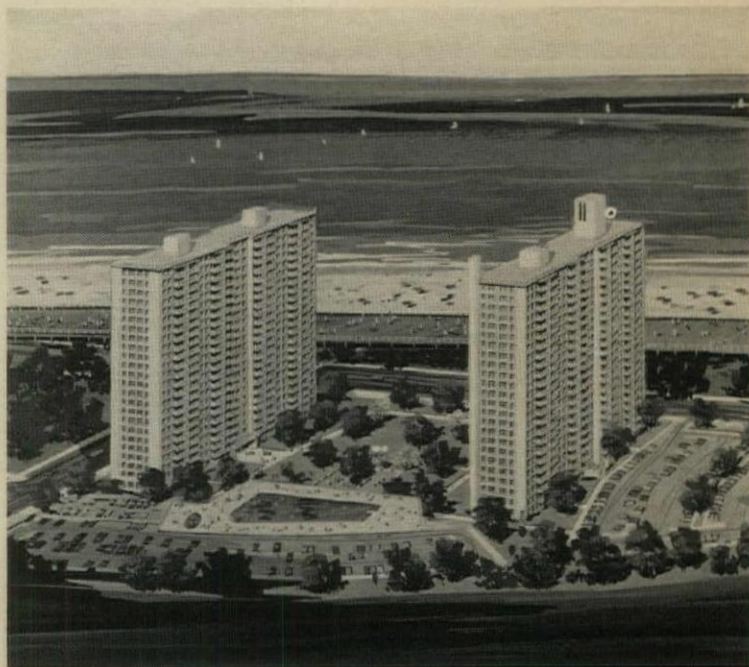
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WASHINGTON INSIDE

Senate approves cabinet post

The vote was 57 to 33, and the Senate decided to keep FHA as a quasi-independent agency within the new Department of Housing and Urban Development. The final outcome depended on House-Senate negotiation, since the version passed by the House (NEWS, Aug.) kept FHA within the new secretary's control.

Public housing replacement

Congressmen who guided rent supplements into law last month are making no secret of their hope that the new plan eventually will replace public housing. "[Existing units] will not be replaced, naturally," Sen. John Sparkman said in a radio broadcast last month, "but we are hoping it may replace public housing for the future. The estimate is that this will actually be much cheaper than public housing [by some \$35 a month]."

'Hearts of gold, heads of lead'?

Did Bob Weaver really say that only persons "with hearts of gold and heads of lead" would build rent-supplemented housing for low-income families, as quoted by the *Pittsburgh Post-Gazette*? Quite probably, acknowledges his office. "It was a glib way of expressing his very real concern that builders, churches and unions are going to have to get their hands dirty and deal with those problem families found in the low-income range," says a spokesman. "He did not mean to imply that the description fits any builders."

More real estate money

The Internal Revenue Service has just given pension funds the go-ahead to invest directly in real estate trusts. Till now pension funds had to buy full mortgages.

Dry lumber stall

Backers of 1½" dry lumber won't get FHA to adopt the nonstandard size soon, despite their success in lobbying a section into the Housing Act letting FHA approve "technically suitable" materials. HHFA Administrator Bob Weaver opposes the idea because "it would render present industry standards meaningless" and it likely will be a cold day at HHFA before FHA acts.

INDEX

Five ways the 1965 Housing Act can help builders now.	6
Can land speculation be organized as a no-guesswork business?	8
Inventory of unsold houses falls to two-year low.	10
Census Bureau spotlights 1964's hottest markets.	10
What today's buyers are buying.	14
Antibias laws make biggest gain since 1961.	16
Prefabber offers no-interest construction loans.	18
Plywood maker emerges as 1,500-house builder.	20
NAHB elevates three staffers.	24
Former builder becomes NAHB's chief economic spokesman.	28
Mortgage market quotations.	18
Housing stock prices.	20

Medicare foreshadows vast changes for retirement housing, nursing homes

The medicare bill signed into law last month by President Johnson will have far-reaching impact on builders in the retirement and nursing home markets.

Builders and geriatric experts contacted by HOUSE & HOME anticipate two results:

1. *Medicare may spur building of a new type of facility called the convalescent center to compete with nursing homes.* Reason for the convalescent centers: medicare will pay the major part of "extended care" up to 100 days for elderly people after they have been hospitalized three days. The cost of the first 20 days would be fully paid under medicare beginning Jan. 1, 1967; patients would pay \$5 daily for the next 80 days.

2. *Medicare will remove medical care plans as a concern for builders of retirement communities.* Medicare does this by paying the major share of hospital charges, convalescent center charges and home health services for all persons over 65. In addition, everyone over 65 can sign up for voluntary health insurance to cover 80% of doctor bills and other costs not covered by the mandatory medicare. Cost: \$3 monthly per person.

Convalescent centers. These centers—a few already exist—care for in-patients in the recovery period between full hospital treatment and a return to normal, active living. Until now many nursing homes have provided convalescent care, and some nursing homes find short-term convalescents provide half their patients.

But only about 1,000 of the nation's 11,000 licensed nursing homes can qualify as "extended care" facilities under medicare. Hence the anticipated swing toward full-scale convalescent centers.

One sponsor, United Convalescent Centers which is backed by the Evinrude Co. and Singer Frances Langford, opened its fourth convalescent center in Jacksonville last month. Two others are under construction at Palm Beach, Fla., and Los Angeles. Wallace Johnson and Kemmons Wilson,

the Memphis homebuilders who organized Holiday Inns of America, are setting up a new company, Medicenters of America Inc., to license 400 convalescent centers across the nation. So far, 10,000 persons have paid \$1,500 for feasibility studies in their localities and stand ready to pay \$100 a bed in franchise fees. Most facilities will care for 50 to 75 patients.

Johnson calls Medicenters "an entirely new concept of medical care, neither a hospital, nursing home or rent home." He says they will serve patients of all ages, and will charge from \$7.50 to \$15 daily. He plans to train personnel in a prototype 150-patient center to open in Memphis.

Initial units will be built at Wilmington and Gastonia, N.C., and Columbia and Spartanburg, S.C. Most will be low-rise construction.

Although these convalescent centers will compete with nursing homes, Mrs. Helen Holt of FHA's nursing home section expects that most of the 328 nursing homes FHA now insures will qualify as "extended care" centers. "No one should build a nursing home and expect it to fill automatically because of medicare," she cautions.

Retirement colonies. Housing experts expect many builders of retirement communities to include the \$3 monthly fee for the new voluntary insurance in their rent or monthly payments.

Such a practice would give these builders some of the sales advantage now enjoyed by builders offering medical and/or insurance packages. Ross Cortese's Leisure Worlds and Del Webb's Sun Cities have led this package field.

Cortese men expect to gain under medicare by being able to qualify more buyers by reducing monthly payments. In Walnut Creek near San Francisco, the dropping of a private medical-care plan with the advent of medicare will cut monthly payments by \$23, from \$183 to \$160.

Congress puts lid on renewal spending

No new urban renewal projects can be started for a while despite passage of new money authorizations under the 1965 Housing Act.

Rep. Albert Thomas (D., Tex.), who is not numbered among urban renewal's friends, last month finally won his battle to gain control of how much money will be committed for various renewal projects.

As chairman of the House appropriations subcommittee, which controls HHFA's funds, he has always disliked the so-called back-door spending approach of urban renewal: i.e., once housing legislation authorizes a lump sum for urban renewal, it's up to HHFA to decide which cities get how much. HHFA would make a contract with a city and then come to Thomas' subcom-

mittee six or seven years later when the money was actually needed to fulfill the contract.

Paycheck power. Thomas seized control by refusing to permit the spending of money to pay the salaries of staff personnel processing the initial contracts. Not until HHFA comes to him and explains which contracts are going to be made with what cities will Thomas allocate funds for salaries of those working on contracts.

Thomas' maneuver forced the Administration to submit a money authorization request late last month. Urban renewal proponents now fear Thomas will cut down on the money or try to use his new power as a political tool in horse-trading with city congressmen.

Five ways the 1965 Housing Act can help builders—now

The \$7.5 billion Housing Act signed by President Johnson Aug. 10 makes the most sweeping changes in federal housing law since the urban renewal program was started in 1949.

Rent supplements, the most controversial change, let private builders compete with public housing agencies in sheltering low-income families. Private builders must operate as limited-dividend companies whose profit is held to 6% *excluding depreciation* on a 10% equity under the program. They may build low-rise apartments for rent or town or detached houses for lease to low-income families with an option to buy.

HHFA expects 20% of the 375,000 prospective units will be lease-option plans.

At press time, regulations for rent supplements remained unissued. Biggest delay: HHFA must survey each local housing market to set income limits for families qualified to receive supplements. Reason: the limits of existing agencies are not comparable under the law.

But other provisions of the new bill become effective immediately, and five of them are of particular significance for builders and land developers:

1. No-down FHA loans up to \$15,000 for vets

Even more important than the no-down terms, the law nearly doubles—to 21 million—the number of veterans eligible for special mortgage treatment. Republican sponsors claim it could add 6.5 million new starts in coming years by making, in the words of one housing man, "virtually every serviceman since Washington crossed the Delaware" eligible for a no-down-payment FHA loan up to \$15,000.

Previously only 12.75 million men from World War II or the Korean War remained eligible for VA loans under the GI Bill. Another 6.5 million have already bought VA houses. Now any veteran with 90 days service at any time qualifies for no-down FHA loans, and even shorter periods of service are accepted if served on hazardous duty. Veterans must hold honorable discharges and may not have purchased a house under the VA program. Veterans whose eligibility under the GI Bill had expired now qualify for FHA loans—and all World War II vets would have lost eligibility by July 1967.

The new plan, also relaxes down payments above \$15,000, so a veteran can now buy a \$30,000 house with a \$2,000 down payment (vs. \$3,000 for non-vets). Veterans must pay 10% of house value from \$15,000 to \$20,000 and 15% of value over \$20,000 (*see pay schedule*).

Housing men expect the no-down feature to boost sales in low-cost areas, mainly in the South. Builders in Dallas started advertising the loans even before President Johnson signed the act.

But builders in high-cost areas such as Chicago, Cleveland and the West Coast expect little sales activity. They point out that VA houses currently are being offered with no down payment up to \$35,000. Too, these VA loans do not carry the ½% insurance charge that FHA will make.

Here is the down payment schedule:

FHA VALUE	PAY DOWN	FHA VALUE	PAY DOWN
\$17,000 and under	\$200	25,000	\$1,250
18,000	300	26,000	1,400
19,000	400	27,000	1,550
20,000	500	28,000	1,700
21,000	650	29,000	1,850
22,000	800	30,000	2,000
23,000	950	31,000	2,150
24,000	1,100	32,000	2,300

2. Lower down payments for houses over \$20,000

The law trims down payments by up to \$500 for houses over \$20,000 and will let FHA builders again become competitive with conventional lenders in this market. Previously, 10%-down conventional loans from S&LS made down payments in the upper price ranges smaller than the FHA scale.

The change cuts down payments from 25% to 20% of house value above \$20,000.

Hence a \$2,000 down payment will now handle a \$25,000 house, down \$200. On a \$30,000 house, the buyer pays 10% or \$3,000, a cut of \$500. Buyers of a \$4,000 house also get a \$500 reduction to \$4,000. The new down payment and monthly payment schedules over \$20,000:

FHA VALUE	DOWN PAYMENT	MORTGAGE	PAYMENT (30 Yr.)
\$21,000	\$1,200	\$19,800	\$117.69
22,000	1,400	20,600	122.45
23,000	1,600	21,400	127.20
24,000	1,800	22,200	131.96
25,000	2,000	23,000	136.71
26,000	2,200	23,800	141.46
27,000	2,400	24,600	146.22
28,000	2,600	25,400	150.98
29,000	2,800	26,200	155.74
30,000	3,000	27,000	160.49
31,000	3,200	27,800	165.24
32,000	3,400	28,600	170.00
33,000	3,600	29,400	174.75
34,000	4,000	30,000	178.32
35,000	5,000	30,000	178.32

3. FHA insured loans for land development

Application forms for FHA's new Sec. 1001 land development loans have not been sent to FHA offices. But the provisions in the law let builders and developers begin planning if they desire a land development loan.

Sec. 1001 lets FHA insure loans up to \$10 million outstanding at any one time covering 50% of land acquisition cost plus 90% of development costs. The total may not exceed 75% of FHA's estimate of the value of the completed project.

Loans will have seven year terms, except that FHA can insure longer-term loans cov-

ering privately owned water and sewage systems. Interest rate and insurance charges are yet to be fixed by the FHA commissioner, but could run to 6% interest and ¾% insurance premium.

Land covered by insured loans can be held in fee simple or by leases running for 99 years or 50 years from the mortgage date. Land improvements can include water and sewer lines, water supply and sewage treatment facilities, streets, curbs, gutters, sidewalks, storm drains and buildings other than schools to be owned by residents jointly.

Davis-Bacon prevailing wages apply.

4. Larger mortgages for three special markets

Low-priced homes in outlying areas can now get mortgages up to \$12,500 under Sec. 203i, a boost from \$11,000. Many prefabbers sell heavily under this section.

Near military installations, servicemen may now obtain \$30,000 mortgages on houses, up from the \$20,000 limit. Down payments are reduced slightly.

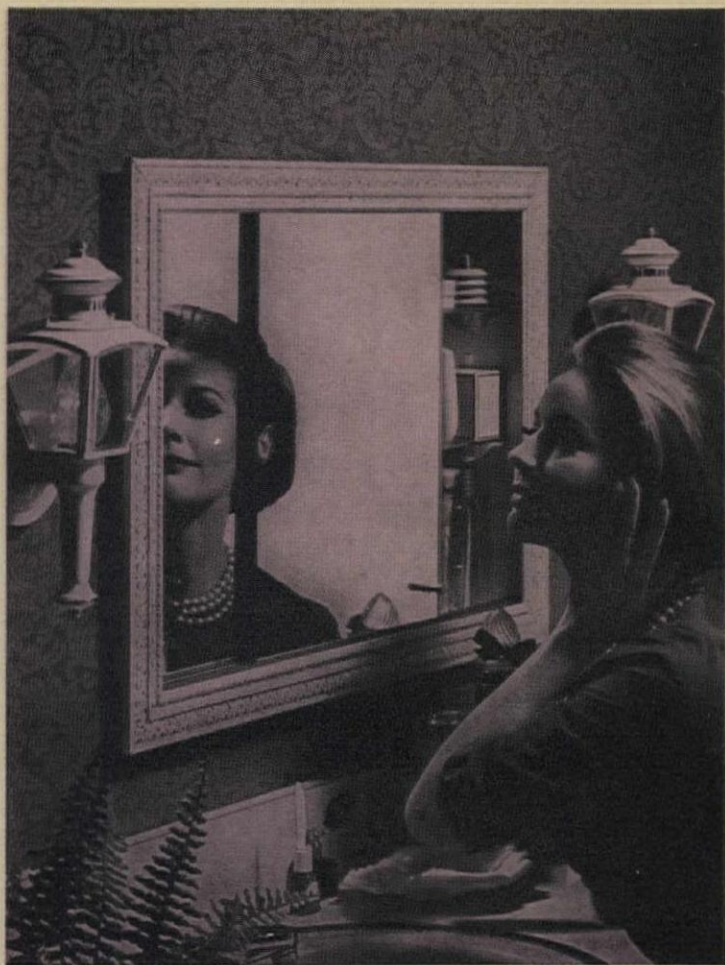
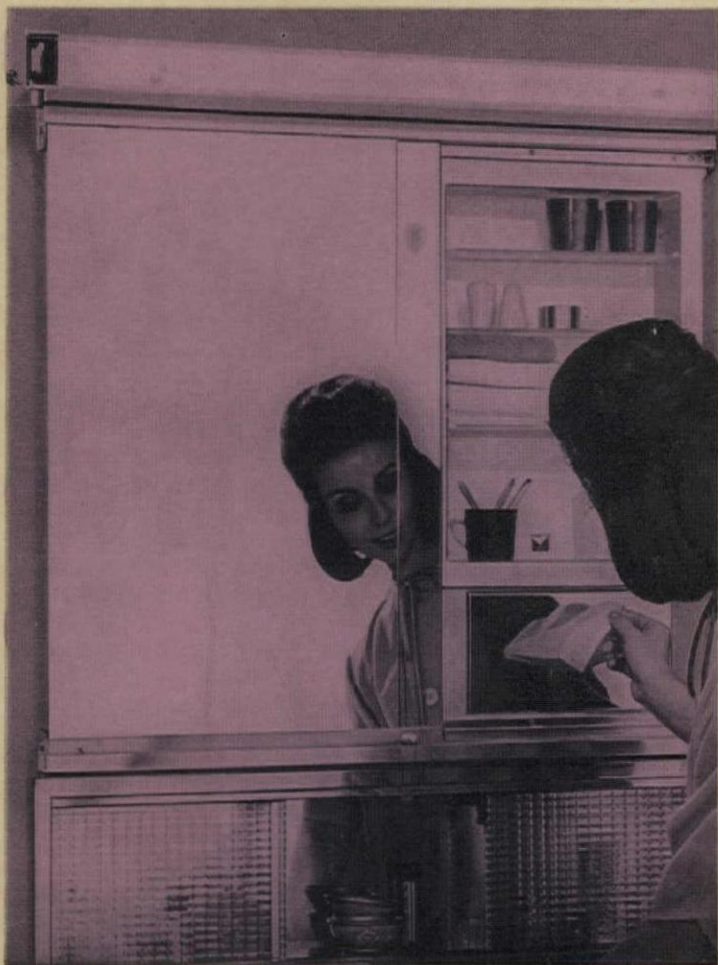
Urban renewal builders can now include general commercial and office space in renewal apartments. Until now only businesses serving apartment occupants—restaurants, beauty parlors, garages and the like—could be included in the FHA mortgage. Building must still be predominantly residential.

5. New insured loans for small-town housing

A totally new system of insured loans is set up to house farm families now living in three million substandard rural homes.

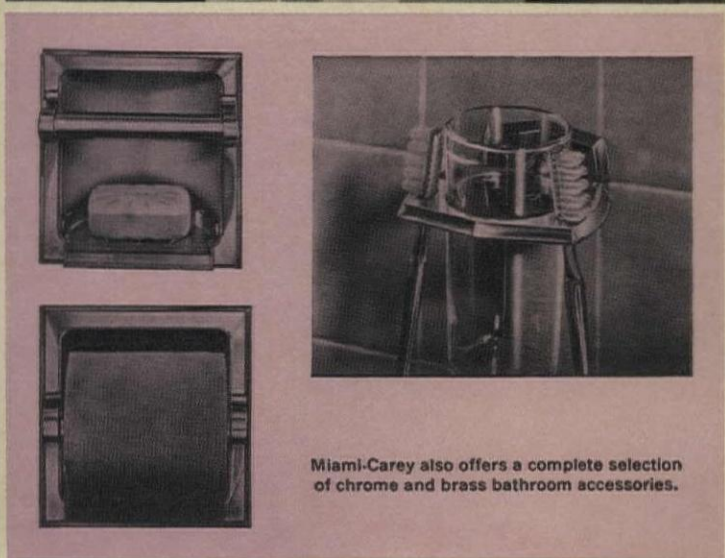
The Agriculture Secretary, through the Farmers' Home Administration, will insure new and existing house mortgages. Moderate income families can get 5% loans; other families will pay going FHA rates of 5¼% interest and ½% insurance. Ag-FHA plans to resell the loans to private investors. Mortgage bankers opposed the loans because private lenders would have no voice in making the original loan.

Houses in small towns in the 2,500 to 5,500 population class can be insured if they are rural in character. Otherwise houses must be in areas below 2,500 persons.



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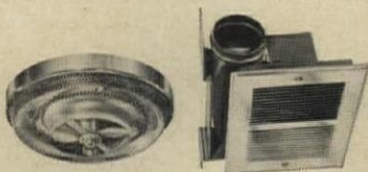
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MOBILE SPECULATOR Herbert Edwards (left), president of Rammco Investment Corp., and his

men first inspect land by helicopter, then fan out over promising tracts by motorcycle.

Land speculation goes scientific in the nation's hottest land market

In southern California three companies have been organized for the sole purpose of packaging land for speculative investors and resale to builders.

Largest of this new breed of speculators is Rammco Investment Corp. of Studio City, which has helped over 1,000 investors put their money into land. Property Research Corp. of Los Angeles, formed in 1959, serves about 200 investors. A third, California Land Sales Inc. specializes in setting up deals for Hollywood's monied set.

Finding the land. The word "speculate" comes from a word meaning "to spy out" and this is exactly what the land packagers do.

Rammco, for instance, keeps a staff of 34 researchers systematically assembling facts affecting land values: hearings of freeway and regional planning commissions, population projections, state and national budgets for new facilities, government and banking forecasts of business and corporate expansion plans.

Rammco regards industrial development as the most important single factor affecting land value, since the buying of a new plant site usually signals rocketing land values.

But Rammco rates the 200 to 300 parcels it scrutinizes each month on 20 other confidential factors. If a tract scores 85% under Rammco's evaluation system, the company is prepared to take title in its own name. "If it scores 90% or higher, we turn it over to a client," says Chairman Arthur W. Carlsberg.

Finding the money. Rammco tries to tie up the land near the end of its dormant phase when the company can claim that its research almost certainly indicates quick profits of 10% to 15% yearly.

So far this semi-scientific research has persuaded entertainment personalities, Eastern investors and even some corporations to put \$20,000 to \$1 million in land.

Builder sales. When the land value rises—investors hold an average of 31 months—Rammco arranges a sale, generally to small homebuilders who do not have the capital to warehouse land.

"By necessity they come to us because we have what's available," says Carlsberg.

The company follows the needs of its builder-clients and tries to place smaller builders near tracts being developed by larger builders. The strategy: to let smaller builders get the most out of advertising dollars "because large builders are already attracting prospective buyers to the area," says Carlsberg.

The typical Rammco sale conveys a 40- to 80-acre parcel to a builder. With each tract, Rammco furnishes the builder a tentative subdivision map already cleared with planning authorities and a market analysis suggesting the house types and price ranges.

Rammco tailors sales terms to give the builder as much leverage with his money as possible. The builder may include pre-paid interest in his down payment, thus getting an immediate income tax deduction. And special release clauses let him substitute trust deeds from housebuyers for cash in taking title to small parts of the tract.

Not all customers of the land packagers are happy at being forced to deal with the speculators. Says one: "It is a service to the unsophisticated. They don't do any service on the land. The builder does the rezoning and the engineering and the solving of the problems." But he concedes: "They make a pile of money."

Pennsy railroad acquires Arvida and Macco Realty

The purchases took the nation's largest railroad (assets \$2½ billion) into land development on a nationwide scale. It got control of 100,000 prime acres of southern California land in the Macco purchases and another 100,000 held by Arvida in Florida.

The Pennsylvania, from its base on Philadelphia's famed Main Line, may wind up paying \$40 million for Macco, which had its greatest year in 1964 with a net of \$2.66 million (\$1.77 a share) on a \$27.9-million gross. The railroad is paying \$14 a share for each of the 1,561,724 Macco Realty shares held by the parent Macco Corp. And Pennsy is asking tenders at the same price for the 170,000 outstanding shares of common stock debentures, which are convertible into 1,099,647 common shares, and warrants exercisable on 30,000 shares.

Macco Realty joint-ventures its building with contractors and sells houses on land it has developed in Los Angeles, Orange and Riverside counties. Its 100,000 acres gave it the largest inventory in southern California. Its holdings include one third interest in the 87,500-acre Rancho California, southeast of Los Angeles.

Chairman John MacLeod, President John Parker and other key Macco officers retain their posts.

Arvida sale. The railroad bought 3,274,428 shares, or 51%, of Arvida Corp. for \$18.3 million from the estate of Arthur Vining Davis, the founder of the Aluminum Company of America who died in 1962. Arvida's acreage includes a mile of Boca Raton oceanfront with 174 apartments in two condominium projects and two housing communities on Bird and Longboat Keys in Sarasota Bay.

In the deal the railroad resold 222,351 of its shares to Stockton, Whatley, Davin & Co., the Jacksonville mortgage banker and realty company which has managed Arvida property since 1961. Brown Whatley, 1953 president of the Mortgage Bankers Assn., retains posts as Arvida president and chairman of Stockton, Whatley.

The Pennsy started moving into land development in June 1964 by buying control of Great Southwest Corp. of Arlington, Tex. The developer of a 5,680-acre industrial park between Dallas and Fort Worth, Great Southwest last spring set up a subsidiary in Los Angeles to deal in all types of land on the West Coast. So far the subsidiary has reported no deals.

SBA will bar small-business loans for land speculation

New rules proposed by the Small Business Administration would stop the nation's 700 small business investment companies (SBICs) from making loans to finance land speculation.

The proposed rules elaborate on a March order (NEWS, Apr.) limiting "real estate investment" to one-third of an SBIC's assets.

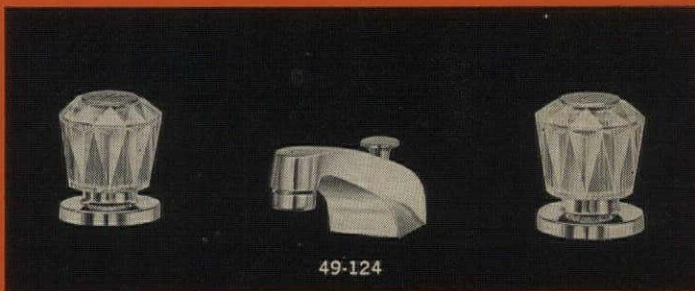
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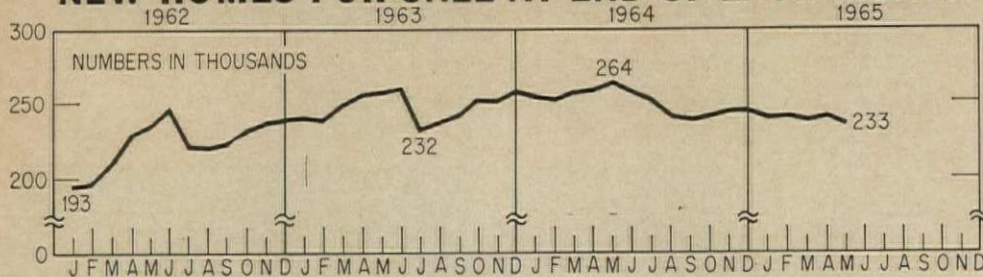
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GRAND OPENING — MAY, 1965

NEW HOMES FOR SALE AT END OF EACH MONTH



Unsold inventory hits two-year low as confident buyers step up purchases

The Census Bureau's count of unsold new houses dropped to 233,000 at the end of May, a full 12% below 1964 levels and the lowest figure since July, 1963 (see graph).

Census' count includes 106,000 completed houses, 105,000 under construction and 22,000 authorized but not yet started.

The unsold inventory equalled five months' supply based on an average of 47,000 units sold monthly in the past year.

HOUSE & HOME's mortgage correspondents report that in most areas June and July sales ate further into that inventory, so that unsold inventory was even less than these record lows at press time.

California concentration. California contains nearly half of all the unsold completed houses in the nation, if an estimate by the usually accurate Bank of America is correct. In early June the Bank estimated there were 50,000 unsold houses in the state. But activity is picking up partially because the buildup of United States military forces in Viet Nam is boosting military spending in the state.

Bullish buyers. May, with 55,000 houses sold, was the biggest sales month for merchant builders since August 1964. Before May, buyers had been slow to act, but the May spurt brought 1965 sales up even with the 1964 pace.

The late-June downturn in the stock market, which came amid predictions of a

slowdown in the nation's 52-month economic boom, has not dampened consumer plans to buy. Only one in 100 consumers mentioned the stock market decline, according to a late-June survey by the University of Michigan's Institute for Social Research. And the Institute's index of consumer sentiment rose to 102.2, its highest level since 1955.

"Optimism has spread during the past year," say Institute researchers. Consumer optimism for families with annual incomes over \$7,500 is rising faster than the overall average.

Rising starts. Private housing starts entered the second half of 1965 trailing the 1964 pace by 45,700 units.

But residential building contracts measured by McGraw-Hill's F. W. Dodge Co. division, scored a 4% gain in June and ended the half-year only 1% behind the 1964 pace. The Dodge index is now at 144 (see graph). As a result, Dodge Economist George W. Christie now predicts total residential contracts will hit \$21,425,000 this year, up 4% from 1964. Private nonfarm starts will reach 1,510,000, says Christie, down 1.3% from the 1,530,400 units of last year.

But the trend is unmistakably up. The U.S. Savings & Loan League reported many housing markets are beginning to look brighter in its mid-year survey.

Census Bureau names 38 cities as 1964's hottest markets

The Census Bureau's final 1964 report finds that 38 urban areas, producing over 1,000 units yearly, gained 25% or more in permits last year. Only 17 cities fell an equal percentage—but this group included some of housing's biggest markets of earlier years. The net result: permits in the nation's 219 metropolitan areas dropped 5.9%—compared to a nationwide decline of only 3%.

Canton, Ohio, led the nation with a 110% gain to 1,811 permits. Three other hot markets trailed closely: Wichita, up 99% to 1,444 permits; Lubbock, Tex., up 98% to 1,413 units, and Ann Arbor, Mich., a 95% gainer to 3,546 units. The other 46 boom markets of 1964:

Gains over 50%: Cedar Rapids, 68%; Charleston, S.C., 65%; Stamford, Conn., 59%; Lancaster, Pa., 56%; Lexington, Ky., 52%; Hamilton-Middletown, Ohio, 51%.

Over 40%—Norwalk, Conn., 48%; Newark, N.J. and Youngstown-Warren, Ohio, 47%; Colorado Springs, 44%; Augusta, Ga. and New Haven, 43%; Boston, 42%.

Over 30%—Des Moines, 39%; Racine, Wis., 38%; Trenton, N.J. and Bridgeport, Conn., 37%; Peoria and Raleigh, N.C., and Jersey City, 35%; Greensboro, 34%; Baton Rouge and El Paso, 33%; Madison, Wis., and Nashville, 31%; and Waterbury, Conn., 30%.

Over 20%—Miami, Fla. and Norfolk-Portsmouth, Va., 29%; Hartford, Kansas City, and Wilkes-Barre, 28%; Milwaukee, 27%; Springfield, Ohio, 26%.

Las Vegas was the largest loser, falling 75% from 11,146 to 2,813 units. Santa Barbara dropped 54% to 2,998 units. Other declines:

Over 40%—Tucson, 47%. Over 30%—New York City and Sacramento, 39%; Salt Lake City, 35%; Seattle, 34%; San Jose, 31%.

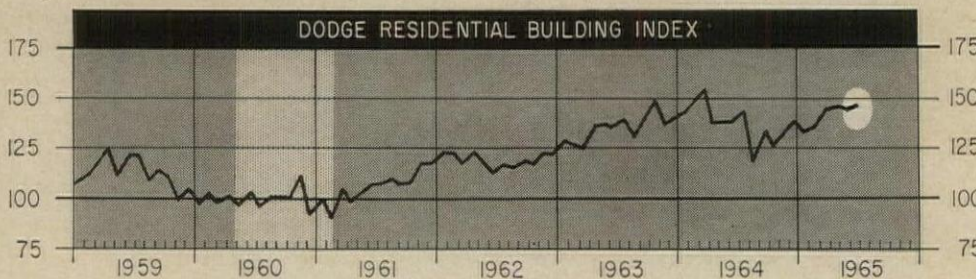
Over 20%—Lowell, Mass., 29%; Amarillo, 28%; Houston and Birmingham, 27%; Phoenix and Albuquerque, 26%; Columbus, Ohio, and Macon, Ga., 25%.

New household formations show a surprising upturn

The surge of new households which builders have been awaiting may have arrived.

The Census Bureau has just reported that 1,253,000 new households were formed in the year ending March 1965—up sharply from the 900,000 yearly rate which was held since 1960.

However, nearly two-thirds of the new figure represented households headed by "primary individuals"—persons living alone or with unrelated persons. It is the biggest rise in this category in a decade and helps explain why apartment vacancies are holding steady while apartment building continues strong. There are now 9.5 million households in the "primary" category, 6.3 million headed by females and 3.2 million headed by men.



Based on contract value. 1957-59 100 (seasonally adjusted). Lighter shaded areas represent general business recessions.

F. W. Dodge Co., a division of McGraw-Hill Inc.

KEY HOUSING INDICATORS

		DOLLARS (millions)	% change from '64			UNITS (000)	% change from '64
Dodge resid. contract	June	\$2,080	+ 4	Starts, priv. nonfarm	June	149.3	- 5
	6 mon.	10,715	- 1		6 mon.	733.8	- 6
ENR adv. resid. plans	July	511	-31	Starts, ann. rate	June	1,504	- 6
	7 mon.	5,220	+ 4	Permits, ann. rate	June	1,241	- 5
ENR adv. apart. plans	July	302	-30	New houses sold	May	55	+ 6
	7 mon.	2,740	- 1	5 mon.	238	NC	
ENR adv. house plans	July	83	-35	New houses for sale	May	233	-12
	7 mon.	1,086	+ 1				

Sources: F. W. Dodge Co., division of McGraw-Hill; Engineering News-Record; Census Bureau; HHFA.



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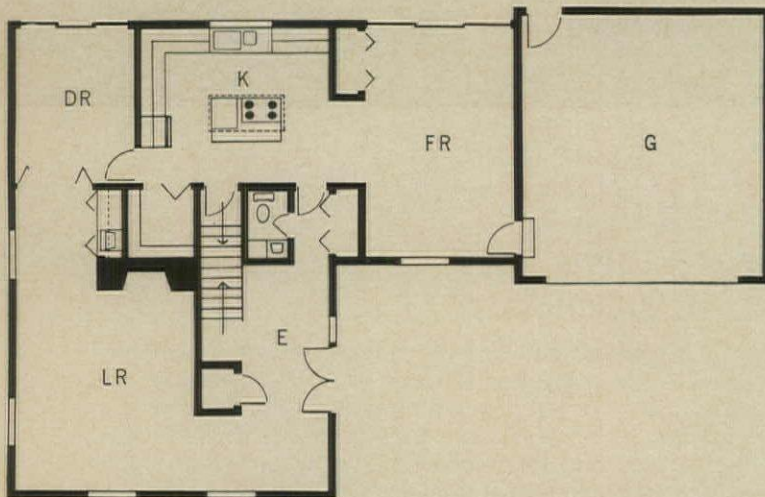
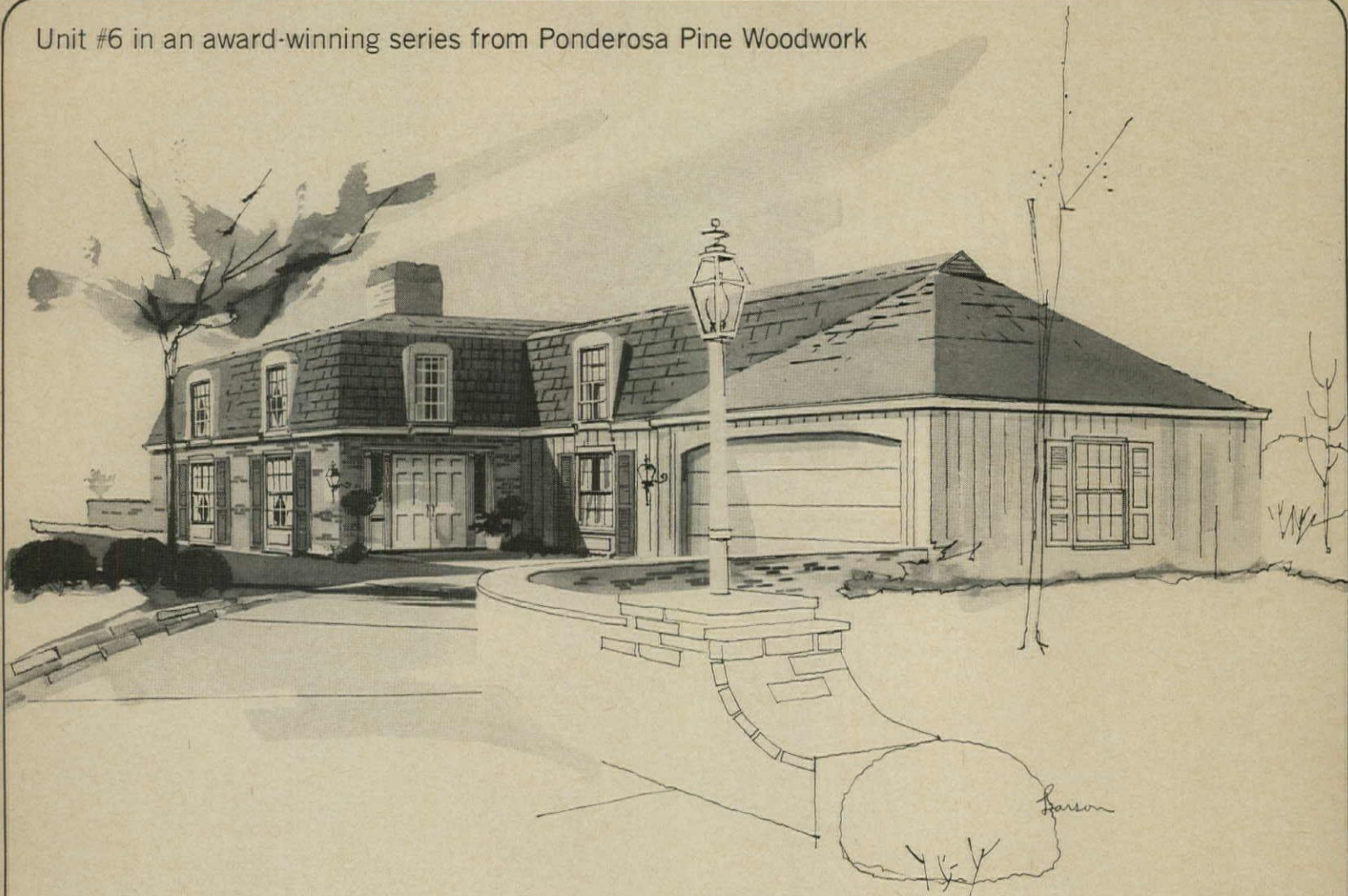


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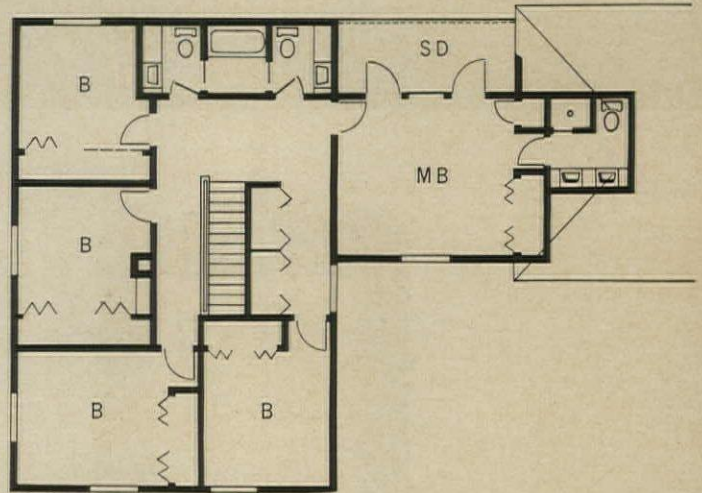
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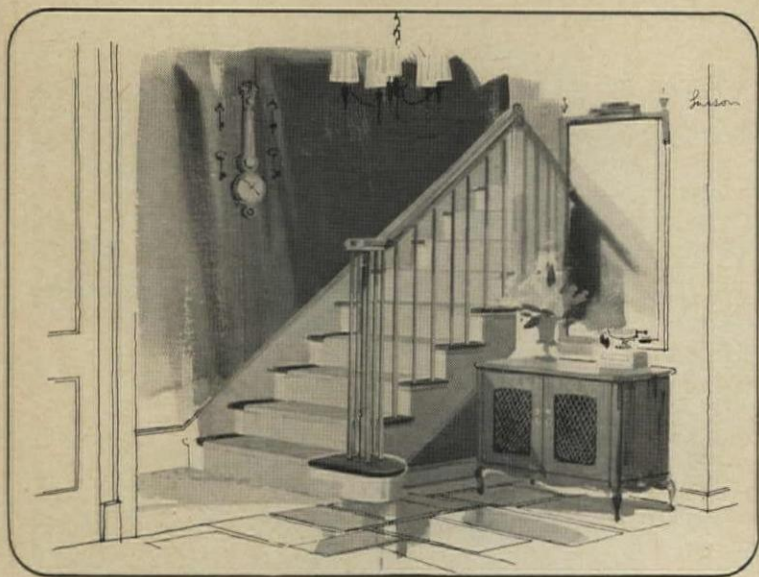
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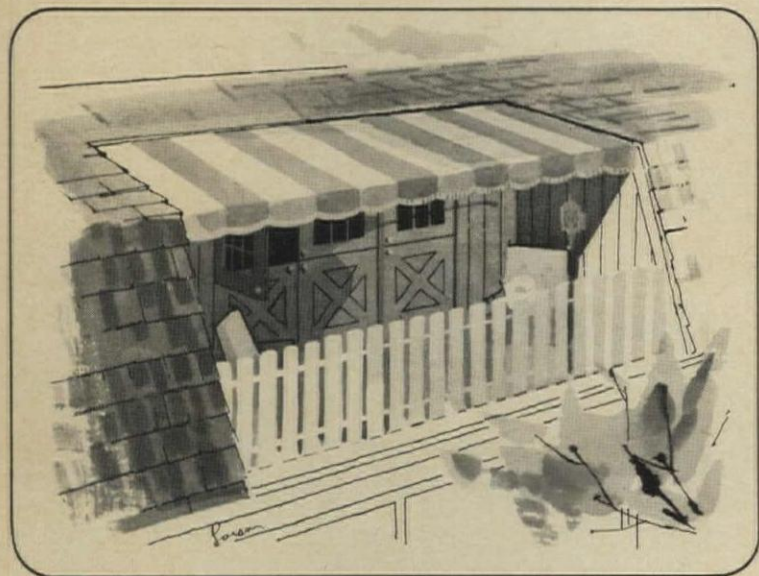
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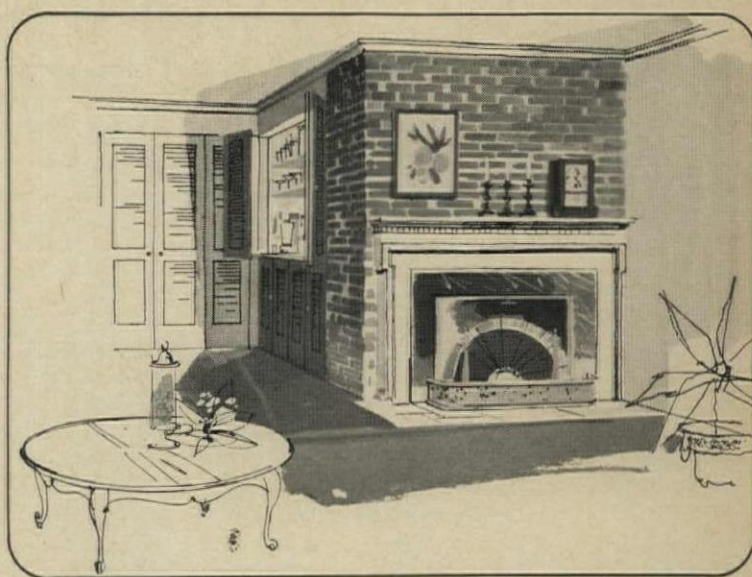
Idea No. 1—Entry Hall: beautifully worked standard Ponderosa Pine mouldings and panel doors give this elegant stairway and hall distinctive sell-appeal . . . *practically*.

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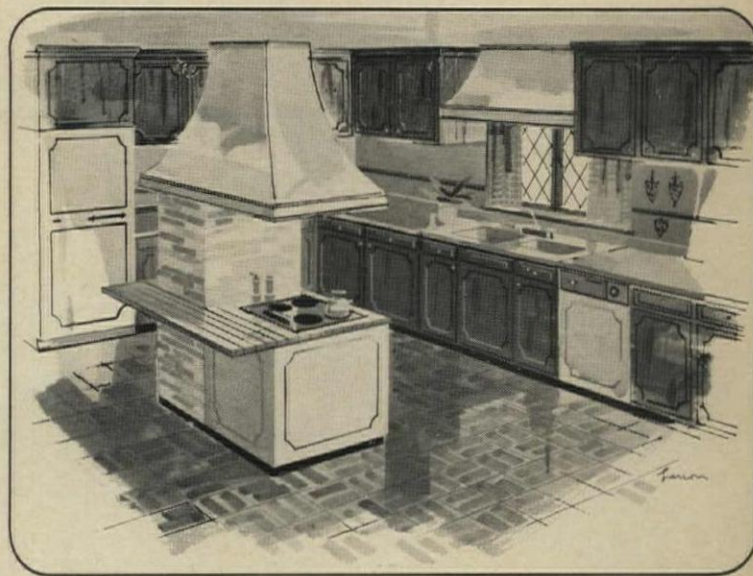
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What the 1965 buyer is buying: more equipment and more space

Demand for the minimum house may be fading faster than the industry has realized.

That's what NAHB found when it asked 600 members of its Builders' Economic Council for detailed descriptions of houses bought by their 1965 customers. Here are the key findings based on reports by the 400 builders who replied:

30% of the houses are air conditioned. More than 75% of new Southern houses have air conditioning, mostly by central units. The trend is also sweeping northward: cooling units are included in 18% of houses in the North Central states and 17% of Northeastern houses. And 75% of all new apartments are air conditioned. By contrast, the 1960 Census found that less than 9% of all rental units then occupied were air conditioned.

61% of the houses have two or more baths. And only 16% have one bath—down from 33% in the last comparable survey, made in 1961 by F. W. Dodge Co.

84% of the houses have a garage or carport. Regionally, figures range from 75% in the South to 96% in the West.

70% of the houses have family rooms. The high (81%) is in the West, the low (57%) in the Northeast. And in five of every eight houses the family room is on the first floor.

80% of the houses have built-in ovens, ranges, dishwashers and garbage disposers. And more than half the builders include these appliances in the house price. Washers, dryers and refrigerators are generally offered as options.

95% of the units have kitchens with wooden cabinets. Only 2% use composition board and 3% use laminated plastic.

38% of the new homes have fireplaces. The high (54%) is in the West, the low (28%) in the South. And the higher the house prices, the more fireplaces.

77% of the new homes use public sewers. Only 7% have individual septic tanks and less than 1% have cesspools.

The average lot size has increased from 9,500 sq. ft. in 1964 to 9,700 in 1965. The most frequently used lot sizes are from 8,000 to 9,999 sq. ft. and from 10,000 to 14,999.

The median sales price of new homes is \$19,225, up 1.8% from 1964.

Two other significant findings: 1) one-story plans, used in 63% of the houses, are still most popular; 2) brick, used on 28% of the houses, is the most popular exterior material. But builders now combine two or more materials on 30% of the houses. Only 15% of the houses have all-wood exteriors—down from 43% in 1940.



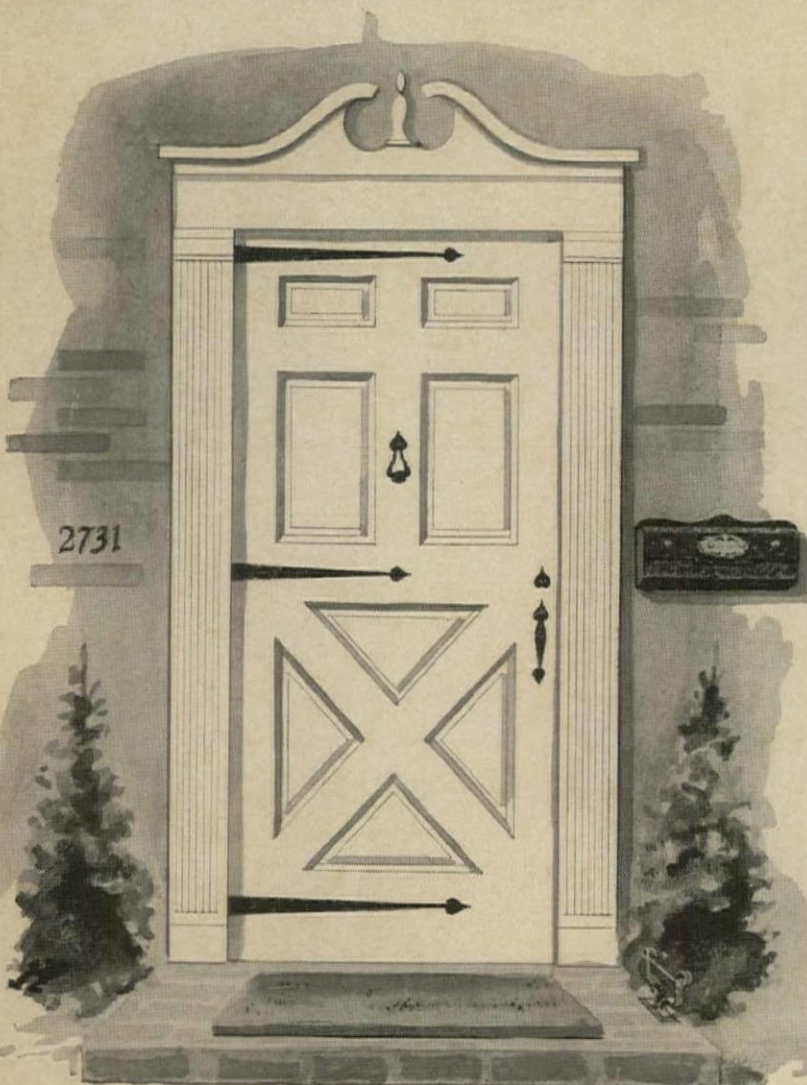
MASS CLOSING



MOBILE CLOSING OFFICE

Two ways to speed closings

In New York City the Dime Savings Bank of Brooklyn staged a two-hour mass closing for 49 buyers of condominiums built by Alexander and Douglas Paulsen. The concentrated effort saved the builder 48 man-hours. And in Dallas, Hexter Title Co. is using a furnished van, dubbed a "Cruiser Completer," to bring sales closings to homebuyers. The air-conditioned mobile office cost \$10,500, includes a radio telephone and table for eight.



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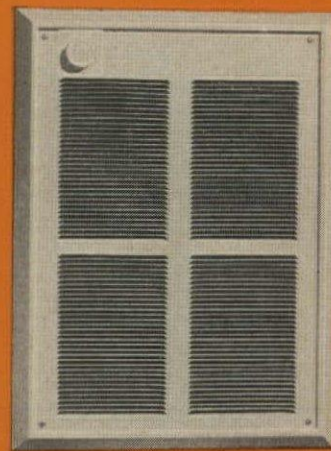
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Legislatures: housing antibias laws have their best year since 1961

After exhaustive legislative hearings, Ohio has just become the fourth state to outlaw race bias in private housing this year. In all, 16 states have adopted such statutes.

Ohio thus joined Rhode Island and Indiana in banning race bias in private-home selling and renting (NEWS, Apr. & May). A fourth state, Maine, adopted a law barring discrimination only in apartments, new or existing.

This is the biggest antibias boom since 1961, when five states passed antibias laws. Until this year, only three more were added to the list,—and California's law was repudiated by voters last November.

Ohio and Maine avoided deadlocks by exempting owner-occupied one- and two-family homes, although they are a major part of Maine's rented housing. Half of Ohio's existing 3 million homes—and all new construction—will come under the ban.

Violators of Ohio's law, to be policed by the State Civil Rights Commission, will face court injunctions and criminal contempt of court citations. Builders, realty agents and property owners are forbidden to make discriminatory refusals to sell or

rent, sign restrictive covenants, use block-busting tactics, publish discriminatory advertising or misrepresent the fact that houses are open for inspection.

State legislatures tightened housing rules in other fields.

Texas made dual-contracting a felony on a second offense. The new maximum penalty for using fraudulent sales agreements with higher than actual prices to obtain illegal loans: up to five years and a \$5,000 fine.

California eliminated cumbersome dual jurisdiction of condominium sales by giving all power to its Division of Real Estate. Previously, condominium salesmen had also to qualify as securities salesmen with the Securities Commission. New York is now the only major state retaining this type of double jurisdiction. California also began preparing for the 1970s—when eight cities the size of San Francisco will be built—by creating a Department of Housing and Community Development to coordinate planning.

New York ordered a November vote on a \$200-million increase for public housing, more than the \$165-million boost rejected in 1964. New York also legalized rent strikes if tenants can prove in court that landlords have neglected needed repairs.

States will be pressured to adopt flexible zoning

The push will begin this fall as the Urban Land Institute and National Association of Home Builders warm up for the 1966 and 1967 sessions of state legislatures. They will stage three state conferences (locations are undecided) with planners and legislators to promote a new model law permitting flexible zoning. NAHB and ULI have been trying to stop suburban sprawl for years. But only New York State and a few California towns have adopted flexible zoning laws permitting cluster plans.

After two years of study NAHB and ULI have drafted model state and local statutes for flexible zoning which builders can ask local officials to adopt. The model codes are backed by a legal casebook* supporting flexible zoning.

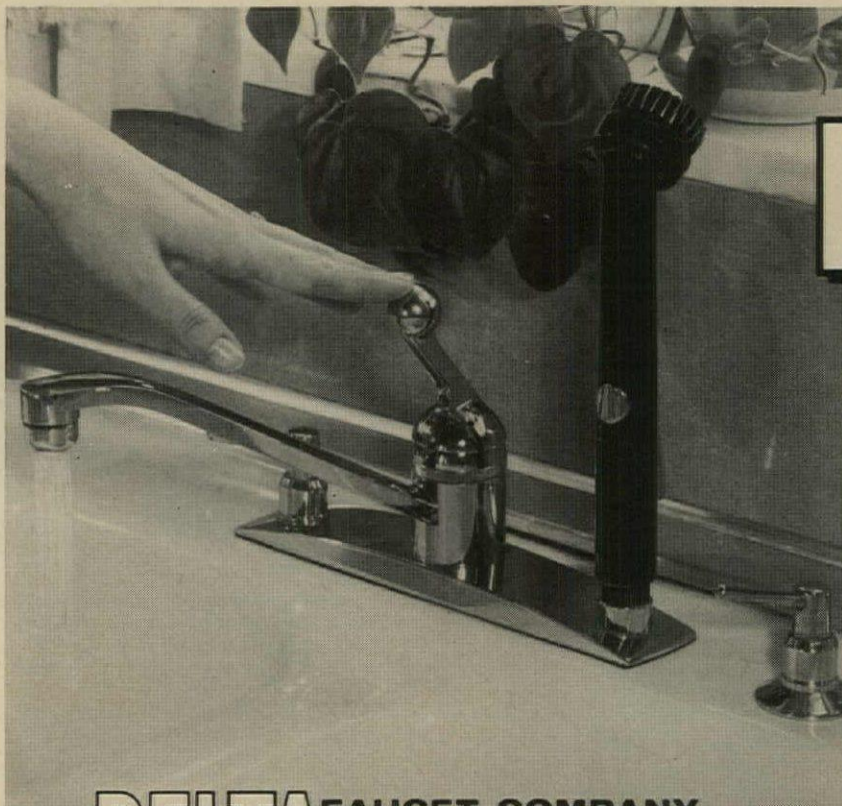
Connecticut and Pennsylvania officials already are interested in the models.

The 96-page legal report suggests that restrictive lot-by-lot zoning be replaced when feasible by flexible zoning to permit better land use through planned unit development of cluster plans.

Under model laws, a builder would have to convince officials to waive local restrictions by showing that his plan, taken as a whole, is in the public interest.

*ULI Technical Bulletin 52, *Legal Aspects of Planned Unit Development*, ULI, 1200 18th St. N.W., Washington, D.C., 20036, \$6.

*Others: Alaska, Calif., Colo., Conn., Ind., Mass., Me., Mich., Minn., N.H., N.J., N.Y., Ore., Pa. and R.I.



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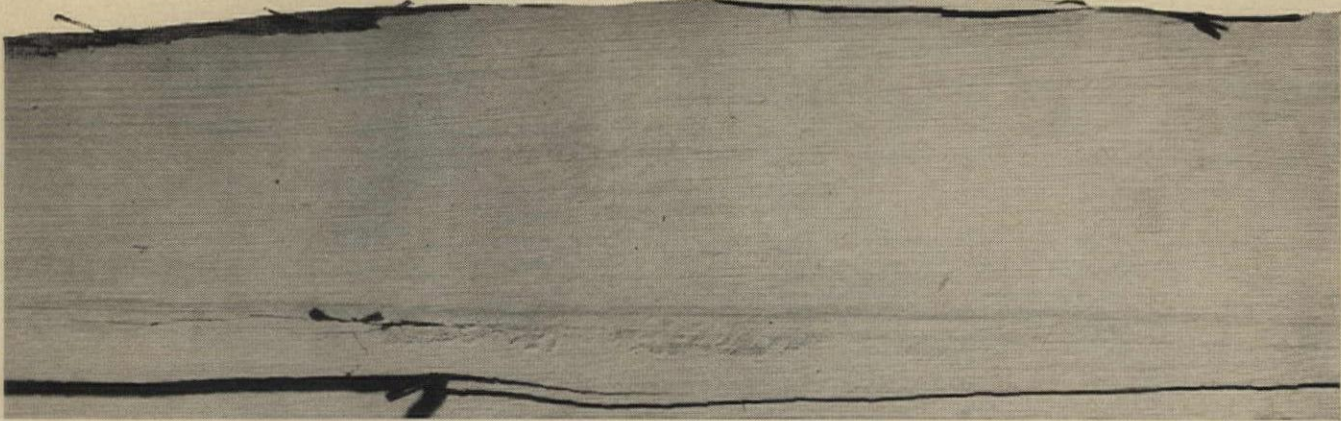
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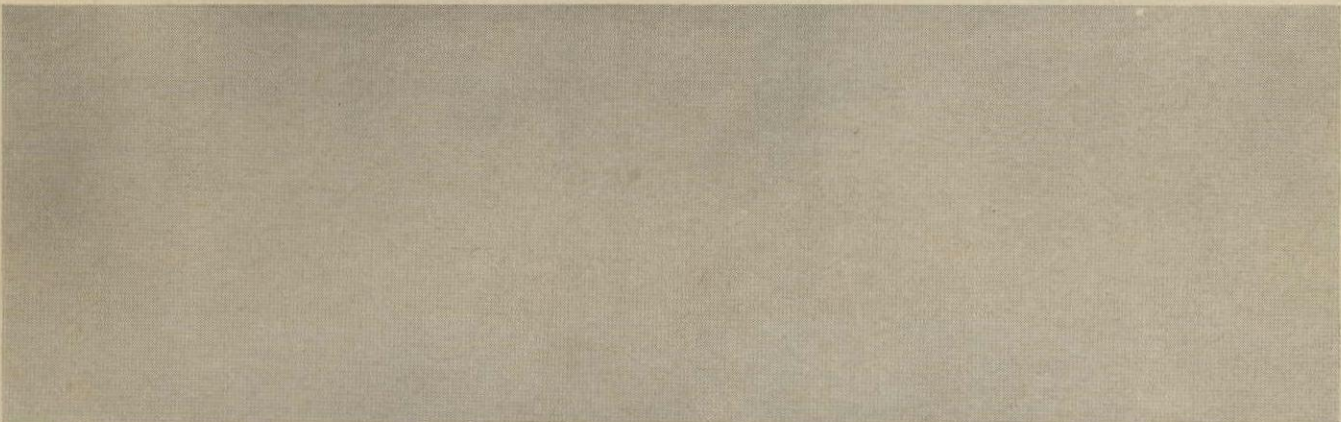
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Prefabber offers its builder-dealers the best deal yet on financing

Hilco Homes of Philadelphia is providing a one-stop loan service which, it claims, will revolutionize the prefab industry.

The plan lets Hilco builder-dealers process and close these two separate loans at once:

1. *A no-interest building loan.* Hilco will advance a loan for the construction cost of a house if the builder or buyer owns the lot and if the ultimate buyer's credit has been approved.

2. *A 25-year conventional mortgage.* The loan is fully amortizing for the ultimate buyer, includes closing costs and covers the full house price if the buyer already owns a lot.

Atlas Credit Corp., Philadelphia credit company which bought Hilco last spring (NEWS, June), began the new Hilco plan. Its aim, says Atlas Executive Vice President Norman Wolgin, is "to provide what nobody in the industry previously had—a complete, vertically integrated financing and service organization."

Break with tradition. The Hilco plan runs counter to the practices of most home manufacturers, who offer standby financing aid to builder-dealers only when they cannot get mortgage money locally.

For instance, National Homes Acceptance Corp., started in the tight-money days following World War II, acts as mortgage banker on a standby basis for only FHA and VA loans. And Inland Homes processes FHA loans and makes construction loans through Inland Mortgage Corp.

A few shell-house builders have financed their own houses but with consumer-type, add-on loans or discounted interest loans. Often a final balloon payment has been left at the loan's termination.

Aid from Atlas. Hilco provides its new one-stop service by calling on two other Atlas subsidiaries: Colonial Mortgage Service Co., a mortgage banker with over \$400 million in its servicing portfolio, and West Jersey Title and Guaranty Co. Atlas has just bought State Mortgage Co. of San Diego, which has a \$262 million portfolio.

"We place the permanent mortgage at simple interest," says Wolgin. "These loans have a ready market through Colonial Mortgage's many offices in Hilco's marketing area. West Jersey Title arranges title search and insurance for building loan and mortgage."

Hilco, which sold 560 houses last year, reports that the new plan has already doubled sales to a 100-a-month rate.

"After a few months of field testing, we probably will extend the same financing and service program to small-subdivision and custom-home builders in other test markets," says Wolgin. Most of these builders would be located outside Hilco's present 14-state territory (along the East Coast from Maine to North Carolina).

In line with this expansion, Hilco aims at doubling its present builder-dealer force of 50. The company is also organizing a new division to sell wall panels, roof trusses and pre-hung doors and windows.

Mortgage money tightening without major price changes

So said Robert M. Morgan, president of the Boston Five Cents Savings Bank and chairman of the Massachusetts Purchasing Group of 190 mutuals.

"There has been a little tightening," he sums up. "Some investors are inclined not only to forego buying mortgages in the secondary market, but also to sell some paper. The situation has not yet translated itself into any definite change in mortgage prices."

Tight money usually means higher discount rates charged to builders.

The tightest cities to report among HOUSE & HOME's 18 key mortgage centers are Washington, where discounts jumped by 1% to 1-2%; Houston, holding strong at 2% after a rise last month; Dallas, up ½% for the second month, to 1½-2½%; and Atlanta, up ½% to 1½-2½%.

Morgan says the mortgage market seems weakest where savings and loan associations are dominant.

California and Chicago, for example, face tighter money as their s&ls slow down deposits and commercial banks continue to invest less of their deposit increase in mortgages.

Vice President Everett Mattson of T. J. Bettes Co. in Houston noted that Federal National Mortgage Assn. has increased purchases of low-grade \$8,000 to \$12,000 mortgages. (Purchases were valued at \$28.5 million in February but were up to \$36 million in July.) "It indicates tighter money," Mattson said, "no matter what the story."

SECONDARY MARKET FHA & VA 5¼%

Money center	Sec. 203b & VA houses		Sec. 207 Apts.	
	Yield to Investor	Trend	Yield to Investor	Trend
Boston	5.03-5.17	Steady	a	a
Chicago	5.06-5.12	Steady	5.12-5.16	Static
New York	5.06-5.12	Firmer	5.12	Static
San Fran.	5.06-5.12 ^b	Steady	5.14 ^b	Weak

a—No activity. b—limited activity.

CONVENTIONAL LOANS RESALE MARKET

Packages of conventional loans, privately insured by MGIC, available for purchase by S&Ls. Loans are in metropolitan areas, originated by mortgage bankers and commercial bankers and listed with Mortgage Guaranty Insurance Co., 600 Marine Plaza, Milwaukee. Address inquiries c/o Jack Dittmann. Typical offerings reported the week ending Aug. 6:

Loans available (millions)	Location	Net. % Yield to investors ^a
\$10.0	California	5.75
2.5	Georgia	5.50
10.0	Hawaii	5.75
5.0	Michigan	5.50
2.0	N. Carolina	5.50
1.0	S. Carolina	5.50
1.0	Wisconsin	5.50

^a—Net after insurance fees and servicing.

NEW YORK WHOLESALE MARKET

FHA, VA 5¼s

Immediates: 96½-97¼ Futures: 96½-97¼

FHA, VA 5¼ spot loans (On homes of varying age and condition)

Immediates: 96½-97¼

Note: Prices are net based on a servicing fee of ½%. Majority of loans being sold today include concessions made by servicing agencies which would be reflected in higher prices. Prices cover out-of-state loans, reported the week ending Aug. 13 by Thomas P. Coogan, president, Housing Securities Inc., New York City.

HOME BUILDER'S MORTGAGE MARKET QUOTATIONS

Reported to HOUSE & HOME in week ending August 13.

City	FHA 5¼s (Sec. 203b)			FHA 207 Apts. Firm Commitment	Conventional Loan Rates			Construction Loan Rates
	FNMA Scdry. Mkt. Y	Min. Down ^a 30-year Immed. ^w	Trend		Comm. banks, Ins. Cos. 75%	Savings banks, S&Ls 80%	Savings banks, S&Ls Over 80%	
Atlanta	2¾	1½-2½	Up ½%	a	5¼-5¾	5¾-6	6-6¾	6+1
Boston	1¾	par+1-par	Steady	par+1-par ^b	5¼-5½	5¼-5½	5½-6	5¼-6
Chicago	2¾	½-1½	Steady	a	5¼-5½	5½	5¾-6	5½-6+1-1½
Cleveland	2¾	1-1½	Steady	a	5½-5¾	5½-5¾	6-6½	5½-5¾+1
Dallas	2¾	1½-2½	Up ½%	par ^a	5½-5¾	5¾-6	6-6¾	6+1
Denver	2¾	½-2	Steady	a	5¼-5½	5¾	6-6½	6+1-2
Detroit	2¾	par-1	Steady	1-1½	5¼-5½	5½-6	5¾-6	6+½
Honolulu	2¾	1½-2½	Steady	a	5¾-6½	6¼-7	6¾-7¼	6½-7+1-3
Houston	2¾	2	Steady	a	5½-6	6	6¼-6½	6+1
Los Angeles	2¾	1	Steady	par+1-par+½	5½-6	5¾-6.6	6¼-6¾	6-6.6+1-2
Miami	2¾	1¾-2	Steady	½-1	5½-6	5¾	6	6+½-1
Newark	1¾	1	Steady	par-½	5½	5¾	5¾-6	6+1
New York	1¾	par	Steady	par+1-par	5½	5¾	6	5¾-6+½-1
Okla. City	2¾	1-2	Steady	a	5½-5¾	5½-5¾	6-6¼	6-6½+1-1½
Philadelphia	1¾	par	Steady	par-1	5½-5¾	5¾-6	6	5-6+1
San Fran.	2¾	1-1½	Steady	par-1	5½-5¾	5¾-6	6-6¾	6¼-6½
St. Louis	2¾	1-2½	Steady	par-1	5½-6	5¾-6	6-6¾	5½-6½+1-2
Wash., D.C.	2¾	1-2	Up 1%	par	5½	5¾	6 ^b	5½-5¾+½-1

^a Immediate covers loans for delivery up to three months, future covers loans for delivery in three to twelve months.

^b Quotations refer to prices in metropolitan areas, discounts may run slightly higher in surrounding towns or rural zones. ^c Quotations refer to houses of typical average local quality with respect to design, location and construction.

^d 3% down on first \$15,000; 10% of next \$5,000; 25% of balance.

Footnotes: a—no activity. b—limited activity. w—for comparable VA loans also x—FNMA pays ½ point more for loans with 10%. y—discounts quoted are net after seller pays ½% marketing fee and ¼% 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 \$84. z—applies to 66% loans.

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

Chicago, Harry N. Gottlieb, vice pres., Draper & Kramer Inc.; Cleveland, David F. O'Neill, vice pres., Jay F. Zook Inc.; Dallas, M. J. Greene, pres., Southern Trust & Mortgage Co.; Denver, Clair A. Bacon, exec. vice pres., Mortgage Investments Co.; Detroit, Sherwin Vine, vice pres., Citizens Mortgage Co.; Honolulu, William J. Hucksins, asst. vice pres., Bank of Hawaii; Houston, Everett Mattson, vice pres., T. J. Bettes Co.; Los Angeles, Christian M. Gebhardt, vice pres., Colwell Co.; Miami, Lon Worth Crow Jr., pres., Lon Worth Crow Co.; Newark, William B. 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, Frank W. Cortright, sr. vice pres., Bankers Mortgage Co. of California and Charles E. McCarthy, vice pres., Bank of America; Washington, James C. Latta, sr. v.p., Frederick W. Berens Inc.



When it comes to harmonizing, our new Golden Olive tile does it beautifully standing up or lying down.

We let ourselves get carried away.

We thought our Golden Olive 6452 wall tile was such a rousing good idea that we made a companion floor for it.

It's called Mosaic 3304-VCDA Olive ceramic mosaic tile. Everything our wall is, our new floor is.

Stack one (or both) up against our 6447 Gold Dust wall tile. Or our countertop of Faientex 1391 Old Gold. Or accessories that run hot or cold.

You'll come off in perfect harmony every time. We guarantee it. Because totally color-compatible tile is the only kind Mosaic makes.

No one Mosaic color ever overpowers any other Mosaic color. Not even if you, too, get carried away with something like a Golden Olive.

Talk to your Mosaic Representative, Service Center or Tile Contractor about that. And about price ranges, alternate colors, samples and availability while you're at it.

Check through your Yellow Pages under "Tile Contractors-Ceramic". Or inquiries may be sent to The Mosaic Tile Company, 55 Public Square, Cleveland, Ohio 44113. For comparable colors in the western states, write: 909 Railroad St., Corona, Calif. 91720.

MOSAIC

"Mosaic" is the trademark of The Mosaic Tile Company

Plywood maker emerges as builder of 1,500 houses yearly

Without fanfare, U.S. Plywood Corp. has become a homebuilder whose production may exceed 1,500 houses, townhouses and low-rise apartments this year. The company's investment in housing will run between \$6 and \$8 million.

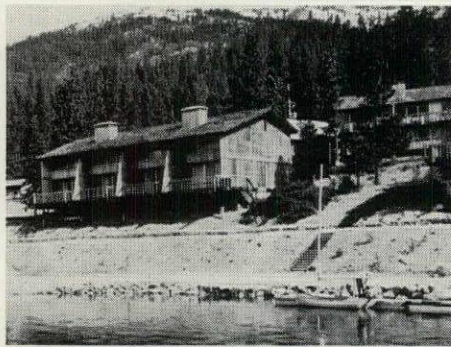
Long known as a leading producer and wholesaler of plywood and allied products, U.S. Plywood began building three years ago. Its Weldwood Structures Division, originally a components maker for commercial buildings, built 16 condominium units in Peacock Gap in Marin County north of San Francisco as showcases for U.S. Plywood products.

The Peacock Gap project showed USP that with proper controls, building can be profitable. Since then the company has erected 925 other houses and condominium units and in the process has picked up experience that has helped the design of new products.

Hawaiian venture. USP's jump into building led to the company's buying Lewers & Cooke, 118-year-old building supply and land development company in Honolulu last spring. The price: \$10 million in USP stock.

As a USP subsidiary, Lewers & Cooke will keep right on building and this year expects to complete 400 houses, mainly in Pacific Palisades overlooking Pearl Harbor.

Lewers & Cooke joint-ventures its



U.S. PLYWOOD condominiums at Lake Tahoe.

houses with island builders, the same method USP has used on the mainland.

Coming ventures. USP's mainland operations are run from New York City headquarters by Financial Vice President John P. Schlick. Weldwood Structures Head Warner Odenthal analyzes proposed projects which, till now, have been centered in California and Nevada.

But this year USP is ranging farther afield, and expects to co-venture projects with 150 units in Houston, 100 in Chicago, 200 units outside Cleveland and 25 houses in Tampa. In California, in partnership with Hy Weisel of Proud Homes, USP will build 210 units in Santa Clara, 100 units at Hiller Highlands in Oakland, 200 houses in Beverly Hills and 60 units in West Covina.

Finally, USP expects to continue building at two projects at Lake Tahoe on the California-Nevada border—Crystal Shores, with Developer Sherill Broudy and Assoc. and Tahoe Tavern.

USP is flexible in its financial arrangements with builders, but generally likes to have a 50-50 share in the financing. In rare cases—Hiller Highlands is one—USP accepts land as the developer's contribution and puts up working capital—about \$1 million in Hiller Highlands to grade and develop some choice hillside sites. "We want our partners to have some cash," says Schlick.

Most projects so far have used either off-site or on-site prefabrication, plus ample quantities of USP products—although their use is not required. One new product that has come out of USP's building operation is a "grid core" panel, 4' wide and any length desired, used as a ceiling-floor system in apartments to deaden noise.

Unlike some other materials producers which have invested in housing, USP doesn't try to retain ownership of its buildings for the depreciation cash flow. It has kept only one project, a 235-unit apartment in Santa Clara, and will probably sell that.

"We have made some mistakes, and we have found that projects tend to be a little less profitable and take a little longer than projected," says Schlick. "But we haven't lost any money."

HOUSING'S STOCK PRICES

COMPANY	Aug. 9 Bid/Close	Chng. From Prev. Mo.	COMPANY	Aug. 9 Bid/Close	Chng. From Prev. Mo.	COMPANY	Aug. 9 Bid/Close	Chng. From Prev. Mo.
BUILDING								
Adler-Built Inc.	20¢	...	First Fin. West.	6 3/4	- 1/2	Atlantic Imp.	18 3/4	+ 1 1/2
Capital Bld. Ind.	75¢	- 7¢	First Lincoln Fin.	14 1/4	- 2 3/8	Canaveral Intl.	1 5/8	...
Cons Bldg. (Can.)	4 1/8	- 3/8	First Surety	4 1/2	...	Christiana O.	4 1/4	- 3/8
Dev. Corp. Amer.	3 3/4	- 3/4	First West Fin.	8 1/8	+ 1/4	Coral Ridge Prop.	2 7/8	- 3/4
Dover Const.	3 1/8	...	Gibraltar Fin.	20 3/8	+ 1	Cousins Props.	11 1/4	- 1/2
Edwards Eng.	5 1/4	- 1/2	Great West. Fin.	11 1/4	+ 1 5/8	Crawford	2 7/8	...
Edwards Inds.	1	...	Hawthorne Fin.	7 1/4	- 1/8	Deltana Corp.	12	+ 1/8
Eichler Homes ^b	3 3/8	+ 1/4	Lytton Fin.	12 5/8	+ 1 1/8	Disc Inc.	3 ^d	- 3/4
First Nat. Rlty.	1 5/8	- 1/8	Midwestern Fin.	3 3/8	- 1/8	Fla. Palm-Aire	2	+ 1/8
Frouge	4	- 3/8	San Diego Imp.	7 1/8	+ 1/8	Forest City Ent.	4 3/4	- 1/8
General Bldrs.	17 1/8 ^d	...	Trans-Cst. Inv.	5 3/4	- 1/4	Garden Land	4 5/8	+ 1/4
Hawaiian Pac.	7 1/4	- 1/2	Trans Wrld. Fin.	9 3/4	+ 1/8	Gen. Devel ^b	4 1/2	- 1/8
Kavanagh-Smith	3	+ 3/8	Union Fin.	6 3/8	- 1/8	Gulf American ^b	7 1/4	...
Kaufman & Bd.	14	+ 1 5/8	United Fin. Cal.	9 5/8	+ 1/4	Holly Corp.	3/4	- 1/8
Levitt ^b	8 1/2	+ 5/8	Wesco Fin.	18 1/4	+ 1 7/8	Horizon Land	1 1/2 ^d	- 1/8
Lou Lesser Ent.	4 3/8	- 3/8				Laguna Nig. A.	9 1/2 ^d	+ 1/8
Lusk	1	...				Laguna Nig. B.	4	...
Pres. Real. A.	9 1/4 ^d	...	MORTGAGE BANKING			Lake Arrowhead	7 3/8	+ 1/8
Sproul Homes	4	- 1/4	Advance	7 3/4	...	Macco Rlty.	10 3/4	+ 1 3/4
U.S. Home & Dev.	1 1/8	- 1/8	Amer. Mort. Ins.	19 3/8	+ 3/8	Major Rlty.	35¢	...
Del. E. Webb ^b	4 1/4	- 1 3/8	Assoc. Mtg.	8 1/2 ^d	+ 3/8	McCulloch Oil ^b	8 1/8	- 1/4
			Atlas Cred.	7 5/8	a	So. Rlty. & Util.	1 1/4 ^d	...
			Charter	1 3/4	+ 1/4	Sunset Int. Pet.	6	- 3/8
			Colwell	13	- 1/4			
PREFABRICATION			Cont. Mtg. Inv.	25 3/8	- 3/8			
Admiral Homes	25 5/8	+ 3/8	Cont. Mtg. Ins.	8 1/2	- 1/4			
Albee Homes	23 3/8 ^d	...	FNMA	87 3/4	+ 2 3/4			
Continental Homes.	k	...	First Mtg. Inv.	17	+ 3/4			
Gt. Lakes Homes.	2 1/8	...	Kissell Mtg.	5 ^d	- 1/2			
Hilco Homes	1 3/4 ^m	+ 1/4	Lomas & Net. Fin.	3 1/2	- 1/2			
Inland Homes ^b	7 1/2	...	MGIC	24 3/8	...			
Madway Mainline	10 1/2	+ 1 1/2	Mortg. Assoc.	5 5/8	- 1			
Modern Homes	2 3/8	- 5/8	Southeast Mtg. Inv.	10 1/2	- 1/8			
Natl. Homes A.	3 1/8	- 1/8	United Imp. & Inv.	4 5/8	+ 1/8			
Richmond Homes	3 1/4	...						
Scholz Homes	1 7/8	...	LAND DEVELOPMENT					
Seaboard Homes	1/8	...	All-State Prop.	3 1/8	- 1/8			
Steel Crest Homes.	6	- 1 1/2	American Land	1 3/8	- 1/8			
Swift Homes	2 1/2	+ 1/8	Am. Rlty. & Pet.	2 5/8	- 3/8			
Western Shell	1/4	- 5¢	Arvida	6 1/4	+ 3/4			
Jim Walter ^c	20 5/8	...						
Wright Homes	80¢	+ 30¢						
S&Ls								
American Fin.	17	+ 3 1/4						
Brentwood ^b	6 1/2	- 3/8						
Calif. Fin.	4 1/2	- 1/8						
Columbia	6	+ 1 1/2						
Empire Fin.	11	- 1 1/2						
Equitable S&L	19	+ 7/8						
Far West Fin.	12	- 1/4						
Fin. Fed.	24 3/4	+ 1						
First Char. Fin.	22	+ 3						

SHORT-TERM BUSINESS LOAN RATES

LOAN SIZE (\$000)	New York City	7 other Northern & Eastern cities	11 Southern & Western cities
\$1-10	5.62 (-.02)	5.88 (+.05)	6.00 (+.07)
\$10-100	5.39 (+.03)	5.58 (+.03)	5.71 (+.10)
\$100-200	5.07 (+.02)	5.32 (+.05)	5.42 (+.08)
\$200 & over	4.62 (-.01)	4.85 (-.04)	5.06 (-.01)

Source: Federal Reserve Board, June, 1965.

Appliance maker takes over stalled renewal project

General Electric Co. has taken over the financially distressed Red Rock Hill project in San Francisco's Diamond Heights renewal area. GE has resumed work on 74 apartments in the 990-unit project.

GE originally held a 10% interest with Redevelopers Irvin J. Kahn and Norman Smith. But their project stalled amid a spate of name calling between the developers and Architects James Levorsen and B. Clyde Cohen over costs (News, May).

GE is putting up over \$1 million to complete Red Rock Hill as a "showcase of electrical living," and has hired Cohen and Levorsen to do the job.

Savings association stocks gain 4% in big turnaround

Savings and loan shares have just staged their first advance since November. Their rally helped lift HOUSE & HOME's index of 82 housing stocks by 1%. The averages:

	June 7	July 12	Aug. 9
Building	5.02	4.55	4.54
Mortgage banking	12.15	11.81	11.76
Prefabrication	5.60	5.44	5.35
S&Ls	11.51	10.96	11.36
Land development	5.86	5.54	5.59
AVERAGE	7.93	7.54	7.65

NEWS continued on p. 24



and real cool too

entire home decor with Fiesta stylings, or use them as focal points in key selling areas.

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Special introductory offer

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Here's an opportunity to add the appeal of electronic dimming to your model homes at no extra cost. Your choice of the M-6502 or M-6503 dimmer (for three-way switches). Both feature Moe Light's new

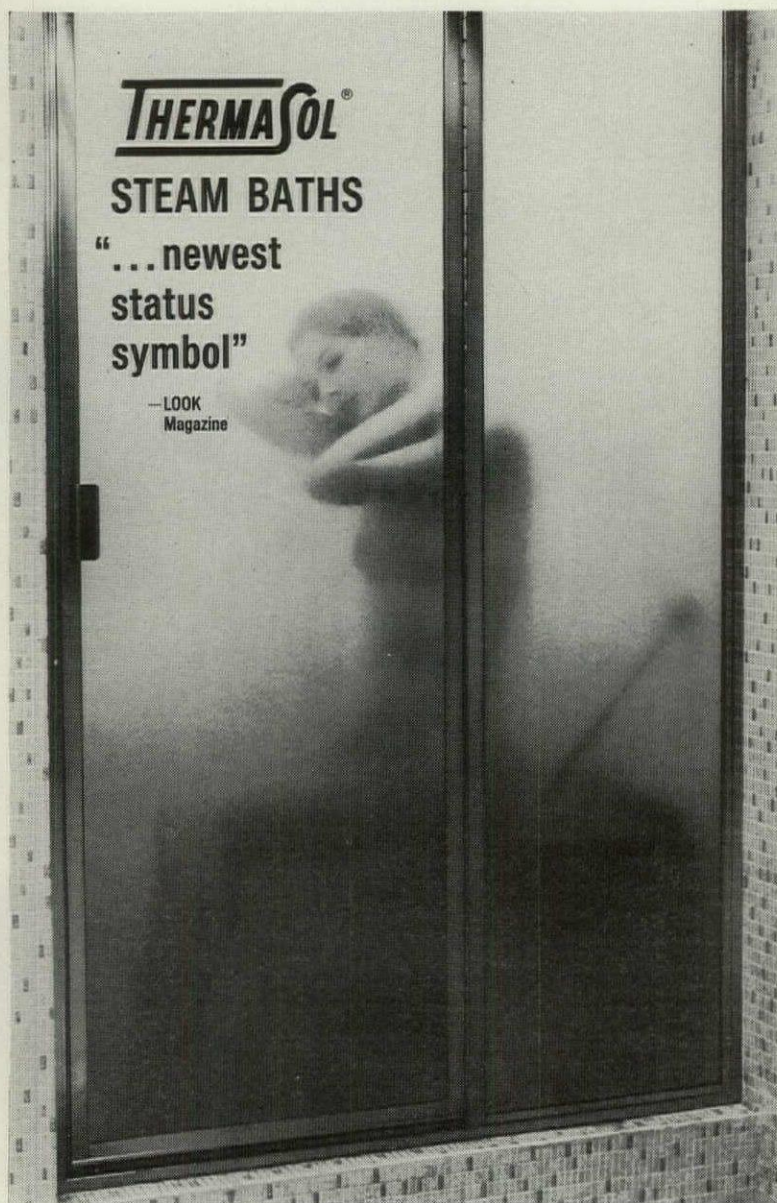


compact design and dimming ranges from 100% to less than 1% with no breaks in the cycle.

Order Fiesta (and free dimmers) now from your Moe Light distributor... and really give your prospects something special to remember about your homes.



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They speed new home sales and apartment rentals!

Here's the exciting feature you've been looking for to make you stand out from the competition. The ThermaSol Steam Bath is the bathroom luxury everyone is talking about. It draws attention to your ads; lures traffic to your model homes and apartments; helps close sales and leases faster, at higher profits. People tell friends about your homes and apartments—and newspapers write about them—when there's a ThermaSol in the bathroom! **Real Estate Forum** says it's "a must for the progressive builder."

ThermaSol is inexpensively installed in any bathroom . . . under construction or already built. The stall shower or tub doubles as a steam room, and serves its normal use as well. ThermaSol takes up no bathroom space. An amazingly compact steam generator hides away in vanity, closet, ceiling or floor. A steam outlet head and timer switch complete the set-up. FHA-approved, ThermaSol adds only a small fraction to the cost of a bathroom. For apartments, the equipment can be leased for as little as 22¢ a day.

Safe, simple, foolproof, ThermaSol is U.L.-listed and guaranteed against steam damage to tile, bathroom walls or decor.

As easy to use as a shower bath—and even easier to install—the ThermaSol Steam Bath is the most appealing home "appliance" you can offer.

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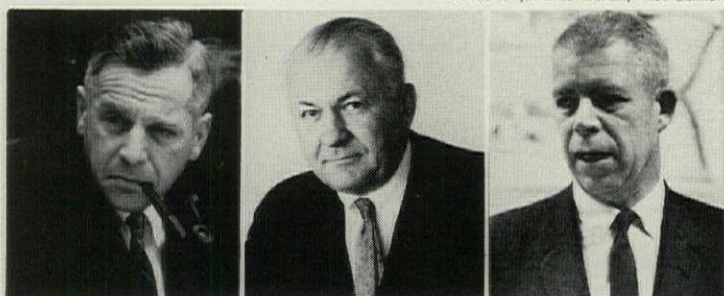
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NEWS

B. Martin, Walter Daran, Fred Schnell



NAHB's **ROGG** (left), **CANAVAN** and **DeWOLF**
 New team of vice presidents takes over

NAHB's staff gets a streamlining: three new chiefs but fewer Indians

Bernard Boutin last month completed the staff realignment he has been working on since becoming NAHB's executive vice president last November. His biggest change: the creation of three brand new staff vice presidencies a notch below his own office.

Richard J. Canavan, 43, a former NAHB staffer who headed technical standards for FHA during the past four years, returns to NAHB to fill one of the new spots. Two other veteran NAHB staffers, **Nathaniel Rogg**, 52, and **Oliver DeWolf**, 53, are elevated to the other two.

Each new staff vice president will take charge of a broad area of service to NAHB's 43,000 members and 380 local associations. Specifically:

DeWolf will handle administrative tasks—budgeting and accounting, mail, clerical work and general housekeeping. A former Associated Press newsman covering the Senate, **DeWolf** has been NAHB's Mr. Inside for years and served as acting executive vice president in the interim preceding **Boutin's** appointment.

Canavan returns to supervise a new builder services division ("anything to build and sell houses better" says **Boutin**). His division encompasses design, technical services, labor relations, land use, multi-family housing, mortgage finance, marketing and business management.

Canavan became a nationally recognized expert on house design when he was NAHB's assistant director and director of construction from 1953 to 1959. After joining **FHA** in 1961, he modernized the agency's time-encrusted underwriting and architectural rules by developing pioneering new rules for planned unit developments and rewriting multi-family standards. For his work **HOUSE & HOME** named him an Outstanding Performer of 1963.

Rogg will direct NAHB services to local associations ("anything

to do with meetings and education," says **Boutin**). Included are the legislative, public relations, economics and statistics and workshop departments, plus the the National Housing Center and the annual convention.

Rogg steps up after 11 years of remarkable achievement as NAHB's chief economic analyst. A Phi Beta Kappa, **Rogg** joined NAHB in 1954, after a 14-year stint as **HHFA** researcher, with the stipulation he gets a free hand in interpreting economic data. With that freedom he has turned out such consistently accurate forecasts that he has become one of the nation's most respected housing economists. One aid to this success has been the Builders' Economic Council which **Rogg** set up in 1956 to survey activities of 600 leading builders every six months.

The reshuffling completes **Boutin's** streamlining of NAHB to get a maximum efficiency from a staff slimmed slightly to 139 from a peak 144 in recent years. One of **Boutin's** first tasks was to conduct a professional work flow study. The finding: "the professional staff was spending entirely too much time on a myriad of details."

To pare detail, **Boutin** is turning to a newly installed **Univac 1004** computer to handle not only accounting and dues billing but also any statistical or engineering problems that might be dreamed up by technical researchers and economists.

NAHB president suffers heart attack

Perry Willits, 51, president of NAHB, was hospitalized in Alpena, Mich., during a speaking tour last month with chest pains later diagnosed as a mild coronary. He will be hospitalized three to four weeks. Other NAHB officers and directors took over **Willits'** summer speaking schedule.

NEWS continued on p. 28

Ripple-Tone

We think new
about exteriors



Kaufman and Broad, Chicago, have already sold over 400 units such as those above in their Brandywine development, Oakbrook, Ill. Architects: Pastor and Fonville, Oak Park, Mich. Ask your Gold Bond Representative for samples of Ripple-Tone, or write National Gypsum Company, Dept. HH-95, Buffalo, N. Y. 14225.

Gold Bond Ripple-Tone Panels replace stucco on 1,100 town houses.

Stucco was originally specified as the accent material. Ripple-Tone Panels achieve the same effect, but are less expensive. And more durable. So a total of 150,000 feet of Ripple-Tone will go into this new 1,100-unit Kaufman and Broad project. Predecorated Ripple-Tone, made of portland cement and asbestos fibers, never needs protective painting. Surfaces are beautifully textured in a choice of two finishes — tough Gold Bond Plasti-Clad, guaranteed against blistering, peeling or crazing; or weather-resisting Plasticrylic®. Both in a choice of standard or special colors. Thinking about lower construction costs? Think new with Gold Bond®.

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RIPPLE-TONE

One of many fine products that come from 40 years of thinking new

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101



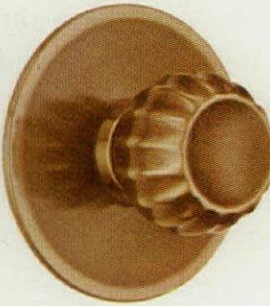
DIFFERENT LOCK DESIGNS

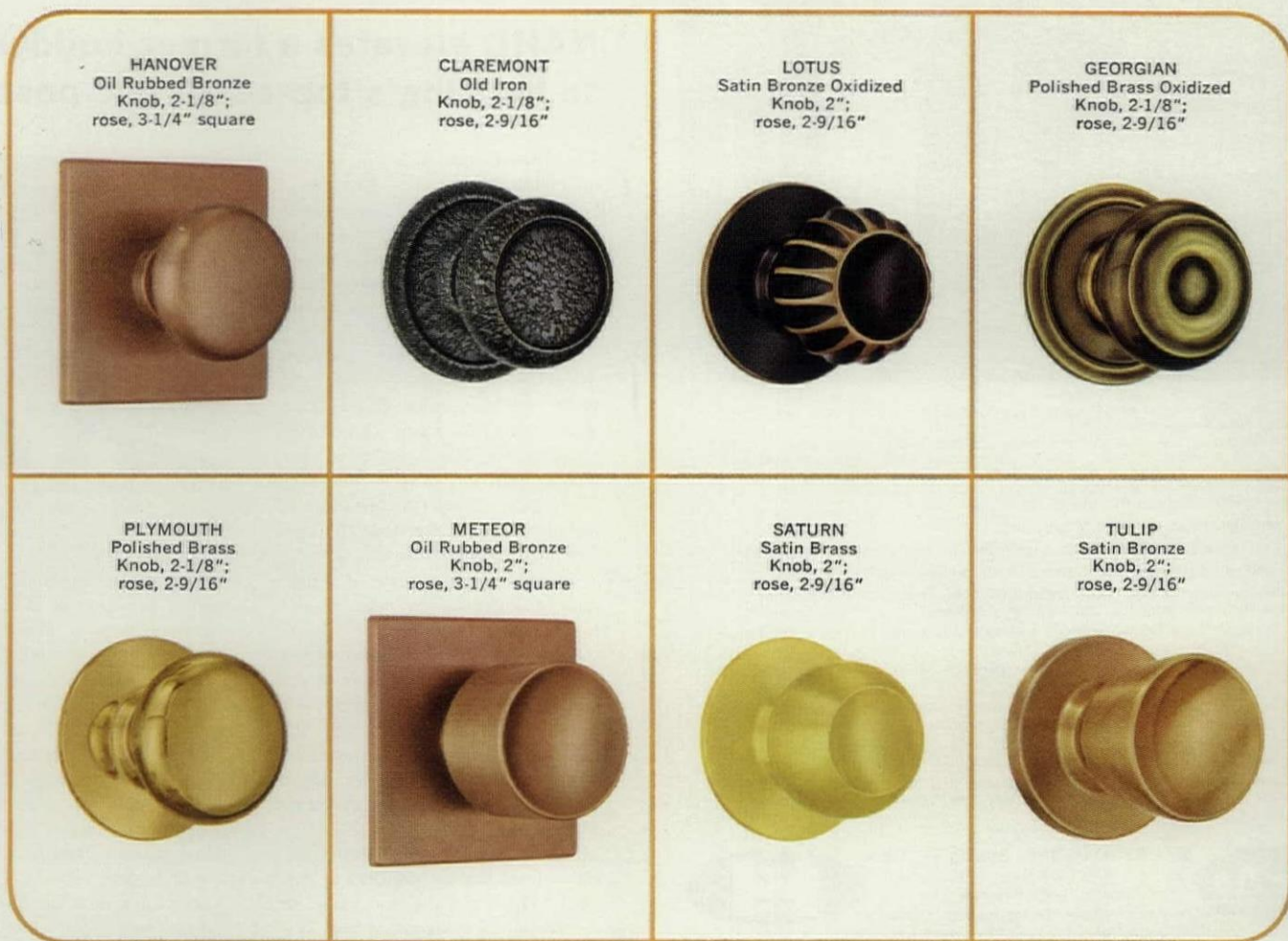



23



DIFFERENT FINISHES



<p>CROWN Polished Brass Oxidized Knob, 2-1/4"; rose, 2-9/16"</p> 	<p>NOVO Satin Aluminum Knob, 2-1/8"; rose, 2-9/16"</p> 	<p>WOODSIDE Oil Rubbed Bronze Knob, 1-15/16"; rose, 2-9/16"</p> 	<p>BELL Polished Brass Knob, 1-7/8"; rose, 2-9/16"</p> 
<p>MAGNOLIA Polished Brass Knob, 2"; rose, 3-5/8"</p> 	<p>CORONET Satin Brass Oxidized Knob, 2"; rose, 2-9/16"</p> 	<p>WATER LILY Satin Bronze Oxidized Knob, 2"; rose, 3-5/8"</p> 	<p>LUNA Satin Chromium Knob, 2"; rose, 2-9/16"</p> 



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So says Mr. Fred Hephinger, President of Hephinger Painting and Decorating Company, New Philadelphia, Ohio. The subject of the conversation was the Spee-Flo Model 28-100 HydraAirless and Patented H-Gun purchased in June of 1962 after a series of tests against competitive units. The unit has now been proved on such jobs as Hillsdale High School near Haysville, Ohio; The Methodist Churches of Brentwood, Dover, and Mingo Junction, Ohio; and Jefferson Union School of Richmond, Ohio.

Here's what Mr. Hephinger had to say:

"This is the only airless unit which I own and operate which is trouble-free."

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"Material savings have run from 20 per cent to 33 per cent depending on material."

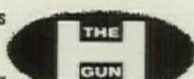
"We have been the successful bidder on many jobs because we can count on Spee-Flo equipment to operate without interruption."

"On one job the speed of application with this equipment permitted us to paint a ceiling deck with 7-inch ribs in about half the time estimated."

Spee-Flo has many other testimonials just like this. Why not put Spee-Flo in your profit picture. Write today or contact the Spee-Flo Representative in your area.

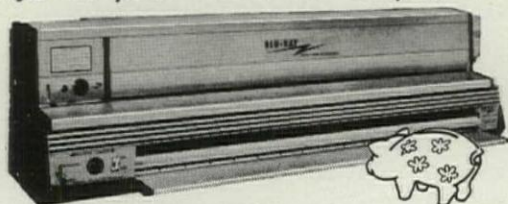


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NEWS

NAHB elevates a former builder to housing's top economic post

Vincent Finnigan



NAHB's SUMICHRAST

Finding ways to do the impossible

The promotion of NAHB economist **Nat Rogg** (see p. 24) puts a new man in charge of NAHB's economics department—a man who combines tireless energy with new ideas that spring from his own experience as a home-builder.

Michael Sumichrast, a Czech construction engineer with a Ph.D. in economics from Ohio State, launched NAHB's ambitious housing forecast system a year and a half ago despite warnings from such knowledgeable men as his boss, Nat Rogg, that the system just couldn't work.

Sumichrast has made it work, and at virtually no cost. Here's how he does it:

Manufacturers' representatives and housing economists in more than 60 cities give him their best guess on housing starts for the next six months. Sumichrast feeds them into a computer which prints out the result in reproducible form.

Sumichrast says he'll have 100 cities lined up by the end of this year. He feels it's too soon to really tell how accurate the system is, but he points with pride to the fact that the first six months' forecast was off by less than 2%.

The forecasts are only a first step in Sumichrast's plans. He's thinking of establishing a similar network of title companies that might report weekly on the number of applications for title insurance on both new and used houses. He figures that with at least 20 cities in the network—and perhaps eventually 100—his computers could produce statistics on how houses are selling.

Sumichrast is that breed of man who wants to take on what everyone says is impossible. He got out of homebuilding because—believe it or not—it didn't offer him enough challenge after he had built 611 units in this country and 901 houses in Australia. (He was also production manager for Fritsche & Co. of Columbus, Ohio during four years when Fritsche built 500 houses a year.)

So what's next on Sumichrast's "impossible" list? An accurate, in-depth national survey of housing characteristics, last tried by F. W. Dodge Co. in 1961. Sumichrast figures it could cost about \$40 million to do the job—but he hopes to slice this by using the talents of participating companies, for free, just like in the forecast service.

Ambitious plans? Perhaps, Sumichrast says with the slight accent familiar to housing experts who keep in touch with him. But then he adds with a gentle smile: "But after all, I've got 7½ hours a day to concentrate on them."

CMI head quits, runs for governor

"In a tough campaign you can't subject the stockholders of a public company to political controversy."

So saying, **David Carley**, 37, last month resigned as president of Continental Mortgage Insurance Co. of Madison, Wis., to seek the Democratic nomination for governor of Wisconsin in a September 1966 primary.

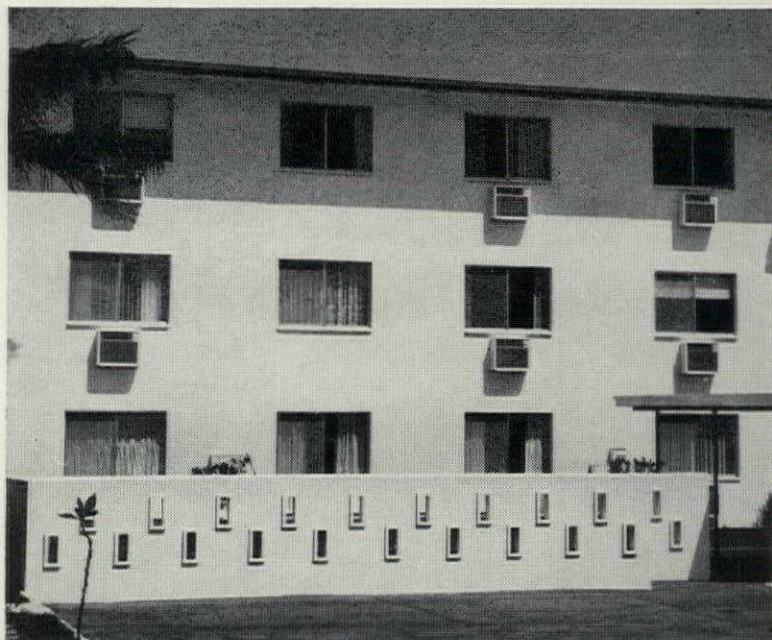
His successor is **Bruce Thomas**, a Madison attorney who helped set up CMI in 1961.

When Carley took over CMI in April 1963, it had insured \$13 million of house mortgages. In slightly over two years the figure swelled to \$173 million, making CMI second in mortgage insurance behind Mortgage Guaranty Insurance Co. of Milwaukee.

Carley becomes a member of Marshall Erdman and Assoc., a maker of prefabricated medical buildings and schools (H&H, '60).

Marvin S. Gilman, Baltimore and Long Island builder and developer, joins Leon N. Weiner & Assoc. of Wilmington, Del., builders of planned communities, as executive vice president.

DIED: George H. McLain, California developer of senior citizens' housing and promoter of pensions for the aged, of a heart attack in Los Angeles on July 12. As president of the California League of Senior Citizens he built two communities for the elderly. **William Best**, president of Best Homes of Effingham, Ill., and a home manufacturer, July 22.



From the inside you can't see them at all!

Those compact Carrier condensing units install in the wall, up out of the way. Each powers a central ducted heating and cooling system. A system ideal for apartments, and homes, too.

Why? It gives the tenant or owner quiet movement of filtered, conditioned air to each room all year long. Plus heating or cooling whenever he wants it. As much as he wants.

It offers you low first cost, takes up no floor space and no land space either. Big sales and rental advantage with the Carrier name and traditional low maintenance and high reliability.

Note the condensing unit. It slides into a wall sleeve from inside. A wallboard panel completely hides it from view. Or, if you or your architect prefer, it can install flush on the outside, and project a few inches into a closet or utility room. Other parts of this easy-to-install Carrier system?

Refrigerant tubing with quick-couples at both ends for a fast, clean connection to fan-coil or furnace.

An all-electric fan-coil that can power air through long duct runs—does it quietly from any spare space—above a closet, in a furred-down ceiling, a crawl space or attic.

And it measures only 13 $\frac{1}{8}$ inches high.

Heats with electric strip heaters or a hot water or steam coil—or a compact gas furnace with matching cooling coil.

Details? Your Carrier dealer will give them to you. And handle everything to do with heating and cooling: duct design, equipment location, wiring, controls—right through start-up. And back it up with expert service.

You'll find Carrier dealers in the Yellow Pages. Carrier Air Conditioning Company, Syracuse, New York 13201. In Canada: Carrier Air Conditioning (Canada) Ltd., Bramalea, Ontario.

Carrier Air Conditioning Company

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

Circle 35 on Reader Service Card



Above: House & Garden "House of Ideas." Below: Architectural Record "Record Houses."





Andersen Gliding Windows ▶

help bring in a favorite view . . . provide top-to-bottom ventilation, yet close extra tight for snug, year-round comfort. New Andersen Wood Gliding Door adds distinctive touch to your jobs.

◀ *Andersen Casement Windows*

in a bow-window combination enhance this remodeled living room. They're the fuel-savingest windows ever, and complemented by the convenience of welded insulating glass, they're far and away the finest units ever made.

Andersen Flexivent® Windows ▶

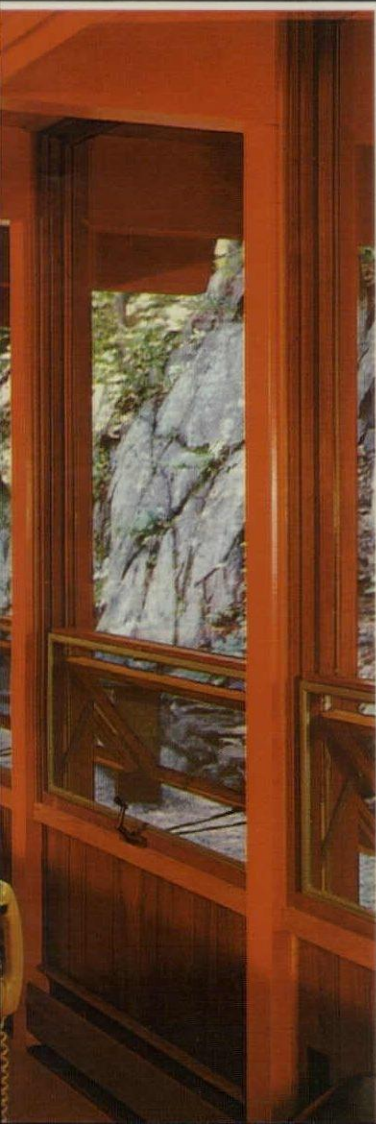
look "custom-designed" for this room. Despite their richness, stock Flexivents are a most economical Windowwall. And they're the most versatile window you can use: single . . . or in stacks, ribbons, or picture-window groupings.

◀ *Andersen Beauty-Line* Windows*

help you provide picture-window beauty at a practical cost . . . make it possible to create a kitchen that's a pleasant place to be. Select wood is specially treated for lifetime protection from termites and decay.

Andersen Narroline Windows* ▶

help transform a dark, dusty attic into a little girl's dream come true. They're so extra weathertight, welded insulating glass is practical. Easily removable grilles pop in or out for easier window maintenance.



And now American-Standard brings you

A Single Lever with everything new but the action

to help prospects sell themselves
on your modern kitchens



To make the Single Lever Faucet even more attractive, we've lowered and smoothed all lines, including those of the aerator-equipped swing spout . . . and added a finger-fitting handle for distinction. It's all new but the time-proven action! Inside is the same American-Standard washerless valve that has already freed more than 1½ million kitchens from the

whole plink-plink-plinkety problem of leaks, drips and washer replacement.

Single Lever on your sinks gives your salesmen an extra selling feature that the lady can *demonstrate for herself!* See your American-Standard plumbing contractor. Or write American-Standard, Plumbing and Heating Div., 40 W. 40th St., N.Y., N.Y. 10018.

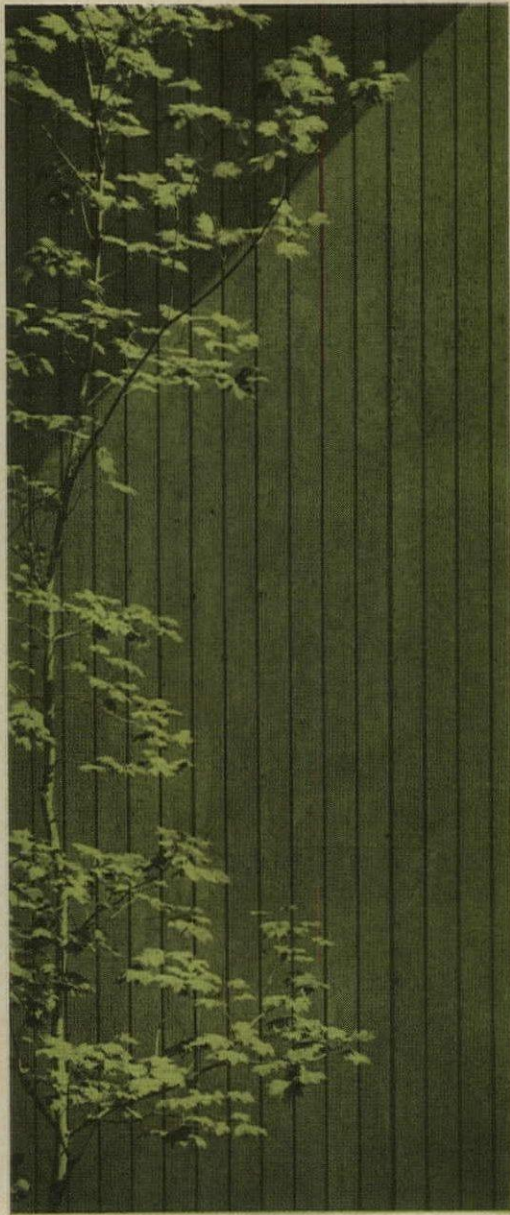
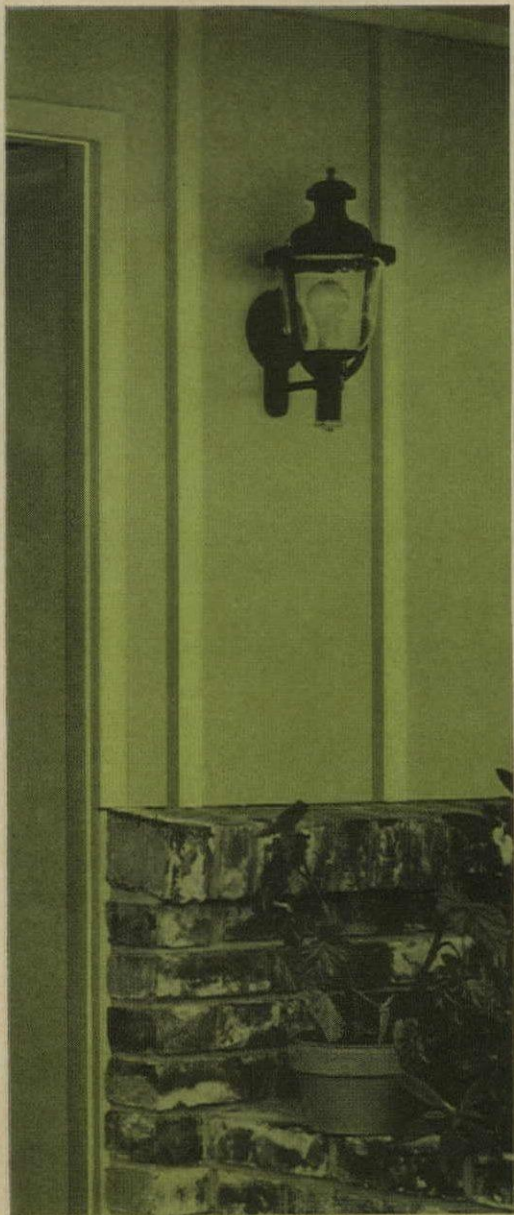
AMERICAN-STANDARD



New ways to build better

(and save money to boot)

with plywood siding



ANOTHER NINE PAGE REPORT TO BUILDERS FROM THE

AMERICAN PLYWOOD ASSOCIATION



1.



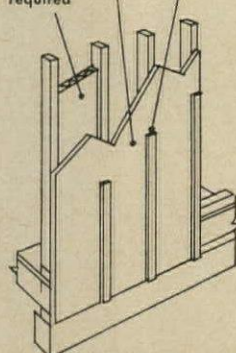
2.

TYPICAL STURD-I-WALL APPLICATIONS

Plywood with Battens

Medium Density
Overlaid plywood;
rough-sawn plywood; etc.

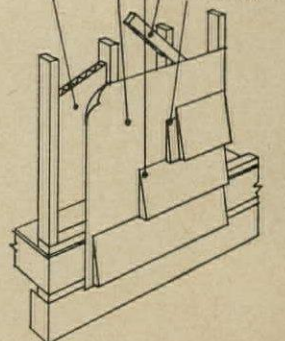
Insulation as
required Batten



Lap or Bevel Siding

Overlaid, preprimed or
coated plywood

Building paper
Insulation as
required Corner bracing
Shingle
wedge under
vertical joints



3.

Note: No diagonal wall bracing
or building paper
required with panel siding.

With plywood siding you can completely eliminate sheathing

...that saves you up to \$200 a house right there

"Sturd-i-wall" is what the American Plywood Association calls the system of using one thickness of plywood as both siding and sheathing. No matter what you call it, it's bound to save you money because it completely eliminates the entire sheathing process. And it's the most modern, efficient way to get a strong, rigid wall — even stronger than most ordinary construction.

1. NAHB Director George Barclay was one of the first big builders to adopt the Sturd-i-wall system. He figures it saves anywhere from \$175 to \$200 a house.

Barclay is trying several new plywood products at his Mayfair development, Parkland, Wash. On this house, it's a preprimed overlaid plywood that needs only one coat of paint on the job. It goes directly on studs, with batt insulation to be applied between studs later.

Barclay says he saves enough from time-saving plywood building systems like this to pay for good design, landscaping and other extras that attract home buyers.

2. Here's a house that couldn't have happened without Sturd-i-wall construction.

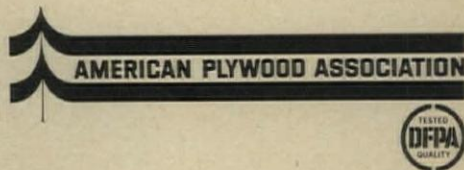
Jewel Builders, Berwyn, Ill., built it for a family limited to a \$22,000 budget. Yet the house had to look right in a neighborhood of homes that cost several thousand dollars more.

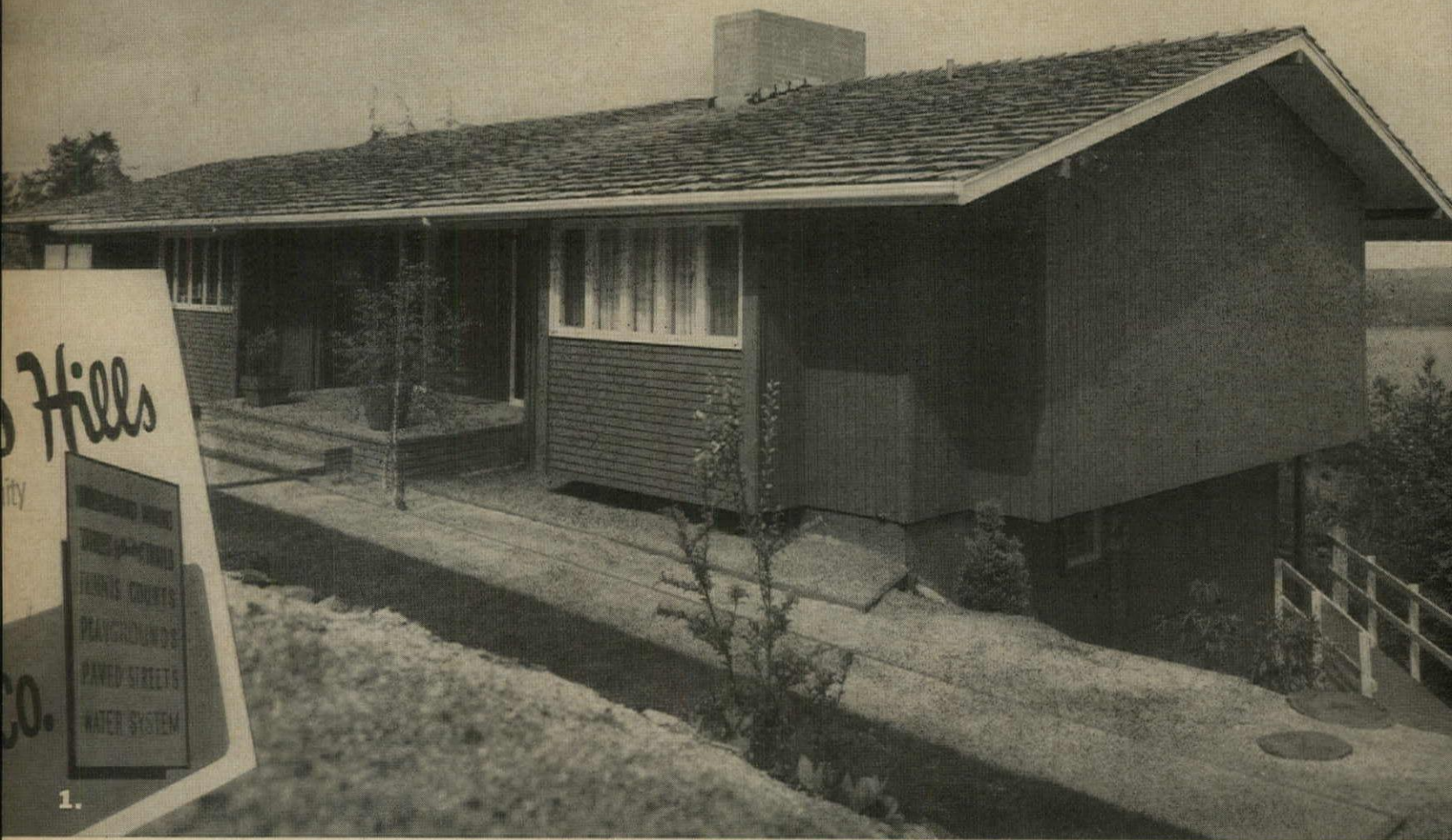
"Using plywood as combination siding-sheathing was the answer," says Tom Simon, Jewel president. "It's a great labor saver — you just go around the house once instead of twice." He used grooved cedar plywood with a reverse board-and-batten effect for the lower level, preprimed plywood lap siding for the upper.

Subfloors, soffits and roof sheathing are plywood too. All in all, Simon estimates he saved about \$1,000 by using plywood.

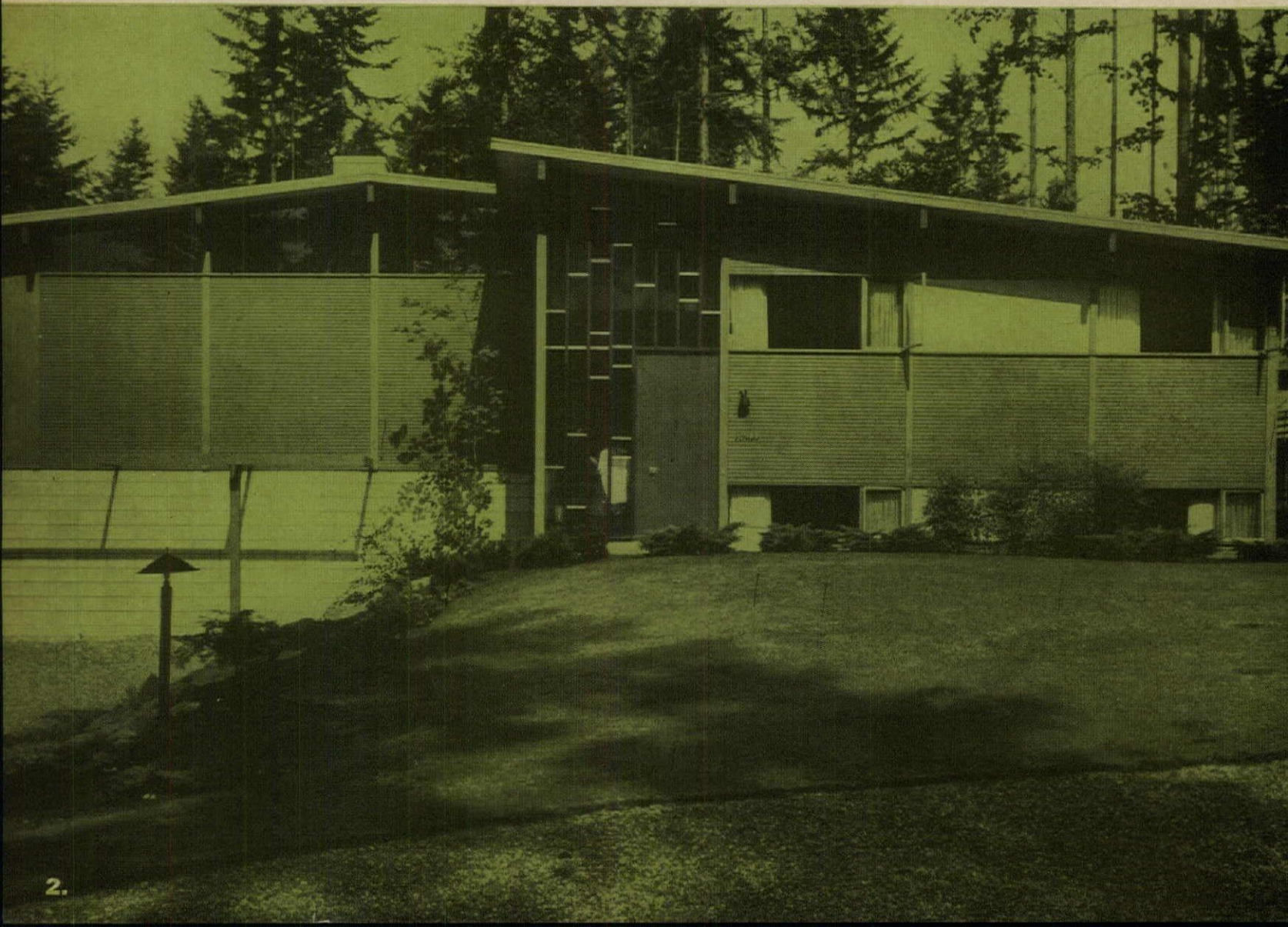
3. These drawings show two of the most frequent plywood Sturd-i-wall applications. When used as shown at far left but without battens, suitable plywood sidings would also include Texture One-Eleven®, grooved, etc.

For a free 12-page booklet with complete information on Sturd-i-wall construction, write American Plywood Association, Tacoma, Washington 98401. (US only.)





1.



2.

Plywood siding helps your sales by making a good first impression

No other material gives houses such a look of quality – at such low cost

1. Like most of today's successful builders, Joe Mentor knows the importance of choosing the right siding to conform with the design of the house. Here's an example: a *Better Homes & Gardens* award-winner in his Eldorado Hills development near Bremerton, Wash. It was sold before completion, as is the case with nearly all the 20 or so houses he builds each year.

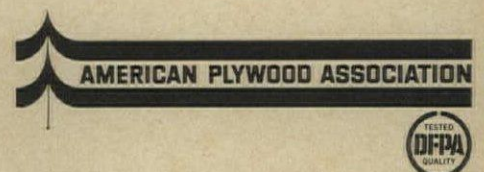
"First you've got to catch the prospect's attention," says Mentor. "That's where plywood siding like this Texture One-Eleven® really pays off. Almost everyone likes it, and it has the kind of style that never goes out of date."

But Mentor uses plywood for other reasons than appearance. He depends on it for quality construction at low cost, too. Floors are 3/4-inch T & G plywood, glued and nailed to avoid any chance of squeaks. His biggest savings come from using plywood as combination siding-sheathing. That cuts labor by 30 to 40 per cent.

2. Thomas Borgford had just completed and sold this Bellevue, Wash., house, when a prospective home buyer drove by and was so impressed he asked him to build another exactly like it.

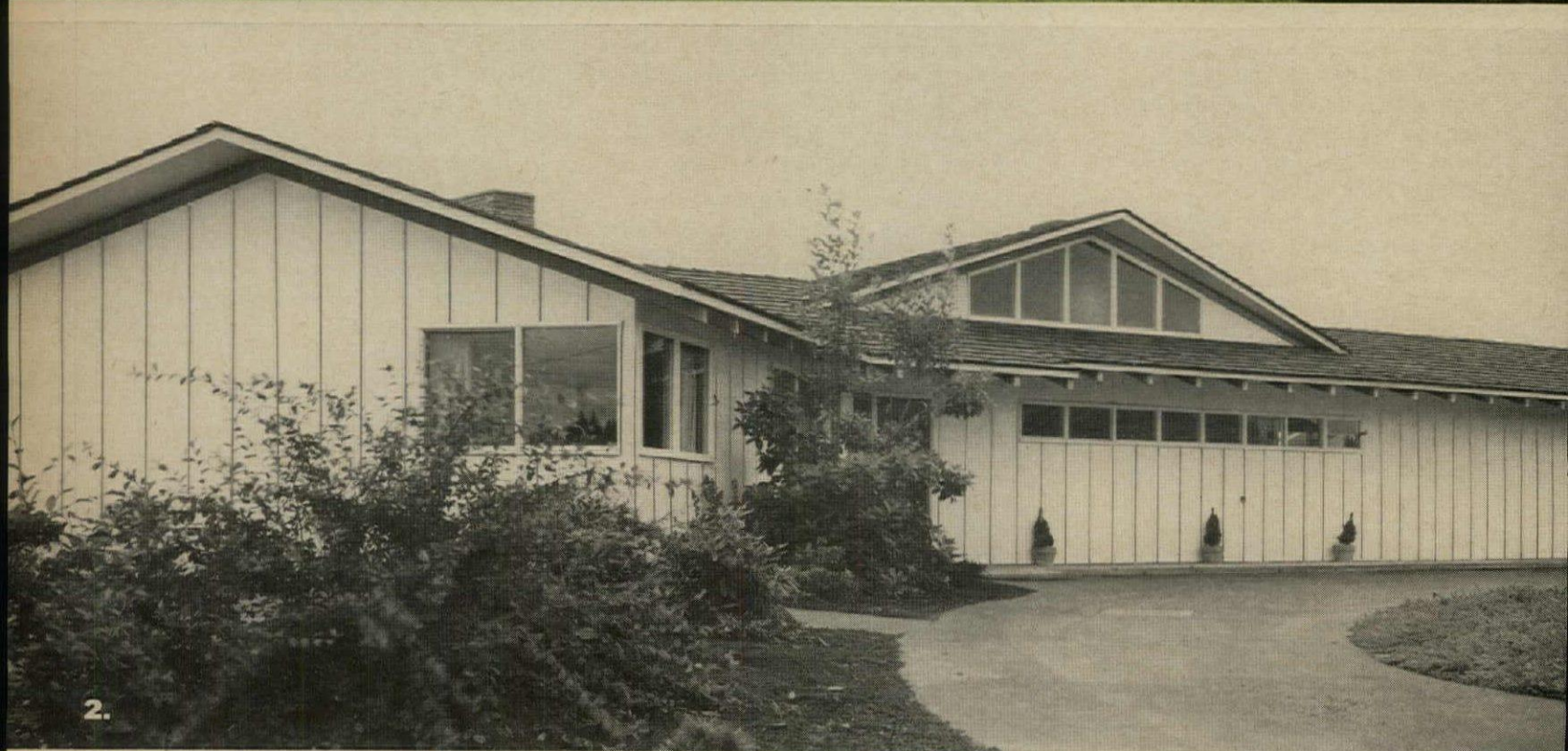
Borgford thinks the use of Texture One-Eleven applied horizontally had a lot to do with the appeal of the house.

Architect Harold J. Nesland, Seattle, capitalized on the horizontal lines by contrasting them with strong verticals around the entrance and battens at panel joints. Borgford reports he got just as much satisfaction from building the second house as the first. For one thing, he likes to build homes with style. For another, he saved about 20 per cent in labor costs, through use of Texture One-Eleven on studs without sheathing.

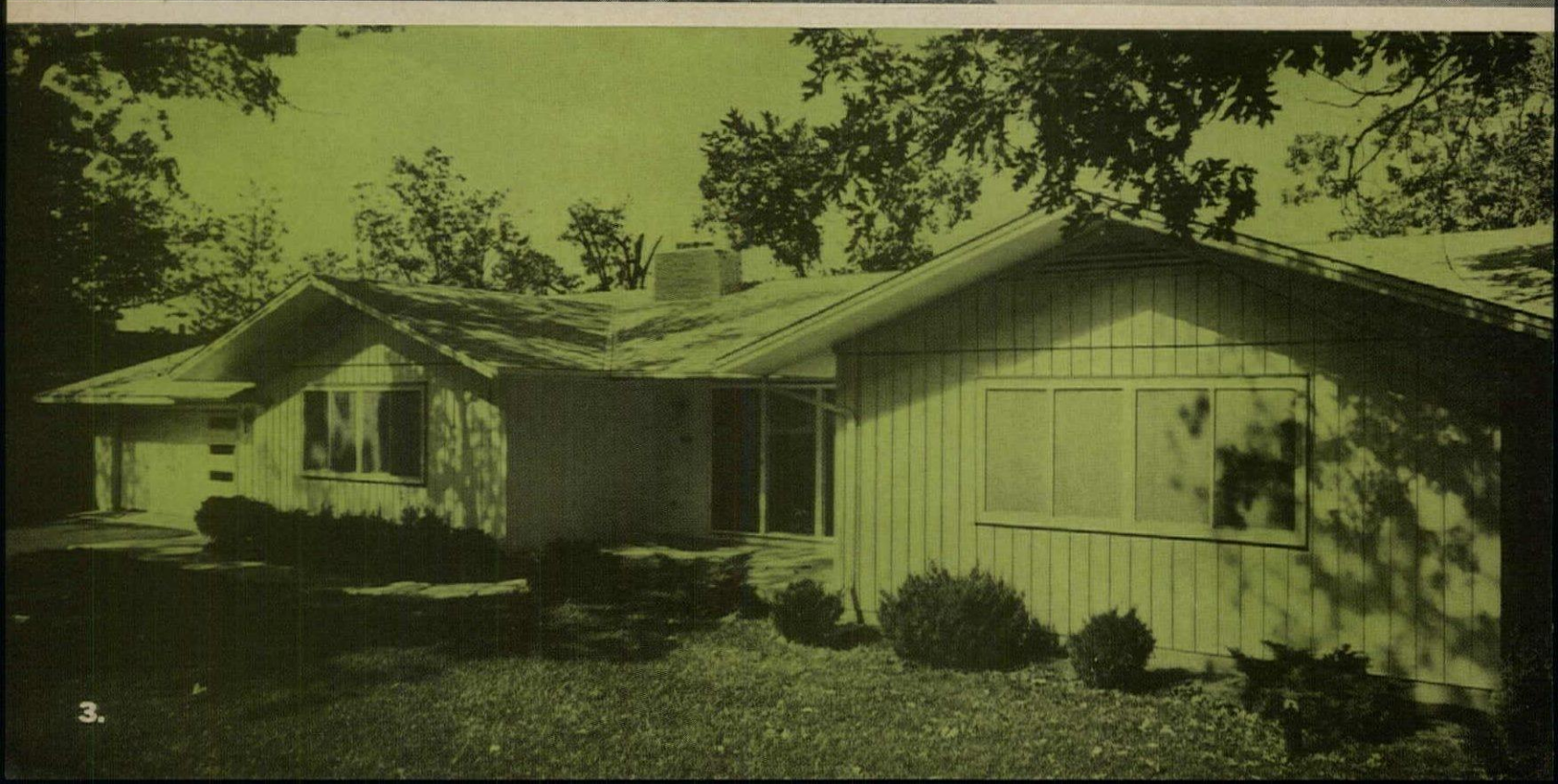




1.



2.



3.

Look into these new plywood sidings for finishes that really last

Overlaid, preprimed or coated plywoods virtually eliminate maintenance — and save you money, too

Research in plywood coatings and finishes is coming up with dozens of new products that cut on-site labor sharply and promise an end to home buyers' maintenance problems.

1. Coated plywood: Phillip Q. Kershner, Norristown, Pa., replaced the faded, 12-year-old asbestos shingles on his house with this new siding. It's EXT-DFPA® plywood, factory-finished with a tough, permanent, weatherproof coating. It comes in several colors, in lap siding or 4 x 8 panels. It needs no paint at all, and is guaranteed by the manufacturer not to need any for 15 years.

2. Medium Density Overlaid plywood: Harold Stroeberger, Portland, Ore., gave this house two coats of paint when he built it 15 years ago. The owners have repainted once — after ten years. That's typical of the superior performance of overlaid plywood. The permanent resin-fiber overlay gives you the best possible surface for a smooth, fast, long-lasting paint job.

3. Texture One-Eleven Overlaid plywood is siding on this Edina, Minn., house. In spite of the severe climate, builder Bruce Yund could apply plywood directly to framing, with insulation between studs.

Besides the familiar smooth panels and T 1-11, overlaid plywood comes in these styles: grooved, lap and bevel, and reverse board-and-batten.

Several new finishes can be applied to Medium Density Overlaid plywood, to give it more resistance to wear and weather than any conventional paint. (Write for more information — see below.)

Other new sidings: Be on the lookout for these new labor-saving plywood sidings, too.

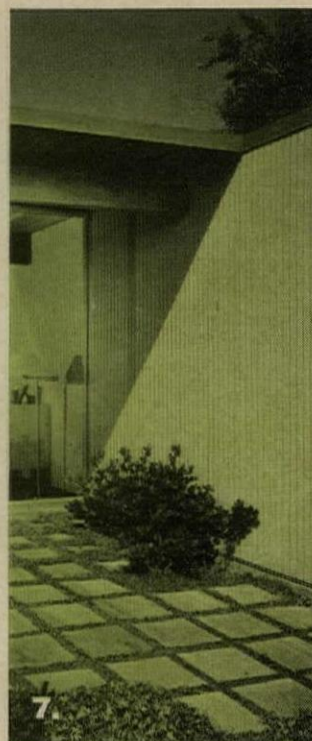
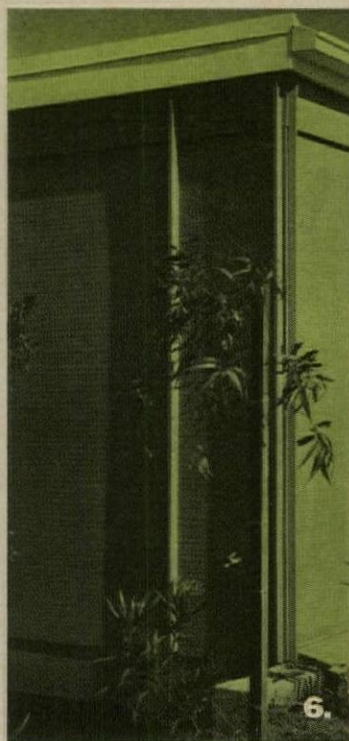
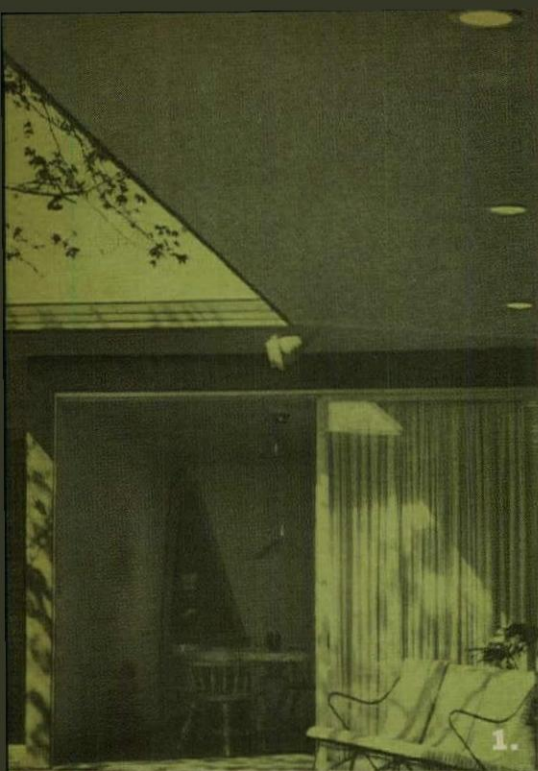
Preprimed overlaid plywood: Cuts painting costs in half. It's Medium Density Overlaid plywood, with a new special prime coat applied under controlled conditions right in the mill.

Aggregate-surfaced plywood: Standard EXT-DFPA® plywood, finished with an epoxy resin and any of several decorative aggregates, ranging from fine sand to marble chips. Comes in a variety of colors. Tremendously resistant to abrasion and weathering.

Aluminum-overlaid plywood: For the warmth, durability and impact resistance of plywood, and no maintenance problems.

For a list of sidings and coating products that have been qualified by the American Plywood Association, write us at Tacoma, Washington 98401.





Free Sidings Guide

Send for your Guide to Plywood Sidings, a free, 24-page manual with dozens of color photographs. Shows how plywood sidings adapt to all architectural styles. Includes application recommendations, technical data on strength and insulation values, finishing techniques. Also, a list of specialty siding manufacturers. Write: American Plywood Association, Tacoma, Washington 98401.

The DFPA grade-trademark on plywood assures you of strong, durable siding.

It's essential to use the highest quality plywood in all your building. But it's especially important with siding. You must be sure the appearance will stand up—and you must be able to depend on the waterproof glue-line and the durability and strength of the whole panel.

So it's good business to specify only plywood with the EXT-DFPA® grade-trademark. That means it was manufactured according to the high standards of the DFPA quality control program. Always insist on this grade-trademark on every panel.

Plywood exterior features like these mean a lot to second-time buyers

Attention to the little details can lift your houses out of the ordinary

Today's home buyer cares about good design and the "extras" that make a house more fun, more convenient. With so many styles of Exterior plywood available, there's almost no limit to the ways you can add these touches:

1. Plywood soffits are faster to install than boards and you have a wider choice of patterns. These are Medium Density Overlaid plywood for a smooth, glossy painted surface. Or use Texture One-Eleven® or rough-sawn plywood for a natural, rustic look.

2. Plywood accent panels, when harmoniously combined with other sidings, can do a lot for most contemporary houses. Dutch Construction Co., Marysville, Mich., used gleaming white panels of overlaid plywood at windows to set off the charcoal-stained T 1-11 siding.

3. Gable ends get an unusual treatment: redwood resawn plywood, with 2 x 2 redwood batts, 5 inches o.c. This award-winning house is by Stoneson Associates, San Francisco.

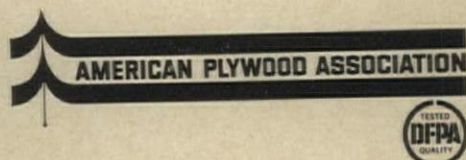
4. Plywood screens can be decorative and useful. This windbreak panel at an entry is overlaid plywood, painted white and framed with 1 x 2's.

5. Atriums and decks attract buyers. Architect Jay Fleishman, N.Y., specified plywood several ways for the atrium-style deck of this Poughkeepsie, N.Y., house: for siding (seen at end of deck) and for plywood-faced "flying beams."

6. Carport screens and siding can help sell the house, too. Resawn redwood plywood, with an interesting horizontal pattern and strong, vertical battens, is carport siding of this Los Angeles house designed by Elda Muir.

7. Patios and outdoor privacy areas are easy to create with plywood. Architect Homer Delawie made a small private patio for the master bedroom of this La Jolla, Calif., house simply by extending the T 1-11 wall.

For a free booklet on finishing these and other sidings, write American Plywood Assn., Tacoma, Wash. 98401.





Don Elferdink



Ira Capelle

When developers Don Elferdink and Ira Capelle first started planning to make Beacon House a "Landmark for Happy Living", they decided that luxury living had to be reflected in every room, especially the kitchen. That's why they specified RCA WHIRLPOOL refrigerators with IceMagic® automatic ice makers, new eye-level Connoisseur® electric ranges, built-in dishwashers and food disposers. "We feel that we receive better attention and service from one source", said Mr. Elferdink.

*Tmk.



Beacon House, Naples, Florida

**More and more builders are
installing RCA WHIRLPOOL
appliances because they like
our Full-Line Concept**

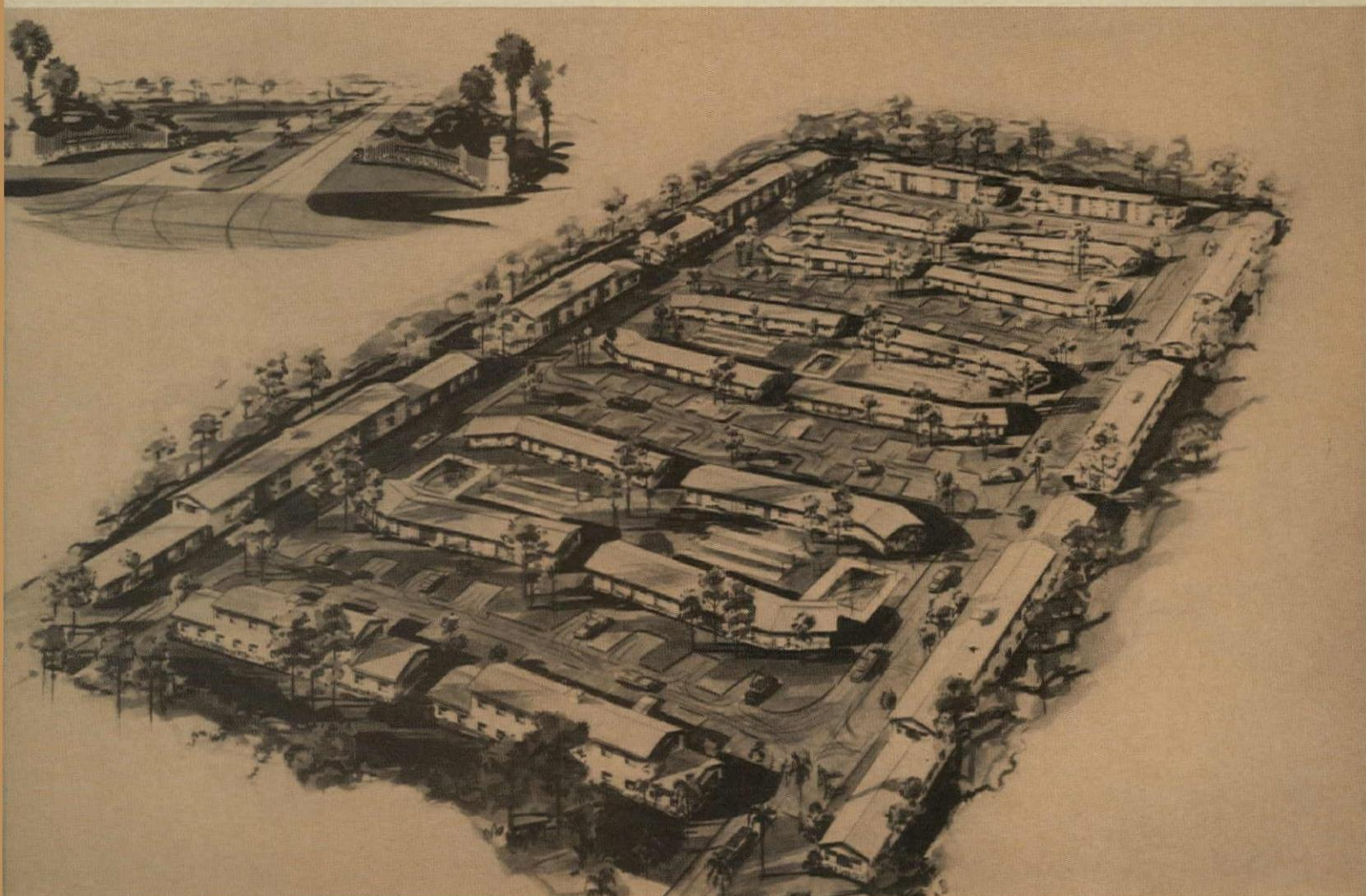


Herb Salzman



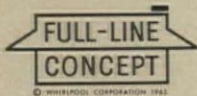
Sande Rocke

One of the main reasons Messrs. Sande Rocke and Herb Salzman selected RCA WHIRLPOOL appliances for their 154-unit Garden Apartments is the way they are perfectly coordinated in design and color. Every apartment will feature an RCA WHIRLPOOL refrigerator, reverse-cycle air conditioner, built-in oven and matching cooktop. This award-winning apartment complex is just about completed and the public response has been very gratifying, according to Mr. Rocke, President of Bobby Jones Garden Apartments.



Bobby Jones Garden Apartments, Sarasota, Florida

Builders from coast to coast are sold on Whirlpool's Full-Line Concept of both gas and electric home appliances. The main advantage is that

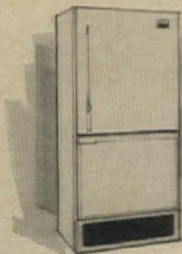
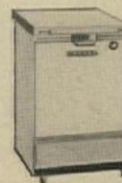


it saves them time and paper work. You have one dependable source for a full line of gas or electric appliances. You deal with one man, sign one order, receive undivided responsi-

bility and service, plus a brand name your prospects know and respect. Millions of dollars in national and local advertising have helped pre-sell your





prospects on these quality appliances. Take advantage of these benefits. Let your RCA WHIRLPOOL distributor show you a "package plan" that can add that extra touch of value to your homes and apartments.



GAS AND ELECTRIC APPLIANCES

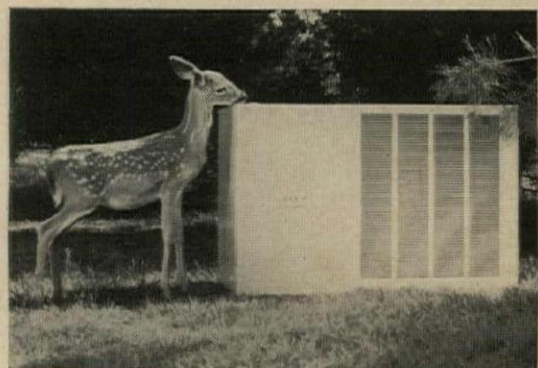
RCA WHIRLPOOL Appliances are Products of Whirlpool Corporation, Benton Harbor, Michigan.

Trademarks  and RCA used by authority of trademark owner, Radio Corporation of America.



“Our last building project taught us we must offer Total Comfort by Lennox”

Portrait of leadership: Victor Cutler, in partnership with his brother Milton, is presently developing Albidale, 15 miles north of downtown Philadelphia, in the Huntingdon Valley. This new community will offer 474 homes, prices ranging from \$23,750 to \$28,500, all improvements included. Only options are fireplaces. The firm Joseph Cutler & Sons has earned the reputation for being “builders’ builders” in the highly competitive Philadelphia market. The Cutler brothers are known throughout the area for their superb scheduling and work flow, backed by good design and construction.



Nature's Freshness: Climate of Leadership

Victor and Milton Cutler
are installing Lennox central
air conditioning as *standard*
equipment in their new
community of Albidale.

Why?

In their most recently
completed, 375-home
"Golden-Gate," in northeast
Philadelphia, 95 per cent
of the home buyers paid extra
to equip for air conditioning.

Lennox air conditioning
provides the competitive
edge. The cost: Completely
affordable with Lennox
RFC™ systems, installed at
building time.

And Lennox gives the
Cutlers an exclusive in air
conditioning: The nationwide
promotion theme: Lennox is
Nature's Freshness Indoors.

Write Lennox Industries Inc.,
513 South 12th Avenue,
Marshalltown, Iowa.

LENNOX IS NATURE'S
FRESHNESS, INDOORS

LENNOX

AIR CONDITIONING • HEATING

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BUSINESS IN THE MAKING

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.

ALABAMA—HARTSELLE: 40 houses, \$560,000. Builder: W. E. Smith. HUNTSVILLE: 100 houses, \$1.5 million. Builder: Jerome Averbuch.

CALIFORNIA—ORLAND: 100 houses, \$1 million. Designer: Jack A. Burman, Chico. SAN DIEGO: Apartments, swimming pool and parking, \$3.5 million. Sponsor: Atomic Investments. Plans: Jack R. Meadows; Condominium apartments, \$3.5 million. Sponsor: I. Feurzeig; Townhouses, \$750,000. Architect: Loch Crane & Assoc.; Townhouses, \$1 million. Sponsor: William Starr & Drogin Homes.

COLORADO—BOULDER: Condominium apartments, \$2.5 million. Sponsor: Keller-Loup Construction, Denver. Plans: Everett Zeigel.

CONNECTICUT—BRIDGEPORT: Apartments, \$2.3 million. Sponsor: Park Royal Apartments, Stamford. Plans: Schulman & Solloway, Jamaica, N.Y. GREENWICH: 40 houses, \$1.2 million. Builder: Winterser Land Corp. GROTON: 23 houses, \$500,000. Builder: I. R. Stich Assocs., West Hartford. MILFORD: Apartment, \$1 million. Sponsor: Anchor Redevelopment Corp. Plans: William Griffin Assocs., Bridgeport; Apartment, \$1 million. Sponsor: Joseph Migliapo, Woodbridge. STRATFORD: Apartment, \$500,000. Sponsor: Stonybrook Garden Cooperative. Plans: William Griffin Assocs., Bridgeport. WATERBURY: Apartment and swimming pool, \$1 million. Sponsor: Arbor Homes. Plans: Ginsberg Assocs., New York City.

FLORIDA—DAYTONA BEACH: Apartment, \$750,000. Sponsor: Ano Corp. Plans: Alfred G. Kemmerer. GULFPORT: Apartments, \$750,000. Sponsor: J. M. Gross, Houston, Tex. Plans: Burndette Keeland Jr. & Assocs., Houston. HALLANDALE: Apartments, \$800,000. Sponsor: El Dorado Country Club. Plans: Arthur A. Frimet and James A. Young, Hollywood. JACKSONVILLE: Apartment, \$675,000. Sponsor: Cal Holland, Charlotte, N.C. ST. PETERSBURG: Condominium apartments, \$600,000. Sponsor: Tyrone Apartments. Plans: John D. Mulslander. TITUSVILLE: Condominium apartments, \$2.5 million. Architect: Lopatka & McQuaig.

GEORGIA—ATLANTA: Apartments, \$950,000. Sponsor: Neal Gochee & James M. Keelin. MARIETTA: 30 houses, \$500,000. Builder: Howard Simpson Realty.

HAWAII—HONOLULU: Apartment, \$650,000. Sponsor: Blackburn & Assocs.; Condominium and swimming pool, \$2.4 million. Sponsor: D. S. Pacific; Apartment, \$870,000. Architect: Bradley & Wong; Apartments, \$850,000. Sponsor: Kamaaina Developers, Kailua; Apartment, \$550,000. Sponsor: Limco Ltd.

ILLINOIS—CHICAGO: 64 houses, apartments, \$18 million. Sponsor: James McHugh Construction. Plans: Ezra Gordon & Jack M. Levin & Assoc. and Solomon & Cordwell & Assoc. DECATUR: Apartments, townhouses and swimming pool, \$3 million. Sponsor: Roy & Haskel Prock, Indianapolis, Ind. DOLTON: 45 houses, \$1,025,000. Builder: William A. Torok & Co., Chicago. Plans: Nelson Joseph, Chicago. ELGIN: Row houses, \$1 million. Builder: Liberty Realty.

KENTUCKY—FT. THOMAS: 80 houses, \$800,000. Builder: Dress Developers & Builders, Erlanger. LEXINGTON: Apartment, \$500,000. Sponsor: Town Properties, Cincinnati, Ohio. Plans: Pansiera, Dohme & Tilsey, Cincinnati. ST. MATTHEWS: Townhouses, \$2.24 million. Sponsor: Klingbeil Haddox & Co., Columbus, Ohio. Plans: Ballard H. T. Kirk & Assocs., Columbus.

LOUISIANA—MARRERO: 80 houses, \$1.6 million. Builder: L. W. Heaslip, Metairie. NATCHITOCHEs: Apartments, \$750,000. Sponsor: Special Ventures Corp. Designer: Design Services, Dallas, Tex.

MARYLAND—DISTRICT HEIGHTS: 49 houses, \$627,000. Builder: Washington Estates. Plans: Douglas C. Dolan, Wheaton. GREENBELT: Garden apartments, \$5.6 million. Sponsor: Forrest Lake Joint Venture c/o Rosansky & Kay Construction, Washington, D.C. Plans: Bucher-Meyers Assocs., Silver Spring. UPPER MARLBORO: Garden apartments, townhouses, apartment, marina and swimming pool, \$20 million. Sponsor: Laurel Investors, Silver Spring. Plans: Morton W. Noble, Washington, D.C.; 325 houses, \$6 million. Builder: Levitt & Sons, Bowie, Md.

MASSACHUETTS—BOSTON: Duplex houses, \$500,000. Builder: Saegh & Conlin, West Roxbury. Plans: Norman A. Homsy, Needham Heights. BRADFORD: Apartment, \$1.7 million. Sponsor: Essex North Association of Congregational Christian. Plans: Clinton Foster Goodwin, Haverhill. EVERETT: Apartment, \$600,000. Sponsor: DiBiasi Bros. Plans: John G. Danielson, Lexington. MASHPEE: 300 houses, \$4 million. Builder: American Central Corp., Wellesley. NEWTON: Apartments, \$2 million. Architect: John G. Danielson, Lexington. NORWOOD: Garden and row apartments, \$700,000. Sponsor: Fisher Garden Apartments. Architect: Lester N. Lechter Assoc., Dedham.

MICHIGAN—DETROIT: Apartment, \$3 million. Sponsor: Young Israel Council. Plans: Jude T. Fusco, Ferndale. FARMINGTON: Townhouses, \$4 million. Builder: Bert Smokler Co., Southfield. PONTIAC: Apartment, \$1.2 million. Sponsor: Ambassador East, Southfield. Plans: Robert Calder, Detroit. REDFORD: Apartments, \$700,000. Sponsor: Practical Construction, Oak Park.

MINNESOTA—BLOOMINGTON: Apartment and townhouses, \$5 million. Sponsor: Inland Construction c/o Jos Havland, Minneapolis. Plans: Arthur Dickey, Minneapolis; Apartment, \$1.5 million. Sponsor: Hugh B. Thorson, Minneapolis. Plans: Miller & Melby Inc., Minneapolis. EDINA: Apartments, \$1 million. Architect: Wallace B. Kenneth, Minneapolis. MINNEAPOLIS: Apartment and garage, \$500,000. Sponsor: Paul Klodt, Hopkins. Plans: Miller & Melby. WAYZATA: Townhouses and swimming pool, \$1.75 million. Sponsor: Gleason Estates, Minneapolis. Plans: Baker Lange & Assoc., Minneapolis.

MISSOURI—BALLWIN: Apartment and swimming pool, \$6 million. Sponsor: Stanley Multin, University City. Plans: Bryce Hastings, Clayton. KANSAS CITY: Apartments, \$800,000. Sponsor: Howard D. Burner. Plans: John R. Horner & Assoc.; Apartment, \$500,000. Sponsor: Van Englehaupt. Plans: Morris-Schechter.

NEW MEXICO—ALBUQUERQUE: Condominium apartments, \$3.5 million. Sponsor: Lee Hanosh Corp. Plans: Lawrence Garcia & Assoc. SANTA FE: 200 houses, \$3.5 million. Builder: Allen Stamm & Assocs.

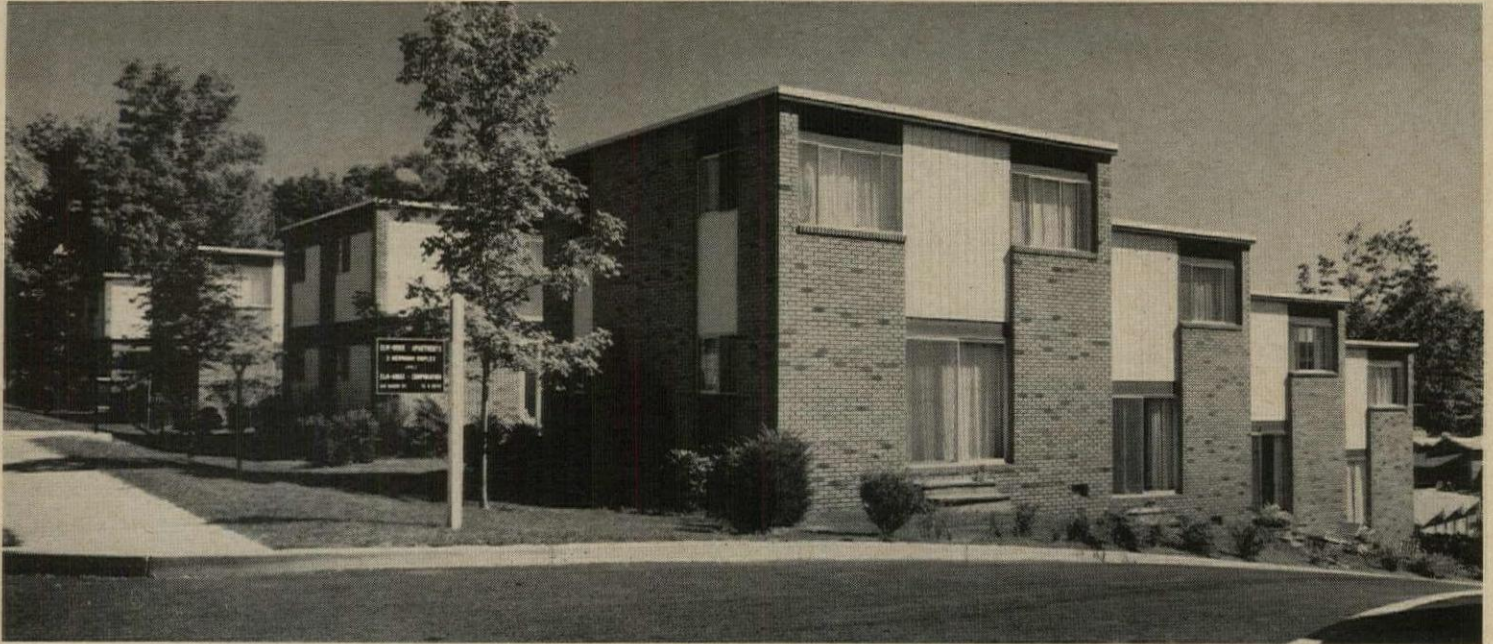
Business continued on p. 48



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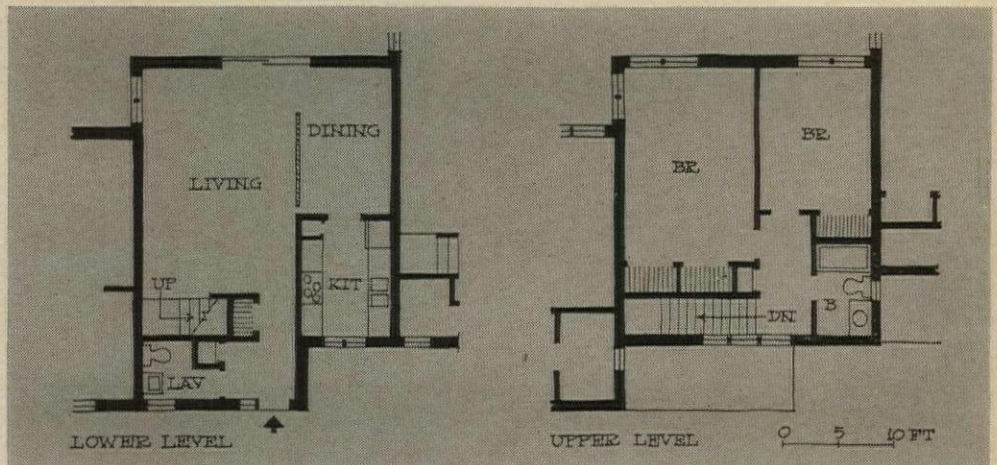
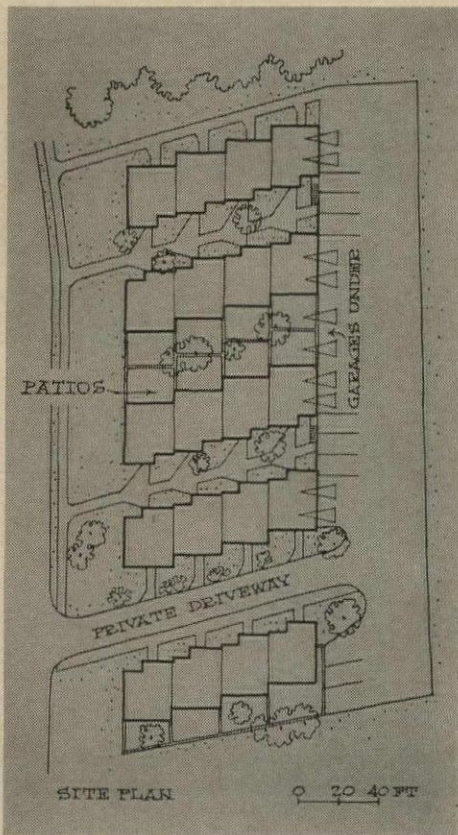
PROGRESS MANUFACTURING CO., INC. **progress** PHILADELPHIA, PENNA. 19134



Stepped-down design cut land development costs in this five-building apartment project

The sloping one-acre site is a former granite quarry. Architect Robert Felson stepped each four-unit building down the hill in 3' steps, excavating only under the two downhill units for basements and garages and putting the upper two units on slabs. As a result, land development costs were held to \$50,000. Another benefit: the steps,

plus offset siting, give the 20-unit project house-size scale which blends with its older residential neighborhood. Because the five buildings are identical, Builder George L. O'Brien was able to keep construction costs to \$315,000. Each building has its own heating and plumbing system. Location: Greenwich, Conn.



STAGGERED SITING (left) adds privacy to front entrance and rear patio of each two-story unit. Townhouses (right) rent for \$250 to \$285.



INDIVIDUAL ENTRANCES (left) face landscaped walkways which lead down to rear garages (right), 35 parking spaces and basement entrances.

Letters start on p. 58

EDITORIAL

Design in housing

Not everyone likes plain vanilla—there is room in the marketplace for much more exciting design

For years most builders have assumed that the majority taste rules the market to the exclusion of minority tastes. As a result, acres of plain-vanilla houses sprawl through the suburban fringe of every metropolitan area. Even worse are the pockmarks on the landscape of tracts of splanches, banana splits, Cinderellas, Old Massas, Aunt Minnies and so on—styles stolen, degraded, ravaged and then uselessly embellished with a pastiche of gimcrackery, all in a headlong pursuit of "the market."

Big question: does plain vanilla, or nightmare architecture, satisfy the market—a market of buyers who don't have to buy? Not by a long shot, says a small but growing number of builders and architects, vanilla only reaches that part of the market that likes vanilla. Potential buyers who don't like plain vanilla, and can't stand nightmares, are staying away from most new housing, and staying in their old houses. In many areas, there is hardly anything on the market that will bring them out.

Builders should ferret out and cater to all kinds of tastes—tastes that cover not only vanilla but also a wide range of contemporary design. And good contemporary design is good business because the few builders who are building contemporary houses are selling them.

Still, most builders shy away from tackling contemporary design because they say it won't sell in their areas. Then, when they go out to find the bestselling models, they find they can't pin down a bestseller that will work for them across town. There is no such thing any more as a bestseller that everybody can copy. Hot houses not only cool off with too much exposure, but they are usually hot because of their price and location, not their design.

Many housing professionals feel the most ef-

fective marketing tool a builder can have today is a broad architectural spectrum in any single subdivision. Not a spectrum that runs from shingled ranch to clapboard two-story, but a spectrum that runs from a major architectural effort (a first-of-its-kind contemporary) to a careful colonial reproduction. Such a subdivision not only would reach out to every segment of the market, but its variety would place it among the better neighborhoods of the future.

Perhaps the best way to come to grips with this changing market is to examine the changing attitudes of buyers. Although there is no great buying trend, the public has never been so responsive to the development of new architecture. In some areas, more and more buyers are buying good contemporary design—as much to express their own tastes and individuality as to satisfy any other need. And they are buying this good design in merchant-built houses like the AIA award winners on p. 62-73.

With better designs, the housing industry could capitalize a lot more on the identification which most of us seek and find in one possession or another. Each individual thinks and knows he is different from other people, so why not let him identify with a house that can be his individual badge, a house that fits his or his family's personality and breaks away, in good taste, from the run-of-the-mill.

In sum, the old compunction to rely on the security of an economic and emotional investment in a plain vanilla or any other market-safe house is slipping away from today's buyers. They, and the lenders, are more sure of themselves, and as they grow more knowledgeable about housing, the badly designed house becomes a poor investment anyway you care to look at it.—RICHARD W. O'NEILL



Award-winning built-for-sale houses:

A hillside two-story on stilts takes top honors

Built on an unusually steep site (*left*), it combines a handsome exterior with a highly workable plan. That's why it received the only Honor Award in the merchant-built category of the 1965 Homes for Better Living program.

The contest judges (*listed below*) were particularly impressed by three aspects of the house: first, it looks good from any angle; second, its living area is expanded 50% by outdoor decks to which six of seven rooms have direct access; third, it is full of well-thought-out details—e.g., an open-gable roof over the living area, a cantilevered fireplace blended into the outside wall by siding and a laundry area conveniently placed at the bedroom level.

The house—located in Belvedere, Calif., and priced at \$29,580 without land—was built by Victor Tchelistcheff and designed by Fisher-Friedman Assoc. and Robert J. Geering.

Seven other merchant-built houses, pictured on the following ten pages, won awards of merit or honorable mention. All show a fresh emphasis on new ways to expand interior space and produce more usable outdoor space. All achieve a high degree of privacy both inside and out. All make heavy use of natural finishes that weather gracefully and need little upkeep. In short, all are production houses with custom-house features.

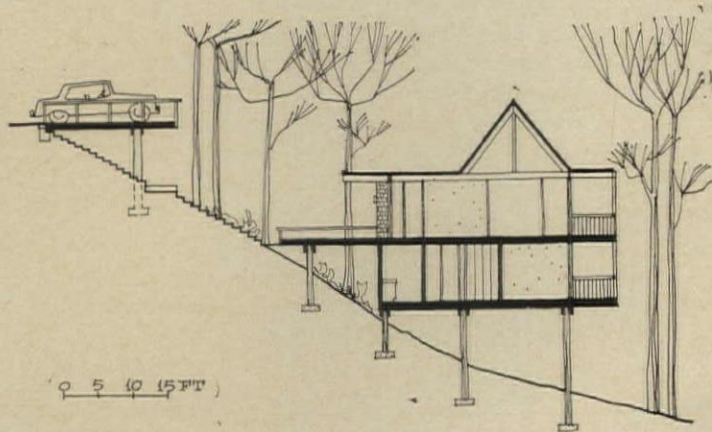
The judges of this year's contest—sponsored by The American Institute of Architects in cooperation with HOUSE & HOME and *The American Home*—were Alan C. Borg, building editor, *The American Home*; Matt Jetton, Sunstate Builders Inc.; Claude Oakland, AIA; John L. Schmidt, AIA, U.S. Savings & Loan League; Earl Swenson, AIA; George Hugh Tsuruoka, AIA, and James P. Gallagher, senior editor, HOUSE & HOME.



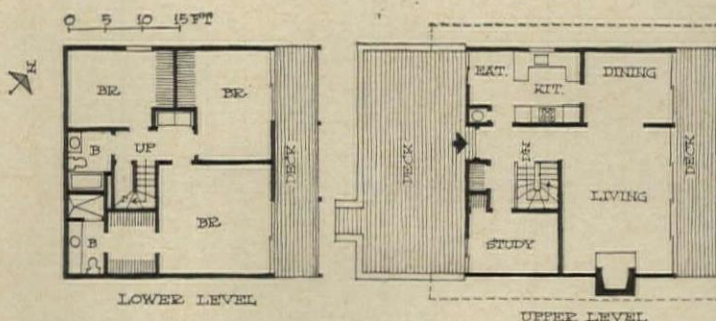
HIGH-PEAKED ROOF permits big glass gable ends above living room. Cantilevered fireplace at upper level is cedar-shingled as part of wall.



SHELTERED ENTRYWAY is reached across house-wide deck which is also outdoor-living space for kitchen, door at left, and study, door at right.



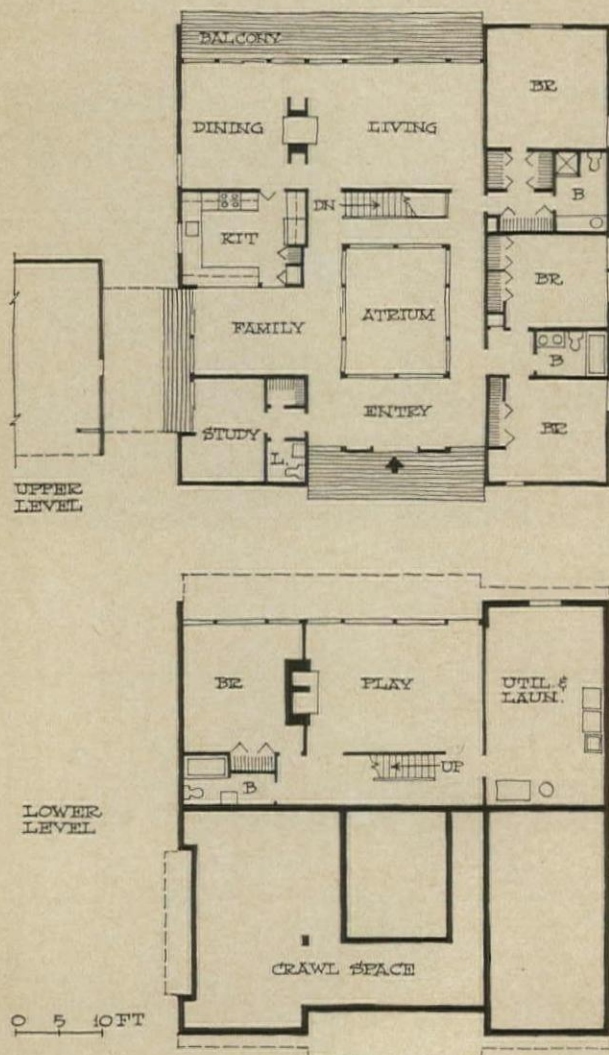
POLE FOUNDATION helped builder stay within \$25,000 construction budget. Pole diameter is 12". Concrete footings are 6' deep, 30" in diameter.



TWO-STORY PLAN puts bedrooms under main living area and provides each level with ample deck space. Laundry area is near bedrooms and baths.



BLANK FACADE conceals atrium (note treecrest at center of roof) behind double-door entry. Breezeway next to garage expands partly inset family-room deck.



A hillside atrium house with a variety of outdoor-living areas

Unlike other atrium houses, this one doesn't depend entirely on the inner court for sun and fresh air. Instead, it offers a choice of three separate and totally different places for outdoor living: 1) a glassed-in formal garden (the atrium) at the center of the house; 2) a screened breezeway-patio next to the family room and 3) a rear deck off the living and dining rooms.

Besides enhancing the interior of the house—particularly the entryway—the atrium creates a circular traffic pattern in which all rooms open off a tile-floored gallery. It also places an effective zoning barrier between the entertainment center and the children's bedrooms.

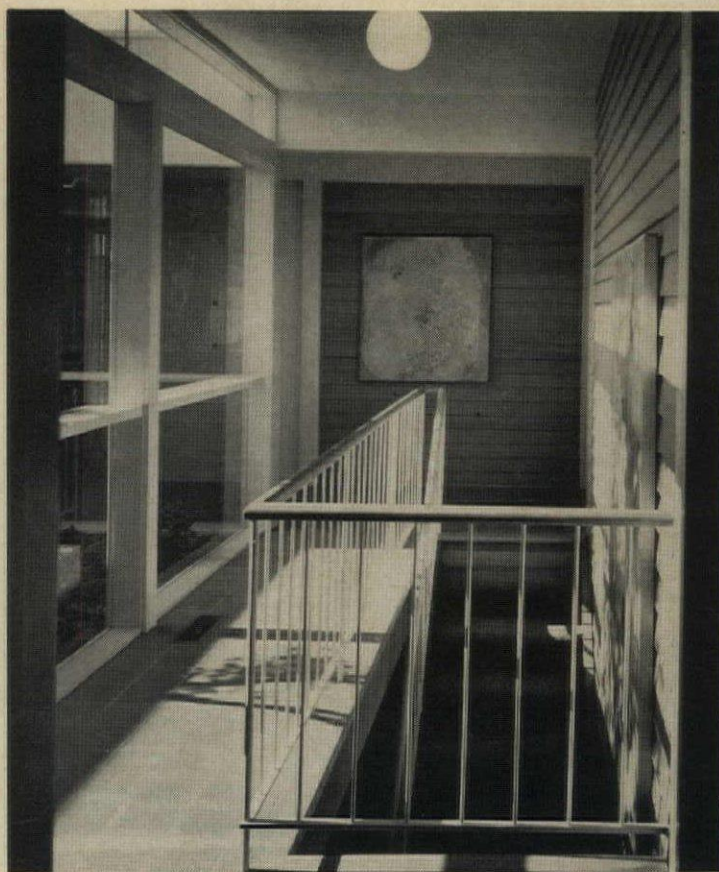
A prefabricator panelizes the post-and-beam house—exterior wall finish and all glazing is factory-installed, but the roof is pre-cut—and the builder's crew assembles it with the aid of a crane.

Award of merit. *Builder: Bennett Construction Co. Architect: Keyes, Lethbridge & Condon. Landscape architect: Thurman Donovan. Location: Bethesda, Md. Price: \$46,000 without land.*

TWO-LEVEL PLAN makes all rooms accessible from atrium gallery. Family-room extension of gallery links atrium to side deck and breezeway patio.

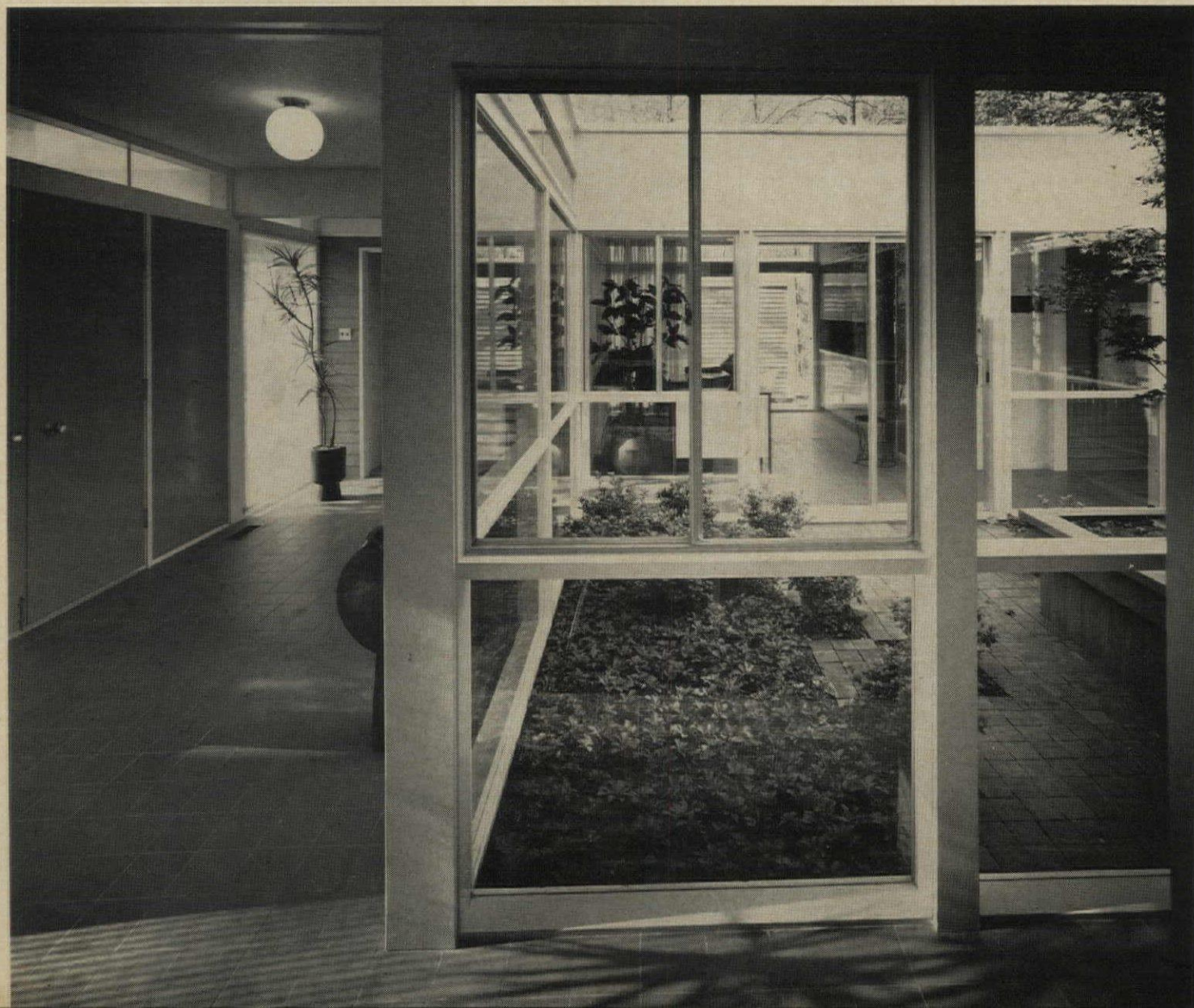


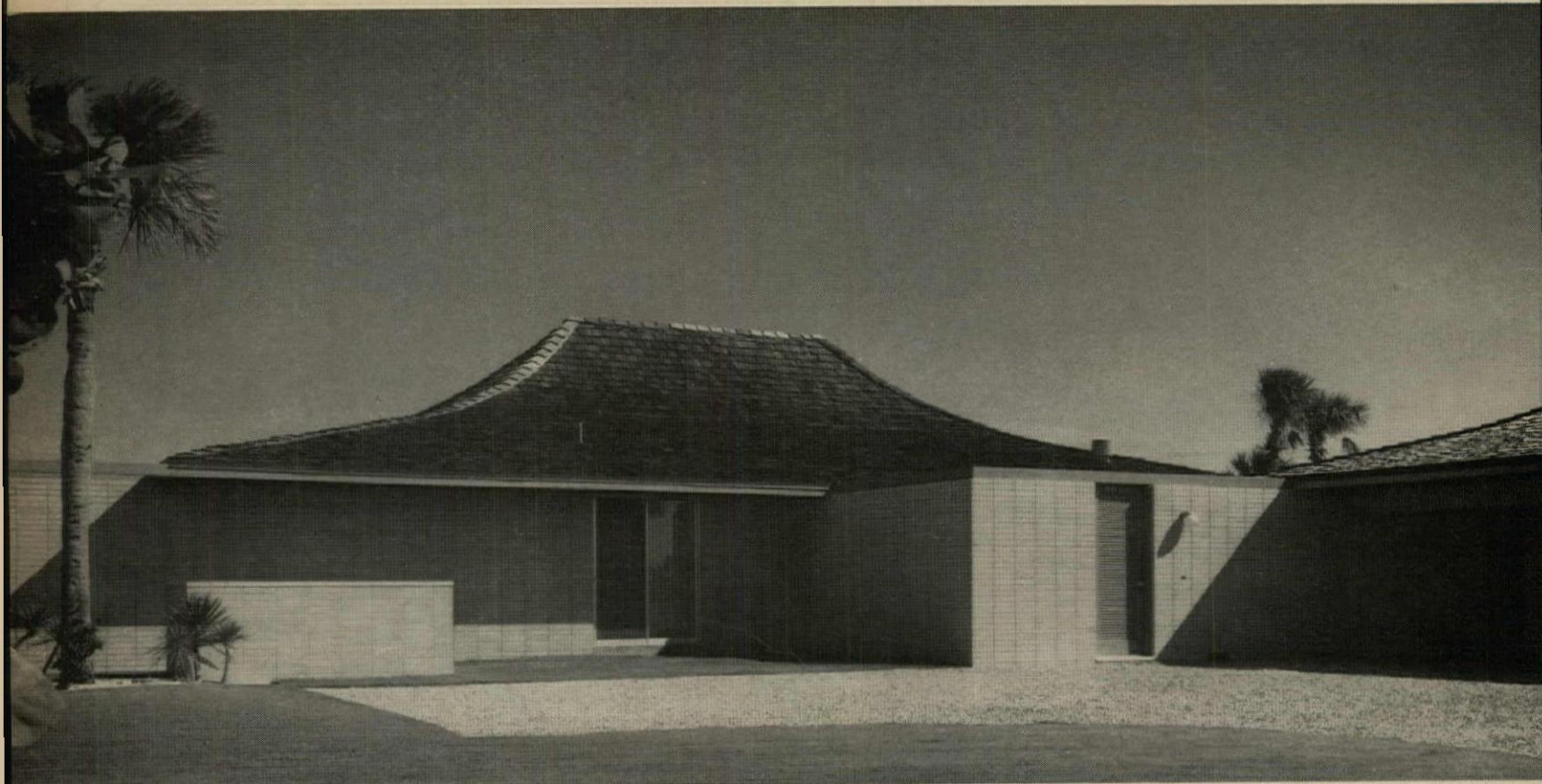
KITCHEN-FAMILY ROOM is lighted by window wall on garage side, at rear, and by roof opening on atrium side. Upper cabinet divider is two-way.



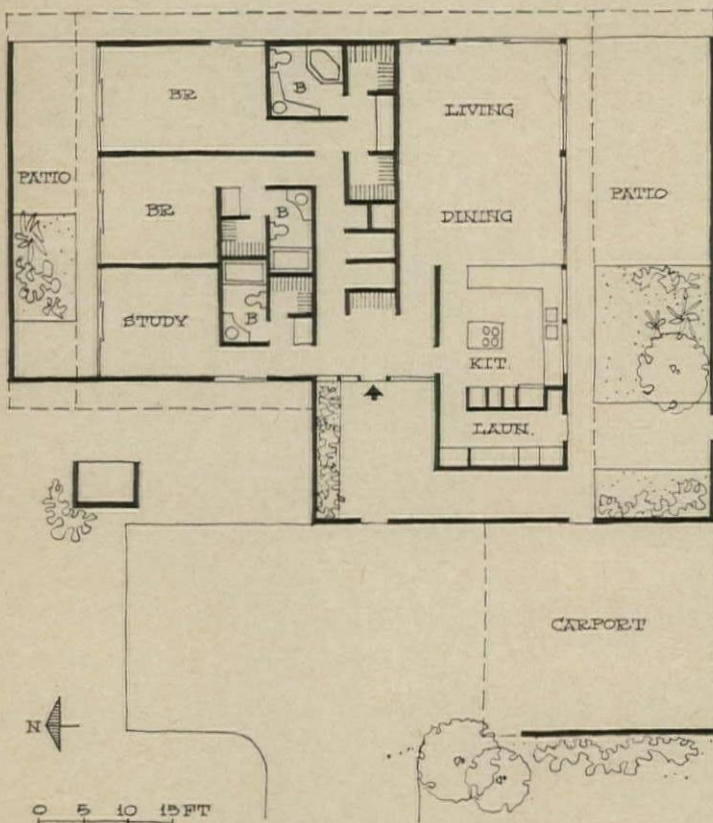
OPEN STAIRWELL to lower level turns gallery at rear of atrium into small balcony. Lap siding on gallery walls carries exterior look inside.

GLASSED ATRIUM includes a formal garden area just inside entryway. Access is from family room, rear. Tile floor is same as in gallery.





PROTRUDING FRONT WALL conceals entry and part of outdoor living area (plan, below). Sliding glass doors give direct access to study.



COURTYARD PLAN puts half of main living area inside, half outside. Side courts were architect's answer to limitations imposed by deep setback.

A Japanese-style house with walled courts on three sides

Every room in the house—and the entry as well—has complete outdoor privacy behind the court walls. And the courts, which are open at the rear, also provide direct access to boat docks that are located behind this waterfront model.

To combine the main living area visually with the outdoors, the red brick floor of the L-shaped court is continued into the foyer, kitchen and living-dining room. Blocks of planting relieve the monotony of the long courtyard floors.

Clean exterior lines—stacked-bond block and a gently sloping shingled roof—are repeated inside by high ceilings of exposed roof decking and beams, and also by exposed block walls. Other interior features: deep storage compartments in the kitchen and bedroom hallway; dressing tables in all three bathrooms; closets set into the bathrooms so the doors do not interrupt the high bedroom walls.

Award of merit. Builder: Jack Lavender. Architect: J. West, AIA. Location: Sarasota, Fla. Price: \$60,000 without land.



Photos: Lionel Murphy



LONG COURTYARD is paved with brick and sectionalized by garden beds. Door at left leads out to yard; door at rear goes to carport in front.

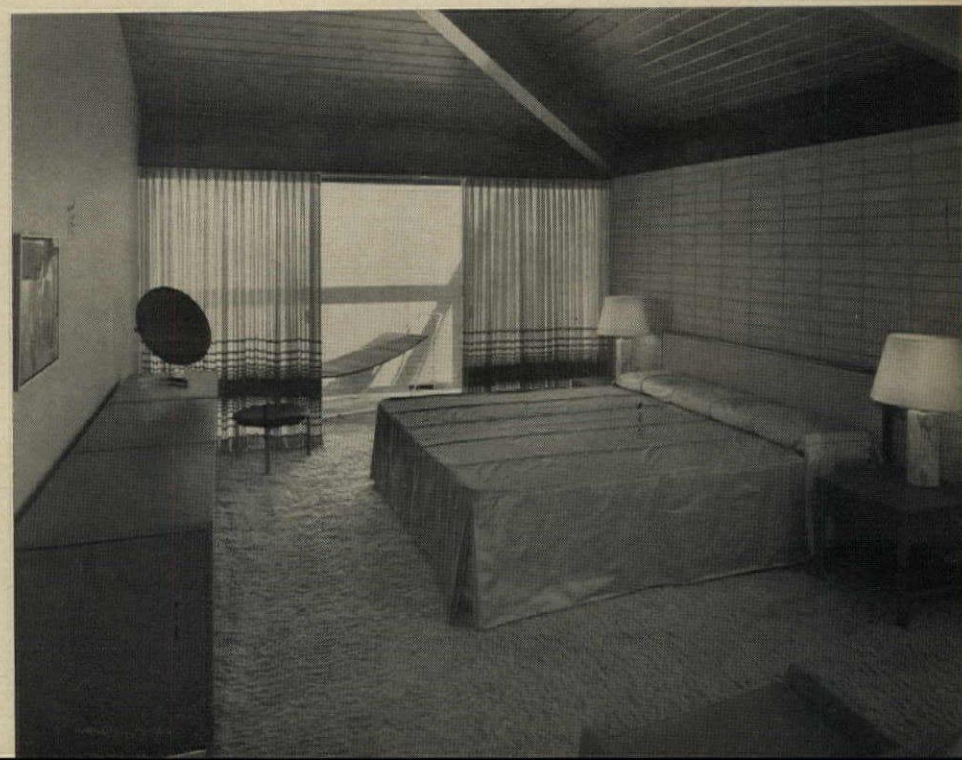


LIVING-DINING AREA may be separated from kitchen by folding screen. Brick floor, extending beyond sliding doors, links area visually with court.



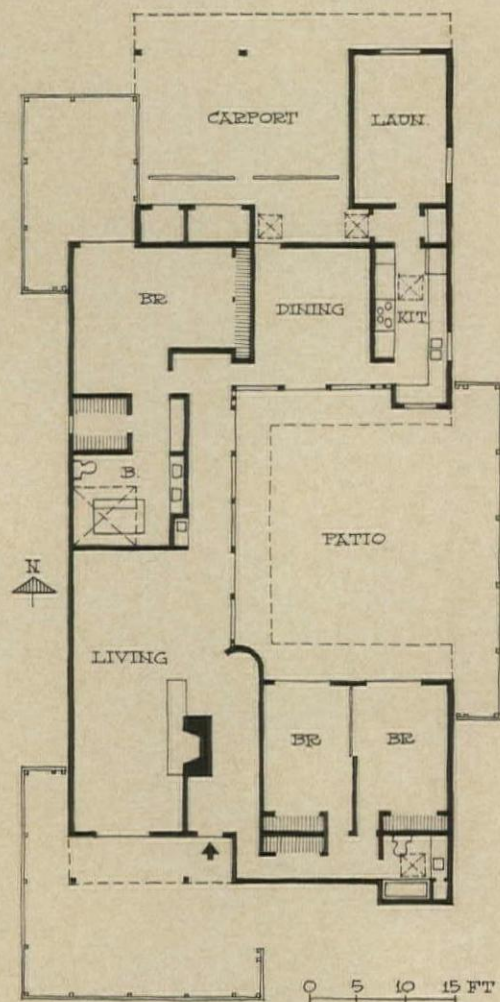
SLOPING CEILINGS and high walls add visual space to interiors. Bedroom closet is built into bathroom, at rear.

INTERIOR SURFACES—dark-stained wood on ceilings, white block on walls—echo exterior and offer low upkeep.





STREETFRONT PRIVACY on narrow lot was achieved by screening entry and living room window with 6' fence made of exterior siding boards.



WELL-ZONED PLAN puts children's bedrooms and bath at front of house, master bedroom at rear and court between.

A C-shaped house planned for privacy on a tight city lot

The three sides of the C enclose a 28'x30' court, which is the principal outdoor living area. Every room except the master bedroom looks inward to the court and has direct access to it through French doors. A separate patio serves the master bedroom, keeping it independent of and thus insulated from the rest of the house.

The plan takes up the full width of the 50' lot, so the carport is at the rear; it is reached through a mid-block alley installed years earlier when the block was originally developed. The front of the lot has a rolled stone surface which provides space for off-street parking by visitors.

One low-maintenance finishing material—re-sawn pine board—is used for both exterior and interior walls. Ceilings are also wood paneled (and stained white). To minimize openings in outside walls, skylights are used as the sole source of daylight in both bathrooms.

Award of merit. Builder: Manning Grinnan. Architect: Enslie Oglesby. Landscape architect: Nancy Marcus. Location: Dallas. Price: \$38,500 without land.



OFF-CENTER COURT is enclosed on three sides by C-shaped house. Grid under high overhang is sun baffle for south-facing window walls.



EXPANDABLE ROOMS for children are partitioned by heavy sliding wall which can be opened (as shown) for daytime activities, closed for sleeping.



LIVING ROOM faces courtyard across gallery which serves to extend living area. Both walls and ceilings throughout house are wood paneled.

continued



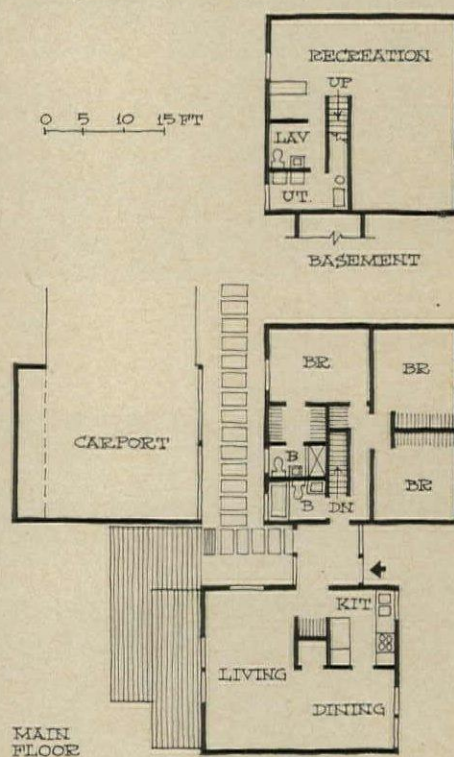
MODULAR PAVILIONS offer wide choice of siting plans and elevations. Buyer has option to expand any floor plan by 4'. Doghouse is optional.

A three-unit pavilion house designed for factory production

Garage, living and sleeping areas are each in separate buildings constructed entirely of standardized, interchangeable components.

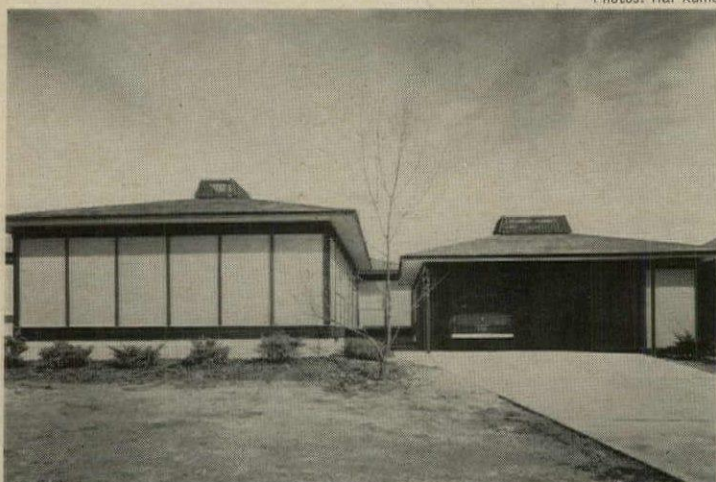
Design, however, is not standardized. Roofs, for example, may be flat, hip or pod. Either of the living units may be raised 4' to create two levels with a split entry. And the three pavilions—a 20'x24' living-dining-kitchen unit, a 24'x24' three-bedroom, two-bath unit and a 20'x20' carport—may be lined up on the site or offset in a variety of groupings and elevations. An 8'-wide link between the living units triples as passageway, entry and rear-yard access. The double carport is detached.

Award of merit. Builder: Alan E. Brockbank Organization. Architect: Boyd A. Blackner, AIA. Location: Salt Lake City. Price: \$19,995 with land.



THREE-UNIT PLAN contains below-grade recreation and utility rooms under bedroom pavilion.

Photos: Hal Rumel



OFFSET SITING screens living-dining-kitchen pavilion at rear of lot. Bedroom pavilion at front conceals main entry. Garage hides outdoor decks.



FLEXIBLE DINING AREA can be combined with kitchen (as shown) or treated as living-room L by altering partitions. Fireplace is optional.



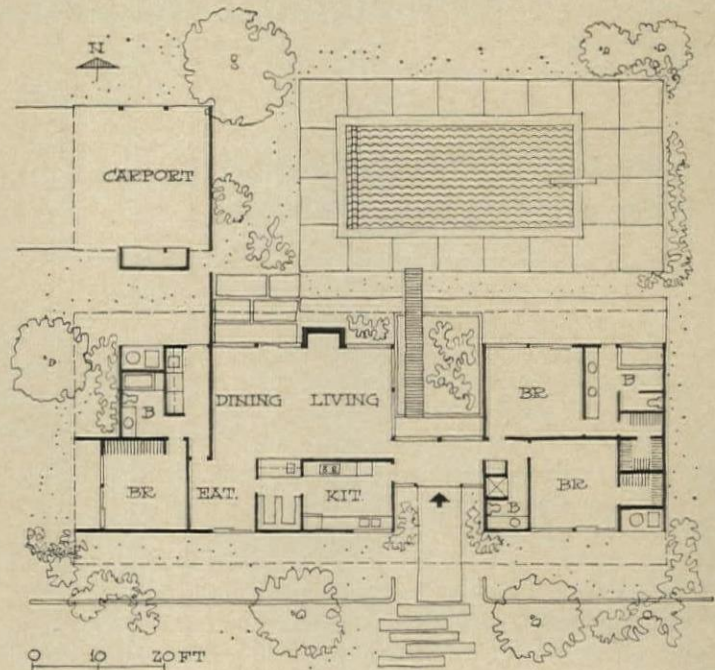
LONG FRONT WALL conceals all rooms but leaves see-through entry exposed. Post-and-beam exterior is finished with stucco and stained redwood.

An H-shaped house divided by a glass-walled entryway

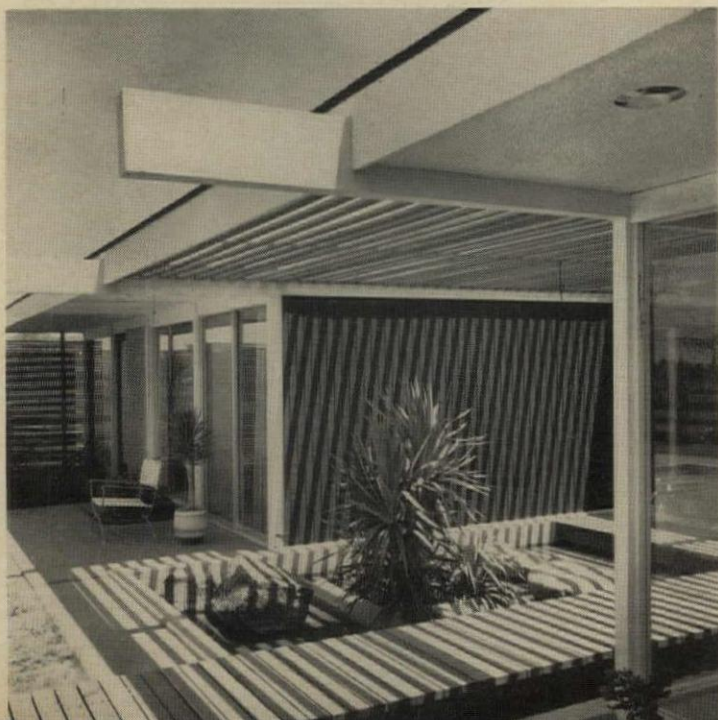
The foyer is both link and buffer between the quiet zone of the house and the active-living area. From the street side, it provides the one point of vertical relief in the long horizontal lines created by low eaves and house-length privacy walls. From the rear swimming area, it is the backdrop for an inset decorative pool and garden.

One flexible plan element—the detached carport—lets the builder duplicate this economical post-and-beam rectangle on irregularly shaped lots. And changing the front privacy walls, which screen patios on each side of the entry, permits a variation in the front elevation.

Honorable mention. *Builder: Fillmore Crank. Architect: Richard Dorman & Assoc. Location: Palm Desert, Calif. Price: \$44,000 without land.*



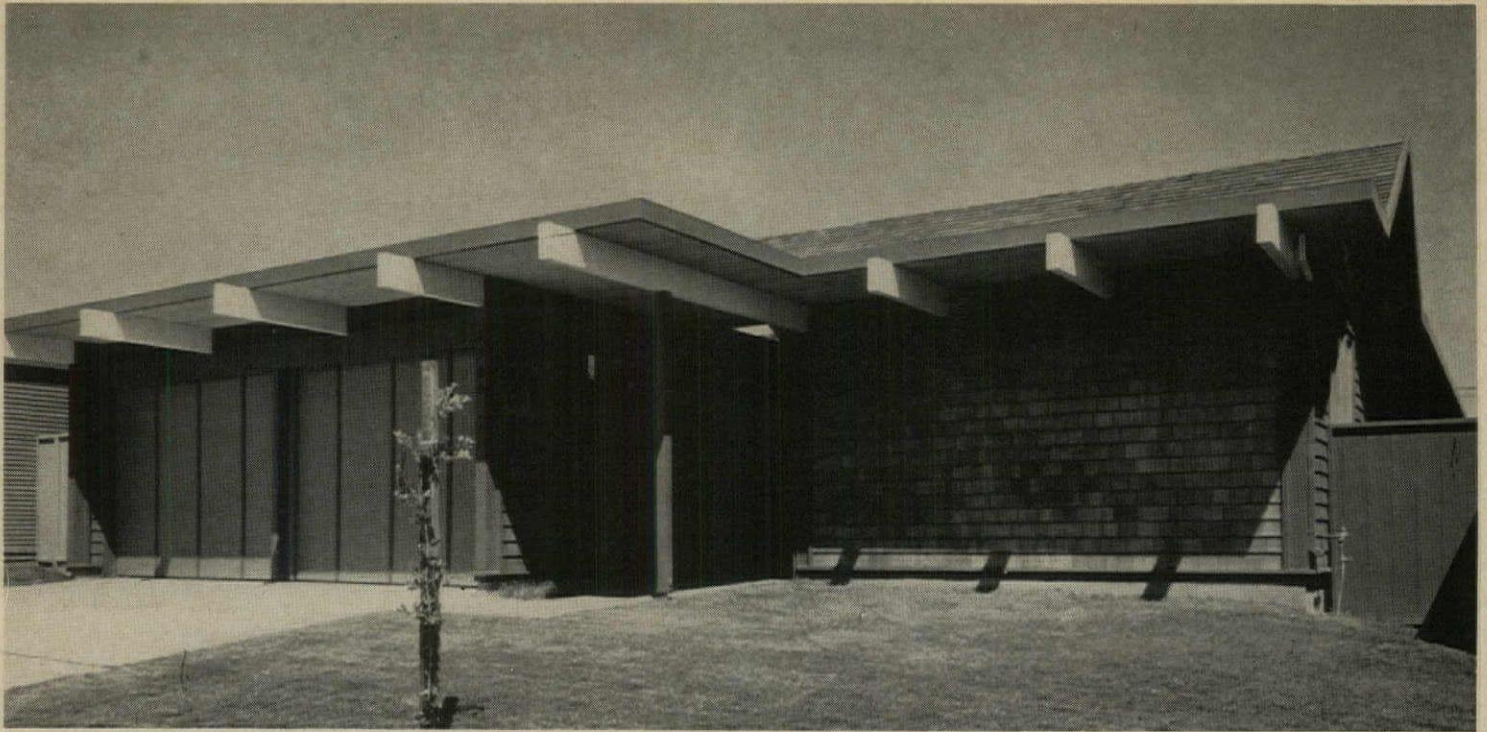
DIVIDED PLAN insulates two bedrooms and two baths from all other rooms. Each half of plan has separate heating, cooling and hot-water equipment.



BACKYARD LIVING AREA, screened from street by lot-wide house, is accessible from master bedroom and living-dining room through glass doors.

POOL GARDEN (left) can be viewed through window walls of entry and living room. Soffit, foreground, is finished with blown textured plaster.

continued



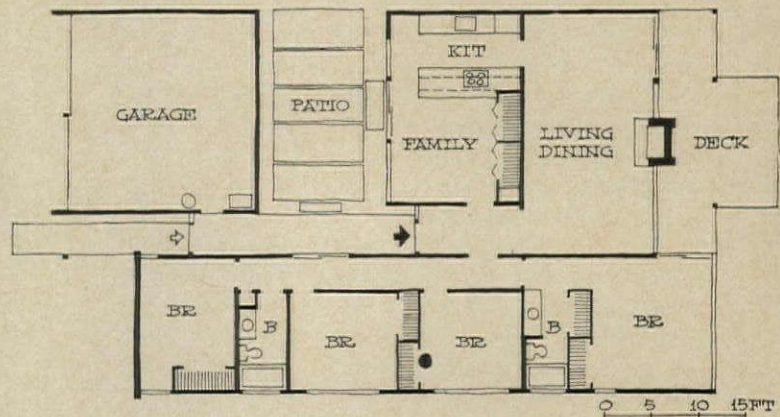
OUT-FRONT GARAGE conceals patio living and creates deep entry. Cedar shingles and redwood trim are used around entire house and on gable roofs.

An L-shaped house designed for a narrow-lot subdivision

The lot is less than 50' wide. Yet the house is private because a detached street-front garage screens the entry, main living area and front patio, and the living-dining room opens to a secluded rear deck.

Four completely different elevations permit repetition of the plan without creating a row-house appearance. Three models (*shown above and below*) have post-and-beam framing—two with flat roofs varied by open-gable and open-truss roofs over living rooms and a third with a gentle roof pitch over the entire house. A fourth model has separate pyramidal ceilings over the family and living rooms.

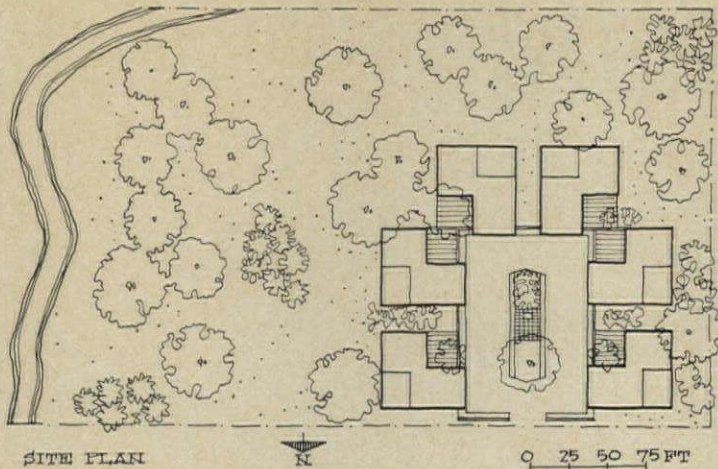
Honorable mention: *Builder: Stoneson Development Corp. Architects: Fisher-Friedman Assoc. and Robert J. Geering. Location: San Bruno, Calif. Price: \$27,500 with land.*



INDOOR-OUTDOOR PLAN gives family room and three bedrooms access to secluded patio. Living-dining room and master bedroom open to rear deck.



VARIED ELEVATIONS for same plan—sloping roof above entire house, left, or flat roof with open gables—avoid row-house look on narrow lots.



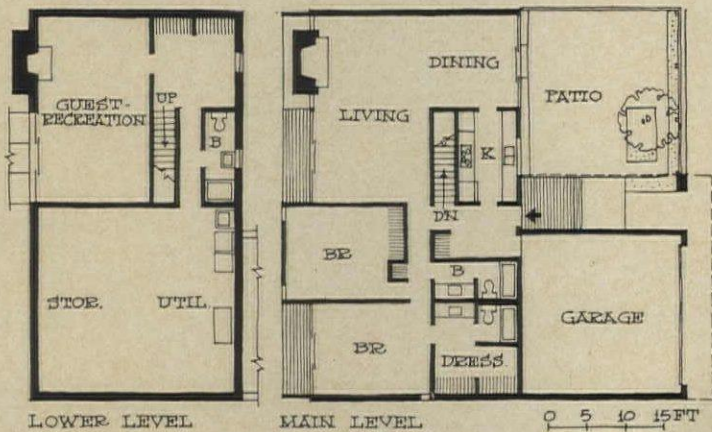
SITE PLAN CLUSTERED HOUSES are as close together as zoning permits to make maximum use of partly buildable site located in prime residential area.

Six luxury rental houses clustered on a problem site

Only one corner of the 2 3/4-acre site was high enough to build on—the rest is flooded periodically by a river that borders the land on two sides. So the houses are tightly grouped on the high ground but planned so that no two living areas, both indoors and out, are exposed to each other. Only the front and rear walls have windows, and the front elevation is screened by a two-car garage and redwood fence.

The plan permits living on one floor but has a lower level for utility and recreation. To provide a contrast of ceiling heights between bedrooms and the living-dining room, two sections of roof slope in opposite directions.

Special merit award: Builder: Willits West Co. Architect: Carl Luckenbach, AIA. Location: Birmingham, Mich. Rentals: \$375 to \$425.



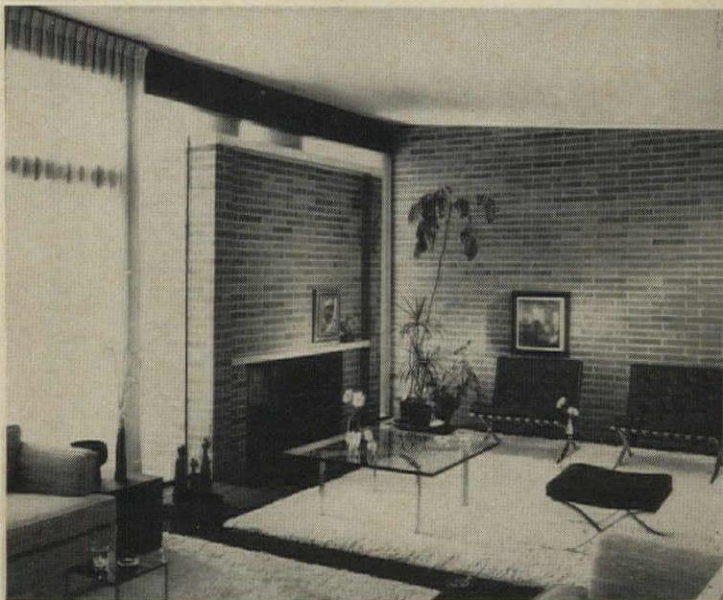
TWO-BEDROOM PLAN attracts small upper-income families who want the no-responsibility convenience of an apartment and the livability of a house.



REAR BALCONIES are enclosed by redwood sidewalls. Only other windows are at front. Neighboring houses cannot be seen from any position inside.



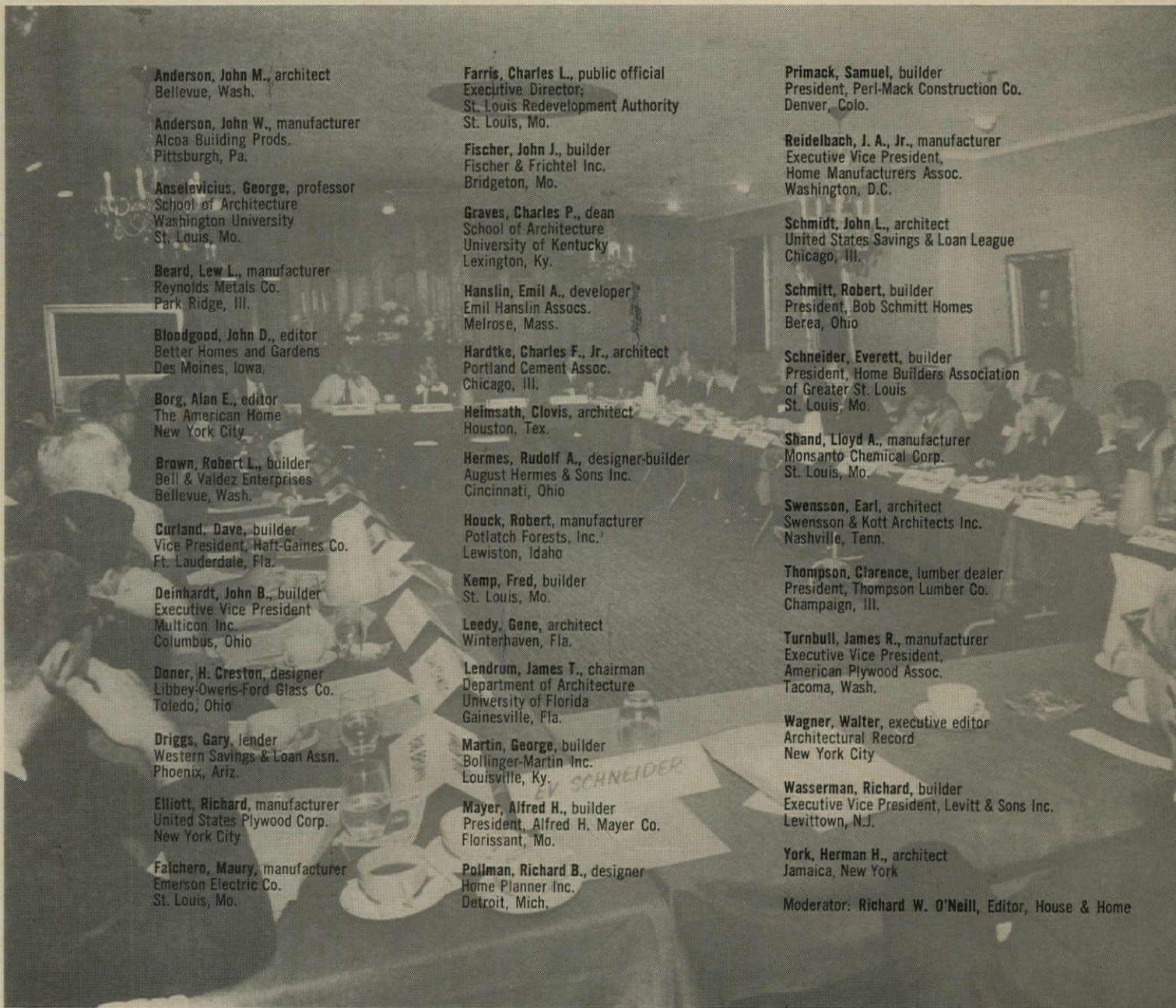
FRONT PATIO, off dining room, is screened on two sides by redwood fence and carport. Deep overhang of carport, foreground, covers approach to entry.



GLASS-WALLED LIVING ROOM has rear view of wooded site. Massive brick fireplace appears free-standing because it is surrounded by glass.

ROUND DESIGN TABLE

Highlights of a two-day discussion among builders, architects and other industry leaders on today's housing design, with emphasis on why architects and builders have so much difficulty establishing and continuing a working relationship with each other.



Anderson, John M., architect
Bellevue, Wash.

Anderson, John W., manufacturer
Alcoa Building Prods.
Pittsburgh, Pa.

Anselevicius, George, professor
School of Architecture
Washington University
St. Louis, Mo.

Beard, Lew L., manufacturer
Reynolds Metals Co.
Park Ridge, Ill.

Bloodgood, John D., editor
Better Homes and Gardens
Des Moines, Iowa

Borg, Alan E., editor
The American Home
New York City

Brown, Robert L., builder
Bell & Valdez Enterprises
Bellevue, Wash.

Curland, Dave, builder
Vice President, Haft-Games Co.
Ft. Lauderdale, Fla.

Deinhardt, John B., builder
Executive Vice President
Multicon Inc.
Columbus, Ohio

Doner, H. Creston, designer
Libbey-Owens-Ford Glass Co.
Toledo, Ohio

Driggs, Gary, lender
Western Savings & Loan Assn.
Phoenix, Ariz.

Elliott, Richard, manufacturer
United States Plywood Corp.
New York City

Falchero, Maury, manufacturer
Emerson Electric Co.
St. Louis, Mo.

Farris, Charles L., public official
Executive Director,
St. Louis Redevelopment Authority
St. Louis, Mo.

Fischer, John J., builder
Fischer & Frichtel Inc.
Bridgeton, Mo.

Graves, Charles P., dean
School of Architecture
University of Kentucky
Lexington, Ky.

Hanslin, Emil A., developer
Emil Hanslin Assocs.
Melrose, Mass.

Hardtke, Charles F., Jr., architect
Portland Cement Assoc.
Chicago, Ill.

Heimsath, Clovis, architect
Houston, Tex.

Hermes, Rudolf A., designer-builder
August Hermes & Sons Inc.
Cincinnati, Ohio

Houck, Robert, manufacturer
Potlatch Forests, Inc.
Lewiston, Idaho

Kemp, Fred, builder
St. Louis, Mo.

Leedy, Gene, architect
Winterhaven, Fla.

Lendrum, James T., chairman
Department of Architecture
University of Florida
Gainesville, Fla.

Martin, George, builder
Bollinger-Martin Inc.
Louisville, Ky.

Mayer, Alfred H., builder
President, Alfred H. Mayer Co.
Florissant, Mo.

Pollman, Richard B., designer
Home Planner Inc.
Detroit, Mich.

Primack, Samuel, builder
President, Perl-Mack Construction Co.
Denver, Colo.

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Executive Vice President,
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United States Savings & Loan League
Chicago, Ill.

Schmitt, Robert, builder
President, Bob Schmitt Homes
Berea, Ohio

Schneider, Everett, builder
President, Home Builders Association
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St. Louis, Mo.

Shand, Lloyd A., manufacturer
Monsanto Chemical Corp.
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Swensson, Earl, architect
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Thompson, Clarence, lumber dealer
President, Thompson Lumber Co.
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Turnbull, James R., manufacturer
Executive Vice President,
American Plywood Assoc.
Tacoma, Wash.

Wagner, Walter, executive editor
Architectural Record
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Wasserman, Richard, builder
Executive Vice President, Levitt & Sons Inc.
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York, Herman H., architect
Jamaica, New York

Moderator: **Richard W. O'Neill**, Editor, House & Home

Nothing has brought the homebuilding industry more criticism than the humdrum design of today's mass housing. It is a rare month when some critic doesn't cry "ticky-tacky," "cookie-cutter" or "rape of the land." Yet, allowing for some exaggeration and not a little downright dishonesty, there is truth in much of the criticism.

Most builders will admit that new houses could be better designed, could offer more of the pleasures of living and are often offensive in line, proportion, color, texture and materials.

And the chief reason for these shortcomings is that homebuilding does not make enough use of the one group trained in the planning, design and aesthetics of housing: architects.

Builders usually say architects don't know what the problems are, don't know what people want, don't know how much

things cost and how much houses can be sold for.

Architects disagree. They say builders low-rate the taste of buyers and simply don't want to pay for good design.

This long-standing controversy prompted HOUSE & HOME to invite 39 thoughtful architects, builders and other concerned industry members to a two-day Round Table. Its purpose: to identify the basic reasons for the lack of architect-builder cooperation and to suggest some approaches to a better relationship. Significantly, the participants agreed that buyers are showing an undefined but growing demand for something new, something more livable than is usually available in today's houses. HOUSE & HOME offers these excerpts from the discussion to start every reader thinking about what he can do to bring about the better design that everyone is seeking.

1

Good design must be defined in terms not of style, but of plan, proportions, relationship of materials and total environment.

Traditional styling seems to appeal to many families, but it is debatable whether it is the style itself or the emotional associations it evokes. Architects insist they can satisfy the same emotional needs in a truly contemporary house.



Robert Schmitt: Good design today is one of the most saleable things there is. A number of people are experiencing this. Perhaps we were forced into bettering our product by economics, but the homebuyer today is demanding and recognizing good design.

George Anselevicius: Young people are tired of being fooled and are not going to be fooled much longer. They do know what they want. They realize we are giving them a phoney and ridiculous house. Manufacturers say they are giving these people what they want. They play on their weaknesses. This, I think, is terrifying.

Gary Driggs: A lot of things may sell, but when people live in them and see the kind of products and materials they have, they find the housing is not as good as the glamorous impression they got in the model house. They will stay in a house and be willing to pay off the mortgage only if there is decent environment and all of the products and materials are as they are supposed to be.

Gene Leedy: Regardless of style, a house often rejects life. It doesn't work. Most of the houses built in the U.S. in the last few years have little differences in their basic floor plan. Find some way to make houses larger. Recognize the fact that people have children and people are entitled to privacy.

George Martin: I believe architects are trying too hard. Everytime I consider an architect, I see a church of his under construction and it scares the daylight out of me. Some places in housing you need to quit horsing around, quit embellishment and just do a functional design.

Clovis Heimsath: Let me ask a question of the builders. Do you really accept us architects as knowing anything more than you do about aesthetics and or about building?

Dave Curland: We build in Ft. Lauderdale and everything there is concrete. Some buyers want colonial homes, so we give them the style they want, even though they are buying concrete houses. We don't try to give them what we think they should want. We don't go to the architect or the designer and ask him to design the exterior. We try to tell him what he's faced with.

Heimsath: Couldn't you give the architect the job with no requirement of style and no mention of materials? If you present the problem without answers and actually give the architect the opportunity to sit down and solve it, he will.

portunity to sit down and solve it, he will.

John Fischer: Anyone can ask an architect to rework a design or an elevation. I think the average builder is asking the architect for an elevation or for some fronts.



Dick Pollman: Go into the back yards of subdivisions and look at the rears of all the houses. It's kind of a grim pattern back there.

Leedy: I don't like colonial although it's very popular. Some of my best clients come to me and say, "We want a colonial house." Rather than turn them down, we analyze why they want a colonial house. Their idea of a traditional house may be entirely different from ours. We analyze further and find these people may have a lot more taste than we gave them credit for.



Jack Bloodgood: When someone says he wants a modern

house, there is no telling what he wants. I would rather work with a person traditionally inclined. The warm feeling, the fireplace and the intimacy are all things we associate with early American. They want the warmth and invitingness and they will say, "Why can't you do this and why can't we have this?"

Earl Swensson: When it comes to budgeting house design, why not include more than the house? After buyers move in, there is little money left to pay for landscaping and outside amenities. The beauty on the outside is beauty to the community.

Sam Primack: Good design is partly the right materials. In Denver every time we put wood siding on a house that faces south or west, we must paint it every blessed year. For this reason, we wind up with all-brick houses and some materials do not blend well with it. If it sells, then we have done a decent job.

Anselevicius: I don't see any relation between selling and good design. I have bought many things that had no relation between selling and goodness. The question is bigger. I'm not interested in just beauty, but in vitality and in the circumstances in which people live. Beauty is not the same as equality of life and opportunity for people. When you look at houses today, the problem seems to be boredom.

Leedy: I question our use of the word "traditional." A new "colonial" today is a phony. Houses built today are contemporary houses, and they are either good contemporary or they are pretense.

continued



Martin: That is certainly a very limited definition. A colonial built today can have a great deal of charm and the luster, as well as the customer, knows it.

Bloodgood: It has been my experience that the types of houses that the consumer likes most are neither pure colonial copies nor very modern houses. They like houses that are contemporary in attitude and detail, but that are traditional, often two-storied in mass.

Alan Borg: I agree. I find that the consumers want a clear, well-defined design—colonial or contemporary—as long as it has a feeling of warmth and a good mass in which to live.



Heimsath: Some people have tried to relate the matter of taste

to occupation and background, but in Houston, 25 astronauts, highly trained in modern science, purchased houses. Only one of the 25 has a contemporary house. The rest have colonial houses.

Primack: We are trying to sell a better way of living. Because of climate, air conditioning is not completely necessary in Denver, but it has motivated a lot of people to buy houses and it sells houses. We are going against the grain in Denver by offering it. Air conditioning does sell houses and so do posts and shutters and considerable bric-a-brac. I'll put on shutters and give them whatever appeals to them if that is what it takes to sell a house.



Al Mayer: One thing an architect has to understand: he must be willing to make slow progress toward better design. When the builder starts talking about shutters, the architect throws up his hands and doesn't want to go even one small step with him. Architects generalize and feel that fine details and trim and design are equally appealing to all prices and classes.

Martin: You have a point there. What people should like and what we should give them and what they should have are apt to be different. Ham Crawford did one of the best designs in Louisville in 1950. I think it was, and is, a tremendous house. The point is that it was too big a step in this traditional area for people to take then, although the house has great resale value today. The young, modern people like it. Some new development might do very well with this concept.



Walt Wagner: Some houses leave you completely cold; in others you want to take the 10¢ tour the minute you hit the front door. There are things about that house that please and excite you. Almost everyone recognizes and likes them. Our problem is how to create these elements.

Heimsath: Four or five years ago, modern meant flat top. We haven't designed flat tops since then. I would say a flat roof is as much a design cliché as anything and as far as creating houses for people, no good architect is just pushing flat roofs. I think the architects are willing to

work with you if you want shutters, if you give them an opportunity to do something better with the land planning and the facilities that go with your houses.



Charles Hardtke: I think we have to relate the problem of taste to a search for security. People seem to get the feeling of security, roots, out of traditional design and not necessarily out of contemporary design.

Mayer: Another factor is the fact that colonial is much less costly to build than contemporary. You can buy all of the woodwork and details right out of a catalogue. Contemporary has not developed anywhere near to that degree.

Jim Lendrum: There are a number of other good reasons for colonial architecture. Our entire building system is based on handicrafts and in colonial you can cover gaps with moldings.

Fred Kemp: We can get an awful lot of mileage out of our costs when we do colonial.

2

A true give-and-take relationship between builder and architect is vital. But it is hard to develop and successful examples are rare.

Architects want to design builders' houses and builders want better design, but lasting partnerships have been few. A clear understanding of, and respect for, each other's area of responsibility and competence is a necessary first step.

Leedy: This discussion asks the architect to compromise. In the last ten years, it seems to me that all of the compromise seems to have come from the architect and none of it from the builder. All the builder knows about the market is based on the past, but when he asks to put the same old things in the same old house, it is just nonsense. In most instances, the only jobs architects are given are changing the floor plan or making some small changes in the shell of a building.

Dick Wasserman: How can a large tract builder develop good

design? Can he work with outside architects? We have worked with many of the country's most prominent and are pleased with the results, but we admit it has been a difficult relationship for both parties. We constantly find that the outstanding architect wants to demonstrate his genius and maintain his identity. We must build houses that blend with the existing community and we do not attempt to dictate taste. Nevertheless, we strongly endorse the use of outside architects in conjunction with our own design staff. It is the best means of obtaining new and creative ideas

and a product freshness that is essential.

Our own design, construction and supply departments make whatever modifications are necessary to make the designs feasible for economic production.

Leedy: The problem is that the architect's services are used like a streetcar. He gets on, stays two stops and then gets off. When an architect is hired, I think he should be brought into the whole operation. He should know the sociological environment of the area. He should understand the methods the builder uses to produce and sell his product. This must come first before designing the individual house. The individual house for one builder will be entirely different from another builder's, because some builders

do certain things much better than others. The architect recognizes this. He doesn't just throw off the same plan to every builder. The great failing is that of the builder-architect relationship.



Curland: We pay our staff architects well because they are important in our operation. We hire them because we want them to be a part of the entire selling and building process. They work with

our custom-house buyers from the moment they walk in. They are an integral part of our sales department.

Heimsath: Won't you builders let us design your houses and still retain our independent architectural practice? I don't think the architect can be a staff man and give truly objective service.



Leedy: My nonresidential practice is one source of ideas for design, materials and technology that I can profitably work into house design.

John Schmidt: Some architects are tailored to do custom houses, and others are tailored to do project work. This must be considered in the relationship of the architect and the builder. We are not able to give the builder good answers without being involved in the very beginning of the project, and we rarely are. We take a real sense of responsibility in our job, and we do know the mechanics of building. We are not satisfied just to design and let the builder tell us how it is to be put together. The only way we can successfully build is when we work with them and they work with us together as a team all the way through.

John Deinhardt: Maybe the first quality the architect has to have is to be a salesman. If he is a good salesman, he will sell himself and his design. The first party he has to convince is the builder, and the builder will help convince the buyer.

Schmitt: One third of our sales today are of completely new designs that we create. Two thirds of them are variations of plans that we have already built. Our buyers are interviewed, and we get a feeling of what they want. If we have a plan category they prefer, we might print up four, six or eight plans or elevations for them to study. They come back in a week, and if they haven't seen anything they like, then we make a completely new plan, or we make whatever variations are necessary on any plan they did like.



Al Reidelbach: Actually, our dealers and distributors are very small builders, only ten to thirty houses a year. Unless they steal their plans or get stock plans, who do they turn to?

Schmitt: This is very critical. The smaller builder is helpless along these lines. With a very tight budget, and a lot of FHA and local government problems, he has never found a way to progress in his design.



Borg: What about the designer-builder? I think a lot of people here are in that category.

Kemp: I myself am an architect and a builder, and another architect is in our employ on all our houses from the very beginning. But very early we do an economic study of the house, and the architect is in on this. He is in on the marketing study along with two or three other members of the firm. We run buyer profiles, and get a pretty good picture of the buyer. We try to show the architect the problems, rather than just present the problems as "design something that will sell." It seems to make the job far more challenging and interesting for them and is more effective in the final results.

Fischer: All of our houses are our own prefabricated houses. We have architects and engineers working for the prefabrication company. We find that most of the architects we talk to don't know enough about prefabrication methods to do any further work for us.

Leedy: One of the problems is the difference between the philosophy of the architect and the philosophy of the builder. I have no indication why people like certain houses, but when I know their needs, I feel that as an architect I can fulfill their needs in honest, straightforward fashion, without copying anything that has been tried before. Architects are trained to do these things. But the builder has been brought up to copy anything if it sells. I am simply trying to solve the same problem that the builder is—creating a house that people want to live in. He does it by copying. I do it by trying to satisfy their real needs.

Clarence Thompson: We must find a way to get good architectural design for the very small builder in the small town who only builds a few houses a year. I would like a plan service for him, only with higher design

standards than some of the plan services presently available.



John Anderson: How can we best help the small builder with property scattered all over in different parts of town?

Chuck Graves: We think we could in our office. We simply charge a small builder an hourly rate. We develop not working drawings but some basic details of design from sketches. I have to admit we don't make any money on it. The man who builds ten houses can afford architectural service and land planning on an hourly basis.

Swensson: All of our work is in multi-family, and the extra construction cost of a comprehensive environment plan is a serious problem, since these costs must be absorbed in the rentals. Therefore, we combine total environment costs with the cost of the buildings themselves, in determining total project cost.

Leedy: We are all after a better product, and I don't think we care who does it, the designer or the builder, licensed or unlicensed architect, or Joe Doaks—but we need one guiding force to follow design through all stages. I say that should be the architect.

Schmitt: How can an architect know construction if he has never personally built a house and kept cost sheets on it?

Schmidt: You don't have to have a baby to be an obstetrician.

3

Good design talent is never cheap. But volume builders can afford to pay well for better design that will attract more buyers.

The per-house fee system sometimes works well, but too often the architect is gambling for his fee. If too few houses are sold, even drafting costs may not be regained. A combination of basic design fees and sliding royalties is one answer.

Heimsath: How can any architect work in this field? Can you afford to have builder houses designed at all? In Houston we come up against design service people who get, perhaps, \$150

for a 3,000-sq.-ft. house. We can't afford to do this work. Some builders, looking for new houses, will pay 6%. You do the design on the first houses and help him get started. The guy

says "this is great, now the next one we want you to do for \$150"—and I can't do it.

Leedy: Six per cent is not adequate. An architect designs a house for a builder. This is almost an industrial product. He should get an industrial designer fee. Too many architects work on a percentage basis or royalty, but frequently this is un-

realistic. They never build the number of houses they promise. Unless the architect gets a lot of royalties, he ends up maybe breaking even. I think the Levitt people have a fine approach.

Wasserman: We feel we shouldn't go to an architect and ask him to gamble. We feel that we can get the best brains in the architectural field by paying ade-

continued

quate fees on a time-card or fixed-fee basis. We generally commit only for design studies, initially. We then select those with the greatest development potential.

Herman York: Many architects believe that a housing practice not only takes them out of the main stream, but may restrict their earning potential. For 18 years, I have been trying to create better design in the one-family house and have specialized in this field. The rewards, emotional as well as financial, have been far above expectations.

Heimsath: How much would builders be willing to pay on a \$30,000 house for architecture?

Thompson: If a house is being built by a small builder for speculation, I say maybe \$500.

Fischer: If you can't feed an architect enough commercial work, then he can't make enough money. And if you don't give him the residential work, you don't keep his ego alive.

Swensson: I wonder if we couldn't come up with some sort of clinic-type of concept—not only one architect but a collection of architects.

Graves: Maybe the local AIA could establish some sort of a homebuilders' advisory service. We might have a clinic one night

a week for this for the small 5 to 10 to 25 houses a year builder. The architects and the other professionals would give him assistance and advice on a time basis.



Creston Doner: Perhaps architectural schools should have salesmen's courses so that the better designers and better archi-

itects they turn out will know how to sell themselves to the people they are dealing with and their skills to the people that need them.

Anselevicius: We are already inundated with salesmen. What we need are more socially committed competent professionals, with both ideas and ideals. They must be able to communicate their ideas, but this is a matter of knowledge and intelligence.

Rudy Hermes: Architects should see the opportunity in this new market. They should be first-class designers, but also men who understand the builders' problems and are sympathetic to them.

4

Local, state and federal governments can aid—or hinder—better design, especially by their receptivity to change in planning and technology.

Local resistance to change reflects the unconcern or hostility of the public, which needs to learn the value of better design and planning. FHA's system works smoothly for volume-built projects but is not adaptable enough for the custom house.

Schmitt: We lost a recent case because the judge said that the local community didn't have to accept minimums. I believe we lost this case on the basis that the community did not have to accept a minimum design for aesthetic reasons. I think federal legislation on this point would be a very great stride toward what we are trying to accomplish.

Martin: I think we need changes in zoning under our existent laws because we are not doing what we could be doing. There are many projects that have rigid front and side setbacks, but if we could locate the house differently, we could develop better siting.



Bob Brown: We have had great success in Seattle with planned unit development. In fact, we've gotten anything we've asked from local officials. The problem we had was that FHA was dragging its feet.

Wasserman: I think it is obvious that PUD is becoming more and more important and requires educating and publicizing beyond

the municipal officials. It's not enough to have it read by a few planning boards. We need many individuals in every community who are familiar with the idea. It needs to be publicized in magazines and papers read by the general public. When the public knows the advantages of a planned unit development, it will put pressure on the town board and they will soon respond.



Graves: We are going to have greater difficulty in providing multi-family housing that adds interest to our neighborhoods unless the building industry uses its political power—particularly in zoning—so we can have variety of building types within a neighborhood.

Charlie Farris: Zoning and land planning are not federal or state things. They are local. All urban renewal is strictly local. It is run from City Hall.

Curland: We haven't built FHA or VA in the south Florida area. Many builders do build under these two programs but FHA and

VA don't work for our higher priced custom houses.

Fischer: This has not been a problem with us. We haven't had appraisals less than \$2,000 above our selling price for I don't know how long.



Primack: We've had the same experience. We don't have any problems. I think these are local FHA office problems that you might have difficulty with. I don't think it's national. Someone said that FHA was a dirty word. I wouldn't be here if I hadn't been building for years under FHA.

Fischer: In the past two years, we have built one FHA 221d3 project and as soon as we can find another place we can build, we will build a second one. They and we are darned happy with the first one and we want to build another.

Schmitt: To say FHA is all bad is foolish. It is one of the greatest inventions of government to vitalize our industry. Its prime function was to show private capital that housing was a good investment and it forced private capital to be more active in housing. Housing became big business because of FHA. Today the mechanics of getting an FHA com-

mitment for large production make it almost mandatory to work with stock plans and stock elevations. It's almost impossible to build an FHA custom house.

Fischer: Is that the reason, or is the reason really that you can't figure out how to do it? Everyone likes to talk as long as they are protected but damn few people have the guts to stick their necks out. Our local FHA has done a real fine job. If any builder can deal with a custom buyer, he can deal with FHA on any volume.

Martin: I disagree 100%. I've dealt with FHA for 15 years. Life is too short to put up with it.

Fischer: You didn't understand me. If you are capable of dealing with your buyer, you sure as hell are capable of dealing with FHA.

Hermes: We have one project in the local office but it has to be cleared by Chicago. We have spent a little over five months trying to get this cleared.



Farris: I think this varies from regional office to regional office. In our case, if we have anything pending in the regional office for more than thirty days, I bypass them and go to Washington. That's what you should do.

5

The lender must throw the weight of his influence—and his appraisals—on the side of better design and planning, and against the commonplace.

The greatest barrier to the "different" house is a low mortgage appraisal that puts a financial handicap on both builder and buyer. One promising lender trend is the use of an architectural panel to review plans before the loan is committed.

Schmitt: The lender has a primary role in design. I wonder if you've ever had the traumatic experience of being turned down for a loan on houses that are well designed but more advanced than the taste of the appraiser? Lenders today put a premium on the mediocre—on the just barely adequate. But the builder doesn't put many quality, low-maintenance items in the house because the lender will discount them. This attitude holds back advanced standards. People are qualified for housing purchase on their income. Yet we know the man is going to spend a great deal more for his housing because of the extras he buys like storm windows, carpeting and a garage. That same man would be a sounder risk if all these things were included and he had the \$15,000 loan that was needed instead of the \$12,000 that his salary qualifies him for.



Driggs: We do care about better design. We held a symposium in Phoenix for both large and small builders, and town and city zoning officials. We invited an architect to talk to them about total environment. We showed pictures of bad projects in town, then showed pictures of good developments. We needed this bad planning and bad architecture.

In our opinion, design is at the bottom of most foreclosures. Even when location and other factors are right, if the design is bad—the project may fail. Not just the house of course—the entire environment.

Deinhardt: If that's really the case, the architect could earn his fees two ways: his design could cut construction costs and it could get us better financing.

Driggs: My own company is now granting 30-year conven-

tional loans. This means that the value of the house must have permanency, including the aesthetics. A few years ago, we had some houses built that looked like Swiss chalets and nothing could be more out of place in Phoenix than a Swiss chalet. They did sell originally, but now they stick out like sore thumbs and are poor mortgage risks. We need materials that last, and we also want design that's in good taste and will stand the test of time.

Martin: How can we get our local savings and loan associations interested in land planning and proper land development? How can you S&L people educate your members to do what Gary Driggs has done?



Schmidt: We have a construction lending guide of about 300 pages that deals with eight or ten various subjects. It took us almost two years to put it together. Our hope is that lenders will use this book as the first place to go when they have a question concerning design or technology.

Primack: Exactly what is this book? Is this going to be some sort of a minimum standard thing?

Schmidt: If there is anything the industry doesn't need, it's another minimum standard. We call it a guide. Essentially it gives lenders some understanding of design and environment. It's a way of putting all of this information in one place.

Driggs: If you would like to get your lender on your team, you should go to him early in the game and say, "I need your help in this land-development loan. These are my plans and this is the better way I want to develop this land and the houses on the land." If the lender knows you

are working with him, he will work with you. I think the Savings and Loan League wants the same thing that you want. I insist that you can get a better loan for your project if you improve the quality.

Anselevicius: I would love to agree with you, but I can't accept that all builders and lenders have improving the environment in mind. Most people build only as well as is absolutely necessary and are no longer involved when the maintenance man has to come in.

Primack: What percentage of lenders give better appraisals to projects with good design?

Schmidt: How close can you get to zero? This is the only instance I know of where it is being done.

Driggs: When we get a plan for a project, we take it to our architectural consultants, whom we hire to appraise properties for their aesthetic and planning qualities. He studies the floor plans, exteriors, siting, everything. He says whether he likes it or not. If he thinks everything is right, he says so. If not, he gives recommendations. Sometimes, we turn it down cold. In a way, this is our own FHA. We charge the borrower for this, just like an appraisal fee. A typical fee is \$25 and the architect-consultant may spend an hour on it. This man, of course, is a real pro, and we use two or three or four so we don't get an inbred opinion. The builder can question our changes. We get the architect-consultant and go over the plan with the builder and show him where it could be a better project. I tell you that economics are on your side. More and more lenders are getting burned. It is often the design and the environment of the house that gives them the trouble.



Swenson: Don't just judge on Gary Driggs' experience—it's unique.

Driggs: Equitable and Prudential are moving in this direction, but in any big company it always takes a while to move because they move slowly. I think you will see this ideal going through the whole industry, at least in the near future.

Doner: Who are the people in Phoenix you are lending money to on this basis? Are they typical of the same kind of people you deal with all over the United States?

Driggs: We cover just about the whole range of families. We frankly do a small amount of FHA. It is mostly conventional, but we have every range of house and apartment and every kind of borrower.



Wasserman: I would like to pose a hypothetical question. Suppose I submitted two houses to you. One, a two-story traditional house, the other one a contemporary. How would you rate these in giving a loan? What is your own attitude, if they were of the same cost and sales price?

Driggs: If the contemporary house were designed for one specific person, it would not have as high a loan value, because it would have a limited market for resale. If it had good proportions, good plan and tasteful use of materials, we would give it as good a loan as a traditional house.



Deinhardt: We had a great deal of difficulty in getting a loan from an institution on a fine new apartment project because it was different in design.

continued

6

Architectural schools today are not oriented toward residential design, and graduates are ignorant of production, marketing and economic limitations.

Before the architect can make a real contribution to volume housing, his education is going to have to include an understanding of how such housing gets built and an emphasis on residential design as a problem worthy of his talent.



York: Several years ago I looked at an exhibit of architectural students' work in the residential field and I was actually embarrassed at the lack of knowledge of construction and construction economy. I think that just as in medicine, the architect should put in a strict internship, working with the builder to learn business details and the economics of construction.

Schmidt: Most architectural schools are turning out young architects totally ill-equipped for residential work. Young people come out of school with the idea

that they must control everything in design, and yet not one of them could create a subdivision when they graduate. Compromise to many of them is a dirty word, and instead of teaching them not to compromise, they should learn that the architect works toward the concept of maximum effectiveness. Not to run away.



Lendrum: Architects like to specialize, but I don't know that any good architectural school should. I think that specialization comes after graduation. The few architects that I know who can

really design houses didn't learn it in school. They learned it by working with clients, builders and from years of design work.

Swensson: One failure of the architect's education after school is that he does not get enough opportunities in the field. In my practice there is no bigger problem than time. Besides having one of our senior members do nothing but work with contractors in the field, we encourage all of our staff to think about the fieldmen's problems.

Kemp: I think the last thing on their minds as students at the university is residential architecture.

Heimsath: Students today are pretty bright and by the time they are sophomores they are reading the local papers, seeing who is commissioned to do what. In Houston they get the local paper and open it up and see all the very badly designed houses and they immediately assume that the housing industry has no place for them and they turn elsewhere for their design career.

Schmidt: I don't think we ought to expect the architectural schools to turn out full-fledged architects to go right in and work with homebuilders. I think the problem of education is the attitude given the students. Most of these kids leave school thinking that a career in housing is not decent. Some think it is something they will have to endure up until they get something better.

Leedy: A young architect doesn't want to work in a builder's office because it doesn't count as time toward his registration. The internship he must put in must be spent in the office of a registered architect. Perhaps if he got credit, he might be more willing to spend a few years learning about volume residential housing.

Graves: You can't have specialization in the architectural school except at the graduate level. The problems in homebuilding should be no different from those in other commissions. Our curriculum prepares the student to deal with people, their program requirements, and to translate them into the finished project.

7

Manufacturers can contribute to better design through new products and materials, but they must work closer—and earlier—with designers and builders.

Both architects and builders would like to be consulted before a product goes on the market because they can help determine how it can best be used. Everyone dislikes materials that imitate others, but marketing may demand such camouflage.



Lloyd Shand: Our new products must be compatible with current designs in the market. We can't always use our materials to take best advantage of the materials . . . For instance, we can make windows of maintenance-free vinyl plastic, but if they are to be used in colonial houses, we have to imitate the traditional wood window. We manufacture clapboard in an 8" and a 4" siding because these are preferred

widths for most traditional houses. It would be more economical and would make better use of the product's properties to cover the outside of the house in large sheets, but there is little housing design where this would be acceptable. We must design our products in forms that the public is ready to buy in vast quantities, so we put most of our effort into products that fit the house designs that the architects and builders tell us can be sold.

Hardtke: Most of us know that millions of dollars are spent on research every year by our industry and NAHB, but much of this is just going down the drain because the research projects are ill-conceived. There is little concern by the lender about maintenance and lasting materials.

Leedy: The problems between architects and builders are parallel to those between architects and manufacturers. Manufacturers spend a great deal of time in creating a new product and then we architects have to work like crazy to figure out how to use it. Why don't more manufacturers call on architects in the initial stages of product development, then both get together with the builder to see how the product will work long before it reaches the marketplace.



Fischer: Often a manufacturer will have a line of products

which are simply added to when new and better designs come out. One manufacturer designed a line of components strictly for the new-house market and when he found some changes should be made, he simply added the new components to the existing line, further complicating the inventory and product selection problems.

Dick Elliott: How do I get approval of new products? What do you use as a basis for acceptance of new products? Do you go on national standards or on the basis of the local codes?

Driggs: Much of our approval is based on the local code. Also, if our architect consultant agrees it is a good product, we will accept it. We will help you get better building codes and push for changes, and I think you will find as you get into the political fights to change codes, that the S&L and banking people will be powerful allies.

Schmitt: Do you screen out bad products and give extra value to good ones?

Driggs: We will go better on a loan, give longer terms or a better interest rate if the guy is doing a good job. If the builder is doing his best job, we go all out to get him a better loan.



Hermes: A lot of the problem is that the house does not accurately reflect its materials. When you have aluminum it comes out looking like wood and tile comes out looking like brick.

Jack Anderson: Certainly aluminum manufacturers are not too proud of the fact that resi-

dential aluminum products sold today in a large volume resemble other materials. There are practical reasons for this. The most important of which is the reluctance of the homebuyer to accept earth-shaking changes in appearance. Consumer and trade acceptance of any new product requires a tremendous amount of time, effort and money.



Elliott: Many of us manufacturers underestimate our power when promoting a major product. We can promote a product so that it will surely sell, and we can make a positive contribution to design change instead of simply designing products that will fit into an existing vocabulary.



Anderson: Usually the most efficient and functional product developments are the most radical in design and, therefore, must be compromised in order to receive volume acceptance by the consumer, building trades, code groups and lending agencies.

Elliott: I think we can fulfill our design obligations by educating the public toward good design. Furthermore, I think we should do more research in what the public really wants in the way of building products, or even better, what motivates the public in the way of aesthetics.

Borg: Materials manufacturers have an obligation to consult

with builders and architects about the design of new products; especially on what it is going to look like when spread over 600 houses in an area.



Thompson: Could some architects get together with the manufacturers and create design service packages that could be sold at minimum fees to builders to encourage better design? I'm thinking of standard floor plans and details that builders could purchase as a sort of architectural service. Most small builders cannot afford architects.

Elliott: We have supplied design service to builders, and we both learned and profited from it.

8

Multi-family housing shows great promise of improving both the design standards and the total environment of our communities.

Variety in the types of housing we offer the American public may be more important than the style it is clothed in. Architects are eager to design multi-type planned communities, and builders are willing to innovate and experiment.



Kemp: I think that the public is starved for something different, and not necessarily a matter of contemporary design in a single-family house versus traditional design in a single-family house. We, as architects, have not begun to scratch the surface of the possibilities of how we can live. And the public cannot react to the potentialities in what we might come up with in variety of contemporary design because they haven't seen it yet.

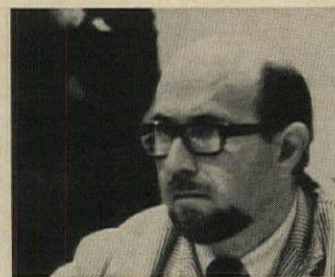
Anselevicius: It seems to me that one issue is really the builders' myopic concern with the individual house. I question whether this is the only way we should try and house American families.

The problem of service to each such house and the tremendous amount of land it takes up means you have to get in your car and drive to any recreation or to schools and every other amenity. The second issue is that part of our environment is not houses. There are other things much more important than to just cover the country with houses.

Swensson: I don't think there is any risk to introducing multi-family units in single-family areas. We've had units of as large as 100 designs that literally changed the neighborhood. It is amazing how beautiful they are and how they fit in.

Deinhardt: Let's talk about the level of cooperation between the designer and the developer in multi-family projects. One, more money is available in multiple projects to hire good personnel including good architect-designers, because of the number of units involved. We've built multi-family units as investments—not to sell—time and again. We rent

and re-rent them for 10 or 20 years. We're interested in the best materials and the best design and the best maintenance we can put into it. We try to combine these factors with good land planning and good designing. We do about 2,400 apartments per year and 3,000 next year. I'm not sure with the pressure that the public has put on us, and that we are putting on the architects for better design, that the small volume builder can really compete.



Anselevicius: People should have choices because that's human, and I think we, as architects, should grapple with the choices people should be able to make for the "good" life, rather than in the choices of styles they might have. Some people want to live in hi-rise and in dense areas. Other people want to live in the country. How can we develop varied density housing, hi-rise and low-rise? We must get

out of this gobbledygook about mellow colonial or modern oriental and deal with important issues.

Graves: We must not overlook the multi-family housing that is not being done by competent architects or builders—small units that provide nothing on the site but buildings and parking.

Deinhardt: Maybe public institutions have a role in promoting taste. Maybe all the way down to the high school level—we give music courses and art courses; why not appreciation? We found that multi-family projects were more challenging a field than almost anything an architect can get into. I might say that we are getting extremely good loans on these better apartments in conventional financing. However, the mortgage man is on our team from the very beginning when we go in and analyze the sites. He works with the developer and the contractor and the architect.

Anselevicius: The real problem for design to me is not simply trying to improve the single house; it is whether there should be more multiple or less multiple housing for rent or sale and realizing that multiple units will not give you the same kind of choice.



SCREENED FRONT conceals entry court behind wood grille and carport. Garage gets daylight through high-up, gable-end glass. Cedar fence provides

partial privacy for living-area windows in sidewall. Low-upkeep walls are finished with rustic cedar outside, factory-coated wood panels inside.

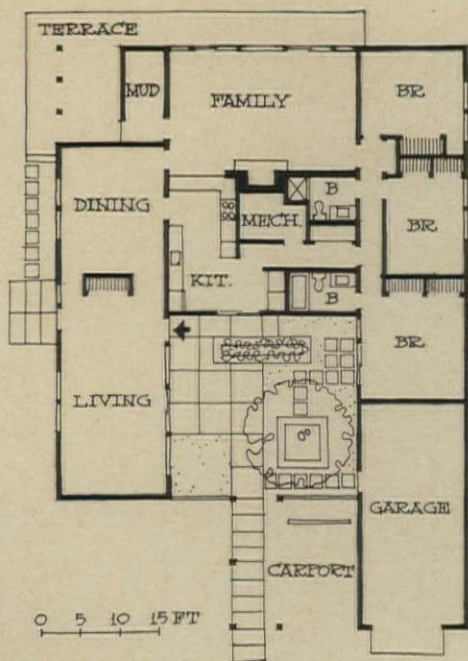
New boost for lumber dealers: this wood-promotion house



GLASSED REAR opens family room to a patio equipped with permanent gas barbecue and gas lighting. Door under deep overhang leads to mudroom.

Purpose of the house: to stir up excitement—and sales—for retail lumber dealers. A lumber dealer prefabricated it, merchandised it and provides a 20-year warranty on every piece of wood in it.

The dealer—Currell Lumber Co. of Lawton, Okla.—is one of 57 lumber dealers participating in the year-old Registered Homes program (H&H, Aug. '64) run by Weyerhaeuser furnishes the design, backs up the warranty and guides the dealer both in producing the house and getting it to Weyerhaeuser Co. of Tacoma, Wash.



U-SHAPED PLAN has all mechanical equipment grouped at center for installation economy.



ENTRY COURT serves as traffic lane between garage and house and as outdoor living area

reached directly from cooking center. Cupola, upper rear, encloses chimney and all vents.



DINING ROOM is separated from living room by island closet. Wall finish is walnut panels.



BREAKFAST COUNTER separates kitchen from family room. Passthrough is fitted with screen.



FAMILY ROOM, like all other rooms, has ceilings of laminated beams and cedar decking.

is backed by a manufacturer's 20-year warranty

market. Purpose of the program: to give the lumber dealer a more profitable role in homebuilding by helping him become an efficient prefabricator and a strong merchandiser.

The one-level contemporary, designed especially for the Southwest, is among the latest of about 60 designs created by Weyerhaeuser. Currell Lumber introduced the house in June as the sales model for a 50-lot subdivision (\$25,000 to \$35,000 price range) which it is developing through a franchised builder.

More than 6-million potential home buyers—the readers of *Good Housekeeping* magazine—will see the house in ten color pages next month. *Good Housekeeping* selected it as a "Home of the Year" and will so publicize it in the October issue.

All heating, cooling and cooking in the house is fueled by gas, as are a barbecue unit mounted in the patio and three outdoor lighting fixtures. A five-ton gas-absorption unit, in a mechanical room at the center of the 2,106-sq.-ft. plan, supplies

warm or chilled air through perimeter ducts and 25 vents.

Exhaust vents and air intakes for the mechanical room are concealed in a decorative cupola which also encloses the chimney and all other vent pipes in the house.

The U-shaped floor plan is based on an entry court which permits good zoning and direct access to outdoors from the living room, kitchen and master bedroom. Maintenance of the house, finished inside and out with natural wood surfaces, is minimal.

If you're a builder or developer considering a new apartment project, the first thing you need to know is whether the project is in the financial ballpark. Contrary to what you may think, this need not involve an extensive—and expensive—survey.

Here's a shortcut to estimating garden apartment feasibility

It's an eight-step system requiring a minimum of time, money and research. And the man who developed it—Housing Consultant William R. Smolkin of New Orleans—says it is sufficiently accurate to tell you whether the project makes economic sense or should be redesigned, re-financed or dropped altogether.

Smolkin's simplified system is based chiefly on two shortcuts in researching local markets:

You need only look at two-bedroom, one-bath units in comparable garden apartments. Smolkin has found that these units are in greatest demand in most areas and are, therefore, the key to a project's success.

You need not determine exact vacancy rates in your area; just use a flat 7%. This method is used by top lenders and appraisers, and Smolkin has found it is perfectly sound. The only exception: if you suspect vacancies run higher than 9%, use a flat 10% in your figuring.

Both of these shortcuts have been proven out on Smolkin's Consultron service for apartment builders—a computerized research-analysis system which he developed with the help of the Barrett Division of Allied Chemical Corp. Consultron requires somewhat more research than the system outlined below, but it is more accurate and also provides marketing data. So it is a logical step between the simplified system and a full-scale feasibility study. Builders can give their proposed projects a Consultron check at no cost by writing to Barrett.

Smolkin's eight-step system applies to garden apartments that offer air conditioning, all kitchen appliances, carpeting and, if there are more than 50 units, swimming pools. Here's how to use it:

Step 1. Determine the proportion of different apartment types in your project. Smolkin recommends sticking close to this formula: 60% two-bedroom, one-bath units; 25% one-bedroom units; 7½% three-bedroom, one-bath units and 7½% three-bedroom, one-bath townhouses.

What about other apartment types? Forget them, says Smolkin. Efficiencies are too specialized for garden apartments; they belong in high-rise projects. And units with two baths are too costly to build for the additional rent they can command.

Step 2. Plan your two-bedroom, one-bath units so they match comparable units in your area in both size and rent. Smolkin suggests that you survey two-bedroom units in at least five comparable projects and average out their rents and living areas.

Step 3. Use your two-bedroom units as the basis for setting the size and rent of one- and three-bedroom units. One-bedroom apartments should be about 150 sq. ft. smaller than two-bedroom units, and three-bedroom units about 150 sq. ft. larger. Townhouses generally require an additional 200 sq. ft. to 300 sq. ft. because of stairways.

To figure rents for your one- and three-bedroom units, calculate the rent per sq. ft. generated by your two-bedroom units and apply the same rate to the other units. A possible exception: where this rent *per sq. ft.* rule throws an apartment type out of line with the rent *per room* of the two-bedroom units, some adjustment may be necessary.

Step 4. Figure your gross rent. Simply total up the rents of all your proposed units. The resultant gross rent is what you would get with 100% occupancy.

Accuracy is important here, says Smol-

kin. Reason: every error will be multiplied ten times or more when the project value is calculated (step 6).

Step 5. Convert gross rent into net income. First, adjust your gross rent for an anticipated vacancy factor by deducting the flat 7% that Smolkin advises for sound markets.

Next, deduct anticipated operating expenses. Here you can get help from your lender: operating expenses for garden apartments vary only slightly from project to project within a local market, and the three factors—heating, cooling and taxes—that exert the greatest influence on operating expenses can be fairly accurately estimated.

In the Northeast, where heating costs are high, expenses generally run between 35% and 40% of gross rent. Further south, where heating costs are lower, expenses drop to between 30% and 35%. But in some parts of the South high cooling costs cancel out low heating costs.

No such rule of thumb can be applied to taxes. Within a given region they can vary by as much as \$100 a unit per year.

When gross income has been reduced by the vacancy allowance and operating expenses, it becomes net income before depreciation and debt service. This is the income figure used in the next step.

Step 6. Convert income into value. Income should be capitalized by dividing the rate of return commonly accepted by investors in your market into your gross income. Again, lenders will be able to provide a reasonable figure.

Generally, capitalization rates run between 8% and 8½% (except for very low-cost projects, where capitalization rates can run as high as 9½%, says Smolkin). But rates should be constantly checked,

since they are subject to more or less continuous fluctuation.

Now, suppose your gross income is \$100,000 and your net income before depreciation and debt service is \$55,000 (after deducting 7% for vacancies and 38% for expenses). If investors look for an 8% return in your market, you can estimate the value of your project at about \$690,000.

Step 7. Check your value by comparing your project with others in your area that have recently been sold. Multiply your gross rent (step 4) by the gross-rent multiplier obtaining in your market. The gross rent multiplier is figured by dividing the price of projects that have been sold by their gross rent at the time of sale.

Multipliers generally range from 6.6 to 8, with 7.5 a common figure. Lenders can usually supply you with the multiplier for your area.

Suppose this multiplier is 7. Now if your gross rent is \$100,000, you can estimate your value at \$700,000, which comes comfortably close to the value you arrived at in step 6.

Still another value check can be made on the basis of local construction costs. A lender will supply you with the going replacement cost per sq. ft. of similar projects, including land and all improvements. This figure, multiplied by the gross floor area of your project, should check with the previous two values.

Step 8. Find out how debt service will affect the feasibility of the project.

At this point you have three consistent estimates of the value of your proposed project and you are ready to look for financing. In most cases you will look for the loan with the lowest equity required, the lowest interest rate and the longest term. But while a lower interest rate and a longer term reduce the debt service, a lower equity raises it.

Now you are ready to determine whether your project, as planned in the previous steps, can sustain the debt service that accompanies the most favorable possible financing. There are, says Smolkin, two key questions:

1. What is the ratio of net income (before depreciation and debt service) to debt service? Lenders generally want this ratio to be at least 1.3, and they consider 1.5 very good coverage.

2. What is your break-even occupancy? Your project must be able to fall to a low level of occupancy and still cover all expenses and debt service (but not depreciation). Lenders often look for a 75% break-even occupancy level when they have committed themselves to a loan that is two-thirds of value. And if the loan-to-value ratio is higher, they will look for a lower break-even level.

STEP 1 & 2	56	two bedroom/one bath	sq. ft. 910	rate \$133	rent \$ 89,376
STEP 1 & 3	12	one bedroom	760	110	15,840
	8	three bedroom/one story	1,160	150	15,072
	8	three bedroom/two story	1,320	173	16,608
STEP 4	Gross rent				\$ 136,896
STEP 5	Net income				
	Subtract vacancy loss (7%)				-9,583
	Effective gross rent				\$ 127,313
	Subtract operating expenses (35%)				-44,560
	Net income before depreciation and debt service				\$ 82,753
STEP 6	Capitalized value				
	Divide net income by capitalization rate (8%)				\$1,034,413
STEP 7	Market value				
	Multiply gross rent by local market multiplier (8)				\$1,095,168
STEP 8	Mortgage and debt service				
	Multiply capitalized value by loan-to-value ratio (80%)				\$ 827,530
	Figure debt service (25 years @ 6%):				
				principal	\$ 14,796
				interest	49,253
				total	64,049
	Figure net income to debt-service ratio				1.29
	Figure break-even percentage				79%

Case example: a simplified feasibility study checks—and chucks out—a builder's proposal

The figures above represent a feasibility study for an apartment proposal in a Midwest market. They have been arranged to conform with the eight-step procedure outlined at left.

For this study, Smolkin advised that 67% of the 84 units permitted by zoning be allocated to two-bedroom, one-bath units; 14% to one-bedroom, one-bath units; and the remaining 11% split evenly among three-bedroom, one-bath apartments and three-bedroom, one-bath townhouses. (These percentages depart from Smolkin's general 60%-25%-7½%-7½% formula because Smolkin wanted to group the apartments in multiples of four.)

The builder found that comparable projects in his market were offering two-bedroom, one-bath units that included an average of 910 sq. ft. of living space and earned an average of 14.6¢ per sq. ft., or \$133 per unit (step 2). The builder designed his units to match these averages.

Other types of units were planned to conform to the two-bedroom units (step 3). For example, the one-bedroom units are 150 sq. ft. smaller and the three-bedroom units are 150 sq. ft. larger. The rent per sq. ft. of the one-bedroom units approximates the 14.6¢ per sq. ft. of the two-bedroom units, but the three-bedroom units have been adjusted to conform with the \$27 per-room rate set by the two-bedroom units.

The total gross rent of all 84 units (step 4) is \$136,896, which becomes a net income of \$82,753 (step 5) after adjustments for vacancies and operating expenses.

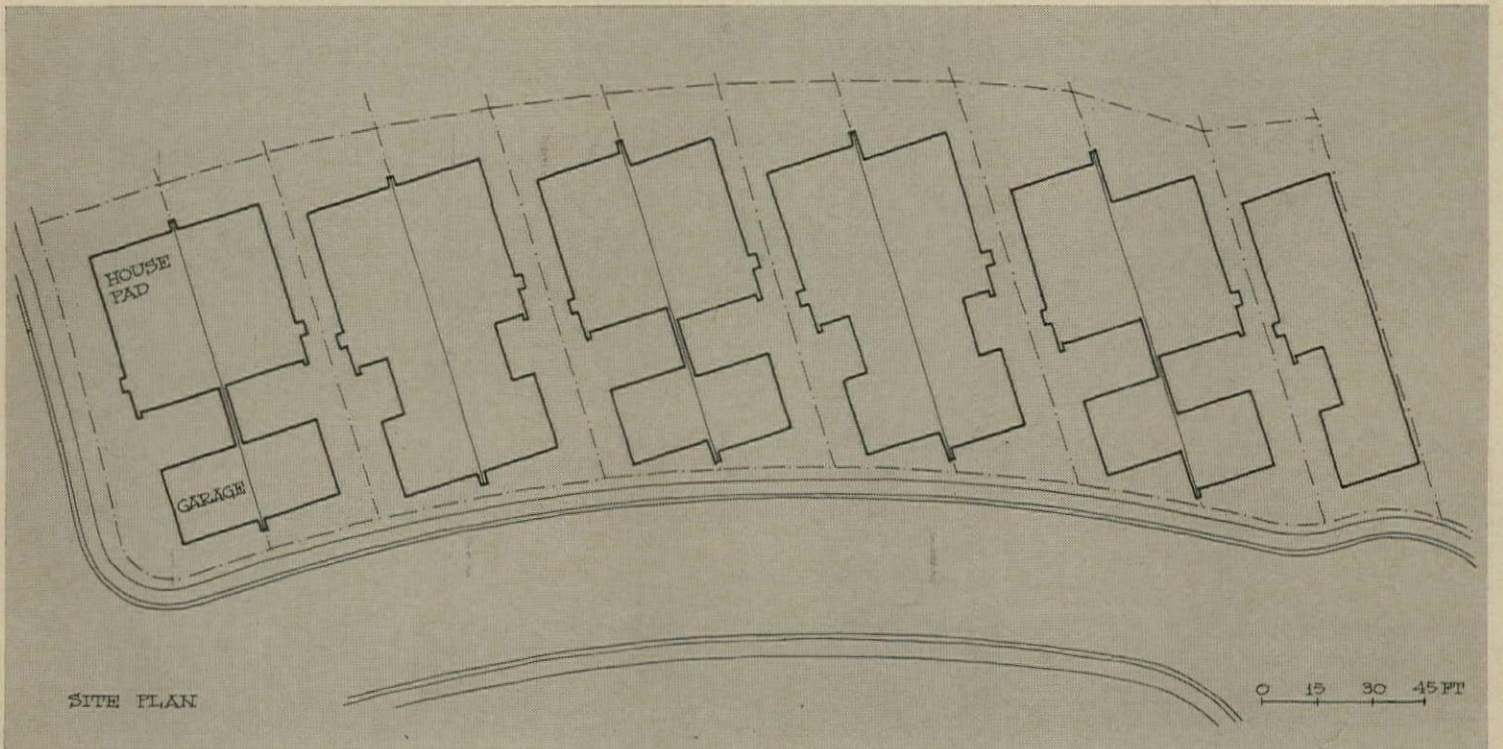
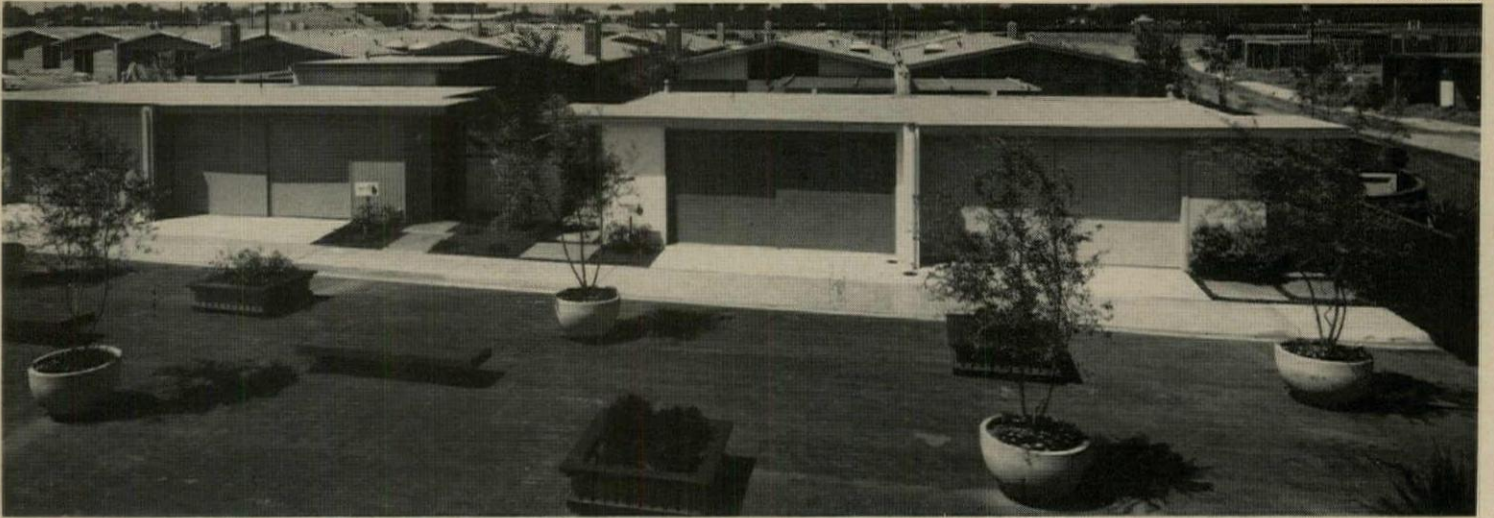
This net income before debt service and depreciation—\$82,753—is capitalized at 8% (step 6), the prevailing rate of return in the builder's market. The resultant value is \$1,034,413.

To check this value (step 7), the builder multiplied his gross rent by his local gross rent multiplier (8). This gave him a value of \$1,095,168, reasonably close to the valuation derived from step 6.

The best financing the builder could get for this value was an \$827,530 (80%) loan for 25 years at 6%. The interest payment during the first year is \$49,253 and the principal payment is \$14,796. So the total debt service is \$64,049.

The builder learned that his net income should be at least 1.3 times his debt service. But his calculations (\$82,753 divided by \$64,049), produced a figure of 1.29. The builder's lender also required that the break-even rate be 75% or less, and the proposal failed this test too. The break-even point (debt service and operating expenses divided by gross rent) was 79% (\$64,049 plus \$44,560 divided by \$136,896).

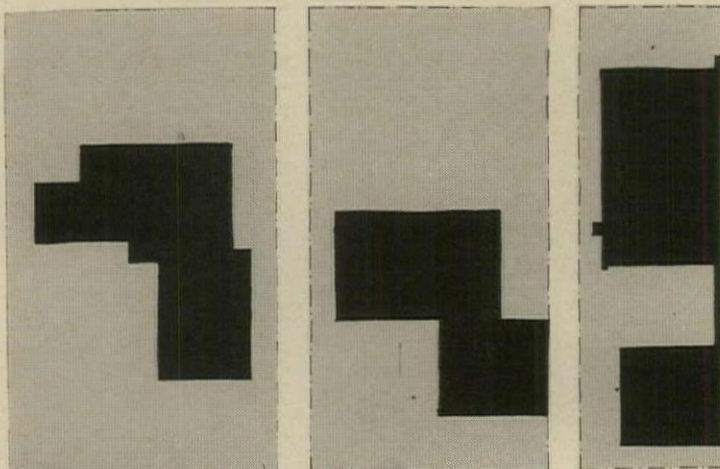
Thus the project was considered unfeasible with this particular rent scale and financing.



PAIRED HOUSES. shown in model area (*photo*), are sited on slightly curved, dead-end streets. Street-front garages screen patios and houses from

passersby. Land plan alternates house pairs with two different floor plans. Houses were designed by Architect Matt Copenhaver, AIA.

Patio houses on 30-ft. lots: these duplex units are a hit

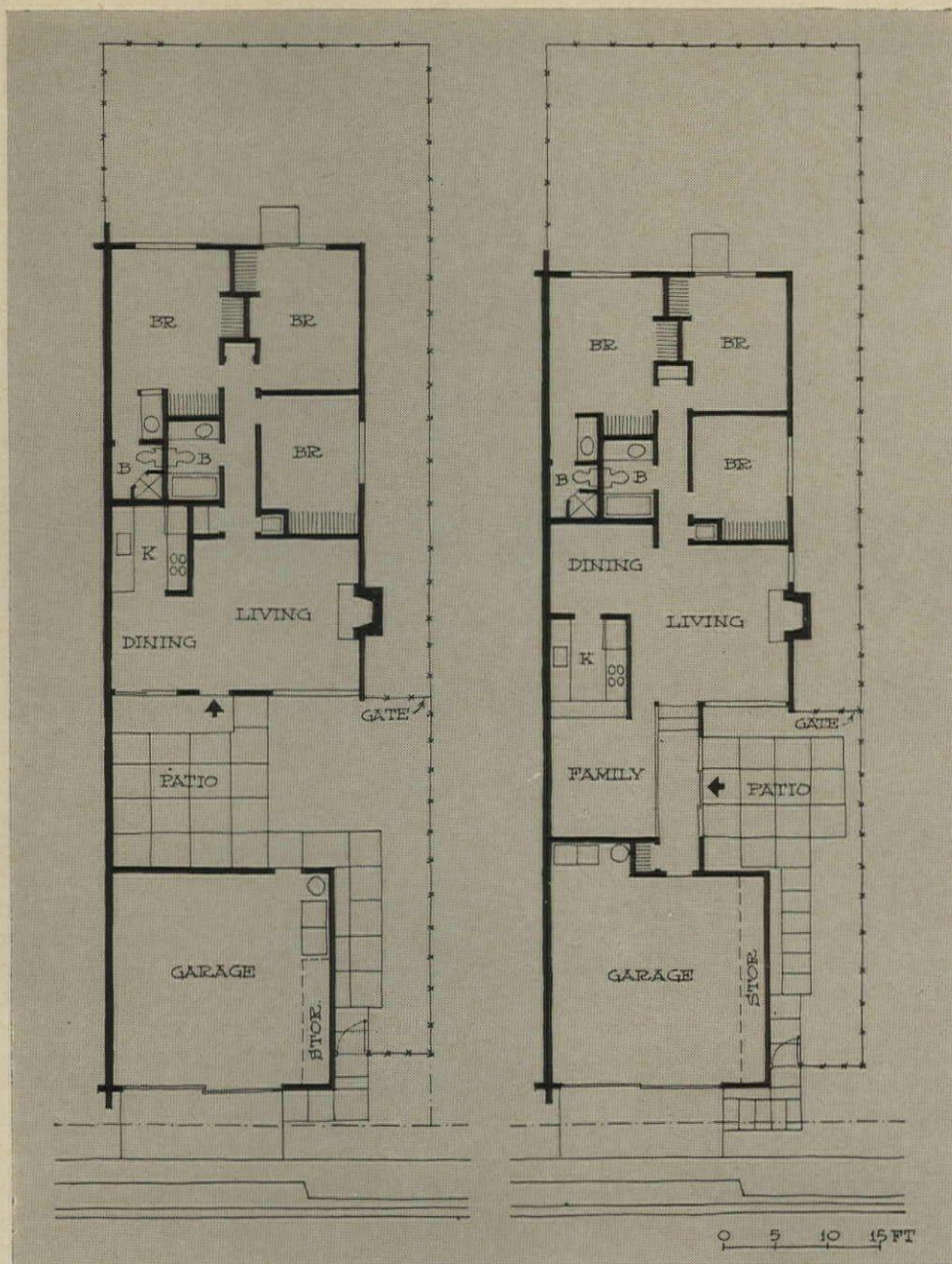


WASTEFUL SIDEYARDS on typical 60' lot, left, are reduced by abutting-garage plan on 50' lot, center, and eliminated by patio house on 30' site.

While most communities are badgering builders with demands for larger lots, Milpitas, Calif., has approved the narrow sites shown above.

Just as important, the attached patio houses, at a planned unit development called Starlite Pines, have caught on fast with buyers. The first 42 units were sold out before they were completed, and Builders Joseph R. McInerney and Richard Harkness are taking reservations on a second group.

Eventually, the project will include 800 houses. About 200 will be patio units on 30' x 100' lots. Most of the others will be semi-detached houses (only garage walls abut) on 50' x 100' lots.

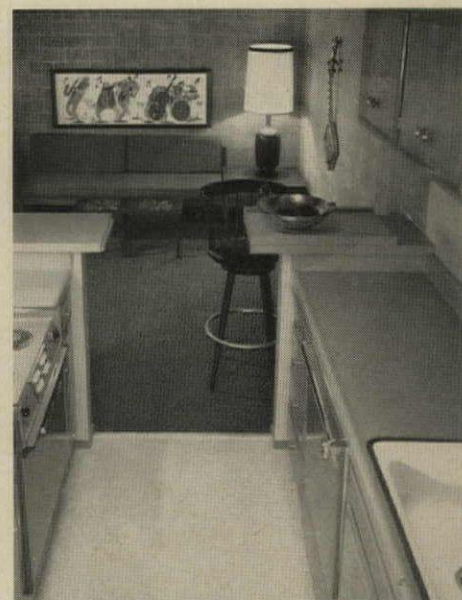


CHOICE OF PLANS. one with and one without family room, is offered to buyers. In model with

family room, kitchen and dining-area locations are switched, and kitchen is open at both ends.



PATIO of house without family room is enclosed by garage, left, house and 8' common wall.



FAMILY ROOM dead-ends off corridor kitchen, can also be reached directly from living room.

with homebuyers—and city officials too

The patio houses attract buyers because they offer a combination of detached-house privacy and care-free apartment-type living. Specifically:

1. Their yards are easy to maintain—an advantage that draws families who balk at garden chores and like to use leisure time for swimming, boating, camping and other recreation. Street-front landscaping of each house totals only 16 sq. ft. And the paved patios need little upkeep.

2. They are planned for privacy—both outdoors and in. Patios are completely enclosed. Front, side and rear lot lines are fenced with 6'-high redwood. And house heights are limited to one-story so no house overlooks the yards next door.

To reduce house-to-house sound transmission where the paired houses abut, the wall of each house has 5/8" gypsum board on both sides, and a fifth layer of gypsum board (1/2") and an air space (also 1/2") is added between the adjoining walls. Besides cutting down noise from the neighbors, the air space resolves any possible confusion over whether the houses are legally separate property.

But invitingly low prices have not been a major sales appeal. Builders McInerney and Harkness analyzed family incomes and were surprised to find that most of their patio-house buyers could have afforded higher-priced houses on larger lots.

Starlite Pines' two patio models—one with and one without a family room—sell for \$18,700 and \$17,600. That's roughly \$2,000 less than the semi-detached models with equivalent living space and almost identical floor plans.

About \$1,500 of the price difference results from lower land and development costs. The rest stems from economies in the design of the patio houses—their unfinished contiguous walls, for example, and their low-pitched, built-up roofs instead of standard shake roofs.

The builders made sure that high-density siting would not detract from the attractiveness of the community. For example:

continued

1. Patio-house sites are limited to lightly traveled, dead-end streets. Results: people driving through main arteries don't get an impression of crowded housing; and homeowners backing out of street-front garages run less risk of accidents.

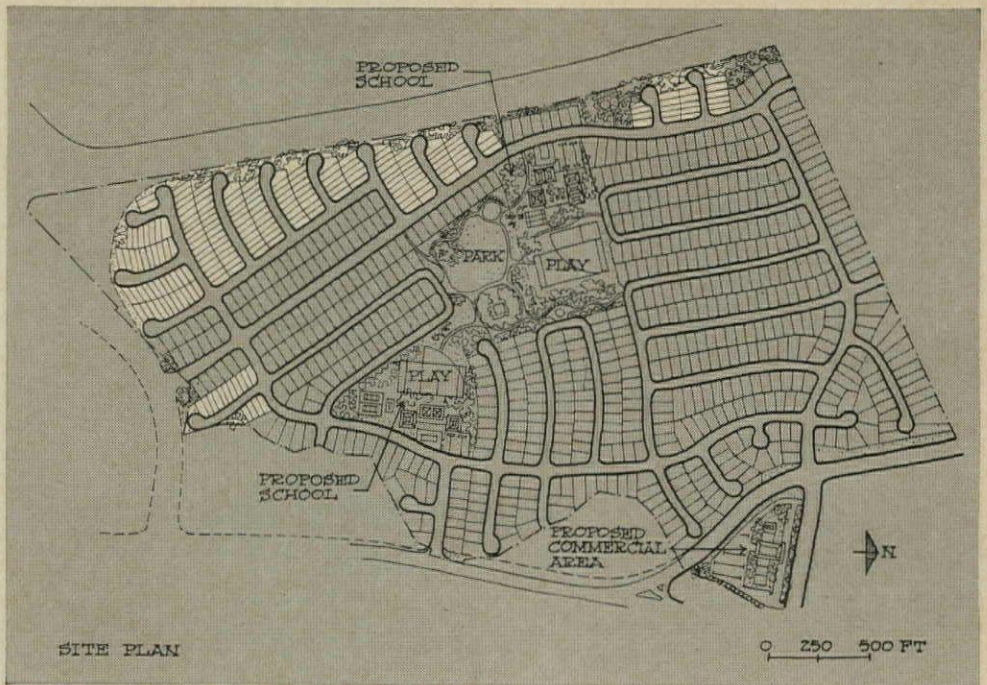
2. Double sliding doors, instead of upward-acting doors, are used on all garages. Result: no more than 8' of any garage is open to the street at one time.

The 30' lots won city approval primarily because they are part of a planned unit development. As in other PUDs, land saved by eliminating almost useless sideyards was put into community open space. So average over-all density is virtually the same as it would have been with a conventional land plan.

The master plan includes 1) an eight-acre park—with paths, plantings, play areas, sprinklers, rest rooms and fire pits—which was deeded to the city; 2) a seven-acre common green, which also serves as a buffer between the house and an adjacent freeway; 3) two centrally located school sites, which were set aside for purchase by the local board of education.

Two other factors helped Harkness and McInerney win official approval of the narrow, patio-house lots.

One was the builders' local reputation (since 1954 they've built 1,200 houses in Milpitas). Says Harkness: "I doubt we would have gotten approval if we hadn't demonstrated our ability and intentions



170-ACRE PLAN of Starlite Pines planned unit development limits 30' patio-house lots to low-

traffic streets (white area). Park and school area are conveniently placed in center of site.

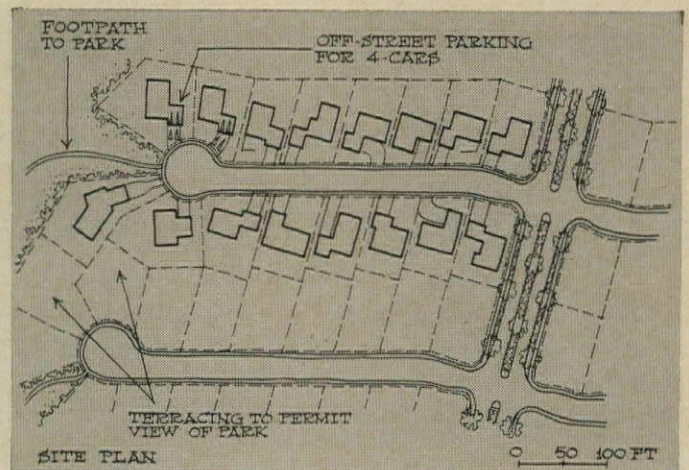
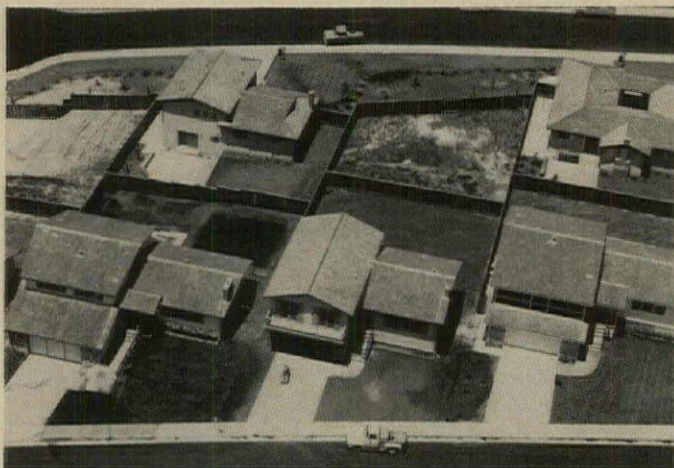
with other projects in this community."

The other favorable factor was the attitude of city officials themselves. As one planning commissioner put it, they were "tired" of stereotyped developments. So they welcomed more imaginative land-use ideas and, in fact, helped design and revise the Starlite Pines plan.

Says City Manager Richard DeLong: "It's easy to go along with standard subdivision plans. But I think we will all be ahead if we experiment with new ideas to

avoid spawning a community of look-alike houses and subdivisions."

After the plan was approved, the first 92 sales revealed figures of significance to any officials who fear the effect on school taxes of smaller lots with lower valuations. The 42 patio-house buyers, mostly older couples or families with small children, averaged only one child per household. By contrast, 50 buyers of the semi-detached houses on larger lots averaged 2½ children each.



Another land-use idea: diagonal siting for added privacy and variety

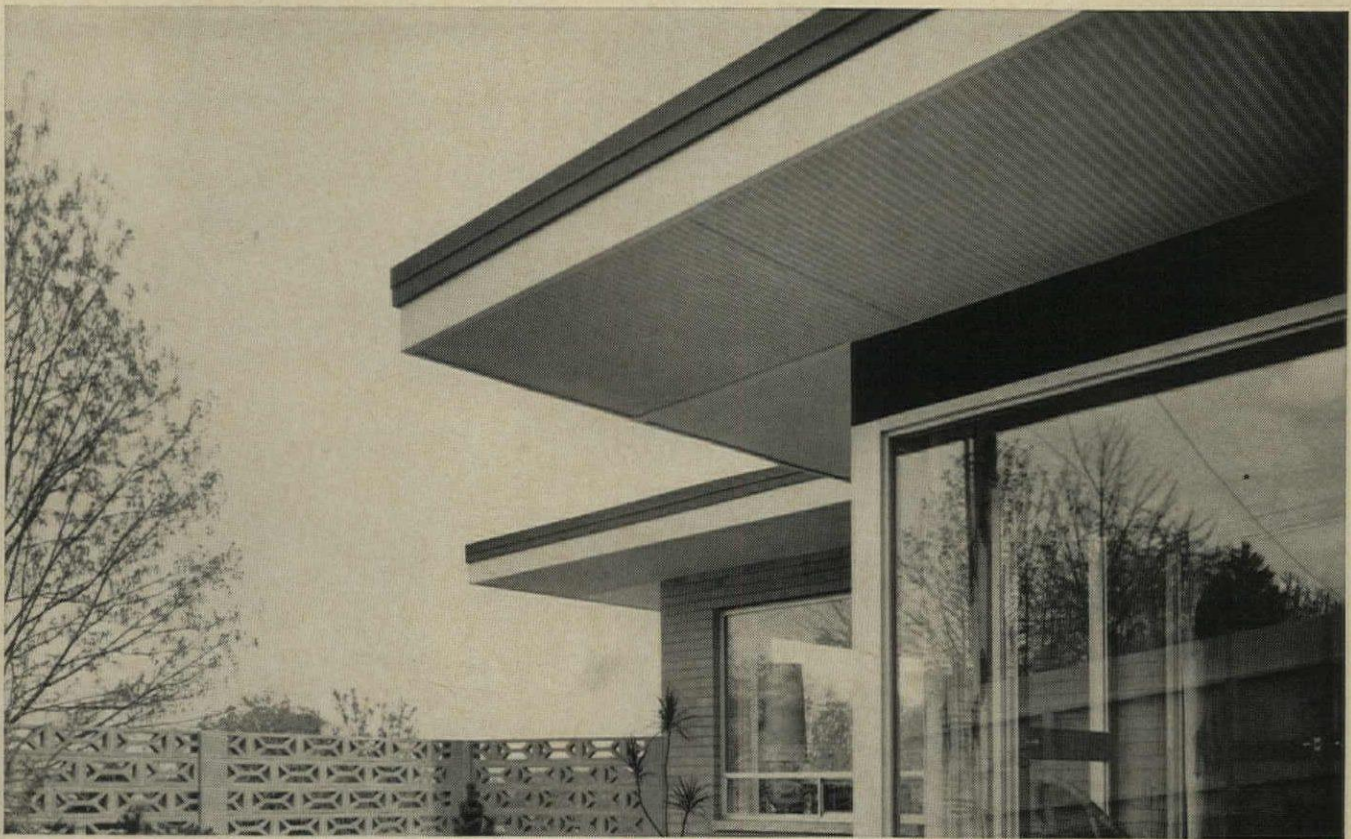
Buyers say the most noticeable gain in houses sited at a 15° angle to the street is more backyard privacy. So reports Ocean View Builders which is building 158 houses (priced from \$25,450 to \$30,950) this way at University Terrace, a planned unit

development located in Santa Cruz, Calif.

Other advantages, says land planner David B. Whittet, are: 1) street-front variety; 2) more sidewall surface exposed to light and air; 3) greater lot depth at two corners, permitting more flexibility in the

positioning of garages, gardens and patios.

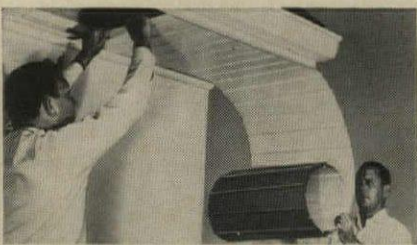
But a word of caution: diagonal siting exposes two house walls to the street. For best results, the leading sidewall and the front elevation should be designed as a single unit.



Newly Patented Reynolds Aluminum Roll Soffit System

You don't paint it. You don't vent it.

You just slide it in place.



It's fast, it's simple, and we think you'll agree the most attractive, too! Reynolds Aluminum Roll Soffit systems come factory-finished, perforated for venting—and ready to install in any weather. And the price is right in line with conventional soffit, too!

Just nail the channels on the fascia and frieze, and roll the soffit right off the coil into place. Polyethylene retainer spline seals it quickly and permanently.

Patented Reynolds Aluminum Roll Soffit is another touch of extra quality on your work, too. It's stucco-embossed in V-crimp or corrugated styles, to blend in with any building design or architecture. Finished in toughest, longest lasting baked-on enamel you can buy—Reynolds exclusive Polar White Colorweld®. It can be bent, cut, and worked without chipping or peeling! It stays new-looking for years on houses and apartment buildings. Available for commercial buildings, too!

Reynolds Aluminum Roll Soffit comes in 50 ft. rolls, in 12", 18", 24", 30", 36" and 48-inch widths. Get details from your Reynolds distributor or dealer, listed in the

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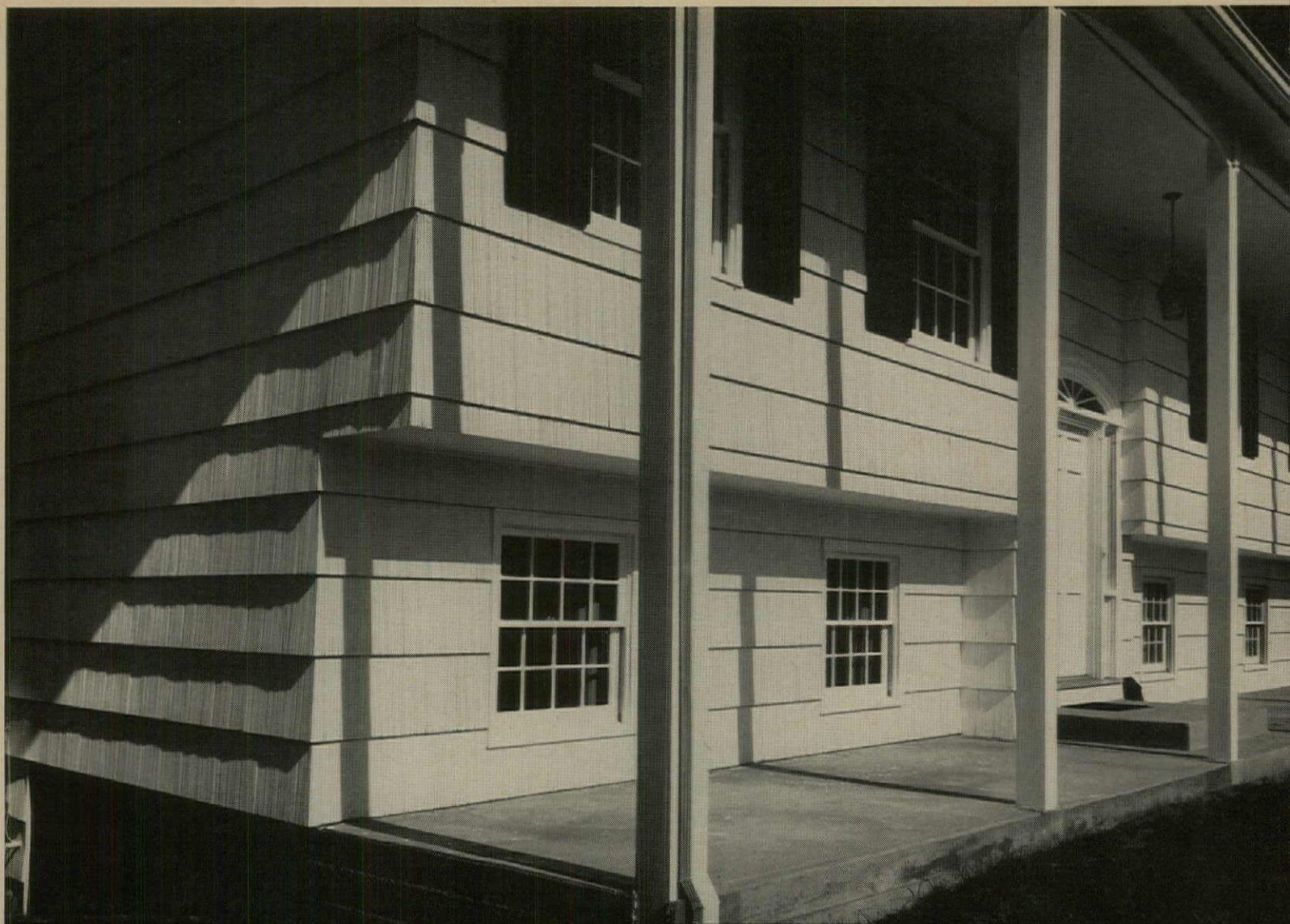
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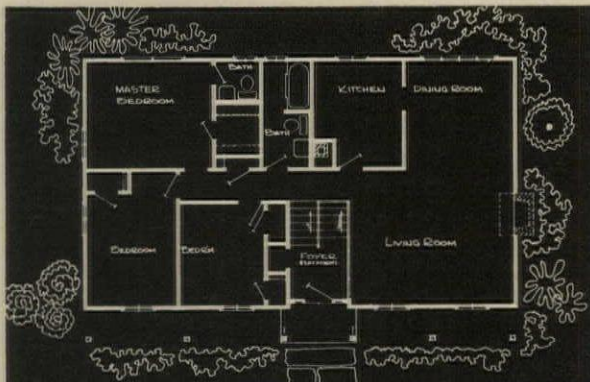
Watch "The Red Skelton Hour," Tuesdays, CBS-TV



Give your client a sidewall he can be proud of:
Red Cedar Grooved Sidewall Shakes



Red cedar grooved sidewall shakes have that "something extra" that clients can understand — and appreciate — for years after you've made the sale. These trim, dimensionally squared shakes give a home a broad, generous look. The vertical grooved texture picks up oblique light, which softens a broad expanse of wall. And the effect is just as good whether the house is tall or not. Occupants will soon notice the shakes' insulating effect, particularly on a hot day. Add to all this red cedar's well-established resistance to decay, strong winds and weather and you can see why homeowners everywhere like them...and tell their friends. Customers and builders appreciate the low applied cost of grooved shakes, too. The lowest, in fact, of any sidewall material of comparable quality. They're available natural or in a range of attractive *factory-applied* colors. Certigroove shakes are of premium quality — 100% clear, 100% heartwood, 100% edge-grained. For more information, write to Red Cedar Shingle and Handsplit Shake Bureau, 5510 White Bldg., Seattle, Wash. 98101. (In Canada: 1477 West Pender St., Vancouver 5, B.C.)



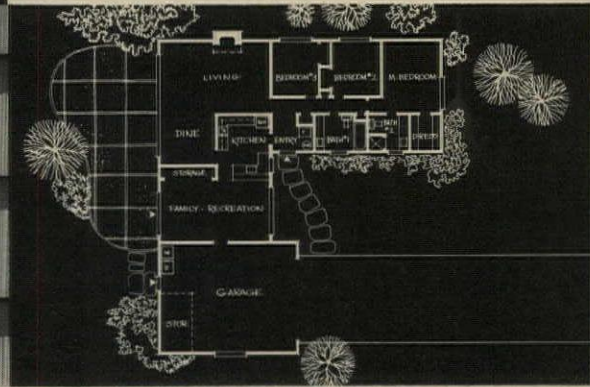
This house, designed in Colonial style (upper left), was built by Metcalf and Co. in Newington, Mass.

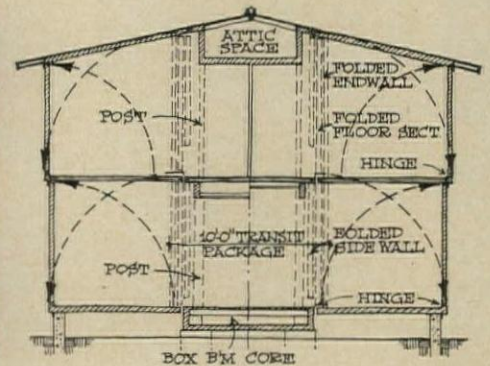
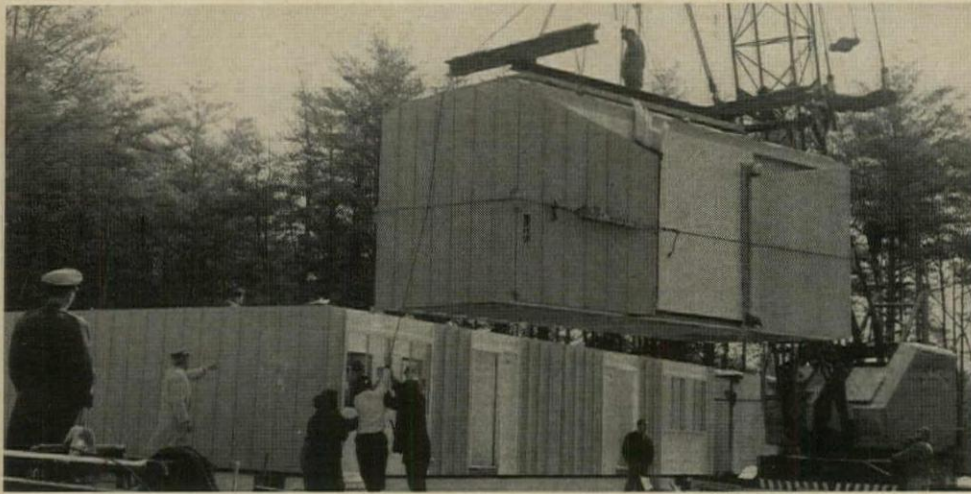
The home at the lower left, in Bellevue, Washington, was built by Bell & Valdez; John Anderson, Architect.

A relatively unbroken, deep horizontal shadow line is a feature of dimensionally squared red cedar grooved sidewall shakes.



The Certigroove label on the carton of red cedar grooved sidewall shakes is your guarantee of *strict-graded* quality. The manufacturing mills subscribe to our standards in order to use this label. And our inspectors constantly inspect at both mills and jobsites. This label is profit insurance for you. Don't pay for less.



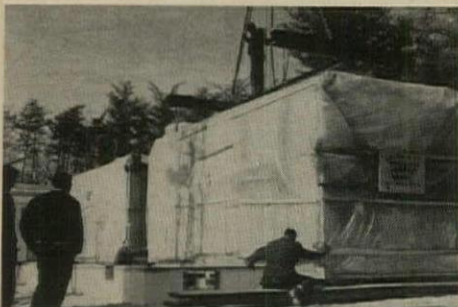


New idea in relocatable housing: a two-story fold-out duplex

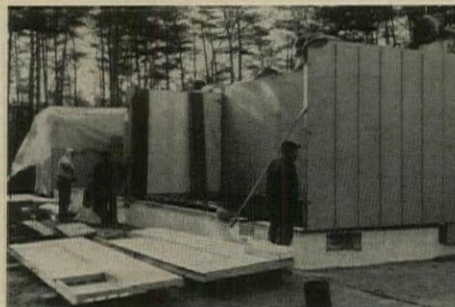
It comes in four 15,000-lb. packages, and it can be assembled and ready for occupancy within 48 hours. The U.S. Air Force developed it and Madway Main Line Homes (of Wayne, Pa.) is building it. Cost: about \$20,000—plus transportation and land—for two 1,075-sq.-ft. bilevel

units with three bedrooms and 1½ baths. Basis of the new design is the Air Force's now-familiar one-story fold-out house (ENR, June '64): designers simply cut it in half and stacked it up. The new two-story unit folds into two 10'x24' packages compared with a single 10'x45'

package for the one-level house. Any number of the units can be linked up. Construction (see photos below) is like the one-story version except for additional mechanical equipment between floors. Official name: USAHOME III. Likely civilian market: housing at work sites.



1. First-floor sections are hoisted off flatbed trailers and placed at center of foundation.



2. End walls, on vertical piano hinges, are unfolded on both sides and bolted to foundation.



3. Hinged floor section is lowered by crane. Roof panels, foreground, are bolted on later.



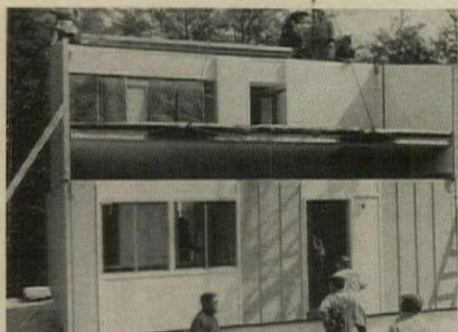
4. Front wall, hinged to floor, is tilted up. Foam sealer strip is placed between hinge leaves.



5. Walls are joined at corners by lag bolts (hole in foreground) which are covered by trim.



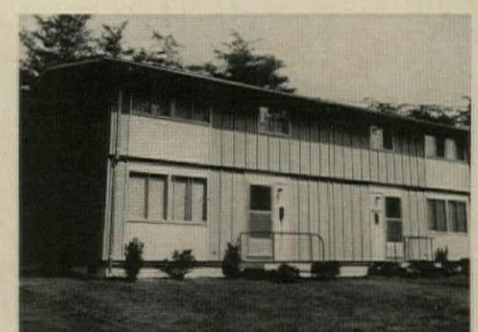
6. Upper-level section is set at center of lower section. Partitions are shipped loose inside.



7. Hinged floor section forms downstairs ceiling. Roof panels, rear, form sloped upstairs ceiling.



8. Upper walls are unfolded. Field-applied hinge sections tie upstairs floors to lower walls.



9. Model, at Andrews Air Force Base, Md., was built from foundation between 8 a.m. and 6 p.m.

Technology continued on p. 97



Floor: Bruce Fireside Plank with dark finish. Walls: Bruce Ply Paneling in Gothic Elm.

Hardwood at its best... *with TUF-LUSTRE prefinish*

Look to Bruce for beautiful hardwood floors *and* walls with the remarkable Tuf-Lustre prefinish that penetrates the surface to protect the wood against scratching, marring and fading. In addition to Fireside Plank with its dramatic dark finish (pictured), Bruce gives you Ranch Plank with pegs, laminated or solid Blocks, and universally used Strip flooring—all prefinished. In Bruce Ply Paneling, you have a choice of 41 woods and finishes, color-styled by one of the nation's top designers. See our catalog in Sweets. For complete data, write E. L. Bruce Co., P. O. Box 397-A, Memphis 1, Tenn.—world's largest in hardwood floors.

Bruce Floors Walls



Leader in prefinished hardwoods

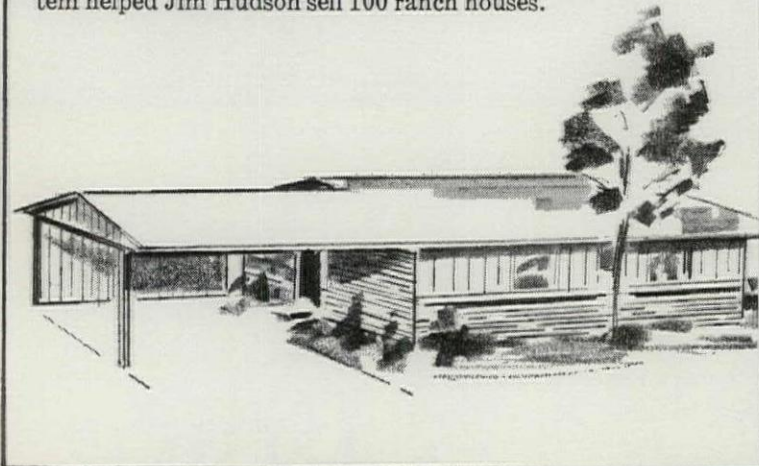
BRUCE FLOOR CARE PRODUCTS • BRUCE-TERMINIX

Give your homes the proven sales edge of hydronic heat at warm air prices

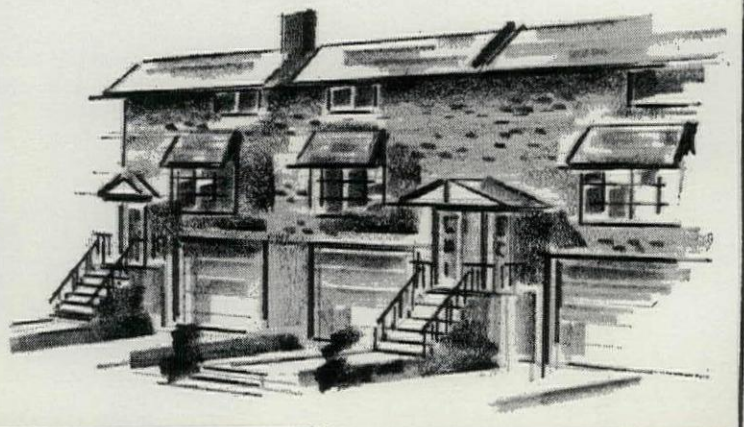
with the American-Standard name and reputation

There's a different breed of prospects looking at your homes today. They have more money and they're more critical because they're more informed. Many are second-home buyers. You have a definite sales edge when you offer them clean, quiet, draft-free hydronic heat. This is the modern version of hot water heat, long the mark of a quality home. American-Standard hydronic heat features compact cast iron boilers and trim baseboard panels, both designed for efficient heat output at low cost. For additional economy, our engineers have established new system design methods and techniques that prevent waste and cut installation time. All this means that you can now afford hydronic heat for *any* home you build. Ask your American-Standard heating contractor for the full story. Or write American-Standard, Plumbing and Heating Division, 40 West 40th Street, New York 18, N.Y.

Boulder, Colo. The snug comfort of a \$470 hydronic system helped Jim Hudson sell 100 ranch houses.



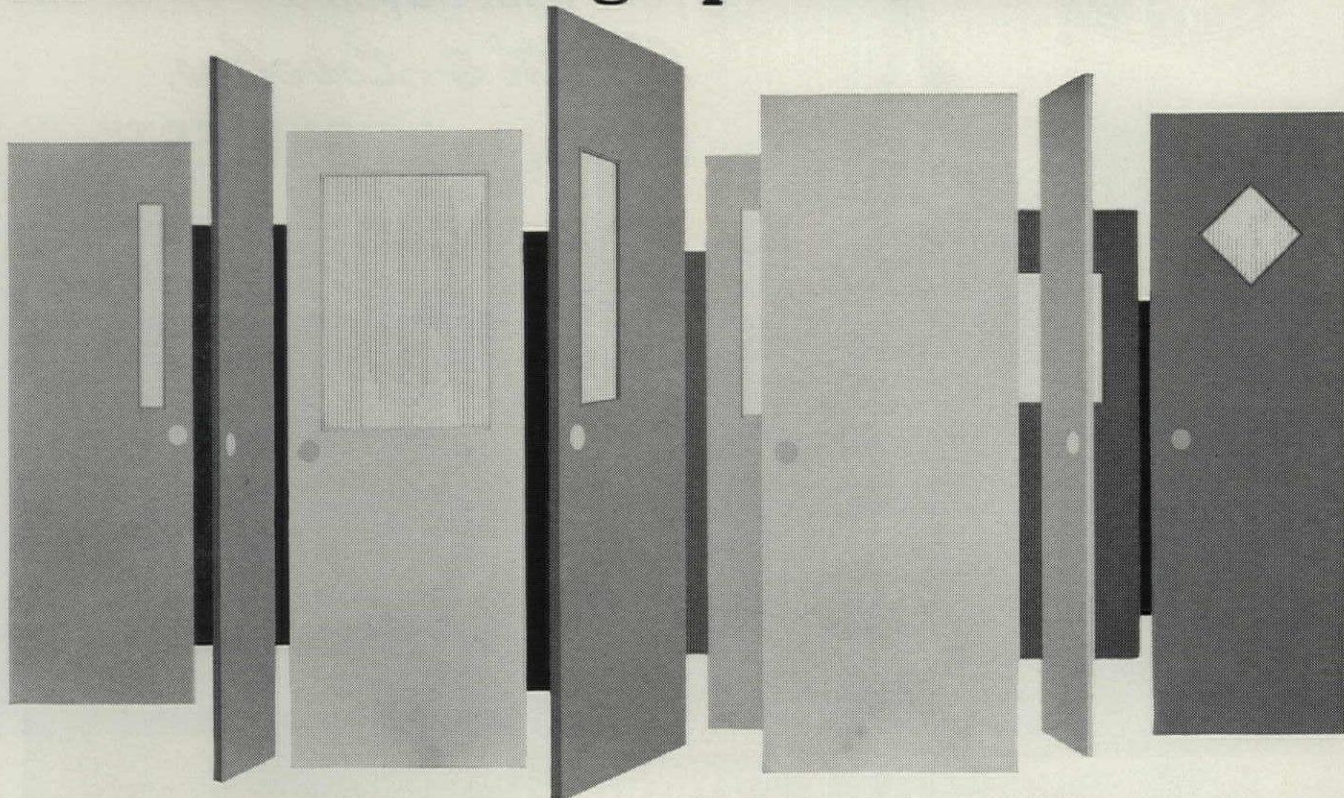
Philadelphia, Pa. A \$510 hydronic system helped Paul Biggans and Louis Feldsher sell 120 row houses in warm air territory.



AMERICAN-STANDARD



This new Imperial Door swings open on unlimited design possibilities...



It's the Imperial Full Flush Door — trim, modern in appearance — compatible with any decor. So versatile that a single style, with the glass frame section and snap-in glazing bead provided, makes possible any glass or louver treatment. For the architect this means specifying prefabricated economy without limiting design possibilities. For the builder it means handling only one type of door at the jobsite and this saves time and money. Because it's reversible — "no handing" — it simplifies construction.

For the people who will live with the Imperial Flush Door — whether it is in a residential, commercial or public building — its highly functional design, handsome appearance and rugged durability mean years of carefree service. It hangs square — and stays that way — with a complete perimeter channel, fully welded, to provide added strength to the heavy gage steel that never warps, sags, binds or splits. It is rust inhibited with exterior surfaces protected by a five-step phosphatizing process.

The new Imperial Flush Door arrives at the site prepackaged — fully protected against damage. You can get immediate delivery from a network of warehouses. And behind every Imperial Door — guaranteeing its quality and performance — is the reputation, skill and experience of the Manufacturing Division of Republic Steel Corporation.

Call or write for a complete catalog of Imperial Doors.

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The new IMPERIAL Flush Door sounds good! We'd like:

Literature A call from your representative

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Company _____

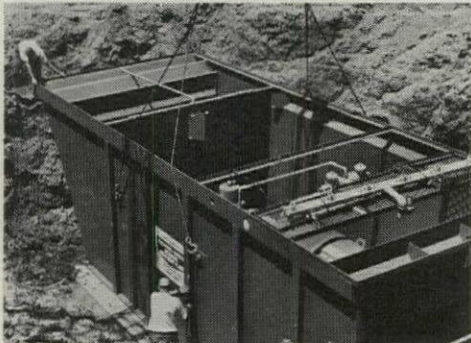
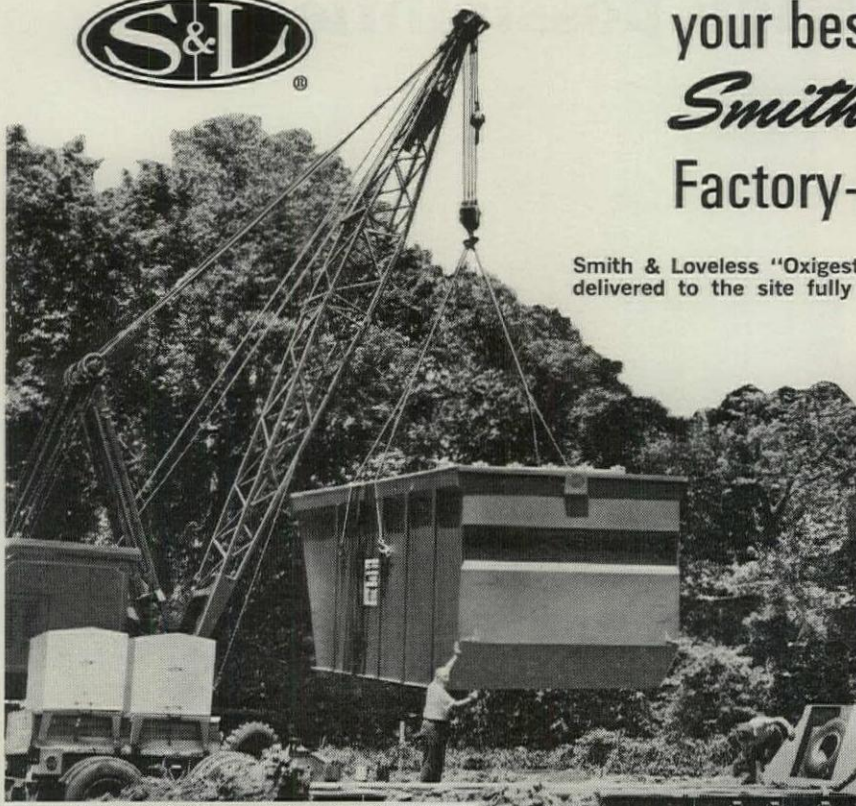
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City _____ State _____ Zip _____

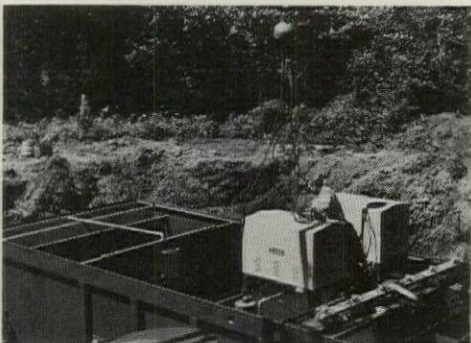


For Sewage Treatment your best buy is a *Smith & Loveless*[®] Factory-built "OXIGEST"[®]

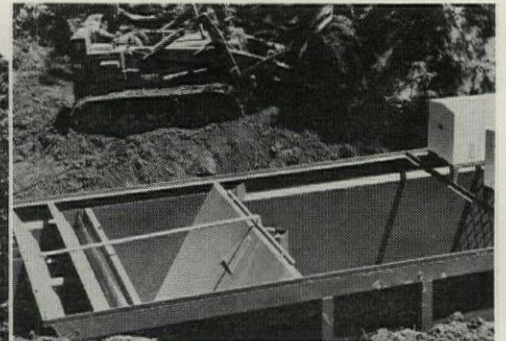
Smith & Loveless "Oxigest" Factory-built Sewage Treatment Plants are delivered to the site fully equipped . . . and installed the same day!



The plant is lowered onto a concrete pad, bolted into place . . .



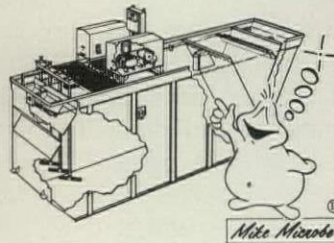
The motor-blower housings are set near the walkway . . .



The treatment plant is backfilled and tamped to prevent settling . . .



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(5133)

TECHNOLOGY

starts on p. 92



Computerized drawing machine turns plans into perspectives

Anyone who can read blueprints can run the machine and produce accurate three-dimensional illustrations up to 60 times faster than it takes by hand. So says the manufacturer, Perspective Inc. of Seattle, which introduced the unit earlier this year.

The operator traces the lines of a two-dimensional plan with two styluses (*photo above*) and an analog computer, guiding a motorized pen, translates the lines into three dimensions. The computer, which can plot perspective from any angle, is set by a front control panel.

While the price is too high for any but the largest-volume architectural and building companies, further development of the computer could produce a less costly model.

Designer adds 26 steel houses to prefabbers' range of plans

Besides giving steel-house builders more designs to choose from, the plans are expected to provide more competitively priced steel houses. L. C. Major Assoc. of Downey, Calif., created the new designs for U.S. Steel Corp. for use by steel-house prefabricators. All of the plans—including more than 70 elevations—adhere to the rigid modules used by the prefabbers.

Gas utility will sell metered heating-cooling to apartments

Is there profit in selling chilled water and steam to residential customers? To find out, Equitable Gas Co. of Pittsburgh is investing in 4½ miles of underground pipe and \$4 million worth of chillers and boilers. The equipment is being installed now at a 79-acre Pittsburgh redevelopment site where it will eventually supply 1,570 apartments and townhouses on a pay-as-you-use basis.

Equitable will set up two subsidiaries to handle the new business and is making its new central supply plant expandable in anticipation of future demand.

New products start on p. 101

SEPTEMBER 1965



It's time
to take a stand
on
seamless
flooring

TORGINOL
SEAMLESS
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Take a stand on SEAMLESS RESILIENT DURESQUE and you'll discover a durable, mar-proof flooring that reduces maintenance costs and health hazards yet provides a touch of unmatched elegance in flooring. This three dimensional flooring will not collect dirt, moisture, or germs. Its unique qualities resist heel and furniture indentations, and is soft, quiet, and easy to walk on.

Specify SEAMLESS DURESQUE flooring and you'll take a stand on a proven flooring product, competitive in cost, available in a wide range of contemporary patterns and colors; for commercial, industrial, and residential buildings.

For further information on "Torginol Registered Seamless Floors," consult your Torginol dealer (check the Yellow Pages), over 1000 factory trained licensed dealers or write: Customer Relations Department, Torginol of America, Inc., 6115 Maywood Avenue, Huntington Park, California.

TORGINOL PRODUCTS / A GENERATION OF WORLD WIDE ACCEPTANCE



Circle 58 on Reader Service Card

Like to make your next tile and linoleum job run more smoothly?

Read this:

Weyerhaeuser Versabord is as smooth on one side as it is the other. This extra smoothness makes the big difference in good resilient tile and sheet goods work. And with no surface grain or knots, there can't be any telegraphing problems. That means fewer call-backs.

Just to make sure we can live up to these claims, each panel is given 43 separate quality control checks before it leaves the plant. That's why we can guarantee the performance.

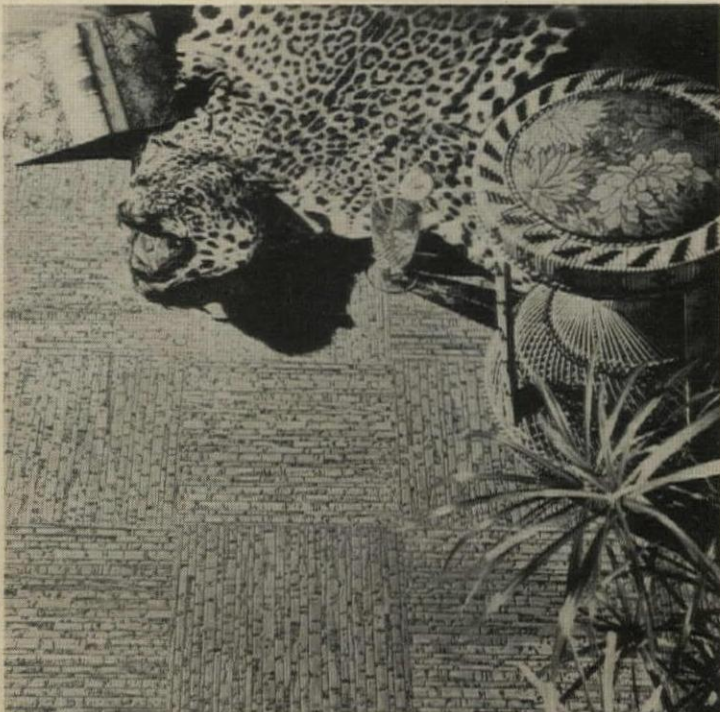
Versabord is a proven product. It was used in more than 100,000 installations last year alone. Was one of them yours? If not, you'd probably like more information. See your local dealer or write us: Weyerhaeuser Company, Box B-98, Tacoma, Washington.



NEW PRODUCTS

For more information, circle indicated number on Reader Service card p. 117.

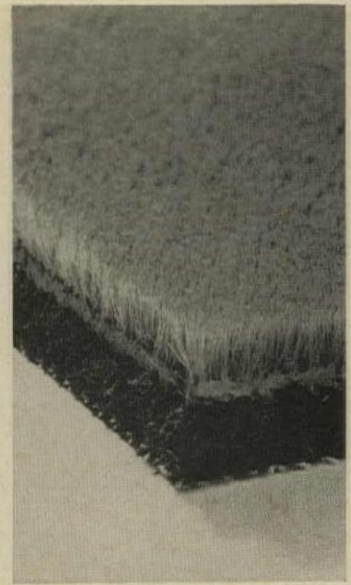
Floors



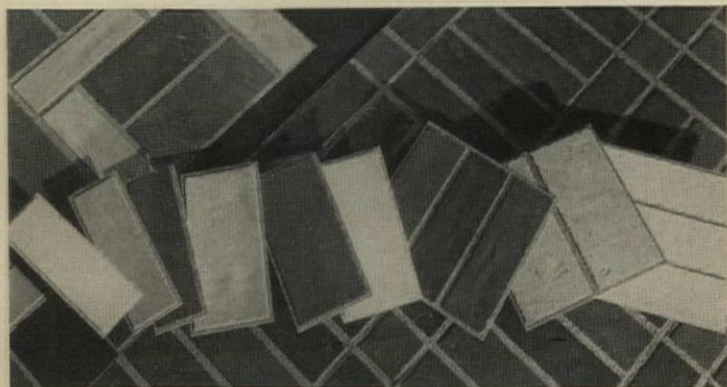
Vinyl asbestos tiles called Rattan, have an embossed design. Tiles may be applied alternately (*above*) or with pattern running in the same direction. Four colors are available in 12" x 12" tile sizes. The Ruberoid Co., New York City. *Circle 201 on Reader Service card.*



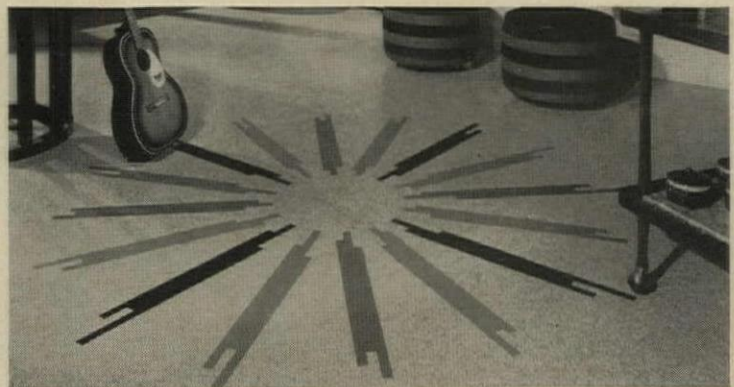
Seamless resilient flooring has large chips, each with its own design and pattern. Colors available: blue, yellow, green, brown, gray, pink and beige. Variegated Duresque is poured on the slab. Torginol, Huntington Park, Calif. *Circle 202 on Reader Service card*



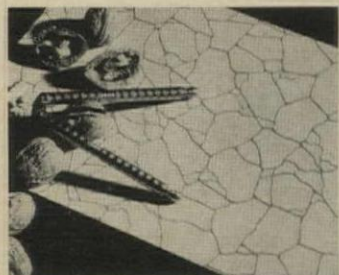
Nylon carpet is made of upright filaments that retain their position after heavy wear, says the manufacturer. The pile is 1/5" thick. Veltron comes in widths up to 15'. High density foam backing is optional. E. T. Barwick Mills, Chamblee, Ga. *Circle 203 on Reader Service card*



Single brick tiles of solid vinyl come in edge and flat types. Tiles are available in pink, red and white. To give the effect of aged brick, the colors vary slightly from tile to tile. Dimensions: flat brick, 4 1/2" x 9" x 1/8"; edge brick, 3" x 9" x 1/8". Kentile, Brooklyn, N.Y.



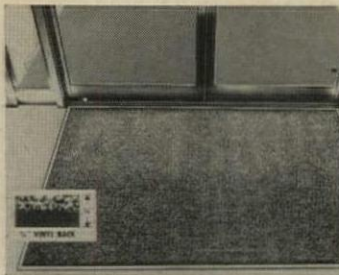
Vinyl decorator strips permit custom design in sheet vinyl flooring. Twelve colors are offered. Strips are available in 1/4", 1/2" and 1" widths in .070", .090" and 1/8" gauges in 50 lineal foot rolls. Armstrong Lancaster, Pa. *Circle 204 on Reader Service card.*



Sculptured vinyl simulates chips of slate. Carina is available in 12" x 12" tiles in brick, slate and sand colors and in tiles and 72"-wide sheets in Twilight Blue, Sea Foam, Shell Beige, Honey Beige, Pearl White and White. Goodyear, Akron. *Circle 205 on Reader Service card*



Embossed vinyl tile in a three dimensional pattern is made of chips of marble encased in translucent vinyl with a surface embossing of marble-like tracery. The chips are colored on a tinted white background. Size: 12" x 12". Azrock, San Antonio. *Circle 206 on Reader Service card*



Carpet matting of deep cut-nylon pile is permanently bonded to a solid vinyl backing. Carpet-Top can be installed in floor recesses or inset into carpet layouts. Available in beige, gray or red-black tweed. American Floor Prods., Washington, D.C. *Circle 207 on Reader Service card*



Vinyl flooring, called Mexican Agate, has random shaped translucent marble set in a mortar of aggregate. Seven colorings are offered. The flooring, built around a vinyl foam center layer, is available in 6' wide rolls. Sandura, Jenkintown, Pa. *Circle 208 on Reader Service card*

New products continued on p. 102

NEW PRODUCTS

starts on p. 101

Baths



Sunken bathtub is one-piece, reinforced cast concrete. Tubs are delivered to job site ready for installation, plumbing connections and tiling. Units may be installed in second floors without a drop ceiling. Cambridge Tile, Cincinnati. *Circle 209 on Reader Service card.*



Shower floor is designed for corner installation. The floor is made of molded stone—crushed limestone and resins bonded under heat and pressure. The line includes nine units ranging in size from 32"x32" to 60"x32". Fiat Prods., Plainview, L.I., N.Y. *Circle 214 on Reader Service card*



Cabinet, called Contempora Imperial, is 27" high and 24" wide. Unit includes a built-in canopy-type incandescent light fixture and three shelf areas. Available with plate and double-strength glass mirrors. Triangle Prods., Chicago. *Circle 213 on Reader Service card*



Vanity has white finish and gold trim factory applied and baked on. Hardware is hand-rubbed white, also with gold trim. Vanity includes sliding shelves for linen storage. Kemper Bros., Richmond, Ind. *Circle 210 on Reader Service card.*



Tub enclosures are made of Styron, which is said to be shatter-proof. To close, panels are unfolded and towel bars are hooked horizontally to secure enclosure. When open, doors allow bathtub accessibility. Tub-Master, Orlando, Fla. *Circle 215 on Reader Service card.*



Wall-mounted lavatory has a sculptured soap rest with drain lip. The vitreous china basin is 20"x18". Virgo has a support which is said to lock the lavatory to the wall. Offered in five pastel colors and white. Universal-Rundle, New Castle, Pa. *Circle 211 on Reader Service card*



Bathroom vanities have cut-from-the-slab marble tops. Three sizes are available: 25", 33" and 49". Units come in three species of marble. Eight styles of vanity bases are offered, all with standard fixture cut-outs. Shasta Prods., Conshohocken, Pa. *Circle 212 on Reader Service card*



Solid plastic seat has wrap-around cover. According to the maker, the seat offers improved sanitation, ease of cleaning and lower maintenance. Four seats are available in black, white and a range of fixture colors. Beneke, Columbus, Miss. *Circle 216 on Reader Service card*



Shower control is said to correct fluctuations in water pressure, preventing excesses of temperature. If cold water fails, supply is cut off. Series 410 Hydro-guard operates on the pressure-equalization principle. Powers Regulator Co., Skokie, Ill. *Circle 217 on Reader Service card*



SURELY YOU HAVE SOMETHING BETTER TO DO

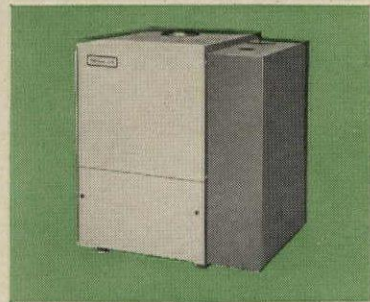
... than assembling, wiring, piping and hooking up a bulky, balky gas boiler? Forget it! Install the National U. S. 99 Series Gas Packet.

This National-U. S. gas boiler is engineered to offer you a dramatic new ease of installation. It's completely wired and factory assembled. Positive positioning device and locking bar secures the sturdy one-piece cast-iron burner for shipment and automatically locates burner in proper alignment.

Simple, easy, quick installation reduces installation time, labor and material... increases your profits. You no longer have to sacrifice modern, eye-catching styling for high performance and lifetime construction.

Designed for the builder market, the National-U. S. 99 gas boiler fits neatly into utility room, kitchen, or other tight area. Choose from eight sizes - from 60,000 to 200,000 Btuh, A. G. A. approved output.

These are just a few of the dozens of features you and your customers will value in the versatile National-U. S. 99 Gas Packet. To get all the facts, write for Booklet ADJ-1409. Crane Co., 4100 S. Kedzie Ave., Chicago 60632.

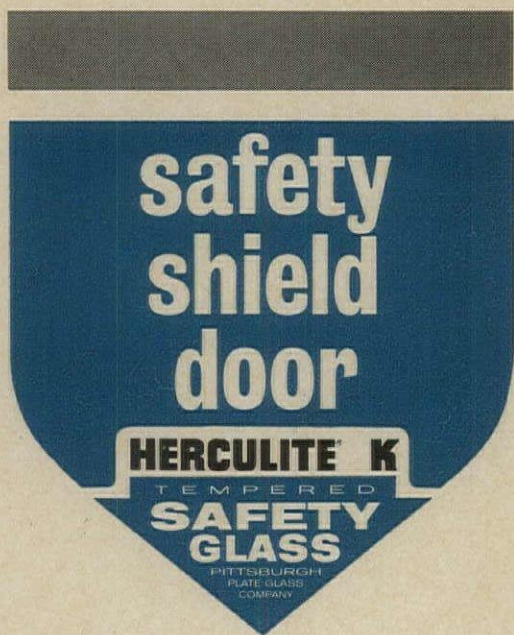


NATIONAL-U. S. 99: MUCH BETTER.

National-U.S.

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**Not all patio doors
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this selling shield.**



Only safe ones.

And home buyers recognize the shield. Millions of people will see it in PPG's national advertising campaign, appearing May through October in *Reader's Digest*, *House & Garden* and *Sunset*.

They'll be looking for the shield as a symbol of quality and value in the home you show them.

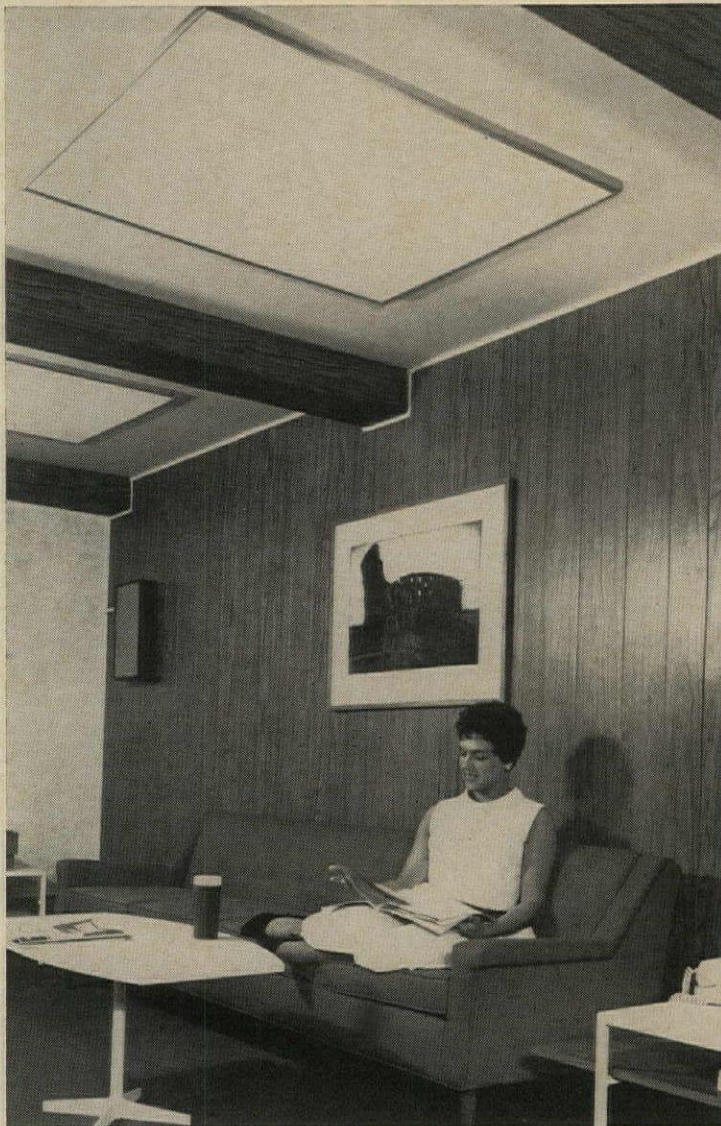
Specify HERCULITE® K Tempered Safety Glass in your sliding glass doors. Then you can display this nationally advertised safety shield, too. Get the shield—and safe doors—from your patio door supplier.

*Pittsburgh Plate Glass Company
Pittsburgh, Pennsylvania 15222*

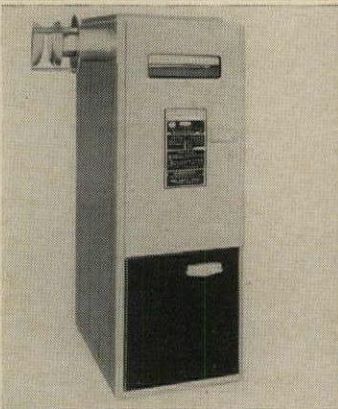
**PPG makes the glass that
makes the difference**



Heating and cooling



Radiant heating panels can be surface mounted or flush mounted in T-bar suspended ceilings. Panels have no glass or moving parts, are unbreakable and require no maintenance, according to the manufacturer. 3M Co., St. Paul, Minn. *Circle 218 on Reader Service card.*



Direct-vent gas furnace has sealed combustion. Available in upflow and counterflow models, furnaces have 50,000 and 80,000 Btu input. Air conditioning attachments can be added. Series 393 V is fully insulated. Bryant Mfg., Indianapolis.

Circle 219 on Reader Service card

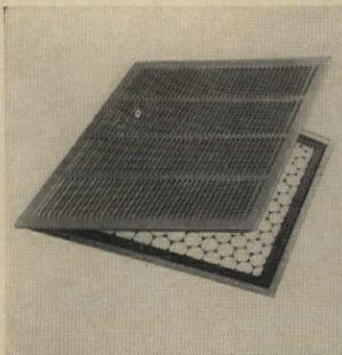


Gas furnace includes an air purifier that is said to remove offensive odors. The furnace is available in upflow models with Btu inputs from 80,000 to 160,000 and horizontal models with inputs from 85,000 to 150,000 Btus. York Corp., York, Pa.

Circle 220 on Reader Service card

NEW PRODUCTS

start on p. 101



Filter grille has two latches that can be flipped to open or close the grille. Tools and screws are not necessary. Series 18FG completely eliminates filter inaccessibility, according to the manufacturer, Lima Register Co., Lima, Ohio.

Circle 221 on Reader Service card



Wall fans have 10¼" square stain-finish grilles and steel housings. Model No. 666 has a four-pole motor with a squirrel cage blower. This style comes in three CFM capacities and can be mounted horizontally or vertically. Broan, Hartford, Wis.

Circle 222 on Reader Service card



Low-cost baseboard electric heaters come with both low- and medium-density fin-tubular heating elements. Units have cooler operating temperatures and lineal overload protectors, says the manufacturer, Emerson Electric, St. Louis. Circle 223 on Reader Service card.



Boilers, for oil or gas fuel, have steel shells guaranteed for 20 years. Units also have an all-copper self-contained domestic hot water coil. Boilers are available in standard or complete packages. Edwards Engineering, Pompton Plains, N.J.

Circle 224 on Reader Service card

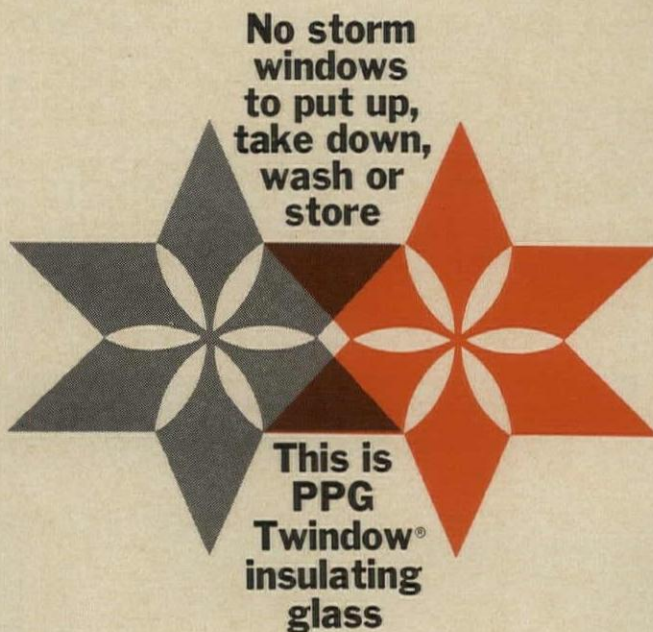


Gas boilers, with output ratings of 60,000 and 80,000 Btus, are cast iron. Units include Therm-o-grid section design that is said to produce a high ratio of heat output through tubular-finned surfaces. American-Standard, New York City.

Circle 225 on Reader Service card

New products continued on p. 106

Make your windows a selling point with these stars



The PPG TWINDOW® stars make your windows visible—remind home-buying prospects of the advantages of wood windows glazed with PPG TWINDOW® Insulating Glass.

The stars tell your prospects they'll never need storm windows. They'll have less fogging and frosting. Rooms will stay cooler in summer. And warmer in winter—for lower heating bills.

PPG is telling your prospects to look for the stars in your windows in a major advertising campaign from April through October in *Life* and *House Beautiful*.

That's why it will pay you to feature TWINDOW® Glass Edge Insulating Glass in wood windows in your homes. Contact your wood window supplier today.

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PPG makes the glass that makes the difference





As Seen at Phila. Interior Decorator Exhibit—"Swirl" pattern floor; "Straitline" wall

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Circle 64 on Reader Service Card



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WM-50B



CHROMALOX electric heat

Edwin L. Wiegand Company, 7770 Thomas Blvd., Pittsburgh, Pa. 15208

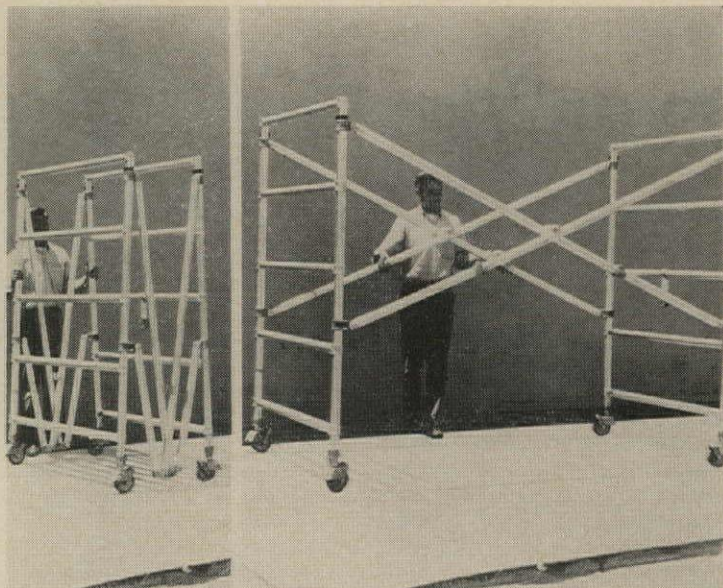


Circle 65 on Reader Service Card

NEW PRODUCTS

start on p. 101

Tools and equipment



Double-width scaffold can be set up in two seconds and locks instantly, according to the manufacturer. When compacted, the aluminum unit is 9½" wide; when open it provides a 4½' platform. Up-Right Scaffolds, Berkeley, Calif. *Circle 226 on Reader Service card.*



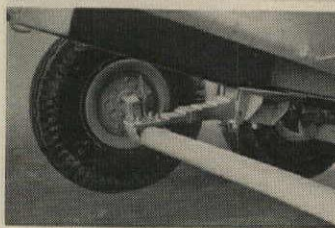
Electric drills are available in ball-bearing or standard-duty models in ¼" or ⅜" sizes. Drills have 2.5 amp motors and a second layer of insulation. They use regular outlets and don't need grounding. Millers Falls Co., Greensfield, Mass.

Circle 227 on Reader Service card



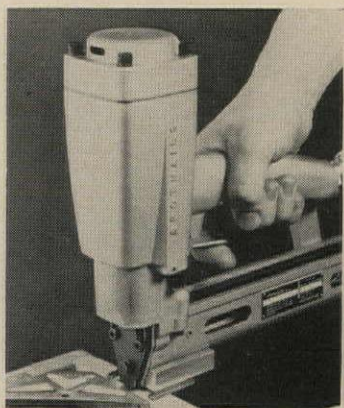
Sight and surface level can be used for leveling appliances, cabinets, etc., or for sighting to establish grades etc. Level has 2½ power optics allowing a 22' @ 100 yd. view. Pocket-sized unit is 4¼" long. David White, Menomonee Falls, Wis.

Circle 228 on Reader Service card



Drop axle for tilt-top trailer provides low center of gravity for highway speeds. Trailer platform converts from an over-the-wheels to a between-the-wheels type by switching four bolts on wheel assembly mounts. Fisher/Biddle, Milwaukee.

Circle 229 on Reader Service card



Corner brace guide control-drives four narrow crown staples. The guide leg locates exact placement. The attachment is designed for manufacturer's Model C and can be removed when tool is used for other jobs. Spotnails, Rolling Meadows, Ill.

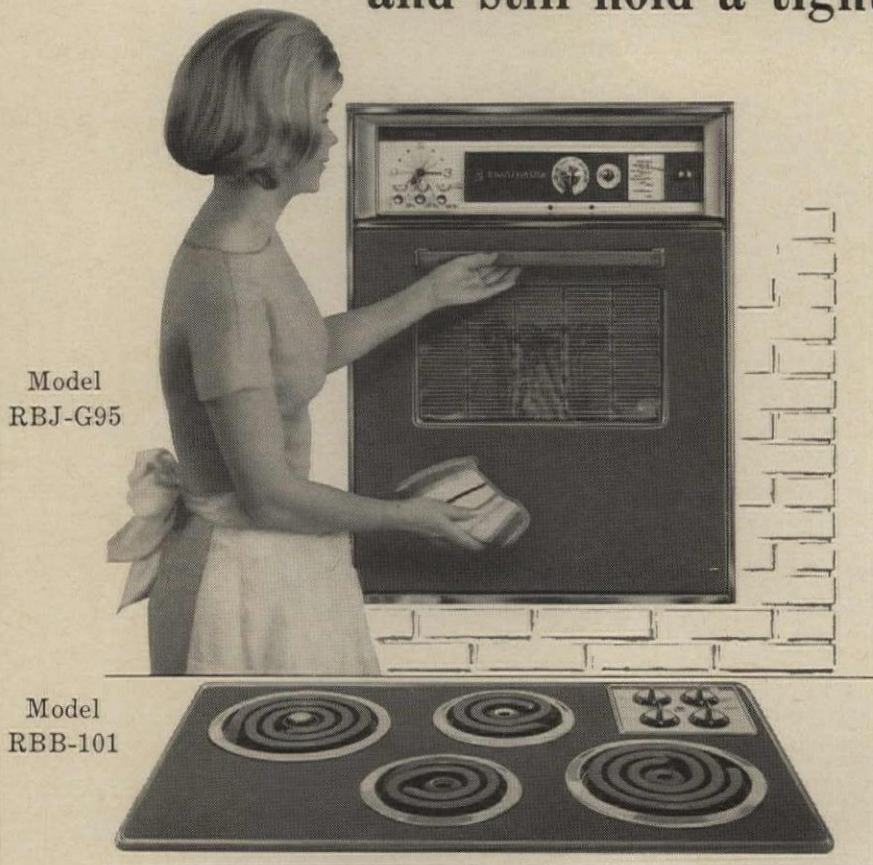
Circle 230 on Reader Service card

New products continued on p. 110



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Model
RBJ-G95

Model
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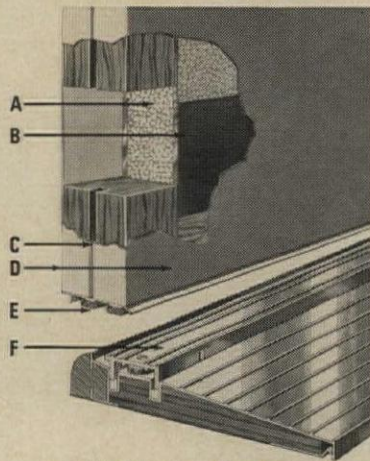


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Tools and equipment



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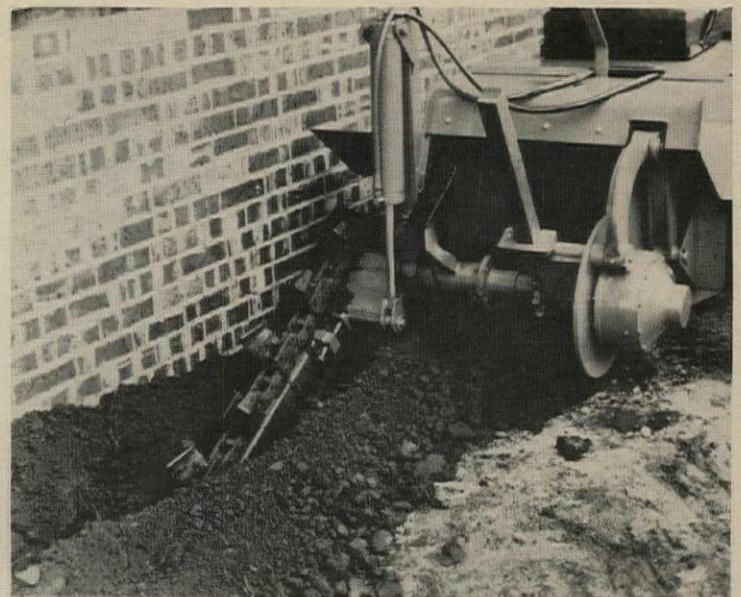
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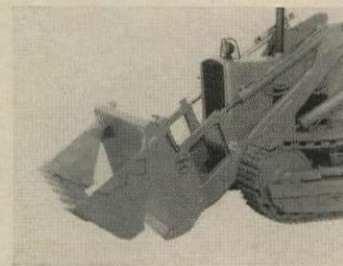
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READING BODY WORKS, INC., Dept. CE-65, 420 Gregg Avenue, Reading, Penna.

Circle 69 on Reader Service Card



Offset pivot moves the digging chain of Model V30 behind left rear wheel. Attachment permits digging a trench 6" wide to 30" deep as close as 2" from building. Quick disconnect couplings included. Charles Machine Works, Perry Okla. *Circle 231 on Reader Service card.*



4-in-1 bucket may be used as a loader, scraper, clam or bulldozer. Unit has two levers, one for conventional operations and one for the clam. Buckets are available for manufacturer's JD crawler loaders and wheel loaders. John Deere, Moline, Ill. *Circle 232 on Reader Service card*



Variable speed drills operate at exact speeds. Model U-205, 3/4" unit, delivers speeds from 0 to 2,250 rpm and Model U-225, 5/8", has speeds from 0 to 1,000 rpm. Both are controlled by a geared rheostat control switch. Black & Decker, Towson, Md. *Circle 233 on Reader Service card*



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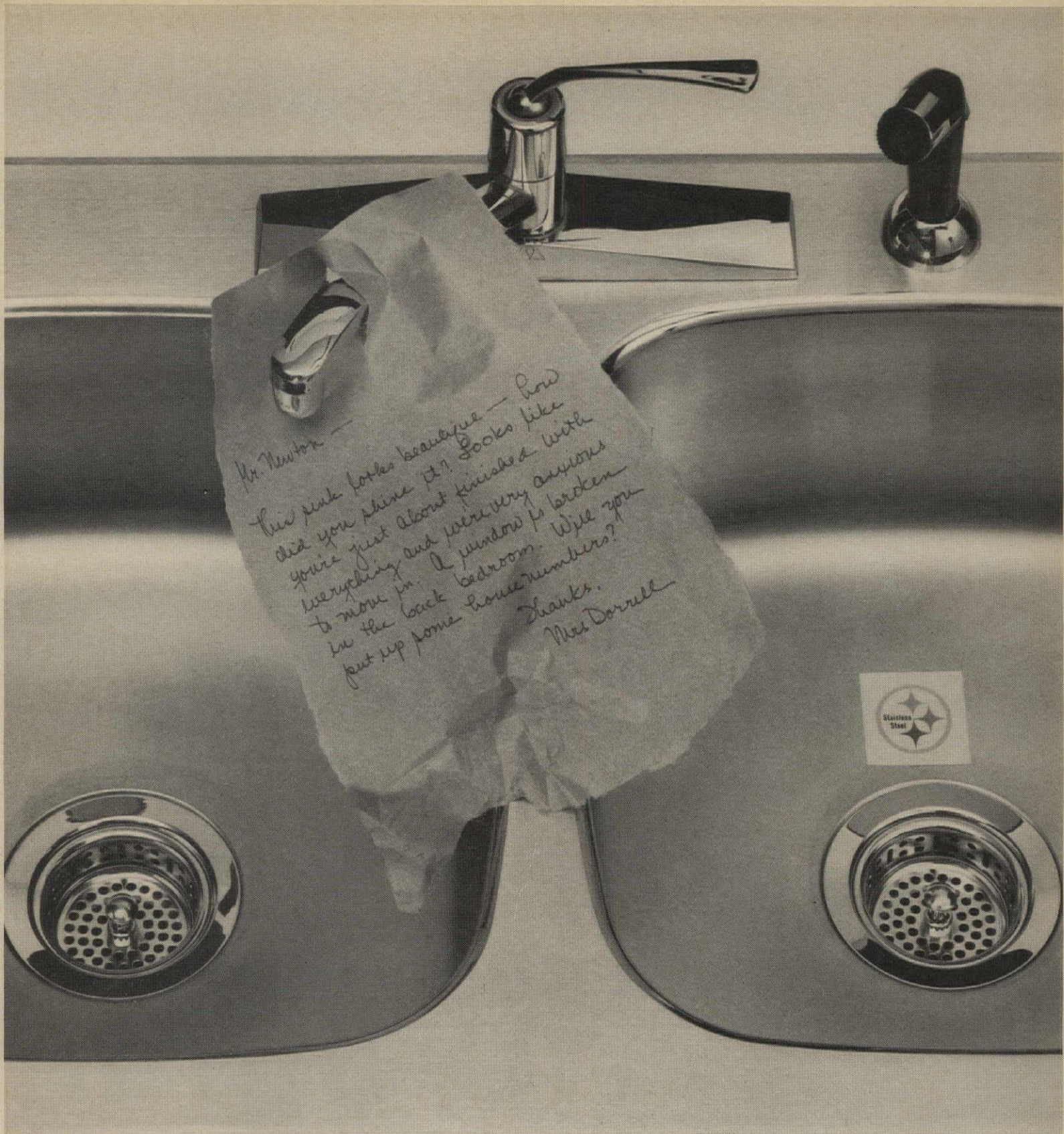
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calder MANUFACTURING COMPANY, INC.
LANCASTER 15, PENNA. 17604



Air-operated chipping hammers are available with 1", 2" and 4" strokes. All units are less than 20" long and weigh 17 1/2 lbs. The hammers have an air cushion design that is said to eliminate shock. Thor Power Tool Co., Aurora, Ill. *Circle 234 on Reader Service card.*

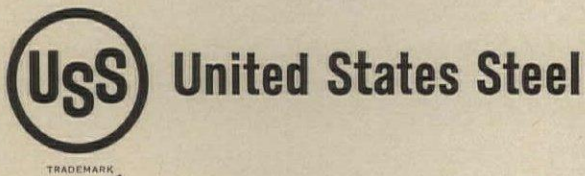
New products continued on p. 114



Dear Mrs. Dorrell:

The builder didn't shine this sink at all. It's stainless steel. It looks that way when it's delivered, and it will always look that way because it won't chip or stain; and constant use just enhances its beauty. It's the best material in the world for a sink — ask any gal who owns one.

P. S. The builder will fix the window, and the house numbers will be up by the time you move in.



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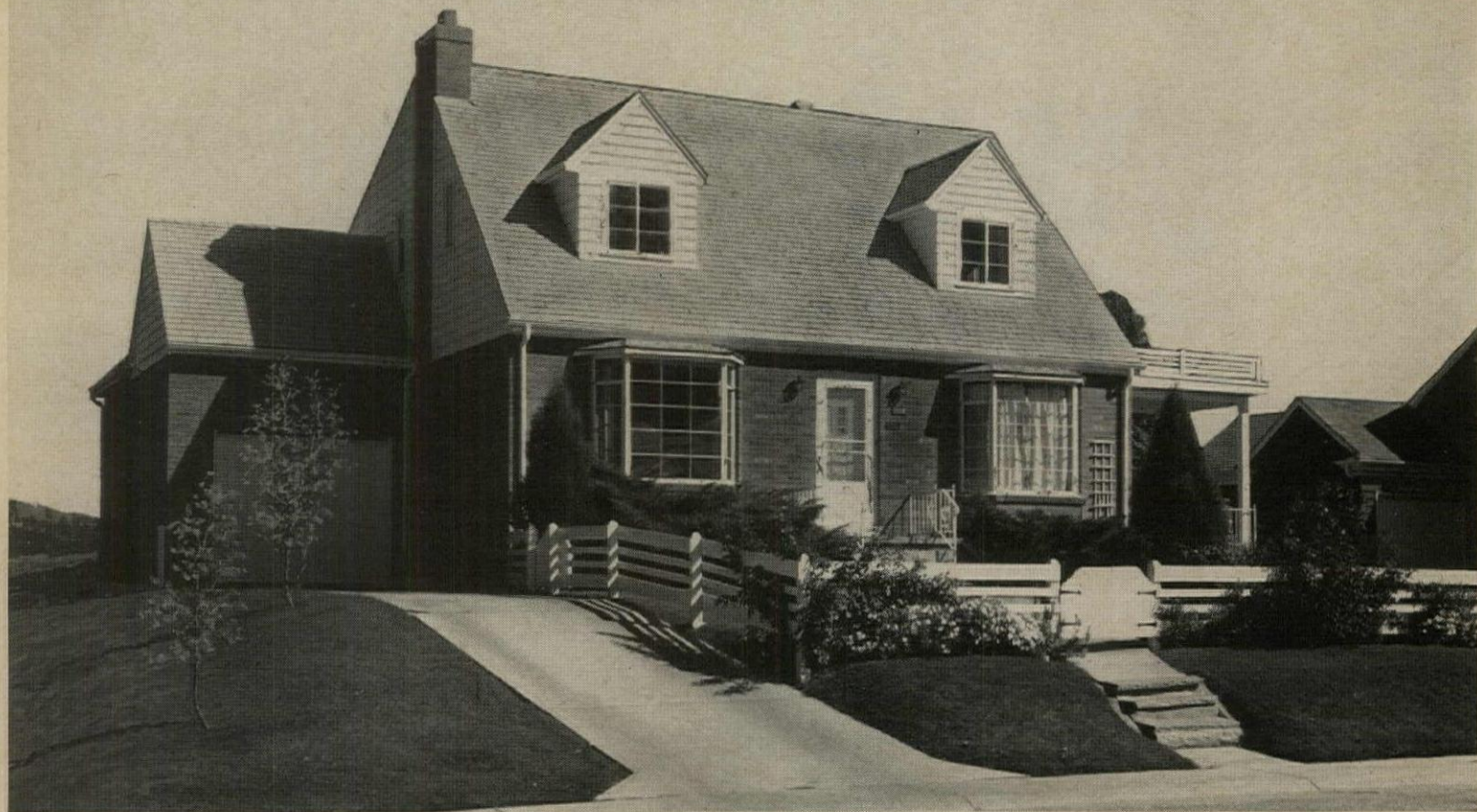
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or a custom-built residence . . .

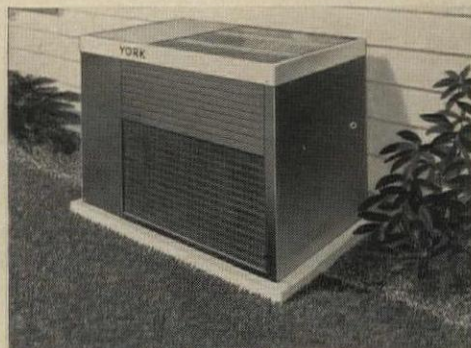
CONDITIONING

YORK

air conditioning
and refrigeration

BORG **WARNER**

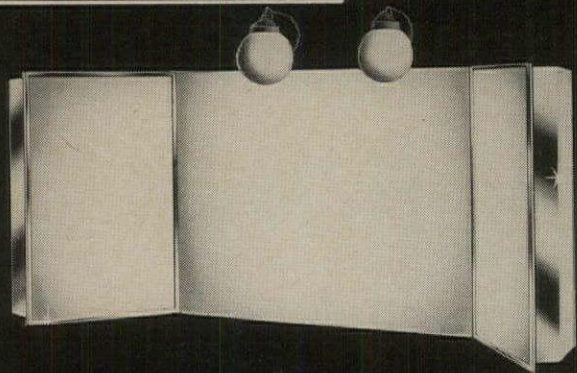
Low silhouette design of York heat exhaust section enhances home appearance; vertical air discharge protects outside paint . . . won't damage shrubbery or lawn.



NEW PRODUCTS

start on p. 101

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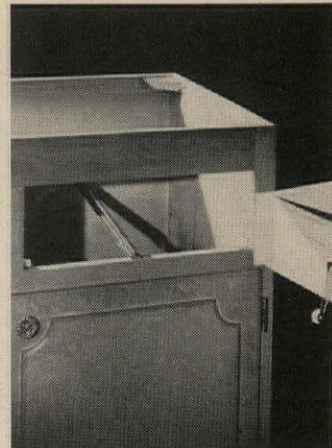


Central system vacuum cleaner eliminates dust bag and increases cleaning power three to four times, according to the maker. The unit is powered by a 1½ hp motor. A 30' pliable hose carries refuse to dirt receptacles. Nautilus, Freeland, Pa. *Circle 235 on Reader Service card.*



Electric generator is portable. Unit can produce up to 2,000 watts of power for operation of lights and tools at construction sites. Mark-2 weighs 77 lbs. and operates at 3,600 rpm. McCulloch Mite-E-Lite Inc., Wellsville, N.Y.

Circle 236 on Reader Service card



Self-closing drawers are included in manufacturer's cabinet lines—Heritage, Starfire and Provincial. Drawers are guided by an aluminum track and nylon wheel assembly. They are said to open and close silently. Peerless Wood Prods., Detroit.

Circle 237 on Reader Service card

New products continued on p. 116

*It's that
revolutionary*



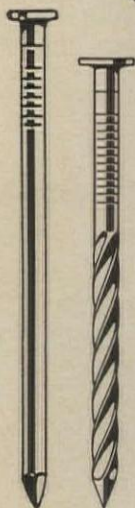
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***Nails 2,000 square feet
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The Gun-Nailer drives regular 8d common or cooler and 6d common or cooler nails, with heads slightly modified to nest in clips. They are acceptable in FHA insured construction as equivalent to regular nails. They are *not* T-nails. It also drives galvanized nails 8d or 6d common; screw nails 2 1/4" or 2" long; short (2 1/8") 10d nails for diaphragm roof and shear wall construction.

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He punishes equipment

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The ARI Unitary Certification Program was started in 1959; today it has expanded to include review of all new models, with physical testing of approximately one-third of every participant's basic models.



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NEW PRODUCTS

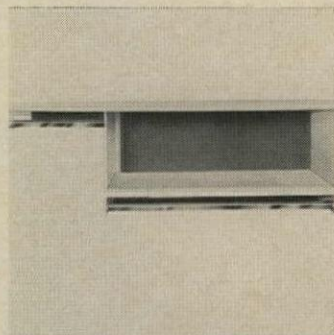
start on p. 101



Lazy Susan unit can be used with wood or metal shelves. Rev-A-Shelf is self-closing and has positive positioning. Unit is pre-assembled. Shelf sizes: 18" to 28" in diameter. Center shaft length is 29". Ajax Hardware, City of Industry, Calif.
Circle 238 on Reader Service card



Electronic intruder alarm protects premises when owner is at home or away. Battery-operated unit produces a piercing blast. A 14-second delay allows owner to enter without triggering alarm. Ballistics Control Corp., Long Island City, N.Y.
Circle 239 on Reader Service card



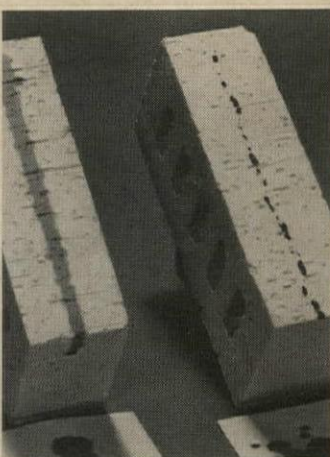
Shelf and rod unit consists of a full-width top shelf, a 14" clothes rod and an additional shelf and rod 12" below them. Two models are available for closets from 36" to 60". Unit is theft-proof. H C Prods., Princeville, Ill.
Circle 241 on Reader Service card



Electric fireplace works with glass-fiber woodlogs and a built-in forced-air heating system. Wall-hung unit, of contoured steel, uses regular house current. A built-in floor-to-ceiling model is also available. Dyna Mfg., Los Angeles.
Circle 240 on Reader Service card



Central cleaning system has increased power and pickup, says the maker. A 2½ hp, 12 amp motor produces an air flow of 170 cu. ft. per minute. The 6-gal., disposable bag requires emptying about twice a year. Black & Decker, Towson, Md.
Circle 242 on Reader Service card



Silicone water repellent for above-grade masonry is said to give improved protection against staining and freeze-thaw damage. Water soluble stains roll off treated brick, right, soak into untreated brick, left. Dow Corning, Midland, Mich.
Circle 243 on Reader Service card

New Literature starts on p. 127



As seen on *THE PRICE IS RIGHT*

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Eleven years ago when Scheirich Bronzeglow Birch cabinets were first introduced, the manufactured wood cabinet was just beginning to come into its own. Builders who formerly tied up their labor in "finishing out" kitchens were learning they could buy and install cabinets more quickly and more economically than they could build them . . . and get far better quality in the bargain. Today the trend is so firmly established that each year sees the rate of usage of manufactured wood cabinets leaping far ahead of the rate of housing starts.

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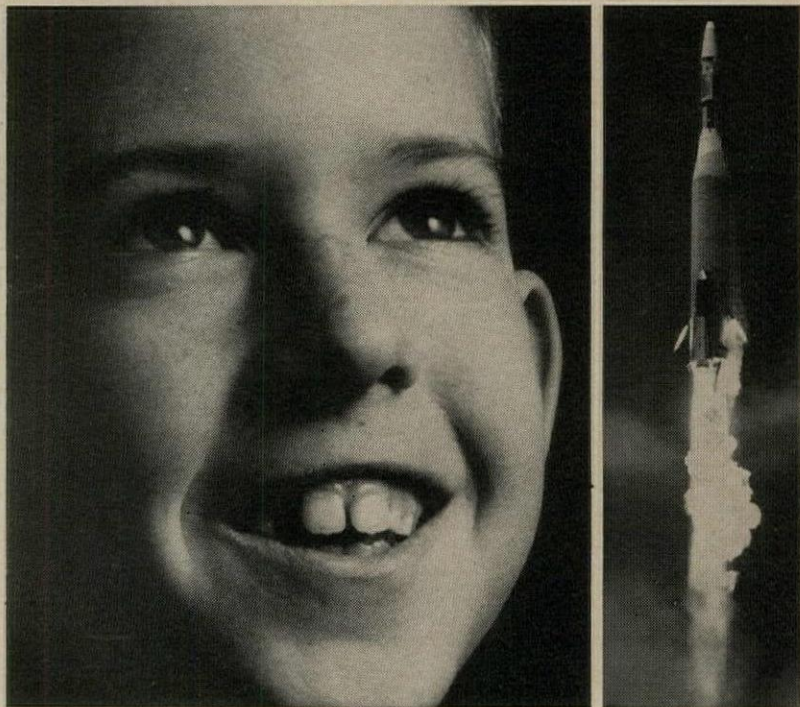
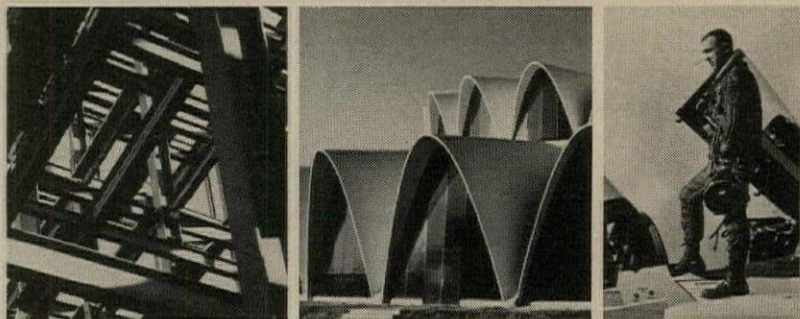
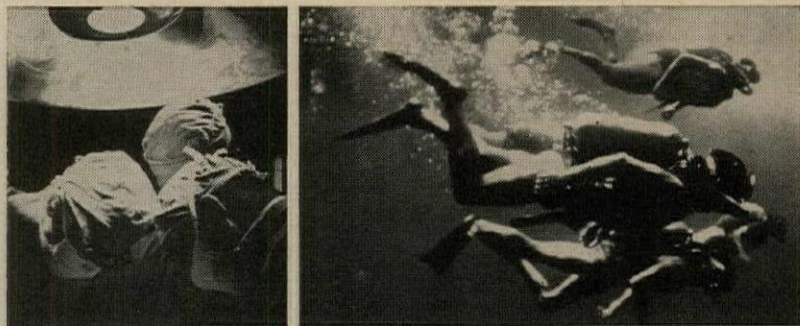
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Louisville Title Agency
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Louisville Title Agency
Worth Street 35976</p> <p>Huntsville
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Louisville Title Agency
208 Eustis Ave., S. E. 35801
Louisville Title Agency
208 Upton Building 35801</p> <p>Montgomery
The State Abstract Company
23 South Perry Street 36104</p> <p>Opelika
Louisville Title Agency
902 Avenue A 36801</p> <p>Ozark
Louisville Title Agency
P. O. Box 700 36361</p> <p>Phenix City
Louisville Title Agency
302 Fourteenth Street 36867</p> <p>Scottsboro
Louisville Title Agency
Court House Square 35768</p> <p>Sylacauga
Louisville Title Agency
City National Bank Bldg. 35150</p> <p>Talladega
Louisville Title Agency
119 West Court Square 35160</p> <p>ARKANSAS</p> <p>Augusta
Woodruff County
Abstract Company 72006</p> | <p>Mountain Home
Alley Abstract Co. 72653</p> <p>Searcy
Strother Abstract Company
302 West Arch Avenue 72143</p> <p>Yellville
Berry Land and Abstract Co.
P. O. Box 567 72687</p> <p>FLORIDA</p> <p>Bradenton
Louisville Title Agency
1107 Sixth Ave., West 33506</p> <p>Brooksville
Gulf Coast Abstract Company
111 North Main Street 33512</p> <p>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</p> <p>Louisville Title Agency
405 Bayview Building
1040 Bayview Drive 33304</p> <p>Fort Myers
Mossley Title and Abstract Co.
1802 Broadway 33901</p> <p>Key West
Monroe Land Title Company
517 Whitehead Street 33041</p> <p>Miami
Land Title Company
3005 Ponce de Leon Boulevard
33134</p> <p>New Port Richey
West Pasco Title and Abstract
Company
722 West Main Street 33553</p> <p>Orlando
Mid-Florida Title Service
Company, Inc.
c/o Rush, Reed and Marshall
55 East Livingston 32802</p> <p>Perry
Louisville Title Agency
Dixie-Taylor Hotel Bldg. 32347</p> <p>Quincy
Louisville Title Agency
4 East Washington St. 32351</p> <p>St. Petersburg
Guarantee Abstract Company
571 First Avenue North 33731</p> <p>Tallahassee
Louisville Title Agency
200 East College Ave. 32302</p> <p>Wauchula
Wauchula Abstract & Title Co.
111 South Eighth Ave. 33873</p> <p>West Palm Beach
Palm Beach Abstract and
Title Company
121 South Narcissus St. 33402</p> <p>GEORGIA</p> <p>Albany
Louisville Title Agency
302 Flint Street 31702</p> <p>Athens
Louisville Title Agency
502 Sou. Mutual Bldg. 30601</p> <p>Atlanta
Louisville Title Agency of
Atlanta, Georgia
423 Standard Federal Savings
Building 30303</p> <p>Augusta
Louisville Title Agency
207 Augusta-Richmond County
Municipal Building 30902</p> | <p>Dalton
Louisville Title Agency
108 1/2 S. Hamilton St. 30720</p> <p>Gainesville
Louisville Title Agency
516 First Federal Building
311 Green Street, N. E. 30501</p> <p>Marietta
Louisville Title Agency
114 Roswell Street 30061</p> <p>Rossville
Woods-Christian Title Agency
110 Howard Street 30741</p> <p>Savannah
Louisville Title Agency
114 E. Oglethorpe Ave. 31401</p> <p>Tifton
Louisville Title Agency
P. O. Box 355 31794</p> <p>Valdosta
Louisville Title Agency
505 N. Patterson St. 31601</p> <p>LOUISIANA</p> <p>Alexandria
Louisville Title Agency
601 Guaranty Bank Bldg. 71302</p> <p>Baton Rouge
Louisville Title Agency
301 Downtown American
Bank Building
352 Florida Street 70801</p> <p>Lake Charles
Louisville Title Agency
2225 Moeling Street 70604</p> <p>New Iberia
Louisville Title Agency
211 East Main Street 70561</p> <p>New Orleans
Louisville Title Agency
1212 American Bank
Building, 70130</p> <p>Opelousas
Louisville Title Agency
122 North Market St. 70570</p> <p>Shreveport
Louisville Title Agency
830 Giddens-Lane Bldg. 71102</p> <p>Slidell
Louisville Title Agency
150 Cleveland Avenue 70458</p> <p>West Monroe
Louisville Title Agency
P. O. Box 135 71291</p> <p>MISSISSIPPI</p> <p>Greenville
West Mississippi Title Co.
338 May Building 38702</p> <p>Gulfport
Louisville Title Agency
2213 Fifteenth Street 39502</p> <p>Hattiesburg
Louisville Title Agency
316 Forrest Street 39402</p> <p>Jackson
Magnolia State Title Company
431 Tombigbee Street 39201</p> <p>Meridian
The Southern Title Ins. Co.
306 Lamar Building 39301</p> <p>Natchez
Louisville Title Agency
133 South Commerce Street
P. O. Box 1335 39121</p> <p>TENNESSEE</p> <p>Jackson
Louisville Title Agency
308 East Main Street 38302
For other areas in Tennessee
consult Home Office</p> |
|--|--|---|



The future belongs to the fit

In space or surgery, farming or finance, nursing or news reporting, teaching or television, the future belongs to the fit. The future belongs to those vigorous enough to live it, and shape it!

Medical authorities put it this way: "It is a tragic waste to highly educate the minds of our children and neglect the physical conditioning that can help them participate in the future to the full extent of their abilities."

How about your schools? Are they providing for physical fitness as part of the sound education your children need to carve out their share of the future? You parents can help see that they do. Write: The President's Council on Physical Fitness, Washington, D. C., for information.

PRESIDENT'S COUNCIL ON PHYSICAL FITNESS



Published as a public service in cooperation with The Advertising Council



Here's the key to close comfort control

In single-family dwelling or garden apartment, homemakers are demanding zone control to regulate temperatures. Bell & Gossett provides a low cost way to achieve this modern heating/cooling system: a thermal/electric zone control valve.

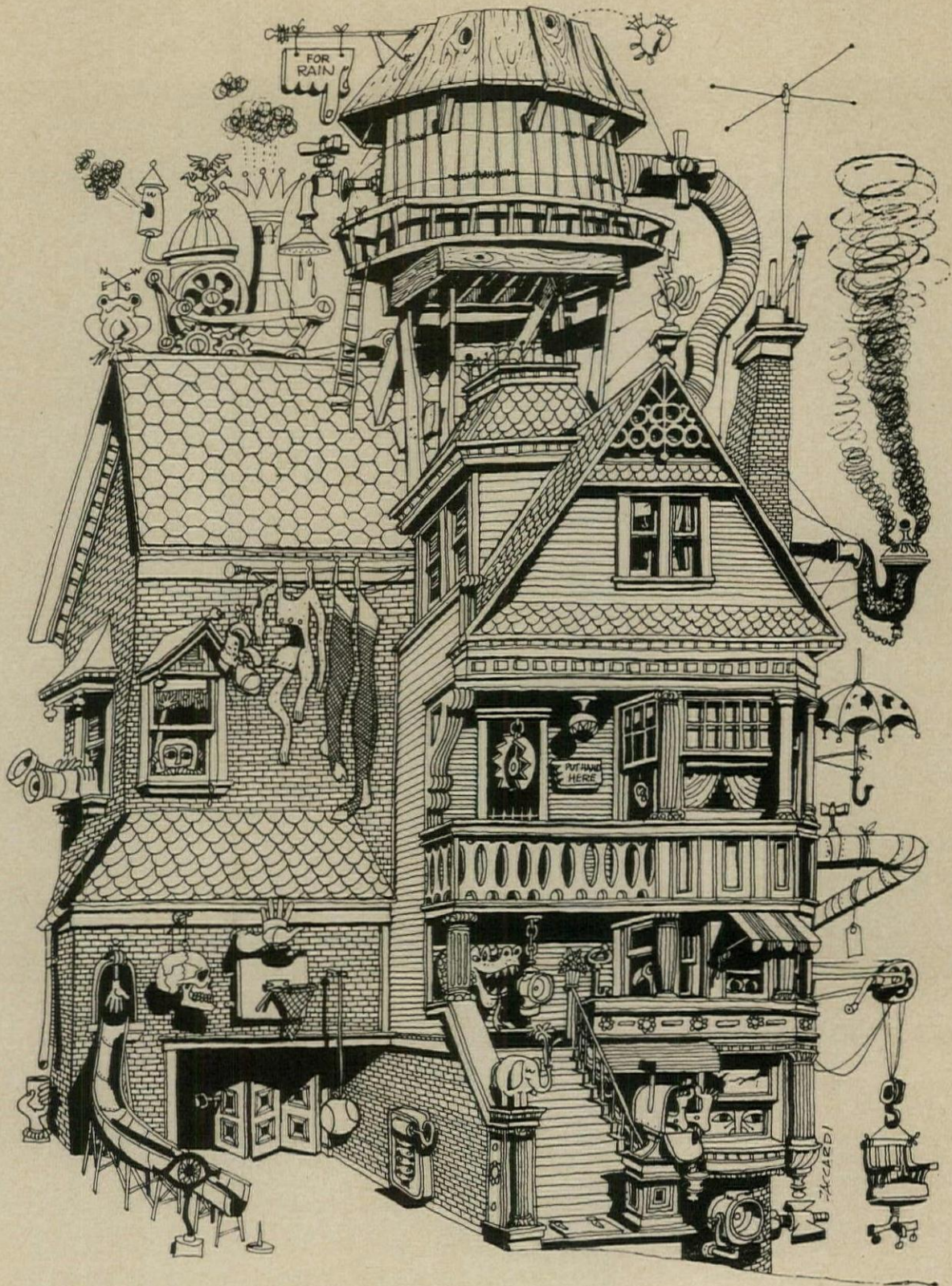
The unique heat motor of this valve assures whisper-quiet operation. "Slow opening" to eliminate abrupt system temperature changes and attendant noises. "Slow closing" to end the disturbing hammer caused by water surges. High-shear rotary

action gives 100% shut-off to assure close comfort control.

Simple design assures long, trouble-free service. Leak-proof construction. Fits all standard hydronic heating/cooling systems.

For data on zone control valves or deluxe systems with Primary/Secondary pumping, write ITT Bell & Gossett Hydronics, a division of International Telephone and Telegraph Corporation, Morton Grove, Illinois, Dept. 10-C.

BELL & GOSSETT ITT
A MEMBER OF THE HEATING AND AIR CONDITIONING GROUP



INSIDE...OUTSIDE...ALL AROUND THE HOUSE

... adhesives help you build better. Builders and contractors have found it's virtually impossible to put up a good building without adhesives. Adhesives help you build better, faster, more economically. With Fuller Black Stuff Stud Adhesive, install paneling and wall board faster, easier, eliminate nail popping. Create distinctive homes with decorative exposed aggregate walls inside or outside—using Tuff-Lite® Epoxy Matrix. Resiweld® Penetrating Sealer gives garage, patio and utility floor surfaces five times the strength of concrete. Stick plaster securely to concrete walls and blocks with Ful-O-Mite® Plaster Adhesive. Do these and more with products from Fuller . . . the nation's foremost producer of construction adhesives.

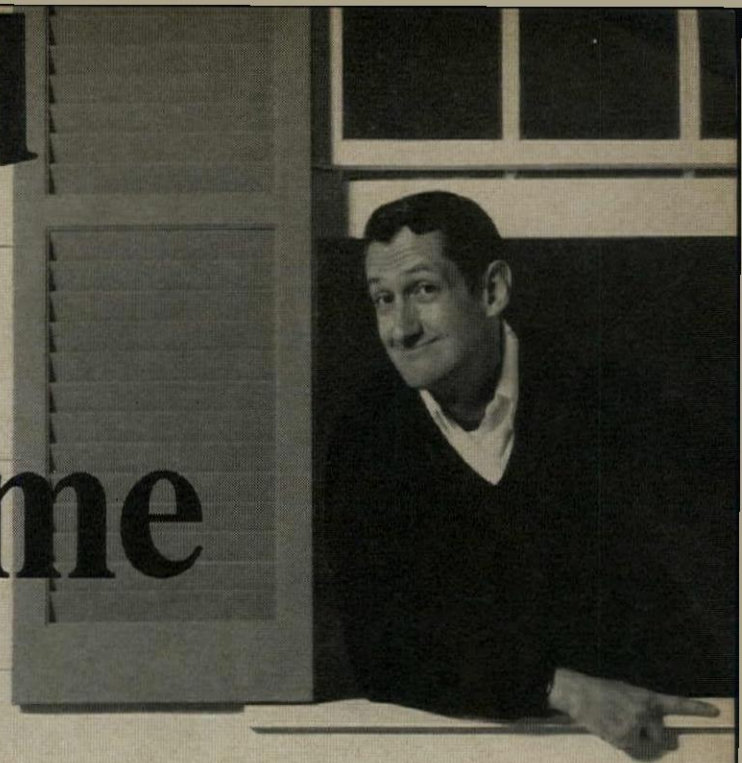
Write for **FREE** Information File Folder on Construction Adhesives.



H. B. Fuller Company

Dept. 13136 • 1150 Eustis Street • St. Paul, Minnesota 55108 • ADHESIVES SINCE 1887

We changed PF-15 Siding's name to PF-L for just one reason.



Turns out Weldwood® PF-15® doesn't last just 15 years.

It lasts as long as the building it's on.

That calls for a new name and a new guarantee:

Weldwood PF-L.™ Guaranteed for the life of the building.* Not just for the life of the owner. And not prorated—it's in full force year after year, owner after owner, for the full amount as long as the building lasts.

PF-L's the same revolutionary plywood siding we introduced as PF-15. Surfaced with Polyvinyl Fluoride film, Tedlar®. The finish is part of the siding; can't chip, crack or flake. And because it's plywood, it's structurally rigid. Won't warp or split.

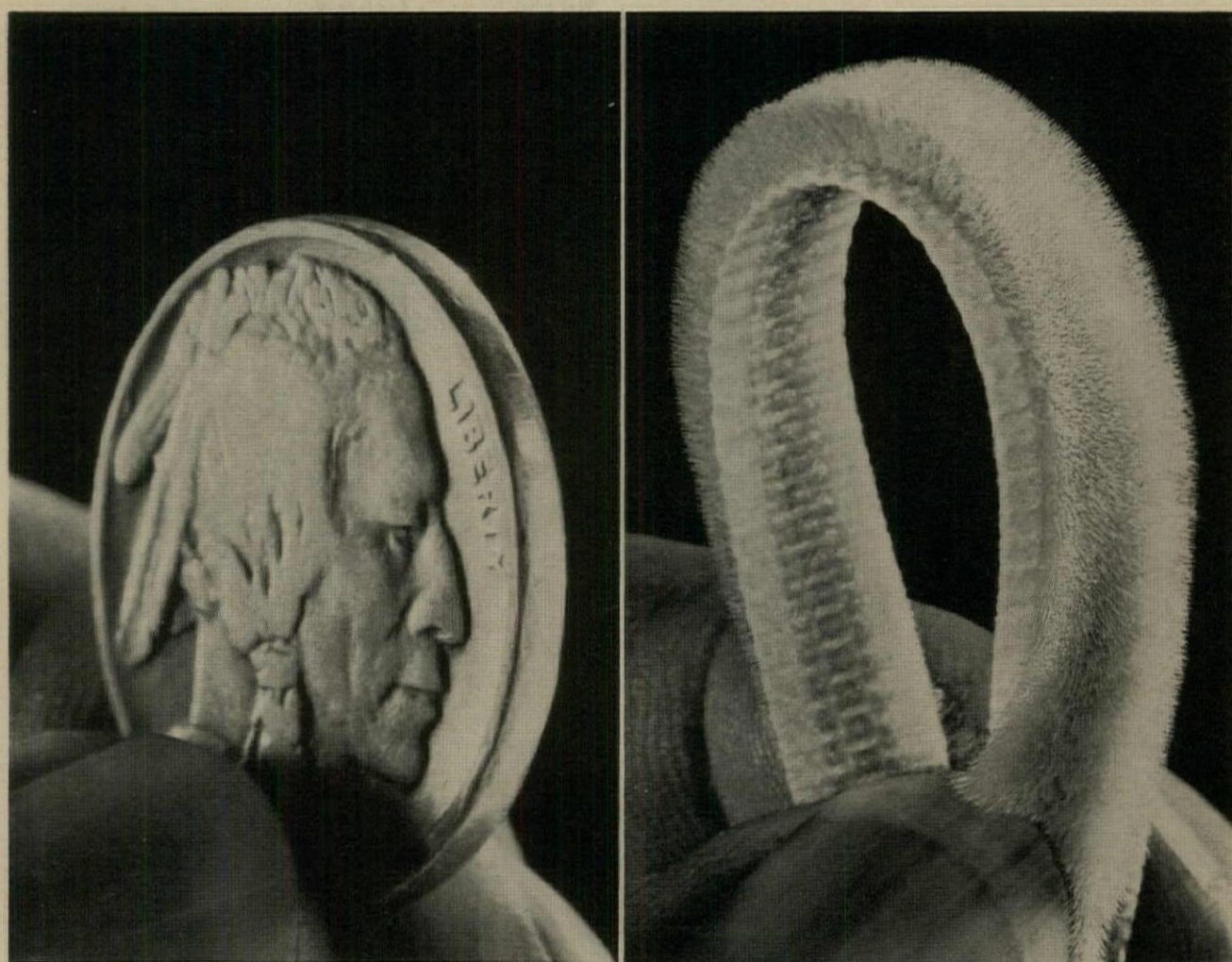
So don't ask for PF-15 any more. Ask for Weldwood PF-L. It's the same thing, only better.

Send for a free sample. United States Plywood, Dept. HH 9-65. 777 Third Avenue, New York, New York 10017.

PF-L is the revolutionary plywood siding guaranteed for the life of the building. Only United States Plywood makes it.

*United States Plywood Corporation guarantees Weldwood PF-L Siding for the LIFE OF THE BUILDING on which the Siding is installed against cracking, chipping, crazing, blistering, flaking or peeling of the original finish and against manufacturing defects. If during the LIFE OF THE BUILDING any Weldwood PF-L Siding is found to be defective within the meaning of this guarantee, United States Plywood will, at its option, (a) refinish, (b) repair, (c) replace, or (d) refund the purchase price of the material involved. This guarantee applies only when the Siding has been installed in accordance with United States Plywood's instructions and established building standards and only when the Siding is used under conditions of normal exposure.

In weatherstripping a nickel still buys a lot



For about a nickel more per door or window, you can give your customers Poly-Pile.* And look what this means to them (and you) . . . *No sticking in hot weather.* Poly-Pile has a low coefficient of friction. No plasticizers to migrate. *No deformation in cold weather.* Poly-Pile doesn't take a set when cold. Stays soft and flexible. *No deterioration from use.* Tests show it outwears conventional weatherstrips 5 to 1. *No gaps, no cracks, no rattles, no leakage.* Poly-Pile has a thick pile that conforms to every surface, follows every irregularity, presents millions of polypropylene fibers as a thick barrier to infiltration of cold, dirt, water. Substantial heat savings are assured, about 9.5%. *No water absorption, no mildewing, no rotting.* Poly-Pile is silicone treated so moisture can't affect it. These are the things your customers expect when you tell them doors and windows have been weatherstripped. Why not avoid complaints? Invest a nickel more and give them the added values of Poly-Pile, by Schlegel.

*Poly-Pile is a trademark of The Schlegel Manufacturing Company

Schlegel WOVEN PILE WEATHERSTRIPPING

THE SCHLEGEL MANUFACTURING COMPANY • P.O. BOX 197 • ROCHESTER, N.Y. 14601



The Krinsky's came up with a natural... colonial and copper

Authentic colonial design cries out for copper. The two go together. Naturally. Beautifully. Convincingly.

This spring, The Krinsky Organization, veteran Long Island, N.Y. builders and land developers, created a complete model home promotion around this idea. In the words of Bernard Krinsky, here's what happened:

"We put in top quality copper plumbing and drainage and an all copper hydronic heating system. We put copper where people could see it—in the flashings, gutters and downspouts. We used solid copper and brass hardware and featured these metals in various interior accents. Then we talked nuts-and-bolts quality to prospects.

"We've found out people *do* care about what's on the roof and inside the walls. They care about how long their home will stay weather-tight, and how many years their piping will last. How warm and comfortable they'll be in winter. And how attractive their home looks. They care enough to weigh these values and to buy a quality house because it makes good sense."

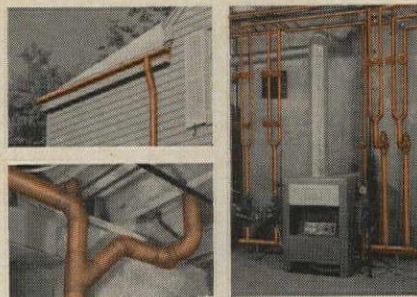
In an area known for tough competition, the concept of using and featuring copper made

the Krinsky home stand out from other model homes on Long Island. It helped build interest, confidence and sales, and it did it at very little additional cost.

What more can one ask of a building material?

Quality copper features from basement to rooftop

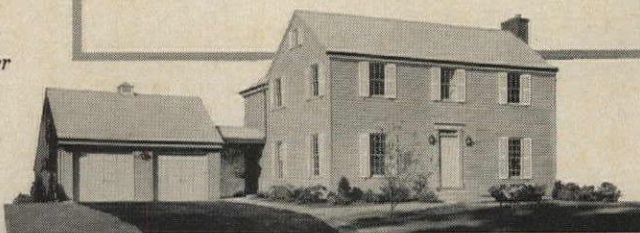
- Copper-tube hydronic heating with 4-zones of comfort
- Copper-lined boiler and hot water heater
- Copper flashing, downspouts and gutters
- Copper water supply lines
- Copper drainage system
- Copper inlaid wall paneling
- Copper wall tiles
- Solid brass bathroom fixtures
- Copper fireplace hood and range hood
- Solid copper and brass hardware and lighting fixtures
- Custom made copper refrigerator panels.



Colonial house at Belle Terre, Port Jefferson, L.I. Because of the extensive use of copper, brass and bronze in this model, the Krinsky Organization was named a Copper Award Home builder by the Copper Development Association.

ARCHITECT: W. M. THOMPSON, JR., P.O. BOX 11, PRINCETON, N.J.

COPPER
DEVELOPMENT
ASSOCIATION INC.



405 LEXINGTON AVENUE, NEW YORK, N.Y. 10017

417/5

Hello Uni-drive... goodby hangover.



Janitrol Uni-drive's outboard bearing eliminates the motor whip of conventional, hang-over-mounted direct drive blowers—gives you the quietest, most efficient, most trouble free unit on the market today.

If your past experience has been with single-anchored, hangover-drive, it's time to check out Janitrol's Uni-drive Blower System.

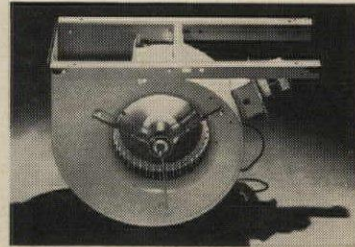
Don't confuse Uni-drive with ordinary direct drive. Sure, the blower wheel's mounted on the motor shaft, but after that it's different as day and night. The four speed Permanent Split Capacitor motor shaft extends clear through the blower housing. (Look at the little picture.) The far end of that shaft's supported in a rubber-cushioned, self-aligning, permanently lubricated, outboard bearing and held in a rigid three-armed bracket. That's double support

and that's what it takes to eliminate noise, vibration and motor whip in a direct drive unit.

This naturally quiet operation is a bonus for the home buyer. It saves the builder and installer a lot of grief, too. Because each noise Janitrol took out, took a potential service problem with it... a wear, a tear, or a stress that could mean a premature breakdown.

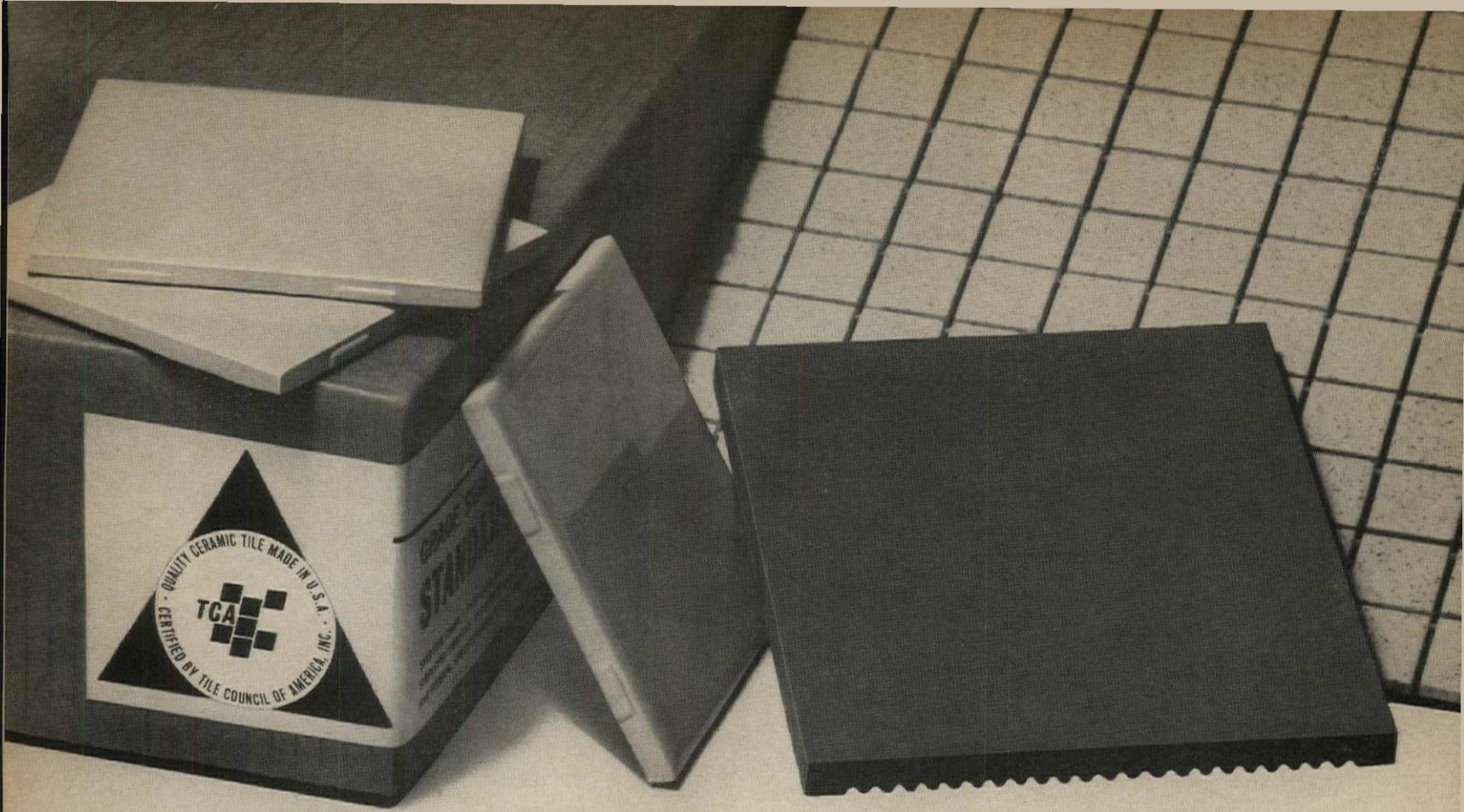
We sell it for less than belt drive, too. That's something else to think about. Available in up-flow and downflow models, 50,000 to 150,000 Btu. All are quick-convert for quiet cooling.

Contact your Janitrol district office. The name's in the Yellow Pages. Janitrol gives you more to work with.



JANITROL DIVISION
Midland-Ross Corporation
Columbus, Ohio □ Phoenix, Arizona





**You can stake your reputation
on this mark**

It labels Certified Quality Ceramic Tile made in U.S.A.

Quality design and construction require quality materials. And the Tile Council of America knows it. That's why we developed the "Certified Quality" program. It means this: You can now select ceramic tile with complete assurance that it was made in the U.S.A. and is quality tile—tile to tile, carton to carton. We put our reputation on it. You can too.

Here's how it works. Tile manufactured by participating companies now undergoes regular inspections by an independent laboratory. Certified Tile must meet the highest quality

standards ever set for the industry. These standards are published by the government in SPR R61-61 and in Federal Specification SS-T-308b.

So why take chances? Specify that each carton of tile shall bear the Certification Mark of the Tile Council of America. You will be glad you did.



MEMBER COMPANIES: American Olean Tile Co., Inc. • Atlantic Tile Manufacturing Co. • Cal-Mar Tile Company • Cambridge Tile Manufacturing Co. • Carlyle Tile Company
Continental Ceramic Corporation • Florida Tile Industries, Inc. • General Tile Company • Gulf States Ceramic Tile • Highland Tile Company • Huntington Tile, Inc. • International
Pipe and Ceramics Corporation • Jackson Tile Manufacturing Co. • Jordan Tile Manufacturing Co. • Lone Star Ceramics Co. • Ludowici-Celadon Company • Mid-State Tile Company
Monarch Tile Manufacturing, Inc. • Mosaic Tile Company • Oxford Tile Company • Pacific Tile Company • Pomona Tile Manufacturing Co. • Redondo Tile Company • Ridgeway Tile Company
Sparta Ceramic Company • Stylon Corporation • Summitville Tiles, Inc. • Texeramics Inc. • United States Ceramic Tile Co. • Wenzel Tile Company • Winburn Tile Manufacturing Co.



short-sited family

They need a real estate agent. So they'll be looking in the Yellow Pages. The chances are 9 in 10 they'll then take action. Will they see your ad?

This over-stuffed clan needs housing so they'll be joining the 7.4 million people who turn to the housing or real estate headings of the Yellow Pages every year. (That's 29% of the entire market!)

When they do look in the Yellow Pages, chances are 9 in 10 they'll either call, write, or visit. (Every 100 references to the housing or

real estate headings of the Yellow Pages bring 91 calls, letters, or visits!)

That's action! With Yellow Pages ads you can expect that kind of action . . . a recent extensive national usage study—consisting of over 19,000 interviews—proved it.

Call your Yellow Pages man. He'll show you what the study

learned about your business. And he'll be glad to help you plan your own Yellow Pages program. You'll find him in the Yellow Pages under "Advertising—Directory & Guide."

Advertise for action...

Yellow Pages





★ ★ ★
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

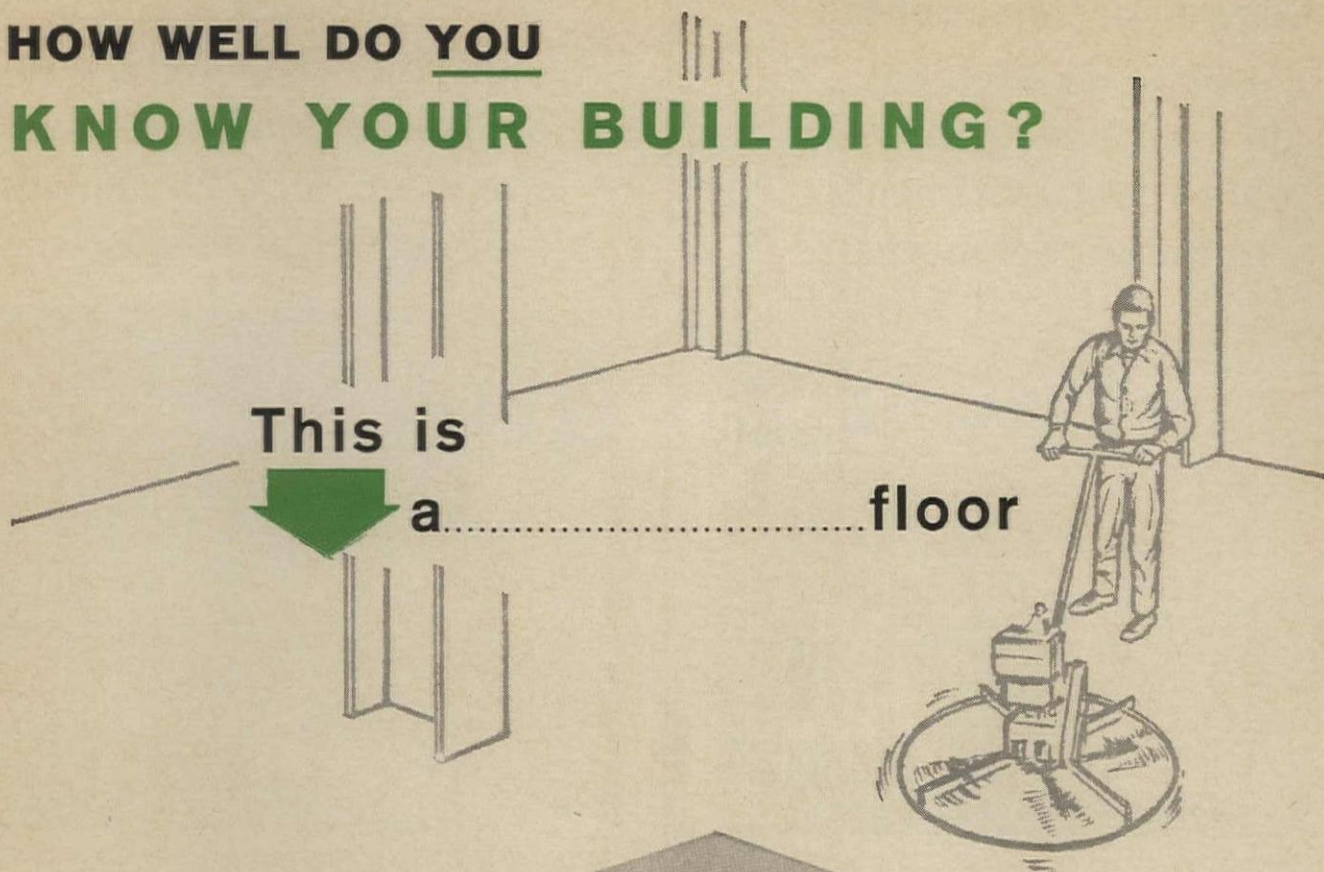
lives of our 2,300,000 citizens in uniform—lives they are pledged to risk wherever freedom is threatened. Someone you know needs the USO. Someone you know wants a choice of conduct during his off-duty hours. Someone you know wants a haven in a hostile world. Someone you know needs a reminder that folks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



HOW WELL DO YOU KNOW YOUR BUILDING?



This is
a floor

and its modern
resilient underlayment
is **RESILBASE™**
by **homasote**



Impact Noise Ratings as high as +19 (according to FHA #750) have been achieved with 32 oz. pad and carpet on 1/2" Homasote over a 5" concrete floor. Test data for "Resilbase" and Floor Decking on request.

In high or low-rise construction, wherever concrete floors are installed - RESILBASE Underlayments of all-wood fibre Homasote provide both sound conditioning and cushioned comfort underfoot. Convenient 4' x 4' panels, 3/8" or 5/8" thick, are applied directly to concrete slabs with adhesive. Over wood construction, Homasote "4-Way" Floor Decking can be applied in 2' x 8', T & G panels, 1 1/2" thick, directly to floor joists giving you *all in one*: sub-floor, underlayment and sound and weather barrier. Write for technical bulletins to Dept. J-3.

homasote Company

TRENTON, N. J. 08603

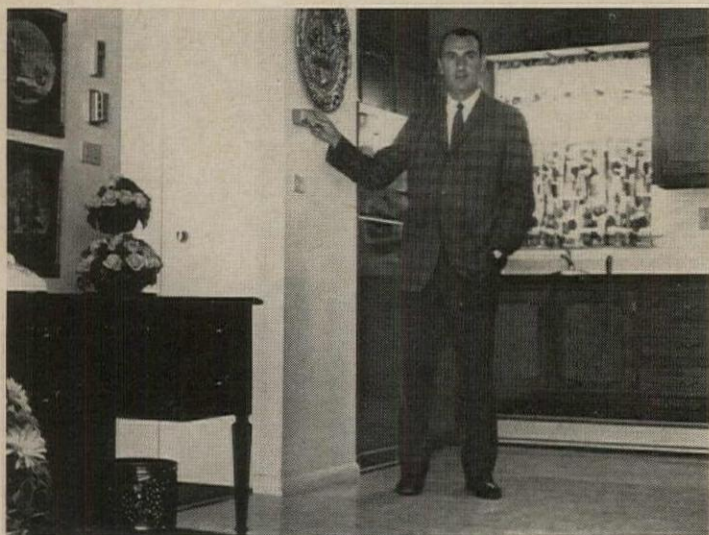
5-100

Circle 83 on Reader Service Card

**Here's how G-E
Central Air Conditioners
solved the problem
of even cooling in the
multi-room apartments
of Robert Schmertz**



"Our apartments, which range up to 1,000 sq. ft. and have as many as four rooms, are laid out so that we prefer 1½- and 2-ton G-E Central Systems to give us even distribution of cooling through ductwork at a low operating cost," says Bob Schmertz of Leisure Village, Lakewood, N.J.



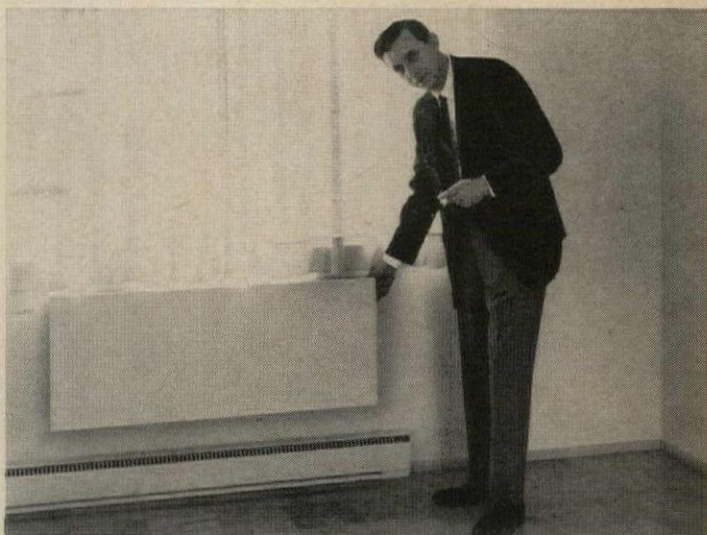
"Because some folks feel the heat more than others, they appreciate the fact that with individual central systems, each apartment has its own separate climate control.

"Of course," Mr. Schmertz says, "we chose G.E. in the first place because we know G.E. makes the most reliable products. And with G.E.'s top engineering design, we can count on the most dependable equipment. We're selling well, thanks in great part to G.E."

**Quiet,
low-cost G-E
Zoneline Air Conditioners
solved Ben Cogen's
Sherwood Park Apartments
cooling problems**



"G-E Zoneline through-the-wall air conditioners are amazingly quiet, and their low-installation costs fit our needs perfectly," says Ben Cogen, owner of handsome, new low-rise apartments in Lima, Ohio. "Zonelines are attractive, too, both on the exterior and the interior."



"Our apartments are laid out so that a single G-E Zoneline can air condition our three-room suites, and two G-E through-the-wall units take care of our larger four-room apartments. Each tenant can control the temperature in his own apartment. If repairs are needed, it requires shutting down just one unit, and it slides out of its through-the-wall case in seconds. Actually, we're so satisfied with G-E Zonelines, we're putting 40 more in our new apartments."

There's a General Electric air conditioning system that's right for your installation. Get full details from your G-E representative or write Air Conditioning Department, General Electric, Appliance Park, Louisville, Kentucky.

GENERAL  ELECTRIC

NEW LITERATURE

For copies of free literature, circle the indicated number of the Reader Service card, page 117.

MULTI-FAMILY PROJECTS. "A Handbook for FHA Multi-family Projects" is designed to guide lenders, sponsors, builders and contractors in efficient processing. Requirements and procedures for applications described. For copy: send \$1.75 to Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

CIRCUIT BREAKERS. 18-page bulletin shows and describes complete line of molded-case breakers. A fold-out selection chart is included. I-T-E Circuit Breaker, Philadelphia. Circle 301 on Reader Service card.

HOODS AND VENTILATING FANS. Catalog shows and describes complete line and discusses types and colors available. Miami-Carey, Cincinnati. Circle 302 on Reader Service card.

NOISE CONTROL. Booklet gives information on tested noise-control methods including information on sound controlling wall systems. Insulation Board Institute, Chicago. Circle 303 on Reader Service card.

WALL PANELING. Specification sheet gives sizes and colors of "Capri Marble" and "Scenics." Panelboard, Los Angeles. Circle 304 on Reader Service card.

LIGHTING FIXTURES. 92-page catalog pictures complete residential line. Full-color room scenes are shown and a guide to decorative lighting for every room is included. John C. Virden, Cleveland, Ohio. Circle 305 on Reader Service card.

LAUNDRY PLANNING. 16-page booklet covers specifics of laundry-center location and content. Specific suggestions are illustrated. Maytag, Newton, Iowa. Circle 306 on Reader Service card.

BATHROOM CEILING HEATERS. 6-page brochure describes and shows heaters with reduced projection from ceiling. Radiant heaters for wall installation and electric baseboard models are also shown. Thermador, Los Angeles. Circle 307 on Reader Service card.

EXTERIOR PARTICLEBOARD. 2-page sheet shows shake siding and soffit and gable end. Advantages and specifications listed. Georgia-Pacific, Portland, Ore. Circle 308 on Reader Service card.

TRACTORS AND EQUIPMENT. Pocket-size selection guide has illustrations and basic specifications for manufacturer's I line. Allis-Chalmers, Milwaukee. Circle 309 on Reader Service card.

SIDING. Two 4-page brochures describe Ceramo siding—a mineral product with stone-like properties and a ceramic-type finish. A color selector and test results are included. Philip Carey, Cincinnati. Circle 310 on Reader Service card.

FIRE DOORS. 4-page selector has chart giving features of doors with A, B and C labels. Amweld Building Prods., Niles, Ohio. Circle 311 on Reader Service card.

FLEXIBLE FITTINGS. Data sheet pictures and describes fittings for connecting manufacturers' air duct to oval troffers. Wiremold, Hartford, Conn. Circle 342 on Reader Service card.

STRUCTURAL WOOD FASTENERS. 12-page catalog describes complete line of fasteners including information on dimensions, manufacturing specifications, recommended safe working values and suggested applications. Timber Engineering Co., Washington, D.C. Circle 313 on Reader Service card.

OFFICE COPIER. 12-page brochure answers questions about copiers. Features described and advantages listed. Xerox Corp., Rochester, N.Y. Circle 314 on Reader Service card.

ELECTRIC HEATING UNITS. Catalog covers complete built-in line with descriptions and specifications. Markel Electric, Buffalo, N.Y. Circle 315 on Reader Service card.

CERAMIC TILES. 16-page catalog discusses 17 categories of tiles. Designs and color ranges are pictured. Amsterdam Corp., New York City. Circle 316 on Reader Service card.

LOADCENTER. 36-page pocket-sized booklet has full specifications on 16 enclosures, fuse holders, circuit breakers and other accessories in the line. Zinsco Electrical Prods., Los Angeles. Circle 317 on Reader Service card.

GARAGE DOORS. 8-page bulletin shows designs of flush sectional doors with polystyrene foam used as core. Graham Inds., Cleveland, Ohio. Circle 318 on Reader Service card.

INSULATING GLASS. 8-page brochure shows ways to use Thermopane in building design. Drawings and photos are included. Libbey-Owens-Ford Glass, Toledo. Circle 319 on Reader Service card.

PREFINISHED PANELING. 4-page brochure shows Stretch Panel available in new size. Jones Veneer & Plywood, Eugene, Ore. Circle 320 on Reader Service card.

LIFT TRUCK. 6-page brochure gives dimensions, underclearances, speeds and drawbar pull of rough terrain trucks. Clark Equipment Co., Battle Creek, Mich. Circle 321 on Reader Service card.

WATER SYSTEMS. 112-page booklet entitled "Water System and Treatment Handbook," is a basic text on the design, installation and operation of private water systems. For copy: send \$3 to Water Systems Council, 205 West Wacker Dr., Chicago, Ill. 60606.

BATHROOM VANITIES. Catalog shows and describes complete line of wood vanities and lavatories. Styles and finishes pictured. Kemper Bros., Richmond, Ind. Circle 322 on Reader Service card.

FINANCING. 8-page booklet "Financing for the Construction Industry" gives features of CIT financing, mentions examples and describes types of financial service available to contractors. C.I.T. Corp., New York City. Circle 323 on Reader Service card.

NOISE CONTROL. 20-page manual covers structural systems and includes cut-away drawings, detailed material lists, sound and fire test ratings and technical data. Georgia-Pacific, Portland, Ore. Circle 324 on Reader Service card.

BATHROOM ACCESSORIES. 32-page catalog illustrates and describes complete line of cabinets and accessories. Miami-Carey, Cincinnati. Circle 325 on Reader Service card.

LIGHTING FIXTURES. 48-page catalog has illustrations and descriptions of the complete Starlight line. Thomas Industries, Louisville, Ky. Circle 326 on Reader Service card.

BRICKS. Folder illustrates colors, sizes and textures of Tebco Face Brick. Evans Brick, Uhrichsville, Ohio. Circle 327 on Reader Service card.

LEAD SOUNDPROOFING. 12-page booklet explains rating methods and specific requirements. Test results are included. Step-by-step design and construction information is given. Lead Industries Assn., New York City. Circle 328 on Reader Service card.

ACOUSTICAL CEILING. 6-page technical folder gives sizes and specifications for noncombustible wood-fiber product. Simpson Timber Co., Seattle. Circle 329 on Reader Service card.

SPRINKLER SYSTEM. 4-page brochure describes use of permanent system. All-State Home Prods., Hicksville, N.Y. Circle 246 on Reader Service card.

FOLDING DOORS. Folder shows and describes doors and includes a specification chart. Kennatrack, Canton, Ohio. Circle 331 on Reader Service card.

what every builder should know about

Kemper

kitchens...



Kemper's Provincial Kitchen in a warm fruitwood finish

Each month more and more builders are installing Kemper wood kitchen cabinets and Kemper bathroom vanities in their homes. You, too, should seriously consider Kemper cabinets if you have not already done so. **Competitive pricing** permits you to offer a line of top quality, extremely saleable cabinets at a price lower than you would expect. This keeps you competitive in your market without eating into your profit. **Full line of styles** and sizes offers you a complete selection. Choose from such popular styled kitchens and vanities as Traditional, Provincial and Colony Line in fruitwood, walnut, and cherry finishes. **The industry's finest** and toughest finish is yours through a remarkable finishing process that is exclusively Kemper Brothers. **Your type of construction**, with strength that you, as a builder, will recognize and appreciate. **Dependable delivery** is assured through our revolving 35,000 cabinet inventory. **A furniture quality guarantee** is our written promise to you. Kemper is the only kitchen cabinet manufacturer licensed by the National Association of Furniture Mfrs. to display the NAFM Seal and offer its exclusive warranty. **Send for** our free, comprehensive, full color kitchen cabinet and bathroom vanity catalogs. In the meantime, why not talk with your nearby Kemper distributor? He's listed in the Yellow Pages.

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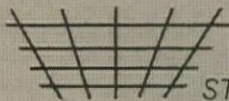
New literature continued on p. 131

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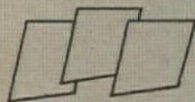
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It's easy to install a Leigh vinyl grid. Staple either the 3-inch or 6-inch hanger-connectors to ceiling joists. Main tees snap up into hanger-connectors at one of four multi-serrated stops for leveling. Then hook in cross tees and lay in ceiling panels. No splice plates, no special connectors needed. No special tools required. For rooms longer than 12-feet, main tees butt end-to-end inside a hanger-connector.

The new Leigh vinyl grid is priced about 20% below Leigh metal grid hardware. And compared to other systems, the saving is even greater!

The new Leigh vinyl grid is ideal in new construction below exposed ceiling joists. Can be installed under finished ceilings, too. And the 3-inch hanger-connector is pre-drilled for wire suspension when ceiling drops more than 6 inches. Grid accepts 2' x 2' and 2' x 4' ceiling panels. Leigh also offers a full selection of light diffusing or opaque panels.

You'll be proud to install this attractive grid in your most expensive home. And it's so practical, has so many money saving applications you'll use it in budget priced homes, too. Get full information today. Write for Leigh Bulletin 402-L.

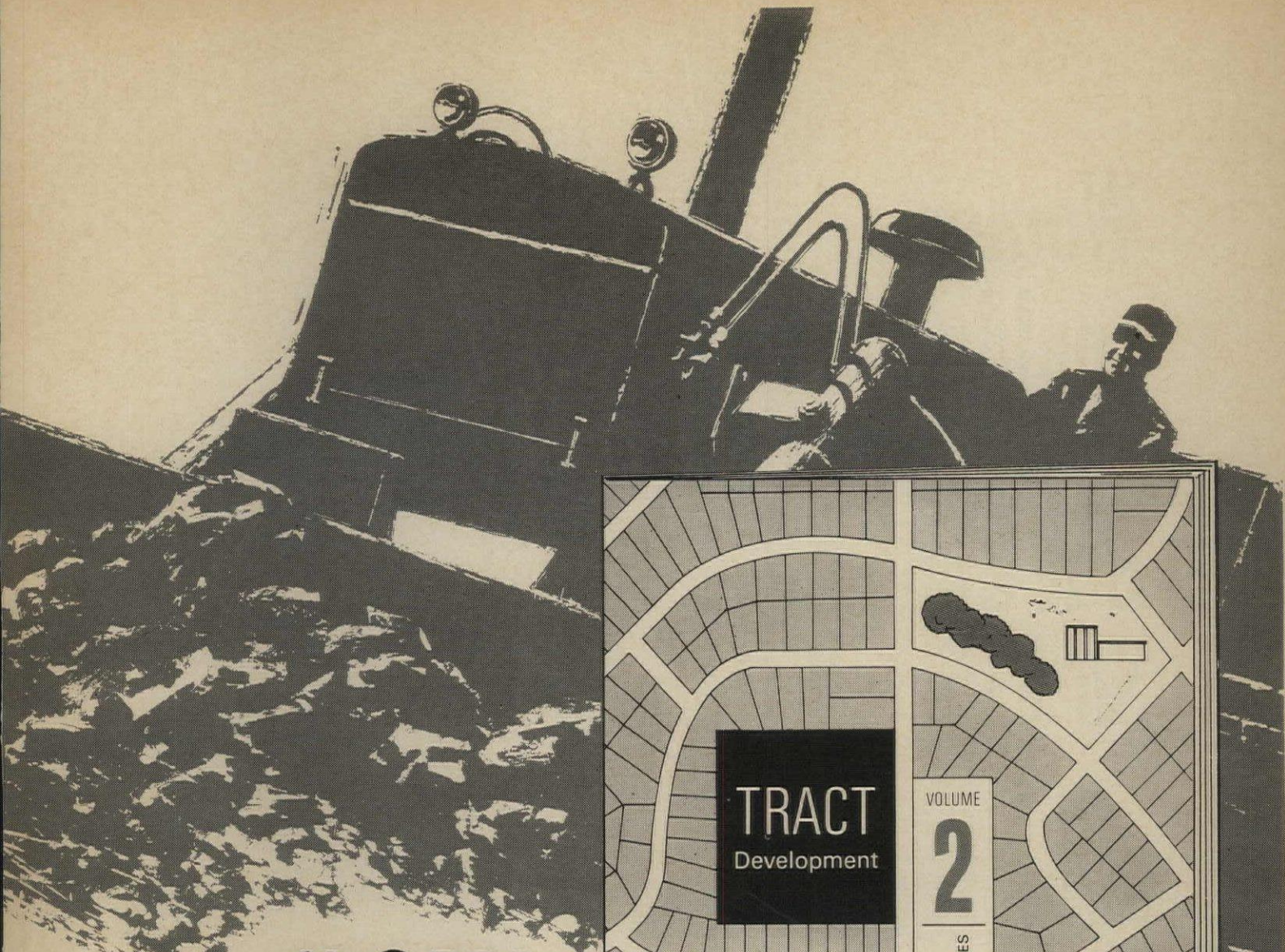


Leigh makes more than 150 products for the building industry

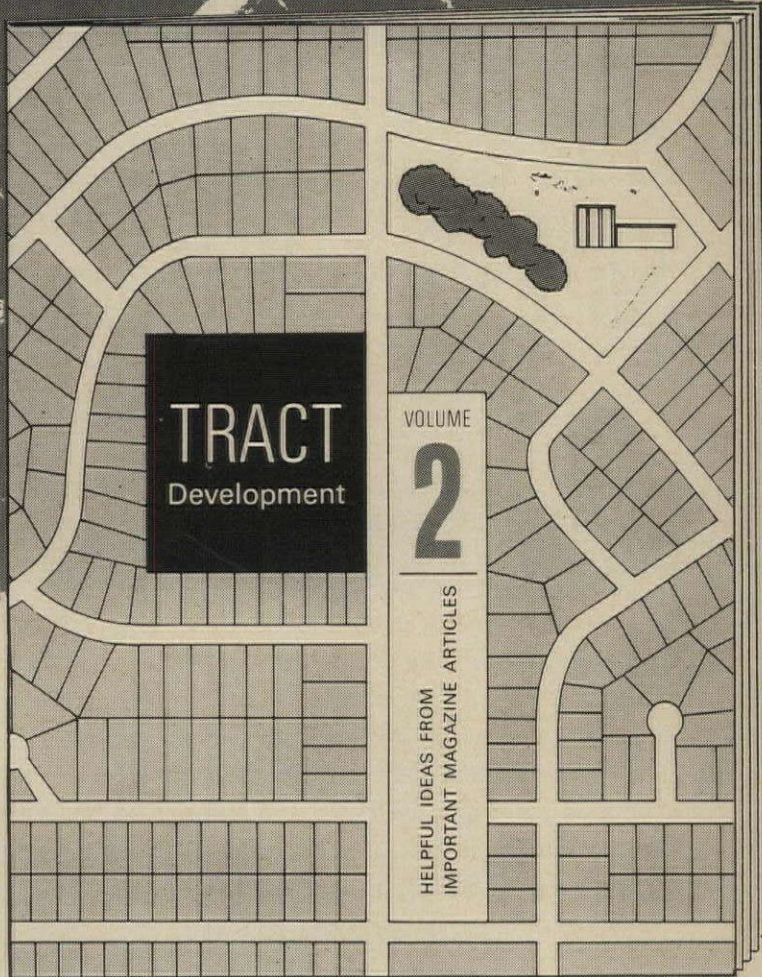
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Brad-Rick Homes,
San Leandro, California

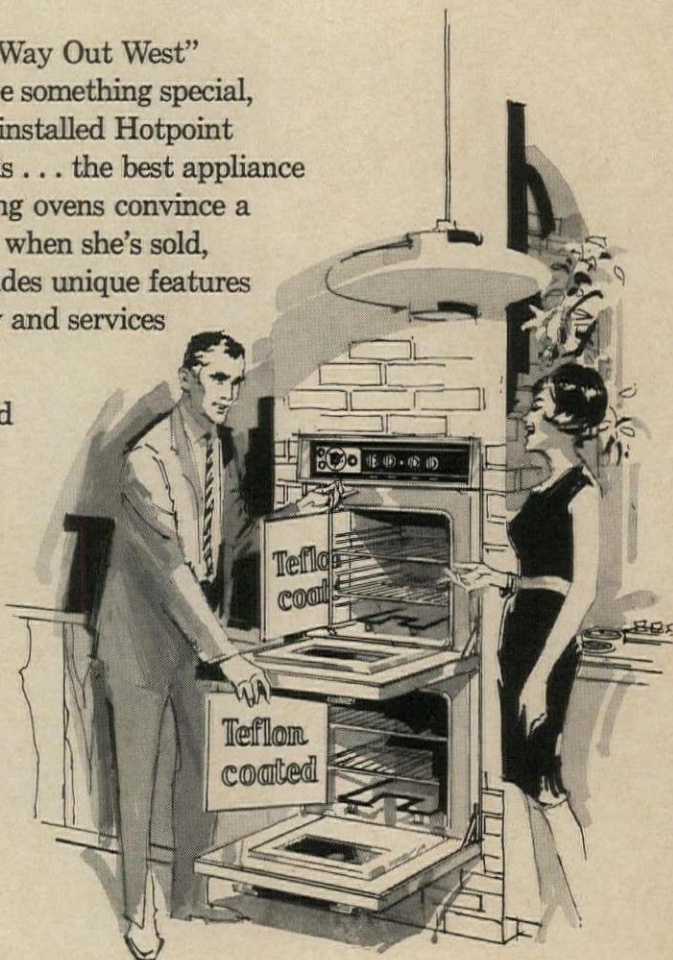
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Teflon-coated oven walls
in drop-in models, free standing
ranges, Hi-Low ranges, and
in built-in ovens.



NEW LITERATURE

starts on p. 127

INSULATING LATH BOARD. 12-page technical bulletin describes Thermo-Lath, lists its properties and shows use as a plaster base on wood-frame construction. Monsanto, St. Louis. *Circle 332 on Reader Service card.*

MEASURING SET. Catalog sheet discusses Tele-scale—a device that measures up to 16' without ladders. Tele-Scale, Buffalo, N.Y. *Circle 333 on Reader Service card.*

ACCESSORIES FOR REINFORCED CONCRETE. 36-page booklet covers complete line of accessories and services for reinforced concrete construction, including concrete inserts, masonry items and others. Gateway Erectors, Chicago. *Circle 334 on Reader Service card.*

IRRIGATION EQUIPMENT. 56-page catalog details features, specifications and recommended usage of Rain Bird sprinklers and accessories. Diagrams and photos are included. Rain Bird, Glendora, Calif. *Circle 335 on Reader Service card.*

HOT-WEATHER CONCRETING. Placard gives do's and don'ts for successful concreting. Steps to follow before, during and after placing concrete are given. Master Builders, Cleveland, Ohio. *Circle 336 on Reader Service card.*

PLYWOOD SIDING. 28-page booklet illustrates siding and gives installation details. American Plywood Assn., Tacoma, Wash. *Circle 337 on Reader Service card.*

POST CAPS AND BASE. Folder demonstrates uses and application instructions for Strong-Tie post caps and post bases. Simpson Co., San Leandro, Calif. *Circle 338 on Reader Service card.*

CONCRETE FORMING EQUIPMENT. 32-page catalog shows complete line of equipment and accessories. Job site photographs are included. Symons Mfg., Des Plaines, Ill. *Circle 339 on Reader Service card.*

CORNER BRACE STAPLER. Specification sheet gives instructions on use of special guide and machine. Application illustrations and stapler specifications also given. Spotnails, Rolling Meadows, Ill. *Circle 340 on Reader Service card.*

BACKHOES. Three specification sheets describe machines and list features. J. I. Case, Racine, Wis. *Circle 341 on Reader Service card.*

FLASHINGS. 8-page catalog has drawings and specifications for all-metal gravel stop, fascia panels, cap flashings and thru-wall flashings. Cheney Flashing Co., Trenton, N.J. *Circle 330 on Reader Service card.*

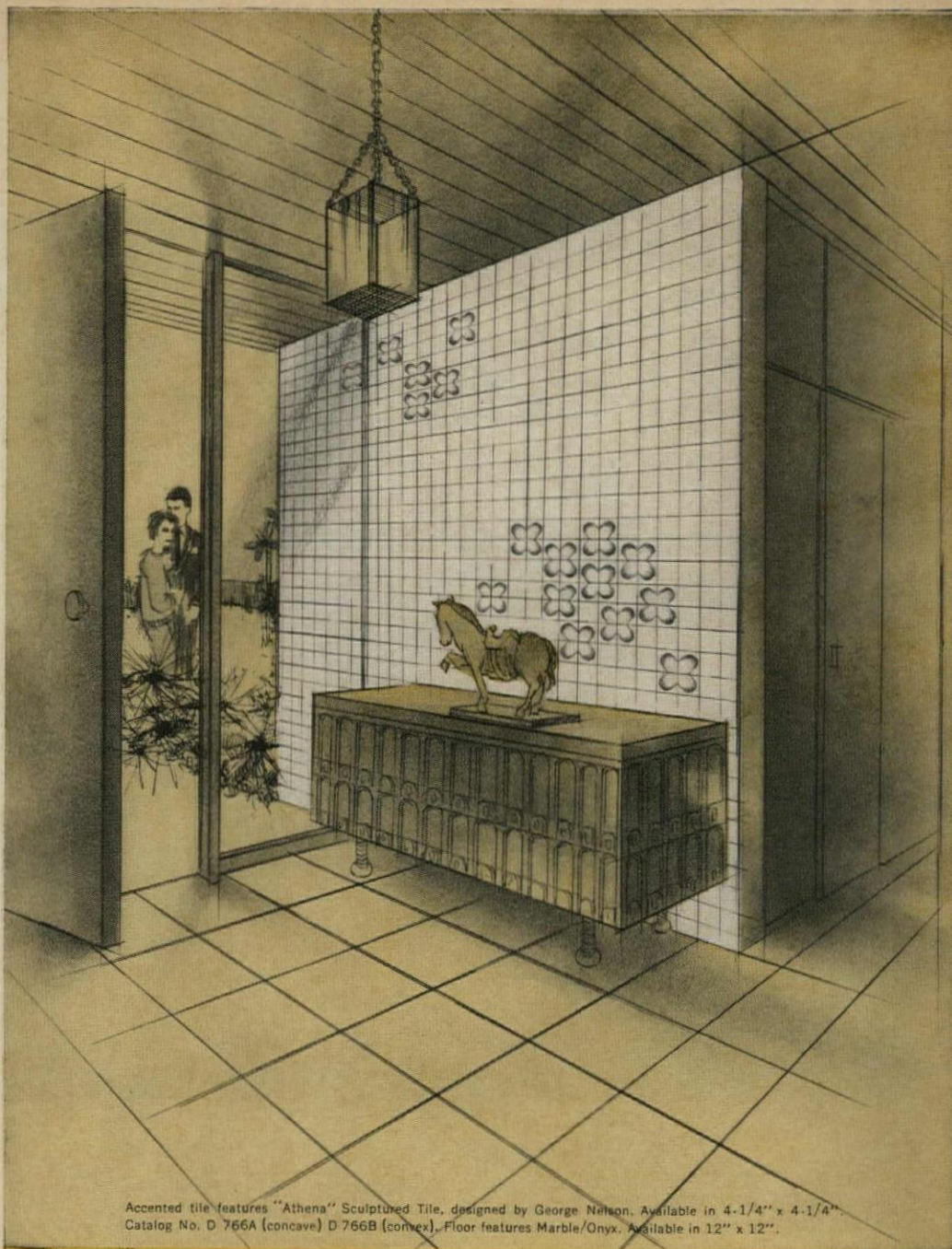
PANELS. 8-page brochure describes properties and various applications of Alply Panels—which are comprised of an insulating core of polystyrene between sheets of aluminum. Alcoa, Pittsburgh. *Circle 343 on Reader Service card.*

BUILDING BOARD. 12-page bulletin discusses applications of boards for sidewall sheathing, interior drywall, soffits, finished exterior walls, sub-floor and underlayment. Homasote, Trenton, N.J. *Circle 244 on Reader Service card.*

FOAM INSULATION BOARD. 12-page bulletin lists properties, fabrication techniques, applications and size information about two formulations of rigid urethane insulation board. Dow Chemical, Midland, Mich. *Circle 245 on Reader Service card.*

PARTICLEBOARD. 14-page brochure details properties and uses for mat-formed wood particleboard. A chart listing physical properties of various types is included. National Particleboard Assn., Washington, D.C. *Circle 312 on Reader Service card.*

WALL SYSTEMS. Folder describes non-load-bearing wall systems with one- and two-hour fire ratings. Step-by-step installation drawings and specifications included. Pabco Technical Services, San Francisco. *Circle 344 on Reader Service card.*



Accented tile features "Athena" Sculptured Tile, designed by George Nelson. Available in 4-1/4" x 4-1/4". Catalog No. D 766A (concave) D 766B (convex). Floor features Marble/Onyx. Available in 12" x 12".

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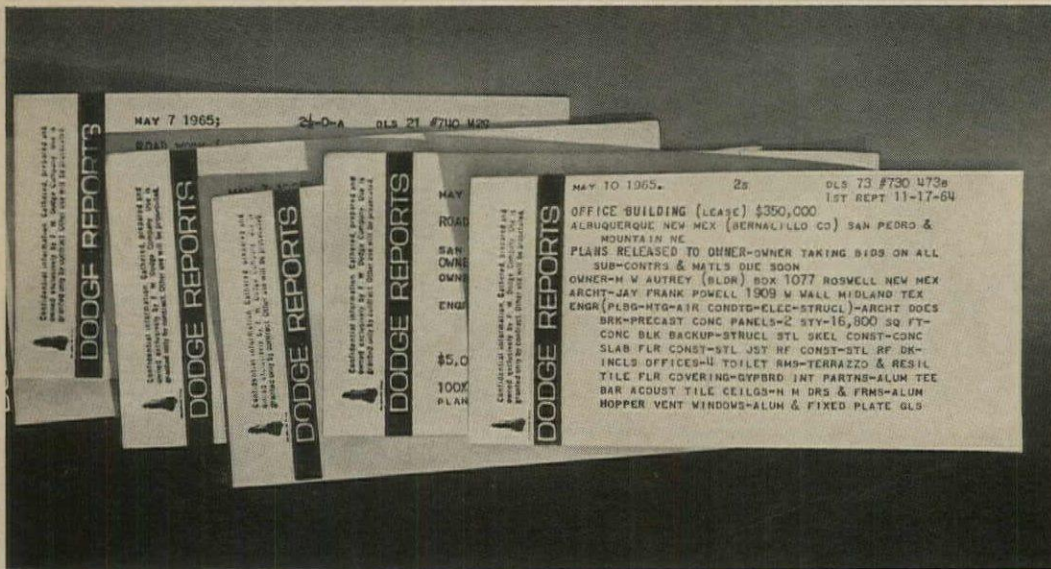
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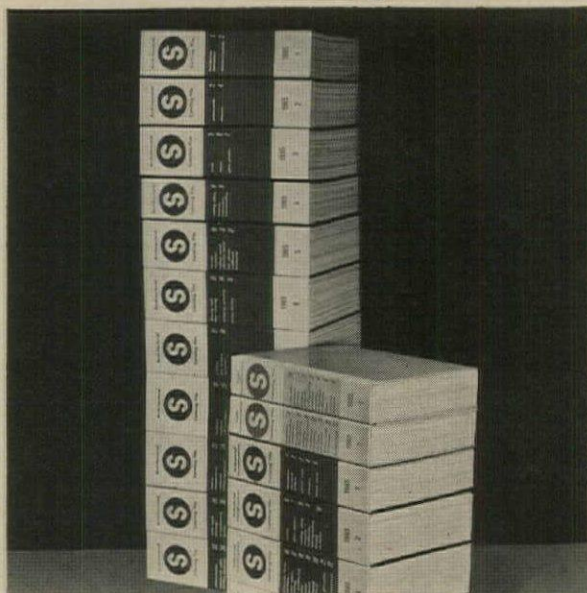


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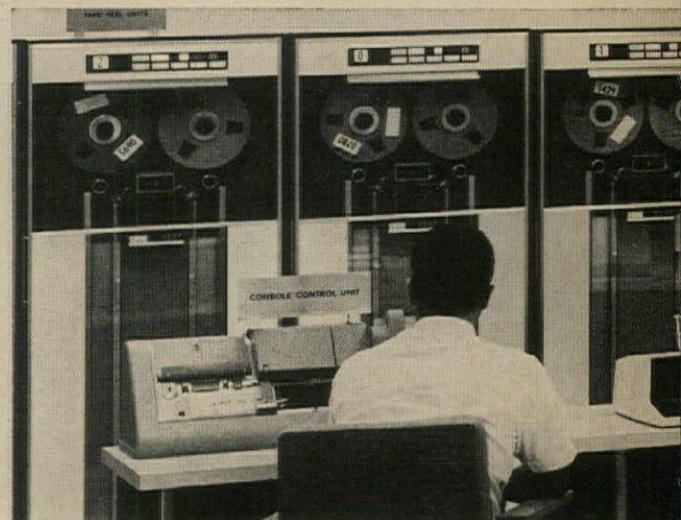
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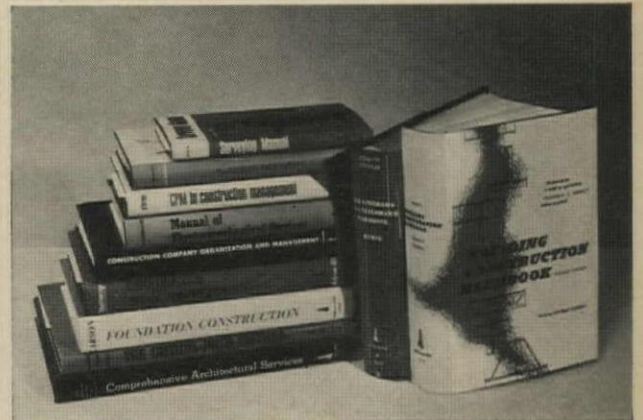
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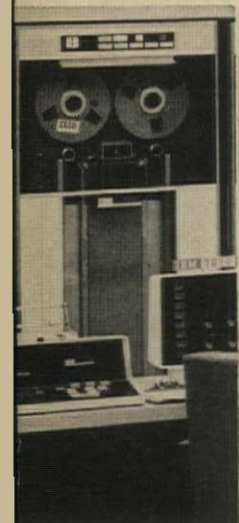
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House & Home ADVERTISERS' INDEX

Page					
116	Air Conditioning & Refrigeration Institute	4	Kelvinator Div. (<i>American Motors Corp.</i>)	98	Weyerhaeuser Company (<i>Wood Products Div.</i>)
35-43	American Plywood Association	127	Kemper Brothers, Inc.	44, 45	Whirlpool Corporation
34, 94	American Radiator & Standard Sanitary Corp.	116W1	Kennatrack	58, 106	Wiegand Co., Edwin L.
123	American Telephone & Telegraph Co.	60	Kentile, Inc.		
32, 33	Andersen Corporation	116N4	Kissell Company, The		
116N2	Armco Steel Corporation (<i>Metal Products Div.</i>)	99, 100	Knape & Vogt Mfg. Co.		
		11	Kwikset (<i>Division of Emhart Corp.</i>)	112, 113	York Corporation
		128	Leigh Products, Inc.		
		46, 47	Lennox Industries, Inc.		
17	B. F. Goodrich Chemical Co.	116W3, N1, S1, SW1	Louisville Title Insurance Co.	108	Zonolite Div. (<i>Grace & Co., W. R.</i>)
106	Bangkok Industries, Inc.				
118A	Bell & Gossett—ITT				
93	Bruce Co., Inc., E. L.	116W4, W5	Masonite Corp.		
		14	McKinney Mfg. Co.		
		7	Miami-Carey Div. (<i>The Philip Carey Mfg. Co.</i>)		
114	Cabot, Inc., Samuel	22, 23	Moe Light Div. (<i>Thomas Industries</i>)		
110	Calder Mfg. Co., Inc.	53	Moncrief Div. (<i>Henry Furnace Co.</i>)		
3rd Cover	Caloric Corporation	116M1, N3	Morgan-Wightman Supply Co.		
29	Carrier Air Conditioning Co.	19	Mosaic Tile Co.		
129	Cast Iron Pipe Research Association				
54, 55	Celotex Corp.	25	National Gypsum Co.		
116E1, N1	Contact Lumber Co.	30, 31	National Oak Flooring Mfg.		
119	Copper Development Association	1, 2	NuTone, Inc.		
103	Crane Company				
		116W2	O'Keefe & Merritt		
16	Delta Faucet Corporation				
132, 133	Dodge Corp., F. W.	116W7	Pacific Clay Products (<i>Los Angeles Brick Div.</i>)		
		115	Paslode Co.		
		109	Pease Woodwork Company		
4th Cover	Emerson Electric Company (<i>Builder Products Div.</i>)	104, 105	Pittsburgh Plate Glass Co.		
		131	Pomona Tile & Mfg. Co.		
		12, 13	Ponderosa Pine Woodwork		
		56	Portland Cement Association		
		9	Price Pfister Brass Mfg. Co.		
		48, 49	Progress Mfg. Co., Inc.		
21	Float-Away Door Company	116W6	Rain Bird Sprinkler Corp.		
57, 59	Formica Corp.	110	Reading Body Works, Inc.		
107	Frigidaire Div. (<i>General Motors Corp.</i>)	90, 91	Red Cedar Shingle & Handsplit Shake Bureau		
118B	Fuller Company, H. B.	28	Reproduction Engineering Corp.		
		95	Republic Steel Corp.		
		89	Reynolds Metals Co.		
126	General Electric Co.	116A	Scheirich Co., H. J.		
51, 52	Gerber Plumbing Fixtures Corp.	26, 27	Schlage Lock Co.		
116N3	Glen-Gery Shale Brick Corp.	118D	Schlegel Mfg. Co., The		
		96	Smith & Loveless		
		28	Spee-Flo Company		
125	Homasote Company	24	Thermasol		
130	Hotpoint Div. (<i>General Electric Co.</i>)	122	Tile Council of America		
15	Hunter Div. (<i>Robbins & Myers, Inc.</i>)	97	Torginol of America, Inc.		
118A	ITT—Bell & Gossett	114	Triangle Products		
116W8	Investor's Mortgage Service Co.				
116E1	Ivon R. Ford, Inc.	118C	United States Plywood Corp.		
		111, 116E2, E3, M2, M3, N5, N6	United States Steel Corp.		
120, 121	Janitrol Div. (<i>Midland Ross Corp.</i>)	2nd Cover	Uvalde Rock Asphalt Co.		

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