

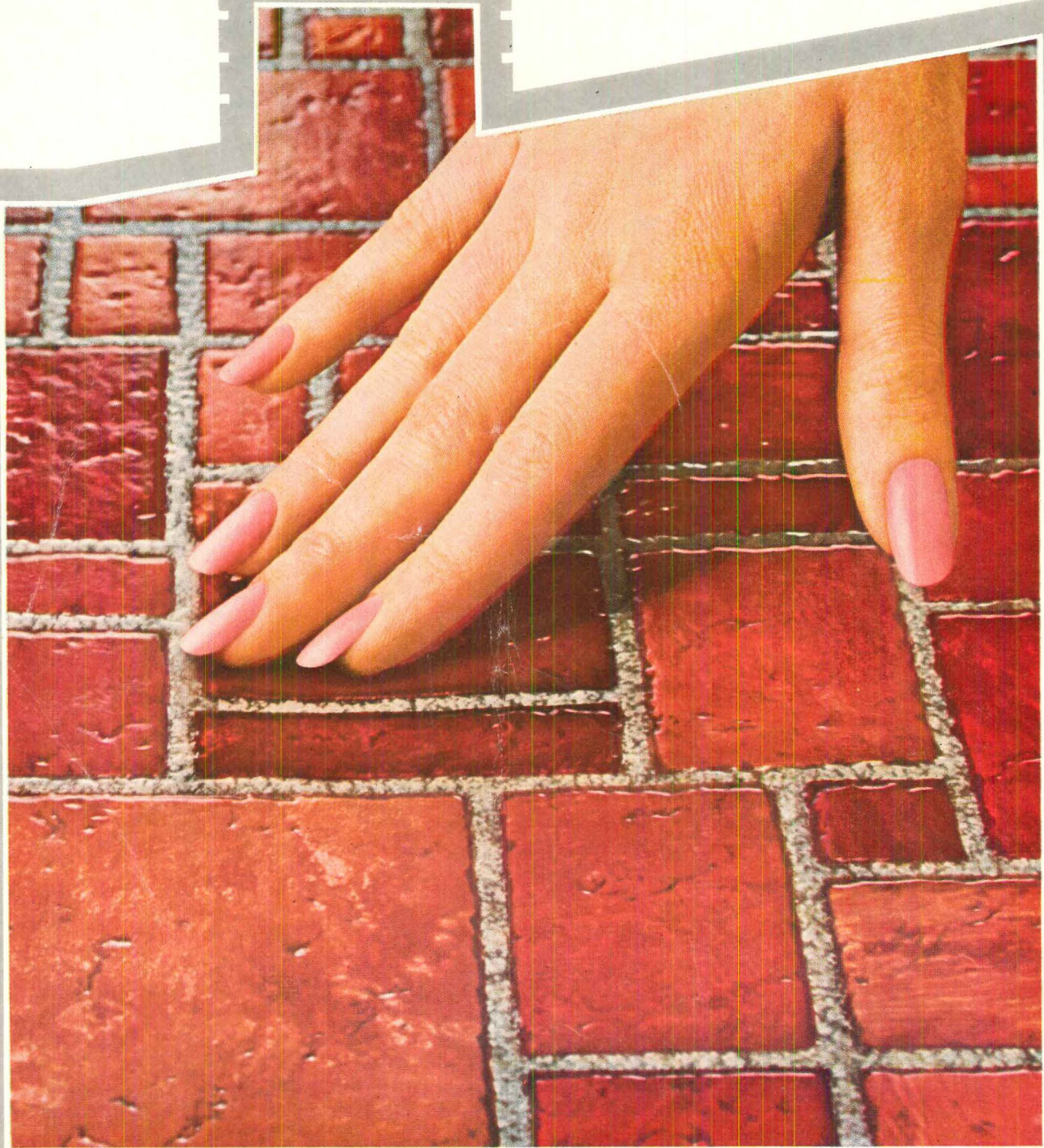
House & Home

MANAGEMENT PUBLICATION OF THE HOUSING INDUSTRY

OCTOBER 1966

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House & Home

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VOL. XXIX NO. 10

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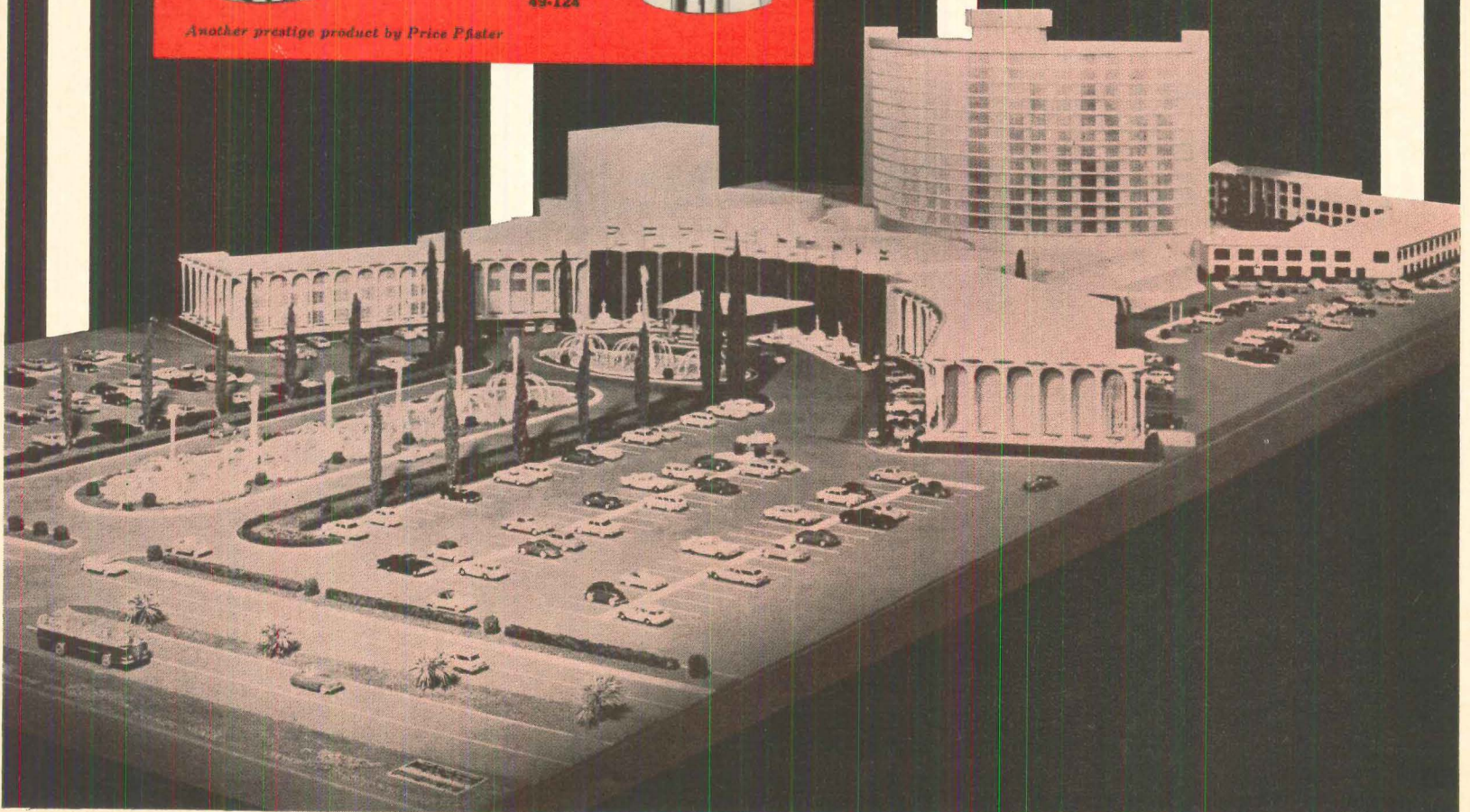
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Hope stirs in the mortgage market as the President acts

President Johnson's fiscal moves to temper the economy have communicated a small degree of confidence to the nation's throttled mortgage market.

Under Secretary of the Treasury Joseph W. Barr told the House rules committee on August 29 that the government would take fiscal action to dampen demands for credit. No decisive move was expected until after the November elections.

But the President moved early, asking Congress to repeal the 7% investment credit for business and the accelerated depreciation provision (see p. 6). More important for residential building, he pulled the Federal National Mortgage Association's debentures out of the private money market lest their escalating yield rates trigger a new rise in general interest patterns. (The FNMA debentures will be sold to the government's 14 trust funds—social security, GI insurance, etc.—which have incoming cash to invest.)

Hint of stability. Bond yields did turn down after Secretary Barr testified. Government long terms of 1987-92, yielding an all-time peak of 5.05% on August 30, were back down to 4.87 on September 7. *The New York Times'* John H. Allan reported that a Standard Oil of Indiana triple-A debenture priced to yield 6% and offered for sale August 30 "might very well turn out to be the high water mark of the 1966 interest rate surge."

There was not even a flutter of downward movement in mortgage yields or discounts, but some experts interpreted the bond news as mildly encouraging. Bond yields traditionally exert pressure on mortgage yields, and the turn toward stability in the bond market was expected to eventually effect mortgages.

Top of the boom? There were other—albeit spotty—indications of relief. *The Wall Street Journal's* George Shea reported three distinct signs that the business boom had reached its peak: a sharp and sustained rise in interest rates, a drop in stock prices, and a decline in industrial materials prices. Said Shea: "The signs accumulate that before many months have passed, the course of general business will be seen to be turning down."

Paradoxically, a business down turn could mean lower discounts and more mortgage money for residential builders.

Rate squeeze on builders. But any cutback in discounts appeared some time off. The discounts charged new-house builders were still climbing, and they ranged up to a cruel 9 points in southwestern money centers (table, right). Both builders and mortgage bankers were complaining that even that profit-eating a discount was not turning up much money from savings banks and insurance companies, the traditional sources of FHA mortgage money.

Yields on FHA loans selling in the secondary market had risen to 6.54%, and the pressure was still upward. There was talk of offering 6.75% to attract pension

fund money—and that would translate into a discount of 10 points with a 3/8% servicing charge. Conventional money was just as scarce for the nation's savings and loan associations had a net savings inflow of only \$568 million in the first seven months—down a sobering 84% from the same 1965 period.* Their mortgage loans fell to \$11.3 billion during the same period, a drop of 16% from the same seven months of 1965, and rates to the homebuyer rose as high as 7.2% on the West Coast. Even at that price, few s&ls were making any new-house loans, and those doing so were charging three and sometimes four points.

The FNMA bonanza. Builder interest centered on the President's action in signing the \$4.7 billion FNMA bill on September 10. It made \$3.7 billion available for the agency to purchase FHA and VA mortgages and another \$1 billion for buying special-assistance loans. President J. Stanley Baughman of FNMA was authoritatively reported ready to raise his present \$15,000 limit on purchase prices to a figure of \$17,500 for used-house loans and \$25,000 for new-house mortgages bought under the \$3.7-billion provision. He has been limited to buying \$15,000 mortgages under the special as-

*Net savings inflow was down 46%, to \$1.08 billion, at the 506 savings banks for the seven-month period. Commercial bank time deposits rose only \$9.5 billion, 21% less than in 1965.

sistance provision, except in certain high-cost areas such as California.

The President said the bill would help to finance 300,000 new homes, and he added: "It will reduce the pressures on the homebuilding industry."

Fast action by builders. Some builders were already making plans to shift into the low-cost sector where FNMA money could be had. Vincent Mazzara of Birmingham, Ala., said: "I'm going to expedite my already underway 221d3, and I'm going in heavily for other houses under \$15,000.

There were warnings about overestimating the benefits, however. Said Executive Vice President Grover W. Ensley of the National Assn. of Savings Banks:

"Total federal government demands on the capital markets will be increased, attracting some funds that would have gone into mortgaging anyway. In addition, some of the new funds will be used to finance the transfer of existing homes rather than new construction. Moreover, the impact of FNMA purchases will be largely indirect, since they will be confined to federally underwritten loans that have a minor part in s&l activity." (s&ls do 40% of the mortgage lending).

And mortgage experts stressed that the biggest unanswered question about the program concerned construction funds. What good was an FNMA commitment to buy a home mortgage if a builder could get no construction money from his bank?

HOMEBUILDER'S MORTGAGE MARKET QUOTATIONS

Reported to HOUSE & HOME in week ending September 16.

City	FNMA Scdry. Mkt. of FHA-VA 5 3/4	FHA Sec. 203b Discount paid by builder Min.-Down* 30-year Immed. w		FHA 207 Apts. Firm Commit.	Conventional Loan Rates			Construction Loan Rates
		5 3/4s	Trend		Comm. 75%	Savings banks, S&Ls 80%	Savings banks, S&Ls Over 80%	
Atlanta	6	8	Steady	a	7-7 1/2	7-7 1/2	7-7 1/2	6 1/2 + 1 1/2 - 2
Boston	5	1-4	Up 2	a	6 1/4 - 6 3/4	6 - 6 3/4	a	6 3/4 + 1
Chicago	5 1/2	6-8	Up 1-2	5-5 1/2	6 1/2	6 1/2	6 1/2	6 3/4 - 7 + 1 1/2
Cleveland	5 1/2	8	Up 1	a	6 3/4 - 7	6 3/4 - 7 + 1 - 2	6 3/4 - 7 + 1 - 2	7 - 7 1/2 + 1 - 2
Dallas	6	7-9	Up 1-2	a	6 3/4 - 7 1/4	6 3/4 - 7 1/4	6 3/4 - 7 1/4	7
Denver	6	7-8	Up 1	a	6 3/4 - 7	6 3/4 - 7	7 - Up	7 + 1 - 2
Detroit	5 1/2	6-8	Up 1	a	6 1/2	6 3/4 - 7	7	6 3/4 - 7 + 1
Honolulu	6	7 1/2 - 8	Up 1	a	7-7 1/2	7 1/2 - 7 3/4	a	7-8 + 1 - 3
Houston	6	6-9	Up 1/2	a	6 1/2 - 7	7 ^b	7 ^b	7 + 1 1/2 - 2
Los Angeles	6	7-8	Up 1	a	6 1/2 - 7	6 3/4 - 7.2	b	6 1/2 - 7 + 1 1/2 - 3
Miami	6	7-8	Steady	a	6 3/4 - 7	6 3/4 - 7	6 3/4 - 7	6 3/4 - 7 + 1 - 1 1/2
Newark	5	5-6	Steady	6	6 + 1	6 + 1	b	7 + 2
New York	5	3 1/2 - 4	Up 1/2	8	6 + 2 - 2 1/2	6 + 2 - 2 1/2	6 + 2 - 2 1/2	6 3/4 - 7 + 3
Okla. City	6	7-9	Up 1	a	6 1/2 - 6 3/4	6 1/2 - 6 3/4 + 1	6 3/4 - 2 ^b	6 1/2 - 7 + 2
Philadelphia	5	8	Up 1	a	6 ^b	6-7	6-7	7 + 2
San Fran.	6	7-8	Steady	a	6 3/4 - 7 + 1 - 1 1/2	7 - 7 1/2 + 1 - 1 1/2	a	7 + 1 1/2 - 3
St. Louis	6	6-8	Up 1/2	a	6 1/2 - 6 3/4	6 3/4 - 7	a	6 1/2 - 7 + 1 - 2
Wash., D.C.	5 1/2	7-8	Up 1	a	6 + 4 - 6	6 + 4 - 6	6 + 4 - 6	6 1/2 + 2 - 2 1/2

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

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

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

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

LBJ's rear-guard fight on inflation: Will the wish go farther than the fact?

Since last spring homebuilders have been calling upon President Johnson to put other industries in harness against inflation:

High interest rates and a resulting tail-spin in housing activity have not slaked the inflationary fires. Worse, tight money has caused so many dislocations in the economy that talk of a panic in the money markets has become commonplace.

Last month Johnson finally heeded the builders' cries and jettisoned any pretense that monetary brakes alone could slow the inflationary juggernaut. He offered a four-point program, patently shaped with one eye on the November congressional elections, that demonstrated the difficulties of correcting "the inequitable burden of tight money."

For money-starved housing, the major provision cuts back federal borrowing in the money market, and thus promises to free more money for mortgages (*see p. 5*).

But equally significant are the President's proposals to enlist other segments of the economy and bureaucrats themselves in the anti-inflation effort.

First, Johnson promised to "take strong measures to reduce lower priority federal expenditure" by as much as \$3 billion.

And he asked Congress to suspend for 16 months, until Dec. 31, 1967, two special tax provisions which he blamed for the capital spending boom. They are:

- The 7% investment credit which lets businesses deduct from their tax bills 7% of amounts spent on new plant and equipment.

- The use of accelerated depreciation by owners of any building started or purchased after Sept. 1, 1966 for the life of that building regardless of owner.

Congressional approval of both, perhaps with modifications, is nearly certain.

Soft touch? Economists and businessmen generally tag a "too little, too late" label on the package. Most businessmen

are inclined to agree with Chairman Roger Blough of U.S. Steel Corp.: "Current signs point to a turndown in capital expenditures without regard to the 7% investment tax credit. Thus suspension of the credit now would result in its becoming effective at just the wrong time."

Indeed, business spending plans failed to show an increase for the first time in two years in a mid-summer survey by the Securities & Exchange Commission.

"It's economic tokenism," summed up one prominent economist. "It's awfully weak medicine, because projects already committed will go forward anyway. But it is the first move into fiscal policy and ought to let the Federal Reserve Board ease up a slight bit on money by delaying some financing for new capital spending."

Psychological boost. Even so, economists expect the biggest impact of suspending the preferential tax treatment will be in the capital markets, as corporations delay securities issues to pay for projected new capital spending. This is the psychological kick some are expecting from the Johnson program: Competition for new money to finance capital outlays may subside even as spending for already committed projects continues to surge through the economy.

Time out for depreciation. For the second time in four years accelerated depreciation is under attack, and this time the attackers may win.

The National Association of Real Estate Boards, whose implacable opposition killed a 1962 proposal to do away with fast write-offs entirely, and NAHB want new residential construction exempted from the suspension. And they want owners to be able to switch back to fast write-offs after 1967. Prospects for these changes are uncertain.

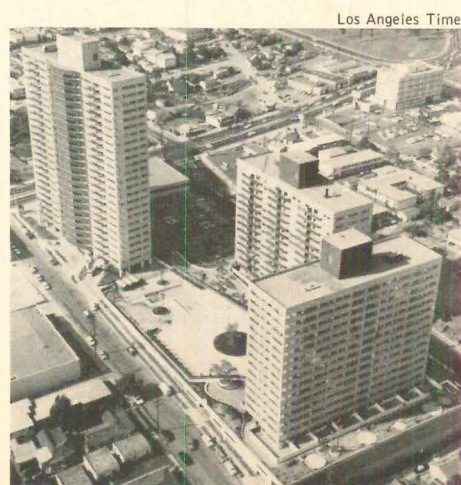
Both groups reason that removing the fast write-offs for new apartments would depress an already shell-shocked market.

A curious Senate probe into foreclosures of FHA renewal apartments ends with a yawn

On the same days that one Senate committee said Housing Secretary Robert Weaver was not liberal enough as an administrator (*see p. 12*), another Senate committee called Weaver's FHA aides too liberal in their lending.

The government operations subcommittee, opening a hastily convened inquiry, heard the General Accounting Office say 27% of FHA Sec. 220 urban renewal apartments were in trouble. Then a GAO auditor said new owners of 712-unit Barrington Plaza, Los Angeles' first high-rise, diverted \$180,000 of project funds. FHA foreclosed the \$18.6 million loan in June.

But two owners, Donavan Karnes and Hugh Krause II, said they put money into separate accounts to evade creditors. Then, without mentioning another project, the hearings evaporated.



BARRINGTON PLAZA, a private renewal project in Los Angeles, caught eye of probers.

WASHINGTON WIRE

Californian for HLBB

President Johnson dipped into the ranks of savings and loan executives to fill a Republican vacancy on the Home Loan Bank Board. Robert L. Rand, senior vice president of the Fidelity Federal S&L in Glendale, Calif., succeeds John de Laittre, who is resigning to become head of the Mortgage Bankers Assn.

Rand is comparatively unknown in the S&L industry. The Administration hailed him as the "first person with direct savings and loan operating experience" to serve on the board, although Walter W. McAllister was chairman of San Antonio Savings Assn. both before and after heading the HLBB from 1953 to 1956.

Good-bye, guaranteed wage

Labor Secretary Willard Wirtz's plan to spread construction work over the full year is dead—for now.

New Jersey general contractors and Operating Engineers Local 825 have rejected a proposal by Wirtz and New Jersey Labor & Industry Commissioner Raymond Male that contractors guarantee tradesmen 1,600 hours of work yearly (NEWS, Aug.). Wirtz and Male had stepped into the dispute after the parties tentatively agreed on a contract far exceeding the Administration's wage-price guidepost.

But now both parties have agreed to a new contract nearly as generous as the first. It calls for wage and fringe increases averaging 9.8% yearly for three years.

Still, the guaranteed-wage idea is not dead. President C. J. Haggerty of the AFL-CIO Building Trades Dept., is calling for new efforts to end the seasonal nature of construction work. But Haggerty avoids endorsing the Wirtz-Male plan.

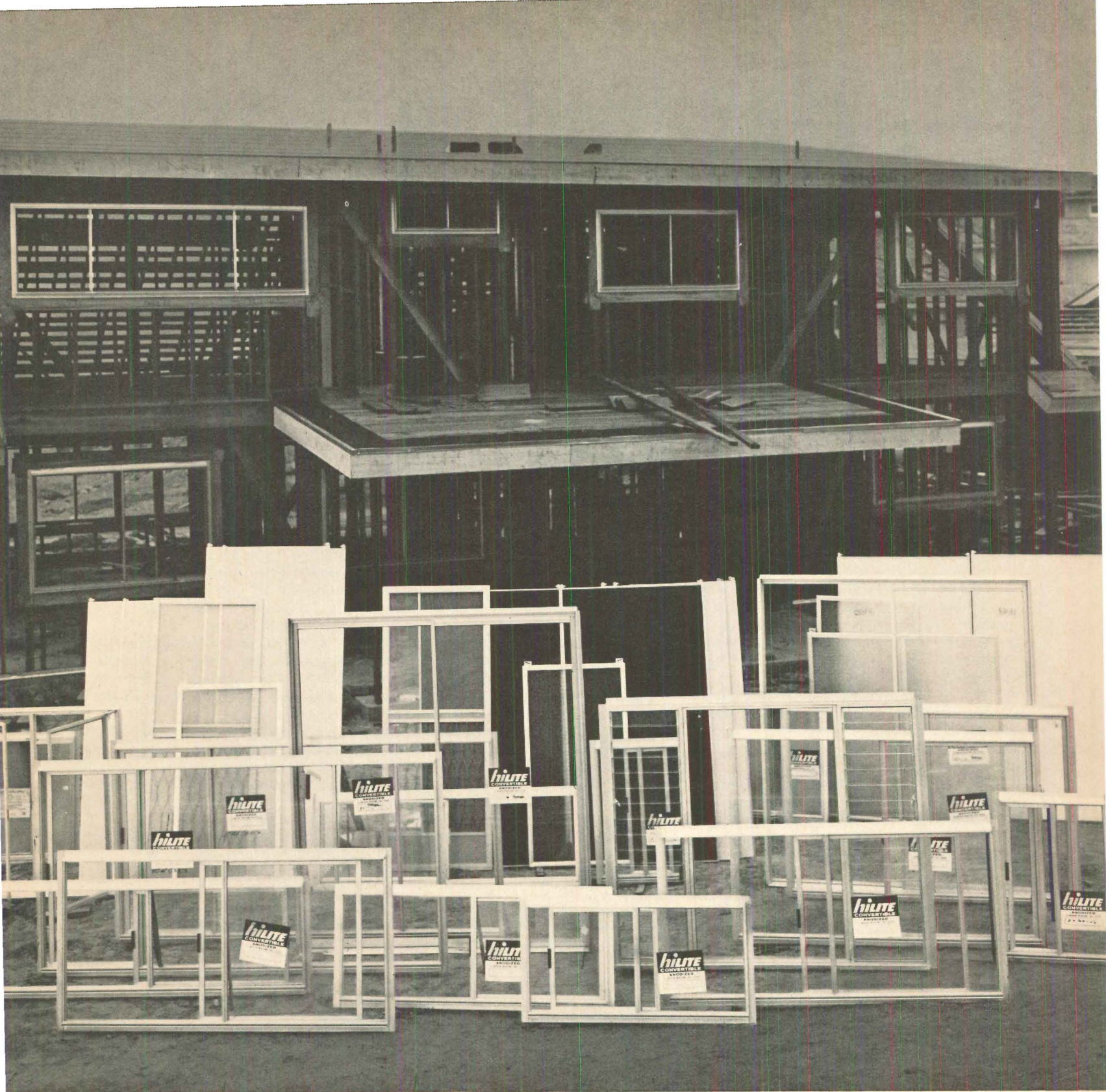
Environmental design (continued)

Housing Secretary Robert Weaver huddled with architects and landscape architects to review HUD programs to improve environmental design in all HUD projects. Curiously, no one from the National Association of Home Builders was invited even though NAHB has had an environmental-design committee for over two years.

Bias bottleneck

President Johnson's bill banning race bias in housing will be back before Congress in January—and so will the formidable opposition of Sen. Everett Dirksen. Without Dirksen's support, the Administration cannot expect to rally enough votes to choke a Southern filibuster on the so-called open-housing proposal—Title IV of the Civil Rights Act of 1966.

Dirksen professes not to see enough "latitude in the Constitution" to embrace Title IV. And just before the Senate vote which killed Title IV last month, he also said, "This Senate has to demonstrate it will not be intimidated by marches and demonstrations into passing lousy legislation for a very small minority." But Capitol Hill observers recall that Dirksen used the same words in opposing the 1964 Civil Rights Act—until the day he decided to support that law.



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Chicago's new housing pact brings peace—for now

A tense summer of march and militancy aimed at ending housing bias in Chicago has ended with a shaky peace. The peace-maker is an open-housing pact, hammered out by the Rev. Martin Luther King Jr. and a blue-chip array of Chicago civic and business leaders, which promises, among other things, stronger implementation of fair housing laws.

The Aug. 26 conference which produced the covenant came after King had scheduled a demonstration march into the all-white suburb of Cicero, where previous Negro move-ins had produced rioting.

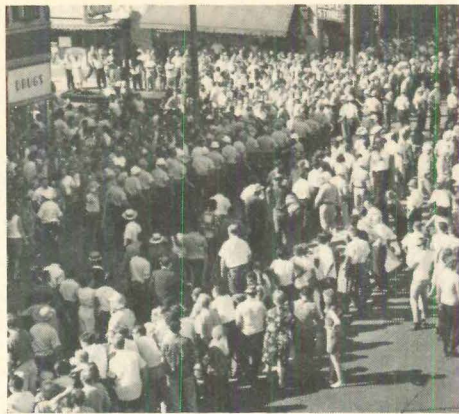
King hailed the agreement. "Never before has such a group been pulled together to think seriously about the Negro," said the president of the Southern Christian Leadership Conference. "This is where the problem has to be solved."

"First you have to win the right to negotiate," King explained. "Surely you can't talk about the agreement point by point to say which part is the most important. It is the right to negotiation which is the real victory. We have won the first round."

The compact was forged at a meeting of King, Mayor Richard J. Daley, Ross Beatty, head of the Chicago Real Estate Board, and others of the "power structure," as King described the conferees.

None voted against the accord. Its ten points provide for better implementation and enforcement of fair housing laws, along with increased educational and moral pressure by religious, civic and union leaders.

In response, King called a moratorium on street demonstrations against housing discrimination—but only "so long as the pledged programs are carried out."



RIGHTS MARCHERS are shielded from residents of Cicero, Ill., by line of helmeted police.

"What was accomplished" at the meeting, King observed, "was setting in motion a process, not a distinct order. This is the ruling which will begin to implement the process of social change."

Not enough? The agreement could serve as a model pact for the nation's cities if successful. But it faces hazards.

"There's nothing in that agreement that guarantees opening housing. It's too general," said Robert Lucas, chairman of the Chicago branch of the Congress of Racial Equality. Activist Lucas promptly led 250 demonstrators through a hail of bricks, bottles, and curses in Cicero and hinted at new turmoil if King persists in his truce.

A group of white property owners picketed city hall in protest against the pact. Their signs accused the mayor of having "sold out Chicago."

And at the first follow-up meeting on the agreement, civil rights leaders, municipal officials and real estate men failed to

agree on composition of a "watchdog committee" to oversee enforcement of the open occupancy agreement.

Terms to live by. A bloc of real estate and mortgage bankers fashioned the most compelling parts of the agreement. They arrived at the open policy on real estate and avowed support for the Negro in mortgaging. Other major points in the pact:

- The Chicago Real Estate Board will drop its opposition to passage of a state open occupancy law. It also agreed to work to end discrimination.

- The Chicago Commission on Human Relations will open proceedings on its own against brokers who fail to comply with the city's fair housing laws.

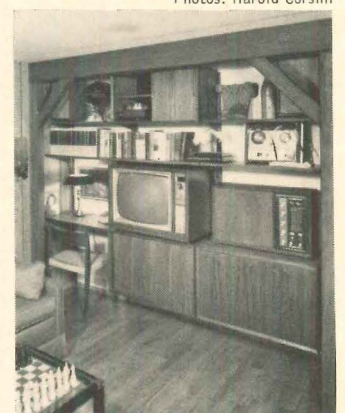
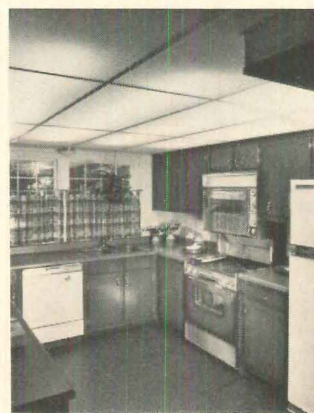
- The Chicago Housing Authority pledged to look for new building sites outside "the ghetto," to begin leasing houses in all parts of the city for low-income families, and to limit new buildings to eight stories.

- Public-aid and urban-renewal officials responsible for relocating families promised to send them to the best available housing, in all-white or all-Negro neighborhoods.

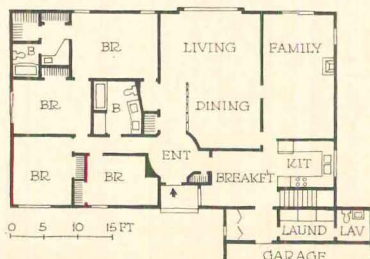
John McDermott, executive director of the Catholic Interracial Council and chairman of the subcommittee which drafted the agreement, said the pact would not have been produced without the pressure of the marches.

King admits that "a march or a demonstration is not going to solve any problem." But, he adds, it brings it into the open and thus "all the resources of a community, Negro and white, can be brought to bear on that problem."

—RECK JOHNSON



Photos: Harold Corsini



Ryan Homes unveils this model in 12 different cities

The cities are major Ryan markets in Ohio, Pennsylvania, New York, and West Virginia. The model—"Projection '70"—isn't meant to reflect local tastes, but to create new tastes. Nearly 70 manufacturers have packed in product extras like a

micro-wave oven and a movie-equipped entertainment center (*photos*). Finishing and structural materials are largely steel. With the works, and with land, the price is \$50,000. But no arrangements have been made to include extras in loans.



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to give your homes more buy appeal

Here's a new convenience that adds almost irresistible appeal to a home! Women love the fact that there's no messy bag to empty with an RCA WHIRLPOOL central vacuum system . . . no recirculation of dust . . . no heavy machinery to drag around . . . no loud cleaning noise. And they can see that it cleans *really* clean because of its tremendous, constant suction and outside exhaust. Even men are impressed by the entirely new areas of usage it opens up . . . whisking up workshop shavings, picking up grass clippings from the patio, emptying ash trays, lifting heavy dirt from garage floors.

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PRODUCTS OF WHIRLPOOL CORPORATION



BURNED LENDERS like First Western S&L turn to moving repos.



INCREDIBLE VANDALISM, such as this sink ripped from vacant 52 units of Hilltop Apartments, depresses market. Apartment vacancies top 17%.



DISTRESS SIGNS distract prospects on main road to new tract.

After the boom: it's 2-to-1 against Las Vegas builders

Three years ago a feverish housing boom rolled out of Las Vegas like an errant tumbleweed and left builders who survived staring at frightening odds.

For every one of the 800 new houses they build this year, builders must sell against the competition of two never-occupied houses left over from the boom.

The houses are not "new" anymore: More than 1,700 have been basking in the desert sun for over a year and are clumped in a few ghost subdivisions

where repair crews are only now beginning to reclaim them from the ravages of weather and incredible vandalism. Their presence casts a pall over the city's market.

Almost all are being sold by Las Vegas' two largest lenders, First Western s&L and Nevada s&L, on terms inviting fast moves: \$295 down for \$20,950 homes. First Western, the largest local lender, held \$44 million of foreclosed loans at mid-year, and payments on another \$19 million of mortgages were overdue 90 days.

Both lenders are fast cleaning up their foreclosures, and FHA has pared its load of house repossessions by one-third (to 170) since January by selling four of every five houses it offers within a week.

In this sticky market, President Allen Collins of the Southern Nevada Homebuilders Assn. is still selling one house a week in the \$35,000-plus range.

Both Sproul Homes and Pardee-Phillips are building, albeit slowly, in two tracts each and together sell most new housing.

Photos: H&H staff



BUILDING ACTIVITY continues at Sproul Homes' two Las Vegas tracts. Company has cut inventory and sells FHA-VA from \$19,950 to \$27,950.



BEST SELLER for Pardee-Phillips is this five bedroom, three-bath model at \$25,950. But a two-bedroom model at \$18,100 is moving slowly.

U. S. and lumbermen still jousting merrily with 2x4s

How big is a 2x4?

It is to be $1\frac{1}{2} \times 3\frac{9}{16}$ —dry.

But it is to be $1\frac{9}{16} \times 3\frac{3}{8}$ —green.

At least those are the standards in the truce to which the nation's fighting lumbermen seem willing to agree. But the Commerce Dept. is taking the precaution of checking via a sampling of industry opinion, and the polling will take the rest of the year. Getting the lumber industry to agree has been a years-long nightmare for the Commerce Dept. (NEWS, Dec. '62). The shaky settlement came only after Secretary John Connor announced that existing 2x4 standards would go out the window Sept. 15. Lack of a new standard would have led to lumber market chaos.

A nudge from U. S. Faced with Connor's warning, and muscled into action by

various federal agencies that buy a lot of lumber the American Lumber Standards Committee finally agreed on sizes on behalf of the industry (see table). It did so at the last minute, so Connor had to extend his deadline for the old standards to Jan. 15. That will provide time for the opinion survey of all affected parties.

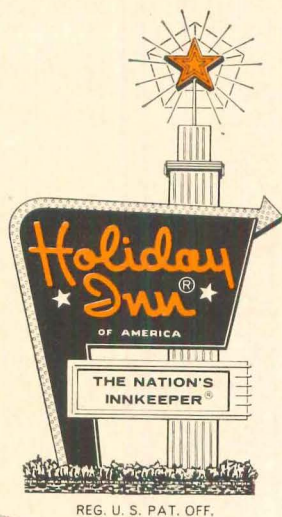
Moisture content snag. There is one major obstacle. Lumbermen can accept the

new dry size and the stress standard, which in some cases is 50% higher than the green value. But most lumbermen probably cannot meet the requirement that moisture content be 19% or lower at every point in every piece of dry lumber in a shipment. Too many mills simply cannot control moisture to that degree.

FHA told its field officers to accept both the new dry sizes and the old larger sizes until Jan. 15, when the squabble should be settled. Most model codes will permit the dry sizes, too.

New name too? And amid all the confusion one group suggested that the 2x4 must have a new name. The National Forest Products Assn. says the old name no longer makes sense, and it has set up a committee to dream up a new label.

NEW LUMBER SIZES					
Nominal	Dressed dry	Dressed green	Nominal	Dressed dry	Dressed green
—	5/8	1 1/16	6	5 1/2	5 5/8
1	3/4	1 1/8	8	7 1/2	7 5/8
2	1 1/2	1 1/8	10	9 1/2	9 3/4
3	2 1/8	2 5/8	12	11 1/2	11 3/4
4	3 1/8	3 5/8	14	13 1/2	13 3/4
5	4 1/2	4 5/8	16	15 1/2	15 3/4



REG. U. S. PAT. OFF.

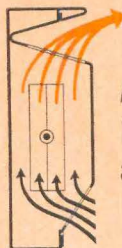
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Weaver's frustrating year—errors, politics mar HUD start

Robert Clifton Weaver is fast becoming the Johnson Administration's scapegoat of the year.

Weaver became an inviting target the day he accepted command of the sprawling new Housing and Urban Development Department, a job President Johnson had trouble giving away. But even the President, who handed Weaver the assignment in January with a prayer—"May the good Lord have mercy on you"—had no idea that ten months later HUD would face such bitterly impatient criticism from homebuilders and Congressmen alike.

As 1966 threatens to become the year of the housing slump and the city skid, Weaver and HUD are under fire on these two fronts:

1. Critics say Weaver has shown no leadership to the homebuilding industry during the tight-money crisis. They say he stands pat, even now, as the Administration continues to sacrifice homebuilding on the altar of taut credit.

2. Critics say Weaver has proposed no new and imaginative programs to cure the festering ills of American cities.

For the defense. As the criticism mounts, Weaver displays a surprising reluctance to defend himself or HUD. And that silence, observers say, has led many persons to believe the worst about Weaver's ability and, more importantly, about HUD's potential.

Those who rush to Weaver's defense note that HUD's so-called inaction stems from the lack of an enforceable national housing policy. HUD, like HHFA and FHA before it, has no power to press its program on local governing bodies.

Others add that the attacks are partly the President's fault for overselling HUD in the first place. Too many expected too much from HUD too soon, they insist.

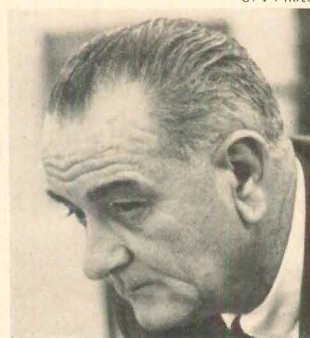
In the middle. And now, the observers point out, an even more explosive issue is fueling the fires under the new agency. It is the political in-fighting between President Johnson and Presidential hopeful Robert F. Kennedy. That clash was the main reason Weaver got such rough treatment from the Senator from New York (an old friend, incidentally) in a Senate subcommittee hearing on the crisis in the nation's cities.

Extravagant charges. In addition to the complaints about tight money and decaying cities, there are other severe criticisms of HUD, all stated by critics swinging with both fists. Several appear exaggerated or fanciful, but here they are:

- Weaver has set no goals for housing.
- He has not yet organized HUD.
- He has blundered both in and out of Congressional hearings, thus jeopardizing important programs such as rent subsidies.

Taking all these complaints one at a time, how much of the abuse do Weaver and his young department deserve?

The tight money case. Rep. Richard T. Hanna (D., Calif.) took the money crisis to the House floor: "What encour-



THE MAN IN THE MIDDLE is HUD Secretary Robert Weaver.

agement have private homebuilders and mortgage lenders had from the agency that is supposed to give it to them? They have had none. The sphinx roars back and mocks the law that conceived it."

Yet another critic, NAHB President Larry Blackmon, nimbly avoided blaming the President—a Texas neighbor and pal—for the tight-money policy that has inhibited Weaver's freedom of action. But Blackmon said, while being careful to name no one: "Someone in the housing administration should have taken positive action concerning new Fanny Mae funds." The funds, of course, would move into the mortgage market.

NAHB was forced to speak for itself, Blackmon said (NEWS, Sept. '66). And last month it won \$4.76 billion for Fanny Mae, including \$1 billion from the Treasury and the President's special fund. That special-assistance money is clearly inflationary, and Weaver opposed it, apparently at White House insistence.

Weaver's side. Weaver's aides point out that HUD has tried to help housing in several ways:

1. Weaver was the only Cabinet member to urge that FHA raise its mortgage rates in April to 6%, instead of 5¾%. The wider increase would have held down the discounts builders must now pay. Is it Weaver's fault, his aides ask, that he was overruled?

2. Weaver helped write a bill to freeze interest rates on time deposits offered by commercial banks in an effort to keep S&Ls competitive in the fight for the savings dollar. The bill died when S&L leaders balked at similar rate ceilings for S&Ls.

What's more, some Congressmen say the tight-money dilemma is bigger than Weaver. Through an aide, New York's Republican Senator Jacob K. Javits said, "We need a tax increase, and that is an Administration decision."

Criticism over city ills. The Senate subcommittee attacked the whole fabric of federal housing programs as obsolete.

Sen. Abraham A. Ribicoff (D., Conn.) said existing programs are responsible for the nation's "reaping a whirlwind of violence" from its cities. And Kennedy added that since 1960, substandard housing actually increased in New York City by 100,000 units—to 520,000.

Weaver protests: "Going back to my days as head of HHFA, I have introduced more new and imaginative programs than anybody who ever held that job—Sec. 221d3, mass transport, open space, rent supplements, water-sewer grants, better design, more flexible public housing and pertinent administrative changes. I have also gotten through Congress omnibus housing bills in '61 and '65, at least half an omnibus bill in '64, and very probably an omnibus bill in '66."

And a Weaver aide pointed out that any lack of new programs is the fault of a Congress that for years has neglected low-income housing in favor of middle-income units for the suburbs. Even now, the aide added, Congress is holding back the Demonstration Cities bill—a bold approach to human and housing rehabilitation. (Congress has cut the bill from \$2.3 billion to \$900 million.)

And Sen. Joseph S. Clark (D., Pa.) defended Weaver: "It was unfair of Kennedy, Ribicoff, and Javits to make Secretary Weaver the sole devil for the problems of our cities. That is something no man can control." (A Javits spokesman was quick to point out that the Senator did not take part in any of the criticism of Weaver.)

Goals for housing. The nation remains without overall housing goals. But are such goals Weaver's responsibility? John Gunther of the Conference of U. S. Mayors says no.

"HUD was badly named," he explains. "Weaver should be Secretary of Urban Development; housing is merely a part of that."

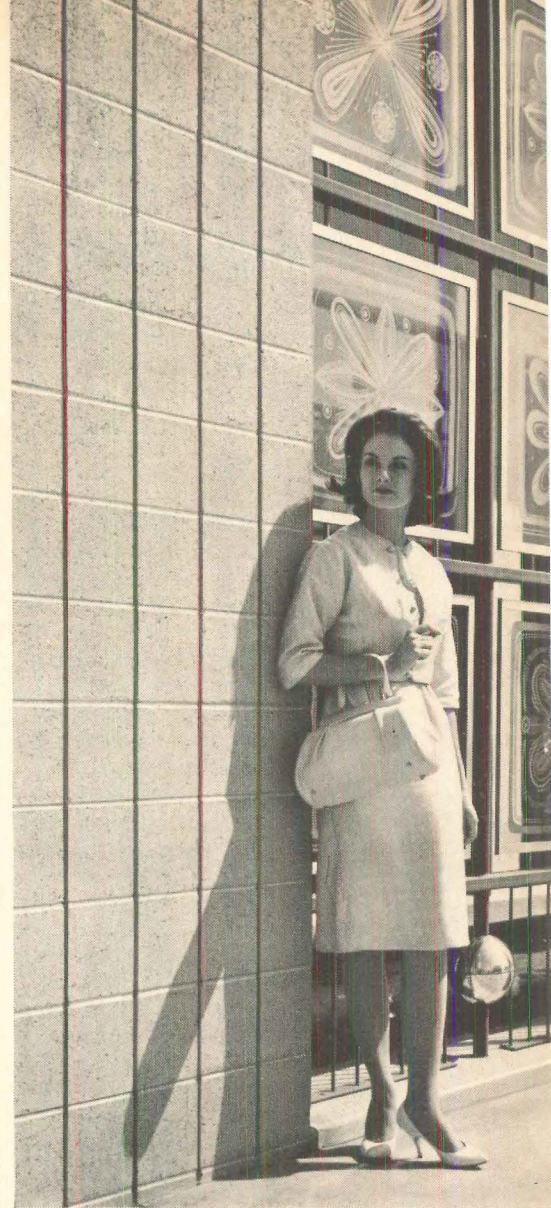
A streamlined HUD. The slow pace of HUD's organization was criticized by Ribicoff and Rep. William B. Widnall (R., N.J.) And HUD replied to each point.

"The regional offices of FHA are still contradicting each other," Widnall's office charged.

But a Weaver spokesman noted that HUD inherited 30 years of housing bureaucracy only 10 months ago. And the problem is further complicated by legions of old civil servants who refuse to fade away.

Both Ribicoff and Widnall said HUD uses outdated statistics. One Congressional aide described HUD's statistical department

continued on p. 14



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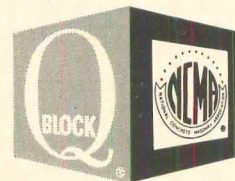
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... Weaver's frustrating year

as "three clerks and a secretary." But, says Weaver's office, "Congress has never given us a cent for basic research."

Weaver replies with emphasis on this issue of statistics.

"I don't hear any of the critics trying to help me get any better statistics," he says.

"And I've been trying to get money from Congress for basic research ever since my first day in office. The only statistics available to us now are those based on the 1960 census."

Weaver himself. Critics say Weaver is a timid and sometimes bungling administrator. Sen Ribicoff complained that Weaver has not been "beating the bushes" to get rent supplements going.

But a Weaver spokesman replied that, for one thing, rent supplement applications have already outstripped the funds Congress appropriated. As for beating the bushes, Weaver has averaged eight speeches a month since May. (Interior Secretary Stewart L. Udall, a leading headline grabber, makes only about five.)

When all other criticism is answered, critics turn to Weaver's lackluster performance in moving rent subsidies through Congress. He stopped the rent bill cold last year by releasing preliminary regulations that would have allowed families

with \$15,000 in assets to receive subsidies. (Weaver's only defense: "A printer's slip.") And when the bill was revived, Weaver could not block a rider giving some mayors an option to veto subsidies, thus permitting them to exclude minorities. Again, a few months ago, Weaver damaged chances for winning an extra \$20 million for rent subsidies when he angered Congressmen by indicating that subsidies might be extended to middle-income families. Weaver claims he was misquoted, misinterpreted, and Congress has granted the \$20 million.

The untold story. Weaver blundered again, critics say, by defending HUD so ineptly before the Senate subcommittee. But there is more to the story than even most critics realize. Here are the inside facts, pieced together from reliable Congressional sources:

President Johnson anticipated that Kennedy would escalate their private dispute by criticizing the Administration. But while trying to prepare Weaver, the lead-off Administration witness, the President unwittingly tied Weaver's hands. To get the Johnson record before the public, Weaver was told to read a statistically loaded 43-page report that had been carefully rewritten by White House aides.

The loyal Weaver tried to read it—but

Kennedy interrupted after Weaver had toiled through 16 pages.

"The job is not being done," the Senator snapped. "And you can go on and list these programs from now until tomorrow and still the job is not being done."

Kennedy and Ribicoff then opened up with questions that required precise statistical answers. Weaver's aides began passing notes. But Weaver, tense and frustrated, ignored the notes and answered briefly in an impatient attempt to get back to his testimony.

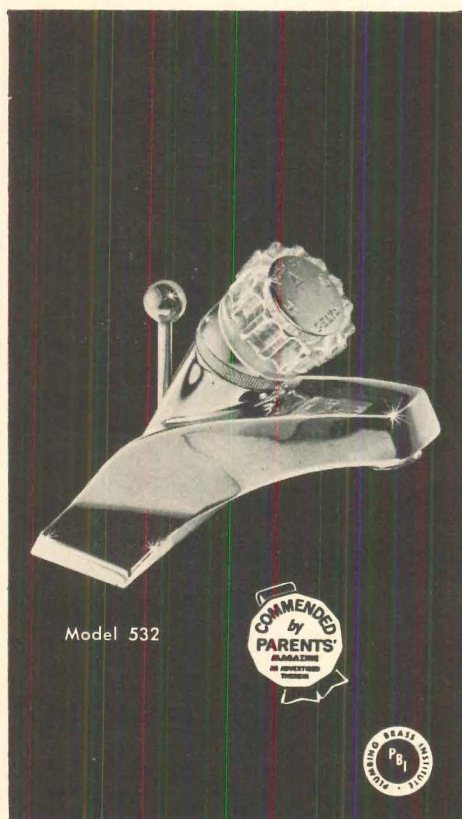
He never did. And his short answers led to newspaper stories reporting that Weaver did not know whether federal funds were indirectly financing the slums.

Outlook. Friends concede Weaver will never win "Politician of the Year" awards. But as one friend said, "Weaver wants to do what the Administration wants."

Critics contend that such a defense merely underlines Weaver's faults. He is loyal to the President, they argue, to a fault; he is a careful administrator, also to a fault.

Yet it may be that to make sense out of the tangled HUD programs, and to handle the astronomical sums new programs will entail, a loyal and conservative administrator is just what is needed.

—FRANK LALLI



Model 532

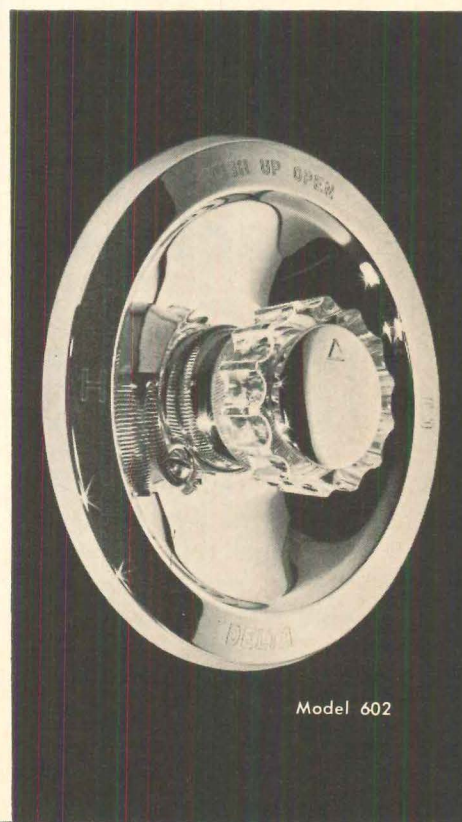


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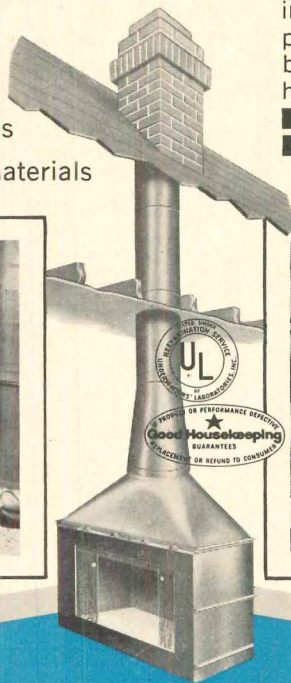
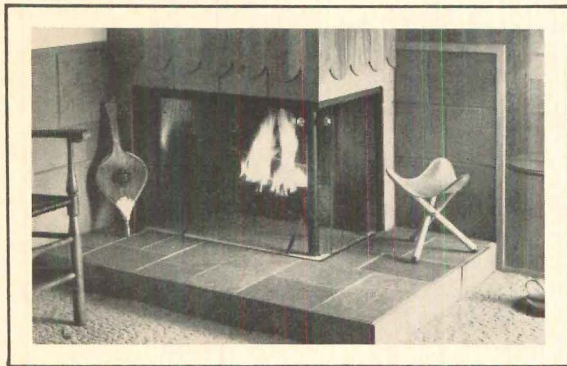
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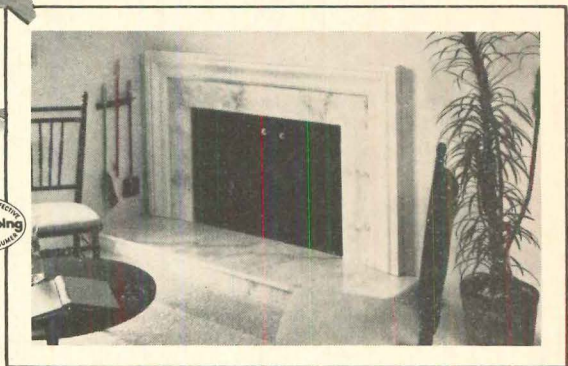
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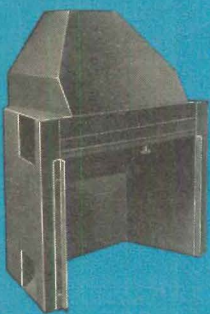
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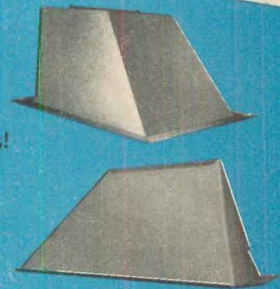
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Chicago's Dover Construction files for reorganization

Dover Construction Co. of Chicago, mass producer of low-cost home projects in four states, has filed for reorganization under Chapter 11 of the Bankruptcy Act.

The action came after three creditors had petitioned for involuntary bankruptcy status for Dover and asked the courts to appoint a receiver. An attorney for the creditors said the debts are "far in excess of \$1 million."

Alex Dolnick, attorney for Dover, filed the petition for arrangement—that is, for reorganization of the company—Aug. 26. It was allowed, and the court restrained all further actions against Dover, including an Internal Revenue Service suit to recover \$78,000 in taxes.

Operations go on. The court authorized Dover to operate under a debtor-in-possession arrangement, which means the company does business under the jurisdiction of the court.

The three creditors that sued under the involuntary bankruptcy clause were Whirlpool Corp., Marsh Furniture Co. and Home Furnishing Council of Chicagoland, which furnished Dover's model homes.

Dolnick attributed the plight of the construction firm to tight money, rising costs, and loss of confidence on the part of lenders and subcontractors after the Internal Revenue Service filed a tax lien in

August for \$78,000 in allegedly delinquent withholding taxes.

Dolnick was preparing last month for an anticipated hearing on the entire Dover case before Victor E. Larue, whom the bankruptcy court appointed as referee.

Receivership? The referee then will decide whether operation of the company will continue under the reorganization measures, or under appointment of a receiver. The motion for appointment of a receiver has twice been continued, or moved up on the court calendar.

Dolnick, preparing schedules of assets and liabilities for the hearing, said in September, "We are also, of course, trying to figure out where we are, what we've got, and what we can do with what we have."

Louis Kessler, attorney for the creditors, has said he would not press the involuntary bankruptcy petition immediately but would wait to see if the firm could be reorganized.

Dover has projects under way in Louisiana, near New Orleans; in Ohio, near Akron and Cleveland; in Minnesota, near Minneapolis, and in Chicago in Du Page and Cook counties.

Dolnick said Dover is trying to finish several hundred uncompleted homes in the Chicago area. An attorney has sued to recover down payments for which no

houses have been delivered.

Dover's financial complex includes 15 to 20 subsidiaries, some owning land, some with contracts to acquire land, and some with commitments to start construction of homes.

For the six months ended July 31, 1965, Dover and its subsidiaries listed \$4,377,700 as income for houses sold, with net of \$156,900.

"We have vacant land, model homes, houses in various stages of construction, utility plants, and lawsuits against us," said Dolnick. "It's not an easy case. We're talking about \$10 million in holdings."

Great Lakes lien. Meanwhile, in Milwaukee, Wis., a lien for \$81,375 in federal taxes was filed against Great Lakes Homes of Sheboygan Falls. The IRS said the lien was for unpaid withholding and social security taxes, interest and penalties for the first half of 1966.

Vice President Allen L. Kovacic, of Great Lakes, manufacturers of custom built homes, said the company's sales in the first six months of 1966 were about half those in the same period last year.

"We are in a slight financial bind, but I think we can handle our payments," he said.

The company lost \$1.9 million in calendar 1965 (NEWS, July).

Housing stocks plummet again under tight money's impact

Eichler Homes of San Francisco and Mortgage Guaranty Insurance Corp. of Milwaukee led housing stocks in one of the sharpest monthly declines ever recorded on HOUSE & HOME's index of 73 issues.

The index was off 16%. Eichler plummeted 2 points to an all-time low of 1, and MGIC was off 5/8 to 17, a new low for the year. Even Colwell Co., the blue-chip mortgage banker in Los Angeles, gave up 3 points to settle at 5.

The MGIC shares retreated despite the company's announcement of a 45% increase in earnings for the six months ended June 30. President Max Karl cited earnings of \$1,801,648 or \$1.04 a share compared with \$1,239,611 or 71 cents a share in the first half of 1965. And MGIC approved a 25% increase in its 10¢ a share quarterly dividend.

Analysts generally blamed tight credit and a shortage of money for housing's following of a much broader retreat of general industrial issues. The averages:

	July 11	Aug. 9	Sept. 6
Building	5.45	5.33	4.60
Prefabrication	2.34	2.17	1.75
S&Ls	7.20	6.83	5.67
Mortgage banking	10.35	10.04	8.60
Land development	6.75	6.04	5.13
Average	6.52	6.22	5.25

HOUSING'S STOCK PRICES

COMPANY	Sept. 6 Bid/Close	Chng. Prev. Mon.	COMPANY	Sept. 6 Bid/Close	Chng. Prev. Mon.
BUILDING			First West Fin. ^c	2	- 1
• Adler-Built Inc.	3/8	.....	Gibraltar Fin. ^c	8 1/8	- 2 1/2
• Capital Bld. Ind.	53¢	- 2¢	Great West. Fin. ^c	6 1/4	- 1
Cons Bldg. (Can.)	80¢	- 20¢	Hawthorne Fin.	5 1/4	- 3/4
• Dev. Corp. Amer.	1/2	- 1/8	Lytton Fin. ^c	4 1/4	- 1 1/4
Edwards Inds.	1 1/4	- 3/8	Midwestern Fin. ^b	2 1/4	- 1/8
Eichler Homes ^a	1	- 2	Imperial Corp. ^c	4 3/8	- 7/8
• First Hartford Rlty	5 1/2	- 3/8	Trans-Cst. Inv.	1 1/8	- 1
First Nat. Rlty. ^b	7 1/8 ^d	- 1/4	Trans Wrld. Fin. ^c	4 1/2	- 1 1/2
• Frouge	37/8	- 3/8	Union Fin.	5	- 3/4
General Bldrs. ^b	17/8	- 1/8	United Fin. Cal. ^c	5 1/8	- 1 1/8
Kaufman & Bd. ^b	10 3/4	- 2	Wesco Fin. ^c	8 3/4	- 2 3/8
Levitt ^b	9 7/8	- 3/4			
Lou Lesser Ent. ^b	3 1/8	- 5/8	MORTGAGE BANKING		
Lusk	5¢	.....	Advance	5 1/2	- 1/4
• Nationwide Homes.	1 1/4	.....	• Amer. Mort. Ins.	7	+ 1 1/4
Pres. Real. A. ^b	9 1/2	- 3/4	Associated Mtg.	5 3/4	- 1/2
• Sprout Homes	1 1/8	.....	Charter	2 1/2	- 1/8
U.S. Home & Dev.	3/4	- 1/8	Colwell	5	- 3
Jim Walter ^c	16	- 3	Cont. Mtg. Inv. ^c	2 1/4	- 3/4
Del. E. Webb ^c	3	- 1/2	• Cont. Mtg. Ins.	37/8	- 1/4
			• FNMA	67 1/4	- 4
			First Mtg. Inv.	14 1/8	- 3/8
			• Kissell Mtg. ^b	3 1/4	- 1/8
			Lomas & Net. Fin. ^a	3 1/4	+ 1/8
			MGIC ^b	17	- 5 1/8
			• Mortg. Assoc.	27/8	- 5/8
			• Palomar Mtg.	2	- 1/8
			• Southeast Mtg. Inv.	7	- 17/8
			United Imp. & Inv. ^b	2 1/2 ^d	- 3/4
			PREFABRICATION		
Admiral Homes	1/2	.....	Land Development		
Albee Homes	5/8	- 3/8	All-State Prop.	17¢	- 9¢
• Continental Homes	2 3/4	- 1/4	• American Land	3/4	- 1/8
Gt. Lakes Homes	1/2	- 1/2	Am. Rlty. & Pet. ^b	3 1/8	- 3/8
Inland Homes ^b	3 3/8	- 3/8	Arvida	5 5/8	- 1
Modern Homes	2 1/4	- 5/8	Atlantic Imp.	16 1/2	- 2 1/2
Natl. Homes A.9.	2 7/8	- 1/8			
• Scholz Homes	2 1/4	- 3/8			
• Seaboard Homes	1 1/4	+ 1 1/8			
Steel Crest Homes	2 1/4	- 1			
Swift Industries	1 1/8	- 3/8			
			S&Ls		
			American Fin.	12 3/8	- 1 3/8
			Calif. Fin. ^c	3 1/8	- 7/8
			Empire Fin.	4 1/4	- 1/2
			Equitable S&L	12 3/8	- 3/4
			Far West Fin. ^c	5	- 3/4
			Fin. Fed. ^c	9 3/8	- 2 1/4
			First Char. Fin. ^c	9 3/8	- 2 1/4
			First Fin. West.	37/8	- 3/8
			First Lincoln Fin.	4 1/8	- 1/2
			First Surety	2 1/2	- 7/8

SHORT-TERM BUSINESS LOAN RATES

Percent interest and (net change) in year

LOAN SIZE	New York City	7 other Northern & Eastern cities	11 Southern & Western cities
\$1-10	6.14 (+.52)	6.32 (+.44)	6.52 (+.52)
\$10-100	6.11 (+.72)	6.35 (+.77)	6.28 (+.57)
\$100-200	5.87 (+.80)	6.08 (+.76)	6.08 (+.66)
\$200 and over	5.57 (+.95)	5.74 (+.89)	5.84 (+.78)

Source: Federal Reserve Board June 1966

a—stock newly added to table. b—closing price ASE. c—closing price NYSE. d—not traded on date quoted. g—closing price MSE. h—closing price PCSE. k—not available. p—formerly Wallace Investments. q—formerly San Diego Imperial Corp. —not included in averages. x—adjusted for 4-for-3 split. y—tender offer.

Sources: New York Hanseatic Corp., Gairdner & Co., National Assn. of Securities Dealers, Philip Beer of Russell & Sage, American Stock Exchange, New York Stock Exchange, Midwest Stock Exchange, Pacific Coast Stock Exchange. Listings include only companies which derive a major part of their income from housing activity and are actively traded.



Geon vinyl puts more leisure in Leisure World

The key word at Rossmoor Leisure World, in New Jersey near Princeton, is "take it easy." Buyers are assured they'll have no outside painting, no grass cutting, no snow shoveling. All this is done for them.

The builders of the 30,000 unit Leisure World are in turn reducing their maintenance load by using vinyl siding, gutters and down-

spouts. Because the color goes clear through, painting of building components made of rigid Geon vinyl is unnecessary. They're easy to clean; stay new looking for years; and will not pit, corrode, rust, dent or warp.

Look for Geon vinyl in siding, pipe, electrical conduit, baseboard raceways, built-in vacuum tubing,

shutters and other building products. They'll make a material difference in your building. Get complete facts in our illustrated builder book. Write B.F. Goodrich Chemical Co., Department H-7, 3135 Euclid Avenue, Cleveland, Ohio 44115.



B.F. Goodrich **B.F. Goodrich Chemical Company**

a division of The B.F. Goodrich Company



TRACK and GUIDES

For 1/8", 3/16",
5/16", 1/2" and
3/4" sliding doors.

E-Z Glide tracks and guides offer many advantages to builders, cabinet makers and furniture manufacturers. Neat appearance, smooth and silent operation, nothing to wear, corrode or rust. They mount easily in several ways. Doors lift up and out.

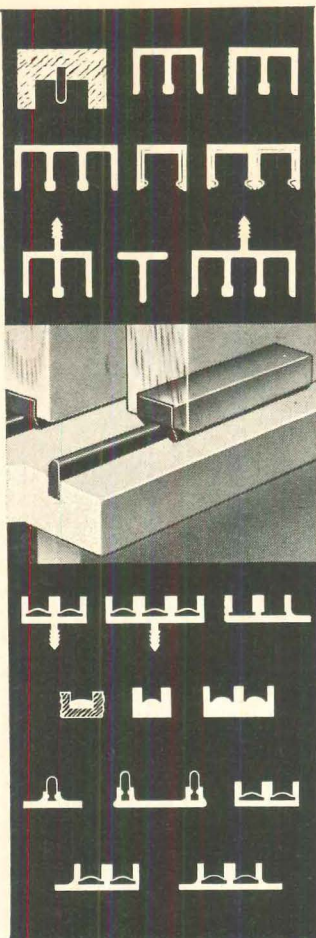


Free 38-page catalog on all EPCO sliding door hardware, magnetic catches, knobs and pulls available on request.

See Sweet's Catalog under Arch. file 19g-En and Light Const. file 7b-En.

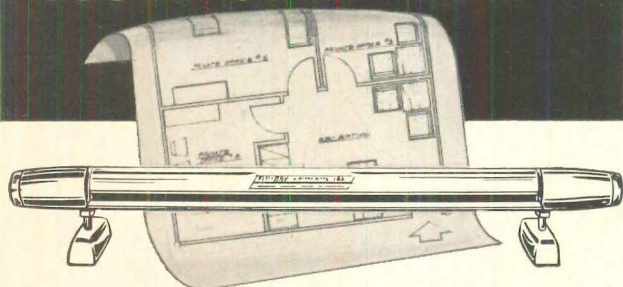
THE ENGINEERED PRODUCTS CO.

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NEW BLU-RAY WHITEPRINTER COSTS ONLY \$239.50*



The new Blu-Ray model 142 whiteprinter copies anything typed, written, drawn or printed on translucent or semi-opaque materials up to 42" wide by any length. Makes foils and sepias, and does anything larger, costlier machines can do. It features a troublefree electronic speed control. And it's so compact it fits on any table or hangs from any wall. In short, it's an amazing value: Try it in your office, free.

*Slightly higher west of the Rockies.

BLU-RAY

BLU-RAY, Incorporated
2542 Westbrook Road, Essex, Conn.
Phone (203) 767-0141

BLU-RAY has nine models. If we don't have one to meet your needs we'll make it. Circle No. 93 on Reader Service Card for complete information.

Photos: H&H staff



NEW JERSEY'S BARBA
Mixing economics and housing



TEXAS' NORMAN
From law to engineering to building

New Jersey and Texas builders vie for ladder to NAHB's presidency

This year's race for the coveted post of vice president-secretary of NAHB pits **Louis Barba**, a New Jersey builder with a degree in economics, against **J. S. (Mickey) Norman** of Houston, who holds degrees in both engineering and law but says he would rather be known as a builder.

In past years the winner has advanced to the association's presidency in four years, but directors have recently shown some reluctance to make the elevation automatic.

Barba, 50, is a second generation builder whose Barcon Associates, of Chatham, N. J., builds \$2 million worth of houses annually in the \$45,000 to \$100,000 range. Barba says each house is individually designed, but he declines to call them custom houses because some tract builders apply the word to their models.

Barba is rounding out two years as chairman of NAHB's mortgage finance committee. He was acting chairman of the committee that started NAHB's Registered Builder program three years ago, and he is a former New

Jersey state association president.

Norman—his initials stand for James Stanford but the names are seldom used—joined his father and brother, **H.H. Norman**, in setting up Norman Associates in 1946. The company has built about 1,000 houses and 600 apartments in Houston. It is building one of Houston's first planned unit developments and is starting an 800-acre second-house community named Panorama 40 miles north of Houston.

In 1962 and 1963, Norman headed a builder committee that wrote a building code later adopted by the city of Houston (NEWS, Sept. '62). He has served on the city appeals board for the last three years and on numerous NAHB national committees and task forces.

Executive officers pick Detroit staffer

Irvin H. Yackness of Detroit will lead the NAHB's Executive Officers Council in 1967, succeeding **Lauren Cahill** of Denver.

The 45-year-old Yackness is general counsel and executive vice president of the Homebuilders Assn. of Metropolitan Detroit. A man of soft but persuasive talk, he took up his dual role in 1951 when his work as a representative of a Detroit homebuilder caught the eye of the local. He had done some labor arbitration and negotiation, and these skills were at a premium because Detroit negotiates directly with four trade unions—carpenters, brick masons, cement finishers and laborers. Yackness negotiated the first four-year contract (with carpenters) two years ago, a contract the inflation-conscious carpenters now regret.

Yackness keeps a staff of 14 bustling to visit members.

His strategy works, for Detroit's 400-member association is the nation's largest.

NEWS continued on p. 22

West Coast assessor appeals jail sentence

Russell L. Wolden, San Francisco's former assessor, has drawn a prison term of one to 14 years for bribery, but the judge said he would urge the California State Adult Authority to impose "moderate" punishment instead.

Wolden remained free in bail pending appeal of both the sentence and his conviction by jury. He was the third assessor convicted this year in the West Coast's tax bribery scandals (NEWS, July).

Superior Court Judge Lewis Drucker said "the court would have no objection to an early release" of Wolden.

"It is the certainty of punishment rather than the severity that will have the deterrent effect," Drucker said.



Family room floor of new, easily installed 12" x 12" x 1/16" vinyl asbestos Berkshire tile. Full-color, full-page advertising will reach your prospects in Life, Look, Saturday Evening Post, and other top national magazines. Berkshire is easy to clean. Greaseproof. Quiet and comfortable underfoot. Colors: 5.

KENTILE
VINYL TILE
FLOORS

New vinyl tile floor—with a luxury look at very low cost!

Use Berkshire to help you sell your model homes. Ideal for offices as well. At vinyl asbestos price, it still looks like a custom floor! Ask your flooring man about Kentile® Berkshire.

These successful builders won't tell you all their secrets.



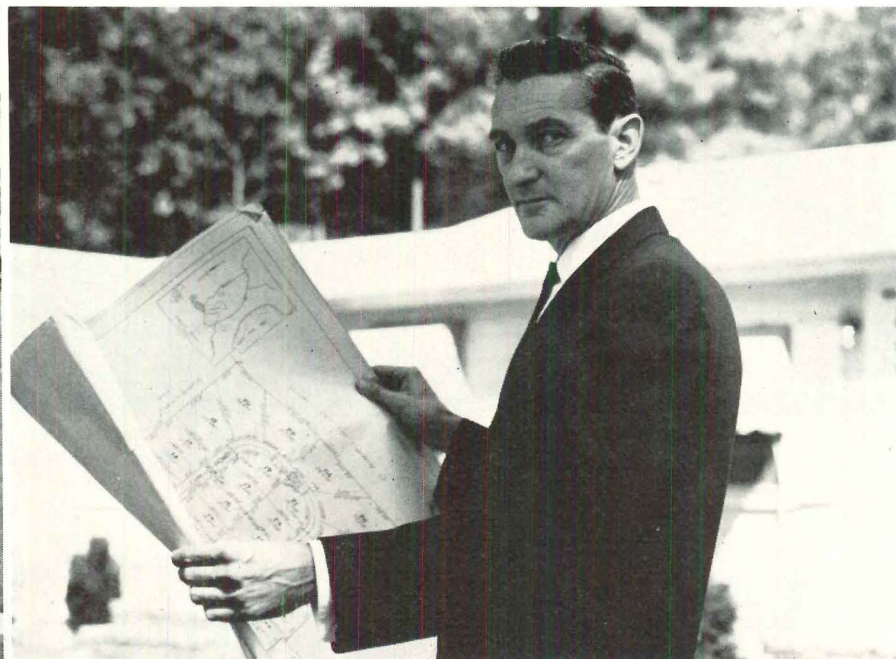
"Quality products and excellent service are the reasons we use Tappan appliances exclusively," states Howard H. Miller's Riviera Homes in Plantation, Florida. Mr. Miller, shown here discussing kitchen plans with a prospect, builds 200 custom homes a year in the \$25,000 to \$40,000 category; included in the price are Tappan ranges, refrigerators, dishwashers, disposers and hoods.



"Ours are the most demanded homes in Orange County," asserts H. Glenn Busby, Doyle Development Co., Inc., Huntington Beach, Calif. Currently, the firm is building at the rate of 600 homes a year. Mr. Busby sums it up by stating, "We feel quality homes sell better when deluxe kitchen equipment is used. Tappan satisfies this demand."



"Customers have a choice of gas or electric with Tappan," says Alan Harrison Temple of Harrison Homes in Pillsford, N. Y. Mr. Temple's firm builds custom homes from \$23,500 to \$38,000, and features Tappan ranges, dishwashers, hoods and the Electronic Cooking Center in his model home.



"We like the public acceptance of Tappan, and the fact that we can get either gas or electric ranges." This is the feeling of Lawrence M. Henrich, president of the Pembroke, Mass. builder of the same name. He features Tappan in his models, and last year built some 140 homes.

But we'll tell you one.



They feature Tappan Time Machines.

Tappan Twin-Temp Combo: The refrigerator-freezer that's practically a super-market in the kitchen. Over 20 cu. ft. of storage in only 36" of space. No defrosting ever. Classic built-in look, but a snap to install. Match cabinets with door inserts. Also in white, coppertone or Lusterloy.

Tappan Reversa-Jet Dishwasher: Sticky food can't hide from Tappan's powerful reversing spray arms. They wash in both directions to get dishes clean all over. Three models—all designed to save you installation time. Match cabinets with

wood or choose Lusterloy, coppertone, provincial, turquoise or yellow finishes.

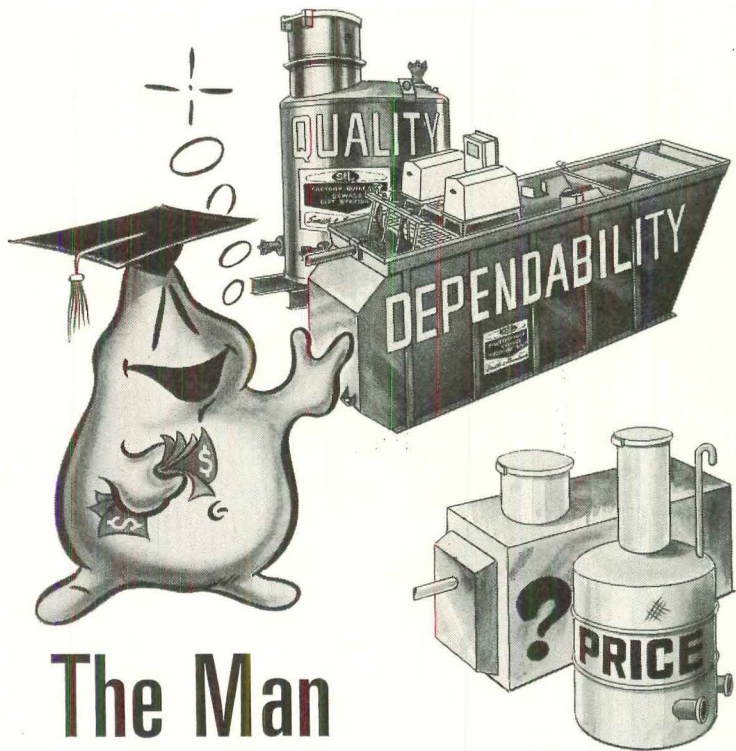
Tappan Profile Range: All the features women flip for at an incredible low price. DuPont TEFLON liners in both ovens lift out and wash in the sink without scouring. Single oven or over-and-under models, gas or electric. Slip-in or drop-in installation. Available in white, coppertone or smart new Provincial styling (the new look that helps sell houses).

Tappan Disposers: The disposer with more do's than don'ts. Makes food waste—and customer complaints—disappear.

Installs in minutes. *Tappan Vent Hoods:* No outside wall? No problem with Tappan no-duct hoods. Wide choice of ducted models, too. *Tappan Kitchen Cabinets:* Perfect setting for the Time Machines. Superb craftsmanship, beautiful woods. Ask your distributor to show you the complete Tappan Line.

TAPPAN Time Machines

The Tappan Company, Mansfield, Ohio • Tappan-Gurney, Ltd., Canada



The Man Who Spends More, Knows More

It's true... the man who knows more about the product he buys is usually willing to spend more. He is buying quality and dependability. It's especially true of a man who buys a sewage lift station or sewage treatment plant. If he knows the product, he will spend a little more to get the very best.

Here are just a few of the many outstanding features you get in every Smith & Loveless product. Study them and make the comparison yourself.

Check the finish! Smith & Loveless products are coated inside and out with "Versapox"®, a specially formulated, tenacious epoxy coating that resists rust and corrosion... the electrical control panel is quality built to meet each job requirement. It's color-coded, with all switches labeled and is power tested after assembly and again after installation.

Investigate the exclusive combination ladder vent ducts and built-in dehumidifier that furnishes clean, fresh, moisture-free air into the Smith & Loveless pump station... the exclusive vertical close-coupled "Non-Clog" sewage pumps with long-wearing, dead-tight, double mechanical seal that eliminates noxious odors and sewage from pump chamber—eliminates shaft wear.

Compare the exclusive features of Smith & Loveless "Oxi-gest"™ sewage treatment plants... such as the non-mechanical Automatic Surface Skimmer® that reduces maintenance, eliminates operation problems... the unique air diffusers and distribution system... the odor-free, nuisance-free sewage treatment.

It's our old quality story, as true today as it was 20 years ago when Smith & Loveless pioneered the factory-built, underground sewage lift station market. Through these years of experience, we are able to offer you the most dependable, trouble-free line of sewage lift stations and sewage treatment plants available today.

Why not spend a little more and get the very best... that's Smith & Loveless.

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NEWS

Kansas builder-developer Larry Winn halfway home in race for Congress

H&H staff



KANSAS' WINN

"My opponent is Mr. Johnson"

If past performance is any guide, Kansas' third congressional district will send Homebuilder **Larry Winn Jr.** to Washington next month. Winn's district is 60% Republican and he won the GOP nomination in August by polling 1,400 more votes than the next of six rivals.

No stranger to politics, Winn, 46, has found time away from building to serve as party district

chairman for several years and as campaign manager for incumbent Congressman **Robert Ellsworth**. Earlier this year Ellsworth relinquished his seat to seek nomination for the U.S. Senate. (He lost.)

Winn's six-county district stretches south from the Kansas City suburbs. Says he of his campaign: "I never said a word against my opponents—just took pot shots at the Johnson administration on inflation and its handling of civil rights."

If he wins in November, Winn expects to give up his post as vice president of Winn-Rau Corp. of Overland Park, Kan., a company he helped found in 1951. His departure would come at a convenient time, for Winn-Rau is just finishing a 650-acre subdivision, Nall Hills, in which it has built 1,500 houses and 200 apartments in ten years.

As for the November election, Winn hasn't changed his campaign stance: "My opponent is Mr. Johnson."

Lumber-dealer leader Cotton Northup dies

H. R. (Cotton) Northup, 71, the voice of the nation's lumber dealers in Washington for over two decades, died Sept. 4 in Washington.

Northup, who grew up within blocks of the nation's Capitol, became executive vice president of the National Lumber and Building Materials Dealers Assn. in 1941 when it was the struggling Retail Lumber Dealers Assn. He knew instinctively that a trade association executive had to be more than a highly-paid clerk and constantly challenged and cajoled the lumberyard operators to expand their services and marketing skills. When he stepped aside in 1961, NLBMDA had 12,000 members.

DIED: **Terry J. Owens**, 61, assistant director of HUD's division of demonstration programs and studies of the Urban Transportation Administration, Aug. 11, of emphysema at his Washington home. **Frank H. McConnell**, 71, editor of the American Stock Exchange magazine *American Investor* and director of the exchange's publications, Aug. 16, of a heart attack in New York City.

CONSULTANTS: **Henry M. Shine Jr.**, NAHB's legislative di-

rector from 1961 to 1965 and director of the National Housing Center in Washington for the last year, has resigned to become a consultant in governmental relations and international trade. His office will be in Washington.

PLANNERS: Urban America appoints **James P. Twomey** as deputy director of the local development services division.

Dentist loses his Dallas apartments

A court has just severed **Dr. Daniel Gevinson's** last connection with the 21 Turtle Creek Square Apartments in Dallas.

Judge **Fisher T. Denny** of the 96th Judicial Court in Fort Worth awarded title to the construction companies that built the multi-million dollar high rise and have operated it for two years. They are the Manhattan Construction Co. of Texas and Manhattan Construction Co. of Oklahoma.

The companies won a judgment of \$1,104,888 against Gevinson. The former Miami, Fla., and Washington, D. C., dentist-developer said he would appeal.

Gevinson was sentenced to a Federal penitentiary on his 1964 conviction for making false statements to the FHA as the original owner of Turtle Creek. He is appealing.



F-250 STYLESIDE

F-100 STYLESIDE

**ALL 1967 FORD PICKUPS ARE COMPLETELY NEW
—INSIDE AND OUT!**

NEW, foot-operated parking brake—quicker and easier to apply!

NEW, longer 131-inch wheelbase for F-100, F-250 gives improved weight distribution . . . easier ride!

NEW, double-section hood construction for greater strength!

NEW wiring harnesses, new fuse panel and voltage regulator locations to speed electrical servicing!

NEW, higher-capacity tires standard!

NEW, reversible ignition key you can use in the dark — with gloves on!

NEW, optional SelectShift Cruise-O-Matic transmission gives complete manual control or fully automatic 3-speed operation!

NEW, optional 25-gallon under-cab fuel tank!

NEW, fresh styling in every model!

**FORD MOTOR COMPANY LIFEGUARD-DESIGN
SAFETY FEATURES INCLUDE:**

- Integrated tail and backup lights • Dual hydraulic brake system with warning light • Two-speed, electric windshield wipers • Padded, dual sun visors • Four-way emergency lamp flasher • Windshield washers • Thick, laminate safety plate glass windshield • Outside rearview mirror.

**PLUS SCORES OF PROVEN PERFORMANCE
AND DURABILITY FEATURES**

- . . . Efficient 240-cu. in. 7-main-bearing Six standard. 300-cu. in. Six or 352-cu. in. V-8 available.
- . . . Fully synchronized 3-speed transmission standard. (4-speed standard on F-350.)
- . . . Double sidewall Styleside pickup box with all-steel floor and one-hand tailgate latch.
- . . . Improved rust resistance with zinc-rich primers.



YOU'RE AHEAD IN A FORD



Reynolds Aluminum building products helped sell 441 Eastwyck Village town houses in just 16 months!

One of the biggest selling points to prospective occupants of town houses in Eastwyck Village in Atlanta, Georgia, was the low maintenance and lasting beauty of Reynolds Aluminum building products. The houses feature aluminum siding, shutters, screen doors, rain-carrying equipment and soffit, plus Reynolds Thermo-Ply® insulation.

Builders Fred Kaye and Phillip Diamond themselves say, "Time after time, we've found Reynolds products produce greater long-term profits."

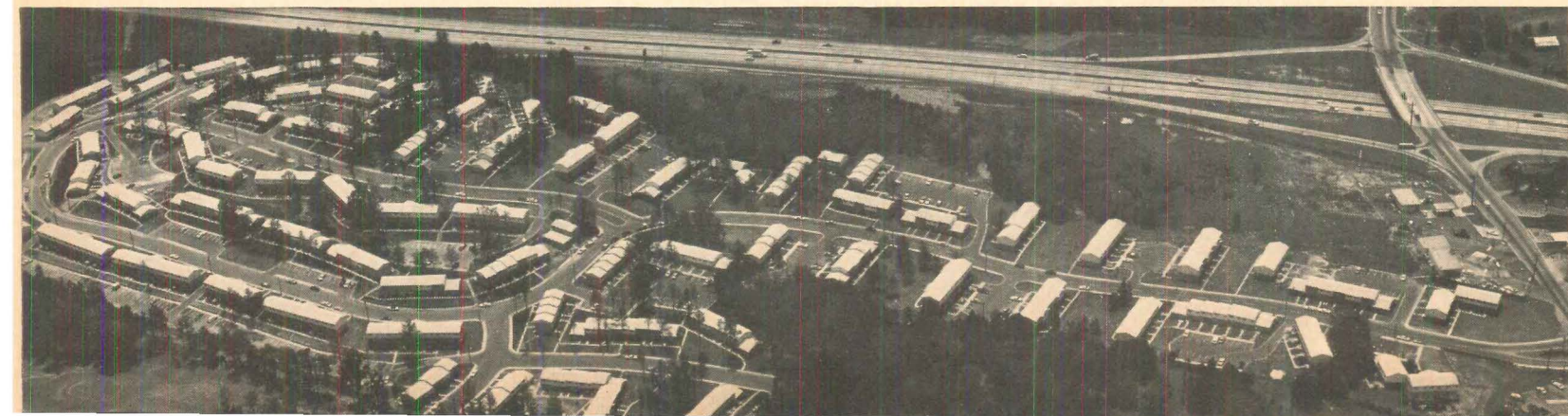
Whether you build to sell, or to operate, you can profit from Diamond & Kaye's experience. Buyers look for an investment with minimum maintenance requirements and lasting beauty. This is what Reynolds Aluminum building products offer you—in a variety of designs and colors. If you build to operate, you'll spend fewer dollars on upkeep and you'll

have the lasting attractiveness that means fewer vacancies, faster occupancy.

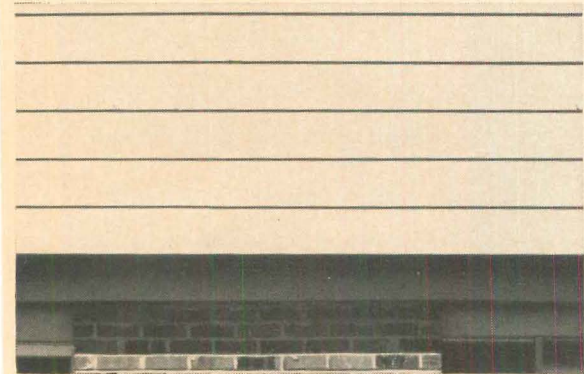
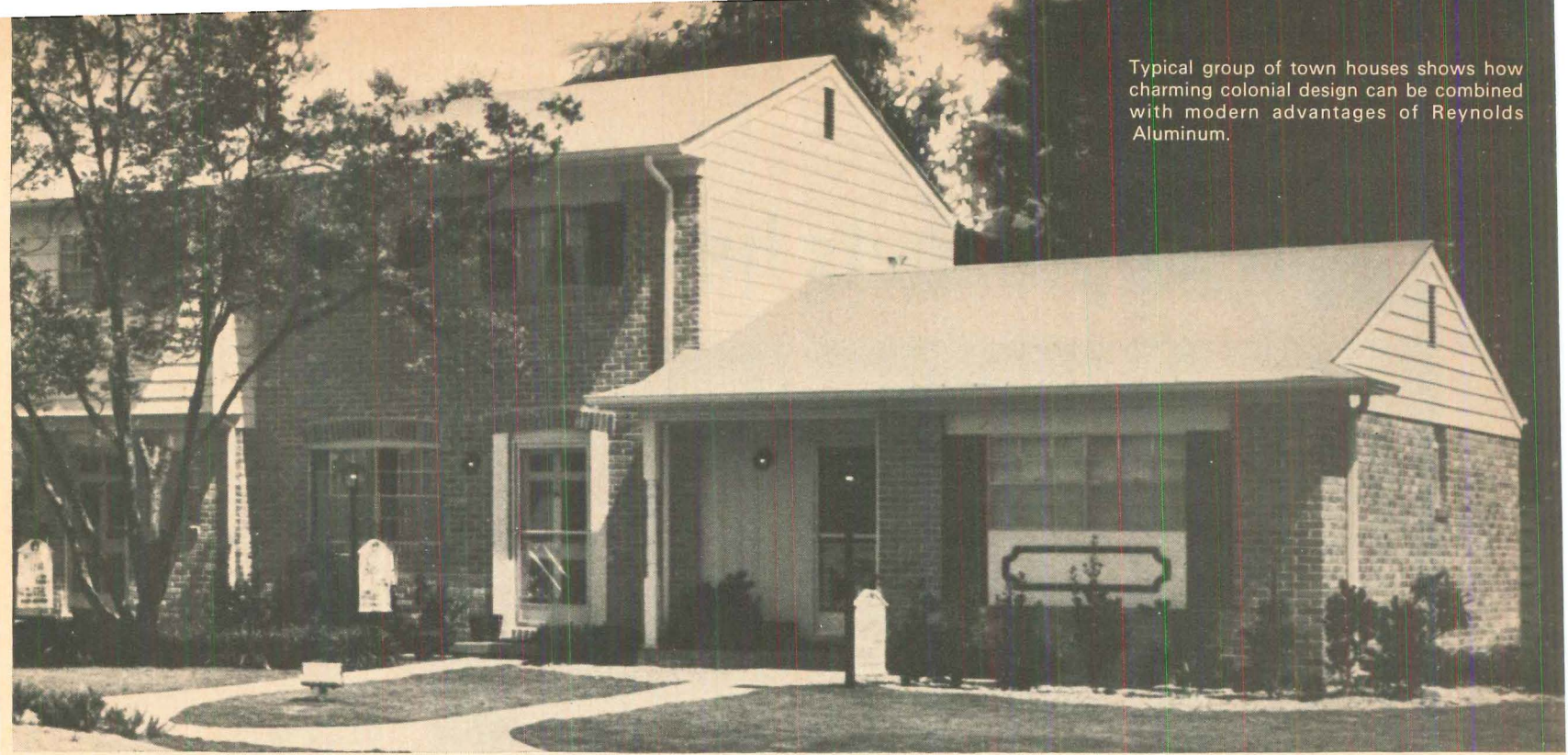
In addition to the products described in the accompanying illustrations, you can add more profit to your buildings with these Reynolds Aluminum building products: Colorweld® Building Panels • Shingle-Shakes® Roofing and Siding • Louvers and Vents • Nails • Railings and Columns • Flashing • Insulation • Vapor Barrier • Storm and Combination Doors • Sliding Glass Doors, Shower Doors and Bath Enclosures • Storm Windows • Colonial Columns • Awnings.

To let Reynolds help you make more profit—and keep it—use the convenient coupon to obtain free literature on the complete line of Reynolds Aluminum building products.

Aerial view shows the first section of Atlanta's Eastwyck Village, luxurious new community by the Diamond & Kaye Building Co.

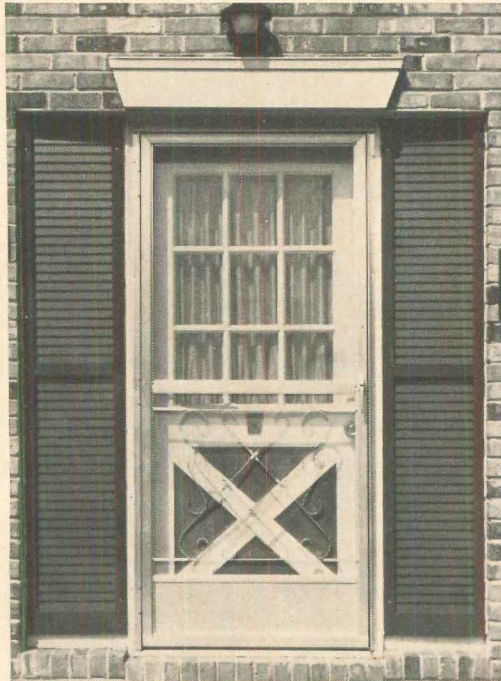


Typical group of town houses shows how charming colonial design can be combined with modern advantages of Reynolds Aluminum.



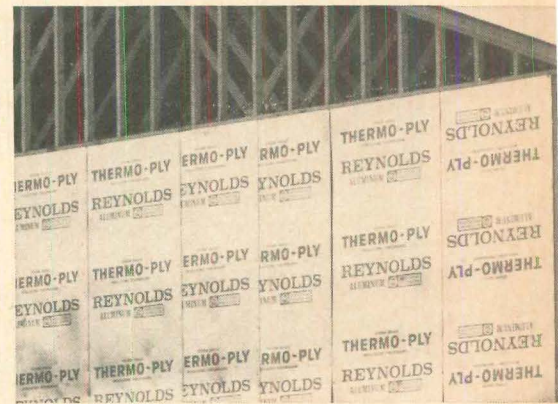
LOW-MAINTENANCE SIDING MADE OF REYNOLDS ALUMINUM

Factory applied baked enamel aluminum siding protects against rotting, peeling, warping and rusting. Aluminum's insulating qualities help cut fuel bills, too.



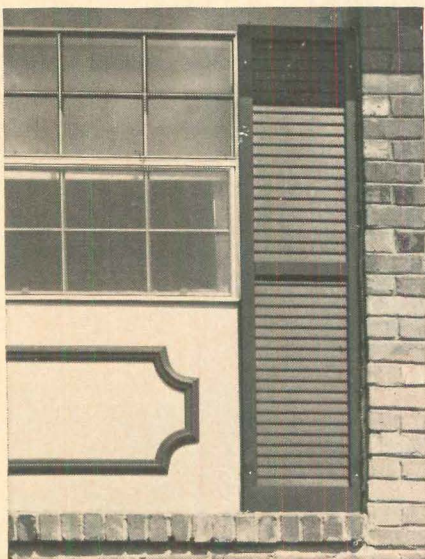
REYNOLDS COMBINATION STORM AND SCREEN DOORS

A strong selling point to families with children. Won't warp, rot, split, rust or corrode. They're shipped fully assembled.



REYNOLDS THERMO-PLY® INSULATION

This unique aluminum-covered insulation board insures comfort the year around. Thermo-Ply not only reflects heat, but acts as a vapor barrier to keep moisture from wood structural members.



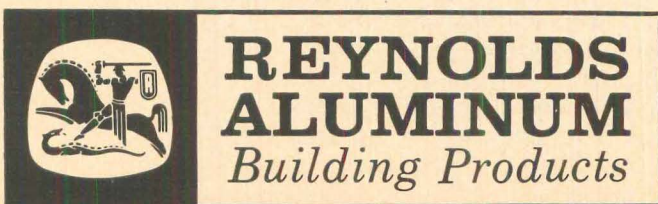
REYNOLDS ALUMINUM SHUTTERS

Available in four standard colors, in traditional or contemporary styling. Their beauty endures through the years.



REYNOLDS RAIN-CARRYING EQUIPMENT AND SOFFIT

Gutters and downspouts feature tough, long-lasting baked enamel finish—won't chip, crack, flake, blister or peel. Perforated and non-perforated coils of soffit available with matching accessories.



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 Building Products and Supply Division,
 Dept. HH-1066
 325 W. Touhy Avenue
 Park Ridge, Illinois 60068

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Leigh products help you sell houses



Leigh GLO-VENT RANGE HOOD

Washable, refreshable filter

Leigh's economy model duct-free Glo-vent range hood is so right for residences.

And apartments.

In addition to its harmonious styling, it has a separate odor removing filter which is easily washed. Easily recoated with hexachlorophene - refreshes all air passing through it. (A can of Leigh filter spray good for about 10 recoatings is furnished with each hood).

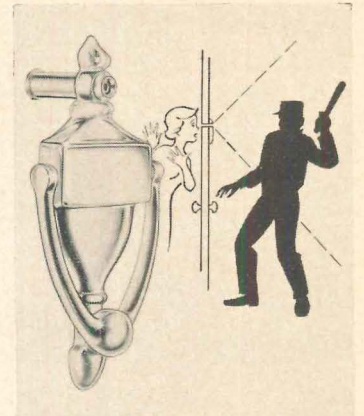
So, it's easy to see why this Leigh Glo-vent hood minimizes filter replacement and filter service costs - economies especially appealing to apartment builders. Appealing

to convenience minded home buyers, too.

All models of the Leigh Glo-vent range hoods (two duct-free and one ducted - in the four popular range hood sizes) offer you unique sales advantages: pre-wired 2-button control panel, powerful ventilation. And the massive translucent front! It lights up. It eliminates any question or need of color coordination. Use a Leigh range hood with any color scheme, any decor.

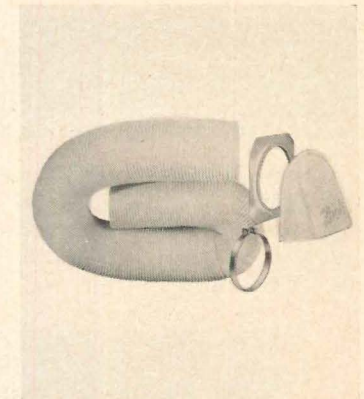
Get full information on Leigh range hoods. Call your supplier. Or write for Bulletin 353-L.

Circle 11 on Reader Service Card



Doorknockers with viewers give homeowners attractive door fronts with a vital safety feature—a thru-the-door viewer! Owner can examine all callers before opening door. Welcome protection against violent intrusion. An inexpensive house-selling plus. Write for Bulletin 408-L.

Circle 12 on Reader Service Card



New dryer vents and kits by Leigh. For lowest cost venting of clothes dryers (ventilating fans, too). High impact hood, flexible GAMMA POL duct with sections that thread together for runs of any length. Individual and bulk packs. See full line, write for Bulletin 411-L.

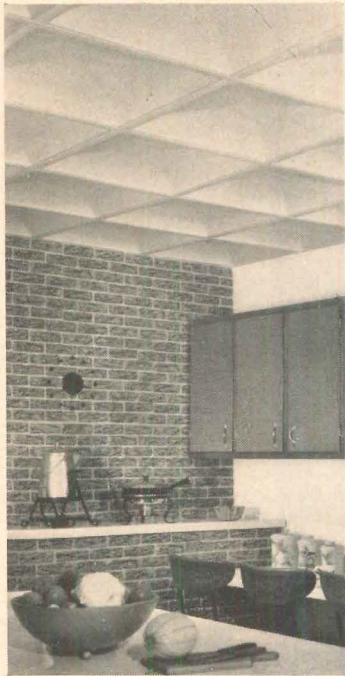
Circle 13 on Reader Service Card



Shhhh — WHISPERVENT. Leigh's exclusive ventilating fan turns so slowly it doesn't create noise. Yet it has enough capacity for a 55 sq. ft. bathroom. G.E. motor is guaranteed a full year. Lots more plus features. Write for Bulletin 329-L.

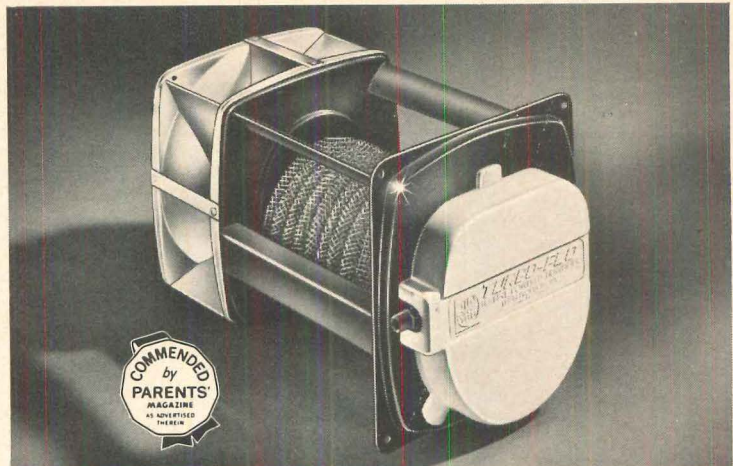
Circle 14 on Reader Service Card

-- and help you cut building costs too!



Suspended ceiling system for kitchens, bathrooms, foyers. And soon, all through the house! Leigh offers grid hardware and a full assortment of 2' x 2' and 2' x 4' light diffusing or opaque panels. Ideal for new construction or remodeling. Ceiling illustrated at left is formed of new Leigh dome-shaped panels. Crisp lines. White. Light diffusing and exceptionally strong. Easy to install. And economical — a Leigh ceiling often eliminates cost of plastering, painting or tiling, and eliminates cost of fancy light fixtures. The savings are considerable. In fact, one of the most economical ceilings you can install is the combination of Leigh grid hardware and the exclusive Leighfoam opaque panels—perfect for remodeling large residential or nonresidential rooms. For complete information on the full line of Leigh suspended ceiling materials, write for Bulletin 438-L.

Circle 15 on Reader Service Card



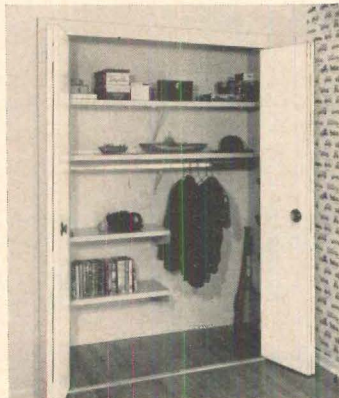
Automatic humidifier—A low-cost house-selling feature! Now carries Parents' Magazine seal of Commendation. The new Air Control Turbo-Flo Humidifier, built by Leigh, runs on air circulated by the blower in a forced warm air system. It has no electric motor, requires no electric wiring at all. Low priced—less than \$25 list! Yet has capacity enough for a 2,000 sq. ft. house. Ask your heating contractor or building materials supplier! For more information, write for Bulletin 414-AC.

Circle 16 on Reader Service Card



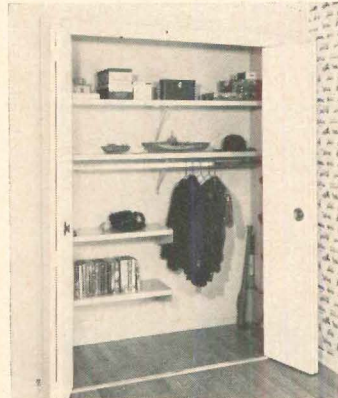
Built-in automatic toaster fits in wall stud space. America's newest kitchen built-in—swings out for toasting, swings back in for storage. Takes no cabinet space, no counter space. Helps sell kitchens. U.L. approved. Write for Leigh Bulletin 365-L.

Circle 17 on Reader Service Card



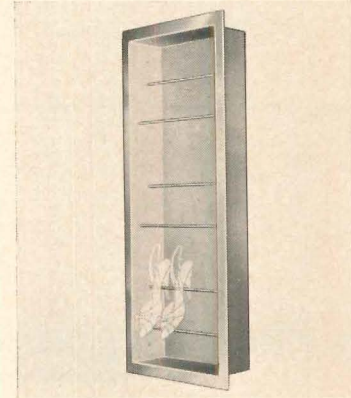
Labor saving doors. Leigh Full-Vu doors save installation time—reduce labor costs—lower total cost of closets. Wide selection of styles. All built on famous Leigh Full-Vu steel frames. Silent. Durable. Dependable. Write for Bulletin 327-L.

Circle 18 on Reader Service Card



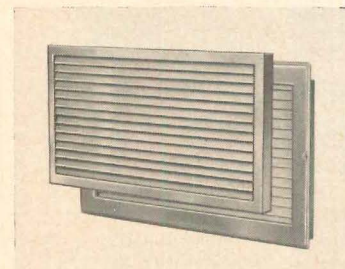
Leigh adjustable shelves and rods cost less *installed* than wood. They cut labor costs dramatically. Made of pre-finished steel—require no sawing, no fitting, no sanding, no finishing—quickly adjusted to exact size required. Write for Bulletin 371-L.

Circle 19 on Reader Service Card



Recessed Shoe Rack fits between studs, easy to install in new or old construction. Takes no floor space; holds up to 6 pairs of shoes. White baked enamel finish over heavy-gauge steel. Wide flange covers opening edges. Write for literature.

Circle 20 on Reader Service Card



Leigh Vision-Proof Grilles allow air to circulate freely between rooms, yet effectively cut down noise and drafts. Ideal for installation in furnace room doors or wherever extra ventilation is desirable. Available in almost any size. Write for literature.

Circle 21 on Reader Service Card



Leigh clothes chute door swings inward as clothes are pushed into chute. Spring closes door against rubber bumper. Easy to install. Wide margins cover rough cut opening. Heavy gauge steel. Choice of white enamel or chrome finish. Write for literature.

Circle 22 on Reader Service Card

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

CALIFORNIA—BAKERSFIELD: Apartments, \$1 million. Sponsor: Tidewater Oil. Plans: C. Barton Alford. COSTA MESA: 284 houses, \$4.2 million. Builder: Kenneth Switzer, Ojai. CULVER CITY: Apartment, \$500,000. Sponsor: Ramco Construction, Los Angeles. Plans: Abraham Shapiro & Assoc., Los Angeles. ENCINITAS: Garden apartment and swimming pool, \$650,000. Sponsor: c/o Simpson & Gerber, architect, La Jolla. GRAND TERRACE: Condominium apartment, swimming pool, and recreation building, \$1.5 million. Sponsor: Farrar & Mays, San Bernardino. Plans: Charles R. Hiller, Anaheim. HUNTINGTON BEACH: 103 houses, \$1.5 million. Builder: Barkley Development, Cypress. Plans: Earl G. Kaltenbach, Santa Ana. LAKEPORT: Retirement community, \$1 million. Sponsor: Local No. 38, Kelseyville. Plans: John S. Bolles & Assoc., San Francisco. LOS ANGELES: Condominium, \$500,000. Sponsor: W-E Corp. Plans: Hai C. Tan & Assoc., Fullerton: Senior citizens home, \$750,000. Sponsor: Church of the Advent. Plans: Carey K. Jenkins. NORTHRIDGE: 32 houses, \$672,000. Builder: Sub-Division Home Builders, Box 367. OAKLAND: Housing development, \$15 million. Sponsor: c/o Sproul Homes, Newport Beach. Plans: Burger & Coplans, San Francisco. PLACENTIA: 160 houses, \$5.4 million. Builder: Aubrey Morris. Plans: W. R. House. SAN DIEGO: Apartments and swimming pool, \$3 million. Sponsor: L. P. Construction, La Mesa. SAN FRANCISCO: Retirement residence community, \$20 million. Sponsor: California-Nevada Methodist Homes, Oakland. VENTURA: Condominium apartment and swimming

pools, \$2.5 million. Sponsor: c/o Sainsbury & Assoc., Encino. WOODLAND HILLS: 25 houses, \$625,000. Sponsor: Scenic Sites, Los Angeles.

CONNECTICUT—BRIDGEPORT: Apartment, \$1 million. Sponsor: George Vitale. DANBURY: Apartments, \$1 million. Sponsor: Danbury Shopping Center. FAIRFIELD: Residential and medical building for the elderly, \$1 million. Sponsor: United Jewish Council, Bridgeport. HAMDEN: 69 houses, \$1.4 million. Builder: James Domeo. NEW LONDON: Apartments, \$3 million. Sponsor: Investment Property Assoc., Westport. Plans: Kane & Fairchild, Hartford. REDDING: Club house, tennis courts, and swimming pool, \$500,000. Sponsor: Nicholas Nerich. SOUTH PORT: Apartments, \$2 million. Sponsor: c/o Bradley Morehouse; WALLINGFORD: Apartments, \$1.5 million. Sponsor: Oakdale Theatre Corp.; 61 houses, \$1.5 million. Builder: Oxford Land Development, Fairfield. WEST HAVEN: Apartment, \$1.5 million. Sponsor: Carrol Construction, Westport. Plans: Walter Damuck, New Haven; Apartments, \$750,000. Sponsor: c/o Samuel Gitlitz, New Haven.

DISTRICT OF COLUMBIA—WASHINGTON: Apartment, \$12 million. Sponsor: Van Ness Joint Venture c/o Robert Silverman Inc. and Pollinger Co., Chevy Chase, Md. Plans: Berla & Able; Garden apartments, \$1.5 million. Sponsor: S. F. I. Construction. Plans: Robert Schwinn, Silver Spring, Md.; Townhouses, \$650,000. Sponsor: R. M. Linde; Apartment, \$4 million. Sponsor: Charles Burton Builders. Plans: Chloethiel, Woodard, Smith & Assoc., Georgetown; Apartments, \$3 million. Sponsor: Office Corp. Plans: Fischer & Elmore; Apartment, \$8.5 million. Sponsor: Charles Burton Builders. Plans: Chloethiel, Woodard, Smith & Assoc.

FLORIDA—BAY HARBOR ISLAND: Apartment and swimming pool, \$1 million. Sponsor: Bay Harbor

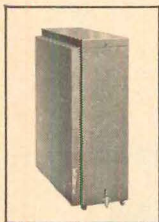
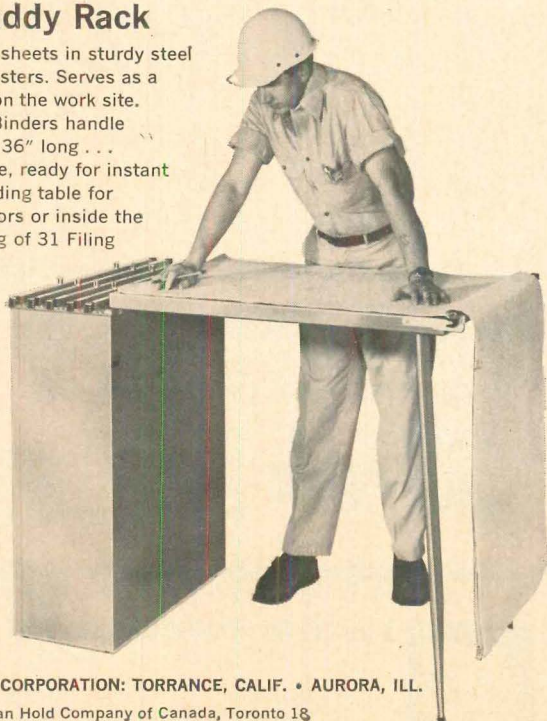
Corp. c/o Harvey J. Ehrlich, North Miami Beach. BEL AIRE BLUFFS: Apartments, \$1.3 million. Sponsor: c/o Clarence Dahlquist, architect, Glenview, Ill. and Pompano Beach. CLEARWATER: Apartments and golf course, \$5 million. Sponsor: Ina Corp., St. Petersburg. DAYTONA BEACH: 1000 houses, \$3 million. Builder: Fred W. Williams, North Charleston. S. C. FORT MYERS BEACH: Condominium apartments, \$1 million. Sponsor: c/o Harold Davis, architect, Cape Coral. FORT WALTON BEACH: Apartments, \$500,000. Sponsor: Lookabaugh & Assoc. Plans: William R. Bean, Pensacola. GAINSVILLE: Apartments and swimming pool, \$700,000. Sponsor: c/o Michael L. Adama, architect. HIALEAH: Co-op apartment complex, \$8 million. Sponsor: Marvin Warner Corp., Cincinnati. Plans: Phillip Pearlman, North Miami Beach. LAUDERHILL: 22 apartments, \$5 million. Sponsor: Park South Apartments. Plans: Arthur A. Frimet, Hollywood. MAITLAND: Apartment, \$600,000. Sponsor: Maitland Development Corp. Plans: Clifford Warriner, Winter Park. MIAMI: Apartment, \$8 million. Sponsor: c/o Harvey J. Ehrlich, architect; 160 houses and swimming pools, \$4.4 million. Builder: Pawliger Building Industries. Plans: Hudson & Root, Coral Gables. MIAMI BEACH: Apartment, \$1.5 million. Sponsor: c/o Gene Baylis, architect; Apartment, \$3 million. Sponsor: Morris Lapidus Assoc.; Apartment, \$750,000. Sponsor: c/o Gene E. Baylis, architect; Condominium apartment, swimming pool, cafeteria, and shops, \$3.4 million. Sponsor: c/o Eddy G. Designer; Apartment, \$2.5 million. Sponsor: Nathan Manilov. ORLANDO: Apartment, \$700,000. Sponsor: Earl Downs Construction. Plans: Allen Berman. ST. PETERSBURG: Apartments, \$2 million. Sponsor: Richard Deeb. Plans: Richard Vogler; Apartment house for senior citizens, \$1.5 million. Sponsor: Martin Luther Fdns. Plans: C. Randolph Wedding.

Business continued on p. 40

Keep Plans Organized on the Job

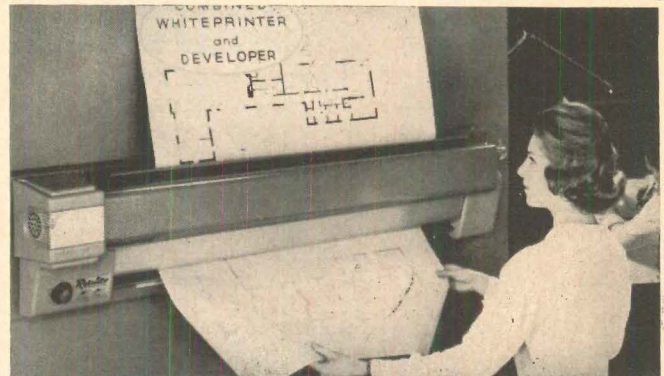
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In Indiana, States:
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"I must say that your units are the most trouble-free economical system for making whiteprints that we have ever used, outperforming other units we have had experience with that cost a great deal more.

Company in Idaho, Writes:
"Good As More
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"Our Rotolite whiteprinter works very satisfactorily with the high speed papers . . . it is every bit as good as the more expensive machines I have used . . . and I have tried most of them."

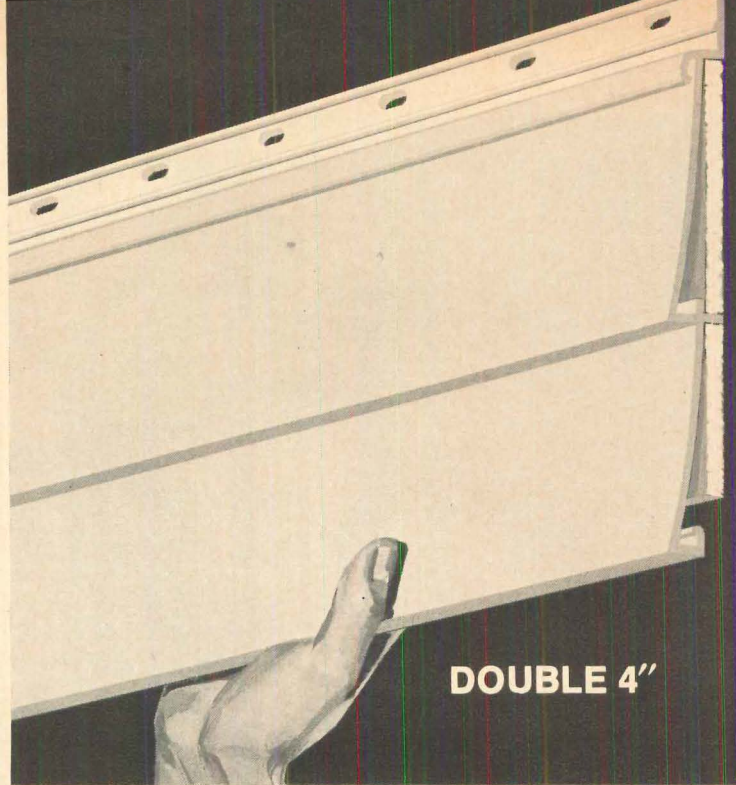
Names on request • Write for catalog showing 7 models

PRICES START AT \$129.50

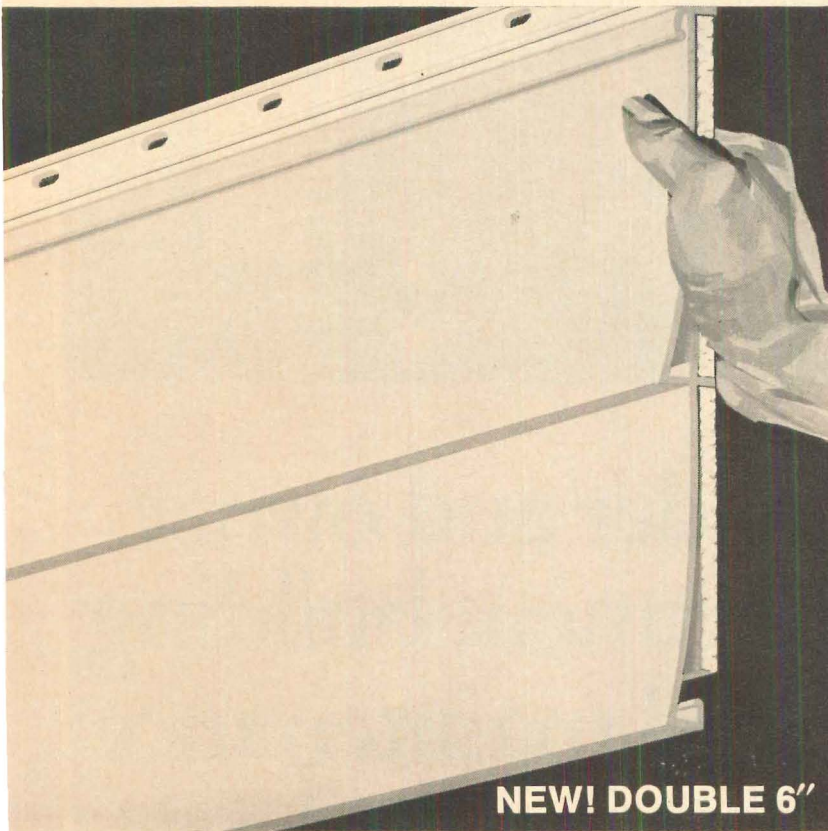
Rotolite SALES CORP. 328 Essex St. AJ-10
Stirling, N. J. 07980

*Now in 3 styles
3 colors
factory-backed with
foam polystyrene*

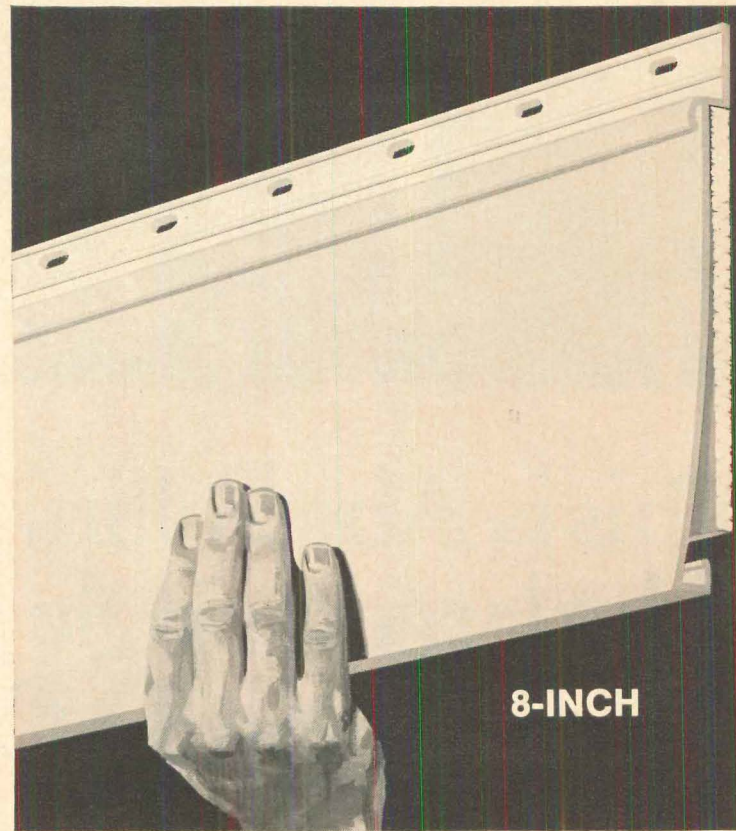
BIRD SOLID VINYL



DOUBLE 4"



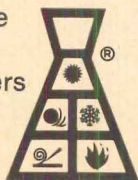
NEW! DOUBLE 6"



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The Hottest Siding Line In The Country Today

- New double 6-inch siding cuts labor costs by 40%! Covers twice as fast.
- All 3 sizes, in 3 colors (gray, green, white) are now factory-backed with foam polystyrene insulation. Just trim and hang in simple 1-step operation!
- No spoilage headaches, either . . . in storage or at site. Bird Solid Vinyl Siding won't dent, kink or show scratches. Won't peel, blister, rot or corrode. And once up, it's maintenance-free: never needs painting.
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This is Abe Pollin. Builder and owner of the largest single apartment building in Washington, D. C. And maintenance man for 525 KitchenAid dishwashers.

No, Abe's not taking on too much work.

He made sure the dishwashers were dependable before he installed them in his \$15,000,000 apartment project.

He checked our service record. (It's outstanding.) He tested our motor himself. ("It's the best built motor I've found," he said.)

He asked his wife if she had any trouble with the KitchenAid in their home. ("No", she said.)

Then he asked himself what dishwasher has the reputation for being the best. (KitchenAid wins again.)

Our dishwashers are only one of the special features you'll find in his new 16-story Irene Apartments. There are two swimming pools, a tennis court, two paddle tennis courts and a putting green, all on the roof. An indoor garage for 830 cars. Individual burglar alarms in each apartment.

So remember, even a busy builder can be a maintenance man. If he installs KitchenAid dishwashers.

See your distributor for details on the three built-in series, three price ranges. Or write Dept. 6DS-10, KitchenAid Dishwasher Div., The Hobart Manufacturing Company, Troy, Ohio 45373.

KitchenAid[®]
Dishwashers

KitchenAid dishwashers are products of The Hobart Manufacturing Company.

Wood windows vs. metal windows: here are the facts about condensation.

In winter a metal window frame is cold. Cold to touch. Cold to be near. It's the nature of metal, caused by what heating engineers call excessive thermal conductivity. This chart gives you the cold, hard facts.

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

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

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

These figures stated another way mean that wood used for window frames is over 1770 times as effective as aluminum in preventing costly heat losses through radiation. When you consider that windows are 30-70% of a home's exterior it's pretty important to the home owner to have the right windows.

What happens to the *inside* of all these windows can be costly, and aggravating, too. Condensation! It's caused by the same excessive thermal conductivity. When interior humidity—even below average humidity—touches a freezing metal window frame, it condenses.

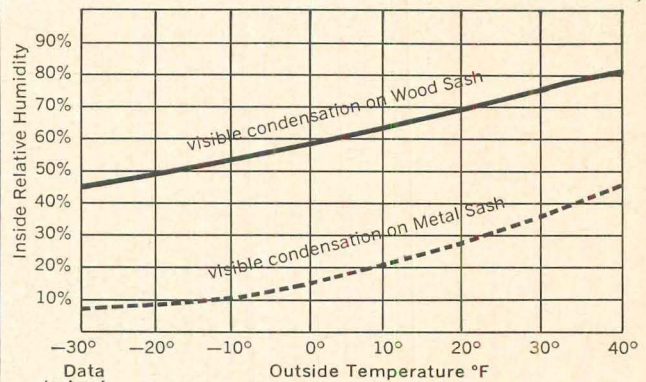
Condensation can build up with amazing rapidity on metal window frames . . . even form ice. And . . . water drips . . . all over the sill, the moulding, and the wall. This type of condensation is impossible with quality wood windows. A look at the chart below will show you why.

The undiluted facts on condensation

Visible Condensation on Inside Surfaces.

Room temperature 70°. Outside wind velocity 15 mph.

Chart shows comparative condensation on inside surface as outside temperature drops. Example: when outside temperature is 20° it would take as much as 69% inside relative humidity before condensation would appear on wood sash—but condensation will form on aluminum sash with just 22% inside relative humidity (and, most homes average 30-35%).



Data derived from: ASHRAE Standard Psychrometric Chart. By permission.

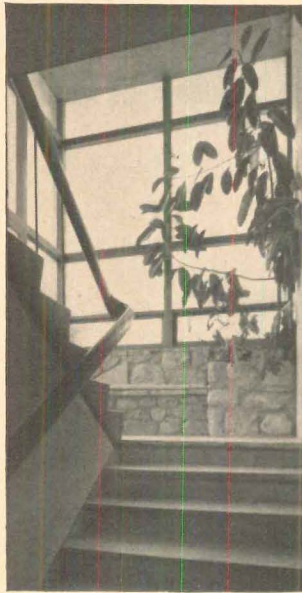
Free Window Condensation Calculator: first time available. Helps you avoid condensation problems before they happen. Send request on your letterhead to:



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and the Western Wood Products Assn.

Dept. HH4, 39 South La Salle Street
Chicago, Illinois 60603



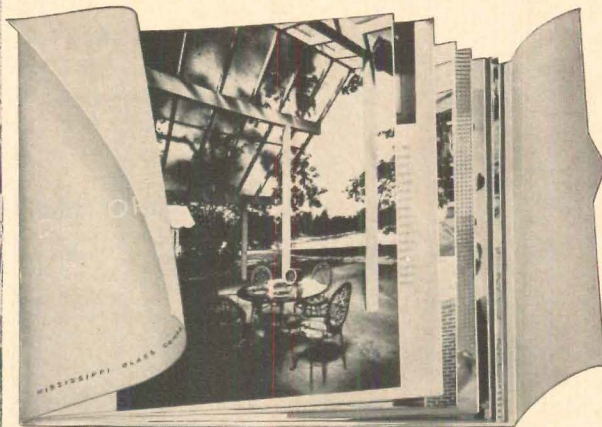
William Brackway residence, Los Angeles, Calif. Burton Schutt, architect. Reprint, Sunset Magazine. H. H. Baskerville, Jr., photographer.

THIS FREE BOOKLET...

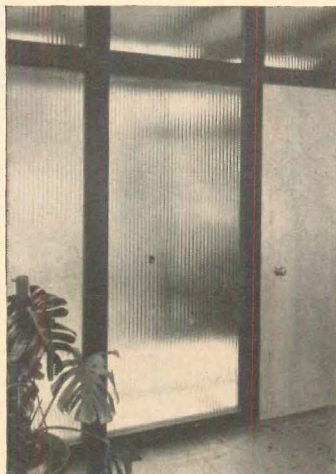
Shows how decorative glass brightens and beautifies homes. It is filled with dramatic illustrations of the ways translucent glass adds a touch of luxury and smartness to every room. Specify Mississippi Glass. Available in a wide range of exciting patterns and surface finishes wherever quality glass is sold.



Architects: Arbogast Jones Reed Associates, Los Angeles, California



Create a distinctive decor with translucent glass by Mississippi that floods interiors with softened, flattering light, makes rooms seem larger, friendlier, important. Write for free booklet. Address Department 9.



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LARGEST DOMESTIC MANUFACTURER OF ROLLED,

ILLINOIS—ARLINGTON HEIGHTS: Apartments, \$9 million. Sponsor: Intercontinental Development, Chicago. Plans: Glen H. Scholz, Milwaukee. CHICAGO: Apartment, \$1 million. Sponsor: c/o Dubin, Dubin, Black & Moutoussamy, architect; Apartment, \$500,000. Sponsor: Phillip Grandinetti. Plans: Tuschmidt & Assoc., FOREST PARK: Apartments, \$1.6 million. Sponsor: Ramar Tower Construction, Chicago. Plans: Anovitz & Assoc., Chicago. JOLIET: Apartments, \$600,000. Sponsor: Contrex-Terrence P. Burke & Robert Schultz, Westchester. Plans: Smith & Stephens, Westchester. LAKE ZURICH: Apartments, \$950,000. Sponsor: Norman A. Witt. Plans: Tuschmidt & Assoc., Chicago. LISLE: 32 rowhouses and apartment, \$1.5 million. Builder: c/o Sellgegg-Stevens-Peterson & Flock, architect, St. Charles. KANKAKEE: Apartments, \$750,000. Sponsor: F&L Construction, Westchester. Plans: Smith & Stephens, Westchester. NAPERVILLE: Dormitories and dining facilities. \$1.5 million. Sponsor: North Central College.

MARYLAND—BEL AIR: Townhouses, \$2 million. Sponsor: c/o John D. Epagnier, Silver Spring. BLADENSBURG: Garden apartments, \$1.2 million. Sponsor: c/o Hardwick Construction, Silver Spring. Plans: Montgomery, Green & Assoc., Silver Spring. CHEVY CHASE: Apartments, \$2 million. Sponsor: Chevy Chase Land Co. c/o Bagley Soule Assoc., architect. FREDERICK: Townhouses and houses, \$20 million. Sponsor: c/o Juan Gruner, Bethesda. GAITHERSBURG: Garden apartments and swimming pool, \$1 million. Sponsor: Demory Bros. Plans: Deigert & Yerkes, Bethesda. HILLENDALE: Garden apartments, \$2.5 million. Sponsor: Kay Construction, Silver Spring. Plans: Bartley, Davis & Assoc., Wheaton. OXON HILL: Apartment and swimming pool, \$1.7 million. Sponsor: Magazine Bros., Washington, D.C. Plans: Anthony De Santis, New York City. ROCKVILLE: 130 houses, \$2 million. Builder: Dr. Leonard Kapiloff, Roger Spencer. Plans: Sullivan & Assoc.; Townhouses, shopping center, swimming pool, and tennis courts, \$4.2 million. Sponsor: Bennett Construction, Bethesda. Plans: Keys, Lethbridge & Condon, Washington, D.C. UPPER MARLBORO: Townhouses, \$1.5 million. Sponsor: Rocks Engr., Washington, D.C. Plans: Zubkus-Zematis & Assoc., Lanham. WHEATON: Garden apartments, \$500,000. Sponsor: David Stearman and William Kaplan, Bethesda. Plans: Cohen, Haft, & Assoc., Silver Spring; Garden apartments, \$3.5 million. Sponsor: Artery Enterprises & H. G. Assoc., Kensington. Plans: Cohen-Haft & Assoc., Silver Spring.

MICHIGAN—DETROIT: Medical center housing, \$10 million. Sponsor: Plymouth Housing. Plans: Madison, Madison & Madison, Cleveland, Ohio; Apartment, and townhouses, \$4 million. Sponsor: Albert Nelson. Plans: Eberle M. Smith Assoc. FLINT: Low-rent apartment, \$2.5 million. Sponsor: Sharp Construction. Plans: J. Lauren Kretchmar. KALAMAZOO: Apartment, \$900,000. Sponsor: O'Meare Chandler Development, Houston, Tex. Plans: Robert Hussman & Assoc., Houston. LANSING: Apartment, \$1.5 million. Sponsor: James Duncan & Glen H. Harris. Plans: Frank & Stein. PORTAGE: Apartment, \$1 million. Sponsor: Phil Simon, Grand Rapids. Plans: Robert A. Reid, Grand Rapids. SOUTHGATE: Apartments, \$2 million. Sponsor: Macomb Corp., Detroit. Plans: P & F Assoc., Oak Park. WESTLAND: Apartments, \$600,000. Sponsor: Jerry Mularoni, Detroit. Plans: John Graham, Livonia.

NEW JERSEY—DIAMOND BEACH: Housing project, including houses, apartments, garden apartments, shopping center, civic center, convalescent and senior citizens home, and disposal plant, \$85 million. Sponsor: Vineland Seaboard Developers, Vineland. Plans: Thomas J. Malone, Westville. EATONTOWN: 87 houses, \$2.6 million. Builder: Bernard Silverstein, Oakhurst. MORRISTOWN: Garden apartments, \$500,000. Sponsor: c/o Daniel Washington, architect, Gillete. ORANGE: Garden apartments, \$1.1 million. Sponsor: Levin Sagner, Livingston. Plans: Eugene De Martin, Lyndhurst. PARAMUS: 70 houses, \$2.8 million. Builder: Cameo Builders, Oradell. PITMAN: Garden apartments, \$500,000. Sponsor: Wellford Ware. Plans: Phillip Diamond, Springfield, Pa.

Leaders start on p. 50



Now prospects can “see” nature’s freshness indoors

This is the Lennox “Living Air” inlet. It keys one of today’s most successful home promotions.

What makes it so great? Low cost. High promotability.

Prospects can see the feature. It wears a colorful decal that reads, “Your Living Air Inlet.”

And they can feel it. “Living Air”

feels fresher. It smells fresher. It is fresher.

Lennox literally brings Nature’s Freshness indoors.

Lots of builders offer air conditioning these days. But how many also

can fill their homes with “Living Air”?

You can with Lennox. Be the first builder in your area to offer it.

Write for information on this low-cost feature, and the high-impact promotion materials that back it.

Write Lennox Industries Inc., 609 S. 12th Avenue, Marshalltown, Ia.

LENNOX

AIR CONDITIONING • HEATING

**If somebody
tries to tell you that
all range hoods
are alike, tell him to
look into a Puritron**



(He'll see the light)

New Puritron Electronic Range Hoods help purify the air in the entire kitchen—quickly, electronically. Also help remove smoke, grease, and cooking odors without vents or ducts. The secret: Puritron's patented GOLD-ION tube.



**HANGS LIKE A PICTURE;
INSTALLS IN MINUTES**

Simply drill two holes, insert studs, set hood in place, tighten two wing nuts, connect wiring...and you're in business!

Unlike other ductless range hoods, Puritron's new Electronic Range Hood helps remove air-borne impurities in the *entire* kitchen—and not just the area directly above the range. It's actually a dual appliance that traps cooking odors, smoke and grease and acts as a room air purifier, as well. The secret: Puritron's exclusive GOLD-ION electronic tube that assures instant action, greater range. Get the complete facts on Puritron's great new line of range hoods (both ductless and ducted). **Write: Puritron, Dept. HH-10, New Haven, Connecticut.**

HAMILTON BEACH
BUILDER PRODUCTS DIVISION

SCOVILL



Mortarless brick flooring helped a home builder sell 100 homes

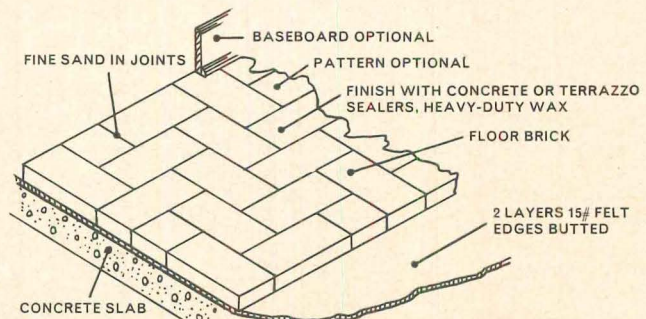
Mortarless brick flooring is a simple and surprisingly economical way to put the beauty, prestige and permanence of brick to work inside your homes.

Brick is a good salesman, as Kavanagh-Smith & Co., Greensboro, N.C., proved. E. J. Michelotti, director of design and engineering, specified mortarless brick flooring in the family rooms of 100 homes ranging in price from about \$16,000 to \$18,000 and located throughout North Carolina. It helped make these homes the company's best-selling line—and Michelotti says, "they cost about 40 cents a square foot," which is considerably less than a good grade vinyl tile floor.

How to do it

Mortarless brick flooring requires no special skills. Kavanagh-Smith & Co. used semi-skilled labor to install it. The firm used standard brick pavers that are about one-½ inches deep, four inches wide and eight inches long. The slab was covered with two layers of 15-lb. felt. Brick pavers were placed tightly together. Fine, dry sand was swept into joints. Brick and joints were sealed with commercial grade concrete heavy-duty sealer applied generously and allowed to dry for 24 hours. Heavy-duty wax was applied and buffed.

(For a mortarless brick patio or walk, brick and sand can be used in the same manner, assuming that a well-drained base is available, or is installed.)



The sales-building advantages:

- Permanent beauty and color.
- An easy-to-clean floor that needs almost no maintenance and lasts, and lasts, and lasts, etc.

scpi Structural Clay Products Institute
1520 18th St., N.W., Washington, D.C.

"When we hit winter frost our Ford 4500 keeps digging"

... *Hollander & Sons, Builders Inc., Elnora, N.Y.*

This progressive builder operates its own equipment fleet for developing Clifton Gardens in the town of Clifton Park, N. Y. One unit is a Ford 4500 tractor loader equipped with 15-ft backhoe.

"When we hit frost we always went to the Ford," reports Nat Hollander. "It was the only machine that could get through. We dug 6,000 ft for water mains and 5,000 ft for storm sewers with this machine in cold weather. We find it more powerful and faster operating than our other rigs."

The reason: Ford deep-hole power

Large diameter lift and crowd cylinders on new Ford backhoes are **in-line mounted** on the arched, deep-section box boom. Power from both cylinders can be applied in tandem for greater digging force. Up to 50 per cent greater force than former models. This frost-busting, shale-shattering force adds up to faster cycles for greater daily yardage.

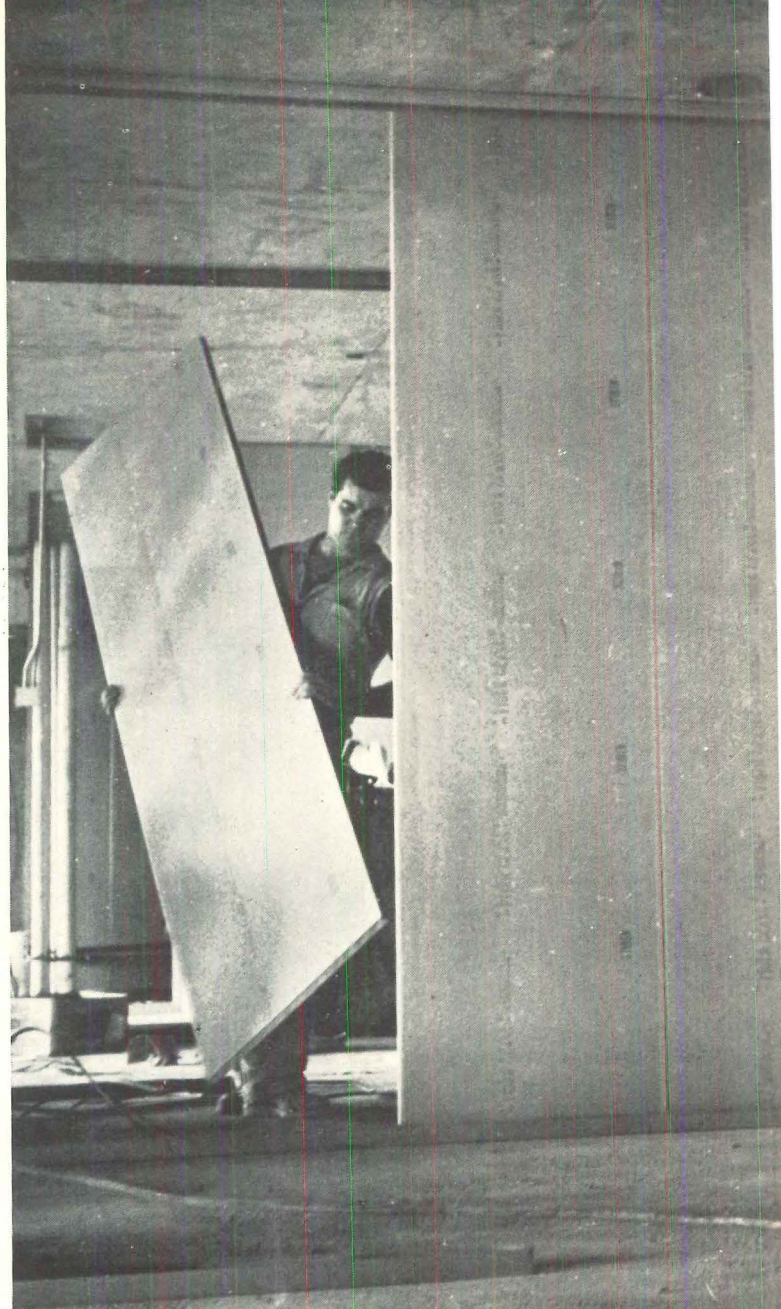
For top trenching-loading-backfilling capacity no need to go anywhere but to your Ford tractor and equipment dealer! For highest performance of all, ask about the New-Size 4500 and 3500 with torque converter and power reversing transmission.

Deep-trenching for storm sewer at Hollander's Clifton Gardens subdivision. One-yard bucket on loader has 3,750-lb lift capacity.



**STRONGER
TOUGHER
FASTER!**





Bestwall Firestop in various assemblies meets building code requirements—45 min. to 3 Hours

Contains greater glass fiber reinforcement than ever before!

Whatever your structural needs or requirements Bestwall offers systems for walls, ceilings or partitions that are strong, crack resistant, easy to build, and provide lowest cost fire protection. Call or write for complete technical data on gypsum wallboard construction.



GEORGIA-PACIFIC

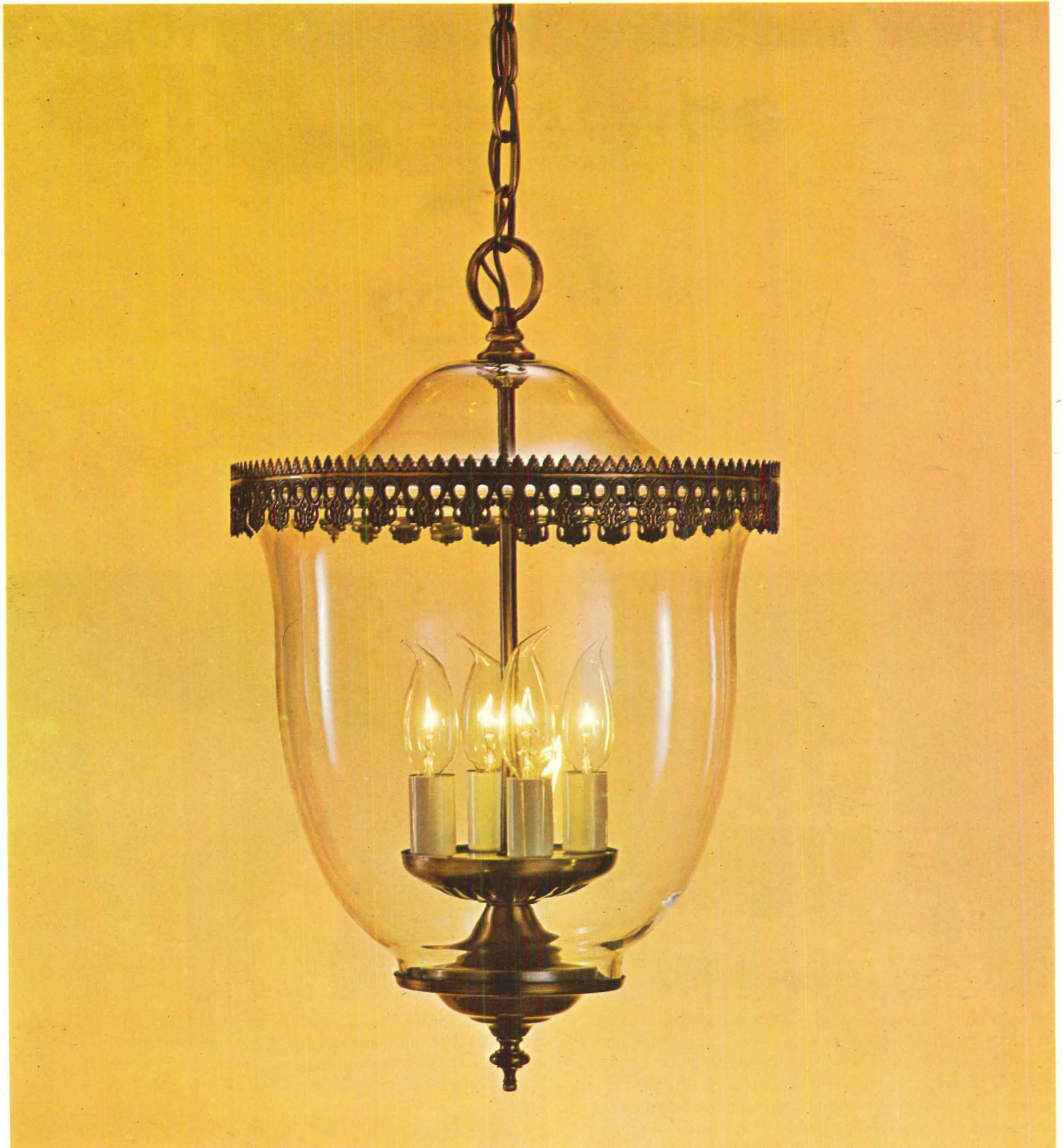
BESTWALL

GYPSUM DIVISION

2 INDUSTRIAL BOULEVARD, PAOLI, PENNSYLVANIA



Sell the fashionable homemaker



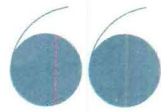
with fashionable Moe Light

She's as style-conscious of decor as she is of clothing. She'll decide whether to take a second look at your model homes. So give her something special to remember: a Moe Light foyer lantern with antique brass accents on a clear crystal bell.

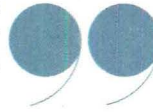
For more ideas on how to sell the fashionable homemaker, write to Residential Lighting Division, Thomas Industries Inc., 207 East Broadway, Louisville, Kentucky 40202.

MOE LIGHT
BY THOMAS

Home manufacturer Hillard Madway collects a



Our policy has always been to give our customers a choice of what they use in their homes. When they started to specify Alcoa Siding, we would have been foolish to resist.



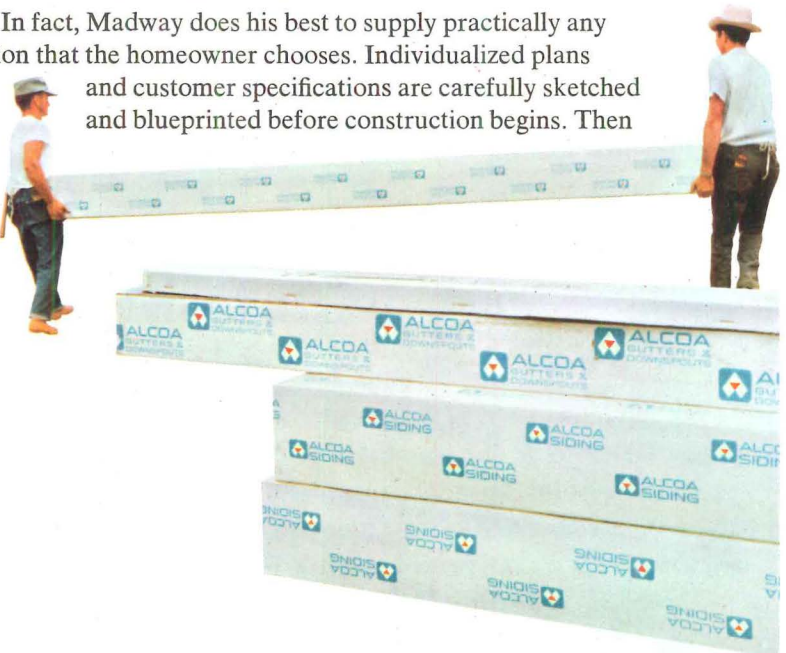
During the past year, more than 1,700 Ridge Homes were sold throughout Pennsylvania, New York, New Jersey, Delaware, Maryland, New England, West Virginia and Virginia.

Hillard Madway, president of Ridge Homes, says that the secret behind such a high-volume sales record is as simple as answering customer demand with quality materials. Like building products made with Alcoa® Aluminum.

"You see," says Madway, "there are two factors involved here. First, we deliver houses up to 500 miles away. It's vitally important to put materials that won't create service calls into each house. That's why we use Alcoa's insulated siding, exclusively. Sure, we could get another product for a little less money, but the Alcoa Siding is quality. And, just as important, we don't get any comebacks.

"The other factor is our type of customer. These people are used to working with their hands. And they know value. Some of the best advice I've ever had on building materials came straight from my customers. The best example of that was with aluminum siding. They started asking for Alcoa's product, and the first year we used it, it was like feeding a hungry baby."

In fact, Madway does his best to supply practically any option that the homeowner chooses. Individualized plans and customer specifications are carefully sketched and blueprinted before construction begins. Then



special bonus from each of his customers: Advice.



the components are precision-built at Ridge Homes' large manufacturing facility at Conshohocken, Pa.

When the exterior construction is completed, huge Ridge Homes' vans deliver all of the materials, fixtures and appliances that the homeowner will need to finish his home.

"The appeal of having a hand in building your own home is pretty basic," Hillard Madway says. "What we do is reduce the risk by giving the homeowner the best value for his dollar investment.

"Here, again, Alcoa is the best example. Several years ago, the aluminum-siding business was a real 'football.' You never knew what kind of quality or service you were going to get.

"Then Alcoa came in and established a superior standard that the other people had to come up to or get out. Now, you know who the consumer is going to go with. The leader. Alcoa.

"Today, Alcoa Aluminum—siding, gutters, downspouts, the works—is an accepted fact. It doesn't have to be painted; there are no maintenance problems to speak of; it's priced so the consumer can afford it. And, maybe most important of all, aluminum really sells longevity.

"My customers are asking for Alcoa Aluminum, consistently. The way I see it, my job is easy. All I have to do is supply it."



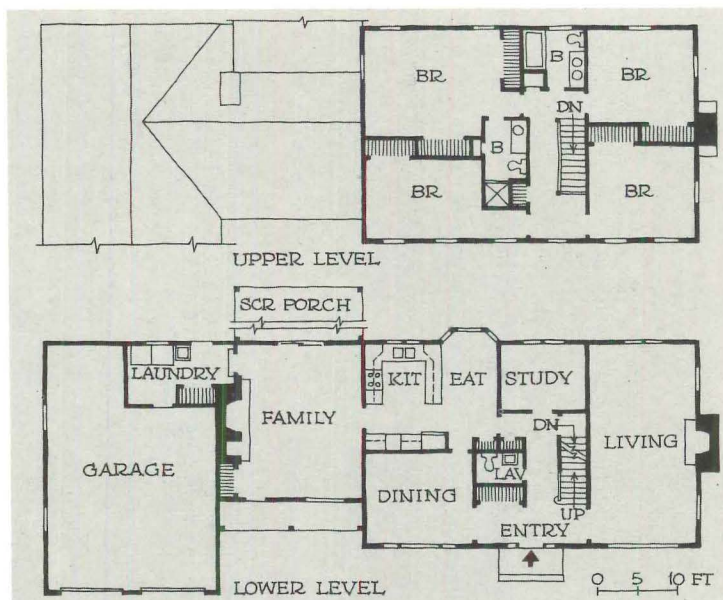
If you, like Hillard Madway, are interested in filling the growing demand for aluminum building products, write for more information: Alcoa Building Products, Inc., Grant Building, Pittsburgh, Pa. 15219.



Change for the better
with Alcoa Aluminum

ALCOA

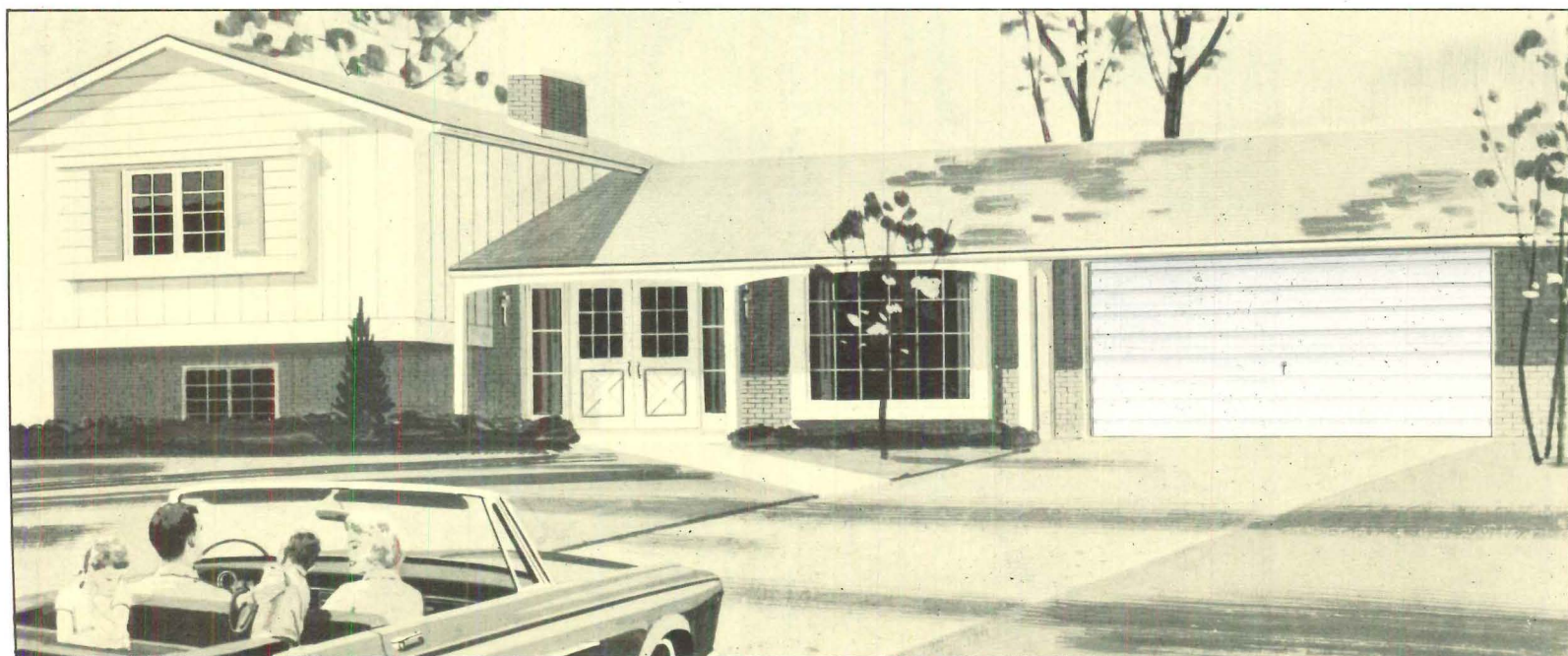
The Alcoa logo, featuring a stylized triangle shape above the word "ALCOA" in a bold, sans-serif font.



Here are two examples of the planning flexibility

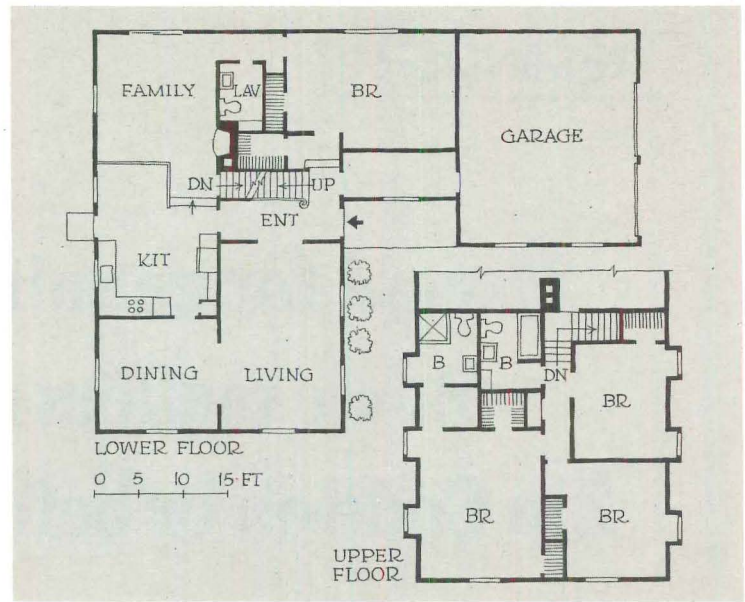
This 2,700-sq.-ft. model is based on the standard center-hall plan, but its lower level includes two variations: A family room is built into what would normally be the breezeway; and the half bath is located in the center of the house, leaving the peri-

meter free for both a rear den and a large kitchen dining area. Priced at \$51,500, the house is one of nine sold by Onondaga Development Corp. in a 14-lot project being built near Syracuse, N.Y. Architects: Gintley & Jenner.



What's so new about a new fiber-glass garage door?

- 1 **NEW MARVEL-LUCENT SUPER SEAL FORMULATION** that defies ultra-violet light and wind-driven rain and grit (the arch enemies of older materials), never blisters, never peels, never checks, never blotches, never needs painting, and is so color-fast that it is covered by a 15-year warranty.
- 2 **NEW 15-YEAR WARRANTY ON THE MARVEL-LUCENT PANELS**—no finer warranty on any fiber-glass.
- 3 **NEW 2-INCH THICK BOX-SECTION DESIGN** for strength and rigidity in the Marvel-Lucent panels.
- 4 **NEW RIGID EXTRUDED ALUMINUM WRAP-AROUND FRAME**, the only such frame on any residential fiber-glass door. Compare this with any old-fashioned rolled sheet metal frame; the contrast is dramatic. This frame is solid, rugged, rigid, strong, like an industrial door frame.



made possible by the traditional two-story house

An L-shaped plan is unusual for a two-story colonial. Here it makes possible a narrow-lot model with a sheltered entry porch and a garage close to the street. The kitchen is in the center of the house, where it separates the informal family room from the

formal dining room. A 19' room extending into the L can double as a large study or a fourth bedroom. Priced at \$43,000, the house was designed by Walter C. Pfeiffer and built by Frank H. Taylor & Son, East Orange, N.J.



- 5 **NEW WEATHERPROOF CONSTRUCTION.** Marvel-Lucent panels are set into section frames with ends pressed into one-piece sponge neoprene pads which fill the end of the wrap-around frame and seal out rain, wind, snow, dust and dirt. Ever seen construction like this? You'll see it in Crawford Marvel-Lucent.
- 6 **NEW SHIP-LAP JOINTS BETWEEN SECTIONS** with an air-lock in the middle prevent moisture from seeping to the inside.
- 7 **NEW MOLDED NYLON ROLLERS** for practically soundless operation; not metal rollers in a metal track.
- 8 **NEW DOUBLE LOCKING MECHANISM** that snaps locked at *both* sides when the door is tight against the floor and holds it there to seal out wind,

dirt, weather. The double-locking action holds the door down evenly, clear across its width, yet, opens easily at a pull on the chain.

- 9 **NEW BUYER APPEAL** because the Crawford Marvel-Lucent has more and does more for the home owner than any fiber-glass door has ever done before.
- 10 All these new features in addition to beautiful, glamorous translucency; three sparkling colors and white; light weight for easy operation and the all-important appeal of newness—the newest door that anyone can offer.

More information from your local Crawford Distributor listed in the Yellow Pages under DOORS or get bulletin CD-3981 from Crawford Door Co., 4720-29 High Street, Ecorse, Mich. 48229. A subsidiary of Jim Walter Corporation.



Crawford **MARVEL-LUCENT** — the ALL-NEW FIBER-GLASS DOOR

1. ROLLED-IN FLANGE ANCHORS PANELS to rails and against rigid back-stop.
2. SHIPLAP SEAL AT MEETING RAILS to bar moisture seepage.
3. HEAVY EXTRUDED ALUMINUM FRAME of alloy 6063-T6.
4. DEEP DOUBLE-BOX-BEAM DESIGN gives panels great structural rigidity.
5. MOISTURE-PROOF SPONGE NEOPRENE PAD seals panel ends in U-shaped vertical end stiles to shut out rain, snow, dirt.
6. PANELS ARE RIVETED TO EACH HORIZONTAL RAIL, to end stiles and to each intermediate stile.
7. ROLLERS ARE ADJUSTABLE sideways to assure free running in the track.

REMINDER

Except for genuine hardship cases, volume mailers must pre-sort by Zip Code on or before January 1, 1967

The Zip Code deadline is January 1, 1967.

After that, only mail that is properly Zip-coded will be eligible for Second Class and Third Class Bulk rates. Unzipped mail will be accepted *only at the higher single piece rate.*

If you have not Zipped yet, you had better start right now!

Plenty of help is available. Both the U.S. Post Office and many private companies in the "mail sector" have already helped thousands of companies to Zip their lists quickly and efficiently. To help speed up your Zip conversion:

1. Call your local Postmaster. He will advise you on ways and means of converting to Zip, and show you how the Post Office can supply the Zip numbers you need for a nominal fee of only \$1.50 per thousand.
2. Talk to your lettershop, addressing equipment salesmen, computer firms and other mail-oriented suppliers. They have developed many ingenious methods for Zipping lists at minimum cost to you.

Zip Code is here to stay!

Most businessmen clearly recognize that only through the modern Zip Code system can the Post Office hope to offer low bulk rates. But many are

also learning to their surprise that Zip Code offers additional benefits to them.

During Zip conversion it is easy to clean your list of duplicate and dead addresses. Zip filing order makes "look-ups" quicker and easier. Zip Codes are already speeding mail deliveries, and a number of businesses find that Zip territorial divisions are useful tools in marketing, sales and other unexpected areas.

IMPORTANT

Extensions will be given to mailers who can demonstrate that they have made a substantial effort in good faith to comply with the deadline but are unable to do so because of circumstances beyond their control. To apply for a hardship extension, contact your local Postmaster at once. Do not wait until the last minute. To qualify for the extension, the mailer must submit his application no later than September 15.

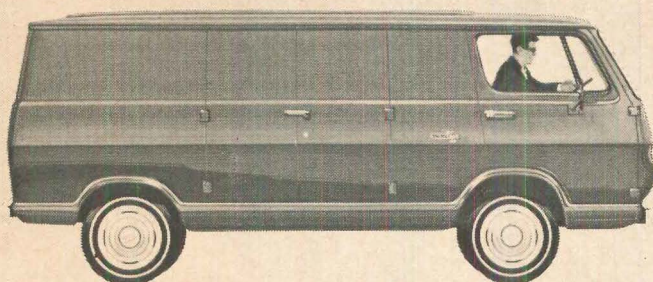
Remember: Zip Code means better postal service at lowest cost to you. There are and will be problems for all of us to solve. But we can be sure of one fact: January 1 starts a whole new era of postal efficiency and economy that will benefit your government, your customers and your business.

Contributed by this magazine as a public service
in cooperation with The Advertising Council



NEW LENGTH!

More load space on a longer wheelbase



All-new Chevy-Van 108
(108" wheelbase)

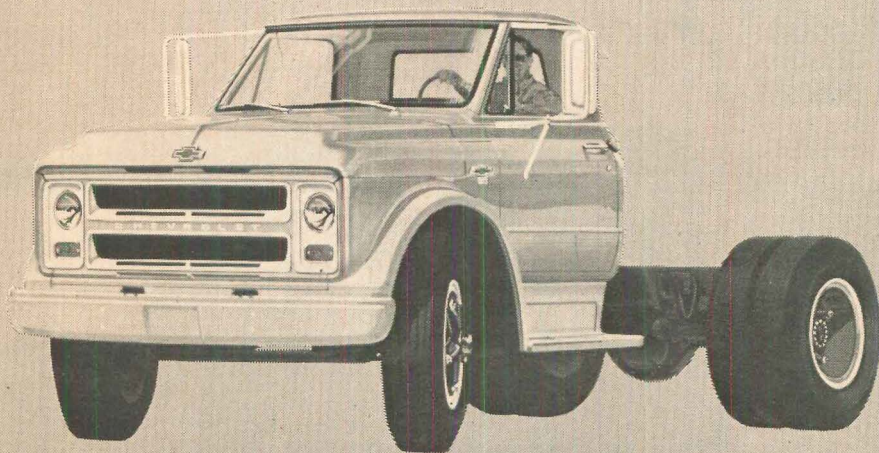


Newly styled Chevy-Van 90
(90" wheelbase)

Chevy-Vans in two sizes for '67... new V8 power, too! Now you can get a low-cost Chevy-Van for most any size delivery! All new for '67 is the Chevy-Van 108 with 108" wheelbase and whopping 256-cubic-foot load space. It's longer and stronger for the big jobs. Or pick the Chevy-Van 90 with 209-cubic-foot cargo area.

Both models offer sharp new styling and tough construction. Both can now be equipped with hustling V8 power—a big Chevrolet 283 V8! And both can be had in Sportvan versions for family use.

NEW CAB!



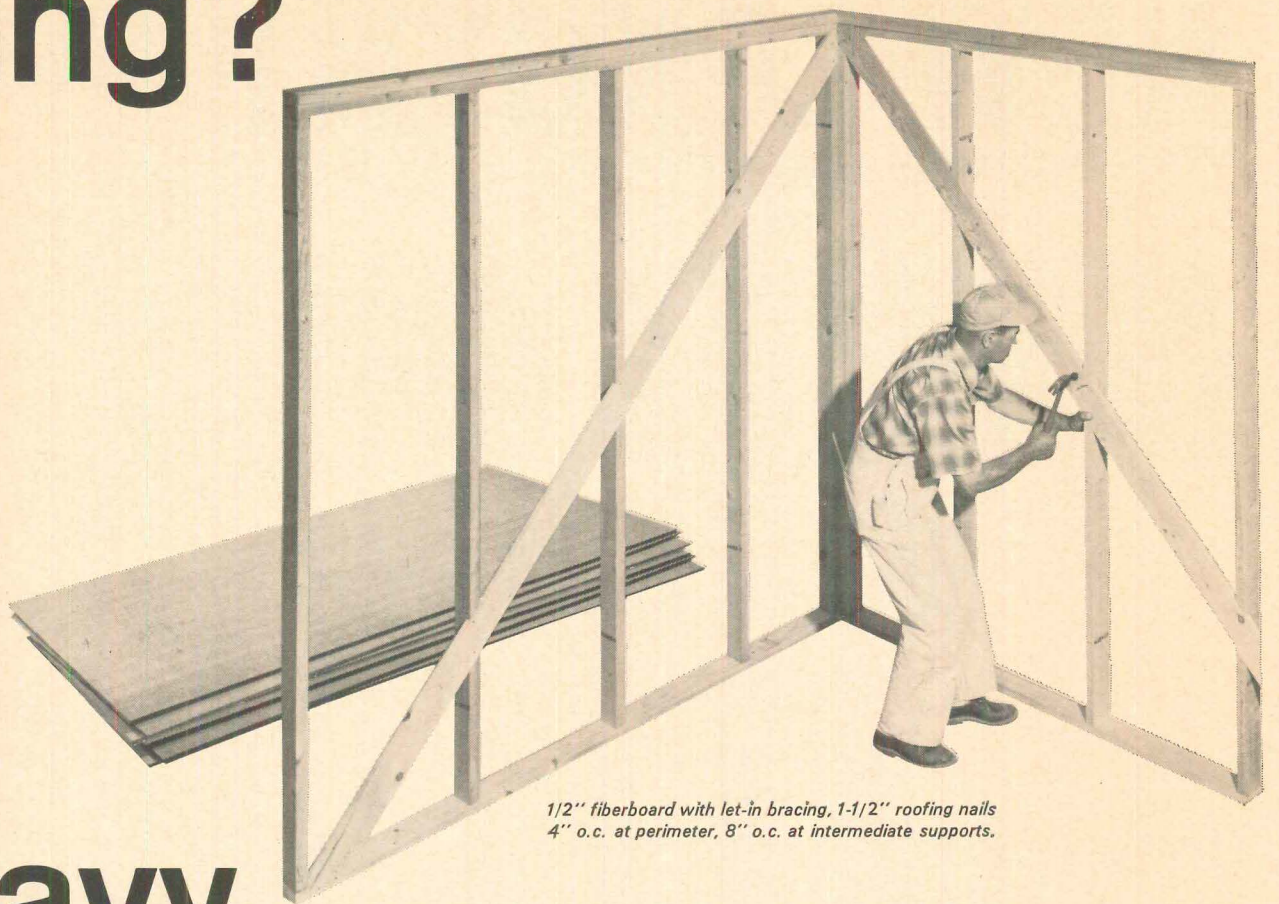
Meet Chevrolet's new 1967 conventional truck—the best way yet to move bigger loads for less! It provides a short 96" BBC for greater maneuverability... and sharp new big-truck styling, plus tougher construction and better visibility than former conventionals.

There are some great new 1967 trucks at your Chevrolet dealer's, so stop by and inspect them soon!... Chevrolet Division of General Motors, Detroit, Michigan.



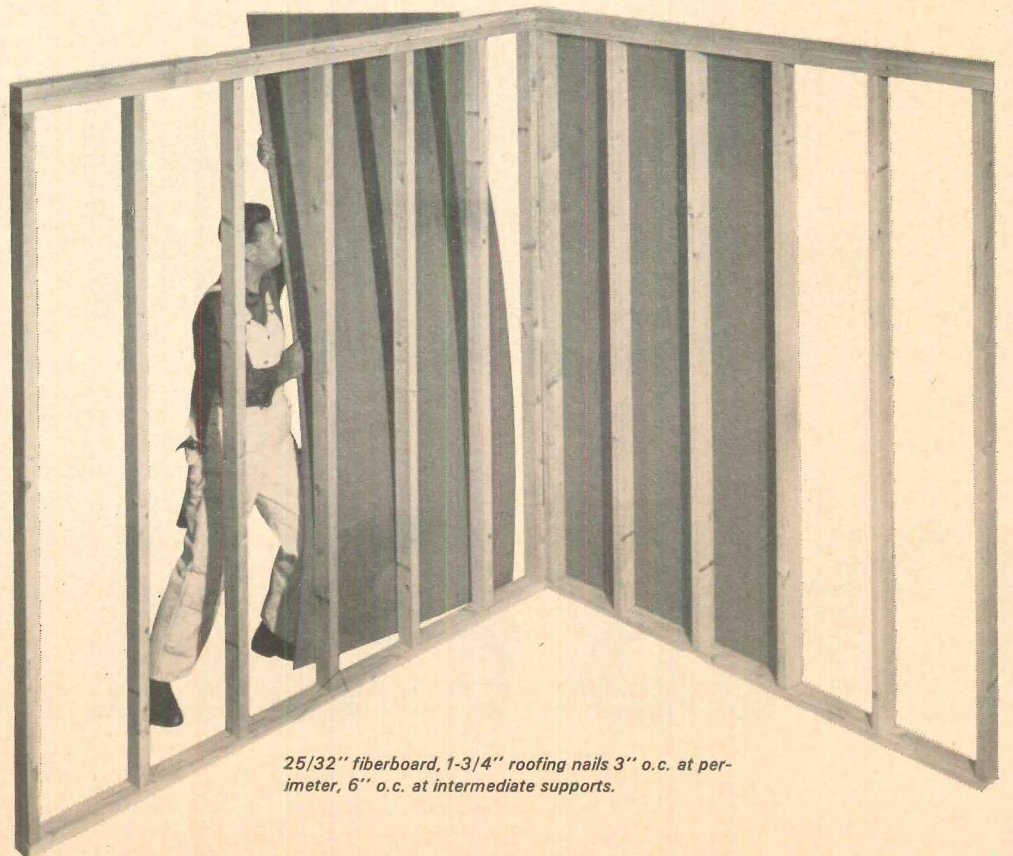
CKS FOR '67!

Let-in corner bracing?



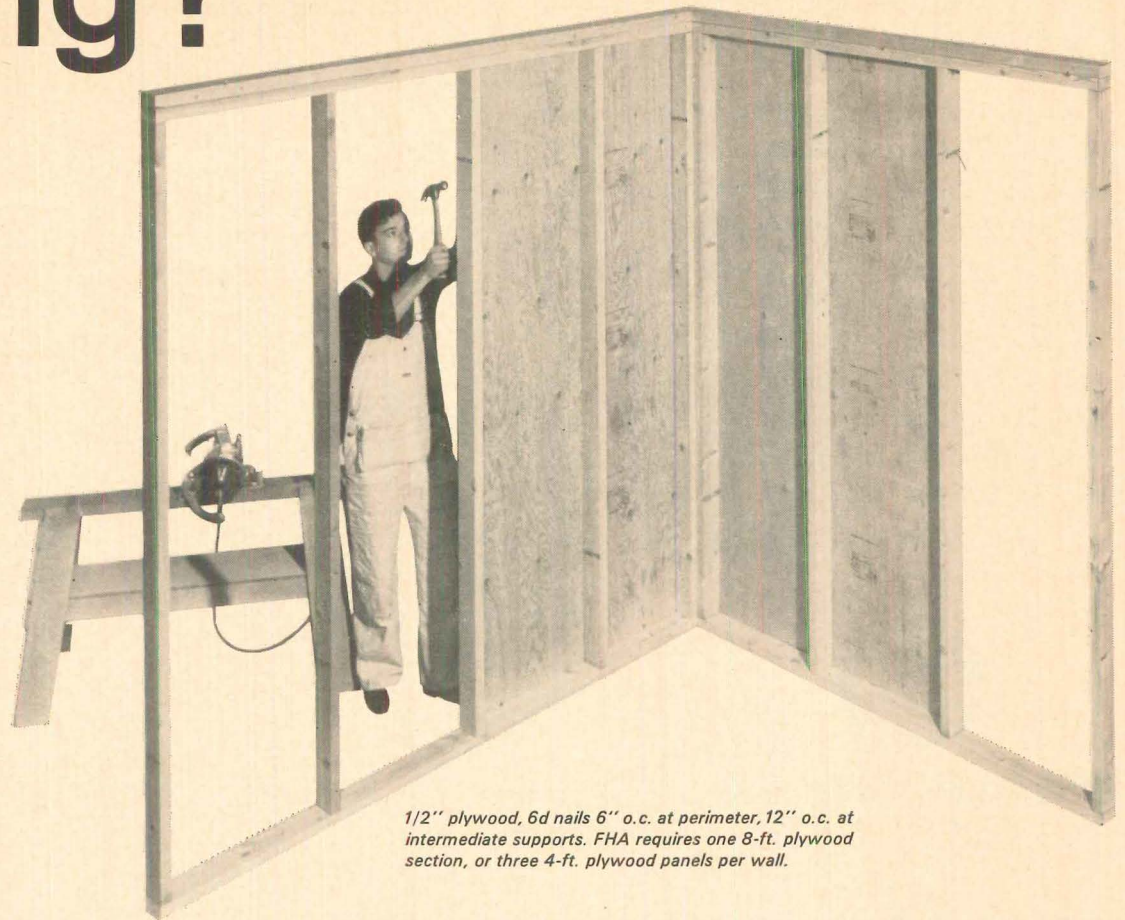
*1/2" fiberboard with let-in bracing, 1-1/2" roofing nails
4" o.c. at perimeter, 8" o.c. at intermediate supports.*

...heavy fiberboard?



*25/32" fiberboard, 1-3/4" roofing nails 3" o.c. at per-
imeter, 6" o.c. at intermediate supports.*

...or plywood corner bracing?



1/2" plywood, 6d nails 6" o.c. at perimeter, 12" o.c. at intermediate supports. FHA requires one 8-ft. plywood section, or three 4-ft. plywood panels per wall.

Which costs least?

Which is easiest to install?

Which is strongest?

If you now use sheathing that requires let-in corner bracing, you can probably save money with plywood corner bracing instead. It goes in place faster, saves labor.

If you're getting away from let-in bracing with 25/32-in. fiberboard, you'll get a stiffer, stronger wall, with half the nailing cost, by reducing to 1/2-in. fiberboard and plywood corner bracing. (Or, for the *very* strongest wall, use plywood all the way around. For example: 1/2-in. plywood provides up to 60 per cent greater bracing strength than 25/32-in. fiberboard.)

Either way, labor costs are less. You avoid double nailing, you can reduce studs to 24 in. o.c., and you still have adequate insulation value with batt or blanket insulation.

Take a minute to figure in-place costs—based on prices in your area. Send coupon for facts to help in the figuring. Or if you like, get in touch with us in Tacoma, or at one of our regional offices: Atlanta, Chicago, Dallas, Detroit, Los Angeles, Minneapolis, New York, San Francisco, Washington, D.C.

AMERICAN PLYWOOD ASSOCIATION

American Plywood Association
Tacoma, Washington 98401, Dept. H



Please send free fact sheet on plywood corner bracing, and Construction Guide on plywood wall sheathing systems.

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Address _____

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Wood-Mosaic
CORPORATION

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Louisville, Kentucky 40221



LETTERS

Why costs are high

H&H: Your editorial on the true reasons for housing's high costs [Aug.] is great!

We agree that the housing industry has done a pretty good job of researching and developing the areas over which it has control (materials and labor). The real difficulty is the application of these research and development talents to the problem areas (land, money, codes, and politics) that are affected by or are in conflict with many other phases of our economy.

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

H&H: I do not agree that the housing industry has done everything that can or should be done to control labor and materials costs.

Modern industrial methods in any industry are based on management control and the systematic search for greater productivity. Overall improvement comes in small, steady steps. And a 5% cost reduction in any industry is in many cases the difference between success and just getting along.

The building company which looks for improvement, finds none and says none is possible because it subcontracts and does not control the operation is not using true industrial management—it is not determining costs and developing better methods.

House & Home has an influential role to play in guiding the homebuilding industry in meeting the housing needs of our expanding population. Do not let up on the need for better management in the areas where the individual builder has the potential to do better—namely, the direct—cost items of labor and material.

HARRY E. LAKE
Bavier, Bulger & Goodyear
Management consultants
Naugatuck, Conn.

H&H: Hardly anyone will take issue with you on the point that the least important savings are to be found in the shell of a house.

There are, we believe, a great many more important areas that have to do with off-site and on-site improvements; design techniques; new materials to replace the conventional; better organization of the construction process; improvements in the end product; less maintenance during the life of a structure; increased flexibility of interior spaces (re-arrangement at will with nominal expense); and further progress to be made in building

with components instead of with pieces.

Beyond the dwelling itself, and of even greater importance, is the creation of cultural, recreational, educational, safety and security values; pollution elimination; traffic control; satisfactory public transportation; better medical facilities; and increased municipal services at affordable costs . . . all of which help to create a living environment. These are the values that motivate people.

There are those connected with building who proclaim the industry is building a better mousetrap. Perhaps, but people are buying ever greater quantities of everything else.

We don't pretend to know the answers at General Electric, but we are going to address our considerable resources to analyzing and seeking solutions to the problems of making new construction compete more effectively for expanding spendable income. Our stake in the construction market is substantial; our interest in the consumer public is paramount . . . to make contributions to both is an obligation and an opportunity.

Perhaps the best answer to the continued health and growth of the building industry will be found to lie in environmental values, aesthetics, home and community services not being currently offered—the house may not be the key factor. Five years experience with thousands of builders in the Medallion Home Program has demonstrated to our satisfaction that there are important opportunities for savings in construction and there are even greater opportunities for improved marketing techniques.

G. T. BOGARD, division general manager
General Electric Co.
Louisville, Ky.

Reader Bogard heads G.E.'s new venture into new-town development (News, Sept.)—Ed.

California—vacancy rates

H&H: Your article on overbuilding in California [Aug.] notes that idle electric meters are an uncertain barometer of apartment vacancies.

Amen. Apartment developers and lenders would be well advised to cease placing so much emphasis on trends in vacancy rates.

Any city is composed of submarkets, and these are the geographical areas to study. It is difficult, if not impossible, to make recommendations on new projects in the submarket. We get best results by sending a "prospect" to visit every available apartment type.

The analyst's best weapon against over-

Letters continued on p. 64

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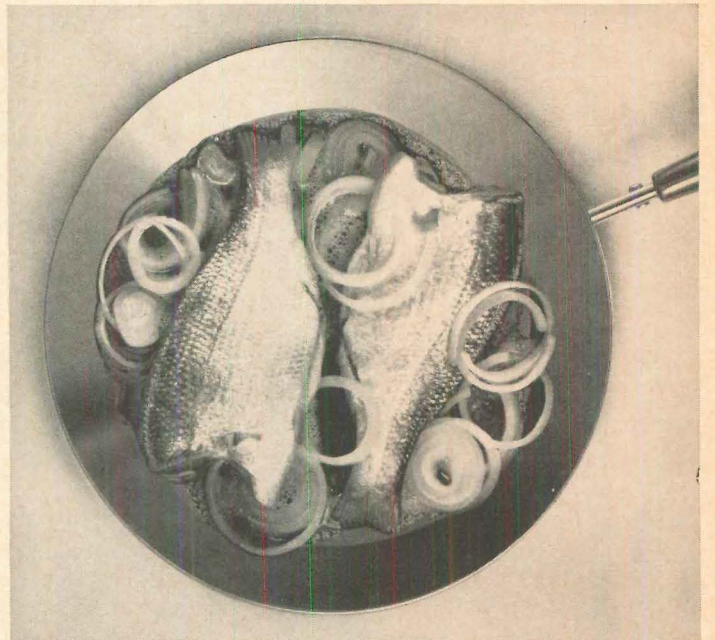
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LOTS MORE



Helps sell your homes! The name YORK on the air conditioning system in your homes stands for quality and dependability. As more and more home buyers expect central air conditioning, York comfort conditioning will help sell your homes—fast. Team with a Borg-Warner oil or gas-fired furnace for year around comfort.



Gives you exclusive odor control! Only York has this amazing method of controlling odors. Cooking, tobacco and other objectionable odors are destroyed—not just masked or stored.

Builders who depend on York for advanced comfort conditioning have more to offer... more selling points... much more than cooling alone! In addition to cooling, dehumidifying and gently circulating the tempered air, York now offers an exclusive *odor control* system. This amazing discovery doesn't mask odors, or store them. It *destroys* them, chemically!

Other York features for builders include factory-charged systems, Quick-

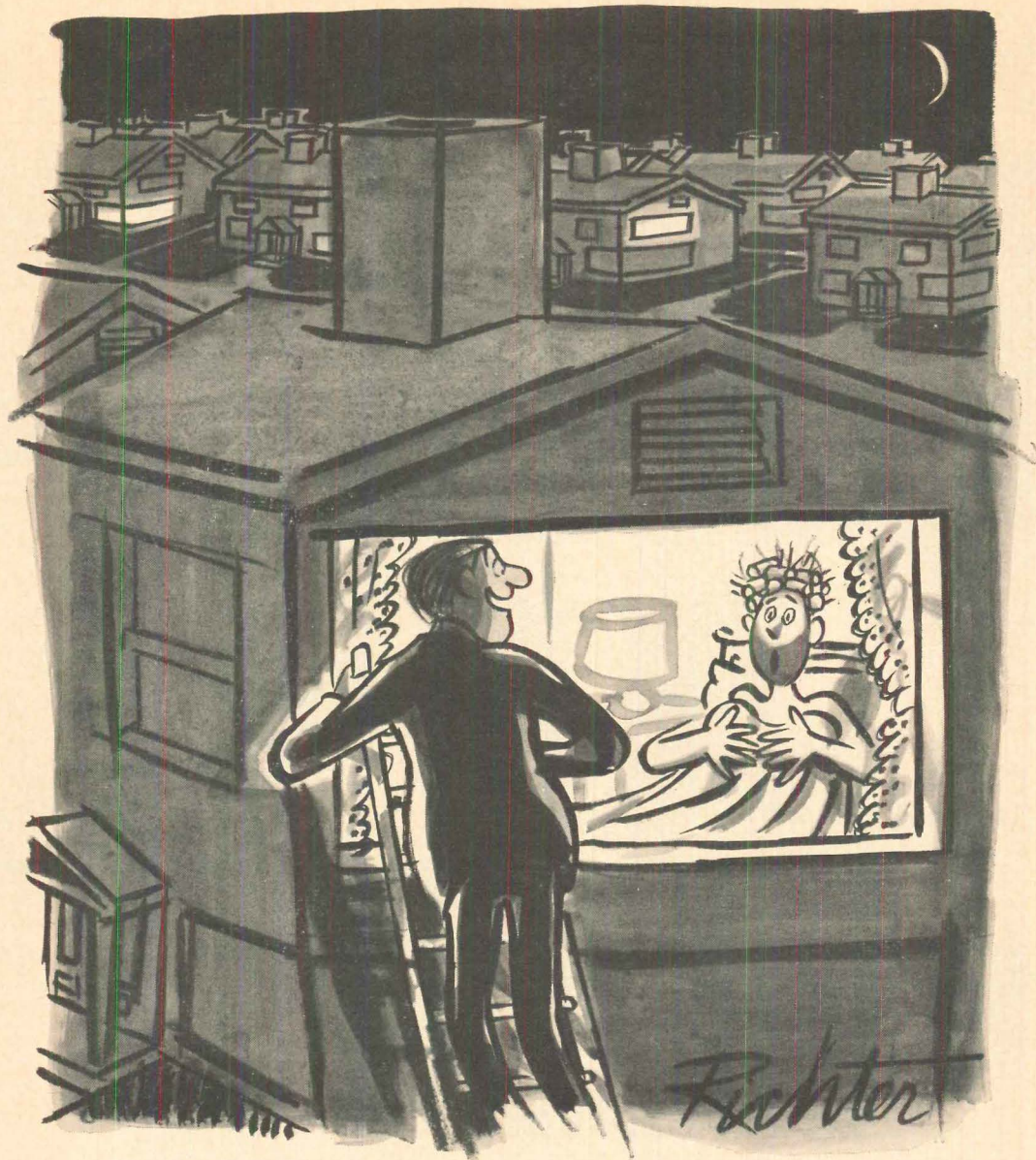
connect couplings that speed installation. And the vertical air discharge of the York heat exhaust section protects outside paint, won't damage shrubbery or lawn. Get the facts on York's builder programs for 1966! Contact your nearby York Dealer; or write York Corporation, subsidiary of Borg-Warner Corporation, York, Pennsylvania. In Canada, contact National-Shipley Ltd., Rexdale Boulevard, Rexdale, Ontario.

YOU CAN DEPEND ON YORK

YORK[®]

air conditioning
and refrigeration

BORG **WARNER[®]**



"Yoo-hoo. Remember me? I'm the builder. Just checking to see how you like your new carpet of Herculon?"

Will homeowners love you for installing carpet of Herculon* olefin fiber? Yes. Because Herculon is the easiest-to-clean of all carpet fibers. It's so chemically inert, so moisture resistant, stains and soil tend to stay on the surface until they are wiped clean.

Will carpet of Herculon stand up under kids, dogs, frug parties and inconsiderate guests? Yes. Carpet of Herculon is exceptionally long wearing even under the heaviest traffic. Lab and "in use" tests show that Herculon matches nylon in long wear and abrasion resistance. And is far more abrasion resistant than acrylics or wool.

Do you have to be a rich builder to install carpet of Herculon? No. Herculon can save you as much as \$3 per square yard below competitive carpet fibers of comparable bulk and construction.

Does carpet of Herculon look like your tenants are rich? Yes. It looks like a million dollars. In beautiful colorfast solids, multi-colors and patterns. And a pile so densely packed, you'll find it

hard to believe this is contract carpet. Of course all carpet of Herculon is practically static-free.

Is carpet of Herculon today's most brilliant, low-cost promotional idea for builders? Yes. And it's available at the best carpet mills in the country.

Why didn't the builder in the cartoon ring the bell? His contractor wired it to the telephone.

Why not surprise your new homeowners with carpet of Herculon? To find out anything you want to know about this great new commercial carpet or for a free copy of the new Architect/Designer's Guide to Carpet of Herculon, simply call, write or visit Fibers & Film Department, Hercules Incorporated, 380 Madison Avenue, New York, N. Y. 10017. OX 7-0010.

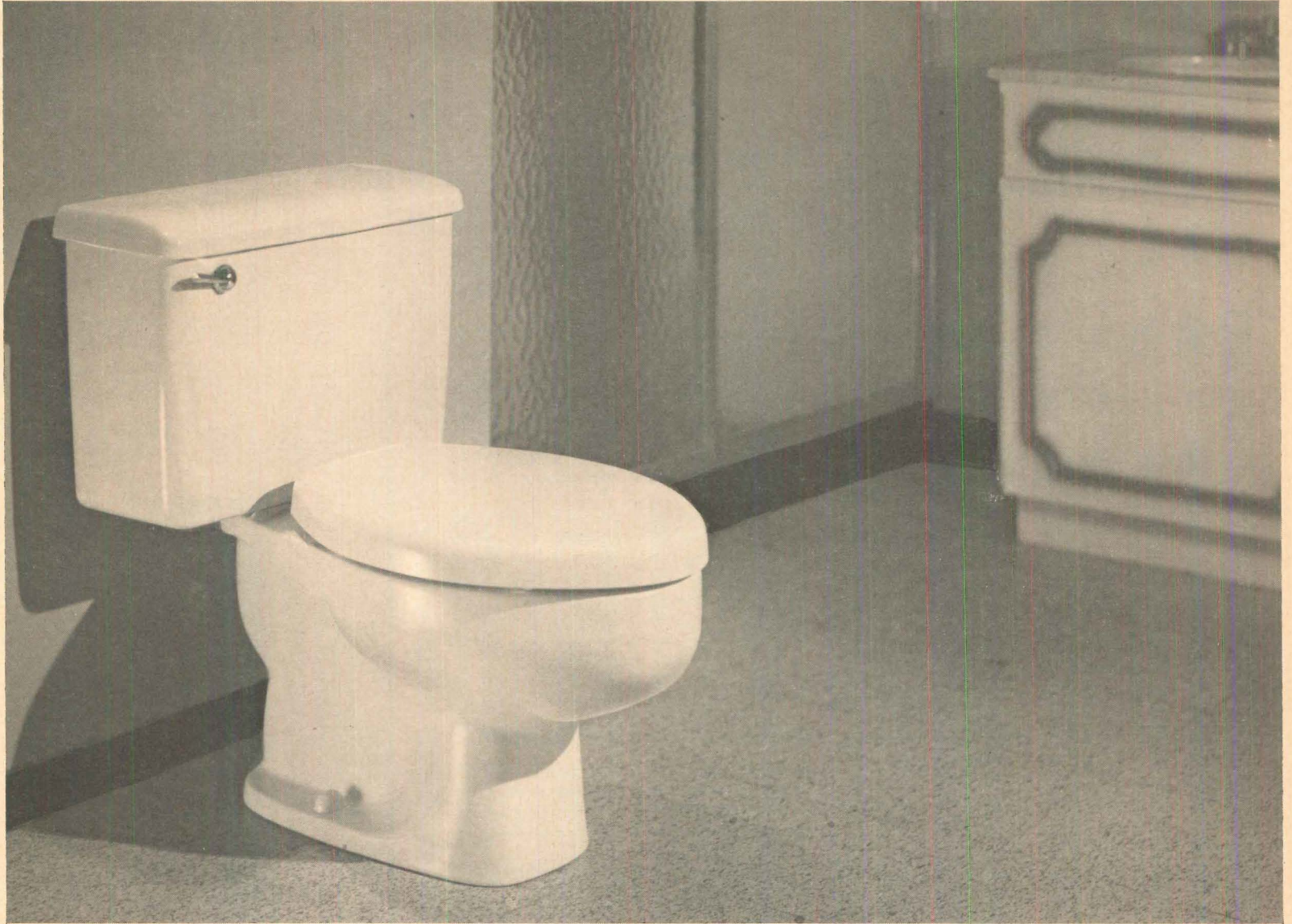
Is there a carpet that has all the answers? Yes. Since when? Since Herculon.*

The No. 1 polypropylene fiber for contract carpets.

*Registered trademark of Hercules Incorporated, Wilmington, Delaware, for its olefin fiber.



**New . . . for the budget-minded
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meet the moderately priced Radcliffe

Pleasing smooth-line sculptured design. Modern low silhouette. No jet channels on the outside of bowl. Super-efficient siphon jet action. They all give the new Radcliffe a look of elegance.

Yet, this siphon jet beauty sells at an old-fashioned, reverse trap price.

You get a choice of elongated rim or regular rim, in telescopic and decorated seat options. Available in white and Crane decorator colors. As an option, you can choose the Neu-Sahara tank . . . urethane-lined for minimum sweat.

One thing more, there won't be



any time-consuming, unprofitable return calls because the Radcliffe is built to endure. We'll stake our engineering reputation on that.

Call your Crane sales office, or wholesale distributor. Or write Crane Co., Dept. 034, 4100 South Kedzie Avenue, Chicago, Illinois 60632.

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Chicago Title Insurance Company

111 W. Washington St., Chicago, Ill. 60602

LETTERS

start on p. 60

building is still the foot soldier: the field interviewer with his extensive checklists waiting for him in his car. The general who acts without these men is fighting a paper war.

GABRIEL M. GELB
Gelb Marketing Research
Houston

California cost pressures

H&H: You fellows turned in a great job of reporting California's market troubles [Aug.]. The problems you highlighted between 1961 and 1966 were compounded by assorted cost pressures in addition to those factors specified in your article. The builder was sandwiched between these added costs and customer price resistance. There was no way to pass through these expenses. Risks skyrocketed. Ultimately the pat solution, increased volume, became an exercise in futility. You covered the inflation in land costs. But all California builders were harassed during this period by state and local increases in subdivision standards, new structural requirements, land materials and wage increases.

The problems we face on money and money supply or on over-supply of housing would have been substantially diminished if we had had an opportunity to absorb some costs without drastic price increases.

JOHN H. TOLAN JR., treasurer
Barrett Homes Inc.
Richmond, Calif.

California—land speculation

H&H: Your August article, "California—where housing ran wild," states that in recent years "fast-turnover speculators abounded, and some companies turned land speculation into a semi-scientific art."

I don't quarrel with the truth of this. There were such speculators. Some made a good deal of money. Many, believe it or not, lost money. But to suggest that these "fast-turnover" speculators are generally the same people who speculate in land in a semi-scientific manner, as your statement does, is inaccurate.

First, because speculation in land can provide positive benefits to the builder when it is properly practiced. Second, because it can provide orderly city growth and development.

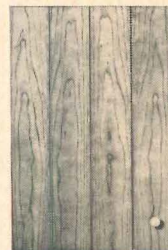
The speculator and the builder are not necessarily natural enemies. And research—practicing land speculation in a semi-scientific manner—is what makes the difference.

Investor clients of Property Research Corp. are currently helping builders in two ways. They are land banking for them, sometimes to the extent that the builder has no cash in a project other than his overhead. And they are land planning for builders—including all engineering soil, and geology tests—so that the builder buys land with expensive surprises weeded out and with a plan that develops the parcel in the manner best suited to it. This is assured by market studies (by Property Research Corp.) and the fact that the land is planned without regard to a specific builder. Only when a plan has been developed is the parcel matched up with builders who have indicated their land needs to us in advance. In this way they are assured in advance of good land when they want it,

Letters continued on p. 70

There is a
quality built
competitively
priced

Kemper
kitchen to fit
every
architectural
style or deco-
rating theme



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

Kemper

KEMPER BROTHERS, INC., RICHMOND, IND.



All the best houses have one in every window now.

It's quite revolutionary.

Thermopane® insulating glass (the GlasSeal® kind) is made of glass fused to glass. It takes the place of bothersome storm windows.

In effect, it's a skinny, flat bottle, that fits into a window. It is the only bottle Libbey·Owens·Ford makes.



It's then filled with dry air and sealed. This seal keeps the dry air inside from leaking out, and dirt and moisture from leaking in to cloud the view.

Thermopane is now available for practically every size and style of window you use.

Thermopane with the GlasSeal edge is already offered as a standard option by the leading

wood window manufacturers. Ask for it.

You won't have any trouble recognizing it. We etch the name Thermopane in the corner where you can see it.

Libbey·Owens·Ford Glass Co., Toledo, Ohio

Thermopane® by 
INSULATING GLASS

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

Circle 66 on Reader Service Card



You'll sleep better nights (and sell better days)

Usually it is a *combination* of appeals that sells. Desirable location. Good design. Quality features. Modern comfort: Day & Night Air Conditioning, for example. In air conditioning, as in water and space heating, people recognize "Day & Night" as assurance of trouble-free performance. From experience. From friends' testimony. From Day & Night advertising. And Day & Night products live up to expectations. They are installed by responsible experts, who relieve you of all service worries. A Day & Night dealer is handy. Owners can call him directly. So *you* sleep better.

There's a Day & Night system to fit virtually any air conditioning job, in homes, apartments, office and commercial structures. 2 to 15 ton units, conventional, heat pump (with or without a supplementary heating coil), heating and cooling together or separate, inside or outside, electric or gas-and-electric (the famous Duopac).

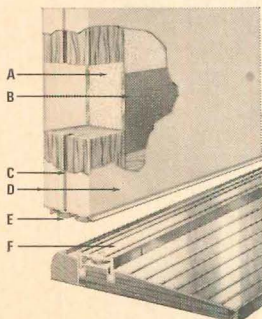
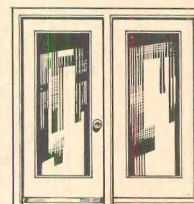
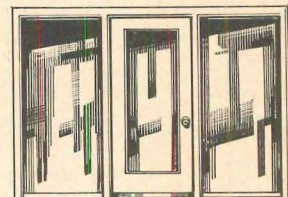
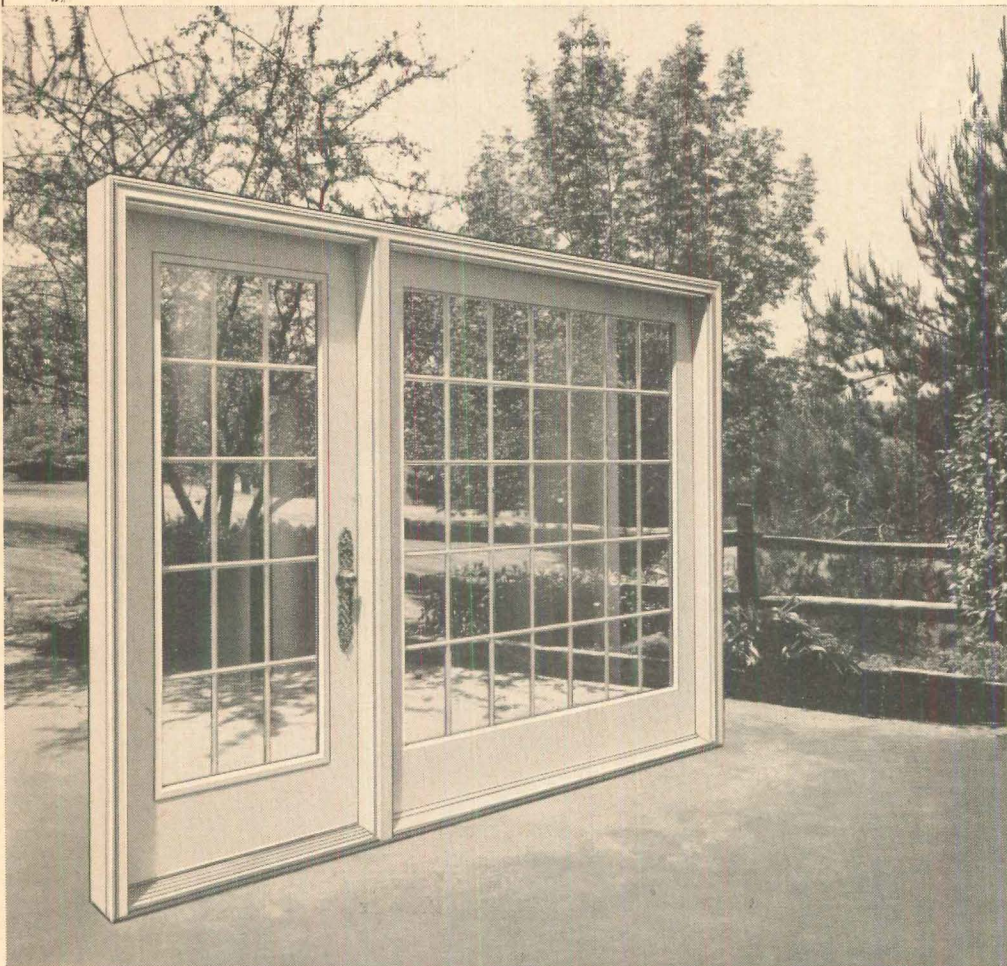
Air conditioning is fast becoming one of the most wanted features, a "must" in many instances. You'll sell better and sleep better when you offer air conditioning by Day & Night.



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

DAY & NIGHT MANUFACTURING COMPANY / 855 ANAHEIM-PUENTE ROAD, LA PUENTE, CALIFORNIA
3359 WEST 39TH STREET, CHICAGO, ILLINOIS / DISTRIBUTORS IN PRINCIPAL CITIES

New type patio doors complement architectural styling



- A. Rigid Dylite foam core insulates
- B. Internal "kick" strip
- C. Thermal break—ends condensation
- D. Galvanized steel facings
- E. Seal strip on door—not walked on
- F. Adjustable universal sill

You don't have to sacrifice architecture for patio doors anymore. Pease Ever-Strait Patio Door Units give you variety never possible with sliding doors.

But that's not all. Ever-Strait Doors can't warp—no call-backs, ever! The positive magnetic weather seal ends drafts. Ever-Straits come with single glass or insulating glass.

Any number of three-foot and six-foot side-lights can be combined to fit your particular needs. Each Ever-Strait unit is delivered primed and pre-hung in a wood frame.

Like to know more about the new type patio doors which complement architecture? See your nearest distributor, or write for free brochure and full details.

Pease Ever-Strait Doors[®]

Dept. H-10, 900 Laurel Ave., Hamilton, Ohio

Patents No. 3,153,817 and 3,238,573. Other patents pending.

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Western Mill & Lumber Co.
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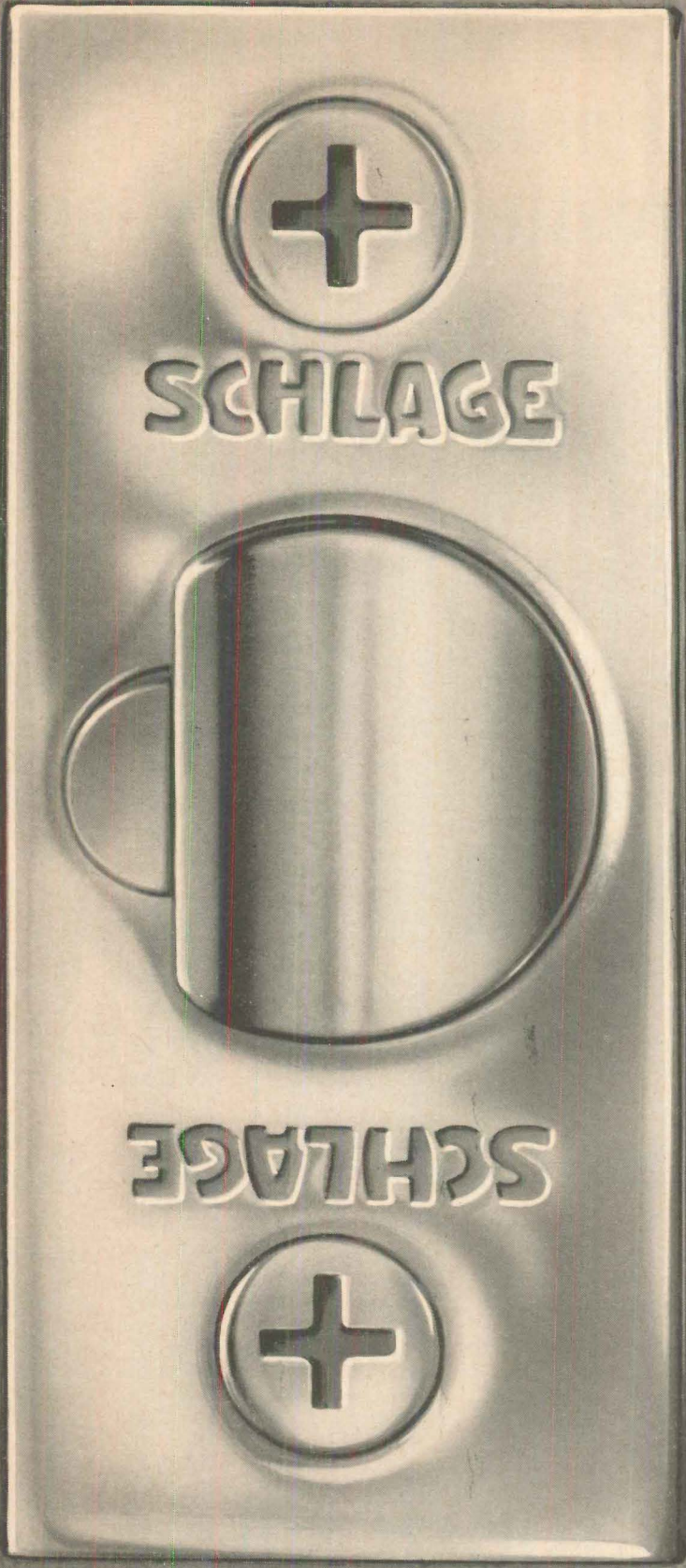
Iron City/Whitjax Co.
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Show your prospects quality right at the front door, with a lock that tells them here is the quality and value they're looking for. A lock that combines the best of beauty, durability, and dependability. A Schlage lock. A Schlage lock because we use only premium metals, milled to our own uncompromising specifications. Because we insist upon more precise tolerances in manufacture. Because we inspect each part and each lock in such a way that insures their meeting quality standards unequalled in the industry. There are Schlage locks just right for any home you build. See our selection of 101 designs, available in 23 different finishes, and in all popular price categories. Your reputation as a quality home builder starts at the front door. You're way ahead when there's a Schlage lock on it. We guarantee it.

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Discriminating home owners immediately recognize the expert craftsmanship of Harris BondWood parquet. This superb performer is thick, solid hardwood all the way through . . . designed for adhesive installation over concrete or wood. And even after years of hard wear there's nothing to replace. BondWood is restored to original beauty with inexpensive refinishing. For flawless performance, always specify Harris BondWood . . . the original parquet introduced from Switzerland by Harris in 1954. Ideal for apartments, homes, gyms, auditoriums, classrooms and churches. Get all the facts about the versatile Harris line . . . mail the coupon below, today!

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HARRIS FLOORING
Hardwood Flooring Since 1898

Parquet • Colonial Plank • Strip • Stairwork



LETTERS

continued from p. 64

where they want it, and at a fair price.

LOIS GAINES, public relations director
Property Research Corporation
Los Angeles

Pension funds to mortgages

H&H: We really appreciate H&H's fine coverage of California's efforts to channel more pension funds into residential mortgages [NEWS, July]. Major credit for our success should go to the state officials, leading mortgage bankers, and officers of the California Council of Carpenters. It was a team effort.

WILLIAM T. LEONARD, exec. vice president
Assoc. Home Builders of Greater East Bay,
Berkeley, Calif.

Heating-system war

H&H: All of us read with interest the June article entitled "The war of the heating systems." While we don't agree with everything that Clarke Wells [H&H associate editor] wrote, we feel that the article was fair.

We read with equal interest the complaint of F. T. Ritter of Metropolitan Edison Co., Reading, Pa., [August]. We concur wholeheartedly with your comments at the end of his letter, particularly your remark that his statements about costs were "somewhat at variance" with electric heat literature. This, we thought, was the understatement of the year!

We can't help commenting on Mr. Ritter's statistical myopia. He says, for example, that while the article credited oil and gas systems with an efficiency of 80%, "the accepted values" are 75% for gas and 70% for oil. We presume he means the electric-heat industry's "accepted values," because they aren't ours, or the gas industry's, or most professional sources'. Too, the fact that electric heat chooses to use a constant of 17 instead of 24 for degree days is *their* problem.

J. RICHARD SHANER, public relations director
National Oil Fuel Institute Inc.
New York City

More on Pert-O-Graph

Readers have asked where they can buy the hand computer used in Builder Duc & Elliot's planning and scheduling system (H&H, July). It is available from its inventor, James Halcomb Assoc., 149 San Lázaro Ave., Sunnyvale, Calif. Price with instruction book: \$5 (not \$1 as reported in the H&H story).

Called Pert-O-Graph II, the hand computer is a slide-rule-type nomograph that eliminates the need for an electronic computer in using CPM (Critical Path Method) and PERT (Program Evaluation and Review Techniques).

Halcomb Assoc., a pioneer in simplifying network programming systems, draws on the expertise of a former lieutenant colonel—William Getz—who designed control systems for the Air Force. The company's service to Duc & Elliot included 1) preparing tailor-made control charts; 2) designing a central control room (Duc's "decision pit"); and 3) training personnel to use the planning and control system.



Always hold
matches 'til cold

Only you can
prevent forest fires



Be sure to
drown all fires

Only you can
prevent forest fires



Crush all smokes
dead out

Only you can
prevent forest fires



Published as a public service in cooperation with The Advertising Council.

Today's new, modern ideas in concrete bring builders a truly fresh opportunity to offer extra value that shows . . . value that home buyers look for. Driveways, patios, walks and other features of Decorative Concrete can give a real competitive edge and stimulate sales.

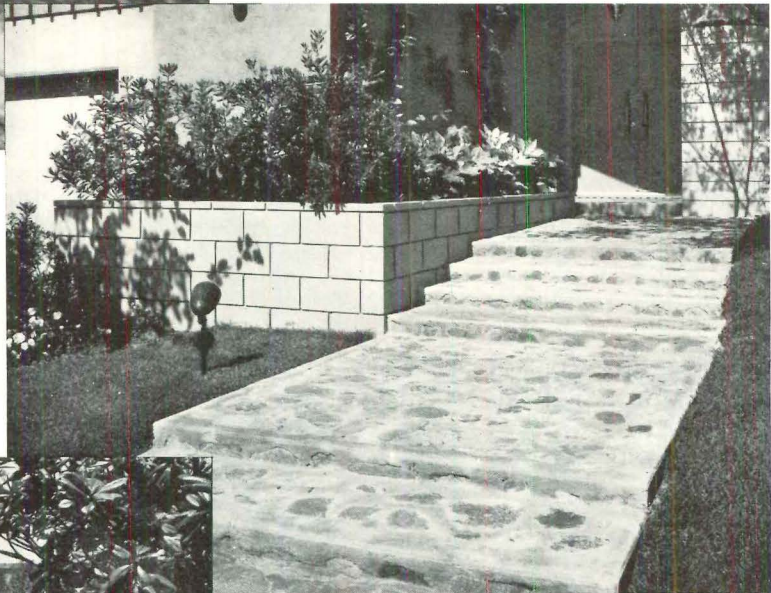
Decorative Concrete works wonders. The outdoor-feature ideas that impress buyers of custom showplaces can readily be adapted by builders of medium-priced and modest homes.

Concrete's versatility makes ideas come easy—with textures, colors, patterns, shapes limited only by your imagination. Get more information: ask your ready mix or concrete masonry suppliers, or contact the PCA office nearest you. *Portland Cement Association, 33 W. Grand Ave., Chicago, Ill. 60610. (An organization of cement manufacturers to improve and extend the uses of portland cement and concrete.)*



New-style concrete masonry—simple way to give patios extra charm. The builder offered not just a patio but a “people pleaser.” Decorative concrete made it easy to be different. The central planter is of painted concrete slump block. This contrasts with the simple box pattern of the patio itself, achieved with redwood headers which also act as control joints. Flatwork surfacing is lightly textured. Decorative treatments with concrete can be adapted to fit any building budget.

Stairway of rocks—steps to a reputation for originality. The “front steps,” leading all the way to the main sidewalk, are given dramatic prominence with a surface patterned with embedded flat-faced rocks in a range of natural colors. Adding the decorative touch to concrete costs-out reasonably—especially when you consider that bold ideas like this win valuable buyer attention and approval.



Free-form patio—concrete shapes up to elegance. A little special form work is worth the effort when the result is the gracefully flowing lines seen in this patio. It's done in natural white concrete, with simple surface scoring. Contours can follow the terrain, or preplanned planting arrangements. Actually, concrete is the one exterior material that meets basic decorating needs—form, color and texture. And this is what gives it such limitless potential.



These five builders tell how they cashed in on Honeywell Electronic Air Cleaners



"Control panel is a talking point"

Mr. Richard H. Wieland, Builder of Brookwood, Prince Georges County, Maryland

"We featured the Honeywell Electronic Air Cleaner in the 1963 Parade of Homes. Now, it goes in about half of our homes. Most people do not know about electronic air cleaning, but they do know about air pollution, and they react favorably when we go into a little sales pitch. "We sell the air cleaner as

part of Comfort Conditioning along with a humidifier and air conditioning. We don't intend to make a big profit on the air cleaner, but feel it is important because it helps make our homes more saleable. We believe electronic air cleaning is on the increase and will feature it again in the 1966 Parade of Homes."

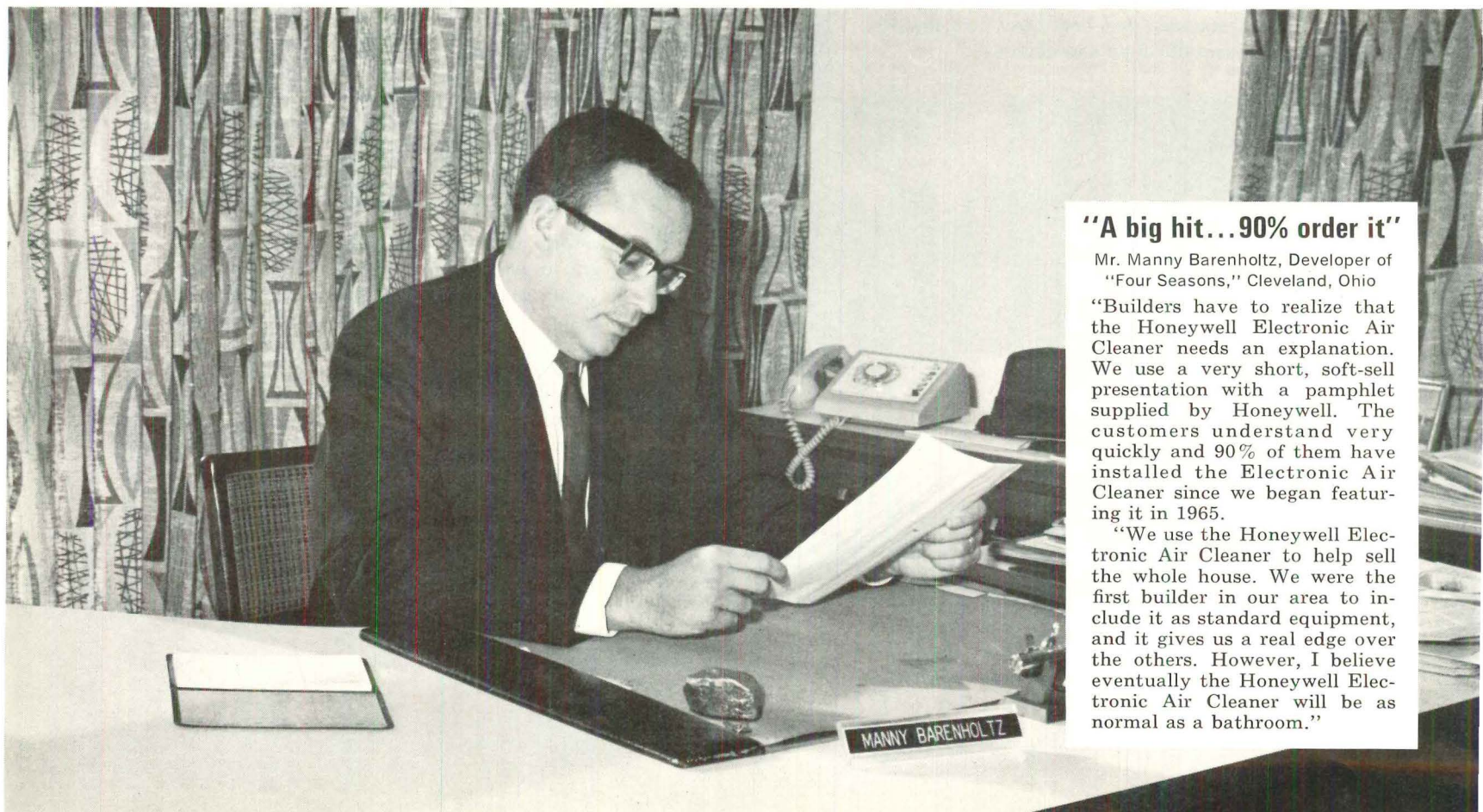


"We give the best, Electronic Air Cleaner is standard"

Mr. Lee Rosenberg, Panitz & Co., Inc. Builder of Rumsey Island, Joppa, Maryland

"Rumsey Island, along with our other development, Joppa Town, is a planned community where every home has direct access to Chesapeake Bay through a series of canals. Our people are the type who like to come home and jump into their boats. Minimal housekeeping is important and the Electronic Air Cleaner is a strong feature for our homes.

"We don't believe in extras. All homes have a system that includes air conditioning and electronic air cleaning, a humidification system, and a central vacuum cleaning system. Our homes are more saleable because they have a sophistication that others don't offer. We feel that all homes should get to this point."



"A big hit... 90% order it"

Mr. Manny Barenholtz, Developer of "Four Seasons," Cleveland, Ohio

"Builders have to realize that the Honeywell Electronic Air Cleaner needs an explanation. We use a very short, soft-sell presentation with a pamphlet supplied by Honeywell. The customers understand very quickly and 90% of them have installed the Electronic Air Cleaner since we began featuring it in 1965.

"We use the Honeywell Electronic Air Cleaner to help sell the whole house. We were the first builder in our area to include it as standard equipment, and it gives us a real edge over the others. However, I believe eventually the Honeywell Electronic Air Cleaner will be as normal as a bathroom."



“Our house of the future includes clean air”

Mr. Theodore H. Bentley, Builder of Hollywood Highlands, Hollywood, California, and creator of the “SteelStone”® concept in tract housing

“Our house is the first really new house in Southern California since the adobe. My Associate, Chester Groves, and I use the ‘Steel-and-Stone’ method of construction like high rise apartments for a home that is fire-proof; earthquake resistant; rot, vermin and termite proof; and should last 100 years. Our house

will not become obsolete. Naturally, air conditioning is standard, but why cool dirty air? This is the smog capital of the world. I won’t add frivolities, but the Honeywell Electronic Air Cleaner is functional, as well as a status symbol. It’s all part of the ‘home-of-the-future’ concept and it really sells homes.”



“Put it in a Comfort Conditioning Package”

Mr. Marco Santi, President of Marco and Soave Co., Warren, Michigan

“We like to compare the Electronic Air Cleaner to power steering in an automobile. People really appreciate it when they have it, but they wouldn’t pay to have it installed after they own the car. We make the Honeywell Electronic Air Cleaner part of a Comfort Conditioning package that includes Ther-

mopane glass, 3” insulation, marble window sills and an Electronic Air Cleaner.

“It’s all or nothing and most buyers take the whole package. They respond to appeals for health and cleanliness. They easily understand electronic air cleaning. It helps sell our houses without over pricing them.”

Honeywell Electronic Air Cleaner removes 95%* of the dust, dirt and pollen passing through it

The Honeywell Electronic Air Cleaner fits in the return air duct of any forced air heating-cooling system and traps up to 19 times as many particles as ordinary mechanical filters.

Only the large airborne particles can be seen, but the invisible particles do most of the real damage. They can irritate allergies, soil windows and drapes, and leave a dingy haze behind mirrors and pictures.

The Honeywell unit traps particles so tiny that it would take about 7,000 of them to stretch across this (·) dot!

In a new home, the Honeywell Electronic Air Cleaner may be included in the mortgage for under \$2.00 per month.

For more complete information and literature, write Honeywell, Dept. HH10-423, Minneapolis, Minn. 55408.

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



Honeywell



You can build French Mansard sales appeal at hometown prices.



Here's how: Use grooved sidewall shakes of red cedar. They're factory-stained. Rebutted and rejointed. Ready to show. And they're lowest in applied cost.

People like the name *red cedar*. They've heard of its durability. They've seen its beauty. They trust its value, now and later.

The picture shows grooved sidewall shakes, 18" long, with 8" to the weather, factory-stained cocoa brown and applied over furring strips. Exactly 1,200 squares of shakes were used to cover 18 buildings containing 212 apartment

units. (After two years of Indianapolis weather, the stain is reported holding up "beautifully.")

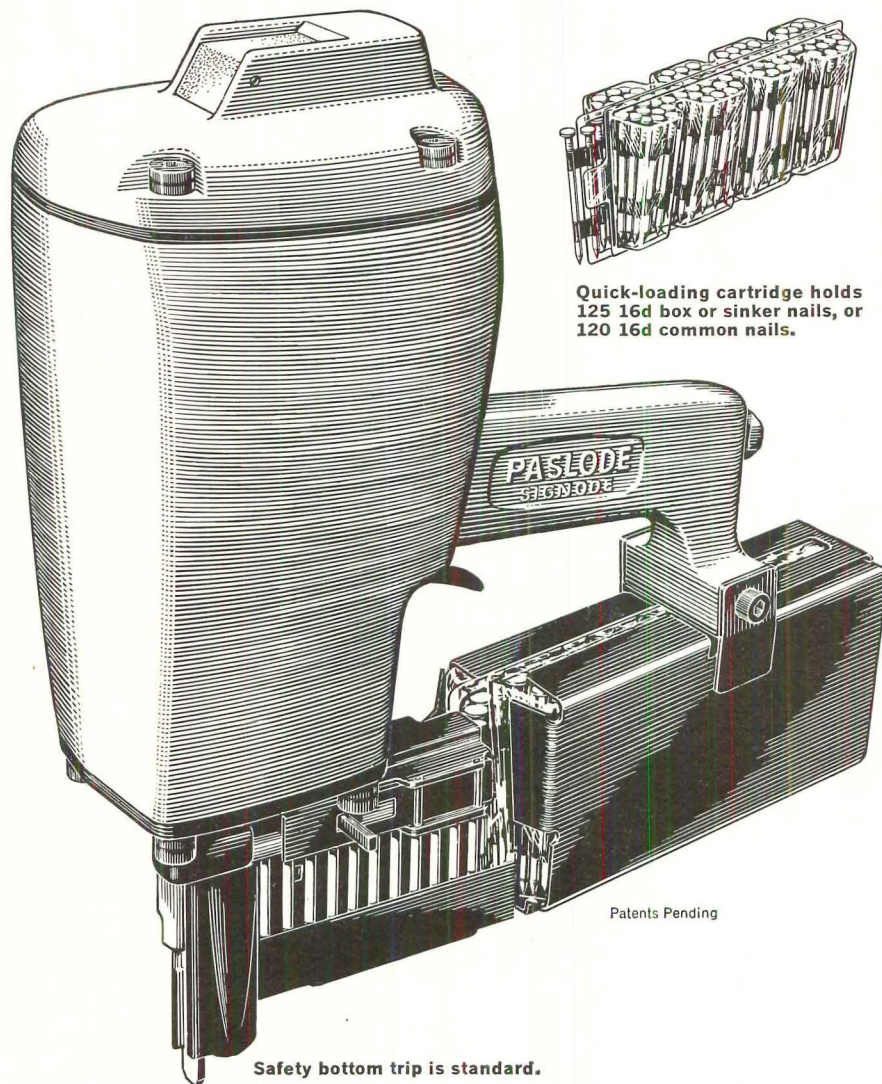
There's useful information about Certigroove Grooved Red Cedar Sidewall Shakes in our Sweet's Light Construction Catalog listing, 3d/Re. For additional information, write or give us a call.



This label on cartons of red cedar grooved sidewall shakes is your guarantee of Bureau-graded quality. Insist on it.

RED CEDAR SHINGLE & HANDSPLIT SHAKE BUREAU
5510 White Building, Seattle, Wash. 98101 (In Canada —1477 West Pender St., Vancouver 5, B.C.)

Announcing
 another major
 Paslode first!



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

Patents Pending

Safety bottom trip is standard.

Drive 16d nails with one blow!

New STALLION portable pneumatic nailing tool

■ Now the advantages of fast single-blow pneumatic nailing with a portable cartridge-fed tool are available wherever 16d nails are used—for nailing studs in frame construction, for example, or, in industry, for the manufacture of crates and pallets.

The Stallion saves time and effort, eliminates waste of nails, makes every nail count with power to pull boards tight. 4,000 to 5,000 nails per hour is a practical on-the-job speed, including reloading time.

16d box nail, 3½" x .135" (10 ga.) shown actual size above. Also drives 16d sinker nails, 3¼" x .148" (9 ga.), right, and 16d common nails, 3½" x .162" (8 ga.). Nails conform to Federal Specification FF-N-105a, Interim Amendment-2, April 7, 1964.



The Stallion grew from Paslode's widely used Gun-Nailer® tool that drives 8d and 6d nails—the *first* portable pneumatic nailer to drive regular nails. Paslode's unparalleled experience in this field plus our 30 years of experience in making industrial staplers is a positive assurance of performance.

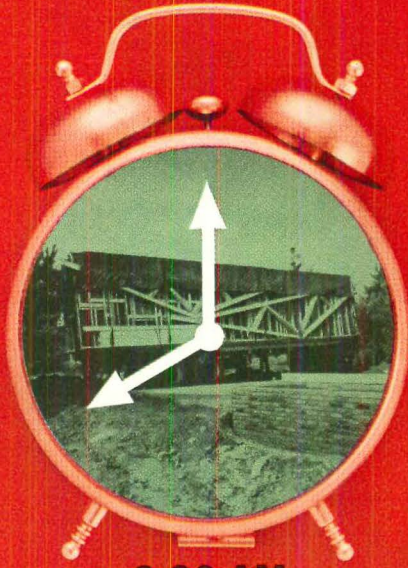
For all its power, the Stallion weighs only 11 pounds. It operates on compressed air at 80 to 100 p.s.i.

Write for price and where-to-buy information.

P PASLODE
 COMPANY, DIVISION OF SIGNODE

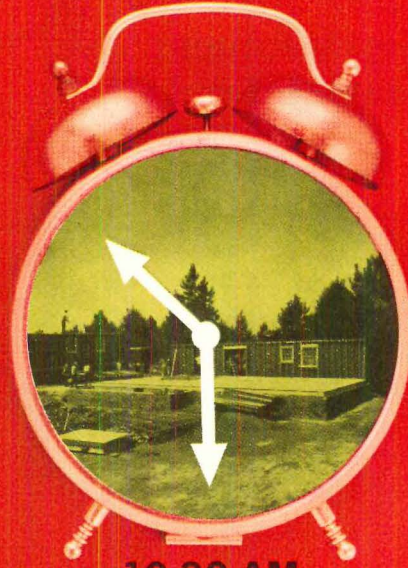
8080 McCormick Blvd., Dept. HH, Skokie, Illinois
 In Canada: Paslode Canada Reg'd, Scarborough, Ont.

TIME IS MONEY \$\$



8:00 AM

Kingsberry's unique system unloads materials in order needed.

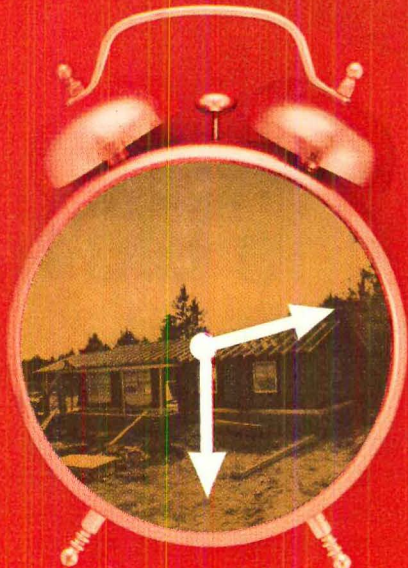


10:30 AM

Floor system in place, first wall section up.

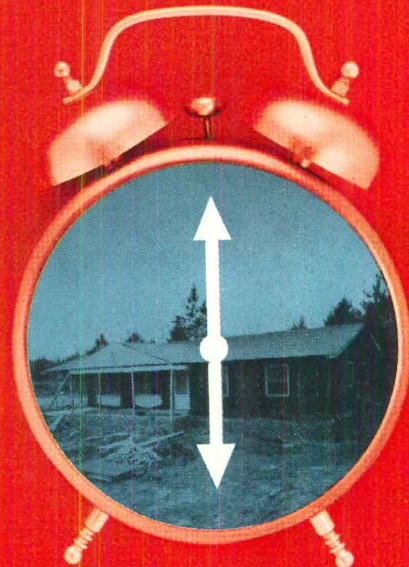
No problem for Kingsberry builders

Faster build-out turns capital quicker, increases net profits, closes more sales! Learn how Kingsberry takes fewer manhours to put up more houses, faster, holding on-site labor costs to the bone. Rush the coupon!



2:30 PM

Trusses in place, interior partitions in.



6:00 PM

House fully dried-in, materials stored inside. Eliminate loss and damage of materials!

KINGSBERRY HOMES

MAIL THE COUPON BELOW TODAY

Mr. Robert C. Smith, General Sales Manager / Kingsberry Homes / Dept. HH-5 / 5096 Peachtree Rd. / Chamblee, Ga. / Please rush me full information on Kingsberry's individualized designs and total marketing-advertising program. I have _____ lots ready to build on. In 1965, I built _____ houses in the \$ _____ price range. I am interested in construction financing.

Your Name _____ Firm _____

Address _____ Phone _____

City _____ State _____ Zip Code # _____

EDITORIAL

Tight money's here to stay, so

If retailers can sell color TV sets at 36% interest, why can't we sell more houses at 7% interest?

Partly because the Johnson Administration's inflation has spooked the consumer. And partly because this inflation has wooed long-term money into more lucrative investments than mortgages—investments made more attractive by the administration's monetary and fiscal policies. However, a good many builders are selling a lot of houses at an effective rate of 7% and more, and other builders are going to have to learn how to do it.

One thing that's going to keep tight money around is the impression that controlling inflation is, to the Administration, purely a political maneuver and not an economic necessity. Our national electorate numbers more than 70 million voters, most of whom might express their displeasure with a tax increase at the polls in November. So the Administration first tried to control the inflation with monetary policy alone—a move that did absolutely nothing to cool down the boom. The only voters really hurt by this move were some 3 million builders, lenders, building product manufacturers, and homebuyers.

Last month the Administration proposed repeal of both the 7% investment tax credit and the accelerated depreciation on commercial and industrial buildings. The proposal may have a psychological effect that will help cool down the boom, but as an economic move it is probably too little and too late. Repeal of the two measures would make the business community mad, but the Administration could still hope that about 60 million voters would be happy not to have an income tax increase, even though the boom is still out of hand.

We're going to have to live with tight money for the foreseeable future. We can expect the President to ask for an income tax increase in his state of the union message to the 1967 congress. That will be well after the election; and the President can easily point out then that his administration tried everything, but it didn't work, so now (January) we'll have to have a tax increase (which in truth should have come a year earlier). And, of course, the voters will have almost two years to cool off before the President himself comes up for re-election.

A tax increase will cool off the economy, but at best its effects on long-term interest rates won't be immediate. In fact, its effect on interest rates is highly problematical because we know so little about tight money.

If the demand for money increases faster than the supply and the result is continually spiraling interest rates, it will bear out the contention that banking does not benefit from

the same sort of hammer and tongs competition that is healthy in manufacturing and retailing. The axiom is based on the fact that banks deal in money supply and savings, not in consumer goods—in a medium of exchange, not in commodities. In fact, the New York State banking law instructs state banking bodies to eliminate unsound and destructive competition.

All of the above should demonstrate to the housing industry that we can't rely on either the Administration or the money market to pull our financing problems out of the fire. We must act for ourselves, and there are two basic things we should try to do:

1. The housing industry should seriously try to form a central mortgage facility to create a secondary market, like FNMA, for conventional mortgages. Participation in such a facility could be sold to pension funds, private investors, materials producers, mortgage trusts, and publicly held investing companies.

2. The housing industry must develop an ability to adjust to the changing price of money. A little arithmetic can prove to a potential buyer that over a 25-year period a house will cost *nothing* while his automobiles will cost him \$22,656.

Assume the buyer takes out a 25-year, \$20,000 mortgage on a \$25,000 house. At 7% he will pay \$42,408 on the mortgage in 25 years, but income tax deductions of \$22,408 in interest will give him an effective rebate, in the 30% tax bracket, of \$6,722. So his house will actually cost him \$35,686 in mortgage payments plus his \$5,000 downpayment—or a total of \$40,686. But using the most conservative estimates of increasing value, the house will be worth at least \$40,000 after 25 years—and that figure does not include an annual 1.2% inflationary factor in the value of money. In short, he will be able to get back every bit of money he has put into his house purchase. So if he sells the house, it will have cost him nothing.

Let's also assume that the homebuyer buys eight cars and keeps each for three years—and that each car is worth approximately \$4,000 and is financed at 12%. At the end of the 25-year period, he will have paid about \$23,000 for his cars and will wind up with only one car valued at about \$1,600.

Builders around the country are proving every day that they can sell with this argument. You could, too.

—RICHARD W. O'NEILL

TOTAL ENERGY—the gas industry's newest weapon in the battle of the fuels

What is it?

Technically, total energy is the production of all of a project's energy needs from a single fuel: a central on-site plant provides all heating, cooling, hot water, and electric power. In theory, any fuel could run the plant; in practice, gas is usually the most economical, hence the most widely used.

Politically, total energy is the adopted label for the gas industry's counterattack on all-electric

living. For years, gas has watched while electricity took over residential air conditioning and, despite much higher operating costs, cut into residential heating—gas's bread and butter. With total energy, the gas industry hopes to stop electricity's inroads into heating, move into air conditioning, and hit electricity in *its* bread-and-butter market by producing gas-generated electric power.

What can it mean to builders?

Where it is feasible, total energy can give builders a marketing edge, a source of profit, or both.

Right now, residential total energy is limited to apartment projects. A builder who sold electric power to homeowners would be infringing on the franchise of a power utility. But a builder who is himself the owner of an apartment project

can make electricity for his own use, even though he sells the power to his tenants. If he can make that power cheaply enough—which depends on a number of factors, notably the comparative costs of gas (or oil) and electric utility rates in the area—he can pass on the savings to his tenants, keep it for himself, or split the difference.

Is it catching on?

It's beginning to. Actually, there are more than 300 total-energy installations in the country, but only a handful are in residential projects; the rest are in commercial or industrial complexes.

But there has been a sharp increase in the attention paid to residential total energy in the past three or four years. For one thing, the gas industry has bestirred itself and is beginning serious

promotion. For another, technical advances, particularly in the fields of natural gas engines and absorption cooling, have made total energy more efficient.

But the most important reason for the recent burgeoning of total energy is that builders themselves are beginning to realize its potentialities. To see why, begin on the next page.

Total energy turns one fuel—usually gas—into electricity, heat and cooling

And a total energy system is not a formidable plant to install and operate. The technical complexities are on the same order as, say, a central boiler room.

"There's no mystery to it," says Max Okun, the Kansas City builder who installed the first total energy plant in the nation in a garden apartment project. "If more builders understood total energy, they'd come running."

What makes a total energy plant economically advantageous is that it makes use of its own waste heat. The results: not only cheaper power but also lower heating and cooling costs.

Even the most sophisticated electric utilities can deliver only a little more than 38% of their fuel energy in the form of power. They have no way to use the tremendous amounts of waste heat created in the generating process.

But the smaller generating plant of a total energy system not only functions at an efficiency close to 30%, it also delivers 50% or more of its waste heat for heating and cooling the project. Hence the total energy plant achieves an overall fuel efficiency of 65% to 85%. And 75% is readily attainable in a garden apartment project.

A total energy plant is an integrated system of engine-driven generators, a heating plant, and an absorption air-conditioning unit. Here's how it operates:

The generators produce the project's electricity. As they operate, the engines or turbines that drive them give off large quantities of waste heat. This heat is recovered from exhausts and water jackets and converted into low-pressure steam by heat ex-

changers. The steam, in turn, heats or (by absorption air-conditioning) cools water that is pumped to each building.

Besides heating and cooling, the steam is also used for domestic hot water, heating the community pool, etc.

Since steam production is directly geared to how hard the generators are working, it will be inadequate for the demand when the generators are operating on a light electrical load. So, to even out the steam supply, one or more steam boilers are installed with every total energy system for supplementary heat or cooling.

The choice of prime mover (engine, steam turbine, or gas turbine) and fuel (gas, oil, or coal) is purely a question of economics. A total energy system will work equally well with any of these combinations. The particular choice depends on which type produces the desired mix of steam and power requirements, so that steam or electricity will be neither wasted nor in short supply. Turbines, for example, produce proportionately less electricity and more steam. Piston engines have a somewhat better electrical efficiency but, in consequence, produce less steam. One type of prime mover, or a combination, will be more efficient for a given project; piston engines fueled by gas are usually the most efficient in garden apartment projects. Both engines and turbines are used in high-rise, commercial and industrial total energy plants.

The investment cost for a total energy plant is high, but operating expenses are lower than the cost of purchasing power from a utility. Therefore . . .

Total energy systems let project owners make a profit from cut-rate electricity

Two types of owners can cash in on these profits:

1. Builders who customarily let tenants buy individually-metered electricity from the utility, or . . .
2. Builders who themselves buy electricity for the entire project, and include the cost of it in their tenants' rents.

The first category of owners can sell to tenants at lower rates than the tenants customarily pay to power companies. Apartment dwellers buying electricity from a utility usually pay the highest rate scale; on the other hand, project owners generating their own power produce it for less than the lowest utility rates. So there's plenty of room to sell electricity to tenants at a profit and still charge them less than the going utility rate.

The best way to take profits out of a total energy project is to hide a discounted flat rate in the rents. This way the builder can gain considerable marketing advantage by including unlimited use of all utilities in the monthly rent.

A typical flat rate can be calculated easily. The annual operating cost of the total energy system is first figured as cost per square foot for the entire project. Some margin of profit is added to this figure, and each tenant's annual rent is calculated according to the number of square feet in his apartment.

Thus, if the cost of operating a total energy plant were 20¢/sq. ft./yr., the owner could add another 10¢ as his profit and charge a tenant 30¢/sq. ft./yr.—or \$300 a year for unlimited heating, cooling, lighting and cooking in a 1,000-sq. ft. apartment. This rate would still be lower than the tenant would pay in a conventional utility set up.

Of course, the project owner could also meter each apartment, but this alternative has been little explored in apartment projects. It could be a most profitable system if the owner didn't need to offer the incentive of lower rates to keep his project full; he could charge his tenants the same rates as the utility.

But the trend in apartment rentals is toward the inclusion of utilities in rents, and the promise of unlimited utility use for a flat rate is usually too tempting a promotional tool. Furthermore, the owner of a total energy project—because he works on a wider profit margin—could quite conceivably cut his rents two or three notches below that of the competition and still be earning as much as his competitor does at the higher rents. Max Okun predicts that within five years, in areas where total energy is feasible, every project will have to have it to survive.

Builders with conventional utility systems can

switch to total energy if their projects have central absorption cooling systems. At the David William Apartments, a 17-story high-rise in Coral Gables, Fla., builder Albert Sakolsky made such a change in 1964. Although he didn't raise his rents, his income immediately rose by \$4,000 a month as monthly power costs dropped from \$6,000 for purchased electricity to \$2,200 for a gas-fired total-energy plant. Sakolsky is quite happy to run the plant at cost; the extra \$4,000 each month will cover the cost of his total energy system in four years.

Given all these economic advantages, the initial cost of a total energy system can be well worthwhile. Average costs are always imprecise, but the generating equipment for a 300,000-sq.-ft. project with a capacity of about 1,300 kilowatts might cost in the neighborhood of \$200,000. This would break down to an installed cost of \$150 to \$200 per kw of piston engine generator capacity, or about \$200 to \$250 per kw of turbine generator capacity.

For bookkeeping purposes, the calculated cost of the total energy plant should *not* include the price of a central gas absorption air-conditioning unit. (Electric power companies have been known to throw it into their calculations when attempting to steer a prospect away from total energy.) A gas absorption unit justifies itself separately; compared to conventional unitary cooling, a central absorption system has roughly double the life expectancy—20 to 30 years vs. 10 to 15—and its operating costs are lower. Thus a central system can more than pay for itself.

The money for a total energy system can be considered as part of the overall mortgage for the apartment project. "Then," says Max Okun, "from the builder's point of view, once the project is completed the total energy plant is paid for. All income over and above straight operating expenses is counted as profit."

But even if the investment cost is broken out separately from the mortgage, the savings from a total energy plant can make possible a two-to-seven-year payout schedule (the period in which the difference between its extra cost and the cost of a conventional system is made up.)

Furthermore, since debt service usually constitutes about half of total energy's operating cost, profits can double when the mortgage is paid off. And the improved generator engines now being manufactured give promise of outlasting a 20-year mortgage by 10 to 20 years.

The larger a project is, the cheaper the cost—and the greater the profits—of a total energy system. The cost of plant equipment doesn't increase in direct proportion to the size of the project; a project of 300,000 sq. ft. would require only about 2½ times the engine capacity of a 100,000-sq.-ft. project. Consequently, both the investment and operating costs on a per-square-foot basis drop considerably as a project gets bigger.

For this reason, some large shopping centers that have total energy plants are reaping tremendous returns on their investments. The owners of these centers commonly sell electricity to their tenants at the prevailing utility rate, and discount the heating and cooling. The tenants like the arrangement because they avoid the heavy cost of installing their own air-conditioning systems.

One total energy plant at a shopping center in Lexington, Ky. is pulling in a 20% annual return on an investment cost of \$1.2-million. That's more than the owner makes each year from his rents.

Financing of total energy systems has been a problem. But gas companies have helped, and a few major lenders are becoming interested. The system is so new that its potential profitability has not been understood by traditionally conservative insurance firms. But some gas companies, notably the aggressive Northern Illinois Gas Co., have instituted divisions for the promotion, service and financing of total energy. And there are signs that insurance firms may follow suit. The Prudential Insurance Co. recently loaned Kansas City builder J. A. Peterson \$100,000 toward the \$160,000 cost of generating equipment in his 272-unit King's Cove garden apartment project.

But total energy is not suited to every type of project or every area. As many as 25 factors may enter into its feasibility for any particular application. But of them all . . .

The key to total energy's feasibility is the cost of electricity vs. other fuels

Only if the comparison is favorable to gas or oil is there room to consider such other factors as size, applicability and financing.

As a rule, it doesn't pay to install a total energy plant in areas with very low electricity rates. Such areas are the region served by the federally-administered Tennessee Valley Authority, which can supply power for about a penny a kilowatt hour, and the Pacific Northwest, where power is also cheap. But in most other parts of the country, especially areas where natural gas is cheap, the chances are better than even that total energy can be more economical than purchased power.

But comparative costs can change. Some power companies are reacting to the threat of total energy by chopping their rates. Kansas City Power & Light Co., for example, used to charge garden-apartment

owners roughly 2.25¢/kwh. But early this year, after seeing some 1,000 new apartment units serviced by total energy plants at rates of 1.1¢/kwh to 1.58¢/kwh, KCP&L made its large commercial rate (1.69¢/kwh or less) available to apartment projects. Says a KCP&L representative: "Total energy helped us to expedite a rate study of this apartment market."

Max Okun believes that even with this new rate, utility power can't compete with total energy. But he adds, "Total energy is the first competition the power companies have ever had. It will result in lower rates for everybody."

(Okun foresees another salubrious effect of total energy—an increased willingness by power companies to put in underground wiring at their own expense to compete with total energy's underground

systems. At the same time, he points out, the increasing demand for expensive underground wiring may tend to keep the utility's rates from coming down, and thus give a further break to total energy.)

Assuming fuel rates are favorable, two other critical factors govern the feasibility of total energy:

1. *The project's size.* As a rule of thumb, a total energy plant won't be profitable in either a garden apartment or high rise project smaller than 100,000 sq. ft. The capital and operating costs are too high and the return proportionately too small.

2. *The degree to which the thermal and electrical requirements of a project balance each other.* The more steam a total energy system provides for heating and cooling as it makes electricity, the more efficient it will be. If the two requirements were to coincide perfectly, there would be no need for supplementary steam boilers, and a lot of money would be saved. Such a perfect balance is rare. But a total energy plant can be profitable if it makes full use of all the steam and electricity that it produces, and if it can operate on an electrical load without too many peaks.

Since total energy was relatively unknown as little as five years ago, methods for computing feasibility

have, until recently, been haphazard. But the American Gas Association has developed a 25-factor formula for calculating the feasibility of a total energy system in any given situation. And last year, AGA came out with a briefcase computer that solves this complex equation instantaneously.

But a formula is only as good as the data put into it. So another organization, called the Group to Advance Total Energy (GATE), is now working on methods to calculate more precisely the raw input data for a project's thermal and electrical requirements. (GATE, formed a year ago by 20 gas utilities, now has 29 full members who have contributed \$50,000 each to promote total energy, plus some 50 associate members.) From its studies, GATE will make available three methods for computing feasibility: a "quickie" method, an abbreviated computer method, and a detailed computer study.

With such a program it should be possible to determine quickly and accurately the comparative investment and operating costs of any energy systems: total energy; central gas heating and cooling plus purchased power; central electric heating and cooling plus purchased power; or unitary electric heating and cooling plus purchased power.

When total energy fails, it's usually due to poor design or inadequate maintenance

Like any good salesman, the electrical industry plays up the occasional failure of a total-energy system without going too deeply into the details. But according to the gas industry, out of more than 300 total energy installations, only seven or eight have been pulled out—and these through no inherent fault in total energy itself.

Two of the most publicized failures of total energy were due to poor maintenance. One was at the Ramada Inn in Beaumont, Tex., the other in a complex of three office buildings in downtown Dallas. In neither of these cases, says an AGA official, was adequate maintenance provided. Ramada Inn didn't buy a service contract, and didn't consult the local gas company when it began running into difficulties. The owner of the office buildings also tried to run the total energy plant with untrained help; when he ran into trouble, the Dallas Power & Light Co. obligingly bought his generating equipment for 10% more than he paid for it and installed it in its own plant.

A Florida bowling alley also pulled out its new plant after suffering outages, voltage dips (all the "foul" indicators lit up), and excess noise. Gas officials says poor engineering caused the trouble.

Total energy systems do, of course, suffer from occasional outages. "Every plant has to go through a tuning-up process," says Max Okun. Some of the failures are due to sheer lack of experience. The Kansas City contracting firm of Truog & Nichols did its first total-energy system in Okun's Mission Valley apartments; the contractor didn't know how to start the engines and ruined two starters. At Kenilworth, Okun's second project, there have been several minor failures and one bad one. (Okun lost only one tenant, an airlines pilot who slept through his flight when the electric alarm failed to ring.)

But subsequent projects in the Kansas City area benefitted by these early experiences. When Truog & Nichols installed a total energy plant in Builder Ernie Straub's Georgetown project, it had only one three-minute failure during its entire first year of operation.

At least two builders have installed total energy plants because they feel they will get more reliable electric service. Jonas Talandis of DeKalb Suburban Estates, now building a 2,000-unit garden apartment project in DeKalb, Ill., says, "We expect much more dependable service with total energy." And builder Earl Lachman of Basic Builders, Inc., Santa Monica, Calif., says he switched to total energy because he was fed up with power surges that burned out his equipment. Says Lachman: "We are not particularly concerned with the rate of financial return. We want a system more dependable than purchased power."

Not surprisingly, the gas industry is emphasizing that conventionally purchased power is not as infallible as it may appear. In a six-month survey of selected national newspapers last winter, GATE found notices of 676 power failures. Some 50% of these lasted between one and four hours, and 11% were of four to 24 hours duration. Generalizing from these figures, GATE speculates that 65 million electric utility customers will be out of service 110 million hours each year, excluding major power failures; and that 50 million customers will have an outage averaging slightly over two hours each year. These failures occur most frequently during morning and evening rush hours.

The recent great blackout in the northeast has given added impetus to the acceptance of total energy systems. While all New York City was dark, for example, the lights kept burning at giant Rochdale Village, a complex of 20 high-rise buildings powered

by a total energy plant. In Coral Gables, Fla., a total energy high-rise has weathered two hurricanes without suffering the power failures that struck the rest of the city. And this summer, a windstorm in Kansas City knocked out service in parts of the city for 24 hours; meanwhile, four apartment projects powered by total energy suffered no interruption.

The most critical requirement for the success of a total energy plant is a good service contract. In Kansas City, for example, two of the larger projects have \$16,000 annual service contracts with Truog & Nichols. The service is so sophisticated that the total energy plant can be left unattended; remote electronic monitoring devices watch some 22 critical points in the plant. When something goes wrong, a correspond-

ing light flashes in the contractor's monitor room, and a service team is dispatched knowing just what must be fixed.

In other areas of the country, service arrangements may be made with the local gas company.

Electrical frequency can be controlled accurately. In sophisticated total energy systems, automatic governors maintain electric current at 60 cycles a second; in simpler systems, the current is adjusted every three days in reference to a clock.

Finally, noise is no problem with a properly engineered total energy plant. A HOUSE & HOME editor visited three such plants, two located directly beneath community clubhouses; the noise level was nearly imperceptible.

Kansas City has become a focal point for residential total-energy systems

In the past two and a half years, four new apartment projects in the city have turned to total energy—the largest concentration in the nation. And there probably would be more systems if financing were readily available.

This high concentration is partly due to favorable gas rates: 30¢ per 1,000 cu. ft. for gas compared with about 2.50¢/kwh for tenants' electricity—or roughly six times cheaper for gas than for electricity. But it is Builder Max Okun who almost single-handedly has persuaded Kansas City builders to take advantage of these rates.

Okun began assembling scarce information about

total energy while it was still in an early stage. He also persuaded Fred Brown, sales engineer for Troug & Nichols, to look into the subject. And he converted the city's Gas Service Co. into a strong promoter of total energy.

Okun's two successful total-energy projects—90-unit Mission Valley and 246-unit Kenilworth—convinced two other builders to install similar plants in their projects. (Several more builders in the area also want total energy systems, but the only source of financing—the local gas company—says that it has no more funds available.)

Okun's experience has made him a prime source of

This cost analysis shows savings from total energy at Mission Valley

Installation costs for conventional system

90 remote units at \$700 each	\$ 63,000	
Gas pipe distribution	\$ 4,500	
Wiring furnace & condensing units	\$ 3,500	
Total		\$ 71,000

Installation costs for total energy system

Central heating & cooling plant	\$118,000	
Engines & related equipment	\$ 57,500	
Subground equipment room	\$ 10,000	
Equipment room wiring	\$ 5,600	
Domestic hot water distribution	\$ 4,500	
Total		\$195,600

Total added cost of total energy system

\$124,600

Effective added cost of total energy system

\$ 68,000

(since the additional expense of a central heating & cooling plant justifies itself)

(fig. includes engine & related costs, plus a proportion of installation costs for overall system)

Annual operating costs for conventional system

(Utilities not included in rent)

Lighting, \$10/mo./apt. @ 90 apts.	\$ 10,800	
Air conditioning, \$100/season/apt.	\$ 9,000	
Gas heat, \$30/season/apt.	\$ 2,700	
Annual cost to tenants		\$ 22,500

Owner also Pays

Water heating \$19/season/apt.	\$ 1,710	
Electricity, \$4.10/mo./apt.	\$ 4,425	
A/C maintenance (excluding replacement costs), \$24/yr./apt. @ 90 units	\$ 2,160	
Annual cost to owner		\$ 8,295

Annual operating expenses for total energy system

Generators & Engines	
Fuel for power generation	\$ 2,270
Maintenance	\$ 4,600
Air conditioning	
A/C & heating fuel	\$ 5,000
A/C maintenance	\$ 3,500
Make-up water to tower	\$ 300

Operating cost of total energy plant \$ 15,670

Extra income & savings each year with total energy plant

Tenants pay utilities to Okun (included in rent), \$18/mo./apt. @ 90 apts.	\$ 19,440
Okun drops costs of operating conventional system, annually saving	\$ 8,295
Total savings each year	\$ 27,735

Subtract annual operating costs of a total energy plant \$ 15,670

Annual operating savings with total energy system \$ 12,065

Thus: Payout for engines is 5 $\frac{2}{3}$ years.
Payout for entire extra cost of plant, \$124,600, is 10 $\frac{1}{4}$ years.

If annual investment costs for engines & controls, plus insurance & property taxes, are subtracted (20 yr. mortgage) —\$ 6,465

Annual net savings after investment costs (amount doubles when plant is paid off) \$ 5,600

information on apartment total-energy systems for many out-of-town builders. Numerous visitors, including a score of builders, have trooped through the plants at Mission Valley and Kenilworth; Okun has passed on to them the simplified feasibility formulas that he developed by trial and error. And his sophisticated automation center at Kenilworth (*see photo*) is now compiling valuable thermal and electrical data which will make future feasibility computations much more precise.

Okun's Mission Valley project demonstrates the feasibility of total energy for a very small project. Its 90 units include just 75,000 sq. ft., and use about 830,000 kWh a year at 1.58¢ per kWh. Okun says that even if the electric utility's rate of 1.69¢/kWh had been available when the project was first built, he could still make a profit.

The analysis on the facing page compares actual costs of Mission Valley's total-energy system with estimated costs of a conventional system. The latter consists of remote gas furnaces and air conditioners, plus individually-metered electricity supplied directly to each tenant by the power company at customary tenant rates.

Okun's 300,000-sq.-ft. Kenilworth produces even larger savings with its total energy plant. Reason: The project uses 3,260,000 kWh a year—four times as much as Mission Valley. But at \$35,920 (including debt service) the operating costs of Kenilworth's generating facilities are only twice those of Mission Valley. According to Paul E. Chamberlin, commercial and industrial engineer at the Gas Service Co., Kenilworth's electricity costs 1.102¢/kWh—almost half a cent lower than Mission Valley's.

An electric utility would earn \$81,972 a year, says Chamberlin, if it sold the same amount of power to Kenilworth's tenants through individual meters. By selling it to the tenants himself at rates of roughly 2.5¢/kWh (or 30¢/sq.ft./yr.), Okun nets about \$45,000 (or 15¢/sq. ft.) a year.

What's more, this amount more than covers Okun's \$40,000 annual operating costs for his heating and cooling plant. "So when you have a central heating and cooling system," says Okun, "it's almost mandatory to go the next step to total energy. The savings on electricity more than pay for the central plant's operation."

Another Kansas City garden-apartment project provides a direct comparison between purchased electricity and total energy. When he began building his 390-unit Georgetown, Ernie Straub decided to install a total energy plant; but he also wanted a hedge against the plant's initially high operating costs in case rentals went slowly. So to begin with, he installed a central heating and cooling plant and bought his electricity.

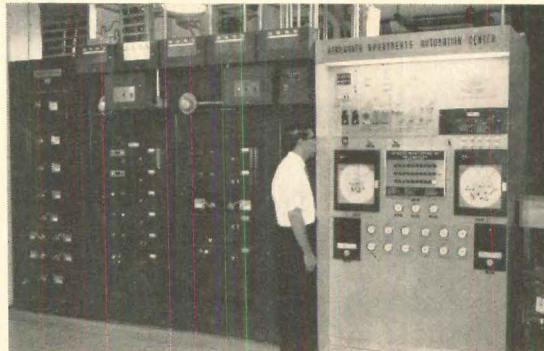
Straub says that by the time the project reached 96 units—the feasible size for total energy—his monthly electric bill amounted to \$6,000. (This was before the commercial electricity rate was granted to apartment projects; although the electricity for the project registered on a single meter, the utility's practice at the time was to divide the monthly consumption by the number of apartments and bill at its individual rate.)

When Straub switched to total energy, his total monthly fuel bill—all for gas—dropped to \$1,000.

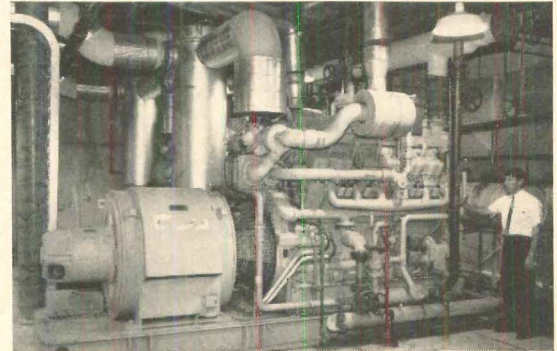
MICHAEL BAYBAK

Here are the key components of a total-energy system

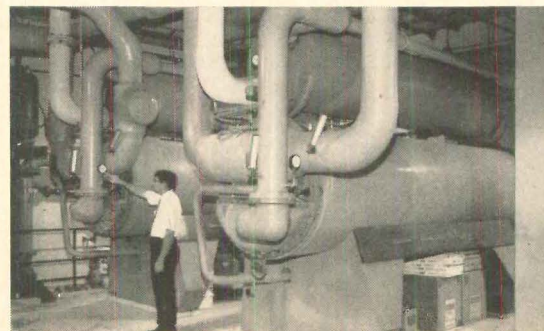
Photos: Norman Hoyt



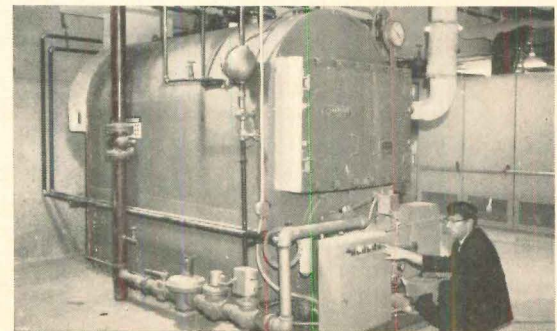
AUTOMATION CENTER monitors critical functions of Kenilworth's total energy plant. System is beneath club.



ENGINE GENERATOR SET is one of three supplying power for Georgetown. Heat recovery unit is behind engine.



TWO ABSORPTION CHILLERS are Kenilworth's cooling plant. They supply unlimited air conditioning to tenants.



GAS-FIRED BOILER at King's Cove project provides supplementary steam when generators have a light load.

9

pace-setting designs for the merchant-built market

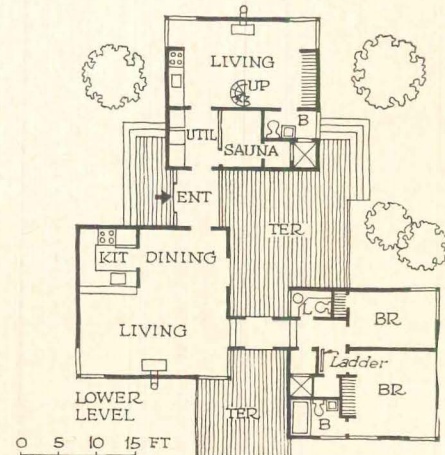
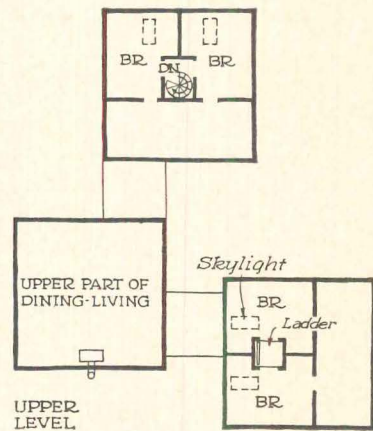
There's a regrettable tendency in the homebuilding industry to consider unusual, interesting design the sole province of the custom-built house, and to relegate the built-for-sale house to the so-called safe category of ordinary, sales-proven design.

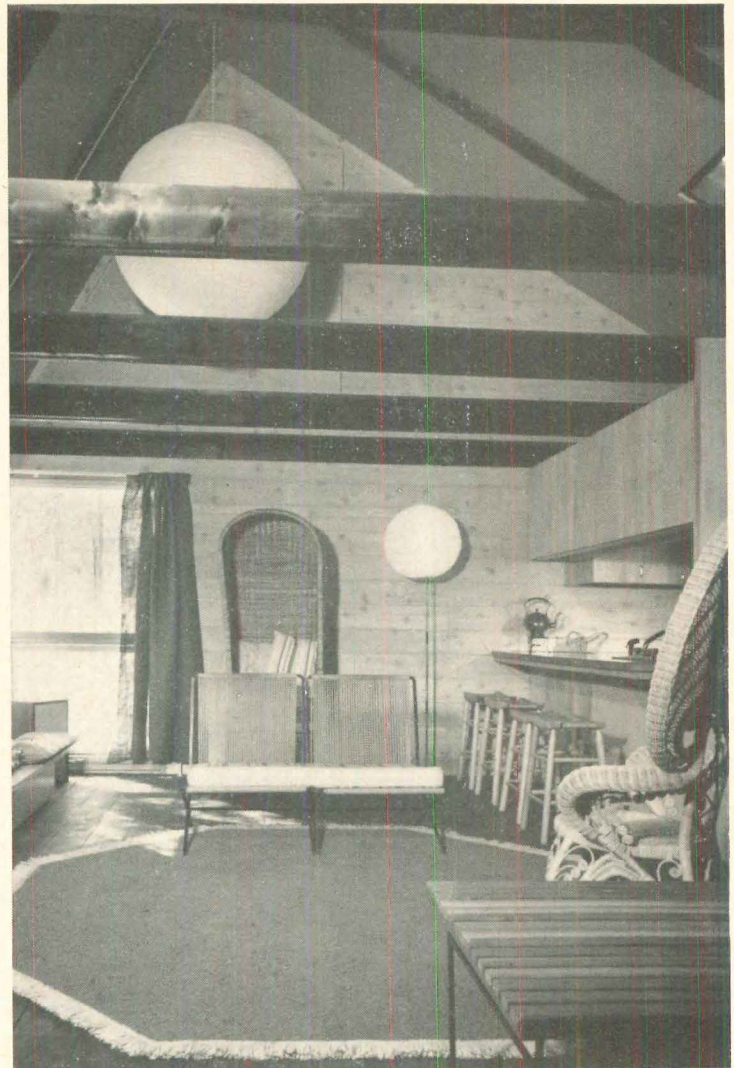
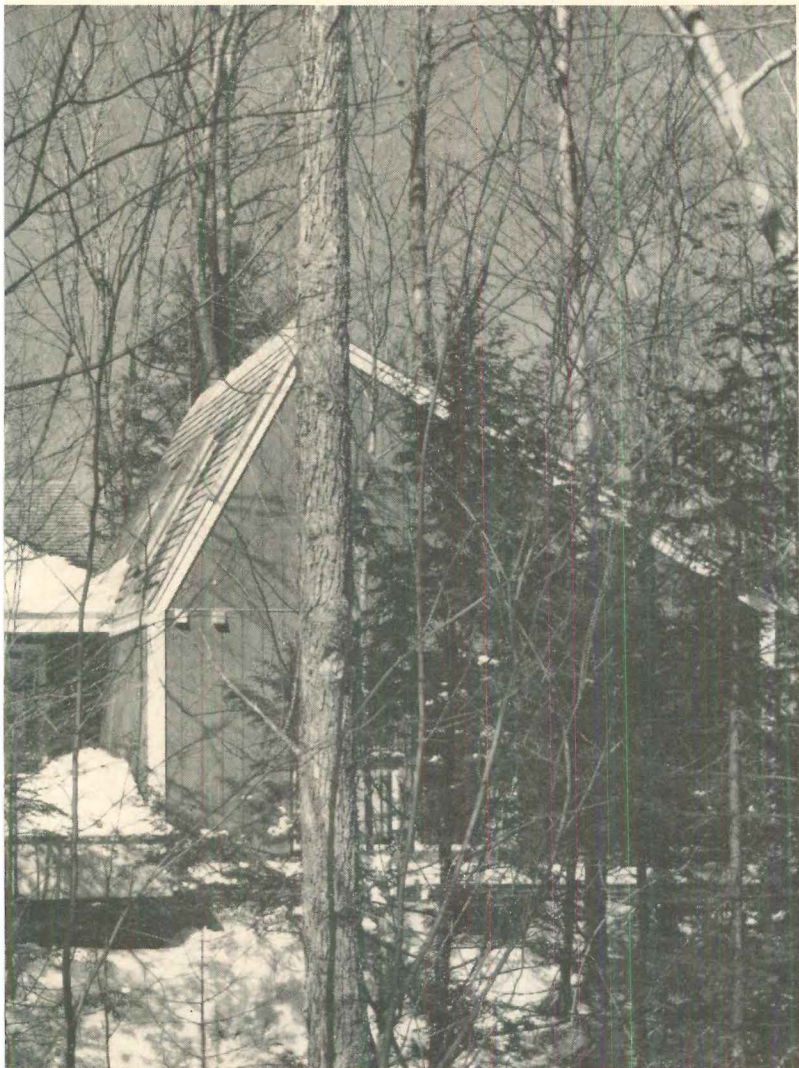
*The nine houses on these pages prove that the two markets can, from the standpoint of design, overlap. Some of them are project models, others were built speculatively. And all of them have enough visual and planning excitement to have won them awards in the 1966 Homes for Better Living competition.**

*Sponsored by The American Institute of Architects in cooperation with HOUSE & HOME and American Home. Judges: Enslie Oglesby, AIA, Dallas; John L. Schmidt, AIA, director of architectural and construction research, U.S. Savings and Loan League; Herman H. York, AIA, New York City; Claude Oakland, AIA, San Francisco; Edmund J. Bennett, builder, Bethesda, Md.; Alan C. Borg, building editor, American Home; and James Gallagher, senior editor, HOUSE & HOME.



MODULAR BOXES contain living area, left, and bedroom wing, right, are connected by breezeway.





BEAMED CEILING over living area is pierced by skylight, top right. Snack bar is in right corner.

A cluster house made up of three modular boxes

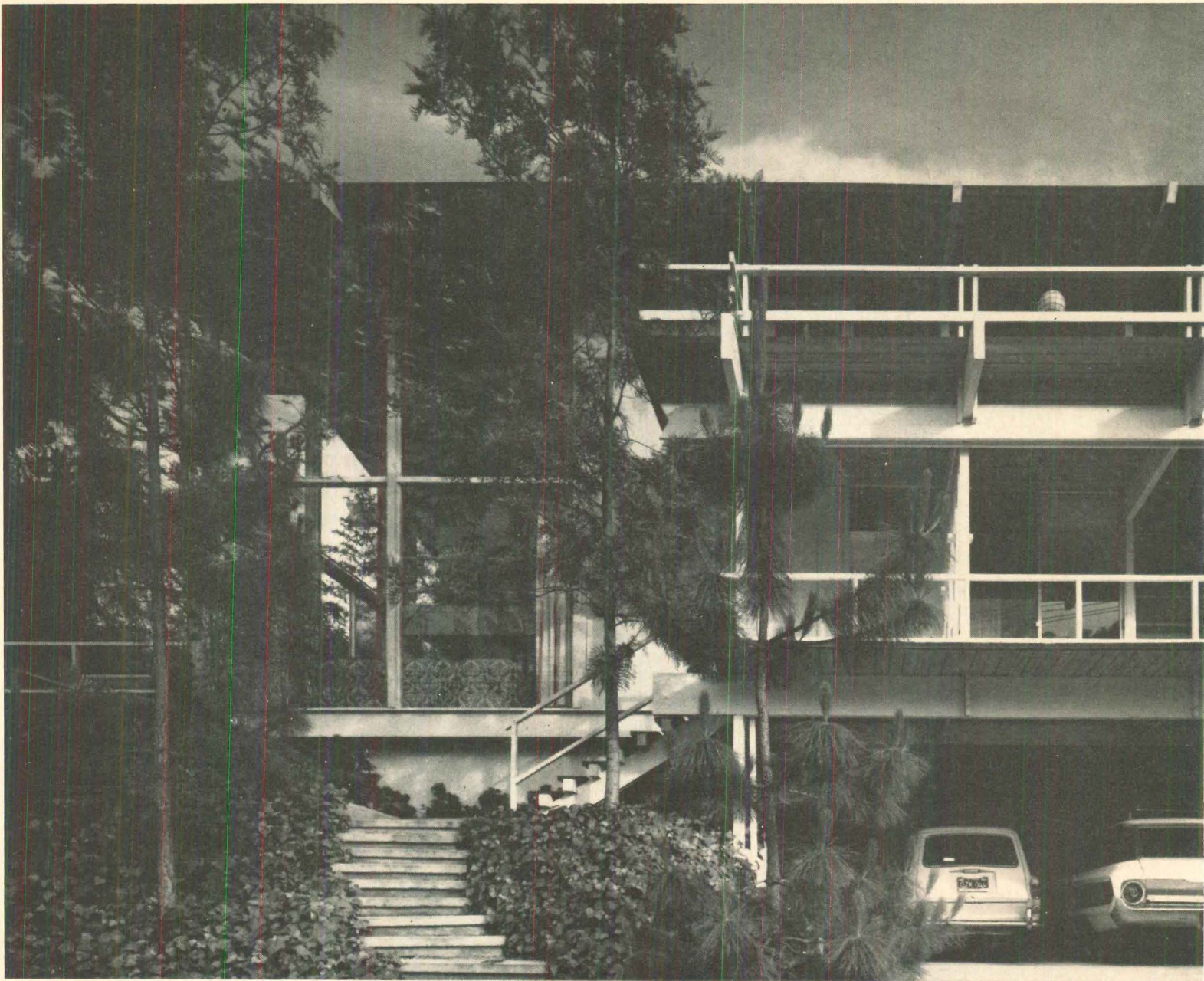
The boxes are actually separate buildings linked by small enclosed breezeways, a system that offers a high degree of plan flexibility. In this model, one box contains the living area, a second has four bedrooms on two levels, and the third is a separate two-bedroom apartment that also includes a sauna. The breezeways serve as entry foyers. Wood decks on both the inside and the outside of the cluster provide space for outdoor living and also tie the elements of the house together.

The main house sections have a fixed depth of 20', but their length can be varied on a 4' module (all three of these boxes are 20'x20'). The salt-box-type roof is high enough to permit bedrooms on the upper level, or, as shown in the photos at right, to provide a spacious beamed vault ceiling. Skylights are used where light must be brought through the roof.

Merit Award. Architect: Bruce Campbell Graham. Builder: DFD Inc. Location: Wilmington, Vt. Price: \$27,000.



OPEN PLAN of living area is apparent in view from behind kitchen. Walls are wood plank.

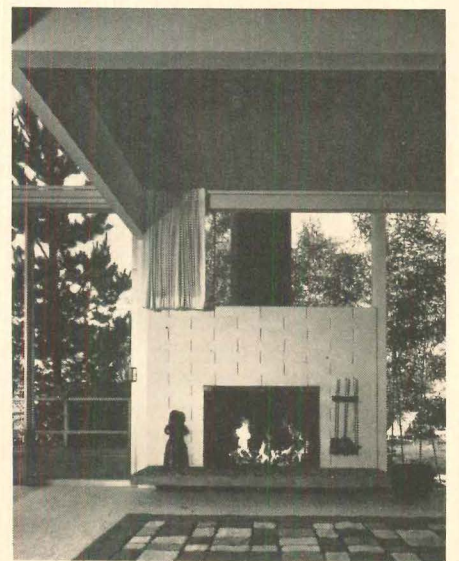


DEEP ROOF OVERHANG protects master-bedroom deck, which shelters dining-room deck below.

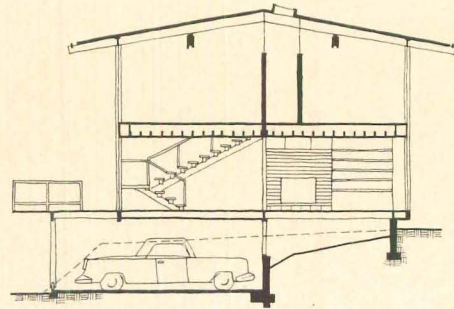
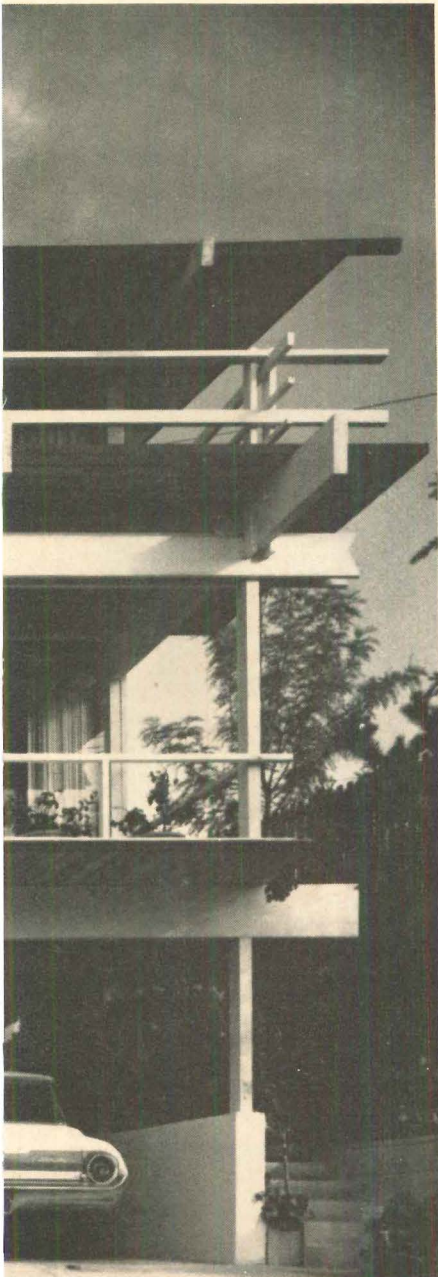
A post-and-beam house with an open feeling inside and out

Three walls of this contemporary model (*see cover*) are almost all glass to capitalize on the view from the site—a pad cut into a steep hillside. The glass walls face four outdoor living areas—three decks, plus a rear terrace on the uphill side. And the sense of openness is carried into the 2,200-sq.-ft. house. On the main floor, the kitchen and dining room form a single large area, and the den and entry are virtually part of the living room. Upstairs, a mezzanine—reached by an open stairway—overlooks the two-story front half of the living room.

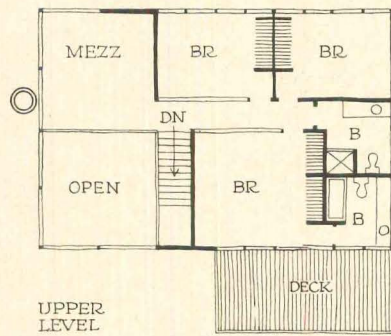
Merit Award. Architect: Richard Dorman & Assoc. Builder: Stanley Martson. Location: Encino, Calif. Price: \$39,750 (including an \$11,750 lot).



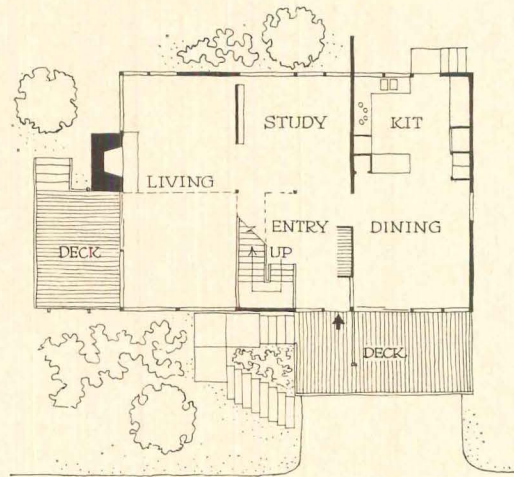
CONCRETE-BLOCK FIREPLACE is flush with living room's glass wall.



SECTION

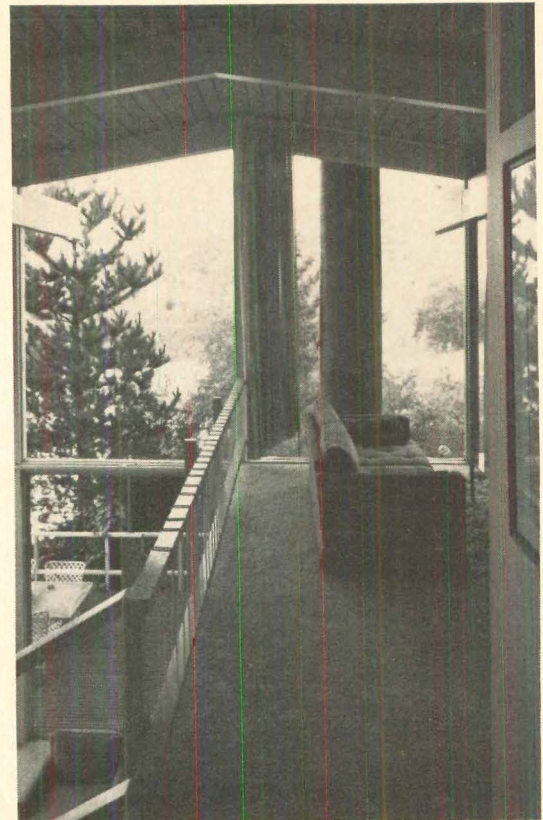


UPPER LEVEL

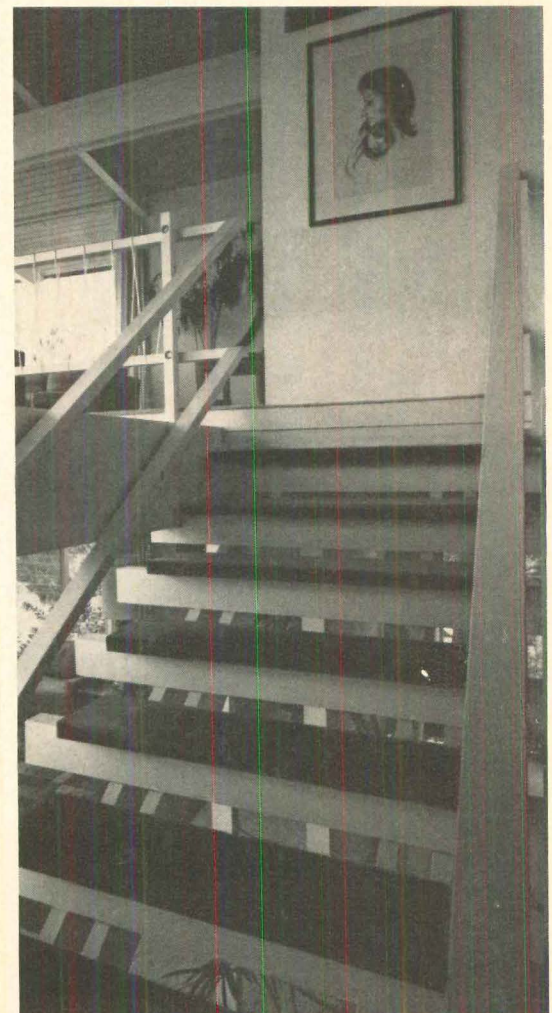


LOWER LEVEL

0 5 10 15 FT



MEZZANINE over rear half of living room serves as upstairs study, play area, or sitting room.

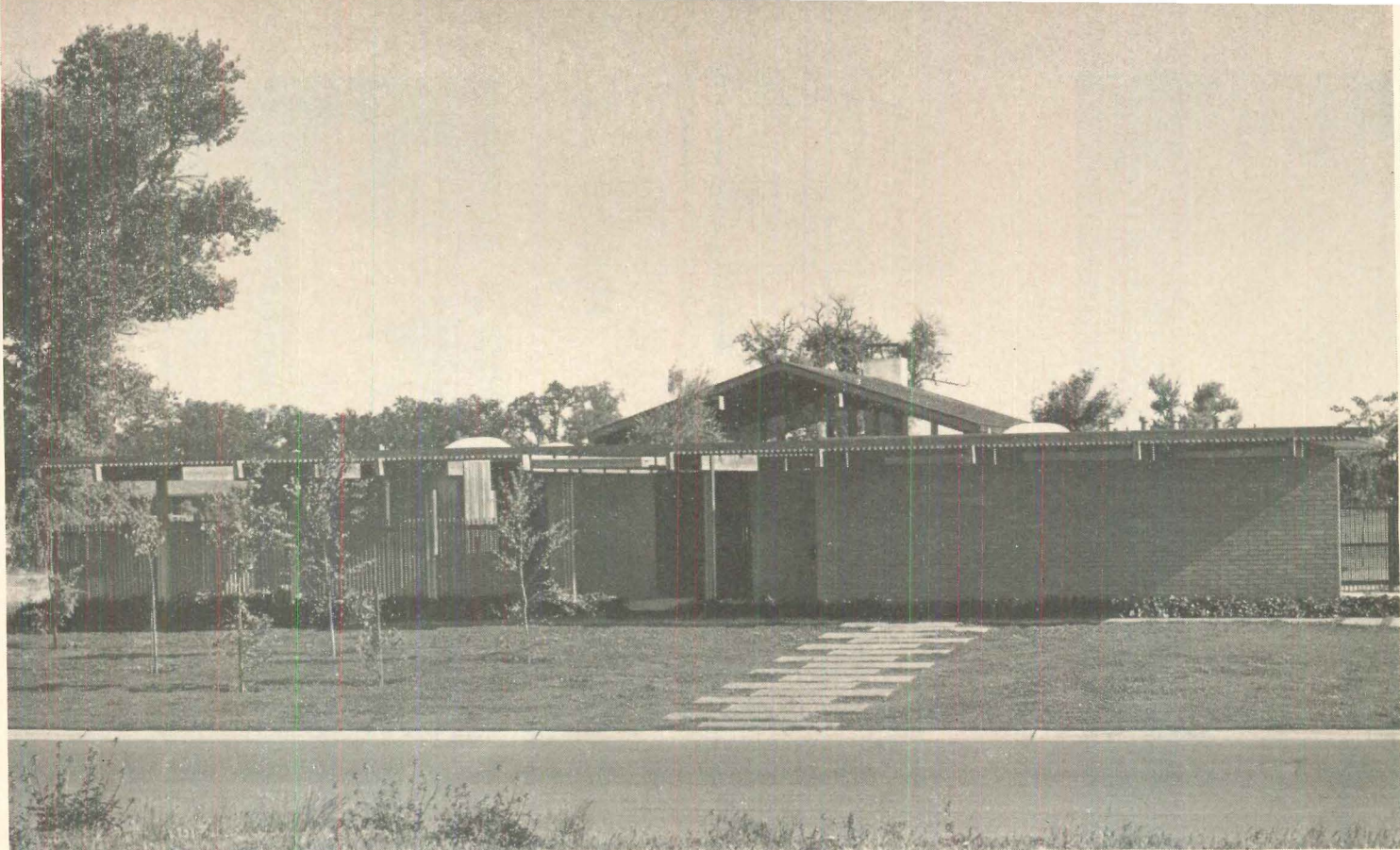


OPEN STAIRWAY leads to bedroom level. Mezzanine is at top left, three bedrooms to right.



TWO-STORY SECTION of living room has glass walls and pitched ceiling with exposed beams.

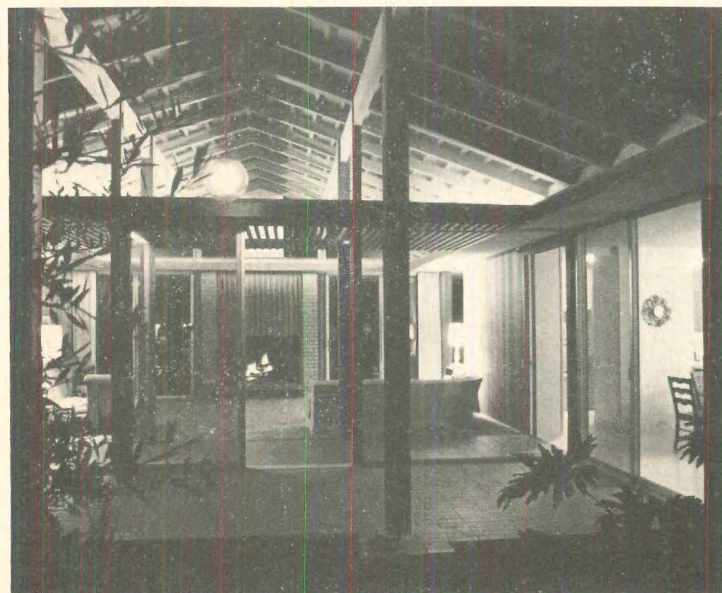
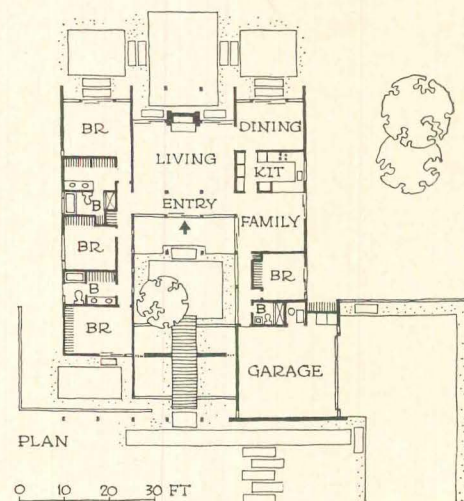
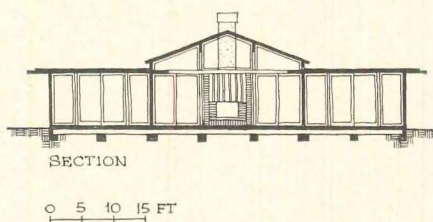
continued



CLOSED FRONT combines brick with redwood siding and fences. Side-entry garage is at right.



OPEN REAR has glass doors to terrace from dining room, living room, and master bedroom.



ENTRY GALLERY, seen here from entry court, is separated from living room by glass wall.

A U-shaped house built around a closed entrance court

The courtyard provides an interior outdoor living area—almost a necessity because the exposed lot overlooks a golf course. It is large (400 sq. ft.), screened from the street by an 8' brick wall, and partly shaded by an overhead wood trellis.

The trellis is a key unifying element. It extends across the front of the house; it forms a dropped ceiling in the living room, and its design is repeated in front and rear fencing. The house consists of three sections—the peak-roofed living room and entry gallery and two flat-roofed wings.

Honorable Mention. Architect: Fisher-Friedman Assoc.; Robert J. Geering, associate. Builder: L & E Emanuel Inc. Location: Davis, Calif. Price: \$55,000 (including a \$20,000 lot).

Photos: Fred Lyon



SHELTERED SIDE is high, opens to living-room deck, center, and dining terrace at far right.



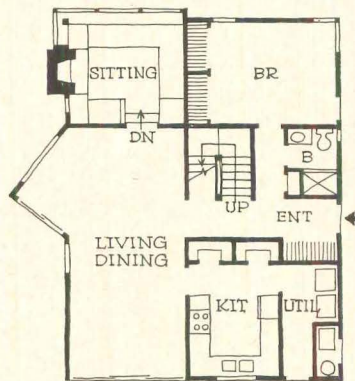
WINDWARD SIDE is low to reduce buffeting. Baffles on fence deflect wind from neighbor's yard.

A vacation house designed for a rugged, windswept site

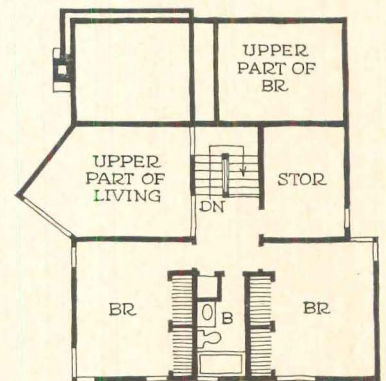
Northwest winds are so high on the cliff-top, ocean-front site that possible roof types for this house (and five others in the same project) were tested in a wind tunnel. The answer: a shed roof, plus carefully placed fences topped by wind baffles.

Partly because of the shed-roof design, interior spaces are surprisingly varied. For instance: The two-story living room with a pitched ceiling is flanked by a sunken inglenook, also with a pitched ceiling, and a dining room with a one-story, beamed ceiling.

Honorable Mention. Architect: Joseph Esherick & Assoc. Builder: Oceanic Properties Inc. Landscape architect: Lawrence Halprin & Assoc. Location: Sea Ranch, Calif. Price: \$54,000 (with a \$9,000 lot).



LOWER FLOOR



UPPER FLOOR 0 5 10FT



INGLENOOK has low, sloping ceiling and built-in sofas, combines snug feeling with ocean view.



DINING ROOM has beamed ceiling and glass wall with sliding door to terrace.



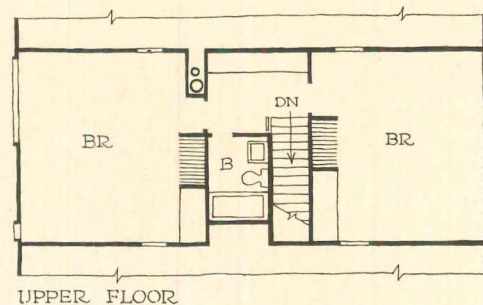
LIVING ROOM, viewed from upper floor, gains open feeling from glass wall and high ceiling.

continued

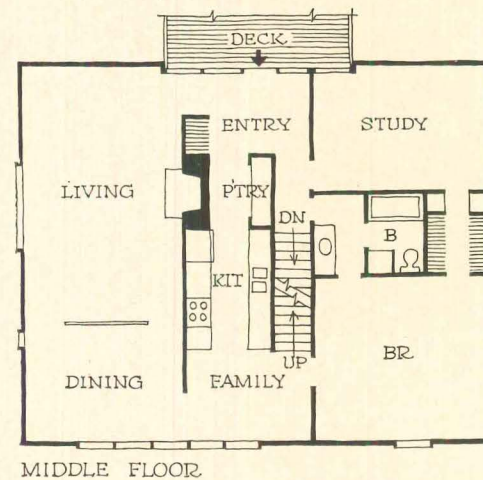


GABLE-END WALL has lower-level strip windows over which upper levels of house seem to float.

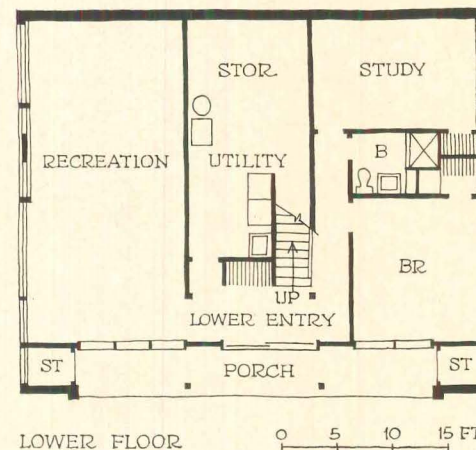
Photos: Warren Ballard



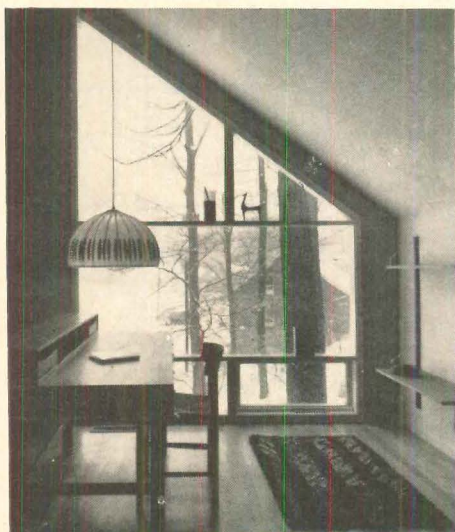
UPPER FLOOR



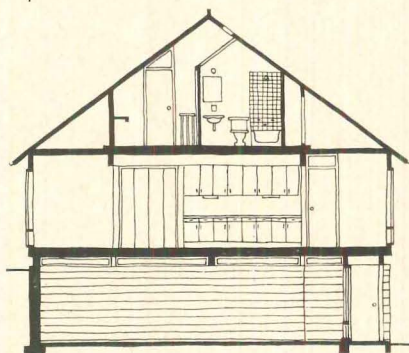
MIDDLE FLOOR



LOWER FLOOR



GABLE-END WINDOW brings daylight into one of two large bedrooms (16'x18') on upper level.



SECTION



FIREPLACE WALL in living room stops short of one of two laminated beams supporting top floor.

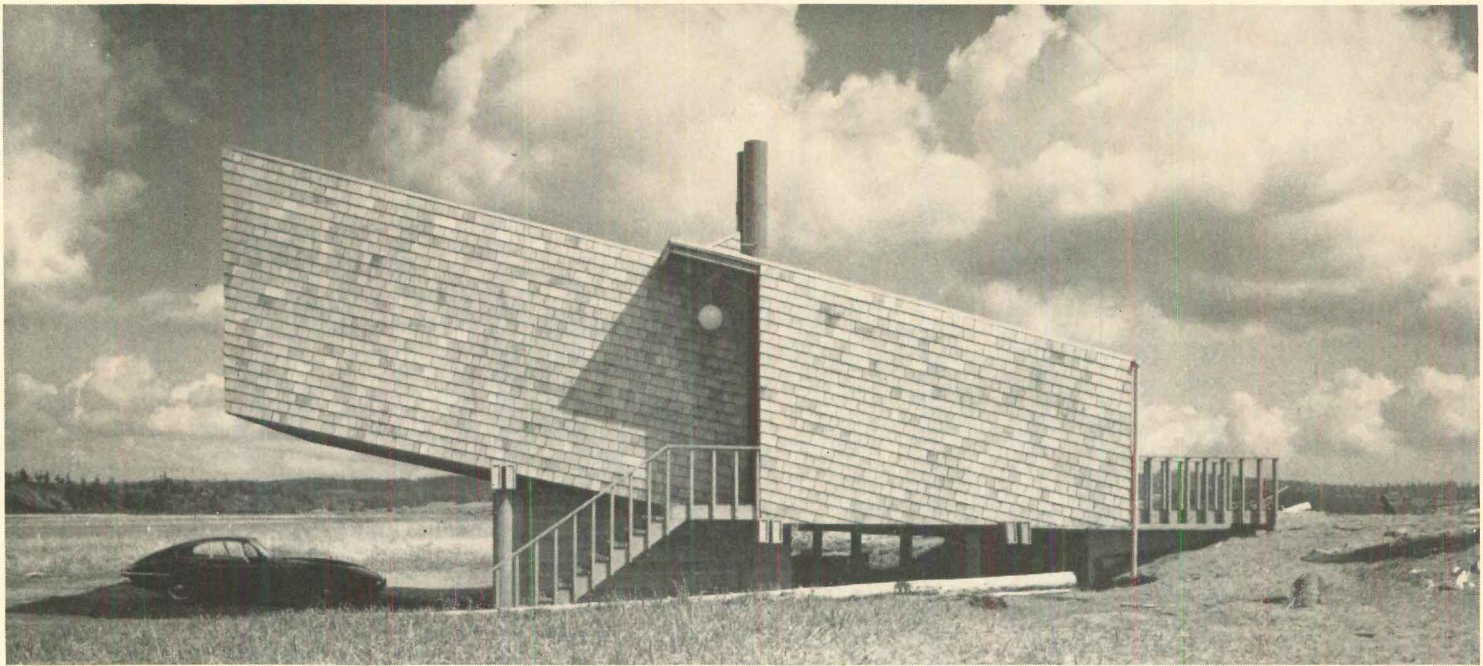
A big but compact model designed for problem land

The two-fold problem: 1) step slopes that seemed to call for extensive—and costly—earthmoving; 2) small lots (only 8,000 sq. ft.).

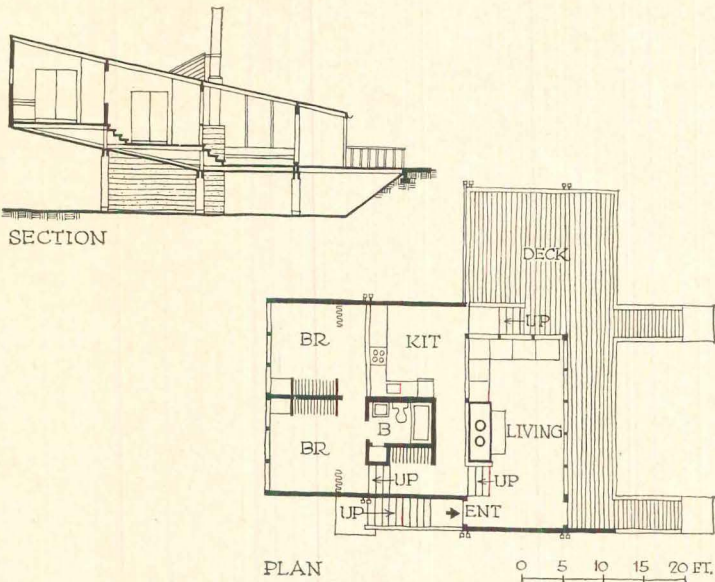
The two-fold solution: 1) an almost-square house that can be set at different angles to the slopes with a minimum of excavating and without destroying the character of the heavily wooded site; 2) a plan that puts 2,600 sq. ft. of living area (including six bedrooms and three baths) on a small foundation by making the most of attic and basement space. The mid-level plan alone has everything needed in a two-bedroom house.

The result: 38 sales in 2½ years.

Honorable Mention. Architect: Cross & Adreon. Builder: Matthews-Schwartz Inc. Location: Bethesda, Md. Price: \$39,000 to \$43,000 (with land).



12' CANTILEVER gives the house its distinctive look and also acts as a carport roof.

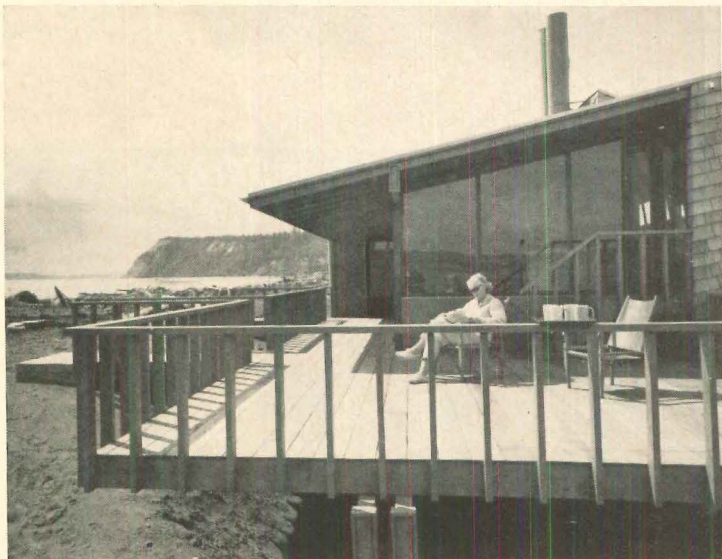


A stilt-mounted beach house with a three-step plan

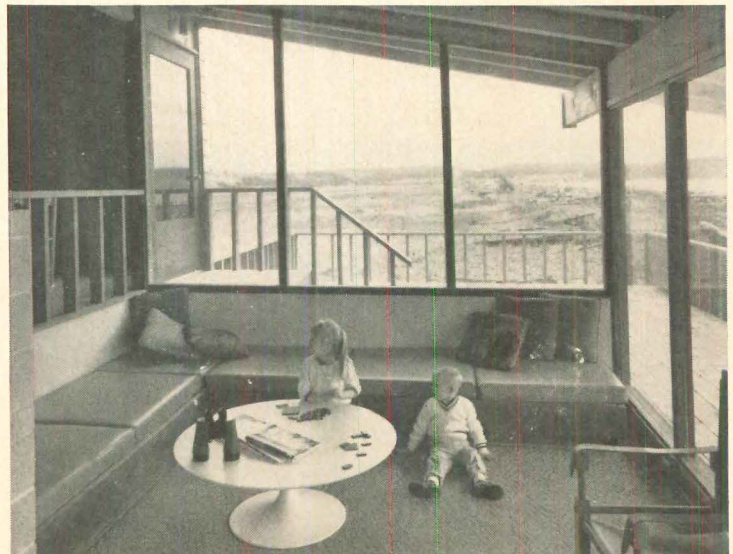
The stilts put this house at the same level as a 6' natural dike formed by the driftwood-strewn beach. And the three-step interior arrangement (*section, left*) permits an open plan—only the bathroom is walled off from other areas—without sacrificing visual privacy. The living room is on the first step, the kitchen and entry hall on the second, and the bedrooms on the third, which cantilevers 12' on the landward side. Space beneath the house is used for a carport and a concrete-block utility room.

Honorable Mention. Architect: Liddle & Jones. Builder: Al Wiklof. Location: Langley, Wash. Price: \$23,000 (including a \$5,000 lot).

Photos: Don Normark



BIG DECK (400 sq. ft.) opens off living room, can also be reached by steps from kitchen.

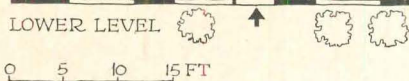
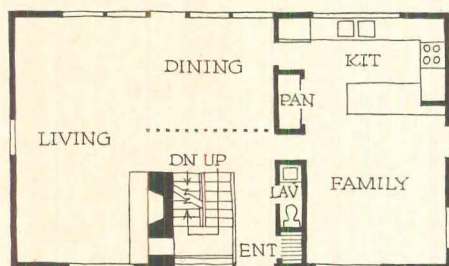
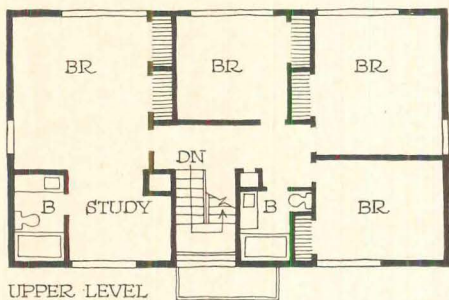


BIG LIVING ROOM (12'x24') on lowest level of house is open to mid-level kitchen at left.



LOW-MAINTENANCE EXTERIOR, brick with natural cedar and redwood, has panelized look.

Photos: Robert Lautmar



A contemporary version of the traditional two-story house

The second-floor bedroom arrangement is pure traditional, but the rest of this house is pure contemporary in both plan and design.

Items: 1) an open main floor consisting of two large areas, the kitchen and family room and the rear-oriented living and dining rooms; 2) an open stairwell that gets outside light through opaque glass panels; 3) a see-through, mahogany-strip screen separating the tiled entry hall from the dining room; 4) a low-maintenance exterior of brick and natural cedar and redwood (only the doors and three small rear panels are painted).

Honorable Mention. Architect: Deigert & Yerkes. Builder: Miller & Smith Assoc. Landscape architect: Edmunds & Hitchcock. Location: Cabin John, Md. Price: \$32,000 (including a \$7,000 lot).



ENTRY HALL, formed by screen at right, has open stairs, tile floor.



BUILT-IN TABLE for informal dining separates kitchen from family room. Pantry is at right.

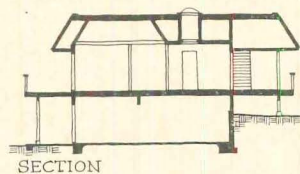


BRICK FIREPLACE WALL separates front end of living room from entry hall and open stairwell.

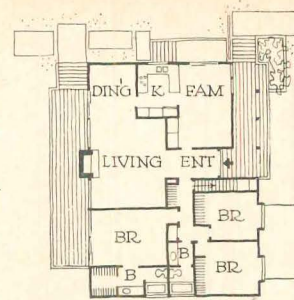


BROAD ENTRY DECK, right, is reached from uphill side of lot. Siding is stained redwood.

A. Robert Fisher



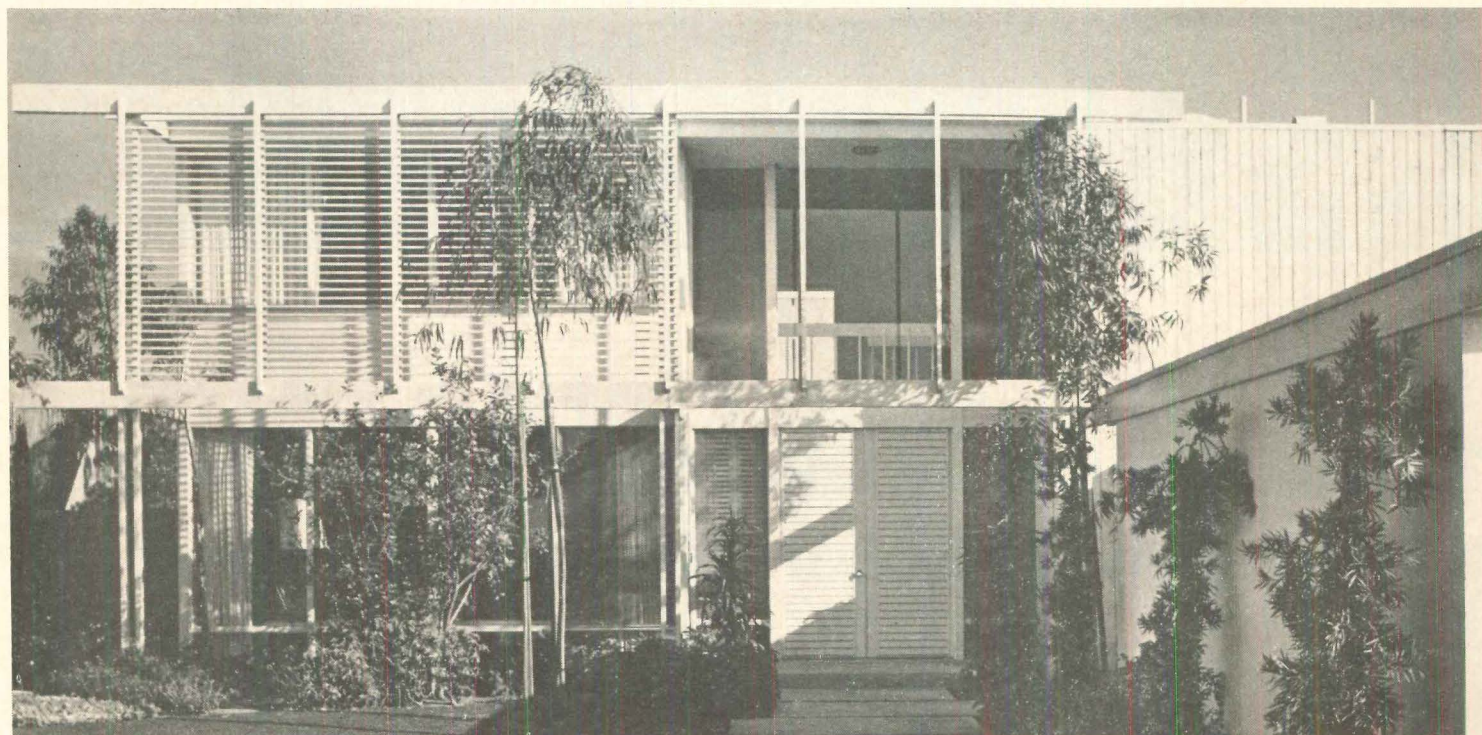
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A hillside model distinguished by its big mansard roof

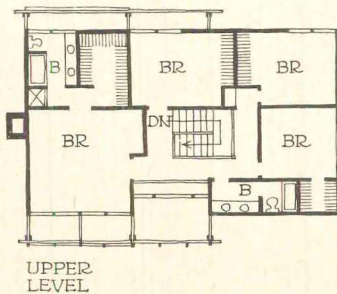
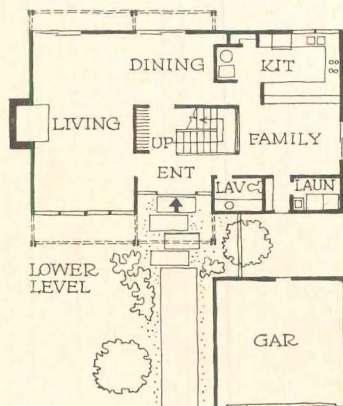
The roof is the strong design element here. It gives the house a low look, permits a 14' living-room ceiling, and protects much of the outdoor deck area. The one-story house was designed for small (70' x 120') lots with gentle, side-to-side slopes.

Honorable Mention. Architect: Fisher-Friedman Assoc.; Robert J. Geering, associate. Builder: Brad-dock, Logan & Valley. Landscape architect: Anthony Guzzardo & Assoc. Location: Oakland, Calif. Price: \$38,250 (including a \$16,250 lot).



LATTICEWORK screens master-bedroom windows from street. Wall of detached garage is at right.

Richard Gross



0 5 10 15 20 FT

A house that combines privacy with openness on a 60' lot

This 2,700-sq.-ft. two-story (for details, see H&H, Mar.) is wide open to the outdoors. Yet it's no fish bowl. Reasons: Its glass walls and most of its windows are at the front and rear; some of this glass is screened by lattice-work; and its front garage walls off one side of the front yard.

Honorable Mention. Architect: Richard Dorman & Assoc. Builder: Classic Development Corp. Location: Huntington Beach, Calif. Price: \$51,000 (including a \$22,000 lot).



TAN-TAR-A, \$4-million resort on Lake of the Ozarks, offers 300 rooms open year-round. Summer occupancy—95%—reaches 750 people per week-end.

This builder-owned lake resort opened the door to the sale of 300 high-priced vacation houses

Called Tan-Tar-A, the resort has given Builder Burton Duenke of St. Louis two strong guarantees that his \$10-million vacation-house project will be a success: 1) an 800,000-sq.-mile market of upper-income prospects; and 2) 300 vacation-house sites so valuable they can only be leased.

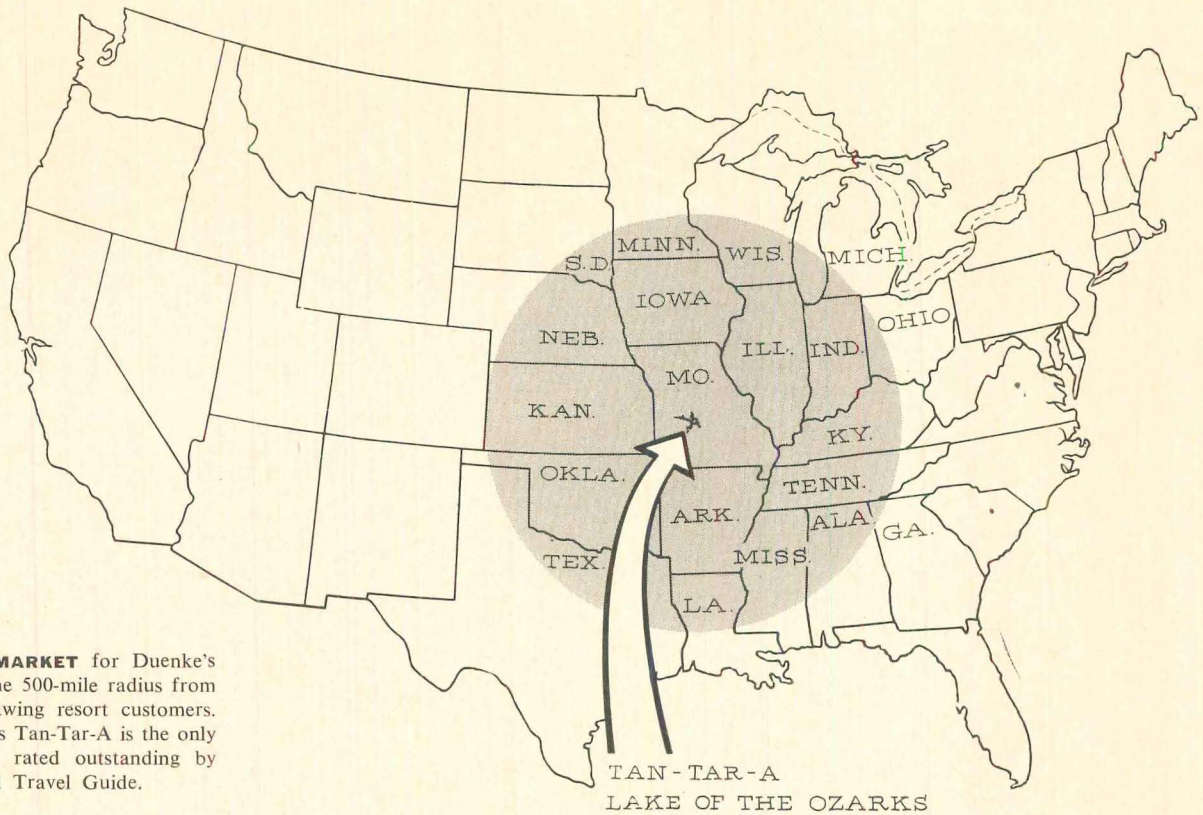
Indeed, without the resort, Duenke's vacation houses wouldn't stand a chance. When he started buying the land six years ago, it had no significant cash value. It is located on Lake of the Ozarks at Osage Beach, Mo., and in 1960 the area had nothing but fishing shacks and honky-tonk amusement spots.

But the setting was made to order for upper-income vacation living. Lake of the Ozarks is a series of dammed-up river valleys with a highly irregular shoreline

of peninsulas and bays. It is 130 miles long but it has 1,375 miles of shore, so the 400 acres Duenke bought gave him several miles of waterfront property. Further, the land is rugged, heavily treed, and so steeply sloped that many of the sites are at the edge of cliffs overlooking the lake.

Duenke's plan: establish a prestigious form of social life at Lake of the Ozarks to attract people of means.

Duenke started small, however, buying his land gradually in four parcels. His first rental units were rustic cottages; when those proved successful he moved up to larger cottages, then built a restaurant. As the resort's success grew, so did the resort—in five years it expanded to 40 buildings with 300 rental units, five



20-STATE POTENTIAL MARKET for Duenke's vacation houses is the same 500-mile radius from which he is currently drawing resort customers. Promotion literature claims Tan-Tar-A is the only resort in a 15-state area rated outstanding by both AAA and the Mobil Travel Guide.

restaurants, and all the basic summer-winter recreational facilities (*drawing p. 99*). Duenke's investment to date: about \$4-million.

In laying out and expanding the resort, Duenke never lost sight of his eventual aim to build vacation-houses. He confined the resort complex to one large peninsula, opening the land on the other peninsulas only to hiking and horseback riding. The peninsula shoreline gives Duenke more than just abundant waterfront; it permits his vacation house sites to be located a short distance from the resort facilities, yet remain isolated (almost like islands).

Duenke decided this year that his land was finally ready for high-priced, built-for-sale houses. Tan-Tar-A had just completed its first winter season, with a year-round occupancy that averaged 65% (profits start at 60%). The summer-occupancy average has been 95% to 100%, and Duenke expects his current 12-month season will produce an average occupancy of 78%.

More important, Tan-Tar-A is now drawing vacationers from a 500-mile radius (*map, above*), and is considered by travel associations to be the outstanding resort in the 15-state region surrounding it.

With that kind of reputation and that size market, Duenke believes he can price

most of his houses—depending on their sites—from \$35,000 to \$50,000. When he started his first group of 98 houses earlier this year, he had a waiting list of 117 prospective buyers.

But while Duenke depends on Tan-Tar-A's reputation to bring him prospects, he isn't depending on it to sell his houses. For that, he is banking on eye-catching design and siting. Duenke, one of the few builders in the country who was selling contemporary houses as far back as 1950,



BUILDER DUENKE has long had a fondness for contemporary design, and Tan-Tar-A reflects it.

is going all out for one-of-a-kind contemporary treatments at Tan-Tar-A. His chief architect, Al Long, is a former professor of architecture who left a post at the University of Kansas for the opportunity to work on the resort.

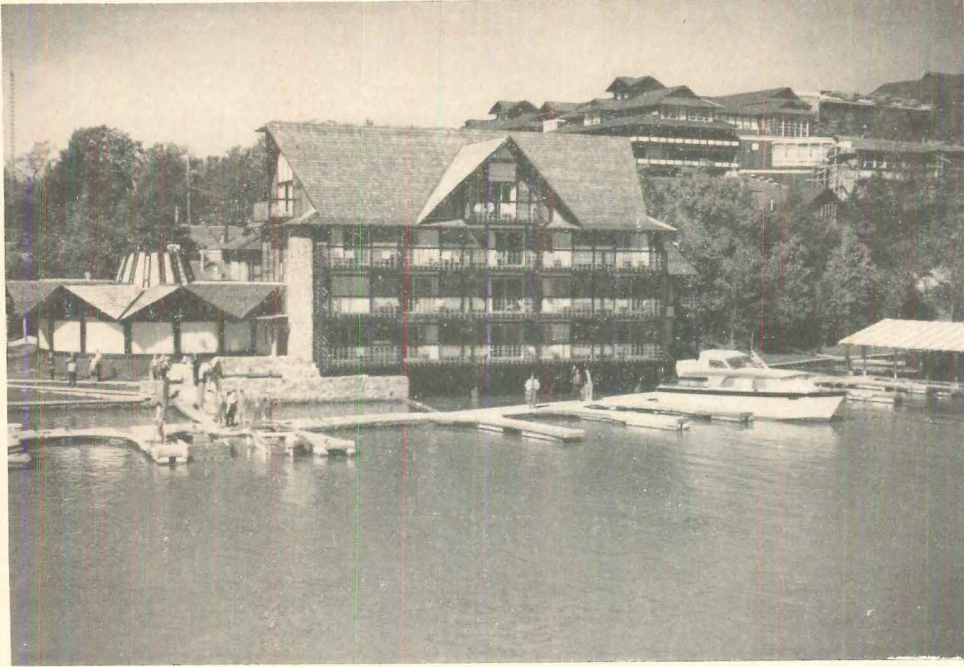
As is the case with most of the resort buildings, no two houses will bear any similarity in either plan or design. Only the materials—heavy timbers, thick-butt shingles, and rough-cut native stone—will be the same. And siting of houses will depend solely on how to make the most of each lot and its lake view. Duenke sites a house first, then draws the lot around it (*see p. 100*).

To insure that the land around the houses will remain natural, Duenke 1) makes his workmen use shovels instead of earthmoving machinery, 2) keeps common land between all his sites, and 3) specifies in his ground leases that buyers can't cut down trees taller than 4'.

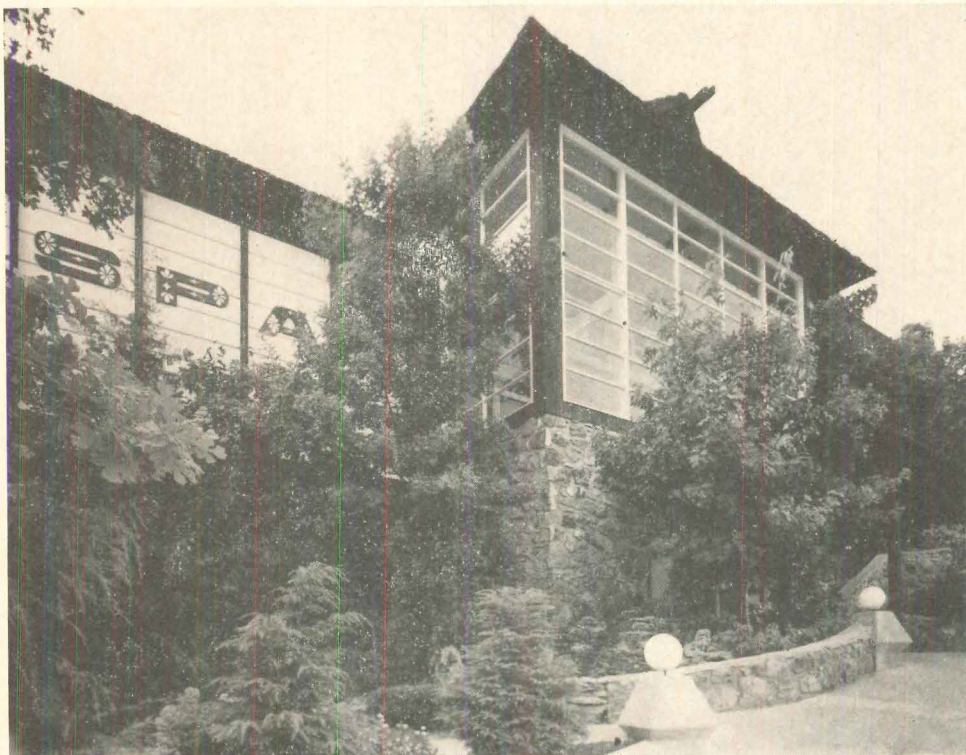
As the vacation-house area of Tan-Tar-A grows, so will the importance of the resort section. Besides social life, it will provide home owners with maid, linen, and yard service. It will also serve as a realty headquarters for renting and managing the vacation houses in the owners' absence.

For a closer look at Burton Duenke's vacation scheme, turn the page.

Photos: Robert Arteaga



WATERFRONT HOTEL offers a lake view on three sides. Every room has a balcony and window walls. Daily rates are \$30 to \$40 for one room, \$43 to \$50 for two-room suites with kitchenettes. Adjoining circular restaurant is designed around a loadbearing fireplace (*interior view above*).



RECREATION BUILDING contains a health spa, indoor pool and ice-skating rink in well-glassed areas (*left*). Other wings (*above*) provide a meeting hall and hospitality suites for the resort's increasing convention trade.

Duenke's resort formula: Pack in variety and excitement

At Tan-Tar-A, variety begins with the accommodations. There are three big hotels, plus studios, suites, penthouses, cottages, and chalets renting from \$20 to \$80 a day. A main hall for conventions accommodates 1,400 persons. And since families of all ages go to Tan-Tar-A, there are two nurseries.

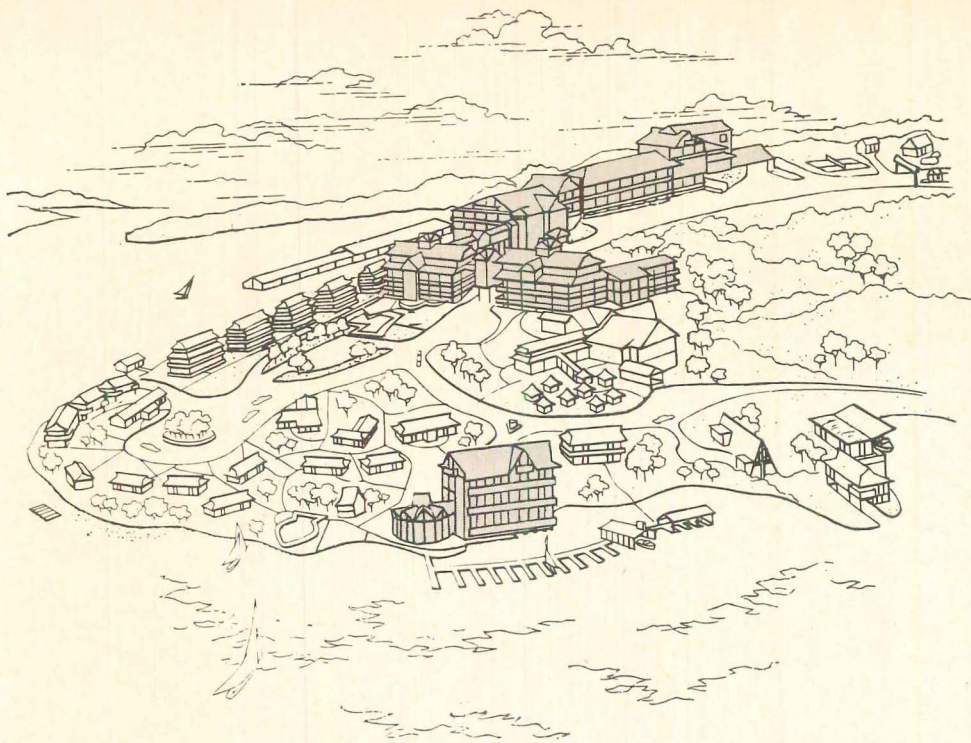
Recreation is equally varied. In addition to its three swimming pools, eight bowling alleys, five restaurants, horseback riding, health spa, and boating, the resort has an

indoor skating rink and ski slopes equipped with snow-making machines. Big-name bandmen like Louis Armstrong appear regularly.

Tan-Tar-A's buildings are grouped around a peninsula (*map opposite*), so the lake seems to surround the resort and is always in view. And there is both variety and excitement in the design of the buildings. All of them are basically contemporary, with an oriental motif expressed in pagoda roofs and exposed timbers that

frame walls of glass. Native stone, which is plentiful, has been used extensively for decorative foundations, walls, columns, and fireplaces. No structure—even an outdoor snack bar (*photo opposite*)—is considered too small for the timber-stone-glass design treatment.

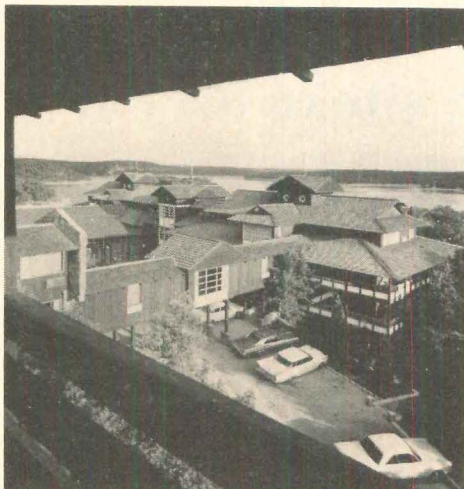
Developing this resort area established a strong market for Duenke's vacation houses. And it also helped him pioneer design approaches and production methods for the houses (*see p. 100*).



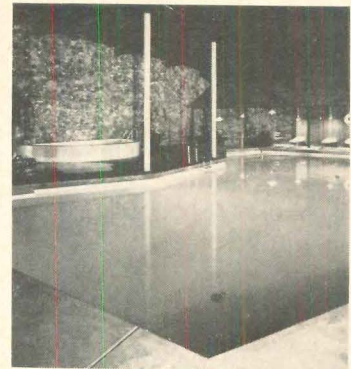
RESORT LAYOUT covers a 200-acre peninsula, which has enough shoreline so most residential units have lake frontage. Shaded buildings are shown in photos opposite and below.



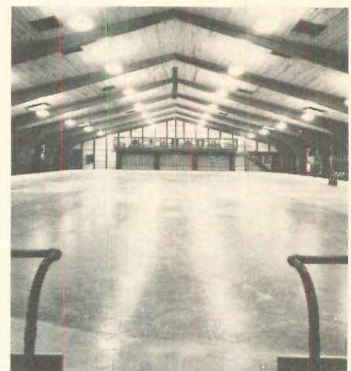
HILLTOP HOTEL, with enclosed access to dining and recreational facilities (*left*), includes tower suites and penthouse units renting from \$40 to \$60 a day. Smaller rooms start at \$26. Duenke's term for his massive-timber, curved-roof design style: Pacific Island.



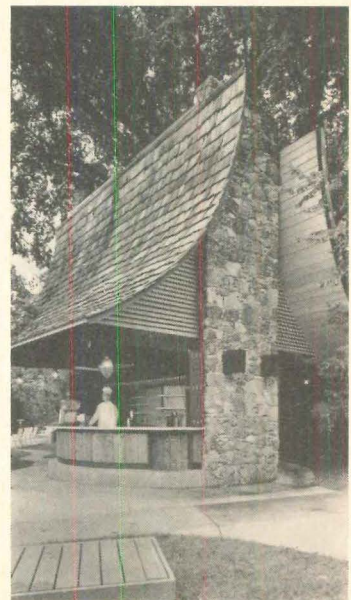
Eye-catching design sets off facilities



INDOOR POOL, bordered by rough-cut stone walls, is one of Tan-Tar-A's four swimming areas. The others: two outdoor pools and a sand beach at the lake shore.



INDOOR SKATING RINK, covered by exposed beams and decking, supplements skiing for Tan-Tar-A's winter vacationers. The winter season starts around Thanksgiving.

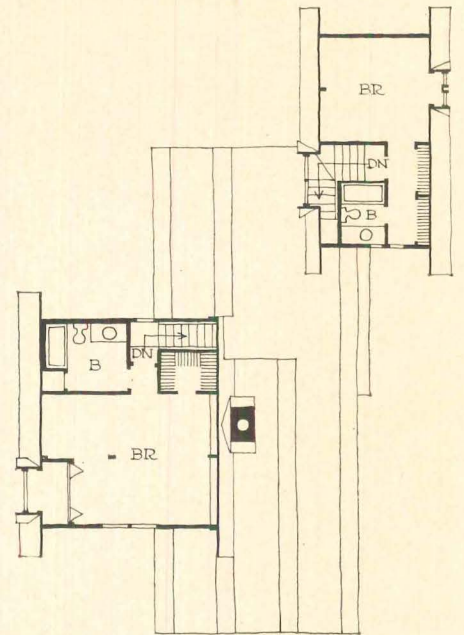


SNACK BAR near outdoor swimming pool reflects the Pacific Island theme—timbers, decking, and native stone—that Duenke uses throughout the resort.

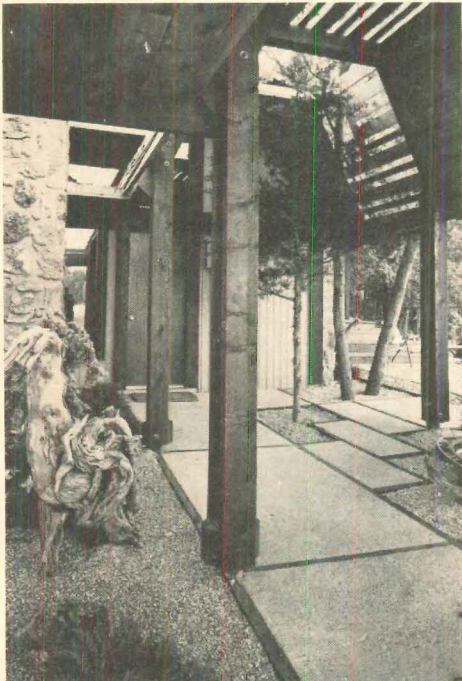
Photos: Robert Arteaga



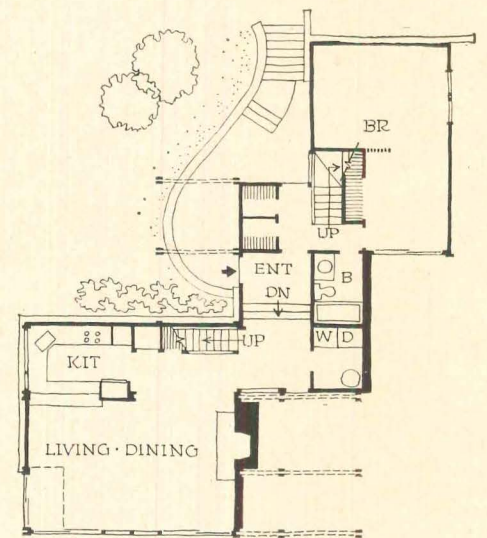
BEACH-SITED HOUSE at tip of lake peninsula has three well-isolated bedroom suites on two levels.



UPPER FLOOR



DEEP OVERHANGS and roof extensions surround the house with sheltered areas for outdoor living.



LOWER FLOOR

0 5 10 15 20 FT

Duenke's vacation-house formula: Play the site to the hilt

And in fact, Tan-Tar-A's lot boundaries are based entirely on house siting. Duenke picks the most desirable location for a house, then scribes a circle with a 50' radius around it to form a circular lot (*land plan opposite*). The land between the lots is commonly held.

The houses themselves are hand-fitted to the site's terrain and to its foliage. Foundations, which are hand dug, follow the outlines of limestone cliffs and pebble beaches. Roofs and retaining walls are

notched or curved around tree trunks and tree limbs.

All of Duenke's utility trenches are dug by hand so they can skirt trees and leave land contours virtually untouched. Costs are held down by combining water, electricity, and telephone lines in one trench.

Approval for this kind of hand-tailoring is no problem in Duenke's backwoods locale. There are neither codes nor zoning, and Duenke owns his own water company and sewage plant. All he must record on

his plan is the location of roads.

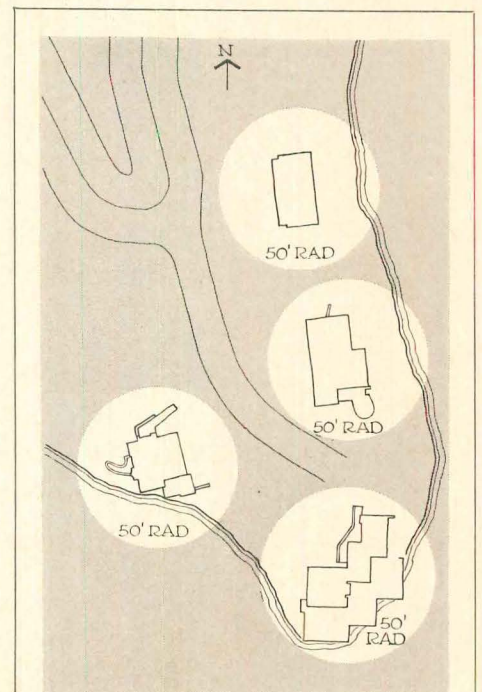
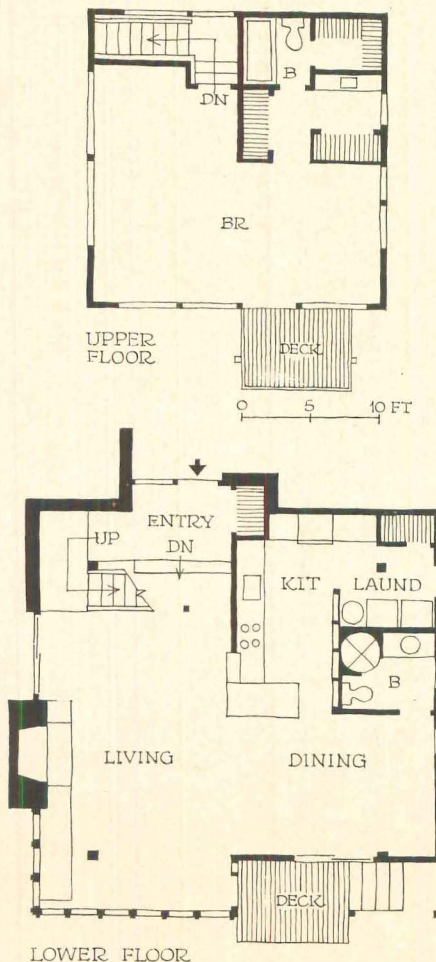
But finding workmen to produce the hand work was not easy. Duenke's main homebuilding operation is 175 miles away in St. Louis, and there is little labor near Tan-Tar-A. So he brought in a veteran superintendent from St. Louis and put together not only a carpentry crew but a permanent crew of masons. Finding plumbers was a serious problem at first, but unions in the area were eventually attracted by the extensive resort work.



CLIFF-SITED HOUSE required hand-dug foundation to prevent damage to overhanging trees. Massive round chimney was built entirely of native stone.

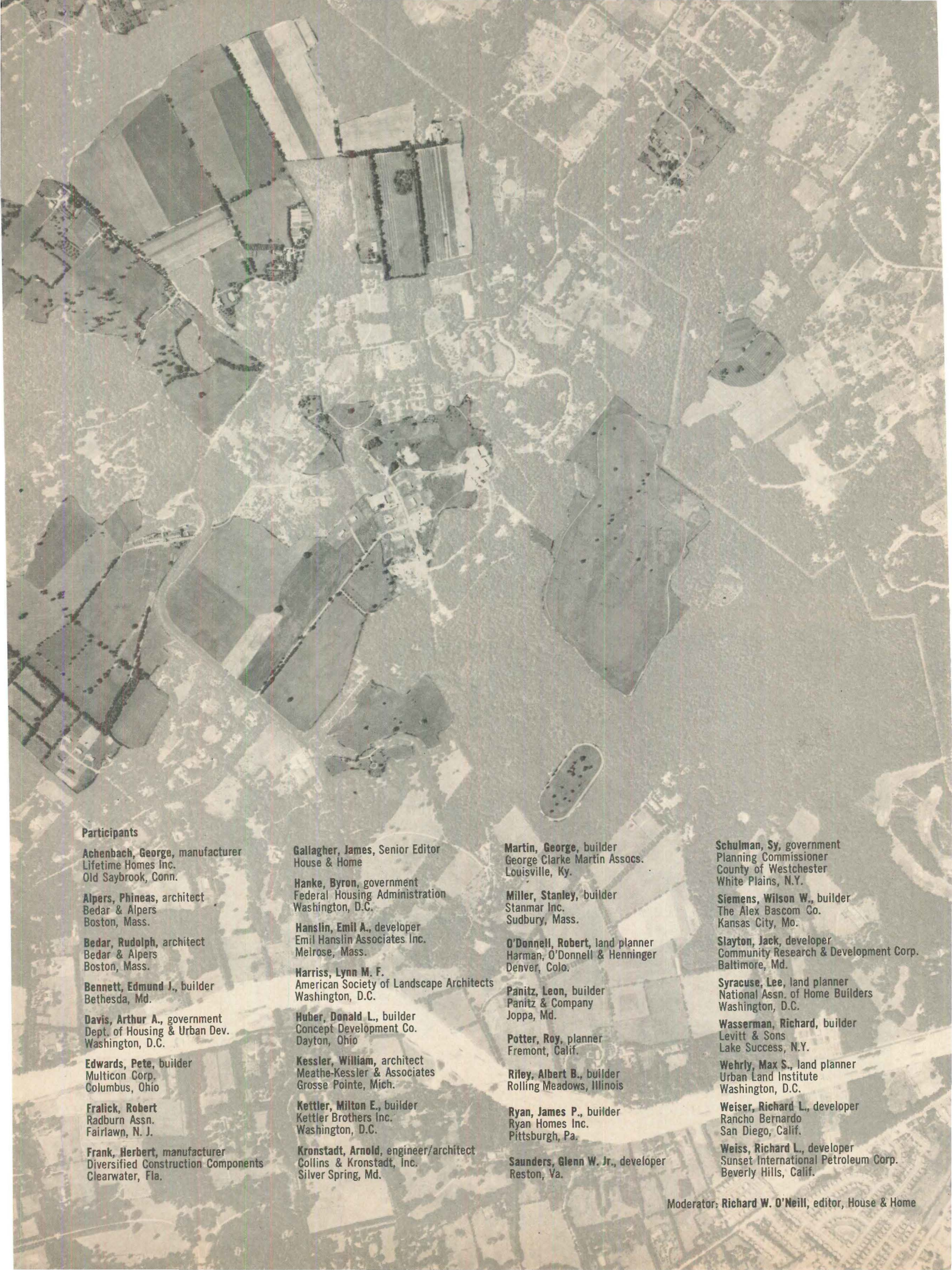


LAKE VISTA, part of every Tan-Tar-A home-site, dictates position of house and terrace.



Round sites simplify planning

Instead of platting his lots first and then siting his houses, Duenke does the opposite: His 50'-radius lots are scribed around the houses after siting. The land between lots remains wild, screening the houses and retaining the shore-front's character.



Participants

Achenbach, George, manufacturer
Lifetime Homes Inc.
Old Saybrook, Conn.

Alpers, Phineas, architect
Bedar & Alpers
Boston, Mass.

Bedar, Rudolph, architect
Bedar & Alpers
Boston, Mass.

Bennett, Edmund J., builder
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Davis, Arthur A., government
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Washington, D.C.

Edwards, Pete, builder
Multicon Corp.
Columbus, Ohio

Fralick, Robert
Radburn Assn.
Fairlawn, N. J.

Frank, Herbert, manufacturer
Diversified Construction Components
Clearwater, Fla.

Gallagher, James, Senior Editor
House & Home

Hanke, Byron, government
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Hanslin, Emil A., developer
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Harriss, Lynn M. F.
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Huber, Donald L., builder
Concept Development Co.
Dayton, Ohio

Kessler, William, architect
Meathe-Kessler & Associates
Grosse Pointe, Mich.

Kettler, Milton E., builder
Kettler Brothers Inc.
Washington, D.C.

Kronstadt, Arnold, engineer/architect
Collins & Kronstadt, Inc.
Silver Spring, Md.

Martin, George, builder
George Clarke Martin Assocs.
Louisville, Ky.

Miller, Stanley, builder
Stanmar Inc.
Sudbury, Mass.

O'Donnell, Robert, land planner
Harman, O'Donnell & Henninger
Denver, Colo.

Panitz, Leon, builder
Panitz & Company
Joppa, Md.

Potter, Roy, planner
Fremont, Calif.

Riley, Albert B., builder
Rolling Meadows, Illinois

Ryan, James P., builder
Ryan Homes Inc.
Pittsburgh, Pa.

Saunders, Glenn W. Jr., developer
Reston, Va.

Schulman, Sy, government
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White Plains, N.Y.

Siemens, Wilson W., builder
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Kansas City, Mo.

Slayton, Jack, developer
Community Research & Development Corp.
Baltimore, Md.

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

ROUND TABLE

Open space and community facilities

Within a very few years, the market pressure from new family formations and demolitions of existing units will demand that we build more than 2 million housing units each year. To compound this task, responsibility for creating housing is vested in the federal government while authority for permitting that housing lies with local governments, many of which can—and often do—zone out new housing.

Our burgeoning population and the constant growth of major metropolitan areas confront builders and developers with two huge problems: 1) how to produce and finance this volume of housing, and 2) how to provide those houses with an optimum physical environment and the host of community facilities

that are demanded by today's families.

It was to this second problem that H&H's Round Table in Boston addressed itself. For two days, 32 industry leaders tackled every aspect of open space and community facilities. They attempted to outline the need for better utilization of land, and to pinpoint what was standing in the way of doing this. They agreed that enough is already known about good planning to insure that tomorrow's housing can include the open space that will make it more human and civilized, that cooperation between planning boards and progressive builders is growing, and that the resistance of the general public to needed local community growth should be a prime concern.

1 Population growth and the need for higher housing densities demand that we do our planning right now

Preservation of open space and provision of community facilities for 300 million Americans will be impossible if the housing industry and all levels of government do not begin unsnarling the legal, political and economic problems that keep us from using the planning know-how we have right now.



Max Wehrly: We can't only consider our subject against a background of single-family homes.

Our population is now 75% urban, and we can expect 85% or 90%. So I question the kind of single-family home living that we had in the '40s and '50s. We are moving to higher density.

Arthur Davis: The federal government can help a city buy additional open space for school—park complexes with recreational and educational uses at

night. When they develop it for a school they also develop a pre-planned recreation and community center.

However, many developers provide what the community did heretofore, whether it is open space, recreation or schools, etc.

Robert O'Donnell: A lot of the things that builders are putting into their subdivision today are really responsibilities of the community, but the builders have had to carry them out.

At what point does the builder-developer responsibility end, and where does the community responsibility pick up?

Richard Wasserman: The large builder working on large tracts can often solve the problems of utilities and recreation facilities without undue hardship. Given intelligent zoning—cluster or otherwise—he can normally

work out adequate provision for open space. For the little builder, the problem is far more difficult.



Lynn Harriss: As our urban populations increase, our cities are going to move farther into the country. I do not think we ought to consider federal participation in this growth necessarily onerous. Local governments would have been unable to keep up with the pressures for parks had it not been for the vision of people who set aside open space.

The value of open urban space goes up in an exponential curve and the political pressures to use it for development are hard to resist. When you set aside open space, plan how it can be protected forever.

Davis: Two adjustments are going to have to be made: One, public officials must be shown what your problems are. Two, you are going to have to give a little, for two reasons:

1) What is suburban today is likely to be urban tomorrow. I

cannot see private developers trying to do in an urban situation what you are doing in a suburban context now.

2) As housing becomes more urban, there are going to be facilities required that you cannot produce. For example, you cannot be expected to produce a museum, or a major art gallery.

Wasserman: I'd like to reposition this vast problem by referring to our company's testimony before the Housing Subcommittee of the Senate Committee on Banking and Currency, April 21, 1966:

"Millions of middle class families have moved to the outer perimeters of our cities and flooded into the suburbs. This has created a whole new chain of related problems—urban sprawl, inadequate municipal services, destruction of natural beauty, choked freeways, and intolerable commuting.

"If our cities cannot provide a workable and worthwhile environment for the people who are here today, how can they even begin to accommodate the additional 50 million who will be here by 1980, let alone the extra 200 million who will be here in the year 2010?

"What this country must do is disperse its industry, build new cities in the middle of nowhere. We must build these cities, many of them, of moderate size, well-

planned, in which future generations may live and work, learn and play, grow up, raise families, and enjoy—really enjoy—all the good things and benefits that this wealthiest of all nations can so fully provide.”

Sy Schulman: I couldn't agree more. Let me add a few more problems. Someone described a metropolitan area as being constructed like a doughnut—a void in the middle, with all the dough on the outside. This in turn relates to the question of the relationships between the federal and local government. As you know, it once was a tradition that the federal government dealt with the municipalities only via the states. But that rule has been long since broken.

Wasserman: Without deprecating new towns now planned, the fact is that substantially *all* are nothing more than append-

ages to big cities and completely rely upon the big city for basic employment (primary industry) and cultural resources.

Providing 120 acres of open space for a golf club or establishing a sewer district in a given community is a far cry from solving the basic problems of our cities. The fact is that the cities are in terrible shape. Building additions to them is not going to solve the basic problem—it will only aggravate it. The larger builders may be able to provide utilities and get past some of the tax or cash-flow problems—but the problem facing us is of far greater magnitude.

Richard Weiss: I think the ultimate answer, as distasteful as it is to all of us, is that the federal government is going to develop new cities along the Swedish and British lines with government planning and private industry as the developer.

2 Too much zoning and planning is based on local determination to stop even badly needed growth

Suburban upzoning, and the refusal of many communities to permit badly needed new housing is crippling our efforts to house many families. But local boards are properly wary of builders who make, and break, planning promises.

Weiss: We have to concentrate on the public, because it is the general public who are opposed to anything other than single family residential development. Their opposition to multifamily dwellings is a very substantial obstacle. If we don't overcome it, we will price ourselves out of the market.

The real problem is to get to the beautniks, the conservationists, and the very well organized homeowner groups that have no communication whatsoever with the homebuilding industry.

The planning director, the city council, and the planning commission know the need for appropriate development of the community, and we have a huge influx of population. Yet most of the homeowners, conservationists, and organized groups seem determined that there should be no development. They feel this way: Maintain all land as it is—do not touch our mountains; do not touch our foothills; do not touch our flatlands; do not touch our clams. The real need for education is in these groups.



Emil Hanslin: Conservation and development are not incompatible. But conservationists in and among themselves are incompatible. They manage, however, to stand shoulder to shoulder as soon as any developer shows up.

There is not much question that we as a nation have been very negligent in land use. The result: Now that zoning is becoming a little more reasonable, conservationists are blocking all development, because it might uproot a few clams or make a lake out of a small marsh.

Davis: These complex problems are becoming worse as we become even more urbanized, and

the only way we can intelligently put these pieces together is through a plan—not a fuzzy plan, but a programmed approach to development for all purposes of lands in and around our urban areas.

I think there is a rationale for having local people look at local land use. They should do it with a sense of responsibility and there should be brakes on how far they go. Some of them are awfully arbitrary.

It seems to me there are three problems:

1. Should you use the space for conservation or recreation?

2. What is the public and private mix of community facilities—and you can rarely sort out the two neatly.

3. The problem of scale and trying to fit our own personal requirements, whether they are within the pattern of development in the Metro area, or the region, or the state.



Donald Huber: The planning board's only concern is whether you should put in a 2" asphalt street, or 6" of concrete—or whatever else they might think of. But they have absolutely no concept of what is going to happen ten, fifteen years from now. They have no plans, and they feel no concern about it.

Schulman: To get down to specifics: We often wonder why our good planning tools—clustering, planned unit development and new towns—are not being used.

There are four basic arguments that bubble up, although they sometimes do not get clearly expressed by a community. First, a community constitutionally and emotionally committed to hold down the rate of development will resist anything that they think will tend to accelerate development.

Second: There will be resistance because we have oversold the argument that development by clustering or planned unit results in economies in utilities and roads. Some communities are not interested in economies for the developer. If it makes it easier or cheaper to develop, they are not interested.

Third: What might happen

if the builder goes broke after he has started a few houses on what normal zoning would consider to be substandard lots, and doesn't complete the PUD? That is a valid question, particularly when the community itself has done its own market analysis and questions the developer's feel of the market.

Fourth: The general question of open space. Who maintains it? If the developer uses the open space for profitable purposes, say a golf course, the community says: "What we are giving this guy in effect is a down-zoning to small lots and he is also going to wind up using the open space to make money."

The only time you will get a community receptive to planned unit development and similar new ideas is when the community accepts the fact that they are in a hot market and are going to get development anyhow.

And if they believe that the builder will not go broke building small houses on small lots, and if he develops an honest and seemingly feasible plan for maintaining and preserving the stability of ownership of the open space.



George Achenbach: I have been on both sides of the table: as a builder-developer, and as a member of the planning and zoning commission in my town.

I think enlightened zoning and planning is really getting better and better. There is opposition, of course. But we don't get articulate builders and developers who present the PUD case well.

Right now our board is waiting for information on one PUD. If the facts were presented properly by builders their plans would have a very good chance of being passed.

Albert Riley: Today we seem to have a wide open field for introducing new planning. For one thing, the ordinance that permits planned unit development in most of these communities is a half-page long; the ordinance on subdivisions is an inch thick.

What happens? Every builder that comes along says, "If I call this a planned development, I can get around a lot of these

rules and regulations." I am concerned that city officials may conclude that PUD is merely a device builders are using to sneak around regulations.

One objection to PUD is the feeling on the part of some community officials that we are going to lock them out, that we are going to build something in their community that they can't touch.



Stanley Miller: Builders often slip fast ones past the planning boards. I'm on my town's board. A builder came to us and wanted some changes in the rules and we gave them to him. He had a good presentation but put up a very ugly building and the planning board was blamed for it.

In another case we approved a beautiful site plan in a particular area. It is now three years since we approved the plan, and the only development has been that sand and gravel on the site has been removed and sold. He made the board look like idiots.

But the majority of builders are on the other side. There are

builders who always do what they say they are going to do plus a little bit more. When they come before us for a variance or zoning change, 99% of the time we give it to them because we know that what they do is a credit to the city.

The housing industry has to police its bad guys. After you get slapped in the face a couple of times it is hard to give approval.

Leon Panitz: If we can do something only 80% right we will gradually educate the community.

Officials are beginning to realize that planned communities are an answer to many of the planning problems that they had in the past. They don't have to ask, "Where are we going to put a school or a playground?" These things are all preplanned. This is an assurance to people that zoning is going to be fixed, that spot zoning is not going to be imposed upon them.

Pete Edwards: Trouble with using the planned community as a good example for local people is how many big new communities are there? They are not wide spread because they are not economically feasible. You cannot develop 2,000 acres in a medium size city within five years. There are a lot of cities other than the top ten places in the country.

3 Developers need better ways to write off or write down investment in facilities and amenities

Tax credits that would let builders spread the cost of recreational or community facilities over the development time of the project are one possibility. Another would be tax bases spread over broader geographic and economic areas.

Glenn Saunders: To finance complete community facilities is a tremendous project. At Reston we are setting from \$300 per apartment up to as much as \$1,000 per house. We think that the value of pools, tennis courts, walk-ways, bridle trails, sculpturing, fountains, etc., is reflected in the houses.

Arnold Kronstadt: The typical subdivision of three-plus units to the acre represents a raw-land-and-development cost of about \$8,000 a unit, or about \$25,000 per acre. The Rossmore Maryland project cost only \$3,000 a unit with its ten units to the acre. Now, this is a \$30,000 an

acre cost, but you have three times more people. The extra \$5,000 per acre were put into total community facilities, and there were 1,000 acres. So here we could put in a 120-acre golf course, and all the rest of the goodies. Higher density brings with it very powerful tools.

Milton Kettler: To provide recreational facilities for the health and welfare of the residents of our community, the federal government must provide some measures in income tax law to help us create these things.

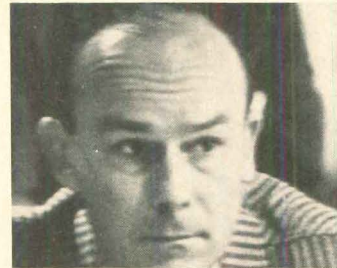
Oil companies, the lumber industry, mining, and so on have up to 27½ per cent depletion

allowances. If we buy a piece of major equipment today—and we just bought some—we get a 7 per cent tax credit.

But we're building two lakes now. They cost about a half million dollars in a project that is going to take 20 years. Now, it takes us 20 years to write these lakes off, and at 6%, those half-million dollar lakes really cost about one million dollars. Why can we not get something like a depletion allowance, or credit for facilities we guarantee we are giving to the community for health, welfare, etc.

We know that open space is good, but the way you have to capitalize it kills you.

Miller: But you are not going to get tax relief or encouragement unless you get government regulations.



Kettler: No, all I'm asking is that if you deed a particular facility to a nonprofit organization of the residents you can recoup some of its cost by tax credit.

They give us a tax credit when you buy heavy equipment, and they let you depreciate apartment houses. It could be part of the income tax law.



Roy Potter: In California we have "tax income and bonding financing" for redevelopment projects. It involves paying for facilities by using the added tax increment created by the new and higher assessments these new facilities bring. In this way the public is not committed to the capital cost, and the new buyer will not be paying off public bonds. This requires changes at the state level. In Fremont, we are trying to encourage more open space by letting the developer increase density by three or four times if he puts in the necessary public facilities.

Kettler: But increasing density does not increase your absorption rate on a piece of ground. Sales do not change just because regulations change.



Edwards: One of the ways to provide better tax treatment for your facilities is to include apartments. Your depreciation will work a little bit better for all structures.

You can build a clubhouse, or anything you want, if you build it in conjunction with your multi-family, even though you only have 100 apartments, and 1,000 homes. Depreciate the club facilities with the apartments.

Hanslin: Industry is allowed to charge off research and development and exploration cost as an expense. Why is it that we cannot treat as expense land-planning costs, architectural costs, landscaping-architectural costs, market-research costs, social behavior-research costs as well as community facilities?

Kettler: This year we will spend, I would say, about three quarters of a million dollars in earth movement. If we hire a subcontractor to move this earth—and, incidentally, it will take us about 27 years to get all this back—the entire cost of three quarters of a million dollars is capitalized. On the other hand, if we do this ourselves, hire a superintendent and expense him, we can take our investment credit on the purchase of \$450,000 worth of earth-moving equipment. We have depreciation on this equipment, and insurance on this equipment. It still costs us three quarters of a million dollars. But you will find that about \$300,000 can be expensed and \$450,000 can be capitalized.

Now, you take \$300,000 at any rate for 27 years. You will find that on a declining balance for 27 years the saving by doing it ourselves is fantastic. You go through all these things just in order to take advantage of the tax laws. I just want the tools to do a good job.

Huber: There is some precedent for this. Three years ago we built a lake on a farm. I think we spent about \$6,000. Under the

farm laws we were allowed to write this off. If we got \$6,000 income off that farm, we could deduct it that first year.

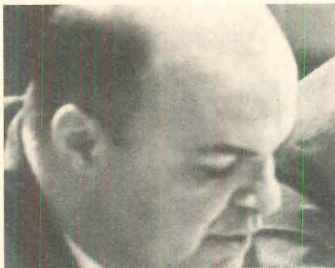
Wehrly: There is a lot to be said for a sensible tax and assessment policy to accomplish things we have tried and failed to do under the police power. The problem of open space and urban sprawl can be traced back to a very large extent to tax policy.

We must evolve tax policy and assessment policy that dovetails with good planning and good land development instead of working at cross-purposes. Tax policy today puts a premium on neglect and a penalty on incentive.

Saunders: The key to assessing open space or golf courses is to record it as perpetually open space. Then it is assessed as such, as the highest and best use.

There should be some type of tax break to encourage people to preserve and leave open spaces.

Wehrly: We desperately need a broader base for our taxes, too. Most major metro regions are pretty much balanced economic units. But as long as we have local autonomy of income from taxation, we are never going to solve this problem through zoning or any other medium.



Schulman: I think we can all subscribe to the idea that new developments would fare better under tax systems, which provide much greater state aid to municipalities, better assessment practices, and larger tax bases for financing community facilities and utilities.



Wasserman: We face tremendous resistance to our building programs in municipalities that foster small school districts. It is virtually impossible for the individual developer to solve the

municipalities' school problem. Under these circumstances, the only solution is the formation of a school district of sufficient size to smooth out the enrollment cycles and justify the economics.

Panitz: We did a fiscal study for our proposed community to satisfy officials that we would be an asset. If anything, they would make money on us. We have made annual interim studies since, and have proved that the county has never made less than \$50,000 per year from us.

Riley: How does the small builder supply these community facilities? We are small, yet we have to find a way to survive. There is not the profit in single family housing as there was 10 and 15 years ago. But we have found an answer in planned unit development. We get concessions from the zoning board for the greater value we give the community in PUD.

Potter: In Fremont, with 96 square miles, we have many builders building only from 50 to 80 houses. We worked out, through planned unit development, an in-lieu transfer of tax credits for the developer if he chooses to reduce his lot sizes, or to provide for some mix of land uses, so he and the city can create and maintain parks.

Panitz: Tax credits would be helpful. It is unfair after you have created a park to have it assessed when the city is also assessing lots with higher values because of their relationship to the park.



Kessler: I doubt that every subdivision needs its own lake. I am sure that three subdivisions could share a lake.

I think we run the risk of too much open space, which is by itself another threat to future development. Where does the community come in in terms of its provision for overall total planning? Are some of these amenities in some of these projects really necessary? If we can nail this down then we can decide what kind of straits we are in economically.



Richard Weiser: Some cities make it downright tough to provide open space. San Diego, for instance, has a water area charge, and each and every acre of property, developed or undeveloped, has a charge against it for present or future use of water.



Saunders: If we want more new towns we have to find new types of help for financing the initial expenses of land development—major roads, utilities, water, sewer—low-interest loans or grants from the government, tax relief or whatever.

The next big expense items are the special amenities that will

cost more than you will ever recover from the rent itself.

Wasserman: In the one case, the huge new city is going to require the participation of industries, developers, and government.

When you go into the lesser question of recreation facilities, open areas, and the like, these problems can be solved by joint efforts of the developer and the municipality.

The recreational facilities make good marketing sense. Good land planning, adequate open space, community amenities, help, not hurt, the builder's profit picture.

Edwards: We spend about \$300 an apartment in a development for recreational facilities.

Panitz: In York, Pennsylvania, we built 275 townhouse units and it cost us \$60,000 to build a recreational hall and swimming pool complex. This is about \$220 a unit. If you apply a 10% factor to this, it is \$22 a year, or \$2 a month. So instead of renting for \$137 a month, we rent it for \$139 a month.

George Martin: In Nebraska one man can form a state sanitary improvement district. With this, the sanitary sewerage system, sewerage collection, sidewalks, street lights, open areas, pools, or golf courses, can be financed over a 30-year period with tax-free municipal bonds.

4 Open space can become a nuisance without advance provision to insure its upkeep and preservation

Buyers must be told what facilities are theirs, what they will cost, and how they are to be paid for. The solution must be worked out in advance with local officials and be satisfactory to families buying in the community.

Weiss: There is no more reason for the developer to maintain open space than for the merchandiser to maintain his goods after they are delivered. Yet we find ourselves coping with it, and coping inadequately.

Saunders: There must be detailed provisions as to who will maintain this open space, and how it will be turned over to them.

What the residents get when they first move in is what they expect forever. If you maintain it for two or three years and then dump it in their laps you will have citizens objecting to the

change from all angles.

Miller: The shape of America is not being made by such new towns, but by fellows building 20, 40, 60, or 80 houses, so how do you keep facilities and landscaping in an 80-house development looking good over a period of 20 years? Do you put the restrictions on the people? Do you have a group set up to maintain the project? Do you get tax benefits to handle maintenance?

We may get a tax allowance to make it more profitable to leave open space, but I believe it is already profitable in terms

of the increased value of the remaining land.

Wasserman: In developing facilities, is there an economic justification or do we throw a burden upon the buyer either in the cost of his housing or in maintaining these facilities?



Slayton: You can add to that one: Are we creating an urban environment which requires urban services without providing them? If so, who carries the load?

Kronstadt: One answer is that open space has to be used to its maximum, which actually provides a form of policing.

Weiss: When we privately maintain major open spaces, or put in private streets, we are avoiding the issue. If what we are doing is safe, proper, aesthetic, and desirable, then our public areas should be the province of the community.

If these communities are going to be economically viable and good places to live, we cannot superimpose community association upon community association with a tax base that is limited to the small community it serves.

Davis: Maybe you can make an arrangement where a local public body, city or county, is willing on a quid pro quo basis to assume responsibility.



James Gallagher: The builder cannot really give anything, he can only pass the cost on to the people who buy his houses. What towns are asking is that these new residents buy their own school without recourse to the broader tax base of the community, which gave existing residents their facilities. I hate to

think that that would become our national philosophy.

Syracuse: We say that people want open space and recreation. But if a family had to make a choice between recreational facilities or a school within walking distance, would they not choose a school first? Certainly a builder should not be obliged to put a school in. But we all know builders who want subdivision approval so badly that they will build a school and lease it back to the town. The whole concept of law which says that the builder simply provides the houses and dedicates the street, may collapse.

Wasserman: We have found that providing recreational facilities need not be a burden on the developer. We have done a dozen or so swim-and-racquet club facilities in the last few years. In some cases, homeowners buy a share of ownership in a non-profit corporation for \$350 or \$400 and then pay approximately \$50 a year in maintenance fees. When they sell their house, they sell their membership. In other cases, we charge \$150 to \$250 annually and retain ownership. Both methods make good economic sense, enhance the community, and provide something that our customers really want as part of their environment.



Weiss: We put in a number of golf courses and operate them. We have never been able to make them operating money-makers, but the effect they have has increased lot prices and house prices.

We ultimately anticipate turning them over to the communities. Approximately 40% of the people in the community actually become club members. We plan our clubs for six to seven hundred members.

Riley: If they are not profitable, how long can you subsidize them out of house sales?

Weiss: We project the life of each new community and the anticipated absorption rate of the developed lots or houses within the community. Then we project the club over that same period

and we capitalize the club losses into the cost of the club itself.

Martin: We gave the initiation fee to all our home buyers and only 40% of them used the facility or continued to pay dues.

Weiss: We use our clubs as marketing devices. We advertise a \$300 membership fee, and to promote the club we let the first 50 to 100 people in for \$50. When we get 100 we let the next 50 or 100 in for \$100.

Edmund Bennett: We put a pro rata capital cost of \$700 in the sales cost of the house. In our community houses sell for slightly above \$40,000 and we have 99% participation.

Martin: If you do not form a home owners association, then you only will have 40% of the people voluntarily joining it.

We have one swim-and-tennis club that has 1,800 family members, and we own it and operate it. If you find the right manager, you can make money.

Kronstadt: A couple of years ago we developed the first condominiums in South Carolina, built around a golf course.

The area had zoning of one house per acre. Prices averaged \$40,000 but up to the \$100,000 range. Around this golf course we planned ten units to the acre in town houses to sell for \$21,000. We included \$1,200 a unit for landscaping, street furniture, screening, night lighting, and the project caught on immediately, partly because maintenance was part of the condominium.



Byron Hanke: In Carrollton, St. Louis, by Fisher & Frichtel, there are 1,000 units, four and a half units to the gross acre. They have a swimming pool and a big community building, tennis courts, and nine acres of park and playground. This is provided through the homes' association at \$25 per year per family.

Kettler: There has been some bad reaction around the country to these planned communities. Over-organization has made them appear socialistic. Obviously, you have to alter your approach to your community. Is this right?

Weisser: Absolutely. We get more residential participation in everything we do. We have a community center and we now have 46 community clubs there. They run their own show.

Kettler: If you have too many different clubs to join—you fragmentize the leadership of your community. You should try as much as possible to have everybody belong in some way to a minimum number of community organizations.

We are eight months away from finding out if this is a good idea, but that is the way we are approaching it.

5 Owners' associations can help in long-term planning of facilities, but they can hurt you, too

There are many guides to the formation, care, and feeding of homeowner's associations available through NAHB, FHA, and Urban Land Institute. But builders with long-term developments have been plagued by owners' groups, and a good rule of thumb is, "don't turn over control until you sell out."

Hanke: The ULI study of home association institutions interviewed 87 developments. The developer's role in home associations is very similar to that of the father and his son. There is a little bit of bringing up father, too. The troubles that a developer can have with an association can be compared to those a parent might have with a trouble-

some teenager.

Slayton: It is the developer's responsibility to maintain control until full development has been reached, at which time the development passes on to the home owners' association. People move in because they want these amenities and they mean something to them. When they have control

of them, if they let them go to pot, okay. You provide them, but let your owners know that they must maintain them.

Robert Fralick: Radburn has a nonprofit association with about 700 families in it paying dues averaging about \$160 to \$170 a year. We work on an annual \$100,000 budget and what we intend to spend we must get back. For this the people get almost everything except horseback riding and ice skating.

When people move into Radburn they are told what the homes association is. The dues are a lien on your property and a book of restrictions and regulations are handed to you when you move in so you know what is going to be asked of you. Owners must abide by our regulations.

If buyers do not like the idea, they do not come in. Our book says that if you do not maintain your property, we will maintain it for you and bill you.

We have two swimming pools, four tennis courts, 26 acres of green area with ball fields, and a little weekly newspaper.

Hanke: In Concord, Mass., a cluster development came in with one-acre lots, leaving 60 acres of open space. It is now one of the most successful playgrounds and recreation areas that I have seen. It costs only \$50 per year per home to maintain. Part of it is an abandoned gravel pit which was rough graded and then left as a vacant lot. It is open space for rough play.

Near Sacramento, Hidden Valley, a 368-acre tract with only 162 one-acre sites, has one big open space operated as a ranch by the homeowners. These people wanted ranch living without the problems of maintaining a ranch, and they have it in this form.

Saunders: Originally we felt that people should pay for what they use and costs should not be spread over everyone. We became concerned with the fact that people strap themselves to buy a home in the first place, and swimming should be available to everyone at a nominal fee.

We take the capital cost of all improvements and spread it over everyone. Then we turn them over to the home owners' association for a ground rent fee plus maintenance and operating expense. You do not pay the annual maintenance of that facility unless you belong.

There is another advantage to this. If a person belongs to a club, regardless of how small the fee is, he is going to be a little more careful about how he takes care of and uses the club.

Kettler: Should everyone pay their share whether they use them or not? Can you have differing charges?

Fralick: In Radburn we cannot cut anybody's assessment for them because they do not use a facility.

Hanke: The homes' association is a private government. If flexibility is built into its constitution, which is a covenant recorded on that land, I think we have come as close to the answer as it is possible to get.

In the J. C. Nichols developments in Kansas City, the owners' associations provided public utilities services not available then from their rural type of government. As city government moved out to them, the associations gave over those utility functions to city government and kept those functions which the city was unable or unwilling to perform.



Martin: We built a sewer system to be turned over to the property owners' association in five years. We were not finished in five years, and we had the property owners' association try to ban our commercial property in their sewer plant area.

We have had associations, formed in a planned community that banned parking on the streets in our apartment neighborhoods. We had one where the community was incorporated before we finished the development and they landlocked us by passing an ordinance where our trucks couldn't move over the main access street. When you lose control to an association, you may have had it.

Saunders: We found that the families at our first home owners' meeting were very concerned that they did not control the architectural review board and several other boards. They represented only one per cent of future families and with our investment, we had to point out that we could not give up control.

Achenbach: It is very important for us as builders and developers to get the home owners' association to help us sell. In the be-

ginning we sit down with the association and encourage it to be active, emphasizing the fact that if we are successful they profit. If the project fails, their home values will decrease.

This worked so well that we were able to get both apartment and commercial zoning through the town with their help.



Wilson Siemens: Our homes association is made attractive to everyone, even that 40 per cent not interested in the pool, by feeding into it grass cutting, and snow and trash removal.

We meet frequently with their association and are glad to do whatever is right for the association and the project as a whole. Cooler heads and sounder minds have gone along with us whenever we had people proposing new rules and limitations.

At what point is it necessary to maintain a full-time staff or a full-time executive secretary to run a homes' association?

Bennett: We tried running our club with 350 members last year without a full-time manager. We found that over 300 people, you need a full-time manager.

Hanke: Experience shows associations can be run at a much smaller scale than we thought three or four years ago.

For example, Boston's Lewisburg Square has over a century of experience with only 28 properties in it. Wembley Lane in Seattle, including a swimming pool, streets and entranceway, has a total of ten sites. Greenwood Common in San Francisco, with a park, off-street walkways, has only 12 home sites.

Certainly a typical developer, doing a one- or two-year project, can use this program. There is an FHA program for private ownership of common open space through the PUD homes' association program—Land Plan Bulletin No. C.

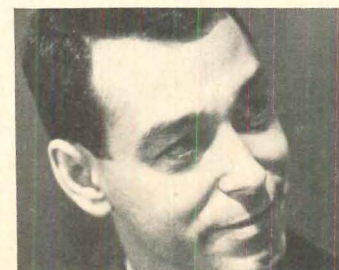
In 1964 FHA came out with its land-use intensity standards, which have been rather widely distributed. The ULI Homes' Association Handbook was published, and that now is in a second printing including an index to make it more useful.

Again in 1965 FHA put together slide talks on planned unit development and land use intensity and pooled the growing experience of ULI and others on land use and zoning. These slides and texts are available to anyone who wants them.

In 1966 the Title 10 Land Insurance Program of FHA came into being and is just beginning to get underway. And we are redoing Bulletin No. 6 to put emphasis on cluster subdivisions as one of the many kinds of planned unit developments with home associations.

6 We can plan open space, but there must also be provision for multi-use of this space, and for changing needs

Single-purpose facilities and spaces run the greatest risk of obsolescence as people's leisure activities change. We need cooperation between the public and private sectors to set use guidelines, and flexibility in engineering standards to take advantage of new and better development methods.



Syracuse: In eight years, World-War-II babies will be

about age 30, starting to buy homes, with youngsters old enough to go to school. There should then be a continuous demand for housing these families. But at the same time, suburban areas are demanding lower and lower density.

If density keeps going down, and the cost of land and development keeps going up, what will happen when these young couples need homes and are unable to afford them?

First of all, courts might then start breaking large-lot zoning ordinances by saying they are capricious, not in the best interest of society or the public welfare. But if the courts break it in one community, other communities might sit tight until their ordinances are tested. There are states where one ordinance has been defeated in court and the town next door still has the same ordinances but no one has taken that specific community to court.

State legislative action? Not likely. Because assemblies are made up of people from towns that are trying to protect themselves. Possibly, though, assemblies may create regional planning districts and give them teeth to overcome local parochialism.

Connecticut no longer has counties. They have 169 towns and the state assembly, with nothing in between. They are trying to carve out planning regions based on metropolitan areas which make a lot more sense. Step by step they are attempting to give all of the powers of the county to these regions and one day give them complete zoning authority.

Another solution may be federal legislation. Whether we like it or not, if there are enough people in eight or ten years who want a home but are forced to live in apartments, pressure will build up on the federal government for relief.

Hanslin: What are some multiple uses of open space that will provide sociological mix and economy, and provide a cultural approach to a community?



O'Donnell: Puerto Rico's planning Board has come to the conclusion that cultural facilities such as the library should be a community facility and be paid for by the community instead of the builders.

Now, this brings up the point of where do you draw the line? You have to limit your commitment at some point.

Gallagher: If our new developments include almost every leisure time activity, how willing will these people be to support the same amenities for the rest of the community. Will the man

with his own swimming club in Suburbia support a bond issue to build a pool in center city, where it might be badly needed.

Martin: I am in the business of private enterprise creation, only because public bodies have not accepted that responsibility.

Kronstadt: We should use industrial-park zoning joined with residential zoning to make the open area of an industrial park part of the open space we need. And we all know that a government institution, like a hospital, can bring wonderful open space around it. How about a sewage treatment plant that is open space as well?

Open space just for houses brings with it maintenance, financial and transportation problems. Combining various land uses to get open space will automatically develop spaces that are self cleaning, self-maintained.

O'Donnell: The approach to landscaping open space may be changing. When IBM moved into Boulder, on 550 acres of land, their assignment to us was "just trees and some kind of ground cover, concrete curb all around the buildings to cut out hand clipping, sidewalks flush with the turf, no shrubs. We are interested more in annual maintenance than we are in the initial cost of design and plant material."

Another point: With today's earthmoving equipment you can create ground sculpture that can be easily maintained. You can give a completely new character to a piece of land.

Saunders: Open space just to provide open space does not really mean very much. Open space should be adjacent to high density areas where the maximum number of people have access to it.



Davis: Federal programs have helped communities, states, and public agencies to acquire open space in and around urban areas. The number of grants now is around 400 in 35 to 40 states. Yet we know no more than we did four or five years ago about what we really need in the way of open space.

"Open Space" is meaningless. Open space is land not used for anything else. We ought to think about it in three contexts. One is recreational, public or private. The second might be open space for conservation. And third, open space used to continue or regulate the timing and location of new development, open space within which your developments will fit.

Finally, what is the public part of the job (federal, state, and local), and what is the private part of the job? When the developer claims he should not be required to provide open space for the benefit of the community at large, I generally agree with him. However, a developer puts in a golf course, or tennis courts, or swimming club, or whatever, because it is going to increase the value of that development and sell houses better and quicker.

O'Donnell: Recreational areas in Colorado, Wyoming, Montana and other states will put on concerted efforts to take dollars from your communities year round. Maybe we are overbuilding the community facilities in our own small way.

Davis: The Outdoor Recreation Resources Review Commission looked at the requirements for outdoor activities from now to the end of the century. Findings: Today's activities change quickly in recreation.

My point is to play it easy. I would not put too many eggs in the golf-course and the marina basket. Basic amenities are perhaps more important. The house design, the landscaping and street furniture make an entire area pleasant and may be more important than an expensive facility.



Herbert Frank: We have people who insist on living near golf courses. I can't afford to worry about what is going to happen 15 years or 20 years from now, because I'm developing for people today and not 20 years from now. No one at this table can tell me what will be popular 20 years from now.

Kettler: Just uncommitted, undesignated space is a very important thing to a lot of people.

Just a place to sit on the grass and watch the clouds has a great depth and meaning to people, and it does not have to be actively used. But when you build in something as concrete as a community center, then you better darn well have some good projections on its use.

Hanslin: In my project we were not forced to put in golf courses, or build marinas, or any of these other things. The reason we provided them anyway was simply better marketing.

Davis: People are interested in libraries, outdoor art exhibits, amateur symphonies, educational functions of all sorts.

This puts you in a tough spot, because if people want libraries—and I do not think a private developer should put in a library—perhaps you can donate the land for it as you do for schools.



James Ryan: What kind of recreational facility can you put in a subdivision of 50 lots? Is a tennis court, a swimming pool, a chipping green or three-hole golf course justified?

Gallagher: Perhaps you are looking for the equivalent of what 30 or 40 years ago was called the vacant lot. What is missing is that there is no place to hang a basketball hoop, to roller skate, or fly a kite.

Potter: In Copenhagen they created a berm around a three-acre area, planted on top so that it was screened from the community, put building material in there and the youngsters came in and would build what they pleased. We need someplace for youngsters to express themselves.

Saunders: We have a 25,000 foot natural gas pipeline easement running through Reston. We have taken portions of that and divided it up into garden lots and the reaction has been tremendous. We only charge \$15 a year. Out of our first 100 families we rented 15 garden plots.

Riley: We are going to attempt to lay our next subdivision down on top of the land without disturbing it. Out where we are, 20 trees on 50 acres is a forest.

Siemens: We have a planned unit development with 120 families and a home association on a piece of bypassed platted ground. We were able to turn these dedicated streets into two short cul-de-sacs and one dedicated street which ran the complete diagonal of the project. By going to private streets and being able to eliminate some storm sewers, we were able to install a swimming pool, a limited playground, and a great deal of open space. Practically everyone has a visual access to this open area and pool.



Kronstadt: Private streets have a great appeal because you do not end up with wide paving and wide right-of-ways. Right-of-ways have led to a lot of meaningless open space, particularly in subdivisions with 60-ft. and 70-ft. right-of-ways.



Riley: We are trying to get private streets, but we are running into a fear on the part of the city that they will lose control and not have the say-so on policing and supervising.

Kronstadt: City requirements of width for safety and fire protection can be met by other controls without having to provide the width that they call for. With off-street parking in most subdivisions, there is no need for streets so wide.

Saunders: In Virginia you may have a 30-ft street within a 50-ft. right-of-way, but the entire 50 ft. has to be on grade and all trees within that right-of-way have to be removed. We also have requirements of vertical and horizontal curves that require three times more earth moving than necessary.

An example: We started 30

houses on a street, 15 each side of a cul-de-sac. We had to design that street so that it would take traffic up to 35 miles per hour, when you couldn't possibly get up to 20. Because of contours that had to be straightened, we ended with a 100-foot cleared area through the woods for this one little 30-foot road. Pressure should be applied to designing the street for its use, not to arbitrary standards.

Wehrly: This educational process on streets and utilities must start in the engineering schools. You can educate men by example, but when these examples do not fit the slide rule of the engineer, he discards them.



Bennett: There is a distinct difference in value concepts between planners and engineers. We need a good statement of these problems to give city councils, city managers and city engineers so that they will at least recognize their basic differences in approach.

Wehrly: ULI is reviewing this whole question of engineering standards and criteria. Whether it will be a good selling document, we will not know until we see the final product.

Bennett: Just one example. Curvilinear sewers are being used in many communities in mid-western areas. When we go into our local public works office, they pull out the orthodox engineering standards. Everything has to run in a straight line, no curvilinear sewers.

O'Donnell: In Colorado, if we go to the State Board of Health, we can get them to accept the principle of putting in curvilinear sewers. We employ a traffic engineer to talk to the county or city engineer about the number of cars, frequency of trips, number of people served on the street. Use an engineer to teach an engineer, and you can get these standards logically reduced and dedicate them as streets.

Bennett: We have used interior-private-streets to solve some of the problems of horizontal and

vertical curves and right-of-way grading requirements. The owners' association takes care of the problems of maintenance of joint driveways and private streets.

We have another problem, now that we use underground wiring. If you multiply the number of trenches that you have going up to the house you tear up a lot of natural area that you might be trying to preserve.

We got our local sewer, water, gas and power authorities to let us try a single trench on an experimental basis. Speaking about the attitudes toward private streets, we give the city easements to enter into some of our private street areas for police and fire protection.

Syracuse: When density zoning first started on the East Coast, it brought open space through reduction of the lot size and lumping all the reduction to gain the open space.

But as you start moving west, you find that lots cannot be reduced any further because the market would not allow it.

Potter: In our cul-de-sacs our fire department took equipment which they use to fight fire in nine-story buildings, drove in and said it would not work. We convinced them that if we tied the ends of the cul-de-sacs together with a pedestrian trail large enough to take a large fire fighting vehicle you could move from one cul-de-sac to another.

There is a need for bicycle trails for the neglected teenager. We let the developer eliminate the sidewalk on one side of the street and use that money to build a cycling trail that will go to the shopping area, school, and parking area.

Syracuse: In a mid-western city, two builders bought large tracts of land on two sides of a main road leading out of a city. One builder chose to go the conventional curvilinear pattern with three and a half homes per acre. The builder on the other side decided he wanted open-space. He asked his site planner to create an open-space subdivision. He wound up with a density of two and a half homes per acre.

Assuming that land cost was about the same, it would be impossible for this enlightened builder to create an open space subdivision and still stay in business. He could not compete with the guy across the road.

City officials preferred the open space development. I suggested that they consider different standards for such developments. First, cul-de-sacs could allow for

a narrower right-of-way. Then narrow pavement widths would reduce costs. Where walkways or sidewalks are considered essential, use macadam instead of concrete. Where curbs are essential, use rolled macadam.

Let the builder place some of the walkways behind the houses rather than in front. This can reduce the length of a walkway by one-half, and is safer.

In those cases where you have narrow pavement lanes on culs allow the builder to put in inverted crowns, thus reducing the cost of storm sewers.

On the cul-de-sac, put the strip of green between sidewalk and curb in back into the common open space.

Also since these houses are on cul-de-sacs, allow the houses to come closer to the streets. In effect, the asset of having the houses set back from broad streets is no longer here.

I also suggested that on streets where traffic is light we should look at the standards for the sub-base of these streets. Then I talked about curvilinear sewers.

I think they are willing to compromise on at least some of these points.



Panitz: We have found that the cost of utility installation by ourselves is cheaper than buying county facilities—which involves a lot of waste and a lot of going by the book.

Potter: One of the most critical things for a developer is the length of time needed to process an application.

One of the greatest incentives would be a time limit on a comprehensive application: submittal which covers every possible element of that project. We need a model development ordinance to give a city some help in creating a single application. The planning commissions would then begin to look not at fragments but at a comprehensive program which would enable a developer to move his project much faster. He should have assurances that within 60 days he would have all his public hearings out of the way and he would have an answer. We are attempting to do this in Fremont now.

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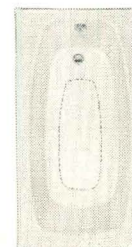
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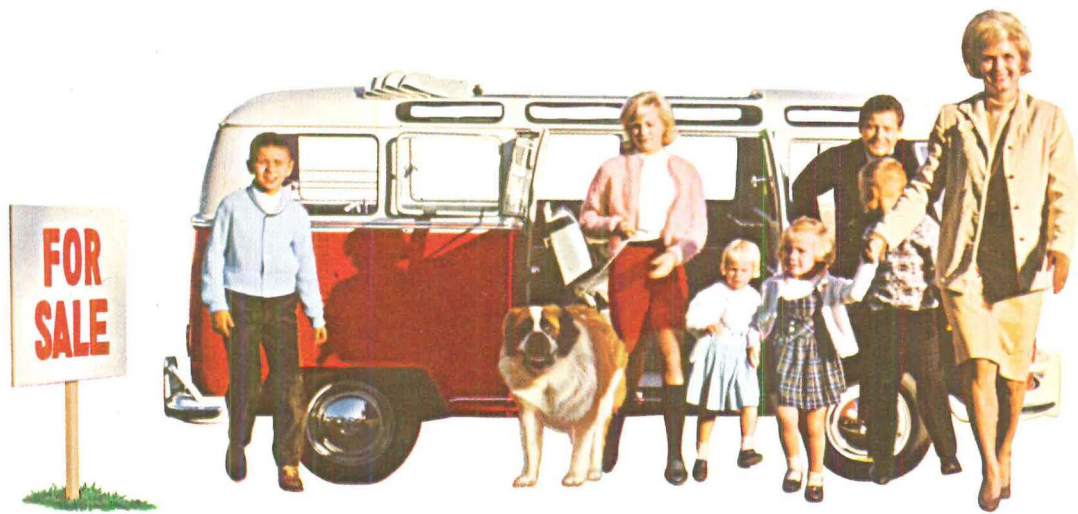


Dotted lines illustrate area of SAFEGUARD safety bottom.

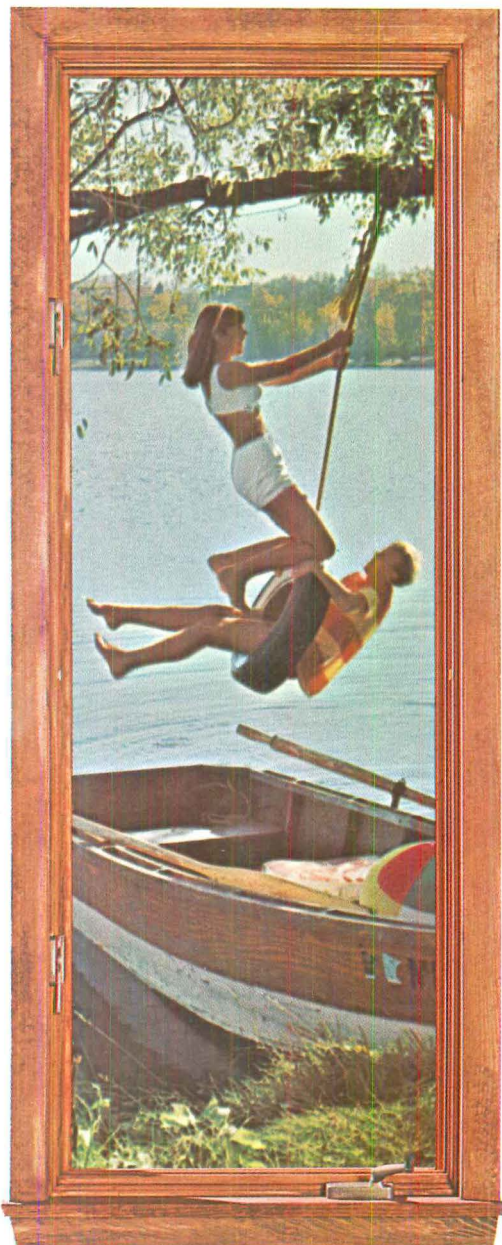
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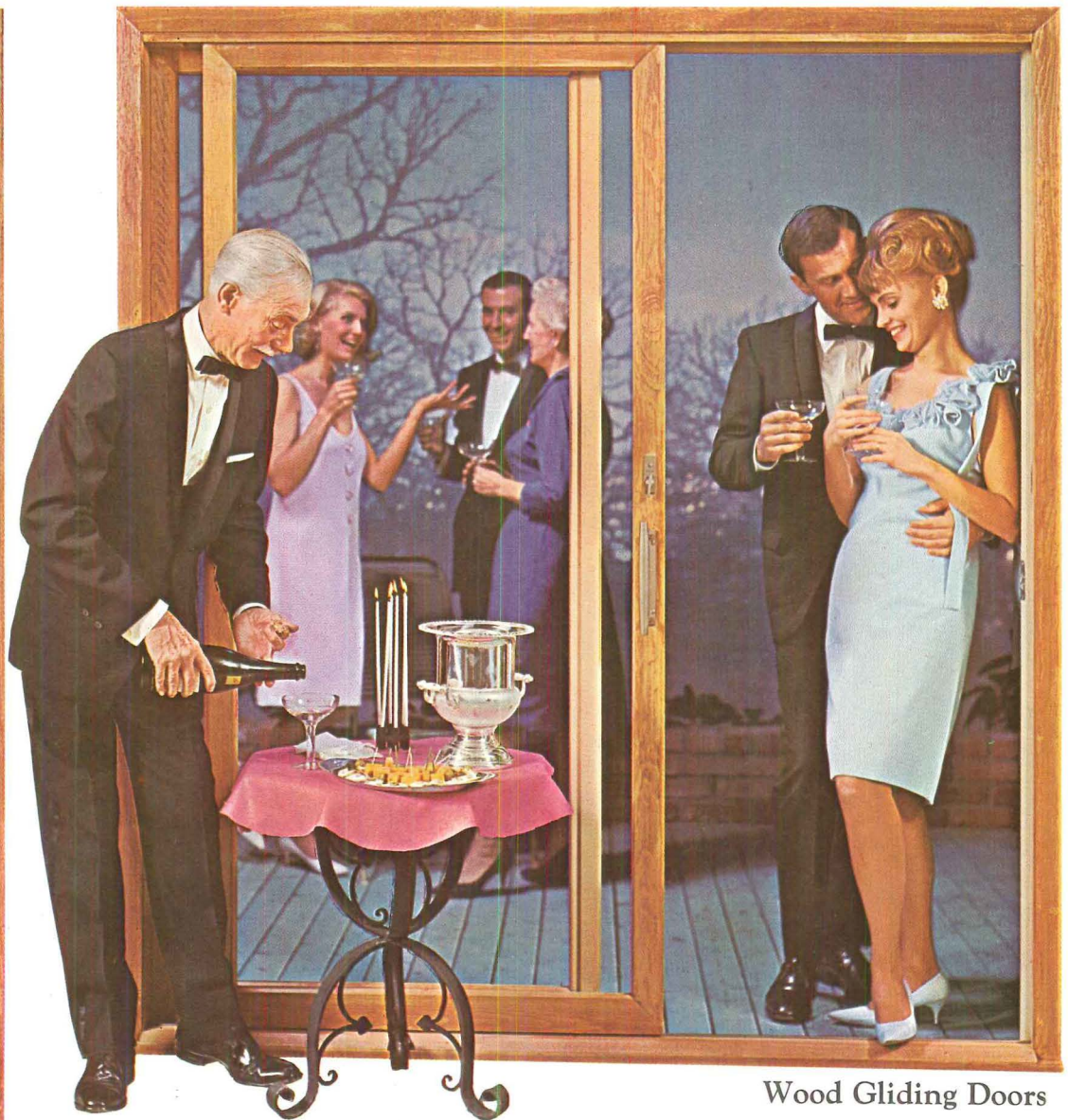
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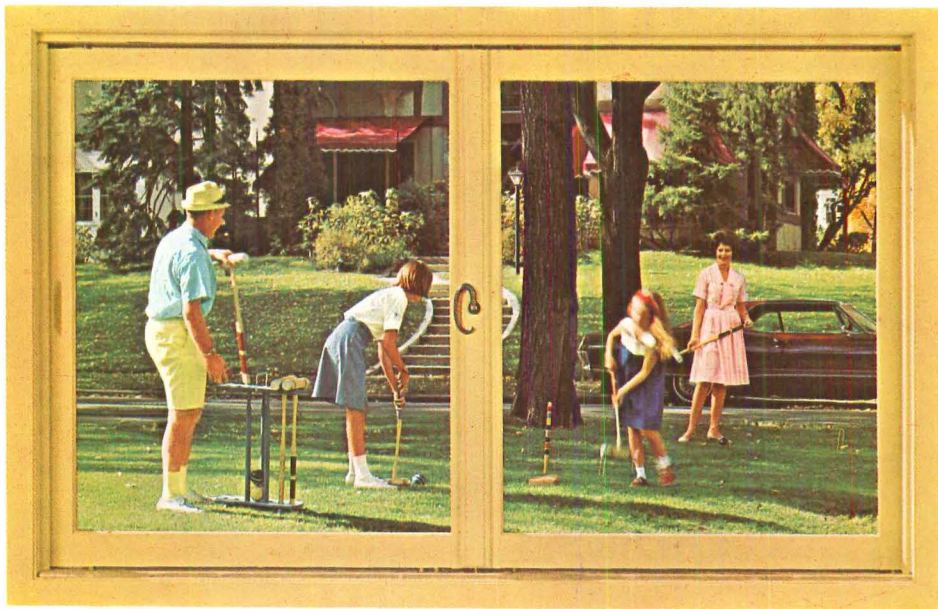
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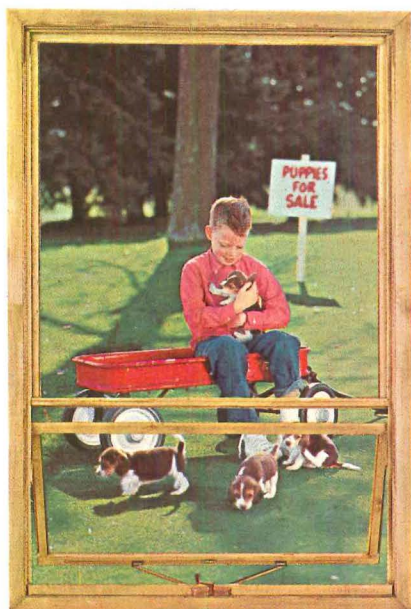
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Narroline™ Windows



Does ungrounded metal siding pose a serious shock hazard?

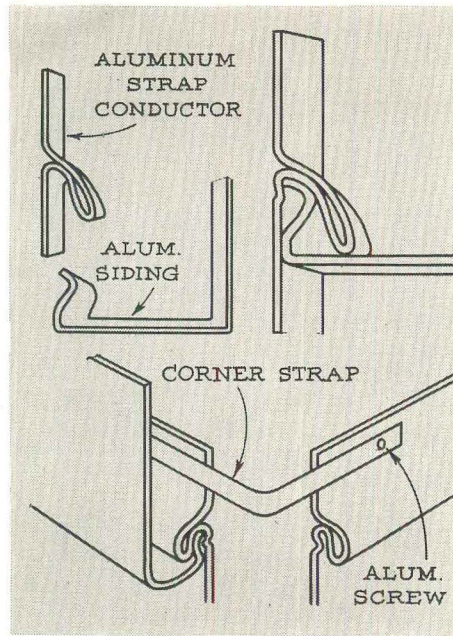
Most aluminum siding manufacturers say no. National code groups say yes. But last month a third group—the nation's firemen—officially said yes, and that may change some of the manufacturers' minds.

Both the International Fire Fighters Assn. and the International Assn. of Fire Chiefs took up the question of metal-siding shock hazard at conventions in August. The outcome was that their board of directors adopted resolutions—automatically accepted by members—that firemen all over the country would start pressuring for new codes to prohibit ungrounded metal siding.

Why are the firemen up in arms about metal siding? Because they have been shocked—literally—by metal-clad houses that have become energized by wiring shorts. The classic example: A house begins smoldering from some unknown cause; the firemen arrive, place their aluminum ladders against the metal siding and, when they grasp the ladders, are knocked away from the house by an electrical shock. Later, when the fire is extinguished, they discover that faulty wiring had put house current in direct contact with the metal siding and, having no ground, heated up the walls with electrical resistance until the wood framing burst into flame. (Lightning is rarely the cause of such energizing.)

So far no fireman has been electrocuted by energized siding, but the firemen attribute this to luck and their rubber boots. Children have been more seriously hurt by it, and house pets have actually been killed, according to published accounts.

But the firemen will have to do more



BONDING SYSTEM made by Alasco Aluminum provides contact between courses of metal siding.

than simply ask for grounding when they confront their local code boards. They will have to spell out what they mean by grounding.

It is meaningless to ground metal siding if it is not also bonded. Unless there is contact between each course of siding—not only at top and bottom edges but at corners, too—the walls can't be grounded by simply connecting the bottom course

to a pipe. Bonding is automatic when siding is uncoated, but today, virtually all builders are using pre-coated siding.

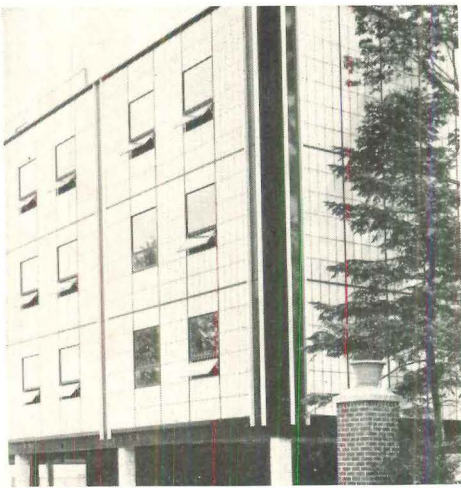
Manufacturers admit to the problem of bonding pre-coated metal siding, but they disagree with national code groups on how to do it effectively.

The code groups—Building Officials Conference of America, Southern Building Code Congress, and International Conference of Building Officials—now specify that metal siding be applied over a continuous underlayment of bare metal straps, and fastened to the straps by sheetmetal screws. The straps, providing electrical continuity between siding panels, are wired at their base to an electrical service ground.

Some aluminum manufacturers claim that accidental scratches in pre-coated siding are sufficient to allow electrical contact between individual panels. But when two manufacturers proposed bonding systems based on this premise to the International Municipal Signal Assn., the association's electrical engineers called them inadequate.

How much more does bonded and grounded aluminum siding cost? The one U.S. manufacturer—Alasco Aluminum, Akron, Ohio—that sells a nationally approved bonding-grounding system (*drawing above*), estimates the extra cost at \$5 for materials, and \$25 to \$30 for the extra labor.

The value of such a system to a home-builder is its written warranty: The manufacturer assumes liability for the results of shocks caused by his siding. Without such a warranty, the builder is liable.



Plastic walls help cut building weight 66%

Instead of 120 lbs. per sq. ft.—the weight of a conventional steel-and-masonry construction system—this four-story New Jersey office building weighs only 40 lbs. per sq. ft. And because of consequent reductions in steel, concrete, and construction time, its cost was a low \$15 per sq. ft.

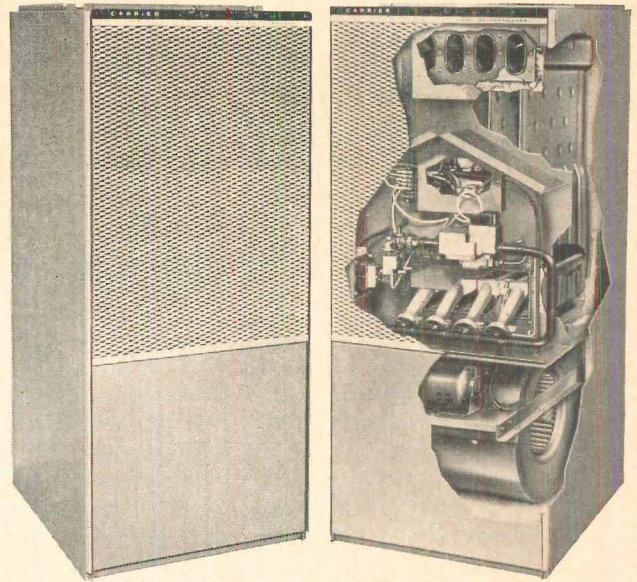
The reason for the building's light weight is a panelized construction system consisting of 1) fiberglass-aluminum walls, and 2) lightweight precast floors. The system was designed by Architect Ian MacKenzie Horne for Builder-Owner Ronald Scheckter of East Orange, N. J. Purpose: to produce a small office building requiring minimum on-site labor, minimum construction time and minimum maintenance, but also a building with lasting style and appeal to attract short-lease tenants.

MacKenzie accomplished all of those goals by enclosing the walls with non-load-bearing sandwich panels—5'x14' panels made of fiberglass sheet bonded to both sides of an aluminum I-beam core. One

man can carry the big panels (*photo*), and the four walls they produced have a deadload of only 11½ tons—compared with 612 tons had the walls been of conventional brick-and-plaster. Installed cost, for panels prefinished on both sides: \$4.50 per sq. ft.

The panels are translucent, so the office walls admit a soft light by day, and glow dramatically outside when the office lights are on at night. And they reduce heat loss 50% better than does double-glazing, says Scheckter. Their insulation U-factor is .25, compared with .55 for double-glazing.

MacKenzie chose precast floors because they are 50% lighter than poured floors—25 lbs. per sq. ft. versus 50 lbs. Reason: The precast panels don't require corrugated decking, and their bar joists—precast in the panels—are lighter than job-installed joists. The panels save on labor because they are installed by steelworkers simultaneously with steel framework.



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All right, you silver-tongued rascals, you've talked us into it.

We know what you're sore about. Because we listened to dozens of owners, drivers and mechanics just like you. And we think we've got a couple of new medium-tonnage tilts that'll make you think you designed 'em yourself. Tilts with a 50° wheel cut. Our short (89" w.b.) tractor can U-turn in 41'10" pulling a 40-foot semi. How about that? Our cab tilts 45° with an easy push, for quick engine, clutch and transmission service. But the cab needn't be tilted to check water, oil and battery. For protection against bumps and scrapes, the cab is set inside the sturdy fenders. Fenders bolt on and are interchangeable to reduce

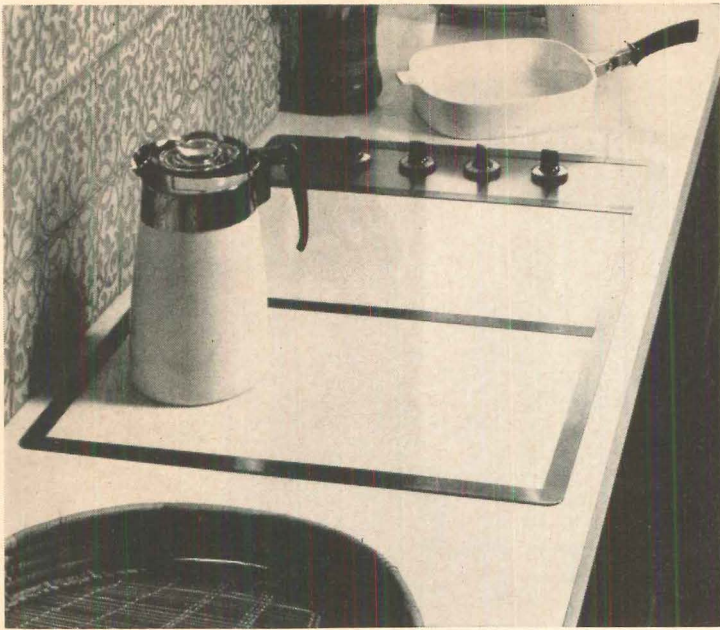
inventory and maintenance problems. Inside the cab there are foam-padded bucket seats and a thick blanket of insulation to soak up noise and heat. And that's far from all. Variable-rate suspension, front and rear. A heavy-duty frame for all wheelbases. Gasoline and diesel power. And a price that's nose to nose with Ford and Chevy. Now, you silver-tongued rascals, get down and see your dependable Dodge truck dealer. We've just scratched the surface of our two new medium-tonnage tilts. Go into them deeper with him. Dodge toughness doesn't cost any more. Why settle for less?



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A glass cooktop—last word in easy upkeep

The top is as easy to clean as the counter surface it's recessed in. Reason: The four electric elements that do the cooking are concealed beneath a panel of non-porous glass-ceramic. Four sunburst patterns embossed in the panel indicate the location of each heating element. When the heat is on, the sunbursts become amber-colored.

At present the rangetop is only available in upstate New York, where it has been test-marketed for the past several months. However, the manufacturer expects to exhibit the top at the December NAHB Convention and distribute it next year.

Probable price: about \$350.

But included in the price is a set of eight matching utensils—also of glass-ceramic—which must be used with the cooktop if it is to perform efficiently.

In other respects, the new top is like conventional counter ranges. It is mounted flush with the counter in a stainless-steel frame. Dimensions are 32¼" x 21½" x 4¼". A 220-volt wiring system is required for the four heating elements which, regulated by individual thermostats, have an infinite range of settings between 120° and 475°F. Corning Glass, Corning, N.Y.

Circle 275 on Reader Service card

Enamel "carpet"—an idea for basements

It's a multi-colored high-abrasion paint that a builder can apply to any concrete floor for less than 10¢ a sq. ft. The advantage: It produces a more decorative finish than solid-color masonry paints, yet costs 25% less than bottom-of-the-line asphalt tile.

Wear resistance is unusually high. After a two-year use test that included roller-skating and skate-boarding, the manufacturer reported that the paint—incorporating a new kind of resin base—showed no signs of wear.

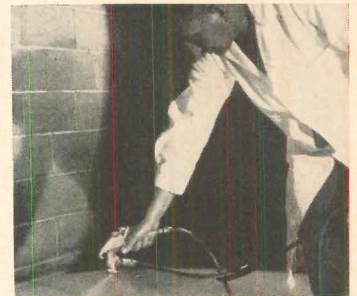
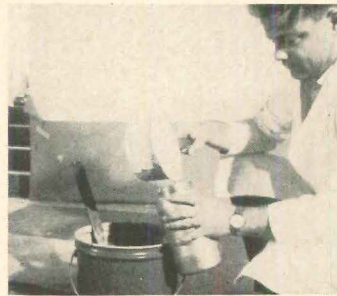
The mottled pattern is produced by individual paint droplets that retain their separate colors within a predominant-col-

or background. A choice of four multi-hues is available: heather grey, aquamist, driftwood, and glen green.

No primer is required with the paint, but the manufacturer recommends that it be spray-applied. And before applying, the concrete must be etched with muriatic acid, rinsed and allowed to dry. The paint takes 24 hours to dry, and should be coated with an emulsion-type wax.

A long-term advantage: The paint can be spot-retouched later because it poses no blending problem. Marbon, Washington, W. Va.

Circle 276 on Reader Service card



Polyurethane sealant—for tougher joints

Tensile strength is so high, says the manufacturer, that the sealant is unaffected by spike heels and sharp rocks. For that reason, this one-part caulking compound—polyurethane rubber—is designed especially for high-traffic concrete floors like terraces, decks, and sidewalks.

Besides hardness, the sealant also provides unusual flexibility. It can be stretched up to 50% in service, says the manufacturer, with no effect on adhesion or joint soundness. Reason: Polyurethane rubber has a low modulus, which means there is relatively little internal stress in the material. Two other statistics the

manufacturer is claiming for the material are: 1) 100% better elongation than most similar polysulfide sealants; and 2) 90% recovery of its flexibility after elongation.

Also, the sealant is said to cure after exposure to atmospheric humidity and—because it is not subject to shrinking, wrinkling or adhesion failures—is a virtual guarantee against freeze-thaw cycles that cause concrete failures.

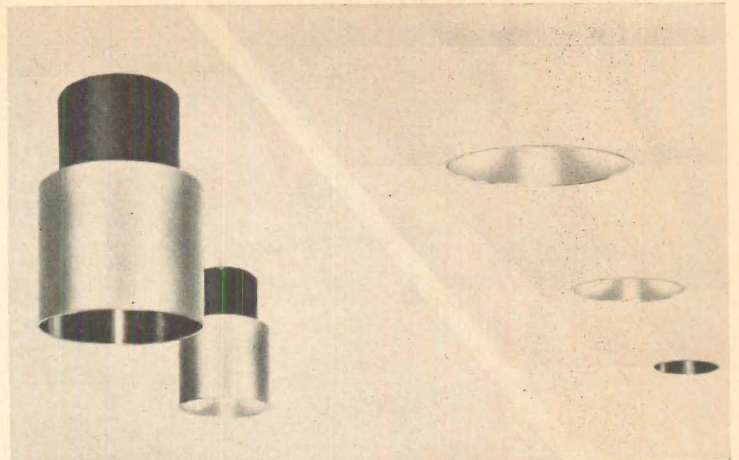
Terraseal 100 is the sealant's trade name. List price is about \$18 a gallon. Dow Corning, Midland, Mich.

Circle 277 on Reader Service card

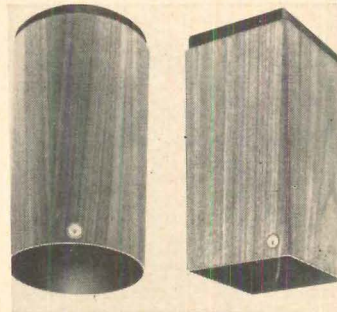
Lighting



Wall sconce and bell-shaped chandelier simulate Old World sculpture. The sconce has an amber glass cylinder, is 6"x27" and projects 7¼". A wood beam forms the chandelier's 24"-long base. Progress, Philadelphia. Circle 265 on Reader Service card



Low-brightness downlights for public areas are available for surface or recessed mounting in a graduated variety of sizes, in three reflector finishes. Surface units have matte-black bases. Wattages: 75 to 500. Guth, St. Louis. Circle 264 on Reader Service card



Hardwood lighting fixtures—made of extruded aluminum housings with wood veneer—come 5½" square or 6" round. Choice of wood: walnut, teak, cherry, maple, or oak. Both styles are 10" long. Litecontrol, Watertown, Mass. Circle 266 on Reader Service card



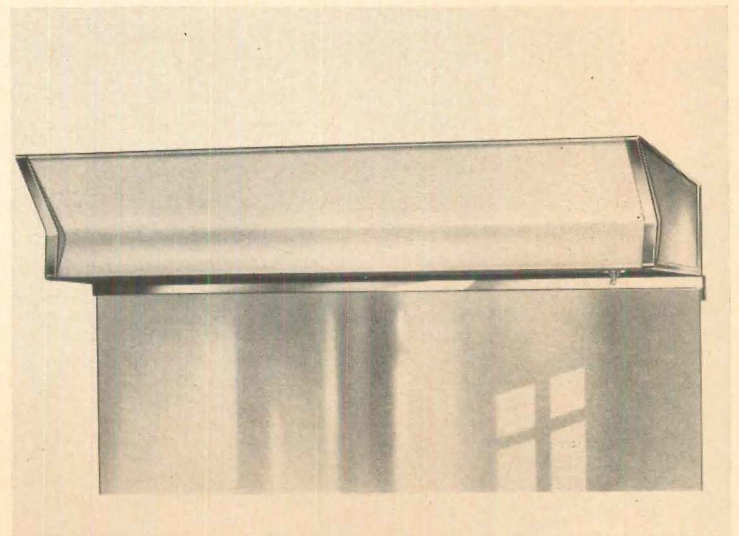
Outdoor post lantern with amber glass globe accents matte black finish with antique brass filigree trim. Lantern is 23" high, 12" wide. Also available is a wall bracket adapter (right) to convert lantern to wall fixture. Thomas, Louisville. Circle 261 on Reader Service card



Yoke-mounted spotlight of extruded and cast aluminum allows up to 358° rotation around the vertical axis and 180° rotation around the horizontal axis. In two diameters: 5" and 6". Finish: brushed aluminum. Prescolite, San Leandro, Calif. Circle 263 on Reader Service card



Outdoor bracket lantern houses three sculptured candles in a textured glass cylinder surrounded by a wrought-iron cage. The fixture is 9½" wide, 14" high, and projects 11¾" from a hammered-finish cast shield. Halo, Des Plaines, Ill. Circle 260 on Reader Service card



Incandescent fixture for four bulbs diffuses light out, up, and down. Flush ends permit butting the fixture against right or left side-walls. Available with plastic diffuser and a choice of gold or silver trim. Grote, Madison, Ind. Circle 262 on Reader Service card

New products continued on p. 125

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SHAKE PANEL FOR
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Brushed cedar surfaces that are unusually distinctive. Now available in 8' panels for homes and apartment construction. Combine handsomely with other building materials. 3-Ply* construction, in colors, for that weathered, rustic appearance.

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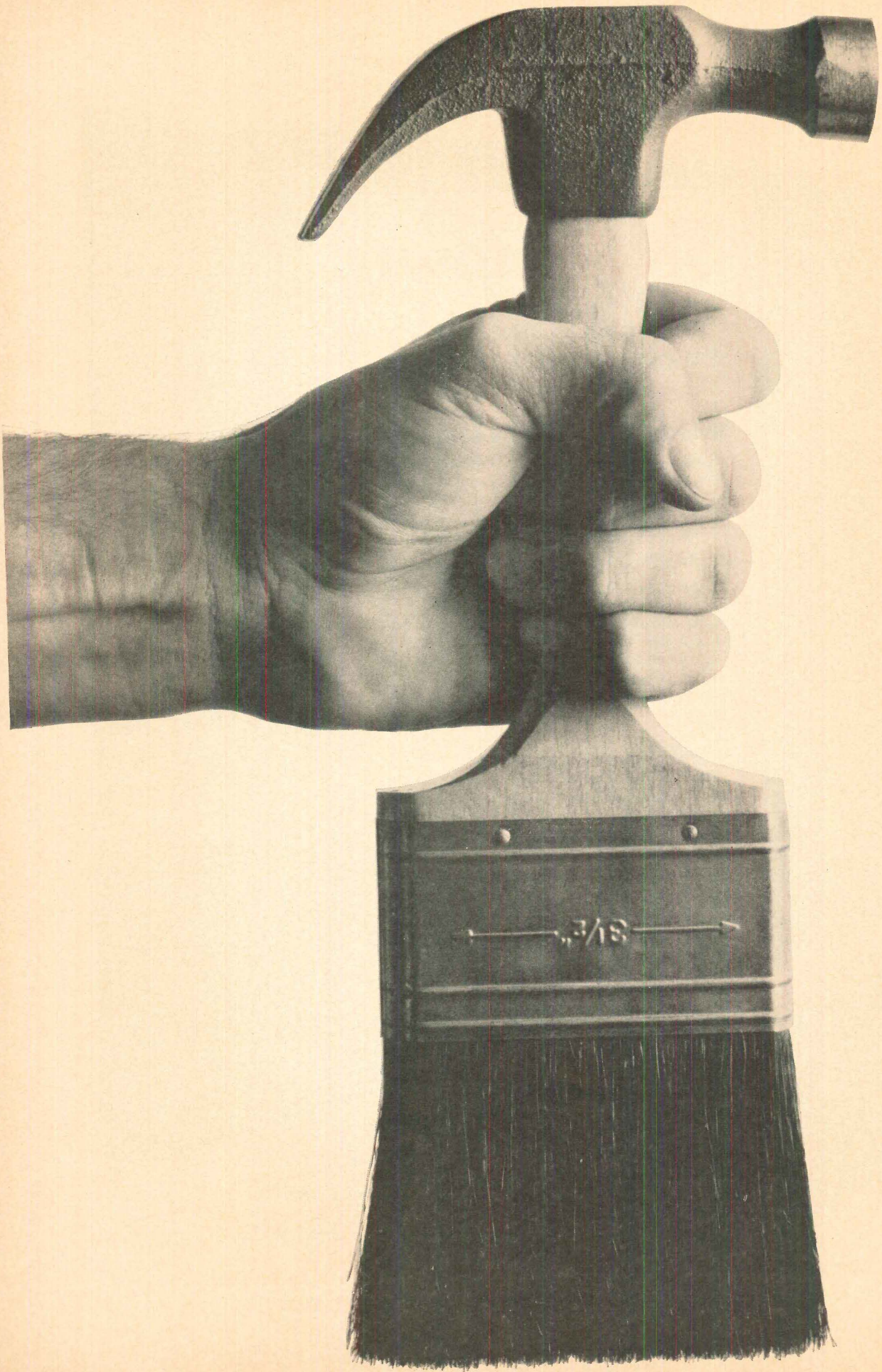
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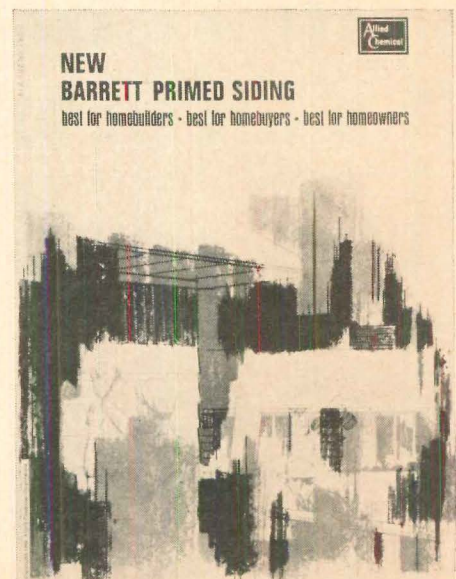
Fully primed means that final painting can be delayed for up to 90 days after application. No more worries about the weather because Barrett sidings are fully protected. The factory-applied prime coat also gives good paint bite. Coverage is faster, more even and requires less paint. Real economy. And call-backs are practically eliminated.

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and easy, too. No special tools are necessary because you cut and nail it just like wood. A reversible edge makes for minimum waste and maximum usage for gable cuts. Guide lines and the 16' length help speed installation time for added savings. And Barrett Primed Siding won't split or check.

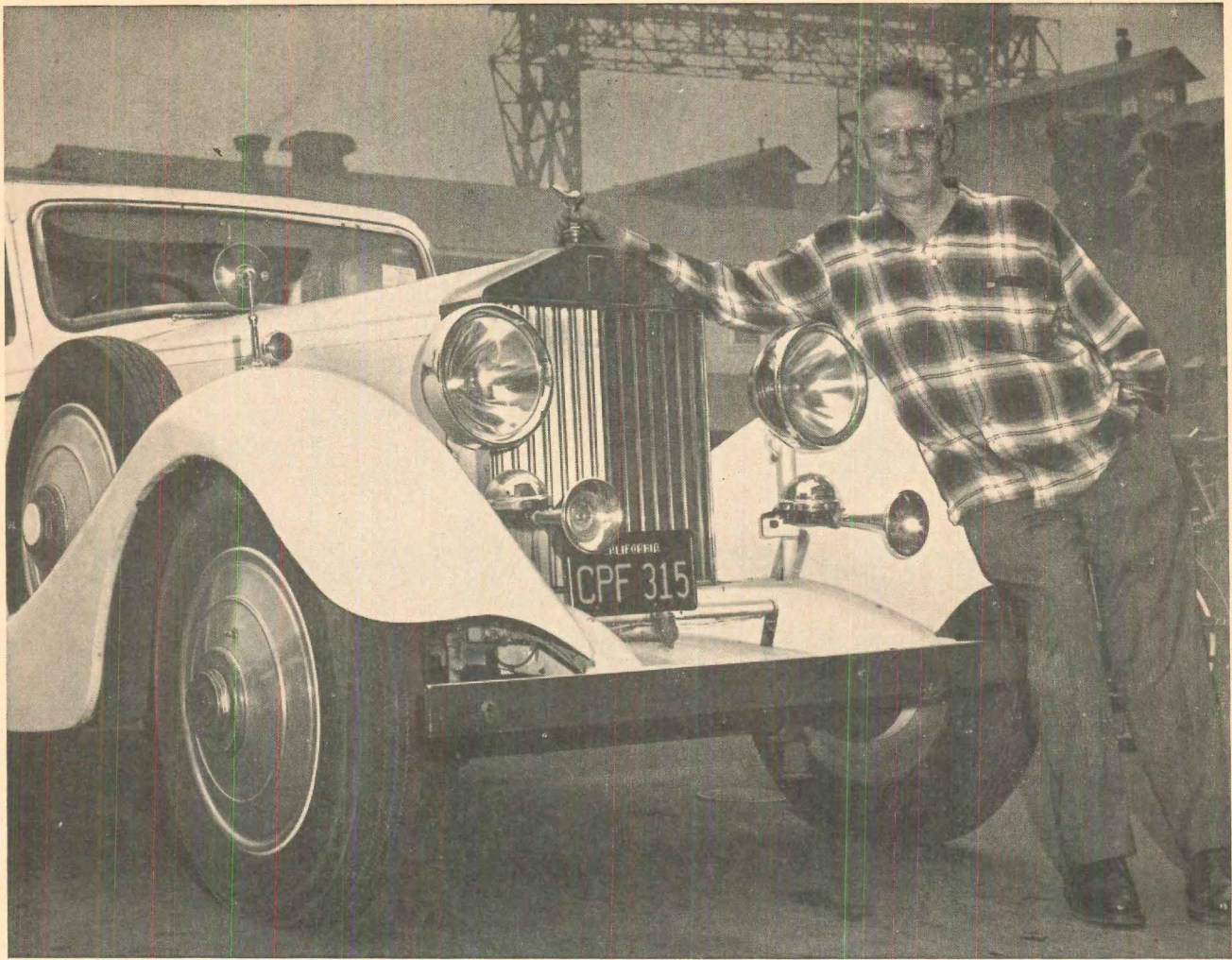
Variety? You can get Barrett Horizontal Lap Primed Siding in 8, 10, and 12" widths, and 16' lengths; also V-Grooved and Plain Panels 4' wide, in 8, 9 and 10' lengths.

For a free brochure that tells all the advantages of building with Barrett Primed Siding, write to: Barrett Division, Allied Chemical Corporation, Dept. HH-10, 40 Rector St., N.Y., N.Y. 10006.



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George Morgan, a shipbuilder at the San Francisco Bay Naval Shipyard in Vallejo, Calif., has been in love with automobiles all his life, and a few years ago he set his heart on owning an antique Rolls Royce.

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They're made with PPG Herculite® K Safety Glass.**

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All this from a guy who doesn't work for us!

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See your Bryant dealer, distributor or factory branch for all the details. Or write: Bryant Manufacturing Company, Indianapolis, Indiana 46207.

And, if you want, tell him Julius sent you.

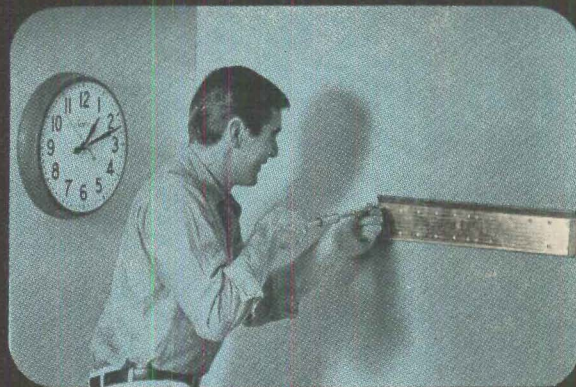
The Bryant logo consists of the word "bryant" in a white, lowercase, sans-serif font, centered within a red, rounded rectangular shape that has a slight gradient and a shadow effect.

Pop



POP the box open and SERVASINK practically floats out—it's so light. Everything for fast installation in a single carton.

Zip



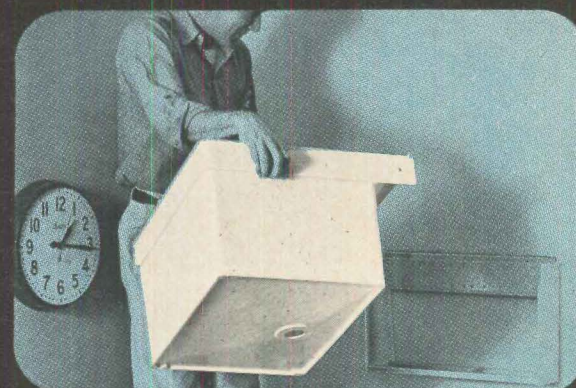
ZIP galvanized wall bracket up with four lag screws into studs of plaster or dry wall—expansion shields included for block wall.

Flip



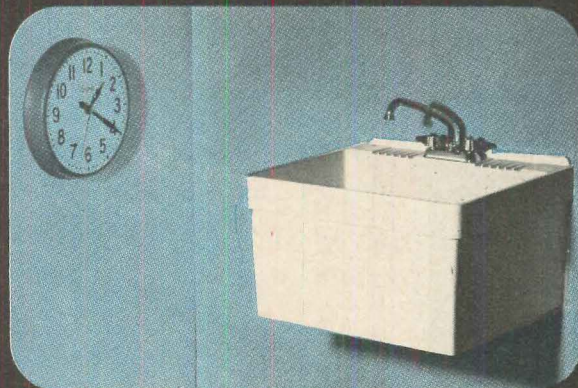
FLIP wall hanger to position—new ingenious design does this step in seconds—snaps in place to secure hanger to wall bracket.

Slip



SLIP the SERVASINK onto the wall bracket and it's ready for water and waste connections. It can't sag or sway and needs no legs.

Done



DONE is your job—in minutes. For the first time, a clean and modern utility tub that is solid, strong, easy-to-clean and permanent.

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FUN? Maybe washday isn't, but saving or making money sure is. SERVASINK sells with ease and profit because it's so versatile.

These six pictures tell why ServASINK[®] is the most popular and profitable laundry tub on the market. Installs faster and more rigidly thanks to the exclusive flip-flop wall bracket. Learn all the advantages of ServASINK from your wholesaler or write to us.

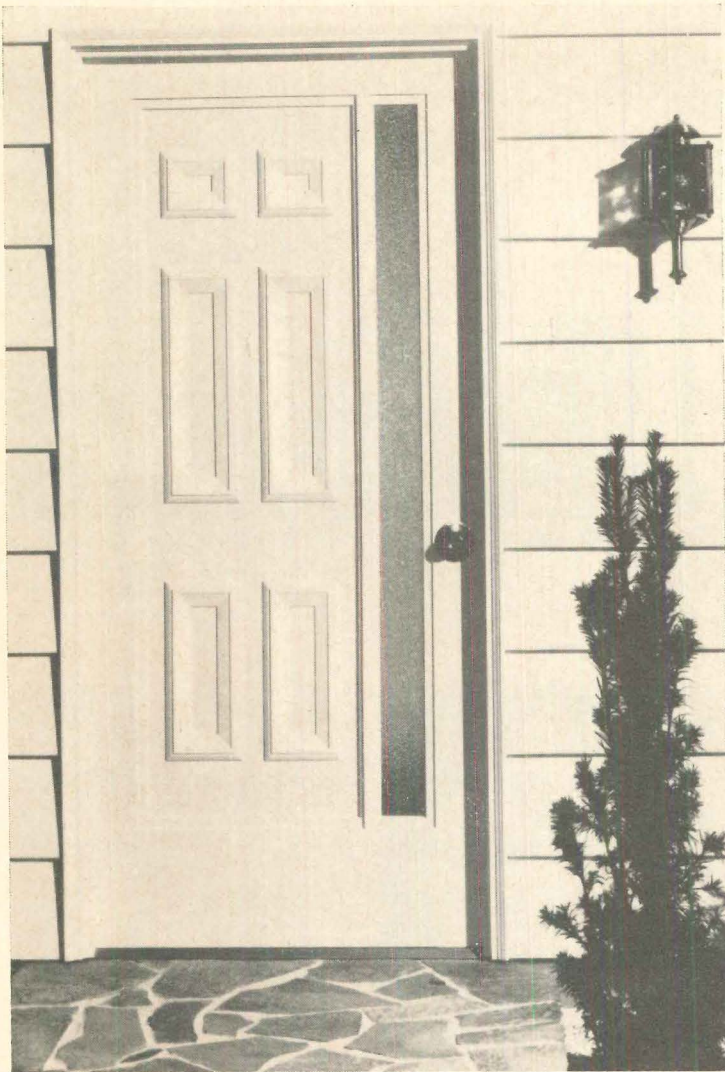
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FIAT

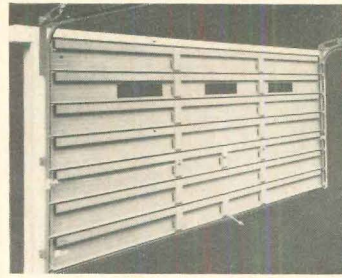
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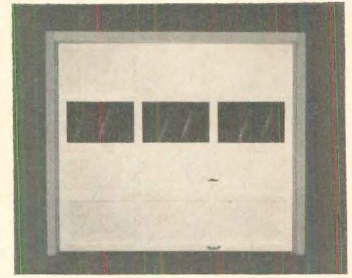
Doors & windows



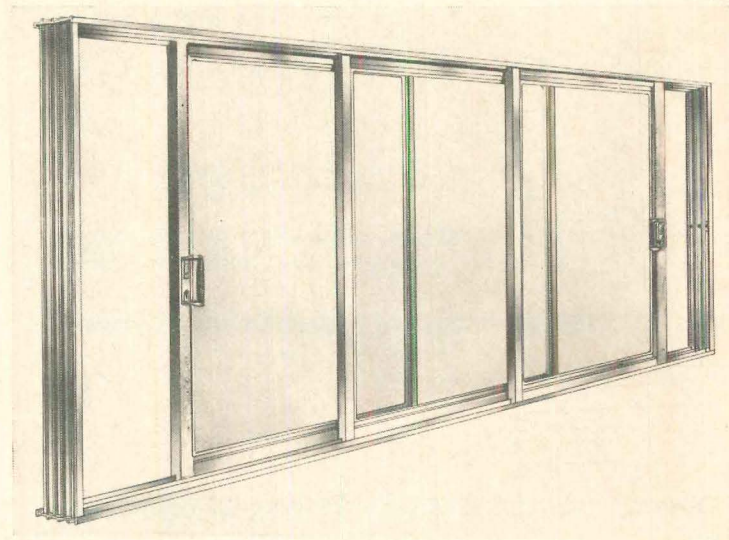
Entrance door—in standard widths of 2'6", 2'8", 3'0" and 3'6"—features six appliques which can be painted in complementary or contrasting colors. The 3'0" door (*shown*) has one fixed side-light; the 3'6" has two. Simpson, Seattle. *Circle 213 on Reader Service card*



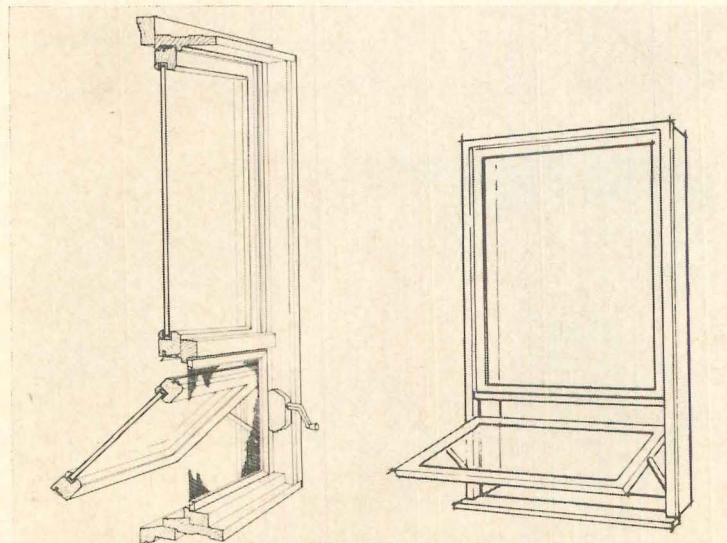
Steel sectional garage door incorporates beefed-up reinforcing ribs welded to each panel. Lengths range from 8' to 18'; height is 6'6" or 7'0". Available with windows or all solid panels. Roly-Door, Buffalo, N.Y. *Circle 214 on Reader Service card*



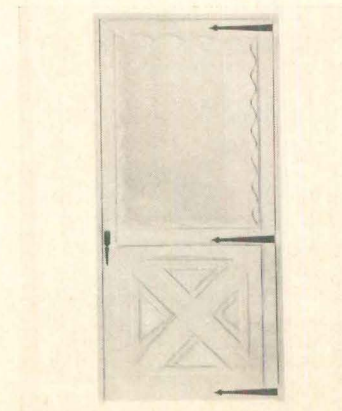
Wood sectional garage door is available in both four- and five-section models, in six sizes: 8' x 6' 6", 8' x 7', 9' x 6' 6", 9' x 7', 16' x 6' 6", and 16' x 7'. Three or six panels wide. Frantz Mfg., Sterling Ill. *Circle 381 on Reader Service card*



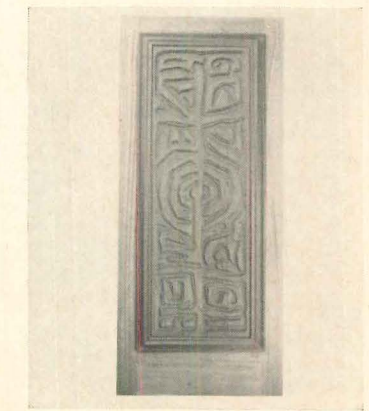
Multi-track sliding door comes in five pocket configurations for 3', 4', or 5' glass panels. Maximum allowable door openings range from 3' to 20'. In standard or insulated glass, glazed or K.D. Stanley Works, New Britain, Conn. *Circle 212 on Reader Service card*



Wood window combines upper stationary sash and roto-operated awning sash within one frame. Bottom sash—controlled by roto-operator mounted in side jamb—opens to 90°. Crestline, Wasau, Wis. *Circle 210 on Reader Service card*



Insulating door is constructed of hot-dipped, zinc-coated steel—treated with zinc phosphate to make it impervious to rust. Features include a tubular steel frame and adjustable closure strips. In 22 colors. Rusco, Pandora, Ohio. *Circle 382 on Reader Service card*



Carved wood door is a modular panel of redwood or mahogany in a solid mahogany frame. Offered in several styles and sizes. The panels can be separately purchased for architectural details. Panelcarve, Santa Barbara, Calif. *Circle 211 on Reader Service card*

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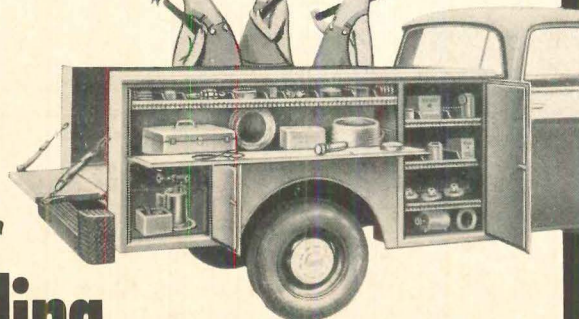
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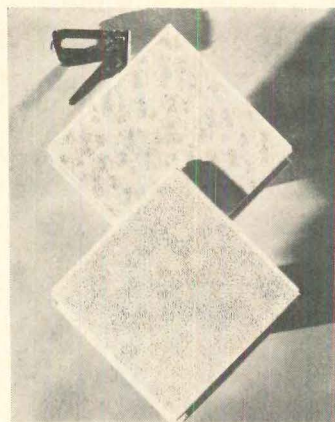
NEW PRODUCTS

start on p. 117

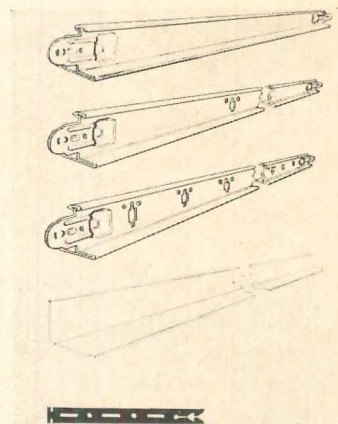
Ceilings



Suspended acoustical panels—made of inorganic material—are designed for high-humidity areas and exterior use. Manufacturer says they remain rigid when wet and are unaffected by freezing temperatures. Armstrong, Lancaster, Pa. Circle 230 on Reader Service card



Embossed tiles are 12"x12" x 1/2" and have flanged joints to simplify application. Two patterns: white-on-white with sound-absorbent micro-drilled holes (top) and floral design flecked with gold and silver (bottom). Simpson Timber, Seattle. Circle 231 on Reader Service card

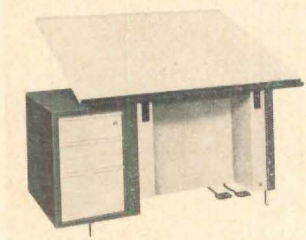


Grid system includes two extras: 1) 1 1/2"-high main tee for added strength, and 2) multi-purpose joist hanger that permits installation of grids whether below or flush against joists. Standard tee is 1" high. Leigh Products, Inc., Coopersville, Mich. Circle 290 on Reader Service card



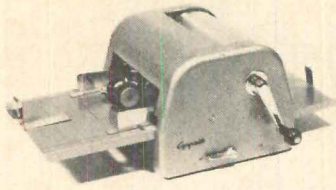
Thermal lay-in panel for suspended ceilings—2 5/8" thick—fits any 2'x4' module inverted T-grid system. It is available in flexible fiberglass or rigid mineral fiber base capped with 2" of insulating fiberglass. Artcrest Products, Chicago. Circle 232 on Reader Service card

Office equipment



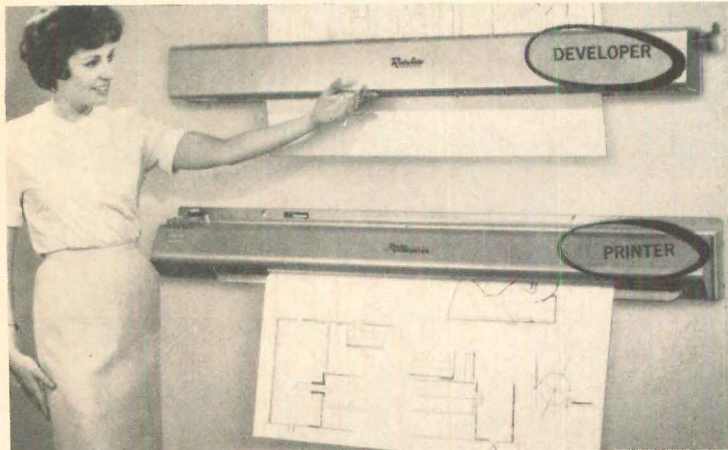
Drafting desk is available with choice of two boards: 1) coated steel-honeycomb, 2) kiln-dried wood. Pedestal drawers are optional. Other styles: a two-man desk, and a desk combined with a right-angle board. Stacor, Newark, N.J.

Circle 221 on Reader Service card



Compact spirit duplicator fits 12"x24" table top. Single control lever sets pressure, releases fluid, and guides accurate positioning and feeding of paper 3"x5" to 9"x14" in size. Machine is finished in beige baked enamel. Copy-Rite, Chicago.

Circle 222 on Reader Service card

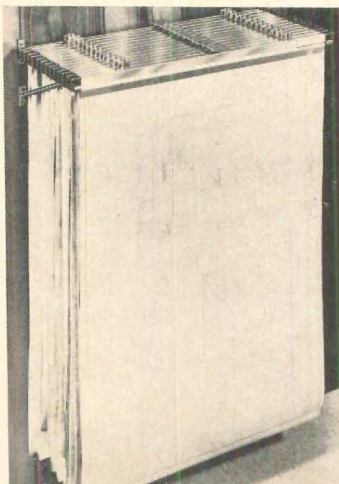


Low-cost whiteprinter operates three times faster than earlier models to match speed of fast diazo papers. Seven models range in width from 18" to 42". All may be wall-hung to save space, or mounted on a table. Rotolite, Stirling, N.J. Circle 220 on Reader Service card



Non-stop folder processes as many as 18,000 sheets—up to 11 3/4"x22"—in an hour. Dimensions: 17 1/4" wide, 40" long, 20" high. It operates on 110-volts. Optional: perforating and slitting attachment. Michael Lith, New York.

Circle 223 on Reader Service card



Parallel wall rack permits compact, vertical plan filing. In lightweight aluminum binders, 12 complete plan sets take up only 11" of space. Each set may consist of up to 100 sheets not more than 42" wide. Plan-Hold, Torrance, Calif.

Circle 224 on Reader Service card

New products continued on p. 128

What's New for 1966? from Grote

Million Dollar Bathrooms for only \$5 more

Alert builders know that a sale or rental often hinges on the only two rooms that come completely furnished, the kitchen and the bath. Having reached the end of the line in the kitchen (what else can you add to it?), builders and decorators now look to the bathroom as the great new frontier for adding more sales appeal to the home or apartment.

Now, for about two days' interest on the building loan, a builder can get a Grote Decorator Cabinet that can help sell or rent weeks earlier. Think of it: the difference between an ordinary-looking bath and a "decorator" bath is as little as \$5 when you use Grote cabinets.

Grote is the only one-stop source for glamor cabinets to enhance a \$12,000 mass-home with a million dollar accent or to complement a \$50,000 mansion. Whatever your decor, look to Grote for exactly the right cabinet at your right price to fill the bill. Your Grote bathroom cabinets will work more sales magic for you than any other investment you can make in your home or apartment.

THE GROTE MANUFACTURING CO.
Madison, Indiana
... world's largest supplier of bathroom cabinets to the building industry

AAA File No. 28

How a \$5-bill will help you sell or rent weeks earlier



loan. And it's not for the catalog, which is free.

For only \$5 more than the cost of an ordinary cabinet, you can buy a Grote high-style "decorator" cabinet that will add a million-\$ worth of sales appeal to your bathroom. And alert builders know that a deal often hinges on this, the only room along with the kitchen, that comes completely furnished.

It costs you nothing to get the lavish full-color catalog that shows you how to work this sales magic. Send the coupon for your free copy.

THE Grote MANUFACTURING CO.
PO Box EF-766, Madison, Indiana

A \$5-bill will save us weeks on our building loan? Show us how. Send your new Decorator Catalog C-366 of sales-magical bathroom cabinets.

Firm Name _____

Street _____

City _____ State _____ Zip _____

Signed _____ Title _____

Baths



Three-dimensional sculptured tile is lugless so its continuous basket-weave pattern is unbroken by grout lines. Available in nine colors with matching trim. Tile size: 4¼" x 4¼". Wenzel Tile, Trenton, N.J. *Circle 203 on Reader Service card*



Combination heater incorporates two-speed exhaust fan and drop-lens light in one unit. Berns Air King, Chicago. *Circle 202 on Reader Service card*



Molded-stone floor for shower stalls is one of eight models in six colors, plus white. American Cyanamid, Plainview, N.Y. *Circle 201 on Reader Service card*



Combination vanity cabinet is made up of standard units in choice of 12", 15", and 18" widths in white and gold, birch, or walnut. Choice of units includes clothes hampers and drawers. International Paper, Portland, Ore. *Circle 204 on Reader Service card*

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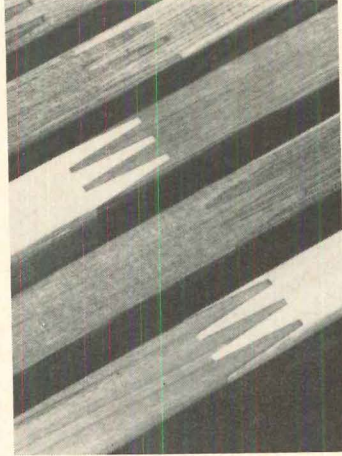
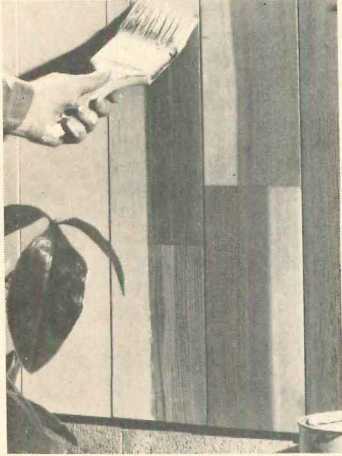
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Exteriors



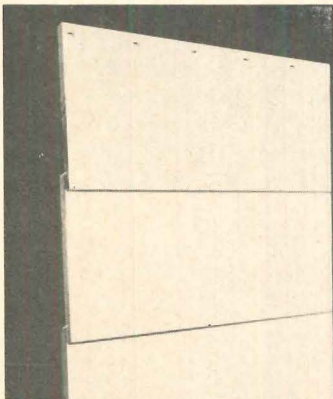
End-glued redwood lumber is available in specified lengths up to 24'. Lumber comes unfinished or factory paint-primed and can also be factory pre-plowed for fascia-board application. Glue line is guaranteed. Union Lumber, San Francisco. *Circle 240 on Reader Service card*



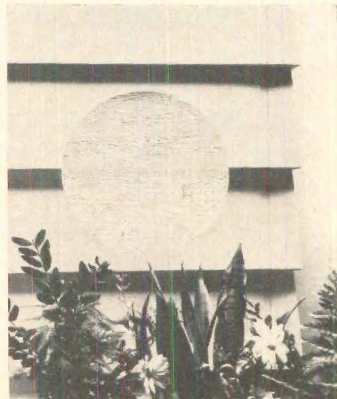
Classic aluminum columns are designed as load-bearing posts for porches and entrances. Column diameter ranges from 6" to 15", lengths from 8' to 30'. Product is distributed only on the West Coast. Pacific Column, Alameda, Calif. *Circle 241 on Reader Service card*



Incombustible sidewalls of perlite—a volcanic ore—look like wood. Grooves and a staggered butt edge give each 13-9/16"x24 3/8" unit the look of three separate shingles. In six colors, with a permanent plastic finish. Johns-Manville, New York. *Circle 242 on Reader Service card*



Zinc-coated steel siding simulates the appearance of wood. Polyvinyl chloride finish—heat-fused to the metal—carries a lifetime guarantee. Siding is available in white or a choice of colors. Lyf-Alum, Oconomowoc, Wis. *Circle 243 on Reader Service card*



Prefinished lap siding—in 16' and 12' lengths—comes with nail slots across the top edge 8" o.c. to speed installation and simplify alignment of courses. Slots are also available in manufacturer's panel siding. Masonite, Chicago. *Circle 244 on Reader Service card*

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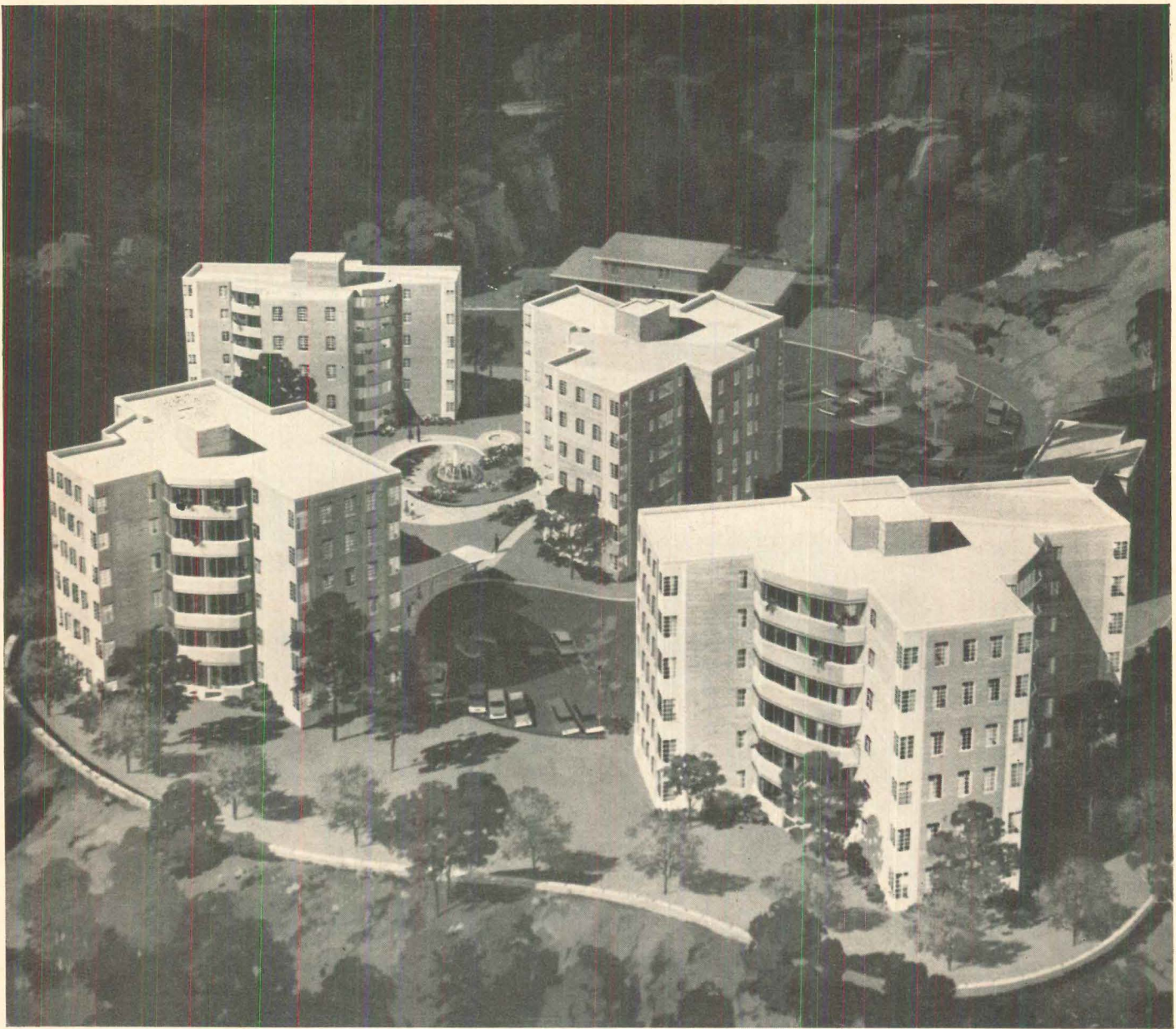
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The New Rivercliff

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The New Rivercliff is complete with swimming and wading pools, luxuriant lawns and gardens, and indoor and outdoor recreation facilities. Every kitchen has an RCA WHIRLPOOL gas range, an RCA WHIRLPOOL No-Frost refrigerator-freezer and an RCA WHIRLPOOL undercounter dishwasher. And there's also a self-service laundry equipped with RCA WHIRLPOOL commercial washers. Prompt delivery of appliances was an important factor because the modernization job was accomplished while the apartments were occupied.

"We went 100% with RCA WHIRLPOOL appliances in modernizing our luxury apartments because the kitchens were of prime importance!"

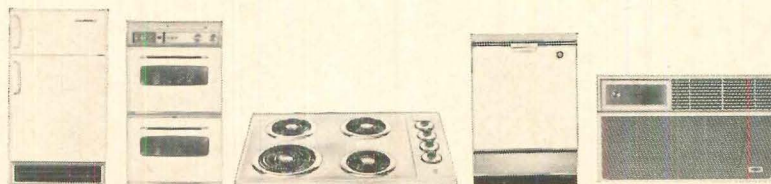
says W. A. Cheek, president of Rivercliff Company, Inc., Little Rock, Arkansas.


When Rivercliff embarked on complete modernization of its four six-story buildings its aim was to create the finest in apartment living in a market where luxury apartments were mushrooming. Kitchen remodeling took top priority, with RCA WHIRLPOOL appliances being installed exclusively. Why? "Their enthusiastic acceptance by our residents, simplicity of maintenance, right price and prompt deliveries all contributed to our decision to go 100% with RCA WHIRLPOOL appliances at The New Rivercliff," according to Mr. Cheek.

William A. Cheek (seated) is president and J. E. Switzer is manager of Rivercliff Company, Inc., developers of The New Rivercliff, 150-unit luxury apartment complex just six minutes from downtown Little Rock.



The reputation of Whirlpool's Full-Line Concept is growing, too. And there are several good reasons. You deal with one man instead of three or four. You sign one order, get undivided responsibility, undivided service. You can equip your kitchens with either gas or electric appliances . . . and get them all from one dependable source, all design and color coordinated. Your distributor can show you many ways in which the Whirlpool Full-Line Concept can benefit you. Get in touch with him today.



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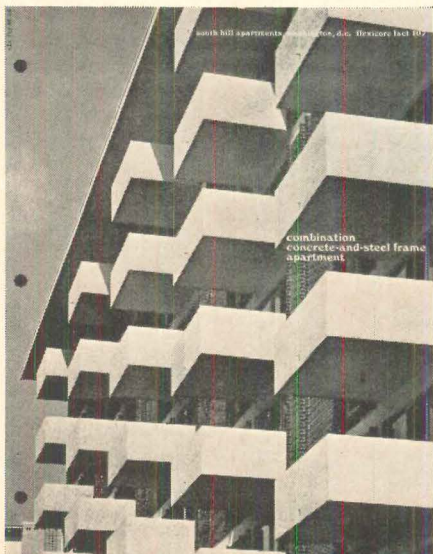
New developments in Flexicore floor-ceiling decks in connection with new lightweight steel frames, new combination concrete and steel frames and a resurgence of wall-bearing construction have produced a "Structure Package" of benefits that deserves your looking into.

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I'd like to send you a report on one such apartment in Washington, D.C. Read about it and talk it over with your architect. Write for South Hill Report, The Flexicore Co., Inc., Box 825, Dayton, Ohio. There'll be no obligation.

Robert E. Smith
Vice-President and Manager



Write for South Hill Report.
Circle 84 on Reader Service Card

NEW LITERATURE

For copies of free literature, circle the indicated number on the Reader Service card, page 119.

CULTURED MARBLE. Four-page brochure describes ways to use marble tops in bathrooms, kitchens, bedrooms, living and recreation areas. Data include physical properties and sizes. Eight colors are pictured. La France Precision Casting, Philadelphia. *Circle 300 on Reader Service card*

RESILIENT TILE FLOORS. Illustrated brochure in full color has 28 pages packed with decorating ideas. Samples are pictured as well as complete rooms. For copy: send 25 cents to Kentile Floors Inc., 58 Second Avenue, Brooklyn, N.Y.

IMPORTED CHANDELIERS. Full-color brochure pictures a selection of elegant fixtures for uses ranging from informal dens and baths to foyers and formal living-dining areas. E-Lite, New York. *Circle 361 on Reader Service card*

CURING COMPOUNDS. The advantages of spray-on, membrane-type cures—to eliminate hairchecking, thermal cracking and spalling—are cited in folder. W.R. Meadows, Elgin, Ill. *Circle 362 on Reader Service card*

ELECTRONIC SPRINKLER. How to install a central lawn-watering system in a new home is detailed in an instruction sheet. Rain Bird, Glendora, Calif. *Circle 363 on Reader Service card*

INSULATION BOARD. Detailed application manual on foam plastic board includes specifications for its use as: 1) a base for wet plaster and other interior wall finishes; 2) perimeter insulation; and 3) cavity wall insulation. Included are comparative insulating values, installation techniques and application photos. Fourteen pages. Sinclair-Koppers, Pittsburgh. *Circle 364 on Reader Service card*

STAINLESS STEEL FLASHING. Advantages and economies of soft stainless steel—easily bent, cut, nailed, and soldered—are cited in a four-page folder which includes a sample. Republic Steel, Cleveland, Ohio. *Circle 365 on Reader Service card*

POWER-ACTUATED FASTENERS. Full-line catalog describes and illustrates tools, drive-pins and studs for fastening to concrete and steel. Includes tabular data on safe working loads in concrete and steel. Diamond Expansion Bolt, Garwood, N.J. *Circle 366 on Reader Service card*

DURABLE CONCRETE. The do's and don'ts of mixing and applying concrete are summarized in a placard which can be posted at the job-site. Master Builders, Cleveland. *Circle 367 on Reader Service card*

DECORATIVE HARDWARE. Full-line of accessories with the look of handcrafted jewelry includes gold- and silver-plated switchplates and jeweled knobs and pulls. Twelve pages, in color. Florenta of California, Los Angeles. *Circle 368 on Reader Service card*

DIMMER CONTROL. Product guide provides a quick reference for selecting lighting controls best suited to particular applications. Points up recently introduced products among a complete line of incandescent and fluorescent controls. Superior Electric, Bristol, Conn. *Circle 369 on Reader Service card*

TRANSITS AND LEVELS. Instruction booklet shows how builders can simplify measuring jobs by using transits and levels. Step-by-step diagrams and illustrations are included. C.L. Berger & Sons, Boston. *Circle 370 on Reader Service card*

NYLON SHUTTERS. Product sheet describes shutters, and lists colors (three) and sizes (ten). A diagram illustrates installation method. Du Pont, Wilmington, Del. *Circle 302 on Reader Service card*

APARTMENTS HEATING PLANTS. A large heating system is more efficient when it is run by mul-

iple boiler-burner units instead of a single large boiler. So says a four-page product brochure which explains the reasons—fuel savings and elimination of short cycling during mild weather—in charts and diagrams. Hydrotherm, Northvale, N.J. *Circle 351 on Reader Service card*

ROAD REPAVING. Illustrated brochure cites advantages of using soil cement for reconstructing old streets, roads, or parking lots. It saves time and money because roads can be closed off for shorter periods. Four steps are pictured. Metradon, Orinda, Calif. *Circle 352 on Reader Service card*

OIL FIRED BOILERS. Updated bulletin—with diagrams and charts—has specifications, dimensions, and ratings on five oval tube models. Hot water Btu ratings range from 102,900 to 164,000. Thermo-Dynamics, Schuylkill Haven, Pa. *Circle 353 on Reader Service card*

ROOFING AND SIDING. Methods and cost savings of pneumatic stapler applications are covered in a 15-page field study with step-by-step photos. Senco Products, Cincinnati. *Circle 354 on Reader Service card*

VAPORTIGHT LIGHTING FIXTURES. Specification catalog illustrates complete line of fixtures for incandescent or mercury lamps. Included are one- and two-light decorative brackets for wall, corner, ceiling or pendant mounting, with a choice of soft-white opal globes in cylindrical, tapered, or spherical shapes. Stonco, Kenilworth, N.J. *Circle 304 on Reader Service card*

SERVICE TRUCKS. Seven-page catalog insert lists standard equipment and options available for truck models with 78" to 108" bodies. Wide range of special accessories is shown. Pierce Auto Body Works, Appleton, Wis. *Circle 301 on Reader Service card*

DRILL/BREAKER. Eight-page leaflet—with diagrams—enumerates advantages of self-contained gasoline operated model. Special design feature: a selector handle that permits operator to convert unit from drill to breaker. Photographs illustrate 13 job uses. Atlas, Hackensack, N.J. *Circle 303 on Reader Service card*

INCANDESCENT DIMMERS. Full-line catalog includes operational data and application information on a new 1800-watt modular dimming system, single-pole and three-way 600-watt dimmers, and a 1000-watt single-pole dimmer. General Electric, Providence, R.I. *Circle 306 on Reader Service card*

HEATING EQUIPMENT SELECTOR. Twenty-eight page booklet summarizes specifications, application data, and advantages of 22 heaters and thermostats. Includes wiring data. Federal Pacific Electric Co., Newark, N.J. *Circle 307 on Reader Service card*

FLOOR TILES AND ACCESSORIES. Full line of vinyl, asphalt, and greaseproof asbestos floor tiles are shown in catalog which includes data on base, adhesive, underlayment, and maintenance products. Flintkote, New York. *Circle 360 on Reader Service card*

PREFINISHED WALL PANELING. Four-color folder describes grade characteristics of paneling that features a baked-on topcoat of catalyzed vinyl. A typical panel from each grade is illustrated. Roseburg Lumber, Roseburg, Ore. *Circle 377 on Reader Service card*

CERAMIC TILE. Several decorating ideas for bathrooms are offered in a 32-page full-color booklet that covers a wide range of tile treatments. It presents a choice of color schemes for accessories, fixtures, and walls. United States Ceramic Tile, Canton, Ohio. *Circle 388 on Reader Service card*



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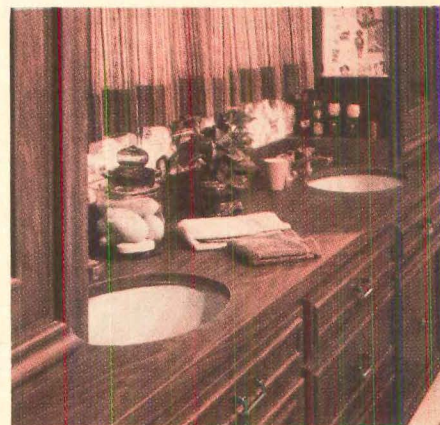
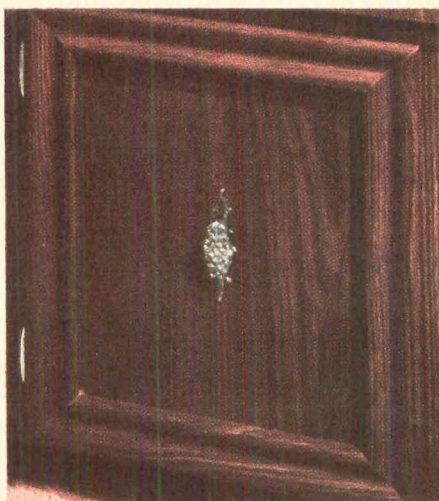
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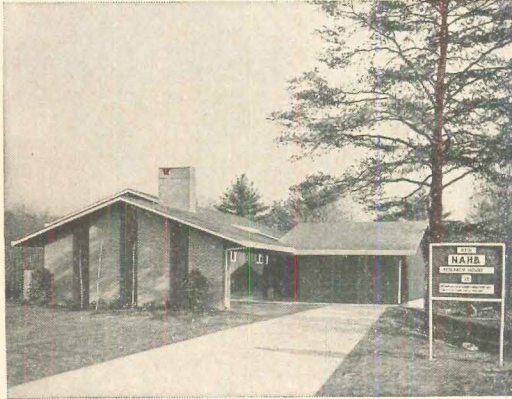
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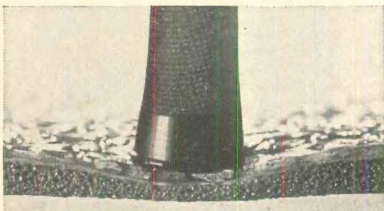
laminated plastic

Important news about Armstrong floors from NAHB Research House VI



The use of Armstrong floors in the new NAHB Research House in Washington, D. C., illustrates some important, new innovations which can add both installation efficiency and customer appeal to today's new homes.

1. New comfort and quiet. The flooring used in the bedroom shown opposite and in other rooms of the second floor of the NAHB House is



Women's spike heels won't permanently dent Cambrian.

Armstrong Cambrian Vinyl Corlon. Cambrian is the most comfortable vinyl floor Armstrong ever made. It has the exclusive Armstrong Cushioncord Back, a thick layer of foamed vinyl beneath the tough vinyl surface. Cambrian gives underfoot and then comes right back when pressure is released. But for all its light-footed comfort, Cambrian is also as tough as any floor Armstrong ever made for the home. Even spike heels won't permanently dent it.

Cambrian's foamed vinyl back re-

duces both the noise of footsteps in a room and noise transmitted to the room below.

This new floor has a pebbly, textured surface, comes in eight decorator colorings, and can be installed at any grade level.

2. Sealed seams in sheet vinyl. Using an efficient, new Armstrong installation system called Securabond, the installer can seal the seams in Cambrian. The floor is bonded at the seam from top to bottom, completely waterproof, and easier than ever to keep clean. You can offer prospects a written Armstrong guarantee with Cambrian, too. It covers both the material and installation when done by an approved Armstrong retailer. It's a useful sales extra.

3. Timesaving, new installation technique. In the entranceway, dining room, and living room (shown



Random chip design of Montana Vinyl Corlon.

opposite) of the NAHB House, the slate design in Coronelle Vinyl Corlon was installed by another new Armstrong installation system called

Perimiflor. With this technique, adhesive is applied only to the perimeter of the floor area, at seam lines, and around fixtures. Installation is simpler, faster, and more convenient because it's not necessary to cover the entire floor area with adhesive. Coronelle was used in these areas to give the luxury appeal of slate, without the high cost and installation difficulties. A custom design in two colorings of Montana Vinyl Corlon was installed in the Research House kitchen and family room (shown opposite) with the new timesaving Perimiflor installation technique.

4. Decorative interest in utility areas. The attractive custom design in the floor of the laundry area was used to make a low-interest area more attractive and memorable. The floor is Armstrong Patrician Vinyl Corlon, installed with a custom design of Armstrong Vinyl Corlon Decorator Strips.

Your Armstrong Architect-Builder-Contractor Representative can give you more information about these and other new products from Armstrong. Call him or write Armstrong, 310 Sixth Street, Lancaster, Penna.



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