FEBRUARY 1970

House & Home

THE MARKETING AND MANAGEMENT PUBLICATION OF HOUSING AND LIGHT CONSTRUCTION

AN OPEN LETTER TO THE PRESIDENT THE CONGRESS THE SECRETARY OF HUD

GENTLEMEN: In the face of the worst housing crisis this country has seen since the 1940s, the Department of Housing and Urban Development has put forth a remedy —Operation Breakthrough—that may well do more harm than good. The **real** problems have

continued on page 51

Tappan Kitchen Packages–$750.

If you start pricing our kitchens from the bottom end, you might get the idea we're after low bid business.

We are.

But if you took a peek at our deluxe kitchens, you'd get the impression we want more custom business.

We do.

In fact, Tappan kitchens cover the whole gamut. From special compact kitchens to luxurious layouts for custom homes.

After all, nobody makes such a complete line of appliances and cabinetry for the kitchen. So when you pick Tappan, you have a lot more to pick from.

Let us have a look at your plans for '70. We'll put together a kitchen package that'll be a great buy. At any price. Tappan, 250 Wayne Street, Mansfield, Ohio 44902. HH-20

TAPPAN
Convenience by the Kitchenful

And up.

Circle 60 on Reader Service card

FEBRUARY 1970

House & Home

THE MARKETING AND MANAGEMENT PUBLICATION OF HOUSING AND LIGHT CONSTRUCTION

AN OPEN LETTER TO THE PRESIDENT THE CONGRESS THE SECRETARY OF HUD

GENTLEMEN: In the face of the worst housing crisis this country has seen since the 1940s, the Department of Housing and Urban Development has put forth a remedy —Operation Breakthrough—that may well do more harm than good. The **real** problems have

continued on page 51

Tappan Kitchen Packages–$750.

If you start pricing our kitchens from the bottom end, you might get the idea we're after low bid business.

We are.

But if you took a peek at our deluxe kitchens, you'd get the impression we want more custom business.

We do.

In fact, Tappan kitchens cover the whole gamut. From special compact kitchens to luxurious layouts for custom homes.

After all, nobody makes such a complete line of appliances and cabinetry for the kitchen. So when you pick Tappan, you have a lot more to pick from.

Let us have a look at your plans for '70. We'll put together a kitchen package that'll be a great buy. At any price. Tappan, 250 Wayne Street, Mansfield, Ohio 44902. HH-20

TAPPAN
Convenience by the Kitchenful

And up.

Circle 60 on Reader Service card

House & Home

A McGRAW-HILL PUBLICATION VOL. 37, NO. 2 FEBRUARY 1970

McGRAW-HILL

HOUSE & HOME, February 1970, Vol. 37, No. 2 Published monthly by McGraw-Hill Inc. Founder: James H. McGraw (1860-1948). Subscription rates for individuals: U.S. and possessions and Canada, $7 per year; single copy, if available, $1; Latin America & Philippines, $20; elsewhere, $25. The Publisher reserves the right to accept or reject any subscription. Executive, Editorial, Circulation and Advertising offices: McGraw-Hill Building, 330 West 42 Street, New York, N.Y. 10036. Telephone: 971-3333. Second class postage paid at Washington, D.C. and at additional mailing offices. Published at 1500 Eckington Place, N.E., Washington, D.C. 20002. Title ® in U.S. Patent Office.

Officers of McGraw-Hill Publications Company: Joseph H. Allen, president; John R. Emery, J. Elton Tuohig, senior vice presidents; George H. Reppert, group vice president; vice presidents: John R. Callaham, editorial; John M. Holden, marketing; David G. Jensen, manufacturing; Jerome D. Luntz, planning and development; Robert F. Marshall, administration; Robert M. Wilhelmy, finance. Director of Circulation: Ralph Blackburn. **Officers of the Corporation:** Shelton Fisher, president and chief executive officer; John J. Cooke, vice president and secretary; Gordon W. McKinley, vice president and treasurer. Member: Audit Bureau of Circulations and American Business Press. This issue of House & Home is published in national and separate editions noted or allowed for as follows: Western W1-W2B, Eastern E1-E4A, Midwest M1-M2, North Central N1-N2B, Southern S1-S2BB. Postmaster: Please send form 3579 to Fulfillment Manager, House & Home, P.O. Box 430, Hightstown, N.J. 08520.

AN OPEN LETTER TO THE PRESIDENT THE CONGRESS THE SECRETARY OF HUD

GENTLEMEN: In the face of the worst housing crisis this country has seen since the 1940s, the Department of Housing and Urban Development has put forth a remedy —Operation Breakthrough—that may well do more harm than good. The **real** problems have

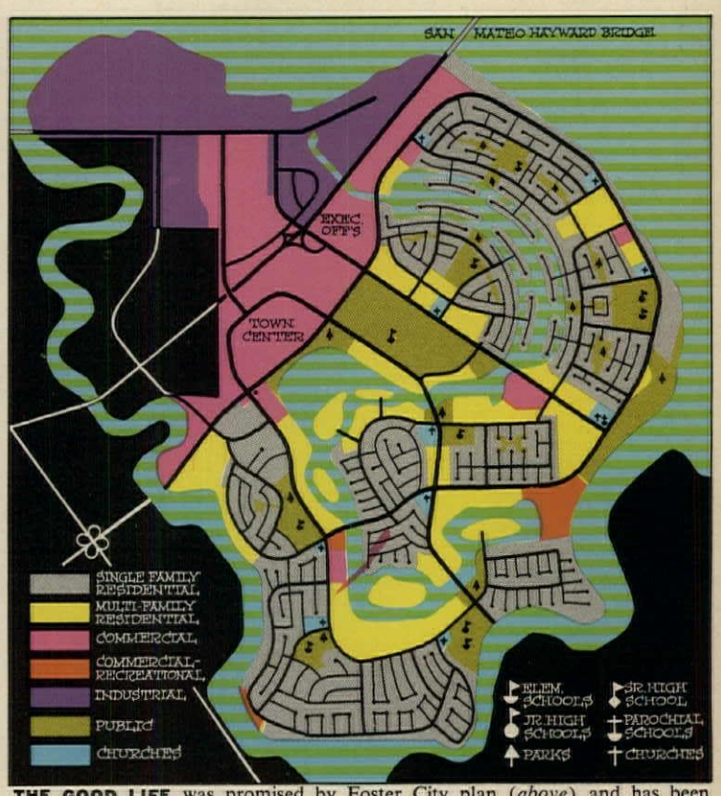
continued on **51**

ALSO IN THIS ISSUE

DEPARTMENTS

NEXT MONTH

How a developer and a small city work together to create a wide range of better housing plus a better municipal environment . . . Factory-built housing: a close look at one company's experience reveals its real cost, shows when it makes sense, and spells out its advantages and disadvantages



THE GOOD LIFE was promised by Foster City plan (*above*) and has been realized on Island of Blue Lagoons, (*left*) where noisy power boats are banned.

Foster City: To the brink and back to fiscal health

Do-it-yourself land development is alive and healthy in the San Francisco Bay Area.

Not that many of the 9,500 residents of Foster City would recommend the route they are taking to become a city both politically and physically. But their method is working, and they now seem reasonably certain of success after a brush with disaster.

T. Jack Foster & Sons planned Foster City on a near-luxury level and a semi-mass scale, with king-sized profits as a goal. Tight money, to which the developers' bond-interest pyramid was vulnerable, and litigation, the ultimate anathema for municipal bonds, threw the entire scheme into jeopardy.

But the future looks brighter. Success has received an $11-million vote of confidence in the form of a land purchase by a big apartment developer. The L.B. Nelson Corp. of Palo Alto has just bought Foster City's last 219 acres of apartment-zoned land and has disclosed plans for an $80-million project. Construction begins in April, and 4,500 units will be completed in three years.

The entry of Nelson, 10% of which is owned by the American-Hawaiian Steamship Co., provides Foster City with a morale booster to counteract the loss of a buyer last summer. Centex Corp., the big Dallas builder-developer, negotiated for much of the open land but then backed away.

Nelson's activity will not put Foster City back on schedule: its original blueprint called for 35,000 inhabitants by 1971. But the apartment deal will help solve one of the community's biggest problems, that of enlarging the tax base.

Dream vs. reality. Foster City was a dream that very nearly came true, and it must still be counted a success on balance. But somewhere along the line enough went wrong to create a lagoon of enmity between the developer and the people who bought the houses. The half-billion-dollar project very nearly fell apart, spewing foreclosures (now $35 million in FHA homes) and bankruptcies all over the 2,600 acres of reclaimed tideland on the western edge of the Lower Bay.

Location was just about the only thing going for the marsh at the San Mateo end of the bridge from Hayward. Precisely because the site looked so forbidding to builders, Brewer Island had remained a mixture of hay fields and salt evaporation ponds.

But to T. Jack Foster the island was a challenge that brought him out of semi-retirement into active development. The physical problems were immense, but the tideland yielded and Foster City became a reality (*There is no such thing as unbuildable land*, H&H, Nov. '65). When Foster died in March 1968, sons T. Jack Jr., Robert, and Richard continued the development.

The earth could be moved (17 million cubic yards of fill) and the sea could be swept away (by draining it into a lagoon system on the island), but other problems arose: tight money and a loss of public confidence.

Bizarre financing. Foster City was unusual in its financing as well as its physical aspects, and there lay the root of its difficulties.

Brewer Island, which the Fosters bought for $5 million, was unincorporated acreage in San Mateo County. Instead of using customary construction lenders for the bulk of front-end money, the Fosters created a tax-levying entity that could borrow to finance its own development.

This method is illegal in the East, but has a history of use in California's land-reclamation and agricultural developments. Its application to a large residential-commercial venture was, however, unusual in the extreme.

The Estero Municipal Improvement District was created by special legislation in May 1960 and activated four months later. It offered the first issue of its presently outstanding $63.86 million of bonds on June 6, 1961.

The bond plan might have worked well but for one consideration. Interest was to be funded by the issue of more bonds, a process that was to continue until the Foster City tax base was large enough to support the debt load.

But Foster City ran headlong into tight money. From the first issue in 1961, which got its only bid from the Fosters' long-time lender in Dallas, Republic National Bank, the bond financing never came easily.

After the credit crisis of 1966, Estero offerings were either withdrawn from the market or placed via negotiation. The last issue, on Oct. 28, 1968, was sold to the Bank of America at a 7% discount on top of a 6% coupon.

Estero bonds have never been rated higher than B, and this lack of bank eligibility means that the B of A cannot count them as assets for bank examinations. One source said the purchase was as much an effort to sustain local enterprise in the bank's home town of San Francisco as to increase its investment portfolio.

One buyer's revolt. Besides tight money, the development was put under

SEVERE PROBLEMS hit the would-be paradise and emotions ran high when residents fought for political power (*above*). Atmosphere is more cordial today.

MASTER PLAN called for 35,000 by 1971. Foster City's 9,500 residents find life agreeable, despite such construction delays as at Town Center (*above*).

what T. Jack Foster Jr. himself describes as a "considerable cloud" by the lawsuits of one unhappy buyer.

One W. S. Cooper bought a $35,000 waterfront residence in 1964, and by 1966 he was waxing indignant over rising taxes and the discovery that his land was a leasehold that would revert to the Fosters in 75 years. The ownership restriction applied at that time to waterfront locations.

Cooper went to court, and although he got nowhere legally, the interminable litigation undermined faith in the project. The U.S. Supreme Court denied a hearing request on Oct. 15, 1969, but in the meantime public confidence had eroded. Even professionals were leary of the project, recalls one Bay Area mortgage man.

And then rebellion. The suits aroused discontent among other residents, who began to call themselves "Foster children." They had watched taxes rise faster than expected without what they considered a fair voice in the matter, for the 1960 act creating the Estero District set up a board of directors elected, not by residents, but by landowners. That meant the Fosters.

As the bond debt rose and the lawsuits raged, issues between the citizens and the Fosters became emotional (*photo, above*). The developers began to give ground.

The Fosters abandoned insistence on 75-year leaseholds for waterfront lots in 1967 and began to sell in fee simple. And in 1968 a land-only tax was substituted for a levy on both land and improvements. This transferred much of the tax load to the developers, and they are now paying two-thirds of the district's budget. The Fosters' tax bill was $3½ million last year.

Crisis period. What financial strain all of this put on the Foster partnership is not a matter of public record, but it is no secret that the developers have sought to sell land instead of holding it.

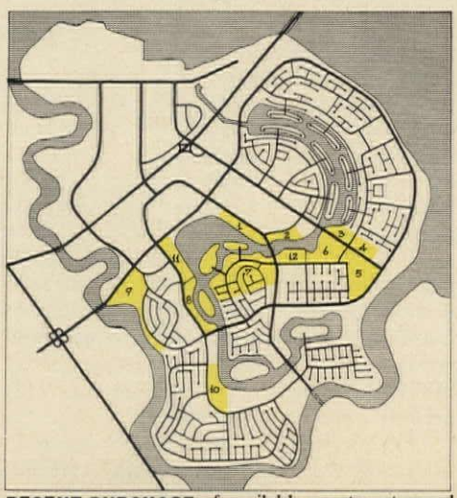
Figures reflecting the overextension of the district are plentiful. Residents managed to call a halt on bond issues after the sale to B of A in October 1968, but by then their obligations had reached $63.86 million. Debt as a percent of true real estate value had declined from its 102.6% peak, but it still stood at 35.3% compared with 4% for San Mateo County. More than $9 million of interest had been funded, and residents could envision their debt climbing still higher while the ability to borrow and to fund interest was evaporating.

Turning point. But the crisis passed. The 1968 bond issue met immediate financial needs, and the shift to land taxes permitted the district to change from funding of interest to cash payment from taxes. It would no longer be at the mercy of the capital markets.

With land reclamation 80% complete, general obligation bonds will be issued only if they appear to be advantageous. Tax rolls are increasing as builders bring more houses on the market, and the Fosters are carrying the big load in the meantime.

One builder says it is now quite possible that Foster City will have the unusual experience of lowering its taxes.

Residents in control. The long fight has given Foster City's citizens a taste of power and a do-it-yourself attitude toward running their district. The Foster City Community Association shifted into high gear in 1967, when it was instrumental in persuading the legislature to amend the 1960 act creating Estero. The amendment enlarged the board of directors from three to five and provided for a transition to complete control by voters, not landowners, by 1971. The association already holds three seats.



RECENT PURCHASE of available apartment-zoned land (*in red*) by L.B. Nelson Corp., of Palo Alto, may add 10,000 residents by 1973.

Now, according to board member Wayne A. McFadden, a major aim is to win permission to incorporate as a city.

Lessons. Better communication between developer and public could have obviated some headaches. Jack Foster's own statement that most of the public does not understand realty development suggests that not enough effort was made to explain it.

But no amount of explaining would have overcome the major hurdle at Foster City —its financing.

Critics say the funded-interest financing was planned to maximize profit. The Fosters say it gave buyers more for their money.

Both are correct. Fixed debt that can be carried to a project's completion permits the developer to reap all rewards. Equity financing, now modishly called a piece of the action, rewards the lender instead. Debt financing, if interest is low, is cheap compared to what lenders ask for taking real estate risks.

If low-cost municipals could have been used, with debt kited by funding it with future bonds until a viable tax base was established, everyone might have come out ahead.

The fallacy. Revenue bonds normally provide enough money for their own interest during construction of bridges, or roads, or utilities. Such projects are completed in three to four years, however, and begin earning their way. Expecting the capital markets to absorb a score of pyramided bond issues over a decade is expecting too much; the building of such an ambitious community as Foster City takes time.

The reception accorded Estero's first issue of pseudo-municipals should have provided a clear warning. The sole bid, at a high rate, came from the Fosters' longtime lender. The bank was apparently looking at the family's credit worthiness rather than at the quality of the bonds, and it was certainly not looking down the road to all those future issues.

There is one major hero in Foster City—the same one that has bailed out many a California builder with grandiose ideas. As Jack Foster and McFadden agree, Foster City owes its success to inflation.

—JENNESS KEENE
McGraw-Hill World News, San Francisco

NEWS continued on p. 6

continued from p. 5

Final tax-reform bill swings a heavy blow at real estate

That can of tax-reform worms that emerged from Congress last year, and which President Nixon described as partly good and partly bad, was mostly bad for real estate.

While minor compromises were won by the real estate lobby, the industry still will pay an additional tax tab of $930 million a year by 1979. That is just slightly lower than the figure in the House legislation, and that was considered a crushing blow to realty investment.

Even after winning a major victory in the Senate, to restore the 150% depreciation method for existing apartments, the real estate industry was beaten back in the House-Senate conference. The panel decided on 125% for buildings acquired after last July 24, or where there were binding contracts executed before July 25.

Bennett: "A racket." Congress was out to "get rid of the loopholes," and, from all indications, real estate was a prime target.

In the words of Sen. Wallace Bennett (R., Utah), "the development of double declining balance depreciation and it application to real estate has developed into a racket . . . It has created an automatic, built-in, extra-fat basis for capital gains on the rapid turnover of real estate.

"Much real estate is now being sold as a tax gimmick rather than as real estate. I think that this is one loophole that the committee will not open up again."

The Senator's thoughts did prevail—as existing real estate with a 20-year useful life expectancy was denied the double-declining method and reset at the 125% compromise level.

New apartments. Congress did not tamper with investment for new apartment building, which will still get the 200% double-declining balance and sum-of-the-digits methods. However, new nonresidential building will be limited to the 150% method, and used commercial building will now be limited to straight-line.

In the case of all other real property, the 1% per month deduction would have applied after the property had been held for 10 years. Under the final bill, however, the "all other" holding period was deleted.

Investment in rehabilitation of residential building for low- and moderate-income families won some tax breaks in the final reform bill. As proposed originally by the House, the bill provides for a five-year writeoff for capital improvements on such properties—but these would be subject to the same recapture provisions as for residential apartments.

The rehab cannot exceed $15,000 per dwelling unit in the aggregate, and the total rehab spending over a two-year period must be more than $3,000 per unit. This provision will expire Dec. 31, 1974.

Aid to U.S. programs. The subsidy programs of the Department of Housing also got special treatment. Sections 236, the interest-rate subsidy program for apartment units; 221d3 rent supplement, and other subsidized projects where profit is limited,

Wide World

BENNETT

Townsend

DIXON

will retain the 200% double declining balance method. Moreover, these will be subject only to the recapture rules existing prior to the enactment of the 1969 tax-reform legislation.

In addition, if the sale of such subsidized projects is to a nonprofit institution or to a cooperative, capital gains taxes are set aside if the seller reinvests the proceeds in a comparable project.

Criticism. The National Association of Real Estate Boards is not happy about the outcome of the bill. Realtor Don Dixon, chairman of NAREB's Realtors' Washington committee, said he is surprised at "the harsh treatment by the conferees."

Dixon said the amendment in the Senate restoring the 150% depreciation method for existing residential structures had been "scaled down . . . in order to win Treasury support.

Real estate interests were particularly hard hit by the provisions relating to recapture of excess depreciation, which now requires total recapture of excess depreciation over straight line. This would apply to acquisitions on which there is a binding contract in force after July 24, 1969, and for the initial 100-months of the holding period.

At the 101st month, the recapture provisions change. The percentage of excess depreciation recaptured as ordinary income starting with that month is reduced by 1% per month.

For nonresidential building, the Congress rejected any holding period. There is total recapture of excess depreciation as ordinary income without regard to how long the nonresidential structure is held.

An advantage lost. The Senate would have eased the recapture provision somewhat, by providing for the 1% per month reduction in the amount to be recaptured after the property had been held for 60 full months in the case of residential housing.

"Whether the Treasury hedged on its support in conference or whether the Democratic Congress decided that it, and not the Treasury, would call the tune, the final result was a disappointment to many in the industry who were banking on the conferees accepting the amendment."

Dixon noted that while it is "true, some forms of accelerated depreciation are retained," much of the incentives that motivated the investors in real estate have been substantially diluted."

Forecast of slowdown. In an NAREB survey of Realtors and other allied industry representatives, much the same conclusion was reached. Realtor Wallace R. Woodbury, chairman of NAREB's federal taxation subcommittee, said the tax measure will result "in a slowdown of industrial and commercial development."

He forecast the slowdown will probably begin to be felt in about six months. The Mortgage Bankers Association said that the tax bill as a whole, "reflects little of the government's national intention to halt inflation."

The tax legislation's impact on real estate interests did not stop with restrictions on accelerated depreciation. The bill places a limit, starting Jan. 1, 1972, on interest deductions incurred to buy or carry investment properties. The limit will not apply to debts acquired prior to Dec. 17, 1969, or for debt incurred on or after that date but on which there was a binding contract in force prior to Dec. 17.

Net leases affected. While interest on rental properties would not be affected, net leases will come under the new law, and taxpayers will be able to write off just 50% of the interest above $25,000. This limitation will apply to partnerships at the partner level, individuals and sub-chapter S corporations at the shareholder level.

The NAREB leaders offer this example of how the interest write-off will work:

Assume six partners involved in a net lease with interest deduction of $300,000. The pro-rata share of each partner would be $50,000 in interest deductions. Each partner would therefore suffer a disallowance of $12,500 in interest. A carryover of disallowed interest is permitted, and it can be used to offset investment income (and capital gains) in subsequent years.

Minimum tax. The one other major blow to real estate investors came in the minimum tax provision of the legislation.

While the final version did ease the sting somewhat from the provisions of the House bill, the limit on tax preference and allocation of deductions will still be felt by those using accelerated depreciation.

Under the amendment for minimum tax, all preferential income items—including depreciation taken in straight line—is reduced by 30,000 plus the taxpayer's regular federal income tax. This balance of preferential income is then taxed at a 10% rate.

—ANDREW R. MANDALA
Washington

Atlanta conglomerate buying land developers in Florida

Fuqua Industries, Atlanta-based conglomerate, announced plans to acquire two land development companies in Florida for undisclosed cash and common stock. They are Haft-Gaines of Fort Lauderdale and Magnuson of Miami. The two are expected to add $3.5 million to Fuqua's earnings which were $9.2 million in 1968.

NEWS continued on p. 10

Peachtree Door calmly introduces the lowest priced wood-framed patio door in the world.

People, us included, have been making aluminum-framed and wood-framed patio doors for years. Each type having its points. Aluminum doors costing less and requiring no upkeep. Wood doors having a warmer appearance, conducting less chill in winter and less heat in summer. But costing far more than metal, ruling out their use in many houses and most all apartments.

Peachtree Door has changed all that. Now we have a door with the economies of aluminum, made out of wood. The least expensive wood-framed patio door in the world. But still a Peachtree Door. So there's nothing cheap about it.

The wood is straight and strong and is pre-finished with our exclusive Neutrakote that makes it need no paint or anything else for years.

There's handsome hardware and a locking system Houdini couldn't jimmie. Screens that won't jump the track with wire that can't be pushed out of the frame no matter what.

Citadel 140 is absolutely weather-tight. Single Plane Perimeter Weatherstripping surrounds the door with no gaps and the sliding panel is mounted in front of it. The more the weather pushes against the door, the tighter the seal, the more snug the door.

Here is one of the finest glass sliding doors in the world. With a price-tag so low that it's misleading.

Send for the new Citadel 140 brochure, which should be back from the printer by now. Learn where to get the lowest priced wood-framed patio door in the world—and exactly how low the price is.

Citadel 140.
PEACHTREE DOORS INC
Box 19682 • Atlanta, Georgia 30325

Circle 64 on Reader Service card

These are the houses that Jim Ryan, the Kennedy Brothers, and Fox and Jacobs built.

These are the Andersen windows that helped them sell about 1400 of them last year.

The men who built and sold these houses live in three different parts of the country. But they all share one thing in common.

A preference for Andersen windows.

Jim Ryan in Columbia, Maryland, builds many traditional homes in the $22,900 to $50,000 range. His favorite Andersen window is the Perma-Shield® Narroline.™ (That's our new double hung—with a unique combination of rigid vinyl and new polyeura factory finish. Doesn't need painting for at least 10 years.) Customers love them. So does Jim Ryan . . . "We never have service problems with Andersen."

The Kennedy Brothers in Chicago specialize in period homes (French Colonial, American Colonial, and Italian) in the $75,000 bracket. They like the fact that Andersen windows come in 6 styles and hundreds of sizes—which gives them the freedom to use our windows as "architectural design pieces . . . almost as conversation pieces."

Fox and Jacobs (down Dallas way) specify Andersen windows in *all* their homes from $25,000 and up. As far as they're concerned, every "quality customer" deserves the finest windows in America.

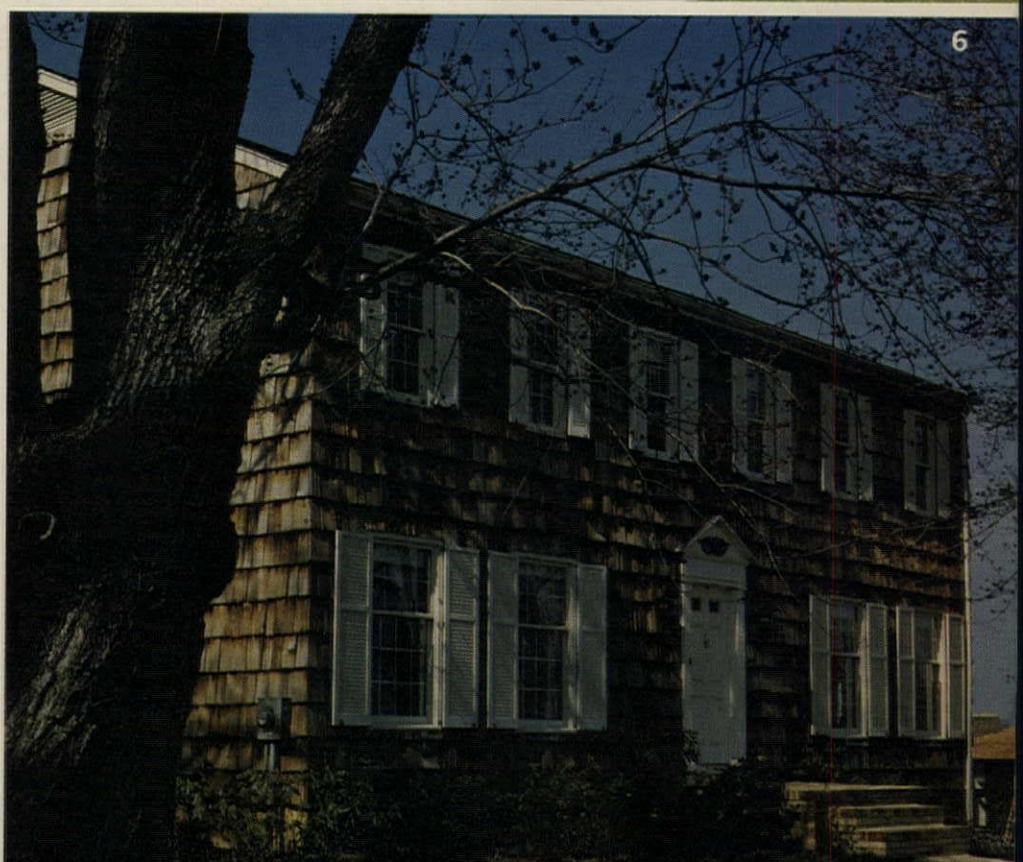
To learn more about why the best builders prefer Andersen, check your Sweet's Catalog. Or see your nearest Andersen dealer or distributor.

Andersen Windowalls™

Window Beauty is Andersen

ANDERSEN CORPORATION • BAYPORT, MINNESOTA 55003

1 and 4. Builder: Fox & Jacobs Construction Co., Dallas, Texas. 2 and 5. Builder: Kennedy Brothers, Chicago, Illinois. 3 and 6. Builder: James P. Ryan Company, Baltimore and Columbia Md., Washington, D.C.



continued from p. 12

Flight of S&L funds signals new woes for housing

Disintermediation is still the name of the game.

Once upon a time the public, color it unsophisticated, put its money in banks and savings and loan associations, color them intermediary institutions. These intermediaries then lent to borrowers. Among borrowers, color mortgage men last at the post.

But in the credit crisis of 1966, rates rose high enough to attract attention, and the public learned what the very rich had always known: direct investment brings a higher yield than any institution can pay.

As more savers learn this, the problems of mortgage lending institutions increase.

The battle for savings. Institutions fight for funds. First Pennsylvania Bank & Trust of Philadelphia has offered 7¼% on 30-month certificates and sliced them into $100 units. The pitch to small savers got off to a good start and promises to help pull the rug from under the 6% S&L certificate just authorized by the Federal Home Loan Bank Board.

Net loss by associations in July 1969 was $1.1 billion nationwide, and early January losses were approaching this level. A big minus factor was the heavy load of maturing certificates of deposit. Some $19 billion of the $134 billion held by S&Ls were in maturing certificates.

Protecting these funds was one aim of the 6% certificates. But their effectiveness will be limited by their size, units of $10,000, and the requirement that funds be on deposit as of Dec. 15, 1969. Some S&L men have already criticized the new instrument—called special housing certificate of deposit—as an inadequate and expensive way to hold funds.

Special problem. In California there was an added difficulty: out-of-state money. Nearly a fifth of the $23.9 billion of S&L deposits there was subject to recall by depositors who never make contact with a teller or association officer.

Not only were out-of-state funds a worry, but the vulnerability of 5½% certificates unique to California caused concern. Late in 1966, California associations were able to top competition across the nation, and their quarter-point advantage is now coming home to roost. Although most of the 5½s have matured, many have remained on S&L ledgers. The recent flurry of news about high returns from direct investment caused anxiety.

One banker tells of a customer who asked for "Dutch Mills," the name of a local candy chain. Corrected, she instantly recognized the name Fanny May as what she had heard paid a high rate of safe interest.

S&L borrowing. Associations can add to loanable funds by drawing on their Federal Home Loan Bank, and the loss of deposits is forcing S&Ls to line up at their discount window, even though these advances now cost 8%.

Advances in the 11 months ending Nov. 30 rose to $8.7 billion nationally. This was a rise of $3.5 billion, compared with a new savings gain of only $2.9 billion.

The high cost of advances is placing upward pressure on mortgage rates. In California, 9% is a common figure.

This is up a point or more from a year ago, and further increases are expected by some lenders. To the high cost of savings and advances, officials add the low return on seasoned loans and get the obvious result, lower earnings.

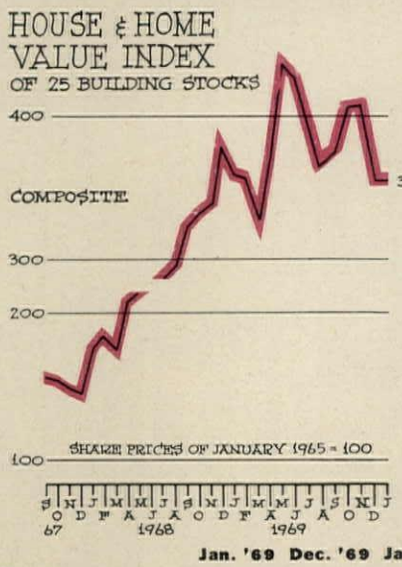
This pressure on earnings can be relieved only by higher loan rates. But as rates go up, the volume of loans goes down. The effects of rising mortgage rates can be seen most clearly in California, where loan activity was in almost steady decline during 1969. In January, $338 million of mortgages were written by California S&Ls, the high figure for the year. By October this had fallen to $279 million. In November it reached $227 million. And the trend was expected to continue.

The future. The strains caused by maturing savings certificates are expected to ease by midyear, but the outlook for easier home finance is not bright. Housing starts will probably drop to an adjusted annual rate of less than one million. This would be the lowest since late 1966, when the evaporation of credit cut the rate below 900,000.

Housing's issues sit out Wall Street new-year rally

Losses among mobile homes and S&Ls kept HOUSE & HOME's index of 25 housing stocks off the elevator that gave most Wall Street issues a new year's lift. The housing index sidled from 350.64 to 351.88. Here's the composite index.

How the top five did in each category:



	Jan. '69	Dec. '69	Jan. '70
Builders	461.72	459.56	453.58
Land develop.	568.53	536.95	604.40
Mortgage cos.	483.00	548.25	567.01
Mobile homes	706.46	678.84	656.64

HOUSING'S STOCK PRICES

COMPANY	Jan. 5 Bid/ Close	Chng. Prev. Month
BUILDING		
Bramalea Cons (Can.)	4.75	– .25
Capital Divers. (Can.)	2.95	– .30
Centex Corp.	47	+ 5
Christiana Oil [b]	22⅝	+ 4⅜
Cons. Bldg. (Can.)	1.50	+ .10
Dev. Corp. Amer.	12¾	+ ¾
Dev. Int. Corp.	16	– 1
Edwards Indus.	8	– 1¾
First Hartford Rlty.	6½	– 1¾
First Nat. Rlty. [b]	5½	+ 1
Frouge	3	– ¾
•General Bldrs. [b]	7½	
•Kaufamn & Bd. [e]	49	– ⅞
Key Co. [b] (Kavanagh-Smith)	8⅛	+ 1⅝
McGrath Corp.	17½	– 3½
National Environment (Sproul Homes)	13¾	– ¼
Nationwide Homes	6	– 1½
•Presidential Realty [b]	13	+ ⅛
Pulte Homes	12	– ½
Ryan Homes	33¾	+ 6
Standard Pacific Corp. [b]	8⅝	– ⅜
U.S. Home & Dev. [b]	33¼	+ 1
•Jim Walter [e]	31⅞	– 1⅛
•Del E. Webb [e]	12¼	+ ⅞
Washington Homes	10⅜	– ⅛
Western Orbis [b]	10⅞	+ ⅝
S&Ls		
American Fin.	29½	– 2½
Belmont S&L	27½	– 5¼
Calif. Fin. [e]	8½	+ ¼
Empire Fin. [b]	21¾	– ⅜
Far West Fin. [e]	13½	– ½
•Fin. Fed. [e]	17⅜	– 2¾
•First Char. Fin. [e]	37	– 2½
First Lincoln Fin.	6½	– ¾
First S&L Shares [b]	14¼	– ½
First Surety	5	– 1½
First West Fin.	3⅜	– ⅜
Gibraltar Fin. [e]	22½	– 3½
•Great West Fin. [e]	20¼	– 3
Hawthorne Fin.	6¾	– 2
•Imperial Corp. [e]	13½	+ ⅜
•LFC Financial (Lytton) [e]	9⅜	– 1⅜
Trans-Cst. Inv.	5¼	– ¼
Trans World Fin. [e]	11	+ ¼
Union Fin. [b]	11⅜	– ⅛
United Fin. Cal. [e]	11⅜	– 2⅜
Wesco Fin. [e]	21¼	– 1¾

COMPANY	Jan. 5 Bid/ Close	Chng. Prev. Month
MORTGAGE BANKING		
•Advance	16½	– 2½
Charter Co.	17	+ 1
•Colwell	19½	– 3¾
•Cont. Mtg. Investors [e]	43⅝	+ 2⅝
Cont. Mtg. Insurance	19¼	– ½
Excel Investment	3¼	+ ⅛
FNMA	142	+ 2
First Mtg. Ins. Corp.	24¼	+ 1
First Mtg. Investors	25	+ ¾
•Lomas & Net. Fin.	9	– ¾
•MGIC Invest. Corp. [e]	54¼	+ 2½
Mortg. Associates	16	+ 3¾
North Amer. Mtg. Inv. [b]	22¾	+ 1½
Palomar Finan.	7¼	– ¼
UIP Corp. [b] (United Imp. & Inv.)	8½	+ 1¼
Universal Invest. Trust (Southeast Mtg. Inv.)	3¼	+ ⅜
LAND DEVELOPMENT		
All-State Properties	1¾	– ¼
American Land	¾	– ⅛
•AMREP [b]	49	+ 5¼
Arvida	16⅜	+ 3¼
Atlantic Imp.	21	+ 1
Canaveral Int. [b]	9⅜	+ ⅜
Crawford	3¾	– ¾
•Deltona Corp. [b]	63½	+ 9½
Disc Inc.	4¾	– ⅝
Don the Beachcomber Ent. (Garden Land)	11	– 1¼
FPA Corp. (Fla. Palm-Aire)	20	
•Gen. Devel. [e]	30¼	+ 2¾
•Holly Corp. [b]	3½	+ ½
Horizon Corp.	53½	+ 9
Laguna Niguel [b]	5⅜	
Major Realty	7	– 1
•McCulloch Oil [b]	34¾	+ 3⅜
Scientific Resources [e] (Sunasco)	13¼	+ ¾
So. Rlty. & Util. [b]	7	– ⅛
DIVERSIFIED COMPANIES		
Boise Cascade [e]	74½	– 1
Citizens Financial [b]	12¾	– 1¼

COMPANY	Jan. 5 Bid/ Close	Chng. Prev. Month
City Invest. [e]	27⅛	+ 1⅛
Cousins Props.	32½	– 4½
Forest City Entr. [b]	19¾	– 2½
Great Southwest Corp.	18¾	– ¾
Investors Funding [b]	21¾	+ 1⅜
Midwestern Fin. [b]	12	+ 1½
Rouse Co.	32¾	+ 3
Tishman Realty [e]	27	+ 4½
MOBILE HOMES & PREFAB		
Con. Chem. Co. [b]	13¾	+ 1¼
•Champion Homes [b]	23½	+ ⅜
Commodore Corp. [b]	16¼	– 7¾
•DMH (Detroiter) [b]	20½	+ 1⅜
•Fleetwood [b]	25¼	– 5⅜
•Guerdon [b]	24⅞	+ ⅝
Mobile Home Industries [b]	20	+ ⅛
Monarch Ind. [e]	24⅝	+ 1½
Redman Indus. [e]	37	+ 1
Rex-Noreco [b]	21⅝	– ⅞
•Skyline [e]	28¾	– 1
Town & Country Mobile [b]	14	+ 1⅛
Zimmer Homes [b]	31½	– 1⅛
Hodgson Houses	7½	– 1
Natl. Homes A. [g]	23⅜	– ½
Scholz Homes	20⅞	+ ½
Swift Industries	4½	– ¼

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. •—Computed in HOUSE & HOME's 25-stock value index. y—adjusted for 2-for-1 split. z—adjusted for 3 for 1 split. NA—not applicable.

Sources: New York Hanseatic Corp. Gairdner & Co., National Assn. of Securities Dealers, Philip Beer of Russell & Saxe, 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.

Elegant life saver!

Put our Lever Handles in your next model home and watch how many hands reach out, touch, caress. It's irresistible!

And . . . they save lives. All Weslocks are panic-proof. They lock people out, but never in. One instinctive turn of the inside knob unlocks and opens the door.

Beauty and common sense safety. We're not about to settle for anything less. Are you?

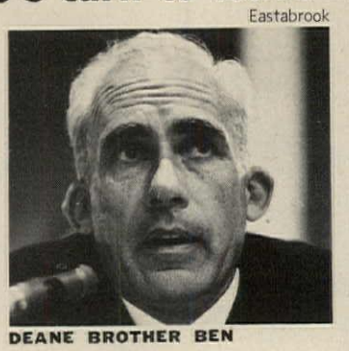
WESLOCK®

The NEW Leader in Lock Ideas!

continued from p. 16

An Occidental Petroleum shakeup–and it's Ben Deane's turn to leave

Eastabrook



DEANE BROTHER BEN
A veteran builder steps down

Occidental Petroleum Corp. has taken a big step toward getting out of homebuilding by combining its building division, Deane Bros. Inc., with Monarch Investment Corp. in a single subsidiary to be called Occidental Petroleum Land & Development Corp.

Ben Cady Deane resigns as president of Deane Bros. but remains as a consultant. **Lawrence E. Kagan,** president of Monarch, becomes president and chief executive of the new subsidiary.

Occidental vigorously denies any retrenchment of its homebuilding activity. Executive Vice President **Tom Wachtel** insists: "No homebuilding plans are changed. All projects that have been under consideration are still under consideration. We plan as rapid a growth as possible."

But several industry sources insist that Occidental has been looking for a way to divest itself of its homebuilding arm. The corporation's venture into housing has been highly disappointing.

The acquisition of Deane Bros. in 1966 had seemed to be a golden opportunity. In the previous 20 years the Deanes had developed their company into one of the industry's most successful, and sales in 1965 had topped $67 million.

But Occidental merged its S.V. Hunsaker homebuilding subsidiary into Deane Bros., and Hunsaker had a history of serious trouble. Occidental apparently believed the Deane brothers could turn the operation around, but the turnabout never came.

Deane is remembered as one of California's most innovative builders, and HOUSE & HOME honored him as one of the industry's Top Performers of 1967 for his development of the garden kitchen and the garden house, both radical new departures in home design (NEWS, Dec. '67).

Deane's departure was amicable, although he insisted that he was resigning while Occidental announced his "retirement." Brother Jim Deane left Occidental only a month ago (NEWS, Jan.), and he and his son William plan to develop an 8,000-acre property in Half Moon Bay, south of San Francisco.

Occidental reported meanwhile that it would pay $60 million in stock to acquire the Charter Co. of Jacksonville, Fla., a financial and mortgage banking combine headed by **Raymond K. Mason.** The new parent will merge charter into Occidental Land.

—MIKE MURPHY
McGraw-Hill News, Los Angeles

New-town expert finally finds new town

Larry Spitzer

BEHRING's BOGARD
Home is the explorer

It's Fort Lauderdale.

After a four-year search for the ideal site for an electrified city of tomorrow, **George T. Bogard** has left General Electric and gone off to join the Behring Corp. in Florida.

His departure signals GE's final retreat from the new-town frontier.

As the company's new-town expert, Bogard has toured the nation speaking of a shining city of 100,000 souls, and he had inspected dozens of sites. But GE's enthusiasm waned on reports of lackluster results in several existing new towns, and it indicated last spring that it was shelving the dream project.

Now Bogard, a 35-year veteran with the company, leaves GE's Louisville office for a post with Behring, a builder with headquarters in Fort Lauderdale. He becomes president of the newly organized Behring Development Co., a merger and acquisition subsidiary, and a vice president of the parent.

From looking for townsites, Bogard turns to a search for bite-sized acreage. His assignment is to acquire and develop land and negotiate with builders who can absorb Behring's Modiflex line of modular houses, due in June.

President **Kenneth E. Behring** was gleeful at landing Bogard: "George will add a substantial amount of corporate expertise. He is one of the best known men in the national realty field."

Builders know Bogard as the architect of the electric industry's Medallion Home program, which promotes electric service in new houses. *NEWS continued on p. 20*

the many faces of Majestic

FIREPLACES

America's Leading Fireplace Manufacturer

Majestic

An American-Standard Company

There is a Majestic fireplace to enhance any room in any home regardless of the size, location or fuel preference. Majestic factory-built fireplaces are easier to install and adaptable to varied requirements . . . . and readily available from coast to coast.

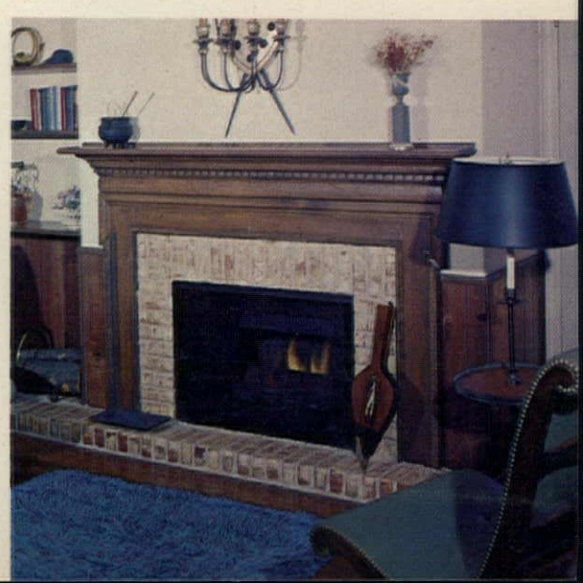
Choose the Majestic® Thulman® wood-burning or Gasilator® gas-fired models for all styles of custom-finished fireplace installations. No costly masonry or footers are required, and Majestic pre-built basic units, flue components and chimney tops can be quickly assembled and installed — even in multiple floor arrangements. Both front and corner opening models, in a choice of sizes, are available.

The Majestic Contemporary free-standing fireplace — in a choice of decorator colors — is a natural for the family room, den, basement or vacation home. It, too, is factory-built, and either wood-burning or gas-fired models are easily connected to an existing or prefabricated flue. Optional solid base or tapered legs is but one of the exclusive features of this unique fireplace.

Majestic wall-hanging electric fireplaces, in a selection of styles, are decorative and ideal where space is limited and other fuels are impractical. Heating models have circulating fan and built-in thermostat.

Get the full Majestic story by writing for details on styles, sizes and installation benefits on fireplaces for every situation.

The Majestic Company, Huntington, Indiana 46750.



House transplants: all those demolitions aren't demolished

Moonlighting builders and full-time house movers are making money by moving entire houses out of the way of the wrecking ball.

And while preserving houses slated for demolition by roadbuilders and others, the movers are casting doubt on some outsized predictions of housing demand. Many forecasters measure demand, in part, by including statistics on houses slated for demolition by highway departments and other agencies.

But perhaps 5% of the 300,000 houses slated for demolition each year are moved intact to new sites, rather than leveled.

(McGraw-Hill Economist George A. Christie, whose 1970 housing forecast appeared in HOUSE & HOME in January, avoids use of demolition figures as questionable statistics, and he says house moving is of limited significance. Christie concedes, however, that demolition estimates figure prominently in several other economists' projections.)

Profit for builders. No official figures on house moving exist. No one even knows how many house movers there are, though some movers contend that there are "more than 200 nationwide" and that the largest move about three houses a week.

And that is only part of the confusion. Homebuilders have learned of the profit in house moving, and have moonlighted into the business from time to time.

HOUSE MOVING is part of Pittsburgh builder Pat Minnock's business. He bought 21 slated for demolition, moved them and rented them out.

Some builders have leased special dollies and jacks and have moved houses themselves for a fee. But professional movers, who are not eager for competition, complain that those builders do a poor job. "This is a very specialized trade," says one mover. "I know builders who can't even move small, one-car garages without wrecking them."

Case study. Most builders, however, approach house moving as a real estate opportunity and leave the actual transport to professionals. Here's a typical case:

Pennsylvania decided last year to build a superhighway through Ivory Towers, an eight-year-old subdivision north of Pittsburgh. Twenty-one houses were go.

Builder Patrick Minnock, who is still developing a corner of Ivory Towers, saw a chance to rescue these houses at a profit.

Government officials, with power of eminent domain, bought the houses for $15,600 to $20,000. But after urging by Minnock, each owner exercised his right to repurchase his home for about $500. The owners then sold their houses to Minnock for $500 to $800, and Minnock got busy moving the houses intact onto his empty lots nearby.

Everyone benefitted. The government took title to a clear site with a minimum of expense. Under normal circumstances, the government must hire someone to demolish the existing houses.

The original house owners made a few hundred extra dollars by rebuying their houses and then immediately selling them to Minnock.

And Minnock got 21 houses for far less than the $30,000 each it would have cost to build them today.

The moving, nevertheless, was expensive. For example, Minnock paid $18,000 to raise electrical and telephone wires so the houses could be moved. He also paid a professional mover for actually moving the houses.

Minnock's total expenses were about $136,500, or $6,500 a house.

NEWS continued on p. 24

The Fulton as built by Heritage, Inc., Asheville, N.C.

How the Kingsberry Man helped Ken Partin start a business that builds 150 houses a year.

When Ken Partin decided to go into the building business, he needed a big assist from the Kingsberry Man. As a Realtor, Ken had sold many Kingsberry Homes, but he had never built one. No real problem. The Kingsberry Man made everything simple . . . guided Ken through the whole building operation, all the way from financial plans through merchandising the finished product.

Result? In recent years, Ken Partin has built more than 600 Kingsberry Homes. Sure, he knows a lot about construction now. But he still depends on the Kingsberry Man in many ways. Says Ken, "Growth presents new financial and management problems—all of which the Kingsberry Man helps us solve. This, together with the efficiency and quality of the Kingsberry package, has enabled us to increase our production every year."

You can do the same. Just mail the coupon. The Kingsberry Man will be in touch with you.

KINGSBERRY HOMES
BOISE CASCADE CORPORATION
61 Perimeter Park East, Atlanta, Georgia 30341

Robert H. Welsh, Director-Marketing/Kingsberry Homes/Dept. HH-2
61 Perimeter Park East/Atlanta, Georgia 30341/(404) 458-3241.

Please send more information on the Kingsberry program and have the Kingsberry Man call on me. I presently have____ lots ready to build on. I have built_____ homes and/or_____ apartments during the past twelve months.

Name _____

Firm _____

Address_____ Phone_____

City_____ State_____ Zip_____

Kingsberry serves leading builders in 35 Midwestern, Mid-Atlantic, Southeastern and New England states.

continued from p. 20

Guide book charts lending methods for mobile home parks

Today's housing spotlight is on the booming mobile home market.

While tight money cramps conventional housing, mobile home manufacturers have continued on their merry way. They turned out 410,000 units in 1969, and will do 500,000 this year.

And while the credit crunch bears particularly hard on the under-$15,000 single-family market, the mobile home industry can tap this area of growing demand because production costs only $6 to $8 a square foot. That compares with $10 to $12 a square foot for low-cost conventional units, although such comparisons are unfair to conventional builders because the mobile home figure omits land costs.

Two recent gains have been particularly helpful for mobile home makers. The $160-billion savings and loan industry has entered mobile home financing, and there is a new Federal insurance program for mobile units.

Where to put them. The industry's biggest problem is park space. Current production is estimated at only one-third of demand.

The increasing interest in the industry, the lack of familiarity with it by many lenders, and the need for additional parks, have led Bankers Mortgage Company of California to publish a study entitled "Mobile Home Parks: A Lender's Guide." The purpose is to help institutional lenders evaluate mobile-home-park financing.

More lenders are taking a closer look at park financing. They have, as a rule, demanded higher rates, shorter terms, and lower loan-to-value ratios than in apartment financing. But Bankers Mortgage reports that "in many cases, the mobile home park may be superior in terms of debt-service coverage, break-even occupancy ratio, and various risk aspects. In time, with greater knowledge . . . rates and terms may be expected to approximate more closely those for other multifamily developments."

The typical commitment to provide the long-term financing for a park is usually for 60% to 70% of appraised value, or $2,500 to $3,500 per space. The term is normally 20 years for full amortization, with a 7- to 10-year prohibition on prepayment.

Higher interest. The rate runs ¼% to ½% above the prime real estate rate for a mortgage. If participation is required, the formula is usually for 2% to 3% of gross income (collected rents) plus the prime real estate rate or slightly less.

Some commitments also carry holdback features, with floor amounts of 85%, which depend on an occupancy factor. (The factor is usually the break-even occupancy rate or about 66% occupied.) A holdback provision, used occasionally in apartment house lending, sets a floor amount to be funded on completion notice, and the balance of the commitment to be funded when break-even occupancy is achieved—if achieved within a year's time.

This has created a special problem for park developers, the Bankers Mortgage study points out. It takes longer to fill a properly run park than an average apartment house. "The long term success of the park is dependent in part on the selectivity exercised during the initial renting period, and it is in the lender's interest to assist the park's management in getting stable residents."

The report suggests that lenders can help by reducing the amount of the holdback or by extending the expiration date of the commitment so that management does not come under heavy pressure to fill the park too quickly.

The FHA program. The FHA now insures loans on proposed parks meeting the agency's minimum property standards. The amount cannot exceed the lesser of $752,000; or 90% of the FHA's estimate of value; or $1,800 per space ($2,600 in high-cost areas). Terms cannot exceed 39 years and 3 months.

The rate is currently the 8½% FHA rate plus an insurance premium of ½%. The difficulties are the $2,600-per-pad or $720,000 overall ceiling and the complicated application process.

The lender's guide terms it critically important for a lender to make certain that the chosen location can sustain the park. The survey urges a market study to determine:

- Economic climate and trends.
- Delineation of the marketing area from which the park will attract residents.
- The competition, including rent structure, vacancy rate of competing parks, type of client served and rival parks' amenities.
- An estimate of market demand for the type of space to be supplied—a service-type park, a housing-type park or a special purpose installation such as those oriented toward military camps or universities.
- A summary of parks proposed and already under construction.
- A summary of local authorities' attitudes toward zoning and more competition.
- An evaluation of the site.

This study should be a part of every loan submission, the study says, and it adds:

"In addition to providing the lender with an indication of how the project will fare, it should substantiate the income appraisal by justifying the rent schedule."

Warnings. Lenders must estimate construction costs and certify the land-purchase price to arrive at a replacement cost, Bankers Mortgage says. Offsite improvements such as grading and recreational facilities are critical to an accurate cost appraisal. If fill or trenching is required, costs will soar. The study urges lenders to go slow on loans on excessively difficult sites.

As parks proliferate, competition will increase. As with luxury apartments, amenities will determine which parks prosper. But amenities raise construction costs.

Lenders will—and must—become more familiar with techniques for financing both mobile homes and parks. The Department of Housing eyes this area as the salvation territory for its 10-year housing goal of 26 million units. Many of these will be aimed at low- and moderate-income families. And with mobile homes already accounting for 89.8% of all low-income units, it would appear that the mobile home and park industry will continue to increase for years to come. —A. M.

Great Southwest expands into apartment building

Big and still growing, thanks to a diet of merger and acquisition.

Great Southwest Corp. took a $20 million step into apartment building with its acquisition of the I.C. Deal Companies of Dallas. The move will boost the diversified land developer's projected 1970 housing output to 18,000 units.

Chairman Angus G. Wynne Jr. says Great Southwest will trade 933,333 to 1.4 million of its shares for Deal, depending on Deal earnings in the next five years. Deal posted $55 million in sales for 1969, up from $38 million the previous year.

Deal adds an apartment specialist to GSC, which already includes mobile-home builders and amusement and industrial parks spread over seven states.

Sale of Ring Bros. Monogram Industries of Los Angeles, a film and airframe conglomerate, has entered real estate development with its acquisition of Ring Brothers for 579,912 shares of stock. Part of this is contingent on future Ring earnings. Monogram, on the Big Board, was trading in the 22 range at the time of the merger.

Ring is a Los Angeles apartment builder. In a joint venture with Kaufman & Broad, it is developing a $20 million complex northwest of Chicago.

Dart's purchase. Dart Industries of Los Angeles has paid cash for Tatum Construction Corp. of Victorville, about two hours north of Los Angeles. The acquisition adds 400 acres of property to the 23,000 acres that Dart bought for $3.3 million in California's Kern County last October.

Canaveral's expansion. Canaveral International of Miami will swap stock for Gateway Estates, an 82-acre mobile home development in Dade County, Fla. There are 342 mobile home sites under construction on 62 acres of the development.

Multicom financing. Multicom Properties of Columbus has abandoned its partnership form for corporate status as a means of facilitating financing for expansion. Under terms of its agreement with Fidelity Mutual Life Insurance of Philadelphia, the life firm will buy $4 million of convertible debentures. A total of $5.5 million of this subordinated debt will be authorized. Multicom will use the money for general expansion.

NEWS continued on p. 26

THE NEW MALT-A-TILT WINDOW

STANDOUT

The most versatile window on the market today. Tilts inward for cleaning. Each sash is completely removable if you want that. Outside screens installed from roomside. And it's airtight with ratings far better than commercial standards. Perfectly balanced. Simple to take care of. Factory finished on the outside, natural wood inside. Insulating glass. See it today. Write for descriptive literature.

Malta Manufacturing Company, Inc.,
261 Johnstown Road,
Gahanna (Columbus) Ohio 43230.

Malta

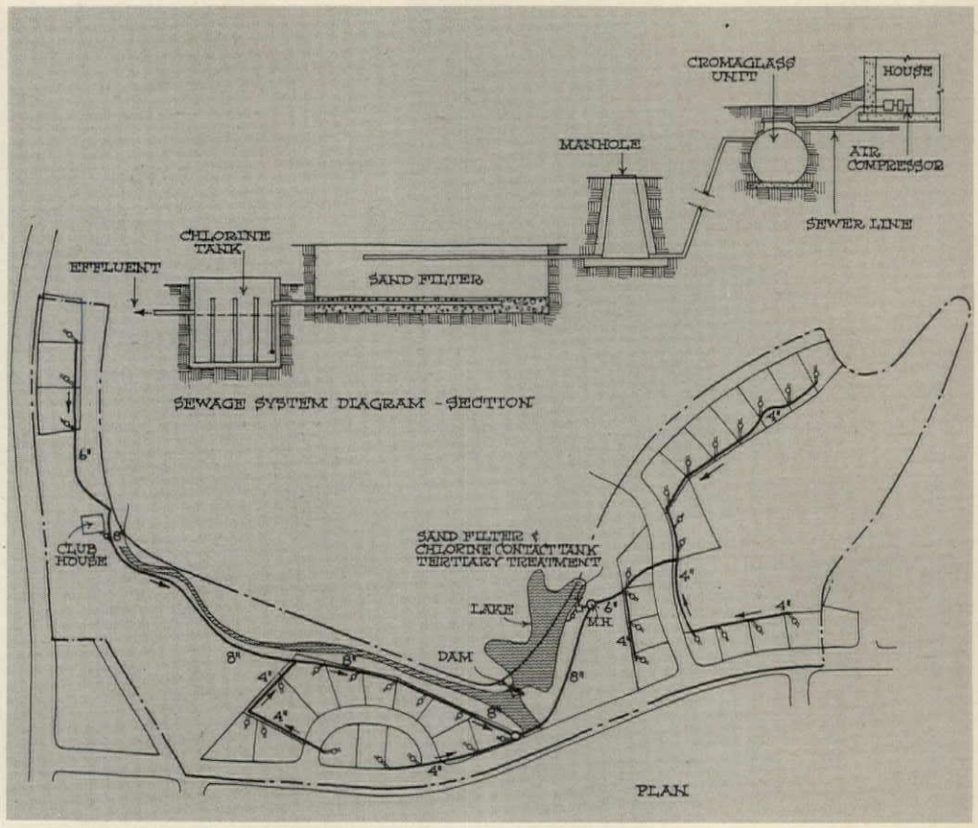
Circle 71 on Reader Service card

Single-house sewage plants *continued*

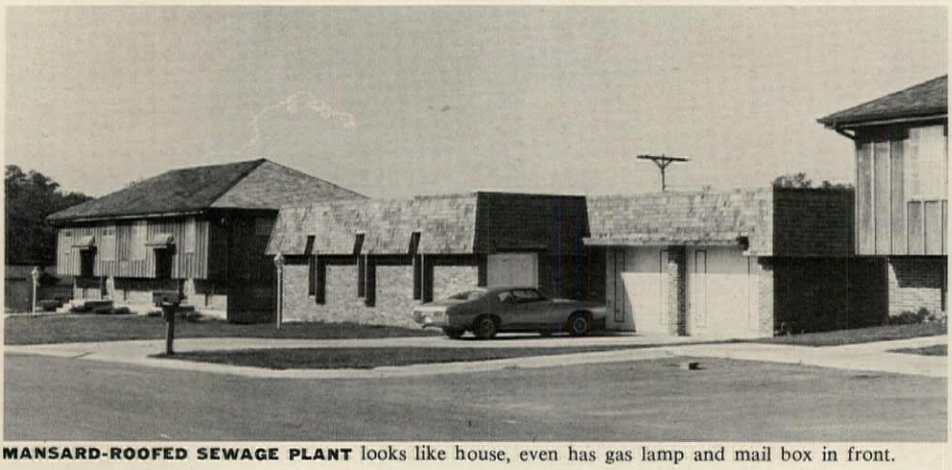
maglass unit for each lot. But the effluent lines empty not into the soil but into collection lines that lead into a central collection point. There the water is chlorinated, and can then be emptied into a lake or lagoon or used for watering a golf course.

The primary advantage of this system is that it ties up relatively little capital compared with a conventional treatment plant. Only the collection and chlorinating system must be built early; the treatment units themselves are installed as houses are finished. Cromaglass estimates that up to half the initial expense of a community sewage plant is saved by this plan.

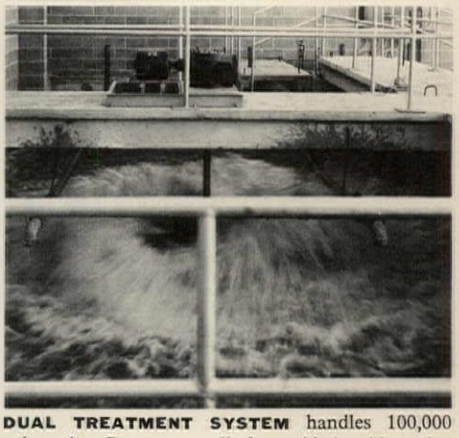
Circle 275 on Reader Service card



COMBINATION SYSTEM includes both central collector and individual treatment units. Sewage flows from units through small collector lines to final treatment unit containing sand filter and chlorinator.



MANSARD-ROOFED SEWAGE PLANT looks like house, even has gas lamp and mail box in front.



DUAL TREATMENT SYSTEM handles 100,000 gals. a day. Basement walls form side-by-side tanks.

How to disguise a temporary sewage plant

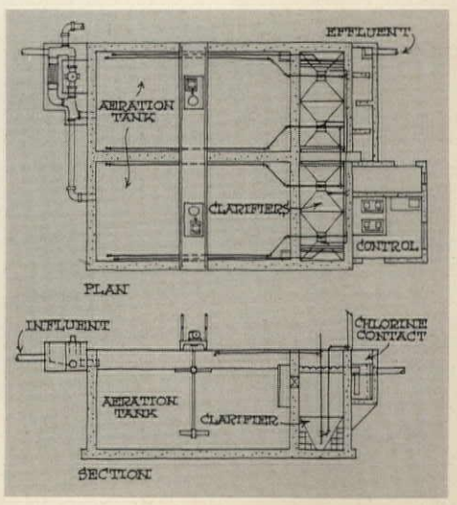
What looks like a mansard-roofed house (*above*) actually has no roof, and in fact is not even a house—at least not yet. Right now it is a sewage treatment plant for Par 4 Village near Parkville, Mo. But if municipal sewers are ever put in, the treatment machinery can be removed and the house completed.

Developer Ed Harris had to provide a treatment plant because 1) there was no municipal system, and 2) his project's final density—500 rental townhouses and duplexes on 40 acres—will be much too high for a septic system. He installed a package plant, supplied by Suburbia Systems Inc., in a tank formed by the concrete walls of a conventional basement. One section of the dual system (*plan at right*) is operating now; the other will be put to work as the project grows. The equipment cost $16,500; total cost, including the house and land, was close to $50,000.

Although the plant is only 20 ft. from neighboring houses, odors are no problem because the system is aerobic. Effluent is chlorinated and released into a stream.

The building, designed by Lawrence M. Jones of Parkville, is brick-faced with heavy cedar trim and cedar shakes. It includes space—in the garage—for maintenance vehicles and a laboratory. And it looks so much like a house that it even collects its share of junk mail.

NEWS continued on p. 32



Our Apartment Department.

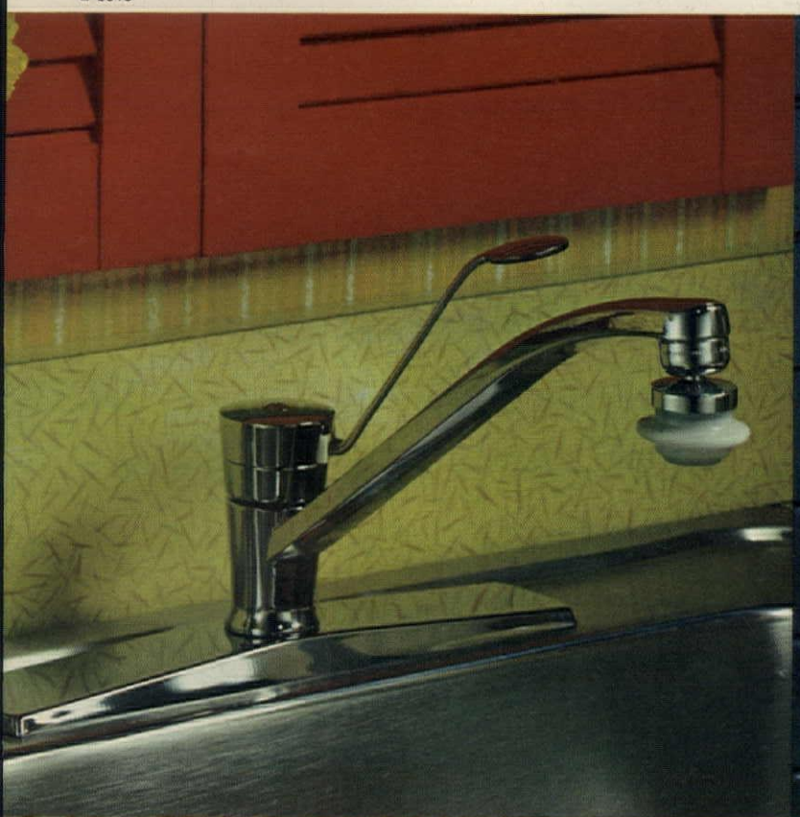
Chateau by Moen. The special apartment line that performs right along with Moen in style, convenience and long life. Chateau is out to reduce your installation and maintenance costs. How can you get all the facts? Write our Apartment Department, of course!

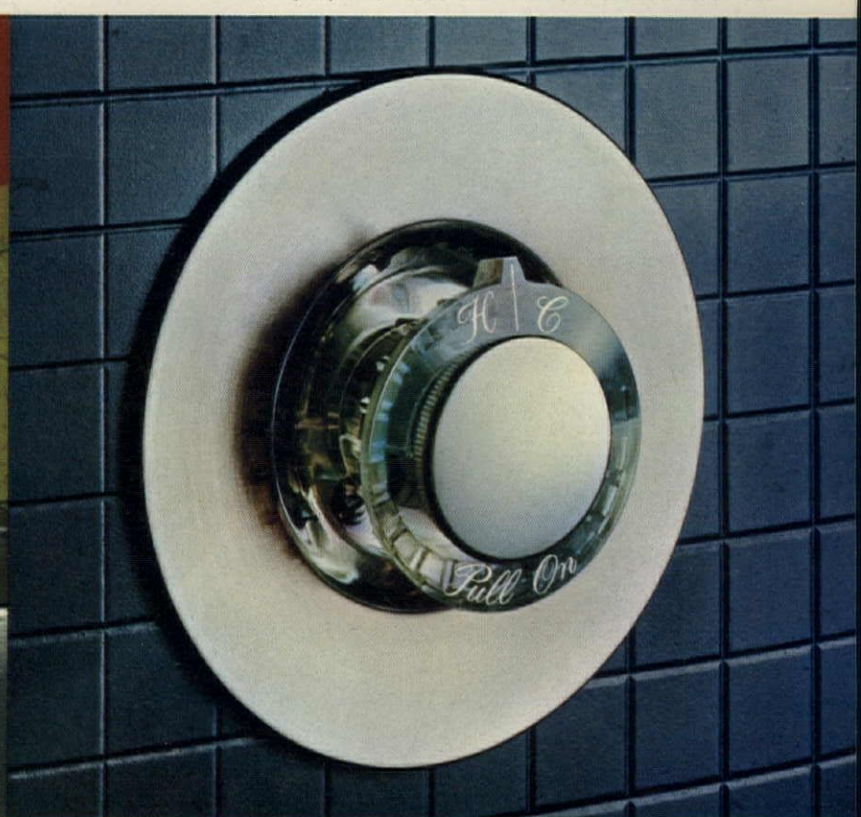
Chateau BY MOEN®

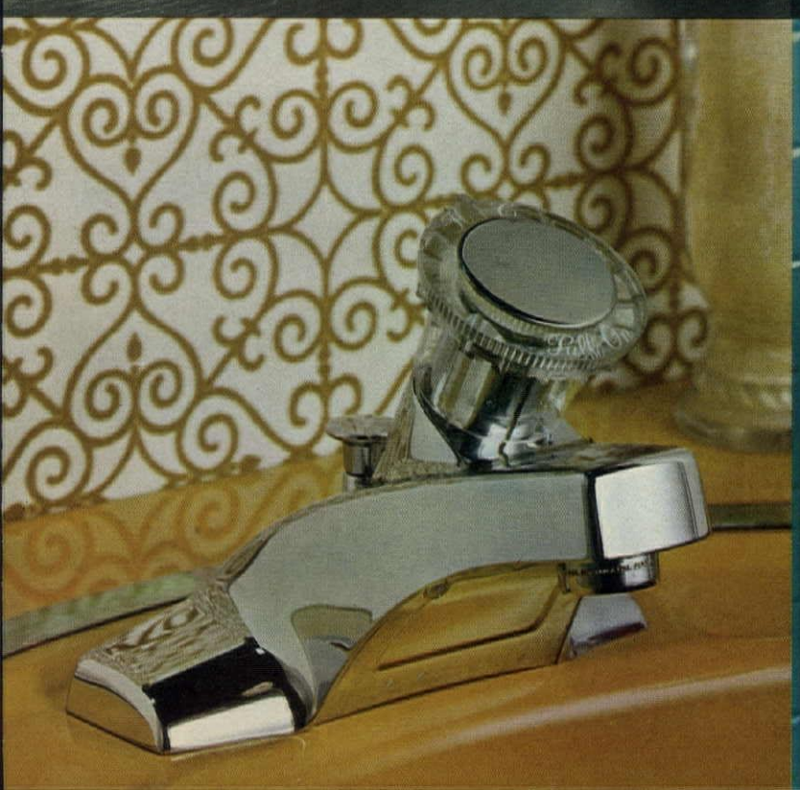
the faucet that turns people on.

B-6915

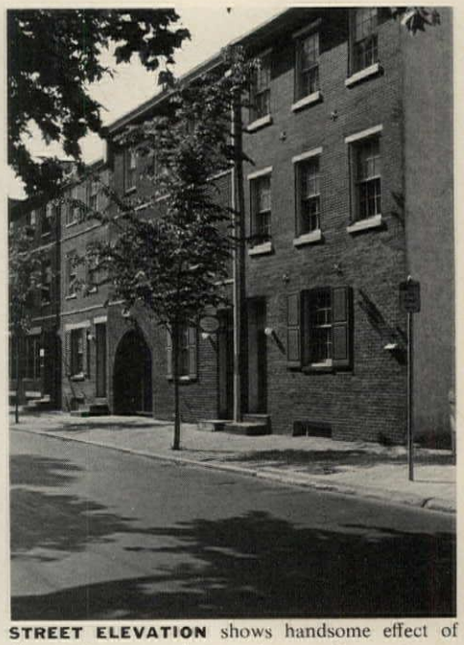
Moen, Elyria, Ohio 44035 a division of Standard Screw Co.







REAR COURTYARD contains community space and private gardens for unit. Passageway leads to street.



STREET ELEVATION shows handsome effect of historical accuracy in restoring row houses.

Restoring these row houses boosted their rentals 700%

Under threat of condemnation and purchase by Philadelphia's Redevelopment Agency, the owner of these 15 row houses chose to renovate them. Result: the units, which were renting for only $40 per month, now bring $300 a month and up.

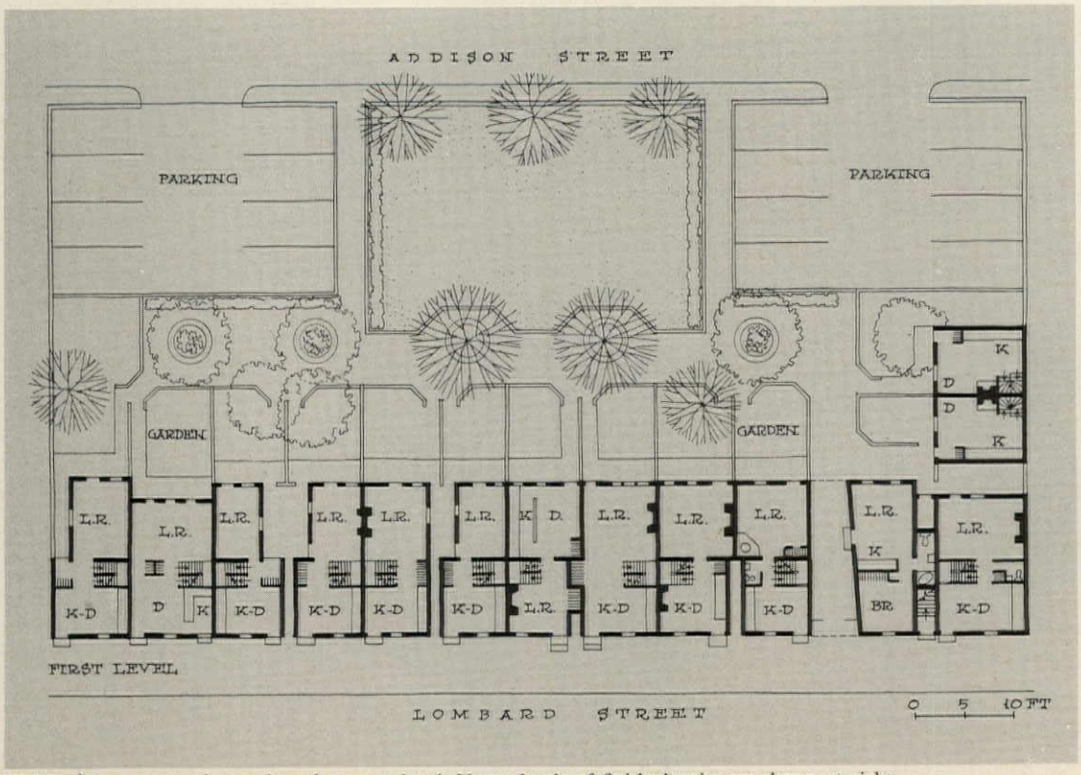
Not without a heavy investment, though. The owners, The Octavia Hill Association Inc., spent $150,000 renovating the first six houses (including landscaping and fees)—several times their original market value. The remaining nine units are in the design stage and will require equally heavy funding.

Location was the key, since the houses were on Lombard St., just at the southern edge of the city's famed Society Hill renewal area, and immediately accessible to all the attractions of the restored 18th-century area.

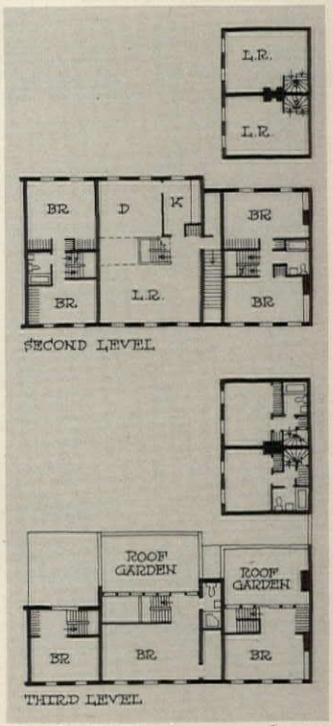
Architects Montgomery, Bishop & Arnold provided a basic living room and kitchen dining area on the ground floor, with bedrooms and baths on the second and third levels. Ultimately, there will be three four-bedroom, five three-bedroom, five one-bedroom and two efficiency apartments.

The high cost of restoration was partly due to standards set by the Historical Commission. The law requires that the commission have complete control over alterations on any building it designates. Since these houses were built in the early 1800's, they obviously belonged on the controlled-building list.

Any change in the fabric of such buildings must be approved, says the commission, and they closely inspect the architect's drawings, specifying such items as window glass and fenestration, shutters, and even the color of the mortar in the brickwork.



PLAN shows proposed complex when completed. Upper levels of finished units are shown at right.



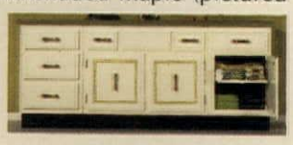
UPPER LEVEL plans are of completed one-, two-, and three-bedroom units.

New ideas sell homes.

The newest ideas come from Kemper.

If you're looking for that extra something to give your homes and apartments more customer appeal . . . talk to your nearby Kemper Distributor. This year Kemper is offering more design and more convenience features than ever before.

design. In addition to the exciting new Tiara Kitchen in shaded maple (pictured above) you may choose English Oak, Traditional Fruitwood or Colony Line Cherry. A complete selection of decorator styled bathroom vanities is also available.



features. How's this for a starter? Built-in cutlery drawers, self-centering lazy susans, roll-out shelves, roomy broom closets, the latest hardware ideas, self-closing hinges, do-it-yourself door front decorating options and the exclusive Kemper "mini-pantry."

construction. Here's where you, as a builder, will recognize Kemper quality. Everything about Kemper, including mortise and tenon joints, glue blocking, baked on finishes and full frame construction, will tell your customers something about the value you are offering. This is only part of the Kemper story. See your nearby Kemper Distributor for all the facts and a first hand look at America's most competitively priced kitchen cabinet value. Kemper Brothers, Inc., Richmond, Indiana 47374.

CERTIFIED CABINET NKCA

Kemper

You are cordially invited to enter the Fifteenth Annual Homes for Better Living awards program for architects, builders and homeowners

Sponsored by The American Institute of Architects in cooperation with HOUSE & HOME and *American Home*. All the award winners will be published in HOUSE & HOME. A selection of the winning entries will be published by *American Home*. All the winning entries will be displayed at the AIA convention in Boston, Mass., and at the Octagon in Washington, D.C.

Houses and apartments must be designed by a registered architect and built and completed since January 1, 1967 in any of the 50 states. Outstanding architects, housing industry leaders, and the editors of HOUSE & HOME and *American Home* will judge the entries. Awards will be made on the basis of outstanding contributions to better living through residential design, site planning, and construction. Winners will be displayed at the AIA convention June 21-25, 1970. Awards will be made in three categories: ☐ CUSTOM HOUSES designed specifically for an individual owner, in three classes according to size: a) Under 1,600 sq. ft. of living space, b) 1,600 sq. ft. to 2,800 sq. ft., c) over 2,800 sq. ft. ☐ MERCHANT-BUILT HOUSES designed for a merchant builder and sold speculatively, in three classes according to sales price including land: d) under $25,000, e) $25,000 to $40,000, f) over $40,000. ☐ GARDEN APARTMENTS AND TOWNHOUSES built for rent or sale. Apartments shall not be over three stories in height from grade, must comprise four or more living units, and may be single buildings or one of a group: g) single apartment buildings, h) multi-building apartment groups, i) townhouses. Pertinent information shall be submitted on the registration blank below (or a facsimile) by March 1, 1970, accompanied by a payment of $20 for each house or apartment entered. Any number may be entered. A separate registration blank must be submitted for each. Upon receipt of registration blank and fee, each entrant will be sent for each house or apartment entered an 8½″ x 11″ binder and full instructions for preparation. It must be completed and postmarked no later than April 5, 1970. It is important that the appropriate category be designated on your original registration slip so that you receive the correct color binder for your entry.

This registration slip and entry fee must be submitted by March 1, 1970. Make checks payable to: Homes for Better Living and mail to Homes for Better Living Awards, HOUSE & HOME, McGraw-Hill Publications, 330 West 42nd Street, New York, New York 10036.

Enclosed is check ☐ money order ☐ in the amount of $20 covering the entry below.

category: ☐ CUSTOM-BUILT HOUSE ☐ MERCHANT-BUILT HOUSE ☐ GARDEN APARTMENT/TOWNHOUSE

location _____

architect _____ address _____

builder _____ address _____

owner _____ address _____

submitted by _____ address _____

AN OPEN LETTER
continued from front cover

been virtually ignored, and it is all too possible that in the flood of publicity Operation Breakthrough is receiving, they will continue to be ignored until the crisis has turned into a disaster.

There are those who see the present situation as merely a difficult but temporary housing shortage that can be cured by jacking up house production. Their view puts too little weight on two vital factors: the rate at which the gap between supply and demand has been widening, and how long this has been going on. As much as four years ago, HOUSE & HOME pointed out that the then-current production of 1.5 million units a year was not meeting basic demand, and that unless production reached at least two million units by 1970 we'd find ourselves in very big trouble.

Well, it's 1970, we're still building about 1.5 million units a year, and we are indeed in very big trouble. Worst of all, most of that trouble is falling on the families least able to handle it.

Needless to say, the homebuilding industry would like very much to alleviate the housing shortage. And not just to create a lot of business: a growing segment of the industry is seriously concerned with the wide sociological problems of which housing is a part.

Unfortunately, the housing industry can't do the job by itself. Most of the obstacles can only be overcome if the federal government will help. And such help must be much more realistic than that offered by recent programs—particularly Operation Breakthrough.

Responsible criticism requires more than just a few simplistic slogans. So on the next 18 pages, HOUSE & HOME presents its detailed argument on the nature of the housing crisis, the reason present remedies won't cure it, and the real problems that must be faced before anything constructive can begin.

We respectfully submit that few national issues are more deserving of your immediate and close attention.

RICHARD W. O'NEILL
MAXWELL C. HUNTOON JR.
For the Staff of HOUSE & HOME

The housing shortage cuts across all categories and all price ranges. The main cause is expensive money; with permanent mortgages up to 10% and 11% and apartment construction money as high as 14%, both builders and buyers have been pushed right to the wall. The fact that 1969's output will be close to 1.5 million units despite this pressure shows just how desperate the housing demand has become.

Behind the money shortage, of course, is the Viet Nam war. Hopefully, as the war and its resultant inflation are throttled back, and as the money situation swings back towards normal, much of the housing picture will get a lot better.

But

easier money won't do a thing for low-income housing. And that's the most critical category among the 30 million units we need to build during this decade

It's critical because between 1970 and 1980 some nine million low-income units will be demolished or become uninhabitable. Unless they are replaced, nine million families will either have no roofs over their heads or be forced to live in the slum circumstances that are helping create so much violent unrest today.

It's critical because even those nine million units will just barely keep us even. More than 13 million new families will be formed between 1970

and 1980, and an estimated three million of them will also need low-income housing.

It's critical because without those low-income units, the housing industry and all it's allied industries will continue to lose ground in the fight to share the growth of the gross national product. In 1960 that share was 4.5%; in 1969 it was only 2.9%.

And it's critical because there's a desperate need, particularly among low-income groups, for the jobs that another million-plus housing units a year would create.

Obviously, if anything is to be done about low-income housing, the federal government will have to be the prime mover

Private enterprise can't do the job because it has to make a profit on what it builds. And as things stand today, a housing unit that turns a reasonable profit for its builder must be priced beyond the reach of low-income families.

Local government can't do the job because it has neither the muscle nor the will. Most local governments—both state and municipal—are, literally, either in or near bankruptcy. And they are highly sensitive to pressures by constituents who already feel themselves overtaxed—chiefly by increasing school costs.

The federal government has the financial muscle to do the job. It can finance low-income housing on the fairest possible basis because much of its revenue comes from the graduated income tax. And within certain limits, it has the power to override local objections and see that projects get built.

Equally obviously, up to now the federal government has done relatively little towards getting low-income housing built

Put together all the federal low-income programs for 1968—the best year such housing ever had up to that time—and you get a grand total of 120,000 units. That's roughly 15% of the annual low-income need. And the all-time totals are even less inspiring. Three decades of public housing have produced just over 700,000 units; and all of the rent-supplement, 221d3, rehab, and senior-citizen programs have given us fewer than 300,000 units. Plainly, at this rate the crisis can only deepen.

Does the federal government have any new plans to deal with the crisis? Yes—Operation Breakthrough

Operation Breakthrough is supposed to be the miracle that will suddenly start low-income housing pouring out of our factories

It is the brainchild of HUD Secretary George Romney, who apparently believes, as have many others in the past, that 1) present methods of house construction are hopelessly obsolete and expensive, and 2) if they are modernized, costs will plummet and hundreds of thousands of houses that otherwise would not be built will begin going up.

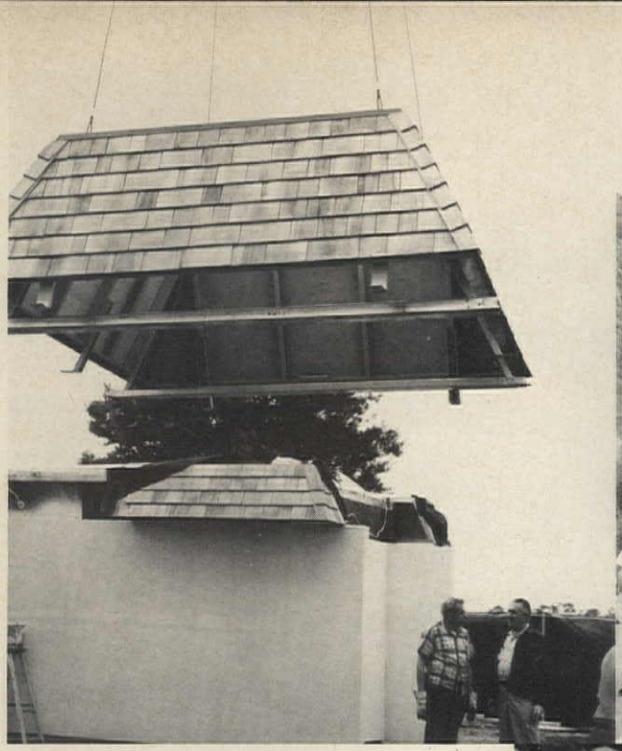
One thing you can say about Operation Breakthrough is that it has really

The response to the program has surprised even those HUD officials who were highly optimistic. HUD expected perhaps a couple of hundred entries from which it planned to pick 20 or so for subsidized prototype projects. It actually got more than 600 entries, and 236 of them were so-called Type A entries (complete structural systems). The rest were Type B entries (components of systems).

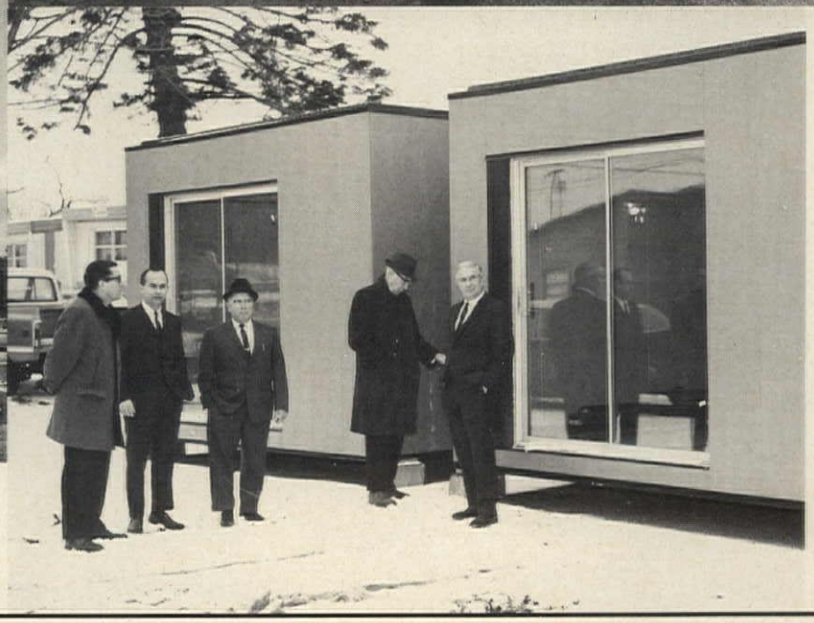
There are a lot of reasons for that flood of industrialized systems, and they'll be discussed further on. There are also a couple of significant aspects to the entries received:

1. Almost all of them would eliminate the builder as we know him today. In his place would be either the system manufacturer himself, who would presumably take over all real estate, developing, marketing, and management operations, or the same developer-investor who builds most of today's apartment projects.

2. Almost all of them are based on small modules which could be made on a mobile-home-sized assembly line. But the need—particularly in urban areas—is for big multifamily buildings. And grouping or stacking small modules to make big buildings —particularly high-rise, as some systems propose—has yet to be proven more efficient than conventional high-rise techniques.



stirred things up. Everyone and his cousin George has come up with some sort of factory-built house



But Operation Breakthrough presupposes that industrializing will cut costs. And it won't

→

We know that industrialization won't work cost miracles because we've tried it again and again in different forms. It hasn't made a dent yet, and there's no sign that anything is about to change radically now

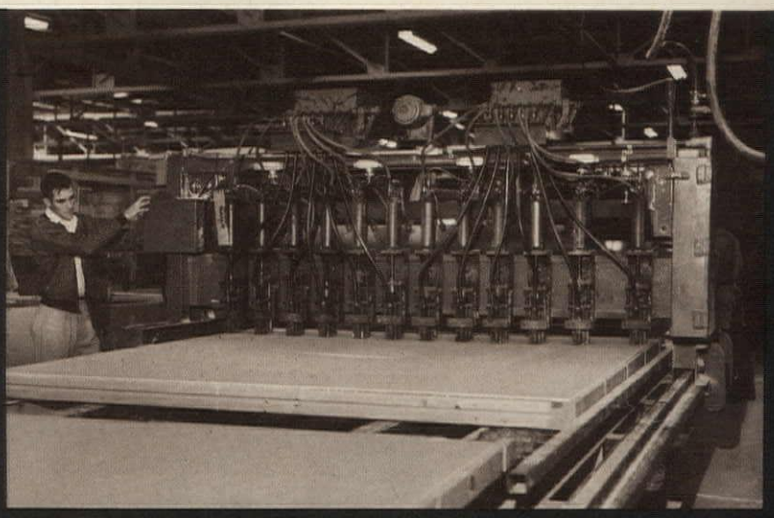
Let's look briefly at industrialization's record

Take the truss. Introduced to homebuilding in the early '50s, it proved to be structurally strong and, with its full-width span, a means of closing in houses much more quickly. Builders or lumber dealers could slap trusses together on a simple jig with hammers, nails, and maybe a little glue. There was no need to invest in heavy machinery, and the total labor in a typical truss might have run as high as $5. So even though trusses were built in a shop instead of in the field, it isn't really accurate to call them a form of industrialization.

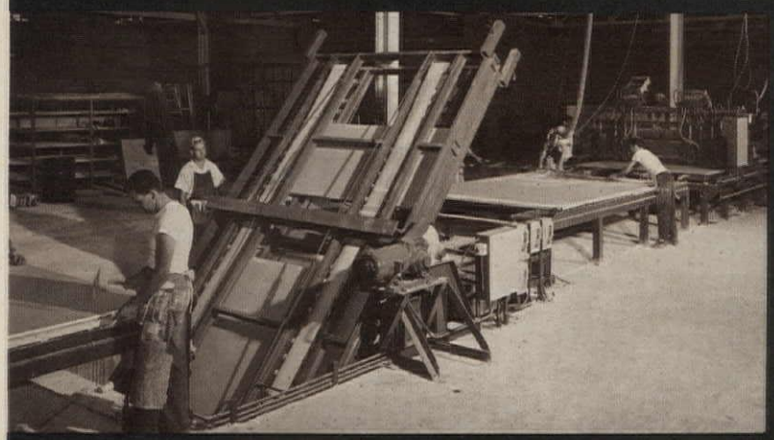
But then some people did set out to industrialize the truss. They bought big gang saws to cut truss members, hydraulic jigs to hold them in place, power rolls to set in truss plates. This kind of equipment cut maybe half the labor out of truss making. But it cost tens of thousands of dollars, so amortizing it required huge volume. Some prefabbers and large lumber dealers made the investment—sometimes to their regret. And today, surprisingly many trusses are still produced on simple jig tables with hammers and nails because experience has shown that's the least expensive way to do it.

Now let's look at the one-time favorite candidate for industrialization, the wall panel.

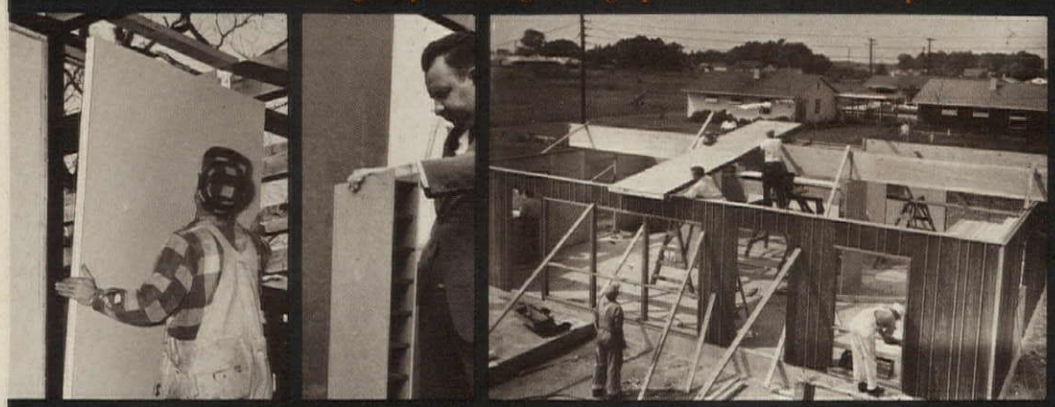
Under certain circumstances, the shop-built panel is great. Used with trusses, it lets a builder close in a house in a day instead of, say, a week—and in some climates, he may have to wait a month during the winter to get those five good building days in a row. So you could say that in some areas and some climates, panels produced some respectable indirect cost savings. But whether the builder builds them himself or buys them from a lumber dealer or a prefabber, he pays no less for panels than for conventional walls.



But panelization was the heart of the prefab industry of the '50s. In fact, except for trusses, it was about all the industrialization many prefabbers offered. So a lot of money was spent to industrialize the panel-building process. There were automatic power nailers like the one at right, for example, and such esoteric equipment as the flipper shown below that speeded the finishing of two sides. When you consider that a couple of men and a hand hoist could do the same thing in only a minute or so more time, this was carrying industrialization to pretty far-out extremes. Predictably, there were serious problems. If these machines had been allowed to spew out the same panel for days at a time, they might have made some cost inroads. But housing has never offered much chance for such standardization. In most houses, few panels are alike. And it's physically as well as economically impossible for most companies to stockpile a big inventory. Constant changeovers mean more flexible—and hence more expensive—machines and slower production. These factors wiped out any appreciable savings and helped bring about the demise of the prefab industry as we knew it in the '50s.



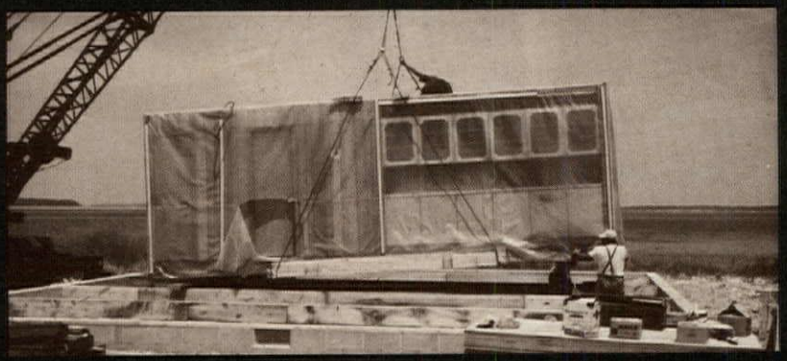
A lot of big corporations got hung up on the industrialized-panel idea. We had a spate of panel systems with hardboard facings, aluminum facings, foamed-plastic cores, spacer cores, etc. Some of them had some very good qualities. And some of them seemed promising enough to persuade their manufacturers and a few progressive builders actually to build prototype panelized houses. But almost without exception, these panel systems proved to be much more expensive than conventional stud-and-skin construction. The upshot: not one is on the market today.



These were all attempts to industrialize the shell of the house, which comprises only about 25% of the total value. What about the more expensive mechanical parts?

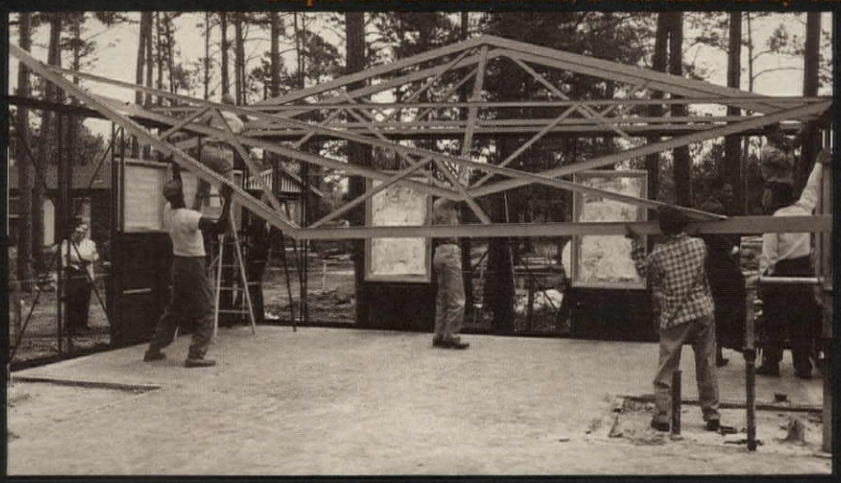
→

Mechanical or utility cores got some brief experimental attention about ten years ago, although nothing on the order of what panels received. The cores usually consisted of wet plumbing walls for the kitchen, one and one-half or two baths, and, sometimes, the heating plant and electrical service panel. The idea behind them was unassailably logical: the mechanicals are the most expensive parts of the house; if you group them and mass-produce the resultant unit, big savings should follow. But big savings didn't follow. For one thing, the cores were designed for field, rather than factory, assembly, so there were few savings in the shop. More important, the standardized cores were terribly limiting on design. Every house had to have its baths and kitchens in fundamentally the same spot, and these areas also had to be pretty much the same size. The buyer of a 2,500-sq.-ft. house wants bigger and snazzier kitchens and baths than he'd get in a 1,500-sq.-ft. house, and he wants a choice of floor plans, too. Since the utility core gave him neither, and saved little or no money in the bargain, it died.



The Lustron house, put out right after World War II, was the first real attempt to industrialize the whole house. It was steel framed, with a skin of enameled steel, and in many respects it was a very good home indeed. Thanks to the steel it was made of, it was fireproof, vermin proof, rot proof, and inordinately strong. Today Lustron houses built 20 years ago look as good as new. Thus in many ways the Lustron house was the best production house ever built—which proved to be its undoing. It was too expensive. While there are those who believe that volume production would have pulled the price into line, the fact is that the first Lustrons were built under subsidies from the Reconstruction Finance Corp., so their price was artificially low. In any event, few Lustron houses were built, and the system died.

Despite the Lustron failure, it was followed by other industrialized systems which used materials other than the traditional wood and masonry. There were other steel systems like the one at left, as well as aluminum and reinforced-plastic systems. All of them had one thing in common: they had to be factory-built by methods other than traditional homebuilding methods. And most of them required fairly expensive factory equipment. Finally, they all shared a fatal flaw: they cost more than traditional methods and materials, and there was no promise that volume production would bring their costs down far enough. Without exception, these systems folded—most of them before reaching any real production at all.



The failure of Lustron and the other nontraditional industrialized systems should have taught people three basic lessons:

1. Old fashioned wood-and-masonry construction is still the least expensive there is and, thanks to its easy workability in the field, the most flexible. Every other system, no matter how highly industrialized, has turned out to be more expensive.

2. All of homebuilding is geared to wood-and-masonry construction, and the introduction of other materials, particularly those requiring special skills and equipment, is bound to be costly.

3. Homebuyers are leery of unfamiliar building materials. Only a very low price will tempt them away from the traditional.

But it took one more great big industrialization fiasco to convince everyone. In 1963 Alside Inc. put together an $8-million plant to produce a steel-framed, aluminum-paneled house of highly contemporary design. The combination of sophisticated machines and automated controls was supposed to pull costs down to the point where a buyer would pay only about $7 a sq. ft. for the house erected on his lot. But even before the assembly lines began running, prices started to inch up. Buyers might have been interested at the originally estimated price, but when it reached the neighborhood of $15 a sq. ft. they balked. Some models were built, but the plant never went into full production.

→

All right, what about the mobile home? It's industrialized to the point where carpets are laid and furniture is installed in the plant, and it costs less than a conventional house of the same size. Can't this be called a successful example of cost cutting by industrialization? Yes—except for one thing. By current housing yardsticks, the mobile home is substandard. It has 2x2 studs, thin skins, and bottom-of-the-line hardware, windows, plumbing fixtures, etc. A lot of people buy mobiles, but chiefly because they need shelter and there isn't anything else at the price. And chances are that within seven or eight years a mobile will depreciate to the point where it has virtually no resale value—which makes it a rather dubious economy.

So much for mobiles, but what of the sectional house? It is usually built on the same assembly lines as the mobiles, so it's fully industrialized. And most sectionals are built to completely conventional specifications, so they can qualify for FHA financing. But thanks to these healthy specifications, sectionals are no less expensive than most conventional houses, and they are considerably more expensive than similar houses produced on site by volume builders. Among other reasons, they must be heavily reinforced to survive over-the-road travel and handling by crane.

Sectionals make sense in rural or vacation areas where labor is high priced or nonexistent, but they have not as yet produced any cost-saving miracles. The same is true of the so-called modular box systems. They seem likely to find their greatest use in townhouses, where a standardized appearance is a relatively minor drawback, and where speed of construction is of major importance because it means renters can be moved in much more quickly. It's also quite possible that where a small project is concerned—say, 50 units or less—a low-volume builder might find sectionals less expensive than conventional construction. But for larger volume, a builder with an efficient field operation should be able to produce townhouses at lower cost by conventional methods.

So as things stand now, stick building in the field, though seemingly obsolescent, is still the least costly way to produce houses.

And there's a key reason for this that most advocates of industrialized housing have missed: industrialization saves money by reducing labor, but it is materials, rather than labor, that accounts for the bulk of housing costs. Most manufactured products have a low ratio of raw-materials costs to in-plant costs. In fact, it's not unusual for a manufacturer to add about 1,000% to the value of raw materials as they move through his plant; in other words, his materials-to-labor cost ratio is roughly 1-to-10. By contrast, the materials-to-labor ratio is about 2-to-1 for the average field builder, and for some high-volume builders, it can reach 4-to-1. Now, if the whole process were put on a factory assembly line, extra efficiency could boost the ratio still higher. But a plant operation also adds costs of its own—factory overhead, for example, profit, and the cost of transporting the house from factory to site. And these added costs can easily cancel out, or even exceed, assembly-line savings.

Does all this mean that industrialization is a dead duck as far as housing is concerned?

Not at all. There are very sound reasons for assuming that during the early '70s factory-built housing will become much more significant than panelized prefabrication ever was during the '50s and '60s. But the reason for this swing to factory production will not be to cut costs; as you've just read, industrialization usually increases costs. The reason, as you'll read later on, is that regardless of its cost, industrialization will, in a few years, be the only possible answer to a serious labor shortage. But right now, and for the immediate future, it offers no solution to the critical problem of producing low-cost housing.

If industrialization won't do the job now, why is everyone so excited about Operation Breakthrough?

Everyone's excited about Operation Breakthrough because . . .

1

It fits the American dream that our assembly lines can do anything

We've seen these lines turn out TV sets, automobiles, and countless consumer products that would be prohibitively costly if they were hand made, and put them within reach of anyone of moderate means. And we reason that the same thing should be possible with housing. The trouble is, few people outside of housing have learned the lessons of the last six pages. They don't realize that only about half the cost of a typical house is in the structure itself; the rest is in land, foundations, financing, and other areas that industrialization can't touch. And they don't realize that the kind of quality-cutting that helps the mass production of other consumer goods simply won't go in housing. We are committed—and rightly so—to a product that with any care at all should last a century.

2

It seems to offer big industry a bigger share in housing's future

The roster of submissions for Operation Breakthrough includes some of the most imposing corporate names in the nation. And there's a strong tendency, particularly in the present administration, to assume that what's good for big business is probably also good for housing, for people, or for anything else you can name. But many of these same giant corporations, and others too, have tried the housing field before with, to put it mildly, indifferent results. Some of the biggest baths in housing have been taken by some of America's biggest corporations. So neither size nor success in other fields is a guarantee of success in homebuilding.

3

It seems to offer a lot of people a shot at federal boodle

The present Operation Breakthrough program won't make anyone very rich: only $15 million has been allocated, and it will be spread among at least 20 companies for further experimenting and prototype construction. But everyone has seen what can happen when the federal government gets interested in an industry: witness the space program, for example. And Operation Breakthrough looks to many like increased government interest in housing.

4

Most important, Operation Breakthrough effectively obscures the fact that we as a nation have made almost no commitment to housing our low-income families

A lot of very pious talk has been committed. But the true measure of commitment is not words, but dollars, and some excerpts from the current federal budget are very revealing indeed.

We have a strong commitment to defense—$68.6 billion worth.

We have a strong commitment to farm subsidies—$5.4 billion worth.

We have a strong commitment to space—$3.7 billion worth.

We have a strong commitment to air and highway travel—$2.26 billion worth.

But our total commitment to helping poor people get decent homes is a measly $375 million. And even that shameful figure suffers more of a picking over by congressional budgeteers than most of the much larger amounts above.

So the first step out of our low-income housing crisis would be to face the fact that we'll have to spend more money

It doesn't have to be an astronomical figure; compared to other items in the federal budget, a little housing money can go a long way. For example, just this year's overruns on the Defense Dept. budget can easily top $10 billion. Used as capital, that amount could build 500,000 low-income housing units; used as rent subsidies or matching funds for local budgets, it could generate up to five million low-cost units—enough to carry us through the first three or four years of this decade.

What will it take to get this kind of commitment? First of all, a realization by the public that we really do face a critical housing shortage; and second, enough political courage on the part of Congress and the Administration to push for more and better housing before 1972—the next presidential election year.

All right, say we do make the commitment. Then what? Then we go after the real problems

To understand the real problems that block low-income housing you have to start with what a family pays each month for its apartment

The chart at right is excerpted from the rent roll of a 15-story elevator building containing more than 100 units. It represents the breakdown of the $228 a month a family would pay for a typical three-bedroom apartment in a typical urban area. And it's the place you have to start if you want to understand why the federal government has to help if we're going to build low-income housing, and where that help has to be applied.

The first thing that has to be understood is that $228 a month is far more than a typical low-income family can pay. Just how much more depends on several factors, including location; let's say that in this case, the family can afford only $150 a month.

The second problem is that the builder and/or owner of the building can't charge anything less than $228; if he did, he couldn't make a reasonable profit.

So it's this $78 gap between what the tenant can pay and what the owner must charge that has to be filled. And the most direct way to study that problem is to look at where the rent money goes—as shown at right.

It can legitimately be asked why such a study is based on rental, rather than owned, housing. The answer is simple: most low-income families can't afford to own their homes, even under federally-subsidized ownership programs. For the foreseeable future, at least, just about all our low-income housing will have to be rental housing.

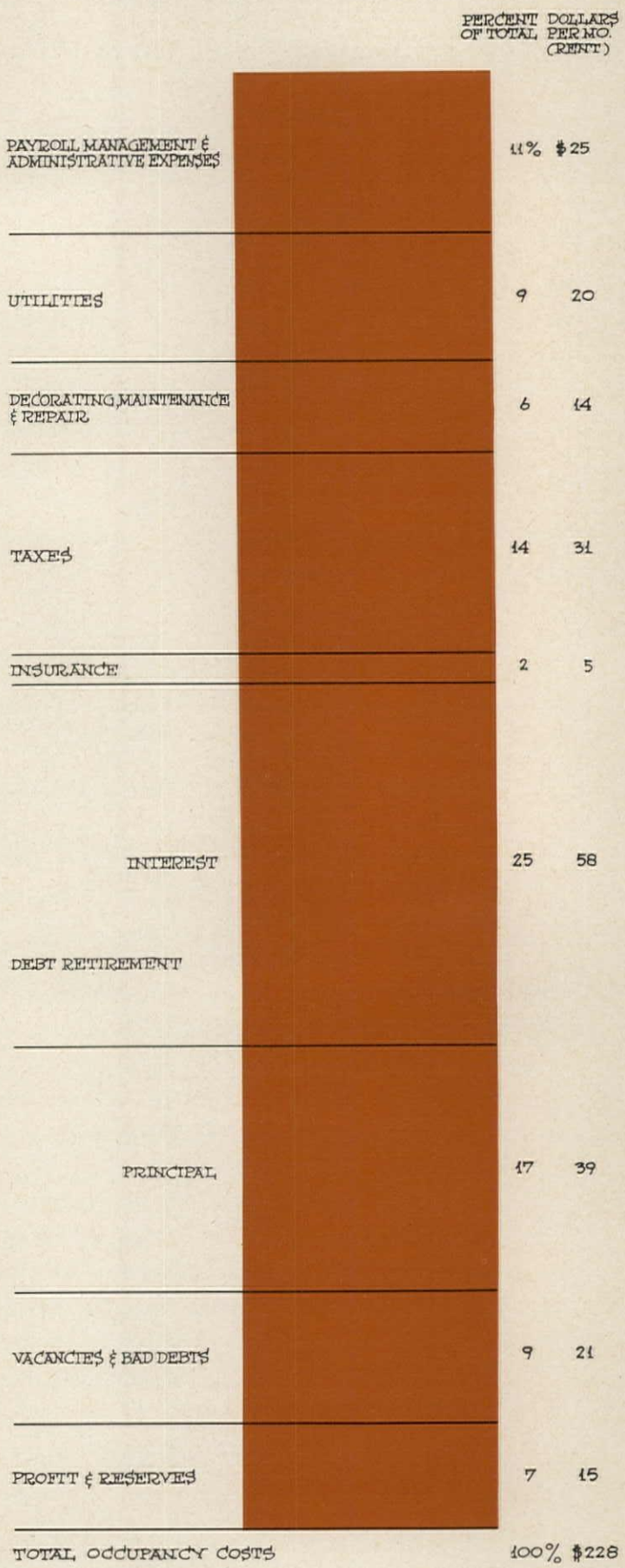


Chart made up from a study for The Kaiser Commission by McGraw-Hill Information Systems Co.

With the rent roll as a background, it's relatively easy to identify the problems that must be solved. These are the biggest

1

PROBLEM: Money

Two categories of the cost of money are included in the chart on the facing page. They are based on the cost of the apartment, $20,000 (which indicates that the builder is a very efficient operator), and the interest on a 9%, 25-year mortgage (which most apartment builders would give their eye teeth to get today). Together they comprise 42%—nearly half—of the monthly rent (the actual proportion between the two will, of course, vary with the time the mortgage has been in force; the figures in the chart represent the average over the entire life of the mortgage). Let's look at the two separately:

Is there any way to reduce the debt service? Yes—as long as somebody pays the difference between the going rate of money and the desired reduced rate. The government has already recognized this with FHA 236, which subsidizes interest payments. If the subsidy were to cover all interest payments, 25% could be cut from the rent.

Is there any way to reduce the principal? No. Construction costs just can't really be cut, Breakthrough or no Breakthrough.

But there is a way to eliminate that entire 42% of the rent taken up by money: if the Federal government were to create a capital budget to build low-income housing, there would be no principal, hence no interest. And while the initial impact on the budget would be high, the ultimate cost would be less than that of a heavy rent-subsidy program.

2

PROBLEM: Taxes

On this particular rent breakdown, local taxes are a very reasonable 14%; in some cases the proportion can go as high as 30% or more.

Can these property taxes be cut? Not as far as local municipalities are concerned. Most of those with low-income housing problems are already on the verge of bankruptcy. If that 14% (or more) is to be cut out of the rent, another level of government—obviously the federal—must make up the loss to the local level.

Direct subsidy is one way. If it proved politically unpalatable, there is the indirect or hidden subsidy whereby the federal government makes up the loss at the local level by paying for other services: welfare, recreation, public health, etc. It is in that way that the federal government now subsidizes air travel, agriculture, etc.

→

3 PROBLEM: Maintenance

On the rent-breakdown chart, only 6% is allotted to this category. But that's misleading: maintenance and repair of low-income housing affects—and is affected by—many other categories.

Case in point is the construction cost of the apartment. Raising the specifications for equipment, wearing surfaces, and finishing material would increase the principal portion of the rent. But it would also cut the amount that had to be spent on maintenance and repair—probably enough to more than cancel the increased construction cost. Moreover, if capital costs were to be borne by the government, the decrease in maintenance costs would benefit the tenant who must pay them.

Consider utility costs—9%. Upgraded specifications—better insulation, for example—could make appreciable cuts in the cost of heating, cooling, and electricity.

Consider administration expenses—11% of the monthly rent. Decreasing repairs would cut such overhead as paperwork and supervision.

Can we cut maintenance costs? Yes—if the appropriate government agencies will initiate and carry through an intelligent re-evaluation of housing specifications.

4 PROBLEM: Land

There is no figure specifically allotted to land costs in the rent breakdown. It is included in the "principal" category, and is a little less than 10% of the total of the apartment.

Can land cost be cut? That depends. The 10% figure is very reasonable for an urban housing project, and there are seldom any land bargains in the downtown areas where much of our low-income housing will be built.

Suburban land, however, could be very much less expensive. The trouble is, most suburbs don't want low-income housing, and have gone to great trouble to keep it out. Their chief weapon is zoning: by holding to large-lot requirements and severely limiting multifamily zoning, they make sure that only higher-income housing can be built.

The federal government can help here by gently but firmly forcing the suburbs to open their land to low-income families. Some states are already working on legislation that would override local zoning statutes to permit low-income housing; the federal government could lend its weight to such programs and press for their adoption by all states.

5

PROBLEM: Red tape

This is such a monumental problem that it's useless to try to assign a cost figure to it. Any builder who has worked with a government program knows that, at best, red tape will delay his project, force him to use extra administrative personnel, and thus boost his overhead costs; at worst, it will strangle him and kill his project.

Can red tape be eliminated? Probably not. But anything that the government can do towards standardizing, simplifying, and de-bureaucratizing the procedures of its housing agencies—and pressuring state and local bodies to do the same—will cut the cost of low-income housing—and in some cases, drastically.

6

PROBLEM: Manpower

Here at last is an area where industrialization may **eventually** help →

Industrialization will eventually help because it can bring more housing production from less skilled—hence less scarce—workers

It's not a question of trying to find cheap labor, it's a question of finding any labor. Even at the current inadequate rate of housing production, in some areas carpenters are impossible to find. And the shortage of plumbers, electricians, and other craftsmen has helped push mechanical costs of housing clean out of sight.

The promise of industrialization is that by standardizing many of these skilled operations, it will allow less skilled labor to perform them. It might also bring new people into an industry that for the past decade has only seen its labor departing.

Industrialization will eventually help because it drastically cuts the weather-vulnerable part of the construction process

Typically, only one day is necessary to drop a factory-built house into place; by contrast, a conventionally built job may be open to weather delays for weeks. And there are both short- and long-term advantages to the quicker way. The builder's money isn't tied up as long, so his overall costs drop; and he knows just what his structure will cost, so his safety margins can be reduced. On a larger scale, industrialization could eventually bring an end to the seasonability of homebuilding in many areas and the consequent higher wages that must be paid to workers who may be idle much of the winter.

On the other hand, industrialization can't do everything. Foundations must still be built outside, and no one yet knows how to prefab a hole in the ground.

Industrialization will eventually help because it will make more possible the use of new materials in housing

Up to now, wood and wood products have been the predominant housing materials. Aside from the relatively low cost, their great asset is the ease with which they can be cut and fastened in the field with hand tools. Metals and plastics, on the other hand, usually must be worked with heavy equipment that can't be brought into the field and that requires volume production to justify its expense. Since housing's present labor force

is geared to wood-frame construction, many materials that could improve housing never had a chance to be used.

Industrialized housing could change that. It is built in a factory where machinery can be installed; it can be standardized to the point where volume production is possible; and its new labor force can certainly be taught to work with new materials.

So there's no doubt that industrialization will play a useful role in producing low-income housing

True, there are limitations inherent in factory-built housing. Because of trucking requirements, the size and shape of modules is limited, and that in turn puts restrictions on design; there are only so many things you can do with a box. Also, while modules can logically be combined to form townhouses and garden-apartment buildings, most urban low-income housing will have to be in medium- and high-rise buildings. And although some Breakthrough proposals show modular boxes stacked up 15 and 20 stories, few housing experts believe this to be a practical concept.

Within these limitations, however, industrialization promises to be the best—and perhaps the only—way to increase housing production in the face of a dwindling labor supply.

But

we don't need Operation Breakthrough to achieve industrialization

The housing industry will industrialize anyway—when industrialization is feasible and necessary. Indeed, many of the most promising proposals for Operation Breakthrough are systems that were designed, and in some cases put in production, long before Breakthrough was conceived. While it's fair to say that Breakthrough may have led to the faster evolution of some good systems, it's equally fair to question whether that faster evolution was necessary, or even desirable.

Regardless of HUD's intentions in creating Operation Breakthrough, the unhappy fact is that for the next few months all of the sound and fury that will inevitably attend the building of prototypes of winning Breakthrough systems is going to hide all the problems of money, land, taxes, and above all, lack of concern, that keep us from mounting an effective program for low-income housing.

It's too late to do anything about Operation Breakthrough; it's already rolling. If we're very lucky, it may produce some useful results.

What's important now is that we stop kidding ourselves. When that smokescreen finally clears, we'll still have a crisis on our hands.

The time to start dealing with it is right now.

Photo: United Airlines

TRANSFER

How to sell a market that tight money can rarely cripple

Scarce mortgage money and high interest rates may discourage some potential homebuyers, but not transferred executives. They are prime prospects for at least four important reasons: 1) they usually have substantial equity in their present houses; 2) their incomes are rising (most transfers bring a salary boost); 3) they're apt to have the backing of a large corporation that is willing to spend thousands of dollars to help them unload their old house and buy a new one*; and 4) they don't have the option of staying put—their employers have already decided that for them.

But if their ability and willingness to buy are exceptional, so are their needs:

1. *They need a house right now.* Rarely does the transferee have enough notice of his move to wait out the complete homebuilding cycle. So builders who sell to transferees must build for inventory, must have houses at least to the point where they can be completed for occupancy within about six weeks. Two New Jersey specialists at selling to transferees—builders Robert Scarborough, of Haddonfield, and Jirair Hovnanian, of Mt. Laurel—each keep as many as six houses in readiness for almost immediate delivery.

Scarborough, who now makes 60% of his single-family-house sales to transferred executives, says:

"It takes around six weeks to close a mortgage on an out-of-state buyer, and that is just about what we need to add the finish items that the customer likes to choose—like colors, patterns, and optional extras." Hovnanian pours enough foundations to let him replenish his inventory by building through the cold

continued

* Mrs. Shirley Fry, personnel manager at Campbell Soup Co.'s Camden, N.J. headquarters, says each transfer costs that company at least $5,000. And a specialist in helping transferees get located (*see p. 73*) says costs for some companies run as high as $8,000 per move.

months whenever he sells himself out of completed houses.

2. *They have little time to shop around.* Generally, an employer will pay for one or two househunting trips by the transferee and his wife, and give them perhaps a week to shop the local market. With that in mind, Scarborough offers to have a salesman pick up the couple at the airport or their motel, show them everything in the community they want to see, and make arrangements that save them time.

But sometimes it may not pay to be the first to talk to the transferee couple. Says Sal Giudice, marketing vice president for American Can Corp.—himself a 12-time transferee:

"If people are moving from a low-cost to a high-cost area, prices and terms will strike them as outlandish, and they may take out their resentment on the man who introduces them to these unpleasant facts."

3. *They want a complete package.* For the stranger in town, decorating and equipping a new house can be a major problem. He's unfamiliar with local merchants, what's available, and how much things cost. As a result, Hovnanian finds that one of his strongest appeals to transferees is that his selling price includes carpeting, drapes, wallpaper, and major appliances.

"These families are going through a traumatic experience," he says. "They have so many decisions to make that they are relieved whenever one is made for them."

4. *They worry about resale value.* To convince transferred buyers that they won't get stuck if they are moved again, Scarborough keeps records of resale prices in his subdivisions. These documented examples show a steady appreciation in house prices, and they are important not only to the potential buyer, but also to his employer—who may have promised to make good any loss the employee sustains when he sells his house.

High ratio mortgages, without prepayment penalty clauses, are also favored by transferees. High interest rates are not a major sales barrier—transferees have simply come to accept them.

5. *They want firm delivery dates.* Nothing will destroy your reputation with transferees as surely as promising a house for a certain date and failing to meet that demand.

"The executive who winds up living out of suitcases, with his family in a motel and his furniture in storage, will blackball you with everyone he talks to," says Bob Scarborough.

To avoid such troubles, Scarborough won't go along with a potential buyer's delivery date just to close a sale.

"We tell the buyer when he can have the house," he says. "That way, we can be sure that it will be ready when promised."

But if the family must move before the house is ready, both Scarborough and Hovnanian help them find temporary quarters. Both builders work with local apartment owners who are willing to take tenants for short periods—at higher rents, of course, and with no redecorating. (Some builders will let a buyer rent a model house until the new house is ready.)

6. *They want familiar design.* This desire can be a sales barrier if the transferee is used to a house style that is not common in the new area.

"It's especially difficult," says Scarborough, "when people move here from the West Coast. They hope to find wood shingles, exposed redwood, and open plan-

FOLLOWING IN THE HOUSE-STEPS OF A FOUR-TIME TRANSFEREE

Photo: Fred Rola

South Plainfield, N.J.

Bought, February 1960	Price: $16,900
Sold, March 1962	Price: $18,000

Photo: Lawrence S. Williams Inc.

Somerdale, N.J.

Bought, March 1962	Price: $18,000
Sold, June 1965	Price: $20,000

ning. We just have to convince them that such a house—even if available—would be hard to resell here in New Jersey, where the market leans heavily to traditional styling. Hopefully, they will decide that ours is the best of this tradition."

7. *They can't be snowed.* The typical transferee—an executive in his late thirties or early forties—is a smart, knowledgeable homebuyer, who already may have owned as many as four or five houses. He knows financing, quality products, and his family's household needs. He will make extensive inquiries about local taxes, preferred locations, schools, shopping, transportation, etc. And he can usually prove or disprove any claims you make by checking with his fellow executives.

8. *They like to be near other transferees.* Scarborough says that these families are very aware of the problems of breaking into a new social environment, and look for others in the neighborhood who have also come from somewhere else. They won't want to get into a closed-club situation, where everyone in the neighborhood has known each other for years, because it is sometimes very difficult for a newcomer to be accepted. So Scarborough emphasizes the number and variety of other transferee families living in his subdivisions.

The transferee market spawns a transferee expert

Builders with houses for sale and employers with transferred executives needing housing are being brought together by specialists like Theodore Robertson of Philadelphia. Robertson's primary tool is the *Home Finders Directory*, a magazine published in separate editions for three metropolitan areas: New York City and suburbs, Philadelphia-Camden, and Baltimore.

The monthly editions (which often run over 120 pages) are compendiums of constantly updated data on all the communities in each area, plus builders' new-house advertising. They are distributed through personnel offices to employees being moved into the areas, and are available at leading motels near major employment centers. They are also sent free to transferees who request them.

In addition to the magazine, Robertson provides employers with a service to smooth the way for transferred househunting personnel. For a fee, he meets with groups of transferees before they make their first visit to an area, describes the area's advantages, and answers questions about schools, taxes, recreation, cultural attractions, and housing. He then leaves them copies of his magazine and builders' brochures. Later, when individual couples make their househunting trips, Robertson or one of his staff shows them around the community and takes them to subdivisions they have asked to see (he makes no recommendations or comparisons). Robertson claims his service cuts househunting time in half (to an average of three or four days) and saves the employer far more in expenses than the fee charged: $250 per couple in large groups.

Robertson's newest idea is a centrally located househunting center, where newcomers can visit one office, get information about different communities and subdivisions, and see exhibits of builders' promotional material. The first center is scheduled to open this spring near Philadelphia.

Joseph Cleary might be described as being at the midpoint of his business and family life. At 42, he is a district sales manager for RCA, married, and the father of three children, aged 14, 12, and 6. In the last eight years, he and his wife have owned the four houses shown below—all in different communities. A year and a half ago they bought their present home—the colonial at far right—from builder Bob Scarborough. Almost surely, there will be more business promotions and more new houses for the Clearys and thousands of families like them.

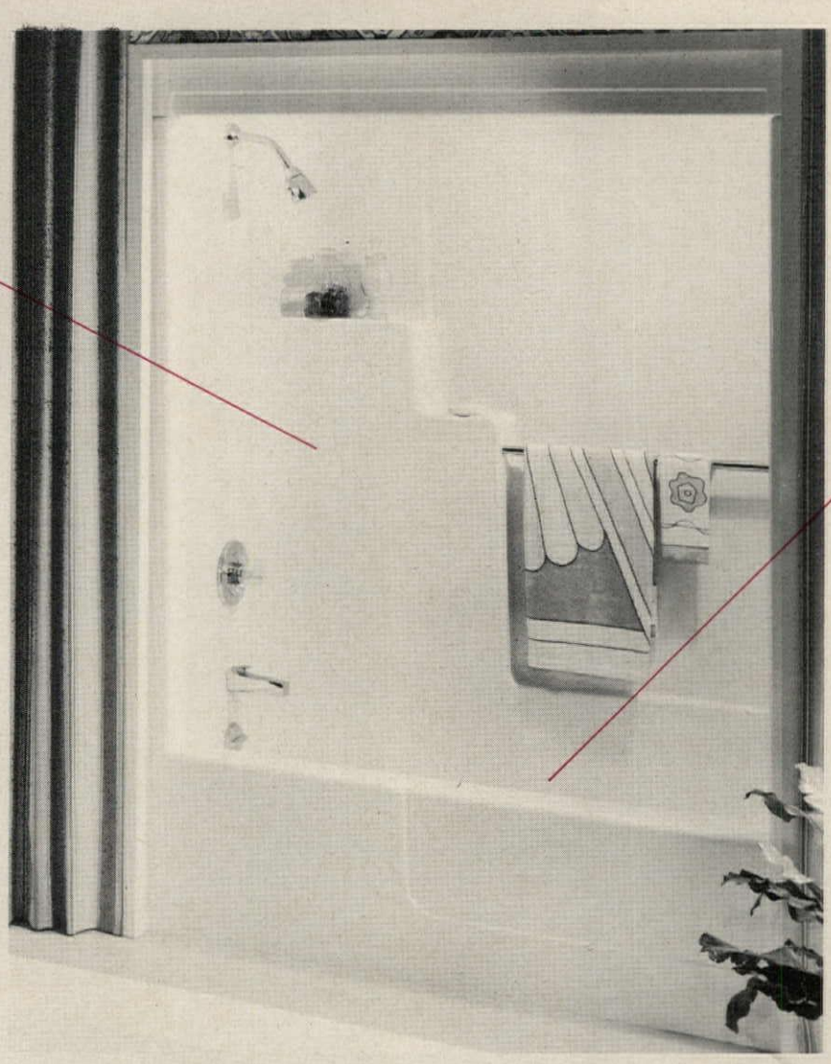
Photo: Dale Peterson/Warren Reynolds Associates

Minnetonka, Minn.
Bought, June 1965 Price: $29,500
Sold, Septetmber 1968 Price: $33,200

Photo: Lawrence S. Williams Inc.

Wexford Lea, Cherry Hill, N.J.
Bought, September 1968 Price: $37,500

Here's the bath that sells the house.



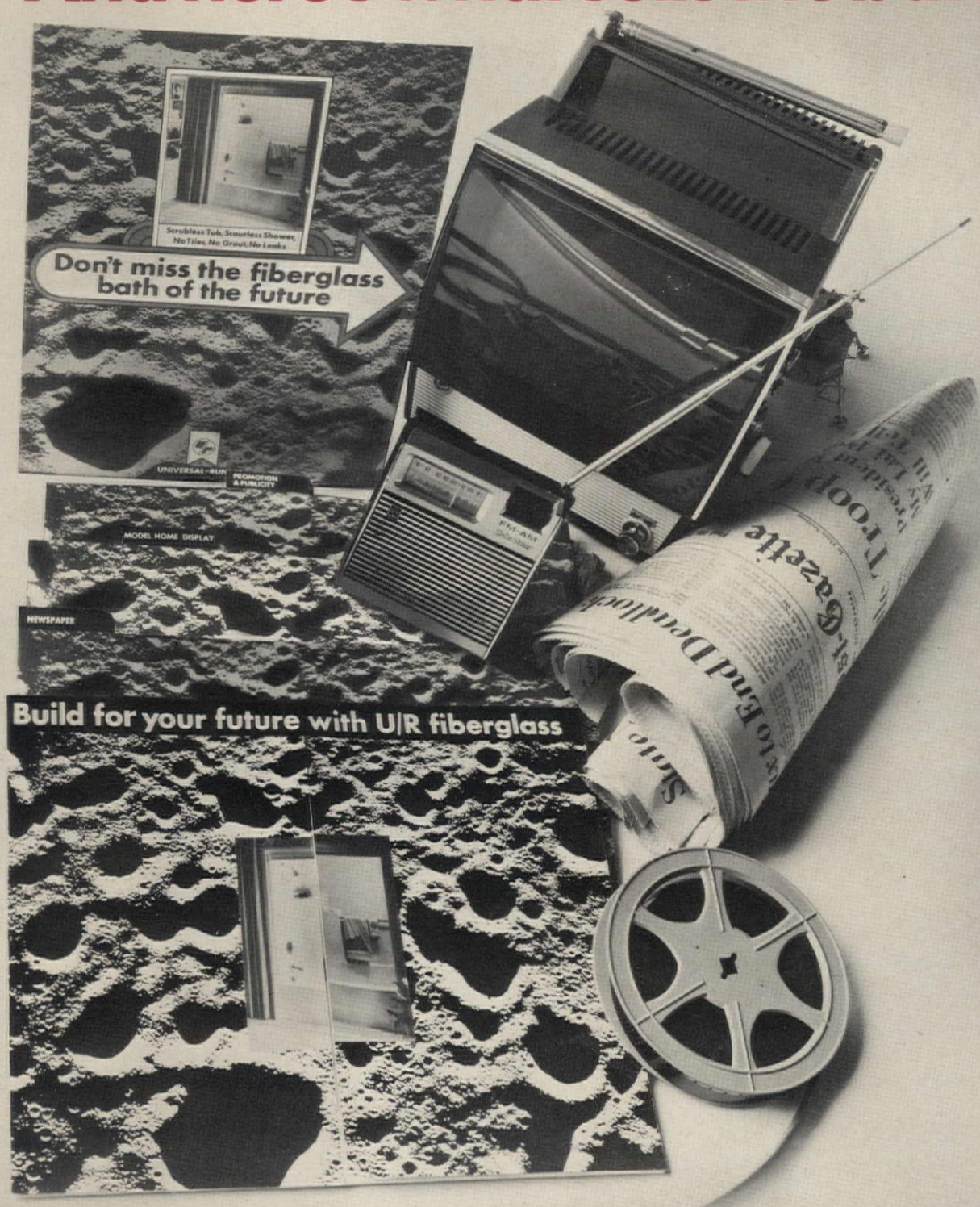
Biggest thing in Home Shows. Biggest draw in model homes and apartments! That's the feedback on the Fiberglass Bath of the Future, featuring U/R's wipe-down Scrubless Tub and Scourless Shower in 54 combinations of styles and colors.

Easy to install: No messy tiling. No seams, no grouting. One-piece construction cuts installation time in half.

Easy to sell: Wipe-down cleaning sells wife. No upkeep sells husband. Coordinated colors and luxury look sell both. A terrific traffic builder!

U/R — first in fiberglass fixtures — is geared to give you prompt delivery and fast field service anywhere in the United States.

And here's what sells the bath!



U/R 1970 Model Home Builders Program builds interest, traffic, sales!

Now U/R gives you this powerful backup! Colorful model home displays, "Take One" facts on fiberglass, newspaper drop-ins, news stories, pictures, radio scripts and a one-minute color commercial that can be used on TV with your signature or as a continuous show in your model home or apartment. All this and more — in a program that's tailor-made for you!

UNIVERSAL-RUNDLE

Universal-Rundle Corporation
Dept. B, New Castle, Pa. 16103

Yes, I want to know all the details of your Model Home Program for 1970. Please have your representative call. No obligation.

Name _____

Company _____

Address _____

City _____ State _____ Zip _____

Circle 94 on Reader Service card

Sell Lindal Cedar Homes and these national magazines will make sales for YOU!

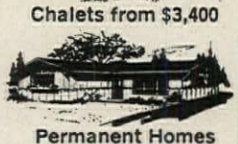
THE WORLD'S MOST COMPLETE LINE OF PRE-CUT CEDAR HOMES. 88 SALES-PROVEN MODELS!

A Lindal dealer-distributorship offers you:

- Highest profits in industry—low investment.
- 100% financing on your sales in some states
- Leads—Sales Aids furnished.
- Pre-sold with dynamic national advertising
- Unlimited market—year 'round sales.
- Patented designs—unlimited flexibility.
- New regional warehouses for even faster shipment.

"A" Frames from $2,800

Chalets from $3,400



Permanent Homes from $3,910

Every Lindal Structure is precision pre-cut from fine Canadian Red Cedar, packaged for quick assembly. Shipping costs tailored to meet competition anywhere.

MAIL THIS COUPON TODAY

_____I am interested in a Lindal dealer/distributorship. Send me color brochure and profit-package information.

Name _____

Address _____ Phone _____

City _____ State _____ Zip _____

HH-2

LINDAL CEDAR HOMES

9004 S. 19th ST./TACOMA, WA. 98465/PHONE (206) 564-3581

WE OPERATE BEST UNDER PRESSURE!

The 33 Valley Faucet models are a welcome addition to the EASTMAN CENTRAL D product lines of plumbing supplies – valves – connectors and fittings.

Valley Faucet's quality silently speaks for itself in trouble-free installations. Our bold, single control, contemporary styling in the kitchen, lavatories, tubs and showers guarantees an easier life for our value-minded users and profit-minded contractors.

We put our guarantee where our quality is. Our unique warranty and labor guarantee is a *first* in the plumbing industry. Ask your Valley representative for the details.

VALLEY™ FAUCET

a division of

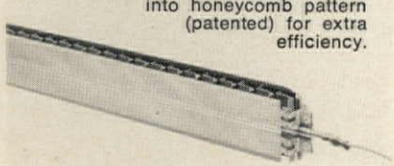
UNITED STATES BRASS CORPORATION
SUBSIDIARY OF HYDROMETALS, INC.
901 TENTH STREET, PLANO, TEXAS 75074

Slim, trim, dependable

That's the beauty of Hunter's best-looking, best-selling electric baseboard

Beauty that blends into any decor —that's the plain-and-simple secret of the Hunter Heatliner's broad acceptance by interior decorators and homeowners. But "beauty is as beauty does," and look what this modern electric baseboard does: Installs easily with convenient knock-outs and easy-to-wire junction boxes at both ends. Offers seven lengths, two power levels. Gives safety and durability. Operates with either unit or wall thermostats. Warms up fast, produces clean heat at low cost in homes, apartments, motels, schools, stores, offices. Send coupon for further information.

Beauty is fin deep. Fins are folded into honeycomb pattern (patented) for extra efficiency.



HUNTER **HEATLINER**® ELECTRIC BASEBOARD

Hunter makes a complete line of portable and ventilating fans and electric heating equipment, including central electric heating and air conditioning.

Mail today for data:

Hunter Division
Robbins & Myers, Inc.
2837 Frisco Ave.
Memphis, Tenn. 38114

Please send full information on Hunter electric heat.

Name

Company

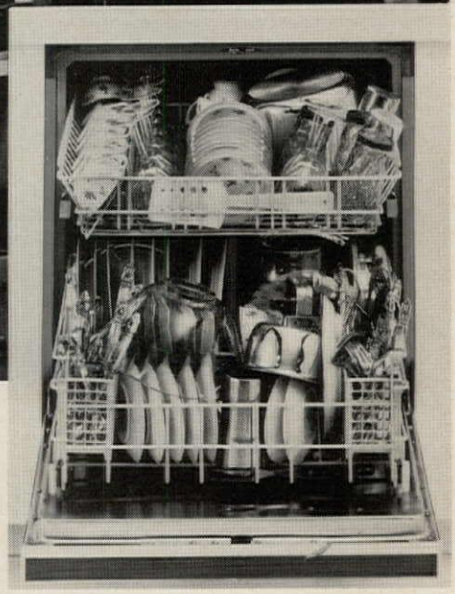
Street

City

State *Zip*

Circle 97 on Reader Service card

We call it an audit. You'd call it nit-picking.



But our quality control experts know what it takes to build the best — and they see to it that your customers get it with Waste King stainless steel dishwashers.

They check and recheck a dishwasher inside and out. They make certain it's structurally and mechanically perfect before it gets their o.k.

They even take a unit completely apart to check the twin wash arms that force hot detergent-activated water against every dish, glass, pot and pan... the Disposo Drain that takes care of soft food waste... the Thermo-Matic heater that assures sanitized humidity-free drying... the Rapid Advance Timer with 5 separate wash/rinse cycles that resets after each use.

So when you check out all that... and add our 20-year guarantee against failure due to corrosion on all stainless steel parts... you have a quality controlled dishwasher you can lay your reputation on. A Waste King dishwasher.

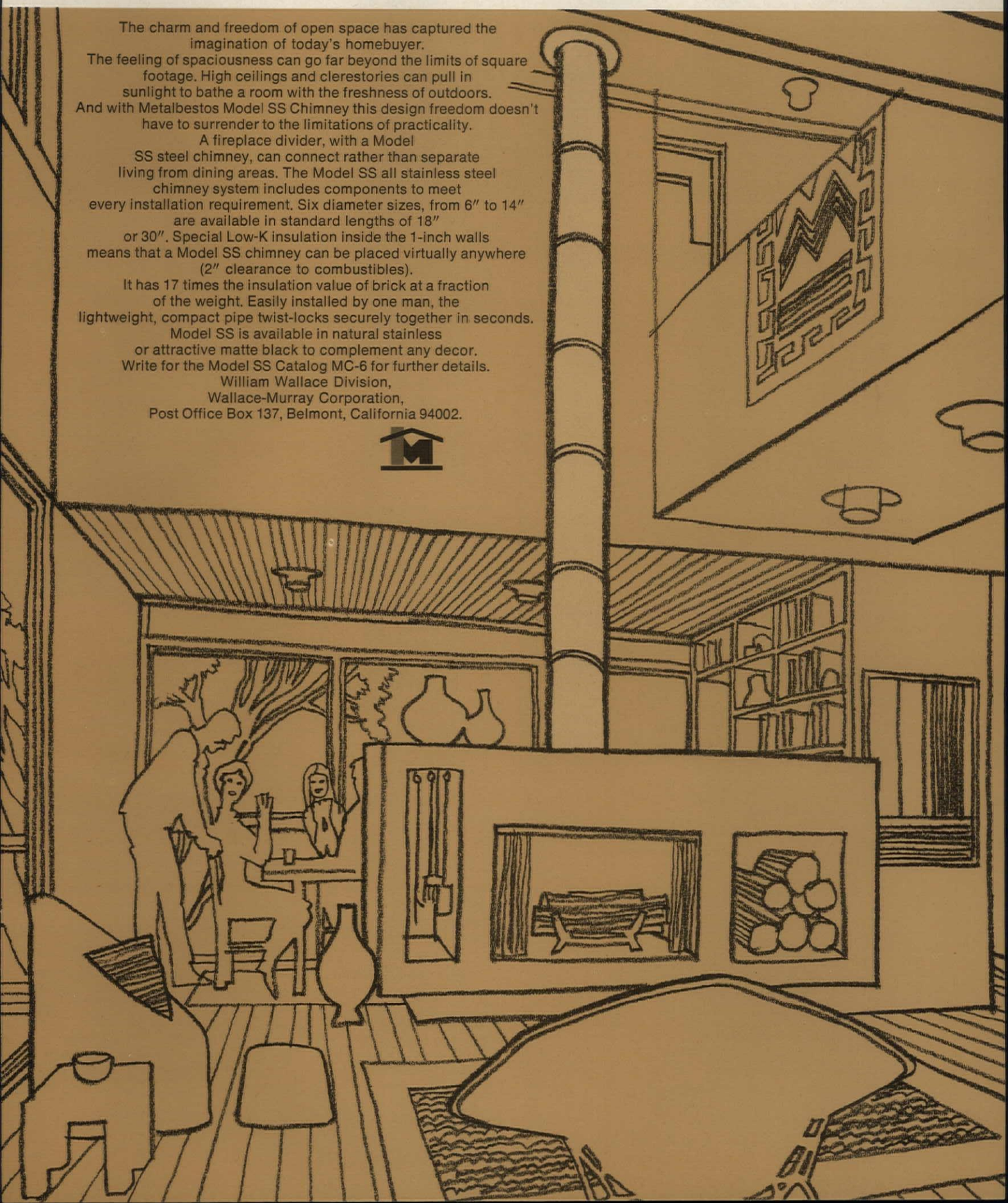
Quiet... just above a whisper.

WASTE KING
UNIVERSAL

A subsidiary of Norris Industries. ®

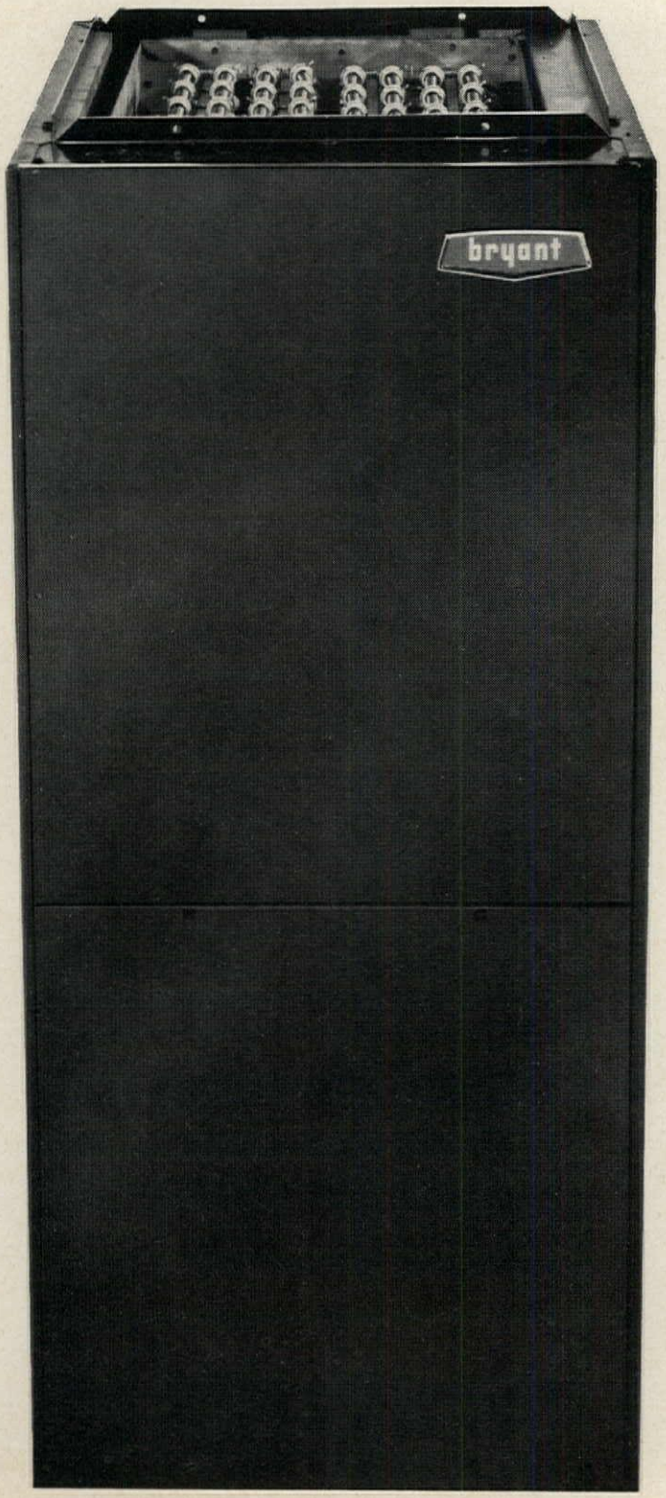
3300 E. 50th Street, Dept. H-2, Los Angeles, California 90058.

chimney innovation



The charm and freedom of open space has captured the imagination of today's homebuyer.
The feeling of spaciousness can go far beyond the limits of square footage. High ceilings and clerestories can pull in sunlight to bathe a room with the freshness of outdoors.
And with Metalbestos Model SS Chimney this design freedom doesn't have to surrender to the limitations of practicality.
A fireplace divider, with a Model SS steel chimney, can connect rather than separate living from dining areas. The Model SS all stainless steel chimney system includes components to meet every installation requirement. Six diameter sizes, from 6″ to 14″ are available in standard lengths of 18″ or 30″. Special Low-K insulation inside the 1-inch walls means that a Model SS chimney can be placed virtually anywhere (2″ clearance to combustibles).
It has 17 times the insulation value of brick at a fraction of the weight. Easily installed by one man, the lightweight, compact pipe twist-locks securely together in seconds.
Model SS is available in natural stainless or attractive matte black to complement any decor.
Write for the Model SS Catalog MC-6 for further details.
William Wallace Division,
Wallace-Murray Corporation,
Post Office Box 137, Belmont, California 94002.

Bryant's new electric furnace isn't just a lot of hot air.



Fact is, this new warm air electric furnace has some pretty cool ideas built into it.

Like the multi-speed blower that readily switches from heating to air conditioning. And the space provided right inside the furnace for a cooling coil when air conditioning is added.

The 960, as it's called, comes in three series that handle from 1½ through 5 tons of cooling respectively. And a range of 5 to 35 KW, or the equivalent of 17,000 to 119,000 Btuh.

It features a staging operation that turns on the heat strip elements at various intervals. So when the furnace goes on, house lights won't dim — because there's no sudden surge of electricity.

Our new electric furnace is available for upflow, counterflow and horizontal applications. In addition, it has the usual quietness and dependability found in all Bryant heating equipment: gas, oil and electric.

Which means we've got what it takes to give you a warm feeling inside — whatever the local fuel situation.

Bryant Air Conditioning Company, 7310 W. Morris Street, Indianapolis, Indiana 46231.

The Great Indoors® People bryant®

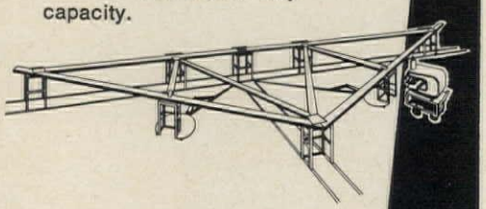
Dealers Have Said...

"As soon as the tight money situation changes I'm going into the Truss Business"

. . . But it's when mortgage money is scarce that a contractor turns to cost saving methods. Show your contractor customers how they can frame a roof in one day, and your customers will show you increased sales volume.

New **TECO** Fibre Grip System

- Complete assembly system for less than $6,000.
- 40 ton capacity press. 80-100 truss per day capacity.



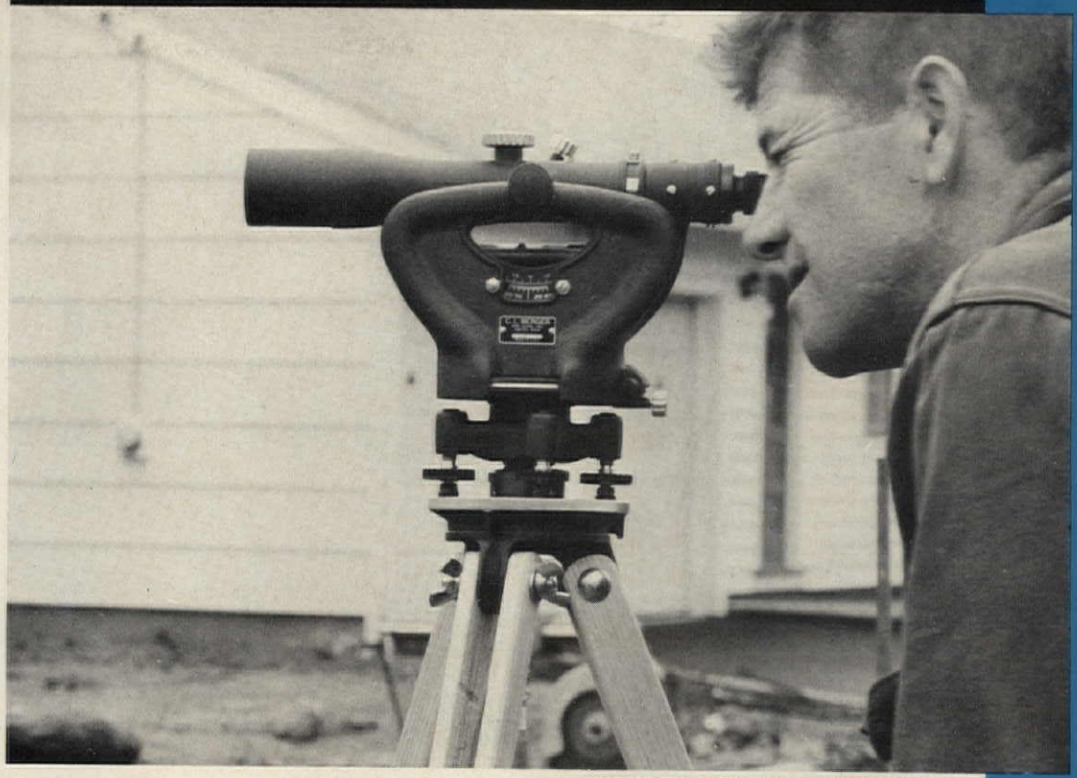
Write or phone for more details

TIMBER ENGINEERING COMPANY

5530 Wisconsin Ave., Washington, D.C. 20015
Area Code (202) 654-8288

Circle 90 on Reader Service card

Even more important today...



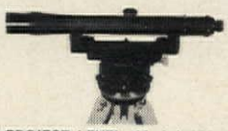
BERGER CONVERTIBLE TRANSIT-LEVEL MODEL 320

Keep the lid on building costs

—with the instrument of "101" uses

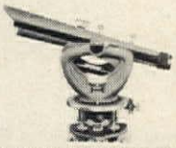
Which Berger is best for your needs?

(Not shown: Model 500 Optical Plummet Transit-Level. Same specifications as #320 but with optical plummet. $320.*)



18" PROJECT LEVEL. Model 480. 33-power coated optics. With horizontal circle and 5 min. vernier. $320.00*

HEAVY DUTY 12" DUMPY LEVEL. Model 150. 25-power coated optics. $180.00*



SPEED-A-LINER BUILDER'S TRANSIT-LEVEL. Model 200A. 20-power optical system. $136.00*

SPEED-A-LINER DUMPY LEVEL. Model 190A. 20-power internal focusing telescope. $90.00*

The more building jobs you can do with a single instrument, the easier it is to keep costs down. That's why Berger's Convertible Transit-Level (Model 320) is really custom made for these days when construction costs keep soaring and nibble away at your profits.

The Berger Convertible meets building challenges from measuring angles, extending lines and setting forms to aligning structural steel and establishing grades for streets. It does these and scores of other jobs fast and accurately—the insurance you need to protect against costly "do-overs." And like every Berger instrument, it's manufactured right here in our Boston factory.

For its moderate price you get big instrument features like a 22-power telescope with coated lenses that focuses 3 ft. to infinity, horizontal circle and vertical arc with double vernier reading directly to 5 min., plus all the other features and superb craftsmanship for which Berger has been known since 1871. See the Berger Convertible...get the feel of it, at your dealer. Or mail coupon for full information. BERGER INSTRUMENTS, A Div. of KMS Industries, Inc., 53 Williams St., Boston, Mass. 02119

BERGER

MAIL COUPON FOR DETAILS

BERGER INSTRUMENTS
53 Williams St., Boston, Mass. 02119
Send complete details on:

- ☐ Master Builder Convertible Transit-Level $240.*
- ☐ Heavy Duty 12" Dumpy Level $180.*
- ☐ Optical Plummet Transit-Level $320.*
- ☐ SPEED-A-LINER Transit-Level $136.*
- ☐ 18" Project Level $320.*
- ☐ SPEED-A-LINER Dumpy Level $90.*

*All prices F.O.B. Boston, include carrying case and plumb bob. Tripod extra.

NAME_____
(PLEASE PRINT)
ADDRESS_____
CITY_____ STATE_____ ZIP____

Circle 101 on Reader Service card

No other wet underlayment offers higher fire and sound ratings at lower costs.

New MASTICAL* Compound for wood frame garden apartments

Economical MASTICAL can be readily pumped. It trowels smooth — fast. Sets in under four hours *without shrinkage cracks.*

MASTICAL Compound provides 1-hour fire rating, 56 STC sound rating.

Use it over subfloors of wood.

Use it under finish flooring of resilient tile or wood, ceramic tile, or carpet and pad.

Get the cost-cutting facts about MASTICAL Compound from your U.S.G. representative. Or write us for information at 101 S. Wacker Dr., Dept. HH-02, Chicago, Ill. 60606.

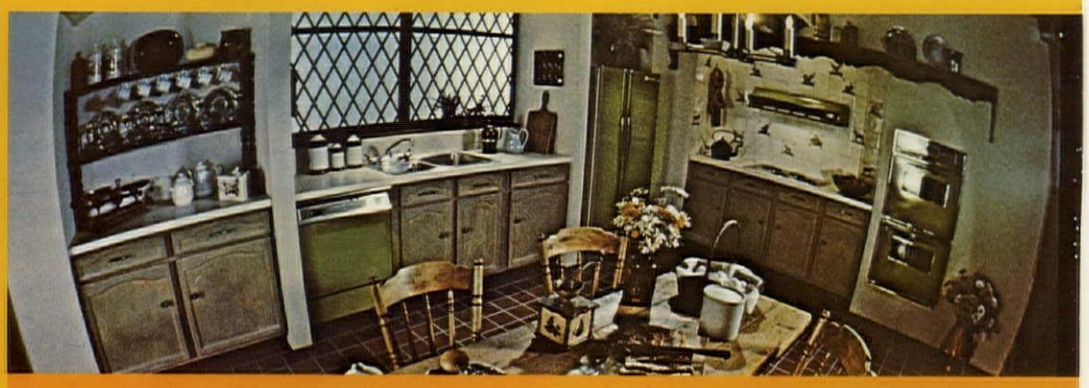
UNITED STATES GYPSUM

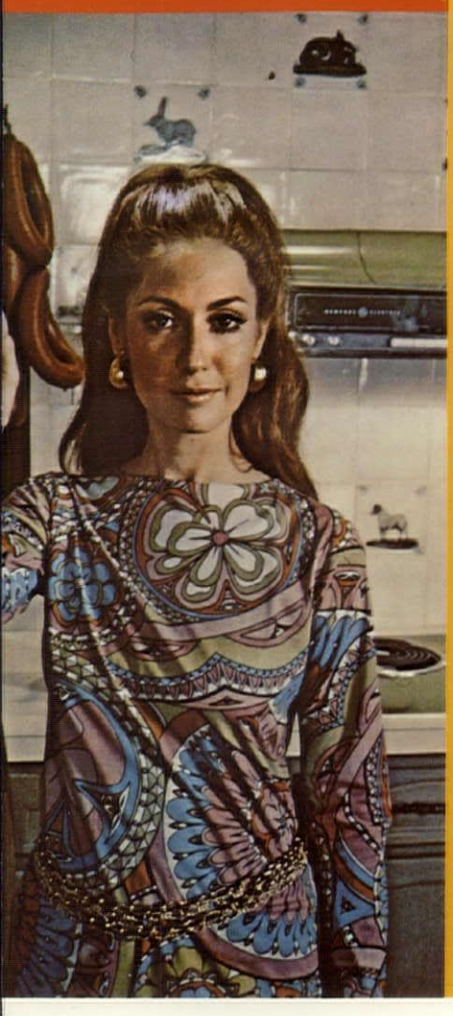
See U.L. Building Materials List, Design #'s 15, 31, 41, 42 all 1-hr. (combustible).

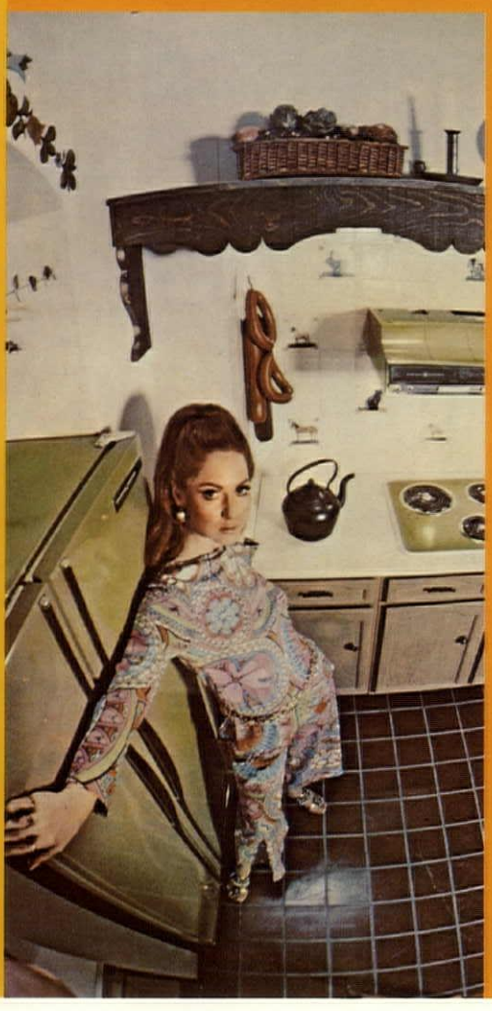
*Reg. U.S. Pat. Off.

GENERAL ELECTRIC KITCHEN & TOTAL ELECTRIC LIVING

concepts







We've all kinds of selling plans for you . . . from all around the world

COUNTRY ENGLISH

It's as English as plum pudding, from the horizontal beam ceiling to the rich, vinyl brick floor. The dishwasher's Power-Flo Mechanism, controlled by a 3-cycle Manu-Cycle Dial, reduces noise to a minimum —and with 3-level Thoro-wash with built-in Soft Food Disposer, there's no need to scrape or hand rinse . . . Just tip off large or hard scraps. The 21.2 cu. ft. refrigerator-freezer has a dispenser on the door; you get crushed ice or ice cubes by pressing against a cushioned cradle. Adjustable tempered glass shelves provide storage flexibility. Your prospects will be pleased with the unusual back-to-back arrangement of the surface units and hoods in the cooking island that permit the Lord and Lady of the house to cook at once. One of the cooktops has a built-in Calrod® unit that can be changed from grill to griddle in a matter of seconds. Flanking the cooking island are not one, but *two* self-cleaning ovens —one with a built-in meat thermometer and rotisserie. This enchanting Country English Kitchen is designed to sell well anyplace in America.

Country English Collection—TFF-21R Refrigerator-Freezer, SD270L Dishwasher, JP77 Cooktop 'N Grill, JP76 Cooktop, JK14 Oven, JK19 Oven, JV62 Hoods, FC600 Disposall® Unit, Texolite® Countertop 1609 Chamois.

POLYNESIAN

This carefree kitchen inspired by the South Seas will appeal to prospects who like to let themselves go. Cool, green carpeting is a stunning complement to the white latticework arches, facings and trim. It even has its own island—for preparation of native and exotic foods. The 17.6 cu. ft. No Frost refrigerator is on wheels for easy-does-it cleaning, and behind the separate freezer door she can store 165 pounds of frozen food. The GE icemaker makes cubes automatically, stores up to 340. The dishwasher, a 2-level Thoro-Wash model, has a built-in Soft Food Disposer and its Power-Flo washing mechanism is quietly efficient. For a change of mood or color scheme, interchangeable front panels are available. Her bird's done to a turn when she leaves it to the built-in rotisserie of the drop-in range. Both spit and rack are removable. The oven is self-cleaning, of course, and surface unit controls are located in the hood at eye level. When your prospects see the plan for this Polynesian paradise, it will be *Aloha* (love) at first sight.

Polynesian Profile—SD250L Dishwasher, TBF-18AL Refrigerator-Freezer, JM99 Range, JN33 Hood, FC100 Disposall® Unit, Texolite® Countertop, Antique White 1460-N.

Custom Dispenser—Featured on two GE side-by-side refrigerators. The 23.5 cu. ft. model offers a choice of chilled water, crushed ice or cubes. A 21.2 cu. ft. model dispenses either crushed ice or cubes. And all at a touch of a glass against the rubber-cushioned cradle, without even opening the door.

Roll Out on Wheels—Easy-does-it for redecorating or cleaning under or behind the refrigerator. All GE side-by-sides as well as six other models are on wheels.

Built-in Soft Food Disposer—N more pre-rinsing or scraping. She jus tips off large or hard scraps and th rest is liquefied and whisked dow the drain. And it's built right int every GE built-in dishwasher.

BAVARIAN

The Bavarians have the word for it: *gemütlich*—agreeable and cheerful. It sums up the mood of this warm and woody kitchen, from its stained beamed ceiling and quarry tile floor to its gleaming Avocado appliances by GE. The dishwasher, with 3-level Thoro-Wash, features an Automatic Dispenser for *two* detergent washes, and Piano Key Selectors for 4 washing cycles. Only 30½" wide and 64" high, the 19 cu. ft. Refrigerator-Freezer on wheels tucks neatly into its own recessed niche. It features adjustable shelves and a 7-Day Meat Keeper, and has an automatic icemaker optional at extra cost. GE's self-cleaning P-7Ⓣ oven system cleans both ovens automatically, while your customer stays cool and calm. The upper oven has both meat thermometer and rotisserie. A Sensi-Temp Ⓣ unit in the cooktop adjusts to 4", 6" and 8" and quickly reaches and maintains a steady setting from simmer to 500°. You'll find a whole world of prospects cheerful and agreeable about your plans for installing this Bavarian Kitchen.

Bavarian Quintet—SD650L Dishwasher, TFF-19D Refrigerator-Freezer, JP86L Cooktop, JV66 Hood, JK29 Oven, FA-600 Disposall® Unit, Texolite® Countertop, Buttery 1624N.

AMERICANA

If your prospects would rather not travel, they'll feel right at home in this kitchen. Everything about it bespeaks the design tastes and convenience requirements of contemporary America. The built-in dishwasher features a Power Scrub cycle for extra-dirty-pots and pans, Silver Shower for gleaming, spotless results. The tough, Carboloy® cutting edges of the GE Disposall® make short work of bones, rinds and pits. Cold water, crushed ice and cubes are served up by the Custom Dispenser on the door of the 23.5 cu. ft. refrigerator. All surface units of the Americana® range boast infinite heat controls and the Sensi-temp® unit can be set to maintain most any temperature on the no-stick griddle. The upper oven features removable panels which can be cleaned automatically in the P-7Ⓣ self-cleaning master oven. An alternate model Versatronic® Range provides the speed and convenience of electronic cooking in its lower oven. Microwave energy cooks and Calrod® units brown foods simultaneously. How's *that* for an All-American sales plan?

Americana Arrangement—SD850L Dishwasher, TFF-24RL Refrigerator-Freezer, J797L Conventional Oven-Range, FA-800 Disposall® Unit, Texolite® Upper Cabinets Avocado 1655-N, Lower Cabinets Buttery, 1624-N, and Countertops Black 1610N.

P-7Ⓣ Self-Cleaning Ovens—Now you see it (ugh!). Now you don't (ah!). GE features self-cleaning, the feature most women want in their next oven, in virtually every range style.

GE Versatronic Range—Combines the best features of both conventional and microwave cookery in a single range. Cooks so fast that she can serve a 12-lb. turkey only 80 minutes after taking it out of the freezer. Shrimp creole in 10 minutes, an apple in 3! Available only from GE in single or two-level style.

GE Stainless Disposall® Unit—Features a Carboloy® cutter for quick and sure grinding, long and dependable life. Cushioned mounting and 3 layers of insulation for a low sound level. 2-quart capacity and it's corrosion-resistant throughout—all metal parts exposed to water are made of brass or stainless steel.

All-Around Comfort & Cleanliness . . . All Around the House

"Backstage" in the utility room, General Electric appliances are quietly at work keeping your customers warm in the winter, cool in the summer, clean and comfortable all year round.

When the heat's on, the Executive Central Air Conditioner (A) automatically cools the whole house. Its exclusive, durable *Climatuff* Compressor assures your prospects of years of dependable performance.

When the weather changes, a trim and compact General Electric Furnace (B) takes over to circulate welcome warmth that's part of total living comfort. If winter air becomes uncomfortably dry and sets up shocks from static electricity, the Humidistat can be set to the desired humidity level. The Power Humidifier (C) then takes over and automatically adds moisture to circulating air.

Whether your customers cool or warm the air, their General Electric Electronic Air Cleaner (D) keeps their home fresher, cleaner, more enjoyable all year round.

When housekeeping finally does have to be done, they can enjoy the convenience of a Central Vacuum System. They simply plug in the lightweight hose; inlets throughout the house are hooked up to a powerful central vacuum unit (E) installed in basement or utility room.

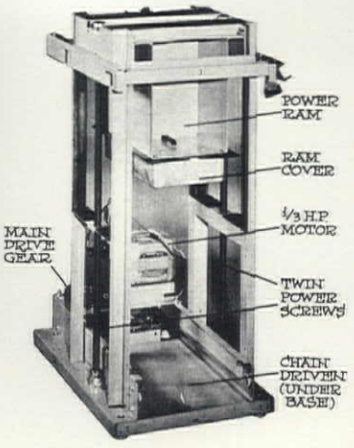
All of these GE comfort and cleanliness appliances will keep your year-round sales at a comforting level, too.

Utility Room Roster—Executive Air Conditioner
36,000 to 63,000 Btuh, Gas Furnaces
60,000 to 180,000 Btuh, Power Humidifier
Model No. HU-500, Electronic Air Cleaner
Model No. EF-100, Central Vacuum System
Model No. VS-600.

FOR ADDITIONAL INFORMATION AND FLOOR PLANS THAT SELL, WRITE . . .

Miss Eleanor Mellichamp, Consumer's Institute
General Electric Company
Building 4—Room 206
Appliance Park, Louisville, Kentucky 40225

PRINTED IN U.S.A.
PUB. NO. 24-8200-2

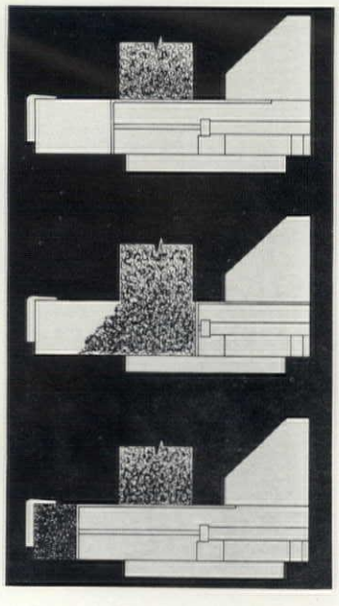


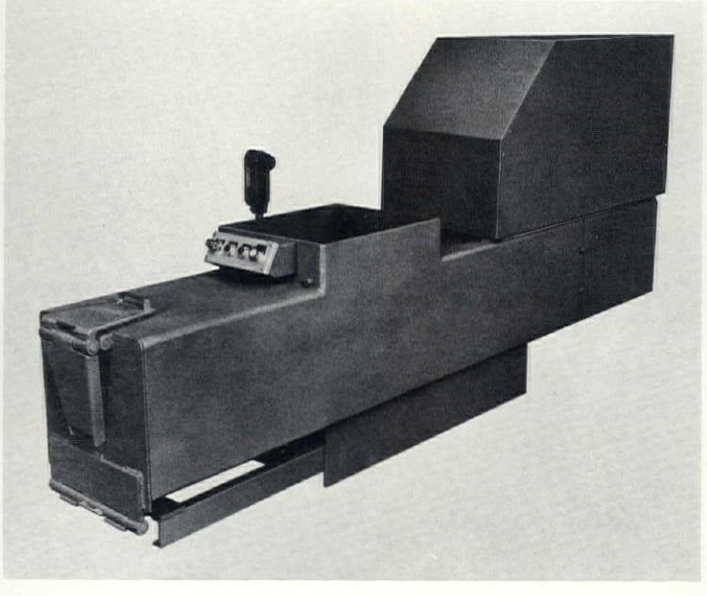
ONE-FAMILY MODEL takes bottles and cans (*left*), compacts a week's garbage and trash into a neat bag (*above*). Only when drawer is closed, safety key turned and button pushed to on, will ram (*drawing, right*) exert 2,000 lbs. of pressure on contents in open bag. Deodorizer is sprayed from container on door back (*right*). Whirlpool, Benton Harbor, Mich. *Circle 200 on Reader Service card*

Now garbage compactors come in both single family and multifamily sizes

To the homeowner, having an appliance-like compactor right in the kitchen means less clutter in the kitchen, fewer trips to the garbage can, fewer cans to wrestle out to the curb, even perhaps fewer expensive pickups. To the manager of an apartment house, the compactor means no cans to replace every three or four months, less manpower to handle large quantities of trash, less downtime from damage and explosions, no possibility of fires, and no worries about next year's more stringent air pollution laws.

Both the individual unit above and the large model below do better than today's four into one requirements. The little one compacts at a 4½:1 ratio, the big one at 5:1 (it can go up to 10:1). Both are easy to operate, easy to keep clean, and compacted trash in both cases winds up in plastic-lined, silicone-treated bags that are easy for the homeowner (or housewife), the janitor, and even for the trashman to handle.



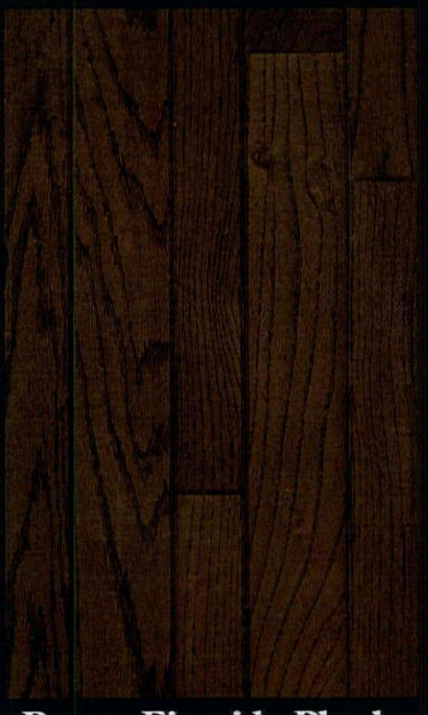


APARTMENT-HOUSE MODEL takes not only garbage, bottles, cans, and cartons, but newspapers, and wire coat hangers without damage. Trash comes down chute (*far left*), empties into chamber, is pushed against locked door. When predetermined amount is reached, signal light or bell goes on, operator lowers door to make a platform, slips bag over the end, then operates ram to push slug of trash into bag. Bag weighs about 65 lbs., which represents about 20 families' trash. Machine could handle a building of about 500 families, especially if it were fitted with a turntable for multi-bag operation. International Dynetics, Greenwich, Conn. *Circle 201 on Reader Service card*

New products continued on p. 90
Circle 107 on Reader Service card ➔

Bruce Cathedral Plank
Traditional pegged random-width planks prefinished Dark (or Medium). Unfinished optional.

Bruce Ranch Plank
A lower priced pegged random floor in 2¼" and 3¼" widths. Prefinished Medium (or Dark).



Bruce Fireside Plank
A sophisticated floor of 2¼" and 3¼" beveled planks with dramatic Dark prefinish.

Oak Plank Floors are "in"

IN STYLE... IN DEMAND
for homes and other areas calling for natural beauty and distinctive design

Individuality of floors gives any interior unusual charm. Wide random planks recall the hand-hewn wood floors of the famous homes of early America. Bruce Oak Planks, with beautiful, durable factory finish, adapt this informal beauty and natural charm to modern homes. Beveled edges emphasize individual random planks. Walnut pegs (or wrought-head surface nails) add uniqueness and authenticity to these heritage floors. Old English and Cathedral Planks are available in 3", 5", 7" or 4", 6", 8" widths. Ranch and Fireside Plank are a combination of 2¼" and 3¼" widths. Mail coupon for literature. Enclose $1 for Selector Kit with samples of Bruce Oak Planks.

Bruce Old English Plank
Wide random planks with wire-brushed grain, dark prefinish, and wrought-head nails.

MAIL FOR LITERATURE AND SAMPLES

E. L. BRUCE CO., Box 397-P, Memphis, Tenn. 38101
Division of Cook Industries, Inc.

( ) Send FREE literature on Bruce Oak Plank Floors.
( ) Enclosed is $1 for Selector Kit with samples of Plank Floors.

Name_____

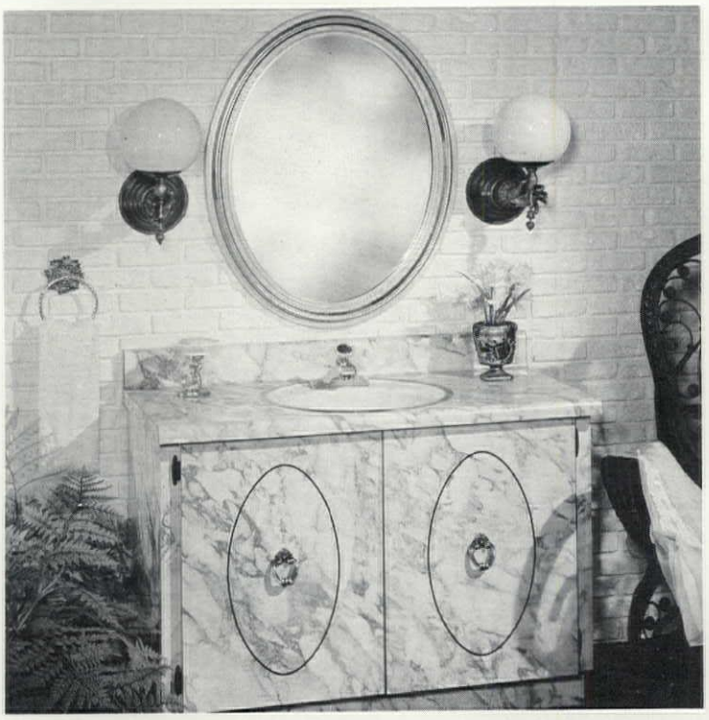
Firm_____

Address_____

City_____ State_____ Zip_____

Bruce Oak Plank Floors

Baths

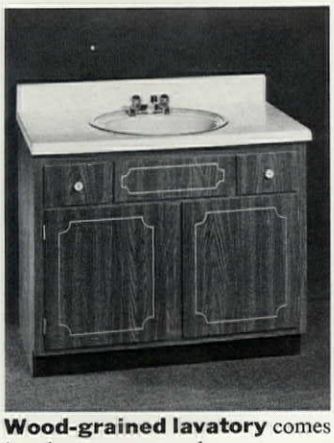


Marbleized vanity is one of a line of six models in six different styles and six colors. All are available 24″ wide with a single door, or 30″, 36″, 42″, and 48″ wide with double doors. Excel Wood Products, Lakewood, N.J. *Circle 202 on Reader Service card*

Sculptured cabinets have paneled door and drawer fronts in a rich wood color. Door and drawer pulls are brass. Three two-door cabinets are combined for extra-wide lavatory. Wall cabinets also available. I-XL Furniture, Elizabeth City, N. Car. *Circle 206 on Reader Service card*

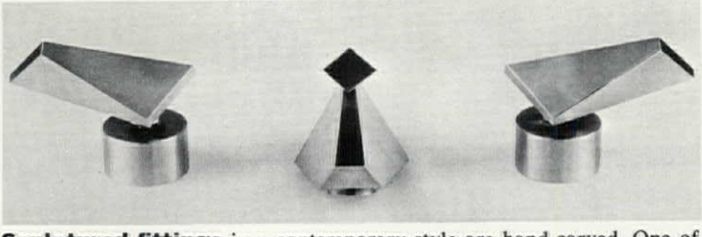
Slab lavatory looks like marble but is one piece of molded plastic. Three bowl styles—oval, round, and lazy-back—in units from 30″ to 72″ long and 22″ or 24″ deep, with or without integral backsplash. Double bowls on special order. Briggs, Warren, Mich. *Circle 207 on Reader Service Card*

China lavatory has a 4½″-high back, measures 20″x18″. Available in six colors or white, it features an extra large bowl, two recessed self-draining soap dishes, an antisplash rim, and concealed-front overflow. Drilled for 4″ centerset faucet. Gerber, Chicago. *Circle 208 on Reader Service card*



Wood-grained lavatory comes in three cases—oak, pecan, or white—with demountable hinges. Doors for the cases are packaged, shipped, and stocked separately so they can be ordered in a wide variety of styles and colors. Shapiro, Rochester, N.Y. *Circle 204 on Reader Service card*

White vanity has walnut graining, pewter-finished door pulls. Sizes: 24″, 30″, and 36″ wide. Largest units have three doors, three left- or right-hand drawers, centered or offset bowl. Ten top colors available. Interiors finished in vinyl. Formco, Cincinnati, Ohio. *Circle 203 on Reader Service card*



Sculptured fittings in a contemporary style are hand-carved. One of two new multifaceted free-form styles (the other has knob handles), they come in brushed chrome, 24-carat gold plate, or pewter finished. Sherle Wagner, New York City. *Circle 205 on Reader Service card*

Decorative cabinet with a sculptured molded one-piece mirror frame in antique gold finish. Available with coordinated light fixtures that have separate control switches and convenience outlets. Hall Mack, Cincinnati, Ohio. *Circle 209 on Reader Service card*

New products continued on p. 92

"Total Electric homes? I wouldn't build anything else."

Quality construction—featuring flameless electric heat—helps sell homes for Builder David C. Smith. And he's sold as many as 30 homes in two weeks.

Last year David C. Smith, Gaithersburg, Maryland, built more than 100 homes—custom built and project units. Every home was a Total Electric Gold Medallion Home.

"We made up our minds to build top quality and minimum maintenance into our homes," says Mr. Smith. "Flameless electric heat meets these requirements best."

"Our quality story makes sense to buyers. And it pays off in word of mouth advertising for us. We've sold as many as 30 homes in two weeks without special promotion."

"My experience building Total Electric homes goes back over the past six years and I haven't had one customer complain about electric heat operating costs."

Electric heat can help you build a better quality, faster selling home, too. Start now, by getting all the facts from your electric utility company. They'll be glad to work closely with you.

P.S. Is Mr. Smith's own home Total Electric? You bet!

TOTAL ELECTRIC GOLD MEDALLION HOME LIVE BETTER ELECTRICALLY AWARD

Live Better Electrically

Edison Electric Institute, 750 Third Ave., New York, N.Y. 10017

. . . where everything's electric, including the heat.

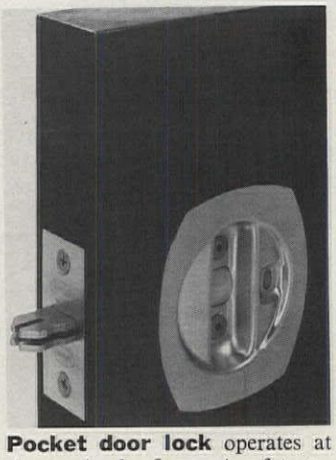
Circle 105 on Reader Service card

Doors and windows

Carved doors with deeply etched, hand-rubbed finish in natural wood and wood-grained vinyl cost little more than standard entry doors, far less than custom-made. From 2′ 6″ to 3′ 6″ wide and 6′ 8″, 7′, or 8′ high. Sculptured Wood, Provo, Utah. *Circle 210 on Reader Service card*

Figured rolled glass is available in sheets up to 132″x57″, and ⅛″ thick. The loose basket weave pattern on a pebbled background diffuses light, can be used vertically in panels, partitions, doors, and windows. Glaverbel, New York City.
Circle 211 on Reader Service Card

Aluminum window for mobile homes can be installed vertically as a single-hung window, or horizontally as a gliding window. Lower sash goes all the way up or tilts in (as shown) for cleaning or for ventilating on windy days. V.E. Anderson, Owensboro, Ky. *Circle 212 on Reader Service card*



Pocket door lock operates at the touch of a finger. A safety release permits emergency entrance from the opposite side. Available in the style shown, or in round or pentagonal shapes, in several finishes. L.E. Johnson, Elkhart, Ind. Easily mortised into any wood door. *Circle 213 on Reader Service card*

See-through shades of vinyl-coated woven fiberglass preserve the view while reducing glare and insulating the room. Durable, washable, and shrinkproof, they may be decorated. Joanna Western Mills, Chicago. *Circle 214 on Reader Service card*

Heated window, to eliminate condensation and frost, combines two coatings on its air-space surfaces: a heat-reducing film on the exterior pane, and a conductive film on the interior pane. PPG Industries, Pittsburgh, Pa. *Circle 215 on Reader Service card*

Wireless control opens and closes draperies from anywhere in the room. Compact motor installed behind drapes starts, stops, and reverses at any point. May be used with existing cords and traverse rods. Auton of California, Arleta, Calif. *Circle 216 on Reader Service card*

New products continued on p. 98

Lennox helps apartment builders tell fortunes

... their own!

How? By permitting accurate forecasting of heating/cooling costs. Original costs. Cost-of-owning. Life expectancy.

Because we're factory-assembled and -wired, including controls, on-site labor costs are held to a bare minimum.

And because we arrive complete, in one piece, your construction timetable doesn't get hung up.

Our modular units permit progressive occupancy. And shut-down of any unit affects only the area served.

We heat and cool. With air or water. We ventilate, clean and humidify, too. Single-zone or multizone systems. Split or combination units.

LENNOX

AIR CONDITIONING • HEATING

We offer single-source responsibility . . . implemented by some 5000 dealers and special service contracts.

And because quality—rather than price—sets our standards, we offer special values to builders who plan to own.

For information, write Lennox Industries Inc., 831 S. 12th Avenue, Marshalltown, Iowa 50158.

What does the new NPA grademark mean to you?

It means assurance. Assurance that the particleboard floor underlayment you buy was manufactured to meet or exceed U.S. Department of Commerce commercial standard CS 236-66. Because before that stamp may be used, every manufacturer must comply with a rigid in-plant testing and quality control program that is verified by NPA through unannounced visits to the mills and tests of board in an independent laboratory.

Behind every stamped panel of particleboard underlayment also stands the manufacturer's own guarantee, giving you an unrivaled combination that means more satisfied customers and more profit. A combination you can't beat.

Today, you can expect more uniform particleboard floor underlayment performance than ever before. So look for the NPA grademark when you buy, and remember, particleboard is the wood product engineered for a 1,000 different uses. Floor underlayment is just one.

For your free copy of *How to Install Particleboard Floor Underlayment*, write to NPA today.

NATIONAL
PARTICLEBOARD ASSOCIATION
711 14th Street N.W., Washington, D.C. 20005

NPA Members: (those with asterisks manufacture underlayment)

American Parboard Company
Brooks-Willamette Corporation*
Cascade Fiber Company*
Collins Pine Company
Duraflake Company*
Forrest Industries, Ltd.*
Georgia-Pacific Corporation*
Hambro Forest Products, Inc.
International Paper Company*
Resinwood—Division of Rock Island Corporation
Southwest Forest Industries
Timber Products Company*
West Virginia Pulp & Paper Company
Weyerhaeuser Company*
Wynnewood Products Company

Circle 107 on Reader Service card

Now you can sell homes like this for under $20,000

and make money.

Royalty homes, factory built in two completely finished sections, enable you to beat rising labor and interim financing costs and profitably tap the huge under $20,000 new home market.

Since these homes are factory-engineered and erected on the job site by our personnel you need only a small, minimum skilled crew for finishing.

Royalty homes are built to meet the most stringent building code requirements and, of course, they are FHA and VA approved.

These homes are easy to sell since you can offer a choice of models and each home is shipped to your site in two sections completely wired and plumbed. Appliances, drapes and carpeting are included.

Your customer can move into his home from four to six weeks after signing the purchase contract and financing can be arranged through conventional lending sources.

Learn how you can make money in the under $20,000 new home market. Mail this coupon for full information with no obligation. Royalty Homes, Mfd. by Capital Industries, Inc., a subsidiary of UGI Corporation, Avis, Pennsylvania 17721. Or phone 717-398-2062 for an appointment.

Please send me full information concerning Royalty factory-engineered homes.

Name _____

Firm Name _____

Address _____

City _____

State _____ Zip _____

Number of homes your firm built last year _____

Royalty Homes®

AVIS, PENNSYLVANIA

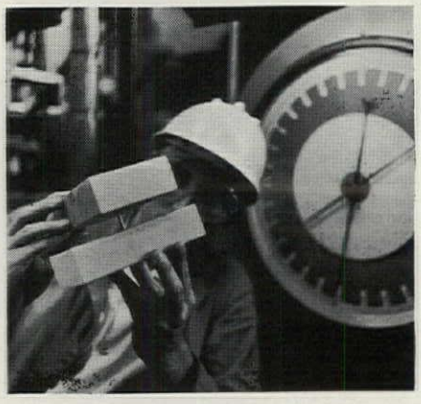
Capital Industries, Inc., Dept. 1, Avis, Pa. 17721

Circle 120 on Reader Service card

96E1

new proof of the extra-grip Scotch Nails

56% more holding power 30 days after installation



Lehigh University recently completed extensive tests of nail holding power. Comparing our Scotch Nails with ordinary round-shank nails—in the 16d common variety—they demonstrated the Scotch Nail's superior withdrawal resistance, both immediately after driving and 30 days later.

Nail tested	Immediate withdrawal, force (lb)	Withdrawal after 30 days, force (lb)	Loss of strength (%)
Scotch, 16d	423	352	16.8
round-shank 16d	295	225	23.7

One hundred samples of each nail were tested under controlled laboratory conditions. Kiln-dried lumber was used to keep moisture content variation to a minimum. And the 30-day test was made so as to simulate actual installation conditions where wood dries and nails lose holding power.

Scotch Nails grip better and longer. Besides the obvious advantages of stronger joints and connections, Scotch Nails have a lower tendency to work loose. This means fewer of those expensive call-backs.

What it means to your customers. House buyers will appreciate your work for years to come. When floors don't creak and mouldings stay tight, they'll tell their friends about that "solid" builder they know.

Scotch Nails cost less installed. Not only do Scotch Nails hold better—and longer—they also cost less installed. Although they have a higher cost per pound, you get more nails in each pound. And, because of their square shank, Scotch Nails have less tendency to split wood than round shank nails. To learn more, just write to us. *Bethlehem Steel Corporation, Bethlehem, PA 18016*

BETHLEHEM STEEL

D'S LARGEST POOL BUILDER—LISTED ON THE AMERICAN STOCK EXCHANGE

Only

ANTHONY POOLS

can offer you
SO MUCH VOLUME

plus—
PRE-TESTED PROFIT PROGRAMS!

Want proof?

MAIL COUPON TODAY!

IN-GROUND
ON-GROUND
VINYL LINER
POOLS

HH-2

ANTHONY POOLS
A DIVISION OF ANTHONY INDUSTRIES, INC.
Swim Pavilion Program
Route 22, Lebanon, New Jersey 08833
Please send me full information on the Swim Pavilion Program.

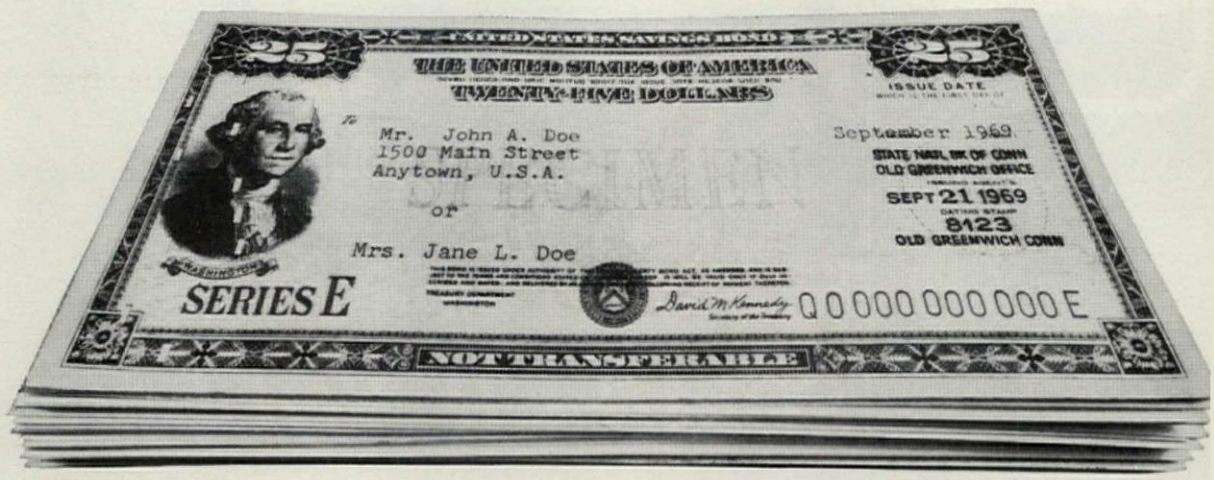
Name_____ Firm_____

Address_____ City_____

State_____ Zip_____ Phone No._____

Circle 121 on Reader Service card

Now all your U.S. Savings Bonds pay higher interest.



Now it's official.

Now one of the safest investments in the world brings you new and higher returns.

Now your U.S. Savings Bonds pay the highest interest in history: a full 5 per cent when held to maturity of 5 years and 10 months. (4% the first year; 5.20% thereafter to maturity). Previously, these bonds earned you only 4¼% if you held them for seven years.

The new interest began June 1, 1969. So all of the bonds you own, no matter when you bought them, have been collecting higher interest since that time.

Those bonds are still replaced if lost, stolen or burned.

You can still buy them through the payroll savings or a bond-a-month plan.

Regardless of your other investments, can you think of any easier, better, or safer way to build a nest egg for yourself?

It's nice to know that you are doing a little something for Uncle Sam, too. The $52 billion in U.S. Savings Bonds now outstanding in the hands of millions of Americans go a long way toward keeping your country financially strong.

There never was a better time to take stock in America.

There's a man at the place where you work who can start you on the Payroll Savings Plan right now.

UNITED STATES ★ SAVINGS BONDS

Bonds are safe. If lost, stolen, or destroyed, we replace them. When needed, they can be cashed at your bank. Tax may be deferred until redemption. And always remember, Bonds are a proud way to save.

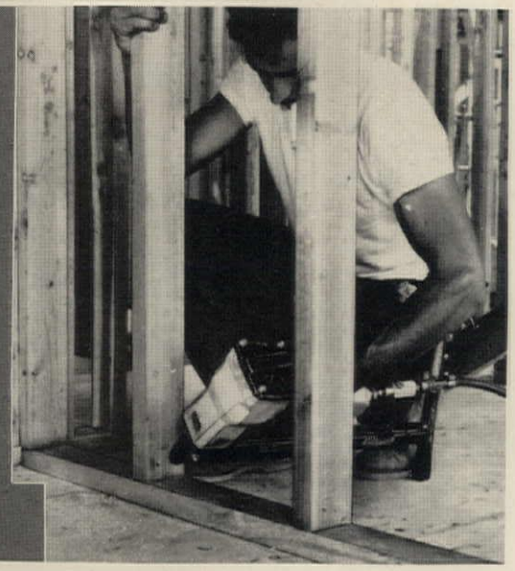
Take stock in America.

With higher paying U.S. Savings Bonds.

96E4

DUO-FAST ideas cut builder costs

1



Fast, strong nailing . . . even in close quarters, is easy with a Duo-Fast CN-137 Nailer. The nailer handles coated regular, ring and screw shanks from 6d commons to 16d sinkers. Cohered nail strips are completely interchangeable without changing the nailer.

2

Component mass production . . . needs tools like the Duo-Fast IN-123 to match the efficiency of in-plant or shed construction. Many on-site uses too. Fed from a coil of 300 nails, the IN-123 handles regular, ring and screw shanks, from 1¼" thru 1⅞". Built-in safety mechanism.

3

Economical staple nailing . . . with a Duo-Fast S-763 and specially coated 16-gauge staples. Makes fast work of wall sheathing jobs while meeting requirements for FHA approval under UM-25A. Also a time-saver for sub-flooring, gypsum lath, roof decking and shingles and shakes.

4

Fast, mar-free interior trim work . . . is easy with Duo-Fast Brad and Finish Nailers. Automatic countersinking eliminates nail-setting. Color brads are available to match pre-finished trims. Duo-Fast has models to cover the complete range of brads and finish nails.

These ideas and many others are explained in two fully illustrated brochures that give you everything you need to know about power driving staples and nails.

Send today for Time and Money Savers for the Building Industry . . . and A Guide to Duo-Fast Staples and Nails.

DUO-FAST® IN FAST TO HOLD FAST

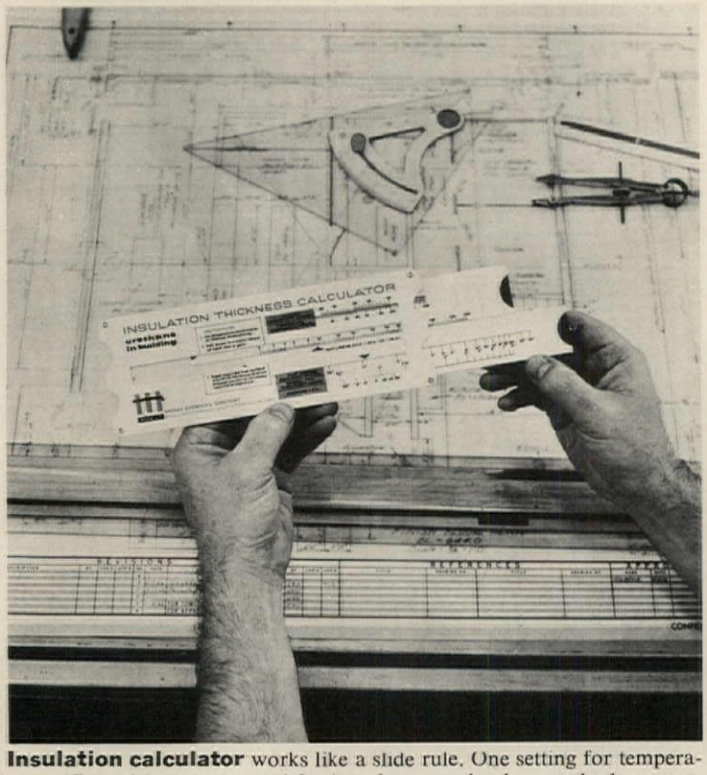
Everything you need for tacking, stapling and nailing.

DUO-FAST FASTENER CORPORATION
3702 River Rd., Department HH
Franklin Park, Illinois 60131

91259

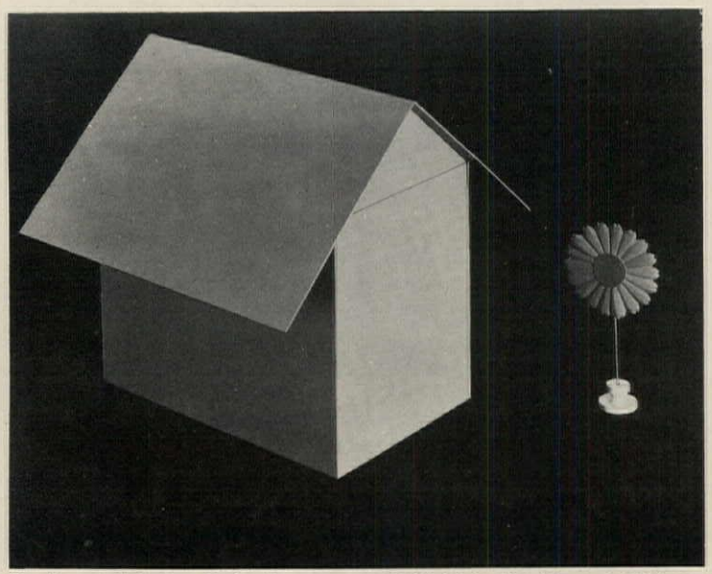
Circle 108 on Reader Service card

Office equipment



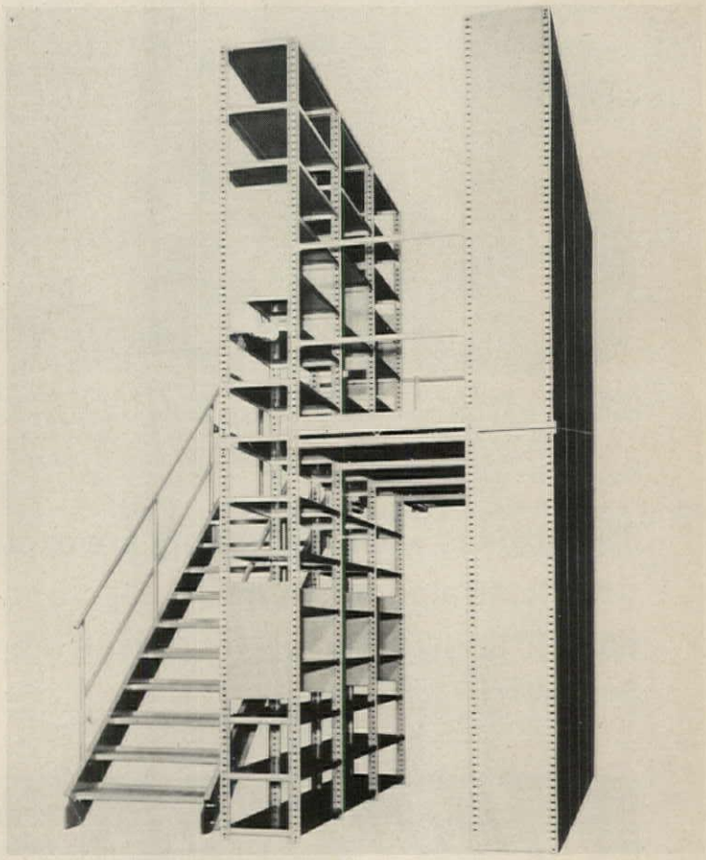
Insulation calculator works like a slide rule. One setting for temperature differential, and a second for heat loss or gain give required amounts of urethane insulation for flat or curved surfaces. Mobay, Pittsburgh, Pa. *Circle 231 on Reader Service card*

Desk-top communication center allows operator to watch, talk, and listen to as many as five locations. Can be used for production lines, hospitals, even as a security system. Concord Communications Systems, Los Angeles. *Circle 234 on Reader Service card*



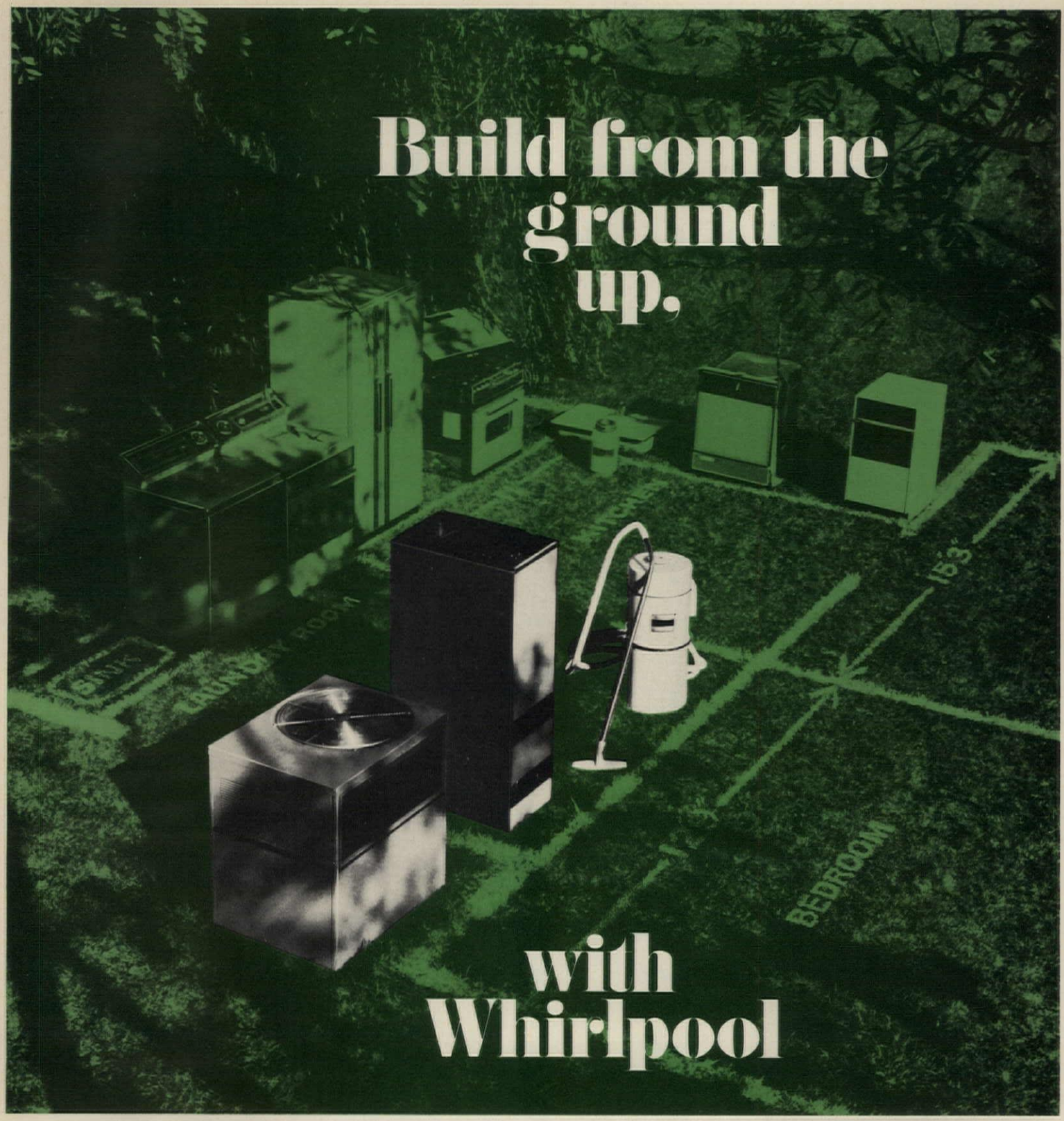
Scale model sheet stock measures .015″ thick, 4″ wide, and 12″ long. Plastic material is easily cut, scribed, or etched, forms a fast bond with quick-drying liquid solvent. Gray surface may be painted. Plastruct, Los Angeles. *Circle 232 on Reader Service card*

Computer print-outs up to 42″ wide can be reproduced on a whiteprinter that is mounted on a stand. A built-in paper compartment is included for storage of roll and sheet stock. Paper is approximately 1½¢ per sq. ft. Diazit, Youngsville, N. Car.
Circle 233 on Reader Service card



Double-decker shelving up to 21′ high can be installed in minutes with ordinary tools by unskilled laborers. Steel shelves are 36″, 42″, and 48″ wide, 36″ deep, have baked-on enamel finish. Columbia-Hallowell, Hatfield, Pa. *Circle 235 on Reader Service card*

New products continued on p. 102



The only major appliance line with a choice of gas or electric Total Comfort Systems

Where do you start? With a Whirlpool furnace. Gas, oil or electric. Up-flow, counterflow or horizontal type. (We made our name in household appliances by unusual quality and selection. And, the same holds true for our furnaces.)

Now. To that strong foundation, add Whirlpool central air conditioning. Again, gas or electric. We make self-contained and split-system models for every installation. But our big edge is gas: Whirlpool 3- and 5-ton gas air conditioners that hook up quickly and take up very little area.

Don't stop there. Install a Whirlpool power air cleaner next. One model fits most furnaces; mounts vertically at the side or horizontally below hi-boy furnaces, or horizontally in the return duct on lo-boys.

And while you're at it, it takes very little more work and cost to complete the comfort scheme with a Whirlpool power humidifier. An exclusive thermostatic switch eliminates the time and expense of wiring into the furnace blower or installing a relay switch in the furnace.

There. Now that that's done, you've built something worth talking about. A Whirlpool Total Comfort System.

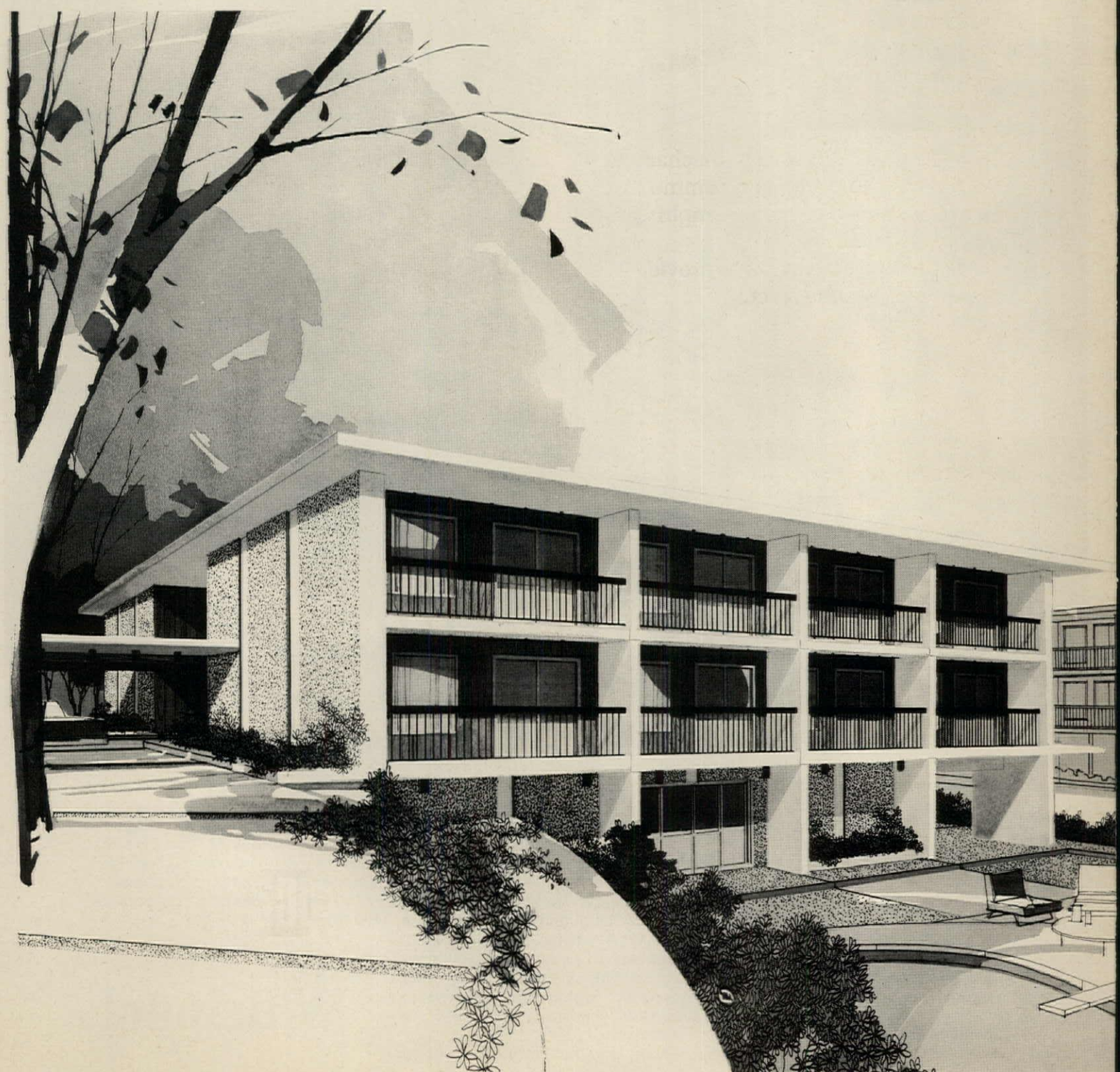
See your Whirlpool Heating and Cooling Distributor soon. He has what it takes to go over blueprints . . . a houseful of Whirlpool products.

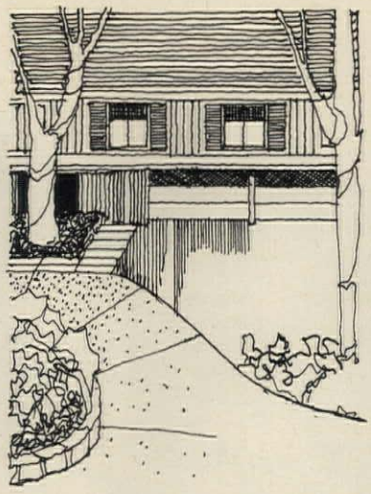
Or write: Whirlpool Corporation, Benton Harbor, Michigan.

Whirlpool CORPORATION

Concrete ideas for higher returns on low-rise housing.

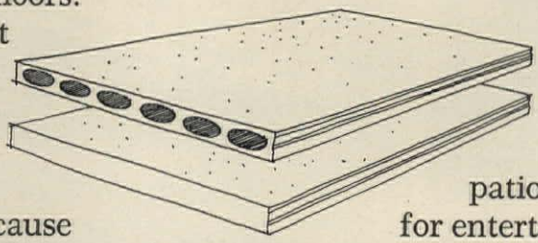
Put concrete housing systems ideas to work... reduce labor and financing costs... increase return on investment.





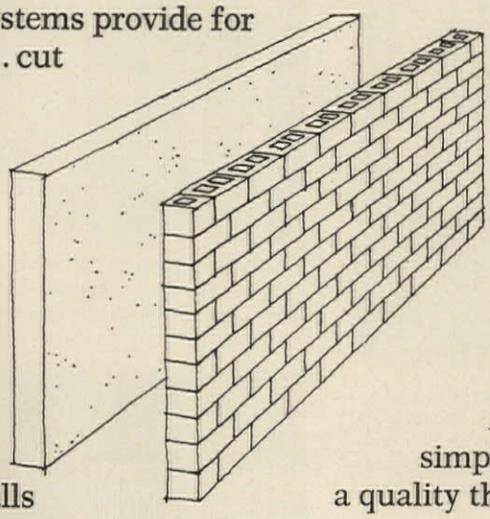
Residential concrete flooring systems cut costs. Accommodate heating, ventilating, cooling . . . serve as ceiling for floor below. And if that isn't enough, they make excellent roof decks, too.

Residential flooring systems adapt to any plans. They can be cast-in-place slabs or big precast sections that go together in far less time than ordinary floors.



The installed cost is competitive with wood floor construction. Costs are reduced sharply because the systems readily accept mechanical, electrical, plumbing and communications sub-systems . . . simplify and speed installation.

Concrete floor systems provide for sound conditioning . . . cut insurance costs too. What more could you ask of a floor that's a ceiling that's a roof?



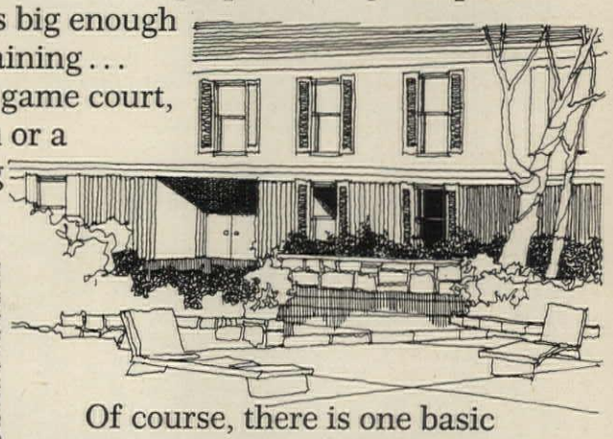
Concrete load bearing walls go up fast, reduce maintenance.

Whether cast-in-place, precast or concrete masonry, concrete walls provide maximum fire resistance, sound control, and weather protection. And that's not all . . . concrete walls allow unlimited design flexibility, inside and out.

Add beauty and appeal with "Grounds for Good Living."

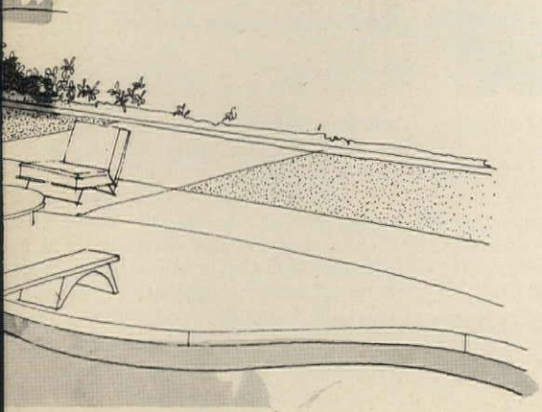
The right *Approach* makes your building stand out beautifully and provides a luxurious setting to any low rise. It includes ample offstreet parking, a weather protected entry, and privacy with screens and decorative planting areas.

The proper *Setting* will provide patios big enough for entertaining . . . perhaps a game court, a fountain or a swimming pool.



Of course, there is one basic reason for using concrete in any application: its inherent values. Its great strength and plasticity allows you to build the unusual, imaginative and eminently practical. And its unquestioned durability simply guarantees that the value lasts; a quality that's hard to come by these days.

For more information (U.S. and Canada only) on "Concrete Housing Systems" and "Grounds for Good Living," call your local PCA office or write Portland Cement Association, Dept. 2-94, Old Orchard Road, Skokie, Illinois 60076.



PORTLAND CEMENT PCA ASSOCIATION

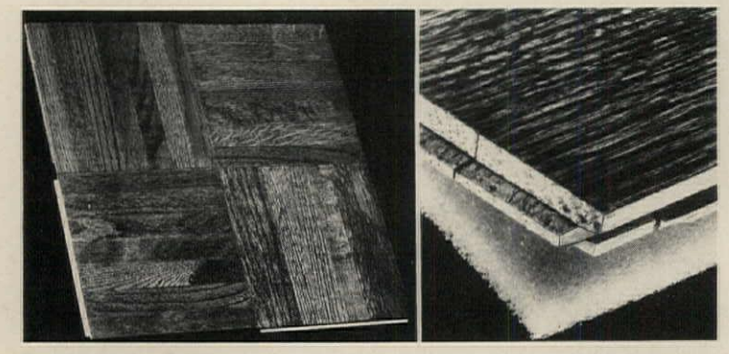
IMPROVING AND EXTENDING THE USES OF CONCRETE

Flooring

Carpet squares are laid—and stay—in place without any adhesive, tacking, or underpads. They can be rotated to equalize wear. The ½"-thick tiles are 20" square, have a dense long-wearing pile. Van Heugten, Kenilworth, N.J. *Circle 224 on Reader Service card*

Seamless floor is layers of clear plastic with colorful flakes sealed between, can be applied to most surfaces. Acrylic plastic lets moisture vapor go through, does not buckle, crack, or peel, won't change color, yellow, or fade. Flecto, Oakland, Calif.
Circle 226 on Reader Service card

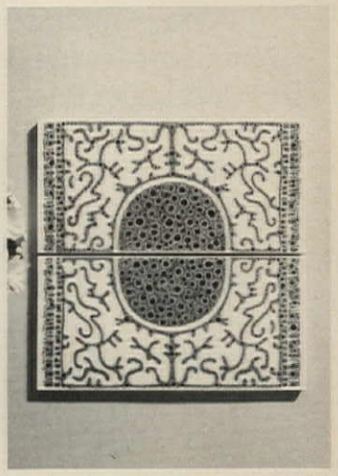
Vinyl flooring has extra thick cushioning for more comfort underfoot. Tile-like pattern of florals comes in four combinations: gold/apricot, avocado/citron, white/sand, and pongee/curry. Felt-backed sheets are 6′ wide. Congoleum, Kearny, N.J.
Circle 227 on Reader Service card



Foam-backed tiles, 12" square for apartment floors, provide better sound control, more foot comfort, and a moisture barrier. Prefinished hardwood parquet flooring 5/16" thick is laminated to ⅛" foam sheet. Tibbals, Oneida, Tenn. *Circle 225 on Reader Service card*

Kitchen carpet is 12′ wide continuous filament nylon, comes in 10 colors. One of six carpets introduced specifically to give builders a complete range of constructions and colors for every room, every buyer. Newhouse, New York City. *Circle 230 on Reader Service card*

Indoor-outdoor carpet is tufted acrylic designed for heavy-duty commercial use. Available in four two-color moresque patterns and four heather-pattern colors, it is colorfast, resists stains, can be cleaned with strong cleansers. Burke Rubber, San Jose, Calif.
Circle 228 on Reader Service card

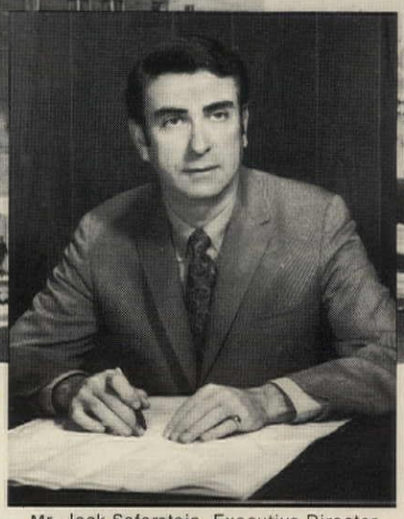


Ceramic tiles made in Italy feature a soft olive filigree pattern on a white background, will harmonize with formal or informal decor. The 6"x12" rectangular tiles are ½" thick and are one of six designs for light-duty floors. U.S. Ceramic Tile, Canton, Ohio.
Circle 229 on Reader Service card

New products continued on p. 104

Dependability isn't the only reason Mr. Jack Saferstein picked Maytags.

Paul E. Belcher Apartments, 400 Locust St., Akron, Ohio



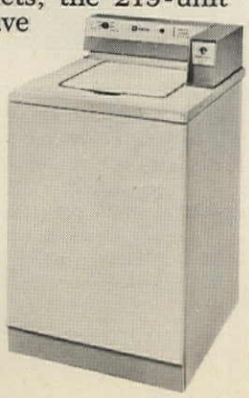
Mr. Jack Saferstein, Executive Director, Akron Metropolitan Housing Authority.

Says the Executive Director, Akron Metropolitan Housing Authority: "The Maytag Equipment Route Operator's total operation approach to self-service laundry facilities for our Paul E. Belcher Apartments was equally important. We got plans that were complete right down to layout, color schemes, and lighting."

Built by the Akron Metropolitan Housing Authority with the help of Federal funds, the Paul E. Belcher Apartments were designed to provide attractive homes at reasonable rentals for older people.

This handsome 12-story building has every convenience, including a beautiful lounge, activity rooms, a complete clinic for visiting doctors and nurses, and a self-service laundry on every other floor, equipped with Maytag Washers and Dryers.

Why Maytag? Reports Mr. Saferstein: "We were pleased with the trouble-free performance of Maytags in another of the Authority's projects, the 219-unit Norton Homes. Here, 18 Maytags have been averaging 5 loads a day for a year and a half."



Another reason Maytags were selected, according to Mr. Saferstein, is the Route Operator's "total operation" planning service: "they did more than install machines, they provided complete plans including layout, color schemes, and lighting."

Of course, we can't promise that all Maytags will equal the record Mr. Saferstein has reported. But dependability is what we aim to build into every Maytag.

Find out what Maytag dependability and the "total operation" concept can do for you. Contact your local Maytag Equipment Route Operator or fill in and mail the coupon now.

MAYTAG
THE DEPENDABILITY PEOPLE

The Maytag Company
Advertising Dept. HH-2, Newton, Iowa 50208

Send me complete information about the dependable new Maytag Commercial Washers with exclusive Dial-A-Fabric.

Name_____

Address_____

City_____ State_____

Zip Code_____ Phone_____

NEW PRODUCTS

start on p. 87

Prefab fireplaces

Gas fireplace, designed especially for apartments, has pushbutton on-off switch, is simple to install, economical to operate, makes no soot, ashes, smoke, etc. Standard and custom hoods available. Dyna, Los Angeles.
Circle 221 on Reader Service card

Reproduction stove burns coal, charcoal, 22" wood logs, or 20" gas logs, can be built in or left freestanding. Comes in red, avocado, or copper porcelain enamel finish that won't peel, fade, chip, tarnish, or discolor with heat. Roesch Enamel, Belleville, Ill.
Circle 222 on Reader Service card

Franklin fireplace can be installed anywhere, even in existing fireplaces. With doors open, it is a fireplace that burns wood, coal, charcoal, or gas logs, or barbecues. With doors closed, it is an airtight stove. U.S. Stove, South Pittsburg, Tenn.
Circle 223 on Reader Service card

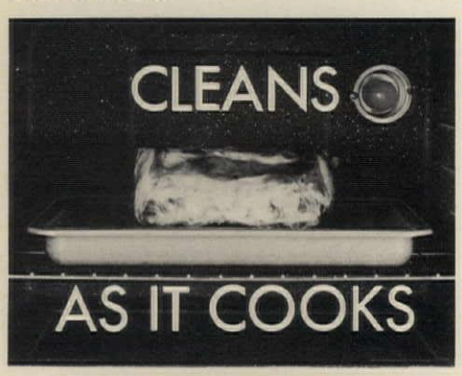
New literature starts on p. 106

There are 2 things women want an oven to do for them:

Our new Continuous Clean oven does both at once.

When you come to the kitchen, show prospects something new that can save time and hard work.

The Whirlpool Continuous Clean oven.



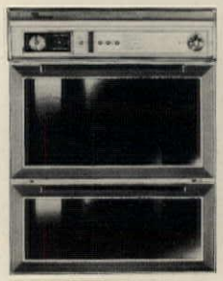
Our new specially treated oven interior continuously cleans itself every time a woman bakes or broils. (Most grease and food spatters are diffused and broken down, until they seemingly disappear.)

No extremely high oven heat required . . . No dials to set . . . No 4 to 5 hour waiting period during oven cleaning . . . No costly oven cleaners to buy and apply . . . No panels to remove and replace.

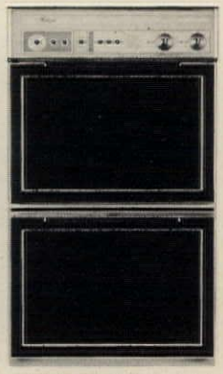
What could be more sensible, or more impressive to your prospects than a Whirlpool Continuous Clean oven?

Find out about the complete line of Whirlpool built-in's, contact your Whirlpool Distributor.

GAS OR ELECTRIC



RVU/G296 (gas)



RVE2698 (electric)

3 new electric Continuous Clean ovens — 2 with double ovens. 2 gas models, plus an electric set-in. And . . . all with automatic oven timers, to make cooking just as simple as same-time cleaning.

Whirlpool CORPORATION

Circle 112 on Reader Service card

NEW LITERATURE

For copies of free literature, circle the indicated number on the Reader Service card p. 95

PORTABLE THERMOSTAT. Illustrated in a four-color brochure is an electronic thermostat that controls temperatures by sending radio signals to a receiver at the furnace or air conditioner. Described as shockproof, immune to dirt, dust, moisture, and tilting. Kimco, Brooklyn, N.Y. *Circle 303 on Reader Service card*

FOAM TAPES. Two folders display samples of polyurethane foam or plasticized vinyl tapes in thicknesses from 1/32" to 1/2" and from 1/4" to 36" wide, pressure sensitive and some double sided. Arno, Michigan City, Ind. *Circle 304 on Reader Service card*

VINYL-URETHANE COATINGS. A booklet covers coatings for wood and flexible substrates. Coatings are self-priming topcoats, general purpose primers for all conventional solvent or water-based topcoats, may be applied to plywood, particleboard, and all woods and wood substrates. Baker Castor Oil, Bayonne, N.J. *Circle 305 on Reader Service card*

WASHROOM EQUIPMENT. Washfountains, column showers, multi-stall showers, drinking fountains, and such accessories as soap and towel dispensers, waste receptacles, mirrors, and shelves are described in a catalog of equipment for washrooms. Four-color photos show the types of precast or enameled bowl colors, materials, and finishes, and drawings show typical uses. Bradley Washfountain, Menomonee Falls, Wis. *Circle 306 on Reader Service card*

FOLDING DOORS. Color photographs show the variety of ways in which a line of folding doors can be used in formal and informal rooms. Close-ups show wood grains, textured patterns, and decorator colors. Clopay, Cincinnati, Ohio. *Circle 307 on Reader Service card*

NONSCALD SHOWER VALVE. A pressure-actuated shower valve that will not scald is shown in black-and-white and four-color photographs, with and without accompanying shower-head. Single-handle control unit comes in stainless steel and bronze. Symtrol, Braintree, Mass. *Circle 308 on Reader Service card*

LAUNDRY APPLIANCES. Eight washers and five dryers are pictured in this four-color catalog. Detailed charts show what features are incorporated in each model, such as bleach dispenser, permanent-press cycles, or lighted work surfaces. Closeups of control panels show four- and five-cycle, two-speed washers, and three-speed dryers. Whirlpool, Benton Harbor, Mich. *Circle 300 on Reader Service card*

PLYWOOD CONSTRUCTION METHODS. A booklet entitled "Report from Jobsite" tells how to keep down construction costs in the face of rising materials and labor prices by not over-building. Photos show stressed-skin roof panels, single-layer floors, exterior siding applied directly to studs. Cost-cutting adhesives and gluing techniques are described. Five specifications charts included. American Plywood Assn., Tacoma, Wash. *Circle 301 on Reader Service card*

LAMINATED BEAMS. A leaflet describes and illustrates "soldier beams" which are laminated of kiln-dried pine up to 50' long. Chart shows how large a load can be carried over spans from 6' to 32'. Potlatch Wood Products, San Francisco, Calif. *Circle 302 on Reader Service card*

ARCHITECT-DESIGNED BATHROOMS. Ten high-styled bathrooms are shown in four-color photographs and floor plans in a brochure that offers help in planning bathrooms. Included are interesting ideas for storage built in over basins, toilets, and tubs, compact use of corner spaces for powder rooms, unified plumbing cores in island baths, and off-the-floor fixtures for invalids in wheelchairs. Such luxury items as bathing rooms, toilet/bidet rooms, and complete makeup centers are shown. Drawings show types of toilets and their characteristics, dimensions, and possible placements. Photos show a complete line of fixtures and fittings. Included is a glossary of terms. For "The Eljer Plan," send $1 to Eljer, 3 Gateway Center, Pittsburgh, Pa. 15222.

BATHROOM ACCESSORIES. Decorative medicine cabinets, accompanying light fixtures, matching mirrors, and coordinated soap, toothbrush, and towel holders are shown in four-color and black-and-white photographs and drawings in a catalog of bathroom accessories. Included are suggestions for various type of mountings, plus complete specifications. Grote, Madison, Ind. *Circle 310 on Reader Service card*

BUILDING MATERIALS. Mail-order catalog describes over 10,000 items in 165 pages, offers every type of building material at wholesale prices. Morgan-Wightman, St. Louis, Mo. *Circle 311 on Reader Service card*

Annual H&H indexes

Copies of House & Home's editorial indexes for 1965, 1966 and 1967 are still available. Each is an eight-page, cross-referenced listing of subjects covered that year by this magazine. To get copies (there's no charge) write to: Reader Service Dept., House & Home, 330 West 42nd St., New York, N.Y. 10036.

CUSTOM-CRAFTED DOORS. A four-color, eight-page catalog features prefinished, machined, and polyethylene-wrapped lines of wood flush and panel doors. The line consists of 14 types of doors, including architectural, bifold, and laminated, and comes in five veneers—birch, hardboard, lauan, oak, and vinyl-clad. Mohawk, South Bend, Ind. *Circle 312 on Reader Service card*

CERAMIC TILE. An exclusive three-dimensional wall tile with a continuous basketweave pattern is described in a four-color, illustrated brochure. Although tiles are 4¼"x4¼", a small-tile appearance is created by the dimensional pattern. A complete line of matching china bathroom accessories is also available. Tile comes in six colors plus white. Wenczel Tile, Trenton, N.J. *Circle 313 on Reader Service card*

HEATERS. A 52-page catalog covers electric duct heaters and accessories, crankcase heaters, typical uses and applications of electric heaters, and updated engineering data. Included are completely detailed charts, photographs, and specification diagrams for five series of heaters. An engineering section features 11 typical wiring diagrams, a contractor and control chart, power circuitry diagrams, as well as installation data, wattage limitations, electrical requirements, voltage ratings, and a wire chart. H. W. Tuttle, Tecumseh, Mich. *Circle 317 on Reader Service card*

ARCHITECTURAL GLASS. This eight-page color brochure describes a wide range of architectural glass; categories include drawn sheet, tinted, figured rolled, float, solar, diffusing, and enameled glass. The catalog details the characteristics and applications of each type. There are more than 60 patterns of figured rolled glass, with many patterns available in a wide selection of colors. Glaverbel, New York City. *Circle 316 on Reader Service card*

STEEL JOISTS. The Steel Joist Institute has just published the 1970 Edition of Standard Specifications and Load Tables. The 32-page manual includes all information needed for fast, accurate specification of joists to carry uniform loads on spans up to 96 feet. Covered in the booklet are open web steel joists (J- and H-series) and longspan steel joists (LJ- and LH-series). In addition to load tables, the manual includes an outline of the recommended code of standard practice for open web and longspan steel joists. Steel Joist Institute, Arlington, Va. *Circle 314 on Reader Service card*

INTERIOR DESIGN PRODUCTS. This eight-page pamphlet features several patterns of California redwood paneling and rough-sawn redwood plywood, as well as overlaid panels that have properties similar to high-pressure laminates, which make them highly suited for use in commercial fixtures, built-ins, and cabinets. Information provided includes basic data on sizes, grades, and patterns. Simpson Timber, Seattle, Wash. *Circle 315 on Reader Service card*

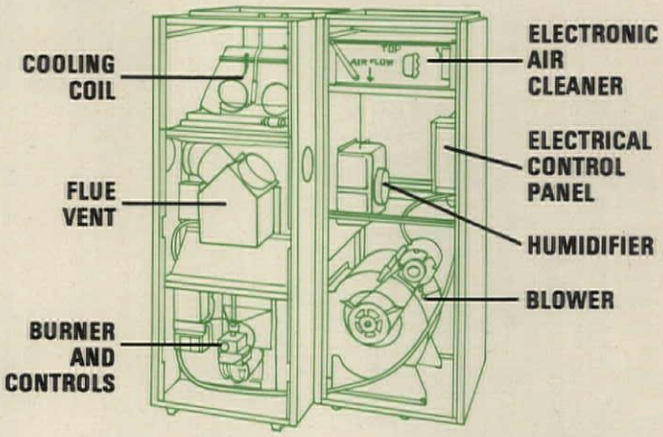
HARDWARE. A two-color, hard-binder catalog covers a complete hardware line. Each product is illustrated, and dimensions, installation drawings where necessary, packaging and weight information, product base metal, and available finishes are included. An improved format with simplified numerical index allows easy reading, with no cross-referencing necessary. H. B. Ives, New Haven, Conn. *Circle 318 on Reader Service card*

HEATING/COOLING SYSTEMS. A new bulletin contains detailed information and specifications for the three newest additions to a complete line of Chromalox electric heating and air conditioning systems for use in apartments. Included are dimensions, air discharge and return statistics, as well as heating and cooling ratings, weights, prices, and other comparative facts. Also featured are installation diagrams for vertical, horizontal, and ceiling placements. Edwin L. Weigand Div., Emerson Electric, Pittsburgh, Pa. *Circle 320 on Reader Service card*

WATERPROOFING. A four-page, two-color brochure describes a line of elastomeric waterproofing compounds including a fluid-applied deck membrane and a deck coating. Also included is information on masonry treatments, dampproofing materials, floor treatments, admixtures, sealants, toppings, adhesives, grouts, form coatings, and caulks. Toch Brothers, Lake Success, N.Y. *Circle 319 on Reader Service card*

SAFETY GLASS. A four-color file-folder/brochure entitled "Safety Glass and Safety Codes" details the three types of safety glass: tempered, laminated, and wired. The booklet includes the FHA Minimum Property Standards for glass, and excerpts from manuals published by the International Conference of Building Officials, the Building Officials Conference of America, and the Southern Building Code Congress. American Saint Gobain, Kingsport, Tenn. *Circle 321 on Reader Service card*

Total comfort for your customers. Measurable savings for you.



WILLIAMSON'S "Five-in-One" Total Comfort System

The Williamson "Five-in-One" is a year-round residential total comfort unit completely enclosed in a smartly styled casing. It heats and humidifies in winter, cools and dehumidies in summer and electronically cleans the air all year long.

A wide range of heating and cooling capacities is available. Natural gas, L.P. gas, fuel oil and electric heat models are offered. Special transitions or enclosures are not needed. Factory pre-wiring reduces on-the-job wiring.

Gas fired units have a solid state modulating control system and a highly responsive sensing element that proportions the flow of gas to the burner according to heat demand. One degree temperature selection increments are possible. Oil fired units have extremely quiet pressure atomizing burners. Electric units have modulating sequencer controlled heating elements.

The Williamson "Five-in-One" is the least expensive total comfort package either you or your customers can buy. Write or phone for further information today.

WILLIAMSON

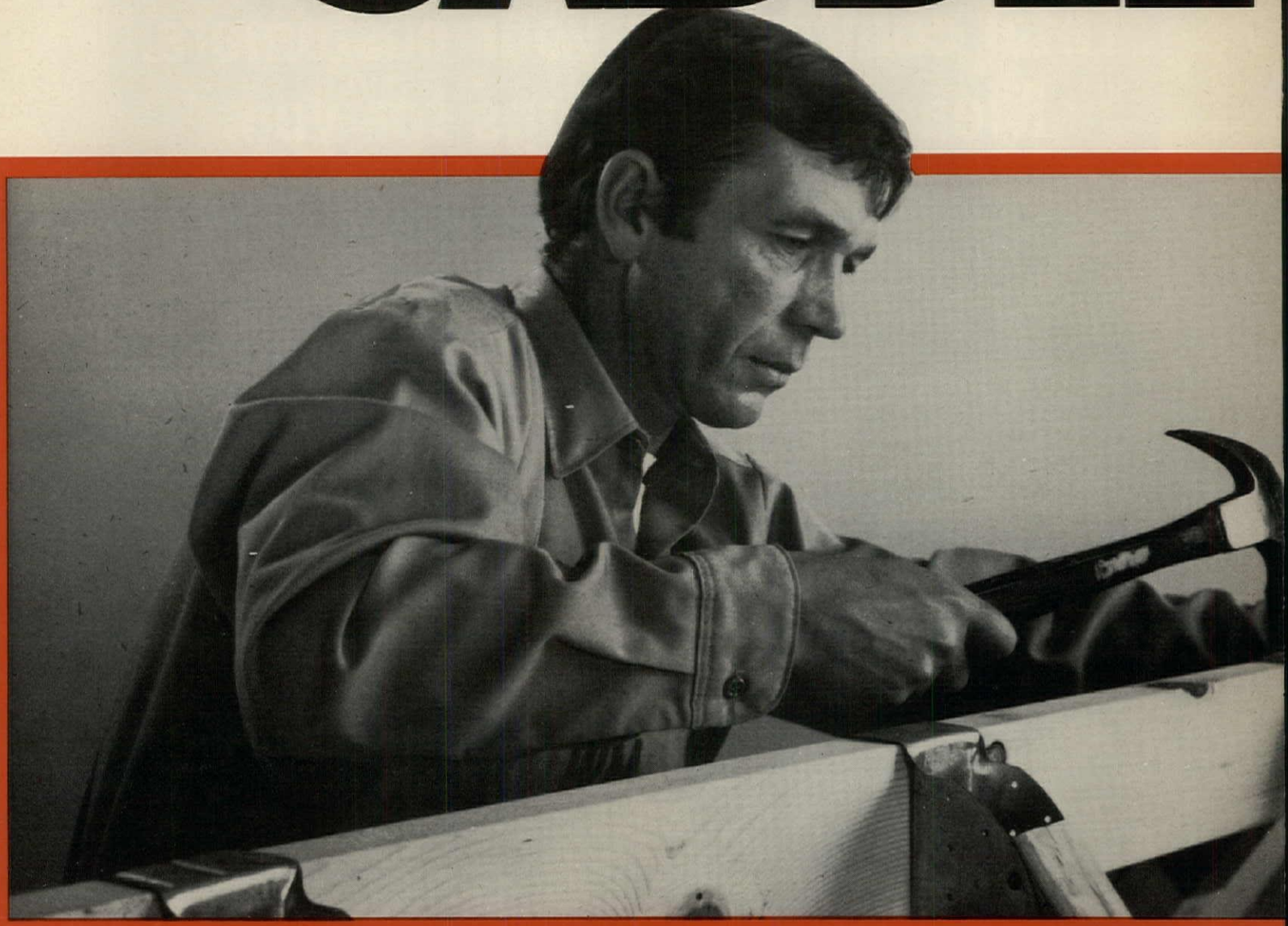
ESTABLISHED 1890

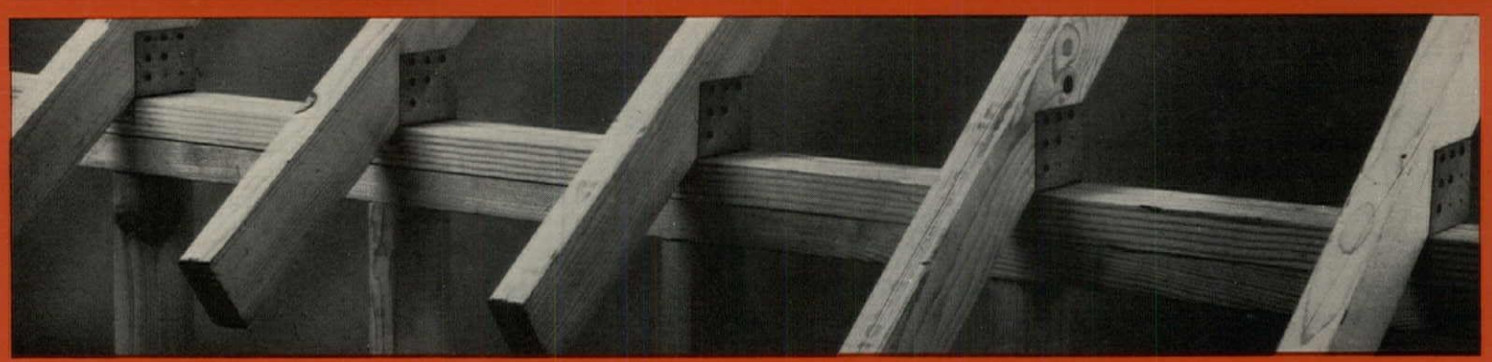
The Williamson Company

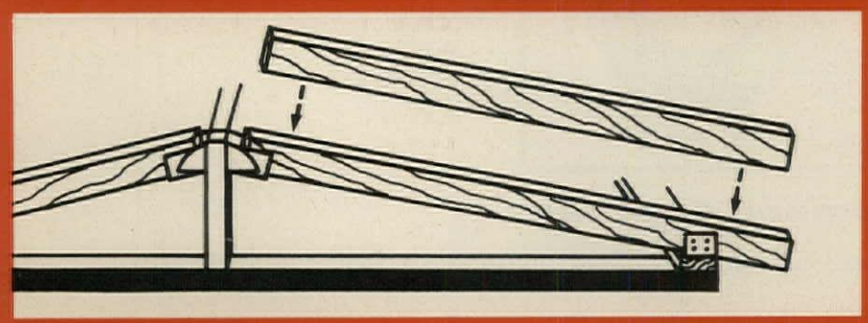
Dept. H-123 • 3334 Madison Road • Cincinnati, Ohio 45209 • (513) 731-1343

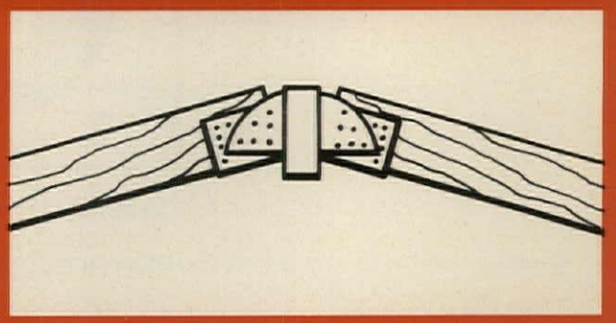
Circle 113 on Reader Service card

SADDLE









BRACE.

Simple, Proven System for Faster, Easier Roof Framing

NOW AVAILABLE FROM BOSTITCH, Saddle Brace roof framing system — a significant development in building construction. Saddle Brace system is a rugged, simple method of framing which gives builders and remodelers remarkable savings in conventional roof framing.

COMPLETE SYSTEM consists of Saddle Brace brackets for fastening rafters to ridge poles, End Brackets for joining rafters to top plates and other brackets eliminating any need for cutting on hips and valleys. Standard brackets fit 2" x 4", 2" x 6", and 2" x 8" lumber.

ON SITE, square end lumber is simply dropped into the Saddle Brace bracket and hand or power nailed immediately. No peak and bird-mouth (seat cuts) on rafters, and no compound angle cuts on jacks. Saddle Brace system adjusts instantly to the proper pitch; produces a perfectly framed roof even if rest of structure is out of plumb.

HUNDREDS OF INSTALLATIONS have proven the versatility, strength, and rigidity of the Bostitch Saddle Brace roof framing system. The Saddle Brace system meets FHA and CMHC (Canadian) requirements, as well as many other local and regional codes.

FIND OUT MORE about the time and money saving advantages of the Bostitch Saddle Brace system. Talk to the man with the fastening facts — your Bostitch man. Or fill out and mail the coupon today.

BOSTITCH® FASTENING SYSTEMS A textron COMPANY

Bostitch will find the way

Bostitch Division of Textron, Inc.
242 Briggs Drive
East Greenwich, R.I. 02818

Please send full details about the Bostitch Saddle Brace system.

Name_____

Company_____

Address_____

City_____ State_____ Zip_____

Telephone_____

House & Home ADVERTISERS' INDEX

The advertising index and reader service numbers published by HOUSE & HOME is a service to its readers. HOUSE & HOME does not assume responsibility to advertisers for errors or omissions

W denotes Western edition
M denotes Mid-Western edition
N denotes North Central edition
E denotes Eastern edition
S denotes Southern edition
SW denotes Southwest (Swing)

ADVERTISING SALES STAFF

ATLANTA 30309
Glen N. Dougherty
1375 Peachtree St. N.E.
(404) 892-2868

BOSTON 02116
David Persson
McGraw Hill Bldg.,
607 Boylston St.
(617) 262-1160

CHICAGO 60611
John L. Filson;
James R. Schaffer;
645 N. Michigan Ave.,
(312) 664-5800

CLEVELAND 44113
Milton H. Hall, Jr.
55 Public Square
(216) 781-7000

DALLAS 75201
Jerry Ambroze
1800 Republic Natl. Bank Tower
(214) 747-9721

DENVER 80202
Douglas J. Carthew
1700 Broadway,
(303) 266-3863

DETROIT 48226
Stuart G. McKenzie
2600 Penobscot Bldg.
(313) 962-1793

LOS ANGELES 90017
Donald Hanson,
1125 W. Sixth St.,
(213) 482-5450

NEW YORK 10036
Charles M. Murtaugh
500 Fifth Ave.,
(212) 971-3686

PHILADELPHIA 19103
Raymond L. Kammer
Six Penn Center Plaza
(215) 568-6161

PORTLAND 97204
Linwood S. Williams
Mohawk Bldg.,
222 S.W. Morrison St.,
Suite 218
(503) 223-5118

SAN FRANCISCO 94111
Stephen D. Blacker
255 California St.,
(415) 362-4600

BUSINESS MANAGER
Vito De Stefano
McGraw Hill, Inc.
330 West 42nd St.
New York, N. Y. 10036
(212) 971-3204