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House & Home

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House & Home

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Volume 41 Number 1 / January 1972

FEATURES

- 105 Homebuilding and hot air—an editorial
If we don't ease up on the yak sessions, we are going to wind up stone deaf
- 106 New products, 1972
A colorful glimpse of what's new in building materials and equipment
- 122 Computer models
High-speed help for the builder's decision-making process
- 126 Project Portfolio
Irregular terrain and a 40' grade change are turned into an urban asset
- 130 A HOUSE & HOME market memo
Houston builders agree that single-family housing will soar in '72

NEWS

- 6 Congress gets housing's top question: who'll finance building in the future?
- 11 Banks hear a warning: go slow in taking over mortgage companies
- 11 Fanny May goes it alone with mortgage forms—to consumer's advantage
- 14 The Realtors bask in the Miami sun—and in their industry's new prosperity
- 18 Boston sets up the nation's most powerful housing court
- 18 Levitt manages to cut house prices despite rising costs
- 22 California asks itself: are we building a boom or a bust?
- 26 Housing's newest giant—City Investing—and how it grew
- 30 Barriers down: the battle to unify building codes begins to pay off
- 52 How to provide livability for 11 detached houses in 1.83 acres
- 60 Alan Dunn serves up architecture on wry in newly published book
- 68 How one manufacturer solves the over-24'-wide sectional shipping problem
- 92 A remodeled townhouse yields six family-size apartments

DEPARTMENTS

- 40 Housing stock prices
- 72 The planning scene
Setback requirements for single-family subdivisions prevent better planning
- 78 The merchandising scene
How built-ins and add-ons spice up your models
- 84 The apartment scene
Condominiums can go sour without professional management
- 97 Letters
- 140 Products
- 186 Job market
- 198 Literature
- 208 Advertisers' index
- 211 Personal business



Financing tomorrow's homebuilding: the old S&Ls or a new all-purpose bank?

A moment of truth looms irrevocably this year for commercial banks, for savings and loan associations and for mutual savings banks.

The showdown comes when Congress moves—one way or the other—on the *Report of the President's Commission on Financial Structure and Regulation*.

The *Report* has been awaited with deep trepidation on both sides—that is, among commercial banks and thrift institutions. For the study poses for Congress a question of enormous significance:

What kind of institution will provide the virtually unlimited amounts of financing needed for the housing the nation will build in the future?

The old-style S&Ls and savings banks, whose performance left homebuilding reeling in the credit crises of 1966-67 and 1969-70? Or a new all-purpose bank, into which the thrift institutions will disappear?

Expectations. Much legislation on the role of the financial institution was left undecided in 1971, while Congress awaited the *Report*. And, while the study and its recommendations were not yet published in mid-December, several of the big financial conventions held late last year addressed themselves to little else.

Leaks, rumors, conjecture surrounded the *Report*, and it early became known that the thrust would be to nudge, if not shove, thrift institutions toward merger with the commercial banking industry.

For the specialized housing lenders—the S&Ls and savings banks—this would represent a kind of consolidation "toward the center," or toward establishment of one type of all-purpose bank.

An end to Q. Sources close to the commission said the *Report* would seek to phase out dividend and rate control, which has worked to the advantage of thrift houses. In its place would come standby power to impose rate controls over all financial institutions. Hence the special rate differential now enjoyed by the thrift institutions because of the Federal Reserve's Regulation Q, limiting the savings dividends commercial banks



COMMISSION'S HUNT
Are his panel's proposals . . .



U.S. LEAGUE'S STRUNK
. . . A death warrant for S&Ls?

can pay, would be eliminated during the phase-out period.

But in recommending elimination of Regulation Q and rate control, the commission is reportedly ready to suggest a plan that would increase some investment powers of thrift institutions—including the use of checking accounts, equity investments and some consumer loan powers. Such a plan would be moot, of course, if the S&Ls merged into banks.

The commission was reported ready to recommend the elimination of any tax advantage for any financial institution. Such a proposal—to tax all institutions on the same basis—would provide additional impetus for consolidation.

Debate. The supporters of thrift institutions are already aroused. Executive Vice President Norman Strunk of the U.S. S&L League called the commis-

sion's plan a death warrant for the savings and loan industry. The thrift industry's partisans promptly predicted that, if they move closer to commercial banks, there will be less money for housing.

To avoid just such a development, the commission has reportedly been eyeing a special tax deduction for all types of financial institutions that invest in housing. The plan resembles a Treasury Department proposal made in 1969.

The commission has also been reported ready to recommend legislation to permit federal chartering of stockholder S&Ls and to revive the old plan to allow federal chartering of savings banks. The savings bank proposal was first made by another commission—that on money and credit—in 1959.

Similar powers. When the commission does urge thrift in-

stitutions to take on more of the aspects of commercial banks, it is expected to seek to eliminate the geographic lending limits now imposed on the savings banks and S&Ls. Another recommendation will reportedly be to let S&Ls and mutual banks issue credit cards.

On the other side of the coin, the panel is expected to urge that commercial banks be permitted the same real estate lending authority now enjoyed by thrift institutions.

A free FHA rate. The mortgage market drew the commission's attention, and there were indications that the panel would urge that state usury ceilings for home mortgages be lifted.

It was also reported that the commission would recommend enactment by Congress of the Nixon Administration's proposal for a dual interest rate system for FHA-VA loans. One system would be that in use today, with an administered rate and discounts permitted. The second system would permit a free rate but no discounts on the initial transaction.

There was also discussion in the commission of a variable interest rate for FHA-VA loans—a development many lenders have sought in the recent past.

Another proposal said to be a part of the *Report* would lift the ceilings for HUD's section 235 and 236 housing loans whenever costs for land and construction rose.

Battle lines. The commission, headed up by Reed O. Hunt, former board chairman of the Crown Zellerbach Corp., is entering the most critical phase of its existence—the period when it must try to convince Congress to enact its recommendations. The commission will put to use its own lobbying powers, and the Nixon Administration will probably join in support.

The President's own *Economic Report to Congress* will be published this month, and many of the commission's recommendations are likely to be echoed in it.

But it is Congress—still controlled by the Democrats—that will decide how many of the Hunt commission's proposals get to President Nixon's desk in the form of legislation.

Real estate puts five on Rent Board

Baltimore builder Harvey M. (Bud) Meyerhoff is homebuilding's representative on the Rent Advisory Board.

Meyerhoff is president of Monumental Properties Inc. of Baltimore, which builds and owns residential and commercial properties in several states. He is president of the HBA of Maryland and is an honorary life member of NAHB.

Realty panel. President Nixon named these four members to the real estate industry's panel of the 14-member board along with Meyerhoff:

Fred C. Tucker Jr., president of the National Association of Real Estate Boards and of the F. C. Tucker Co., Realtors and developers in Indianapolis (photo on p. 30).

Robert H. Pease, former president of the Mortgage Bankers

Assn. and senior vice president of Draper & Kramer Inc., the Chicago mortgage bankers.

Bruce P. Hayden, vice president, mortgage and real estate, of the Connecticut General Life Insurance Co. in Hartford and president of Connecticut General Mortgage and Realty Investments, a realty trust.

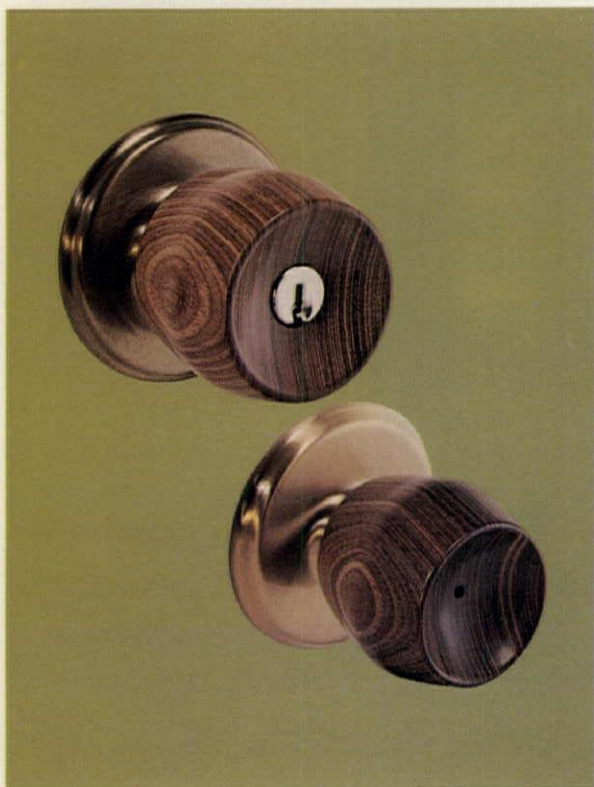
Robert Ross, president of the National Apartment Assn. and of the Ross Real Estate Co. of San Antonio, Tex.

Rent rules. The board, as part of the Price Commission, will write the rent guidelines for Phase II of the president's economic stabilization program. (NEWS, Nov.). The Cost of Living Council has ruled that the guidelines will apply only to residential structures built and occupied before prices were frozen last August 15.

NORRIS INDUSTRIES, a new force in building products brings you ideas in lock styles



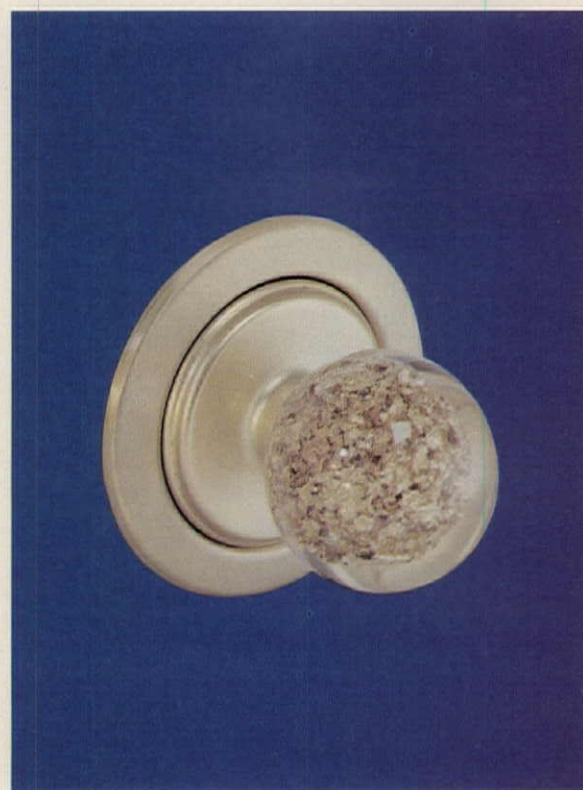
Ideas in lock styles from Weiser, and



Nothing Quite Equals the Warmth of Wood

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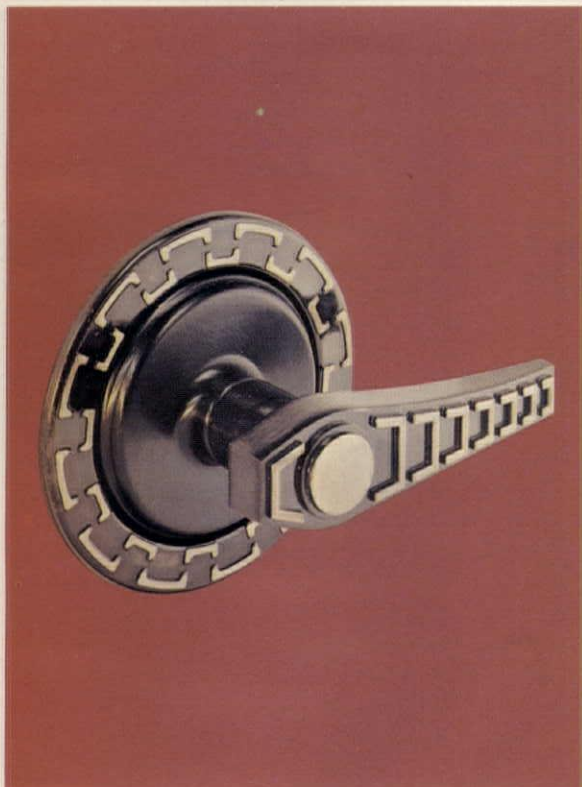
CIRCLE 10 ON READER SERVICE CARD



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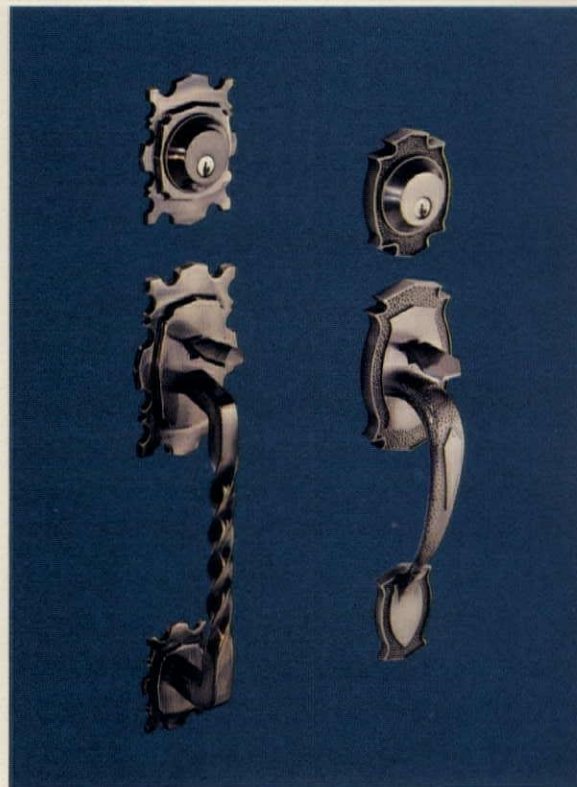
CIRCLE 11 ON READER SERVICE CARD



Lever Handle Locks with a Continental Look

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CIRCLE 12 ON READER SERVICE CARD



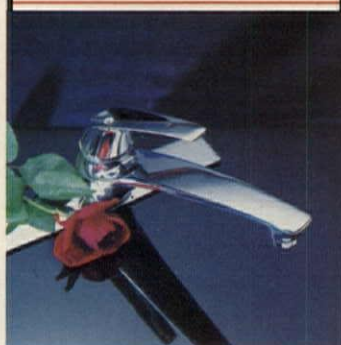
First Impressions are Created at the Entranceway

For mediterranean styled homes or those with a Colonial influence, nothing will enhance the entrance more than these sectional handle sets. Stately sentinels of security, they cannot help but be noticed each time your friends come to call. Whether used on a single carved door or in pairs on double door installations, Weiser sectional handle sets in El Cid or Heritage styling leave an impression of rugged security wherever used.

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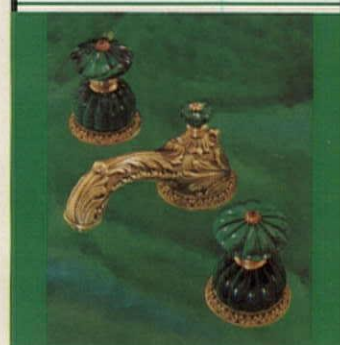
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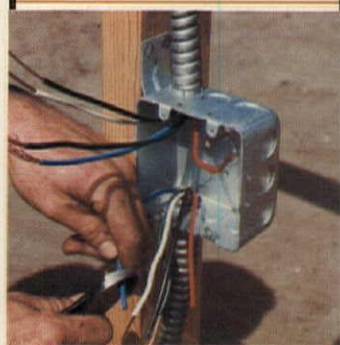
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**CIRCLE 19 ON
READER SERVICE CARD**

A go-slow signal for commercial banking's takeover of mortgage business

The growing tendency of commercial bank holding companies to take over mortgage banking concerns has now come under the scrutiny of the Federal Reserve Board—and the Fed may soon impose restrictive regulations.

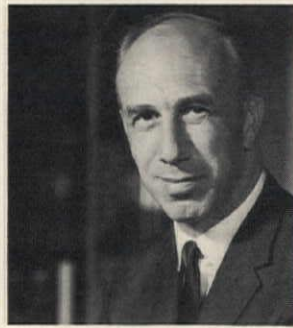
The anti-trust division of the Justice Dept. has just advised the Fed that the board is supposed to apply standards that are considerably stricter than the normal anti-trust standards to these acquisitions of mortgage banking concerns.

Fed Governors George Mitchell, Sherman Maisel and Andrew Brimmer listened at a recent hearing to witnesses from several of the holding companies that have applications pending to buy mortgage companies as well as to spokesmen from the American Bankers Assn. The witnesses contended that no restrictions should be imposed.

The Fed held the hearing to explore the question of whether the public interest requires limitations on size, area and types of activities of mortgage com-



FED'S MITCHELL ...
Taking a closer look ...



... AND MAISEL
... at mortgage takeovers

panies that may be acquired by bank holding companies.

Banks' stand. While each of the holding company representatives outlined his specific application, the ABA took on the Fed on the basis of the overall concept of the takeovers.

Eugene H. Adams and Clarence Liller Jr., the ABA spokesmen, argued that the imposition of any limitations could work to the detriment of the public interest by eliminating possible future competition.

The ABA said that each deal is separate and unique—that no blanket rules should be set.

It must be remembered, the

ABA spokesmen said, that a mortgage banker is merely a conduit through which money flows on behalf of a permanent investor. Since a servicing contract can be cancelled at any time, it is unrealistic to make size comparisons based on dollar volume, number of loans serviced or stockholders equity.

Growth potential is also a significant factor. The future growth of a company will largely depend on the ability of the company to generate an increasing volume of loans. This, in turn, depends on the caliber of management and the area's growth potential.

Present rules. The Fed's regulations do not now limit the location of permissible activities for bank holding companies, although the Board does reserve the right to impose such limitations on a case-by-case basis. The ABA said it endorses this.

It pointed out that "because of variations in state statutes on entry, market and product extension, banking structures, trade areas and local competitive conditions, the benefits to the public from such acquisitions can only be determined after weighing all of the competitive effects in light of the unique circumstances of individual acquisitions—in other words—case by case."

"There are far too many factors at work to permit the establishment of a neat set of criteria on which to base acquisition judgments," the ABA argued.

The Fed's one-day hearing was exploratory. The governors in attendance issued no opinions, and Fed officials say there is no certainty that any new regulations will result. —A. M.

Mortgage form dispute: Fanny May goes own way, to benefit of consumer

Thomas R. Bomar, executive vice president of the Federal Home Loan Mortgage Corp., said last fall:

"We think that a mortgage form should provide for an acceleration on sale." (News, Nov. '71)

Later he added:

"Penalties for prepayment should be a matter for individual negotiation between the lender and his borrower.

"We don't want to try to regulate all loan transactions. We don't think that's any of our business."

The FNMA stance. In November, however, the president of the Federal National Mortgage Assn., Oakley Hunter, issued a press release stating:

"When the FNMA begins the operation of its secondary market for conventional mortgages, its standard documents will permit home owners to make payments in advance without payment of penalties."

And Hunter added:

"The FNMA forms also will permit a homeowner to sell his

home without requiring that the mortgage be paid off in full if the loan is assumed by a new buyer."

With those two divergent views, Fanny May and Freddy Mac parted company on the proposed uniform mortgage document for loans traded in either the FNMA or FHLMC secondary markets.

Year's effort. Prodded by consumer groups for more than a year, the two organizations had sought in vain to agree on one document. They split over several important points—pre-

payment penalties and acceleration on sale being two major differences. Their separate documents had not yet been published in mid-December, but the private Fanny May and the government mortgage corporation were clearly moving in separate ways.

In a speech to the U.S. Savings and Loan League after FNMA issued its statement, Bomar said that the FHLMC would require that the mortgage be on a FHLMC uniform mortgage document. Until then, drafts of the proposed form had carried the

names of both FHLMC and FNMA.

Approvals. Hunter, in issuing his statement, noted that Housing Secretary George Romney had approved the Fanny May documents. No such approval is needed by the FHLMC, which is an arm of the Federal Home Loan Bank Board.

Without detailing what the FHLMC form will contain, Bomar told the S&L audience that "our standards will be those which make sense in your markets. For FHLMC wishes to buy good loans and knows that the standards of one area of the country may differ from other areas."

Critics. In mid-December, congressional critics of the mortgage documents had so far been silent on the split between the two organizations.

Whether they remain so is uncertain, but it is conceivable that Senators John Sparkman of Alabama and William Proxmire of Wisconsin, both of whom have expressed interest in a uniform document, may apply pressure to try once again to arrange for a single form.

HLBB's HOAP program: some second thoughts

The S&Ls' Housing Opportunity Allowance Program is still hobbling along with most S&Ls avoiding it like a plague. HOAP was devised as a shallow subsidy to aid those families who did not qualify for HUD subsidy programs, but whose incomes did not qualify for conventional loans. The Home Loan Bank Board had committed 50,000 such allowances for fiscal 1971, but S&Ls had only committed 4,200 by October 1.

RICHARD W. O'NEILL
The O'Neill Letter, 11-23-71

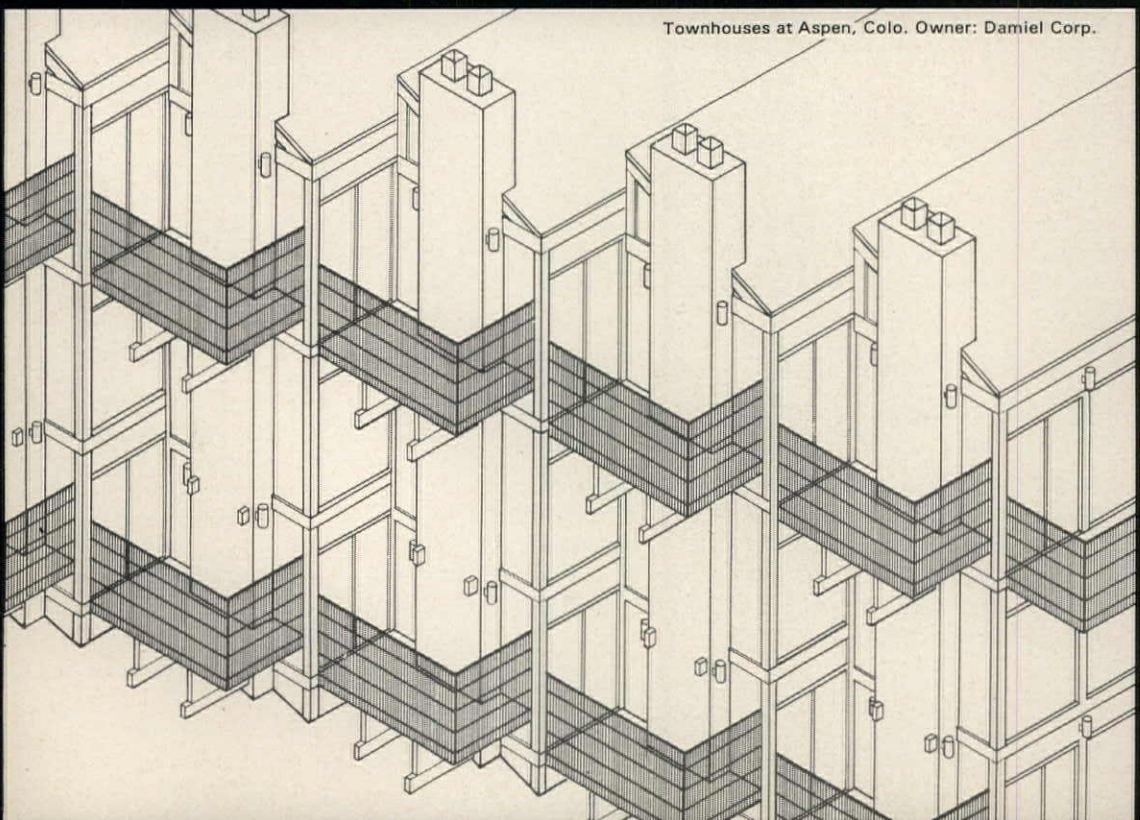


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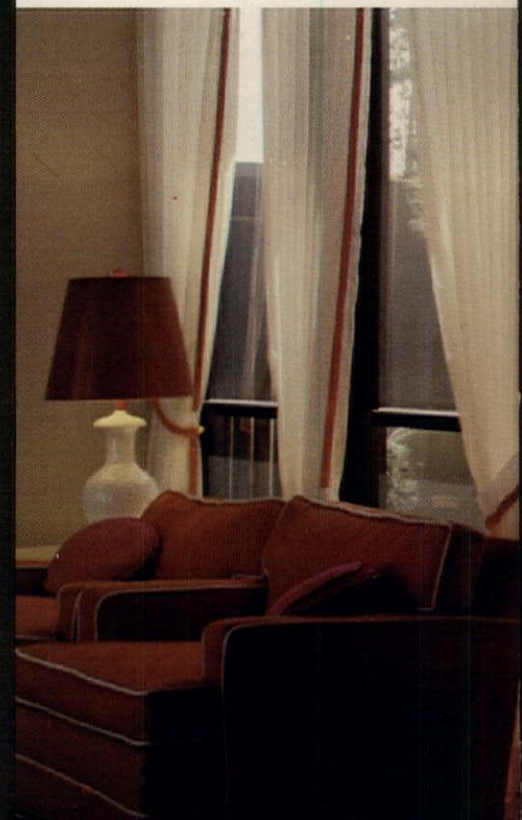
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More than 9,000 of them trooped into the plush Beach hotels with an unmistakable air of affluence and an unshakable confidence in even better times to come.

The delegates of the National Association of Real Estate Boards presented a kind of portrait of the face of prosperity. Real estate and housing have been at the very forefront of the economic recovery now in progress, but few outsiders had appreciated the extent of the Realtors' good fortune.

The sales boom. Real estate dealers from five sections encountered dubiety verging on skepticism when they tried to communicate sales figures to the cynics of press and television. A California spokesman said sales were running 20% to 25% above those of 1970. Panelists representing the South, Southeast, Midwest and Southwest raised eyebrows with their insistence that their own gains ran an incredible 40% to 60%—and these compared with 1970, a bit of a vintage year in itself.

The Realtors also maintained that 1972 would be just as good as 1971, probably better.

For the disbelievers, Al Jennings Jr. of Clover Realty in Atlanta tried to summarize:

"Every day has been like Christmas," he said.

And its reasons. Were not such figures as 40% far too high, the press wanted to know. And how could the Realtors be doing that well, and expect to do even better, when that trusted barometer of national confidence, the stock market, had fallen on its ear? (It was sent reeling anew during the Realtors' meeting by a selloff of near-panic proportions in real estate trust issues.)

Undaunted, Realtor West Shell Jr. of Cincinnati replied that Wall Street's loss was actually real estate's gain.

A disenchanted public was simply transferring its investments from paper into solid earth as a hedge against inflation, Shell contended, and this trend would accelerate, particularly among the young. Thus his industry's fond dreams of



REALTORS' TUCKER
Into the president's chair

'72—and even of years beyond. Time alone would tell whether the panelists* who readily confessed to incurable optimism, were right about 1972. But they were indeed right about the dimensions of their present prosperity. As they met, the Commerce Dept. released these figures for the first nine months: 510,000 new houses sold, or 40% more than in the same 1970 period.

Widnall's warning. Rent con-

*Other Panelists were Tom Grant, Jr., Tulsa; Blanche Fey Sedam, Fort Lauderdale, Fla., and Art S. Leitch, San Diego.

trols and government housing provided other issues for the convention, NAREB's 64th.

Delegates applauded a stern warning by Rep. William B. Widnall (R., N.J.) that the munificent housing subsidies now being expended by the federal government were going to the wrong people—"to the housing producers, not to the homeowners"—and they reiterated NAREB's plea to the government for a new deal in housing the poor: a greater emphasis on used housing, or shelter, and less concern with the costly and time-consuming production of new units.

New president. The Realtors elected Fred C. Tucker Jr. of Indianapolis to succeed Bill N. Brown of Albuquerque, N.M., as president of the 98,000-member association. Tucker directed the influential Realtors Washington Committee in 1968, the year of the last major Housing Act. He heads the F. C. Tucker Co., Realtors and developers in Indianapolis. His first vice president will be J. D. Sawyer of Middletown, Ohio.

New step in turning mortgage into a bond: first FHA-VA serial note is sold

Mortgage-backed securities, guaranteed by the Government National Mortgage Assn., have undergone a new twist: serial notes are now being issued with GNMA backing. The notes are supported by FHA and VA home loans.

The serial note issue marked another first for mortgage securities—the vehicle being used by the government to make home loan investments more like security purchases.

The first such serial note, for \$5 million, was issued by IDS Mortgage Corp. and sold to the Dollar Savings Bank of New York City and the State of Minnesota Board of Investment.

Differences. Serial notes backed by GNMA have this major distinction from the regular pass-through securities: the note enables investors to buy earlier maturities of an issue; other investors can purchase notes that mature later on.

The notes differ, too, from the pass-through securities in that principal and prepayments

of principal are remitted in amounts of \$25,000 to the holders of numbered units in

sequential order—but in no case later than the unit's maturity based on the amortization

schedule of the pool of 30-year mortgages backing the issue.

Interest Rule. Interest is paid monthly on all serial notes, but principal is applied to the lowest numbered units first, so that they have an earlier maturity than the higher numbered units. With the pass-through securities, payments and prepayments of principal are made monthly to the holders of all securities in the issue on a pro rata basis.

The first issue of the serial notes had 201 units of \$25,000, and carried a 6½% coupon rate.

Participations. The Federal Home Loan Mortgage Corp., an arm of the Federal Home Loan Bank Board, has begun meanwhile to sell participation interests in conventional single and multifamily loans to S&Ls, mutual savings banks and commercial banks.

The program is the second part of its participation program which in the last year has seen the FHLMC purchase more than \$200 million in loans from FHLB System members.



MORTGAGING'S COLEAN
A critic of GNMA's role



U.S. LEAGUE'S EATON
A private market supporter

GNMA's tandem plan: some second thoughts

The open cookie jar . . . A costly illusion . . . A discriminatory dispensation of favors . . . Had government set out to design a means of derationalizing and convulsing the market process, it could hardly have done better.

Consulting economist Miles Colean,
Economic Report, 10/71, Mortgage Bankers Assn.

An example of unnecessary tampering with the mortgage market.

Lewis S. Eaton
Retiring president, U.S. S&L League, at the
league's annual convention in New York, 11-26-71.



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GENERAL  ELECTRIC

Boston is setting up the nation's most powerful housing court to counter blight

Boston is trying to put teeth into its building codes by establishing the nation's first housing court with equity powers. The court can arrange settlements even in cases where no statutes or precedents apply.

The new tribunal's broad mandate allows it to fine or jail offenders and to issue injunctions and restraining orders.

The court can also hire experts for advice on housing maintenance, repair, financing and federal, state and local laws affecting housing.

Landmark. In signing the bill creating the unique court, Massachusetts Gov. Francis Sargent said:

"This is a landmark piece of legislation—one that establishes a housing specialist in the judiciary with the real authority to do the job.

"We can no longer tolerate a society that caters to irresponsible landlords. Only a court with power to order corrections can turn abuse into decency."

Two-year battle. Boston officials and a coalition of urban Democrats and suburban lib-

erals had struggled for two years to establish the court. Opponents had contended it could become too closely oriented toward tenants and hence unfair to landlords, and that housing cases should remain in the regular courts "in fairness to all concerned."

These objections were not supported by the special legislative commission's study, issued in 1968, on which plans for the court had been based. The commission had found that:

- There was a lack of judicial enforcement of existing housing laws and too much delay in the regular courts.

- The criminal procedure for prosecuting housing violations was inadequate.

- Inadequate housing was contributing to the physical and psychological deterioration of tenants.

No fines. As an illustration of lack of enforcement, the commission noted that 1,690 building code violations were cited in 1967 but that only 461 reached judicial action.



GOVERNOR SARGENT
'Landmark legislation'

Of this total, only two fines were levied in district courts—and both were subsequently dismissed in Superior Court.

Indifference. Under the old system, according to Francis Gens, commissioner of the Boston housing inspection office, the courts were reluctant to punish landlords because criminal charges had to be brought to enforce housing codes.

"Judges who normally hear murder, rape and armed robbery cases are reluctant to impose a fine for a code violation and give the landlord a criminal record," Gens explained.

As a result, he said, "the city spends a lot of time and money

on inspection, and the landlords merely ignore our orders while tenants continue living under horrible conditions."

Last year alone, Boston inspectors reported more than 13,000 violations, and an estimated 20% of all dwelling units were rated substandard.

Wide powers. Housing courts, or special housing sessions of regular courts, now hear cases in Chicago, Toledo, Philadelphia, New York and Baltimore. The Boston court will have broader powers than any of these. The judge's status will parallel that of a Superior Court judge, and appeals—which can be made only to challenge points of law—will go directly to the Massachusetts Supreme Judicial Court.

Home rule. The new court is expected to open early this year, after Gov. Sargent appoints a judge to the \$26,400-a-year post. Boston will pay all costs in accordance with a home-rule petition to the legislature.

—PAUL GIGUERE
McGraw-Hill World News,
Boston

What's a guy to do when zooming costs price him out of his prime market?

It happened to one of the big guys—ITT Levitt and Sons.

What Levitt did was to scrutinize its designs and methods until it hit upon a way to turn the costs around again.

In the Chicago area, for example, Levitt has trimmed 8% from the average price of the homes it sold there two years ago. Its 1972 average of \$32,900 will be 5.3% below 1971's \$43,750, and 8% under 1970's \$35,750.

Here's how the company did it.

Design economies. Levitt turned first to designs that are economical to build: fourplexes and townhouses.

Next, the company reduced the footage in its conventional single-family houses by drawing more efficient floor plans that retained a feeling of space.

The townhouses and fourplexes are turning out to have one more advantage: they appeal particularly to Levitt's traditional market of first-time homebuyers. These busy young couples are delighted to leave

outside maintenance chores to the homeowner associations that manage Levitt's townhouse and fourplex units.

New suburbs. Finally, Levitt looked for new frontiers. It be-

gan to build as far away as New Lenox, 35 miles southwest of Chicago. When that development is finished, it will contain 1,200 units, including single-family homes in the \$24,000

to \$29,000 range, fourplexes and garden apartments.

Levitt also decided to build in Naperville, 25 miles west of the Loop. Naperville will eventually contain 3,800 units, including single-family homes in the \$33,000 to \$41,000 range, townhouses from \$25,000 to \$35,000, condominiums and garden apartments.

In Schaumburg, also about 25 miles west of Chicago, Levitt is building its first fourplex community. There will be 500 condominium units priced from \$21,000 to \$25,000 along with 700 townhouses from \$26,000 to \$33,000 and, eventually, 1,200 single-family homes and 1,000 garden apartments.

Success. The new approach seems to be working. Levitt's management now insists that it expects sales of homes and land in the Chicago area to total \$30 million in 1971, as against \$15 million in 1970. And for 1972 the company predicts even better results—over \$35 million in sales in the Chicago area alone.

Chicago homebuilding costs up 10.9%

Levitt's success in cutting the price of homes in the Chicago area is even more impressive when viewed against the actual rise in homebuilding costs.

By the end of the third quarter of 1971, these costs had risen a record 10.9% above those at the end of 1970, according to a survey by Chicago's Uptown Federal Savings & Loan Assn. Costs rose 7.5% in 1970 and 7.7% in 1969.

Wage raises accounted for much of these increases. The survey found that pay raises for the building craft unions averaged more than 13% in the second quarter of the

calendar year 1971 alone.

With 1960 prices as a base of 100, last October's construction costs index for the Chicago region was 174.8 as against 157.0 in October 1970.

In the same period, structural lumber costs rose from 116.0 to 126.4; asphalt roofing, from 100.9 to 116.1; window glass, from 123.5 to 131.8.

Wages, including welfare and pension costs, rose even more dramatically. The index for common laborers went from 197.4 to 229.6; for brick masons, from 184.8 to 222.5; and for sheetmetal workers, from 175.6 to 215.8.

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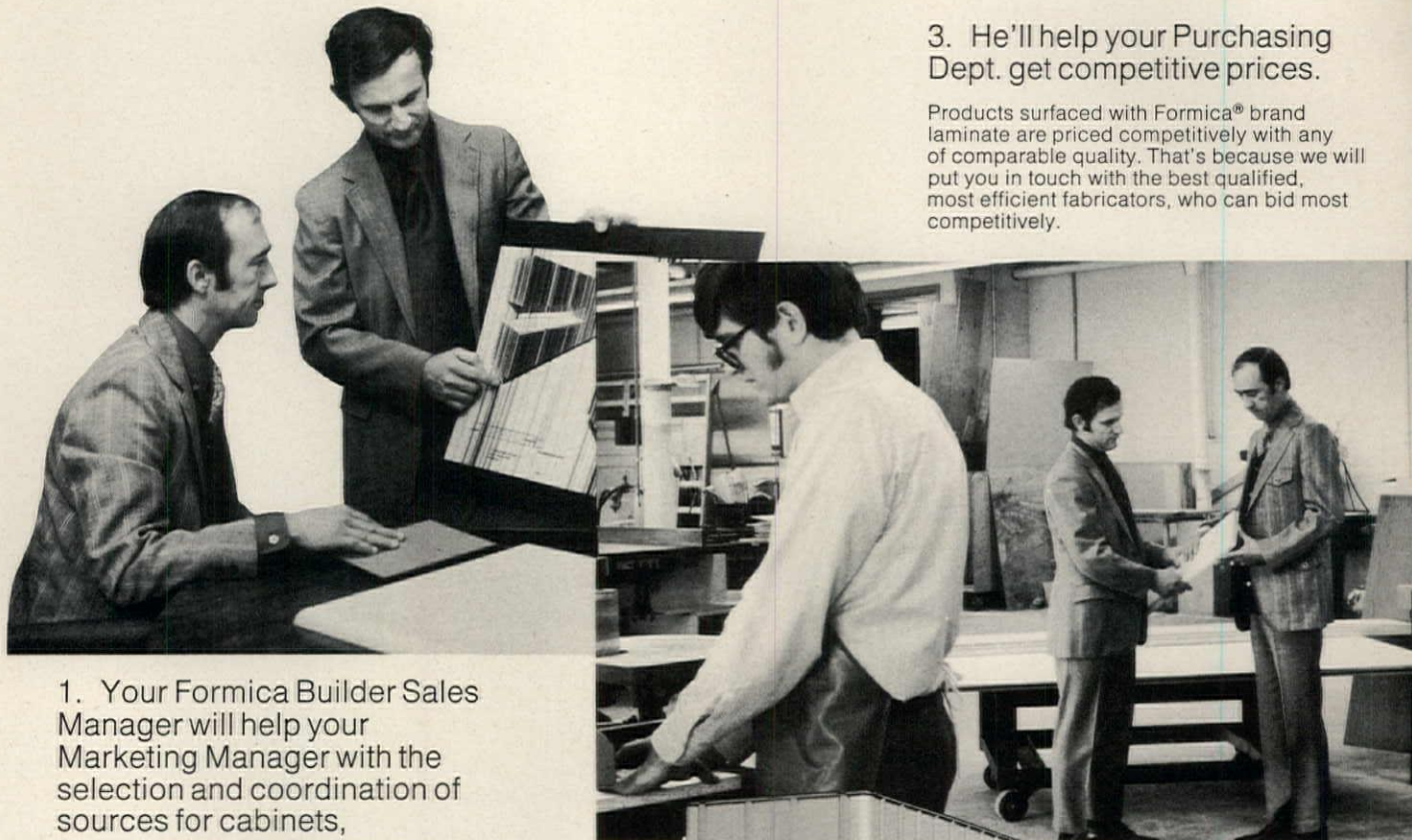
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Is California building a boom or a bust? Well, it depends on whom you ask

Is the California homebuilding industry about to take a nose-dive?

Many of the experts warn that it could happen, but meantime, builders are rolling merrily along, seemingly oblivious to the danger signs in the market place.

Two men close to the housing picture, Vice Presidents Charles McCarthy of the Bank of America and Conrad Jamison of Security Pacific National Bank, agree that builders are putting up too many units but that the problem so far is with multiples, not single-family homes.

McCarthy explains: "The absolute numbers make it appear definitely that there's been a trend toward overbuilding all year. Our latest figures indicate starts running at an annual rate of around 250,000 units—a 52% increase over 1970—and there's nothing to indicate an absorption rate that high."

Add the projected sales of 30,000 mobile homes, and this brings the total new housing supply to 280,000 units. That compares with a basic demand estimated by the bank at 160,000 to 180,000 units.

Contradictions. California's housing boom parallels a slow-down in population growth, a phenomenon in the state. One factor is a drop in in-migration. One lender remarked: "There's more than one new unit being provided for every person being added to the population of the state, including men, women, children and babies. On the face of it, that's a case of overbuilding."

But there seems to be another side of the coin. Some researchers insist that the new housing will be absorbed because of California's high rate of family and household formations. And they warn against relying too much on an analogy between the rate of population growth and new additions to the housing supply. They say that overbuilding is only spotty—mostly in urban areas—and not applicable to all types and prices of housing. They're keeping cool.

Lenders' caution. The view of the lenders is not so sanguine. They expect that housing starts must start to decline



SECURITY'S JAMISON
They warn that builders...



B OF A'S MCCARTHY
... are overdoing it a bit

in the second half of 1972 and drop sharply by 1973.

The single-family house today is selling at a relatively rapid pace, especially if it's priced under \$30,000. Above that, there's some softening in the market.

"All our builders report the market is strong for homes under \$25,000," McCarthy says. "And those down through \$17,000 and up through \$23,000, where a buyer can get in almost as cheap as he can rent with the benefits of home ownership, are selling very well."

And Jamison says the low priced market for townhouses and condominiums "has been hot as a firecracker, but of course it won't last forever. People like McKeon (McKeon Construction of Sacramento) and his imitators are selling their units like mad. So many people are jumping on that bandwagon, they won't get off until they break an axle and go into the ditch, so I think you can just take it for granted that sort of thing is going to roll in high gear unless there are excesses, and the market's gluttoned."

Middle view. Douglas Cannon, economist at the Federal Home Loan Bank of San Francisco, notes that California will be overbuilt only if builders and lenders fail to heed the warnings, and construction goes on unrestrained. And he says any fair analysis of California's housing supply must be done on a market-by-market basis.

"Right now, it is confined almost entirely to the apartment rental sector. My opinion is that much of the strength of the home buying market—and it has been very strong—has been at the expense of declining occupancy in the existing apart-

ment house market."

Rent concessions. McCarthy observes that some apartment owners are starting to offer rental concessions, an indication that their units are not being filled. Other reports indicate a number of areas where vacancy rates are running well over 8%, and sometimes as high as 15% or 20%.

Jamison says apartment vacancies have been rising for almost two years, and considering the number of starts and completions recently, the situation will worsen.

He cautions that "this inventory of people drawn out of apartments isn't unlimited. Builders in the single-family category may figure this market's going to last forever, but it may dry up. As the apartment situation deteriorates, landlords will lower rents and make all sorts of concessions, and this will offer more and more competition to the single-family home."

The red flags. Jamison amplifies it this way: "On the surface there doesn't seem to be anything in the single-family home situation that would cause concern, unless you say that as the problems in multiples get worse, they might slop over and affect the single-family market. And I think this is a reasonable expectation."

"So you might say that the red flags have been waving furiously with regard to multiples for quite some time, and the flags are just beginning to wave in the single-family category."

California's department of finance reports that, based on units authorized, overbuilding appears to be most severe in Alameda, Contra Costa, Fresno,

Los Angeles, San Diego and San Mateo counties. Other sources note that the market in Orange County is slipping a bit, too.

Cutbacks? Mrs. Pauline Sweezy, an economist for the state finance department, says the number of apartment vacancies and the number of units under construction are about equal, so next year the vacancy rate will double and "it will be too late to avoid a crunch."

Jamison guesses housing starts in 1972 will decline about 15%, which would still represent overbuilding.

"Some think starts will drop below 200,000," Jamison said. "That would be a decline of 20%. I wish that were true, because the basic market for housing is lower. But I have a sneaking suspicion it won't drop quite that far."

Policing the boom. Mrs. Sweezy assigns the responsibility for slowing construction to the lending institutions. They should refuse to lend on marginal projects where the market is overbuilt, she says, because the builder otherwise will not stop building.

"There's so much momentum in the industry—advance commitments, plans drawn—so much in the pipeline, that it's hard to reverse sharply," Jamison explains.

But McCarthy and Jamison concur that the lenders will have to police the boom—do the research, watch the market, be more selective in lending and cut off funds when starts get out of line with sales demand.

Otherwise, McCarthy says, there may indeed be cause for alarm.

"There's no way of predicting just how many family formations or demolitions there will be," McCarthy explains, "but if our figures are right, and if the ratio of about 250,000 new units to 160,000-180,000 units of demand is correct, then within the next six months we will face a problem."

"And if we end up with 50,000 to 100,000 surplus units, they're going to be a drag on our activity as much as they were in 1966."

—JENNESS KEENE
McGraw-Hill World News,
San Francisco

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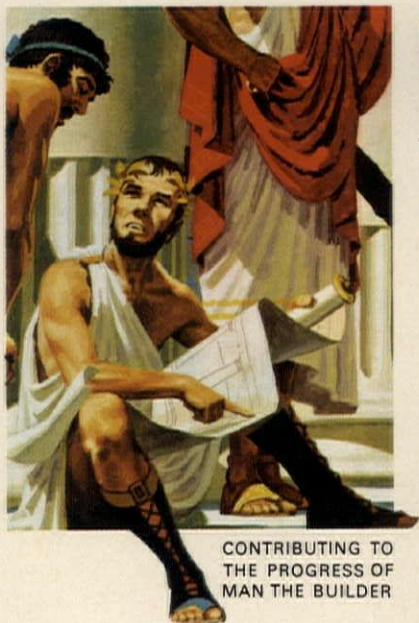
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How City Investing is building a shelter giant—and without losing its shirt

That exclusive fraternity of shelter giants will soon have another member if George Scharffenberger, president of City Investing Co., has his way.

City has just acquired Wood Bros. Homes Inc., a Denver homebuilder with 1971 sales estimated at \$40 million, and Scharffenberger feels that he now has "the ideal candidate for national, if not international, growth."

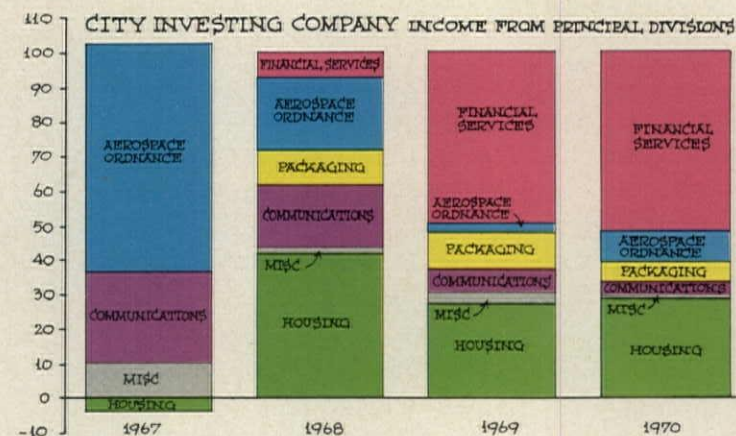
By some definitions, City already qualifies as a shelter giant. The company owns 53.6% of Guerdon Industries, one of the largest manufacturers of mobile and modular homes; 49% of General Development Corp., the Florida land developer and builder; and land-sales operations and recreational developments in California and New Mexico.

Biggest market. Now, with Guerdon's manufacturing capacity and Wood's stick-building potential under one corporate roof, Scharffenberger feels City can tackle one of the most pressing problems of the seventies—how to meet the demands of the world's housing market.

If you've never heard of this venturesome giant, you're not alone. City's officers are used to hearing a puzzled "Who?" when they mention their company in homebuilding circles, and they are in the unique position of having to establish their credentials by naming City's subsidiaries, most of which are far better known than the parent.

New start. City Investing was a staid, 62-year-old New York real estate company when it hired Scharffenberger away from Litton in 1966 to become City's president. Scharffenberger mapped out his now-famous plan to diversify by acquiring companies with revenues of at least \$20 million a year and a predictable annual growth rate of 15%—criteria that City still applies to new acquisitions.

Scharffenberger's program took City into three major areas: financial services, manufacturing, and housing and land development. In the last five years, the company has acquired Home Insurance, Southern California Savings & Loan Assn. and Westamerica Securities in the



financial services field; Rheem Manufacturing, Hayes International, Wells Marine, American Electric and World Color Press in manufacturing; and Guerdon Industries, General Development and Wood Bros. Homes in housing and land.

Growth. Revenue (including revenue from unconsolidated subsidiaries) rose from \$167.5 million in the year ended April 30, 1967, to \$1.4 billion in fiscal 1970. Income climbed from \$4.6 million to \$44.8 million. City then went to a calendar year, earning \$47.2 million on revenues of \$1.5 billion for 1970.

Housing and land development, which accounted for 0.9% (\$1.4 million) of the company's sales and a pre-tax operating deficit of \$493,000 in fiscal 1967, contributed 20% of sales (\$306.5 million) and 27% of pre-tax operating income (\$28.2 million) in calendar 1970.

In the first nine months of 1971, housing and land development sales totaled \$264 million, up from \$233 million for the first nine months of 1970. Income rose to \$25.4 million from \$20.9 million the previous year.

Optimism. At a time when most conglomerates are retrenching, and some giants, such as Boise Cascade and American Standard, are trying to sell their homebuilding divisions, City Investing is looking for new companies to acquire. Right now, it is negotiating with a major apartment builder, with Estes Bros. Construction Co., a southern Arizona homebuilder, and with Batir, S.A., one of France's largest on-site and modular builders.

In 1966, when City drew its expansion plans, the company decided that homebuilding of-

fered one of the world's largest markets, exceeding even that of the auto industry. Five years of experience with General Development and two with Guerdon have strengthened that optimism.

Future giant. "We look upon the homebuilding field as the area of our business that will grow the most," said Scharffenberger. "Of late, the traditional fragmentation of the industry has tended to change through the emergence of the Levitts, the Larwins, and the Kaufman & Broads that are either nationally or internationally large, and not fragmented. We think there is room for additional companies of that size. City is well financed and able to make the capital contribution that in turn makes possible that sort of growth."

Management as key. With the acquisition of Wood Bros., Scharffenberger feels that City is finally in position to move toward that goal. His enthusiasm stems from his belief that, with proper financial support, "Wood Bros. is the ideal candidate for national, if not international, growth."

"It has all the ingredients of management know-how to accomplish this," he explains. "The company was chosen for that reason."

Good management is the key to Scharffenberger's philosophy, and City gives the key people in acquired companies every incentive to stay. This is why it feels it will succeed, where others have failed, in attaining a happy marriage between conglomerate and homebuilder.

"If one can achieve a personal relationship and agree at the onset that there will not be a

diminution of the entrepreneurial aspect, including some of the incentives, then there's a good chance of not only continued success, but even greater success," Scharffenberger said.

Contingent payouts. This philosophy is built into City's merger agreements, most of which are contingent payout deals. In essence, the seller receives a modest down payment in cash or stock—\$10 million in stock in the case of Wood Bros. Additional shares—again \$10 million for Wood—are put in escrow. The seller gets these if he meets certain growth standards.

City is thus assured that what it pays for a company will relate to actual earnings, and the seller has a chance of receiving more for his company than he would in an outright acquisition.

Personal tie. City's method of managing is merely to add one or two City officers to the subsidiaries' boards.

"Just a mechanism to bring us into relationship," said Scharffenberger. "It means we have continuity of the company's management and merely add whatever contributions we can make as individuals."

Of course, City also keeps tabs on each subsidiary's financial health and insists on full monthly reports.

City feels that its prime function is to act as a source of funds. "We have more than adequate financial resources, and this is one of our major contributions," Scharffenberger explained.

Because of its insistence that the companies it acquires be large enough to stand on their own, City runs its \$1.5-billion business with only about 70 people—including secretaries. However, its person-to-person management style does place a limit on how far it can expand; the present thinking is that more than 10 major units would be unwieldy.

City's system seems to work, as a look at the growth record of some of its earlier shelter acquisitions shows.

General Development. City's first diversification move back in 1966 was to buy 16% of General Development Corp., the Florida land developer. City

TO PAGE 28



George Slepington Washed Here

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CIRCLE 27 ON READER SERVICE CARD

H&H JANUARY 1972 27

How City Investing is building a shelter giant... *continued*

bought another 33% a year later, bringing its holding to 49%.

General Development earned \$4 million on sales of \$41.5 million in 1966. Its 1970 income was \$17.1 million on \$120.5 million, and the 1971 figures promise to be even better. Nine-month sales were \$103.7 million, as against \$90.1 million for the same period of 1970.

Expanding S&L. Merely a savings and loan association when City acquired it in 1967, Southern California Financial Corp. has since expanded into joint venture construction, land sales, recreational development and motels. Revenue has risen from \$13.5 million in 1967 to approximately \$38 million in 1971, and profits have more than tripled.

SoCal has also taken over development of Sterling Forest, a 30-square-mile tract of woodland 30 miles from New York City that City acquired in 1954 for \$850,000. Some preliminary planning has been done, but the



Giant-builder George Scharffenberger is taking another giant step into homebuilding.

company is moving slowly on developing the site.

Guerdon. In 1969, City acquired an interest in Guerdon Industries, one of the largest manufacturers of mobile and modular homes in the country. It now owns 53.6%.

Guerdon's sales rose from \$144.9 million for the year ended April 30, 1969 to \$170.8 million for 1970 and then fell back to \$160.4 million for fiscal 1971, partly because of a time lag between closing some unprofitable plants and opening some new factories, and partly because of the recession.

The company earned \$5.3 million in fiscal 1969, \$4.9 million in 1970, and \$5 million in 1971.

Guerdon is switching to a calendar year, and its earnings for the nine months ended September 30, 1971, were \$5.1 million on \$135 million sales, up from \$3.2 million on \$122 million in the same period of 1970.

Guerdon expects to produce 26,000 mobile units in 1971 versus 22,500 in 1970, 2,400 sectional units versus 1,750 last year, and 2,500 modular units versus 3,100 a year ago. The decline in modulars is due to the completion of some overseas

modular hospital projects and to the fact that some other projects switched to sectional units.

Synergism. Back in 1970, City proposed restructuring its housing and real estate activities into one company. The plan was never implemented.

Today, Scharffenberger thinks the concept of synergism has been overplayed. He feels that City's subsidiaries can cooperate, but that each must stand on its own.

"The real synergism," he says, "is in the management relationship that starts to develop when the have-you-ever-thought-of? approach helps in developing new areas of thought."

It is just such new areas of thought that promise to lead City's builders into new sections of the country, and even abroad, to fulfill Scharffenberger's dream of supplying what he sees as the largest market of the seventies—the world's housing needs.

—NATALIE GERARDI



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CIRCLE 29 ON READER SERVICE CARD

Barriers down: the battle to modernize the nation's building codes begins to pay off

After decades of talk and dozens of reports from commissions and committees assailing restrictive building codes that raise the cost of housing by banning innovative materials and labor-saving techniques, the Republican Administration and the Democratic Congress are responding to the pressures from change.

Most immediately, Secretary George Romney of the Department of Housing and Urban Development has put the financial screws on San Francisco—and other big cities—to adopt a modern building code that permits the use of plastic drainage pipe allowed in thousands of other jurisdictions—or else (News, Dec.).

The or else is HUD's threat to cut off \$19 million in renewal grants that San Francisco would otherwise get. A deadline was set for December 31 for similar code requirements in St. Louis, Chicago, Tucson, Philadelphia, Los Angeles, New Orleans, Jacksonville and Richmond, Va.

Institute. In Congress, hearings have been completed on bipartisan legislation to create a new National Institute of Building Sciences—with federal funds and the assignment of straightening out the building code tangle (News, Oct.). There is an excellent chance that the proposal will come to a vote this year as part of a major housing bill.

The project has strong support from virtually all segments of the housing industry, and some—but not all—government agencies. Otis M. Mader, an Alcoa executive, told Congress that the measure would "strike at the heart of what is commonly called the building code problem."

Legal backing. Romney and an assistant secretary, Samuel Jackson, are exercising for the first time the legal authority that has been available, but never used, since the Housing Act of 1954 was adopted. That law says that each city, to be eligible for a share of HUD's urban renewal grants, must submit a workable program or plan for ending slums and urban blight—and such a workable program must include an up-to-date building code.



HUD'S FINGER . . .
They're leading drive . . .

Romney and his aides have specifically ruled out the 1955 edition of the National Plumbing Code, which bars plastic drain pipe. Officials at HUD are reviewing and may soon approve a new plumbing code proposed last March by the National Association of Plumbing, Heating, and Cooling Contractors.

New markets. There are other materials involved in these disputes—plastic insulated electrical cable, for example. But Ray Durazo of the Plastic Pipe Institute says HUD's actions have opened up a market for the industry's product "in places where we didn't have a chance before." Durazo estimates that about 2,000 jurisdictions now have codes permitting plastic drainage pipe, representing about 60% of the potential national market.

The HUD attack on outdated codes is the most dramatic of a number of developments that make it plain that local code administrators—and officials of the model building codes on which the local codes are based—are being forced to yield the virtually absolute control they have had over their own turf.

Court action. One model code organization and a number of cities subscribing to its code have been made the defendants in a \$20-million antitrust suit brought by the ABS Institute, which has as members the Celanese Corp. and other plastic pipe producers. The plaintiffs claim that the Southern Building Code Congress (SBCC) has illegally restrained the market for their product by limiting its use to one- and two-family dwellings.

Local codes are being limited by the action of legislatures from California to Connecticut in passing preemptive statewide codes. The local rules are also



. . . AND JACKSON
. . . for code reforms

giving way to state laws that allow factory-built housing that is approved by the state to be erected anywhere in that state, regardless of conflict with local code provisions. Such laws increase the pressure on local code officials to bring their own codes into conformity.

"If the state requires that factory-built housing have smoke detectors as safety equipment, home buyers will begin to ask why they aren't required in the house built by a conventional stick builder," says an industry representative. "If the factory-built house can use less expensive plastic drain pipe, the local stick builder will put on the pressure to get the code changed so he can use it too."

Also, adoption of a statewide code for factory-built housing immediately generates demands for uniformity between state codes—between New York and Connecticut, for example—so that entrepreneurs can market across state lines.

Breakthrough's role. Secretary Romney has used Operation Breakthrough to exert pressure on state and local code officials. For one thing, he's displaying 2,800 factory-built housing prototypes of 22 producers on sites in nine states. They are to become showpieces of up-to-date technology—a great deal of which isn't permitted by local codes.

More important, Romney and another assistant secretary, Harold B. Finger, who heads HUD's research and technology program, contracted with the building research division of the National Bureau of Standards to create an industry-shaking set of performance guide criteria—performance standards—by which Finger and his aides can judge the safety and livability of the Breakthrough units and their component parts.

Definitions. The guide criteria aren't a building code, even though a couple of states have written them into state laws.

"There's always a lot of confusion between codes and standards," says Douglas Whitlock, long-time Washington representative of the Clay Products Industry and frequent spokesman for other building materials producers. "Codes are laws. Standards are piles of technology which may or may not get written into law."

Breakthrough's four volumes of guide criteria spell out in standard tests with numbers the structural strength and flame resistance of an interior wall of a house, for example—without specifying, as many specification codes still do, that the wall must be made of a certain type of wallboard or plaster on 2-by-4 studs on 24-inch centers.

Controversy. The guide criteria are highly controversial and have been bitterly fought by the building materials producers, particularly.

"Harry Finger bought a lemon when the National Bureau of Standards gave him the guide criteria," says one industry representative.

Whitlock agrees, but adds: "In all fairness, this is the first effort I know of anywhere to write a full set of performance criteria (for a house). Those documents are loose in the world, now. They aren't going to go away."

The criteria consist of a volume of standards each for high-rise apartments, low-rise apartments, townhouses and single-family detached houses. As Finger says, "They cover all aspects of construction"—safety, habitability and durability. Arthur Newburg, one of Finger's top aides, describes the criteria as "one of the finest technical throw-offs" of the \$60-million Breakthrough program.

Objections. Whatever else they are, the criteria became a pain to many of the companies who won the competition for a Breakthrough contract. The criteria also stirred fears that officials at the National Bureau of Standards were using the opportunity given them by the Breakthrough contracts to em-

TO PAGE 36

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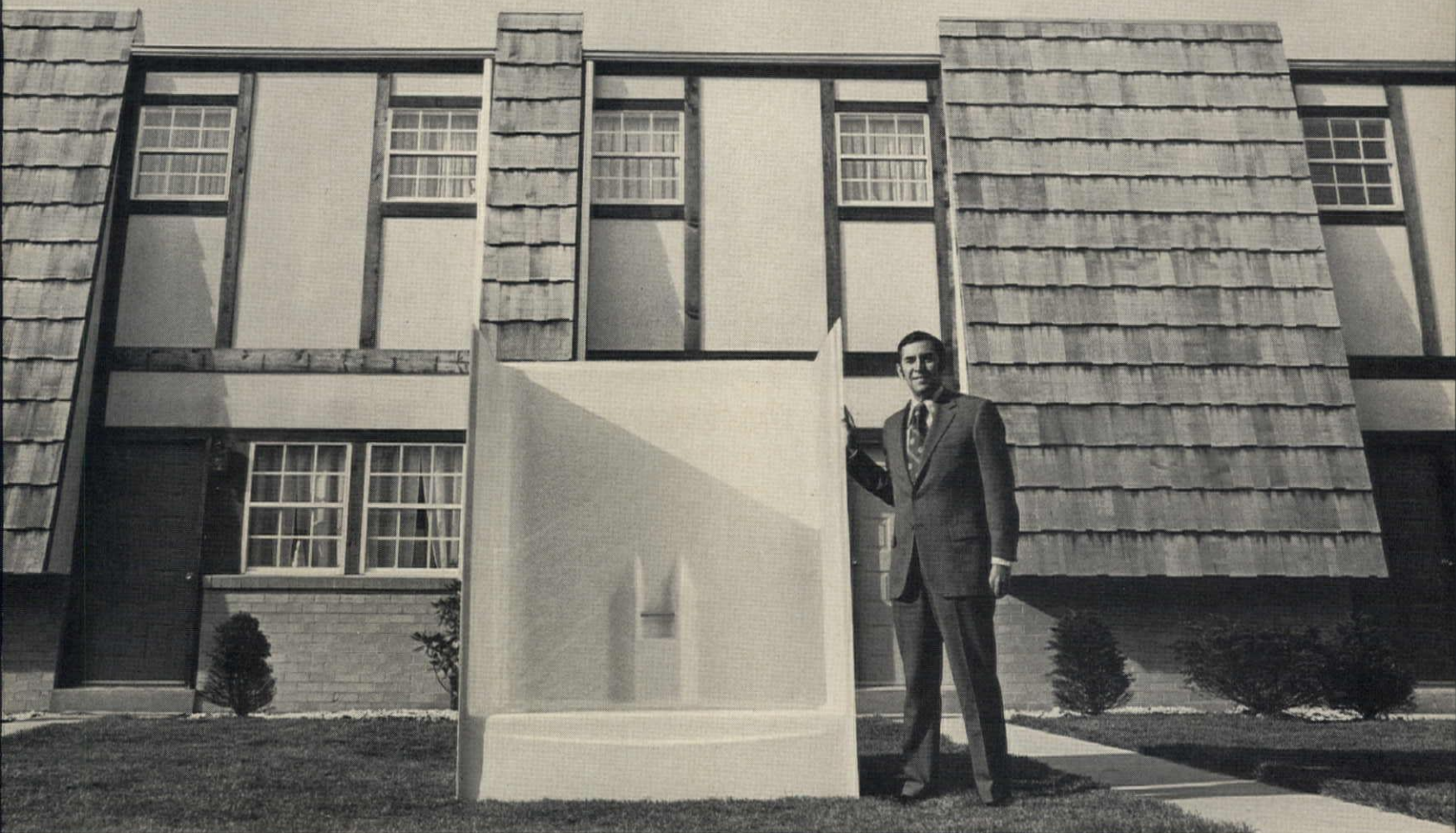


Apartments shown on preceding pages are:

1 & 2—Cheesman Garden Apartment, Denver, Colorado. Architects: Slater, Small, & Spenst, Denver, Colorado
3—Capstone Cluster Condominium, Salt Lake City, Utah. Designed by: John W. New and Harvey Dalton.
4 & 5—Garden Avenue Townhouse Apartments; Myerstown, Pennsylvania. Builder/Developer: Eugene Landis

6 & 7—Hampton Mews Apartments, East Hampton, Long Island, N.Y. Developer/Builders: Brett-Wallace Associates, New York
8—North 40 Apartments, Great Falls, Montana. Architects: Korell & Iversen, Great Falls
9 & 10—The Chaumont Apartments, Wichita, Kansas. Architects: Calvin, Perkins & Jones/p. a., Wichita

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CIRCLE 35 ON READER SERVICE CARD

H&H JANUARY 1972 35

Barriers down: battle to modernize building codes begins to pay off . . . continued

bark on a crash program for a national building code with NBS in the driver's seat.

Industry representatives complained that the criteria were put together without consultation with private industry and so actually tend to raise the cost of housing by laying down unrealistic requirements in low- or moderate-priced dwellings. Newburg replies: "Good current practice (in the construction industry) should meet the criteria; marginal current practice may not."

Costs. At the Bureau of Standards, V.E. Gray, head of the Breakthrough testing and evaluation unit that wrote the criteria and is now applying them to the Breakthrough prototypes, concedes: "In certain cases we probably did raise costs." He notes, for example, that some communities permit use of 3/4-inch plywood, that few codes have standards aimed at holding down interior noise as the Breakthrough criteria do and that one company claimed the criteria boosted costs of exterior doors by \$20 each. Gray's riposte:

"I wonder if, on its regular houses, that company was putting lower-cost interior doors in exterior doorways."

One report that circulated in Washington suggested that two Breakthrough producers had told HUD that the criteria would raise the costs of their prototypes by \$1,300 to \$1,500 over their commercial-market units. But Charles L. Biederman, president of Levitt Building Systems, said production under the criteria "is no more expensive than complying with any other major building code."

However, NBS officials confirm that all 22 of the house producers had to be given waivers on one or more of the roughly 400 individual standards wrapped into the criteria. The waivers are approved variations, allowing the producer to go ahead with the prototype even though it doesn't meet the letter of the Breakthrough requirements.

Power struggle. On the record it's clear that NBS—with the \$2 million of Breakthrough contracts and its own congressional appropriations—wants to become the national authority

MOVING TOWARD STATEWIDE CODES

- (1) State has statewide building code
- (2) Has factory-built housing code
- (3) Has code for mobile homes
- (4) Legislature is considering state codes

	(1)	(2)	(3)	(4)		(1)	(2)	(3)	(4)
Arizona				x	Mississippi	x	x		
California	x	x			Missouri				x
Colorado	x	x			Montana	x			
Connecticut	x	x			New Jersey	x			
Florida	x		x		New Mexico	x			
Georgia	x	x			New York	x	x		
Hawaii	x				North Car.	x	x	x	
Idaho				x	Ohio	x			x
Illinois				x	Oklahoma	x			
Indiana	x		x		Oregon	x			x
Iowa				x	Penn.				x
Maine		x			Rhode Is.				x
Maryland	x	x	x		South Car.	x	x		
Massachusetts				x	Texas				x
Michigan				x	Virginia	x	x		
Minnesota	x	x	x						

on code standards and uniformity. Officials of NBS have been working through the relatively new National Conference of States on Building Codes and Standards—NCSBCS, or NIX-BIX. The organization's secretary, Eugene Rowland, has offices at NBS headquarters in Gaithersburg, Md., just outside Washington.

There is no single prestigious national authority on building codes and standards now—but industry and government officials believe there will be, and sooner rather than later. "It's one of those ideas whose time has come," says a congressional staffer.

One side. The National Bureau of Standards wants the role and, on the agency's behalf, Secretary of Commerce Maurice Stans sought \$1.1 million from Congress (and got \$800,000) to finance the work that helps to enhance the NBS claim.

The funds would be used, Stans told the House Appropriations Committee, to produce by the end of 1972 "criteria and procedures to evaluate and permit accreditation of laboratories which will test factory-built houses; model legislation for use by states on building construction regulation (Stans shunned the word code), and an evaluation procedure for measuring the performance of building systems and compon-

ents of such systems."

The role of NCSBCS, representing the states, Stans said, "is to develop an updated and coordinated system of compatible building codes and standards, so that industrialized methods and materials can be used in construction throughout the country."

And the other. To counter the NBS campaign, a broad coalition from the building industry has gotten behind the proposal—which got its last big boost from the Douglas commission—to create a new National Institute of Building Sciences (NIBS). The institute would receive federal funds and direction from Congress to bring uniformity and coordination to the chaotic code situation.

The institute would be initiated with the help of the National Academy of Sciences, National Academy of Engineering and the National Research Council, and would be governed by 15 to 21 directors appointed at the outset by the president. These directors would be reasonably representative of various parts of the building industry, design professions, government, labor and consumers.

Builders' ranks. Favoring the bill sponsored by Senator Jacob Javits (R., N.Y.) and Representative William Moorehead (D., Pa.) are such groups as the National Association of Home

Builders, the American Institute of Architects, the National Association of Building Manufacturers, the Associated General Contractors and spokesmen for most of the producers of building materials and components.

Industry spokesmen want the new NIBS to be a non-government institute comparable to the National Academy of Sciences, which would be the recognized standard-setting body. It would work through existing agencies, including the NBS, but without authority to make its standards mandatory.

In effect, those favoring this concept see states and localities adopting NIBS standards under pressure from competing entrepreneurs, public officials and public interest groups—and from Congress, which would supply funds.

President's stand. The Nixon Administration has taken no definitive position on the bill, but industry lobbyists claim that both Romney and Stans have now told the White House they favor creation of the institute, more or less as laid out in the Javits-Moorehead bill.

Despite industry's support, the bill that's reported out of the House and Senate Banking Committees may be substantially changed. Committee members will soon meet privately to mark up the measure, based on the testimony they have heard and on their own view of what the institute should be and how much power it should have.

These lawmakers will almost certainly ask whether, for instance, the institute could actually do the job without having its relationship with other federal, state and local agencies spelled out more explicitly and whether it should not have some powers of enforcement.

As a report to the committee from a Library of Congress expert pointed out, encouragement of voluntary cooperation "could become empty words without a clear mandate from Congress. Recent history of administrative agencies makes it clear that industry can regulate the regulator." —DON LOOMIS

McGraw-Hill News,
Washington



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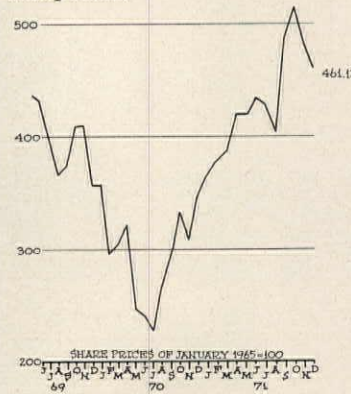
NEWS/FINANCE

Stocks off sharply

Virtually all housing stocks fell hard in the month ended Dec. 1, led down by the real estate investment trusts.

The debacle in REIT shares began Nov. 18 after Continental Mortgage Investors disclosed that earnings would be lower in the next two quarters. REIT shares lost \$670 million in value in November trading.

HOUSE & HOME's share index of 25 housing issues fell to 461.13 from 482.79. Here's the composite:



How top 5 did in each group:

	Dec.'70	Nov.'71	Dec.'71
Builders	422	557	526
Land develop.	458	551	519
Mortgage cos.	613	862	812
Mobile homes	725	1,285	1,280
S&Ls	162	202	190

Company	Dec. 1 Bid/Close	Chng. Prev. Month
BUILDING		
Alodex	6 3/4	- 1 3/4
AVCO Community Devel. ^b	5 1/2	+ 3/8
American Urban Corp.	4 1/4	- 3/4
Behring Corp. ^b	8 1/2	- 1
Bramalea Cons. (Can.)	2 1/2	- 1/8
Building Systems Inc.	21 1/4	- 4 1/4
Capital Divers. (Can.) ^a	54	+ .09
Centex Corp.	27 1/2	- 1 1/2
Christiana Cos. ^b	6 3/4	- 1 1/2
Cons. Bldg. (Can.)	1.55	+ .15
Dev. Corp. Amer. ^b	28 1/2	- 1
Dev. Int. Corp.	9 1/2	- 2 1/2
Edwards Indus.	7 1/2	- 1 1/2
First Nat. Rlty. ^b	1 1/4	- 1/4
FPA Corp.	8 3/4	- 1 1/2
Frouge Corp.	3	- 1/2
General Builders^b	5 1/4	- 3/4
Gil Development	7 1/2	+ 1/4
Hallcraft Homes	42 1/2	- 1 1/2
Hoffman Rosner Corp.	12	- 3/8
Hunt Building Marts	8 1/2	- 1/4
Kaufman & Broad^a	38 1/2	- 1 1/2
Key Co. ^b	11 1/2	- 1
Leisure Technology ^b	23	+ 1/4
McCarthy Co. ^b	5 1/4	+ 3/8
McGrath Corp. ^d	6
McKeon Const.	23 1/4
H. Miller & Sons	13 1/4	- 1
National Environment (Sproul Homes)	2 1/4	+ 1/4
Presidential Realty And	11 1/2	- 3/8
Presley Development ^b	54	- 3 1/4
Pulte Home Corp.	14 1/2	- 1 1/2
Robino-Ladd Co.	15 1/2	- 1 1/2
Ryan Homes ^b	75 1/2	- 1 1/2
Shapell Industries ^c	27 1/2	- 3 1/4
Shelter Corp. of America	19 1/2	- 1 1/2
Standard Pacific ^b	37 1/2	- 1
3-H Building Corp.	11 1/2	- 3/4
U.S. Financial ^a	38 1/4	+ 1 1/2
U.S. Home Corp. ^c	26 1/2	- 4 1/2
Jim Walter^a	35 1/2	- 3 1/2
Washington Homes	22	- 3 1/4
Del E. Webb^a	7	- 1/4
Western Orbis ^b	4	+ 1/8
Wyandotte Indus. ^b (First Hartford)	4 1/2	- 1/4
SAVINGS & LOAN ASSNS.		
American Fin.	27 1/4	- 1 1/4
Calif. Fin. ^a	7 3/4	- 1 1/2
Empire Fin. ^b	12 3/4	- 1 1/2
Far West Fin.^a	11 1/2	- 3/8
Fin. Corp. of Santa Barb. ^b	27 1/2	- 1/4
Fin. Fed.^a	7

Company	Dec. 1 Bid/Close	Chng. Prev. Month
First Char. Fin.^a	27 3/4	- 3/8
First Lincoln Fin.	7 1/4	- 1/4
First S&L Shares ^b	19 3/4	- 1 1/4
First Surety	3 1/2	- 1/2
First West Fin.	1 1/2
Gibraltar Fin. ^a	23 3/4	- 2 1/4
Great West Fin.^a	25	- 4 1/4
Hawthorne Fin.	14 3/4	- 1
Imperial Corp.^a	16 1/2
Trans-Coast Inv.	4 1/2	- 1/8
Trans World Fin. ^a	11 3/4	- 2
Union Fin. nd	11	- 3/4
Union Fin. Cal. nd	10 1/2
Wesco Fin. ^a	15 3/4	- 2

MORTGAGE INV. TRUSTS

Alison Mtg. ^b	27 1/2	+ 1/8
American Century ^b	26 1/4	- 1 1/2
Alico Mtg. ^b	22	- 2
BankAmerica Rlty.	26 1/2	- 2 1/2
Bennett Mtg. Tr.	27 1/2	- 3 1/2
Beneficial Standard Mtg. ^b	23 1/2	- 2 1/4
Cameron Brown	31	- 2 1/2
Capital Mortgage SBI	29 3/4	- 1 1/4
Chase Manhattan	53 1/2	+ 1 1/4
CI Mortgage Group ^a	22 3/4	- 3 1/2
Citizens Mtg. ^b	13 1/4	- 1 1/2
Citizens & So. Rlty.	34 1/4	- 2 1/2
Cleve Trust Rlty. Investors	19 1/2	- 2
Colwell Mtg. Trust ^b	27 1/2	- 1 1/4
Conn. General ^a	30	- 2 1/2
Cont. Mtg. Investors^a	14	- 5
Cousins Mtg. & Eq. Inv. ^b	24 1/4	- 1 1/2
Diversified Mtg. Inv. ^a	28 1/2	- 3 1/4
Equitable Life	27 1/2	- 1 1/2
Fidco Growth Inv. ^b	33 1/2	- 3
Fidelity Mtg. ^b	22 1/2	- 1 1/2
First Memphis Realty	23 3/4	- 1 1/2
First of Denver ^b	18 1/2	- 2 1/2
First Pennsylvania	25 1/2	- 1 1/4
Franklin Realty ^b	9 1/2	- 1/2
Fraser Mtg.	26	- 3 1/2
Galbreath Mtg.	26 1/2	- 1 1/2
Great Amer. Mtg.	29 1/2	- 4 1/2
Guardian Mtg. ^b	41 1/2	- 4 1/2
Gulf Mtg. & Rlty. ^b	18 1/2	- 1 1/2
Heitman Mtg. Investors	14	- 1
Hubbard R. E. Investments	21 3/4	- 1 1/2
Larwin Mtg. ^b	28 1/2	- 4 1/2
Lincoln Mtg.	8 1/2	- 1/8
Mass Mutual Mtg. & Realty ^a	28	+ 1/4
Median Mtg. Investors	14 1/2	- 1 1/2
Medical Mtg.	29	- 2 1/4
Mony Mtg. Inv. ^a	13 1/4	- 1
Mortgage Trust of Amer. ^a	24 1/2	- 2 1/2
North Amer. Mtg. Inv. ^a	31 1/2	- 3 1/2
Northwestern Mutual Life Mtg. & Rlty. ^a	24 1/2	- 1 1/2
PNB Mtg. & Rlty. Investors ^b	26 1/2	- 1 1/4
Palomar Mtg. Inv. ^a	15 1/2	- 2 1/2
Penn. R. E. Inv. Tr. ^b	11 1/2	- 1/2
Realty Income Tr. ^b	15 1/2	+ 1/2
Republic Mtg. ^b	18 1/2	- 2 1/4
B. F. Saul, R.E.I.T.	18 1/4	- 4
Security Mtg. Investors ^b	17 1/2	- 2 1/2
Stadium Realty Tr.	10 1/2	+ 1
State Mutual SBI ^b	22 1/2	- 1 1/2
Sutro Mtg. ^b	20	- 2 1/2
UnionAmerica Mtg. & Eq. ^b	29 1/2	- 2 1/2
U.S. Realty Invest. ^b	17 1/2	- 1
Wachovia Realty Inc. ^c	32 1/2	- 2 1/2
Wells Fargo Mtg.	21 1/2	- 1 1/2

MORTGAGE BANKERS

Charter Co. ^b	29 1/2	- 3/4
CMI Investment Corp. ^b	44 1/2	- 1 1/4
Colwell^a	19 1/2	- 1 1/4
Cont. Illinois Rlty. ^a	32 1/2	- 4 1/4
Excel Investment	8 1/2	- 1 1/2
Fed. Nat. Mtg. Assn. ^a	77	- 5 1/2
First Mtg. Ins. Co.	12 1/2	- 1 1/2
First Mtg. Investors^a	25 1/4	- 6
Lomas & Net. Fin.	18 1/2	- 3 1/2
MGIC Invest Corp.^a	77 1/2	+ 2 1/2
Midwestern Fin. ^b	18 1/4	- 1 1/2
Mtg. Associates	30	- 1 1/2
Palomar Fin. ^b	10 1/4	- 1 1/2
UPI Corp. ^b (United Imp. & Inv.)	17 1/2	- 1 1/2

LAND DEVELOPERS

All-State Properties	7 1/2	- 5/8
American Land	.02	- .03
AMREP Corp.^b	22 1/2	- 2 1/4
Arvida Corp.	9 1/2	- 1
Atlantic Imp.	3 1/2	- 1
Canaveral Int. ^b	4 1/2	- 1 1/2
Cavanagh Communities	6	- 3/4
Crawford Corp.	4 1/2	- 1/4
Deltona Corp.^b	27 1/2	- 1 1/2
Disc. Inc.	2 1/2	- 1/8
Don the Beachcomber Ent. (Garden Land)	4 3/4	+ 1 1/2
Gen. Development^a	25	- 3 1/4
Gulf State Land and Ind. ^b	3 1/2	- 1/8
Holly Corp.^b	1 1/4	- 1/4
Horizon Corp.	47 1/4	+ 2
Land Resources	3 1/2	- 3/8
Major Realty	9 1/2	+ 1
McCulloch Oil^b	27 1/2
Sol. Rlty. & Util. nd	4 1/2	- 3/8

MOBILE HOMES & MODULES

Conchemco ^b	17 1/2
Champion Home Bldrs.^b	37 1/4	+ 3 1/2
Commodore Corp. ^b	13 1/4	- 1 1/2
De Rose Industries ^b	7 1/2	- 1 1/2
Fleetwood^a	30 3/4

Company	Dec. 1 Bid/Close	Chng. Prev. Month	Company	Dec. 1 Bid/Close	Chng. Prev. Month
Golden West Mobile Homes ^b	15 1/2	- 4 1/4	Permaneer Corp. ^b	8 3/4	- 1 1/2
*Guerdon ^a	29 3/4	- 1/4	Philips Industries ^c	20 3/4	+ 1/4
Mobile Americana	8 3/4	+ 3/8	Pioneer Plastics ^b	9 1/4	- 1/4
Mobile Home Ind. ^b	27 3/8	+ 1 3/8	Ply Gem Industries ^b	6 1/4	- 7/8
Monarch Ind.	5 1/2	- 2 3/8	Potlatch Forests ^c	22 1/2	- 3 3/4
*Redman Indus. ^c	24 1/4	- 1/2	Pratt & Lambert ^b	15 1/2	- 1 1/8
Rex-Noreco ^b	14 1/2	- 1 7/8	Reliance Universal	18 1/4	+ 1 3/4
*Skyline ^a	50	- 1/4	Republic Gypsum	9	- 1 1/4
Town & Country Mobile ^b	10	- 1/2	Robertson (H. H.) ^c	19	- 2 1/2
Triangle Mobile	9 3/4	- 1/2	Schott Indust.	4 7/8	- 1 1/8
Zimmer Homes ^b	15 1/2	- 1/2	Scotty's Home Builders ^b	40 1/4	+ 4
Albee Homes	3	- 1/8	Sherwin Williams ^c	42 1/2	- 2 3/8
AABCO Industries	1	- 1/8	Slater Electric A	4 7/8	- 1
Brigadier Indust.	4 1/4	+ 1/4	Southwest Forest Indus. ^b	14 3/4	- 5/8
Environmental Systems	9 1/2	- 2	Standard Brands Paint ^c	75	+ 1
Hodgson Houses	6 1/2	+ 1/2	Supercrete Ltd. ^b	2 1/2	- 1/4
Liberty Homes	18 3/8	- 3/8	U.S. Ceramic Tile ^{hd}	6 1/8	- 5/8
Modular Dynamics	9 1/2	- 1 1/8	U.S. Gypsum ^c	61 1/2	- 4
Modular Housing Systems	14	+ 1 7/8	Valspar Corp. ^b	4 3/8	- 3/8
National Homes ^c	30 7/8	- 1 5/8	Vulcan Material ^b	23 3/4	+ 1 1/4
Nationwide Homes ^b	11 1/2	- 1 1/8	Warner Co. ^{cd}	43 3/8	- 1 1/4
Shelter Resources ^b	9	- 1/4	APPLIANCES		
Stirling Homex	17 1/2	- 1	Bernz-O-Matic	8 1/8	- 1
Swift Industries	3 3/8	- 1/4	Hobart Manufacturing ^c	58 1/2	- 3 7/8
DIVERSIFIED COMPANIES			Hoover Co.	55	+ 6 1/4
Amer. Cyanamid ^d	30 1/8	- 1/8	Magic Chef ^c	40 3/8	+ 7/8
Amer. Standard (Wm. Lyon)	12 1/2	- 1/2	Maytag Co. ^c	40	+ 1 3/8
AVCO Corp. ^b	14 3/8	- 1/8	Tappan Co. ^c	24 7/8	+ 1/8
Bethlehem Steel ^b	26 1/2	+ 2 3/8	Welbilt Corp. ^c	3	- 3/8
Boise Cascade ^c	16 1/2	+ 1/4	Whirlpool Corp. ^c	91	+ 1 1/2
CNA Financial (Larwin) ^c	24	+ 3/4	CEMENT PRODUCERS		
Castle & Cooke (Oceanic Prop.)	14 3/8	- 1 3/8	Alpha Portland ^c	14 1/4	+ 1/2
CBS ^c (Klingbell)	45 1/4	+ 3/8	American Cement ^c	6 1/4	- 3/4
Christiana Securities	128 1/2	+ 5	California Portland ^{hd}	31 1/4	- 1 3/4
Citizens Financial ^b	11 1/4	- 7/8	General Portland ^d	25 1/2	- 2 1/8
City Investing ^c (Sterling Forest)	18 3/8	+ 1/2	Giant Portland ^c	13 1/2	- 1/8
Corning Glass ^c	185	+ 9 1/4	Ideal Basic Indus. ^c	16	- 3/8
Cousins Properties	24	- 1	Kaiser Cement & Gyp. ^c	13 3/8	- 1
Dreyfus Corp. ^c (Bert Smokler)	24 3/4	+ 3/8	Lehigh Portland ^c	13 1/2	- 5/8
Evans Products ^c	50 7/8	+ 2 1/8	Lone Star ^c	23 3/8	+ 1 3/8
Ferro Corp. ^c	29 1/2	+ 3/8	Louisville Cement ^b	23 3/4	- 2 3/4
First Gen. Resources	3 1/2	- 1/4	Marquette Cement ^c	10 1/2	+ 1/4
Fischback & More ^c	38 3/8	+ 7/8	Martin Marietta ^c	18	+ 1/2
Forest City Ent. ^b	22 3/4	- 1 3/8	Medusa Portland ^c	35 1/4	+ 1/2
Fruehauf Corp. ^c	35	+ 1/2	Missouri Portland ^c	26 1/2	- 2 3/8
Fuqua Indus. ^c	18 3/8	+ 1/4	Penn Dixie Cement ^c	8 1/2	+ 1/8
Georgia Pacific ^c	45	- 1 3/8	Puerto Rican cement ^c	11 1/2	+ 1 3/8
Glasrock Products ^c	5 1/2	- 5/8	CONSTRUCTION MACHINERY		
Great Southwest Corp.	1 1/2	- 1/4	American Hoist & Derrick ^c	10 3/4	- 1
Gulf Oil (Gulf Reston) ^c	26 1/2	- 3/8	Caterpillar Tractor	43 3/8	- 1 3/4
INA Corp. (M. J. Brock) ^c	51 3/8	+ 1 1/4	Clark Equipment ^c	43 1/2	+ 2 1/4
Inland Steel ^b (Scholz)	27 3/8	- 1/4	Harnischfeger Corp. ^c	23 3/8	+ 1 3/4
International Basic Econ.	5 7/8	- 7/8	Kaiser Industries ^b	8	+ 1/8
International Paper ^c	32 1/2	+ 1/2	Deere & Co. ^c	44 3/8	+ 2 1/8
Internat. Tel. & Tel. ^c (Levit)	54 3/4	+ 3 3/4	Pettibone	12 1/4	- 1 3/8
Investors Funding ^b	9	- 1 1/8	HEATING-AIR CONDITIONING		
Killeam Properties ^c	13 1/4	- 2 1/2	Borg Warner ^c	27 7/8	+ 2 3/8
Leroy Corp.	2 1/2	- 1/2	Buffalo Forge ^c	34 1/2	- 2
Monogram Industries ^c	11 1/2	- 1/2	Carrier Corp. ^c	43	+ 2 3/4
Occidental Petroleum ^c (Occ. Pet. Land & Dev.)	11 1/2	- 1 3/4	Coleman Co. ^b	25 1/2	+ 2 1/4
Pacific Coast Prop. ^b	3 1/8	- 1/4	Copeland Refrig. ^c	68	+ 1/4
Parini Corp. ^b	5	- 1/4	Crane ^c	41 1/2	+ 1/8
Philip Morris ^c	61 3/8	+ 1 1/2	Culligan ^c	15 1/2	+ 1
Prosher Corp.	2 3/4	- 1	Fedders ^c	41 1/4	+ 3/8
Rouse Co.	26	- 1/2	Intertherm Inc.	8 1/2	- 5/8
Santa Anita Consol. (Robt. H. Grant Corp.)	25 1/4	- 1/2	Masco Corp. ^{cd}	35 1/4	+ 7/8
Sayre & Fisher ^{hd}	2 3/8	- 1/2	Tecumseh	148	- 1
Tishman Realty ^c	18 1/2	+ 1 1/8	Trane Co. ^c	71 3/4	+ 1 1/4
Titan Group Inc.	2 7/8	- 1/4	HOME FURNISHINGS		
UGI Corp. ^c	20	+ 1/8	American Furniture Co.	13 3/8	+ 5/8
Unis Bldg. ^c	15 1/2	+ 1	American Seating ^c	19 3/4	+ 1/4
U.S. Ply-Champion ^c (Lowers & Cooke)	29 1/4	- 2 3/8	Armstrong Cork Co. ^c	41	+ 1 1/2
Weil McLain ^b	23 3/4	- 1/4	Bassett Furniture	50 1/2	- 2 1/4
Westinghouse ^c (Coral Ridge Prop.)	86 1/2	- 1 1/2	Bath Industries ^c	46 1/4	+ 1 3/4
Weyerhaeuser ^c (Weyer. Real Est. Co.)	45 1/2	- 2 1/4	Baumritter Corp.	37 3/4	+ 1 1/2
Whittaker (Vector Corp.) ^c	9 1/4	- 1 1/8	General Fireproofing ^c	7 3/4	- 1/2
Wickes Corp. ^c	46	- 1 1/8	General Housewares	9 1/4	- 1/2
BUILDING PRODUCTS			Giffen Industries	3 3/8	+ 1/4
Alcan Aluminum ^c (Alcan Design Homes)	16 3/8	- 7/8	Hamilton Cosco ^b	6 3/4	+ 3/8
Ameron ^c	13 3/8	- 1 3/4	Henredon Furniture	43 1/2	+ 1 1/4
Automated Bldg. Comp. ^b	12 3/8	- 7/8	Hickory Furniture	11 1/2	+ 1/8
Bird & Son	77 1/2	+ 2	Kroehler Mfg. ^c	28 1/2	+ 5 3/8
Brooks Scanlon	18 1/4	- 2	Levitz Furniture ^b	103 1/2	+ 3 3/8
Ceco Corp. ^c	27 3/4	+ 1/4	Lightolier ^c	9 1/4	- 1
Certain-teed ^c	43 3/4	- 1/2	Ludlow Corp. ^c	26 1/4	- 3/4
Clow	21 1/8	- 5/8	Mohasco Industries ^c	40	+ 4
Colonial Sand ^b	8 1/2	- 1 1/2	Ozite Corp.	11 1/4	- 3/4
Consolidated Rock	25	- 1/2	Simmons Co. ^c	33	- 1 1/4
Flintkote Co. ^c	29	- 2	TOOLS & HARDWARE		
Florida Steel ^c	27 3/8	+ 1 5/8	Black & Decker ^c	70 7/8	- 1/4
GAF Corp. ^c	22	+ 1 5/8	Bliss & Laughlin ^c	18	+ 1 1/2
Glen Gery Corp. ^b	7	- 1/2	Emhart Corp. ^c	32 1/4	+ 7/8
Interpace ^c	30 3/8	+ 2 7/8	Kliklok Corp. ^b	9 1/4	- 1/2
Johns Manville ^c	37 3/8	- 2 3/8	Scovill Mfg. ^c	49 3/8	+ 3/8
Keene Corp.	7 7/8	- 1/2	Skil Corp. ^c	21 3/8	+ 1 7/8
Kirsch Co. ^{hd}	36 3/8	- 5/8	Snap-On-Tools	81	+ 12 1/2
Knapch & Vogt	46	- 1/2	Stanley Works ^c	32 3/4	+ 3 1/4
LCA Corp. ^{hd}	57 1/4	- 1/2	Tool Research ^c	32 1/4	+ 5 3/8
Leigh products ^{hd}	17	- 1/2	MISCELLANEOUS		
Lowe's Companies ^b	52 3/4	+ 6 1/2	Butler Mfg.	31	- 1/2
Masonite Corp. ^c	62 1/2	+ 3 3/8	Dorr-Oliver ^c	13 3/4	+ 1 1/2
Mouldings Inc. ^c	6 1/2	+ 1/4	Foster Wheeler ^c	20 1/2	- 3/4
National Gypsum ^c	18 1/2	- 2	Morrison Knudsen	17 3/8	+ 1 3/8
NL Industries ^c	14	+ 3/8	Neptune Meter ^c	14 1/2	+ 3/8
Norris Industries ^c	34 1/2	- 2 1/2	Otis Elevator ^c	37 1/2	- 2 1/2
Owens Corning Fibergl. ^c	51	- 4 1/8	Raymond Int. ^c	10	- 1/4
PPG Industries ^c	39 1/2	- 1 3/8			

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. *—Computed in HOUSE & HOME'S 25-stock value index. x—adjusted for 3-for-2 split. y—adjusted for 2-for-1 split. Source: Standard & Poor's, New York City.



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Company _____

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Number of units planned this year: _____

Type of units: Single Family, Multi-Family

VB _____

HH-JAN



Boise Cascade
Wood Products Division

Sparkman faces challenge in '72; upset could cost housing a friend

Senator John J. Sparkman (D., Ala.), chairman of the powerful Senate Banking, Housing, and Urban Affairs Committee and a longtime friend of the homebuilding industry, may face his severest challenge for reelection next year.

The former Postmaster General, Winton Blount, and two other Republicans have indicated they would like to run against the senator in the November general election.

Sparkman will be 73 years old next year, and the Nixon Administration is virtually certain to campaign for his ouster. Blount, in charge of the Postal Service when it split from the government, is now believed to be the prime prospect.

Sparkman will also encounter opposition within his own party. A primary fight is shaping with Robert S. Edington, a state senator from Mobile, and Lambert Mims, Mobile's city commissioner and presi-



ALABAMA'S SPARKMAN
Has rivals in both parties

dent of the statewide Baptist organization, as contenders against the senator. And the state auditor, Mrs. Melba Till Allen, 38, has already announced that she will oppose Sparkman in the spring primary.

Should Sparkman fail to return, his committee chairmanship would revert to Sen. William Proxmire, (D., Wis.) if the Democrats continued to control the Senate. If the GOP took over, the post would go to Senator John Tower of Texas.

Florida lots-for-saler to refund \$388,000 to New York state buyers

A Florida land developer with \$80-million worth of sales contracts in force throughout the United States has offered to return \$388,000 to New York state buyers to settle a lawsuit brought by the New York attorney general's office.

Corporation of Americas Ltd. of Miami had been accused of selling land that was of dubious value, physically inaccessible or periodically under water.

Buyers had contracted to pay from \$4,000 to \$9,000 for 1¼- to 2½-acre lots—1% down and the balance over 100 months, including 6% annual interest.

In a judgment obtained in New York County Supreme Court, the company was enjoined from selling subdivided land in New York state without first registering with the Department of State and filing an offering statement.

"The promoters of this company attempted to circumvent the laws of New York state designed to protect the consumer by failing to file the necessary papers," said Attorney General

Louis J. Lefkowitz. "If they had, their scheme to fleece unsuspecting investors would never have gotten off the ground."

Corporation of Americas is a subsidiary of the Summit Organization of Pelham Manor, N.Y. Stephen R. Reiner of New York City is president; Robert H. Solof of Kings Point, N.Y. is vice president and treasurer; Anthony Trella of Miami, Fla. is vice president.

FSLIC gets director

He is Roger K. Lindland, a Florida real estate developer.

Chairman Preston Martin of the parent Home Loan Bank Board has just appointed Lindland to succeed Robert P. O'Brien as director and chief executive of the Federal Savings & Loan Insurance Corp., the agency that insures savings accounts in 4,300 member S&LS.

O'Brien resigned October 1 to return to New York's Bowery Savings Bank.

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Chances are you didn't have too much to say about the appliances you're using now. They came with the house or apartment . . . they were the only brand offered by the store that had your account . . . they were all the budget could afford . . . or your choice was limited by any number of other reasons.

Life styles change. Now you have an opportunity to buy the appliances you've always wanted. *Now you have a choice.*

Look at many different brands. Get all the facts. Ask questions. If the store you're in handles only one brand, go to a retailer who offers you a choice of brands. If the salesman you're talking to wants to talk about only one brand, go to another salesman.

The important thing is that this time the decision is completely up to you. We hope your choice is Tappan. But even more importantly, we want you to have the opportunity to make a choice.

For the name of your nearest Tappan dealer, dial **800-243-6000** (in Conn. 800-882-6500) or write Tappan, 250 Wayne St., Mansfield, O. 44902

CIRCLE 45 ON READER SERVICE CARD

#724

If it's something for the kitchen, your Tappan dealer probably sells it. Tappan offers 1. gas ranges, electric ranges 2. electronic ranges 3. dishwashers 4. compactors 5. refrigerators 6. disposers 7. home climate control products 8. central vacuuming systems and 9. cabinets. Check them for appearance, features, performance, and price.

And remember that when you buy any new Tappan product, you receive a one year warranty from Tappan that guarantees free replacement of defective parts including the cost of labor by **Tappan's National Certified Service Organization.**

SEND FOR YOUR COPY OF "THE KITCHEN BOOK." Virtually everything you'll want to know about kitchen remodeling, 64 pages. Only \$2.00. Send check or money order to Tappan, Dept. B261, 250 Wayne Street, Mansfield, Ohio 44902.

Name _____

Address _____

City _____ State _____ Zip _____



Lindal Cedar Homes. They practically sell themselves.

That's one reason we can boast over 350 distributors around the world. But we need more to keep up with the growing demand for Lindal Cedar Homes. You don't need previous sales experience or even a real estate license. If you're a sound business person with a little time we can train you.

We'll provide you with leads and sales aids and a large national advertising program to presell the product for you year-round.

Lindal has over 70 different designs, all pre-cut and part numbered. Regional warehouses have been set up to speed shipping everywhere.

How do we know it will work for you? We've been at this for 25 years now and have sold thousands of homes through distributors like yourself.

To find out more about it, simply send in the coupon below and we'll send you an information packet on owning your own Lindal distributorship.

Mr. S. W. Lindal, *President*, Dept. HH21
18601 Pacific Highway S., Seattle, Wa. 98188 • (206) 246-7800

- I am interested in a Lindal distributorship.
 I am interested in a Lindal home for my personal use and am enclosing \$1 for color brochure and information.

Name _____

Address _____

City _____ State _____ Zip _____

Area Code _____ Phone _____

Lindal is represented throughout the world!
Plants in U.S., Canada, England, Australia and Japan.

NEWS/PEOPLE



FOREST GROUP'S McGRATH
From builders to suppliers



NAHB'S COAN
Now chief legislative aide

McGrath to Forest Products Assn., NAHB names Coan legislative chief

Joseph B. McGrath, NAHB staff vice president and legislative counsel, has moved to the National Forest Products Assn. with the new title of vice president of governmental affairs.

His successor as NAHB legislative counsel is his former deputy, Carl A.S. Coan Jr.

McGrath joined the NAHB in 1952 and helped direct its mortgage finance, urban renewal, and labor activities in addition to its legislative effort.

He left the homebuilders in 1964 to administer a Ford Foundation program for Urban America, and later practiced law. In 1967, he rejoined NAHB as head of the government affairs division.

Coan has been NAHB's deputy legislative counsel since 1969. Before that, he served as HUD's assistant general counsel for legislative policy. He helped draft the Housing and Urban Development Act of 1968.

New leader for realty fund group

He is Jack E. Sonnenblick, 48, just elected president of the National Association of Real Estate Investment Funds.

The association lists 100 real estate investment trusts as members, and their assets exceed \$5 billion. Sonnenblick took over the presidency from Henri J. Bourneuf, president of the Real Estate Investment Trust of America, at NAREIF's recent convention in San Francisco.

Sonnenblick is executive vice president of the Sonnenblick-Goldman Corp., the New York City mortgage brokerage widely known for its development of new and sophisticated financing techniques. The corporation is the advisor to two mortgage trusts, Mortgage Growth Investors and North American Mortgage Investors.

Sonnenblick has lectured extensively on mortgaging dynamics, and his analytical articles have appeared widely in the real estate press. A brother, Arthur I., 39, first vice president of Sonnenblick-Goldman,



NAREIF'S SONNENBLICK
He'll speak for the trusts

was elected president of the Mortgage Bankers Association of New York in May.

LENDERS: David C. Tolzmann is Connecticut Mutual Life's new vice president for real estate investments. He moves to Hartford from Chicago, where he had been executive vice president of McElvain-Reynolds, the mortgage banking company. Tolzmann has just received the Mortgage Bankers Association's distinguished service award for 1971.

There's only one faucet you can put here.



New Moen Model 7200 is specially designed for use with stainless steel sinks.

B-721

You can put only one faucet in the sink. So why not make it the one that's going to help you sell homes. Make it Moen®.

Choose the top-of-the-line Moen deluxe model. Or choose our new Model 7200—it's designed for use with stainless steel sinks. And it's priced slightly lower. Or for real economy, choose Chateau® by Moen. The special faucet for builders that performs right along with Moen in style, convenience and long service life. All are available with our exclusive triple-action aerator or with hose and

spray. Your customer will notice a lot of things in your homes. She'll notice a Moen single-handle faucet, too. And she'll remember it. It's stylish. And it's easy to use.

Offer your customers reduced noise and maintenance, plus increased water savings. With the single-handle faucets from Moen. They're available from your plumbing contractor. And they help you keep the promises you make with every home you sell.

There's only one.

MOEN, A DIVISION OF *Stanadyne*, ELYRIA, OHIO 44035

Moen and Chateau are registered trademarks of Stanadyne, Inc.



CIRCLE 47 ON READER SERVICE CARD



Get to know Canada's

Canada's building design and products industry know-how really works to create new ideas that will facilitate construction and capture the fancy of consumers.

Our exhibit at the N.A.H.B. Exposition in Houston offers you the opportunity to inspect our newest products and unique ideas. Each has already proven itself in the competitive Canadian market.

COME TO THE SHOW AND SEE OUR EXHIBIT IN HALL #4, BOOTH 2326

Your nearest Canadian Trade Office can supply you with information on these and other Canadian building products.



Department
of Industry, Trade
and Commerce
Ottawa, Canada
K1A 0H5

Ministère
de l'Industrie et
du Commerce
Ottawa, Canada
K1A 0H5

canada

CANADA



know-how... Now!

A sampling of Canadian know-how in building materials and systems on display:

Canadian Wood Council, Wood products—dimension lumber panels, shakes etc.

CIRCLE 121 ON READER SERVICE CARD

Daymond Limited, Home Drain Kit, Door Sealing Systems (weatherstripping), Aluminum Trims & Mouldings, Kwik-Klips (for plywood sheeting)

CIRCLE 122 ON READER SERVICE CARD

Eastland Industries Limited, Kitchen Cabinets, Bathroom Vanities, Counter Tops

CIRCLE 123 ON READER SERVICE CARD

Fitzpatrick Stair Limited, Circular & Straight Stairways

CIRCLE 124 ON READER SERVICE CARD

Hambro Structural Systems Limited, Composite Floor Systems

CIRCLE 125 ON READER SERVICE CARD

Sauna World, Sauna Installations, equipment etc.

CIRCLE 126 ON READER SERVICE CARD

Tru-Fit, a division of **Bulkley Valley Forest Industries Limited**—Western Red Cedar Doors

CIRCLE 127 ON READER SERVICE CARD

Universal Sections Limited, Suspended Ceiling Systems, Steel Stud Partition Systems, Aluminum Siding & Soffit, Foam-Form Building Systems, Modular Housing—"Pre-engineered"

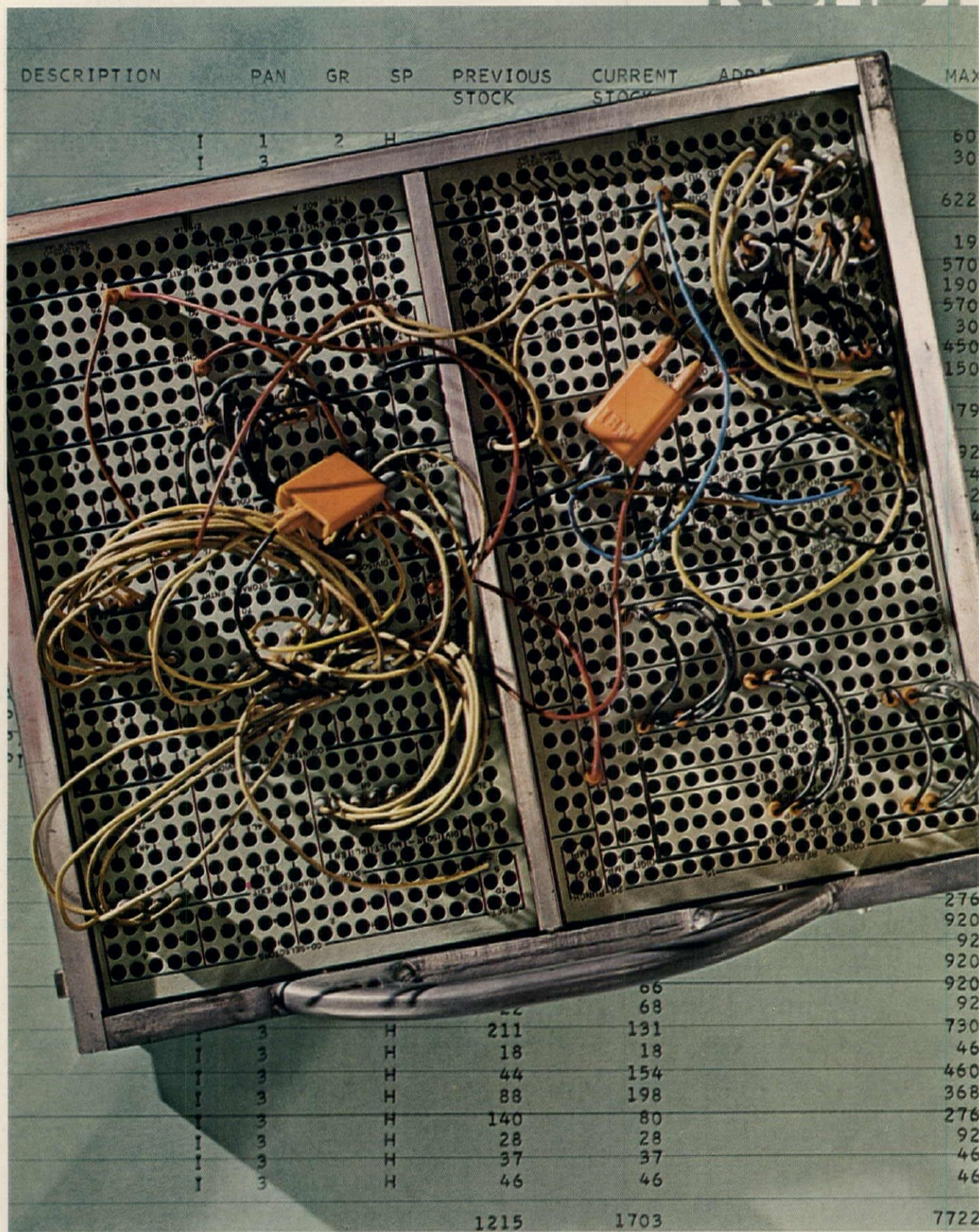
CIRCLE 128 ON READER SERVICE CARD

Velto Industries Ltd., Velvetouch Locksets

CIRCLE 129 ON READER SERVICE CARD



WHAT'S NEW AT NORD?



Lots. Faster delivery, for one thing. Now Nord's EDP center coordinates manufacture with seasonal demands and customer needs to save even more time between order and shipment. Designs and sizes of all doors and architectural products are controlled daily to maintain an inventory of 40,000 units in Nord's 75,000 square foot warehouse. So now distributors get delivery one-third faster.

What's NOT new at Nord?

The Nord philosophy. For a quarter of a century we've never deviated from this rigid policy of combining old-world craftsmanship and genuine Western woods with advanced technology. So automatic tray sorters, the length of a football field, sort and stack a million board feet of lumber each week. And electronic

gauges reject any air- and kiln-dried lumber that has more than 10% moisture content. But in the end, all Nord doors are hand-finished by skilled artisans, and primed doors are dipped, not sprayed. That way, builders get enduring doors and architectural products of distinction at "commodity" prices.

Best of all, Nord's craftsmanship reduces costly on-site labor.



Our full-color brochure "33 Ways Nord Makes It Better" tells the story and illustrates the complete Nord line. Just put your name and "33 Nord" on your business letterhead and mail it to E. A. Nord Company, Everett, WA. 98206.



MAKES IT BETTER — NATURALLY

See our all-new exhibit at the NAHB convention . . . booth 2558.



PHOTO: J. ALEXANDER

A problem site hits the dust: lawyers help architect turn the trick

Problem: to provide a livable environment for 11 detached houses within 1.83 acres.

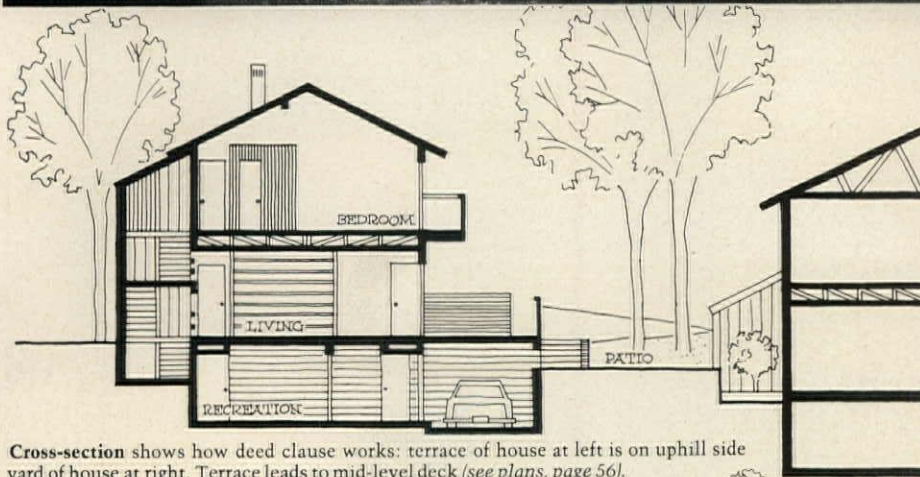
The constricted site could not be rezoned for apartments or townhouses. And the code required front, side and rear yards. So despite a close-in location, the Washington, D.C. property had been bypassed as too difficult to work.

Solution: a plan by the architect that gives each owner exclusive use of the uphill side of his neighbor's property—and a deed clause devised by the lawyers to make the plan work.

Since individual lots are only 5,000 sq. ft., a stem-lot layout was used so that all houses are served by a private winding road that cuts across lot lines (see site plan). Owners are jointly responsible for the road's maintenance.

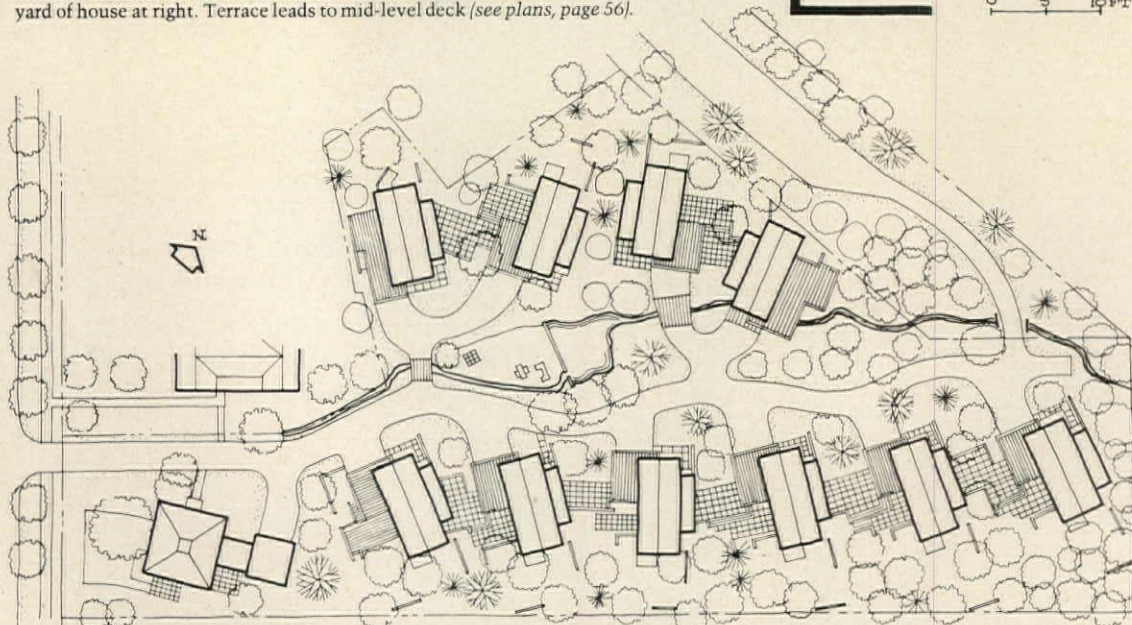
The 2,900-sq.-ft. houses sold for \$60,000 to \$65,000. Builder: Matthews-Schwartz Inc.; architect: Cross and Adreon, AIA.

TO PAGE 56



Cross-section shows how deed clause works: terrace of house at left is on uphill side yard of house at right. Terrace leads to mid-level deck (see plans, page 56).

0 5 10 FT



Stem-lot layout permits staggered siting of houses and forestalls a cookie-cutter, look-alike environment.

0 20 40 FT



Nobody ever notices our product

(which is what we had in mind when we designed it)

It's too unobtrusive. Too simple. Too quiet. Too trouble-free. It fades right into the background after it's installed . . . performs only when needed . . . gives fast, clean, even heat . . . goes on and off automatically via unit or wall thermostat. It fits any wall, too, with seven lengths to choose from. For all types of buildings . . . even mobile and modular homes. Installs easily, with convenient knock-outs and junction boxes at both ends. It's the product nobody notices, except builders and contractors who like satisfied customers.

Mail today for further data:

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

Please send full information on
Hunter Heatliner Electric Baseboards.

Name _____

Company _____

Street _____

City _____

State _____ Zip _____



HUNTER HEATLINER Electric Baseboard

Hunter has the complete line
in electric heat

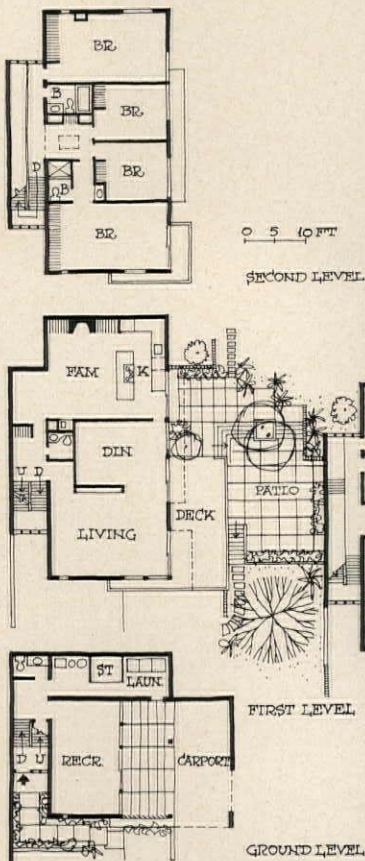




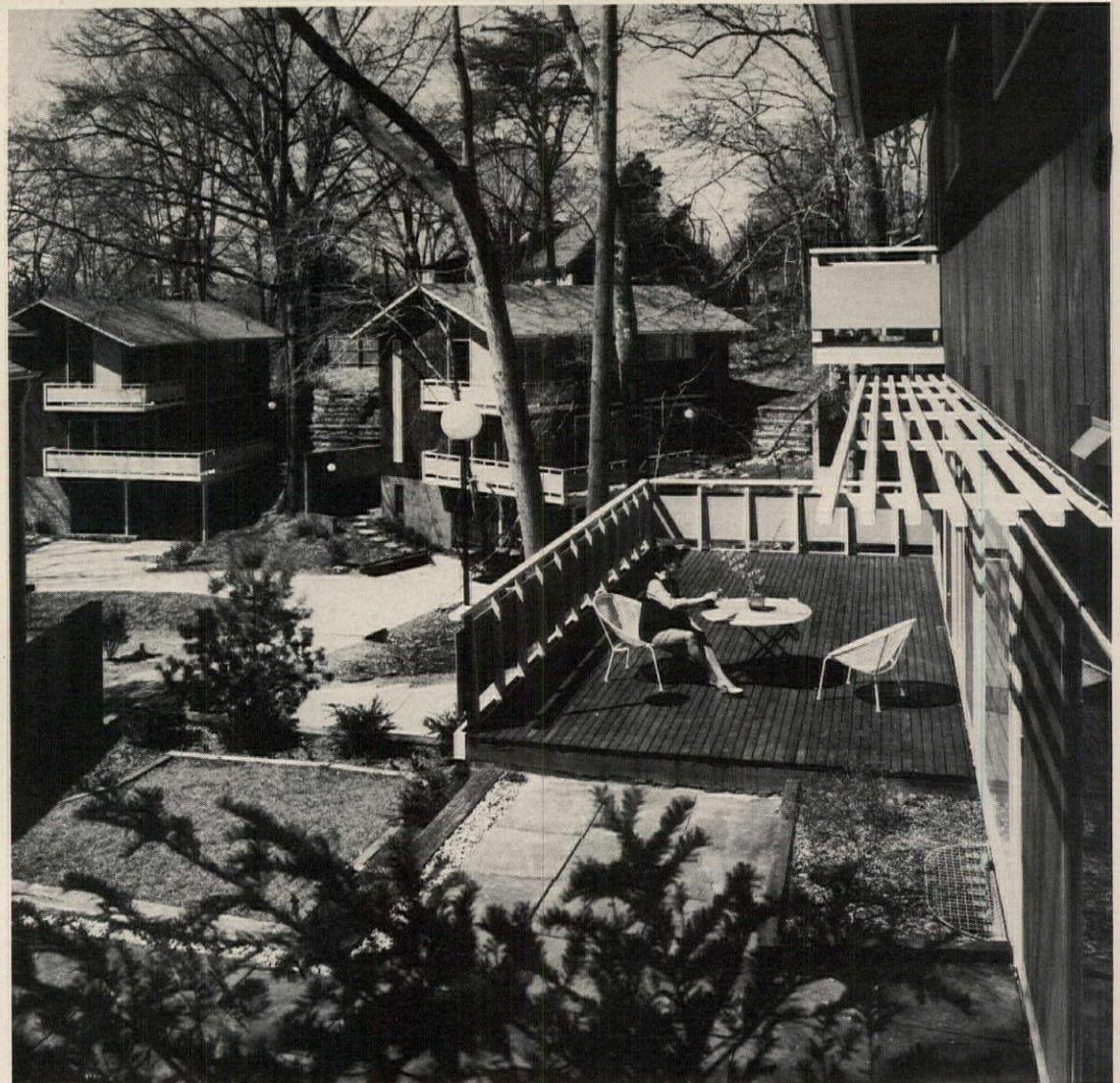
Living-room window-walls (above) overlook tops of surrounding houses. Unobstructed views are possible because houses are sited on sides of the ravine. Natural amenities—including big trees (below), a brook (photo, page 52) and pool (not shown)—were left intact to provide a non-urban environment for the project.



Mid-level deck (above and lower right) overlooks neighboring houses; yet privacy is maintained by staggered siting and fences. Deck opens into living and dining rooms and the kitchen (plans, below).



Three-story plan puts four bedrooms, two baths on top floor. They open to a gallery overlooking the entry.

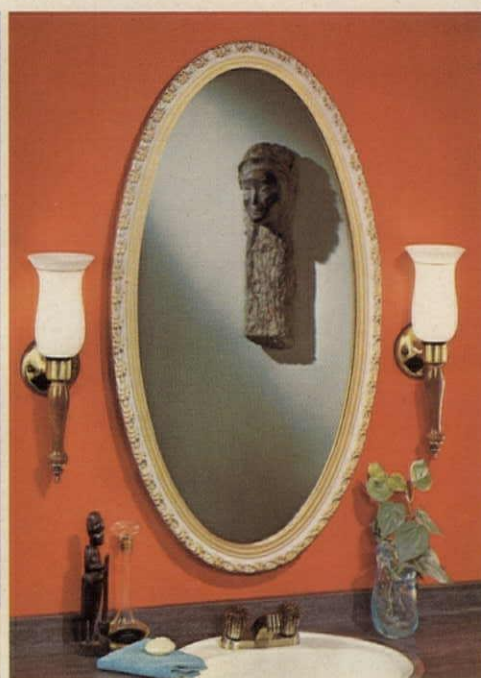
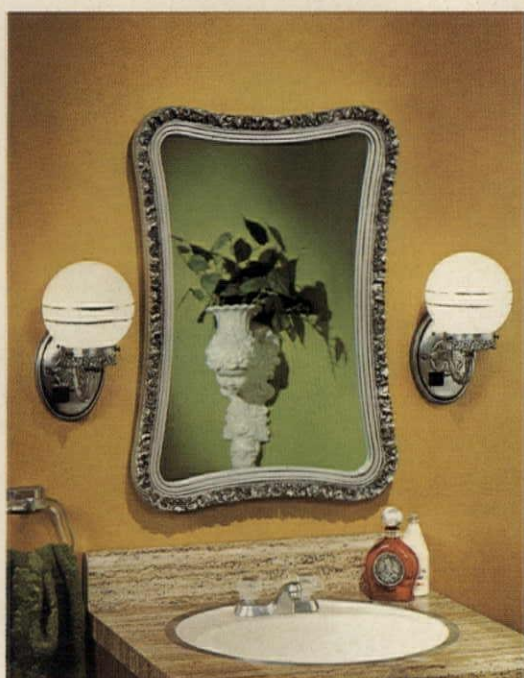


LAWSON

All-American Bathroom Cabinets and Light Fixtures

The sales power of the bath is hardly a new discovery. (Fact is, Lawson pioneered the "bath extraordinaire" years ago with some of the first true decorator cabinets and mirrors.) Today, with your competition tougher than ever, Lawson continues to lead in bath products that give you that sales edge. The elegant new wood framed Lawson mirror-cabinets below, with their classic matching light fixtures, are supreme examples of this leadership. Write or call for more facts on the entire collection of All-American Bathroom Cabinets, Mirrors, Light Fixtures and Accessories from the bathroom cabinet company builders know best . . . The F. H. Lawson Company, Cincinnati, Ohio 45204.

Known For Quality Since 1816





Why buy 2 nailers when 1 will do?

That's right! Only one nailer—the Duo-Fast CN-137—drives all nail sizes from 6d common to 16d sinkers. 23 different nails. No adjustments needed. Just slide in a stick of nails of the right length and drive away. It's a Duo-Fast exclusive.

What a time saver! No time out making adjustments to the gun. No time looking for another model. It's as fast as changing nail sizes with a hammer.

What an economy! You buy only one nailer...not two. Only one tool to maintain, to store, to keep track of. The money you save can be used to buy other Duo-Fast time-savers.

What performance! Drives regular, ring-shank or screw-shank nails. The 16d's drive as effortlessly as the 6d's...as

fast as you can pull the trigger. Special Duo-Kote coating assures extra tight hold. Also available galvanized. Safety mechanism prevents accidental firing. Beautifully balanced for easy, fast, precise nailing.

Want to know more? Send today for a copy of Builders Brochure FT-26. We'll demonstrate the CN-137 at your convenience. Write Duo-Fast Fastener Corporation, 3702 River Road, Franklin Park, Illinois 60131.

DUO-FAST EVERYTHING
FOR
STAPLING
NAILING

041

Despite the fact that apartments are filled with young people, no cabinet manufacturer has ever really designed a line to reach that specific portion of the market.

Until now. At Del-Mar, we've developed Overture. The first cabinet line that's both provocatively young in design and solidly based in sales potential.

Its doors are laminated on all sides with attractive and practical white polyester. Its end panels and frame are ebony black. These two basic colors in Overture will highlight any color appliances, floor coverings or accessories. And the new, bright colors in counter tops make a perfect marriage with Overture. Self-closing hinges, solid end panels and

three point drawer suspension round out Overture's beautifully efficient styling.

In other words, if you've got designs on this young market, we've got the design for you.

Del-Mar
THE CABINETMAKER



If you design your kitchens to appeal to people over thirty, you've just missed over half of your market.

Del-Mar Cabinets by U.S. Plywood, a division of U.S. Plywood-Champion Papers Inc.





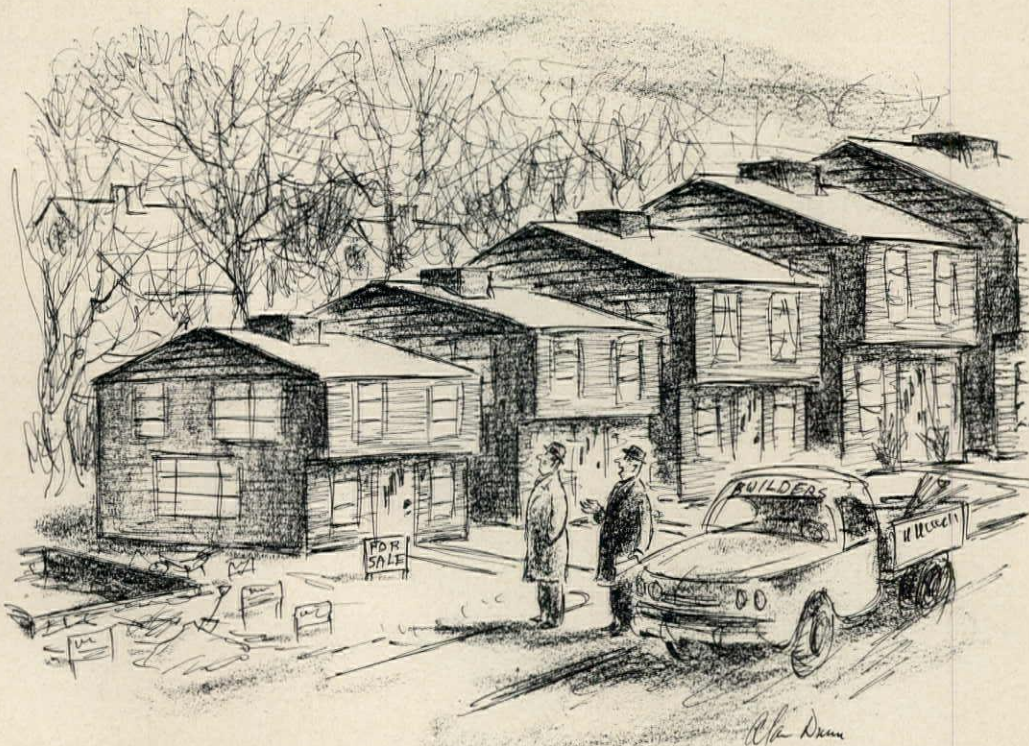
Cartoonist serves up architecture on wry

Sandwiched between the covers of his newly published *Architecture Observed* (Architectural Record Books, New York City; \$6.95) are 140 of Alan Dunn's incisive cartoons depicting the foibles inherent in the architectural world.

Here and on page 64, the editors of *HOUSE & HOME* have selected six of the many car-



"I think they're just trying to stand out!"



"You know how it is—money keeps getting tighter."

THE OLDEST ESTABLISHED FLOATING SMOKE GAME HAS BEEN LICKED BY ELECTRO-AIR.



The boys will be gathering on Friday nights at one of the homes you've built long after you've completed the job. And the air is going to get very heavy with cigarette and cigar smoke. The same thing is also going to happen when the ladies play bridge on Wednesday, or a weekend cocktail party is held. Your home buyers are prime prospects for Electro-air electronic air cleaning.

An Electro-air installed in your forced air heating systems will remove up to 95% of the cigar and cigarette smoke from the air.

And that's not the whole story. An Electro-air will also keep the home free of dust, dirt and pollen. Decorating and maintenance costs are reduced. The whole family breaths clean,

pure air. It's a highly desirable, profit loaded product that consumers all across the nation are requesting.

The next time you build a custom home, or plan a small tract of luxury homes, or even get involved in a high volume, low cost tract... include Electro-air. Electro-air wholesale distributors are prepared to quote on volume installations, provide blank cabinets at reasonable costs and give technical and sales advice.

You really owe it to your customers, your card playing cronies and their families. After all owning an Electro-air is just about as good as having a royal flush when the pot is filled with chips.

Slim Line—Dry Type Unit



Super Compact—Residential Water Wash Unit



Slim Line Cabinet Only For Future Installations



Electro-air
ELECTRONIC AIR CLEANERS


EMERSON
ELECTRO-AIR DIVISION
EMERSON ELECTRIC CO.
McKEES ROCKS, PA. 15136

Looking for ideas to help sell your next project?

CIRCLE 62 ON READER SERVICE CARD

Look here!

Next time you plan a townhouse or garden apartment project, look first at your entry. Your customers do! Is your entry just a few steps and a door? Or does it attract the eye? Does it make an exciting first impression? The Western Wood "Outdoor Room" idea kit shows how to add interest, excitement, and curb appeal to an entry. In addition, it shows how to expand a bath into a private outdoor world, double the kitchen-family living space, turn a bedroom into an intimate garden.

More living space is easy, and inexpensive, when you use Western Wood and the Great outdoors. Send for the free, full color "Outdoor Room" idea kit and plan sheets. Mail the coupon today!

Name _____

Address _____

Firm _____

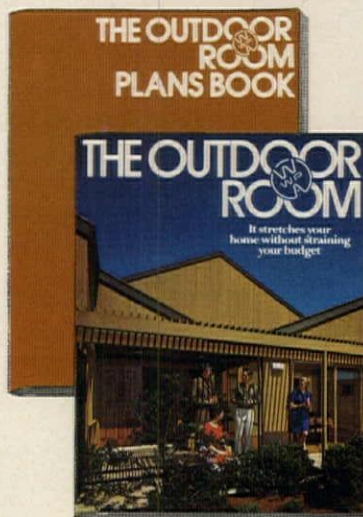
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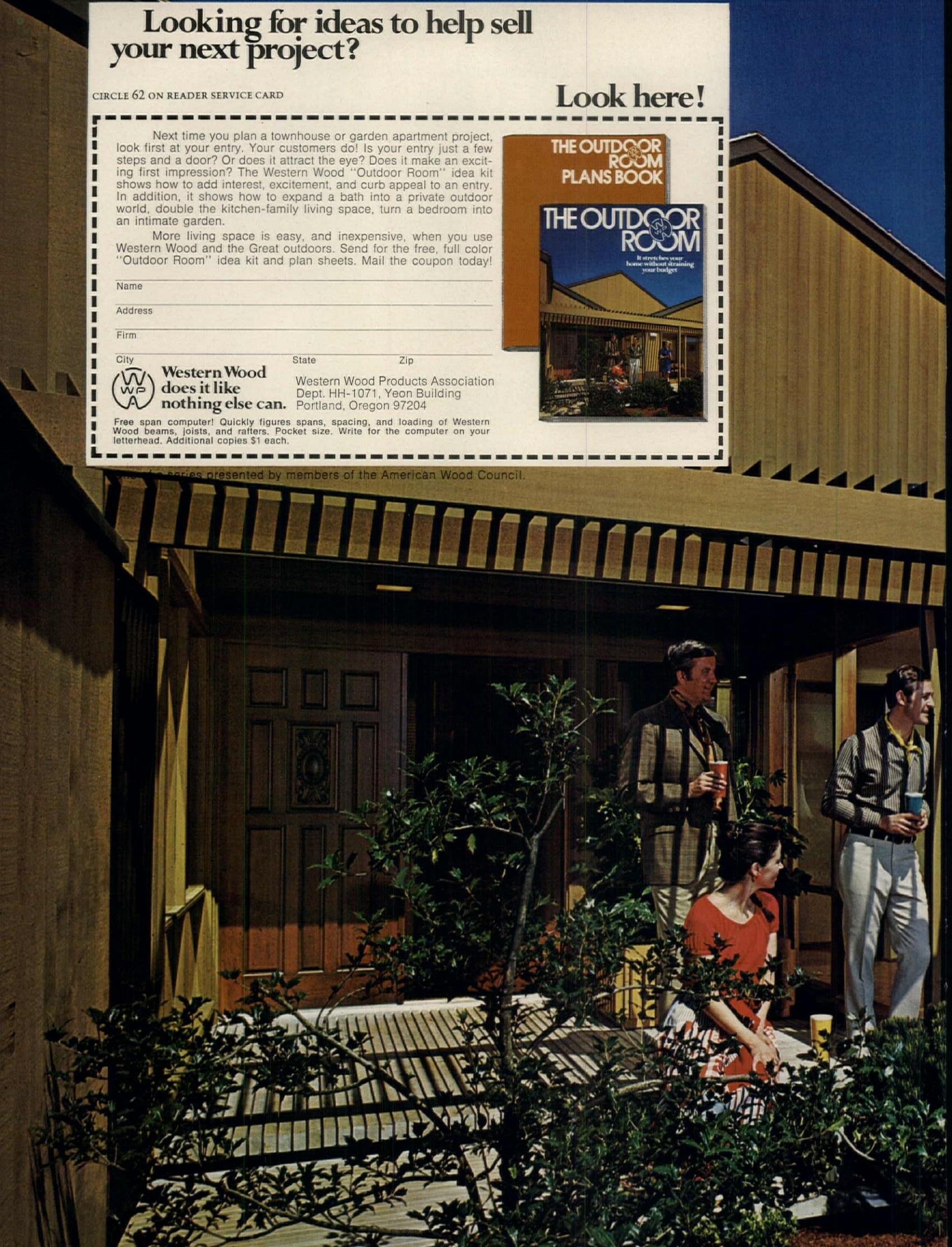
Western Wood
does it like
nothing else can.

Western Wood Products Association
Dept. HH-1071, Yeon Building
Portland, Oregon 97204

Free span computer! Quickly figures spans, spacing, and loading of Western Wood beams, joists, and rafters. Pocket size. Write for the computer on your letterhead. Additional copies \$1 each.



This series presented by members of the American Wood Council.

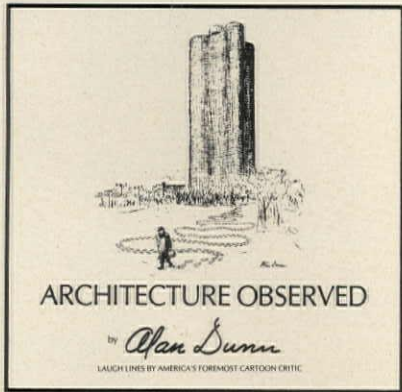
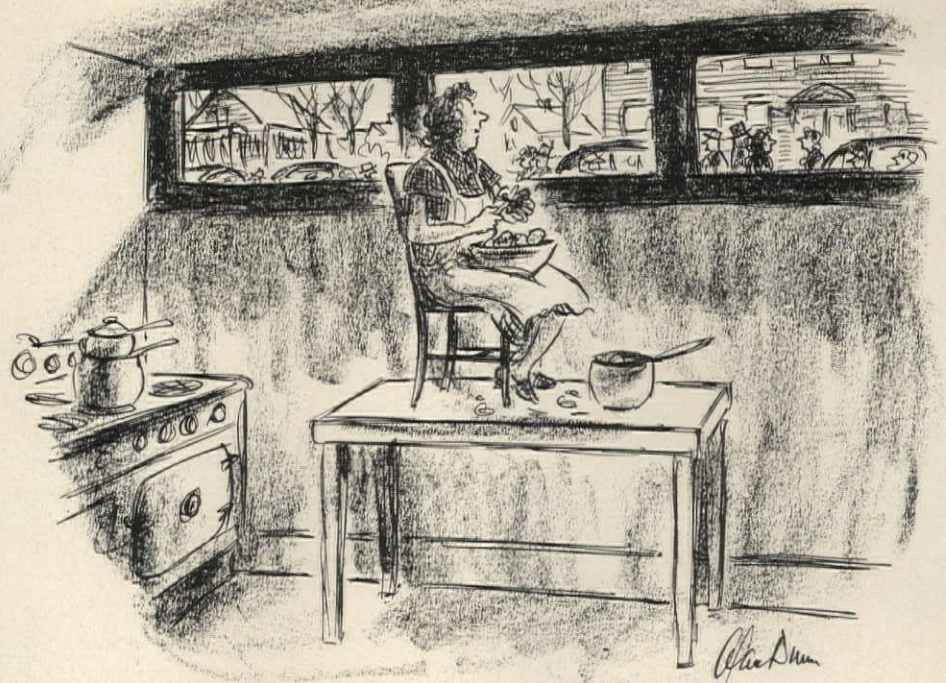




toons that also happen to poke fun at homebuilding.

The cartoons appearing in the published book were culled from the hundreds which have appeared monthly in *Architectural Record*, a McGraw-Hill publication, since June 1937.

This cartoonist, who has succeeded so well in making his audience chuckle at its own idiosyncrasies, was headed for an architectural career himself when he discovered the world of drawing in a course at Columbia University's school of architecture. After a year at Columbia, Dunn dedicated himself to painting, spending four years at the National Academy of Design Schools.



*"This is the last word in condominiums—
each owner hires his own architect."*



"Dinner is served, Madam."

If you don't know LMF, here's 3 good reasons why you should.

Actually, we're very familiar with the building industry. We've been involved in land, materials and finance for quite some time. Even so, you may not be aware of us.

That's why we've recently applied our knowledge to some other areas of the business to give you a good reason to know us.

Now, we can give you three.

We felt builders needed a stronger, more flexible, low cost coating process. So, our chemical division developed Semprall.

We felt your buyers, as well as interior designers and architects, were growing tired of conventional doors. And conventional wall

panels. So Formel, an affiliate of LMF, developed an entirely new concept for both.

We want your first impression of LMF to be a good one. And we have 3 reasons to believe it will.

LMF LMF Corporation
912 East 63rd Street
Kansas City, Mo. 64110

Formel Doors.

A totally unique concept. Made of solid-core urethane molded over steel reinforcing members. Has sculptured designs and color assortment. At a cost comparable to conventional doors.



Formel Wall Panels.

Developed from the same unique process as the Formel Door. Can be attached by any conventional paneling method. Comparably priced to other accent walls.



Semprall Textured Coating.

A new coating process that combines unmatched strength with a high degree of flexibility. Can be applied at a fraction of the cost of comparable processes.



NAHB'S
28th ANNUAL
CONVENTION
& EXPOSITION
HOUSTON,
TEXAS

For life styles of the 70's



The Whirlpool brand name can be a powerful persuader in a new home or apartment. To her, it means the chances are good that you designed the whole dwelling with quality in mind.

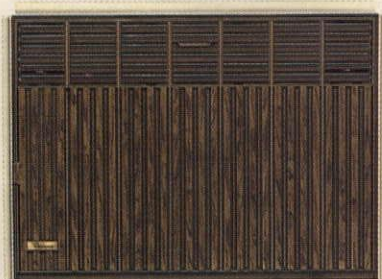
To you, it means we'll take better care, after you turn over the keys. Whirlpool Warranty Central Service pays the costs involved to honor our warranty obligations. (Our responsibility; not yours). And we maintain a 24-hour "Cool Line" phone number she can call (instead of you) for service information, day or night. Toll-free.

Better give your Whirlpool Distributor a ring soon, and plan to put our powerful persuaders in your next project.

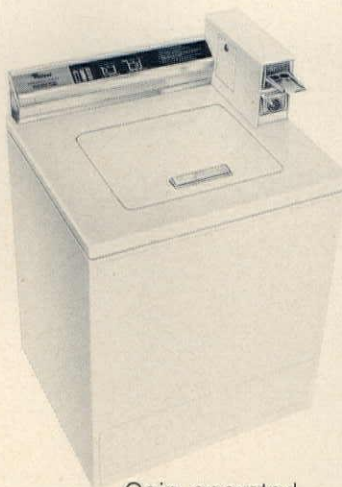
...Whirlpool appliances



Dishwashers



Air conditioners

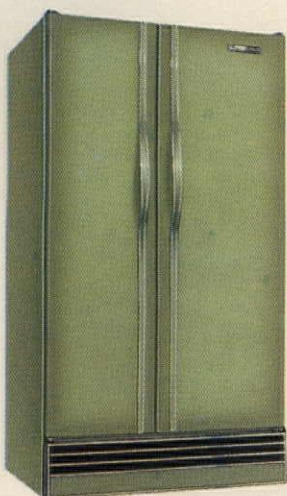


Coin-operated laundry equipment.



Trash Masher* compactors

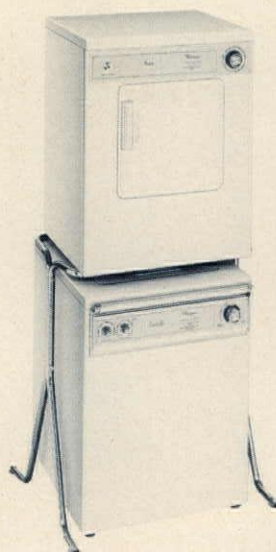
This is a composite photograph to show simulated compaction action.



Refrigerators



Washers & dryers



Compact laundry products



Built-in ovens



Heating & cooling products



CONNOISSEUR® ranges



Set-in ranges



Free-standing ranges



Whirlpool ...builders for builders
CORPORATION

*Tmk.

CIRCLE 67 ON READER SERVICE CARD

H&H JANUARY 1972 67



Here's how one manufacturer expands a 24'-wide sectional



Roof is jacked up from position in which it was shipped (photo, above) to create 4-in-12 pitch. Small kneewall supported roof in transit.



New kneewall section is inserted between small kneewall and roof stringer. Jacks have been removed, and roof rests on new wall.



Collar beams are nailed between kneewalls, and half of the new roof structure is prepared. Shingles and cap will then be put on.

Most state highway laws limit sectional-house halves to 12' widths. So, by and large, sectional manufacturers have had to live with a 24'-wide house.

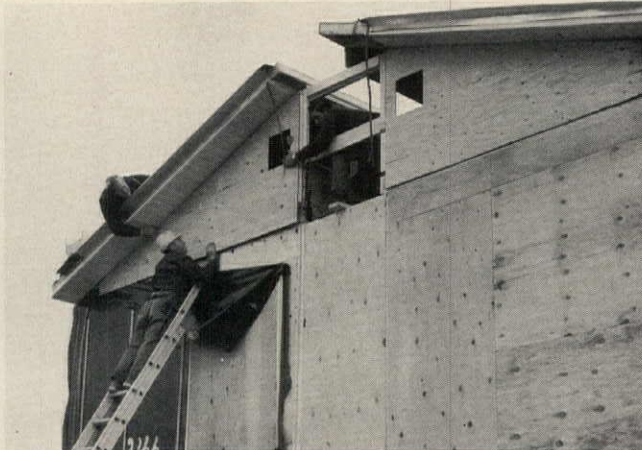
But Capital Industries of Avis, Pa., has found a way to ship a 27'-wide sectional despite the 12' restriction: site-build a 3' center section between the two 12'-wide halves after they have been placed on the foundation (photo, above).

Closing in the 3' gap adds six hours to the usual eight-hour erection time. Capital's own crews do this job, and details of it are shown in the photos at left.

Finishing the inside of the wider house doubles the interior finishing costs compared to the 24' sectional. The work includes walls on the inside of the 3' section, ceiling, flooring and insulation. The builder does this part and on a typical Capital sectional the extra cost is \$800 to \$1,000.



End wall is closed in with a 3' x 8' prefabbed panel. Floor joist fillers have already been installed, but in this photo roof is not yet raised.



Gable-end panels are placed after roof is raised. One roof panel has already been nailed in place at right. Square holes are for gable louvers. House was erected last November in a suburb of Baltimore, Md.



easy-ply[®] roof decking defies humidity

The finished ceiling side of Easy-Ply Roof Decking is unaffected by high humidity, chlorine, or other corrosive vapors. Easy-Ply is laminated with decorative, vapor barrier films impervious to humidity. Easy-Ply is a thick, tough, structural base for roofing, weatherproof insulation and made from 100% recycled material. See your building materials dealer, or use the service number for more information.

CONTAINS RECYCLED MATERIALS
ONE HUNDRED PERCENT!

1-378

homasote company WEST TRENTON, N.J.

The electric climate is for builders who want a faster return on their investment.



Paul P. Merritt built it into one "test" house and then built an amazing sales story with a 597-home development.

The story began when Paul P. Merritt went total electric in one home as an experiment. With everything electric, including the flameless electric heat, it sold almost instantly. Based on this success, he offered two total-electric models at Merrifields, his 597-home development in Portsmouth, Va.

Result? Orders for total-electric models rose rapidly from 35% in the first section to 100% in the last section. When the development was

completed, more than 500 of the 597 homes had *the electric climate*.

Building with *the electric climate* builds profits. That's because total-electric features like clean, steady, even heat, and modern electric conveniences, build buyer appeal into every model. In addition, installation time and labor costs are lower.

Find out more about *the flameless electric climate* and how it can help you. Call your electric utility company today.

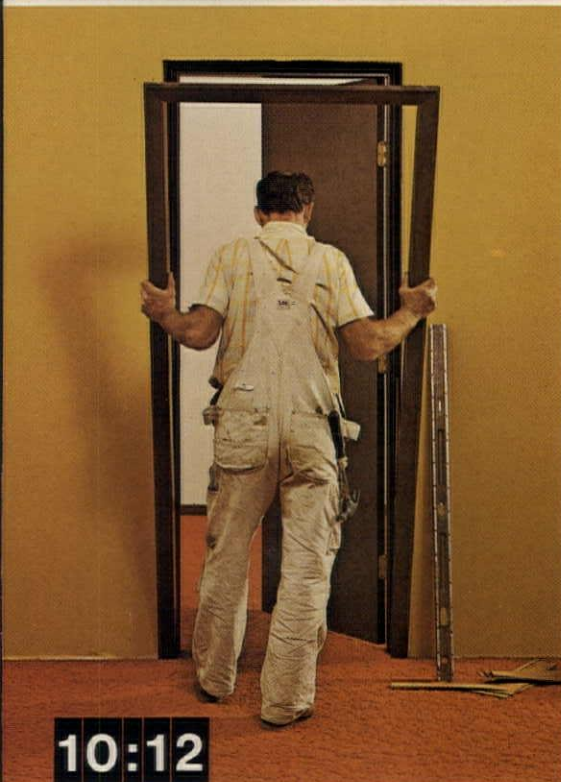
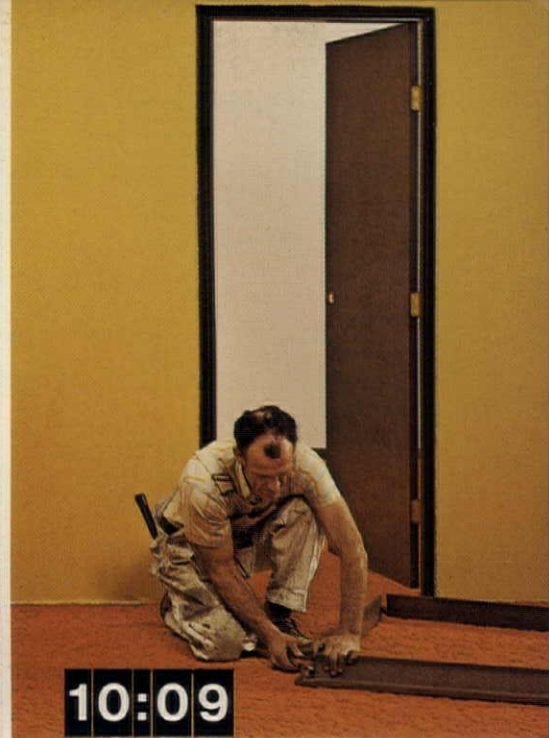
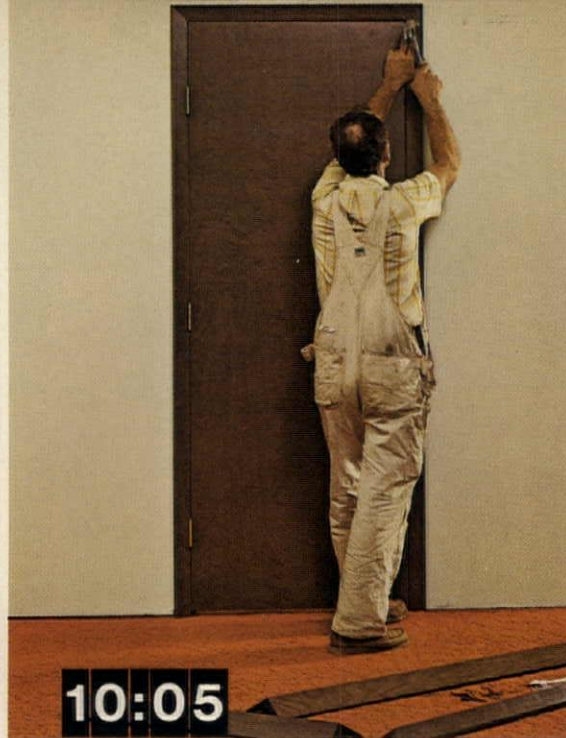
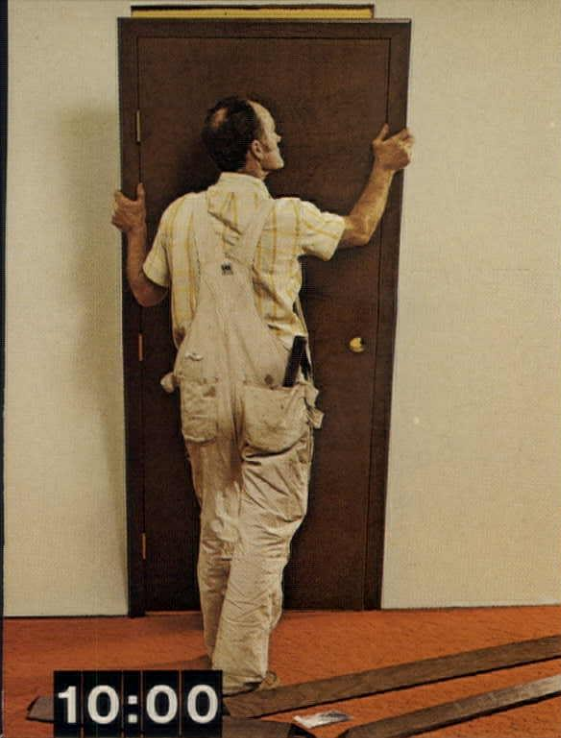
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H&H JANUARY 1972 71



**"Condominiums go sour
without professional
management. Take it
from a disenchanted buyer"**

Some developers think condominium ownership is the perfect out for building multi-family housing and ducking the responsibilities of property management. Just hand over your apartments or townhouses to a residents' association and walk away. But there's a snag: most owners' associations can't cut it. They haven't the ability or the teamwork to manage housing. So unless the developer starts off his owners in the hands of a professional management company, his project will be less than a show-place; it may even be a disaster.

Developers rarely get the opportunity to see exactly why homeowners' associations fall apart. We were fortunate during a recent survey of condominium owners (not our own) to receive an enlightening letter from an articulate middle-aged widow who is having her first taste of do-it-yourself condominium management. How it's working out is well told in her own engaging blow-by-blow account:

"A year ago, if anyone had asked how I like condominium living, I'd have unhesitatingly replied that there are no disadvantages. As a single person who once owned a ten-room house on an acre of land, it was a great relief for me not to have to cope with all the things that can go wrong with one's property, e.g., oak-worms, septic tank leaks, weeds, and barking dogs.

"The condominium I chose is located in the middle of a golf course, where nobody can build a shopping center across the street and ruin the neighborhood. Children under 12 are not allowed, although they can stay for extended visits. The majority of residents are older couples with a concern for keeping up the property and keeping the peace—their party-time days having long since passed.

"I assumed that the men, having been moderately successful in their various careers, could manage budgeting the \$58,000 per year which the 60 owners kick into the maintenance fund at the rate of \$80 a month. Their wives seemed relaxed and free of the neurotic curiosity one finds among apartment house busybodies.

"Since the men had, for the most part, taken responsibility for finances in their professional lives, none of the women living here had ever been asked to serve on the six-man Board of Governors.

The problems start. "Then, a nutty lady moved in. The place has never been the same. I became aware of her when she distributed a 20-page letter advising owners

that she had found a number of irregularities about the way the place was being managed. She said she'd gone over the Board of Governors' books and had found gross over-spending and irresponsible neglect in the record-keeping. She also questioned the soundness of certain policies relating to the manager who was hired to oversee maintenance work. She proposed that the owners give her their proxies so she could confront the Board of Governors with her misgivings.

"About half of the owners had, at one time or another, served on the Board of Governors, and apparently had put in a great amount of time and energy developing a system for keeping the books and for delegating responsibility for making decisions. The system was based on a sort of gentlemen's agreement that everyone involved was acting in good faith.

"Since it was so time-consuming to run the place, everyone involved carried out his task in the way he found easiest, secure in the belief that he was doing his part in an unpleasant but necessary obligation to one another. Nobody supervised anybody. An unstructured kind of 'old-guard' group developed. And if they felt a little critical of each other they didn't say so, as they depended on good will to recruit next year's volunteers.

"But then the nutty lady's husband was asked to serve on the Board and his wife got hold of the books. Simultaneously she developed a great dislike for the manager, a bossy real estate saleslady who is short on tact. Then she distributed her 20-page letter.

A neutral position. "I didn't take sides. I agreed with criticisms from both camps. The Board of Governors was undoubtedly devoting too little time to the thankless task of finding the least expensive ways of getting things done; they tended to pay a little more than necessary. They weren't planning ahead or putting money aside for emergencies. But they weren't deliberately irresponsible.

"So they were outraged and appalled when the criticism was distributed without the Board having been given a chance to formulate a reply. And they had to defend the manager because they had hired her, and because she was a friend and former co-worker of several of the couples who live here.

"Well, there was no way to avoid a confrontation, and that meeting was a sham-

bles. Everyone had to take sides, and those who didn't, like me, were in real trouble. People brought their lawyers, and Robert's Rules of Order really got a workout. The meeting was even tape-recorded because of threats of lawsuits for defamation of character. It got to be funny, and I left before it was over because I couldn't stop laughing. Nothing was solved.

"The biggest disadvantage to condominium living is that apparently there is no productive way to handle dissent. Too much depends on leadership talent that happens to buy into the property. At least, it seems that way in this condominium. All chiefs, no Indians.

"Two owners have moved out as a result of what happened: the nutty lady and her neighbor. Everyone says good riddance. But much of what she said was valid, and I wish they had listened. Also, now that I've seen how defensive some people are who have lived here a long time, I wonder what will happen if I ever get really displeased with something.

Professional help is the answer. "One man who lives here really has good sense. He was on the Board of Governors for several years, knows how to handle people and how to get them to think rationally. I asked if he'd be willing to stay on the Board of Governors. No way.

"The solution, he says, is to find a professional property management company. However, because there are so few condominiums in this region, none of the companies are skilled in condominium management.

"Another result of the hassle is that the manager has quit. I'm told it is very difficult to find condominium managers. Most managers would rather deal with 40 tenants than with 40 owners.

"So ends my commentary on condominium life. The financial advantages are great for people whose income bracket is high. I think that's why condominiums tend to be associated with comfortable means—they are a kind of status symbol like certain types of cars or boats. They are not for people on a tight budget.

"At the rate this year's Board of Governors is spending our budget, we'll have to vote a fat increase next year to break even. And it's funny how financial problems can ruin social relationships. Living here is like being in a three-legged gunny sack race and discovering your large partner is a centipede."

H. CLARKE WELLS, MARKETING VICE PRESIDENT, L.B. NELSON CORP., PALO ALTO, CALIF.



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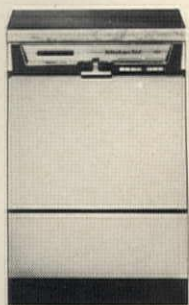
natural setting has been kept intact. We wanted no 'builder models' of anything.

"I wanted to retain top quality in all areas of this project," said Mr. Snell, "so that 10 years from now, I can walk down these streets with pride. That's why I chose KitchenAid."

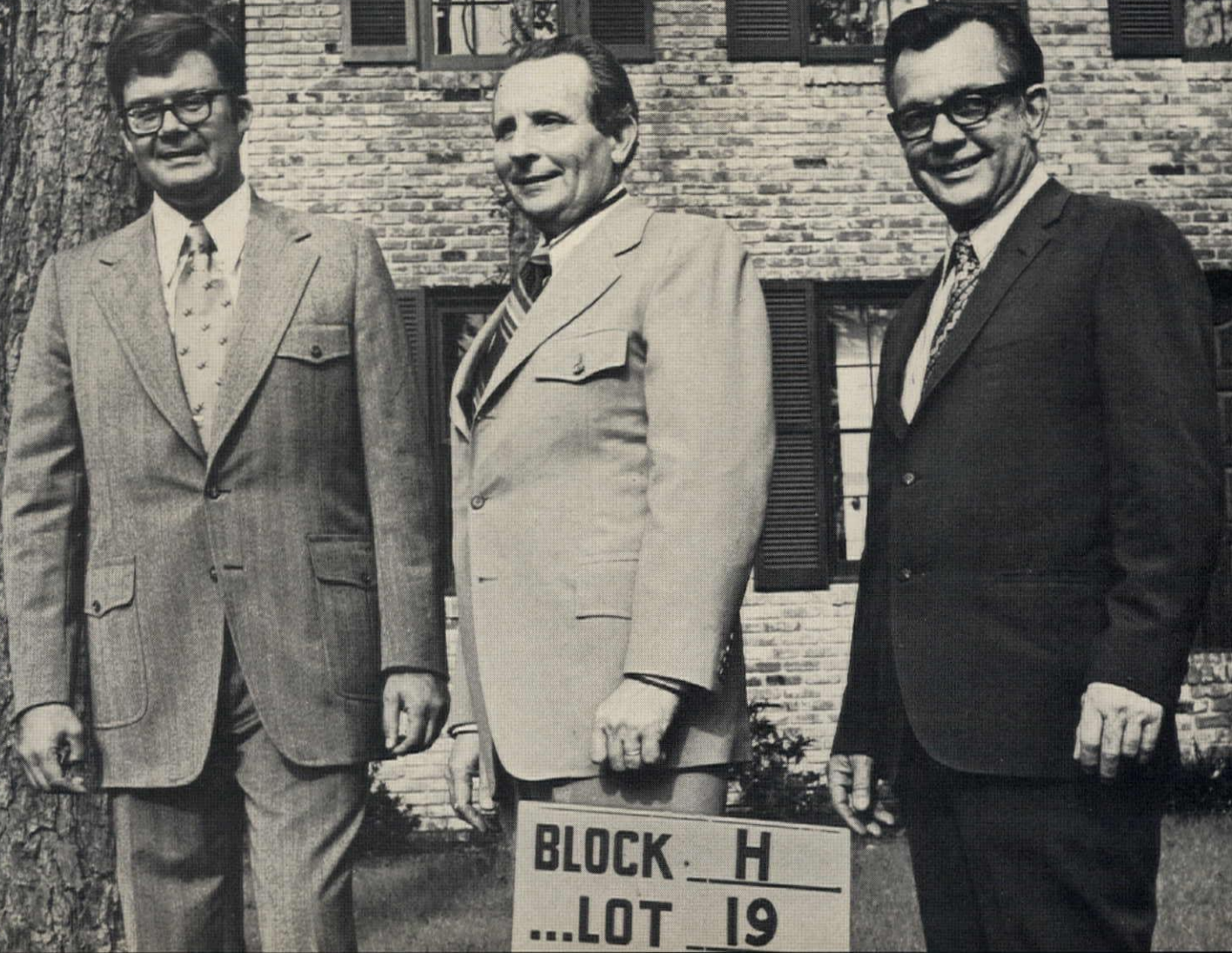
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Lawrence W. Snell, Jr. (left), President, Fred A. Blevins, Vice President-Construction, Robin B. Cuthbert, Vice President-Development.



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**"Built-ins and add-ons: they'll
spice up your models—
and give prospects decorating ideas
they can copy for themselves"**

To merely decorate a model home or apartment or to give it a warm, inviting customized look has become a mini-controversy among residential builders. Personally, I'm a proponent of going beyond the four-bare-walls approach and using a certain amount of built-ins to create the look of livability.

Use imaginative built-ins tastefully, identify them as extras, and you accomplish a number of things: you involve the prospect in the model, you complement and enhance the architecture and you provide decorating examples that even can be reproduced by the buyer or renter who's all thumbs.

But just as with other aspects of interior design, the builder must resist the temptation to go overboard. Here are some practical and creative suggestions.

Built-in bookcases. I have never met a person who is turned off by books. It's psychological. Everyone likes to think he is a well-informed, heavy reader. So I frequently use built-in bookcases as a decorating technique.

Bookcases should be used in all shapes, sizes, colors and designs with white-washed, lacquered, polished or rough woods. They are relatively inexpensive to construct and can hide a multitude of architectural sins.

A bookcase backed with randomly spaced mirror inserts that are visible between books is an excellent stimulant for the imagination—and it adds a strong element of warmth.

Or, take an odd-sized, high window—a pain-in-the-neck area for most decorators—and build a self-contained desk and bookcase treatment around it. But don't load the bookcase to the hilt. I suggest using plants, accessories and perhaps even a portable television to give it some sort of a wall unit effect.

For a family room the bookcases can be filled with items that would normally be found only in a person's home—trophy, family photographs, party games, anything imaginable to give the home a lived-in feeling.

One thing to consider when including bookcases in a living room is size. Build them large, even massive. I usually prefer floor-to-ceiling bookcases, even if the ceiling is pitched.

Another important point: the shelves

shouldn't extend into the room more than 8" to 10". While these shelves might be too narrow for your own home, they're ideal in a model home where every inch of space counts. Books and other objects should cling snugly to the edge of the shelf.

Bedroom treatments. Built-in headboards are sure to catch your prospect's attention. It's also one way to get away from the furniture-store look where every piece—headboard, night stand and dresser—matches.

Headboards in a master bedroom can consist of shelf-and-storage combinations; they serve the purpose of a night stand but avoid its space-consuming presence.

To add a strong element of drama, use mirrors in a headboard treatment, and give a smaller bedroom the appearance of a master suite.

Children's bedrooms also are natural places to use built-ins. For example, an imaginative headboard, built like an English guardhouse with overhead shelves for books and toys, will catch the eye of mom and dad as well as the kids. And it's not that difficult to construct, either.

Built-in toy boxes and window seats with storage areas show parents how their children can avoid the traditional cluttered look found in practically every kid's room. A built-in desk butted up against the wall with overhead bookshelves transforms a smaller bedroom into a children's learning room.

Besides giving a model home a custom look, built-ins can also be money savers: the builder can furnish a room with considerably fewer pieces of furniture.

Non-functional add-ons. Paneling, mirrors or wood strips can be used in a model home or apartment to enhance design values, open up a room or reinforce the exterior design. For example, an English Tudor-style home is enhanced by using floor-to-ceiling strips of wood in an X-pattern on a bare wall.

A wall combining paneling with mirror inserts can be used to open up a room and provide a three-dimensional look. But, mirroring by itself should be applied cautiously. Using full-mirrored walls in a small room is a blatant attempt to make the room look larger and is a deception pure and simple. You'll have one disappointed customer when he walks into his new home, only to discover that it seems to have shrunk by a good measure.

Paneling, like bookcases and mirroring, is one of the most versatile built-in treatments of all when used properly. Also, its feeling of richness is always warmly received by the public.

What's more comfortable than a man's den with a rich warm brown wood covering all four walls? You can use expensive pecky cedar or inexpensive T-111. Or whitewash some rough-sawn wood, and you've turned a what-do-I-do-with-it expanse of space into a great textured wall.

Take that same rough-sawn wood into the living room and wash it down (wipe it on, don't paint it) with your dominant color. The result: a unique wall with depth and excitement that complements and completes your entire interior decor. Or panel one end of a large bedroom, and turn it into an adult retreat.

When working with woods, here's a tip: stay away from redwood which is difficult to cover with stain or paint since you can't kill the red color very easily.

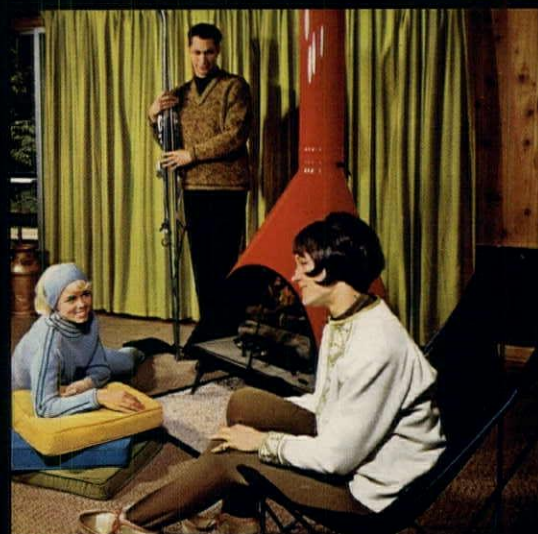
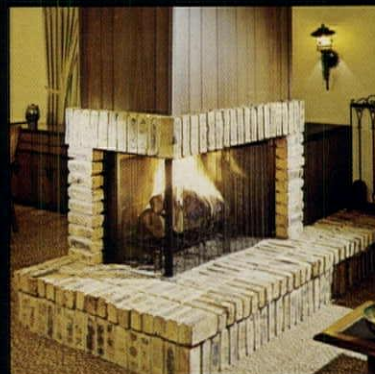
Keep it simple. The possibilities of putting built-ins to work to add charm and individuality to your models are endless. But I can't stress how important it is for built-ins to be unobtrusive and distinctly recognizable as extras. Don't try to make them look like part of the house. At the top of my list of no, no's is the use of false beams.

The easiest way to avoid any confusion for your prospect is to tag your built-ins with a single uniform sign instead of separate disclaimers. Here is an example used by Jack Risbrough, vice president-director of marketing for J.H. Snyder & Co. of Los Angeles:

"This model has been decorated by interior designer _____ (name) _____. Decorative wall treatments, special use of mirrors, carpeting, wallpaper, paneling, draperies, shutters and furniture are decorative items. For your convenience please check with our sales staff for information concerning our many standard features."

After that, it's up to your salesman. Clue them in on costs and suggest some good selling conversation about built-ins. The salesman should stress the do-it-yourself aspect. All it takes, he should point out, is a can of paint, a little wood and some imagination.

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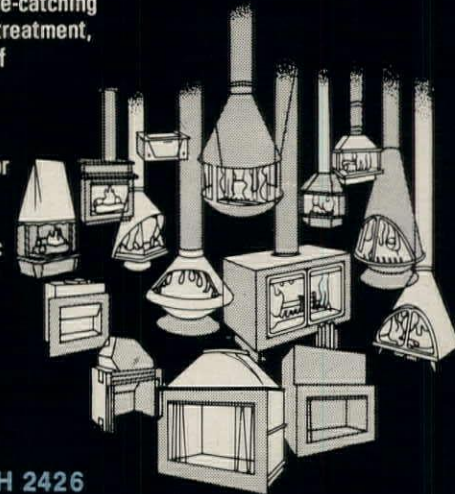
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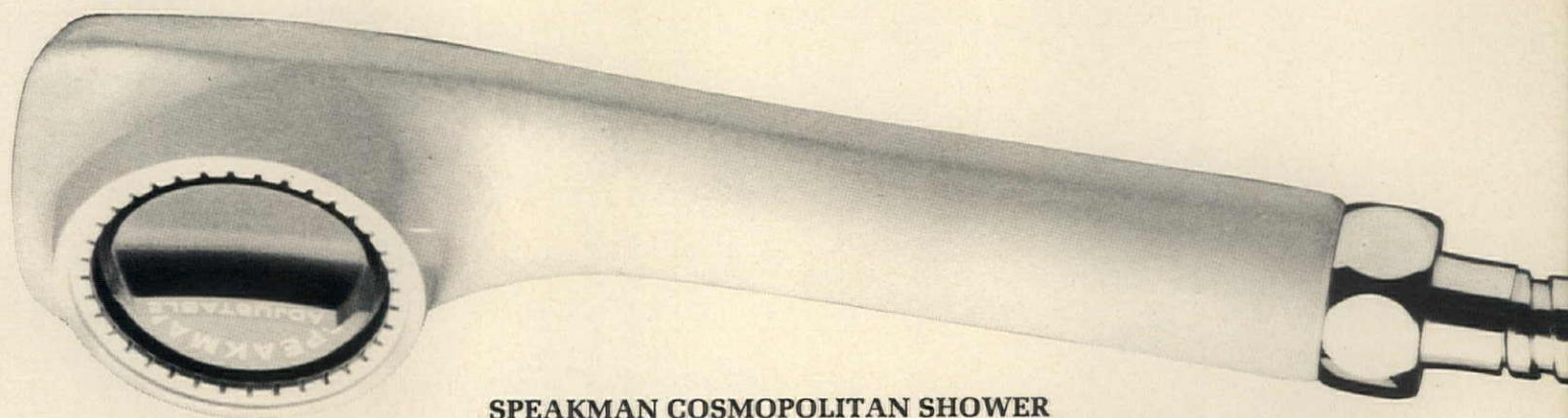


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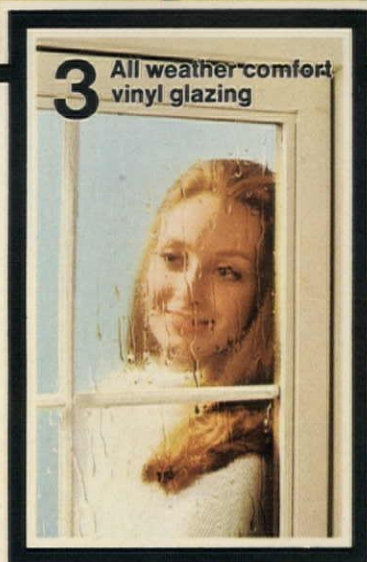
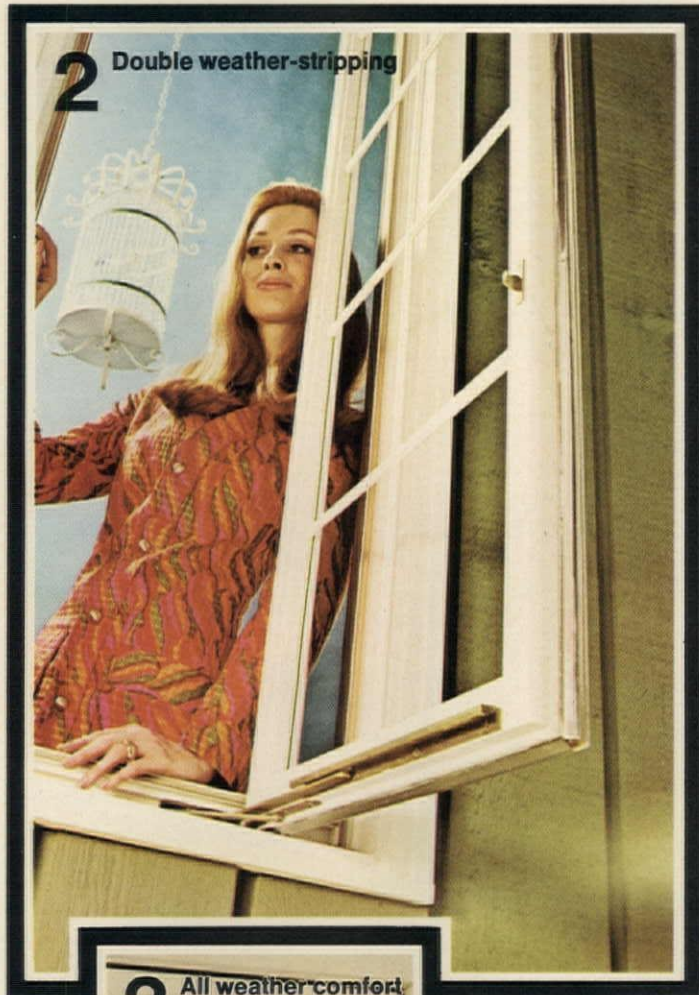
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H&H JANUARY 1972 81

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Setback requirements: Part I

"They're major roadblocks to improved planning for single-family subdivisions"

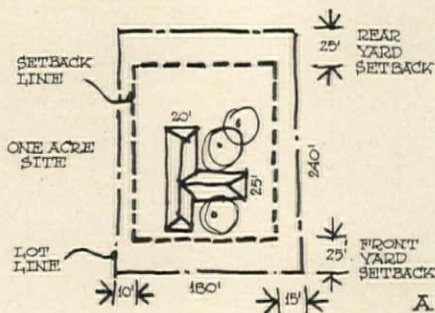
There are thousands of standard single-family subdivision lots in the country today, and certainly many more will be created in the future. For, despite the fact that the planned unit development concept is taking the country by storm, it by no means answers all problems.

So let's take a look at what's preventing the builder and the architect/planner from doing a better job with the standard single-family lot, and let's see what can be done about it.

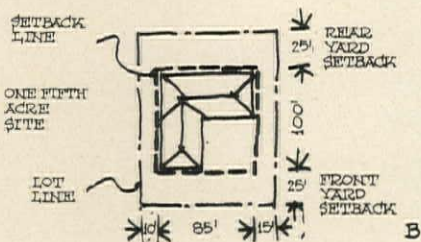
The lot itself is not the major deterrent to good planning. The difficulty is the restrictions put upon it, specifically setback requirements: setbacks from the street, the side lot lines, other homes and the rear property line.

Why are these setback requirements so detrimental to good planning? Because they haven't been modified to work with today's smaller lot sizes.

For example, in the past a fairly typical one-acre site could have considerable setbacks and yet provide ample room for a rather generous house. A 2,000-sq.-ft. house could be comfortably accommodated on this site, avoiding major trees and allowing for flexibility of design (Figure A).

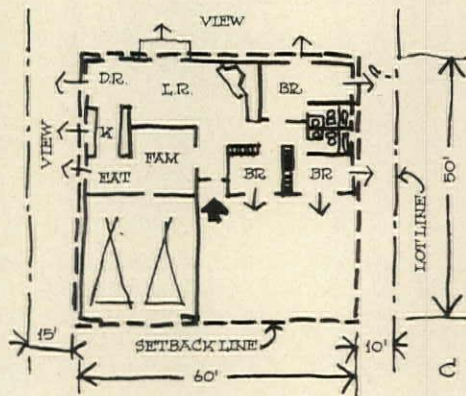


Today's typical lot is about one-fifth-acre, or about 8,500 sq. ft. With the same so-called reasonable setback requirements, what's the resulting situation? Even a smaller 1,500-sq.-ft. house has no place to go. It's locked in like a prisoner, with the setback lines forming the cell (Figure B).



You might reason that with 3,000 sq. ft. of net buildable area within this cell any imaginative architect could design an excellent house. This might be so with an unlimited budget. But the merchant builder must work to stringent cost parameters, such as economic roof spans and joist sizes.

Once the roof span exceeds 25 feet, the sizes of the truss members change drastically, and so does the cost. Thus, the L-shape of the typical merchant-built house is no accident. It's based on economical roof spans and usually double-loaded corridors, the latter also for economy. Not only does this preclude any flexibility in setting the house on its lot, but it dictates the placement of rooms (Figure C).

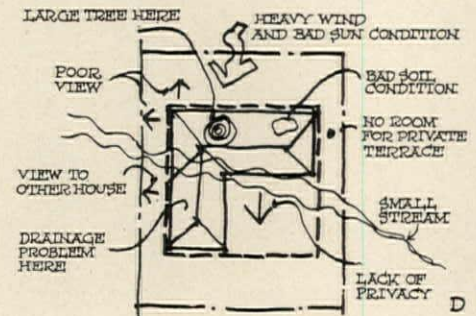


With a locked-in building area and a somewhat standardized floor plan, what's left to the imagination? What factors must be overlooked? Obviously, natural terrain—mature trees, brooks, rock outcroppings—must be ignored when such tight restrictions are enforced. Engineering factors such as soil conditions, drainage and utility placement are also pretty much dictated by this locked-in condition.

More important are the so-called livability factors such as sun orientation, wind, heat, views and privacy. With these considerations comes the interrelationship of indoor to outdoor spaces, their orientation and size. But under current setback restrictions, very little attention can be given to any of the above factors (Figure D).

What can be done to replace setback requirements? Can a system be devised so that the builder can take advantage of site factors as well as conditions effecting livability of the house itself? And, can such a system save money for the builder?

For the moment, let's consider the prob-



lems of natural terrain and engineering. Why shouldn't the current national concern for conservation apply to a small lot as well as to a park? Yet, at this level we have just begun to scratch the surface in setting up performance guides to help us avoid engineering difficulties as well as save natural terrain.

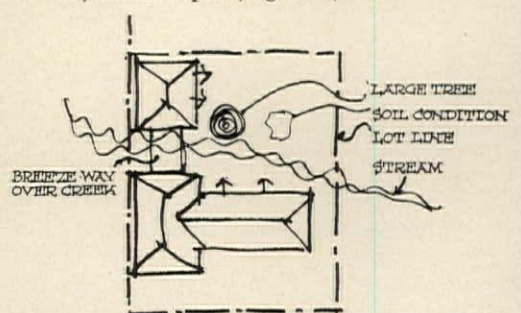
For example, the Del Monte Forest development in California has lot conservation deed restrictions. Trees over a certain diameter cannot be removed.

On a state-wide basis California has adopted guides for Engineering Criteria. Lots must be individually certified by a Soils Engineer as to the stability of the soil where the house is being built.

And on a nation-wide basis, drainage requirements have been in effect for many years at FHA projects.

Performance standards such as these can prove costly to the builder who also must work with strict setback requirements.

If setbacks were eliminated or modified, possibly some terrain and engineering problems could be avoided by setting the house elsewhere on its lot, and thereby saving money in site repair (Figure E).

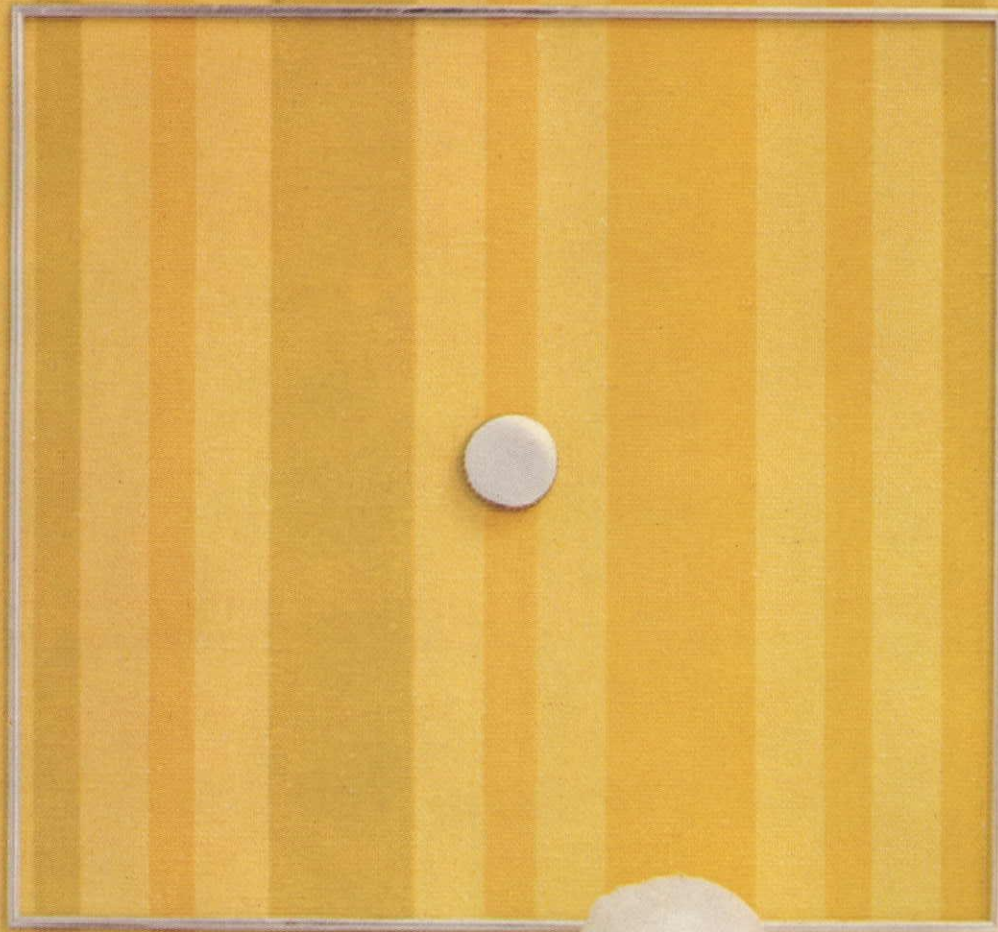


PLANNING TO WORK WITH SITE CONDITIONS E

Livability factors are even more important. There are many ways to define these and turn them into performance standards that can be easily used by the builder. I will discuss these in more detail in a subsequent column.

ROBERT W. HAYES, PRESIDENT, THE COMPLA CORP., SAN FRANCISCO, CALIF.

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F-100 4x4 Pickup (GVW to 5,600 lbs.) features Ford's exclusive Mono-Beam front suspension with coil springs, forged radius rods and a steer-

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F-250 4x4 Pickup (GVW to 7,700 lbs.) is an all-round workhorse that seems to thrive on punishment. The beefy front suspension has long, resilient leaf springs and lubrication-free shackles. Power brakes, free-running hubs, 2-speed transfer case, and 4-speed transmission are standard. 300-cu. in. Six is standard; 360-cu. in. V-8 optional. Six-man crew cab with four doors and two full-width seats is also available.

Ford has a 4x4 to fit your toughest job needs. See your Ford Dealer for complete details.

FORD TRUCKS 

"Leisure World wanted a quality faucet that needed a minimum of maintenance. So I got them 50,000 Delta faucets!"

x John Kennedy
John Kennedy

Kennedy Mechanical Contractors

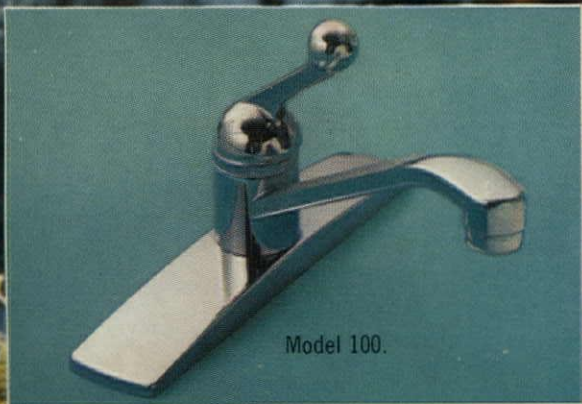
Leisure World is just that. A beautiful retirement community in California that's become a new living concept in America. And for the maintenance crew and the plumbing contractor, it's even more of a leisure world. Because during the 7-year history of Leisure World, they've hardly had to repair or replace any of the community's 50,000 Delta faucets.

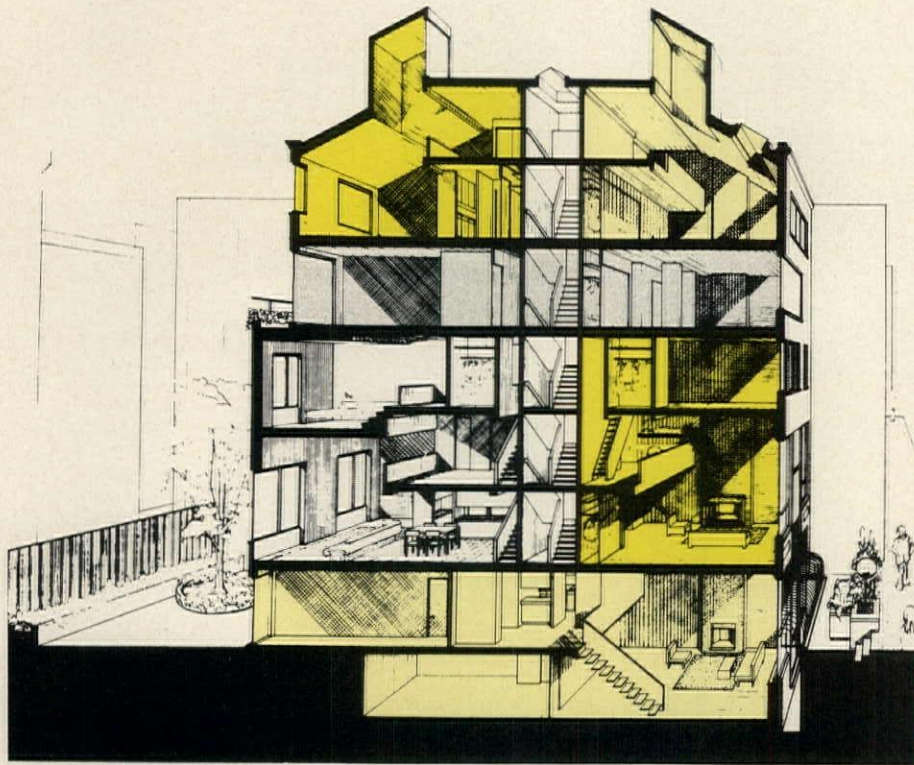
But beside its great maintenance record, Delta single handle faucets were chosen because of their ease of operation. And because they look as good as they work.

As John Kennedy said, "Seven years ago when Ross Cortese, the developer of Leisure World, awarded me the project, he said he wanted a Class A job. And with Delta faucets that's just what he got."

We can tell you even more about the full line of trouble-free Delta faucets. Just write Delta Faucet Co., a Division of Masco Corporation, Greensburg, Indiana 47240.

Delta Faucet.
Simply beautiful.





A constricted townhouse yields 6 family-size apartments

The co-op apartments were created by building nine levels into a 54'-high brownstone that had been gutted by fire. So, despite limited square footage (lot size is 25'x92'), the six units provide spacious, almost-private living in downtown New York City.

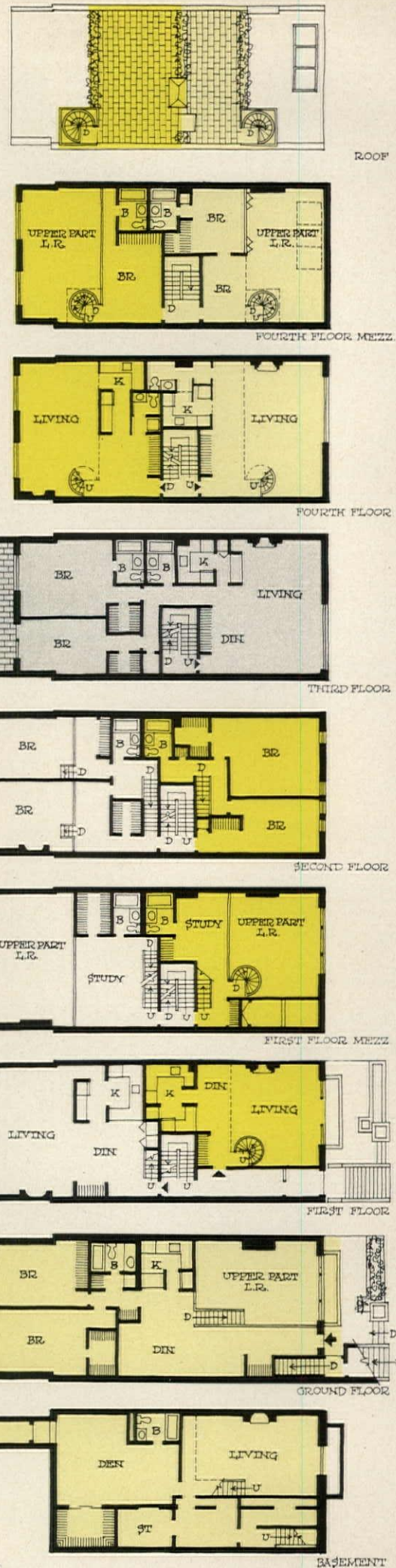
Except for the lowest-level duplex which utilizes the original basement and partly excavated cellar, duplex and triplex units were created by suspending mezzanines part-way over the entry levels. Thus living rooms are two-stories high. There is also one floor-through unit.

Four apartments open to private outdoor living areas—a garden for the lowest duplex, a rear terrace for the floor-through unit and roof terraces for the topmost duplexes. Prices ranged from \$35,000 to \$75,000—well within the means of urban-oriented, middle-income families who would not be able to find similar amenities in middle income high-rise buildings.

Cost of the conversion was \$280,000, of which \$102,000 was for the property. The remodeled building was designed by Stephen B. Jacobs & Associates, with Chickafusa Sato as associate. It was built by J.D.C. Construction Corp. for M.L.T. Realty Corp.

For a closer look, inside and out, please turn to page 94.

PHOTO: WILLIAM GINSBURG OF LUXICON



THERMADOR'S THERMATRONIC RANGES

Point The Way To Easy Sales With Four Exclusive Extras:



BROWNING ELEMENT IN ALL MODELS
Cooks everything to a tasty, golden brown.

COOKS IN SHALLOW METAL PANS
Cook Frozen Dinners in their own metal trays — or use any metal tray up to $\frac{5}{8}$ " deep.

STAINLESS STEEL INTERIOR
Easy to clean — wipe out with a damp cloth.

BLACK GLASS DOORS
Thermador's elegant trademark black glass doors add beauty to all models.

Cooking is Thermador's business. We build a microwave range that cooks like no other.

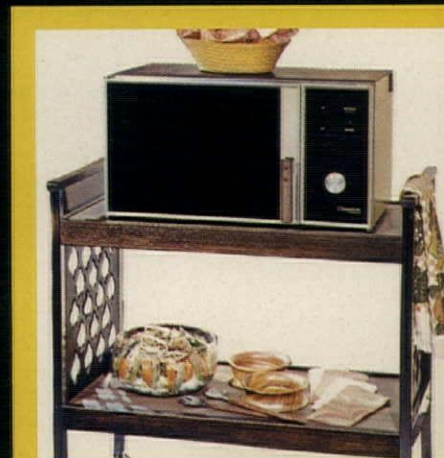
These four exclusive features are designed for speedier, easier cooking for your customer . . . and speedier, easier sales for you.

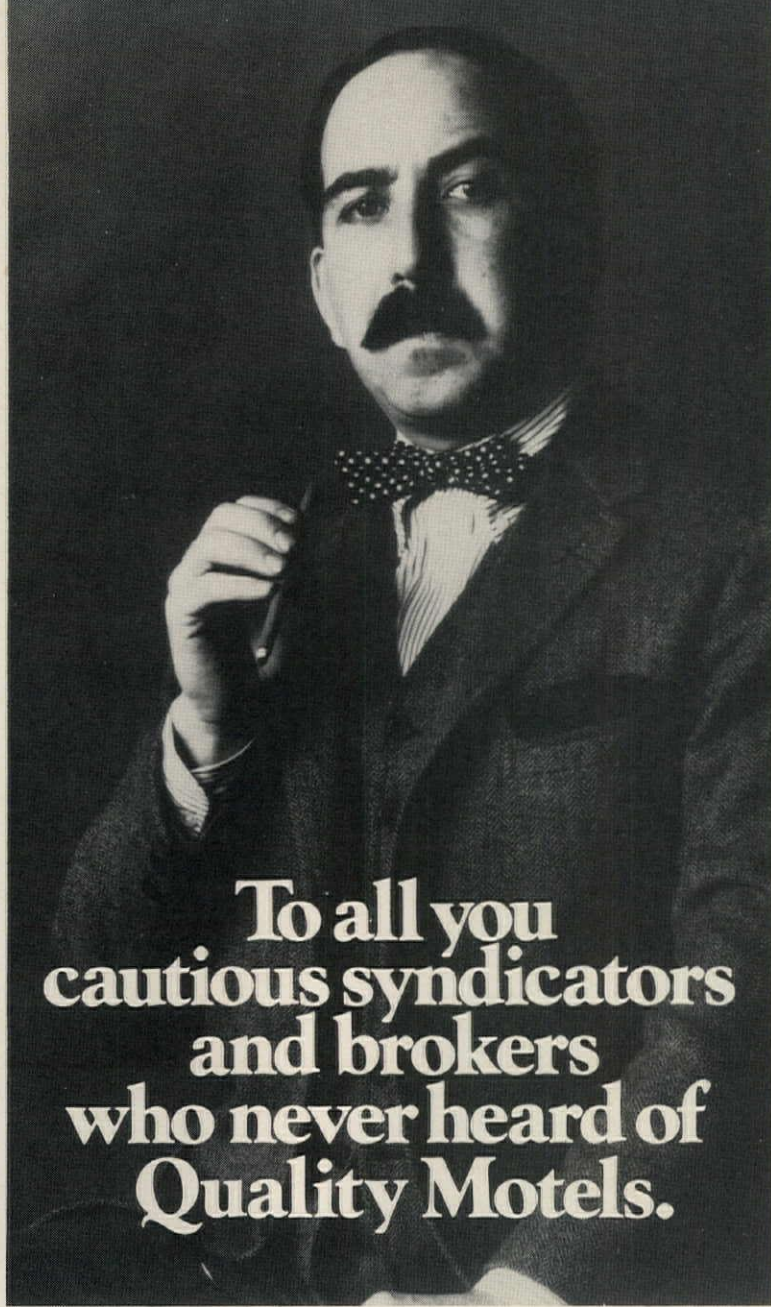
Thermador built-in microwave ranges in combination with the self-cleaning oven (shown) or singly for hanging under wall cabinets. 240 Volts or 120 Volts. Model MC11, the new handy portable is complete with browning element too. Moves any place — indoors or outdoors. 120 Volts.

Thermador

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Hear this: Quality Motels is an international chain of nearly 400 motels, most of them franchised.

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We're looking for new properties and franchisees to share our national multi-media advertising program, toll-free, one-number reservations system, and our affiliation with 10 major credit cards.

To hear more, phone or write: Leonard K. Dowiak, Director, Franchise Operations, Quality Motels International Offices, 10750 Columbia Pike, Silver Spring, Maryland 20901. Phone: (301) 593-5600.

Quality Motels International Offices
10750 Columbia Pike B-1
Silver Spring, Md. 20901



Please send me your get-acquainted fact sheet.

Name _____
Address _____
City _____ State _____ Zip _____



Typical New York City townhouse, squeezed between neighbors, presents a closed-in look at the street side. Lowest-level duplex has private entrance below stoop.



Skylighted ceiling in top-level duplex brings added light to living room. Stairway (foreground, right) leads to mezzanine bedrooms, thence to roof terrace.

One million Ever-Strait doors



One million warp-free, weathertight, steel-clad, foam insulated Ever-Strait doors are now in service. Solving traditional door problems. And making beautiful, durable entrances.

Of course, we look back on a million doors as

**One
million**

**not bad for
openers**

nothing more than a good start. But it does indicate that more and more people recognize the advantages offered by patented Ever-Strait features in steel doors. And it proves we've got more than just a foot in the door business.

Make a grand entrance

**Pease
Ever-Strait Doors®**
PEASE COMPANY 900 FOREST AVENUE • HAMILTON, OHIO 45012

U.S. Patents No. 3,153,817; 3,273,287; 3,238,573; 3,426,479. Patented in Canada 1965, 1966; and in United Kingdom 1962. Other patents pending.

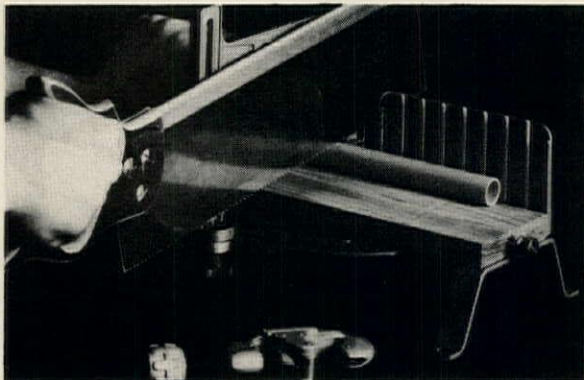
© Pease Company 1971

See the Millionth Door at the NAHB in our Booth # 3418

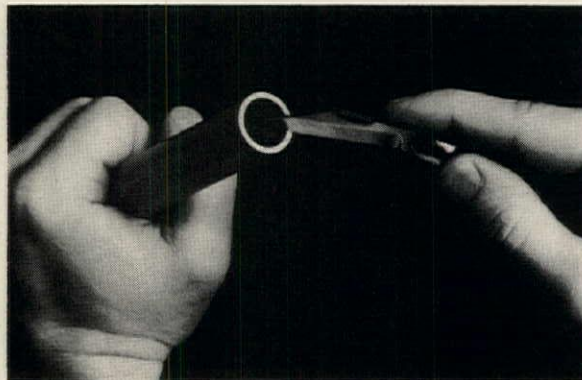
CIRCLE 95 ON READER SERVICE CARD

H&H JANUARY 1972 95

How to install CPVC pipe for hot and cold water and be sure you are right.



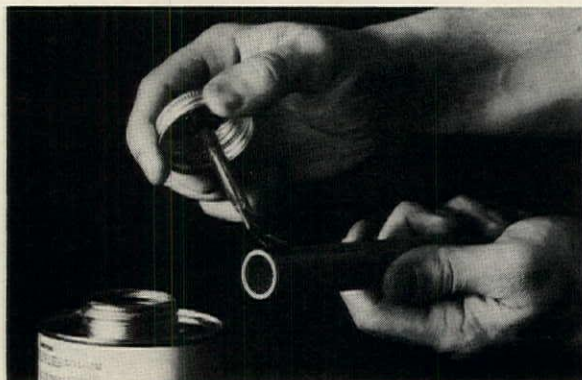
Be sure you cut it square! It's easy in a mitre box. Or use a cutting tool. Pipe made of hi-temp Geon® vinyl (CPVC) is for hot and cold water lines, Geon vinyl (PVC) for DWV, etc.



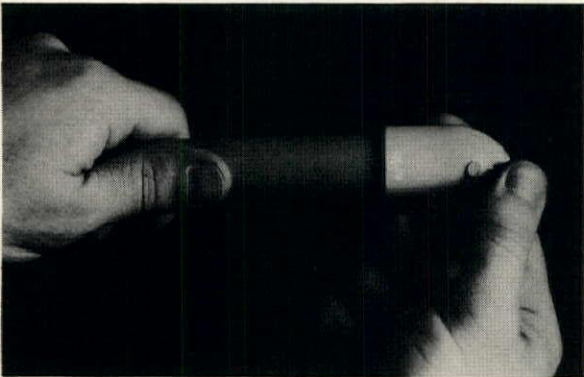
Remove the burrs or ridge from the outside and inside with a knife or tubing reamer. Before you apply any cement, be sure the tubing will enter the socket but not be so loose the fitting falls off.



Remove surface gloss from the tubing end and fitting socket with CPVC cleaner or fine sandpaper and wipe clean with a dry cloth. Brush CPVC cement to the inside of the socket.



Then brush cement on the outside of the tubing. Notice how easy it is to handle. Tubing made of hi-temp Geon resists moisture, oil, corrosion, acids, alkalis and other chemicals.



Push the tubing into the fitting. Then give either the tubing or the fitting a quarter turn to insure proper distribution of cement. Immediately adjust for direction. Wipe excess cement from the fitting lip; hold both together for a few seconds.



It's easy to connect hi-temp Geon vinyl tubing to metal lines or valves. A transition fitting like this does the job. Get all the facts about CPVC piping. Write to us for free booklet.

For free illustrated booklet, write **B.F. Goodrich Chemical Company**, a division of The B.F. Goodrich Company, Dept. 3135 Euclid Avenue, Cleveland, Ohio 44115.

B.F. Goodrich *...in pursuit of excellence*

LETTERS

Agri-communities

H&H: Having worked with realty projects in rural areas (and overseas in suburban/rural areas) that involved farm-estate and agricultural producing properties, we found your November article by John Rahenkamp, "Farms and housing don't have to compete for land", was extremely interesting.

Our entry into this area more than a decade ago was a result of an in-depth study for a major realty organization dealing in suburban/rural properties.

In principle, there is basic agreement with recommendation for the "agri-community" approach which could make acreage available for housing and project development. However, to sell a group of farmers on putting together marginal lands into 3,000 to 4,000-acre sites would require a considerable amount of time. And in dealing with persons who have lived in the open most of their life and who, basically, resent being crowded-in by outsiders, it is almost predictable that in the end the developer will wind up paying far more for the land than if the available farms for sale were acquired.

The same applicable rules and guidelines that corporations or developers look for in acquisitions or mergers are apparently not considered or contemplated with respect to acquisition of strategic farm or farm-estate properties. For example, the Institute for Business Planning has recently issued some 30 pages of new tax benefit information for farming. Over the long-term period, the investor or farmer can reinvest up to \$1 million tax-free. Current interest rates for acquisition of farm properties are between 6% and 7%. First mortgages up to \$250,000 for up to 33 years can be obtained. And long-term revolving credit plans are available, at reasonable interest rates, for reactivation, expansion or diversification of farm operations.

Prior to acquisition of a farm property in preparation for upgrading, improvement and expansion of the farm activities to bring the farm operations to maximum efficiency, the help of a local Department of Agriculture agent can increase the first mortgage another \$5,000 to \$10,000, and possibly extend the mortgage period. Usually mortgages are open-ended, permitting the developer to adjust his mortgage to accommodate the tax structure for tax advantages.

Just as a company may acquire or merge with other companies and utilize the management of the new company, the same rule of thumb, if applied when acquiring a farm or farm-estate property, can be advantageous to the developer. First, by acquisition of an operating farm or farm-estate, he can get an immediate cash-flow. Usually an

operating farm will have competent help and management, and usually both will remain with the new owner. Alternatively, there are professional farm management groups, or reputable banks that have specialized computerized farm-management services that can be utilized.

There is another factor to be considered by a developer. By their acquisition of the farm property, in addition to picking up a cash-flow or tax-loss situation, a potential exists for development of a sophisticated package offering investment in the farm-management (which could be operated as a corporation), or in cattle or dairy operations, which investment (on a pay-in arrangement) could be made with the monthly mortgage payments of the persons buying homes or apartments in the housing project on the farm.

One possible way to accommodate this trend is the development of villages on small farm or farm-estate properties (150 to 700 acres). A good developer can use this approach economically, for if he acquires operating farm properties, which gives an immediate cash-flow and expectations of increased profits from expansion of the farm operations, he can pick up strategic lands at exceptional prices.

CHARLES A. ABBOTT, president
Charles Abbott and Associates
Elmhurst N.Y.

Builders in N.Y.C. suburbs

H&H: Regarding your November article, "Top builders swarm into nation's largest city—the suburbs of New York. . ." [News], we would not want the impression to get around that substantial builders have in any way replaced the hard core of small- and medium-sized builders who have done the building that created the New York suburbs, especially Nassau and Suffolk Counties on Long Island.

Since 1950, more than 460,000 residential units, including multi-family, have been constructed in the two counties. In addition to Levitt & Sons, we have recently welcomed Larwin and Kaufman & Broad. Presumably the other giant builders will eventually "make the scene," as you put it. In addition, Leisure Village has been with us for several years and recently projected another 1,000 units for its retirement community in Shoreham, Suffolk County.

It is significant that two of the most innovative projects in our area in recent years were built by builders who have been involved in Long Island residential activities since the postwar building boom started. Klein & Teicholz (Kalman Klein and David Teicholz), who have built thousands of homes under their well-known Lakeville

TO PAGE 99



Sico enables you to change your space...



...as often as you change your mind.

Imagine offering 9 rooms at nearly the price of 5. How? By multiplying one room's livability.

Demand for any dwelling increases when one room offers a total of 5 distinct living environments: bedroom; dining room; living room; family room; den. Each is created as quickly, easily and often as residents' needs change.

The secret: Sico "Multiplex" Furnishings System. It includes an exclusive torsion-bar-controlled wall bed, convertible desk/table, sliding nightstand, and rough-in or finished

cabinetry modules. Buy any one or all.

Each fits your individual design and interior scheme. Whether a single-family residence or multiple-dwelling high rise; on-site or factory-built housing.

Sleeping comfort? It's any standard single, double or queen size, and "floats" out-of-the wall on fatigue defying torsion bars. "Float" it back, then pull 20x40" Sico desk out-of-the-wall, roll it anywhere, flip it open to a 40x40" table.

Space conversion takes 10 seconds. Details? Contact Sico.

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PRODUCTS '72

New Products from House & Home Advertisers

a timesaving guide to the 1972 NAHB exhibits

Builders attending the big sprawling NAHB convention in Houston next January will face a bewildering array of products, new and old, spread out over a huge exhibit area. Products '72 has been created by House & Home and its advertisers to organize your shopping tour of this impressive display. Copies will be available free at the show.



see the best, newest, most exciting

This pocket sized guide to the exhibits is a collection of building products, materials, tools and equipment . . . in each case especially selected by the exhibitors themselves as being the best, the newest, the most exciting they will be offering in 1972. Each product will be handsomely illustrated in full color, described in detail and identified by company and booth number.

save time and steps

The order of presentation in Products '72 will be by booth sequence enabling you to move quickly and

efficiently through the aisles pinpointing just the specific products of interest to you.

The booth numbers will also be color coded to match the carpeting and banners that identify the different sections of the exhibit area. This means you can start your Products '72 tour at any exhibit and still save hours of time and thousands of footsteps.

can't make the show?

If you can't make the show this year you can use Products '72 to see for yourself just what the participating exhibitors are displaying as their

best, their newest, their most exciting. Every copy of Products '72, including those distributed at the show, will have two reader service cards so that you and your associates can request catalog information by mail.

reserve your copy now

If you can't make the show, you can reserve a copy now by sending one dollar along with your name and address to Products '72, House & Home, 330 West 42nd St., New York, New York 10036. Your copy will be mailed immediately on publication in January.

Be sure to attend the NAHB Convention in Houston: January 23-27, 1972

Estates identification, will do a 939-acre planned unit development in the Town of Islip, calling for the construction of 1,248 single-family homes, 250 garden apartments and 254 townhouses on some 700 residential acres. There will also be light industry, business and professional land use.

The equally well-known partnership of Donald G. Partrick and Stanley Neisloss (Heatherwood Communities) has projected another 900-acre-plus planned community in the Town of Brookhaven. This will include more than 1,600 units of homes and garden apartments, shopping centers, a golf course and light industry. Also proposed is cluster zoning for a number of new subdivisions.

One of the biggest problems confronting builders and developers in our area, as elsewhere, is the ever increasing phobia, suburban provincialism. Every innovative building program has had to overcome the mass hysteria of our present suburbanites, who appear to think that they have a right to declare a moratorium on all building—obviously because they reject the idea of schools and community facilities being required to serve newcomers.

The same hysteria is displayed at multifamily zoning hearings. But the housing is *not* needed for newcomers. It is for present one-family homeowners who no longer wish to maintain homes, for young newlyweds and for others who want apartments rather than single-family homes to fill their shelter needs.

There is a vast opportunity on Long Island to provide low and middle income housing under various federal and state subsidies. We welcome the advent of builders from elsewhere to join with our own in helping us put up the housing urgently needed by all segments of our society.

T. J. McINERNEY

Executive Vice President

Long Island Builders Institute Inc.

Hempstead, N.Y.

Modular housing

H&H: I was interested in the symposium in your September issue on the breakthrough in modular housing.

However, I think it was lacking in one respect. When you consider all the costs involved in providing housing—including land cost, site improvements, financing, etc.—actual construction costs are not as great as they would appear to be. Even a 15% reduction in construction cost, when translated into monthly payments, does not achieve much of a reduction. A breakthrough in housing requires innovations which will lower all costs—not just construction costs.

RICHARD D. MAY
North Lake Corp.
Evansville, Ind.

"What was the real reason why you selected this carpet for your store, Mrs. Rehart"



*"Assured performance, of course, was a key requirement. But, the aesthetic consideration was all-important. The taste we express throughout our store interior is bound to project to our customers a similar attitude in the selection of merchandise we offer."**

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*Authorized quote of Mrs. R. Rehart, Manager of Rodders, Fashion Fair

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You should know about it.

The Malta V.P. Double Hung . . . a brand new, top quality, vinyl protected 4 balanced wood window by Malta. It will take the most adverse weather conditions yet remain virtually maintenance free. All exterior frame parts are vinyl clad, weatherstrip is vinyl laminated on steel, sash is factory finished coated by special process. And, Malta V.P. Double Hungs reduce your total installed cost. They are factory assembled and require no exterior painting on the job. Rigid vinyl nailing flanges lock securely into frame making weathertight installation into wall panels a breeze.

Easy to install . . . built to last . . . competitively priced. Isn't this the kind of double hung window you want to work with? Write today for complete details.

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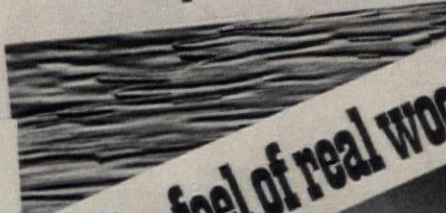
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real wood.

Real
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The texture of real wood.

the look and the feel of real wood

**IT LOOKS
LIKE REAL
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The one all the others
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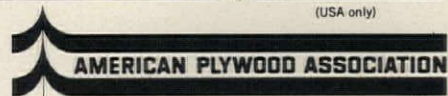
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**Fine styling,
top quality,
panic-proof safety.**

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A lot of personal attention. At least our field men think so. For example, they're often out on the road with our distributors to help get the Weslock story told; they dig into the plans and do the take-off on the big jobs for builders; they often get out on the job site and make sure the locks are installed right—and more.

It's no mystery why they seem to go so far out of their way: service is the best kind of selling.



WESLOCK®
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Shown: Aztec Lever Handle, Antique Silver (large photo) and Antique Brass (small photo).

Homebuilding and hot air

If we don't ease up on the yak sessions, some of us are going to wind up stone deaf

It may seem that housing is having a banner year, but actually the industry is in big trouble. It is in imminent danger of drowning in a sea of words. Between now and next December our calendars are choked with such a plethora of yakkety yak in the form of seminars, round tables, conferences and the like that we may reach the breaking point.

Other industries have the same problem, but not to the same degree. An extremely private survey, just made available to us, shows that in 1971 a total of 32,306,422,004 words relating to housing were uttered in formal sessions of one kind or another. That's up 17% over 1970, and there's every indication that 1972 will be even worse.

The astonishing thing is the way builders, developers and all the rest of us in and around housing are drawn to this torrent of words. We go, we listen and, glassy-eyed, we return home, and our wives look at us and say, "You look like you've been stoned for two days."

And we have. But on words, not booze.

Take modular housing. It's a new and promising part of homebuilding, and we've said several times that we confidently expect it to grow. But now we're not so sure. What with all the talk sessions that have been going on about it, modular housing could explain itself to death before it ever gets off the ground.

Is all this verbiage really necessary? It's worth questioning.

First, we need to distinguish between yak sessions and conventions. Conventions serve a very useful purpose. They bring industry people together to talk shop and exchange ideas, and they give manufacturers a chance to display their wares, so to speak, in the flesh.

The yak sessions—some of them, of course, fringe benefits of conventions—can and do serve a useful purpose as well. They too make it possible to exchange ideas and present useful information. But unfortunately they can just as easily be used as soap boxes from which people push their own self interests, as pacifiers to tell the audience only

what they want to hear and as drone sessions which can put even the strongest man into a sound sleep.

With another yak year stretching before us, this seems a good time to offer some advice to those responsible for dishing up the verbiage.

Make sure that the speakers know their subject, that they stick to the subject and that they haven't given the same speech before seventy-seven times. If this were done, all yak sessions would instantly improve by a minimum of 56%.

Keep all speeches brief. Allot speakers ten or twenty or thirty minutes, and at the end of that time tell them to sit down, even if they're in the middle of their presentation. If they refuse, strike them firmly behind the ear with a heavy object.

Leave more time for questions. Panel members seldom know what their audience really wants to hear, and questions are the only way to find out. In a good yak session the questions are by far the most interesting part. They also show which panelists know what they're talking about and which don't; hence many participants in panel discussions dislike question periods intensely.

When in doubt about holding a seminar, don't. Our private survey proves conclusively that cutting the number of yak sessions in half would increase their acceptability 69%. Even the toughest among us balk when we see that the same subject is going to be worked over five times in the next ten weeks. We may get mad and stay away from all the sessions, which could mean we'd miss something valuable.

We need to exchange ideas, and we need to get all the new information we can. Done right, the yak session in its many forms is the best possible way to both goals. Done wrong, it can put itself right out of business—death by self smothering. On behalf of everyone who has to listen, we plead for improvement.

Now that you mention it, how about a series of seminars on how to create better yak sessions?

MAXWELL C. HUNTOON JR.

Preview 1972 Products

Showcased in this issue are almost 200 products for the homebuilding industry. Some are brand-new, so new in fact, that they won't make it to Houston for the NAHB annual convention later this month. This will be your only opportunity to see them. The majority, however, will be on display at the Astrohall. Many are updated versions of really successful products of the last couple of years. Their advantages—re-engineering for safety or better performance, re-design for speedier or easier installation, re-styling in color or line—are highlighted in these pages. So, you will know what to look for when you see them in Houston. Leading off the 1972 products preview are two four-color pages of exciting products, bound to become trendsetters. Following these are twelve more four-color pages of products for exteriors, interiors, kitchens, etc. And starting on page 140 are twenty more pages in black and white which feature such products as tools and equipment, electrical devices, heating and air conditioning, etc. To find products within any category, use the page-numbered guide at right.



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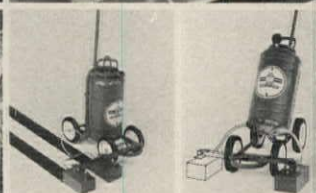
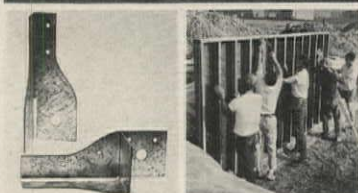
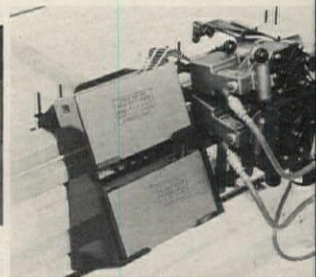
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trendsetters pp. 108/109

exteriors pp. 110/111

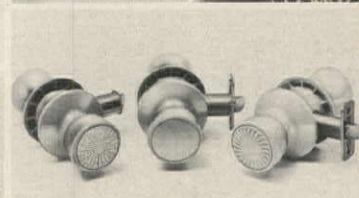
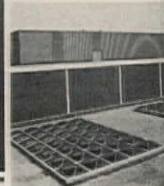
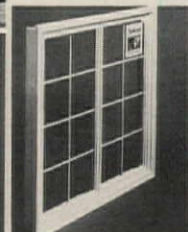
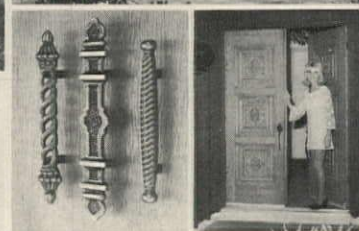
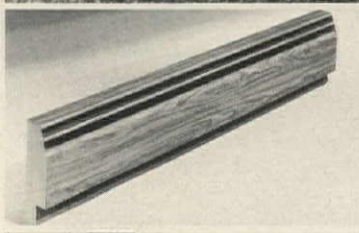
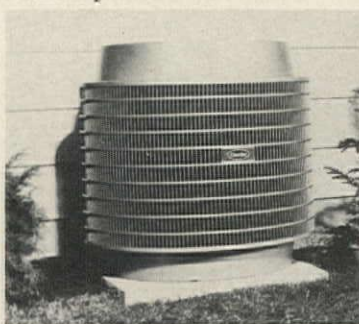
interiors pp. 112/113



kitchens p. 140

structural materials p. 142

tools & equipment p. 144



heating & air conditioning pp. 160, 167

doors & windows pp. 168, 170

... p. 172

... p. 174



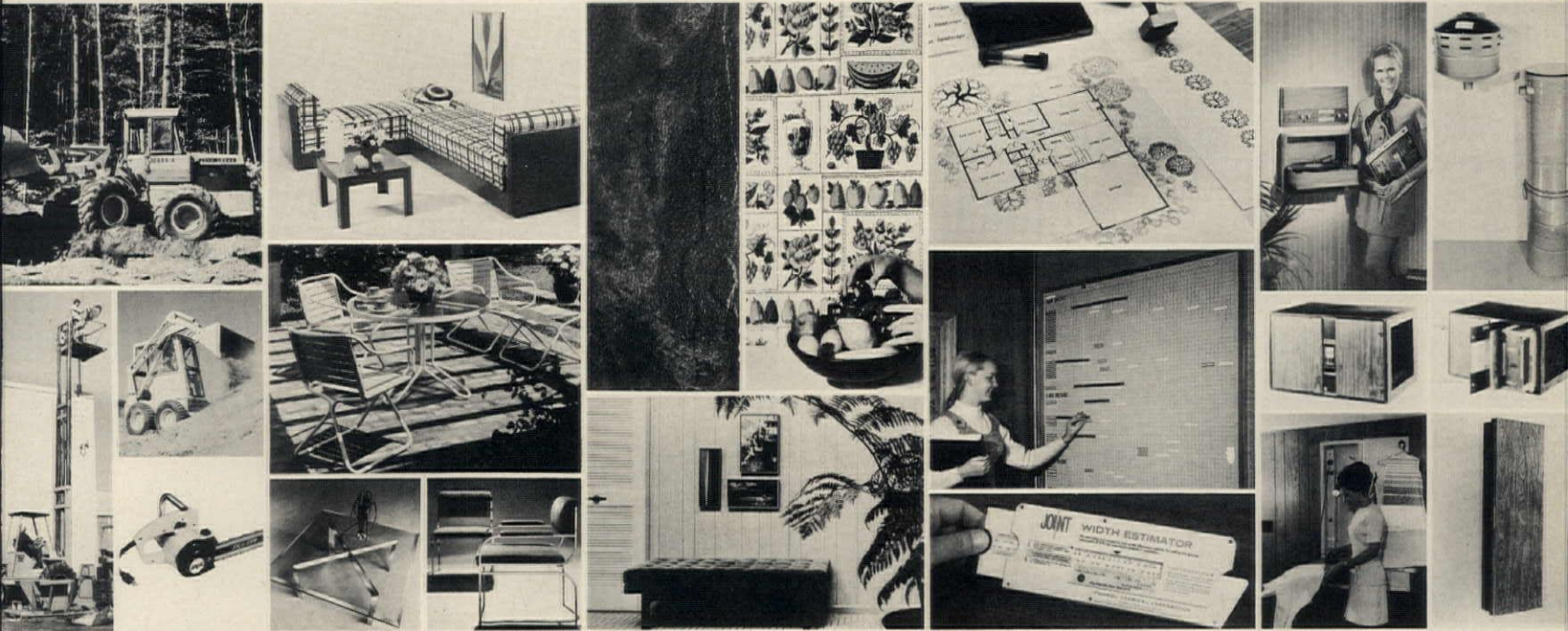
flooring pp. 114/115

kitchens pp. 116/117

doors p. 118

lighting p. 119

baths pp. 120/121



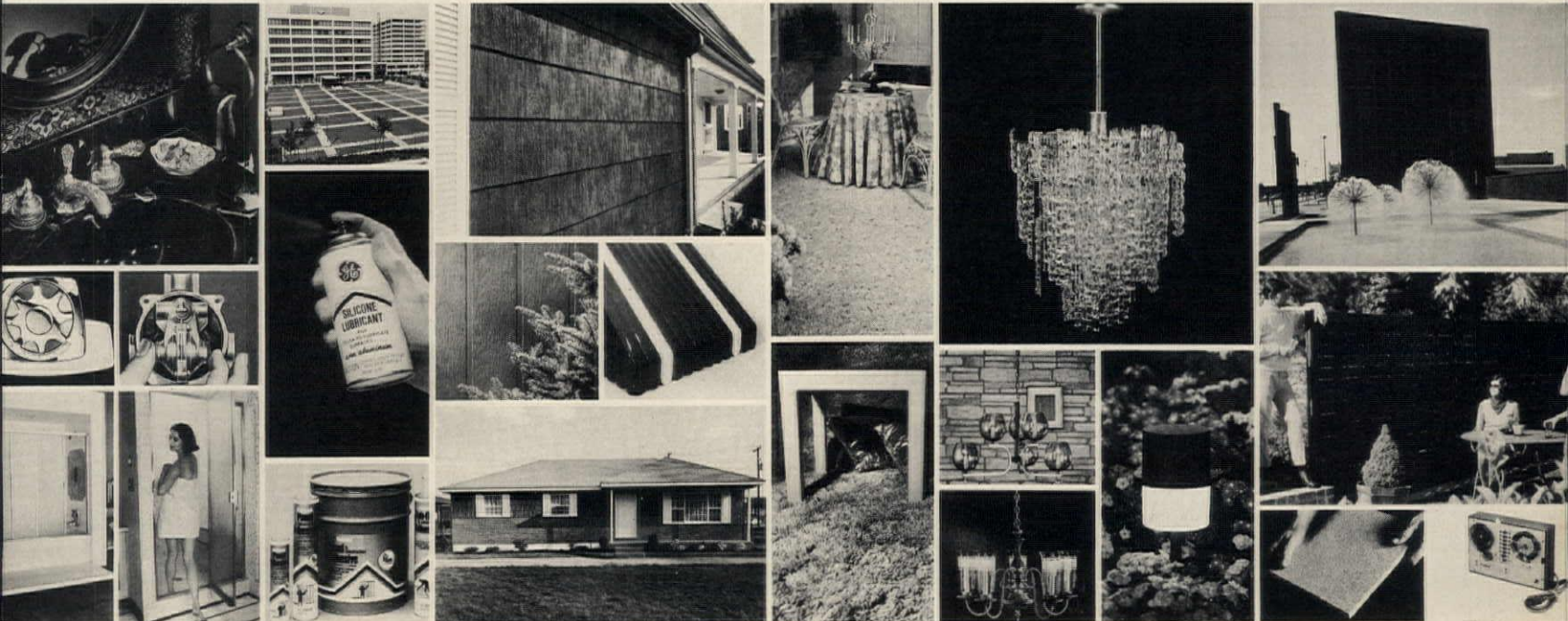
... p. 148

furniture p. 152

interiors p. 154

office equipment p. 156, 158

electrical devices pp. 160, 162



baths p. 177

coatings & adhesives p. 180

exteriors p. 182

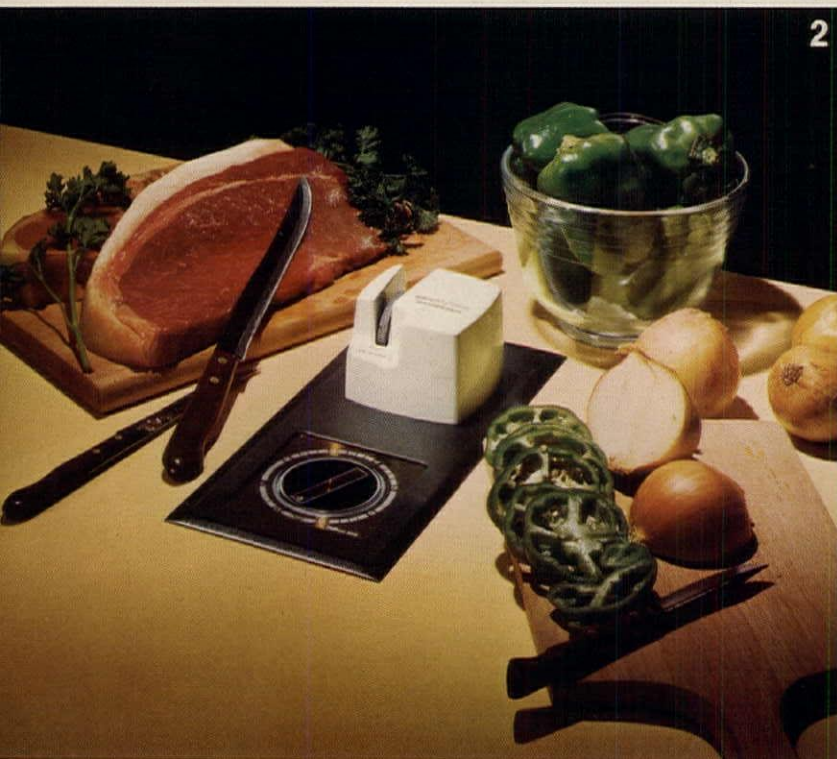
flooring p. 184

lighting p. 194

outdoor living p. 196



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New
Products
1972

trendsetters

1 **Ceramic glass countertopping** is a space-age material that won't burn, blister or scorch, even when pots are set on it still sizzling from range or oven. Nor will it scratch if used for a cutting board, as knives, scissors and even razor blades cannot mar it. And all nail polish, glue, grease, oil, iodine, dye, paint or acid simply wipes off with no damage. "Pyram", formerly available in manufacturer's cookware and counter cooking units and inserts, now comes in sheets 4'x8' or 25" wide in most standard lengths. Sheets are 1" thick, including the rigid fiberglass-reinforced backing to which "Pyram" is permanently bonded. Counter edges can be covered by PVC moldings or with strips

of "Pyram", metal or wood. Besides the white shown above, "Pyram" is available in gold, primrose, butterscotch and avocado, all of which are fadeproof and have been tested on the exteriors of buildings. In costs the countertopping will rate somewhat less than other luxury materials. Corning Glass, Corning, N.Y.

CIRCLE 201 ON READER SERVICE CARD

2 **Updated food center** has a heavier duty 1/3-hp. motor, a redesigned beater and bowl that really chase mixture around, a redesigned knife sharpener that hones blades at the proper angle from one end to the other on a 150-grid aluminum oxide stone and an enlarged blender

with an integral handle. Even the stainless steel counter-plate has been redesigned and has a solid state speed switch that cycles in either direction from off. Only the salad slicer, juicer and ice crusher remain the same. NuTone, Cincinnati, Ohio.

CIRCLE 202 ON READER SERVICE CARD

3 **V-groove siding** is all wood hardboard, with no knots or grains, that won't split or crack when it's cut, won't fracture at the surface when nails are driven in flush. "Shadowcast" sidings, with smooth surfaces or textured surfaces, are made in V- or U-groove, board-and-batten and deep lap designs that create shadows. Choice of primed

or unprimed. Back-sealed in 4'x8', 9', or 10' panels. Celotex, Tampa, Fla.

CIRCLE 203 ON READER SERVICE CARD

4 **Spiral stairway** in a graceful design connects living levels in a minimum of space. Stairways, in diameters from 3'6" to 8' and adjustable to any height, can be ordered with landing platforms to fit square, round, or special well shapes. Minimum riser heights are 6 1/2", 7 5/8" and 8 1/2" for 22 1/2°, 28° and 30° treads, in either right- or left-hand units. Six types of cantilever treads have checkered abrasive plates, are covered with rubber or wood or may be carpeted. For use indoors or out they are made of



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steel or aluminum, and their hubs slide down over steel center pole from 3½" to 5¼" dia. that sits on a 10'-dia. steel plate beneath flooring. Duvinage, Hagerstown, Md.

CIRCLE 204 ON READER SERVICE CARD

5 □ **Personal sauna** for home, apartment or office, holds two adults comfortably but fits into a space just 3'x4' and 78" high. "Duo Sauna" has kiln-dried redwood interiors and slatted redwood benches, stained mahogany exterior, stainless steel Swedish heater that provides temperatures from 90° to 190° and light fixture. Controls include an automatic two-hour safety shut-off, a timer with a bell and a pre-set dial that turns sauna on in advance

of time when it will be used. Unit plugs into standard 120-V outlets, latches together, can be put up in 15 min. Viking, San Jose, Calif.

CIRCLE 205 ON READER SERVICE CARD

6 □ **Textured floor tiles** have a raised design that looks like sea anemones. "Tropics" is one of four new tiles in "Franciscan Terra" line for use on large or small residential or light commercial floors. All come in brown, olive, amber and the antique white shown. The 12"x12" tiles have cushion edges so they can be installed next to tiles with slight differences in size to provide a handcrafted look. Interpace, Los Angeles.

CIRCLE 206 ON READER SERVICE CARD

7 □ **Acrylic mirrors** of "Plexiglas" form a reflective wall in several colors above. Transparent sheets in clear, amber, yellow, blue, green, gray or bronze are vacuum-metalized on the back with aluminum. The mirrors then can be heated and bent around corners or curves or cut in a variety of shapes. And they can be glued or taped to surfaces, because they are only half the weight of glass mirrors, to form lamps, furniture, signs, displays or interiors. During the heating and forming, and during shipping, storage and installation, the front surfaces are protected by a polyethylene masking film that also identifies the color. Sheets of "Plexiglas Mirror" are ⅛" or ¼" thick and 2'x2',

2'x4', 3'x4', 4'x4', and 4'x8' in size. Rohm & Haas, Philadelphia.

CIRCLE 207 ON READER SERVICE CARD

8 □ **Ceramic cook top** has four glass heating elements set into a polished metal frame. These have designs imprinted in them and a smooth surface that is easy to clean with a damp cloth. The flat "Cervit" (an Owens-Illinois trademark) glass-ceramic material heats up rapidly. There are two 1,200-W and two 1,600-W elements, and all four are controlled by infinite heat knobs set into a side panel. "Smooth-Top" measures 21³/₁₆" deep and 33³/₁₆" wide, takes any kind of pot. Tappan, Mansfield, Ohio.

CIRCLE 208 ON READER SERVICE CARD



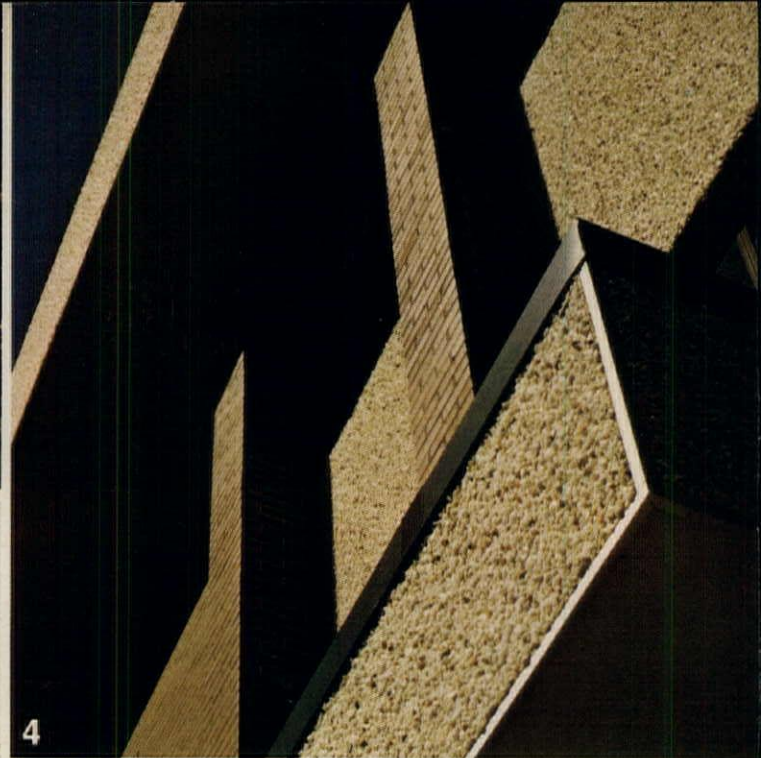
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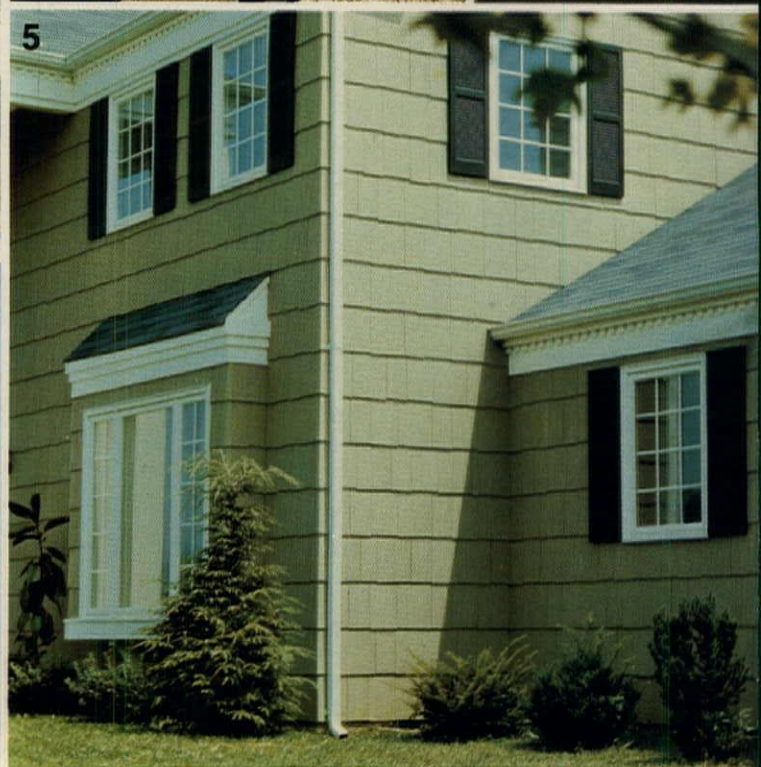
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New
Products
1972

exteriors

1 □ **Clear redwood lumber**, used as siding, is splashed with contrasting cream-colored sapwood when new. Left to weather unfinished in a humid climate, it will first darken, then turn shades of silvery gray as the rain rinses it. In a dry climate it will turn not dark, but tan. It needs no treatment, although it can be painted, stained or bleached for visual effect. If finish is to be applied in the future, it should be treated with water repellent to avoid major preparations later. California Redwood, San Francisco.

CIRCLE 209 ON READER SERVICE CARD

2 □ **Two prefinished sidings** were used on the modular house above: "Sand-A-Sote" was applied to the

front of the house and "Durasote", to the sides. The first has a layer of fine white or tan sand bonded by polyester resin to weatherproof insulating "Homasote" building boards. The second wraps "Homasote" boards in a tough acrylic film called "Korad", comes in green, gold, white or the blue shown. Can be installed with battens or in Tudor style. Homasote, Trenton, N.J.

CIRCLE 210 ON READER SERVICE CARD

3 □ **Solid vinyl clapboards** are made by a new method: vinyl is extruded in uniformly thick flat sheets, then formed into siding panels. Thus, there are no thick or thin spots. "Contour T-lok" comes in 8" or double 4" styles in smooth

or wood-textured surfaces and in vertical panels with 7" V-groove, double 6" V-groove and board-and-batten designs. Features: oversize nailing holes and a flexible nailing hem. Mastic, South Bend, Ind.

CIRCLE 211 ON READER SERVICE CARD

4 □ **Aggregate surfaces** are black, white, dark gray or light gray stones bonded to panels of exterior grade plywood "Homasote" insulation board or cement asbestos board. Polyester resin used is shiny white, won't yellow, fade or crack and can be tinted to match or contrast with stone colors. "Aggreboard" panels are 4'x8', 10', or 12'. Modular Materials, South Plainfield, N.J.

CIRCLE 212 ON READER SERVICE CARD

5 □ **Mineral shingles**, grained to look like weathered wood shakes, now come in three wood tones of cedar brown, birch white and gray, in addition to previous colors of barn red, beige, gold and two greens. All colors are protected by a plastic coating that isn't harmed by sun, wind, rain or snow. "Concorde" shingles carry 20-year weather warranty. U.S. Gypsum, Chicago.

CIRCLE 213 ON READER SERVICE CARD

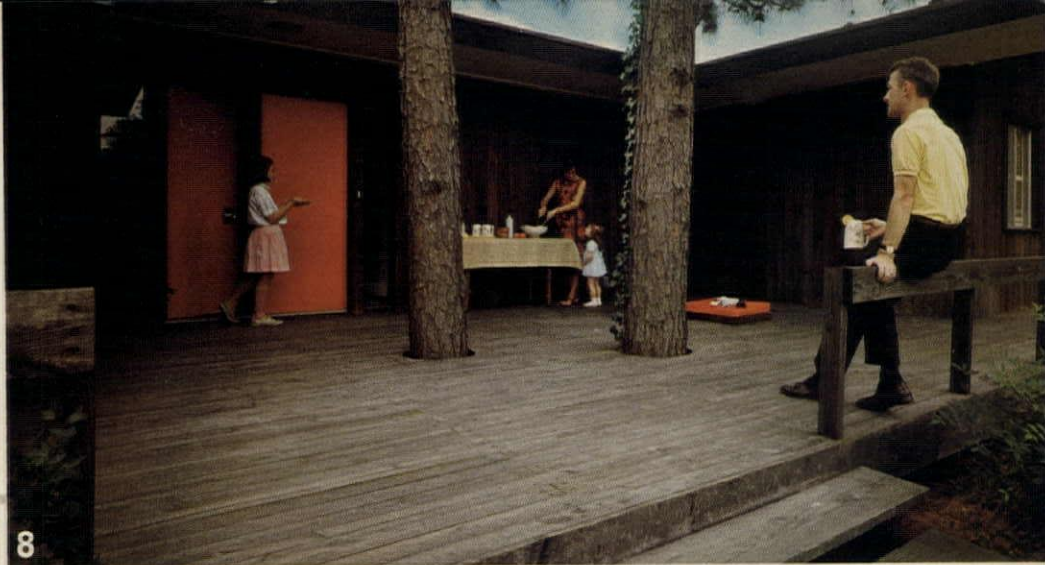
6 □ **Asphalt roof shingles** are several plies thick, enough to create deep shadows, and have 1"-wide strips laminated to bottom edges of 14"x36" shingle panels to enhance the effect. "Regal" shingles have "Seal-O-Matic" feature that bonds



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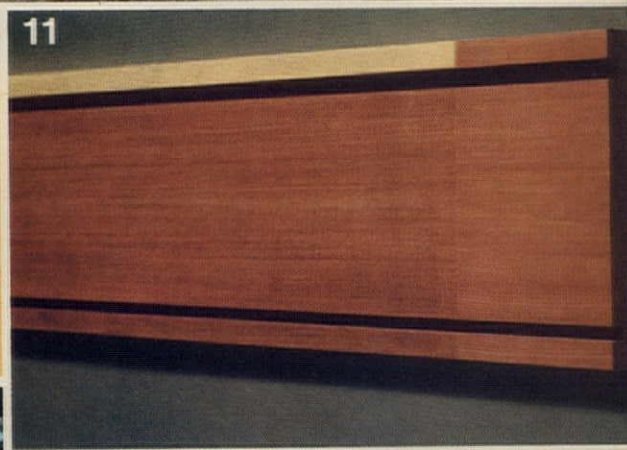
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each to the one below it strongly enough to resist high winds. Ceramic granules come in either light or dark tan, plus brown, black and dark gray. Johns-Manville, New York, N.Y.

CIRCLE 214 ON READER SERVICE CARD

7 **Fiberglass in roofing** lasts longer than felt-based shingles of the same weight—250 lbs. per square—and permits shingles to be guaranteed 25 years. Fiberglass mat construction is teamed with thermally activated self-sealing adhesive strips. "Glasstex" shingles with wood-grain texture look like manufacturer's "Woodtex" product. Certain-teed, Valley Forge, Pa.

CIRCLE 215 ON READER SERVICE CARD

8 **Wood patio/deck**, low to the ground, built out of southern pine, is pre-shrunk and chemically pressure-treated to make it immune to both insects and weathering. Southern Forest Products Assn., New Orleans.

CIRCLE 216 ON READER SERVICE CARD

9 **Board-and-batten design** disguises joints between factory-finished siding panels. These are wrapped in a three-mil-thick acrylic film that won't chalk, peel, flake or blister and ends painting. The 25 "Korad" colors are sunproof, can be touched up with acrylic paint if gouged. Rohm & Haas, Philadelphia.

CIRCLE 217 ON READER SERVICE CARD

10 **All-plastic shutter** is molded of ABS (like a crash helmet) which is very durable except when exposed to light. So, during the molding, it is coated with "Korad" (see No. 9), to keep out the sun. "Vilager" shutter is the same color all the way through, is unaffected by temperature changes, won't deteriorate in weather, comes in 14" widths to fit most window and door heights, in black, dark green or white and never needs painting. Philip Carey, Cincinnati.

CIRCLE 218 ON READER SERVICE CARD

11 **Fascia board** is made of knot-free redwood. The long-length kiln-dried lumber is finger-jointed and put together with exterior adhesive.

"Palco-Loc" stays flat and straight, holds finishes and comes in a variety of types of fascia and trim boards, either with or without T&G edges. Pacific Lumber, San Francisco.

CIRCLE 219 ON READER SERVICE CARD

12 **Aluminum siding** that duplicates wood texture and graining can be installed over old siding or in new construction, and its pre-laminated fiberboard backing reduces on-site labor costs. "Royale" has a rough-sawn finish, comes in the sea green shown and in eight other colors of baked enamel, which don't need painting, are guaranteed for 30 years. American Forest Products, San Francisco.

CIRCLE 220 ON READER SERVICE CARD



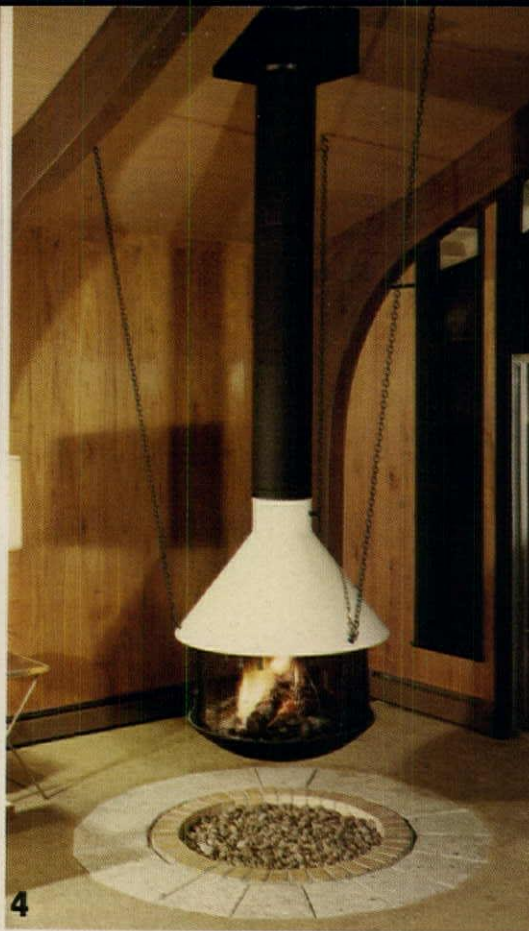
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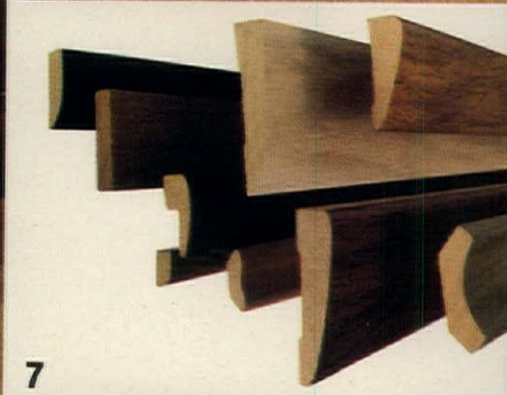
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New Products 1972

interiors

1 **Decorative ceiling tiles** of fiberboard have heavily embossed pattern, called "Aegean", that reflects light. Tiles are double—12"x24" with a center groove that looks like a tile joint—for speedy installation. Washable vinyl coating protects tiles, and T&G edges are self aligning. U.S. Gypsum, Chicago. CIRCLE 221 ON READER SERVICE CARD

2 **Prefinished paneling** in two colors—"Burgundy" and "Provence"—is laid up both horizontally and vertically for dramatic contrast. "Cavalier" paneling in the "Weldwood" line features lauan wood with an embossed texture and a protective varnish coating, comes in 4'x7' and 4'x8' sizes and in three

other colors. U.S. Plywood-Champion Papers, New York, N.Y. CIRCLE 222 ON READER SERVICE CARD

3 **Plastic-finished hardboard** in two designs—"Carved Leaf" (the blue) and "Weatherboard" (the brown)—cover a bathroom's walls and vanity. The leaf design comes also in dark and light brown, red, green and gold; the wood-like style also comes in gray. Both textured panelings, 3/4" thick, come in 16"x96" planks or 4'x8' panels. Marlite, Dover, Ohio. CIRCLE 223 ON READER SERVICE CARD

4 **Hanging fireplace** is suspended by heavy steel chains. "Duchess" can be used with its own

hanging fire bowl, as a free-standing unit with the fire bowl set on a pedestal or with just the hood alone over a fire pit of stone or brick. Diameters available are 36", 42", and 48". Maximum height to flue connection is 59 1/2". Ten colors. Malm, Santa Rosa, Calif. CIRCLE 224 ON READER SERVICE CARD

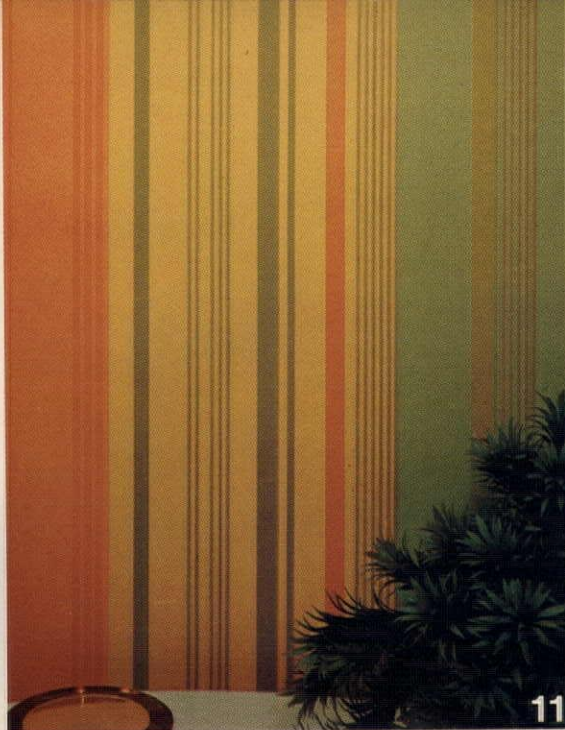
5 **Plank-like panel** has wide grooves at veneer joints, is deeply brushed for texture and protected by a clear stain and a vinyl coating. "Mark V" cedar panels are five plies thick, need no backing and come in the gray shown, plus beige, ivory and brown. Roseburg, Roseburg, Ore. CIRCLE 225 ON READER SERVICE CARD

6 **Zero-clearance firebox** has internal insulation kept cool by a draft system so outer shell can be installed next to combustible wall materials. Sides are porcelainized, the back is ceramic and it can be installed in wall as shown or in a corner. Preway, Wisconsin Rapids, Wis. CIRCLE 226 ON READER SERVICE CARD

7 **Vinyl-and-wood moldings** come in a variety of shapes and sizes in a range of wood-grainings to go with panels of ebony, cherry, maple, pecan, teak, hickory, lauan, elm, birch, oak, ash, avocado, walnut or decorator colors. "Rhinohide", bonded to wood, is resistant to abrasion, scuffs, mars, stains, acids,



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dirt, food and detergents. It can be wiped clean, won't wear away and won't fade. Kimberly-Clark, Anderson, Calif.

CIRCLE 227 ON READER SERVICE CARD

8 **Three-dimensional bricks** are reproduced in hardboard panels 4'x8' for walls or around bars and planters. "Plantation" — complete with chips, light and dark shadings and realistic mortar—comes in weathered red or white. Prefinished for long wear, "Naturel" paneling won't splinter or crack, can be applied with adhesive. Masonite, Chicago.

CIRCLE 228 ON READER SERVICE CARD

9 **Scrubable plaid**, protected by

vinyl, is shown here in fluorescent inks of purple, turquoise, blue and green. "Glad to be Plaid" also comes in fadeproof conventional inks of hot and soft pinks with orange and green or yellow with orange and green. From a new collection called "Right On", it is pre-pasted and pre-trimmed to 20½". Imperial, Cleveland, Ohio.

CIRCLE 229 ON READER SERVICE CARD

10 **Glazed blocks** have sculptured patterns of facets, raised circles, concave or convex forms as well as dots and lines shown. "Design Series"—in face dimensions of 3¾" x 15¾", 7¾" x 15¾", or 7¾" square—is made for all wall thicknesses in 48 "Spectra Glaze" colors,

including blues, greens and orange. Burns & Russell, Baltimore, Md.

CIRCLE 230 ON READER SERVICE CARD

11 **Stripes within stripes** form "Spectrum", a fabric-backed vinyl wallcovering with "Mylar". Textured designs in "Dimensions" line are scrubbable, pre-trimmed. James Seeman, Garden City Park, N.Y.

CIRCLE 231 ON READER SERVICE CARD

12 **Large-scale flowers** come in pinks and mauves shown or in yellows, mustard and gold. "Peony" is a "Vymura" paper-backed vinyl wallcovering from British-made "London Style 2" collection. ICI, Stamford, Conn.

CIRCLE 232 ON READER SERVICE CARD

13 **Target-like rings** in contrasting colors are set on lines within a wavy pattern. Called "Alley", it comes in four hand-printed colorways besides the one with "Mylar" shown: yellow/lime/orange/white/"Mylar", green/turquoise/charcoal/white/"Mylar", chocolate/black/tan/yellow/white and white/red/gold/green/navy. Classic Connoisseur, New York, N.Y.

CIRCLE 233 ON READER SERVICE CARD

14 **Fabric wallcovering**, made in Sweden, binds natural yarn to a neutral colored textured paper. Vinyl coating is washable. "Multi-Ripple" comes in beige, gold, green and blue. Van Arden, Hicksville, N.Y.

CIRCLE 234 ON READER SERVICE CARD



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New
Products
1972

flooring

1 □ **Vinyl-asbestos bricks**, set three on every 9"x9" tile, come in the weathered red shown, in tan and in white. Three-dimensional surface is deeply embossed, shows realistic mortar and helps to hide both heel and scuff marks as well as floor irregularities. The surface is also resistant to grease, stains and alkali. "Hampshire Brick" can be installed on, above or below grade, may be applied over concrete or wood subfloor. Azrock, San Antonio, Tex.

CIRCLE 235 ON READER SERVICE CARD

2 □ **Bathroom carpeting** comes in the wall-to-wall sizes of 5'x6' and 6'x8'. "Camelot" is made of American Enka's "Encon" polyester and

is washable. Among the 14 bright colors available is the vivid green shown here. Burlington House, New York, N.Y.

CIRCLE 236 ON READER SERVICE CARD

3 □ **Mix-and-match vinyl**—a geometric design teamed with a solid color—is called "Now Floor". Pattern comes in five color combinations: pink, yellow and green as shown; red, white and blue; blue and green; walnut with jet black and doeskin; and marigold, red, and doeskin. The solids are lime green as shown, yellow, blueberry, signal red, jet black, doeskin and white. Thus each pattern color combination can be teamed with two or more of the solids for different ef-

fects, or two or more solids can be used together. Both come in 6' and 12' widths and have a "Shinyl Vinyl" finish that maintains its wet look without waxing. A "White Shield" asbestos backing permits installation on concrete or wood floors at any grade. Congoleum, Kearny, N.J.

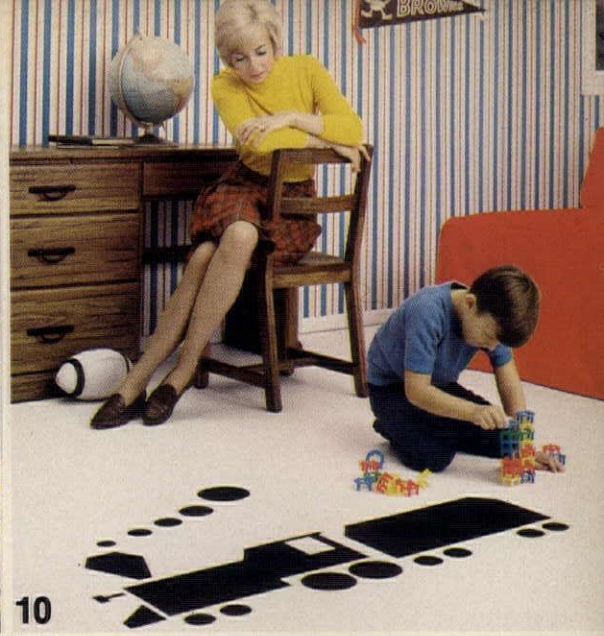
CIRCLE 237 ON READER SERVICE CARD

4 □ **Oriental design**, although usually found in room-size rugs, here carpets a bank floor. "Royal Madar", a pure wool woven Wilton with a border, was supplied in rolls to cover 500 sq. ft. of wall-to-wall area. The traditional pattern is called "Ispahan", which also comes in ecru with wine and blue. Other

patterns—"Kermanshah", "Persian Panel", and "Sarouk"—come in traditional rich colorings. All are permanently mothproofed and are available in seamed or seamless room sizes as well as in 27"-wide bordered stairway runners. Down, Willow Grove, Pa.

CIRCLE 238 ON READER SERVICE CARD

5 □ **Cushioned vinyl**, embossed in a raised floral design, is meant to look like hand-hammered metal. Called "Hammered Gold", it comes in the burnished golds shown and five other color combinations, ranging from light celery to a dark brown. The textured surfaces not only hide scuffs and dirt, they disguise irregularities in the wood or concrete



subfloor. The transparent vinyl wear layer keeps out dirt, resists abrasion, doesn't need waxing and can be wiped clean. An inner layer of "Quiet-Cor" vinyl foam provides comfort and helps to dampen noise. And an asbestos backing—available on all "Softred" floors—permits installation on any grade, with or without cement. Sheets are 9' or 12' wide. GAF, New York, N.Y.
CIRCLE 239 ON READER SERVICE CARD

6 **Polyester shag**, whether seen in closeup sample or installed across a full room, provides a deep-piled opulent look for any area of the house. The rough-textured "Look Sharp" shown here tends to hide soil, and the polyester fiber is easy

to keep clean. Lees, Burlington, Norristown, Pa.
CIRCLE 240 ON READER SERVICE CARD

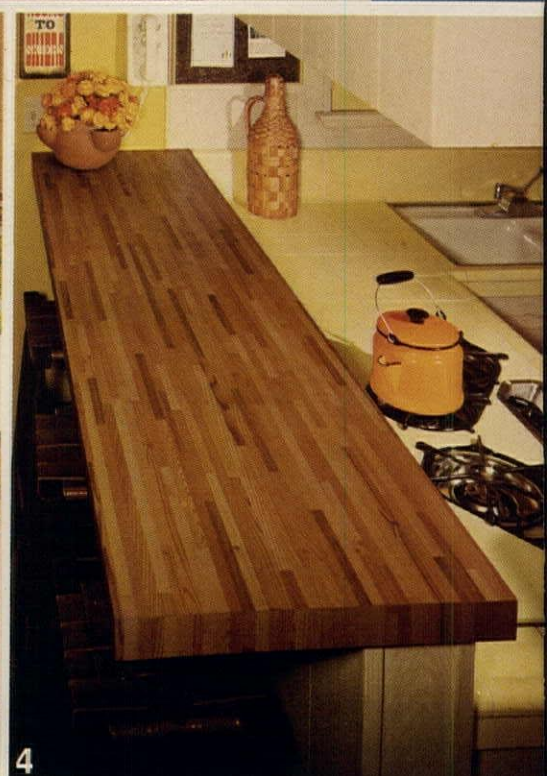
7 **Glazed tiles** in a soft opaque white are the newest addition to manufacturer's special "Primitive" line of floor tiles in which there are seven other muted glazed colors and one unglazed tile. "Cumulus" has a textured surface to give it a hand-crafted look, but it is 1/2" thick and flat enough to be installed with adhesive. Like the other tiles in the line, it comes in six shapes: the hexagon shown, two curved Mediterranean styles, 4"x4" or 8"x8" squares and a 4"x8" rectangle. American Olean, Lansdale, Pa.
CIRCLE 241 ON READER SERVICE CARD

8 **Wood parquets** are made with strips of solid hardwoods. Steel splines are embedded in their backs to bind them together in blocks that are 6 3/4", 7 1/2" or 9" square and surrounded by pickets. "Monticello" design comes in the "Fire-side" finish shown or in "Ripe Olive" or "Old English". (Shown with the flooring here are manufacturer's wall panels of prefinished solid cherry in random width planks—from 3" to 7" wide—that are 3/4" thick and have T&G edges.) Bruce, Memphis, Tenn.
CIRCLE 242 ON READER SERVICE CARD

9 **Patchwork quilting** is reproduced in large scale and printed on a carpet made from manufacturer's

nylon fiber. "Calico Quilt" is a flat level-loop construction easy to keep clean. Made by Trend Industries, it is 12' wide and comes in four vivid color combinations. Allied Chemical, New York, N.Y.
CIRCLE 243 ON READER SERVICE CARD

10 **Customized vinyl tiles** are of the self-stick variety. The train pattern shown was drawn onto both black tiles and white tiles where pieces would be inlaid. Then the tiles were cut with scissors and knife and pressed permanently. "Instant-Floor" tiles are 12"x12", come packaged back-to-back with peel-away paper between. Slate finish cuts glare. Goodyear, Akron, Ohio.
CIRCLE 244 ON READER SERVICE CARD



New Products 1972

kitchens

1 **Appliance grouping** features two new 27"-wide self-cleaning ovens with "Rota-Grill" rotisserie and standard window doors. Also shown: four-burner cooktop with grill/griddle, range hood, built-in dishwasher and side-by-side refrigerator/freezer. All come in white as shown, plus harvest gold, copper-tone and avocado. Hotpoint, Louisville, Ky.

CIRCLE 245 ON READER SERVICE CARD

2 **Planked-front cabinets** have deep V-grooves between the vertical oak boards, horizontal battens on the back doors and black strap colonial hardware with hammered edges. Five finishes in this "Newport" style include "Sheffield"

(shown), plus three other browns and one green tone. Cabinets come in all standard sizes, with other hardware such as white ceramic knobs, and with many types of storage accessories. Mutschler, Napanee, Ind.

CIRCLE 246 ON READER SERVICE CARD

3 **One-piece range top**, formed of a single sheet of metal, has no cracks or crevices to catch dirt or grease, and all edges—front, back and sides—are upswept. So it is featured as an easy-to-clean model. Additional work saver is the self-cleaning oven with large window and its own light. General Electric, Louisville, Ky.

CIRCLE 247 ON READER SERVICE CARD

4 **Chopping block laminate** forms the countertopping of a peninsula eating bar. One of three new patterns in "Custom" series, "Butcher Block" reproduces graining of actual hardwood veneers, while providing easy maintenance. The high-pressure plastic laminate sheets come in long grain, standard grain and vertical surfacing grade for kitchen counters, wall paneling, bar tops and furniture. Lamin-Art, Los Angeles.

CIRCLE 248 ON READER SERVICE CARD

5 **Coordinated cooking units** include built-in gas oven and broiler plus a countertop unit. The 18" oven has four rack positions, may be ordered with "EverKleen" contin-

uous cleaning feature, has illuminated control panel with clock, timer and controls for keeping food warm, can be ordered with all-glass doors. "Luxury 18" broiler is engineered for even heat distribution, has a lift-off door, as does the oven, for easy cleaning. Cooktop is 30" wide, 21 $\frac{3}{4}$ " front-to-back, and 2 $\frac{7}{8}$ " deep, with black all-steel burner grates. Finishes are brushed chrome or porcelain copper, avocado, gold or white. Hardwick, Cleveland, Tenn.

CIRCLE 249 ON READER SERVICE CARD

6 **Microwave oven** fits under a standard 12"-deep cabinet, may be vented through a range hood or directly outdoors. Unit is similar to manufacturer's portable model, has



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stainless steel sides, measures 23 $\frac{3}{4}$ " x 12 $\frac{1}{4}$ " x 13 $\frac{3}{4}$ ", may be used with shallow $\frac{1}{2}$ "-deep metal pans. Oven features a browning element as well as fast cooking capability. Thermador, Los Angeles.
CIRCLE 250 ON READER SERVICE CARD

7 **Easy-loading dishwasher** has two heavy-duty roll-out baskets. Large-capacity one below holds pots and pans; upper one has special curlicues to separate china, M-shaped supports for stemware. Stainless steel washing arms rotate beneath each basket, so that bowls may be washed in either, or stacked atop other dishes. About 15 gals. of water each cycle produce the washing equivalent of 960 gals. Most

parts are stainless steel, both for low maintenance and long life. Unit is guaranteed against corrosion for 20 years. Waste King, Los Angeles.
CIRCLE 251 ON READER SERVICE CARD

8 **Side-by-side refrigerator/freezer** eliminates all defrosting, has separate controls for the two compartments. Unit is 30" wide, 65 $\frac{7}{8}$ " high, and is set on nylon rollers for easy cleaning. Features: five shelves and five door shelves in the refrigerator, four shelves and six door shelves in the freezer, cheese and butter keepers, removable holders for two dozen eggs, three ice trays, and an optional ice maker. Exterior finish is acrylic enamel in the gold shown, avocado,

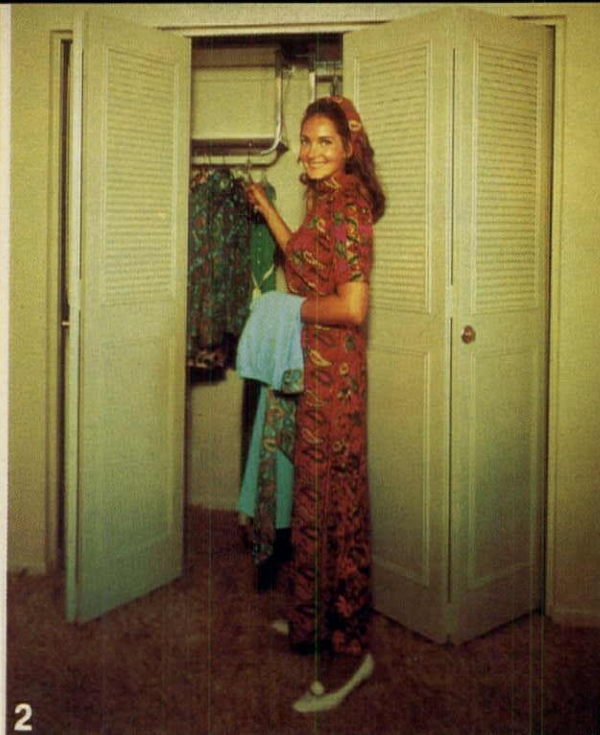
copper or white, with wood-grain handles. Guaranties include a one-year warranty for repair of *any* defect plus a four-year protection plan for repair of defects in refrigerator system or ABS plastic liner. Frigidaire, Dayton, Ohio.
CIRCLE 252 ON READER SERVICE CARD

9 **Wicker and wood cabinets**, in a full range of sizes, have furniture-styled hardware, self-closing hinges, plastic-covered drawers, plasticized door and drawer fronts that resist dents and scrapes, as well as stains and fingerprints. "Woodcrest" line also includes vanities and bifold doors. Raygold Div., Boise Cascade, Winchester, Va.
CIRCLE 253 ON READER SERVICE CARD

10 **Sophisticated controls** eliminate dishwashing guesswork. Action-indicator lights keep the user constantly informed as to which cycle is in progress—even if cycle has been interrupted by lifting the door handle. A rinse-only light indicates that a partial load has been lightly rinsed and is waiting for further loading and a full washing cycle. Other cycles include a soak, a sanitizing rinse of 180° water, one for warming plates and one for light loads. New "Superba" line, with pushbutton control panel, comes in gold, avocado, copper or white with a trim kit for decorating front panel with wood, metal or cloth. KitchenAid, Troy, Ohio.
CIRCLE 254 ON READER SERVICE CARD



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3 4



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New Products 1972

doors

1 **Carved door** has a horizontal panel in the center, beveled panels below, panels above of amber glass as shown, clear glass or wood. "Innsbruck", like others in "International" line, is made of vertical grain Douglas fir or hemlock, may be used alone or in pairs for either exterior or interior doorways, comes in widths of from 2'6" to 3'6" and heights of 6'8" or 7'. Simpson Timber, Seattle, Wash.
CIRCLE 255 ON READER SERVICE CARD

2 **Steel bifolds** are produced by a new process designed to eliminate all chips and cracks. The finish is electro-plated on the steel, then baked hard for 22 minutes. All the parts get a deep and uniform coat-

ing—the edges, screw holes, corners and louvers. Even if the metal is bent 180°, no damage will occur because the bond is permanent. Doors come in sizes to fit door openings of from 1'6" to 7' wide and 6'8" or 8' high. Float-Away, Atlanta, Ga.
CIRCLE 256 ON READER SERVICE CARD

3 **Ventilating sidelights** do away with full screen doors, as they have their own interior screens. Opened by special levers, they can't be pried open from the outside. They are available on 14", 32" and 36" rimmed sidelights, and the larger sizes are made—like the door—of steel panels formed around an insulating core of rigid polystyrene foam. Thermal breaks eliminate condensation, and

weather strippings seal out drafts. Ever/Strait doors and vents won't warp, sag, shrink or swell, come pre-hung and factory primed. Pease, Hamilton, Ohio.

CIRCLE 257 ON READER SERVICE CARD

4 **Raised panel door** of solid western Ponderosa pine has dowel joints for extra strength. "The Heritage" is one of two new interior doors—plus two exterior doors—of similar traditional design. All come in widths from 2' to 3', are 6'8" high and may be shellacked, stained, antiqued or painted. Ideal Div., Certain-teed, Valley Forge, Pa.

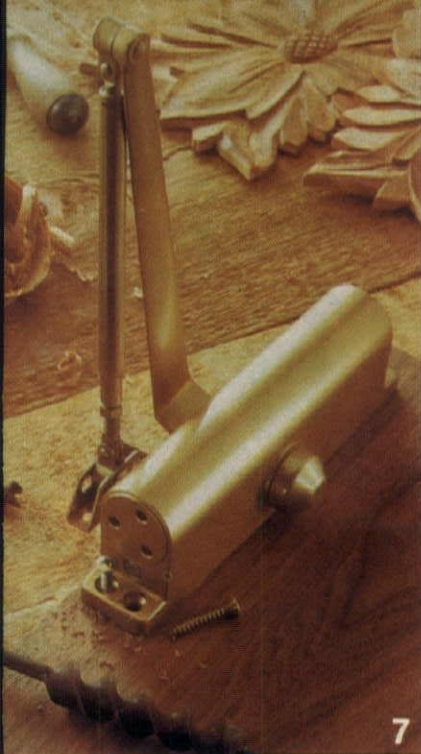
CIRCLE 258 ON READER SERVICE CARD

5 **Door chimes** are housed in a

box 8³/₁₆" square and 3¹⁵/₁₆" deep that is finished in matte black to set off a hand-glazed ceramic tile centered on the front. Within the box is transformer and a large resonating chamber. Signals of "The Chord" are a rich two-note chord for the main entrance, plus a higher two-note tone for a second (rear) entrance. Thomas, Louisville, Ky.

CIRCLE 259 ON READER SERVICE CARD

6 **Steel entrance doors** have deep panels molded right into the metal so there are no cracks or seams in door or trim. The steel is bonded for strength and insulation to a high-density polyurethane core. "Chateau" is one of seven styles in "Benchmark" line. All have revers-



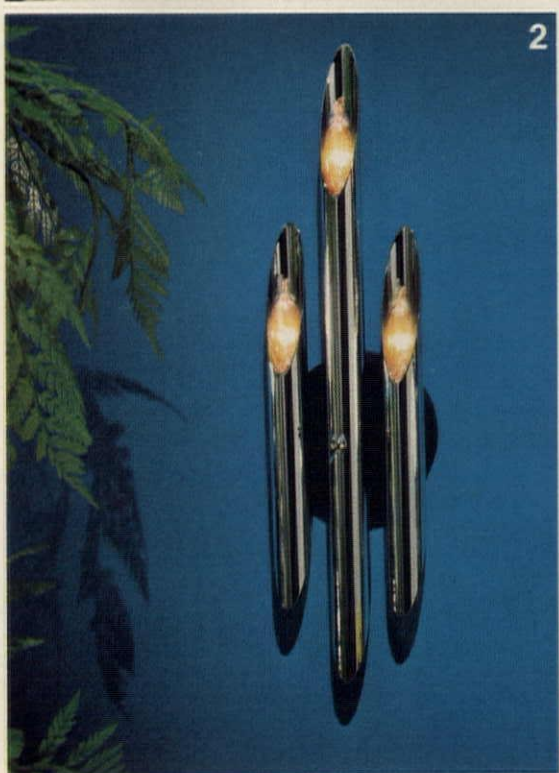
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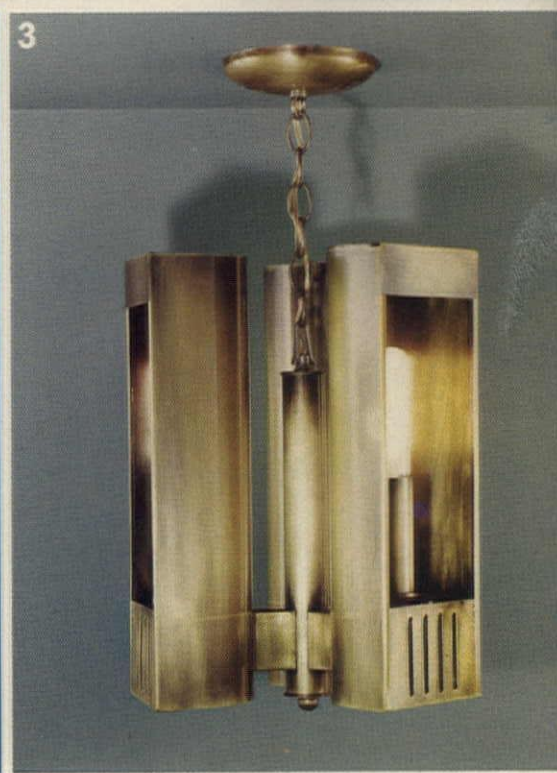
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New
Products
1972

lighting

ible hinges, can be hung singly or in pairs, are pre-finished and pre-hung, have flexible magnetic weatherstripping on the jamb and adjustable frost-free thresholds. General Products, Fredericksburg, Va.

CIRCLE 260 ON READER SERVICE CARD

7 **Door closer** in an aluminum housing comes in bright or dark bronze or bright aluminum finish. Of narrow design, it can be used on slim frames of glass and aluminum doors, mounts either on the door or top jamb. Five sizes, from 7½" to 11" long, are less than 2" wide and project less than 3½" from door. Openers are permanently lubricated, have hydraulic fluid that

works in any temperature, can be adjusted for slow or fast closing speed, may be used with hold-open arm and for left- or righthand opening. International Hardware, Anaheim, Calif.

CIRCLE 261 ON READER SERVICE CARD

8 **Door bolt alarm** can be used as an inside lock only or as an inside-outside lock. A solid steel dead bolt thrown with a key prevents door from opening, and if pressure is applied as in an attempted forced entry, a loud alarm goes off. Unit has a walnut finished case and gold grille, operates on standard "C" battery. Stanley, New Britain, Conn.

CIRCLE 262 ON READER SERVICE CARD

1 **Makeup lighting** combines three simple fixtures: a five-bulb and 2 three-bulb chrome triangular bar lights. Smaller units are 19" long, extend 5¾". The larger unit has a knockout for convenience outlet, is 31" long, extends 6". Bulbs shown and recommended are soft white in 60-W intensity. Progress Lighting, Philadelphia, Pa.

CIRCLE 263 ON READER SERVICE CARD

2 **Contemporary sconce** is three tubes of highly polished chromium-plated steel set against a suede black shield. Bracket measures 20" in height, 5" in width, takes three 60-W candelabra base lamps. Unit is part of eight-style "Chromo-Lite" line that includes chandeliers with

four and six lights, ceiling fixtures with eight and 16 lights, plus other wall fixtures with tubes set at angles, and an exterior wall sconce with longer tubes set against a larger shield of black-finished cast aluminum. Thomas, Louisville, Ky.

CIRCLE 264 ON READER SERVICE CARD

3 **Chain drop lantern** is made of solid brass. Although its lines are contemporary, it has a soft antique brass finish. Part of "Celebrity" series, it can be used indoors or out, has coordinated fixtures including a wall-mounted lamp and a post-mounted lantern. Cage is 16" high and 11" wide. Glass panes are clear. American Lantern, Newport, Ark.

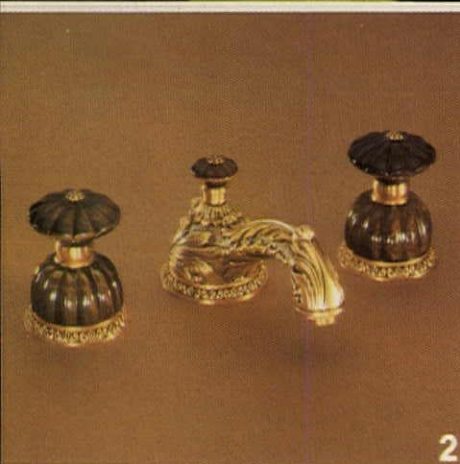
CIRCLE 265 ON READER SERVICE CARD



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New
Products
1972

baths

1 **Compartmented bathroom** features four coordinated fixtures—a low-profile water closet, bidet, square tub, and basin—all in "Fresh Green". Also available in this color are two other basins, one for shampooing, plus a 6'-long contoured-back tub with grip railings. Faucets shown are "Alterna" fittings in polished chrome with white (changeable) inserts. Kohler, Kohler, Wis.
CIRCLE 266 ON READER SERVICE CARD

2 **Hand-carved lavatory handles** are fashioned of tigereye, one of seven semi-precious stones used in "Gem" line. Others are rose quartz, amethyst, malachite, aventurine, sodalite and rhodenite. All are

set in cast brass bases finished in 24K gold plate, polished brass, antique brass or antique nickel pewter. Artistic Brass, Los Angeles.

CIRCLE 267 ON READER SERVICE CARD

3 **All-plastic faucet** comes in blue, avocado, gold, sand or white, and the color shell can be changed in minutes with just a screwdriver and without removing faucet from bowl. "Aurora" can also be repaired in minutes because its one-piece cartridge is removable. Single-handle flow-and-mix control is said to cost 30% less than conventional single controls. Shell, valve, valve body, tube and aerator body are injection-molded "Cel-

con" acetal plastic (Celanese) that won't corrode or rust. Bradley Wash-fountain, Menomonee Falls, Wis.
CIRCLE 268 ON READER SERVICE CARD

4 **Coordinated fixtures** include "Mount Vernon" elongated water closet with jet-accelerated flushing and quiet refill and "Luxoval" self-rimming lavatory. Both come in white as shown, and in pink, blue, forest green, avocado, sand and yellow. Lavatory is shown with "Hi-rise" centerset faucet and "Crystallite" handles. Gerber, Chicago.
CIRCLE 269 ON READER SERVICE CARD

5 **Personal shower** is hand-held, can be used at any height, has a

flexible hose. This model features a white nylon showerhead. Others in line of 22 are chrome-plated brass, have rubber or vinyl hose-liners, sliding bars or brackets. Alsons, Somerset, Mich.
CIRCLE 270 ON READER SERVICE CARD

6 **Fully adjustable showerhead** delivers a steady spray in an infinite variety of patterns—from needles to a full flood in any direction. Six plungers that move in and out are of black "Lexan" polycarbonate plastic (General Electric) which won't stick, resists deposit build-ups. "Anystream" head has chromium-plated finish, is 2 3/4" across its face. Speakman, Wilmington, Del.
CIRCLE 271 ON READER SERVICE CARD



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7 □ **Decorator showerhead** is designed to complement contemporary bathroom decor with its streamlined hexagonal styling and finishes in antique bronze, antique chrome, satin chrome or polished chrome. Adjustable "Jet Setter" provides a wide range of spray patterns including soft vapor mist, needle jet, rain jet and flood rinse. And it incorporates a low-maintenance, self-cleaning feature. Price-Pfister, Pa-coima, Calif.

CIRCLE 272 ON READER SERVICE CARD

8 □ **Three-way mirrors** swing out to give user side and back views. End panels are 12" wide and 36" high, conceal twin all-steel cabinets 5 1/4" deep with three adjustable glass

shelves each. Center mirror is 24" x 36", including frame strips which match those on cabinet doors. Mirrors are of plate or float glass, carry a five-year guaranty. Miami-Carey, Monroe, Ohio.

CIRCLE 273 ON READER SERVICE CARD

9 □ **Multi-piece bath system**—for tub/shower or for shower stall—is designed for easy, speedy installation. "Bath Systems 4" units are shipped to the job site in two cartons, all ready for assembly. Tub/shower unit is 32" deep, 60" wide, and 74" high with a dam height of 16"; shower stall is 34" deep, 48" wide, and 76 1/2" high with a 5"-high dam. Both come in bone or white "Fiberglas" with accent strips

in one of six colors. Owens-Corning Fiberglas, Toledo, Ohio.

CIRCLE 274 ON READER SERVICE CARD

10 □ **Cabinet and torch lights** are color coordinated. Mirrored door is set in a stationary frame of wood sculptured in a leaf pattern and finished in antique gold, ivory and gold or silver. Lights are pre-wired and factory-attached, have crackled glass ball shades. "Sheraton" series features adjustable glass shelves, blade drop, toothbrush holder and convenience outlet. Monarch Metal, Elk Grove Village, Ill.

CIRCLE 275 ON READER SERVICE CARD

11 □ **Marbleized acrylic panels** form bathtub walls and skirt and a

vanity top. "Corian", a filled acrylic, not only resists scratches, but impacts, stains and cigarette burns as well. Tub surround is a five-panel kit; only cutting needed is for plumbing fixtures. Skirt is cut from a 1/4"-thick slab. And vanity top comes with integral bowl. Colors are beige (shown), gray and olive. DuPont, Wilmington, Del.

CIRCLE 276 ON READER SERVICE CARD

12 □ **Oval-mirrored door** with antique-pewter-finished wood frame, swings open to reveal a 19 1/4" x 27 1/4" recessed cabinet. Also from "All-American" is swag light fixture in matching finish. F. H. Lawson, Cincinnati, Ohio.

CIRCLE 277 ON READER SERVICE CARD

high- speed help for the decision making process

The developer is in a dilemma. A piece of land has come on the market at a price that *seems* right. But there are a number of variables—incipient changes in interest rates, different possible price and rent levels, changes in market absorption potential, etc.—which could make the price turn out to be much too high. To check out enough combinations of these variables to be safe would take the developer and his staff weeks, and he doesn't have that much time. He has to make a large financial commitment to that land within a couple of days or risk losing it.

The dilemma is a familiar one, and the developer's solution has usually been a combination of fast, rough arithmetic, intuition and luck. Sometimes he does fine, sometimes he gets squeezed, and occasionally he loses his shirt.

Enter now the computer. It takes developer's data, digests it, and in a matter of minutes turns out the answers. The developer can, if he needs more information, sit down and ask the computer questions, ending up with a comprehensive view of how good a buy that piece of land will be under almost every conceivable condition.

Making use of computers this way is not, as many people think, an enormously expensive process. On the contrary, it is easily within the financial reach of relatively small building and real estate companies. Moreover, building and real estate are particularly well suited to take advantage of what is called the computer model.

The computer model is part of a company in electronic miniature

It is based on what is called a financial model, a system used when a series of business alternatives have to be considered. The idea is that a wide variety of business situations can be tested in the model before being actually put into practice; problems can be foreseen, limits can be established, and a lot of trial-and-error work can be done on paper rather than in the flesh, where error can be expensive.

In its simplest form a financial model may be just a couple of formulas that can be worked out on scratch paper. But when a business is as complex and includes as many variables as a typical real estate operation, working with the model, even with the help of calculating machines, can take an interminable time.

This is where the computer comes in. Once it is programmed, a series of problems that might require weeks of manual computation whizzes through in a minute or two, and with far more accuracy. Problems that are so complex as to be for all practical purposes insoluble by manual means are readily handled by the computer.



Marshall Cole (left), Leventhal partner, and Larry Diamond, head of computer model operations, check the readout from one of the firm's portable computer terminals.

Obviously, the builder or developer who makes use of this tool has an enormous financial advantage. And this has led Kenneth Leventhal & Co., a Los Angeles-based accounting firm with some 50 of its clients in real estate and building, to put special emphasis on computer models. The company feels that while computer-model applications to real estate are still new, the speed and versatility they offer make them ideal for the industry.

Computer models can handle a wide spectrum of jobs

Here are some typical financial data furnished by models:

- Balance sheet.
- Cash flow statement.
- Income tax schedule.
- Liquidity ration analysis.
- Inventory turnover analysis.
- Year-by-year projected income statement.
- Source and application-of-funds statement.
- Return on investment analysis.

Models also allow an unlimited number of "what if" questions to be asked. What if salaries go up 10%? What will that do to the financial picture? What if sales only run at one-third the estimate? What if construction costs go 25% over budget? What if it takes 18 months to sell out rather than 12? What if 12-year-paper is taken on land sales instead of six?

These what if's can be answered in terms of effect on cash flow, profit and loss, balance sheet, return on investment or any number of other measurement criteria.

Models are good in real estate, Leventhal executives believe, because of specific industry characteristics. For instance, individual elements tend to have a high degree of uncertainty and risk. Sales are harder to predict within a narrow range than in many other fields. And financing is subject to sudden and unpredictable fluctuations.

Too, since real estate operations are full of complex interrelationships, a switch in one phase may have a marked effect on almost all the others. For example, if a developer decides just before starting a project that work has to be extended over a longer period than planned, there'll be major changes in such things as construction cash flow, construction loan draws, interest expense on construction loans, start of sales, selling price, sales cash flow, gross profit, rate of sales, construction cost, selling expenses and income taxes.

The need for speed in project decision-making is another reason why the company looks for more model use in real estate. When, say, financing construction timing

or sales estimates change because of an outside force (interest rates) or internal planning (adding features and raising the price), the developer has to know what this means to him—and fast.

"The real name of the game is that you have to end up with net receipts," says Marshall Cole, Leventhal partner and head of the management services department. "And more than that, net receipts over a time period."

And, says Leventhal's Lawrence Diamond, head of the computer model section of the management services department: "That's not the whole story. You have to examine assumptions, because you can always show excess receipts if your assumptions are weighted wrong.

"A model allows you to vary assumptions, to be very optimistic and very pessimistic. You can examine results of many alternatives. You can see how an interest-rate rise from 8% to 9% affects you. Or, perhaps you think you can sell land parcels over a five-year period, but you also know it could take 10, so you run selling from 5 to 10 years."

Says Cole: "It's the kind of dialogue that really gives the builder an insight into his projects."

Computer models work rapidly, accurately and flexibly

Few homebuilders, Cole points out, still do their own cost accounting by hand; most of them use an accountant and worksheets. "But to change one of these worksheets and reconsider every alternative takes anywhere from one to three days. With a computer, you can do it in about two minutes."

As an example consider the situation of a builder who had bought a piece of land in southern California for a 100-house tract. This developer believed that:

1. He could sell the houses at from \$30,000 to \$45,000, while construction cost (not including land, finance or selling costs) would be between \$15,000 and \$23,000.
2. He could get an 80% interim construction loan at 8½% with two points at the front end and two at the time of the takeout permanent loan. If the house were unsold after 1½ years, he would have to begin making principal payments. And

he was willing to take back a second trust deed note equal to 5% of the selling price, payable at 1% a month, including interest at 7½%.

3. He would build the houses in releases of 25, with the first 25 finished and available for sale five months after their start. He felt he'd sell 12 homes a month, so he planned to begin the second release about two months after the first. He would pay a 4% commission at the time of the sale, he thought escrow costs would average \$100 a house and his advertising budget would be \$70,000, payable over the sales period. He believed 40% of the sales would allow him to cash out, and the other 60% would require him to take back paper.

Armed with all these assumptions—and more—the builder asked himself these questions:

What will my monthly cash flow projections look like for the next few years?

When will I get my investment back?

What is the rate of return on my investment?

How much income tax will I have to pay—and when? (Since he was in the 50% bracket, he wanted to calculate his tax by deducting everything possible and using the installment method.)

What will my projected financial statements show (income statements and balance sheets), using generally accepted accounting principles?

To answer the questions, the builder put several financial-accounting staff people to work. They got all the answers—but it took over three weeks.

Then the builder asked some more questions, each based on a change of one or more of his original assumptions. For instance, he wondered what would happen if he got \$1000 less in the selling price, or if 80% of his sales were paper ones instead of 60%. And what if interest on the construction loan turned out to be 9%? What if his sales only averaged 9 a month?

For each question that involved a change of just one assumption, the staff had to do almost all the work over again. In cases where more than one assumption changed, the job was even harder.

When he was done, the builder had taken nearly a month and a half to go through the entire process of questioning, evaluating and requestioning. Had he used a computer model, Diamond says, he would have been ready to make a decision in less than one day.

How do you know when you need a computer model?

This, says Marshall Cole, is the big problem. In most cases, the need and applicability of models derives not from advanced

planning, but rather as a costly lesson in hindsight. The trouble is, says Cole, there's no single major sign that serves notice a computer model would help evaluate or implement a project.

The size of a builder's company really isn't a determining factor in whether or not he should use a model. More important is the approach he's going to take.

"The optimum use," says Cole, "is where you have a fairly complex series of economic elements interrelated with each other, and where you can't get quick answers to what you're thinking of in terms of alternatives."

To see if it could pinpoint when a model should be used, the Leventhal firm reviewed a large number of situations where a developer discovered he did in fact need one. This turned up some common characteristics which, particularly if they appear in combination, provide warning that a model is needed. Specifically:

- You lost money on a project—and even more important, are surprised. You feel you should have realized it much sooner.
- You lost money and can't really identify the reason.
- You find you don't have time to prepare formal budgets, or you feel things are changing so fast that you don't have time to update budgets.
- Your staff is spending a lot of time preparing budgets by hand, or continually updating them.
- You ask questions like "what would be the effect of doing it this way instead of that way?" and no one can give you an immediate answer. Sometimes, before you get a reply, you're already exploring a third way of doing it.
- You find yourself short of cash and, more significantly, are surprised by the amount and/or timing.
- You're surprised by the amount of income taxes you have to pay.
- Your project concludes profitably, but you find all your cash is still tied up in it.
- You have a hard time relating final results of the project to planned results.
- You don't know what your break-even point is, regardless of the project's profitability.
- You don't understand thoroughly the relative influence of various elements in a particular project.

If you do need a computer model, how do you pick the right one?

There are two major choices open to builders. One is between a customized and a generalized or commercial model, and the other is between running the model internally or externally.

Leventhal partners believe customized financial computer models—internally run on a time-sharing basis—are the best bet for most real estate businesses.

A customized model, as the name implies, is specifically designed for one particular customer, taking into account his unique characteristics and preferences. One Leventhal model, for instance, was designed for a large and complex housing project, where land was bought from six different owners and each one had special terms of financing and payoff of notes.

A commercial model is designed for a particular segment of the real estate industry and created to fit general situations. It is intended to satisfy some requirements of many customers. Normally, the commercial model costs less than a customized one; the cost of developing a customized model hinges on its complexity.

More and more customized real estate models are turning up every day. They're found in all areas, from FHA 236 projects to shopping centers, retirement communities, redevelopment projects, new towns and P.U.D.s. Example: in a new town or P.U.D. the model can help solve the crucial question of how much land to bank. Does it pay to buy it now and hold it or wait and pay more for it later.

"I don't see how builders can make decisions like that without models," says Cole.

Sometimes real estate companies that create their own models make them available to other firms, often through time-sharing companies. And a lot of small firms put models together and try to market them.

"What's happened recently is that these small firms offer their models on time-sharing," says Diamond. "They have an account with a time-sharing company. You sign in using their account number, and they bill you a small amount for model use."

There are two main things a builder should look for in a generalized model, according to Cole.

"First, he's got to find one that fits his particular needs. There are so many miserable models—for apartment houses, for example—it probably will take a lot of looking. But he should make an analysis of models and get a feeling of what's on the market.

"Second, he should check the design capability of each model to see what they have and haven't got, what they can and can't do."

Diamond agrees: "The builder should really shop."

During his research into models available on the market, Diamond compiled a list of characteristics a good apartment-project

model should have, then checked half a dozen existing ones to see how they measured up. Some features were present in all the models, particularly, analysis of after-tax cash flow and return on investment. However, generally missing were important items such as rent schedule, occupancy rate at break-even (cash), changing vacancy rate and additional capital improvements over time.

Leventhal's real estate clients often are frustrated by commercial model restraints. An example is the idiosyncrasies of land purchase. In the typical model, payoff on the land might parallel sales of the project. A house is sold, and the buyer assumes the existing land purchase note as a secondary trust deed, so that would be paid off as each house is sold. The assumption is, effectively, a payoff to the developer.

Another model, however, might require a different set of land conditions. It might call for premature payoff of the land note because the land owner isn't going to trust the developer to build the houses, and he wants more protection. Or, the developer may have to make very substantial payments at fixed periods, and the remainder could be assumed.

Here are two more special situations where available generalized models wouldn't work.

1. An apartment house developer wants projected cash flows for a project, from completion to arbitrary date of sale some 12 years later. Instead of the normal amortizing mortgage on the property, he is going to have irregular principal payments—plus lender participation in the profits from operation, to be paid as a percentage of before-debt-service cash flow. In addition, there is to be a minimum management fee, plus an overage as a percentage of pre-debt-service cash flow, to be paid to a management company for handling the project.

2. A developer of multifamily and industrial properties plans to sell the land under one of his apartment buildings to the lender in the second year of operation, pay ground rent for three years and then buy it back—a method of financing the land.

The cost of a custom model is getting lower every day

The chief reason, says Diamond, is that there are new simulation techniques. Until recently it took awkward and expensive re-programming to change a model. Now, however, by using new technology, the cost of creating a customized model can be cut by starting with a generalized model.

"We take an existing model which is only slightly different from the client's particular needs, then customize it," says Diamond. "It's not like starting from

scratch, spending thousands of dollars to develop a totally new model. It may cost only a few hundred to take a commercial model and modify it slightly so it fits a special situation."

The cost of developing a customized model can vary from \$50 for a commercial model that can be used as is to \$7,000 or more for a totally customized model. In a typical case, Leventhal set up a residential income-property model for a client by making minor modifications to an existing model. The bill for customizing and running the model ten times under varying assumptions came to \$800. Now the client can use it any time for about \$45 per run.

The new simulation methods also allow a model to have great flexibility. If a situation changes, the model can be re-customized with relative ease.

Diamond has recently been working on an extremely flexible model, one that can handle all kinds of construction projects. The cost will be high—at least \$20,000. But Leventhal will amortize it over a number of clients.

"Here's what we're aiming for," says Cole. "A client comes in and says he's thinking of buying a piece of land. He gives us a check list. If it fits into our general model easily, he can come back in the afternoon, and we'll have it on the computer. And then we sit down with him and start the what if game."

Both Cole and Diamond predict that the cost of models is going to come way down.

"First of all," says Diamond, "more people are getting into the game. It's becoming wide-spread, and eventually it will be commonplace. Five years ago if you wanted a model it was hard to find someone who had one. Now, wherever I turn I see people working on them. When someone develops a model, initially he charges a big fee to use it. But after a while, it becomes very competitive. When you sell a model, in essence, you just snap a picture of it and hand it to the buyer. So how much can you charge? You've already covered your development cost. If you can make a penny, it's good."

Should the computer model be run externally or internally?

External running means relying on an outside source to handle computer input and readout. In internal running, which Diamond and Cole recommend, the user has actual control himself.

Control is important in the Leventhal philosophy because it gives the user greater freedom in interacting with the model. That is, he can question it when he wants and respond quickly to the answers by asking further questions.

Only very large builders, of course, can have their own computer. Time-sharing—which the Leventhal firm uses—is the solution for most real estate operations. It requires installation of a terminal, which resembles a typewriter, in the builder's office. The terminal is connected by standard telephone line with someone else's computer in an outside location. To use a model, the builder dials the number of the time-sharing company, types in the questions, and the terminal types back the answers.

Time-sharing is a metered operation. The builder only pays for what he uses, and it is relatively cheap. But there are certain minimum costs. He has to lease the terminal for the writeout; a cheap one rents for \$70 a month. In addition, a number of time-sharing companies charge a minimum, which could run \$100 a month. (Terminal and time-sharing companies are separate.)

"So," Diamond points out, "you're talking about at least \$170 a month whether you use the terminal or not. If a builder is only going to run something once every three months, he might be better off going to somebody else who has a terminal and a model. But to make use of the model—really interact with it—the only way to get full benefit is to have the terminal in your own office. Then you can play around asking what if questions and getting answers that lead on to other questions. This continuity is lost by going outside, and it may take days to get everything."

Cole agrees that it's better for a builder to have a terminal in his office. He also believes the builder should have an accountant to put the figures in the model. "If not, the builder should be a guy who's pretty sophisticated with numbers."

Cole adds: "Someone on your staff has to be willing to learn how to operate the terminal. It isn't that complicated—I've always said it takes 10 minutes to learn. The truth is, our secretaries do our runs for us once we've designed the program and made up operating instructions. It's not difficult to use mechanically, only conceptually."

Cole, however, meets resistance from clients who don't want to learn how to work the terminal.

"They have mental blocks, and they'd rather someone else do it. So you have to take personality into account. If there's someone in the office who loves to play with this type of thing, it's better to let him. Otherwise there may be a terminal sitting there not being used."

Some builders, according to Diamond, are afraid they'll do something wrong at the terminal. "They never get used to it or get into the swing of it. If they don't hire some-

one who likes it, it may be better for them to go outside, even though there's a loss of speed and inter-reactiveness."

There's another potentially difficult problem, according to Cole: if the builder doesn't understand models, he won't understand results. "He can only interpret results in so far as he grasps input."

Cole feels it takes a combination of computer and accounting skills to really understand models. The best situation, he believes, is where the builder interrelates with the accountant who is putting the information into the computer.

"The model can be prepared and maintained by a clerk," says Cole. "It doesn't need an accountant. But it is necessary for the builder to know the various elements and variables and what the consequences are. If we show how he's going to make 10% on a community development based on buying property for \$11 million, he's got to see that it's all fallacious if he says a commercial acre is going to sell for \$54,000 when he knows it can go for \$78,000. He's got to be conscious of this. And that's why he never can understand output without understanding input. And a lot of builders don't. They say, 'don't bother me, just give me the answers.'"

The Leventhal system is to get input from the builder. But he often has to be forced into providing it. According to Diamond there's a tendency for the builder who's not very number-oriented just to accept without understanding.

"You give him a financial statement and he says, 'great,' and goes running off to his bank without looking at the numbers or really understanding what went into creating them."

Diamond feels it takes mental discipline to use a computer model. But, he says, when a builder has developed a model and has exercised this type of discipline, his grasp of his own business increases greatly.

The input also helps a builder to organize, Diamond says, because it gets all the necessary assumptions into one place.

"But these numbers are only as right as assumptions are," says Diamond, "so it's very important that the builder understands his numbers and agrees with them. We try to make them his numbers rather than ours, because there's a tendency for him to say, well what do you think the number is, or why don't you put something in there? Yet, he really knows that end of it better than we do. We can make a pretty-looking picture, and tell him how to look at it, and what's the best way to view it, but he's the one who knows what the product's going to cost and what he can sell it for."

—BARBARA LAMB

McGraw-Hill World News, Los Angeles



PROJECT
PORTFOLIO

4

DEVELOPMENT: West Village

LOCATION: Philadelphia

BUILDER: The Fox Companies

ARCHITECT: Cope, Linder, Walmsley

SITE SIZE: 16 acres

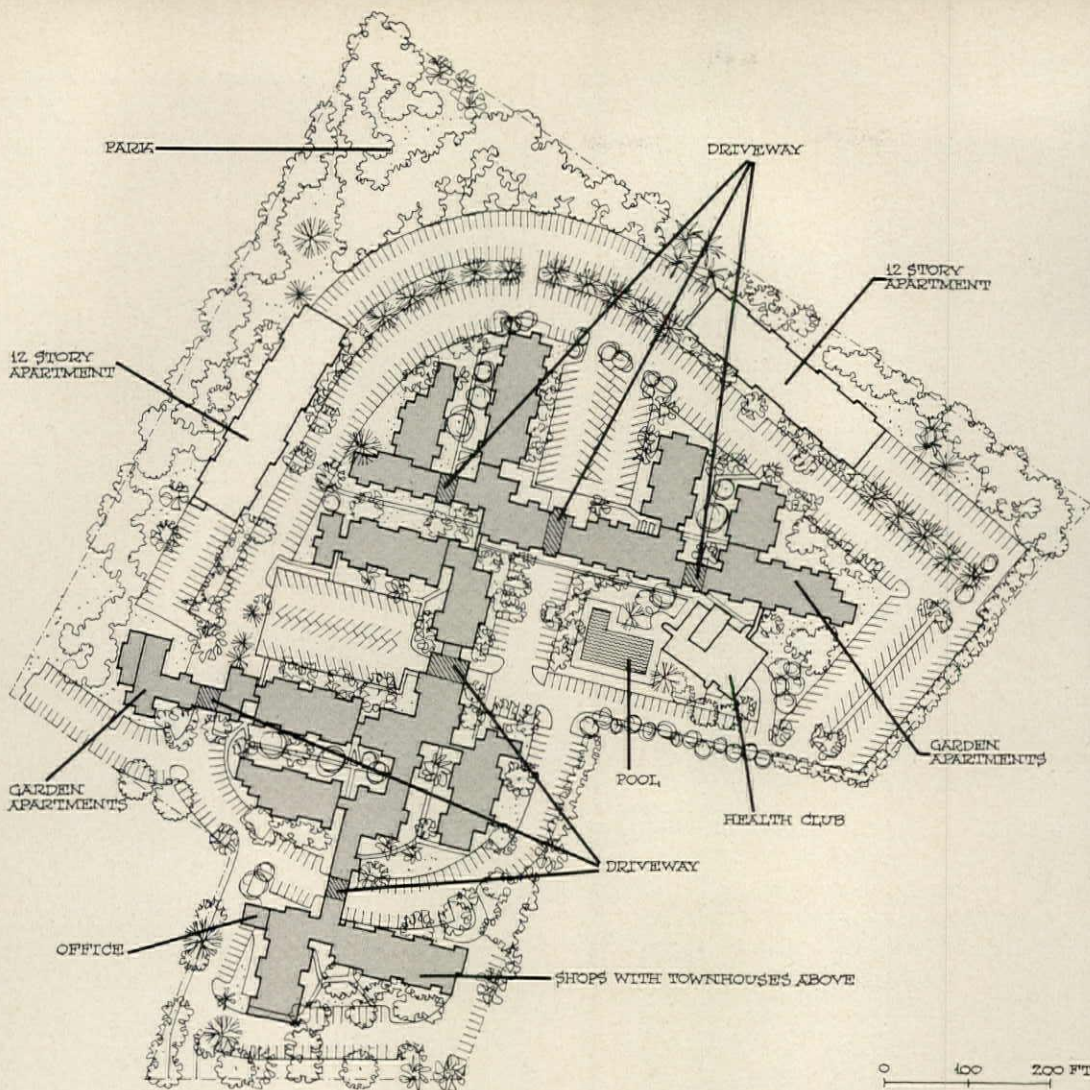
NUMBER OF UNITS: 348 garden apartments,
422 high-rise apartments, 30 townhouses,
plus 13 stores

RENTALS: \$185 to \$361



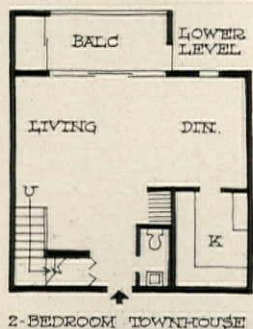
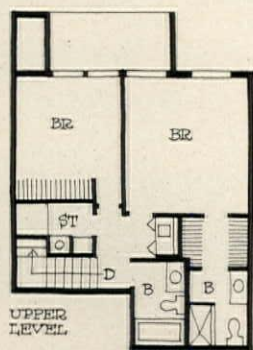
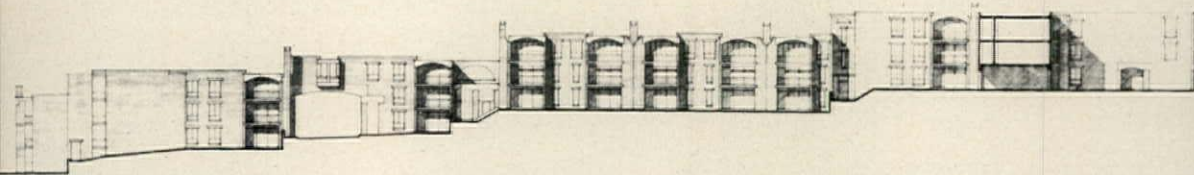
Even a high-density project on a difficult site needn't feel cramped or overbuilt, and West Village is a case in point. Its density is 56 units per acre. And its in-town site posed a problem—irregular terrain and a 40' grade change—that was actually turned into an asset. Within the area, and at different levels, the planners created a variety of courtyards connected by driveways and walk ways that pass through the buildings (photo, above). Tenants are singles, young marrieds and empty nesters.

TO NEXT PAGE

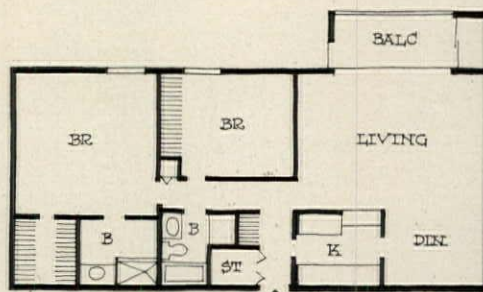


Mini-shopping center, facing → main thoroughfare at south end of site, draws customers not only from West Village but also from neighboring apartment projects. It includes a bank, beauty parlor, delicatessen-restaurant and 10 stores. Annual rentals start at roughly \$4.50 a sq. ft. Above the shops are two-story townhouses with two bedrooms, 2½ baths.

← High-density site plan (56 units per acre) tucks courtyards and parking spaces between wings of two sprawling, three-story buildings. Driveways, passing through the buildings at six points, connect the open areas. Rectangular parking facility at left center was cut into hillside, has two levels, both of which can be entered at grade. Project's entrance, controlled by a full-time guard, is past office at lower left. Health club at right center includes three squash courts, sauna and massage, billiard and community rooms. Formerly the main building of a country club, it was remodeled and enlarged by the developers. Two 12-story apartment towers are slated for completion in 1973.

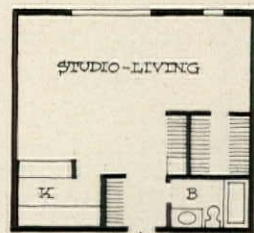


2-BEDROOM TOWNHOUSE

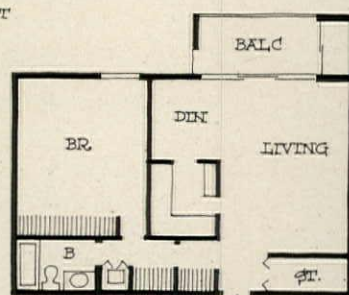


2-BEDROOM APARTMENT

0 5 10 FT



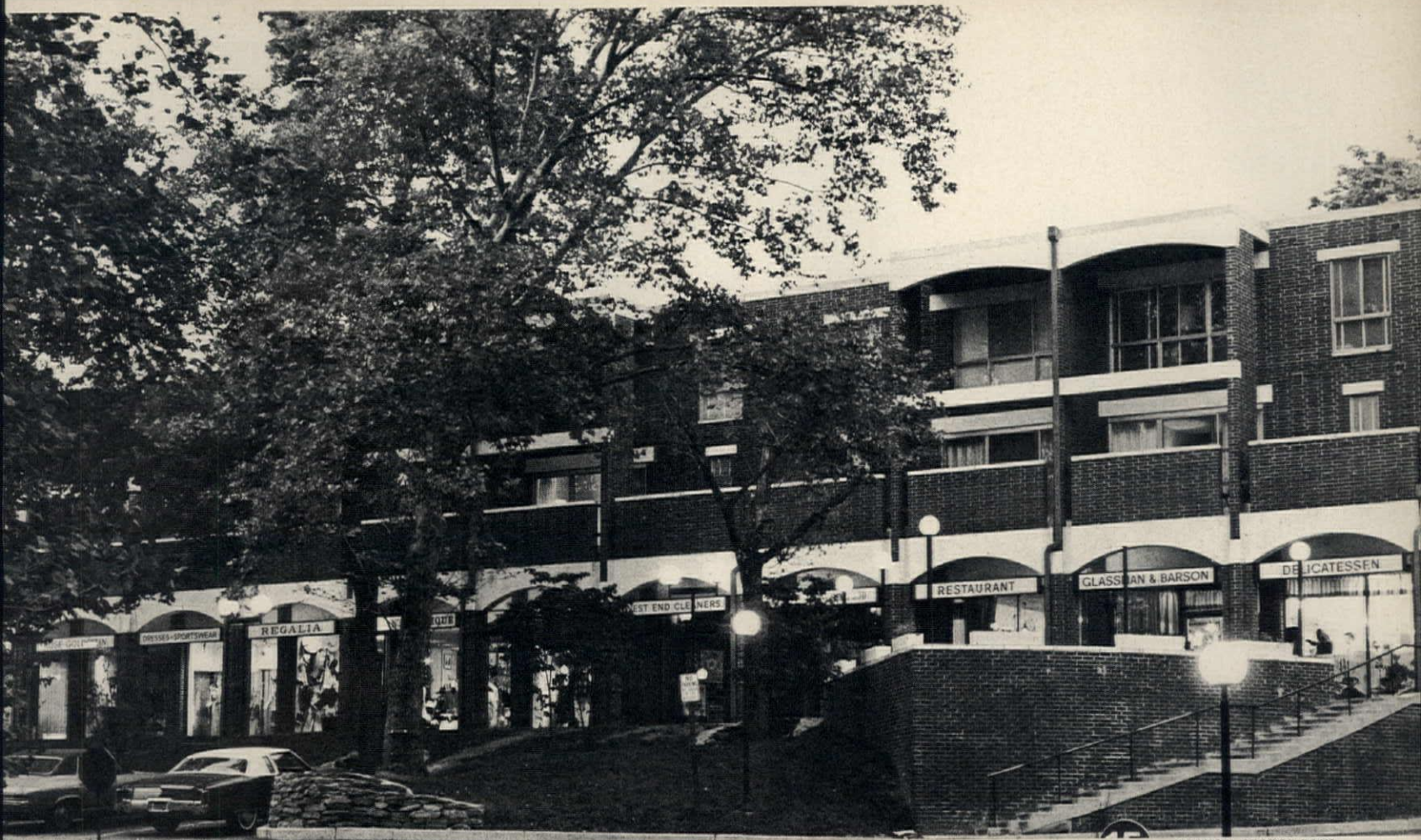
STUDIO



1-BEDROOM APARTMENT

← Variety of plans ranges from 483-sq.-ft. studio, which rents for \$189, to 1,040-sq.-ft. townhouse at \$347 to \$361. Also available: a 754-sq.-ft. one-bedroom unit (\$220), a 987-sq.-ft. two-bedroom unit (\$285) and a slightly smaller two-bedroom unit (903-sq.-ft. for \$265), which is not shown here. For the most part apartments were grouped by size—studios in one area, for example, two-bedroom units in another. Townhouses were built back to back above shopping center.

Irregular terrain is easily apparent → in this view of the courtyard between two wings of apartment buildings. Balconies at right open off studio units.



PHOTOS: GEORGE POHL



MARKET MEMO

To: House & Home edit staff

From: Lorraine Smith, McGraw-Hill World News, Dallas

Bob Lee, McGraw-Hill World News, Houston

Subject: The **HOUSTON** Market

You can resurrect all those adjectives which became cliches for the sixties—"sizzling," "soaring," etc.—and apply them to the single-family housing market in Houston, at least through 1972. That's the unanimous opinion of representative Houston builders we talked to, and also of a couple of Dallas firms which are entering the market this year.

Furthermore, we hear an Atlanta builder is making inquiries about Houston. So it seems highly probable that the boom is going to bring several new names into the single-family market, which in the past has been a tough one for an outsider to crack. It will be interesting to see what happens this time.

In apartments it's an entirely different story. The vacancy rate is now about 15% and seems sure to get worse before it gets better.

"If it gets much worse," says large apartment builder Jennard Gross, "we all may end up in the breadlines. And since we've

not seen a slowing in permits, there is no reason to think it is going to get better. We'll have to have a reduction in permits before we see a turnaround."

According to Howard Martin, who heads up the research department of the Houston Chamber of Commerce, 14,319 of 28,744 residential units constructed in Harris County in 1969 were apartments. In 1970, this jumped to 23,120 of 34,017 units.

Gross predicted there would be between 25,000 and 26,000 apartment units in 1971 out of a total volume of approximately 39,000 housing units.

"That's our problem in a nutshell," he says. "Overproduction."

He goes on to explain that the local economy has remained strong and unemployment, low. "We haven't had problems of

James Goettee—\$55,000



Doyle Stuckey—\$33,500



Glen Norwood—\$17,950

recession or depression with resulting layoffs—just housing overproduction in spite of good growth. We turned out about 8,000 more units in 1970 than we had demand for. And apartment builders failed to slow down last year, not realizing that homebuilding was picking up with the increased availability of mortgage money."

Part of the steam in single-family building is coming from pent-up demand due to tight money; part, from growth. Population in the Houston area is increasing at a rate of about 60,000 a year.

About a dozen large national corporations have moved or are in the process of moving their headquarters to Houston. To name a few—Shell Oil, Enjay, Esso Eastern, Esso International, Raymond International and M. W. Kellogg Co.

These corporate moves, says one of the Dallas builders who is moving into Houston, "have created an extremely strong market in high-priced homes. It is not uncommon for a builder to have eight to ten speculative houses in a subdivision priced at \$60,000 up to \$200,000. These are stock houses. It's absolutely incredible."

The Greater Houston Builders Association (GHBA) is planning day-long, guided bus tours for NAHB conventioners to show them some of the more

interesting projects. There will be at least two apartment complexes, three or four single-family subdivisions and several townhouse projects included in the tour.

We did a preview tour of the Houston market by car to see how practical it would be to try to hit on your own about a dozen different subdivisions, apartments and townhouse projects which GHBA selected as being representative of what the volume builders are doing and of different sections of the city. One builder who looked at the list said, "No way, no way," and we have to agree. Even going at a constant run from nine to six it wasn't possible to get around to them all in a day. Distances are just too great.

Houston is expanding in every direction except directly south. Actually, says GHBA, between 60% and 65% of the new housing is located outside the corporate limits of Houston in Harris and Montgomery Counties. The newer subdivisions are located anywhere from 25 to 45 minutes from the central business district, and some aren't too easy for a stranger to find. Anyone who prefers to go on his own, rather than on the scheduled tours, is going to have to be pretty selective if he's to cover much ground.

We might add that Bob Batten, executive vice president of GHBA, says the Houston metropolitan area had 72 active subdivisions in 1971, and will open between 50 and 60 new subdivisions this year.

Statistics are hard to come

by on just what the price mix is. Batten says that slightly over 52% of the reported new starts in the city of Houston in the first three quarters of 1971 were houses selling from \$18,999 down. However, he adds, these lower-priced houses actually account for only about 35%. The reason for the apparent discrepancy is that permits are not required outside the corporate limits of Houston, and most of the houses there are in the higher price ranges.

To generalize about the market, much of the upper-bracket building is in the north and northwest sections of the city, while the middle- and lower-priced homes tend to be in the southwest. The northern half of the city is blessed with some magnificent stands of pine trees which builders and developers are taking full advantage of. For one thing, they give even the new subdivisions the appearance of being well established. Land to the south and southwest is generally treeless.

According to GHBA, the builders who dominate the Houston market are Norwood Homes, Suburban Homes, Hennessee Homes, Catalina Homes, Kick-erillo, Westchester, Monarch Homes, Bratten Construction, Vista Homes, Dollar Homes, Superior Homes Inc., Doyle Stuckey Homes, Bob Tresch Homes and James Goettee.

Approximately 15 builders are in the under-\$25,000 market, with the biggest being Norwood (1,300 units), Suburban (1,500), Hennessee (500) and Vista.

Since Norwood, which was already Houston's largest builder (\$25-million volume in fiscal 1971) and had expanded into Dallas, was acquired last November by U.S. Home Corp., it will probably become an even more dominant builder in the South.

Norwood's Greenridge North subdivision, which contains both townhouses (33%) and single-family detached homes (66%), is well worth seeing because of its large number of models. There are ten townhouses (\$16,950-\$25,950) and six single-family homes (\$18,950-\$25,950). Norwood is building in 10 locations and has single-family homes priced up to \$32,500. Even one of Norwood's competitors remarked to us that the firm builds a very good and attractive house for the money.

Which brings up a point.

The Houston market is very competitive, and homes cost less than they do in Dallas, for example, even though the two cities are only 240 miles apart (that's close in Texas).

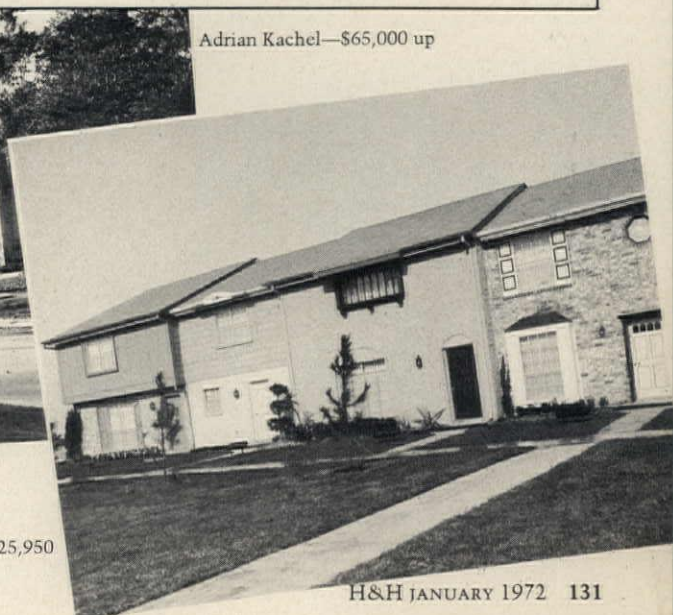
Mike Marix, who heads up the Houston operation for Raldon Corp., one of the Dallas firms moving into Houston, characterizes the market as "terribly upbeat and optimistic." He



T. E. Webster—\$31,000



Glen Norwood—\$16,950 to \$25,950



Adrian Kachel—\$65,000 up

finds the growth diverse, but if anything more heavily weighted toward high-income people. However, he adds, "those people create the service jobs which bring a housing demand in the price ranges we like to build in—\$16,000 to \$21,000."

Raldon plans to get underway in March with the first of three fourplex developments similar to its "Two Worlds" fourplexes which have proved very popular in Dallas. Later it will probably move into single-family detached homes, but, says President Don Dixon, "only after we have our three fourplex projects off and running."

Redman Industries of Dallas, which last fall created a subsidiary, Redman Homes, to enter the single-family market, is going into Houston with plans to build at least 500, and possibly 1,000, homes per year.

Says Bill Dotson, president of Redman Homes: "Houston has the potential of being an even more dynamic housing market in the seventies than it was in the sixties. The single-family market is really taking hold, and we feel it will be even more dominant than the multi-

family market was in the sixties. It's really roaring, just as it is in Dallas."

Dotson says Redman has two 300-unit apartment complexes underway in Houston, but dropped plans for two more because of the softness of the rental market.

Redman will start out with two- and three-bedroom fourplexes (\$15,000-\$18,000) and townhouses (\$19,000-\$30,000). To date it hasn't been able to find enough developed lots for single-family detached homes because of the shortage caused by the dramatic upsurge in that type of housing.

"Sites developed for apartments are now being offered for townhouses and fourplexes," Dotson says.

He sums up: "I think that, overall, Houston has to be the most dynamic housing market in the southern half of the U.S."

There is only one cloud on the horizon, according to Al Hennessee (Hennessee Homes), president of GHBA, and that is the shortage of labor. He has more than 200 houses under construction in half a dozen subdivisions.

"Two years ago it took six weeks to complete a house, and now it takes four months," Hennessee says. "We lose contracts because we can't promise completion dates. And with the increased cost of labor and building supplies, we have priced a lot of people out of the market. There's no way to build a low-income house any more. What was \$14,000 to \$20,000 is now \$18,000 to \$27,000. The

magic monthly-payment figure at which people bought used to be \$125 to \$140. Most payments now start at \$180."

In the past year costs have gone up \$1,200 for the average house in the lower brackets, he says.

Even in the face of the labor shortage, Houston builders are not moving in the direction of off-site fabrication or factory-built components. According to Hennessee, "anything that looks like prefabrication scares people to death."

We can bear that out from our experience on the tour. When asked what are the features which help sell a house, one builder in the \$20,000 bracket and another who goes up to more than \$200,000 mentioned first that all cabinets, as well as other components, were custom made for each house.

Another big sales feature is wood-shingle roofs. Hennessee says that "the situation may be unique to Houston, but they really sell houses."

Also, believe it or not, considering Houston's muggy climate and its claim to be America's most air-conditioned city, a woodburning fireplace is considered almost essential in any house from \$25,000 up.

The only features which a salesman in one of the lowest-priced subdivisions could cite were "location and price." And to be brutally frank, that is about all that most of these homes had to offer. Take away a few amenities, like brick (no one in Houston seems to be

building anything but all-brick homes), some carpeting and a few built-in appliances, and most of these homes come across like post-war cracker-boxes with their chopped-up floor plans, postage-stamp bedrooms and very limited kitchen cabinet and closet space.

The cost squeeze is the chief culprit. According to this salesman, a house which sold for \$17,000 in January had gone up to \$18,650 by November. But imagination is sorely lacking. Only one plan out of about seven in the model homes looked very livable.

As for the middle and upper price ranges, we'd have to classify Houston as very conservative, at least as far as what the tract builders are offering. We didn't see anything which even hinted of contemporary. English Tudor seems to be big right now in luxury homes, with Georgian, Colonial and modified Spanish also popular types of styling.

As we mentioned earlier, outsiders have been notably unsuccessful in penetrating the Houston market in the past. One big name was Del Webb, who came a cropper in the days of the build-up around the Manned Spacecraft Center when he offered Arizona and California type homes. They went over like the proverbial lead balloon. More recently, Fox & Jacobs gave up after about a two-year try when their



Jack Bryan—\$28,500



Vincent Kickerillo—\$140,000



Hennessee Homes—\$28,050

Dallas-style product failed to find acceptance.

As a result of this, Redman and Raldon have done and are doing intensive market studies, particularly on the single-family situation, both with consultants and with their own people. We think you might be interested in the appraisal of one of the people involved in one of these market studies (he didn't want to be identified).

Of course he finds Houston a very healthy and rapidly expanding market. But, he adds, "Marketing of houses there appears to me to be fairly backward, or at least quite different from the sort of marketing professionalism we are accustomed to in Dallas. This includes, to my mind, the product itself as well as methods of marketing it. I'm referring here more to floor plan and lifestyle. These are closed houses with no glass, no patio-type kitchens. As far as the floor plan is concerned, it is the same thing we were building 15 years ago. You can't help asking yourself the question—is it like that because it's what people want, or because nothing else has really been offered here?"

"It's an expensive decision for a company to go in with a subdivision and build models and say this is what we are going

to offer. Could a guy come in from the outside with a new perspective and set the place on fire? Or do people in Houston really prefer the sort of thing they are getting? We tend to opt for the idea that the market is largely a product of inbreeding, and that a guy coming in with something a little bit different would do quite well, mostly because a great percent of the growth of Houston is coming from outside. Those guys are still selling square footage, but I think the market is getting sophisticated enough to start talking about lifestyle.

"Then you come to the next big decision. Do you go in all out, or do you sneak in these changes one at a time? There are a lot of things like that we want to find out before we commit ourselves, and these decisions are yet to be made by our company."

As we said earlier, it promises to be an interesting ballgame.

The people who don't seem to be having any problems finding buyers who like their product are the luxury builders like Westchester, Kickerillo and Doyle Stuckey.

Vincent Kickerillo, a developer/builder, is completing 300 to 350 homes a year in two major subdivisions near the Houston Intercontinental Airport: Ponderosa Forest and Greenwood Forest, where prices range from about \$40,000 to \$200,000 and up. A \$200,000, 7,000-sq-ft model is to open in January in time for the con-

vention. Kickerillo is primarily a developer who joint-ventures with four building companies who actually build the homes.

Adrian Kachel (Westchester) is building in the \$35,000 to \$100,000-plus range with the average about \$47,800. Doyle Stuckey Homes has five subdivisions in the moderate-to-high range; the highest has \$75,000 to \$125,000 homes.

All of these luxury homes offer large lots with trees, and such extras as walk-in wet bars with wine racks, trash mashers, continuous cleaning ovens, huge utility rooms (to offset the basements incoming Easterners are used to), Jenn-Air indoor barbecues vented through the slab, Insta-Hot faucets at sinks to provide 190° water, Hollywood-type sunken baths plus lots of wood paneling and built-in bookshelves. Not all of these are in all houses, of course, but they are typical higher-priced amenities.

Burleigh Sanford Jr., sales manager for Westchester's Norchester subdivision, says that 76% of their sales are to in-transit people, the rest to local people moving up. So that's a pretty fair indication of how much effect corporate moves and transfers have had on some projects.

You asked about innovations and new ideas. Well, we didn't see any, and the salesmen we talked to couldn't suggest anything in particular. Westchester is building some town villas with atriums, which may be a first for Houston, in the Nor-

chester subdivision. These have Spanish-type architecture, are all the same color and are fenced with 8-ft-high fences which are attached. They are priced at \$65,000 up, have 10-ft. ceilings, and contain about 3,000 sq. ft. of living area.

Houston was the first city in Texas to build townhouses in any quantity; it was several years ahead of Dallas in that respect. According to Redman's Bill Dotson, "Townhouses hit Houston way ahead of Dallas thanks mainly to much more aggressive S&Ls. It gave the market much more flexibility, and to that degree Houston has had a little more advanced housing than has Dallas. Otherwise, that's the only difference our two surveys have shown between the two markets."

One big factor in the Houston market which should be mentioned is the school busing situation. The city is under court order for extensive busing for racial balance, and the big push in building has been in the better independent school districts. Schools are always a big part of the sales pitch—sometimes subtly, sometimes not.

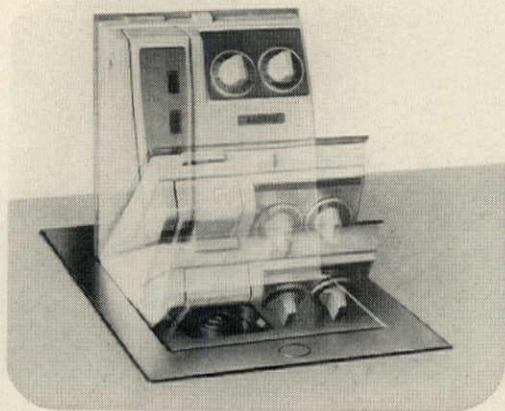
Paul McConnell—\$35,000 to \$45,000



Vernon Bratten—\$28,500



Vista Homes—\$29,900



Hydraulic Lift-Lower Mechanism

Module raises and lowers in and out of counter. Closes flush with counter top.

Latch Release Knob

Retracts two latches located inside attachment well to unlock and release attachments.

3-Position Mixer Arm

- 1) Locks in horizontal position for mixing.
- 2) Raises even higher and locks in place to drip-clean beater.
- 3) Folds out of the way when not in use.



Beater Release Latch
Releases beater from power socket.

Professional Two-Way Mixing Action

Bowl and beater are powered by separate drives. Bowl rotates one way, beater the other way for smoother, more complete beating and mixing.

Beater Clutch and Arm Release
Button stops beater while bowl continues to rotate. Also releases arm to adjust to one of three positions.

Automatic Timer
Sets the Foodmatic for automatic use. Also can be set for manual use.

Solid-State Speed Control
Provides infinite choice of speeds. Solid-state circuitry assures no-stall power.


Speed Selector Guide
Imprinted on mixing arm.

1/3 HP Motor

Extra power to operate more than a dozen attachments. Will not stall at any speed.



New Ronson Built-in Foodmatic

Listed by Underwriters' Laboratories 

New Ronson Built-in Foodmatic

...the one appliance that does the work of dozens, does it better and in less space. It mixes, blends, slices, shreds, grinds meat, grates, sharpens knives, grinds coffee, juices oranges, crushes ice... it even cooks!

The following attachments are available for the Ronson Foodmatic

 <p>Two Beaters, Two Bowls, Turntable and Dough Hook Turntable and heat-resistant glass bowls interlock to keep bowls firmly in place.</p>	 <p>Deluxe Juicer Comes with two interchangeable ceramic reamers... small for lemons and limes... large for oranges and grapefruits.</p>	 <p>Knife and Scissors Sharpener Hones knives and scissors to original sharpness in seconds.</p>	 <p>Salad Slicer-Shredder Comes with three types of discs.</p>	 <p>Meat Grinder Three grinding discs store in handy compartment.</p>	 <p>Wide-Base Blender Takes whole fruits and vegetables. Even crushes ice.</p>
 <p>Two Custom-Molded Trays Contoured to hold all attachments.</p>	 <p>Ice Crusher Dial settings for ice from chunks to shavings.</p>	 <p>Coffee Mill Grinds beans for drip, percolator or vacuum coffee makers.</p>	 <p>Stirring Cooker Stirs automatically as it cooks at dial-set temperatures from 100 to 400 degrees.</p>	 <p>Mount Organizer Holds beaters, turntable, blender key on cabinet door.</p>	 <p>Recipe Booklet Over 100 pages of recipes and illustrations for hundreds of drinks and dishes.</p>



Portable On-Counter Model
Uses same attachments and has same operating features as Built-in Foodmatic. Storage trays can be mounted in kitchen cabinet.

Console Model
Free-standing cabinet with casters. Only 18" wide. Power module hydraulically lowers flush with "butcher-block" counter top. Uses same attachments and has same operating features as Built-in model.



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THE ALL NEW SUPER KITCHEN/SUPER BATH '72

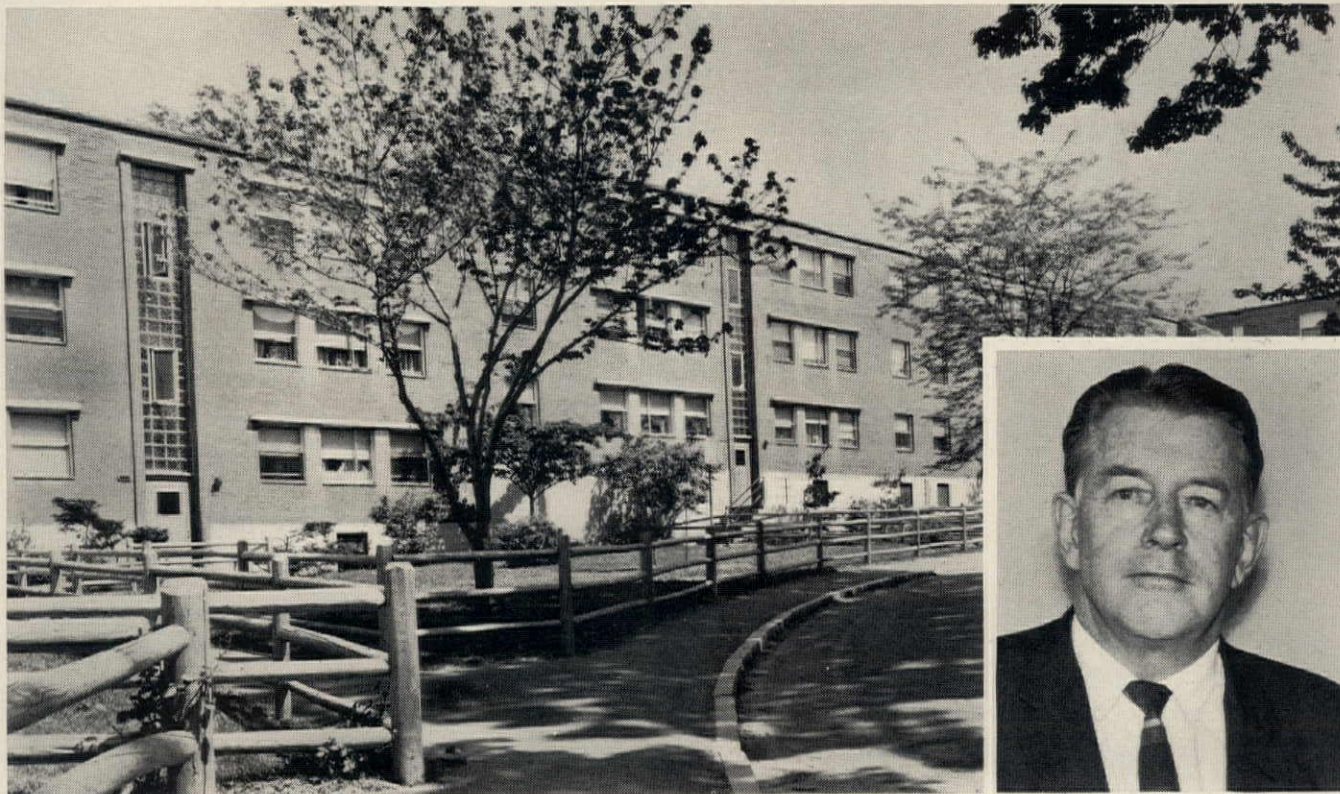
Masterminded by House & Garden; motivating consumer action by focusing on two sleek and spacious centers for today's living. Building up excitement that is already piquing national interest in tomorrow's housing concepts, building and remodeling schemes through the two most important rooms in the house.

Launched editorially to five million innovating readers via a superlative ten-page-plus-cover lead feature in the January issue, the House & Garden Super Family Room Kitchen and Super Spa Bath will command the attention of industry leaders assembled at the NAHB Show in Houston. There, at the AGA and American Standard exhibits in the Astrohall, House & Garden will again demonstrate its forceful and far-reaching influence on American lifestyles, architecture and interior design.

HOUSE & GARDEN

The magazine that makes things happen in the building trades.

A Condé Nast Publication



“Ticket-Operated Maytags stopped coin-box looting, ended vandalism, and increased our gross 25%,” writes Mr. Thomas Connelly, Executive Director, Brookline Housing Authority.



Ticket-Op Maytags help take the temptation out of the laundry room. Instead of coins, they use an exclusive electronic ticket!

Brookline Housing is a project in a low-income section of Brookline, Mass., with 290 apartments and 700 tenants.

Mr. Connelly of the Housing Authority, and Don Shaw of the Mac-Gray Co., Cambridge, operator of the laundry concession, report: “We tried with coin-operated machines for five years, and couldn’t keep running. Break-ins and damage were constant.

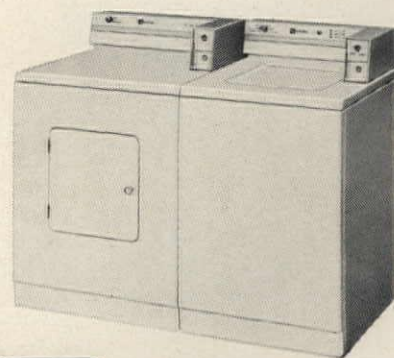
“In 1966, we switched to Ticket-Operated Maytags—11 washers, 11 dryers. Instead of coins, these machines use Maytag’s exclusive Electronic Tickets

which are difficult, if not impossible to counterfeit. No ticket dispensers were put in the laundry rooms. Tickets were available only at the Management Office, at the extreme end of the project. Some tenants have to walk half a mile to buy tickets, but they don’t seem to mind.

“As a result, coin-box looting and vandalism are no longer a problem. Gross income is up 25% over the best year before we put in Ticket-Op Maytags. Machines are in service practically 100% of the time, and both management and tenants are pleased,” conclude Mr. Connelly and Mr. Shaw.

Naturally we don’t say all Maytags will equal the experience at Brookline. But dependability is what we try to build into every Maytag Commercial Washer and Dryer.

Find out what Maytag Ticket-Operated Washers and Dryers, and Maytag dependability, can do for you. Just fill in and mail the coupon.



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GENTLEMEN: Please rush me full information on the dependable Maytag-Equipped Laundry package.

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Because THOROSEAL PLASTER MIX is a cement-base, waterproof coating, it solves many problems in finishing rough concrete, while retaining a natural concrete look. ACRYL 60 is added to the mix for a superior bond. Here is proof not only of the great economy of this finish, but the lasting beauty and protection it will give for years to come.

Mt. Carmel Nursing Home, Manchester, N. H. Arch.: Andrew C. Isaak, Manchester Gen'l Cont.: Landers & Griffin, Inc., Portsmouth, N. H.



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New Potlatch MASTERPIECE Prefinished Paneling offers the natural warmth and universal appeal of real wood, lovingly prefinished, in two grades to suit almost any need, at highly competitive prices. All are fully mismatched, shadow-line V-grooved, with carefree, maintenance-free prefinish. Size 4' x 8' x 3/16" or 1/4". Other sizes on inquiry. Write or phone your paneling needs today. We've got the answers.

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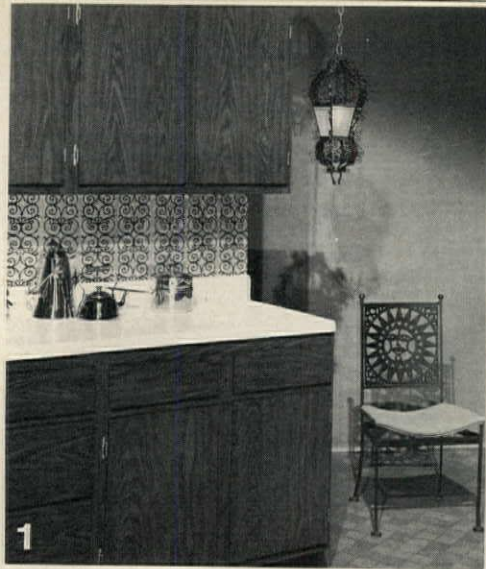
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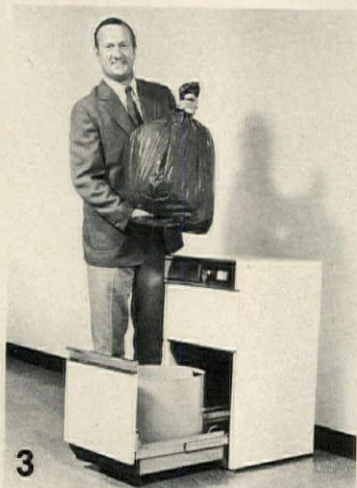
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New
Ideas
1972

kitchens

1 **Durable cabinets** have oak wood-grain design and baked-on finish that resists mars, never needs waxing, and is impervious to moisture, food acids and household chemicals. "Ebano" cabinets in "AristOKraft" line have self-closing hinges and reverse bevel openings. United Cabinet, Jasper, Ind.
CIRCLE 301 ON READER SERVICE CARD

2 **Gas range, 30" wide**, features waist-high broiler, 24" continuous-clean oven, lift-off door with dark glass fog-free window, lift-off top and keep-warm controls. Royal Chef, Nashville, Tenn.
CIRCLE 302 ON READER SERVICE CARD

3 **Trash compactor** has round ram and round removable bucket.

Compacted slug of refuse is cylindrical in shape, thus fits standard trash can—with or without plastic bag—for neighborhood pickup. Two bags fit in one 20-gal. can. "Stor-Mor" exerts 3,000 lbs. of force, flattens 25 lbs. of cans, bottles, cartons and other trash into units one fourth the original volume. Amana, Amana, Iowa.
CIRCLE 303 ON READER SERVICE CARD

4 **All-in-one appliance** combines vent hood, eye-level 21" oven, four-burner electric cooktop and a dishwasher. Just 30" wide, "Cook-'N-Clean" is suitable for retirement units, vacation apartments or second kitchens. Modern Maid, Chattanooga, Tenn.
CIRCLE 304 ON READER SERVICE CARD

5 **Washer and dryer** have stainless steel tub and drum for long wear and better care of synthetics. There are five water temperatures, four spin speeds or agitations, automatic bleach and softener dispensers and timers for durable press cycles. Speed Queen, Ripon, Wis.
CIRCLE 305 ON READER SERVICE CARD

6 **Furniture-finished cabinets** in cathedral styling lend warmth to kitchen eating areas. Pewter finished pulls set off dark "España Royal" finish. Whitehall, East Rockaway, N.Y.
CIRCLE 306 ON READER SERVICE CARD

7 **Built-in dishwasher** has a spray tower that washes dishes in upper rack while rotating arm

cleans dishes in lower rack. Other features: dual detergent dispensers, drying vent for spotless dishes, sanitizing heat element. O'Keefe & Merritt, Los Angeles.
CIRCLE 307 ON READER SERVICE CARD

8 **Elegant cabinets** have oak door and drawer fronts finished to highlight grain. Brass pulls add fine furniture look to "Cortina" style. Kemper, Richmond, Ind.
CIRCLE 308 ON READER SERVICE CARD

9 **Roll-out cart** has expandable top shelf with two 6" drop leaves plus two shelves below. It is 18" wide and 34 3/4" high, comes in oak, maple, cherry or distressed pine. Wood-Mode, Kreamer, Pa.
CIRCLE 309 ON READER SERVICE CARD

GO **GSR** FITTINGS ALL THE WAY!

ALL-PLASTIC plumbing is here — with two great new GSR® systems! For plastic hot and cold water lines, install all-new GSR Hi-Temp CPVC pipe and fittings—designed to operate at 100 psi at temperatures up to 180°F. Scale build-up is eliminated and pipe sweating is greatly reduced. The complete GSR system includes pipe and fittings in ½" and ¾" copper tube sizes — plus all necessary accessories.

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With these new GSR systems — plus the most complete line of standard DWV fittings, sewer fittings, pressure fittings, sprinkler fittings, etc. — you can enjoy the convenience, economy, and extra profitability of plastic piping . . . *all the way!* See your GSR fittings distributor or write for complete information.

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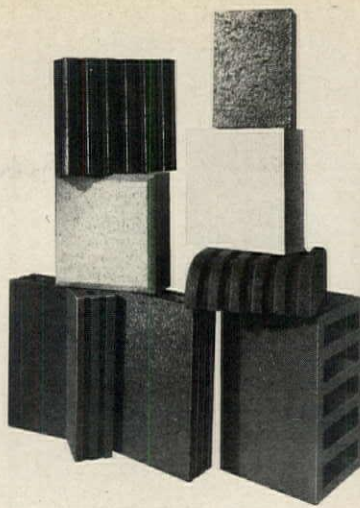
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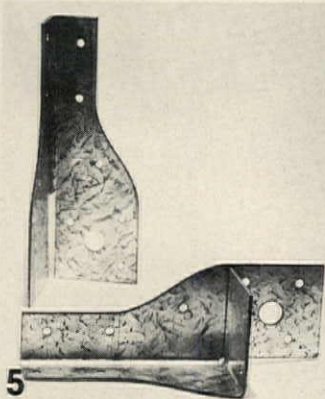
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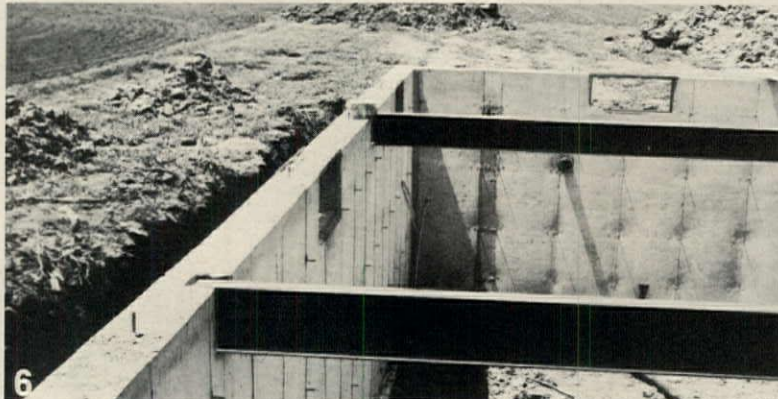
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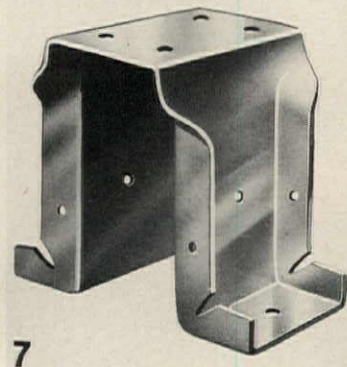
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New
Products
1972

structural materials

1 □ **Spiral stairs** for easy access in small spaces, indoors or out, can connect levels in duplex apartments, townhouses, A-frame resort homes or motels. Stairs adjust to ceiling heights from 8'7½" to 10', and treads reverse for left- or right-hand use. Metal outdoor treads are diamond patterned, plain interior treads can be carpeted. Logan, Louisville, Ky.
CIRCLE 310 ON READER SERVICE CARD

2 □ **Face bricks** of kiln-fired clay for interiors or exteriors come in earth tones, reds, buffs, grays or white, are 4" thick and 8" or 12" square with fluted, beveled, sanded or matte finishes. "Panelbrik" hollow cores accommodate wiring, reinforcing or insulation. Glen-

Gery, Reading, Pa.
CIRCLE 311 ON READER SERVICE CARD

3 □ **Steel joists** were installed by four men who had never worked with them before in less time than they would have spent for wood joists. These are 7½" deep, can be cut with power hand saw. Plywood decking is attached with threaded tap-in screws that eliminate nail popping and squeaks. Pre-punched holes are for wiring or plumbing. Armco, Middletown, Ohio.
CIRCLE 312 ON READER SERVICE CARD

4 □ **All-wood foundation**, built on the site or prefabricated, is based on "Wolmanized" lumber, a trademarked term for wood injected with Wolman salts under pressure.

Such treatment makes lumber moisture resistant and impervious to fungus and termites but with no oily residue. Foundation panel above sits on treated sill on 4" of gravel. Polyethylene film is glued to exterior plywood sheathing and all joints caulked. "All Weather Foundation," used for both full basements and crawl spaces in townhouses above, has no musty masonry odor, looks finished on both sides and permits year-round building. Koppers, Pittsburgh, Pa.
CIRCLE 313 ON READER SERVICE CARD

5 □ **Framing anchor** connects studs to sills, plate to studs, trusses to plate, purlins to trusses, etc. Five types (two are shown), eliminate toenailing at any connection, add

strength to joints. F.D. Kees, Beatrice, Nebr.

CIRCLE 314 ON READER SERVICE CARD

6 □ **Lightweight steel beams** in 8" or 10" size have high ratio of strength to weight, which means less steel per sq. ft. and lower materials costs. In modulars or small commercial buildings, beams may be welded or bolted together. Northwestern Steel & Wire, Sterling, Ill.
CIRCLE 315 ON READER SERVICE CARD

7 □ **Purlin hanger**, saddle-shaped, fits over truss so purlins are flush with truss top, eliminating space beneath roofing. Clips come in 2x4, 2x6 and 2x8 sizes. Panel-Clip, Farmington, Mich.

CIRCLE 316 ON READER SERVICE CARD

The Hardwick gas range

All this

HARDWICK CHALET WITH WARMING SHELF and built-in temperature control. Keeps food at perfect serving temperature.

FLUORESCENT LIGHT OVER COOKTOP makes sure you see what you're doing.

BURNER-WITH-A-BRAIN* regulates top-burner temperature automatically, won't let things burn.

LIFT-UP, LIFT-OFF GAS COOKTOP. Once over lightly cleans it.

OVEN LIGHT AND WINDOW let you check your cooking without opening the door and losing heat.

HARDWICK JET-GLOW OVEN DOOR has chrome lining that reflects heat back into the oven.

CLOSED-DOOR BROILING. No spatters. No smoke.



HARDWICK MODULINE DESIGN for years-ahead styling—forms a built-in unit with your kitchen counters.

PROGRAMMED COOKING turns oven on and off automatically and holds food at serving temperature.

TRI-TEMP GAS BURNERS. High, simmer, and keep-warm settings—with all in-between heats, too.

CHROME BURNERS focus heat directly, stay new-looking longer.

140° LO-TEMP OVEN CONTROL. Thaw frozen food, warm plates, keep food at serving temperature with Hardwick.

OVEN DOOR LIFTS OFF. No more reaching or pulling at clean-up time.

This Hardwick range is one more way **GAS GIVES YOU A BETTER DEAL.**

AMERICAN GAS ASSOCIATION, INC.



*A.G.A. Mark

and the EverKleen® oven, too!

Now Hardwick combines all the fine gas cooking features with an oven that cleans itself automatically. Cook as you normally do, soil and spatter will simply disappear. It's done with an amazing new miracle finish pioneered by DuPont and Hardwick—it keeps your oven continuously clean.

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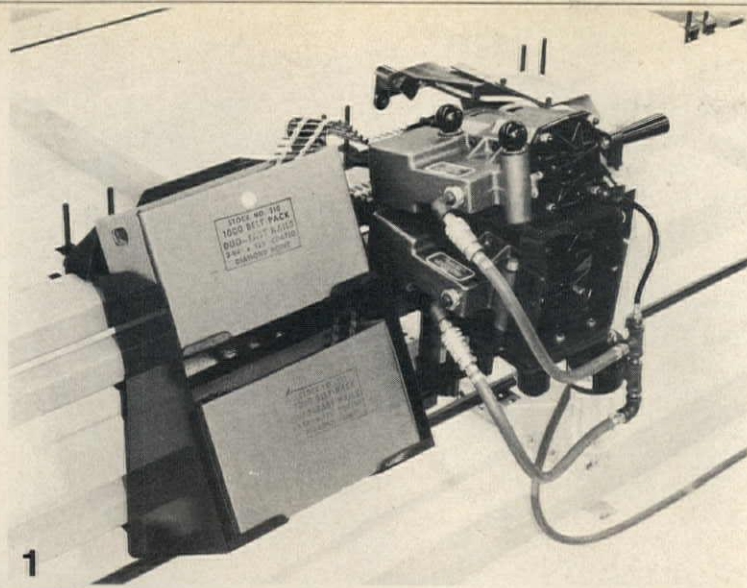
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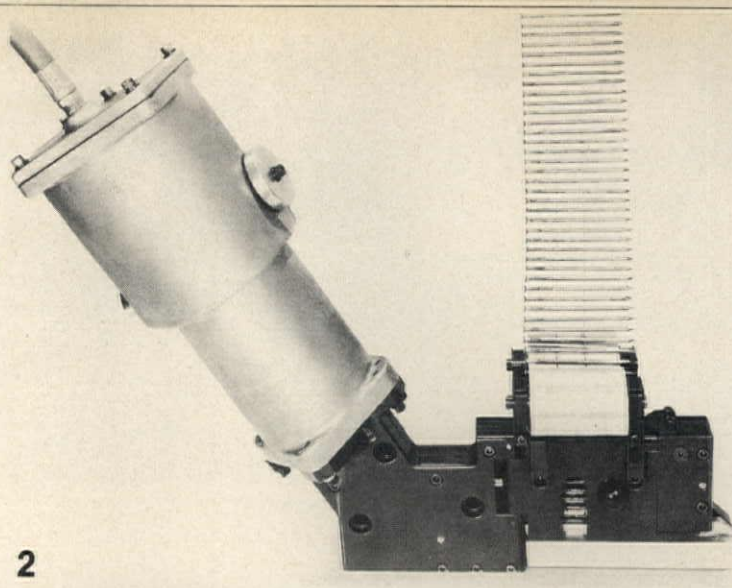


HARDWICK

Hardwick Stove Company, Cleveland, Tenn. 37311.



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New Products 1972 tools & equipment

1 **High-speed nailer**, designed for assembling wall frames in the factory, rides along the rail of a framing machine, automatically locating the studs and driving 3½"-long nails from two air-powered heads through the plate and into the studs. All the air regulators, filters and oil mechanisms are built in, and a valve system controls the rate of firing. Duo-Fast, Franklin Park, Ill.
CIRCLE 317 ON READER SERVICE CARD

2 **Pneumatic nailer** is belt-fed for rapid nailing and can hold up to 2,000 3½"-long nails in one load. When it is set up with multiple heads (which is what it was especially engineered to do), it can drive two nails simultaneously as close

as ¼" o.c. Bostitch, East Greenwich R.I.
CIRCLE 318 ON READER SERVICE CARD

3 **Adhesive guns** are shown above applying heavy-duty neoprene construction adhesive. The one at the left is pneumatic, operates at 40 lbs. air pressure, has fingertip control for accuracy in placing the adhesive and in the bead size, and it features one-quart disposable cartridges. The one at the right is a ratchet gun. Both are shown gluing plywood subflooring to aluminum joists, and both use manufacturer's "Spot-Grp 1 N" adhesive. Spot-nails, Rolling Meadows, Ill.
CIRCLE 319 ON READER SERVICE CARD

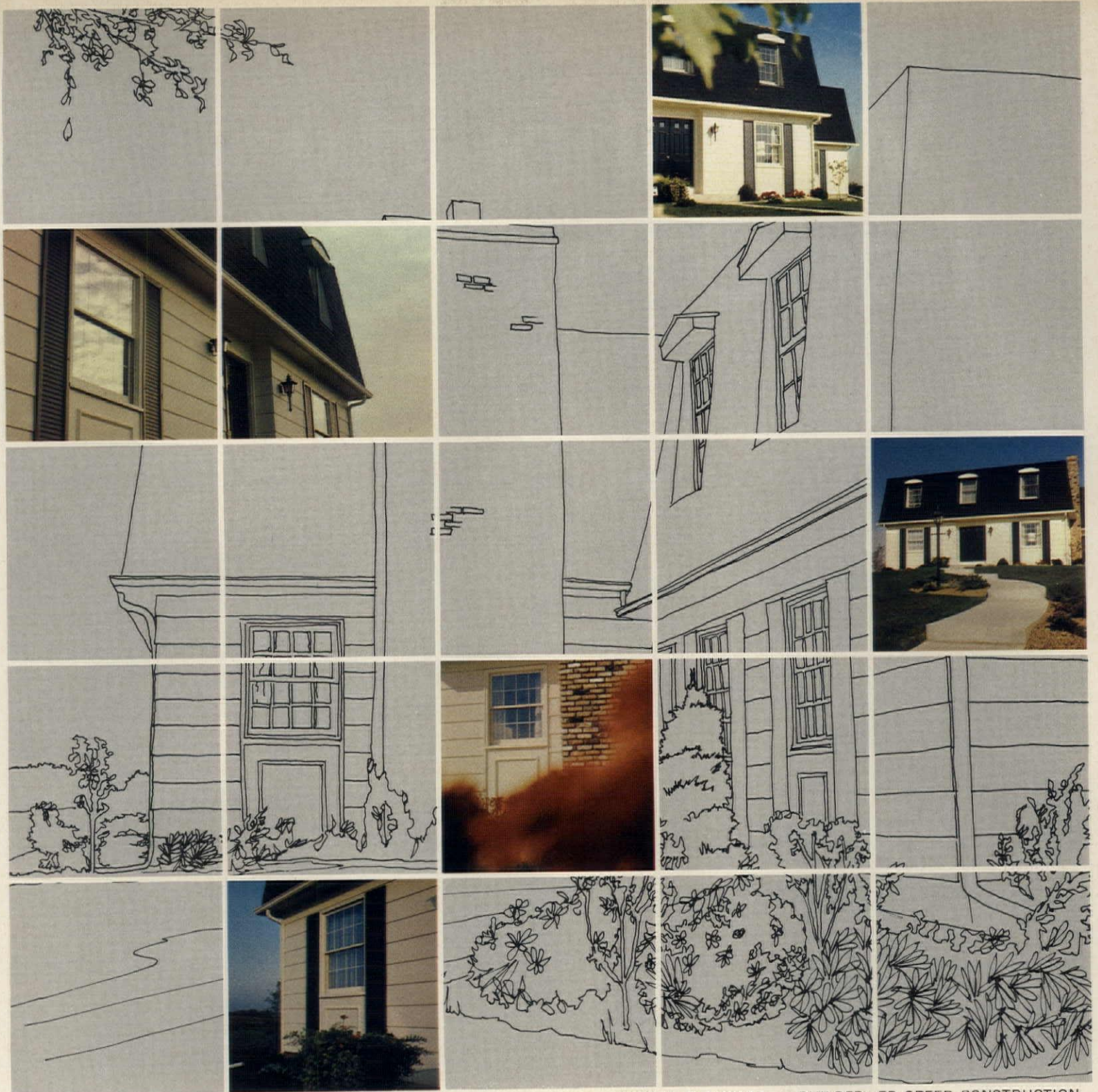
4 **Paint striper** holds up to two

gallons of paint and paints up to 40 lines—4" wide and 16' long—per gal. at the rate of five lines per min. Spray-head box may be placed on either side of the carriage, or two heads may be used on the same side for double lines as shown above. Cooper-Stanley, Construction Technology, Arlington, Tex.
CIRCLE 320 ON READER SERVICE CARD

5 **Automatic level** does not need any leveling screws or telescope vial. When the instrument is tilted on its ball-and-socket bearing, a compensator instantly brings the line of sight to the horizontal. Compact, it weighs just five lbs. (including its mahogany carrying case). It has a 6' minimum focus and a 22-power telescope with

erect image. Berger, Boston, Mass.
CIRCLE 321 ON READER SERVICE CARD

6 **Heavy-duty rotary hammer** which is designed for improved drilling in concrete and masonry, is based on space-age technology developed in producing the Apollo lunar drill. It is protected by dust seals, it has lifetime lubrication, its double-insulated motor delivers 3,150 impacts per minute at 625 rpm and both its handle and casing are made of unbreakable polycarbonate plastic that is reinforced with glass fibers. Hammer weighs 8¼ lbs. It takes percussion carbide bits from 3/16" to 7/8" and cone bits from 1" to 1½". Black & Decker, Towson, Md.
CIRCLE 322 ON READER SERVICE CARD



OWNER: R. SHULTZ BUILDER: ED SPEER CONSTRUCTION

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(and sales)
come alive
with **RIMCO**
wood windows



People who really care about how well their design ideas look and sell when the construction is completed are the most likely prospects for RIMCO wood window units. Like the talented RIMCO Tilt double-hung units used to great effect in this house. The Tilt, with the kind of beauty and convenience features that help your homes sell easier. Both sash tilt inward so both sides are washed from inside. Or lift out for repainting where the carpet won't be spattered. Every wood part is preservative treated and all surfaces exposed to the weather are heavy factory-prime coated. RIMCO Tilt. The double-hung unit that makes other premium windows seem obsolete. For more information on how the Tilt and other talented RIMCO windows like the Casement, Casement Bow, Horizontal Slider, Tilt I, Vent, View and Vuevent can help you sell more homes, write:

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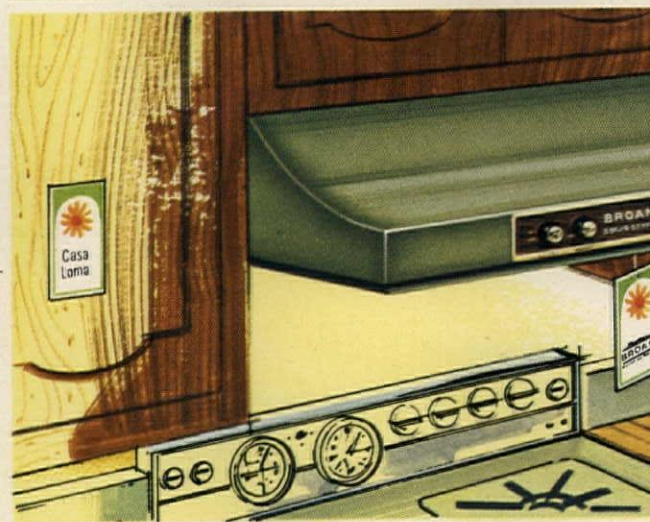
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Easy! When you install Broan Range Hoods and Bath Fans in your homes, Broan puts a new image-building promotion program to work for you. This great new concept identifies you as a "fresh idea" builder. A *concerned, in-tune-with-the-times* builder who is aware of consumer demand for better indoor environment and does something about it. Like installing Broan, the very finest in home ventilating equipment to maintain in-the-home fresh air.

This exciting whole-house merchandising plan helps you highlight *all* the unique features you build into your homes with free "fresh idea" highlight tags, signs, and ad drop-ins. Mailers and premiums imprinted with your name are

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Broan Range Hoods and Bathroom Fans are performance proved, easy to install, backed by a 5-year quality guarantee. And they're smart. Beautifully designed to complement any decor.

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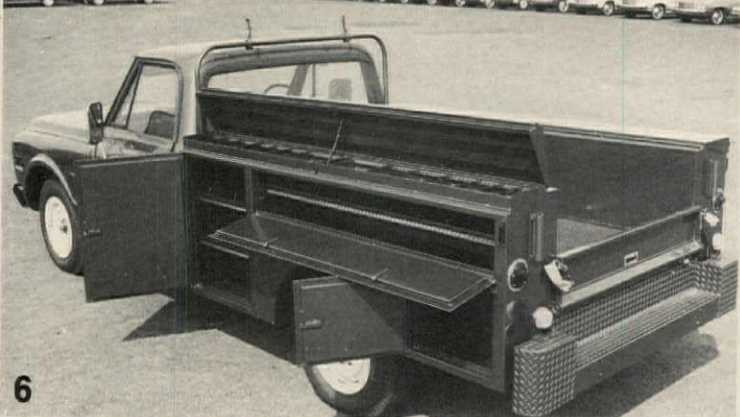
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Gentlemen: Your "Fresh Idea" program sounds appealing. Please rush full details, plus facts about how I can become eligible for the Broan Builder Award and Publicity Program.

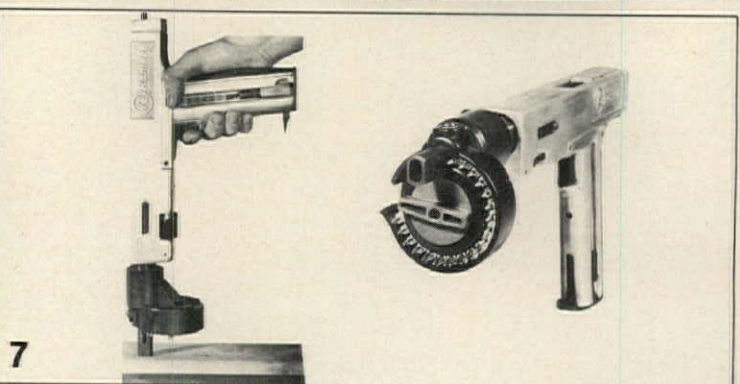
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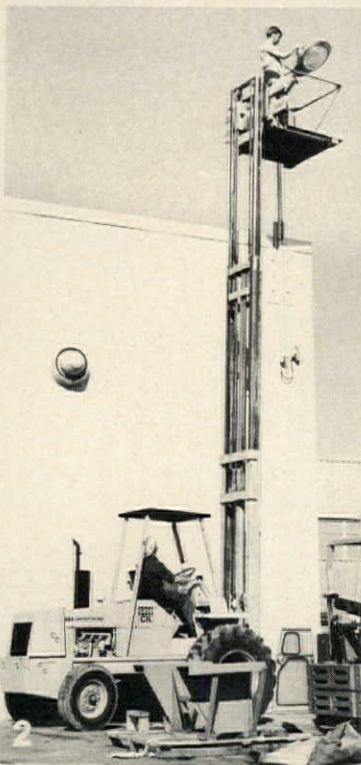
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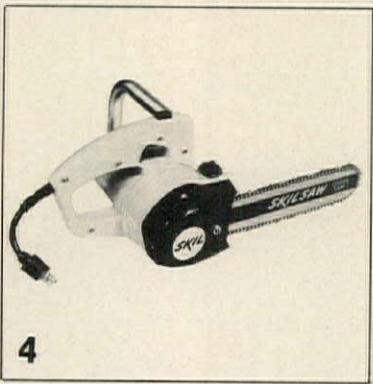
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New
Products
1972

tools & equipment

1 □ **Four-wheel-drive loader** has a redesigned twin-turbine torque converter in its power transmission that delivers 17% more power to wheels and provides four forward speeds (up to 23 mph) and two reverse speeds. Redesigned and reinforced buckets fill and dump faster, take 2¼ or 2½ cu. yds. of general materials, 3 to 4½ cu. yds. of loose materials. Loading height: 11'10". John Deere, Moline, Ill.
CIRCLE 323 ON READER SERVICE CARD

2 □ **High-mast forklift** hoists up to two tons as high as 28'. Features: built-in counterweight, driver's cab that opens on both sides, overhead guard, four-speed transmission, power steering, foot throttle and three brake pedals plus parking

brake. J.I. Case, Racine, Wis.
CIRCLE 324 ON READER SERVICE CARD

3 □ **Compact loader** is 63" high, 58" wide, and weighs 3,600 lbs. It can dig, level, shovel, load, haul, scoop, sweep, fill and stack, plus lift and dump 1,000 lbs. from 9' high. Ford, Birmingham, Mich.
CIRCLE 325 ON READER SERVICE CARD

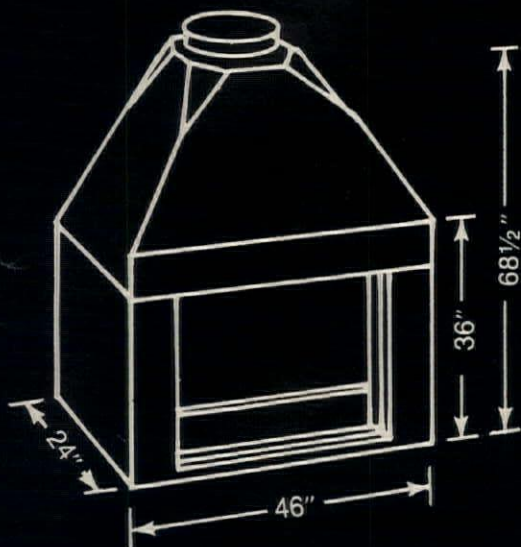
4 □ **Electric chain saw**, less noisy than gas saws, can be used indoors to make plunge cuts for heating ducts or door or window openings. The 10" saw weighs only 8¾ lbs., has unbreakable polycarbonate double-insulated housing, plugs into any 115-V two-prong outlet. Skil, Chicago.
CIRCLE 326 ON READER SERVICE CARD

5 □ **1972 pickup** features larger, more powerful engine, has all-wheel drive, carries bigger loads. Leading the list of optional features is anti-skid device to prevent rear-wheel locking and provide straight-line stopping, even on ice. Other options: heavy-duty rear-wheel axles, automatic transmission, five-speed manual transmission with overdrive, bucket seats and white or black vinyl cab roof. International, Chicago, Ill.
CIRCLE 327 ON READER SERVICE CARD

6 □ **Service body** for pickup trucks, from one-half to one-ton, puts additional space for tools and parts in two large extra compartments that open at the top. "Space-Maker" units, only 1½" higher than standard

service bodies, have the same steel structure, weathertight doors, removable shelves, etc. Inside top cabinets are 15 removable dividers to create bins of any size. Reading Body Works, Reading, Pa.
CIRCLE 328 ON READER SERVICE CARD

7 □ **Automatic fastener** fires 20 1½" drive pins into concrete or steel. Tool must be pressed against work surface to fire (left-hand photo). Two belts of ten fasteners loaded into drum at the front of tool (right-hand photo) and ten button-size power pellets in a track in the handle channel are fed one every three secs. into chamber and breech, respectively. "Ramset" tool weighs 6 lbs. Olin, New York City.
CIRCLE 329 ON READER SERVICE CARD



The Fireplace of Many Faces . . . permits endless variations in authentic hearth and mantel decor, in any setting. Installs in corners, "stacked" in apartments, anywhere! Preway's "Custom" Model 868 burns wood, is U.L. Listed for 100% "zero clearance" to framing materials. No need for masonry! Exclusive Chimney Package, with decorative or contemporary styled housing fits any roof pitch, accommodates plumb or offset installations.

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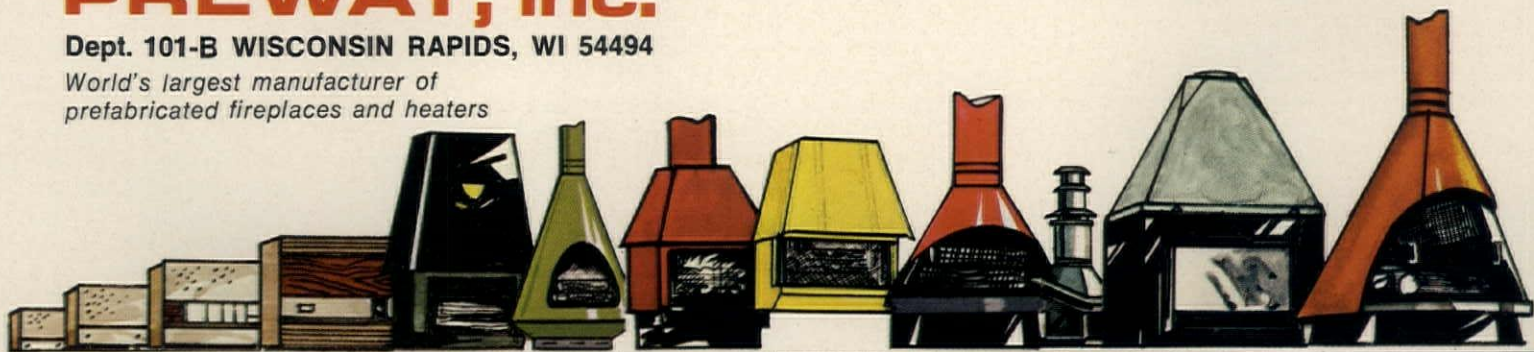
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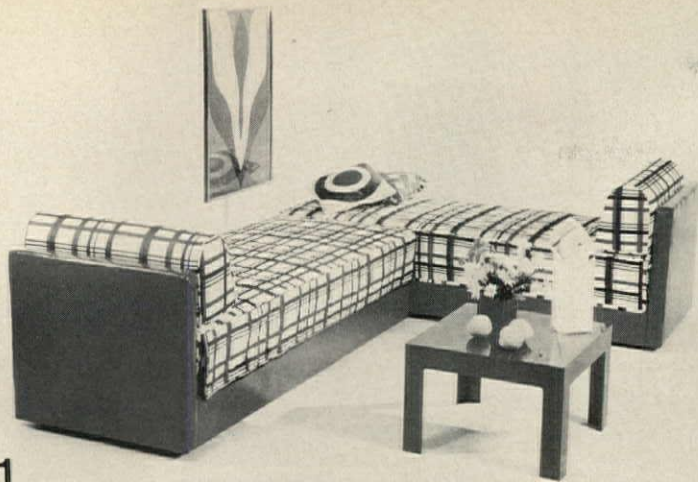
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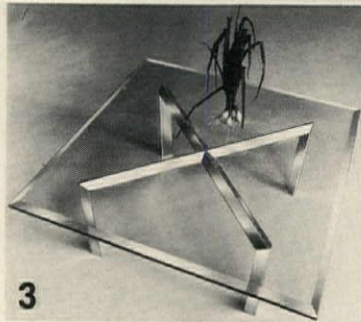




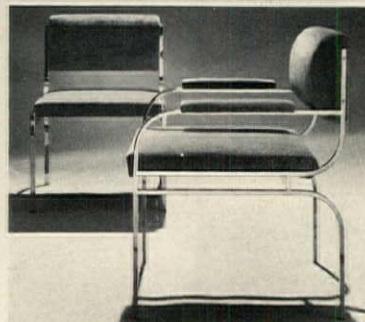
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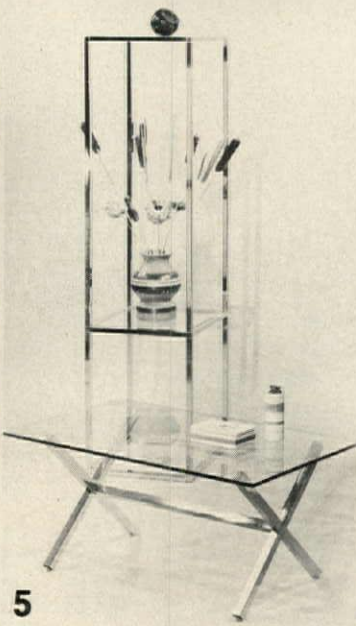
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New Products 1972 furniture

1 □ **Day beds**, from a new collection of contemporary sleeping furniture, have only a headboard, fit easily into a corner as shown. Others have footboards as well, can be placed along a wall or in the middle of a room. All are covered with shiny vinyl in bright colors like red or green with mattress and bolster covers in bold designs. Simmons, New York City.

CIRCLE 330 ON READER SERVICE CARD

2 □ **Outdoor pieces**, shown on the patio of a builder's model, are of oval and round $\frac{7}{8}$ " tubular aluminum. Sled runners sit as well on sand or grass as on patio. Individually attached 2" vinyl seat and back straps may be replaced. Brown & Jordan, El Monte, Calif.

CIRCLE 331 ON READER SERVICE CARD

3 □ **Stainless steel collection** features triangular-shaped tubing for tables like the X-based one above and squared-off tubing for pieces such as the chairs. Faceted tubing reflects light, as do the beveled edges of glass tops. Upholstered-in-velvet arm and side chairs were designed by architect Donald Mallow. Brueton, Springfield Gardens, N.Y.

CIRCLE 332 ON READER SERVICE CARD

4 □ **Knocked-down units** of Appalachian oak are left unfinished, have straight or turned legs and dowels and contrasting walnut doweling. Pieces above can be used in various ways: the seating bench

can be a sofa, a low dining table or an extra bed; the room divider is several small bookcases stacked up, can also be used against the wall. Other pieces: a dining table/desk, lamp/end tables, a round coffee table, a butcher block table on casters, a stool and an entertainment cart. Harco, Asheville, N.C.

CIRCLE 333 ON READER SERVICE CARD

5 □ **Chrome and glass kits** are of heavy gauge steel with a triple-plated finish. "Age of Chrome" components snap together, and the joints are tapped with a plastic mallet to lock them firmly. Glass table tops are $\frac{3}{8}$ " or $\frac{1}{4}$ " thick, shelves are $\frac{7}{32}$ " thick and all have polished and rounded edges. Prices range from \$30 for a small cocktail table

through \$80 and \$90 for the small étagère and table shown to \$500 for a triple étagère with 15 shelves. Integral Cubics, Long Island City, N.Y.

CIRCLE 334 ON READER SERVICE CARD

6 □ **Round tubing** is used for two contemporary chairs. The top design, by Dick Tremulis, is 2" tubular stainless steel, bronze plated, supporting a one-piece upholstered unit that curls over the back. The bottom design, by Robert Balonick, is $1\frac{1}{2}$ " polished tubular stainless steel forming triangular sides and sled runner bases. Black leather straps suspend the seat and back cushions of down and foam. Marden, Chicago, Ill.

CIRCLE 335 ON READER SERVICE CARD



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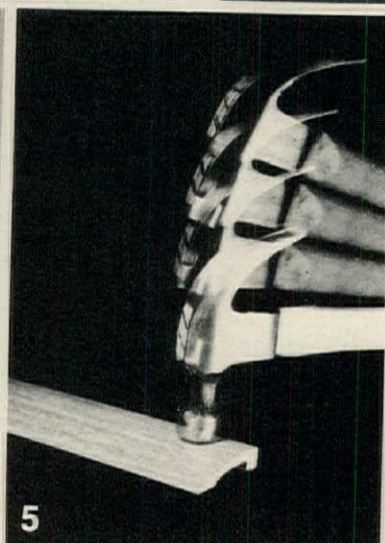
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Melamite interiors

1 Rows of flowers are precisely outlined and arranged on a wallpaper called "Mary Quite Contrary". The brightly colored blossoms, which are suitable for use in a child's bedroom, family room or garden room, are echoed in the matching border. Albert Van Luit, Los Angeles.
CIRCLE 336 ON READER SERVICE CARD

2 Slate-like countertopping for kitchens or baths is a "Melamite" plastic laminate, yet it has the texture and striations of slate, and it comes in the mixed grays and greens of dark marble. "Splitstone" is one of four new textured "Melamite" patterns which include another slate/marble with a stone finish, plus two wood textures.

Johns-Manville, New York City.
CIRCLE 337 ON READER SERVICE CARD

3 Fruit-patterned paneling looks like hand-painted tiles in bright colors. Called "Autumn Bounty", it can be used in kitchens and eating areas because it is protected by a tough vinyl coating that resists scuffs and stains and won't fade. "Vy-Panel" comes in smooth-surfaced and grooved wood-grain patterns as well as other smooth-surfaced decorative designs. Panel Products, Lithonia, Ga.
CIRCLE 338 ON READER SERVICE CARD

4 Vinyl "grass cloth" provides a textured surface for dining room walls, yet it is durable enough for use in kitchens and family

rooms. It comes in avocado green only, is called "Avocado Fleece" and is available in 4' x 8' panels with matching moldings. AFCO, Houston, Tex.
CIRCLE 339 ON READER SERVICE CARD

5 Vinyl molding is cellular PVC, which has twice as much resistance to impacts as wood does and, consequently, won't easily dent when hit with a hammer as shown. The material is flexible so the moldings will not break if they are bent, nor will they split if they are edge-nailed or splinter if they are sawn. They come in eight wood-grains and three solid colors and are protected by a tough finish coat. Various types and shapes of moldings available include base, stop,

shoe, cap, outside corner, crown and inside corner/cove. Gossen, Milwaukee, Wis.
CIRCLE 340 ON READER SERVICE CARD

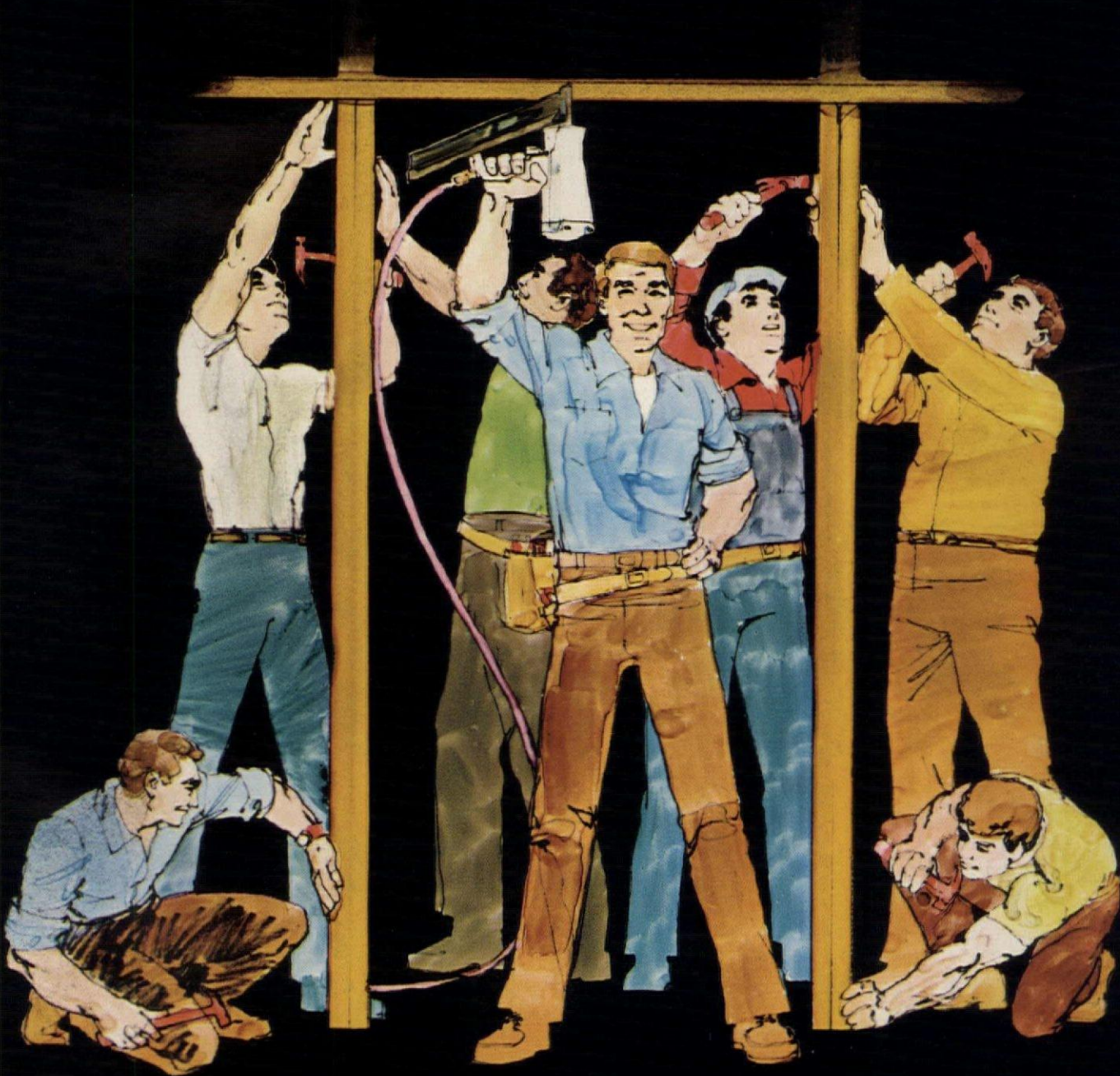
6 Hardwood panels have an embossed wood-grained surface and random width grooves for a plank-like look. "Carousel" paneling, however, comes not in standard wood or antique tones, but in five bright pastel colors. "Bright Sky", "Spring Green", "Wild Canary", "Flamingo Pink" and "Whipped Cream" are suitable for use in kitchens, baths, dressing rooms and children's bedrooms, where the usual wood colors of paneling might prove to be too dark. Georgia-Pacific, Portland, Ore.
CIRCLE 341 ON READER SERVICE CARD

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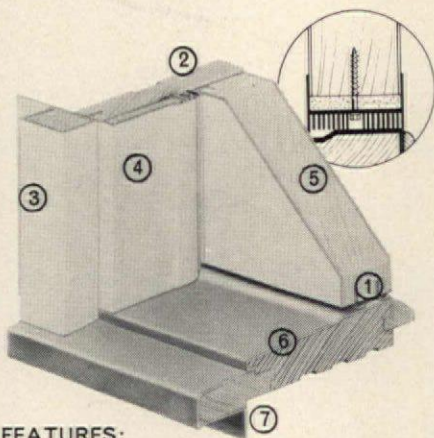
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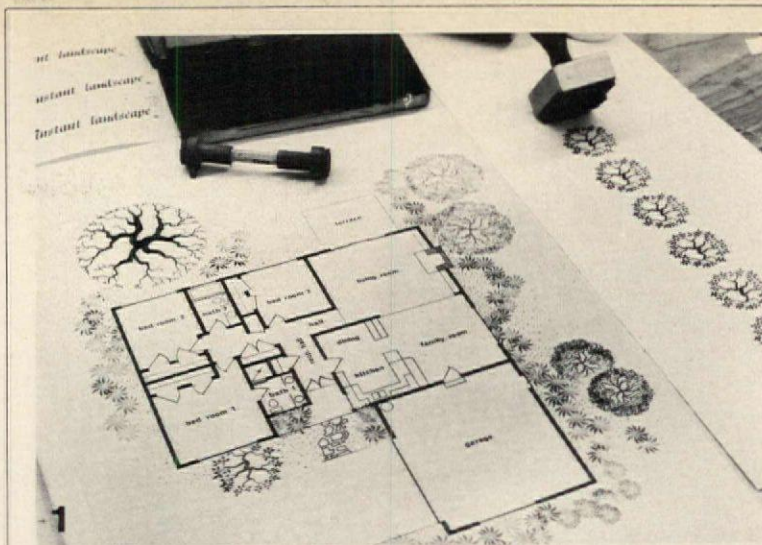
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- ⑦ Trim fins below sill, at side and head
- ⑧ Sash doors glazed insulated tempered (Safety) glass

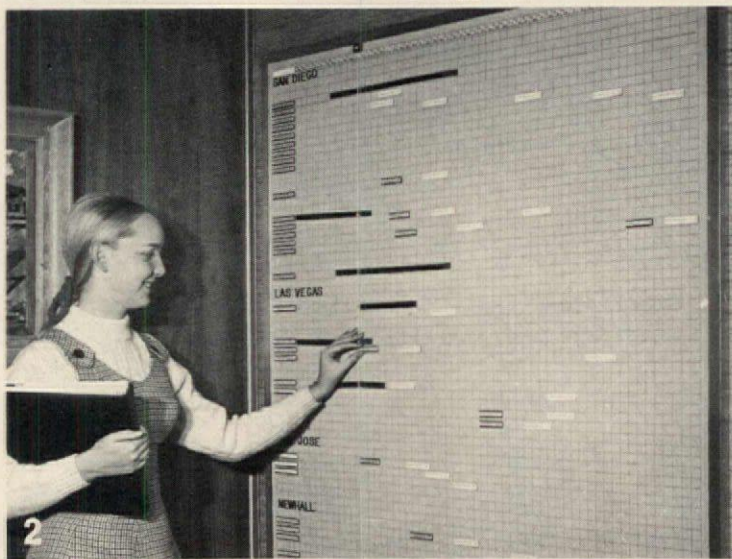


OSHKOSH, WISCONSIN 54901

CIRCLE 156 ON READER SERVICE CARD



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New this fall office equipment

1 **Drafting figures**—on rubber stamps as shown or transfer sheets to copy, trace or cut out—include trees, shrubs, plants, foreign and American cars, trucks and people. Trees, cars and trucks are shown in both plan and elevation. People of all ages and types are shown sitting, standing, in motion, alone and in groups of two or more. Scales vary, but range from 3" for largest trees in plan to 40 scale for smallest cars. Instant Landscape, San Francisco.

CIRCLE 342 ON READER SERVICE CARD

2 **Magnetic display panel** shows estimated, present and upcoming construction schedules with color-coded magnets, pressure-sensitive labels on magnetic rectangles and

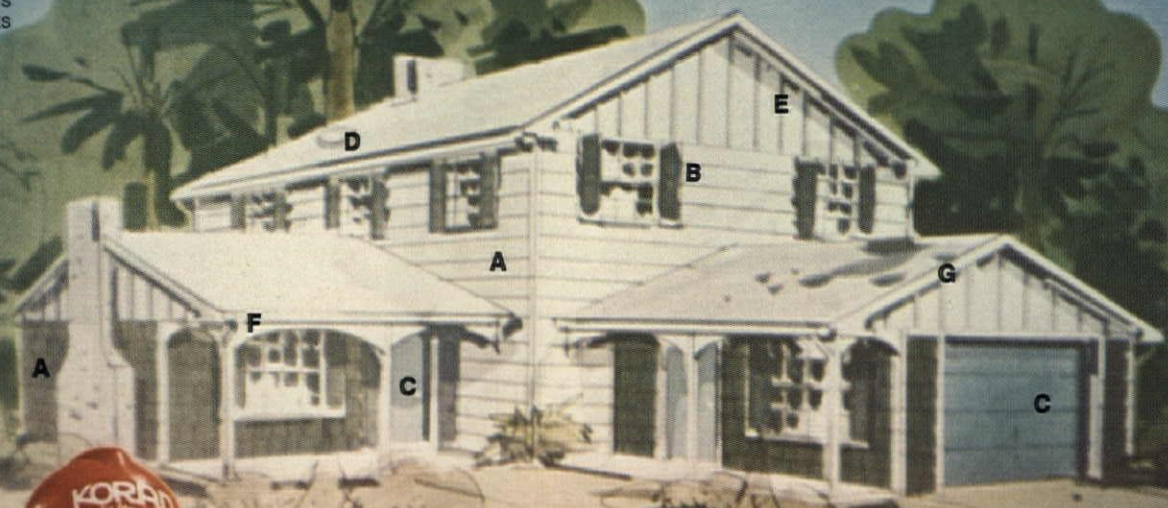
cards inserted in magnetic holders. Boards come in sizes from 24" x 18" to 144" x 48", with or without custom grids or stripes. Porcelain-like surfaces come in eight colors. A-1 School Equipment, Los Angeles.

CIRCLE 343 ON READER SERVICE CARD

3 **Joint width estimator**, a pocket-sized slide rule, compares joint width allowances for various glazing and sealing compounds and also calculates linear expansion or contraction of building materials at various temperatures. (Manufacturer produces elastomeric sealants which, rubberlike, expand and contract.) Thiokol, Trenton, N.J.

CIRCLE 344 ON READER SERVICE CARD
TO PAGE 158

- A—Korad on siding
- B—Korad on shutters
- C—Korad on doors
- D—Korad on roof ventilator
- E—Korad on soffits
- F—Korad on gutters and downspouts
- G—Korad on trim



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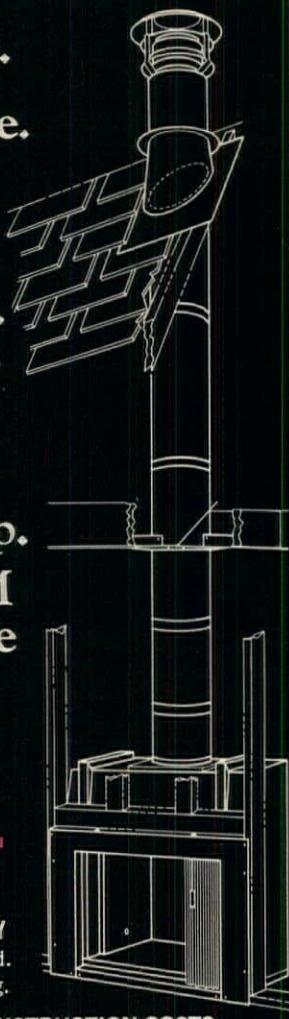
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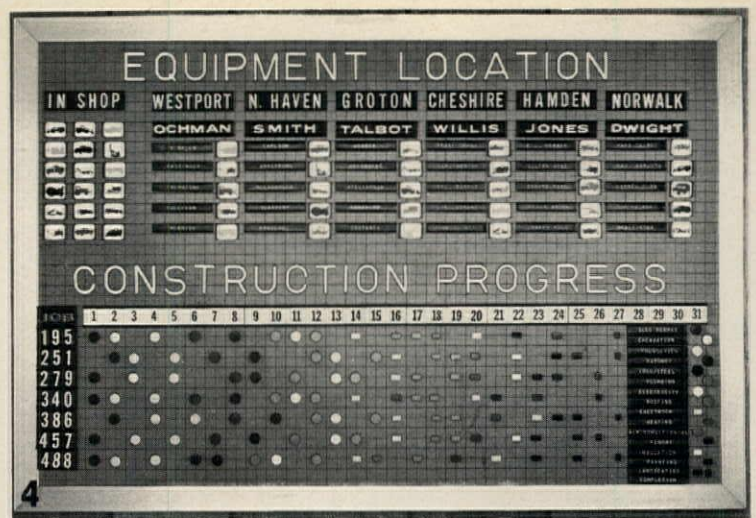
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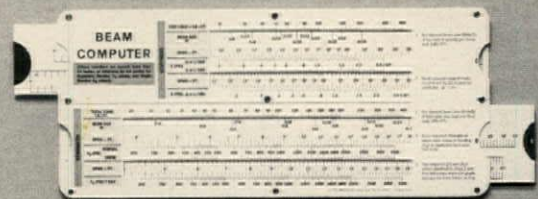
CIRCLE 288 ON READER SERVICE CARD



4



5



6

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office equipment *continued*

4 **Visual control board**—for construction schedules, budget control, inventory of materials or vehicles, or maintenance programs—includes magnets in 32 colors and 40 shapes and sizes. Edward Ochman Systems, Fairfield, Conn.
CIRCLE 345 ON READER SERVICE CARD

5 **Instant office** is based on acoustical panels—5' wide and 4' high—that stand on T-legs and are connected by vinyl hinges. To the framing of the panels are bolted tubular steel desk legs. Then a 2½' x 5' desk top is bolted to the legs. Other accessories, like the shelf shown, are snapped or slid into the grooves of the panel frames. They include a telephone bracket, electric outlets, tables and

file bins. All components come in a variety of colors and finishes. Panels are full or cornice height. Conwed, St. Paul, Minn.
CIRCLE 346 ON READER SERVICE CARD

6 **Beam computer** is a speedy tool for determining the right sizes and grades of nine Western Wood species for use as joists, rafters or beams. The 4" x 9" slide rule—small enough to fit in a pocket—contains all the span tables from a 43-page NFPA booklet and shows all lumber sizes from 2x4s to 4x14s, commonly used deflections, all spacings and loads from 10 lbs. per sq. ft. to 400 lbs. per lin. ft. Western Wood Products Assn., Portland, Ore.
CIRCLE 347 ON READER SERVICE CARD

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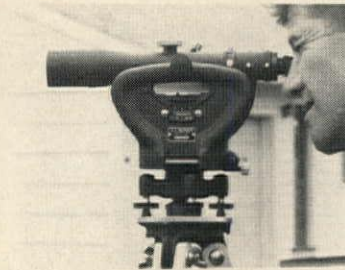
It's easy to put together an imaginative, beautiful kitchen when you start with versatile Kitchen Kompact cabinets. They're strong, sturdy and set to go anywhere at

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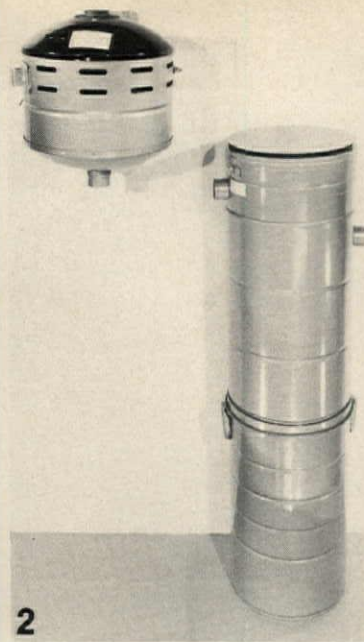
Company

Address

City State Zip



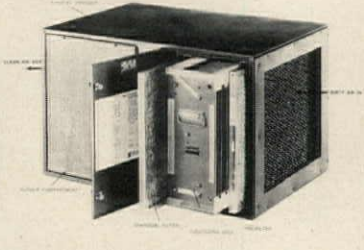
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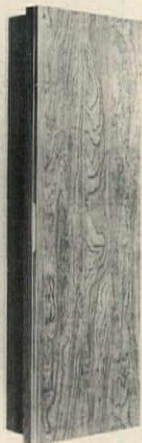
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4



New
1972

electrical equipment

1 **Built-in stereo units** include fold-away stereo-monoaural phonograph and FM/AM stereo tuner/amplifier with plug-in jacks. Speakers may be located throughout the house. NuTone, Cincinnati, Ohio. CIRCLE 348 ON READER SERVICE CARD

2 **Vacuum system** has separate pump and dirt canister so power can be placed where noise isn't objectionable and canister put where emptying is convenient. Features: 2" pvc tubing that handles even broken glass or hairpins, a wet pickup and control for drapes. Vacu-Maid, Ponca City, Okla. CIRCLE 349 ON READER SERVICE CARD

3 **Electronic air cleaner** does a room 20' x 35' at 800 cu. ft. per

min., or one 20' x 50' at 1,000 cu. ft. per min. "Eliminator" removes 95% of dust, dirt, pollen and tobacco smoke. Wood-grained panel is removable for servicing. Emerson, McKees Rocks, Pa. CIRCLE 350 ON READER SERVICE CARD

4 **Fold-away ironing center** is a cabinet that fits an opening 14½" x 46⅞" x 4⅛" between studs. Door has walnut or fruitwood graining and continuous hinge—for right- or lefthand swing. Steel board is 42" long. Iron-A-Way, Morton, Ill. CIRCLE 351 ON READER SERVICE CARD

5 **Fluorescent dimmer** for high-power lighting installations, works smoothly from zero to maximum,

TO PAGE 162

The new Super Singles. From Gerber.



Clever new styling that lets you match the decor of *any* home.

Sleek—to go beautifully in the most contemporary setting. Delicately accented to complement traditional furnishings.

These new Gerber singles let you add the luxury and convenience today's home buyers want—with confidence that the styling will be *right*.

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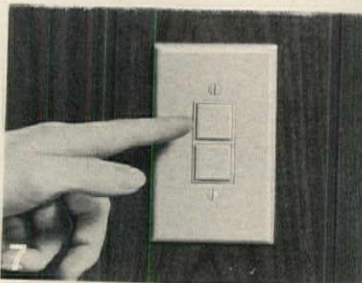
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162 H&H JANUARY 1972 CIRCLE 162 ON READER SERVICE CARD

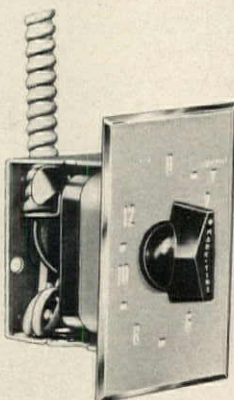
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9



10



electrical equipment *continued*

has a dimming ratio of 500:1 and can be used for incandescent lighting. Lutron, Coopersburg, Pa.
CIRCLE 352 ON READER SERVICE CARD

6 □ **Built-in coupling** saves time and labor, needs only two pre-set screws tightened. "Uni-Couple" comes in 10' straight lengths, plus 45° and 90° elbows. ETP, Maspeth, N.Y.

CIRCLE 353 ON READER SERVICE CARD

7 □ **Geometric switchplate** has square touchbuttons flush with the plate. "Centura" plates and outlets come in decorator colors, carry a 25-year guarantee, are easy to install. Leviton, Brooklyn, N.Y.

CIRCLE 354 ON READER SERVICE CARD

8 □ **Lighted doorbell button** saves searching in the dark. "Sculpturesque" comes in several styles besides the key shown. General Electric, New York City.

CIRCLE 355 ON READER SERVICE CARD

9 □ **Time switch** controls lighting, heating or ventilating. An on type breaks circuit, off type makes circuit. Both control from 60 secs. to 12 hrs. M.H. Rhodes, Avon, Conn.

CIRCLE 356 ON READER SERVICE CARD

10 □ **Touch switch** may be embossed with company logo, family monogram, or word indicating what it controls, i.e., porch or entry. Slater, Glencove, N.Y.

CIRCLE 357 ON READER SERVICE CARD

Marvin's new Singl-Glide and Singl-Lift windows cost a little less than most other wood windows. But with any Marvin window, the big savings come later. They're all factory-assembled, with everything in place. They can be 100% factory-prefinished — beautiful interior and exterior finishes you can't equal on the job. They're easy to install, and when you're done, they work. That's how you can take the cost out of fine windows.

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Singl-Glide and Singl-Lift units have one operating sash and one fixed lite. Big choice in glazing, from insulated to button-on storm panels to interchangeable storm sash and screen. Everything designed for generations of easy living. Get the full story in Marvin's new catalog. Marvin Windows, Warroad, Minn. 56763. Phone: 218-386-1430.



CIRCLE 163 ON READER SERVICE CARD





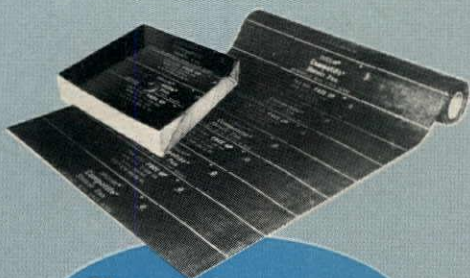
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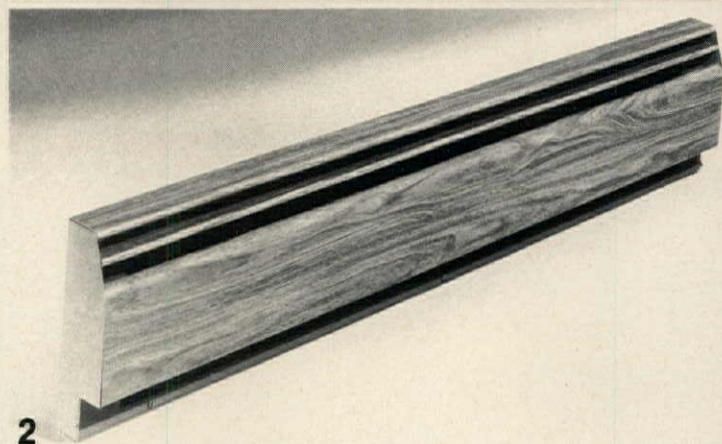
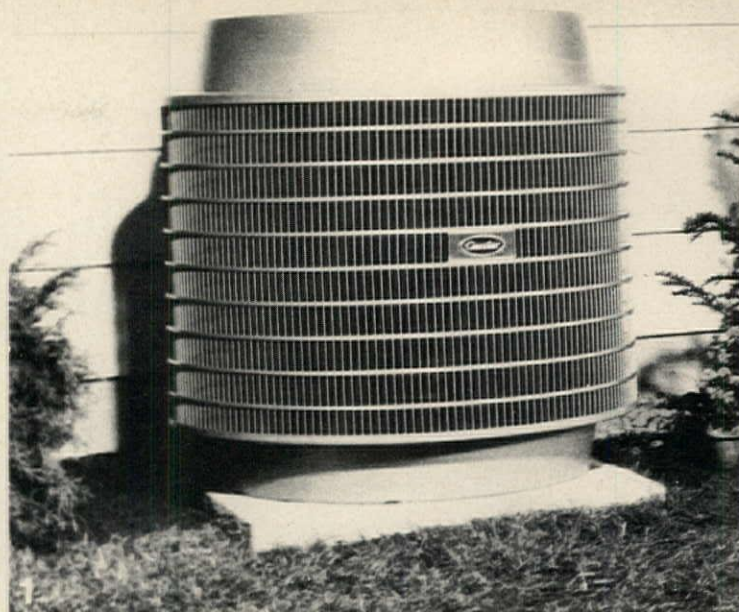
In most cases, the economy of Compotite waterproofing will result in a desirable fully tiled shower at no more than the expense of a plastic tub or receptor.



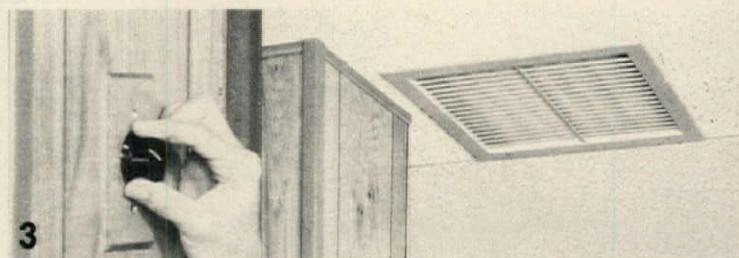
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CIRCLE 164 ON READER SERVICE CARD



2



3

New
Products
1972

heating & air conditioning

1 **Round condenser** is for outdoor installation in residential central air conditioning systems. "Round One" directs heat and noise upward, away from both plants and neighbors. Carrier, Syracuse, N.Y.

CIRCLE 358 ON READER SERVICE CARD

2 **Wood-grained baseboard heater** has vinyl finish, also comes in white or two-tone beige. For every linear foot 488 inches of aluminum hot water fins provide a continuous flow of heat up and out from beneath a curtain guard into the room. Stepped-back design permits use in conjunction with thick carpeting. Front panel snaps off for easy access. Floorlevel, Baltimore, Md.

CIRCLE 359 ON READER SERVICE CARD

3 **Ventilator** replaces hot, stuffy air with fresh outdoor air in minutes, may be mounted in the wall or ceiling. Solid state speed control has a timer with automatic shut-off. Kool-O-Matic, Niles, Mich.

CIRCLE 360 ON READER SERVICE CARD

4 **Through-the-wall unit** heats, cools, ventilates and dehumidifies. Cooling capacities in four models range from 9,500 to 15,000 BTU/hr., heating from 2,200 to 5,200 watts at 208-V, from 2,640 to 6,300 watts at 230-V, and air flow from 360 to 380 cu. ft. per min. Compact "Ratic" is 27" high, 44" wide and 10" deep, comes in beige baked-on enamel with optional front panel in woodgrain design. Pushbutton

TO PAGE 167



Dromoland Castle, County Clare, Ireland. Built between 1700 and 1800. Remodeled in 1962 by Milosevich and Trautwein, A.I.A.

Dromoland Castle doesn't need a moat.

Moats don't have much to do with security these days.

Dromoland Castle relies on Schlage for that.

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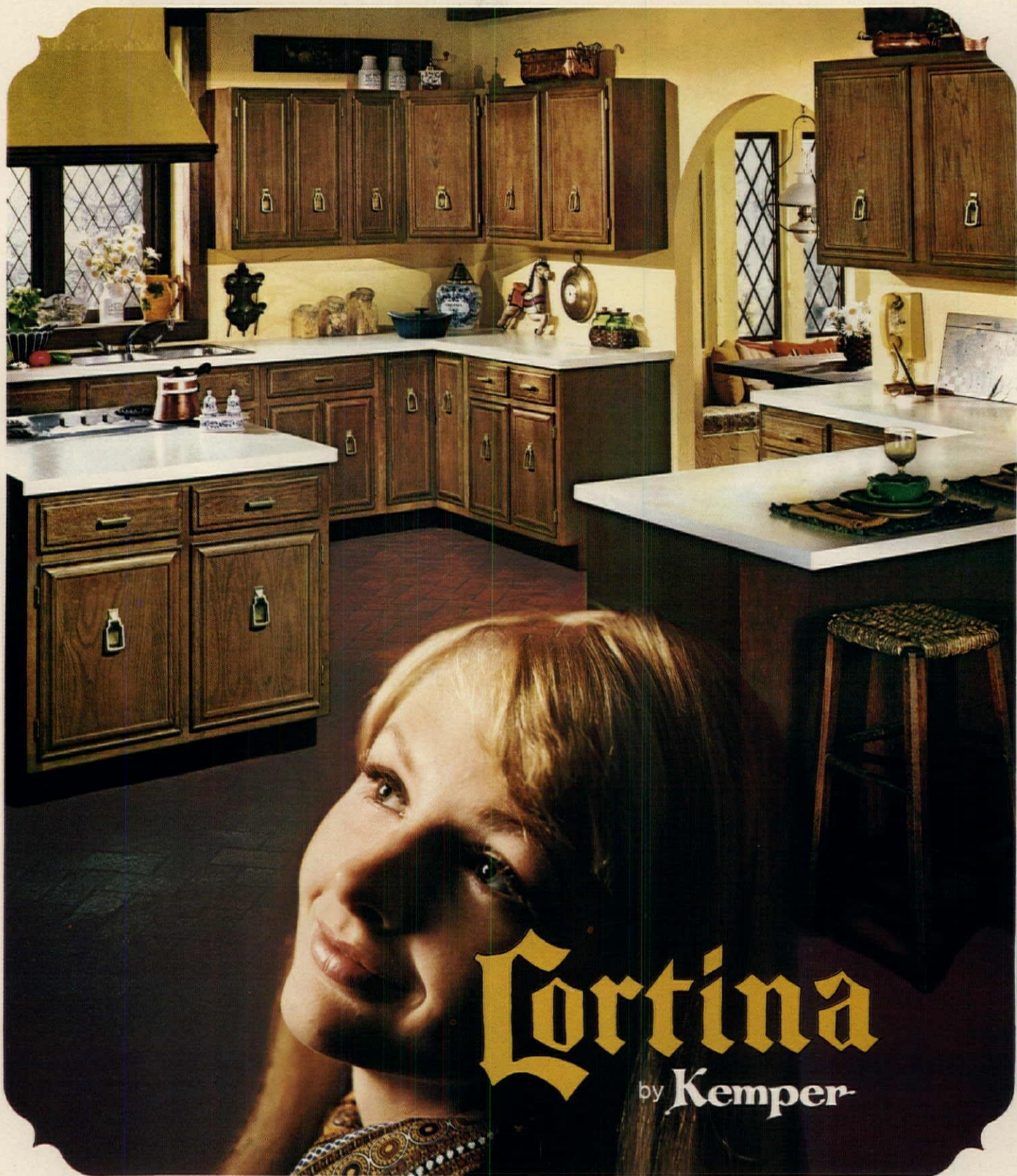
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Kemper understands and satisfies the desires of the home owner to

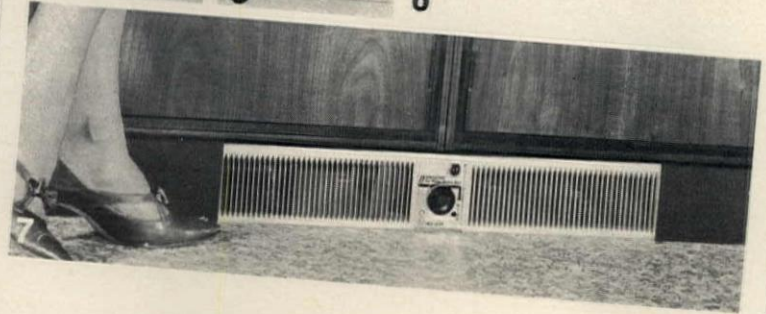
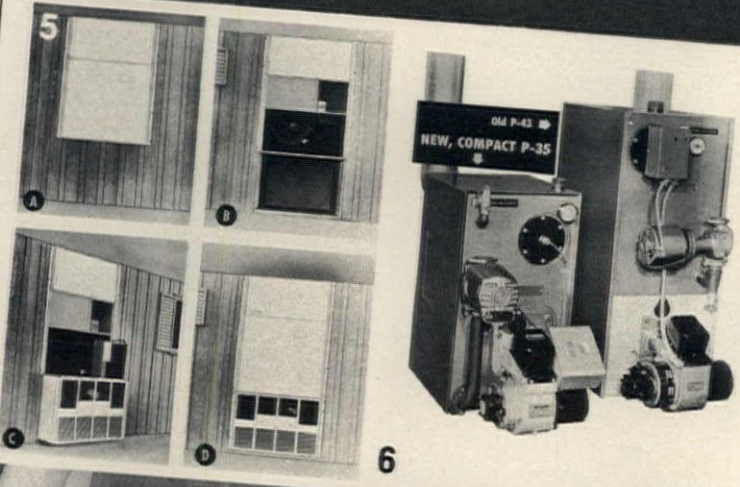
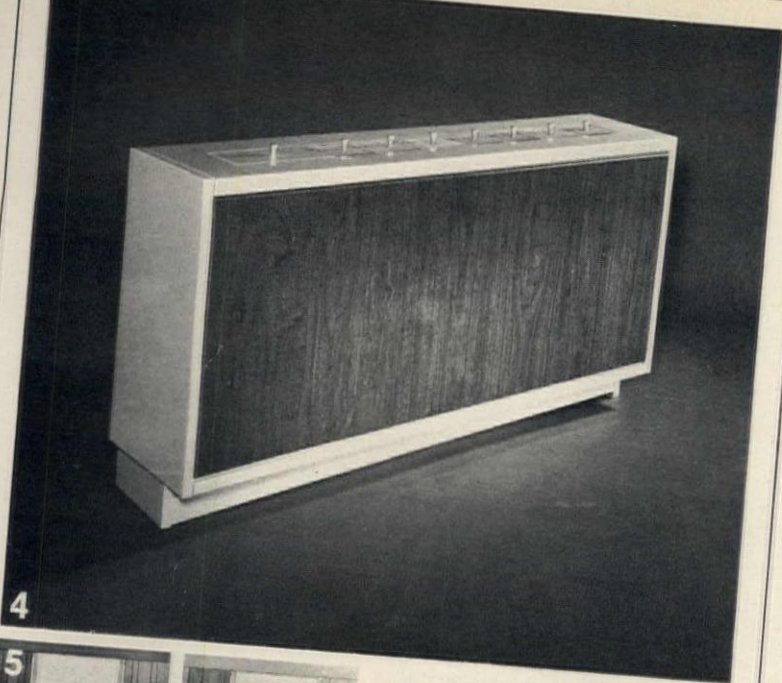
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heating & air conditioning *continued*

controls are color coded. Raywall, Tennessee Plastics, Johnson City, Tenn.
CIRCLE 361 ON READER SERVICE CARD

Puente, Calif.
CIRCLE 362 ON READER SERVICE CARD

5 **Modularized system** is based on a compact electric forced-air furnace. "Module-Pac" is installed outdoors on modular home, portable building or school or low-cost apartment or townhouse (A). When air conditioning is to be added, access door, blower and siding below the unit are removed (B); an accessory air conditioning package is slid into place; the blower is replaced and four plug-in connections made (C); and the panels are put back in position (D). Sound is dampened by an acoustical insulation lining and neoprene cushions. Day & Night, La

6 **Compact oil boiler** is 32" high and 17" wide, takes up less space than the old model to which it is compared above. Cast iron "Heat Capsule" delivers 90,400 to 201,700 BTU/hr. for oil-fired homes and apartments. Weil-McLain, Michigan City, Ind.
CIRCLE 363 ON READER SERVICE CARD

7 **Toe space heater** is 3½" high, 22" wide and 14" deep, provides hot water electric heat under bathroom or kitchen cabinets. Air drawn into grill's center passes over sealed tubing, is recirculated from grill's ends. Intertherm, St. Louis, Mo.
CIRCLE 364 ON READER SERVICE CARD

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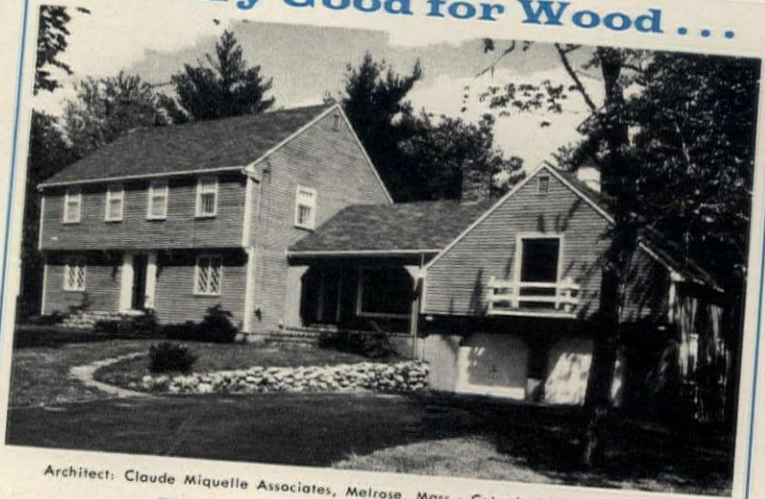


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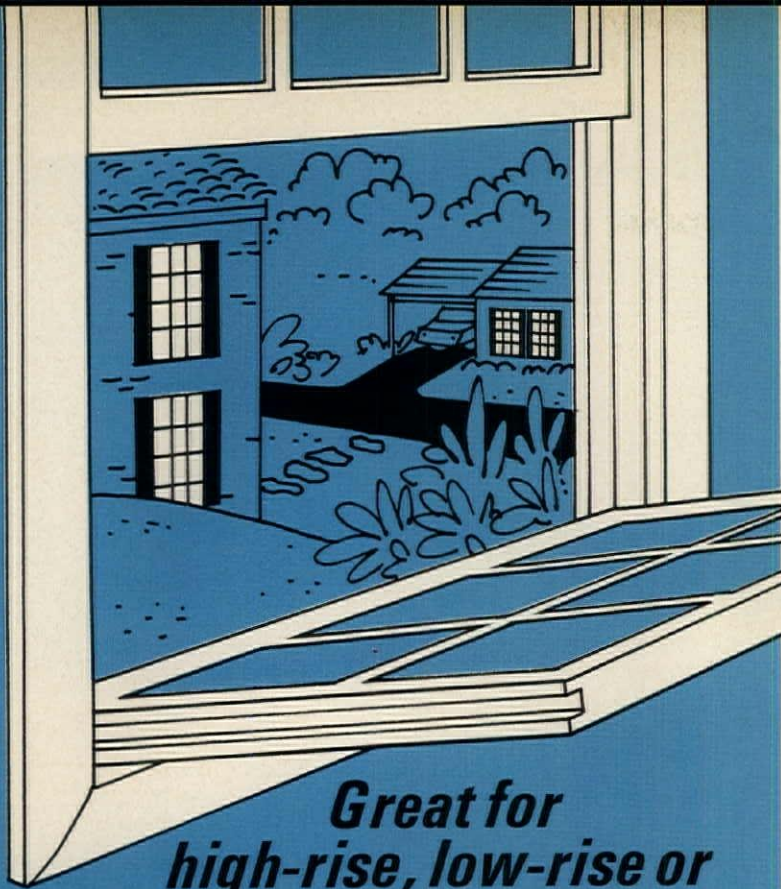
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CIRCLE 167 ON READER SERVICE CARD



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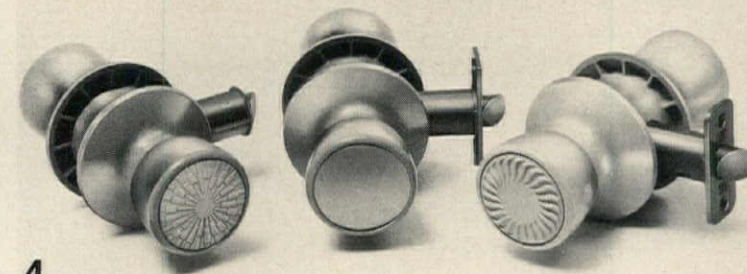
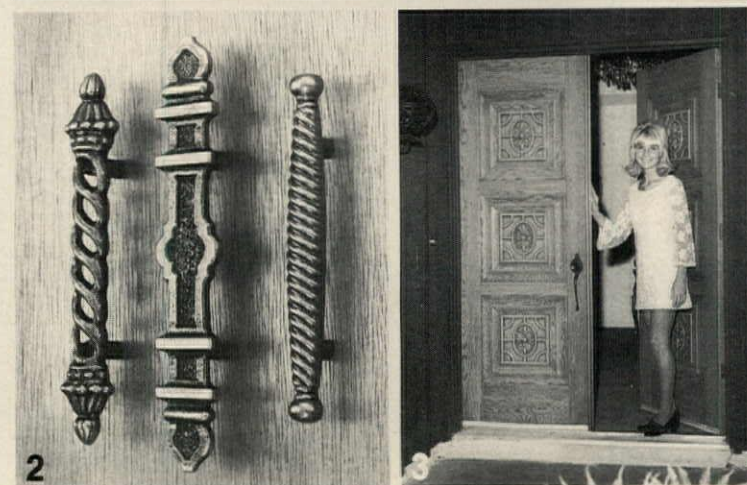
The TILT-TAKE OUT from WABASH

The Wabash Tilt-Take Out Window is a pre-finished, double-hung unit made of only high-grade Western Pine for maximum beauty and insulating efficiency. It has a special Korad® wrapped hardboard sill which shields against weather, scratching, pitting, corrosion and never needs painting. Dri-Vac treatment gives protection against fungus, rot and insect damage. The exterior frame and sash are pre-finished with a weather-proof coating.

The special "tilt-take out" feature of this Wabash unit permits effortless cleaning of outside glass areas by allowing the sash to be tilted inward. Rectangular grooves prevent accidental tilting. The unique 4-balance tilt mechanism is self-lubricating and is not affected by dust or dirt.

This pre-finished Tilt-Take Out unit is completely factory assembled and shipped ready-to-install in car loads or by Wabash truck. Removable colonial wood grids and regular or insulating glass are available.

High-rise, low-rise or no-rise—the Wabash Tilt-Take Out serves your building and remodeling needs with the greatest in window efficiency. See your Wabash dealer or distributor today.



doors & windows

1 **Steel entrance doors** need no additional storm doors: their polyurethane foam and honeycomb cores keep the interior free from frost even if the exterior is exposed to temperatures as low as -60°. Adjustable vinyl door bottoms and aluminum weatherstripped astragals seal out weather. Doors come in 54 styles, with or without small or large windows and up to full-height sidelights. Perma-Door, Cincinnati, Ohio.
CIRCLE 365 ON READER SERVICE CARD

2 **Cabinet hardware**, in styles called "Granada", "Mosque", and "Seville," comes in antique brass or old iron finish. Ajax, City of Industry, Calif.
CIRCLE 366 ON READER SERVICE CARD

3 **Fiberglass panels** resist chipping, peeling, or cracking. Each side of door is one piece of FRP with paneling—raised or recessed—molded right in. In 21 styles in walnut, teak, dark, or mahogany grains and colors, doors run from 2'6" to 3'6" wide, are 6'8", 7', or 8' high. Kaylien, Santee, Calif.
CIRCLE 367 ON READER SERVICE CARD

4 **Decorative locksets**, molded of high-impact ABS plastic, won't tarnish, rust, corrode or discolor. Three styles—"Perspective," "Di-Opter," and "Iris"—come in solid or two-toned ivory, beige, gold and avocado. Needs no lubricating; is shockproof. Acme, Monrovia, Calif.
CIRCLE 368 ON READER SERVICE CARD



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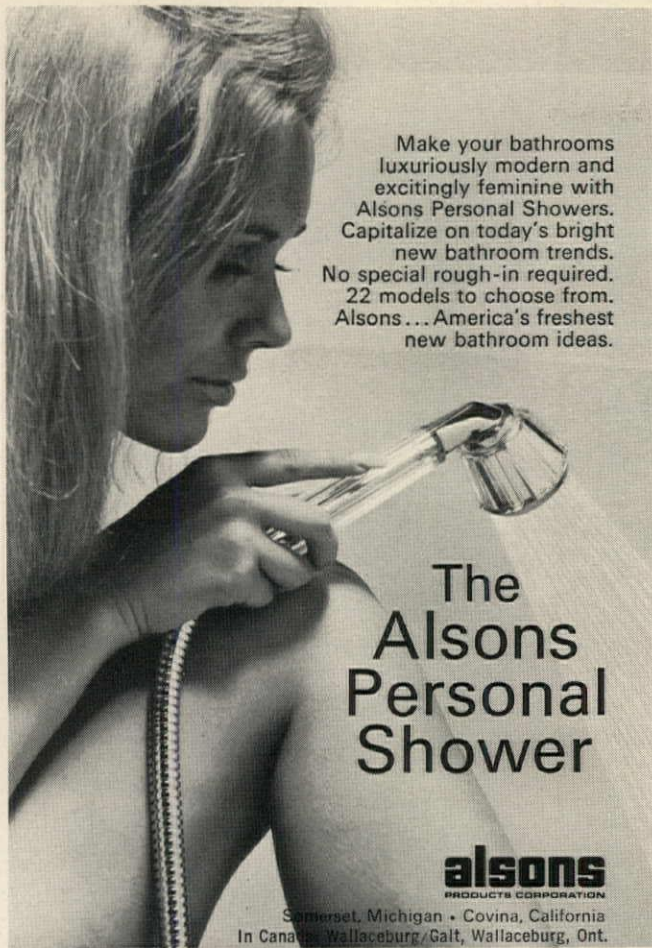
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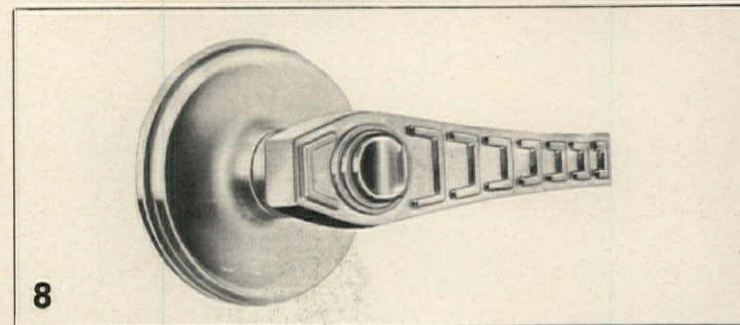
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CIRCLE 290 ON READER SERVICE CARD



doors & windows *continued*

5 **Insulated sliding doors** keep heat or cold out—or in—and reduce condensation and air infiltration. Thermal break between extruded aluminum alloy sections keeps inside warm when dry ice at 110° below zero is piled outside and when tested conventional doors frosted up in five minutes. Double weatherstripping of polypropylene pile and a "Mylar" fin keeps air infiltration down to 150 cu. ft. per hour with 25 mph winds outside while other doors tested let in up to 2,580 cu. ft. per hour. "DorWal" comes in bronze baked-on enamel. Acorn, Detroit, Mich.

CIRCLE 369 ON READER SERVICE CARD

6 **Pre-hung unit** has a vinyl finish—both sides—in maple, oak,

walnut or driftwood wood-grain, is set into matching vinyl-wrapped jamb. "Vinyl Shield" doors, with solid or hollow cores, come in all standard sizes. Georgia-Pacific, Portland, Ore.

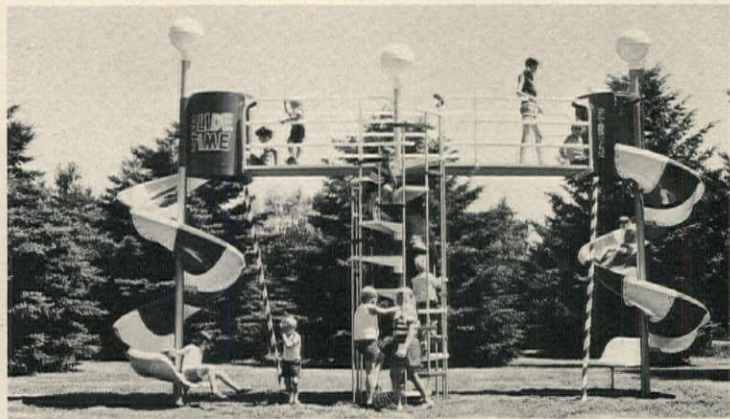
CIRCLE 370 ON READER SERVICE CARD

7 **Paneled steel door** can't warp, shrink, swell, buckle or rust. Part of "Therma-Tru" insulated line, it has a urethane core, thermal breaks at mortised butts and magnetic weatherstripping. Lake Shore, Toledo, Ohio.

CIRCLE 371 ON READER SERVICE CARD

8 **Lever handle** has a raised design. "Java" comes in several finishes. Weiser, South Gate, Calif.

CIRCLE 372 ON READER SERVICE CARD



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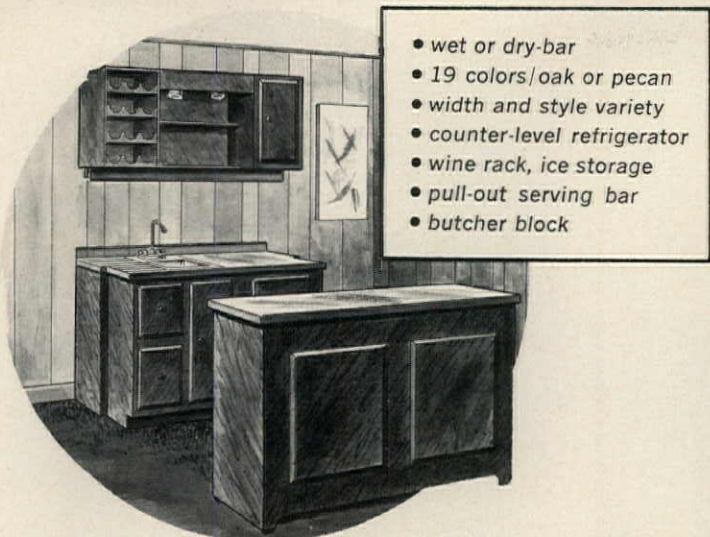
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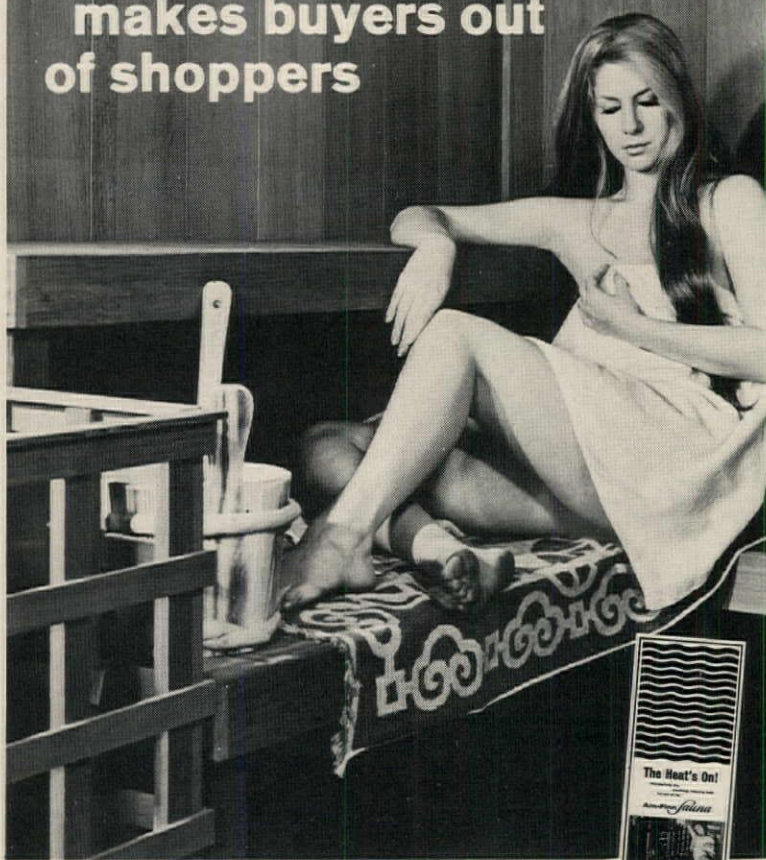
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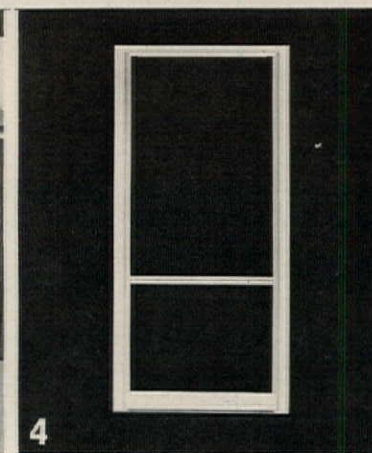
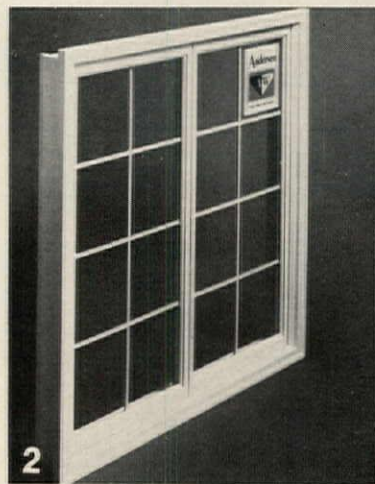
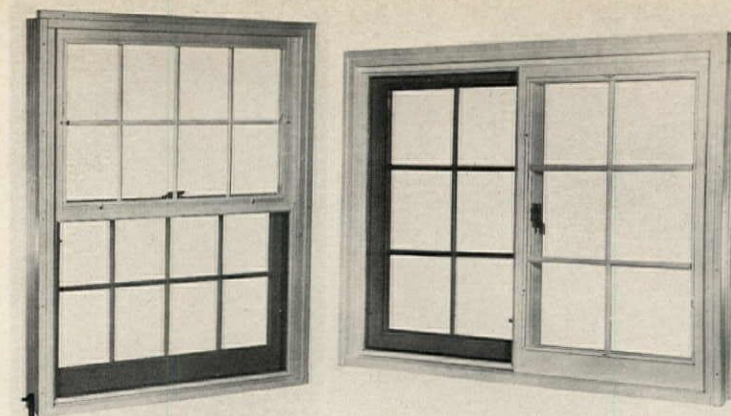


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172 H&H JANUARY 1972

CIRCLE 172 ON READER SERVICE CARD



New styles 1972 doors & windows

1 **Pre-hung windows** come in the double-hung and sliding styles shown above, even have screens and locks installed. Both sash in double-hung unit are removable, but only the lower one operates. Only the operating sash in the sliding unit is removable. Both units come with standard or insulating glass, are painted inside and out, can have snap-out vinyl grilles and storm panels. Caradco, Dubuque, Iowa.
CIRCLE 373 ON READER SERVICE CARD

2 **Hinged window** can be installed as a casement or awning type, as shown, just by turning it 90°. "Flex-Pac" units come in nine sizes, have removable grilles, and are finished with electrostatically-

applied paint. Andersen, Bayport, Minn.

CIRCLE 374 ON READER SERVICE CARD

3 **Key tags** come with manufacturer's keyed locks. When new lock is installed, tags can be used immediately for permanent coding or identification of key and duplicate. Schlage, San Francisco.
CIRCLE 375 ON READER SERVICE CARD

4 **Single-hung unit** has spring-action latches at sill, removable vent and a sash system claimed by manufacturer to be trouble free. Anodized or finished in acrylic enamel, window comes in a variety of sizes with standard or insulating glass. Crossly, Miami, Fla.
CIRCLE 376 ON READER SERVICE CARD

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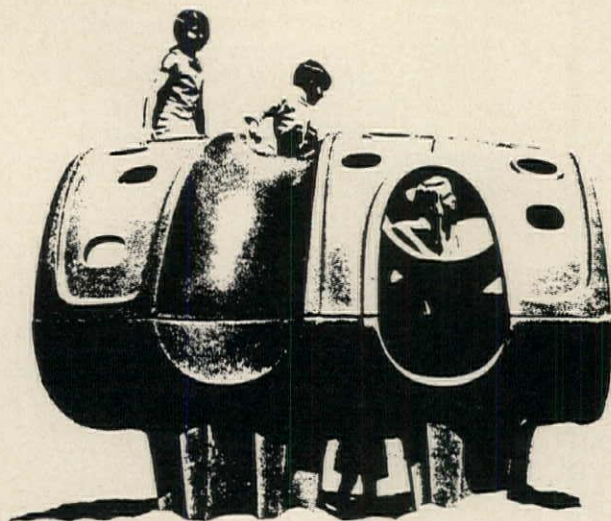
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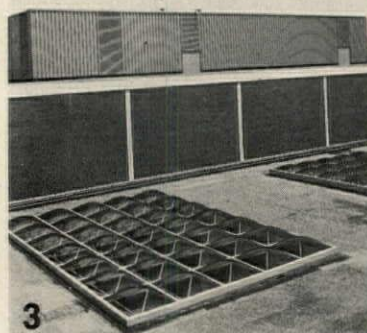
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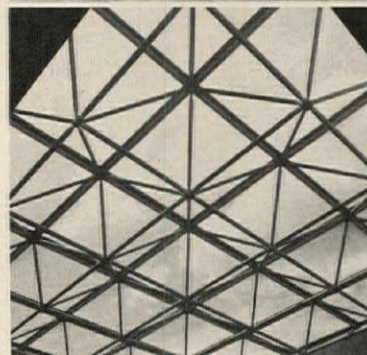
1



2



3



4

New
Products
1972

doors & windows

1 Mirrored sliding doors have $\frac{3}{16}$ " or $\frac{1}{4}$ " shatterproof, laminated-backed mirrors framed in anodized aluminum, nylon guides and lifetime ball-bearing rollers. Sizes to fit openings from 2' x 6'8" to 12' x 6'8". Diston, Hialeah, Fla.

CIRCLE 377 ON READER SERVICE CARD

2 Revolutionary window has single metallic coating on the inner surface of one pane that is both transparent and reflective. It not only turns back heat and glare but conducts electricity to warm window and air between edge-sealed panes. Window also muffles sound. PPG, Pittsburgh, Pa.

CIRCLE 378 ON READER SERVICE CARD

3 Acrylic skylights of clear or

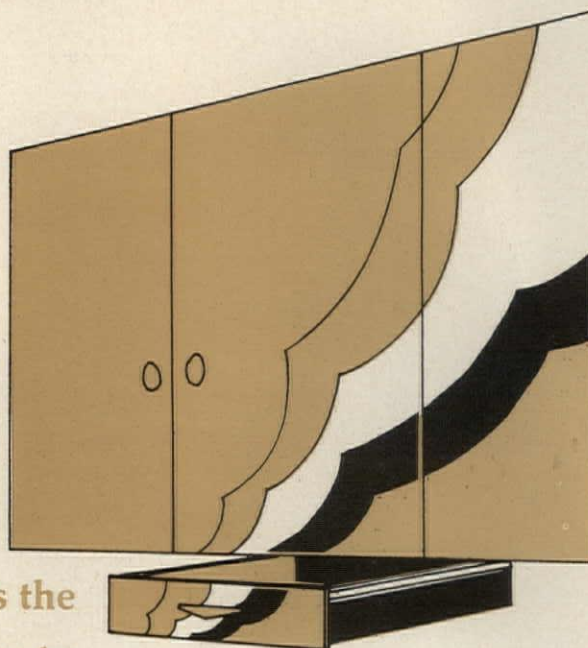
shaded "Plexiglas" (Rohm & Haas) are supported by "Triodetic" glazing bars that also act as condensation gutters. System—for domes, arches, rectangular or square openings up to 600'—can cover pools, auditoriums, showrooms, etc. Panels can be flat or bubbles as shown. Butler, Grandview, Mo.

CIRCLE 379 ON READER SERVICE CARD

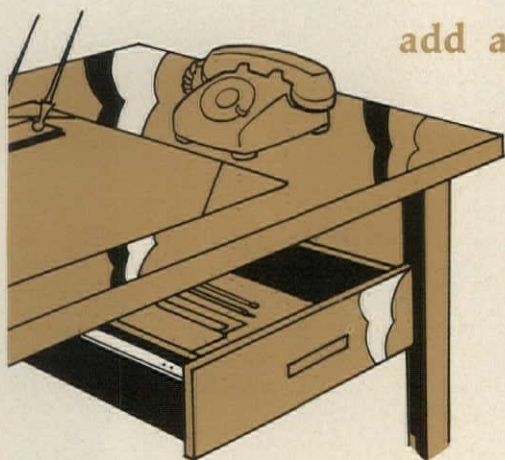
4 Tilt-in sash make washing easy. Both tilt inward and are removable. "Tilt-Take Out" has pine frame and sash treated with water repellent and finished in acrylic enamel. Sill is wrapped in "Korad" acrylic film (Rohm & Haas). Regular or insulating glass, optional grids. Wabash, Memphis, Tenn.

CIRCLE 380 ON READER SERVICE CARD

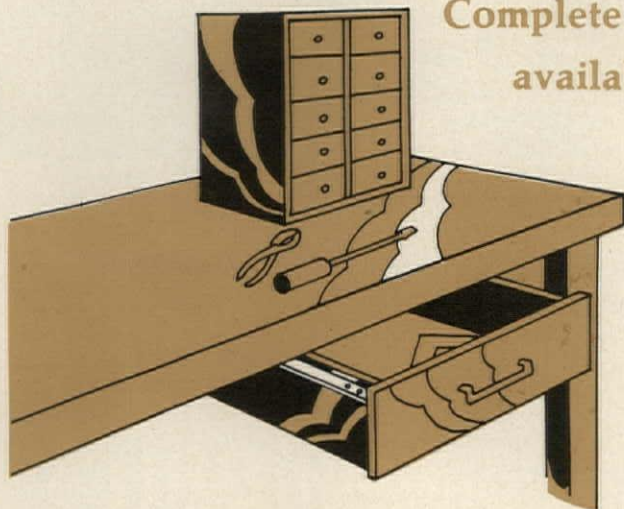
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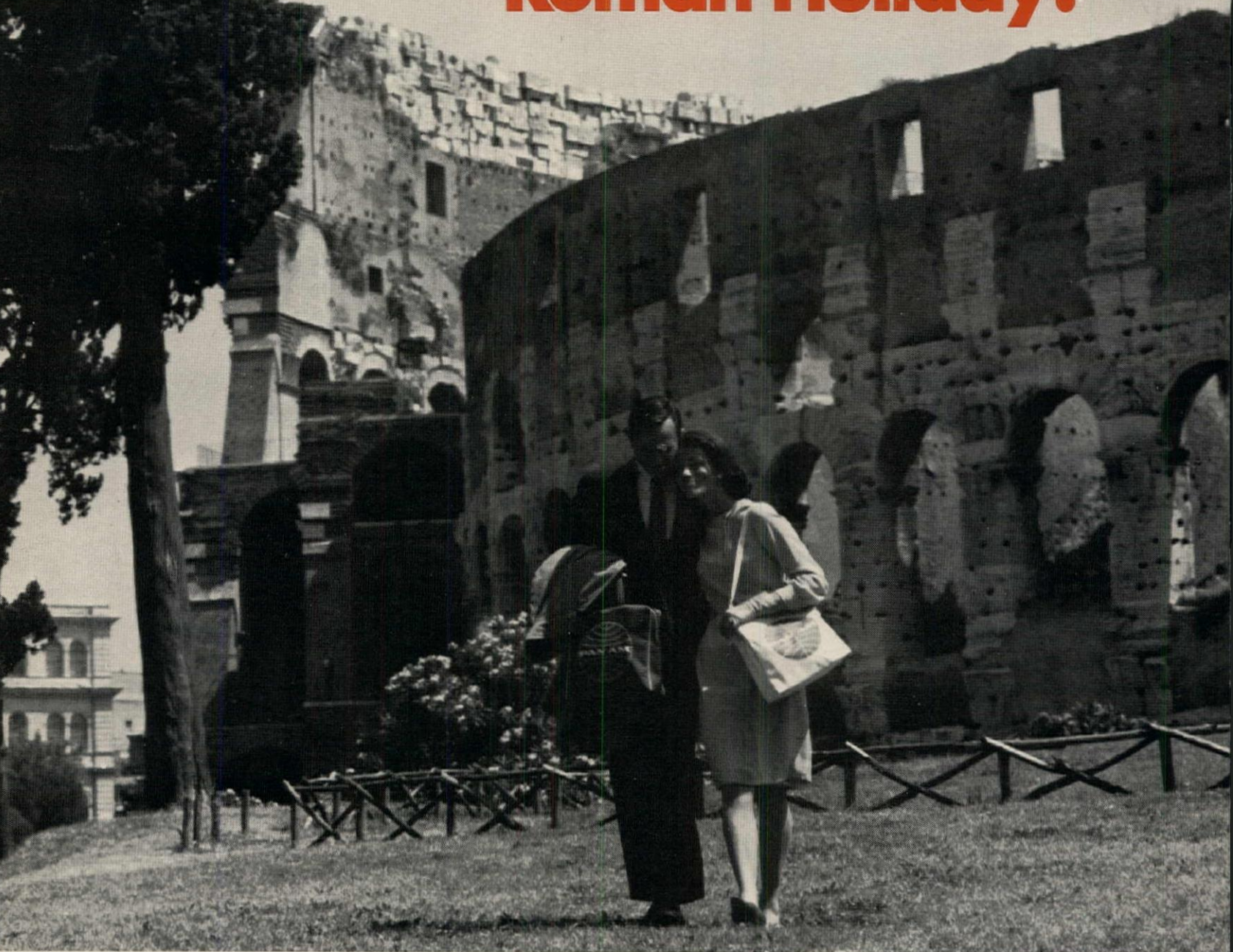
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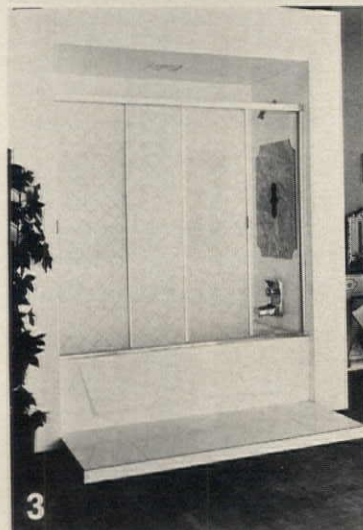
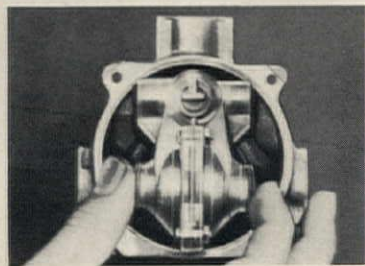
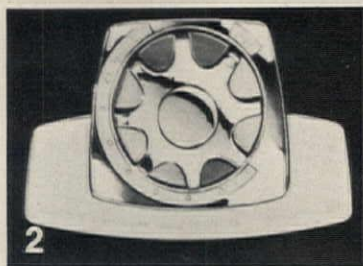
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*New
1972* baths

1 Decorative faucets are jewel-cut crystal set on ornate bases finished in antique gold or brass or polished brass. Other styles feature onyx or carved handles in floral, dolphin or leaf designs. Other accessories include towel ring and bars, tissue and soap holders, tank lever and tub and shower combinations. Thomas, Louisville, Ky.
CIRCLE 381 ON READER SERVICE CARD

2 Nonscald shower valve automatically adjusts pressure so temperature never varies more than $\pm 1/2^\circ$ from setting, shuts off immediately if hot or cold supply fails. Triple chrome-plated "Tempress" has only one working part, the cartridge shown above, which can easily be removed and quickly

replaced. Danfoss, Mahwah, N.J.
CIRCLE 382 ON READER SERVICE CARD

3 Tub enclosure, for 54" or 60" tubs, includes plastic panels and aluminum lift-out sliding doors. Panels are white, avocado or green. Aluminum has a satin silver finish. Kinkead, U.S. Gypsum, Chicago.
CIRCLE 383 ON READER SERVICE CARD

4 Home steam bath has a compact 20"x8"x11" electronic steam generator that goes beneath lavatory or in a closet. Included: wall panels, tub enclosure, fold-away seat, timer and anti-scald steam outlet. Unit for hotels and motels supplies steam for four rooms. Thermasol, New York, N.Y.
CIRCLE 384 ON READER SERVICE CARD

CIRCLE 177 ON READER SERVICE CARD →



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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 Houston, Texas.

Houses and apartments must be designed by a registered architect and built and completed since January 1, 1969, in any of the 50 states or U.S. possessions. 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 May 7-11, 1972. Awards will be made in three categories:

CUSTOM HOUSES—defined as single-family detached houses for a specific family for year-round or seasonal living, new or totally remodeled. Also owner-occupied brownstones.

Four classes: a) under 2,800 sq. ft., b) over 2,800 sq. ft., c) vacation or second homes, d) remodelings.

MERCHANT-BUILT HOUSES—defined as single-family detached houses for speculative sale or rent for year-round or seasonal living, new or rehabilitated, conventionally or factory built.

Four classes: e) volume-built houses, repetitively sold, up to \$75,000; f) one-of-a-kind, prototype, rental, and over \$75,000; g) rehabilitations; h) modular houses.

MULTIFAMILY HOUSING—defined as multiple-dwelling-unit structures for rent or sale under any type of financing. In-

cludes: single buildings of five or more units, attached housing from two units to townhouses, projects with more than one type of these structures, renovations of such buildings, and industrialized systems for building such structures. Exception: high-rise buildings may be part of a submitted project but will not be judged.

Five classes: i) single apartment buildings, j) multi-building projects, P.U.D.s, k) duplexes, triplexes, quadruplexes, etc., and townhouses; l) renovations; m) modular units.

Remodeling, rehabilitations, or renovations must take in the whole structure. Custom additions to a detached house must be tied into original design of house or house must be redesigned. Face-liftings must be structural.

Modulars must be completely factory-built house sections, hauled to site and attached to other modules to form single-family detached houses.

Systems are any combination of factory-built living modules with structural frame put together on the site to form multiple-dwelling-unit structures.

Pertinent information shall be submitted on the registration blank below (or facsimile) by January 17, 1972, 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, HOUSE & HOME will send an 8½"x11" binder and full instructions for preparation. The binder must be completed and postmarked no later than midnight February 27, 1972. It is important that the appropriate category be designated on original registration slip so that entrants will receive the correctly coded binder.

REGISTRATION SLIP MUST BE RECEIVED BY JANUARY 17, 1972

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

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architect _____ address _____

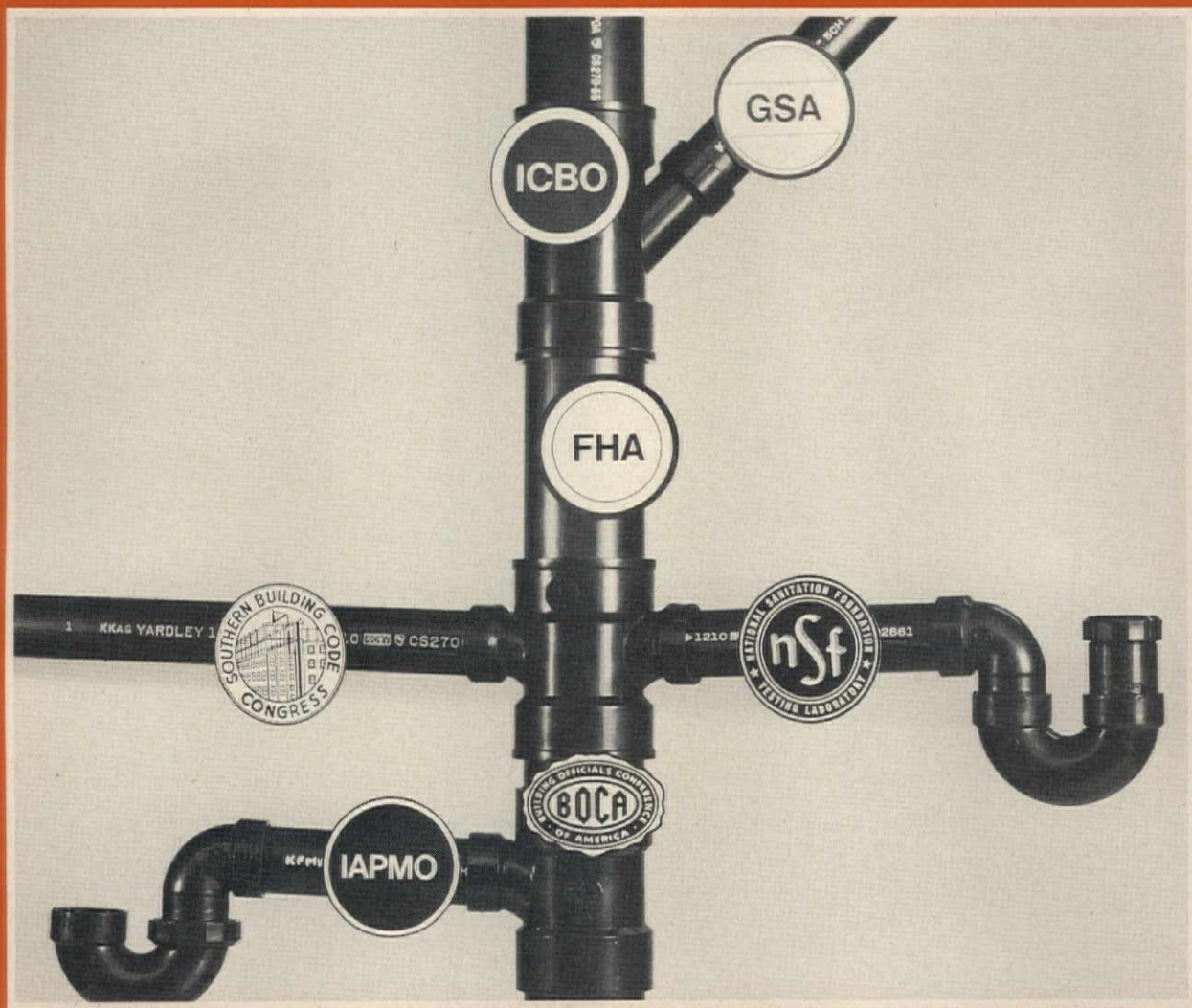
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Gentlemen:

You apparently have more than a passing interest in shelving or you would not have read this far. This being the case you really owe it to yourself to read on and get the facts about the most revolutionary new concept in shelving ever developed.

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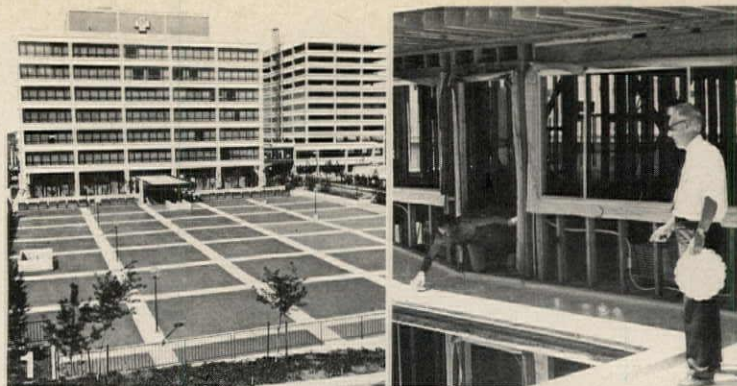
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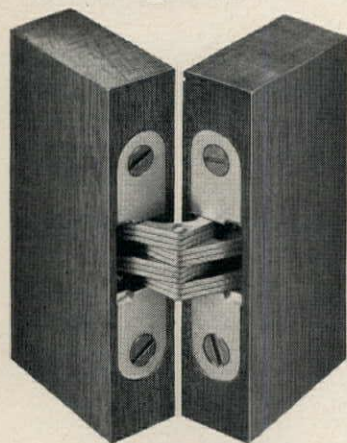
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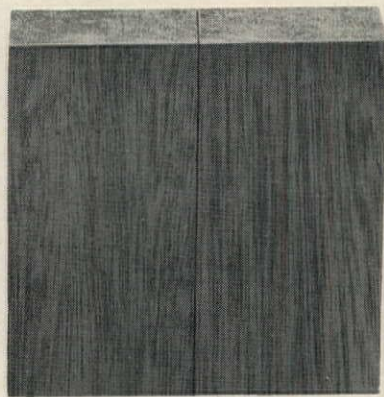


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CIRCLE 180 ON READER SERVICE CARD

1 Urethane deck coating, with new Dow Corning coupling agent, needs no mixing. One "Urebond" coat waterproofed parking deck, left, second coat with embedded pebbles wasn't damaged by studded tires. Thick first coat on plywood apartment decks, right, lets wood expand or contract; second coat holds non-skid colored quartz. Poly Resins, Sun Valley, Calif.
CIRCLE 385 ON READER SERVICE CARD

2 Spray-on lubricant of silicone reaches difficult spots like slides in bathtub enclosures or storm window hinges. It reduces black aluminum residue and corrosion, may be painted over. General Electric, Waterford, N.Y.
CIRCLE 386 ON READER SERVICE CARD

3 Fire retardant paint is like other latex paints: rolled, brushed or sprayed on wood or other interior surfaces, it has no odor and dries in 30 min. Its difference: exposed to flame, it foams up, insulating combustible surface and slowing flame spread. A 1,500° blowtorch produced only a scrapable scorch on "Speedhide" coating. PPG, Pittsburgh, Pa.
CIRCLE 387 ON READER SERVICE CARD

4 Construction adhesives for decorator paneling, subflooring and other construction uses, come in convenient cartridges or five-gal. pails. Weldwood Packaged Products, U.S. Plywood-Champion Papers, Kalamazoo, Mich.
CIRCLE 388 ON READER SERVICE CARD



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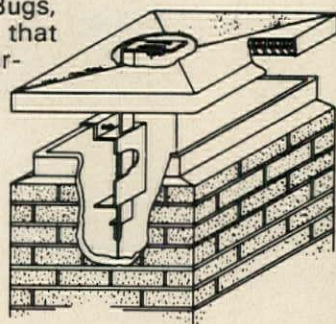
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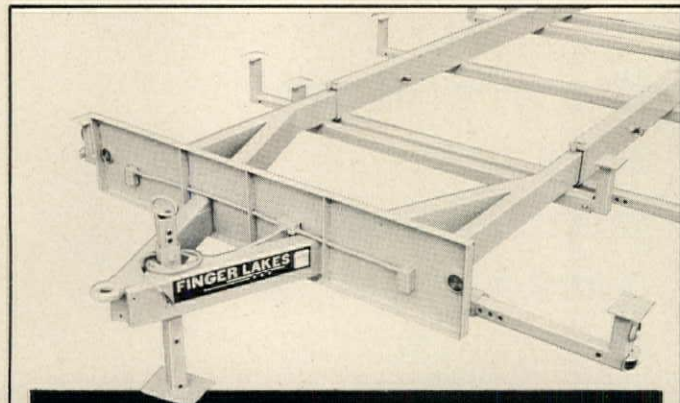


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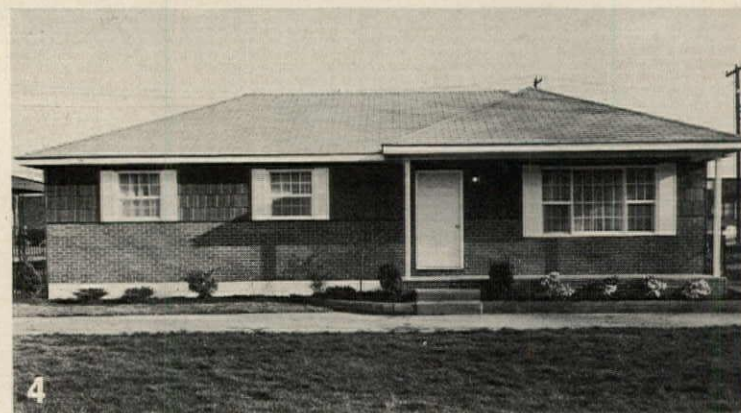
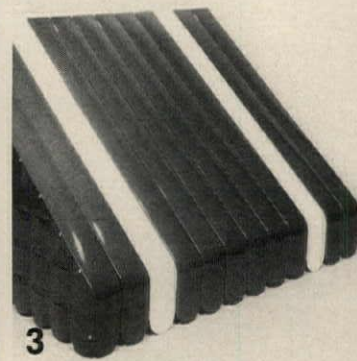


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New Products 1972 exteriors

1 **Mineral siding** looks like wood shingles and can be sawn, cut or drilled like wood, but is otherwise unlike wood. It won't burn, shrink, curl, rot, dent or buckle. "Stratalite" comes in three greens, two grays, red, gold, brown, tan and white, all of which are sealed beneath a baked-on acrylic coat that is weatherproof, won't blister or peel, never needs painting. GAF, New York City.
CIRCLE 389 ON READER SERVICE CARD

2 **Textured hardboard** has wood-like graining, but is guaranteed not to split, splinter, check, crack or delaminate. Lap or vertical siding comes prime-coated and back-sealed. Vertical patterns include V- or channel grooves and reverse

board and battens. Georgia-Pacific, Portland, Ore.

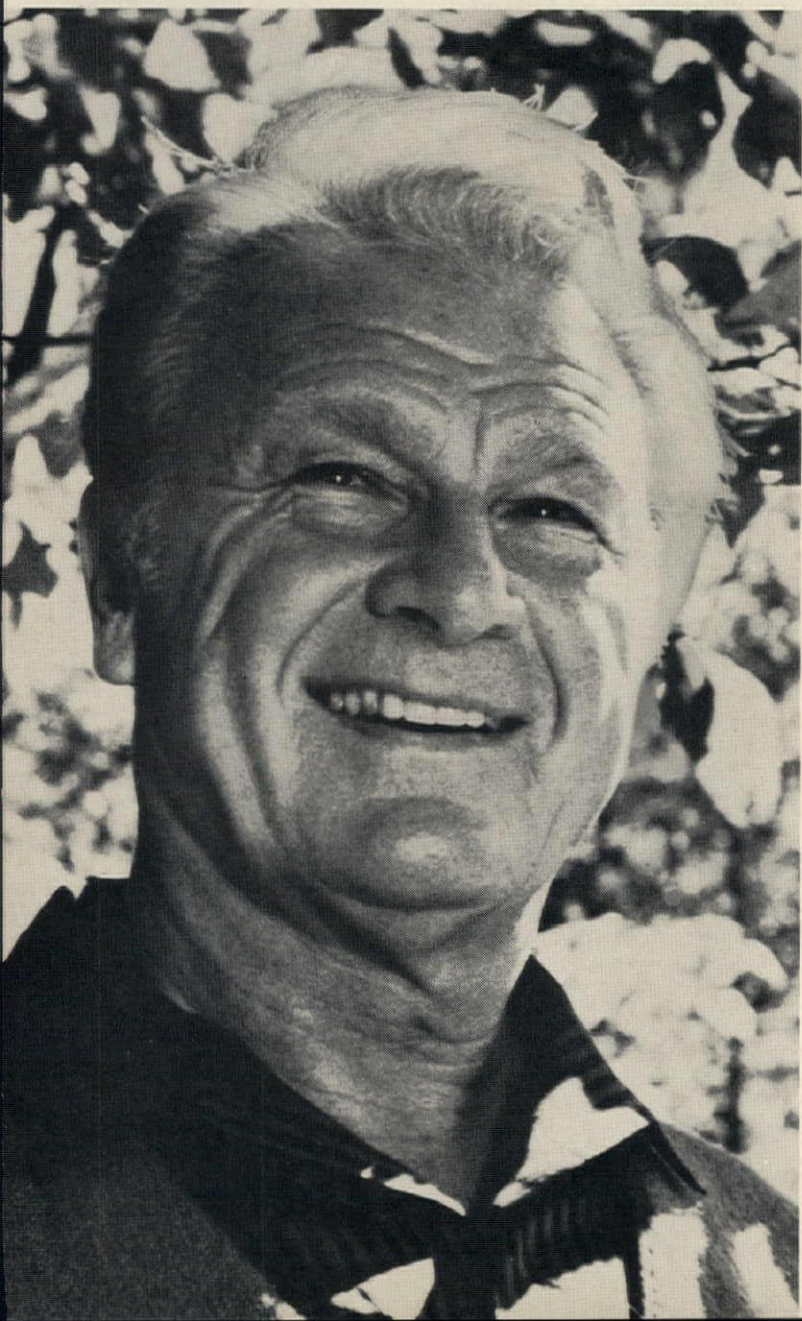
CIRCLE 390 ON READER SERVICE CARD

3 **Aluminum awning** is protected from blistering, peeling, cracking or crazing by silicone enamel that resists corrosion and sunlight deterioration. Finished inside with light-reflecting white, awnings come in many colors. Hastings, Hastings, Mich.
CIRCLE 391 ON READER SERVICE CARD

4 **Fiberglass brick panels** resist mars and scratches, are lightweight. Molded-in bricks of "Super Rigid Brick" come in two standard and 14 custom colors for use indoors or out. Alside, Akron, Ohio.

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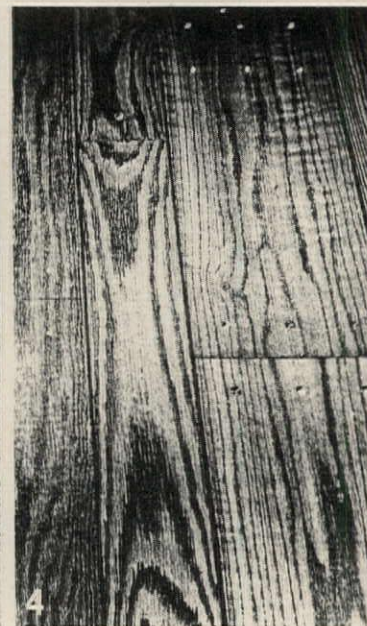
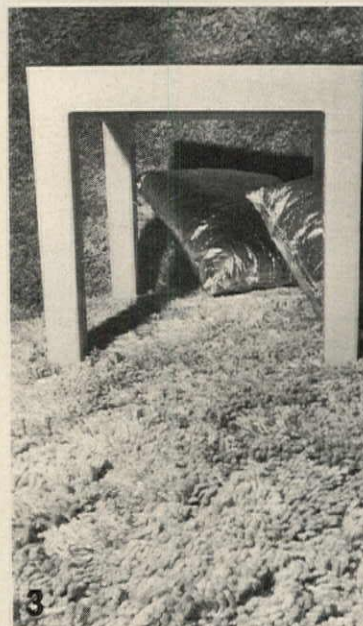
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CIRCLE 106 ON READER SERVICE CARD



New
products
1972

flooring

1 Vinyl-asbestos tiles with non-directional pattern of chips—in eight translucent-colors—appear seamless when 12"-square tiles are installed. NAFCO, Florence, Ala.
CIRCLE 393 ON READER SERVICE CARD

2 Unglazed mosaic tiles, shown above in a pattern of squares, coordinate with manufacturer's ceramic wall tiles in bright, matte, crystal and dappled glazes. Unglazed tiles are very dense, have an absorption rate less than .5%, come in 30 patterns and 56 colors with solid or textured surfaces. Florida Tile, Lakeland, Fla.
CIRCLE 394 ON READER SERVICE CARD

3 Custom-like shag comes in a patterned cut-and-loop construction

of nylon fibers. Part of a three-pattern decorator line called "Collection Internationale," "St. Moritz" retails for about \$14 per sq. yd., comes in tone-on-tone shading in colors like slate, green, and gold. E.T. Barwick, Chamblee, Ga.
CIRCLE 395 ON READER SERVICE CARD

4 Plank flooring is solid oak with distressed texture. Left unfinished, it is shipped pre-drilled along with heavy wrought head nails. "Frontier Grade Planks" are beveled to produce a V-joint and have T&G edges for easy installation. Random widths are 3", 4", 5", 6", 7" and 8". Plank lengths are random. Packages are 8' long. Harris, Johnson City, Tenn.
CIRCLE 396 ON READER SERVICE CARD



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The new 747 whiteprinter now offers 2 work-saving accessories.

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CIRCLE 118 ON READER SERVICE CARD

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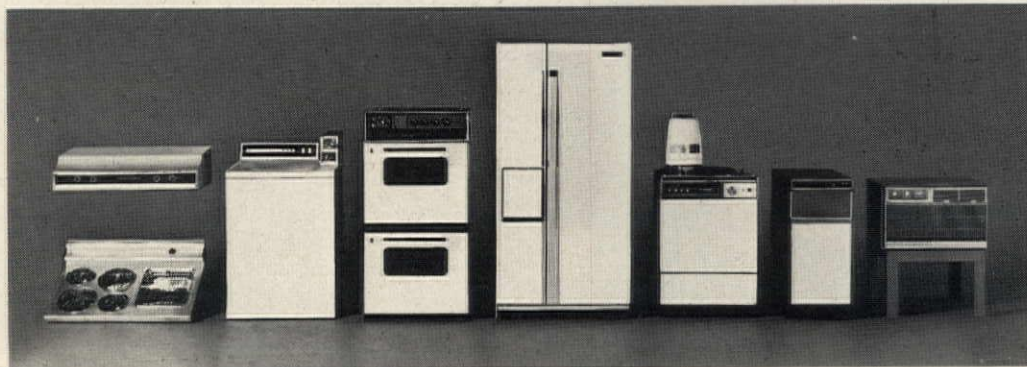
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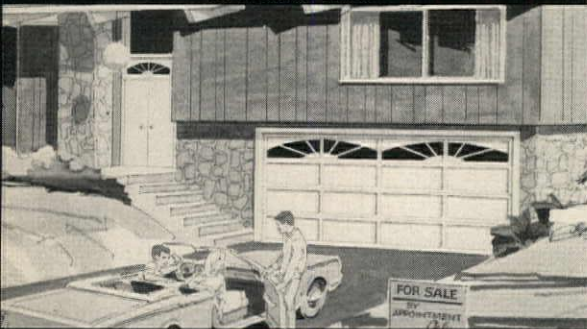


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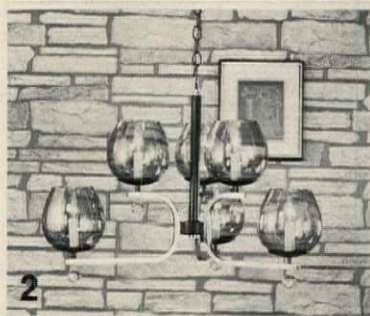
CRAWFORD

**Crawford Door Company, 4270
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division of The Celotex Corp.



1



2



3



4

New Products lighting

1 Prismatic panels of hand-cut and hand-polished imported lead crystal hang in six (or three) tiers from a polished brass frame. Larger fixture (shown) is 18" wide, 21" long, and holds ten lights. Smaller one (not shown) is 12" wide, 14" long, and holds four lights. E-Lite, New York City.

CIRCLE 397 ON READER SERVICE CARD

2 Smoked glass bubbles surround candle-like lamps in a contemporary chandelier; crystal balls are set beneath the bubbles. Three J-shaped curved arms around the slender black center column provide a two-tiered look. Diameter is 29", overall height is 18" and the fixture suspends to 36". Del-Val, Willow Grove, Pa.

CIRCLE 398 ON READER SERVICE CARD

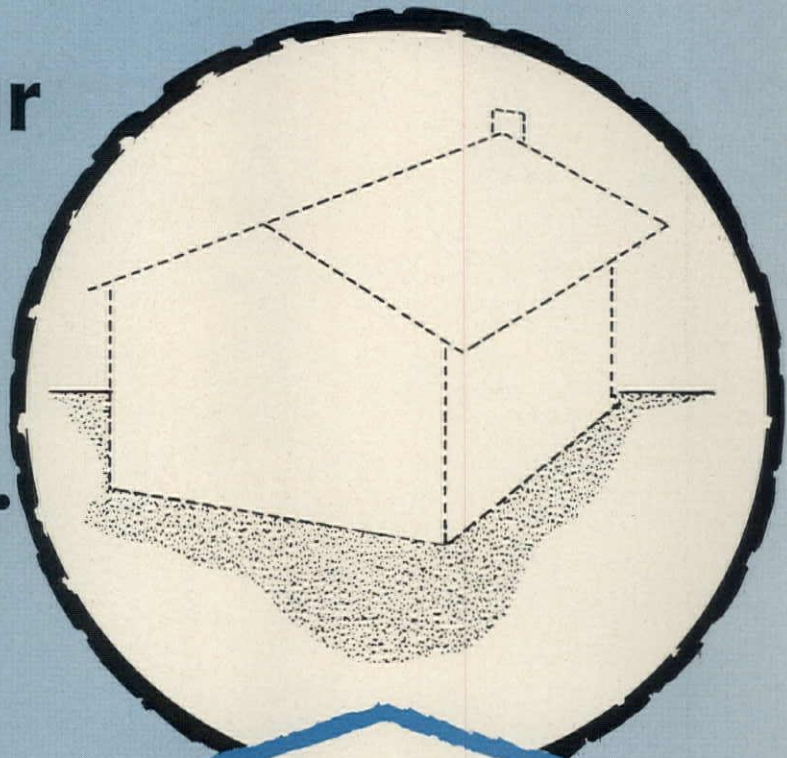
3 Filigreed chimneys shade five flame-like lamps set in candelabra bases. Part of "Bordeaux" traditional line, chandelier has sculptured spindle, slender arms and decorative bobèches. Lightcraft of California, Cincinnati, Ohio.

CIRCLE 399 ON READER SERVICE CARD

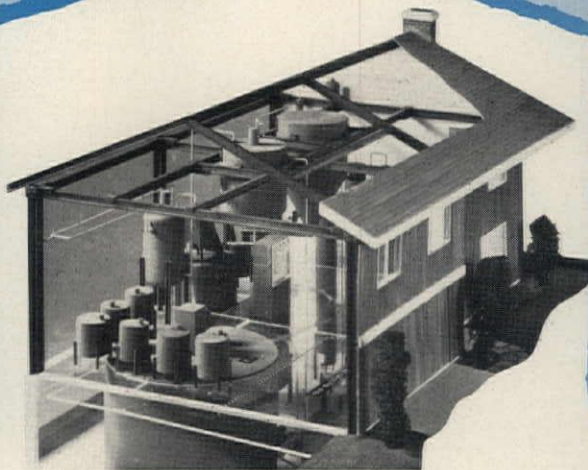
4 Landscape light is a rugged die-cast aluminum fixture that is light in weight, gasketed to keep out the weather and tamperproof. "Fieldlite" has an unbreakable "Lexan" (General Electric's polycarbonate) diffuser, measures 6" x 6", takes a 75-W lamp, and fits a 1/2" pipe. Prescolite, San Leandro, Calif.

CIRCLE 300 ON READER SERVICE CARD

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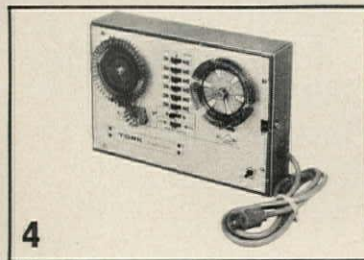
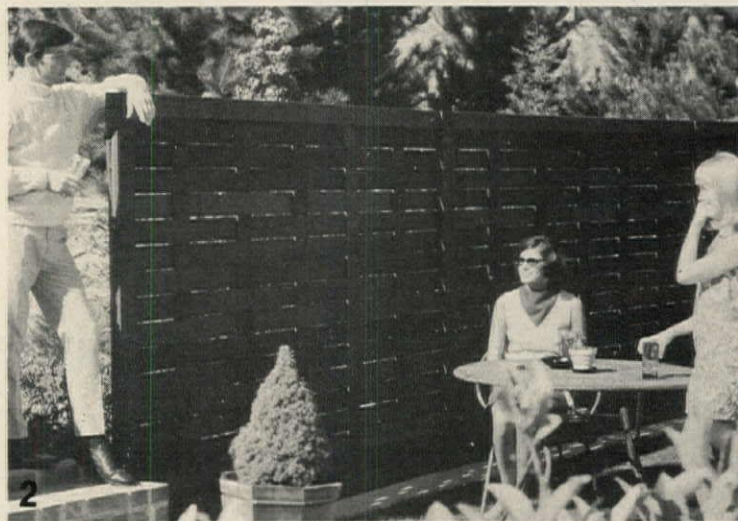
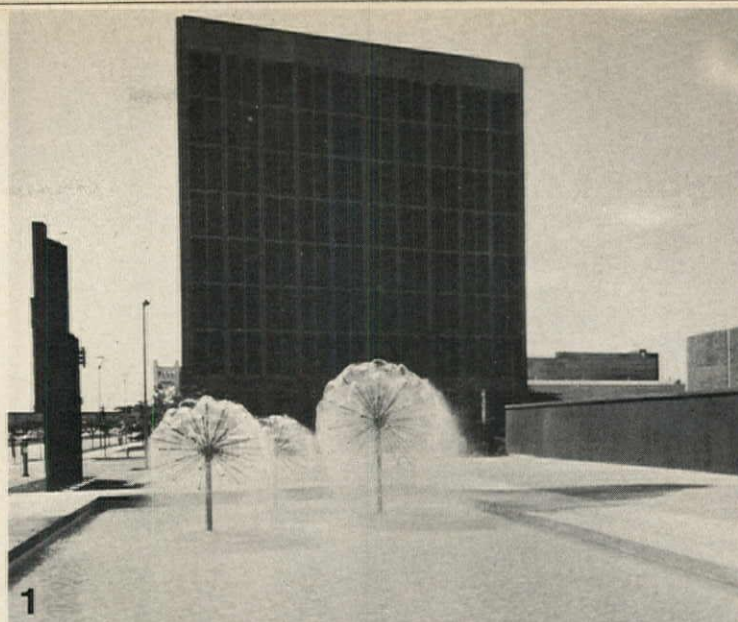
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- Two years of Forecast for only \$60. Plus bonus offer.

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 ADDRESS _____
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SEND TO: GARLINGHOUSE COMPANY, INC.
 Box 299, Topeka, Kansas 66601



New! 1972 **outdoor living**

1 **Round fountains** produce a fine mist, look like shiny dandelions. Australian architect Robert Woodward's "Sphere-de-Fleur" displays can be ordered through manufacturer. Roman Fountains, Albuquerque, N.M.
 CIRCLE 298 ON READER SERVICE CARD

2 **Fencing** is top grade California redwood, cut in 3/8" slats and machine woven. Top and bottom rails of grooved 2x4s hold weave in place; panels are nailed to 4x4 posts sunk every eight ft.; joints are covered by 1x4s. "Wood Weave" panels are 8' long and 3', 4', 5' or 6' high, come with matching single walk gates and pairs of drive gates. American Forest Products, San Francisco.
 CIRCLE 299 ON READER SERVICE CARD

3 **Nonskid decking** is exterior plywood, made with waterproof glue. A layer of abrasive particles between two coats of polymeric resins won't hurt bare feet, but will keep them from slipping. Panels, 1/8", 5/8", or 3/4" thick, come in blue, green, gray and terra cotta. Weyerhaeuser, Tacoma, Wash.
 CIRCLE 297 ON READER SERVICE CARD

4 **Sprinkler control** repeats a two-week cycle, can be set for particular days—or nights—of the week for as little as 2 1/2 min. or up to 32 1/2 min. for each of six zones covered every two hours. Tork Time Controls, Mt. Vernon, N.Y.
 CIRCLE 296 ON READER SERVICE CARD

"This is a tough business! Nobody can make it easy. But Scholz can make it easier."



Scholz Homes' new Seville Model, named "La Hacienda Grande" by Tom Swift & Associates. It's been attracting 500 prospects per weekend since October.

Tom Swift knows what he's talking about.

He ought to! He's been a successful builder of luxury-priced homes in Indianapolis, Indiana for more than 13 years now.

And last year was one of the more important ones. Because that's when he joined Scholz Homes' Builder Program.

"It hasn't made my job easy, but it sure has made it easier." That's what Tom says.

And no wonder!

When he builds a Scholz Home he knows he is offering professional architectural design with proven consumer appeal.

When he builds a Scholz Home, he builds it with less labor for less money.

And in less time. From 45 to 60 days, compared to the normal 90 to 100 days needed for conventional building.

He already has 12 Scholz Luxury Homes completed or in work. And he plans to put up a minimum of 35 more by next year. His first model openings have been attracting an average of 500 prospects per weekend—every weekend—since October.

Tom calls Scholz "the way of the future for residential construction."

What we've helped Tom Swift and Associates do, we can help you do, too.

Call our Vice President, O. A. Thomas, Jr., direct at Scholz (419) 531-9997 or send him the coupon at right.

In return he'll send you information on our Builder Program. It'll show you how you can make your business easier.

Not easy. Easier.



Mr. O. A. Thomas, Jr., V.P.
Scholz Homes, Inc.
P. O. Box 3355
Toledo, Ohio 43607

HH-172

Tell me how to make it easier. Send free information on Scholz Homes' Builder Program.

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TITLE _____

COMPANY NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

SCHOLZ HOMES, INC.

A division of  Inland Steel Urban Development Corporation

CIRCLE 197 ON READER SERVICE CARD

H&H JANUARY 1972 197

LITERATURE

Insulation. The NAHB Research Foundation Inc. has published a 48-page manual on thermal insulation. "Insulation Manual—Homes Apartments" sponsored by manufacturers and the National Mineral Wool Insulation Assn. Inc., is divided into two parts: seven sections of explanatory text and six sections of reference data. The first seven sections include "Insulation Benefits for Builders—Actual and Potential," "Effective Locations for Insulation," "Amount of Insulation," "Blown Attic Insulation," "Ventilation—Attics, Roof/Ceilings, and Crawl Spaces" and "Fact Versus Fiction about Insulation". The reference half defines common thermal terms; lists thermal resistance values for structural and finish materials, air films and air spaces; presents weather and operating cost data for 561 localities throughout the U.S.; provides worksheets for new and simplified methods for calculating heating and cooling loads and operating costs. Foreword to the manual is by Andrew S. Place, president of NAHB Research Foundation Inc., who recently stated that it is possible to insulate a house well, so no air conditioning unit on the market is *small* enough to carry so light a load. Copies of the manual are avail-

able free to members of the NAHB from the NAHB Research Foundation, 627 Southern Lane, P.O. Box 1627, Rockville, Md. 20850 and to nonmembers for \$4.00 from the National Mineral Wool Insulation Assn. Inc., 211 E. 51st St., New York, N.Y. 10022.

Exterior stains. Two exterior stains—semi-transparent and solid—are described and pictured in a color brochure. Twenty-four semi-transparent and 25 full-hiding solid color chips are included as well as discussions of the advantages of each. Sherwin-Williams, Cleveland, Ohio. CIRCLE 405 ON READER SERVICE CARD

Glass-ceramic wall facing. Four technical bulletins describe specific applications for "Pyram" architectural facing. The six-page, illustrated publications report on use of the glass-ceramic material in two different curtain wall systems, as fascia or spandrels, and as panels for elevator cabs. Included are detailed drawings of installation techniques and listings of physical properties and other design data. Corning, Corning, N.Y. CIRCLE 401 ON READER SERVICE CARD

Concrete. This report lists re-

search projects on plain and reinforced concrete in progress throughout the world. The projects are listed by descriptive title and, where known, are identified as: active (A), inactive (I), or proposed (P). A subject index is provided to facilitate the finding of specific projects. The 8½" x 11" paperback book has 155 pages and costs \$10. Send check or money order to American Concrete Institute, P.O. Box 4754, Redford Station, 22400 West 7 Mile Rd., Detroit, Mich. 48219.

Lumber. Seven catalogs have been revised to include complete data related to lumber sizes and grades. The 1972 four-color edition of the "Western Woods Technical Library" covers 11 softwood species and lists all the latest information for using lumber in construction. "Product Use Manual"—one of the booklets—is a basic technical guide for choosing the right lumber for light framing and estimating needed quantities of siding and paneling. New working stresses, more complete size data and additional grade selector information have been included. Other books in the library are entitled: "Stock Doors, Windows, Mouldings," "Sound Control," "Fencing, Decking,

Storage," "Wood Siding," "Interior Paneling" and "Concrete Forms." Western Wood Products, Portland, Ore.

CIRCLE 402 ON READER SERVICE CARD

Metal trim. A folder describes metal trim products utilized in various ventilation and drip applications for buildings and homes. Included is information on specific usage, materials and dimensions for 12 types of ventilation and expansion screed, base grounds and drip moulds. Schematic drawings accompany each type of product. Porter, Pittsburgh, Pa.

CIRCLE 403 ON READER SERVICE CARD

Sidings. A brochure featuring redwood's use in apartments, offices, schools, homes and other buildings also lists complete technical information with application instructions and finishing recommendations. "Guardian" medium density overlaid sidings are also shown. Simpson, Seattle, Wash.

CIRCLE 404 ON READER SERVICE CARD

Ceramic tiles. A full color brochure describes and shows the colors and patterns of 6"x6", 4¼"x4¼" and 4"x8" silk screen decorated tiles. The publication includes photographs

TO PAGE 200

It's like money on a silver platter.

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Then add the fact that we can provide a computerized feasibility analysis of your project, and that we can process a project anywhere in the United States.

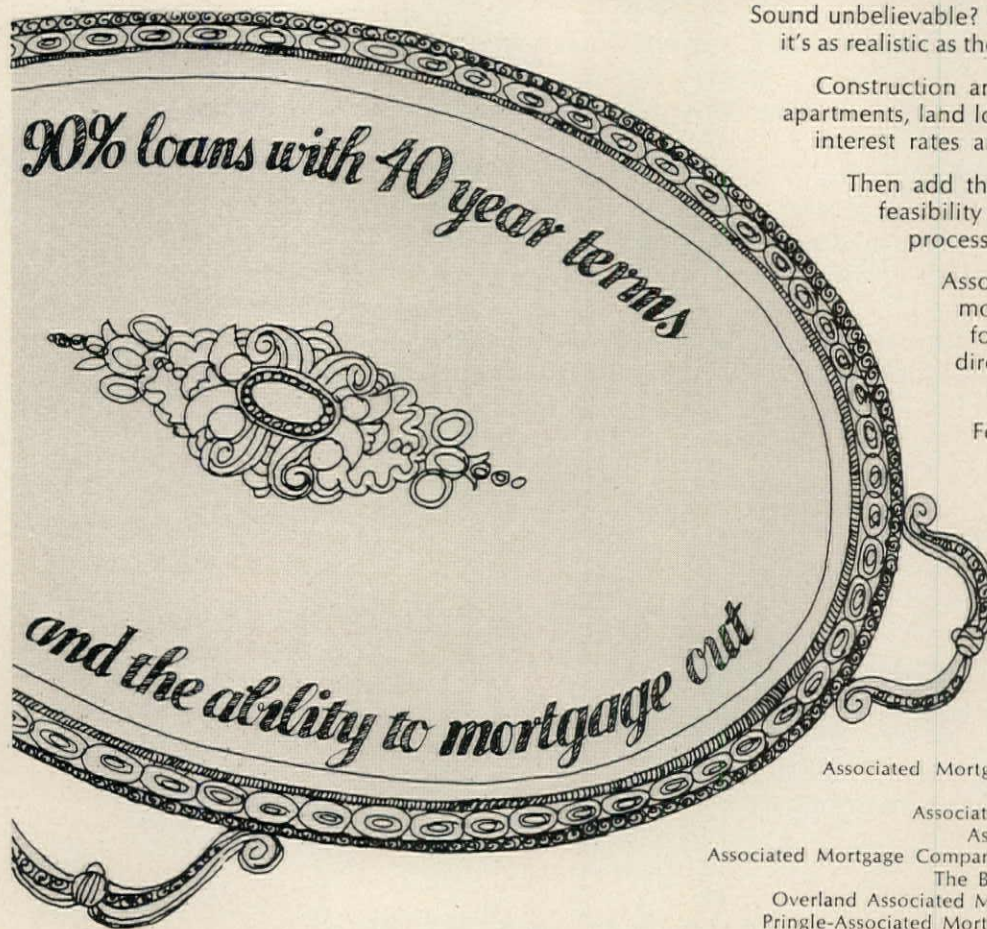
Associated Mortgage is one of the nation's largest mortgage bankers. We maintain a servicing portfolio in excess of \$1.6 billion. And we have direct contact with over 300 investors throughout the country.

For more information on how you can realize higher profits (even if you already have an FHA feasibility letter or commitment), call or write us today.

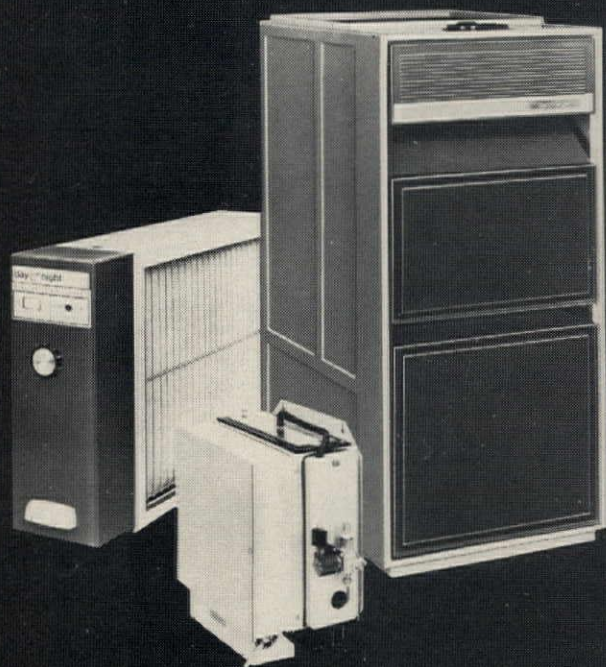
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The Berens Companies, Washington, D.C. (202) 333-8600
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day & night Futura/5 furnaces let you turn extra profits with an ordinary screwdriver.



DAY & NIGHT COMPANY/La Puente, California • Collierville, Tennessee

Granted, Futura's primary job is circulating fresh, ventilated warmth throughout the home. And, its shorter size (as low as 46") makes it a better fit in basements, closets and utility rooms. Which, in turn, makes it easier to sell, install and service.

But best of all, Day & Night's Futura forced-air furnace takes the extra work out of accessory add-ons. The secret is our Printed Circuit Control Center. A central terminal board for all wiring connections. No more intricate hookups to contend with. Accessories can be connected with an ordinary screwdriver.

Start with a Day & Night Dustrap electronic air cleaner. Available in three popular sizes, it traps airborne dust and

other pollutants conventional furnace filters normally miss. Next attach a Day & Night Humidifier for a balanced moisture level all winter long.

And finally, add Day & Night air-conditioning. That's all it takes to complete our year 'round comfort package.

Conclusion: if you're looking for a forced-air furnace with more built-in advantages — call your Day & Night Distributor. He's got the furnace with a profitable future. Day & Night's Futura/5.

day & night *The people of warmth.
And cool. And comfort.*

Be sure to see Day & Night's Booth #3606 at the NAHB's Annual Show.

of complete wall, panel area and other accent treatments in living rooms, dens, children's and adult's bedrooms and entrance halls. Send 25¢ for "Villeroy & Boch Decorated Wall Tiles" to Amsterdam Corp., 41 E. 42nd St., New York, N.Y. 10017.

Athletic track surface. Now available is a full color brochure describing the properties and advantages of a formulation of rubber, vermiculite and asphalt to be used for both indoor and outdoor tracks, athletic jump aprons, field house floors, golf cart paths and walkways. California Products, Cambridge, Mass.

CIRCLE 406 ON READER SERVICE CARD

Window shades. "Window Shade Parade" covers 22 whys and hows of window decoration. Full color photographs illustrate each point made. Instructions included are how to analyze a window and its particular problems, how to measure for shades and what brackets to use. Send 75¢ to Breneman Inc., Dept. HH, 1133 Sycamore St., Cincinnati, Ohio 45210.

Light fixtures. A group of novelty lights, featuring colorful hats and opal spheres with do-it-yourself

faces called "Mad Hatters" and children's room units based on translucent plastic animals are featured in "Party". Also included in the brochure are chandeliers, mini-chandeliers, drops, swags, ceiling and wall brackets in chrome, polished brass and wet-look colors and a series of more traditional fixtures. Halo Lighting, Rosemont, Ill.

CIRCLE 407 ON READER SERVICE CARD

Water heaters. "Commercial Gas-fired Water Heaters" was written to assist building owners, engineers, wholesalers and contractors in the proper selection and sizing of volume water heaters for apartments, commercial and institutional buildings, food service, swimming pools, commercial and self-service laundries and various industrial plant and process applications. Included in the manual are complete dimensional data, wiring and piping diagrams and recovery rates based on varying incoming water temperatures. Hydrotherm Inc., Northvale, N.J.

CIRCLE 408 ON READER SERVICE CARD

Ceramic tile. The entire ceramic tile product line is shown in a 1972 color catalog. Products included are glazed tile, crystalline, ceramic mosaics, Murray quarry tile, silk-

screened tile and ceramic bathroom accessories. Dimensions and trim are listed. Architectural specifications, color coordination, mural and swimming pool design services are described. American Olean, Lansdale, Pa.

CIRCLE 409 ON READER SERVICE CARD

Walls. A new architectural interior-exterior metal wall system with concealed fasteners is described and illustrated in a color brochure. Marathon Metallic Building, Houston, Tex.

CIRCLE 410 ON READER SERVICE CARD

Mailboxes. A two-color brochure describing a line of vertical style mailboxes is available. It illustrates the mailboxes and matching painted magazine racks and directories. Specifications and dimensions are included. Auth, Deer Park, N.Y.

CIRCLE 411 ON READER SERVICE CARD

Fans. Ventilating fans of all types for factories, stores, shops, plants, warehouses, offices and homes are featured. Described are exhaust, airspeed, ceiling and vestibule fans in all sizes, with and without shutters. Hunter, Memphis, Tenn.

CIRCLE 412 ON READER SERVICE CARD

Carpeting. A full color illustrated

brochure outlines styles and man-made fibers of contract carpeting. Available are shags, plushes, bi-level scrolls and commercial-quality level loops. Fibers include polyester, acrylic, modacrylic, continuous filament nylon and staple nylon. Certain-teed, Valley Forge, Pa.

CIRCLE 413 ON READER SERVICE CARD

Windows. A new catalog shows installation details of four types of construction for nine types of windows and patio doors: frame/drywall, frame with drywall and brick veneer, 12-inch masonry and brick veneer or 8-inch masonry. Opening sizes and other dimensions are given for each of hundreds of windows mentioned. Marvin, Warroad, Minn.

CIRCLE 414 ON READER SERVICE CARD

Wiring. A color catalog features many new products and innovations for specification grade wiring devices. The booklet describes switches, receptacles, combination devices, weatherproof power outlets and wallplates. Slater, Glen Cove, N.Y.

CIRCLE 415 ON READER SERVICE CARD

Plywood. "Plywood Construction Systems" has been updated to in-

TO PAGE 202

SAVE TIME and MONEY

on costly drainage problems!

use  **ADS** Corrugated Plastic Drainage Tubing and Fittings!

A.D.S. has developed a new type corrugated plastic tubing for use in construction. Perforated tubing is available for foundation drainage, another type with holes is also available for septic tank leach beds. Non perforated tubing is available for downspout runoff. A.D.S. tubing is light weight, strong and comes in coils for easy installation. Approved by the F.H.A. The tubing comes in 4", 5", 6", 8", 10" and 12" diameters. A full selection of fittings is available.

A.D.S. has 10 manufacturing plants and sales offices throughout the United States.

 **ADS** advanced drainage systems, inc.

1880 MacKenzie Drive
Columbus, Ohio 43220 (614) 457-3051

See us at the NAHB Home Builders Show.
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A.D.S. FEATURES THESE ADVANTAGES

Lightweight — easy to install • Strong — won't break • Can't Misalign — continuous lengths • Unaffected by freezing • Install in any season • Unrestricted flow • Complete selection of fittings • FHA Approved 619a



Booth No. 2267



**Here's the one that guns down
sub-floor costs — safely!**

New Weldwood®
Sub-Floor Adhesive
is Approved by
HUD-FHA, ICBO,
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NON-FLAMMABLE!

Try to find another adhesive that can make that statement!

Weldwood Sub-Floor and Construction Adhesive gives you all the advantages of glued-floor systems: you slash labor and material costs and actually have squeakless floors, with fewer call-backs.

And with Weldwood there's a bonus: it is non-flammable, with no explosive fumes.

For factory fabrication, Weldwood is compatible with an entire multi-outlet pump system, and is available in 5 and 55 gallon pails and drums. For on-site use, there is a quart cartridge.

And Weldwood's new Sub-Floor and Construction Adhesive really does the job! The Product Fabrication Service found that it exceeded all shear tests by at least 250%, and went way beyond durability tests requirements. Just look at the certification seal! And at that "FHA Approved/A.P.A. Approved"!

You'll approve, too. Of its 30-minute open time, the easy way it cleans up with water, and guns at all temperatures. Most of all, you'll approve of the way new, non-flammable Weldwood Sub-Floor and Construction Adhesive saves you both time and money.

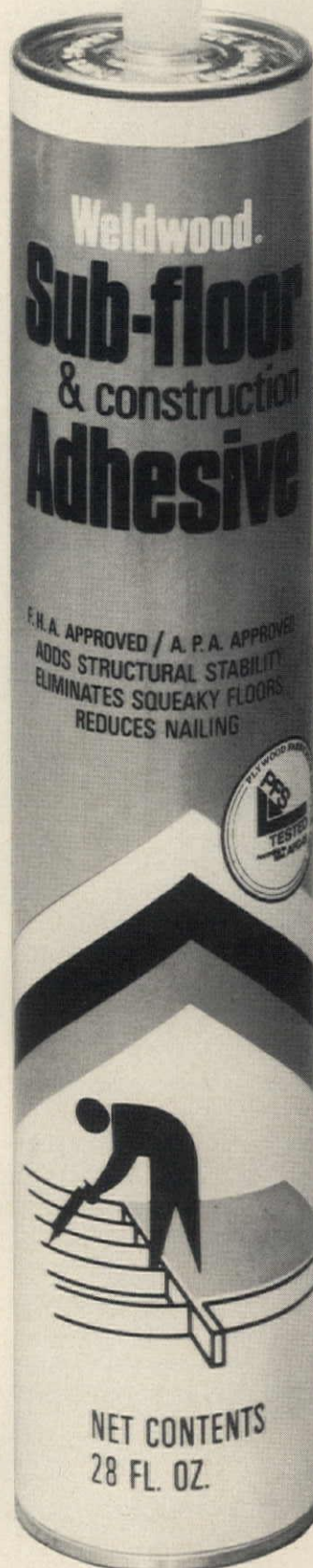
Weldwood

PACKAGED PRODUCTS

U.S. Plywood-Champion Papers Inc.
2305 Superior Avenue
Kalamazoo, Michigan 49003



Weldwood's newly packaged family of adhesives includes Weldwood Panel & Construction Adhesive (also approved by HUD-FHA, ICBO, and APA) and Big Stick Construction Adhesive.



clude current plywood performance information for designing and constructing commercial and industrial buildings. Special sections include: roof systems—the brochure presents photographs and information on spans, preframed and stressed skin panels, curved panel and folded plate roofs, open web joists and box beams; wall construction—with textured plywood siding, sheathing, shear walls, paneling, backing and lining described; and floor construction—with basic information on subflooring, underlayment, glued floors and heavy duty and special floor systems. Also discussed in the booklet are building requirements, treated plywood and sound control construction. American Plywood, Tacoma, Wash.

CIRCLE 416 ON READER SERVICE CARD

Piping systems. Non-corrosive, pre-fabricated insulated piping systems for underground distribution of chilled and low temperature hot water are described and shown in this folder. Fiberglass reinforced plastic pressure carrier pipe, polyurethane foam insulation and PVC plastic outer jacket are detailed in a cutaway diagram. Charts show heat gain and loss comparisons, thermal stress and safe bearing loads. Dimen-

sions, suggested specifications and recommended field installation procedures are also provided. Ric-Wil, Brecksville, Ohio.

CIRCLE 417 ON READER SERVICE CARD

Paneling. Pre-cut bath recess kits for decorating the bathroom are described and pictured in a full color folder. The kits feature moisture resistant, melamine-coated panels and mouldings. AFCO, Houston, Tex.

CIRCLE 418 ON READER SERVICE CARD

Pneumatic tubes. Tube systems for interconnecting offices, departments and buildings are discussed in this brochure. Photographs and illustrations as well as schematic layouts punctuate written descriptions of several different types of carriers and terminals. Powers Regulator, Skokie, Ill.

CIRCLE 419 ON READER SERVICE CARD

Recirculating toilets. A 16-page color brochure describes recirculating toilets and accessory equipment. New products introduced include four new models of the toilet, a mobile clean-up system and a complete line of pump equipment and accessory items. Monogram Industries, Los Angeles.

CIRCLE 420 ON READER SERVICE CARD

Acrylic film. An eight-page bulletin describing the lamination of colored acrylic film to wood products such as siding, doors, trim soffits, fascia and accent panels includes data on the physical and performance properties of the film and techniques for the lamination. In addition, the booklet provides information on rotogravure printing and use of filmpaper overlays in prefinishing lumber and millwork. Rohm & Haas, Philadelphia, Pa.

CIRCLE 421 ON READER SERVICE CARD

Remote valve controls. A manual on remote control equipment for valves helps in the design selection and installation of valve systems and all types of equipment actuated by rotary shafts. Typical applications are included. Stow Manufacturing, Binghamton, N.Y.

CIRCLE 422 ON READER SERVICE CARD

Skylights. One-piece molded fiberglass single and double dome skylights are described. The fixtures are shatterproof, diffuse light evenly in all directions and have 72% light transmission. Williams Bermuda, Alhambra, Calif.

CIRCLE 423 ON READER SERVICE CARD

Fireplaces. "Elegant Fireplaces For Fun & Flames" shows a full line of

contemporary and traditional fireplaces and fireplace/heaters in four-color room setting photos. Full descriptions, installation characteristics and dimensions for each of seven models are listed. Preway, Wisconsin Rapids, Wis.

CIRCLE 424 ON READER SERVICE CARD

Redwood houses. A selection of residences and floor plans are shown in the new four-color booklet, "Redwood Homes". Houses shown were chosen for excellence of design and siting. California Redwood Assn., San Francisco, Calif.

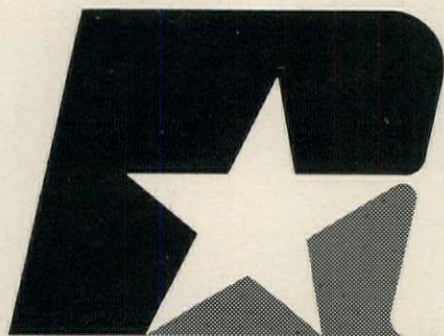
CIRCLE 425 ON READER SERVICE CARD

Steel floor joists. Outlining and illustrating the features of steel floor joists, brochure also gives spacing and maximum allowable span tables for both simple-span and two-span continuous installations. Photos showing the complete installation sequence are included. Armco Steel, Middletown, Ohio.

CIRCLE 426 ON READER SERVICE CARD

Tool safety. The proper use of striking tools—hammers, axes, etc.—and struck tools—chisels, punches, etc.—is graphically illustrated in a 32-page booklet. Cartoon characters help explain proper and improper

TO PAGE 206



REPUBLIC HOUSING CORPORATION

The new name for what we've grown to be.

Republic Housing Corporation is a brand new name that stands for ten years of progress in the housing industry. In the form of Republic Gypsum Company, we have grown from a single-product family enterprise into a diversified, publicly-held company serving markets in 20 states.

Today, in addition to gypsum wallboard, we manufacture and market three full lines of mobile homes, as well as various lumber products. We started with one plant; we now have five and a small railroad. And we haven't stopped growing.

Our new name does a better job of showing our scope and thrust within the housing industry. But we're not abandoning our heritage. The name Republic Gypsum Company will be retained for our gypsum operations; our mobile homes subsidiary will continue as Republic Homes, Inc., and our lumber interests have been consolidated into Republic Lumber Company.

Republic Housing Corporation — a new name with a great future . . . and a solid past.

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Today's Americans want a world that's clean and pollution free. They're creating a heavy demand for natural gas. Because gas is clean-burning energy. In fact, there is no cleaner burning fuel. That's why gas is such a great way to heat a house, and cool it, too.

While in some areas there are restrictions in new homes, we want you to know the gas industry is working very hard to meet the growing demand for clean gas energy. We're sinking

deeper wells than ever before. Drilling under the ocean bed. Piping in gas from Canada. Importing LNG (liquefied natural gas) from overseas. Even researching to turn things like coal and oil into clean gas energy.

It's a lot of work, and it's expensive. And it's going to mean somewhat higher prices in the future. But all forms of energy will be going up. So gas will continue to be the most economical for your customers.

Gas, clean energy for today and tomorrow

AMERICAN GAS ASSOCIATION

"Or equal."

When you specify nylon carpet fiber, ANSO® probably isn't the first name that pops into your mind. Because you think it's just an "or equal."

True, ANSO is equal to other commercial nylon carpet fibers in many respects.

ANSO is a type 6 continuous filament textured nylon offering excellent color retention and fade resistance.

ANSO is opaque to hide dirt.

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ANSO has a Taber Abrasion rating of 4 or better (no sign of pilling or fuzzing).

But there's one big difference between ANSO and most other nylon carpet fibers. All carpets made with ANSO nylon are guaranteed* for 5 years.

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*Meeting Allied Chemical Corporation Specifications.



Now... 'built-in' fireplaces from Martin.

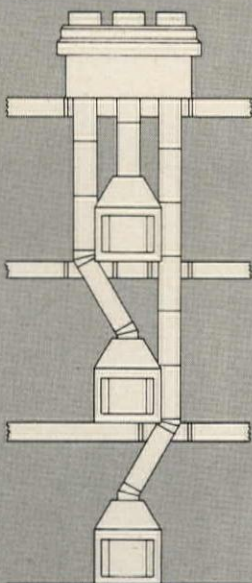
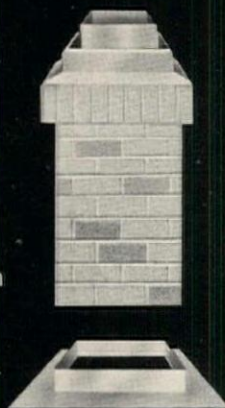
Because Martin Fireplaces are designed and engineered for ZERO CLEARANCE, they can be built in anywhere. On any floor. Against any wall, combustible or not!

Installation is quick and easy. After the unit and flue are assembled, there's nothing more to do but trim out the fireplace to suit individual tastes.

Since there's no need for a special foundation or masonry chimney, a Martin "Build-In-Anywhere" Fireplace can be installed for a great deal less than an ordinary masonry fireplace. Which makes a Martin Fireplace a great deal all around!

Discover for yourself the economy, convenience, comfort, and charm of a "Build-In-Anywhere" wood burning fireplace by Martin.

Martin offers a complete line of quality fireplaces, such as: Free-Standing, Built-In, and Wall-Hung in gas, electric, and wood burning models.



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2. Tapered shape for minimum corner installation
3. No special starter sections required as other manufactures. Simplifies stocking.
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5. Round contemporary or simulated brick roof-top terminations.
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7. Designed for multi-story installation where units may be stacked directly above one another.
8. UL listed.
9. Another builder "Profit Product" from Martin.

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NAHB Show.

FIREPLACE PRODUCTS DIV.
MARTIN STAMPING & STOVE
P.O. BOX 1527
HUNTSVILLE, ALA. 35807

LITERATURE FROM PAGE 202

uses. Full descriptions and recommendations for replacement are listed for each tool discussed. Service Tools, New York City.

CIRCLE 427 ON READER SERVICE CARD

Heat control valves. A recently published engineering and specification leaflet describes a line of non-electric thermostatic heating controls and related valves which can be used on either hot water or low pressure steam systems. Information includes covering design, specifications, dimensions and capacities. Ammark, Fair Lawn, N.J.

CIRCLE 428 ON READER SERVICE CARD

Concrete. Uniformity of concrete is discussed in "Greater Uniformity . . . A Concrete Benefit with Pozzoloth". Included are performance data for seven projects and a graph comparing regular concrete with concrete employing "Pozzoloth" admixture. Master Builders, Cleveland, Ohio.

CIRCLE 429 ON READER SERVICE CARD

Lift trucks. A bulletin, "Computer Rated Lift Trucks," discusses cushion-tired engine-powered vehicles in 3,500 to 5,500 lb. capacities and the pollution controlled engine. It also lists systems, components, dimensions and masts. Allis-Chalmers, Matteson, Ill.

CIRCLE 430 ON READER SERVICE CARD

Water coolers. The full color 1972 "Oasis" water cooler catalog is now available. Included are over 46 models of designer/decorator, ultra-compact, high capacity and special industrial units; plus residential and bottled water models; and a full line of accessories. Ebco, Columbus, Ohio.

CIRCLE 431 ON READER SERVICE CARD

Custom form liner. Brochure describes flexibility in design and texture of concrete surfaces. It explains how contractors can select different types and materials to suit particular job and design requirements. Symons, Des Plaines, Ill.

CIRCLE 432 ON READER SERVICE CARD

Lumber & plywood conservation. The "Manual of Lumber- and Ply-wood-saving Techniques for Residential Light-frame Construction" is based on research conducted for HUD. It is a compendium of ways to save on framing lumber, sheathing, siding, etc. by preplanning and using all materials at maximum efficiency. Incorporating extensive changes and additions necessary due to the revisions to the American Softwood Lumber Standard, it is intended for use by code officials, building inspectors, builders, subcontractors, etc. The 88-page manual is available for \$3.50 from NAHB Research Foundation Inc., Box 1627, Rockville, Md. 20850.

The Klincher® enables you to handle truss jobs that are impossible with other systems!

Control your own truss business with Panel-Clip's Klincher truss press and Jig. This is the lowest investment system on the market today and you can take it anywhere.

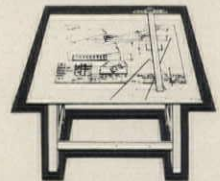
This is Panel-Clip's Klincher. It installs 510 nails a minute, which means it's **fast**. The Klincher and Jig can be leased for just \$40.26 per month or purchased for \$1,184.00 which means it's also economical.



If you need trusses today, not tomorrow, Panel-Clip's Klincher is your answer. A heavy duty unit, the Klincher can be moved from job to job or set up in a building for stationary use. Operating on a 115 volt house current, the Klincher eliminates hand nailing, rollers, glue and the need to turn the truss over when nailing. If you're a growing truss fabricator, you'll appreciate Maximum Speed, Flexibility and Profit with a minimum investment.



These high strength, hardened zinc coated 18 Gauge steel clips are accepted by FHA and other building codes. It can be installed by hand or with the Klincher.



FREE ENGINEERING AND TRUSS DESIGN SERVICE

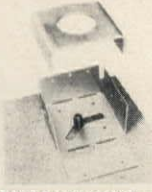
You can call on our design engineering staff to assist you in planning without charge. Panel-Clip's extensive design library is available to you.

Panel-Clip's Special Clips for Special Jobs



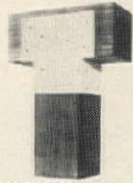
ANCHOR CLIPS!

Anchor Clips are the fast, efficient way to anchor wood framing to masonry or concrete. They eliminate the time consuming, difficult task of locating and drilling holes for anchor bolts. They are made of heavy 16 Gauge zinc coated steel. Shipped flat, Anchor Clips can be quickly shaped to the application desired. The upper arms wrap around plates up to 2" x 8" in size, while the lower arms engage the masonry.



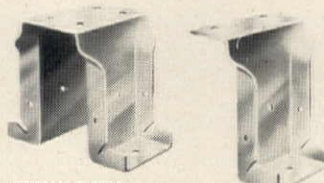
POST BASE CLIPS!

Adjustable two-piece clip goes in fast, positions 4 x 4 posts even when bolts are out of line. Base cover is made of heavy 16 Gauge stamped steel, zinc plated with exclusive "gold" zinc dichromate finish which resists weathering and holds paint better.



BEAM CLIPS!

Designed for good appearance and structural strength. These Beam Clips are also strong enough to be used as a beam splice plate.



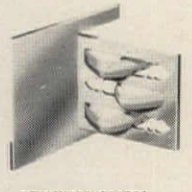
PURLIN CLIPS!

Panel-Clip's new Purlin Clips are designed to save you time and money by speeding up framing, layout and installation. Both the Saddle and Single Purlin Clips are manufactured from 18 Gauge Hot Dip Galvanized prime steel.



TOP PLATE TIE!

The approved way to save measuring and cutting time. Panel-Clip's Top Plate Tie beats the conventional fly-by and hold-back method in every way. It requires less figuring and eliminates cutting. It holds over a half ton as opposed to 214 lbs. with 16 penny nails. Made out of hardened zinc coated 18 Gauge steel, 4 H size Truss Clips are used.



DRY WALL CLIPS!

Panel-Clip's new Dry Wall Clips were designed to save you time and money by eliminating any need for installation of back-up framing. Overall framing time is reduced since regular 16" spacing of studs is not interrupted. Insulation between the studs left unbroken and nailing of dry wall or paneling at back-up locations is eliminated. Dry Wall Clips are manufactured from 18 Gauge zinc coated hardened steel.

For samples and literature, write:



THE PANEL CLIP CO.

P.O. Box 423 • Farmington, Michigan 48024 • (313) 474-0433

ADVERTISERS INDEX

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- A Architectural File (green)
- I Industrial Construction File (blue)
- L Light Construction File (yellow)
- D Interior Design File (black)

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)

A

A-L	Advanced Drainage Systems	200
	Alliance Mfg. Co.	203
A-D	Allied Chemical	205
	Alsons Products Corp.	170
	American Gas Assn.	143, 204
A	American Olean Tile	54
A-I-L	American Plywood Assn.	101-103
	Amsterdam Corp.	40, 41
A-L	Andersen Corp.	31-34
	Associated Mortgage Co.	198
	Athens Stove Works, Inc.	191
A-I-L	Automated Building Components, Inc.	190
	AWT Systems Inc. (Hercules, Inc.)	195
A-L	Azrock Flooring Products	Cov. II

B

	B.F. Goodrich Chemical Co.	96
	Berger Instruments	160
A-D	Berven of California	99
A-L	Bird & Son, Inc.	171
	Blu-Ray, Inc.	184
	Boise Cascade Corp.	42, 43
	Broan Mfg. Co.	147

C

A-L	Cabot, Inc., Samuel	167
	Cameron Brown Co.	188S3
	Canadian Dept. of Industry, Trade & Commerce	48, 49
	Capital Industries, Inc.	188E1, N1
A-L	Caradco Div. (Scovill Mfg. Co.)	82, 83
	Celanese Plastics Co.	179
A	Celotex Corp.	24, 25
A-I-L	Certain-tyed Products Corp.	183
	Chim-A-Lator Co.	182
	Citizens and Southern National Bank, The	188S1
	Colonial Products Co.	87-90
	Combustion Engineering	221
A	Compositte Shower Pan	164
A-L-D	Congoleum Industries, Inc.	38, 39
	Container Craft of Marblehead	172
A-I	Crawford Door Co.	194
	Cromaglass Corp.	188S2

D

	Day & Night Mfg. Co.	199
	Delaware Management Co., Inc.	158
A	Del-Mar (Div. of U.S. Plywood)	59
A-L-D	Delta Faucet Co.	91
	Duo-Fast Fastner Corp.	58
A-I-L-D	Duvinage Corp.	28
	Dyna Mfg. Co.	188W4

E

	E.A. Nord Sales Co.	50, 51
	Eastern Brick	188N2
	Edison Electric Institute	70
A-I	Emerson Electric Co. (Chromalox Comfort Conditioning Div.)	85
	Emerson Electric Co. (Electro-Air Div.)	61

F

A-L-D	F.H. Lawson Co., The	57
A-L-D	Formica Corp.	20, 21
	Filtex Div. (Natter Mfg. Corp.)	177
	Ford Motor Co. (Truck Div.)	86
	Form, Inc.	174

G

	Game Time, Inc.	70
	Garlinghouse Co., Inc.	196
	Giles & Kendall Co.	162
A-L	General Electric Co.	16, 17
	Georgia Dept. of Industry and Trade	217
A-I-L-D	Georgia-Pacific Corp.	71, 146
	Gerber Plumbing Fixtures Corp.	161
A	Grant Pulley & Hardware Corp.	175

H

A-I-L	Hercules, Inc.	19
	Homasote Co.	69
	Home Comfort Products Co.	153
A-L	Hotpoint Div./General Electric Co.	193
	House & Garden	136
L	Hunter Div. (Robbins & Myers, Inc.)	55

I

	Indian Head Millwork Corp.	188E3
--	----------------------------	-------

J

	Jacuzzi Research, Inc.	184
	Job Market	186

K

	Kemper Brothers, Inc.	166
	Kingsberry Homes	29
	KitchenAid Home Dishwasher Div. (Hobart Mfg. Co.)	77
	Kitchen Kompact, Inc.	159
	Kwikset (Div. of Emhart Corp.)	37

L

	LMF Corp.	65
	Lakeside Mfg. Corp.	182
	Lindal Cedar Homes, Inc.	46
A	Ludowici-Celadon Co.	15

M

	Majestic Co., Inc.	79
	Malta Mfg. Co.	100
	Martin Stamping & Stove Co.	206
	Marvin Windows	163
	Maytag Co., Inc.	137
A	Miracle Equipment Co.	149
	Modern Maid, Inc.	209, 210
A-L	Moen Div. (Stanadyne)	47
	Moneysworth	215
A	Morgan Co.	156

N

	Noblecraft	53
	Norris Industries (Plumbingware)	188W2-W3
	Norris Industries (Weiser)	7-10
	North East Builders Expo & Conference	188E4
A	NuTone, Inc.	1-4

O

A-L	Olympic Stain Co.	Cov. IV
	Omark Ind.	188W4A

P

A-D	PPG Industries	12, 13
A-L	Panacon Corp.	73-76
A-L	Panel-Clip Co.	207
	Paslode Co.	155
	Peachtree Doors, Inc.	189
	Pease Co., Everstrait	95
	Perma-Door, Div. of Steelcraft	181
	Pinecrest, Inc.	177
	Pomona Tile (Div. of American Olean)	54
A-D	Potlatch Forests, Inc.	139
	Preway, Inc.	151
	Price Pfister	23
	Products '72	98
	Progress Lighting Co.	176

Q

	Quality Motels, Inc.	94
--	----------------------	----

R

	R & G Sloane Mfg. Co., Inc.	141
	Reimann & Georger, Inc.	174
	Republic Housing Corp.	202
	Rodman Industries, Inc. (Rimco Div.)	145
A-L	Rohm and Haas Co.	157
L	Ronson Corp.	134, 135
	Rutt-Williams	27

S

	San Valle Tile Kilns	188W1
A-L	Schlage Lock Co.	165
	Scholz Homes, Inc.	197
	Senco Products, Inc.	186, 173
A	Shakertown Corp.	185
	Shelter Corp.	167
	Sico Inc.	97
A-I-L	Simpson Timber Co.	169
	Snelling & Snelling	216
A-I	Sonoco Products Co.	222
A	Soss Mfg. Co.	180
	Speakman Co.	80, 81
A	Standard Drywall Prod., Inc.	138
	State Farm Insurance	212
L	Superior Fireplace Co.	158

T

	Tappan Co.	44, 45
A-L	Thermador (Div. of Norris Ind.)	93
	Timber Eng. Co.	180

U

A	United States Gypsum Co.	Cov. III
	Ugine Kuhlmann of America, Inc.	28
A-L	Universal Rundle Corp.	35
A-D	Urethane Fabricators (Am-Finn Sauna Div.)	172

V

A	Valley Faucet Div. (U.S. Brass Corp.)	150
---	---------------------------------------	-----

W

	Wabash, Inc.	168
	Weldwood (Div. of U.S. Plywood)	201
	Westlock Co.	104
A-I-L-D	Western Wood Products Assn.	62, 63
A-L	Whirlpool Corp.	66, 67

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