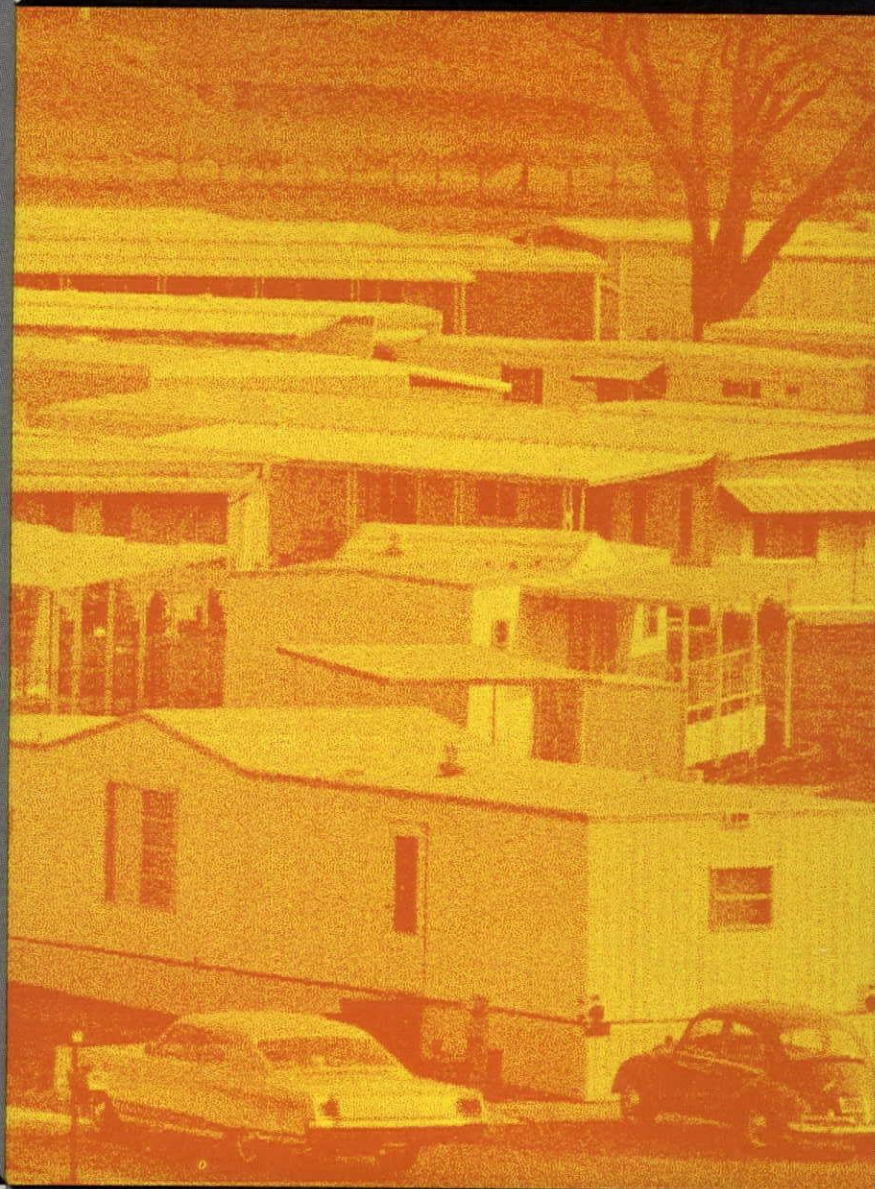


McGraw-Hill's marketing and management publication of housing and light construction

House & Home

APRIL 1971

It's time
to
take
the
low-price
market
back
from
the
mobiles



Also in this issue:

What a new airport means to a major housing market

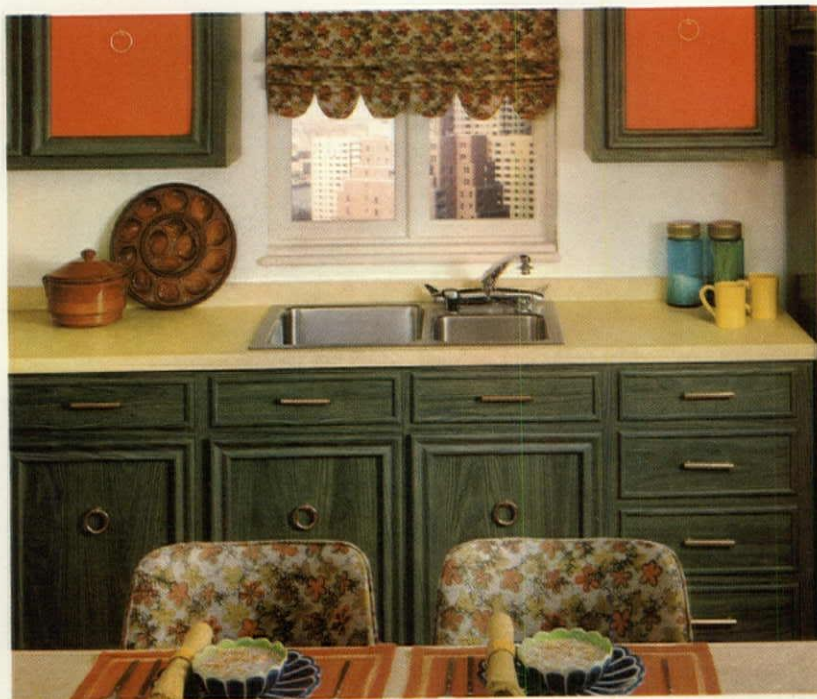
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EDITOR

John F. Goldsmith

SENIOR EDITORS

Maxwell C. Huntoon Jr.
Edwin W. Rochon

ASSOCIATE EDITORS

William J. Dukes
John Kirk
June R. Vollman
Jenepher Walker

ART DEPARTMENT

Marianne Vlazny, *assistant*
Jan V. White, *consultant*

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Nancy Jane Davis
Ellin Kaknes
Peggy Stevely

CONTRIBUTING EDITORS

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Andrew R. Mandala, *Washington*
David Thaler
H. Clarke Wells

EDITORIAL CONSULTANT

Carl Norcross

CONSULTING ECONOMIST

George A. Christie

MCGRAW-HILL WORLD NEWS

Walter Stanbury, *director*
20 domestic and
international news bureaus

ADVERTISING SALES MANAGER

John S. Renouard

MARKETING SERVICES MANAGER

Henry G. Hardwick

CIRCULATION MANAGER

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James E. Boddorf

House & Home

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Volume 39 Number 4 / April 1971

FEATURES

- 61 What consumerism means to you: an editorial
The buying public is kicking up a storm . . . should you feel uptight?
- 62 It's time to take the low-price market back from the mobiles
A HOUSE & HOME report tells why and how modulares can reclaim this market
- 72 Four vacation homes for special sites
These houses make their sites—with advantages and drawbacks—work for them
- 80 Plastics: a guide to the dozen or so plastics used in construction today
Including five of the most exciting new plastic products for the homebuilding industry
- 86 Make your financing deals now while the money tree is ripe
Suddenly there's a surplus of mortgage money for apartments—but you must act now

NEWS

- 4 Builders break free of the Davis-Bacon Act's wage requirements
- 6 Takeoff—or, watch how a giant airport can trigger a building boom
- 8 Community rejects a 'perfect' new town—it would mean too many kids
- 12 Mortgage bankers mine a bonanza and benefits trickle down to builders
- 16 Housing stocks leap for the fourth straight month
- 20 Mortgage rates ready to bounce back up
- 22 Consumers force changes in the mortgage document
- 26 Tenants win a round with a model lease for public housing
- 30 For a narrow site, a high-density project with plenty of open vistas
- 32 Hemmed in by drab surroundings? Create your own environment
- 34 A round prefab that's really round: even its components are curved

DEPARTMENTS

- 16 Housing stock prices
- 36 The apartment scene
Tenant unions' new angle—support for nonpaying tenants
- 38 The merchandising scene
The color in your model houses can sell—or kill a sale. It's how you use it
- 40 Letters
- 115 Reader service card
- 117 Products
- 136 Advertisers index
- 93 Personal business

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Davis-Bacon wage rates suspended—and the threat of stiffer action remains

It's questionable whether one side or the other has won the first round—or even that the initial hand has been played—in the administration's economic poker game with the construction unions.

President Nixon has acted—as he said he would—to head off further skyrocketing wage hikes affecting construction and housing, but the action he took was far less than many had expected.

For the President imposed a remedy that is, at best, of dubious efficacy. He suspended indefinitely the Davis-Bacon Act provisions that relate to paying construction workers on government jobs.

That law requires the "prevailing" wage, usually the union scale, for employees on federally aided construction projects, and the suspension means that contractors may now bid for such jobs at lower rates.

Mixed reaction. While there remains a large question of whether this action can effectively cool the inflationary fires in the construction industry, reaction to the move was predictable: union leaders generally condemned the decision and building leaders hailed it.

President George Meany of the AFL-CIO said the action was an attempt to correct the administration's mistakes by "penalizing a single segment of the working population."

President John A. Stastny of NAHB, on the other hand, said the homebuilders "wholeheartedly welcome the President's action . . . as a vital step in restraining excessive wage increases in the construction industry."

"For too long," Stastny went on, "the Davis-Bacon process has been a vehicle for pushing up construction wages, creating inflationary pressures, and adding inordinately to the cost of producing housing."

Criticism. Other labor leaders joined Meany in condemning the action, but additionally questioned whether the move would in fact check inflation. Their argument was that the impact on inflation would be negligible, but that wages paid nonunion workers would be adversely affected.

Yet there were some in the



ECONOMIST CHRISTIE
'Short . . . of action needed'

labor field, most notably President Leonard Woodcock of the Auto Workers, who broke ranks with the construction unions. Woodcock said the building trades are partly to blame for the nation's economic troubles. "Their wages have skyrocketed beyond anyone's" he said, and he termed it unfair that construction workers were earning \$2 to \$3 per hour more than auto workers.

While the unions and contractors predictably disagreed with the impact of the move, some believed it was "too little, too late." The Associated General Contractors, for instance, called the action "disappointing, inadequate, and totally ineffective in bringing stability to the construction industry."

A McGraw-Hill economist, George A. Christie, agreed. Christie said the action represents only "a small step, falling far short of the kind of action needed right now to halt the steep rise in construction costs."

Christie argued that the President "has chosen the mildest of all alternatives open to him, short of doing nothing at all," and he added that it "is not likely to have a significant effect on construction costs in the near future."

Political front. Politicians voiced predicted opinions. Senator Birch Bayh (D., Ind.), mentioned as a possible Presidential candidate in 1972, said the President's action was a "thinly disguised attempt to blame wage-settlements alone for the increased costs of construction." He called the suspension a "grandstand play designed to enhance his image as an economic activist," and he urged the use of wage and price controls instead.

Transportation Secretary John Volpe, who owns a construc-



NAHB'S STASTNY
'Wholeheartedly welcome'

tion company, also seemed less than satisfied with the move. Volpe said he would recommend that the President take stronger action—to impose mandatory wage and price controls on the construction industry—unless voluntary restraints were agreed upon by April 1, the date many construction contracts were to expire.

Housing Secretary George Romney was also reported to favor stronger action than the President had taken.

Unions' reforms. It is the threat of still more severe action that has kept the poker game alive. The unions have reacted by joining contractors in a pact to curb rising costs.

Seventeen building trades unions and 34 big industrial contractors signed the agreement in March.

The agreement sets seven new guidelines for union craftsmen:

- There shall be no limit on production by workmen, no restraint on full use of tools or equipment, and no restrictions on the number of men assigned to a crew except for safety regulations.
- Slowdowns, standby crews, and featherbedding practices will not be tolerated.
- There shall be no illegal strikes, stoppages, or lockouts.
- Workmen shall be at their place of work at the starting time and until quitting time.
- If a union cannot furnish workmen within 48 hours, a contractor can hire qualified personnel from any source, even if they are nonunion.
- Overtime is undesirable and will be worked only in unusual circumstances.
- Foremen shall be selected by and be responsible to the employer.

This pact between the unions and the nation's big industrial contractors does not necessar-

ily mean the unions can enforce the guidelines. But it is viewed as a good-faith sign on the part of the unions—a sign which the federal government has been seeking.

Romney warning. Indeed, several months before the suspension of the Davis-Bacon provisions by President Nixon, Secretary Romney had stated there would have to be a voluntary plan to hold down building costs—or the government would impose control.

Even early in 1971, the President's Council of Economic Advisers flatly asserted that "the public interest cannot condone continuing massive increase in construction costs at a time when American families need more homes and many in the industry are unemployed and need jobs."

In that same report, the President noted the administration's "particular concern" over rising construction costs.

Still the unions didn't budge. Even after the President sent Labor Secretary James Hodgson to the AFL-CIO meeting in Florida in February to try to hammer out a voluntary plan, the crafts stood pat.

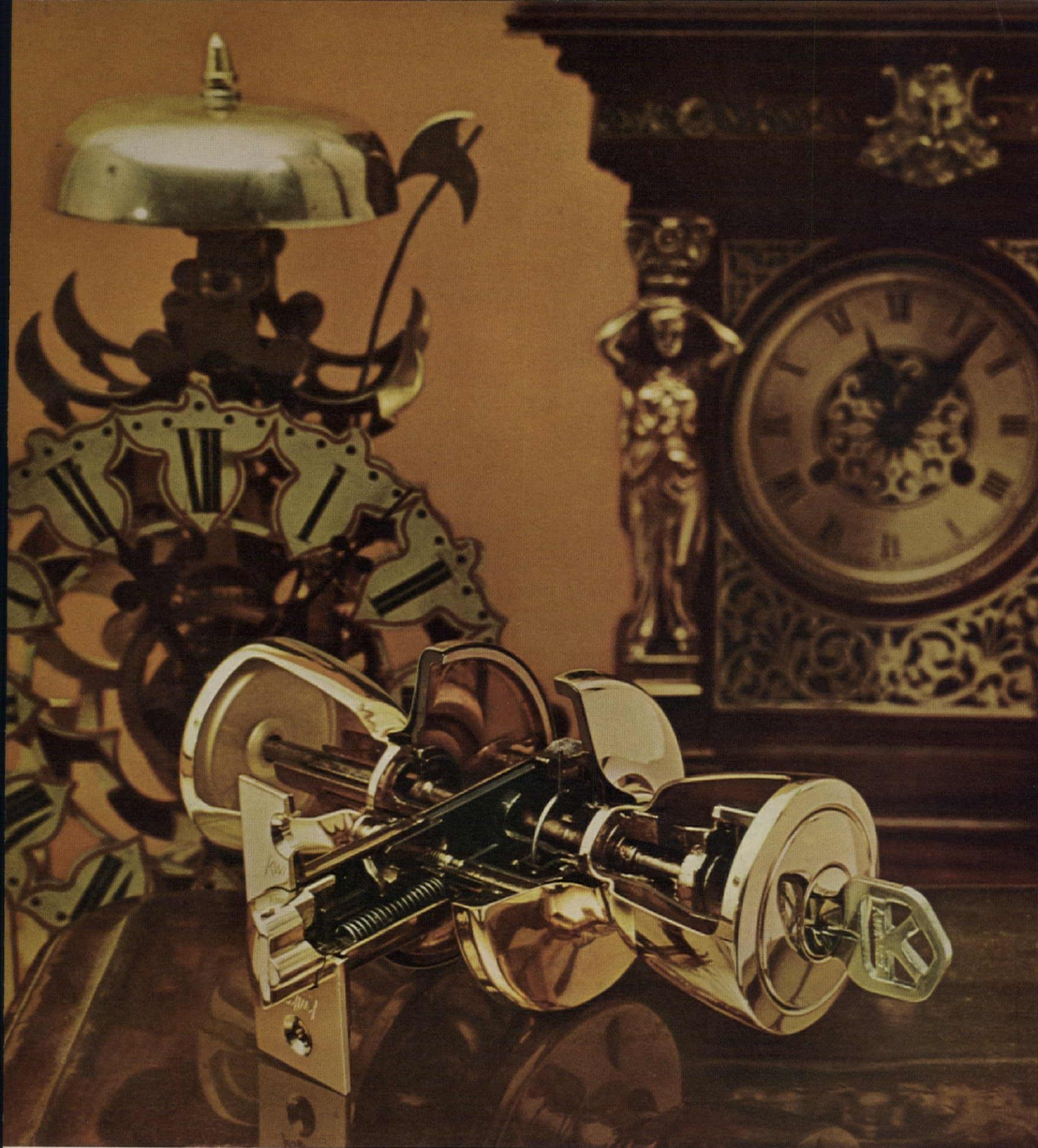
Implicit threat. The President, pledged to "do something," acted—but only mildly. Only after that, did unions and contractors agree to their seven point work program. The President still has the power to institute standby wage and price controls, of course, and it may well be that Secretary Volpe's recommendation will have some bearing on future action.

Many union contracts were to run out on April 1, and labor leaders are beginning their wage bargaining.

The Associated General Contractors believes new pacts may push wages upward by as much as 15% to 20%, with as many strikes this year as in 1970, when 36% of 1,100 local wage negotiations broke down.

But the unions must also know the administration has its sights on 1972. Since the economic outlook in large part depends on how well inflation is contained, it may well be that the President—if he has to play another card—will, in that event, go for broke.

—ANDREW R. MANDALA



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John Davies

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Wm. F. Cody & Assoc., Architects

2 The garden bath, which uses a picture window overlooking a private court, lets the ladies bathe in Roman splendor. But in privacy. In an area like this PPG *Herculite*[®] K safety glass lets them move about in safety.



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3 Mirrored wardrobe doors introduce glamor, a feeling of spaciousness, more light and beautiful practicality to the master bedroom in your homes. Or use this idea in a guest room to give it importance. Look into PPG *High-Fidelity*[®] mirrors for this idea.

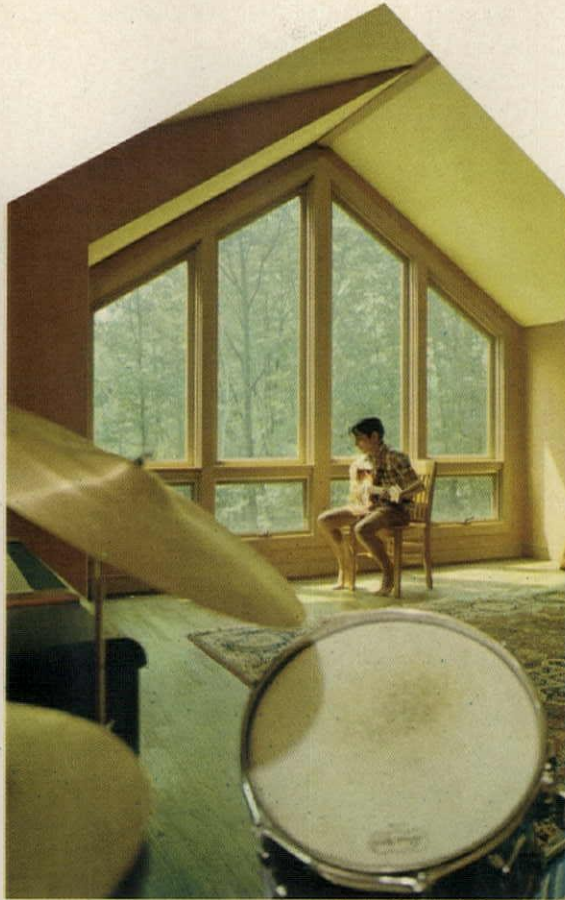
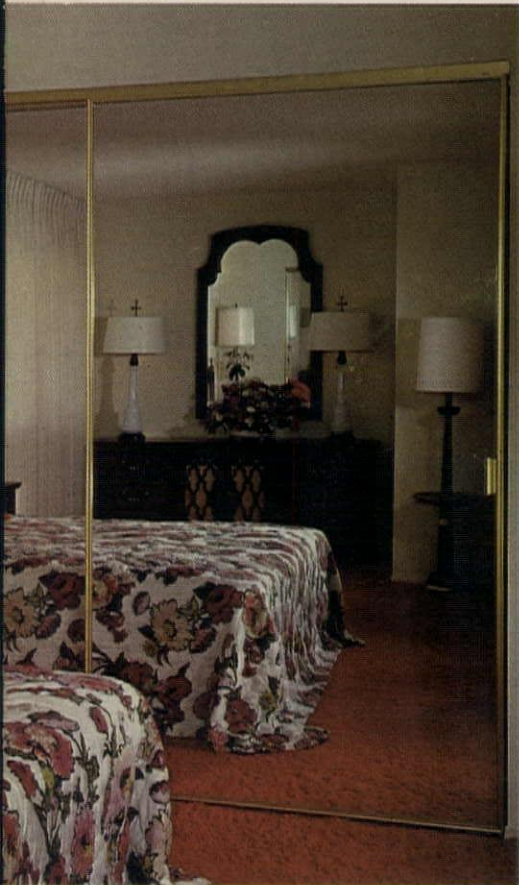


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PPG
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Charles B. Wills & Co., Builder

6 A two-story fixed-glass window wall overlooking a private court gives this dining area light, excitement and a real outdoors flavor.

Robert Andrews, Builder

Richard Chalfant, Architect



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CIRCLE 7 ON READER SERVICE CARD

Virginia county says no to a 'perfect' new town—it would mean too many kids

"I byde my tyme."

The official motto for Loudoun County, Virginia, has come to have deep meaning for Levitt and Sons, the nation's largest homebuilder.

Levitt had loving plans for Loudoun but the county fathers suggested to Levitt that the company should not take the county to heart.

In a four-to-two decision, the board of supervisors turned down Levitt's rezoning scheme for a new town that had been described by county planners as "technically perfect," praised by the board in its own denial, and referred to as "a planner's delight" by the man in charge of the project for the big building combine.

Levitt won't take the rejection lying down. William O. Vose, manager of new project planning, said the company would sue. What's more, he is optimistic about the court's action, noting that the Levitt proposal is consistent with Loudoun County's master plan and that it obtains the "maximum objective of the planned community ordinance."

School issue. But even with this optimistic outlook, Vose feels that Levitt is going

to have to look to the county's motto. The court case will delay the project a year, he says, even though Levitt had been ready to begin construction this spring.

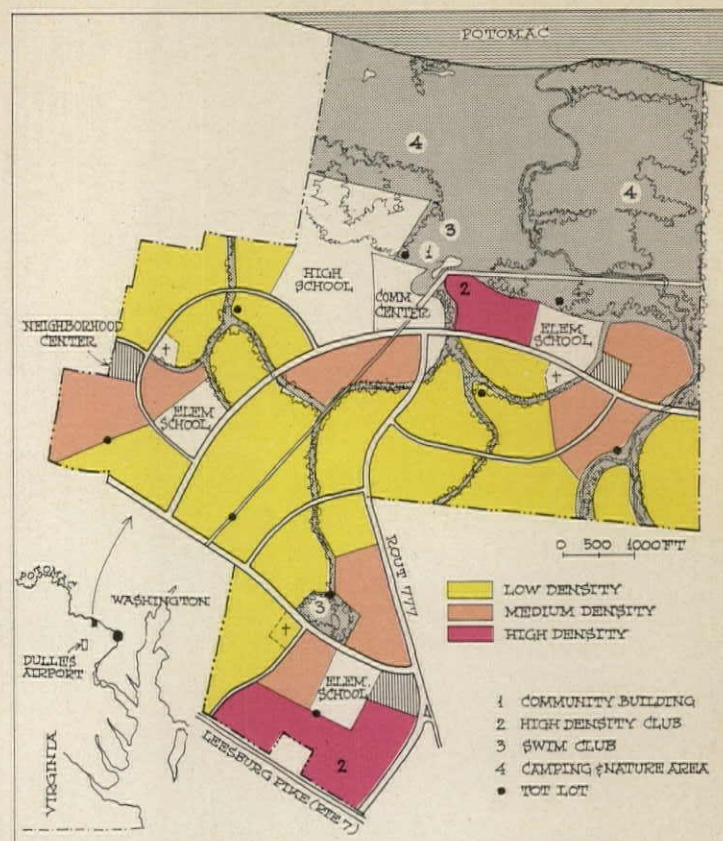
The project involves an investment by Levitt of \$13 million over ten years. The 1,270-acre planned community would include a 200-acre park along the Potomac River and would allocate 112 acres for schools—which Levitt had agreed to build and lease to the county.

But it was the school issue that was Levitt's undoing. Despite the fact that the county need make no capital investment, the Loudoun board rejected the entire scheme because new schools and wider law enforcement would require an increase in taxes.

The issue, in fact, never was the plan itself—but the economic impact of the plan, particularly upon the school system, which already takes 80% of the county's operating budget.

Larry Brown, executive secretary to the supervisors, said the majority's thinking was that the project "would bring more kids and therefore more operating expenses."

Expansion. The planned community would indeed bring more people to the county. Levitt planned to build 4,235



Master land plan for Levitt's 1,270-acre planned community in Loudoun County, Va.

dwellings for 13,000 people in a mix of apartments and single-family homes. Levitt was projecting the cost of townhouses at \$22-26,000 and single families at \$26-32,000. The company estimated its housing would bring 3,188 new pupils.

Levitt has been planning the project for two years and had

touched base with just about every responsible official, according to Vose.

The company had the support of the county planning staff, the planning commission, the school board, and the state highway department.

It simply didn't think enough about kids and taxes. —A.M.

Another special school tax afflicts the builder—and at \$120 per new house

Builders in Atlanta's big bedroom annex of DeKalb County were taken aback recently when the county began assessing them \$120 per new residential unit to support the schools.

The tax is being levied under a little-known 1949 law unearthed by a recently elected county commissioner. The law states that developers of housing projects with more than 100 units must pay the school tax. The commissioners, however, voted to extend the levy to all housing units constructed within the county.

Collections. On the first day the law was in force, the county collected \$1,200 for the units started in 1971. Had the law been applied retroactively, as some commissioners wished,

the school board would have gained \$1,179,480 from the 9,829 units built in the county last year.

James B. Terry, president of the DeKalb Developers Assn., says the law will be tested in the courts, by individuals or by

a building association. If the law is upheld, he assumes that the new tax will be passed on to buyers and renters.

Controversy. DeKalb's school system, which has won national recognition for educational excellence, has long been a source of controversy within the county itself.

When voters rejected a school tax increase last July, the school board adopted a budget based on deficit spending.

It was hoped that the legalization of beer and wine sales within the county last fall would add revenue, but the county commissioners refused to turn over any portion of the spirits tax to the schools.

—STAN FISHER
McGraw-Hill News, Atlanta

Landlord's remedy for tenants' blues

Even swingers can get the blues, particularly when they live in an area where aerospace layoffs have become a daily occurrence.

It may therefore be significant that R&B Development, a West Coast apartment company that makes its living from singles and young couples, has started a campaign called "We care about you!" The program aims to improve service in the com-

pany's 13 apartment developments.

The slogan is being used on staff buttons and on clocks which time-stamp maintenance requests. Tenants get buttons reading "I'm cared for!"

The campaign also includes "We goofed" slips, on which tenants can air complaints, and an "Employee of the Month" contest.

R&B has 13,000 tenants.

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CIRCLE 9 ON READER SERVICE CARD



Takeoff: what a huge new airport means to a metropolitan housing market

What it means to Dallas and Fort Worth could be a building boom to boggle the mind.

The boom could create one city out of the two, which are now 12 to 15 miles apart.

A veteran Dallas watcher sees things this way:

"The whole area, and especially the mid-cities, will enjoy a growth beyond our wildest imagination."

And that assessment comes from W.W. Salmond of Southern Trust & Mortgage. He is the executive vice president of that conservative old mortgage banking house, and he is not a man addicted to hyperbole.

Airport's role. The Dallas area has so far survived the economic downturn far better than most sections of the country. Its builders had one of their best sales years in 1970, and they can now look forward to the opening of the Dallas/Fort Worth Regional Airport in 1973. The field will cost \$700 million and its 16,400 acres rank it as

indisputably the world's largest.

Studies by the Regional Science Research Institute of Philadelphia for the North Central Texas Council of Governments show that the 10-county area directly affected by the airport will double in population in the next 15-20 years, with 3.9 million of these 4.4 million people concentrated in Dallas County and Tarrant County (Fort Worth).

By 1975 the airport will be serving 18 million passengers a year, handling 275,000 tons of cargo and employing about 24,000 people. Its economic impact on the Dallas/Fort Worth area by 1975 is pegged at about \$636 million annually. By 1985 it will be handling 36 million passengers and a million tons of cargo and employing 40,000-50,000 people.

In the last 18 months, developers have unveiled plans for 31 major projects running into several billions of dollars. These projects will take from

five to 20 years to complete and construction will not shift into high gear until the airport opens.

Land speculation. Land prices have soared since firm airport boundaries were announced in 1968. The site, originally planned at 18,300 acres for an estimated \$21-\$25 million, will cost more than \$60 million for the scaled down 16,400 acres. Most land within five miles has tripled in price and much of it has quadrupled and quintupled.

Horace Ainsworth, whose Dallas real estate firm has been active in the airport area, believes that much of the land is now in the hands of the second-generation speculator. The original owners, farmers in many cases, sold to the initial speculator, who in turn sold to a joint venture or syndicate (since few individuals could afford it at the increased prices). These investors may develop it or else sell to the ultimate developer.

Ainsworth tells of one 100-acre tract that a farmer sold for \$2,800 an acre to a speculator, who sold it 18 months later for \$10,000 an acre to a syndicate of 10 investors. They are waiting for it to go to \$40,000-\$50,000 an acre within a year or so after the opening of the airport.

"Some choice tracts with good transportation undoubtedly reach this price," Ainsworth says. He adds that "anything that has got utilities and can be used for apartments is bringing \$20,000 an acre now."

Centennial Construction's Lawson Ridgeway, whose company has just started work on a 30-acre apartment site in Bedford and is land planning 160 acres in the same city, says that "much of the land has been bid up to a point that hasn't been realistic." Anticipating his biggest year, Ridgeway recently revised his 1971 forecast for Centennial upward by \$4 million. He expects a \$30-

What they're building for tomorrow's buyers on the Dallas airport circle

Here are the 31 developments now being planned to take advantage of the expansion generated by the new Dallas/Fort Worth Regional Airport. Cost projections for just one new town, Flower Mound, exceed \$1 billion. For locations, see map on next page.

1. Flower Mound, a new town on 6,156 acres situated four miles from the airport. It will eventually house 60,000 people in four villages grouped around a town center. Work on utilities may start this year.

Edward S. Marcus, board chairman of Nieman-Marcus, owns the land in concert with 20 associates, and he announced the master plan. The Department of Housing and Urban Development has agreed to guarantee \$18 million in loans to develop the property and Raymond D. Nasher, a Dallas developer, got the job.

1-A. Southlake, on the airport's Fort Worth side. The town of 2,000 runs heavily to airplane pilots and executives with private airstrips alongside their homes. Its residents took up a collection to hire an en-

gineering concern to produce a master plan for a new town with industrial parks, office and apartment complexes, and shopping centers.

2. Centennial Construction's project of single-family units, townhouses, and apartments on 160 acres. Construction begins this year.

3. Bedford Ranch, a 130-acre, \$20-\$25-million development by Claude R. McClennahan Inc. of Dallas. It will include a boutique-type shopping center with 234,000 sq. ft. of offices, 50 single-family homes, 188 condominium townhouses, and 986 garden apartments. Construction waits on utilities.

4. Bedford Forum, by Macatee Capital Corp. of Dallas. It will be a \$250-million, 12-15-year development, primarily industrial and commercial, but with 93 acres for cluster houses, townhouses, and single-family attached units. Some commercial/industrial development is under way.

5. International Village, by Perspecta Development Co. of Dallas. Construction begins in 1972. It will include specialty shops, restaurants, and 1,500

apartment units. The 118-acre project will cost \$20-\$25 million.

6. A commercial park, with apartments. Dallas builder Harvey Huie has acquired this 50-acre, \$1.2-million site.

7. An office park on 117 acres. Donald Kerr & Associates is joint-venturing the project, to cost up to \$75 million. It will have several hundred luxury apartment units.

8. Woodhaven Country Club Estates, a 700-acre luxury housing development by Glendale Associates of New York City, for Texas and Tennessee investors. Some 350 lots have been developed, 82 sold, and 15 homes completed. A championship golf course will be completed this year. Plans include single-family and townhouse developments.

9. An office tower complex on 138 acres. This is another Donald Kerr & Associates joint venture. Preliminary plans call for a shopping center, three 12-story office towers, two two-story office buildings, and 650 garden apartment units. Ultimate cost: \$100 million.

10. Parkway Central, a 360-

acre development by Woodland West Co. of Dallas. It will include a 32-acre Park, 3,300 apartment units, 26-acre shopping center, and office and commercial buildings. Ground will be broken in March on \$10 million worth of office buildings. Centex Corp. of Dallas, in its first Dallas building in years, is constructing 213 apartment units here.

11. Brookhollow Business Park on 206 acres. It will be developed by Brookhollow Corp., a subsidiary of Texas Industries of Dallas, in the Great Southwest industrial district.

12. Six Flags Business Park, a \$250-million business/distributing / manufacturing / research center. It will be developed on 500 acres in the Great Southeast industrial district by the Vantage Co. of Dallas. Construction starts this year.

13. Six Flags Mall, a 900,000 sq. ft. shopping center opened last fall. It will cost about \$10 million when completed. Developer is Monumental Properties of Baltimore.

14. Forum 303, a \$13-million shopping center being developed by Alpert Investment Corp. of

million dollar year, with sales of 900 single and 600 multiple dwellings.

Zoning reform. Even in such towns as Bedford and Hurst, which will be bedroom communities, says Ridgeway, "land prices have been run up to the point that single-family housing is not too practical. Because of this and because of the limitation of land in the mid-cities area, I think there will be a lot of zoning granted that will allow builders to use some innovations in land planning to get a little more density."

A Dallas land broker and developer, Donald Kerr, who

has four big joint ventures going in the airport area, foresees "a new zoning module between single family and apartments—maybe 7-10 units per acre—which would make the land a good buy at \$10,000."

Shift to condominiums. One trend is toward the townhouse condominium. Norwood Homes has a project under way (see next page), and many other builders have condominiums in their plans.

Salmon says there is no question that the townhouse condominium is the coming thing for the area: "All of us in the industry share the feeling

that denser development will be zoned, and people are ready for this type of housing. They want the freedom from maintenance that goes with the townhouse concept."

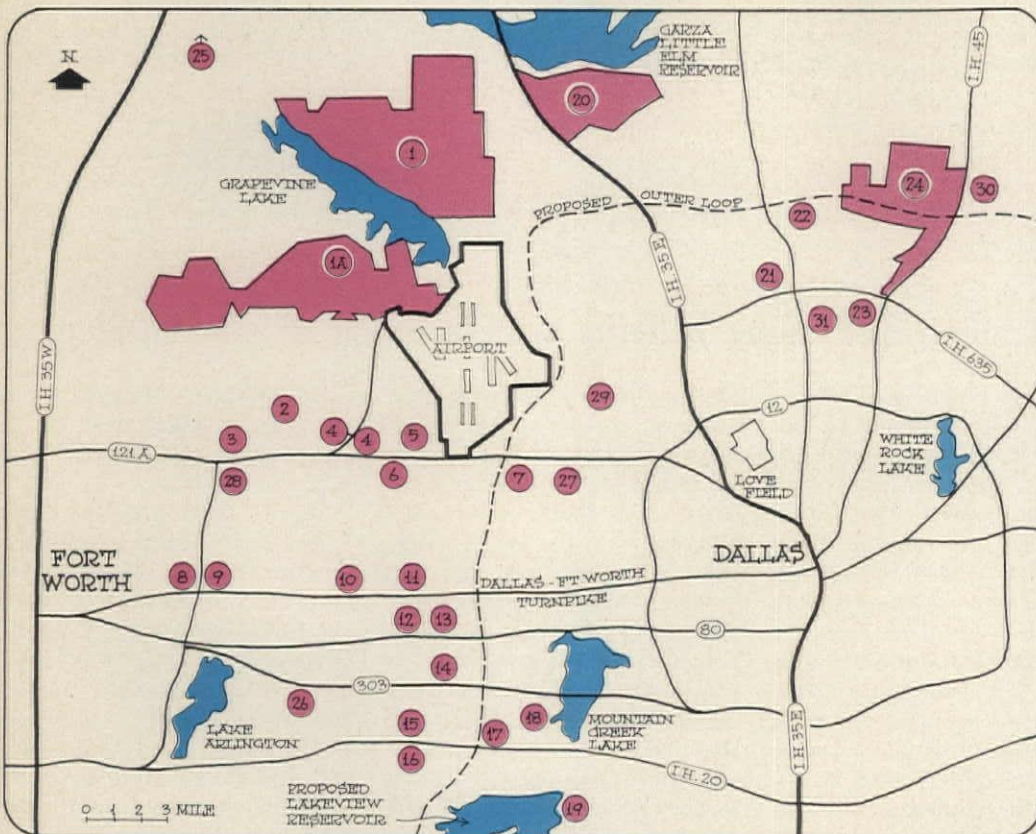
Or, as Ainsworth puts it, "People are paying \$10,000 for land that can't be used economically for single-family residences, so the corollary is that housing is going to have to change."

Kerr believes that where garden apartments are built, most will be family oriented, with more three-bedroom units and wider use of green belts and recreation facilities.

Planning. Some giant projects recently announced for North Dallas, which includes much housing, have been in the planning stage for years. They would have been a success without the airport, but their growth will be considerably enhanced by the facility, particularly after proposed freeway connections with the airport are completed in the next five years.

Working through the North Central Texas Council of Governments, most of the cities directly affected by the airport are trying to develop zoning and planning programs to cope with the explosive growth. The city of Irving, for example, has developed a model airport zoning ordinance and soundproofing adoption by all communities around the new airport.

—LORRAINE SMITH
McGraw-Hill World News,
Dallas



Jacksonville, Fla. It will be completed in October.

15. Century 21, a \$150-million planned city on 320 acres. It will include 2,500 apartments, and Associated Developers of Kansas City says first stage construction will begin in 1973.

16 and 17. Multifamily projects on 200 and 132 acres respectively. Both are Donald Kerr & Associates joint ventures.

18. Norwood Homes, \$10-million townhouse condominium development. The first phase opened in February.

19. Summertree Park Ltd., 2,500-acre planned community. It will be developed after construction of proposed Lakeview reservoir.

20. Lewisville Valley, 1,300

acres, a \$210-million residential/commercial/industrial development by Hunt Properties of Dallas. It will be developed over a 10-year period for a population of 20,000. Construction on 408 single-family homes will begin in 90 days. Project will have 602 acres in single-family, 291 acres in multifamily homes. W. Herbert Hunt, son of the oil millionaire H. L. Hunt, is the backer.

21. Midway Park, \$15-million office park by Southwestern Dynamics Inc. Under way.

22. Preston North, a \$250-million planned community by Macatee Capital Corp. of Dallas. Utilities and streets are going into its 1,410 acres.

23. Park Central, a \$150-mil-

lion office park. Two towers are under way. This is a 15-20-year joint venture by the Trammell Crow Co. and Coker Brothers Construction Co. of Dallas.

24. Dallas North-Palisades, a \$500-million planned business/industrial / commercial / residential development by Hunt Properties of Dallas. Site spreads over 3,959 acres.

25. An industrial park on 447 acres.

26. Stoneridge, a 503-acre residential / commercial development. Southern Trust & Mortgage, Dallas, and Businessmen's Assurance Co. of America, Kansas City, are the investors. The project will have 1,200 single-family homes, and 1,200 apart-

ments. Some are already under construction.

27. Irving Mall, developed by Melvin Simon & Associates, Indianapolis. This is an 800,000 sq. ft. shopping mall. Two major department stores in the 90-store center opened last week; rest under construction.

28. Northeast Mall, a 900,000 sq. ft., 80-store, totally enclosed mall by Melvin Simon & Associates. First stores will open in March.

29. A 3,000-acre project of commercial and residential units. The Crockett Co. and National Real Estate Development Co., both of Dallas, are doing preliminary land-use planning and an economic survey. Their proposed project will take 15-20 years to complete.

30. Spring Park, a 2,000-acre residential/commercial development by the Raymond D. Nasher Co., Dallas. The project will lie in parts of three cities—Richardson, Garland, and Plano—and will contain 10,000 houses and apartment units. Cost: \$400-\$500 million.

31. Hillcrest 635, a \$24-million office park by Hillcrest Management Corp., subsidiary of Daniel Investment Co., Dallas.

The Dallas market—builder opens in a snowstorm and sells 15 houses on first day

Houston's largest homebuilder, Norwood Homes, has moved into the Dallas market with a \$10-million planned unit development of townhouses. This is Norwood's first project outside Houston.

The company opened its Mountain Creek townhouses in a February snowstorm and still sold 15 units the first day.

The first phase of the Norwood development—217 homes on 24 acres in the suburb of Grand Prairie—will be started immediately afterward. Financing is FHA-VA, and prices range from \$17,950 to \$25,950.

A first. Norwood says its townhouses are the first for Dallas/Fort Worth in this price bracket. The few small townhouse projects previously built in this area were for the luxury market.

The Norwood company has



Townhouses in \$17,950-\$25,950 range come to Dallas. The units are all-electric.

had great success with townhouses in Houston. When it opened its Crown Colony development there in 1968, it sold 23 houses the first afternoon. The company is now building in five townhouse communities and has 779 townhouses completed or under construction in Houston. Prices range from \$15,950 to \$24,950.

Some of Norwood's most successful plans are being used in the Dallas project, which of-



Norwood Homes units are first townhouses at moderate prices in Dallas.

fers 10 basic plans and 28 different exteriors. The first phase will include 89 two-story and 148 one-story plans. Sizes range from 1,000 sq. ft. for a one-story, two-bedroom house to 1,672 sq. ft. for a two-story, three-bedroom house.

The houses are all-electric; in fact, Norwood claims to be the nation's largest builder of total electric homes.

Although its plans and marketing are not oriented to a spe-

cific age group, Norwood has found in Houston that 81% of its buyers are 21 to 37, and most are professional people.

A \$40-million year. In 1970 Norwood built 1,179 single-family homes and 320 townhouses, representing 1,499 sales totaling \$30.4 million. The company forecasts a \$40-million year in 1971, with 1,957 single-family homes and townhouses in its building program.

Norwood was founded 12 years ago by Glen Norwood, presently vice chairman of the board of directors. Charles Monaco is president.

Vice president Joe Mullins is in charge of the Dallas operation, and Mike Derkacz is sales manager. The project is located about four miles south of the Dallas/Fort Worth Toll Road, 25 minutes from downtown Dallas. —L.S.

A bonanza for mortgage dealers—and some benefits trickle down to the builder

A good many people have been riding a gravy train down the mortgage rate slope.

The Federal National Mortgage Assn., which bought FHA and VA loans last year at deep discounts, has of late been selling these same loans well above par.

The Federal Home Loan Mortgage Corp., which purchased government-backed mortgages from savings and loan associations at 97 cents on the dollar, sold some of these same loans back to S&Ls two months later at prices averaging 104-plus.

Mortgage banking houses and other financial institutions, which had warehoused 8½% FHA and VA loans they had purchased at discounts during tight-money 1970, have packaged these same loans and sold them as securities backed by the Government National Mortgage Assn. at prices as high as 107.

Even builders, who seemingly never get any of the pie, are said to be sharing in what has become a veritable bonanza.

Standby profits. By far the greatest potential for profit has developed from the fast dip in interest rates and the capabilities of selling higher-rate loans at big premiums via GNMA, popularly known as Ginny May.

A major factor in this pro-

cedure has been Fanny May's standby commitment in its regular mortgage-commitment auctions. Seller-servicers can get FNMA's commitment to buy a mortgage, but they need not deliver the loan if the private mortgage market improves before the delivery date. And that market has improved in spades.

The 8½% FHA and VA mortgages have become a gold mine for mortgage companies that have been able to take advantage of the FNMA standby commitment. Rather than deliver loans to FNMA at prices established by auctions in 1970, the mortgage bankers have kept these loans and packaged them into GNMA pass-through securities. The securities are currently trading at about 106 cents on the dollar in Wall Street.

Fanny May's own first sale at 8½% mortgages recently brought a price of 102.31, and seller-servicers were delighted to pay that sum. The private market was heading much higher. Dealers could buy from FNMA and sell the same loans into the private market at a markup.

Benefit for builder. Today, according to some West Coast mortgage men, even the homebuilder is getting some of the benefits. Some mortgage firms, these experts say, have been

passing on a portion of their profit to builders in the form of higher prices paid for loans.

Charles McCarthy, vice president of the Bank of America National Trust and Savings Assn. in San Francisco, explains:

"There may be a strong possibility that some mortgage bankers are negotiating with the builders at a price that takes into consideration the fact that they [the mortgage bankers] were very fortunate in having loans on their books as the rates dropped [and prices rose]."

McCarthy mentioned no specific cases, but he said discounts on the new 7% FHA loans were very small, ranging from 1½ to 2½ points. That meant builders were getting 97½ to 98½ cents on the dollar for their mortgages.

John Jensen, senior vice president of Bankers Mortgage Co. of Calif., concedes that the discount on 7% loans is quite small—perhaps only 2 points. But Jensen adds: "I don't know that mortgage bankers are passing on their profits to builders. I don't think I'd word it just that way."

Rate cuts. Another mortgage banker in San Francisco, who asked not to be named, said: "It's true that mortgage bankers are passing on a portion of

their profits to builders. Even when the FHA rate was 7½%, one firm put an ad in the paper, talking about 7%."

John J. Cunningham, vice president of Sonoma Mortgage in Santa Rosa, took exception. "I'm not passing on any of my profits to builders, I can assure you of that," he says.

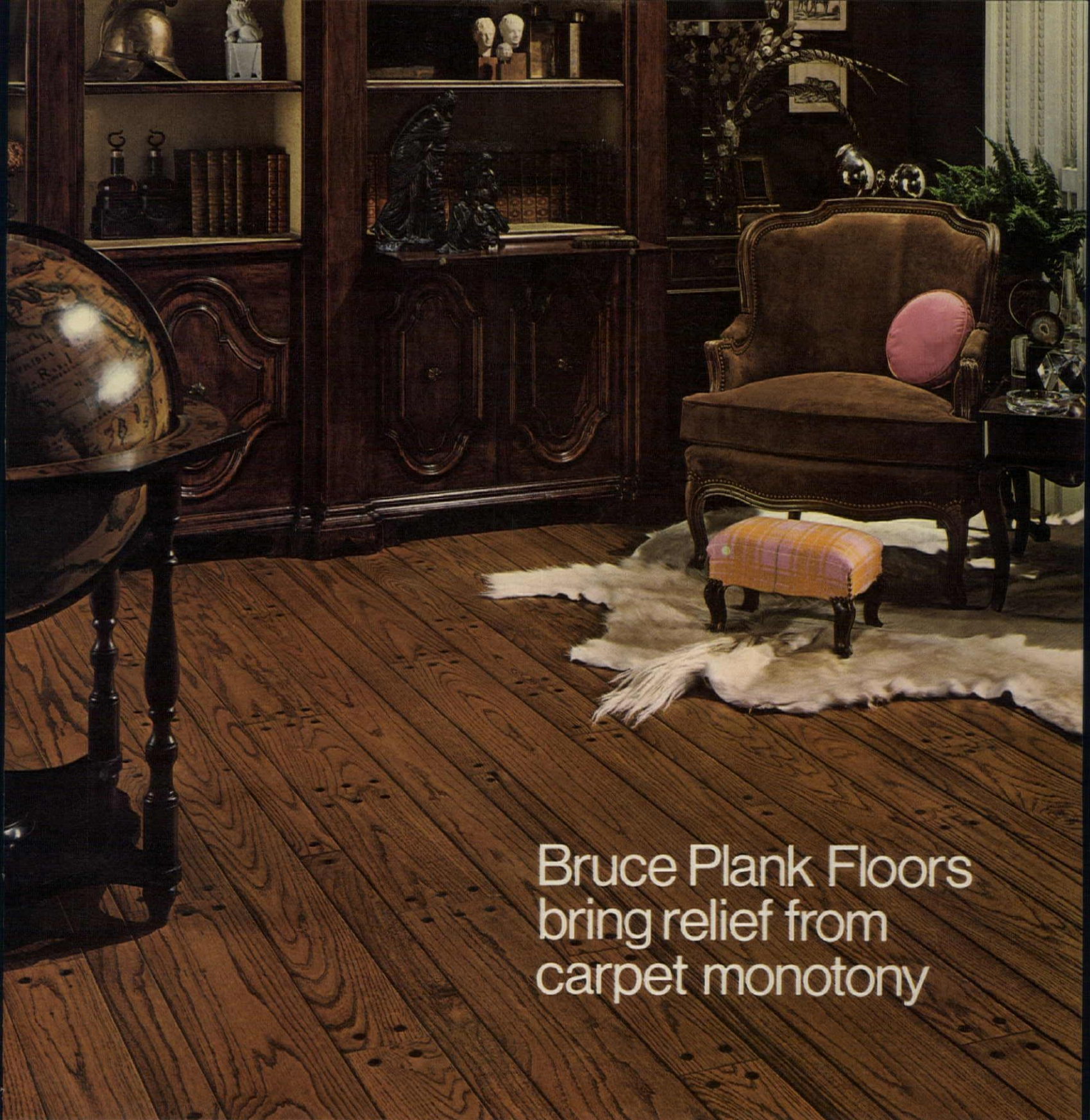
But Robert Morgan, senior vice president of the Colwell Co. in Los Angeles, said builders were definitely reaping the benefits of an improved market.

Asked if some mortgage companies were passing on profits to builders, Morgan replied: "Yes. And why they are doing it is because they are stupid."

"You get into a highly competitive market and you have people who want to build their portfolios—and they'll do almost anything to fill them."

But, Morgan adds, such practices cannot go on forever. "They [mortgage companies] can't make any money," he says, and "they will have to wake up to the fact that it will catch them on the balance sheet."

But for now, it would seem that the homebuilder, along with the mortgage banker, is enjoying a seldom-seen windfall from the mortgage market turnaround.



Bruce Plank Floors bring relief from carpet monotony

BRUCE CATHEDRAL PLANK—Wide Oak planks in random widths, accented with beveled edges and walnut pegs. Prefinished dark (above) or medium.

To carpet or not to carpet. That is the question still in the minds of some builders today. But when you consider how interior designers and most home owners feel about the monotony of wall-to-wall carpet, the matter is settled.

In a recent survey by Interiors Magazine, nine out of ten designers said they preferred hardwood floors in certain rooms rather than wall-to-wall carpeting throughout. Right away this gives home buyers more freedom in decorating and more value in their investment.

In living room, dining room, or den, Bruce Plank Floors add a charm and livability that far exceeds the small extra cost. And in price and styling, the choice is wide. In addition to Cathedral Plank (above), there are *Ranch Plank* and *Fire-side Plank*. Another Bruce Plank Floor (*Old English*) uses wire-brushed texture, dark finish and wrought-head nails for an authentic antique touch.

Write for our free booklet on Plank Floors by Bruce and give relief from carpet monotony to your homes.

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You save about \$10 a window, because there's no need for exterior painting. The sash has a weather-resistant polyurea finish, and the exterior frame is sheathed in rigid vinyl. Interior wood surfaces can be painted or stained to match any decor.

HH-41

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Window beauty is Andersen. Andersen Corp., Bayport, Minnesota 55003



Here's the window that delivers more.

No storms.

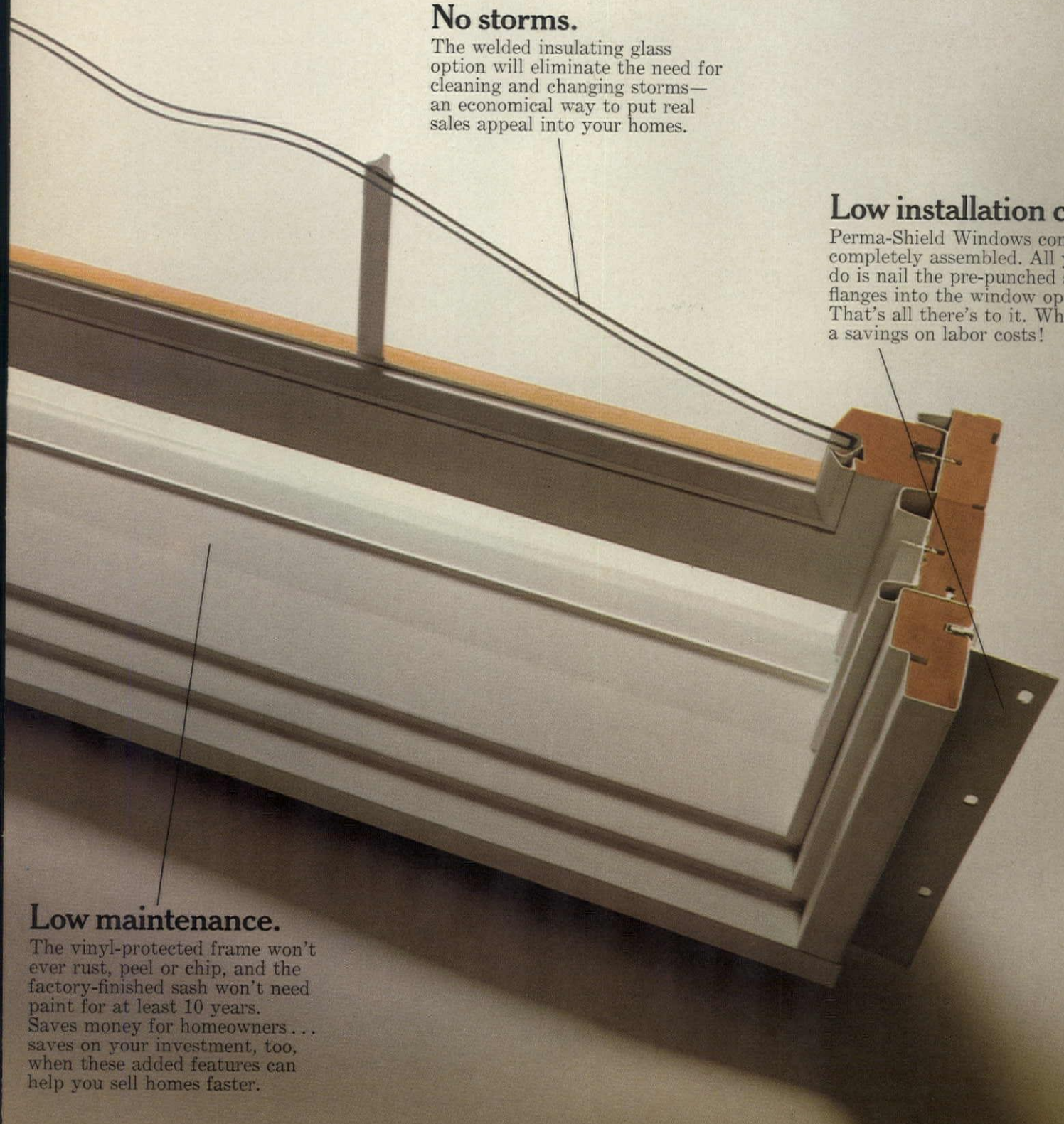
The welded insulating glass option will eliminate the need for cleaning and changing storms—an economical way to put real sales appeal into your homes.

Low installation cost.

Perma-Shield Windows come completely assembled. All you do is nail the pre-punched side flanges into the window openings. That's all there's to it. What a savings on labor costs!

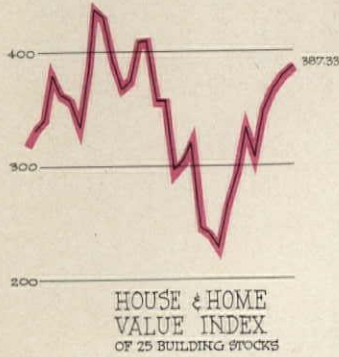
Low maintenance.

The vinyl-protected frame won't ever rust, peel or chip, and the factory-finished sash won't need paint for at least 10 years. Saves money for homeowners... saves on your investment, too, when these added features can help you sell homes faster.



Housing's stock prices are up sharply in their fourth straight monthly advance

HOUSE & HOME's index of 25 housing stocks rose from 377.64 to 387.33 in the month ended March 4. It was the fourth consecutive monthly gain. Issues on the index are indicated by dots (•) in the tables at right. Here's the composite index:



How top 5 did in each group:

| | Mar. '70 | Feb. '71 | Mar. '71 |
|----------------------|----------|----------|----------|
| Builders | 391 | 476 | 503 |
| Land develop. | 448 | 551 | 560 |
| Mortgage cos. | 557 | 664 | 740 |
| Mobile homes | 527 | 700 | 687 |
| S&Ls | 139 | 175 | 170 |

HOUSING'S STOCK PRICES

| COMPANY | March 4 Bid/Close | Chng. Prev. Month |
|---------------------------------------|-------------------|-------------------|
| BUILDING | | |
| Behring Corp. ^b | 17½ | + 3 |
| Bramalea Cons (Can.) | 4½ | + ½ |
| Capital Divers (Can.) | 1.10 | -.25 |
| Centex Corp. ^y | 24½ | + 2½ |
| Christiana Cos. ^b | 9½ | + ½ |
| Cons. Bldg. (Can.) | 1.75 | -.05 |
| Dev. Corp. Amer. | 29½ | + 4½ |
| Dev. Int. Corp. | 15 | + ½ |
| Edwards Indus. | 8½ | + ½ |
| First Hartford Rlty. | 8½ | + 1½ |
| First Nat. Rlty. ^b | 3½ | + ½ |
| Frouge | 1½ | - |
| -General Bldrs. ^b | 7½ | - ¾ |
| Hunt Building Marts | 4½ | + 1½ |
| -Kaufman & Bd. ^e | 54 | + 7½ |
| Key Co. ^b | 10½ | + ¾ |
| Leisure Technology Corp. ^b | 22½ | + 6½ |
| H. Miller & Sons | 8½ | + 2 |
| McGrath Corp. | 7½ | - ½ |
| National Environment (Sproul Homes) | 2½ | + 1 |
| -Presidential Realty A ^b | 13 | + ½ |
| Presley Development | 31½ | + 6½ |
| Pulte Homes | 17 | + 1½ |
| Robino-Ladd | 18½ | - ¾ |
| Ryan Homes | 68 | + 12½ |
| Shapell Industries | 30 | + 5 |

a—stock newly added to table, b—closing price ASE, c—closing price NYSE, d—not traded on date quoted, g—closing price MSE, h—closing price PCSE, k—not available. —Computed in HOUSE & HOME's 25-stock value index. y—adjusted for 2-for-1 reverse split. z—adjusted for 3 for 2 split. NA—not applicable.

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

| | | | | | |
|-------------------------------------|-----|-------|--|-----|------|
| Standard Pacific Corp. ^b | 7½ | - ¼ | Canaverl Int. ^b | 6½ | + ¾ |
| U.S. Home & Dev. ^b | 43½ | + 5½ | Crawford Corp. | 5 | + ¾ |
| -Jim Walter ^e | 37½ | + ¾ | -Deltona Corp. ^b | 40½ | + ¼ |
| -Del E. Webb ^e | 10¾ | + ¼ | Disc Inc. | 4½ | - ½ |
| Washington Homes | 15¼ | + 2 | Don the Beachcomber Ent. (Garden Land) | 7 | - 1 |
| Western Orbis ^b | 5¼ | - ¾ | FPA Corp. (Fla. Palm-Aire) | 10½ | + 1 |
| S&Ls | | | | | |
| American Fin. | 32½ | + 6½ | -Gen. Devel. ^e | 29¼ | + ¾ |
| Calif. Fin. ^e | 8½ | - 1¼ | -Holly Corp. ^b | 1½ | - ¾ |
| Empire Fin. ^b | 16½ | - | Horizon Corp. | 38½ | + 2½ |
| -Far West Fin. ^e | 15½ | + ¾ | Major Realty | 8½ | + 1 |
| -Fin. Fed. ^e | 15½ | - 3½ | -McCulloch Oil ^b | 43 | + 2 |
| -First Char. Fin. ^e | 45½ | - ½ | Scientific Resources ^e | 1 | - 3½ |
| First Lincon Fin. | 6½ | - ¾ | (Sunasco) | | |
| First S&L Shares ^b | 20 | - 2½ | So. Rlty. & Util. ^b | 5¼ | + ½ |
| First Surety | 4½ | - ¾ | DIVERSIFIED COMPANIES | | |
| First West Fin. | 3 | - ¼ | Boise Cascade ^e | 44½ | - 4½ |
| Gibraltar Fin. ^e | 23½ | - 1¼ | Citizens Financial ^b | 16½ | + ¾ |
| -Great West Fin. ^e | 24½ | - ¼ | City Invest. ^e | 20½ | + 1¼ |
| Hawthorne Fin. | 13½ | + 2 | CNA Financial ^e | 20½ | + 2½ |
| -Imperial Corp. ^e | 14½ | - ½ | Cousins Props. | 38 | + 2½ |
| Trans-Cst. Inv. | 10½ | + 1½ | Forest City Entr. ^b | 20 | + ¾ |
| Trans World Fin. ^e | 11½ | - 1½ | Great Southwest Corp. | 2½ | + ¾ |
| Union Fin. ^b | 11½ | + 1½ | Investors Funding ^b | 12½ | + 3½ |
| United Fin. Cal. ^e | 10 | - 1½ | Leroy Corp. | 3 | - 1¾ |
| Wesco Fin. ^e | 23½ | - ¾ | Rouse Co. | 37½ | + ½ |
| MORTGAGE BANKING | | | | | |
| Charter Co. | 35 | + 15½ | Tishman Realty ^e | 25¼ | + 3½ |
| -Colwell ^b | 29½ | + 6½ | MOBILE HOMES & MODULES | | |
| -Cont. Mtg. Investors ^e | 17½ | - 5½ | Con. Chem. Co. ^b | 11 | - ¾ |
| Cont. Mtg. Insurance | 21½ | - | -Champion Homes ^b | 28 | - 1½ |
| Excel Investment | 11½ | + ½ | Commodore Corp. ^b | 11½ | + 4½ |
| FNMA ^e | 62 | - 2½ | -Fleetwood ^e | 30½ | - 4½ |
| First Mtg. Ins. Co. | 10½ | - 1 | -Guerdon ^b | 20½ | + ¾ |
| -First Mtg. Investors ^e | 28½ | + ¼ | Mobile Home Industries ^b | 14½ | + ¾ |
| -Lomas & Net Fin. | 15½ | - ¾ | Monarch Ind. ^e | 19½ | + ¾ |
| -MGIC Invest. Corp. ^e | 82½ | + 6½ | -Redman Indus. ^e | 27 | - 2¼ |
| Midwestern Fin. ^b | 28½ | + 1½ | Rex-Noreco ^b | 16½ | - 1 |
| Mortg. Associates | 31½ | + 2½ | -Skyline ^e | 29½ | + ¾ |
| Mortg. Trust of Amer. | 23½ | + 1½ | Town & Country Mobile ^b | 10½ | + ¾ |
| North Amer. Mtg. Inv. ^b | 25½ | + 1½ | Zimmer Homes ^b | 16 | - 1¾ |
| Palomar Finan. | 12½ | + 1¼ | Hodgson Houses | 5½ | - 2 |
| UIP Corp. ^b | 3½ | + ½ | Modular Housing Systems Inc. | 21½ | + 2 |
| (United Imp. & Inv.) | | | Nat. Homes A. ^e | 26½ | + 2½ |
| LAND DEVELOPMENT | | | | | |
| All-State Properties | ¾ | + ¼ | Nationwide Homes | 7 | - 1 |
| American Land | ¼ | + ¼ | Shelter Resources | 12½ | + 1¾ |
| -AMREP ^b | 37½ | - 1½ | Stirling Homex | 24½ | + ¾ |
| Arvida | 12½ | + 2 | Swift Industries | 4¼ | + ¾ |
| Atlantic Imp. | 15 | - | | | |

Rez

The best thing that's happening to wood

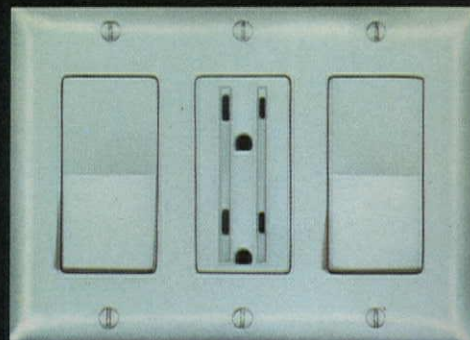
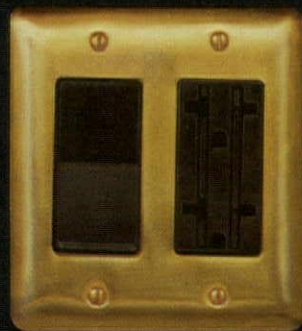
REZ Double-Tones . . . a one-coat system, specially designed for rough-sawn or textured exterior woods. Extra-heavily pigmented, yet costs no more than conventional stains. A time and material saver because one coat beautifies and protects like two coats of ordinary semi-transparent stain.

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"They just don't make 'em like they used to."

That's right. At Slater, we make them better. Our expanded Decorative Line of specification-grade touch-switches and receptacles, for example.

We've come up with a rather unique idea. Personalized embossing on the touch switch. Let's say you're bidding on the electrical contract for a new motel. There isn't a motel around who wouldn't love to see its name on every switch in the building. We can emboss other things, too, like switch functions (fan, disposal, etc.). The possibilities are limitless.

A small detail? Let's face it. In your business, an advantage is an advantage.

Speaking of advantages, here are some more.

We've added a new single receptacle to our Decorative series. Also a wide variety of combination devices. Slater's soon-to-be-a-classic 770 touch switch now comes in a 20-Amp version called the 2770.

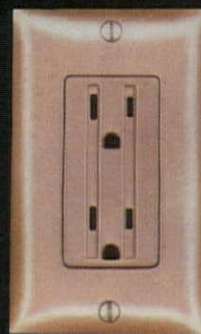
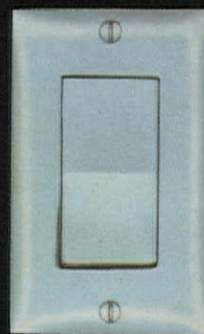
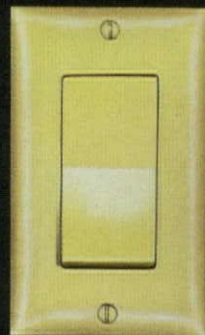
And the modular design of our Decorative series enables you to really reduce your inventory. One plate fits both the switch and the receptacle.

We also ask you to remember that selling up to Slater means greater profit per item. As if we had to tell you.

And last, but not least, are the colors. The newest decorator pastels belong in the newest buildings. The only part of an installation that your customer sees is the devices installed on the wall. If he likes what he sees, so much the better.

We have a whole bunch of new ideas. But they all boil down to one thing:

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If within fifteen years of the date of installation, the factory applied Colorlok finish fails in any of the above ways due to normal exposure, Masonite Corporation, after inspection, will compensate the owner for the paint and labor required to refinish the siding involved with one coat of paint.

In addition, Masonite Corporation guarantees its Colorlok Siding, other than finish, for a period of twenty-five years against hail damage. Should this product fail in this way within twenty-five years of the date of installation, Masonite Corporation, after inspection, will provide replacement material for the damaged panels, exclusive of installation.

Claims under either the fifteen or twenty-five year guarantee must be made in writing to the manufacturer within the life of the guarantee and prior to beginning any repair work. These guarantees are valid only when Colorlok Siding is installed according to the manufacturer's recommendations and extend only to the person(s) registered as the guarantee holder within thirty days after installation or occupancy of the premises.

Masonite Corporation accepts no responsibility for defects or damage resulting from or connected with misuse, abuse, improper installation, performance of other coatings, or other causes beyond the manufacturer's control.

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Mortgage rates are ready to bounce—and warnings about overbuilding are heard

The turnaround point for mortgage rates may be just around the corner.

With mortgage interest plunging headlong for six months, housing's money experts are now asking not whether but when rates will turn up. And how much?

The interest ceiling on government-backed mortgages had fallen from a December peak of 8½% to 7% on Feb. 17.

But when Housing Secretary George Romney made the last reduction, by ½% to 7%, the experts began to talk as if the low-rate market would be a short-lived affair.

But the new 7% FHA rate triggered no sharp rise in the Federal National Mortgage Association auction price for mortgages, although prices had leaped when the rate fell from 8½% to 8%, and from 8% to 7½%.

Several big New York banks—including the Chase Manhattan and Chemical—lowered their conventional home loan rates by ½%, to 7%, on March 3. But the impression among smaller competitors was that the big banks were grandstanding. The low rates were available only on 25% downpayment loans on one- and two-family homes.

Upward emphasis. The big New York bond house of Salomon Brothers & Hutzler has forecast a record demand for credit in 1971, and such demand would create upward pressure on interest rates.

The Federal Home Loan Bank Board has just raised liquidity requirements for savings and loan associations—and one of its intentions was to preclude the possibility of their investing in long-term bonds whose prices fall later this year.

Despite a flood of funds now in the hands of savings and loans, the president of the National League of Insured Savings Associations, C. E. Bentley, has warned that "housing markets are going to be faced (later this year) with a tightening mortgage money market." He adds:

"Homebuyers are going to be disappointed if they wait for interest rates to go lower."

And the Nixon administration's budget director, George



U.S. LEAGUE'S STRUNK
A warning about overbuilding



TREASURY'S CONNALLY
A cautious word on the economy

REAL ESTATE MORTGAGES—ALL TYPES (Annual Net Increases, \$ Billions)

| | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970E | 1971E |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Net Increase in Outstanding: | | | | | | | | |
| 1-4 Family Non-Farm Home Mortgages | 15.4 | 15.3 | 10.7 | 12.5 | 15.3 | 15.6 | 13.9 | 15.5 |
| Multi-Family Mortgages | 4.5 | 3.6 | 3.1 | 3.6 | 3.5 | 4.3 | 4.1 | 6.6 |
| Commercial Mortgages | 3.8 | 4.4 | 5.7 | 4.7 | 6.6 | 5.2 | 4.5 | 5.7 |
| Farm Mortgages | 2.1 | 2.3 | 2.1 | 2.0 | 1.9 | 2.0 | 1.9 | 2.1 |
| Total | 25.8 | 25.6 | 21.6 | 22.8 | 27.3 | 27.1 | 24.4 | 29.9 |
| Less: Federal Agency Net Purchases (a) | 0.2 | 1.0 | 3.4 | 2.6 | 3.5 | 5.3 | 5.5 | 2.8 |
| Net Increase in Privately Held Mortgages | 25.6 | 24.6 | 18.2 | 20.2 | 23.8 | 21.8 | 18.9 | 27.1 |
| Net Increase in Private Ownership: | | | | | | | | |
| Mutual Savings Banks | 4.3 | 4.1 | 2.8 | 3.2 | 2.8 | 2.5 | 1.8 | 4.0 |
| Savings and Loan Associations | 10.4 | 8.9 | 4.2 | 7.4 | 9.4 | 9.5 | 9.9 | 11.0 |
| Life Insurance Companies | 4.6 | 4.9 | 4.6 | 2.9 | 2.5 | 2.1 | 2.2 | 2.9 |
| Private Non-Insured Pension Funds | 0.5 | 0.6 | 0.5 | 0.1 | 0.0 | 0.2 | 0.0 | 0.1 |
| State and Local Retirement Funds | 0.6 | 0.7 | 0.8 | 0.5 | 0.4 | 0.4 | 0.3 | 0.4 |
| Total Non-Bank Investing Institutions | 20.4 | 19.2 | 12.9 | 14.1 | 15.1 | 14.7 | 14.2 | 18.4 |
| Commercial Banks | 4.6 | 5.3 | 4.7 | 4.6 | 6.7 | 5.2 | 2.1 | 6.5 |
| Finance Companies | 0.4 | 0.5 | -0.6 | 0.4 | 0.6 | 0.8 | 0.1 | 0.5 |
| Residual: Individual & Misc. | 0.2 | -0.4 | 1.2 | 1.1 | 1.4 | 1.1 | 2.5 | 1.7 |
| Total Net Increase in Private Ownership | 25.6 | 24.6 | 18.2 | 20.2 | 23.8 | 21.8 | 18.9 | 27.1 |

(a) Includes very small amount of state subsidies.

Salomon Brothers & Hutzler
New York City

P. Schultz, and Treasury Secretary John Connally have both implied that the economic outlook may not be as bright as officials had hoped. Their com-

ments mean that the federal deficit may well be much higher than the Administration's estimate of \$11.6 billion. Indeed, Schultz, under questioning by

Uncle Sam: builder or house wrecker?

A Senate report has just criticized the federal government for tearing down more houses than it helped build and for subsidizing more squalid homes than decent dwellings.

The Senate Select Committee on Nutrition and Human Needs made its charges in a study of the government's 33-year effort to ease housing need. The panel's report, "Housing Needs and Federal Failure in Rural America," was particularly critical of the Departments of Housing, of Health, Education, and Welfare, and of the Farm Home Administration.

"The government has proved

to be more efficient at destroying low- and moderate-income housing than in providing it," the report maintains. "Urban renewal, highway construction, and other federal programs destroyed more units in the last decade than federal subsidies created."

Subsidies' effect. The committee said \$9 billion in federal welfare payment goes to pay rent for needy families, two-thirds of which live in inadequate housing. It concluded:

"This means that the government . . . spends considerably more money subsidizing bad housing than subsidizing good."

the Joint Economic Committee, said that if the economy is not as buoyant as is hoped, the deficit could run close to \$20 billion.

When the deficit runs higher than predicted, the Treasury is forced into the credit markets to borrow. The pressure under rates increases.

Too much money? Norman Strunk, executive vice president of the U.S. Savings and Loan League, is worried about too much money coming into housing at one time.

Strunk notes that housing will have a major recovery this year (he predicts starts at 1.8 million; Bentley says they may approach 1.9 million), and he warns that any "forced feeding" of housing will be a mistake.

"Ample credit is now available to finance a major housing recovery," Strunk says. "We must avoid, however, an excessive injection of funds into the housing market because the problems it would leave could plague many local markets for several years to come."

'Overbuilding.' Strunk's comments are directed at the possibility of overbuilding, which occurred in the early 1960s, when money was in ample supply—as it is today.

The overbuilding problem was another reason the Bank Board acted on s&l liquidity. The Board said that association funds now exceed housing demand, although experts say that demand will build up later in the year. To avoid the possibility of overbuilding, as well as the possibility of s&ls having to take a loss on long-term bonds whose prices fall, the liquidity level has been raised from 5½% to 6½%.

Bank Board Chairman Preston Martin told an s&l group early in March: "We are now looking, as you are, for the next turn in the money markets—when money won't be as plentiful as it is today."

This, in essence, is what the experts at Salomon Brothers expect. Economists with the firm say the big demand for credit is going to dry up the excess funds.

By year-end, they say, a moderate growth in the economy is going to have interest rates rising once again. —A.M.



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CIRCLE 21 ON READER SERVICE CARD

Consumers on the march: their objections force changes in mortgage document

Consumer groups are having their say over the content of mortgage forms used by the Federal National Mortgage Corp. and the Federal Home Loan Mortgage Corp.

Public meetings began late in March, giving interested parties a chance to be heard on the final version of the controversial forms.

The forms, drafted by the two mortgage agencies, have come under severe criticism from the consumer advocate Ralph Nader as well as from Senator William Proxmire (D., Wis.), who has developed a reputation in recent years as something of a Populist.

Complaints about the forms focus on two major contentions: that the two agencies failed to consult consumer groups in drafting the documents, and that several clauses in the forms are unfair to consumers.

Nader and Proxmire criticized the forms on five counts:

- Lenders could foreclose if a loan default continued for 30 days.
- Lenders would have to charge a penalty for late payments.
- Borrowers would have to waive their redemption rights where state law permitted.
- Home owners would have to prepay taxes and insurance in monthly installments to the lender.
- There would be a mandatory prepayment penalty.

Easing of rules. Nader and Proxmire made these complaints after an initial draft of the forms was published last November, and the agencies revised the draft to ease some requirements.

For instance, in the case of foreclosure, the lender must give advance notice to the borrower. On late payment charges, the original draft called for such a charge after ten days; the new draft leaves the time period blank. On the prepaying of taxes and insurance, the new draft provides the lender discretionary authority to permit the borrower to pay these funds as they come due—without a prepayment.

New charges. Despite these and other changes, Nader insisted on public hearings. He wrote to Housing Secretary

MORTGAGE

THIS MORTGAGE is made this _____ day of _____, 19____, between the Mortgagee, _____, and the Borrower, _____, a corporation organized and existing under the laws of the State of _____, and the Mortgagee, _____, a corporation organized and existing under the laws of the State of _____.

17. Acceleration. Upon the occurrence of any of the following events of default, Lender may during the continuance of such event, by notice to Borrower, declare the sums secured by this Mortgage to be immediately due and payable, without demand:

(a) failure by Borrower to pay when due any sum secured by this Mortgage and the continuance of such failure for 30 days, or

(b) breach by Borrower of any other covenant or agreement of Borrower in this Mortgage, and the continuance of such breach for 30 days after notice from Lender to Borrower of such breach, or

(c) without Lender's prior written consent, the sale or transfer by Borrower of the Property, or any part thereof or interest therein, not, however, including the creation of any lien or encumbrance subordinate to this Mortgage, a transfer by devise or descent, or the grant of any leasehold interest of three years or less not containing an option to purchase.

NOTE

US \$ _____ City _____ State _____, 19____

FOR VALUE RECEIVED, the undersigned promise to pay _____ or, at the option of the principal sum of _____

The undersigned shall pay to the holder hereof a late charge of _____ per cent of any monthly installment not received by the holder hereof within _____ days after the installment is due.

The undersigned may prepay the principal amount outstanding hereunder in whole or in part on _____

New mortgage form adds restraints against foreclosure and late-pay penalty.

George Romney to demand that such hearings be conducted after the March 5 deadline that the two agencies had set.

In his letter, Nader argued that neither FNMA nor FHLMC had "actively sought to publicize the forms to the public

generally, nor made necessary and useful information available to consumer groups."

He further characterized the agencies' actions as a deliberate and systematic exclusion of consumer interests from the drafting process. "This deliberate



Write-in vote for \$20-a-month mortgage credit

The \$20-a-month mortgage assistance plan now under consideration by the Federal Home Loan Bank Board brought a deluge of mail. Chairman Preston Martin is shown with some of the letters received by the Board in Washington since the program was described.

The Housing Opportunity Allowance Program (HOAP) would aid buyers earning \$7,000 to \$10,000. The proposal has caught the fancy of the public if not the savings and loan industry. Newspapers that have run stories on the program report stacks

of mail and busy switchboards as consumers seek more information.

One letter to Martin read: "I feel that I am one of the forgotten Americans. Although my job is steady, my salary is consumed by everyday living expenses." Others asked the Board for more information and applications, and many included personal financial data.

The HOAP would provide a \$20 monthly "allowance" to homeowners for five years. Only homeowners seeking new, conventional mortgages would qualify. —A.M.

exclusion of the consumer," he said, "should be compared to the extensive consultation with the mortgage industry, beginning in September or before, and including the use of several industry task forces in the drafting of the forms, and the systematic inclusion of every known mortgage lender in the November mailing list"—which, according to Nader, included 20,000 names.

"The draftsmen have taken no active part in locating and notifying consumer groups or publicizing the forms," he said. "They passively wait for us to bring them names."

Market delays. Romney had promised he would approve the forms adopted by Fanny May before the corporation opened its secondary market. Since the FHLMC and Fanny May have attempted to come up with one document, Romney's approval would effectively determine the start date for operations of both secondary markets.

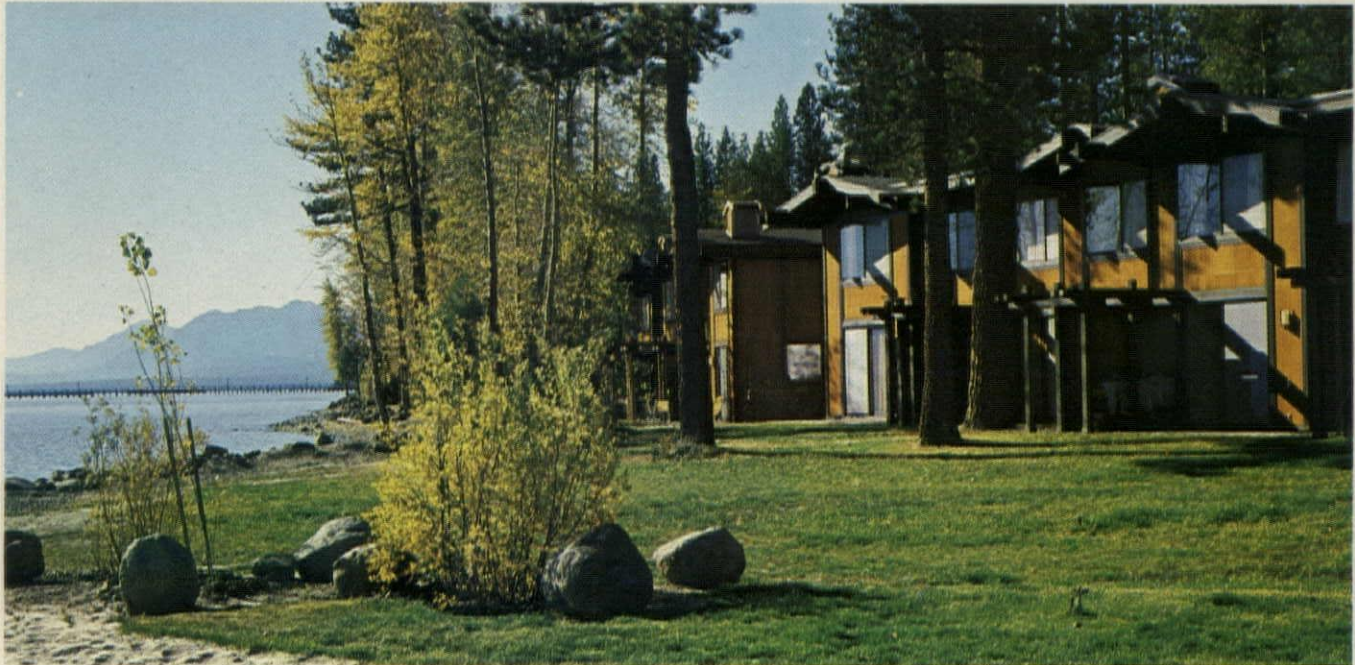
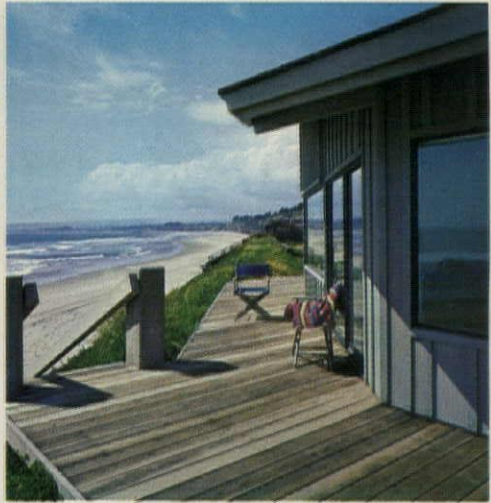
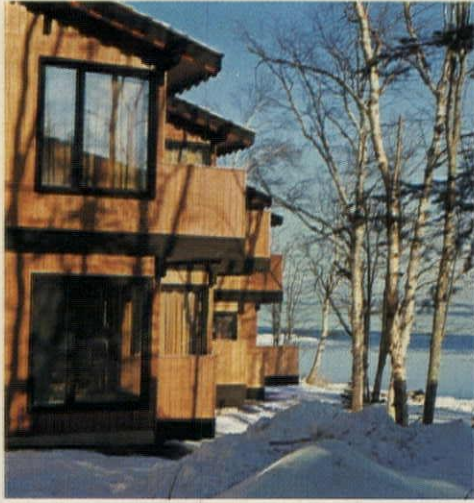
But Nader said Romney should hold the hearings to give public-interest groups a chance to comment on certain provisions in the forms which, he says, are clearly in favor of the lender.

His group, he said, had been unable to determine the reasons why certain terms have been adopted by the draftsmen, or the arguments or data felt most persuasive by them, or any dissenting views. "It is impossible," he went on, "to refute unknown arguments."

While Nader asked Romney to publish the forms in *The Federal Register*, giving adequate time for public comment, and to set up a neutral panel to hear arguments on the documents, what developed was short of that.

The hearings were being conducted under the auspices of Fanny May and the FHLMC—and the thinking was that officials of both agencies would hear oral arguments from interested individuals and groups.

Whether this would satisfy Nader or other critics of the draft forms was unknown. But, without question, it delayed the start of the secondary markets for conventional mortgages at both agencies until well into spring—if then. —A.M.



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Score one for the tenants: they win a standard lease for public housing

Tenants won an important round in their battle with at least one group of landlords recently when HUD ordered into effect a standard lease and grievance procedures for the nation's 857,000 public housing units.

The HUD announcement represents a major victory for the National Tenants Organization, a Washington, D.C., group that claims a membership of 300,000 in its 177 state, city, or apartment development affiliates.

This is the first time since the low-rent program was started in 1937 that minimum standards, applicable to all 1,900 local housing authorities, have been established.

New rules. The lease sets up precise procedures for handling security deposits, redetermining rent levels, re-examining incomes, inspecting dwelling units, and carrying out eviction policies.

For the first time, five grounds for eviction are made uniform

for all housing authorities: non-payment of rent, serious and repeated damage to property, interference with the rights of

others, creation of physical hazards, and over-income status.

The lease also grants any tenant threatened with evic-

tion the opportunity to be heard before an impartial judge or panel.

Year-long fight. The NTO fought for more than a year for the new policy.

Its first victory came last year, when tenant pressure prompted HUD to appoint a task force—consisting of members of the National Association of Housing and Redevelopment Officials (NAHRO) on the one hand and the NTO on the other—to draft a lease plan.

The two sides came up with a lease in October, but 11 local housing authorities fought off adoption for three months. They argued that the lease violated state and local laws.

The objections were withdrawn when the lease was rewritten to exempt leased housing, which accounts for about 10% of all public housing units. Leased units, privately owned, are usually subject to state and local rather than federal regulation.

HOUSE & HOME wins Neal award citation

Contributing editor Frank Lalli's article on modular home manufacturers, "The Phantom That Parades as an Industry," has won honorable mention for HOUSE & HOME in the 1970 Neal award competition.

The awards are made by the American Business Press, a publishers' trade group, to reward editorial excellence in specialized business publications.

The Lalli article, published last June, provided one of the first searching examinations of an infant industry that had been taking Wall Street by storm.

Lalli traveled and interviewed for 10 weeks before writing. He found that, at that time, very little modular housing had actually been produced, and he



RICHARD HOLLAND

WRITER LALLI

A citation for excellence

was then able to report:

"The modular housing industry is five new public companies, a few prefabbers, a dozen mobile home companies and enough press-agent puffery to stuff last year's total production of 2,000 units."

Lalli was an associate editor of HOUSE & HOME from 1964 to 1969. He is currently a staff writer for *Forbes* magazine.

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oven-set process makes Superoo's texture stay thicker and plusher.

But thickness and plushness are only part of the story. Superoo is offered in 15 solids and 9 coordinating tri-colors. From muted tones like Tahitian Teak and Gold Affection to vibrant color blasts like Cherry and Lemon Twist.

Take a look at the new Superoo. It's a story you can really sink your feet into.



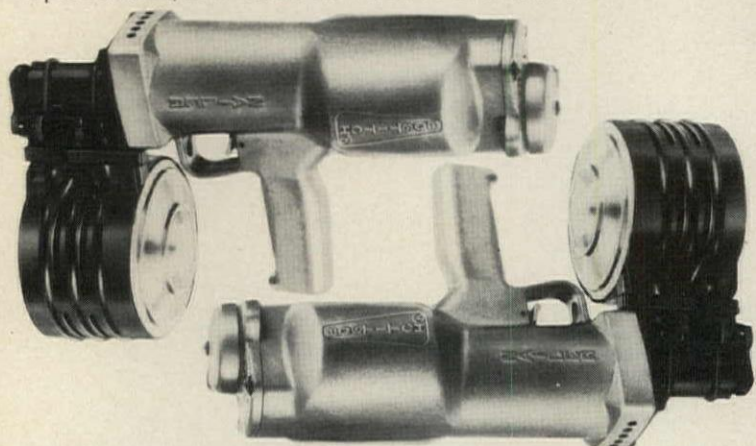
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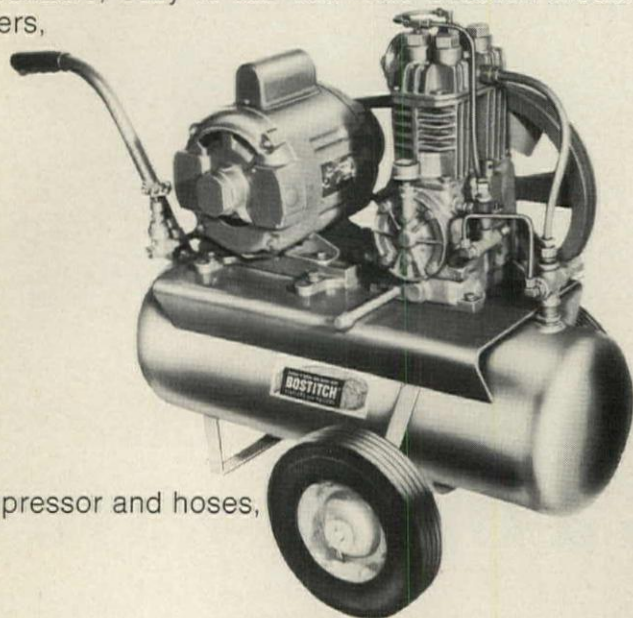
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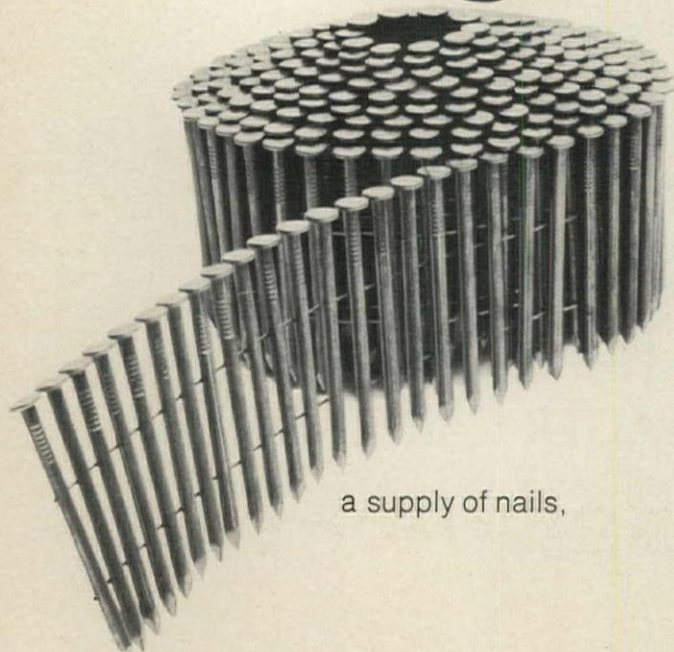
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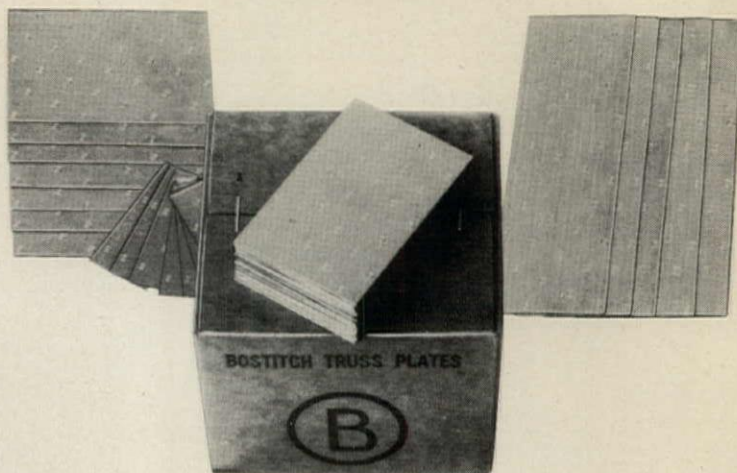
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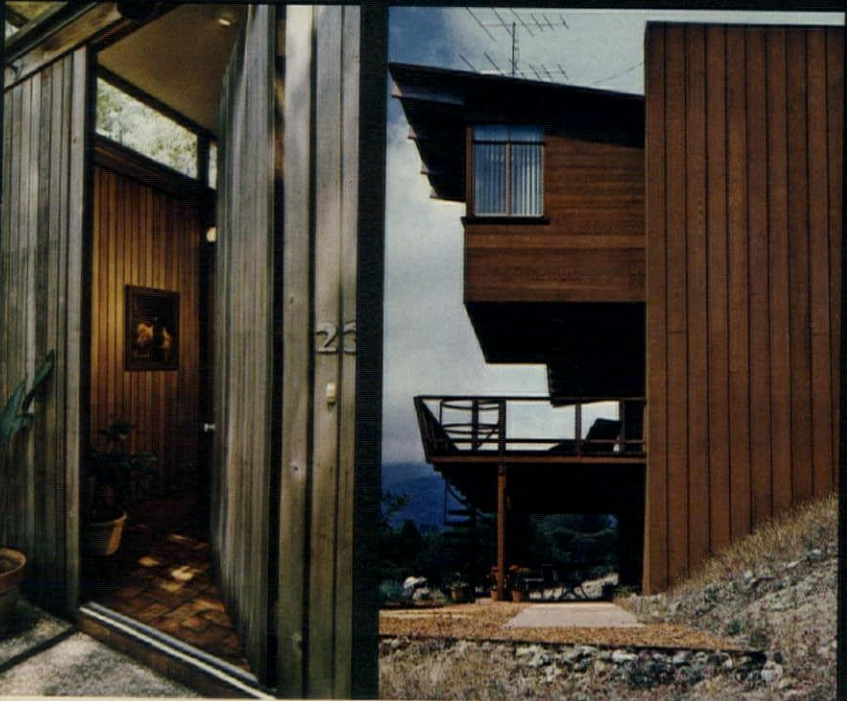
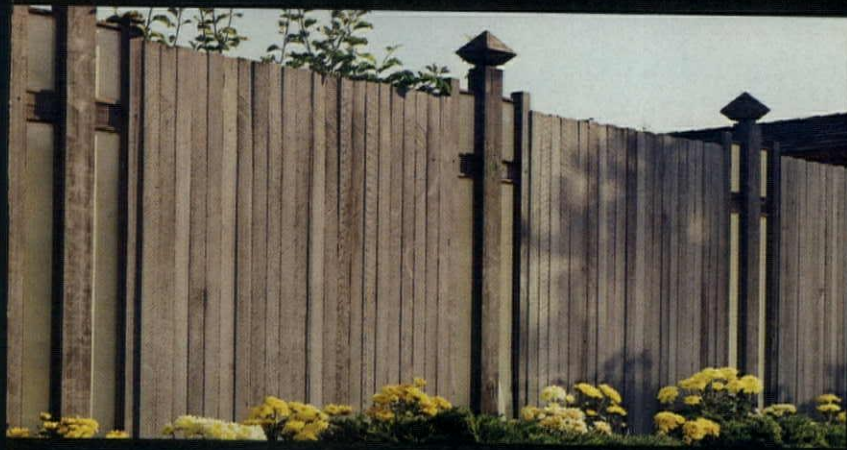
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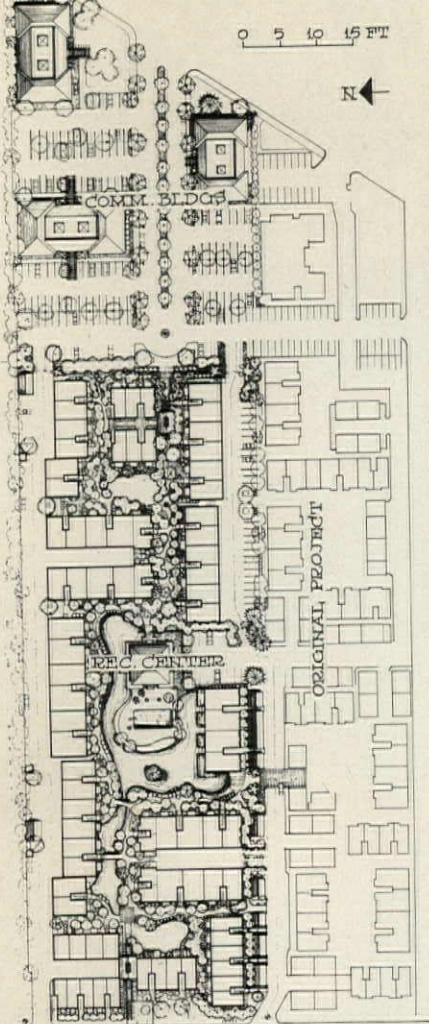


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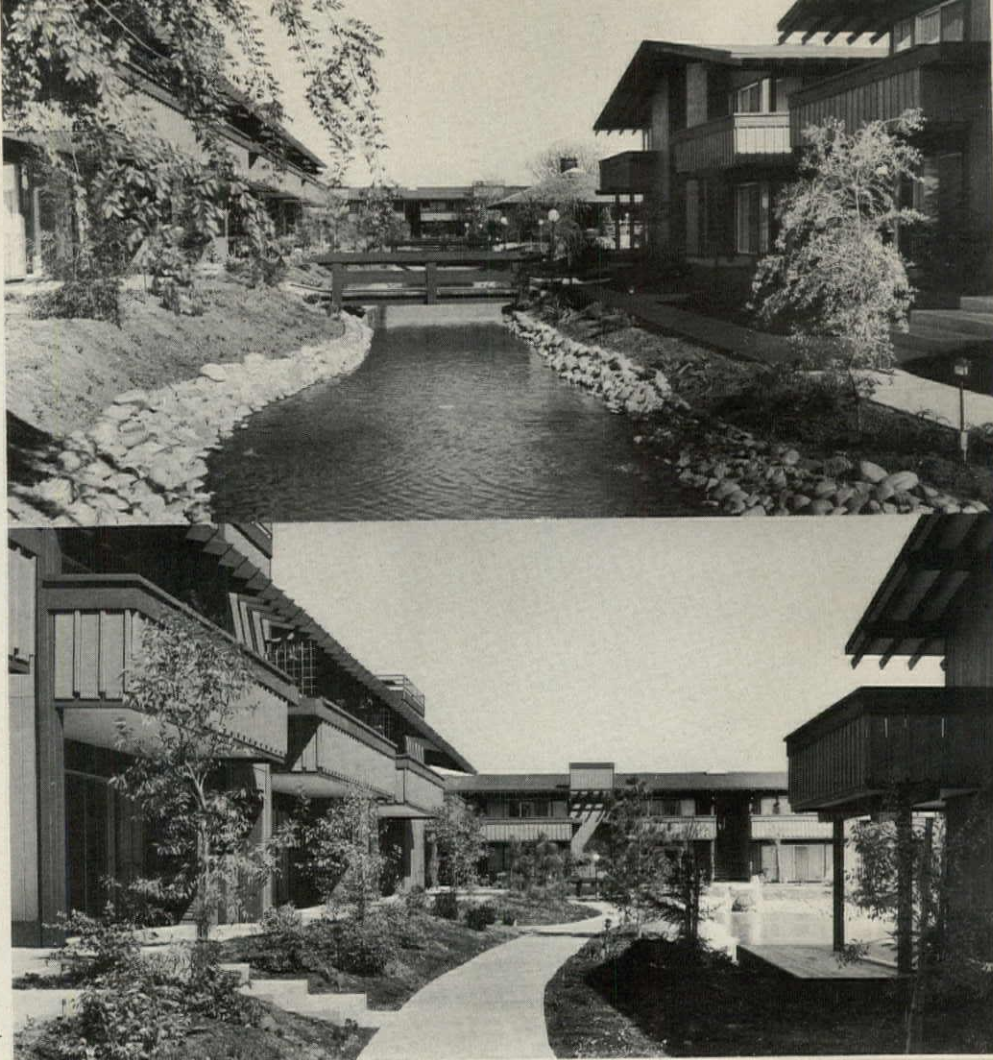
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Site plan shows how new project, left, relates to older section by same builder. Commercial area is at top.



For a narrow site: a high-density project with plenty of open vistas

The 9.8-acre site in Santa Clara, Calif., is 1,410 ft. long and 324 ft. wide. It includes 170 apartments, a community club, and three commercial buildings. And the apartment-area density is 25 units per acre. Yet the project has an attractive, open feeling typified by the two views above.

To create open space, the architect and the developer

placed much of the parking underground or on the site's perimeter. And to make the most of such space, they put in a meandering lake, winding paths, and generous landscaping.

The project, an Honorable Mention winner in the 1970 Homes for Better Living program*, adjoins an earlier development which won a similar award in 1968 (H&H, Sept. '68).

Like its predecessor, it was designed by architect Matt Copenhaver and built by Interland development Corp.

Apartment rents range from \$185 to \$425 for the one-, two-, and three-bedroom units. Tenants include young marrieds, empty-nesters, and singles.

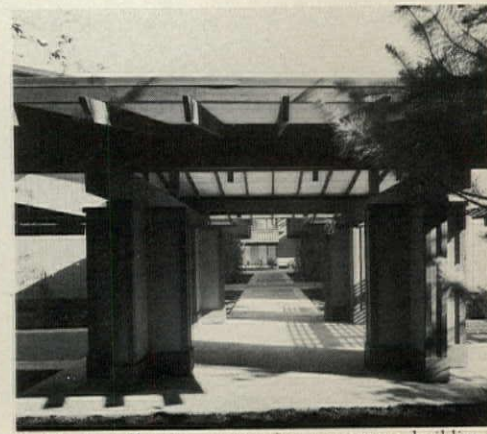
* Sponsored by The American Institute of Architects, HOUSE & HOME, and American Home magazine.



Decks and balconies of some units overlook lake. Individual storage closets are at sides of decks.



Office building style echoes apartment architecture. Commercial area accommodates 170 cars.



Trellised walkways, connecting apartment buildings, are used at three entrances to the project.

Now all Marvin windows can be pre-finished inside and out. You get a better window. and cut labor costs \$10-20 per opening.

We still make it easier to get wood windows — any style, any size, any option—than anybody else. And now we can give you all of these windows completely pre-finished.

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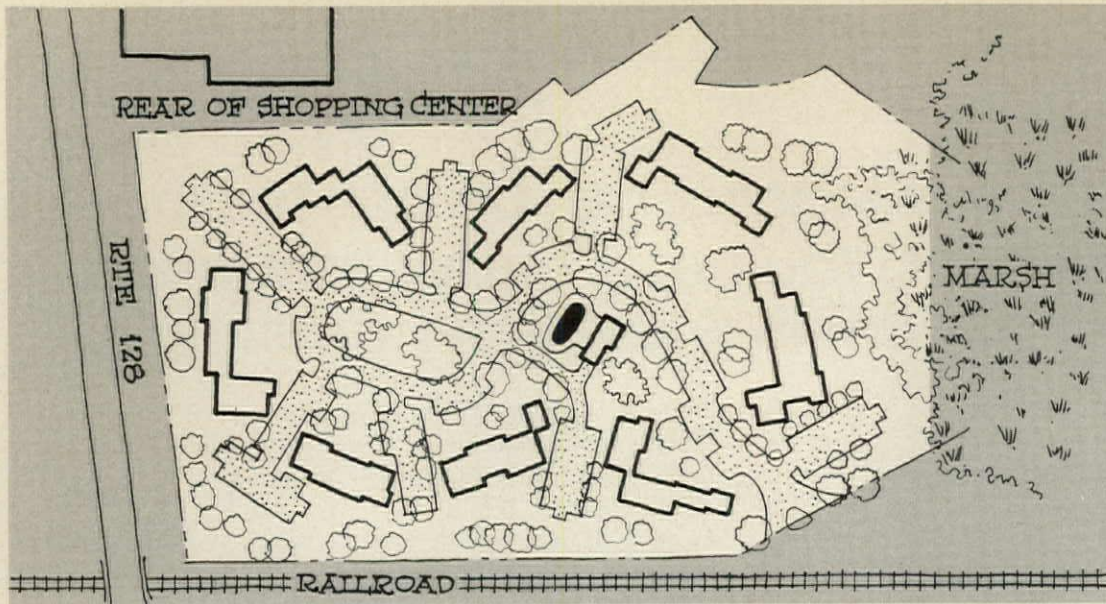


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26

CIRCLE 31 ON READER SERVICE CARD





Project plan shows how buildings are sited at various angles and oriented toward interior green. Entrance is at the lower right. Parking lots are at sides and rear of buildings.

Clubhouse and pool (below) are the hub of the project. Modelled after a New England barn, the clubhouse is used not only by tenants but also by local townspeople for meetings.

PHOTOS: CHARLES L. NORTON

Hemmed in by drab surroundings?

Shut them out and create your own environment

That's how the problem was solved at this rental project in Beverly, Mass., an industrial suburb north of Boston.

The 15-acre site, a former gravel pit, is bounded by a marsh, a railroad track, an elevated highway, and the rear of a shopping center.



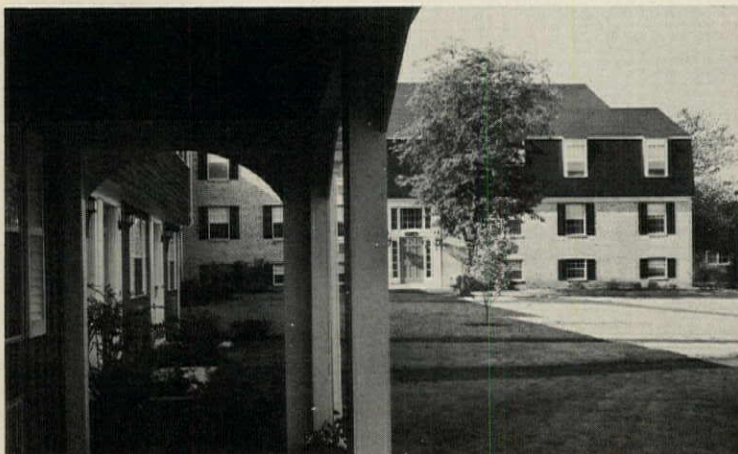
To isolate the project from its surroundings, its eight buildings were oriented inward to a common green, with a clubhouse and pool. And around the site's perimeter, and behind the buildings, trees were planted in a 50-ft. buffer strip.

All but 11 of the project's

219 units were rented 18 months after the first building was opened. Tenants are mostly empty-nesters and school teachers, although there are a few young couples. Rentals range from \$175 to \$295. And the unit mix consists of seven studio apartments, 78 one-bed-

room apartments, 110 two-bedroom apartments, and 34 townhouses.

The project, Beverly Commons, was designed by architect Claude Miquelle and joint-ventured by John M. Corcoran & Co., Edward Darman, and Beverly Trust.



Buildings have a mixture of board-and-batten, shingle, and brick facades.



Central green provides campus-like setting for the apartment complex.

Senco Value Analysis Report:



How to evaluate Automatic Fastener service

How highly should you rate service as a buying factor?

Service could be the *prime* consideration in the purchase of automatic staplers and nailers. When a tool goes out because of poor maintenance, and you can't get service, this costs you money. (Men without tools in their hands don't build much.) Rate service at least equal to other value points, making sure that the supplier provides professionally trained servicemen on a regular maintenance schedule, and on call at a moment's notice.

Construction Specialist vs. general salesman

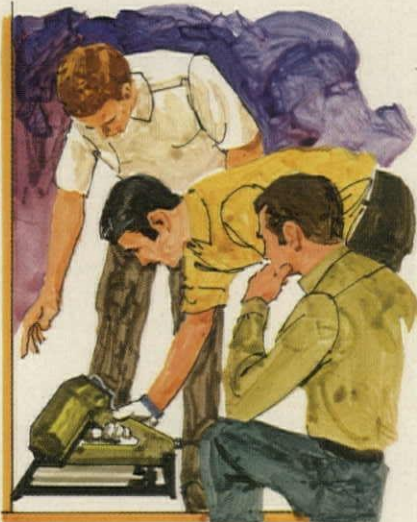


Stands to reason that a man who knows construction, and who spends 100% of his time serving builders will be better equipped to do a job for you than a salesman who calls on all types of businesses. If your fastener representative has mud on his shoes, and a pencil behind his ear, score a plus in your Value Analysis.

How essential is regular, on-site service?

Funny thing about workmen who rely on automatic fastening tools. When their tool breaks down, they'd rather sit than pick up a hammer. They know that they can do more work automatically in a few hours than they can all day by hand. That's why regular, on-site service is so important. You don't have time to run all over town for service. And nothing happens while you're gone. Insist on regular, pre-scheduled service. If you don't get it, don't buy.

Will you receive training help?



A properly engineered automatic fastening tool can make craftsmen out of your least experienced people, often in a matter of hours. But proper training in the very beginning, and periodic checking along the way, is critical in getting the most from your equipment. You should expect your fastener representative to take the time with each man to get him started right. And the representative should know enough about construction to *teach* him right. A Construction Specialist who talks your language.

How much maintenance is needed?

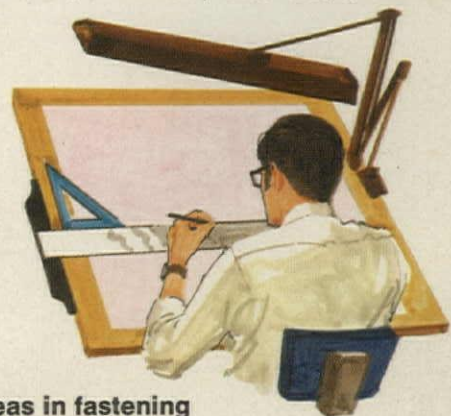
A well engineered, craftsman-built fastening tool needs little maintenance. Your Value Analysis should read, "tool meets highest standards of design and


proven reliable performance" — your assurance that constant maintenance is not required. Your Construction Specialist should also teach *your* people to do simple preventive maintenance themselves, which will further increase tool life and assure day-in, day-out trouble free operation.

What about systems planning?

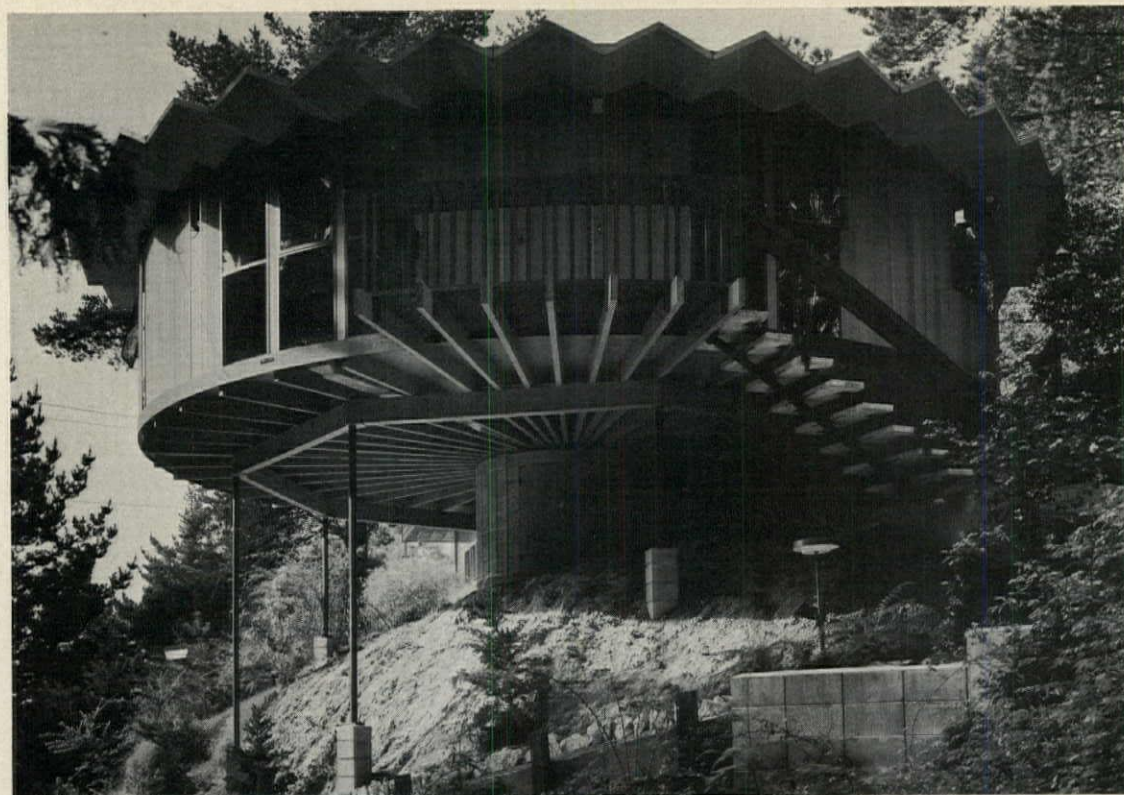
Revolutionary things are happening in the construction business — most of which have grown out of rising costs and narrowing profit margins. Automatic fastening tools, integrated in a systematic way, have helped solve these critical problems for forward-thinking builders. Your Construction Specialist, and his engineering and research back-up people, should help you develop systems for increased production, more efficient use of labor, and all around profitability with automatic fastening.

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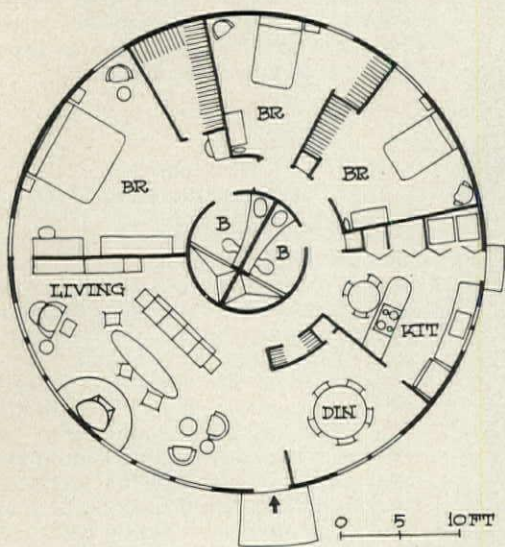
Senco 

Big Ideas in fastening



PHOTOS: MORLEY BAER

Circular house is set into hill, but design also suits flat sites. Model shown is 40' in diameter (1,250 sq. ft.), and is priced at about \$25,000 without land. Other models have been sold for use as a day-care center, office, and veterinary clinic.



A round prefab that's really round— even its components are curved

Most round houses are in reality polygons—straight-line walls within a circular frame. This house, however, has curved wall panels and doors, pie-shaped roof components, and a circular bathroom core.

The wall panels (3'6" wide and 8' high) are made up of 3x6 T&G cedar planks glued on edge and set vertically; the doors are made the same way but with hinges on one side. The folded-plate roof is made up of 3'6"-wide sandwich panels (plywood

with a urethane core) and beams. And the manufacturer—Meyer & Taylor Modern Structures of Oakland, Calif.—is developing a factory-built bathroom core that can be dropped into the shell.

Meyer & Taylor says the in-place costs of three models (34', 40', 45' diameters) range from \$18 to \$20 a sq. ft.

The prefab packages are available to franchised builders for \$7,900 to \$12,650 (f.o.b. factory).



Living room takes up one-quarter section of house (plan, above). Exposed ceiling with radiating beams heightens circular effect. Triangular area between beams and above exterior wall is glass.



Kitchen has curved cabinets and counter. Wall of bathroom core, background, is also curved.

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CIRCLE 34 ON READER SERVICE CARD



"Tenant unions explore another interesting angle: why shouldn't landlords carry tenants who can't pay?"

Out our way the tenant unions have a new slogan: "Apartments are for living, not for profits." That may sound downright unpatriotic to landlords. But to the tenants who are painting it on apartment house walls, the slogan is dead serious, and has all sorts of ramifications.

The latest interpretation we've heard goes all the way. Our local tenant organizers are now asking landlords to waive or postpone rent payments for tenants when they're down on their luck and short of cash. How long would the landlord carry them? Well, if the drafters of a model apartment lease for Palo Alto have their way, we would carry them "until they can get back on their feet."

The logic behind this arrangement was explained by Director Robert Lancefield of the Palo Alto Housing Corporation, which is helping to prepare the model lease. Says Lancefield, presumably with a straight face: "This question of a tenant's inability to pay is one of the areas where there is pretty big disagreement among landlords and tenants. Generally, it might apply where a tenant is on welfare or a fixed income and there is just not enough left at the end of the month to pay the rent. There is a feeling among part of the community that the landlord should be obligated to carry these people until they can get back on their feet. If a landlord evicts, he solves his problem by passing it on to someone else."

In other words, apartment landlords would take some of the burden off taxpayers by augmenting unemployment insurance and welfare payments. Instead of forcing the nonpaying tenant to seek state and federal assistance, the landlord would magnanimously carry the ball.

Forgive us our debts. My first question is, why only the landlord? Besides his rent, the average tenant also has car payments, charge accounts, and maybe a personal loan or two. Why don't tenants put the blame on General Motors, Sears Roebuck and Wells Fargo for a few months grace, too?

There's logic in believing "apartments are for living, not for profits," then the same thinking should be extended to "cars are for driving, not for profits," and "loans are for spending, not for profits." If nothing else, at least these additional suggestions might take some of the heat off us landlords.

My second question is, why not the tenant's employer? Before accusing the land-

lord of passing on the problem of an indigent tenant to someone else, let's back up one notch in the economic cycle to the employer who released our tenant from his job and created his money problems in the first place. If it's okay for an employer to keep his business afloat by laying off unneeded employees, how can a landlord be asked to jeopardize his business by absorbing non-paying tenants?

My third question is, if landlords carry tenants when they can't pay, will the tenants carry the landlord when he can't pay, i.e., pick up his mortgage, tax, and utility payments when business gets bad? At least they might be willing to do without maintenance and repairs for a while until business improves and the landlord is in a better position to meet his operating expenses.

My fourth question is, if a tenant can no longer afford his \$225 apartment, is it all right to ask him to move into a \$125 apartment, or at least one he can afford, rather than to continue supporting him in his customary style at the landlord's expense?

For some reason, apartment tenants feel justified in demanding free shelter, while the idea of free cars, free clothes, and free bank loans never comes up. Maybe that's what comes of conditioning people to the idea that lots of subsidized housing is on the way, and then not producing it. They become frustrated and start demanding from private landlords what the government has failed to provide.

Who's for bankruptcy? The only trouble is, the private landlord can't provide subsidized apartments in an existing project built under conventional financing. Subsidized housing needs a source of operating capital that never quits, i.e., tax money. In private housing there is only one source of operating funds—the rent money collected from the tenants every month. If his tenants stop paying, the landlord either has to find new paying tenants or go out of business.

Under a system in which down-on-their-luck tenants were excused from paying rent, the landlord would be in a unique economic position. In addition to laying out tax dollars to help support poor people, he would also give away part of the commodity that helps produce the tax dollars.

Now that tenants are finding strength in numbers, they're looking for action on several fronts. And much of what they've accomplished thus far has been beneficial

not just to themselves but to landlords as well.

For example, a new amendment to the California Civil Code permits tenants to make their own apartment-maintenance repairs and to pay for them with rent money. Under the new act, the tenant gives the landlord 30 days to fix a particular item and, if the landlord doesn't produce, the tenant may hire the work done and use up to one month's rent to pay for it.

There are deadbeat landlords as well as deadbeat tenants. Controls like this tougher civil code help reform bad landlords by placing effective policing power in the hands of tenants.

When tenant unions force through controls that improve the quality of apartments and their availability, they serve a useful function. Sometimes these controls tend to go overboard, such as forcing the Lefrak organization in New York to accelerate racial integration by paying the equivalent of moving expenses to any tenant who wants to move from one Lefrak apartment complex into another. But as long as the objective is to improve the product and the service that should be provided with it, tenant-union pressure will strengthen the apartment industry.

However, when the definition of landlord service is extended to include permission to skip rent payments, then tenant unions cease to make economic sense.

Sauce for the goose. Like any other group of consumers, apartment tenants are people who buy a product. If they take the product without paying for it, the production cycle breaks down. In promoting logic like this, tenant unions are forgetting their role as consumers and are confusing themselves with labor unions. Employers can afford to carry workers on sick leave or vacation because other workers are available to take their place. But no business can afford to carry a consumer who can't pay.

If tenants insist on equating themselves with labor unions, they could take a lesson from some of the better organized unions and work out a more sensible approach to carrying indigent tenants than forcing private businessmen to absorb them. Big labor unions set up insurance funds to care for members in financial need. Tenant unions could set up a similar fund to help indigent renters. But on second thought, the landlord would probably seem like a logical contributor, so maybe we'd better not suggest it.

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

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"The color in your model houses can sell—or kill a sale. It depends on how you use it"

Harnessing the persuasive powers of color is one of the most important aspects of model home interior design.

Splash on bold, conflicting colors and you shock, perhaps amuse, but rarely do you elicit the all-important positive emotional reaction from the average home-buying prospect. He simply cannot visualize his family living in carnival-like surroundings.

On the other hand, if your use of color is too subtle or too bland, you may fail to excite the buyer or arouse him emotionally. By the time he leaves your last model he has not been uplifted by what he has seen. And, naturally, he is less receptive to your salesman.

I try to make color a merchandising tool. The idea is to make the color scheme of a particular model imbed itself in the memory of a prospect so that when he visits six similarly priced subdivisions, the interiors will help him to remember yours. It may sound farfetched, but to the average person color helps reinforce the theme of the house, which he then identifies with a specific project or development.

For that same reason we carry a single color scheme throughout the entire house, rather than use a different scheme for each room. This again helps the shopper to remember particular models. At dinner that evening, Sophie and Sam are going to recall the model homes they visited by remembering colors: "Sam, remember that home," asks Sophie, "with the orange carpeting and the orange plaid velvet spread in the bedroom? I like that home, Sam."

When planning the interior color scheme of your model homes, contrary to widespread opinion there is no basic color that *must* be used. Any color can be used today with any style of furniture. For instance, red, white, and blue, which is generally a Williamsburg or a provincial look, can be combined just as effectively with contemporary furnishings.

Yellow is often considered a traditional color, but gray and yellow contemporary fabrics go exceptionally well with chrome and glass in contemporary-theme houses.

If you have not had much experience with color, here are some basic guidelines to follow in selecting colors and establishing themes:

A ranch home should be warmed with earth tones. The same is true for a Mexican or Spanish home. A traditional home should

be light, while a country French home should be warm. A contemporary home can be cool with monochromatic whites and beiges, or you can warm it up with some earth tones, browns and heavy textured fabrics.

Those are the basics. If you want to inject some fresh colors, without going overboard, use blue and gold in a ranch instead of blue and green. If you are really skilled at working with colors, or if you're going to use a decorator, try an olive and hot pink Mexican theme. Sounds ghastly, but if done right it can be great.

However, pink alone can be deadly for a development home. The same goes for black, kelly green, and purple. The mass audience, the group that you are merchandising your product to, generally reacts negatively to these four colors.

When planning the color scheme for a complex of models, it is important, as I pointed out in my last column, to start with a light, bright house and end with a light, bright house. Let's go back to orange, or as I call it, my orange juice house. This doesn't mean I use orange in every room. I add white, yellow, and other colors to complement it. But orange is a happy color and an orange house is a happy house. Yellow and lime green are two other bright cheery colors that combine to make a light, happy-feeling home.

For a dark house, consider a rust or brown. Rust is a warm, intimate, cozy color. It's a big, roaring fire, a rugged den. This is a man's house just as an orange or yellow and lime is a woman's house.

Now you've established your basic color schemes. Out of, say, four homes, one should definitely be a woman's home, one quite masculine, and the other two should be designed to appeal to both. In the same house, for instance, offer both an airy kitchen with lots of potted mums and an inviting den warmed by floor-to-ceiling bookcases.

The type of market you sell to also determines to a very large extent the colors you should use. Newlyweds and families with young children would find an all-white home with white carpeting and white sofas smashing but impractical. For this group, you would go to deeper tones such as blues and greens or browns and yellows.

As the family matures and the children start to grow, the second home buyer may not want to be so practical. He may be in-

trigued by a fresh coral and white color scheme or white and maroon (yes, I said maroon), which is both sophisticated and adaptable to various styles of furniture.

If you are building for an upper-middle income audience which may well be quite style-conscious and sophisticated, you might try a color scheme now gaining nationwide acclaim—beiges, roses, sauterne greens. It's very elegant and works well with eclectic furnishings (contemporary and traditional pieces mixed).

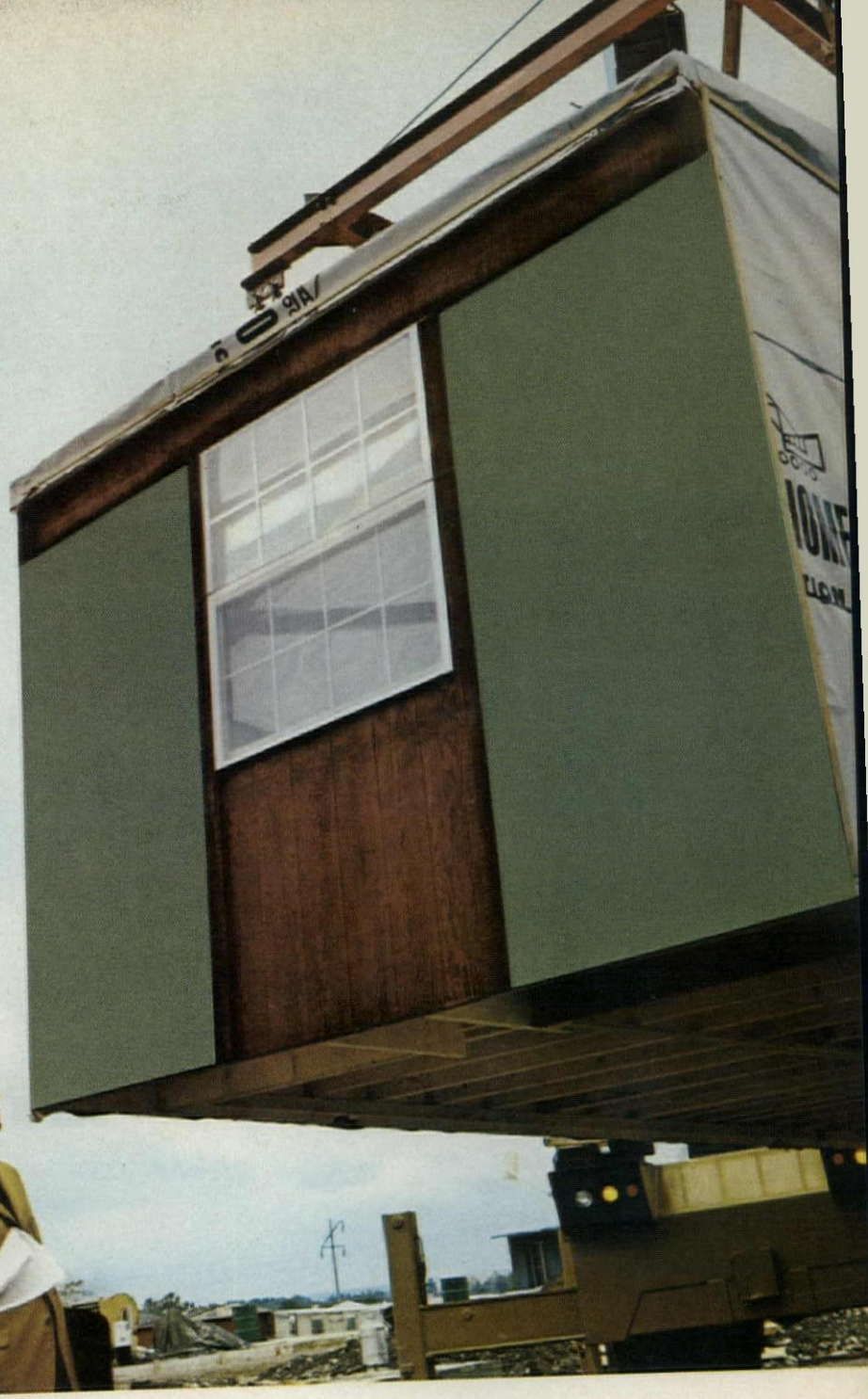
Mass market. That's a phrase I can't emphasize enough. It's your market, and it comprises the mass taste you must decorate for. So you cannot gamble with any approach that smacks of custom interior design. By that I mean you cannot show stark, sterile interiors simply because you happen to like the cold, clean contemporary look. It's simply too hard, too stark for the mass public. Black furniture also should not be used except as an occasional piece. The color black should only be included as an accent.

The location of a development plays a key role in color planning. Obviously, a Florida or dry desert locale would dictate the use of cool colors. Bright reds, and other hot or even warm colors wouldn't make sense. In these areas, if you need warmth, you achieve it with woods and textured fabrics. Proximity to water suggests a nautical theme. I have done, for example, a Cape Cod style in Long Island and a bright blue and white mariner apartment in San Diego.

Wallpaper is an excellent source of color. In fact, I suggest using it in practically every kitchen and bathroom. Wallpaper can help to liven up the traditionally drab subdivision bathroom, but you must be careful in selecting patterns. The paper I recommend should have an overall pattern without a distinct direction. In most cases, it should have a light background so as not to close the room in. Do not use stripes or plaids because the optical illusion in the small area makes one dizzy.

Summing up: the real secret in using color in model home or model apartment merchandising is restraint. Be bright, even bold, but don't overpower. Your objective is to make your product creep into the prospective buyer's mind and stay there. Bathing him in a blazing maze of color may prompt an immediate reaction, but, in my opinion, it will not help the sale.

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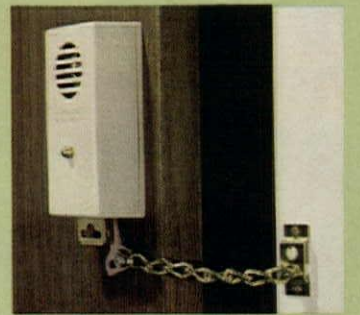
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CIRCLE 40 ON READER SERVICE CARD



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CIRCLE 38 ON READER SERVICE CARD



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CIRCLE 42 ON READER SERVICE CARD



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Quality of living

H&H: Hurrah and amen for your editorial on the quality of living [Feb.]. I agree with you 100%.

Oklahoma City has a conservative tenancy, but our planned unit development has gone over very well since our opening in May '69.

DICK COYLE
J.W. Coyle Co.
Oklahoma City, Okla.

H&H: I liked your editorial—also the PUD case history which might be an illustration for it.

Saul Shiefman
Shiefman, Werba & Assoc.
Detroit, Mich.

Justice due

H&H: Your article in the October 1970 issue, "California-style Marketing Hits New York," makes interesting reading, but is slightly askew on facts that need clarification.

Your picture of Heartland Village, taken in the rear of a house, certainly doesn't do this successful community any justice. It is not a "typical 100-150 unit" but rather a 1,500-home project of one- and two-family homes, 90% of which are fully detached. Presently there are about 350 families residing in this community. We are contem-

plating the start of construction of the swim club and shopping center.

Many builders could learn from our presentation how best to put merchandising money to use. Our sales records seem to back up our contention that we are on the right track.

GERALD WOLKOFF, president
Heartland Holding Corp.
Brooklyn, N.Y.



Heartland Village model home (above) and sales center (below).



LFC rescue

H&H: The article in your November 1970 issue is captioned "Uncle Sam subsidizes rescue of LFC Financial Corp.—at \$6.6 million a year." The first paragraph then continues: "A rescue operation for LFC Financial Corp., of Los Angeles . . . has been organized with the aid of a substantial government subsidy."

As a matter of fact, the payoff to Great Western to take over Lytton (but which allows Great Western to trade one of its shares for four of Lytton) is, or will be, underwritten by the Federal Savings and Loan Insurance Corp. The government has no investment in the FSLIC, nor does it undergird any of its expenses. The only source of income for the FSLIC is from the premiums paid by its insured members. The subsidy is being paid from the premiums of FSLIC-insured institutions—85% of which are mutual!

GEORGE L. BLISS, president
Council of Mutual Savings
Institutions
New York City

Regional planning

H&H: The author of "The zoning scene" [Feb.] is entirely correct, in our opinion, when he states that local home rule approaches to sol-

ving housing problems will work better than directives from "higher" levels. But he doesn't know what regional planning means as he equates it with regional government.

Around the country regional planning staffs generally report to boards composed mostly of local elected officials or persons responsible to them. On the housing front most regional planners work to assist the local governments to do the things Mr. Rahenkamp says need to be done. Perhaps he feels only private consulting organizations should be permitted to give this kind of assistance.

ROBERT N. YOUNG,
executive director
Regional Planning Council
Baltimore

H&H columnist John Rahenkamp replies: Reader Young is correct in pointing out the division between regional planning and regional government; we do not in all cases equate the two. To the degree that these two functions duplicate each other, however, regional planning becomes ineffectual. As a data collecting system, regional planning can be an aid to local governments. Regional planning boards—not just private organizations—should offer fact-finding expertise without governmental bureaucracy.



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Condominium living has much to offer . . . well-kept grounds, attractive buildings, freedom from care and maintenance. Cabot's Stains, the architect's choice for all wood surfaces, blend naturally, beautifully into the Heritage Woods setting. Cabot's Stains in 87 unique colors protect the wood, enhance the grain, grow old gracefully, never crack, peel or blister. Today the trend is toward stains . . . Cabot's Stains, the Original Stains and Standard for the Nation since 1877.



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One Union St., Dept. 430, Boston, Mass. 02108

- Send color card on Cabot's Stains.
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Heritage Woods, Avon, Conn.; Architects: Callister & Payne-August Rath; Builder: Paparazzo Development Corporation, Southbury, Conn.; Cabot's Stains throughout.

**a timesaving
guide
to the 1971
PCBC exhibits**

Builders attending the fast-growing PCBC show in San Francisco this June will encounter a colorful array of new products displayed in several areas of the Fairmont Hotel and—for the first time—in the Masonic Temple as well. PRODUCTS PCBC has been created by House & Home and its advertisers to organize your shopping tour of the newly expanded exhibit areas. 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 1971. Each product will be handsomely illustrated in full color, described in detail and identified by company and booth number.

save time and steps

With a significant expansion of exhibits at this year's PCBC show, booths will be located in the Mason-

ic Temple as well as in several areas of the Fairmont Hotel.

For this reason the order of presentation in PRODUCTS PCBC will be by booth sequence for each separate exhibit area. Thus, all exhibits at the Masonic Temple will be grouped together in PRODUCTS PCBC, enabling you to move quickly and efficiently through the exhibits to pinpoint products of special interest to you.

can't make the show?

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

their best, their newest, their most exciting. Every copy of PRODUCTS PCBC, 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 PCBC, House & Home, 330 West 42nd St., New York, New York 10036. Your copy will be mailed immediately on publication in late May.

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Shhh.

Six builders talk about the APA® glued floor. The quiet one.

"We use fewer joists... 24-in. centers instead of 16-in. centers. One layer of plywood."

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"We save \$55-\$60 using glued floors compared with double-layer, non-glued floors."

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"By gluing 5/8-in. tongue and groove plywood on 2x8 joists, I'm getting stiffer floors than with 2x10's..."

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"The nail-glued floor simplifies our operation and saves us 7 cents per sq. ft."

Ralph Howey, The Howey Co.,
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"We save \$10,000 a year with field-glued floors because we don't need a man to service squeaky floors on callbacks anymore."

George E. Glenn, Bluebonnet Homes,
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Harlan Carpenter, C&M Construction,
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Properly constructed, the system is as simple as glue-nailing a single layer of tongue and groove plywood to wood joists.

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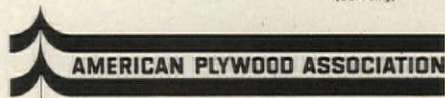
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We build a Cargostar the

When you think about it, our trucks and your foundations have a great deal in common.

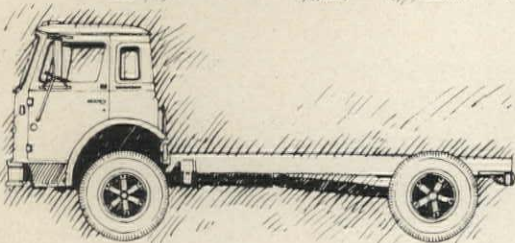
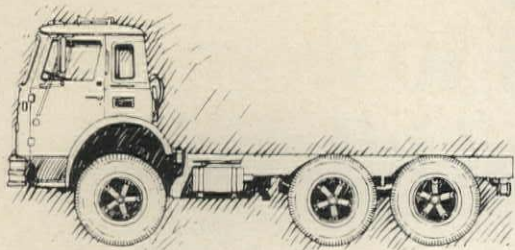
They both have to be the perfect size

for whatever you're planning.

And they both have to be built to carry whatever it pleases you to pile on top of them.



same way you build a foundation.



That's why the International CARGOSTAR® is so right for your kind of work.

There are ten basic Cargostar models for you to choose from. Their GVW'S go from 19,500 to 46,000 lbs. And their GCW'S range from 30,000 to 65,000 lbs.

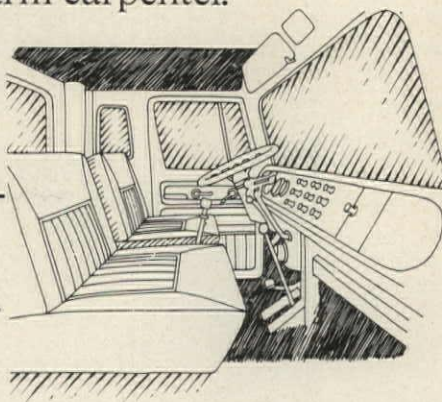
Whichever you choose, its tilt-cab will give you maximum accessibility for quick and easy servicing. It will have a wide-track front axle for better maneuverability. And tremendous cooling capacity. Its engine will be any of our many efficient gas or diesel engines. And it will have what is best in the way of frame, transmission, heavy-duty clutch, single or tandem rear axles and air or hydraulic brakes to meet your job requirements.

So you just go ahead and pile on the

bricks and blocks and mortar and lumber. It can take it.

Take it wherever you want. Down the road and onto the construction site. Or downtown where the traffic is tighter than knotty oak and where maneuverability and visibility pay off like a four-arm carpenter.

The inside of the Cargostar cab is something to behold, too. Flat floor, no engine



doghouse. Plenty of room for the driver and even a couple of crew people.

The International Cargostar really is a foundation of sorts. After all, when you're trying to keep a going business profitable, trucks that work long and hard can make an important contribution to your margin. The Cargostar might be just what you need to build a dream on.

Your International dealer can help you build the perfect Cargostar.



INTERNATIONAL® TRUCKS

INTERNATIONAL HARVESTER COMPANY • CHICAGO, ILLINOIS 60611

This is a taste of our year-round Life campaign. It's just one of the reasons 6 out of 10 women prefer a gas-equipped kitchen.

We have the facts in a study by an independent research firm. More than half the women when house-hunting would rather have one with a gas range. Great gas performance is one big reason. Our year-round advertising is another. Ads like this one—week after week in Life, Reader's Digest and many other major magazines. Plus gas-sponsored TV specials all season long. Remember, when she steps into a gas kitchen, you're probably one step ahead on the sale.

AMERICAN GAS ASSOCIATION, INC.

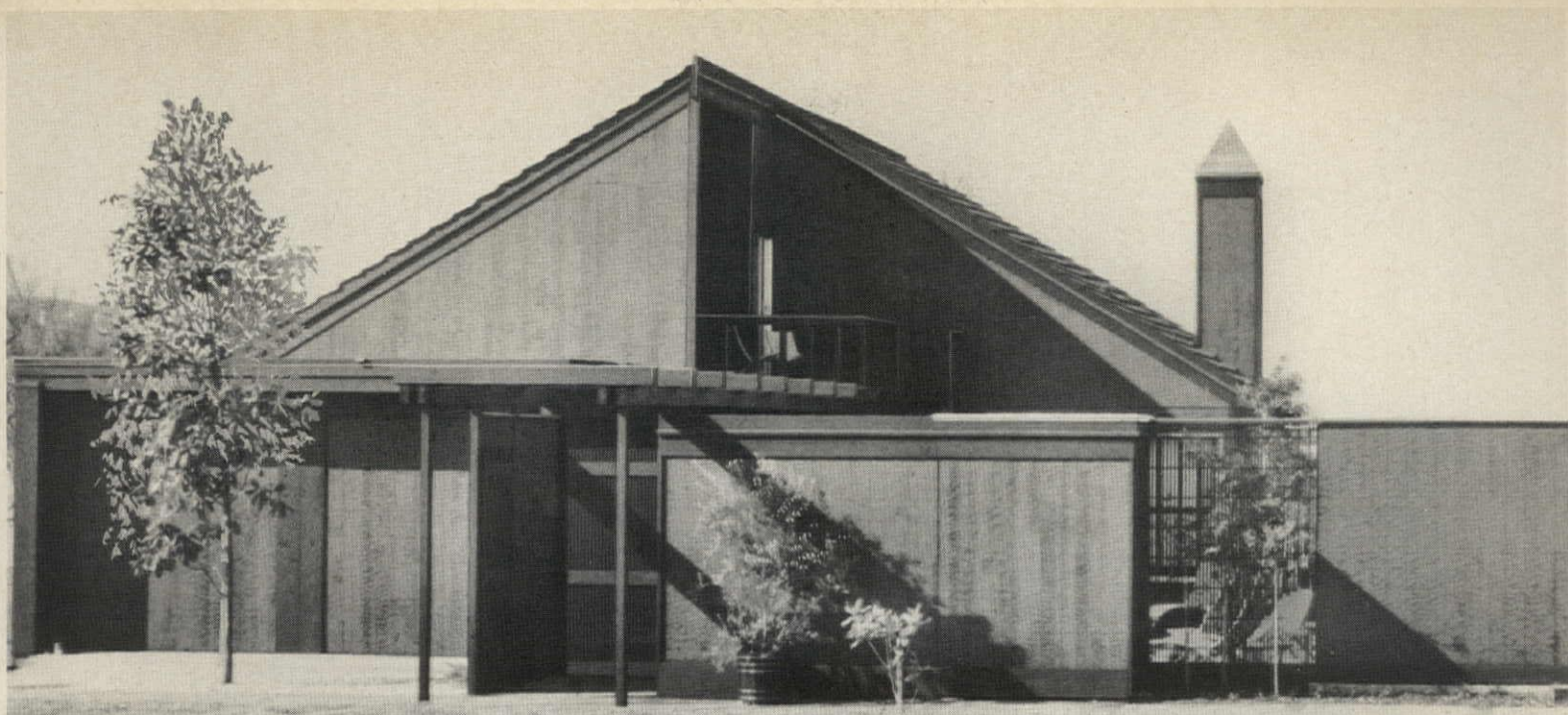


**The gas self-cleaning oven
can clean up anything
you can dish out.**

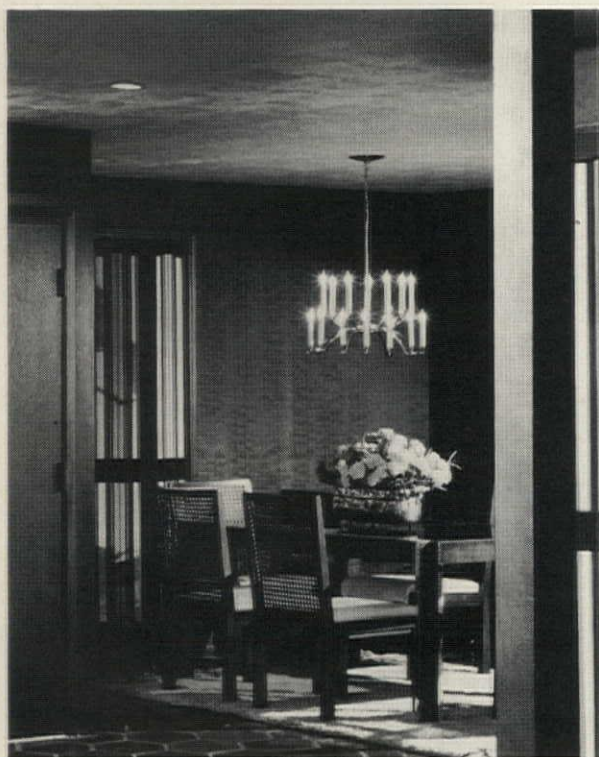
You name it—the gas self-cleaning oven will clean it. Fast. For less (about 2½¢ per cleaning). And gas gives you infrared broiling, the Burner-with-a-Brain™, and a dozen other great gas features. Most cooks cook with gas. How about you? See your gas company or appliance dealer.

Gas gives you a better deal 

AMERICAN GAS ASSOCIATION, INC.



Why was Progress Lighting selected for Computer House? For lower building costs and faster sales!



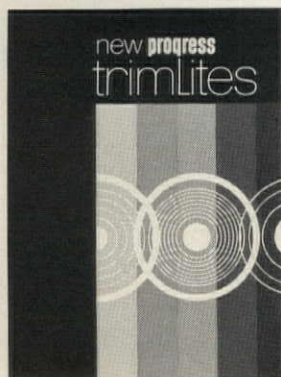
The Computer House in Houston was designed and constructed, with the aid of computer technology, to demonstrate how a home can be built faster. With lower material and labor costs. To sell faster. And Progress Lighting was selected exclusively for the entire home!

Why? Because Progress can deliver any fixture you need. In any style you want. In a price range to fit your budget. Promptly from local warehouses. That's how Progress became the world's largest manufacturer of residential lighting fixtures.

Take a new look at Progress. Our new Catalog 111 Supplement has great new Contemporary, Mediterranean and Traditional fashions for the entire home.

... especially the new, low-cost Trimlites. Recessed downlights that cost less—and save you money on the job because they're easier and faster to install! Another way you can make progress with Progress.

Mark the reader service card and we'll send you our new Catalog 111 Supplement along with the new Trimlite Catalog. For faster action, write us direct. Dept. HH-2, Box 12701, Philadelphia, Pa. 19134.



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LIGHTING

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Visit our booth 939 at the Apartment Builder Show in New Orleans, April 26-28



You can get advice from a man who helped change the face of Chicago.

You might say that if Paul O'Neill of our Corporate Market Development Operation didn't help to heat and cool Chicago's new Lake Point Tower and John Hancock apartments the way they were finally done, the architects of these two great buildings couldn't have made them look the way they do.

And their spectacular good looks as much as anything else set the tone of the new Chicago.

What Paul and his Electrical Systems Engineering group do is help consulting engineers, architects, builders, contractors and investors in making the best use of GE products in their projects.

What he did at both Lake Point Tower and John Hancock was to work with architects and consulting engineers to provide a through-the-wall



heating and cooling system using GE Zoneline™ units, whose exterior louvers could become important elements of the buildings' architectural detail.

And at both buildings, this approach overcame the problems created by solar loads on glass during those critical spring and fall months when one side of the building needs air conditioning while the other needs heat.

Paul O'Neill and his group are ready to help you solve electromechanical problems ranging from those they faced in Chicago to the best way to wire a kitchen.

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He's listed in the Yellow Pages under "General Electric Major Appliance Distributor," and he'll wire you in with Paul.

GENERAL  ELECTRIC



Photo courtesy Andersen Corp.

Be sure it insulates against lawsuits, too.

**For sliding
glass doors,
use Thermopane[®]
insulating glass units
made with Tuf-flex[®]
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safety glass.**

Now you're covered. When Tuf-flex tempered safety glass is hit hard enough to break (not easy), it doesn't break like regular annealed glass. It turns into pebble-like pieces that are very unlikely to cause serious injury. So when you tell your customer about the comfort of Thermopane, you can also tell him about the safety

of Tuf-flex. And that's a comfort, too. Thermopane/Tuf-flex units in clear, grey and bronze are available in standard sizes. Made only by Libbey-Owens-Ford Company, Toledo, Ohio 43624.

LIBBEY-OWENS-FORD 



"I've never seen anything like it. Every buyer was given his choice. And every buyer chose KitchenAid."

"This was one of my first projects," explained Burton Blase, president of The Redevelopment Corporation of America, "and I must admit that I did not know the KitchenAid quality story.

So when I began reserving condominium apartments in Park Central Towers in San Diego, I let each buyer choose the dishwasher he wanted.

Every single one of them chose KitchenAid."

Mr. Blase's experience seems to prove that renters and buyers want KitchenAid dishwashers.

At KitchenAid we go to a lot of trouble to build a superior

product. And for the past 20 years it's paid off. For builders who install our products and for customers who use our dishwashers.

Did Mr. Blase's buyers convince him?

"I'm having trouble with another make of dishwasher at home," he said.

"So I'm replacing it with a KitchenAid."

KitchenAid. We build them better. Not cheaper.

Ask your KitchenAid distributor about his builder plan. Or write KitchenAid

Dishwashers, Dept. 1DS-4, The Hobart Manufacturing Company, Troy, Ohio 45373.



KitchenAid
Dishwashers and Disposers
Hot-water Dispensers



Your new salesman is ready to start.

This spring, your customers are going to be hearing a lot about some of the easy ways to recognize value in a new home. From Ed McMahon!

Ed's hosting a new guest interview program, "Celebrity Homes", sponsored by the members of Ponderosa Pine on NBC Weekend Monitor. He's going to visit famous personalities, talking about the things that interest your customers most—homes and home decorating ideas.

Along with each guest interview, your customers will hear useful tips that'll help them see the quality in the houses and apartments you build. One of the important things he'll be talking about is the warmth and beauty of wood panel doors.

What Ed says makes sense.

A recent consumer survey showed that people recognize the durability and beauty of wood panel doors. They expect to see wood panel doors inside the better homes. This shows that homeowners generally look for wood panel doors as a sign of quality—a sign of character and individuality in a home—a sign of tasteful living. And now's the time to take advantage of these attitudes.

Panel doors inside carry a design theme beautifully.

Your customers start making up their minds the minute they walk in the front door. And you know a handsome wood panel door makes a handsome first impression. But why not let wood panel doors

carry your design theme all throughout the home? A door can have a great deal of influence on the character of a room. Any room.

There's a lot to choose from.

It's easy to build character with doors because there's a beautiful wood panel door to complement any home design. Spanish, modern, traditional, contemporary, colonial—you name it. There are 65 different designs for exterior panel doors, and dozens more for interiors. This means you can vary your door design theme from home to home to give each home its own individuality.

And don't forget to consider louvered doors, too, for that extra bit of interest.

Tune in with your customers.

This spring, "Celebrity Homes", sponsored by the members of Ponderosa Pine Woodwork, is going to tell your customers about the quality features in your homes. And Ed McMahon will be pre-selling your customers on the extra quality of wood panel doors and wood windows, too.

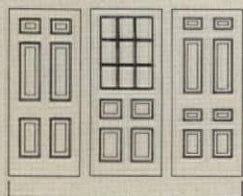
Stay tuned to NBC Weekend Monitor from April 3 to May 16. You'll see what we mean.



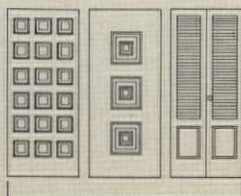
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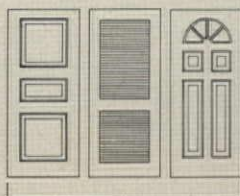
A member of the American Wood Council



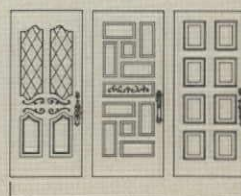
Colonial



Contemporary



Traditional



Mediterranean

HOTPOINT HUSTLE

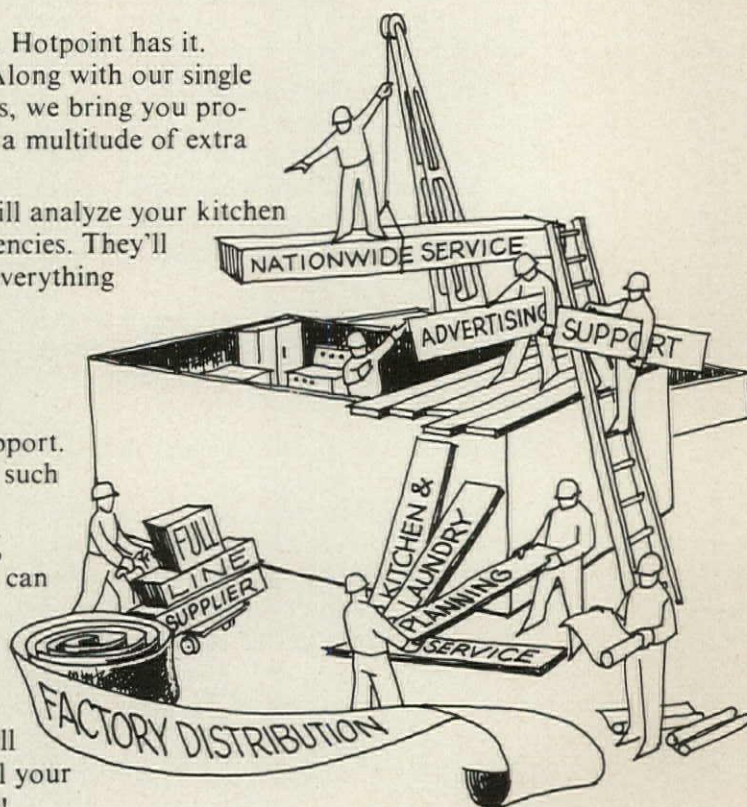
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in one complete package.

You name the appliance. Hotpoint has it.
But we don't stop there. Along with our single source of full line appliances, we bring you professional building advice and a multitude of extra services.

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Your Hotpoint counselor works closely with you from blueprint to closing offering other services like advertising and merchandising support. And following through on details such as scheduling delivery on time.

And since we're the only 100% factory-owned distribution, we can get things to you in short order. You see, we hustle at Hotpoint for a very good reason. We want your business, and we'll hustle to keep it. Call your Hotpoint man, now!



Hotpoint
The difference is Hustle



**There are some windows in this world which must be
scraped and repainted every other spring.
There are others which you simply open.
We help Caradco make the second kind.**

Caradco's prefinished C-100 window is made virtually carefree with durable Geon vinyl. Exposed exterior frame and sill, side brick mold, head brick mold and blind stops are sheathed with rigid Geon vinyl. Flexible vinyl material is used for glazing, too. It resists cracking, crumbling and leaking.

Geon vinyl and Caradco believe that windows should let you enjoy life.
B.F. Goodrich Chemical Company, Dept. H-21,
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"The floor underlayment I trust is NPA grademarked particleboard."

Dwight E. Graber, Graber Homes, Fort Wayne, Indiana



"If it has the NPA grademark clearly stamped on it, I know what I'm getting," says Dwight Graber. And you'll know too.

We've taken away the guesswork and replaced it with the assurance that particleboard floor underlayment stamped with the NPA grademark is manufactured to meet or exceed U.S. Commercial Standard CS 236-66. Only those manufacturers agreeing to a rigid in-plant testing and quality control program that is verified by NPA through unannounced visits to the mills and tests of board in an independent laboratory are permitted to use the NPA grademark.

The NPA grademark tells you the things you want to know. The standard the particleboard

floor underlayment conforms to. The mill that made it. And the use for which it's been engineered.

Easy to cut, smooth, stable, solid, and void-free, particleboard gives you trouble-free performance when installed properly. Write today for NPA's free booklet, "How to Install Particleboard Underlayment." And next time you use floor underlayment, specify that it must be NPA grademarked particleboard floor underlayment. It's the underlayment you can trust.



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Hunter has it. Every basic size, shape and type of electric heater. Portable and installed. Industrial, commercial and residential. Convection and fan-forced. From handy 7-pound carry-around unit to whole-house central electric furnace and air conditioner. Baseboard, wall and ceiling heaters. For bathroom and kitchen and den. For homes, stores, offices, apartments, motels and mobile and modular homes. Also infrared and unit blower heaters. Ceiling cable and panels. Sidewalk and driveway snow melters and roof de-icers. So call off the search for a complete-line supplier. The hunt ends with Hunter.

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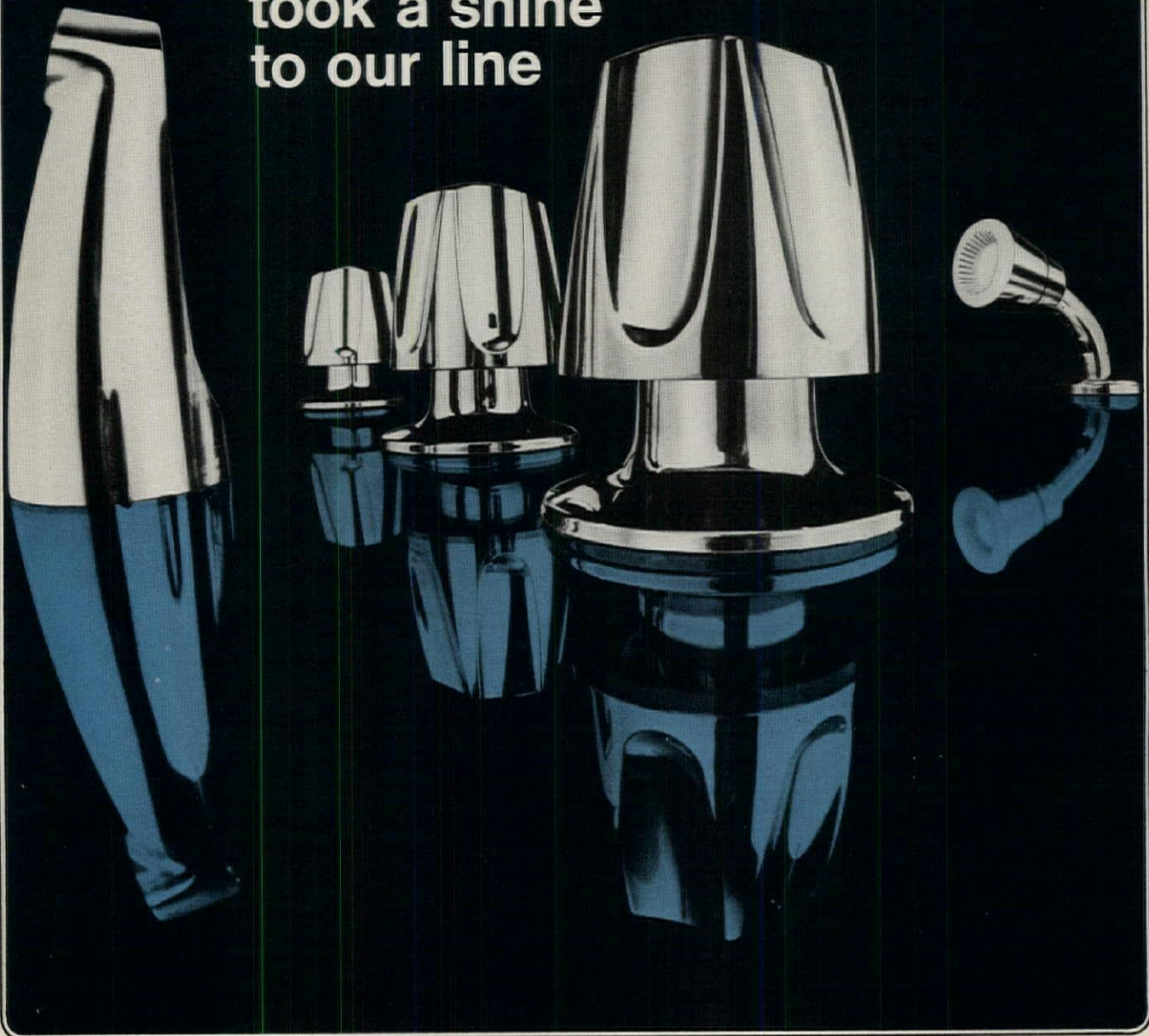
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the day
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Manufacturers of Plumbing Brass 13500 Paxton Street, Pacoima, California 91331 • Subsidiary of Norris Industries

What consumerism means to you

The buying public is kicking up a storm over shoddy products, false sales claims, and slick credit deals... Should you feel uptight?

By no means—because in the long run all that militancy can work to your benefit.

It's easy to understand why consumers are demanding their rights, why Washington is starting to react to their demands, and why Ralph Nader, the high priest of consumerism, has taken on the stature of a folk hero. In a word, the public is tired of being taken.

Sooner or later—and probably sooner—the sort of public reaction generated by dangerous toys and fault-ridden cars, for example, is bound to crop up in the housing market. Already there are straws in the wind:

- Apartment tenants are organizing against landlords, making heady demands (see p. 36), and getting results (see p. 26).
- Critic Nader has started a probe of the recreation-land business in California, according to a newsletter published by the Housing Data Bureau. Nader's manager of the investigation says, "This will probably be the most controversial report ever issued in the state."
- Consumers, inspired by Nader and Senator William Proxmire (D., Wis.), are forcing changes in mortgage forms used by the Federal National Mortgage Corp. and the Federal Home Loan Mortgage Corp. (see p. 22).
- The Department of Housing and Urban Development, which is not exactly impervious to public opinion, has started issuing "consumer protection" pamphlets.

Of course, it's quite possible to do what many other businessmen have done about consumerism: think of it as a dirty word, impugn the motives of people like Nader, and only make improvements when they're forced on you.

It's possible but not very sensible. For one thing, the wave of consumerism won't subside just because manufacturers, retailers, and builders make faces at it. For another, con-

sumerism could turn out to be more of an opportunity than a problem.

The well-informed, skeptical, demanding buyer (or tenant) needn't be a threat. He can, in fact, be your best customer—if he's convinced you're trying to give him what he wants.

Giving him what he wants puts you on the side of the angels. More importantly, it puts you in a stronger competitive position. And there's plenty of evidence to back up that point:

Buyers and tenants want a better living environment. That's why planned unit developments, for example, tend to have relatively fewer sales and rental problems.

Tenants want well-managed apartments. That's why smart apartment owners are putting more and more emphasis on hiring and training professional apartment managers—and why their projects have low turnover and low vacancy rates.

Buyers want fast action on callbacks. That's why post-sales selling—meaning a prompt response to complaints—has always been a sure way to build up referral sales.

And everyone wants more and better housing for the money. That's why builders can't afford to ignore the timely opportunity spelled out in the story on the next ten pages. The gist of the story: families with low to moderate incomes are being sold shelter that looks like a bargain but really isn't. So why are they buying, and why hasn't the voice of consumerism been raised? Because consumers haven't been offered a real alternative—yet. But builders can provide the alternative—and not only develop a market but also beat consumerism to the punch.

It's that kind of reaction—upbeat instead of uptight—that's the key to dealing with aggressive consumers. You can't beat them, so why not join them? —JOHN F. GOLDSMITH

It's
time
to
take
the
low-
price
market
back
from
the
mobiles





Mobile homes have taken a big slice of the housing market, and the slice is bound to grow even bigger unless the homebuilding industry starts competing now.

Consider the inroads already claimed by mobile-home manufacturers: for the past two years their annual shipments have topped the 400,000 mark; they account now for 95% of all new single-family housing priced below \$15,000 and 46% of all new houses selling at any price.

Consider also the help mobiles are getting from high places: FHA and VA will now insure mobile-home loans, and no less a personage than President Nixon has said he considers mobiles the best answer to the shortage of low- and moderate-income housing.

None of this can be comforting to homebuilders. It means that more than 20% of the country's current housing volume is being produced by mobile-home manufacturers, sold by mobile-home dealers, and sited on land owned and developed by mobile-home developers.

Homebuilding can thank no one but itself for this situation. It has, in effect, given away the under-\$15,000 market by default.

But the industry can take back much of that market.

First of all, the mobile home is not that tough competition. It is, in fact, a rather poor buy for almost anyone, and particularly for a low-income family. It has flourished up to now because almost nothing else has been available for less than \$15,000.

Secondly, homebuilders *can* produce housing for this market. They have long-established expertise in the most important areas: land planning and development, design, marketing and finance. And they have a product with all of the advantages of the mobile home and few of its disadvantages—the modular house. With the combination of all these elements they can offer better housing than the mobile and at much less cost to the buyer.

It would be naive, however, to think that mobile-home manufacturers will just disappear. They have reached their present position through hard work and shrewd merchandising, neither of which will diminish in the face of increased competition. And they have also taken a solid share of the infant modular industry. In one way or another they will almost certainly remain a strong factor in the low-cost housing market.

But homebuilders can and should take their logical place as the prime movers in this market. They should be either manufacturing or controlling the house itself, handling the development of the land, and selling the houses. And they should start moving in this direction right now.

Why and how this can be done is the subject of the next eight pages.

Let's analyze the mobile home and see how well it serves the low-price market

Price: the mobile isn't as cheap as people have been led to believe

On the one hand, the Mobile Homes Manufacturers Assn. declares:

"We estimate the average mobile home in 1970 sold for \$6,050. The average size was 12'x60'. And 83% of all mobile homes shipped last year were 12' wide."

But on the other hand HOUSE & HOME reporters, shopping last month in and around eight major cities, discovered that 12'x60' mobiles typically ranged in price from \$6,500 to \$8,500. With minor exceptions, anything cheaper was roughly in the 10'x40' category, selling at \$4,000 to \$5,000.

Says a HOUSE & HOME shopper from Toms River, N.J.: "A dealer/park-owner here vowed he had *nothing* for sale cheaper than a 12'x60' model for \$7,900. A lower-priced mobile, he cautioned, would be junk. A few miles away, a salesman for a top-quality park just opening in this community told me his least expensive model—12'x60'—was \$7,800."

The Dallas shopper for HOUSE & HOME wired: "Bargains are possible in year-end close-outs, as they are selling some 200 of last year's models for \$7,395."

Furthermore, cost calculations do not end at the price tag. There is a list of necessary extras that jack up the home's price by \$1,000 or so.

Thus, on a \$7,000 mobile home, add these expenses: city and state sales taxes (\$420

in New York City, \$350 in Illinois and California); license (\$100 in Dallas and Seattle); steps (\$50 to \$150 in Chicago); skirting (\$200 in Seattle, \$240 in San Francisco, \$150 to \$350 in Chicago); and awnings—sometimes mandatory at parks—(\$350 in San Francisco, \$300 in Seattle).

In high-wind areas, anchors are critical. In Miami such tie-downs cost \$100. And while set-up charges are usually absorbed by the dealer—or added to the home's selling price—in Chicago some buyers are paying an extra \$100 to \$300.

Since it is impossible to store bicycles, lawn mowers, garden tools, barbecue grills, etc., inside a 12'-wide mobile home (there is no room), small sheds for outside storage become necessities—not luxuries. Sears, Roebuck and Co. sells a 7'x10' shed for \$115, a 5'x6' shed for \$70.

The industry further promotes the low-cost image of mobile-home living by stressing that all mobiles are fully furnished, offering buyers a total-home environment.

So a HOUSE & HOME shopper asked a salesman in New Jersey by how much the price of a \$7,800 model would drop were the unit delivered *without* furniture—but with carpeting and kitchen appliances. His answer: \$200.

And what was the carpeting worth? The salesman's reply: \$160.

Depreciation: in 10 years the mobile is just about worthless

Everyone within the industry knows it. There's even *The Blue Book** of used-home prices to guide dealers on trade-ins, just as there is for second-hand cars.

The lenders know, too. They limit borrowing to about seven years but will stretch to 10 years on higher-priced units.

Even the government knows. For example:

"While the life of a mobile home can vary substantially depending on make and model, climate, and the care taken by its occupants, some indication of its expected life is suggested by the typical financing period of seven years, as compared to 20 to 35 years for conventional construction. And unlike many houses, the mobile home loses a good deal of its resale value at the end of a relatively short period." So said the report of the National Commission on Urban Problems, submitted to Congress and the President, December 12, 1968.

Despite that, the general public is not aware that mobiles do depreciate in value.

Compounding the consumer's problem

is the fact that the dealers—unlike their counterparts in the automobile industry—strive to minimize the depreciation factor when questioned:

The Miami HOUSE & HOME shopper reported:

"Dealers claim that even the cheapies will last 25 years with minimal care."

The San Francisco reporter-shopper wired:

"Dealers wouldn't say how much the 12'x60' home would be worth in 10 years. They said if the home is in a quality mobile park in the Bay Area it will keep its value quite well."

The Dallas shopper reported:

"The salesman here was very evasive when I asked about value. He said he could not say what anything would be worth after 10 years. But, he added, there is 'not much depreciation' in mobile homes. 'Good used ones are hard to find,' he said. He would not give any figures on depreciation."

The Chicago reporter said:

"When I asked how much my little in-

vestment would be worth after 10 years, there was invariably a pause while the dealer gathered his story together. They all said the value will depend on the condi-

tion of the mobile home. One dealer felt the place of sale might affect the price."

*Judy-Berner Publishing Co., Westchester, Ill.

Financing: for mobiles, rates are high and terms are short

So financing is expensive for the buyer. But it's lucrative for the lenders:

The typical rates—11% and 12%—are way above mortgage levels. The average seven-year lending span—while longer than on, say, a three-year auto loan—is nonetheless easy for lenders to live with. And the downpayment, anywhere from 20% to 30%, is sufficient to offset early depreciation, building in lender protection.

The clincher: mobile-home financing is available even in tight money markets.

A better deal for the borrower appeared on the horizon in December 1969 when the FHA offered to insure personal bank loans of

up to \$10,000 to buy new mobiles at least 10'x40' in size. The terms: 12 years, 32 days. Down payment: 5% of the first \$6,000; 10% on the remainder. Rate: 7.9% on a \$10,000, 12-year loan.

But this FHA program has never really gotten off the ground because lenders think the rate is too low.

Lenders today also come out on top when a mobile-home owner decides to sell to a private individual. In such cases, the lenders refuse to refinance. Instead, title to the mobile is transferred to the second purchaser, and the original owner is held legally obligated for the loan's repayment.

Land: good mobile park space is limited—and costly

That means the doors of the better parks are often closed until the mobile-home family comes up with the proper key.

One key: some park owners demand an entrance fee. In Miami, according to HOUSE & HOME's shopper, that fee can go as high as \$2,500. Exit fees also exist.

Another key: some owners say "No admittance" to anyone not buying a mobile home from them or their designated dealers. And then such prices are inflated.

Why do shortages exist? The industry's statistics* clearly answer the question:

In 1970, 404,000 mobile homes were sold; 172,000 park sites were built.

In 1969, 412,690 mobile homes were sold; 121,000 park sites were built.

Once inside any park, the family lives under the threat of eviction. Leases are seldom granted.

The mobile-home family also pays monthly rent—another expense—for its pad. Based on reports filed by HOUSE & HOME shoppers throughout the United States, typical rents at good but not outstanding parks today are: Atlanta, \$50; Chicago, \$80; Dallas, \$45; Miami, \$65; San Francisco, \$70; Seattle, \$50.

* Mobile Homes Manufacturers Assn. and Woodall Publishing Co., respectively.

All this adds up to high monthly payments

And they're especially high for the typical mobile-home family, which reportedly earns \$10,000 a year or less.

Let's put the pieces together. Here is a picture of what a buyer of a 12'x60' mobile home has to pay:

| | |
|----------------------|---------|
| Loan (7 years) | \$6,500 |
| monthly repayments | |
| on loan | \$115 |
| Monthly rent for pad | 60 |
| | — |
| Total monthly outlay | \$175 |

| | |
|-------------------|---------|
| Purchase price | \$7,500 |
| Downpayment | \$1,000 |
| Extras (cash) | 1,000 |
| | — |
| Total cash outlay | \$2,000 |

That's \$2,100 a year—a lot of money for a \$10,000-family to spend on shelter.

Actually, however, that \$2,100 expenditure is only a *subtotal* in the mobile family's budget. One more piece must be added:

Depreciation makes the picture even worse

To see just how bad it can get, let's estimate the family's depreciation loss at the end of five years at a conservative \$3,750—half of the \$7,500 purchase price.

Now spread that loss over the 60 months

the family lived in its mobile home. Result: in effect, an extra cost of \$62.50 each month.

Of course the family doesn't pay this out each month. But it *doesn't* get recouped when the mobile is sold.

...So
the
low-cost
mobile
winds up
a
pretty
expensive
proposition

Okay,
what
about
the
modular?

Can it
do the
job
better
than
the
mobile?

First, let's be sure we all mean the same thing by "modular"

The modular, as used in this article, is a single-family house made up of one or two modules. After delivery its wheels and undercarriages are removed (otherwise it would be a mobile-modular), and it sits on a permanent foundation.

Other definitions used in this article:

The mobile is a single-family unit that 1) does not meet standard housing construction codes, and 2) keeps its wheels

and thus is taxed as chattel rather than real estate.

The double wide is mobilese for two mobiles hitched together side by side to form one unit.

The mobile-modular is simply a modular with the undercarriage and wheels left on.

The double-wide modular is just what it says. For all practical purposes, it is also the same thing as a sectional—a term which will not be used again in this article.

Unlike the mobile, the modular is built to standard house specs

That means things like 2 x 4 studs instead of 2 x 2s. It means standard sheathing, roofing and siding, plus electrical, plumbing and heating systems that meet local housing codes.

Indeed, modulares are often better and more rigidly built than conventional houses. They have to be to survive the haul

to the site without cracking wallboard, and to span the pier foundations sometimes used under modulares.

Mobile homes, on the other hand, are built to standards which in most cases were established by the industry itself. Their rate of depreciation is proof of the level of these standards.

But just like the mobile, the modular can be built in a factory

In fact, many mobile manufacturers produce both modulares and mobiles in the same plant—sometimes on the same assembly line. So the modular can benefit equally well from the advantages—present and future—of assembly-line production.

It's true that an efficient stick-built operation can still produce houses just as cheaply as most factory operations. But it's much

more efficient to build houses for many sites in a central factory than to set up individual stick-built operations on each building site. And it's pretty generally agreed that within a couple of years, the combination of skilled construction-labor shortage and the resultant high cost of that labor will make factory operations definitely advantageous.

And the modular is just as mobile as the mobile home

It may, in fact, be even more mobile. The wheels on a mobile serve chiefly as 1) a delivery device from the plant to the park from which the unit probably will never move and 2) a legal device which allows the mobile to circumvent building codes. Few mobiles leave their initial site until they are to be junked.

The modular can also be on its own wheels (a cheaper method than flat-bed trailer). Once it is put on its own foundation, the wheels and undercarriage are either removed, or, in some cases, left in

place as part of a permanent foundation.

This does not mean that the modular is permanently anchored to its site. Should the owner decide to trade it in for a new model, or perhaps move it to the mountains as a vacation house, the undercarriage can be either resuscitated or slipped back into place and away the house goes. It should, in fact, be far more amenable to such moves than is the mobile; since it is built to more rigorous specifications, it should retain its structural vigor for a far longer period.

So physically at least,
the modular house seems to have
all of the mobile's virtues
and
none of its deficiencies.

Now, what about cost?

This has to remain a somewhat iffy question because first of all the modular market is still very new and, second, it's possible that under the pressure of competition, mobile manufacturers might be persuaded to drop their prices somewhat. But for the moment, the price difference between the mobile and the modular is very small—remarkably small when you consider the difference in specifications.

Take, for example, the typical 12' x 60' mobile HOUSE & HOME's corps of shoppers priced out: its 684 sq. ft. (you have to extract about 36 sq. ft. because the towing gear is figured in as part of the 60 ft. length)

carried a price tag of roughly \$7,500, so the unit price works out to about \$11.00 a sq. ft.

Or take the typical double-wide mobile, which is steadily growing in popularity. A bottom-of-the-line model can sell for as low as \$10 per sq. ft., or even a hair less. But a top-of-the-line model can sell for more than \$13 per sq. ft.

In both cases, the unadvertised "extras" noted on p. 64 can boost the sales price by as much as \$1,000, which in turn raises the cost per sq. ft. by as much as \$1.

Now, what about the modular?

The modular should sell for little more than a good-quality mobile

Typically, those modulares produced by mobile-home manufacturers will cost between \$11 and \$12 per sq. ft. The quality of these units will vary according to the manufacturer and the model line, but a homebuilder, comparing them to conventional housing, would judge few of them any higher than middle-of-the-line, and some of them considerably lower.

A better example is the modular line now being produced by Levitt Mobile Systems, Inc., a joint venture of Levitt & Sons (H&H, Feb.) and Environmental Systems Industries (H&H, June '70). These are legally mobile-modulars, since they carry a motor-vehicle inspection tag rather than a building-code approval tag. But in fact, structure,

and price, they are modulares. They are priced at about \$13.50 per sq. ft., including most of the same decorating and appliances as a comparable sized top-of-the-line mobile.

So it works out this way: today's buyer pays anywhere from \$9 to \$12 per sq. ft. for a run-of-the-mill mobile, and more than \$13 per sq. ft. for a top-of-the-line, double-wide mobile. By contrast, he must pay from \$11 to \$12 per sq. ft. for a run-of-the-mill modular (most of them are double wide), and as much as \$13.50 per sq. ft. for a top-of-the-line modular (also double wide).

Not very much difference.

*But
that's
not the
whole
story.
Not
by a
long
shot...*

The modular is a real house. Put it on its own lot and it qualifies for a mortgage. And then everything changes

It commands favorable financing

Today's conventional mortgage rates of 8% to 8½%—and FHA's 7%—are far below the 11%-12% (and sometimes even higher) installment loan rates that mobile-home buyers must pay.

Further, the 20-to-30-year terms available both on conventional and FHA/VA mortgages are much kinder than the 7-to-10-year terms given the mobile purchaser.

The upshot: a family that mortgages a modular and puts it on its own land pays far less per month for shelter than does the mobile-home family under comparable circumstances—even when the cost of the modular's site is included.

Here is a hypothetical but entirely realistic case history of the costs incurred by a modular-buying family.

Assume the family bought a modular house the same size as did the mobile-owning family (see p. 65), and selling for \$13.50 a sq. ft.

| | |
|--|----------------|
| Purchase price | \$9,700 |
| Land | 3,000 |
| Downpayment (20%) | \$2,540 |
| Closing costs and extras | 600 |
| Total cash outlay | \$3,140 |
| Monthly payments on a conventional 20-year 8% mortgage of \$10,000 | \$83.70 |

It can appreciate—not depreciate

The modular can go up in value for the same reason any other house down the street does: the land under it appreciates, usually faster than the house itself depreciates. (Since modulares are built to the same specs and codes as the conventional house, they should depreciate no faster than the conventional house.)

Bankers realize that. If they didn't, they wouldn't make mortgages on modulares. Instead, they would opt for the installment loan.

What it all adds up to is a much cheaper home for the buyer

| | |
|---------------------------------------|-----------------|
| Monthly payments on real-estate taxes | 25.00 |
| Total monthly payment | \$108.70 |

Had the family chosen an FHA mortgage, the downpayment would have been less and the monthly payments would have been slightly higher. Specifically:

| | |
|---|----------------|
| Purchase price | \$9,700 |
| Land | 3,000 |
| Downpayment (3% FHA) | \$380 |
| Closing costs and extras | 600 |
| Points | 160 |
| Total cash outlay | \$1,140 |
| Monthly payments on an FHA 20-year 7% mortgage for \$12,320 | \$97 |
| Monthly payments on real-estate taxes | 25 |
| Total monthly payments | \$122 |

And the modular family gets an additional benefit over the mobile folks: it can deduct the real-estate tax on its federal income-tax return.

To continue the cost computations: let's say, conservatively, that the modular does not appreciate. Assume that when a family sells, it gets back what it paid for the house.

Obviously, then, since there is no decline in value, there is no need to add pro-rated depreciation to the monthly costs as in the case of the mobile.

Rather, those payments spelled out in the previous section remain as they were: \$108.70 for a conventional mortgage; \$122, FHA.

The modular's advantages add up to a big opportunity for the developer

He has a number of big potential markets

To begin with, there are the 400,000 or so families buying new mobiles every year. Those putting their mobiles on pads in mobile parks are certainly candidates to buy their own modular on their own lot in a modular development. Those putting modules on odd lots are equally good candidates, as long as they own the land and can thus qualify for a mortgage.

Then there are the buyers who now buy used mobiles. (Their numbers are unknown. But it's reasonable to assume there are as many as there are new-mobile buyers.) For the same amount or less than they would

pay for a used late-model mobile, they could move into a new modular.

Then there is the uncounted market that needs housing of the type and size provided by mobiles but can't afford the high downpayment and monthly payments.

Finally, there is the uncounted market that needs—and can afford—housing of the type and size provided by mobiles but simply doesn't want to live in them.

You can't hang a figure on these potential markets. But common sense says that as a group they are much, much bigger than the present mobile market.

He has a big competitive edge over the mobile-home dealer

First and foremost, the developer can sell much lower monthly payments and, very likely, much lower downpayments. And they, rather than the actual price of the unit, are the economic keys to sales.

Second, the developer can sell a real house on a real piece of land. Even though the rental apartment has become an accepted way of life for millions of Americans, every survey ever made on the subject shows that home ownership remains a goal for most families. And regardless of its recent meteoric rise in popularity, the mobile

home is not universally accepted as a real home.

Third, the developer can sell an investment. Home-owners and potential home-owners have come to accept the home as, at least, a hedge against inflation and, at best, a property that will appreciate faster than the economy as a whole. There's no reason why the modular, built in a good development, can't fill this bill. By contrast, the mobile itself depreciates. And the land under it, the real key to any home's appreciation, is only rented.

And he can have the advantage of fast delivery

Like the mobile-home dealer, the developer can provide a reasonably broad choice of models from stock and then move the family in swiftly on a pad (or lot) of their choice.

In sales terms, such speed means a pros-

pect needn't be lost because he won't wait for the two or three months (at least) it takes to build a conventional house. In economic terms, such speed means the developer turns over his lots more quickly, and has little need for construction money.

... So
there's
an
enormous
market
just
waiting.
But
that
raises
a
question:

If the market is so big, what's keeping builders out of it?

The most obvious obstacle is the lack of manufacturing facilities

Even though roughly 200 companies now produce some sort of modular housing, few of them are engaged in the kind of volume production necessary for a market of the size we've been talking about. Further, most of the big modular manufacturers are making multifamily rather than single-family units. The biggest current producer of single-family modules is almost certainly the mobile-home industry itself, which last year turned out an estimated 8,000 to 10,000 sectionals (which are nothing more than double-wide mobiles). The bulk of these probably ended up on odd lots in rural areas.

The problem of adequate modular pro-

duction will not be solved easily. Plants aren't built and put into operation overnight, and no builder in his right mind would put one up without knowing either that he himself could market its production or that he had enough other builder/buyers signed up to do the same.

In all probability, the immediate slack would have to be taken up by mobile manufacturers who would supply units to modular-project developers. And if homebuilding doesn't move fast enough or far enough, mobile manufacturers could take over almost all of the modular business, leaving only land development and marketing to the builders.

What's more, homebuilding looks down on anything that smacks of mobiles

This attitude stems from the days when the trailer park was usually a semi-slum on the worst side of town. The people to whom the homebuilder sold his houses regarded these parks with contempt; hence, the builder did too. By and large, he still does. But times have changed:

The trailer has become the mobile home—bigger and more glamorous, even though

its longevity still leaves much to be desired, as was noted earlier.

Trailer parks have become mobile home parks—on the average, very much better than the old parks and, in a few instances, on a par with good house subdivisions.

And the market has blossomed. If anything can change the traditional attitude towards mobiles, that's it.

But the big reason is inherent resistance to anything new

It's easy to understand builders' reluctance to make major changes. Despite its high potential rewards, homebuilding remains a risky business—one seemingly small marketing mistake could wipe out a builder. So in his view it makes sense to stay as close as possible to the known and the proven.

Nor is the builder the only one reluctant to change. Lenders are traditionally conservative when it comes to new ideas. And the communities in which the new ideas will eventually appear are well known for their almost automatic resistance to change.

Such conservatism on the part of the lender or the community could thwart the builder.

What then are the chances for the

modular's acceptance? Pretty good.

From the marketing standpoint, modulars would be manufactured in the same sizes as the already popular mobiles—at lower monthly costs to the buyer.

From the community's standpoint, it's reasonable to expect that a community would be happier with a subdivision of real houses than with a mobile park and that it would grant the former at least equally high density.

From the lender's standpoint, bankers have given every indication that modulars are in the mortgage league along with conventional houses.

Any new housing market is a risk. But this one looks like a small risk with a promise of big rewards.

When and if homebuilders do move into this modular market, it's all-important that they do a first-class job

Construction must be good

If the key to the potential success of the modular in the mobile market is its status as a real house, the converse is true: the biggest potential hazard to that success could be any intimation that the modular is, after all, nothing but a glorified mobile.

Thus, innocuous slips in construction quality that might pass unnoticed in a conventional house could damage the modular's image in the consumer's eyes—even though such slips posed no long-term struc-

tural problems at all.

There are other considerations, too.

The builder's modulares will be in competition with the modulares manufactured very efficiently by mobile-home companies. To hold his competitive edge, the builder must perforce produce a well-constructed unit. In turn, the mobile home manufacturers may be pressured into upgrading the quality of their modulares, ultimately benefiting the entire market.

Design must be good

Good design will help the modular manufacturer combat the image of the mobile home, and give him those competitive advantages that come from looking as little like the mobile and as much like a conventional house as possible.

Such a design goal should not be particularly difficult to meet, chiefly because few mobiles look very much like houses. (Their aluminum skin, however disguised, usually marks them instantly, and the attempts by some companies to tack on house-like fea-

tures usually make them look even less like houses.) On the other hand, neither the modulares produced by mobile companies nor those of modular-only companies have shown much promise of fresh design. The majority, in fact, look like little more than glorified boxes.

That better design is not only possible but already extant is shown by such modulares as those being produced by Environmental Systems Industries (H&H, June '70) and Kaiser Aetna (H&H, Feb.).

Environment must be good

If the popular image of the mobile home is not particularly good, that of the mobile home park is far worse. And to at least some degree, it's an earned image. Despite a few farseeing mobile-home park developers around the country who strive to make their parks attractive, the typical park today is a sea of jammed-in mobiles with little or no attempt to create a pleasant

environment.

The builder, with his experience in land development, can and must do a much better job in his modular project. There's no question that detached-house projects can have six, seven, and even eight units to the acre and still be reasonably attractive and livable. California builders do it every day with full-sized houses.

And marketing must be good

Drop in at a park to buy a mobile and you may think you've wandered onto a used-car lot. Many mobile-home dealers surround their operations with the high-pressure tactics that have earned used-car salesmen their dubious reputation.

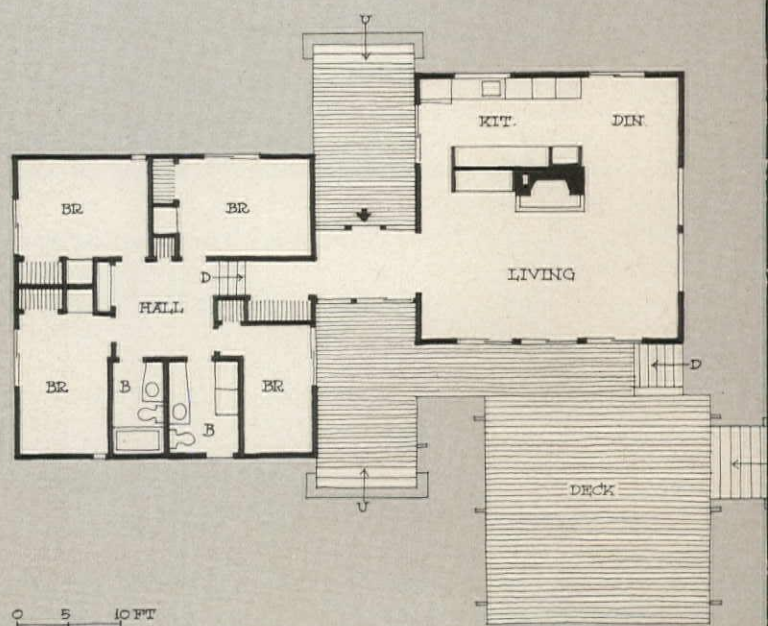
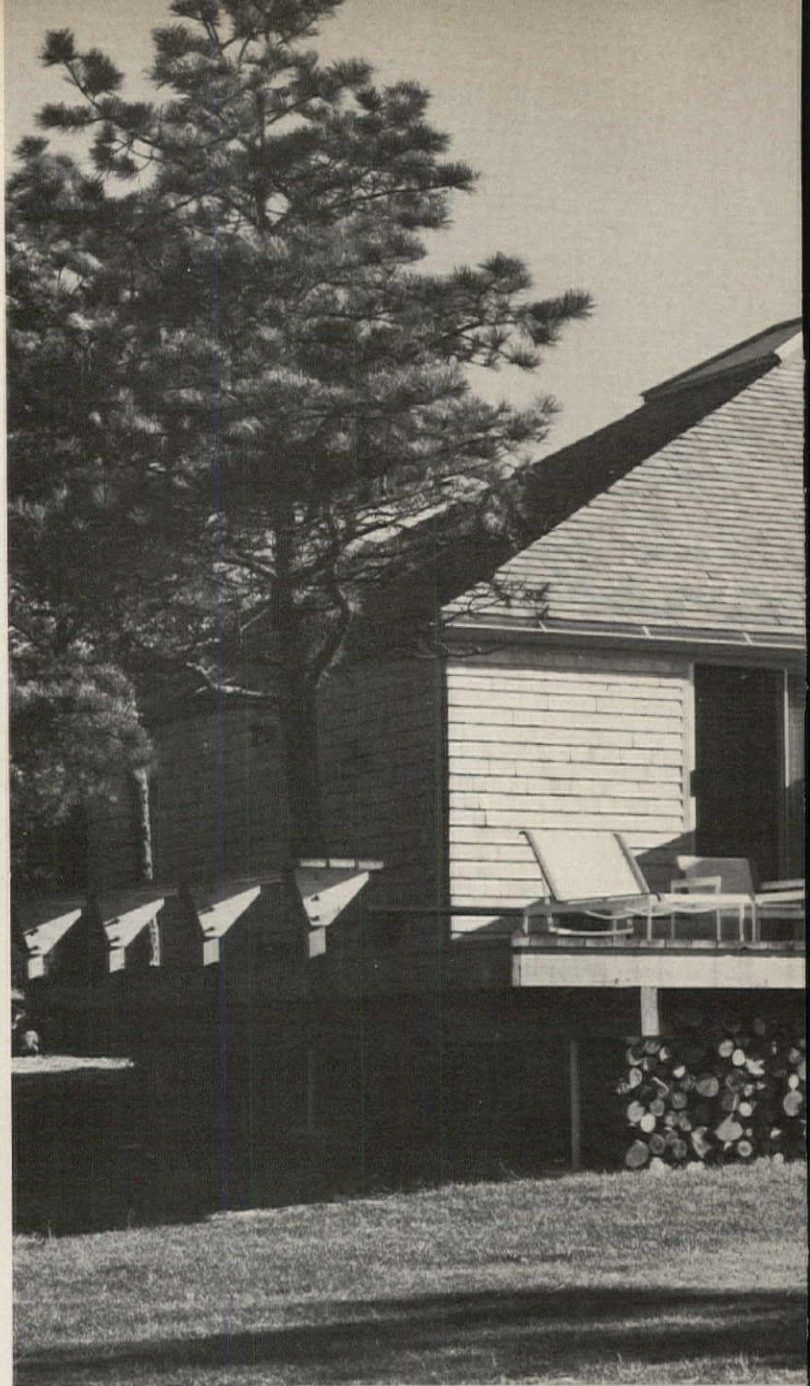
Certainly, not all mobile dealers sell

that way—particularly at the new and better parks. But the general level of selling is still low—so low, in fact, that it offers the modular builder a marketing opportunity: by using just the opposite sales tactics, he can enhance his reputation and gain an edge over the mobile-home dealer.

—MAXWELL C. HUNTOON JR.
JOHN KIRK

Four vacation homes for special sites

There's a lot to be learned from these homes. Not the least is how intrinsic environmental qualities can be turned into plus factors. Each home works well because of a two-pronged approach: the plan overcomes disadvantages of the site while making good use of its advantages.





Two boxes with hip roofs (above) are connected by entry passageway. Rear box contains bedrooms, baths. Front box is living-dining area.

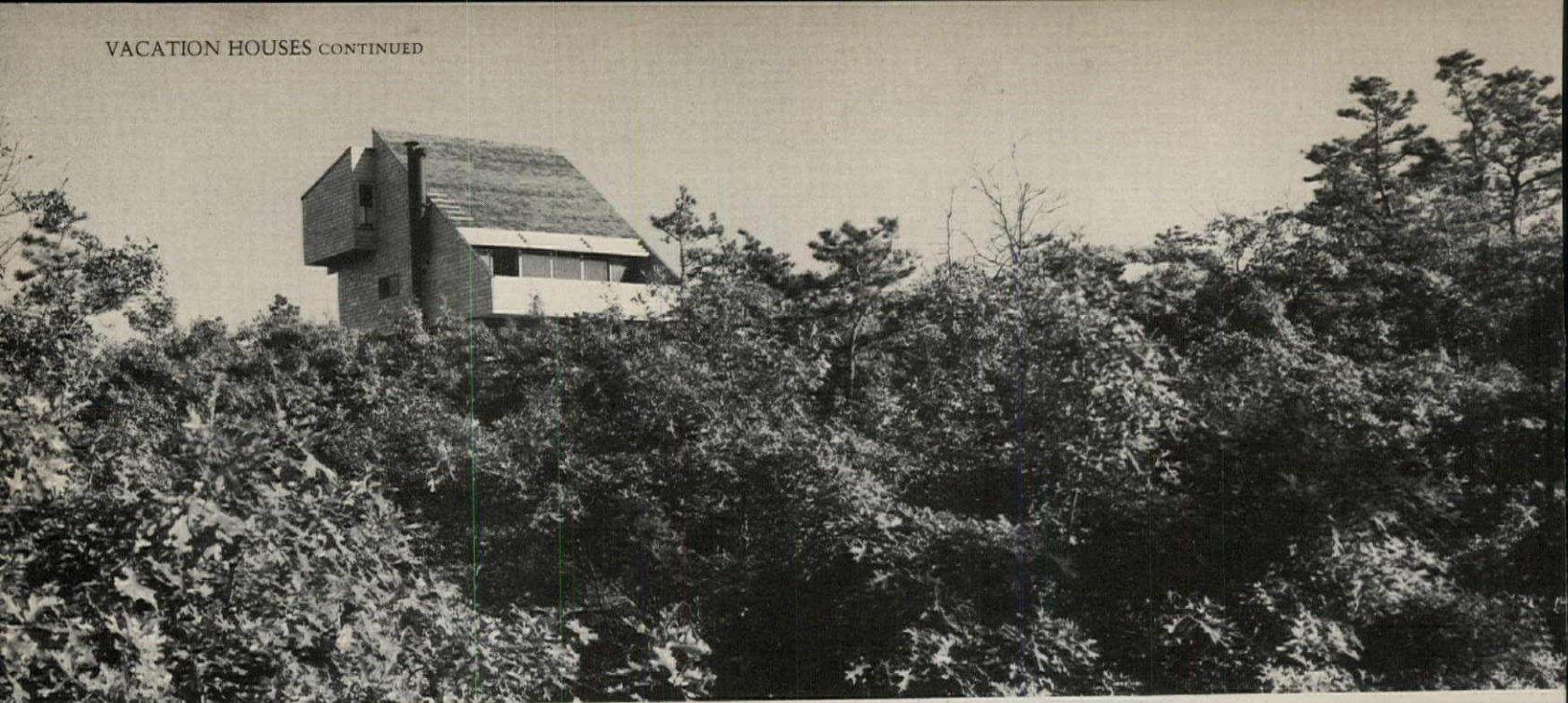
Plank-and-beam construction of 2 x 6 t&gs forms the ceiling (photo below). Walls are comprised of sheathing boards nailed up diagonally.

For a windy site: a layout that's geared to maximum outdoor living

Climate dictated the design of this home. It fronts on Buzzards Bay in Cataumet, Mass., where prevailing summer winds are strong from the southwest. It is planned so that the exposed deck is partially sheltered by the living wing. At the same time it is oriented so as to provide a sun trap in spring and fall when winds shift to the northeast. Two wings, one for living, one for sleeping, are connected by a main entrance passageway. One extra feature not always provided in leisure homes: ample sleeping accommodations for guests. *Architect:* Davies and Wolf. *Builder:* Costa Limberakis.

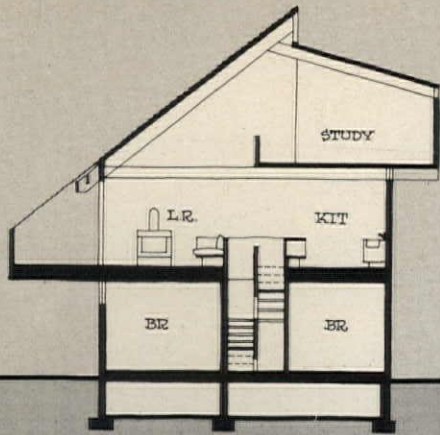
PHOTOS: CAROL RANKIN AND J. L. DAVIES





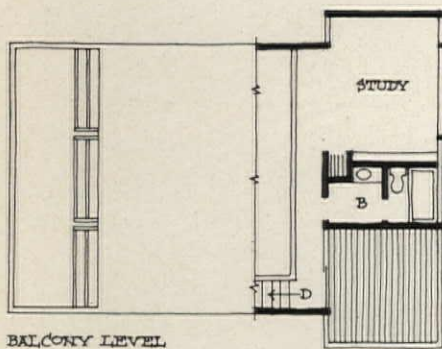
Living level with sheltered deck (*below*) is raised to tree-top height (*above*). Sunscreen over deck window wall is supported by extended rafters.



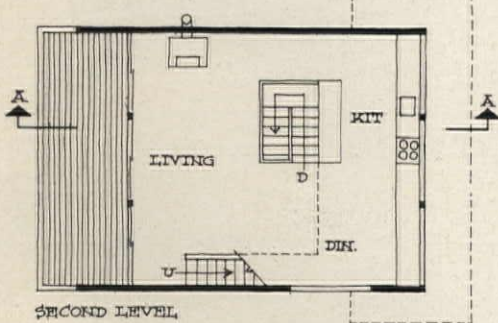


For a site with a view: a room layout that puts the living area up high

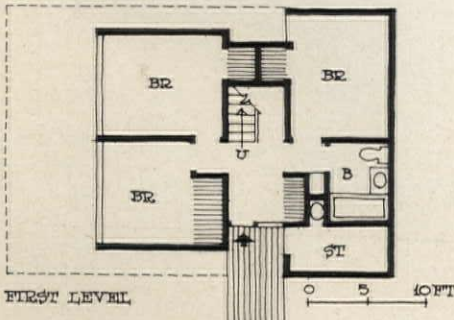
The key element of this Southampton, Long Island, home is the middle level. It incorporates living-dining-kitchen areas into one large space with a sliding glass window wall opening to the magnificent view. The lower level, which at first glance appears to be the basement, is for sleeping. A top level, overlooking the living room, contains a study and a second bath. *Architect: Bernard A. Marson. Builder: Ira Weissman.*



BALCONY LEVEL



SECOND LEVEL

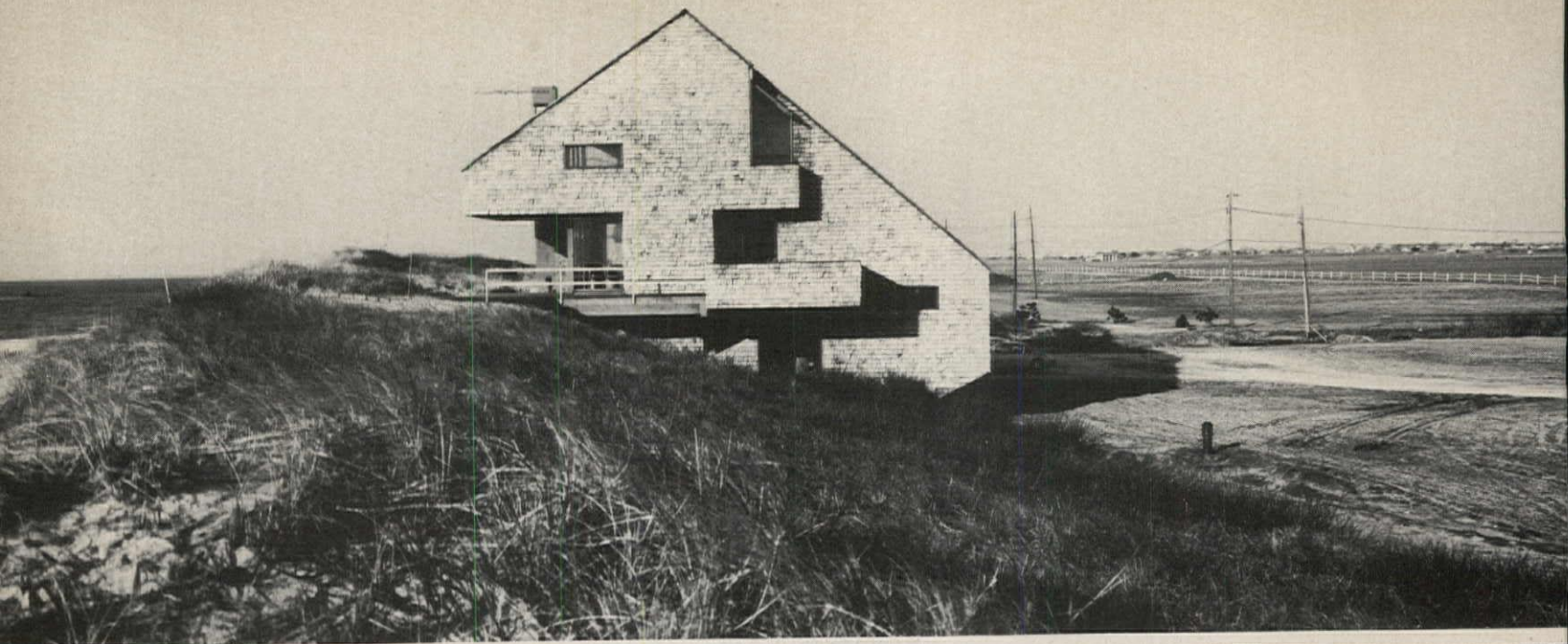


FIRST LEVEL

Mid-level (photos) is one large expanse comprising living, dining, and kitchen areas. Top-level balcony (right) leads to study and second bath.

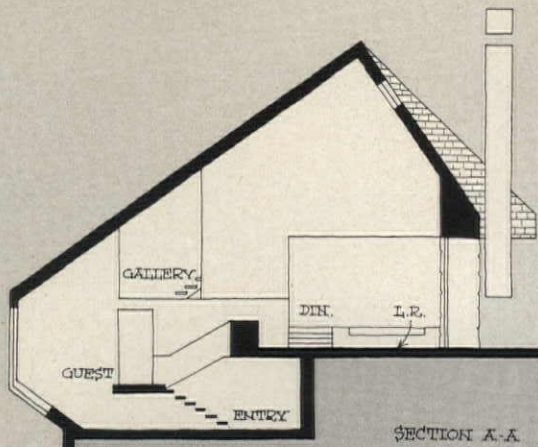
PHOTOS: HANS NAMUTH





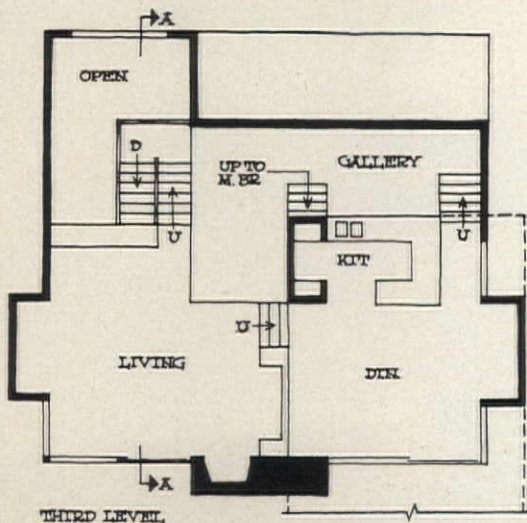
Stepped-down design for dune site puts living area and terrace (*below*) just under dune's top, facing ocean. Upper deck opens to master bedroom.



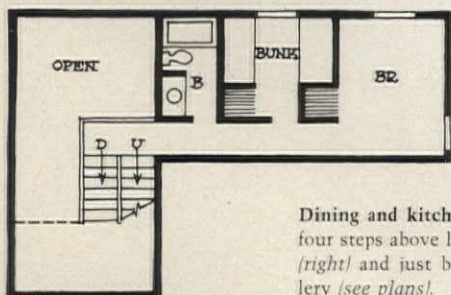


For a shore site: a five-level house that minimizes excavation

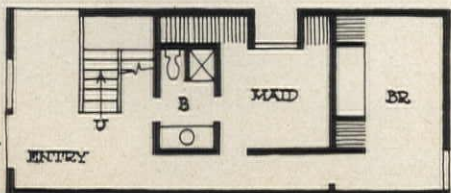
A steeply pitched roof, echoing the slope of the site of this Sagaponack, Long Island, home, covers five living levels. The entry level, built into the dune, was formed with granite retaining walls; the top level opens onto a cantilevered deck facing the ocean. Between are three levels comprised of guest, living, and kitchen-dining areas. Granite steps lead to a terrace surrounded by the retaining walls. *Architect:* Norman Jaffee. *Builder:* Stephen Perl binder.



THIRD LEVEL



SECOND LEVEL



FIRST LEVEL

Dining and kitchen level (top photo) is four steps above living room and terrace (right) and just below a skylighted gallery (see plans).

PHOTOS: BILL MARIS



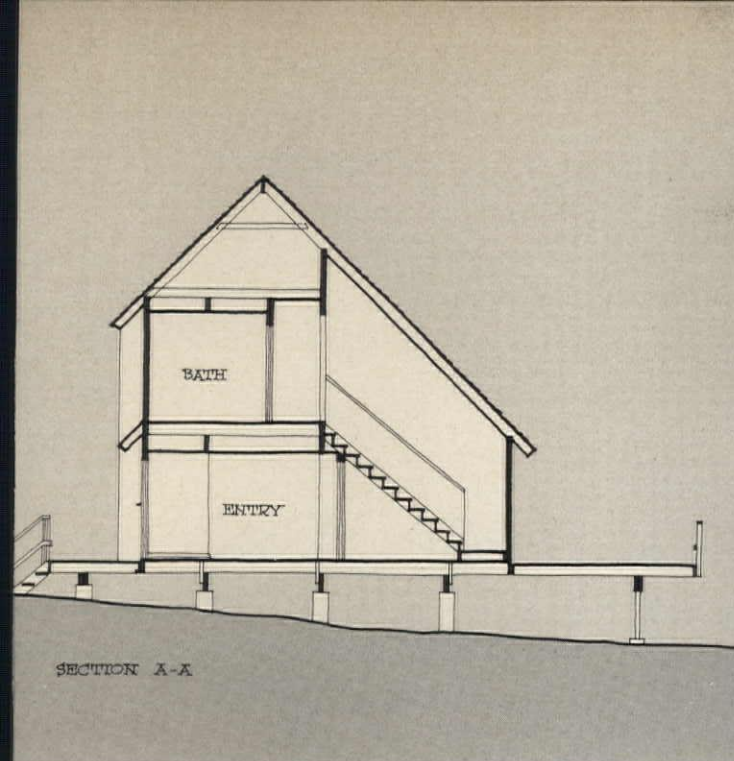
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PHOTOS: WOMAN'S DAY MAGAZINE

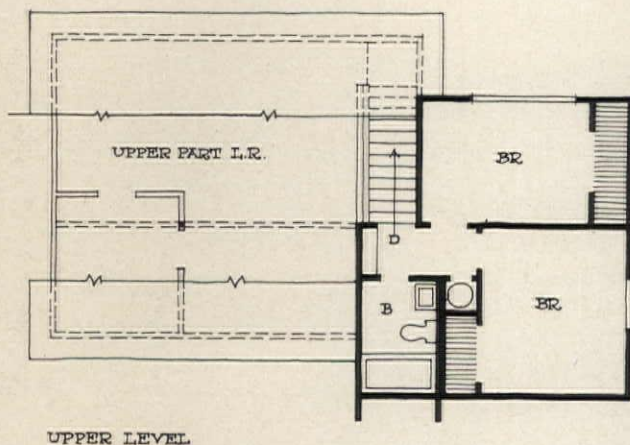


Setbacks and varied roof levels are used to break up basically simple front (below) and rear (above) elevations of the house.

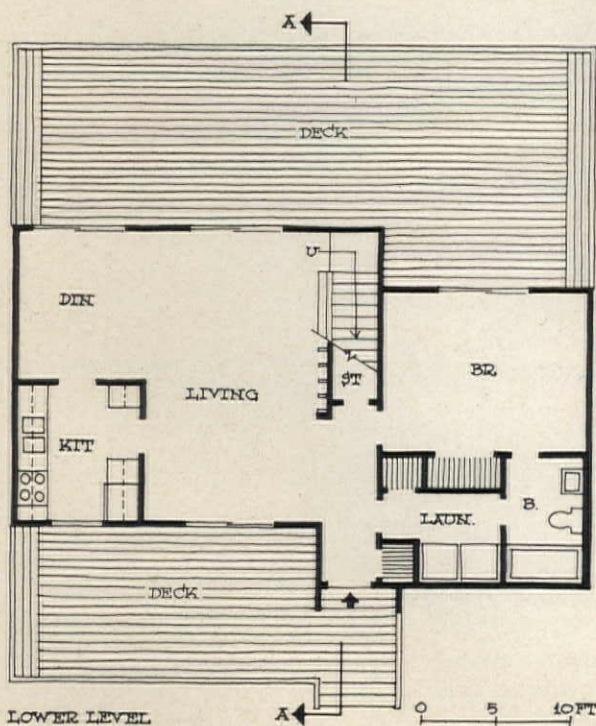




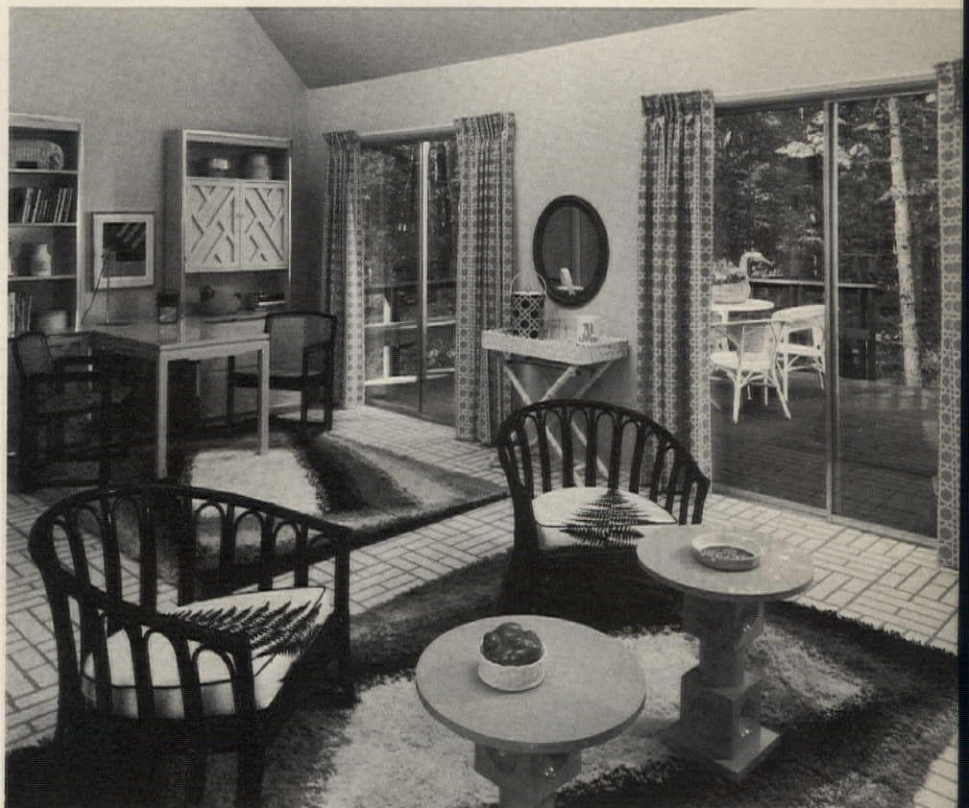
Rear deck (above) opens to living and dining areas (below). Horizontal siding is redwood, treated with preservative; roofing is asphalt.



UPPER LEVEL



LOWER LEVEL



For almost any site: a two-story house with a pier foundation

The piers, coupled with a rather small base (34' x 36') make this house readily adaptable to a wide range of sites—from flat land to relatively steep slopes. This model was built at Ocean City, Maryland. Obviously it's adaptable to a foundation or slab with crawl space. The Wayfarer, featured in *Woman's Day* (Feb., '71), is a Kingsberry Home, manufactured and distributed by Boise Cascade. Designer: Benjamin A. Hirsch. Builder: Purnell, Inc.

What is polymethylmethacrylate? Is ABS a brand name? What building material dropped 80% in cost in 25 years? Is there more than one brand of Plexiglas? You'll find the answers to these questions—and many others—in this brief guide to:

PLASTICS

Many of today's products, including building products, are plastic-coated, filled with plastic foam, made of reinforced plastic, connected by plastic, packaged and/or wrapped in plastic, and—many times—all-plastic.

The question in each case: What plastic? Also: Why that particular plastic? Will it keep the water off, for instance? Will it resist household cleansers and the stains of coffee, ink, grease, oil? Can it withstand the impact of dropped pots, the scrapes of chair backs, the scuffs of shoes? Will it burn? How will it stand up to weather and sunlight? And how long will it last?

Such questions make sense in light of the explosive growth of plastics production. In 1940, according to The Society of the Plastics Industry, production was only 277 million lbs. a year. Annual output jumped to 2 billion lbs. by 1950, 6 billion lbs. by 1960, and 19 billion lbs. last year. And *Modern Plastics* magazine expects the annual total to reach almost 40 billion lbs. in the early 1980s. Of last year's output, 28% (or 5 billion lbs.) went into construction. And by 1980 that figure should rise to 32% (or almost 13 billion lbs.)

Paralleling the sharp rise in plastics production has been a steady drop in their cost. For instance, the cost of polyethylene, which alone accounts for one-third of all production, has been cut by 80% in a period when other building materials have fluctuated or risen steadily. So it's not surprising that last year, despite housing cutbacks, the construction industry used more plastics than ever before.

There are now 40 families of plastics. A few are familiar to everyone: silicones, synthetic "rubbers", epoxies, synthetic fibers, and the "breathing" poromers for shoes and leather-like upholstery.

But the plastics most widely used in housing fall into 13 groups. Some of them are old friends (H&H, Sept. '56). Others are relatively new. Nine are thermoplastics (they can be melted down and reformed). Four are thermosets (they are permanently set, chemically or by heat). All are described in this report.

On the next five pages, you will read about their qualities, prices, uses, and better-known brand names. And on the last page, you will see five plastic building products that are the newest of them all.

Want to know more about plastics?
Read "Plastics for Architects and Builders" by Albert F. H. Dietz, \$7.95 from the MIT Press, 50 Ames Street, Cambridge, Mass. 02142.



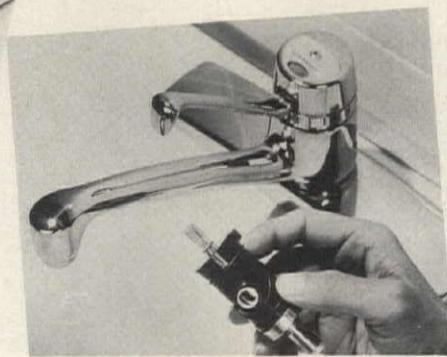
ABS

ABS is an abbreviation for acrylonitrile-butadiene-styrene, a thermoplastic that came along in 1948. Its primary advantage: extremely high resistance to impact. Not only is it tough; it also stands up to temperature extremes—down to -60°F and up to 212°F —and resists acids. It is priced in the lower half of the range for plastics at 25¢ to 50¢ a lb., slightly less than the acrylics.

For years ABS has gone into telephones; recently it has been used for power tool handles; it now shows up in Cicolac locks and moldings (*above*) and a Tybrene shower stall (*above*), and will soon appear in a Cicolac roof vent.

But the primary use of ABS in construction is as piping (H&H, May '68), and it is now being made into a two-story plumbing tree.

Some of the well-known names are Cicolac (by Borg-Warner Div. of Marbon Chemical), Lustran (Monsanto), Kralastic (Uniroyal), and Tybrene (Dow).



ACETALS

The acetals, introduced in 1956, are one of the stiffest and strongest thermoplastics. Although rigid, they are not brittle, even after extreme temperature changes. What's more, they have a high resistance to most solvents, a low water-absorption rate, a glossy surface, and an abrasion resistance superior to everything but nylon. Cost: about 65¢ a lb.

Acetals are used for small parts like gears and bearings, and will show up more and more as streamlined plumbing fixtures or as plumbing parts such as the Celcon valve pictured above.

Brand names include Celcon (Celanese) and Delrin (DuPont).



ACRYLICS

Abbreviated PMMA, for polymethylmethacrylate, this thermoplastic has been around since 1936. Its best quality is its excellent clarity and ability to transmit light, even around a bend. What's more, it is difficult to break, and it won't deteriorate in the sunlight.

However, it scratches easily, won't take steam for long periods, and melts if exposed to heat above 212°F for more than a short time.

Prices are from 25¢ to 50¢ a lb.—down from 55¢ in 1956 and 84¢ in 1946.

In their transparent form—clear, tinted, or reflective—acrylics are used for skylights or glazing like the Acrylite wall and the Plexiglas bus stop above. Translucent varieties form diffuser panels and opal shades on contemporary lights. Opaque types can be used in outdoor signs, insulation, or vanity tops like the Corian one above.

Well-known brand names are Acrylite (American-Cyanamid), Lucite (DuPont), and Plexiglas (Rohm & Haas). Corian (DuPont) is a new product with fillers to make it look like marble.



AMINOS

FLUOROCARBONS

NYLONS

PHENOLICS

Amino thermosetting plastics—urea and melamine—are among the oldest: they've been on the scene since 1929 and 1939. Their primary qualities are glossy surfaces and extremely good resistance to scratches, detergents, cleaning fluids, nail polish, grease, or oil.

But they are not unbreakable. So in most cases they are part of a lamination: kraft paper impregnated with phenolic resin is bonded under heat to a decorative melamine layer, which is then protected by a clear layer of melamine. Cost of the melamine: about 32¢ a lb.

In laminations, the aminos show up on cabinet faces or countertops. Two countertoppings—grasscloth Formica and floral Textolite—are pictured above.

Aminos are also used in baked-enamel coatings, plywood and particle-board adhesives, and appliance housings.

Well known brand names: Formica (American-Cyanamid), Melamite (Johns-Manville), Micarta (Westinghouse), Textolite (General Electric).

There are four fluorocarbons: chlorotrifluoroethylene (CTFE), tetrafluoroethylene (TFE), fluorinated ethylenepolypropylene (FEP), and vinylidene fluoride (PVF₂*).

They have been around since 1943 but have only recently become household names because of their primary quality: extremely low friction, which gives them an anti-stick quality useful for coating the insides of pots and pans. This quality, plus an unmatched resistance to chemicals and solvents, suits them for lining pipes and coating the filters of range hoods like the Teflon one above.

As liquid or film finishes for metal or hardboard siding, fluorocarbons resist smog, salt air, and chemicals. At \$3 to \$4 a lb., they are the most expensive plastics used in construction.

Major brands are Halon and Aclar (Allied), Kynar (Pennwalt), Nobelar LT (Glidden), Teflon and Du-Lite (DuPont).

* Not to be confused with PVF, which is considered a vinyl.

Nylons, the polyamides, have been encasing girls' legs, carpeting living rooms, or giving sliding doors a smooth ride since 1938.

Nylon (originally a DuPont trade name) is the plastic with the highest resistance to normal abrasion. It is also extremely tough and resilient, has low friction, withstands extremes of temperature (both freezing and boiling), and resists chemicals, greases, and solvents. Although it can be stained by coffee, tea, or food coloring, it can also be dyed easily in a complete range of colors.

Prices are from 40¢ to 60¢ a lb.—around the middle range for plastics.

Nylon is now used in such products as washers and gears; shutters; translucent, push-button switches that light up; and an undentable, non-peeling skin for bifold doors like those shown above wrapped in DuPont nylon.

DuPont, the major nylon supplier, makes glass-reinforced Zytel, DuPont Nylon, and carpet fibers (H&H, Oct. '69).

Of the four available types of phenolics, phenol-formaldehyde is the workhorse of the industry. Developed in 1909, it is a thermoset material. So it resists high temperatures won't melt, and can't conduct heat. It also withstands severe knocks, has a smooth surface, and resists most oils, greases, acids, and solvents. However, it yellows on exposure to light, so it usually must be colored brown or black.

Prices of phenolics, about 20¢ a lb., are comparable to those of polyesters. They've changed very little since the mid-1950s, but were only 12¢ a lb. in 1946.

The most widespread use of phenolics in construction is for electrical devices like those pictured above. They're also used as adhesives in laminating plywood, wood members, or other plastics as aminos.

Better-known names are Bakelite* (Union Carbide), Plaskon* (Allied Chemical), and Varcum (Reichhold).

* A brand name also applied to other types of plastics by the same manufacturer.



POLYCARBONATES

Polycarbonates came to the market in 1957. The strongest transparent thermoplastic, they cannot be broken by hammer blows or pierced by small-caliber bullets. They are also rigid, dimensionally stable, and resistant to high heat. But although they withstand abrasion better than the acrylics, they are not as sunproof and may discolor in time. At 70¢ to 90¢ a lb., they are relatively expensive.

The polycarbonates are used primarily in vandalproof school windows like the Lexan glazing shown above, street light globes, light-diffuser panels, electrical connectors, double-insulating, power-tool handles—and astronauts' visors.

Brand names include Lexan (General Electric) and Merlon (Mobay Chemical).



POLYESTERS

When reinforced by glass fibers, polyesters become FRPs, the structural plastics. Because they can take up to 25,000 lbs. per sq. in., they've been used since 1942 to form tough products such as car and plane parts. And because they are water- and weather-proof, they are also used for boat hulls.

These thermosets can be cured at room temperatures, so they can be molded into parts as large as 500 sq. ft. They are either poured over mats of loose fibers of cloth or glass or molded and then sprayed from the back with chopper fibers. A gel coat protects the fibers from "wicking" or drawing moisture inside.

Polyester prices have dropped steadily from 46¢ a lb. in 1946 to a 20¢ average today. And rigid polyester foam now costs only 13¢ a lb.

Translucent varieties show up in roof panels, garage doors, and partitions. Opaque types are used for products like those pictured above—a one-piece tub and shower unit made of Cyclocac, a lavatory bowl formed of Wyoming Sand & Stone's plastic, and colonial Fiberglas doors.

Best-known structural plastic is Fiberglas FRP (Owens-Corning Fiberglas). Others are Alsynite (Reichhold Chemical) and Selectron (PPG).



POLYETHYLENES

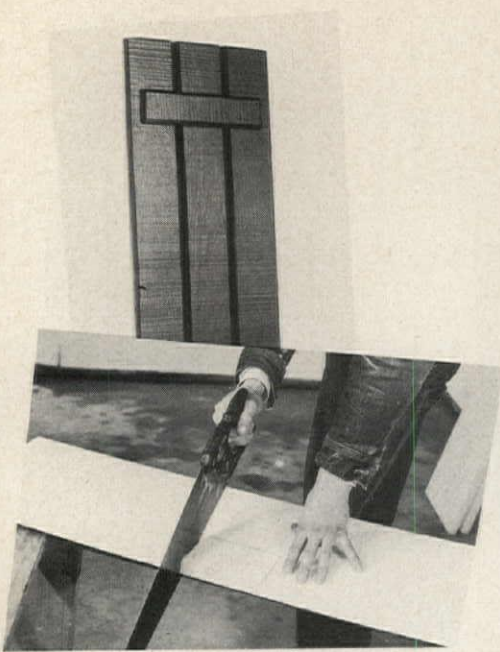
Polyethylene, a thermoplastic, showed up in 1942, and is now the most widely used plastic, accounting for a third of the industry's production.

Its primary advantage: whether rigid or flexible, it is hard to break or tear. It won't absorb moisture, is impervious to chemicals, acids, and solvents, and can take temperature extremes but not direct heat or sunlight.

Polyethylene's average price has dropped by 80% in the last 25 years—from 74¢ a lb. in 1946 to 15¢ today.

It's used for vapor or moisture barriers like the one above and in underground piping, for gas lines, water lines, and irrigation.

Brand names include Aldyl (DuPont's piping), Ethafoam (Dow), and Zental (Union Carbide).



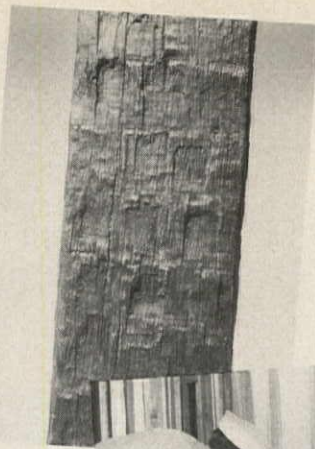
POLYSTYRENES

Polystyrene, the third most widely used plastic (after polyethylene and the vinyls), was introduced in 1938.

A thermoplastic, it is stiffer than soft polyethylene, but not as flexible without added plasticizers. It withstands freezing temperatures and, for a short time, temperatures approaching boiling. And it is not affected by foods, acids, oils, alcohol, or vinegar, but can be harmed by citrus rinds, cleaning fluids, turpentine, gas, or nail polish. Since 1946 its average price has dropped from 26¢ a lb. to today's 16¢.

For many years polystyrene has been used for bathroom wall tiles. In the last decade, builders have been insulating houses and apartments with foamed polystyrene slabs or blocks, which can be cut to fit, like the Styrofoam shown above. And more recently manufacturers have developed products like the molded shutter above by Benson.

The best-known brand name is Styrofoam (Dow, which also makes Dorvon, the foam slabs).



URETHANE

Urethane—polyurethane—is a thermosetting plastic first used in 1954. In foam form it can be flexible or rigid, depending on the density, and light in weight. In the solid form it is tough, shock resistant, and usually hard to abrade or tear. It also resists chemicals and solvents and is waterproof, rotproof, and verminproof.

The foams are used decoratively as in Paeco's wood-like beam (above), as cores for sandwich panels and doors, as cushioning, and as acoustical or thermal insulation. Insulation is usually foamed in place. At Heritage Village in Southbury, Conn., for example (above), Witco's foamed-in-place urethane not only replaces the usual insulation, but also voids the need for plywood sheathing and building paper, according to the builder. Foamed directly to the back of the siding, the urethane is said to "glue" the building together and to provide a weathertight seal.

Solid (or liquid) urethanes are used to coat metal siding and to seal wood-round flooring (see photo in section on nylons). Coming soon is a Pease steel door wrapped in an undentable skin of urethane. And already on the market is a Reynolds aluminum sliding door with a thermal break formed by a continuous strip of urethane.

Brand names include PolyLite (Reichhold), Selectrofoam (PPG), and Thyrane, a pipe insulator (Dow).



VINYLS

The two vinyls (in a family of eight) most used for construction are polyvinylchloride (PVC) and polyvinylfluoride (PVF). They are thermoplastics, have been around since 1927, and rank second—right behind polyethylene—in the industry production charts; they account for almost 4 billion lbs. (or 20%) of total output.

PVC is somewhat denser than the ABS plastics and somewhere between polyethylene and polystyrene in flexibility. It can be used in either rigid or flexible form, as a film, or as a foam. PVF is generally used as a film.

Vinyls resist normal abrasion, withstand impacts, don't react to most solvents (except chlorinated ones and nail polish) and are unaffected by water and oils and unchanged by temperatures up to 130° F.

Vinyl prices have dropped from 46¢ a lb. in 1946 to their present level of 12¢ to 20¢.

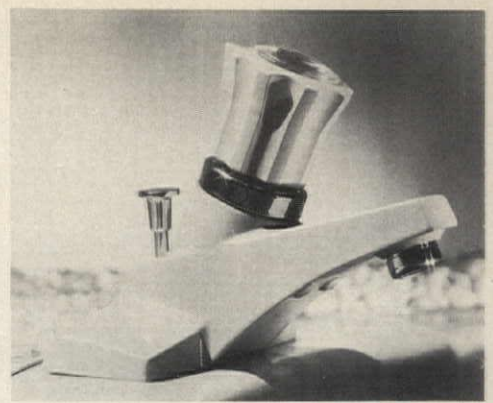
With or without additives like asbestos, PVC goes into sheet or tile flooring. A clear vinyl top layer not only protects the flooring design but provides an always waxed look like that in GAF's flooring above. Rigid PVC extrusions include siding like Mastic's and siding and raingear like Bird & Son's (both above).

PVC film is stretchable so it gives with the material it covers. Bonded to U.S. Plywood's PF-L hardboard siding, it is guaranteed for 30 years and is being used in Columbus, Ohio, to re-face a ten-year-old public housing project.

Best-known PVC brand is Tedlar (DuPont). PVC brands include Marvinol (Uniroyal), Vynaloy (B.F. Goodrich), and Vitafilm (Goodyear).



Here are the five newest building products of plastic. Each is designed and engineered for easier installation, lower cost, or longer wear—or all three.

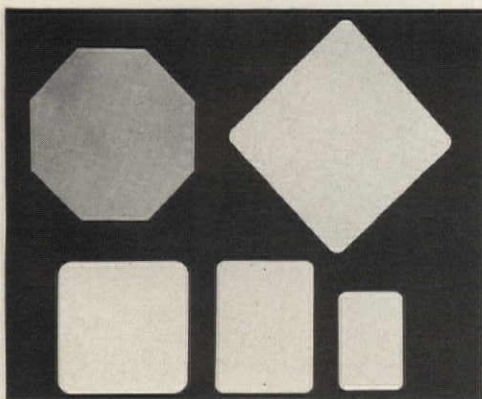


Acetal faucet of Celanese's Celcon comes in four decorator colors—blue, sand, avocado, and gold—plus white. The smooth-surfaced outer shell and handle can easily be changed by the housewife to one of the other colors. Not only does the faucet look more streamlined, it is designed to sell for 30% less than standard single-handle controls. Shell, valve, tube, and aerator body—all injection molded Celcon—won't pit, corrode, or swell. Cole Valve, Menomonee Falls, Wis.

CIRCLE 279 ON READER SERVICE CARD

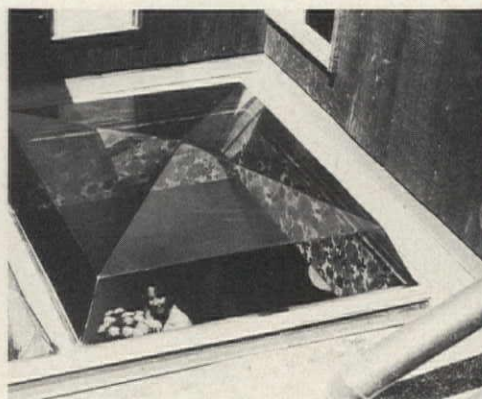
FRP vanity module is Fiberglas reinforced polyester. Its measurements are similar to those of tub/shower units: 91" high, 30" deep, and 60" long. The three-piece Vanawall is shipped complete with wiring and plumbing and includes a sink, a molded-in medicine cabinet, a make-up table with a built-in drawer and wastebasket, and storage beneath the sink. There's a place for a stool, the counter is narrow, i.e., close enough to the mirror so bending is not necessary, and the mirrors swing out for three-way viewing. Owens-Corning Fiberglas, Toledo, Ohio.

CIRCLE 275 ON READER SERVICE CARD



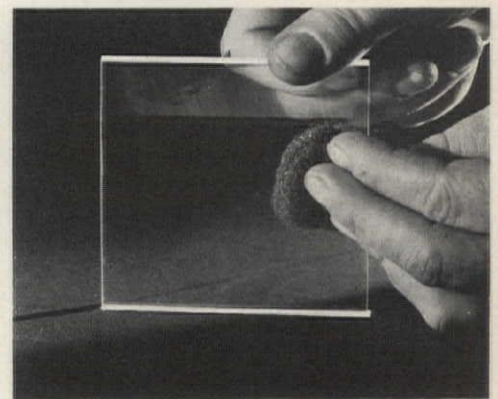
ABS traffic signs are manufactured in all the standard shapes, sizes, and colors. Not only will they withstand collisions because of their high impact resistance, they'll hold up in all kinds of weather. Since the colors go clear through the plastic (Cyclocac), the signs will not chip or peel like ordinary paint-on-metal signs. The colors won't fade, the signs won't warp, and vandals will find them hard to break. Silk-screened legends and reflectorizations available. Borg-Warner, Scottsburg, Ind.

CIRCLE 276 ON READER SERVICE CARD



Acrylic skylight lets the sun down into the kitchen and family room of a townhouse in Denver. The formed-Plexiglas unit is 6' square and tinted bronze to keep out the glare and heat of the sun. Made from $\frac{3}{16}$ "-thick sheet, it looks like a mansard with 12" sides and a center peak that rises 6" higher. The units are being fabricated by Plasticrafts of Denver for two-bedroom units at Plaza de Monaco, a 104-unit project. Rohm & Haas, Philadelphia, Pa.

CIRCLE 277 ON READER SERVICE CARD



Fluorocarbon coating, called Abcite, protects easily scratched acrylic sheeting from normal abrasion and even from rough steel wool as shown here. Abcite also improves light transmission because it contains silica. Coated acrylic will cost more than the uncoated variety at first and will only be available in limited quantities. Eventually, it may become less expensive, will be more readily available, and might be used to coat materials other than acrylics. DuPont, Wilmington, Del.

CIRCLE 278 ON READER SERVICE CARD

Suddenly there's a surplus of mortgage money for apartment projects.

Interest rates have dropped and many lenders are waiving participation requirements.

Some builders are actually being courted by lenders.

But as demand increases, the surplus funds could evaporate.

The message is clear: **Make your financing deals
now
while the money tree is ripe**

Last year the money tree was almost bare. Even though apartment builders had first call on available mortgage money, they were faced with high interest rates, low loan-to-value ratios, and painful participation deals.

This year the tree appears to be full. The price of money has been dropping and participation deals are disappearing. Lenders are easing their terms now because they have large surpluses. They're paying high interest on the money they've taken in and they're eager to lend it out.

With short-term rates dropping faster than long-term rates, lenders now find yields on mortgages more attractive than the yields on short-term instruments.

So for the first time in years, builders are being asked to take mortgage money.

Normally, that would be cause for cheer. And it is for the moment. But the credit market being what it is, members of the building and financial communities realize this lush condition won't last forever. They see a toughening as increasing demand for money by builders—and by others—eats up the surplus funds.

So the next few months may be the best time to obtain financing for apartments—and also the best time to refinance projects for which mortgages with participation clauses have already been negotiated.

Some lenders must place loans this year And they have to place them in long-term investments.

"Last year," says Rochester, N.Y., apart-

ment builder Mort Brodsky, "they were able to reinvest in short-term loans and get a pretty good yield. But today they can't get that yield, so they're looking to place it in mortgages."

Says mortgage banker Kimbro Cavanaugh of Kimbro Cavanaugh & Associates, Nashville: "Lenders have plenty of money. They have to get it out. And for the first time in a long time, a lot of savings and loan associations have called us wanting to know if we had any mortgages for them."

S&Ls aren't the only institutions eager to make loans today. Savings banks and insurance companies also are feeling the pressure of having to place surplus funds.

One reason that long-term loans look so attractive to lenders is that long-term rates have not come down as quickly

While the money market stayed tight, many builders stayed loose

They weathered the storm in various ways: some went into commercial building; some sought refuge in FHA financing; others just stopped building altogether; and a few large companies turned to S&Ls where they had long established records.

Shareholders Equity of Los Angeles, a real estate development and mutual fund company, listened to a number of insurance company proposals but decided to stick with S&L sources.

"We were in an unusually good position," says Ted Rokas, vice president for finance. "Our banking relationships allowed us to continue to build."

Except for one participation deal (the lender gets 2% of gross rentals), Hickman-Hoppe of Dallas has been doing its apartment building under FHA.

"That just substitutes the distasteful FHA situation for the distasteful conventional lending practices," says Stan Hickman. "But you don't have to live with FHA forever."

While Shareholders and a few others were able to continue working under at least partially favorable conditions, many builders either stopped completely or pulled in their oars and drifted along.

"We sort of went on strike when the deals became too prohibitive," says Louisville builder Frank Metz. "We had four or five projects on the stove and just let them sit there during the time of participation deals and high interest rates."

Metz has built nearly 1,400 units in the last six years and held most of them.

"We had a world of 6% mortgages that were aged," he explains. "I looked at them and decided I couldn't pay 10% on them tomorrow. So how could I think I could build new apartments at 10% and still make money?"

But Metz wasn't completely idle. He did some commercial work and completed one apartment project on straight mortgage financing arranged in better days.

Rochester, N.Y., builder Mort Brodsky

pulled out of the market for about a year.

"We just felt it was wise to sit back and wait," he explains. "I'm sure there are a lot of builders who took commitments and are sorry now that they have to live with them."

The general apartment building cutback in Rochester reduced the supply of housing to the point where Brodsky says owners have had one of the best winters for rentals in years. He's about to start building again with three projects ready to be financed.

Multicon, a multi-market, semi-luxury apartment developer active in 14 states, cut back last year—both because of the market and because the company was busy negotiating a merger with Bethlehem Steel.

Says Peter Barnes, who watches the money market for his company: "The deals just didn't make sense when the insurance companies were talking about 10½% interest plus participation."

as short-term rates. This puts the builder with an apartment project ready to go in an excellent position.

States Brodsky: "Whenever we get a quotation, it's always prefaced by 'how soon can you use it?' For immediate deals you can do a little better than you can on future commitments."

"Lenders apparently have to get money out this year," confirms David Gambrell of the James Bynan Construction Co., Kansas City apartment developer. "That's why they're willing to negotiate on any deals they can close this year. Last year, by contrast, they wouldn't consider negotiating. If they were willing to lend you money, it was on their terms."

This eagerness of lenders to get back into permanent mortgages has given builders leverage at the bargaining table.

Participation deals are disappearing

In fact, many builders are insisting that participation terms be removed from any loan proposals.

"If the question of participation comes up," says Ted Rokas of Shareholders Equity, Los Angeles apartment developer, "we just discontinue the discussion."

William Foote of Kaufman & Broad agrees: "We don't have to take that kind of deal."

Many builders are negotiating loans without participations, according to apartment developer Stan Hickman of Hickman-Hoppe in Dallas.

"We find that some mortgage trusts are interested in making long-term loans without participation," he says. "S&Ls are talking about looking for straight apartment loans, too."

Not all lenders are foregoing participation deals, however. Some are still hold-

ing out for a piece of the action—although they may be more flexible in other areas. Hickman has found that some lenders' concessions are to offer longer terms or to give a little better constant.

Gambrell complains: "The word about the easing money situation doesn't seem to have reached some lenders around here. They're still holding out for the same deals they were getting last year."

John Hancock Life Insurance Co., generally regarded as a company with stiff demands, still is looking for participation, according to George Rowland, real estate investment officer.

"But," he adds, "we will give a little bit better deal on a project that is ready now than we will on one that won't be ready for a while."

Some builders, buoyed by the present flexibility of lenders, have been tempted to wait for money to ease even further. But they should consider this question: how long will pickings in the money market be as easy as right now?

Demand could trigger tighter conditions

So even though lenders are presently more flexible in one area or another, the watchword seems to be: take what you can get now because you don't know how long it will be available.

Demand for money is being triggered in two ways: first, by builders who were sitting out tight money on the sidelines and who now are re-entering the market; second, by builders who have accepted commitments or taken mortgages with participation and are trying to refinance under more favorable terms.

Says K&B's Foote, who looks at both sides of the picture because he also is in the savings and loan business: "A lot

of people [builders] have held up, and this is what they have been waiting for."

Builder Brodsky agrees: "I'm sure most builders are in the market now, and it's the law of supply and demand that really influences mortgage rates. It takes a year to process a multifamily proposal. So I can see interest rates dropping and then coming back up again."

In addition to builders re-entering the market, a lot of builders who made deals with tough terms when money was tight are now looking for a slice of the surplus funds.

Because rates have dropped rapidly, some builders who committed themselves to participation deals can drop out, pay a point penalty (the standby fee), and come out ahead. Says an insurance company executive: "The fee is peanuts compared to what the builder can save."

Nashville apartment builder Louis Gaines would like to refinance an agreement he made a year ago to pay out 35% of his net cash flow. He wants to sell the project, and he can get more for it if the financing is improved by obtaining a mortgage without participation.

Builder Brodsky has several friends who are trying to work out a better deal.

"If they can't make a new deal with their lender, they'll have to pay the standby fee on the commitment," he says. "That's generally a point, and the market has actually dropped a point-and-a-half or a point-and-three-quarters."

So indications are that much of the available surplus funds will soon be spoken for as more apartment builders recognize that today's financial terms are the best they've seen in a long time.

The money tree is ripe. The trick is to pluck it before the best pickings are gone.

—DAVID THALER

What four builders say about participation deals

Says Frank Metz of Louisville, who negotiated with an insurance company that bases its participation deals on defined net income:

"It comes down to this: they do the defining and you do the paying.

"They tell you how much the project should throw off every year on a pro forma statement, and they want a set percentage of that—whether or not the project actually throws off what the pro forma says it should throw off. Theoretically, if you slip badly in your figuring, you could end up owing the lender more money than you've taken in.

"Let's say, for example, you've got a project that you expect will gross \$200,000 a year, and you estimate 40% of that for expenses. That leaves \$120,000. At 10½% interest, your debt service is way up there. You'd end up with a cash flow—a cash throw-off—of about \$30,000. And let's also say your deal with the insurance company is for 50% of that,

which means they get a check for \$15,000. But say your expenses run higher than 40%, or vacancies are higher than you projected, or that some other factor drops your cash flow below \$30,000. You're still going to have to pay that 15 grand."

Says Stan Hickman of Hickman-Hoppe in Dallas, who dealt with a lender that took 2% of gross rentals:

"It's working out. I just consider it an additional cost, and I'm not concerned now that the 2% might make the difference between profit and loss some day.

"That's something nobody has given much thought to. But whenever a market becomes overbuilt and a builder with a participation deal gets into trouble, the first thing the lender is going to have to do is give something on his participation.

"The lender won't have much choice. It's either that or take the project, and they won't want the project. They only want it when it's 98% rented—not when it has

operating problems. None of them wants to get involved in operating an apartment project, and, of course, we don't want them to."

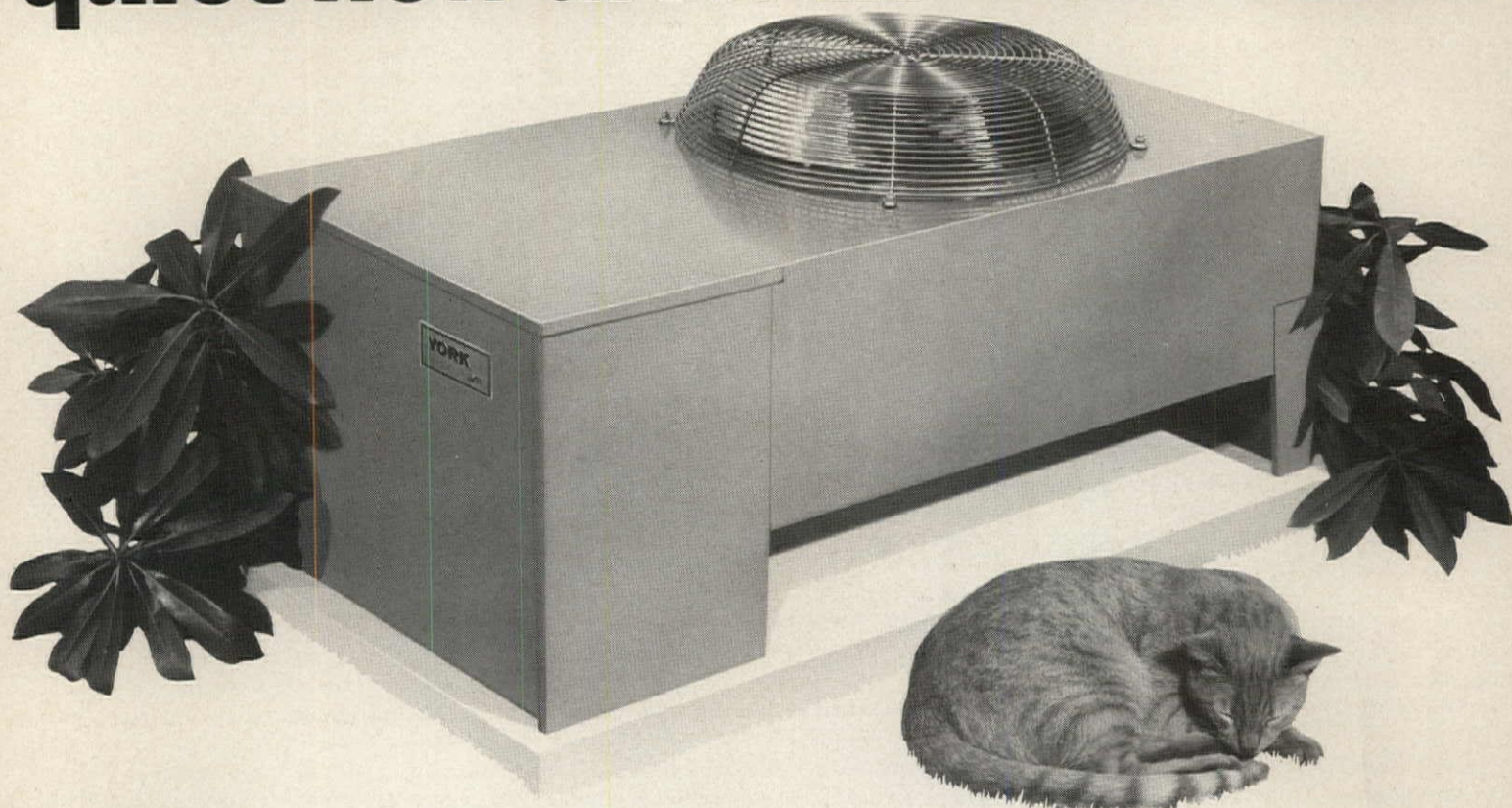
Says Ted Rokas of Shareholders Equity in Los Angeles, who has steered clear of all participation deals:

"The majority of these deals don't work. Or they work only if the rents continue to go up. But if you have a vacancy problem—and the vacancy situation here is a little touchy right now—and if you are in a percentage-of-the-gross situation, you're in trouble."

Says David Gambrell of James Bynan Construction Co., in Kansas City, who has entered into participation deals based on percentage-of-increase in gross rentals:

"That kind of deal is the least of the evils available. And that's why we've used it. We've always tried to get as high a gross rent roll as the lender will accept, and consequently we haven't yet had to pay off on the kicker."

Get a bigger piece of the new home action with the quiet new arrivals from York.



Introducing the York Champion III.

As a builder, the name York probably means a lot to you already. Just as it does to prospective home buyers. And the name Champion III can mean even more.

York's new Champion III is the quiet, low, compact air conditioning unit that's perfect for every home.

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The Roffinos made faster profits because homes with *the electric climate* (which means that everything is electric, including the heat) sell faster. They have

exclusive consumer benefits like room-by-room temperature control, unbeatable cleanliness, and steady, even heat. There's every convenience for modern comfort and carefree living, too.

The electric climate also slashed building costs for the Roffinos. For example, lower time and labor costs, fewer parts to install, and faster, easier installation.

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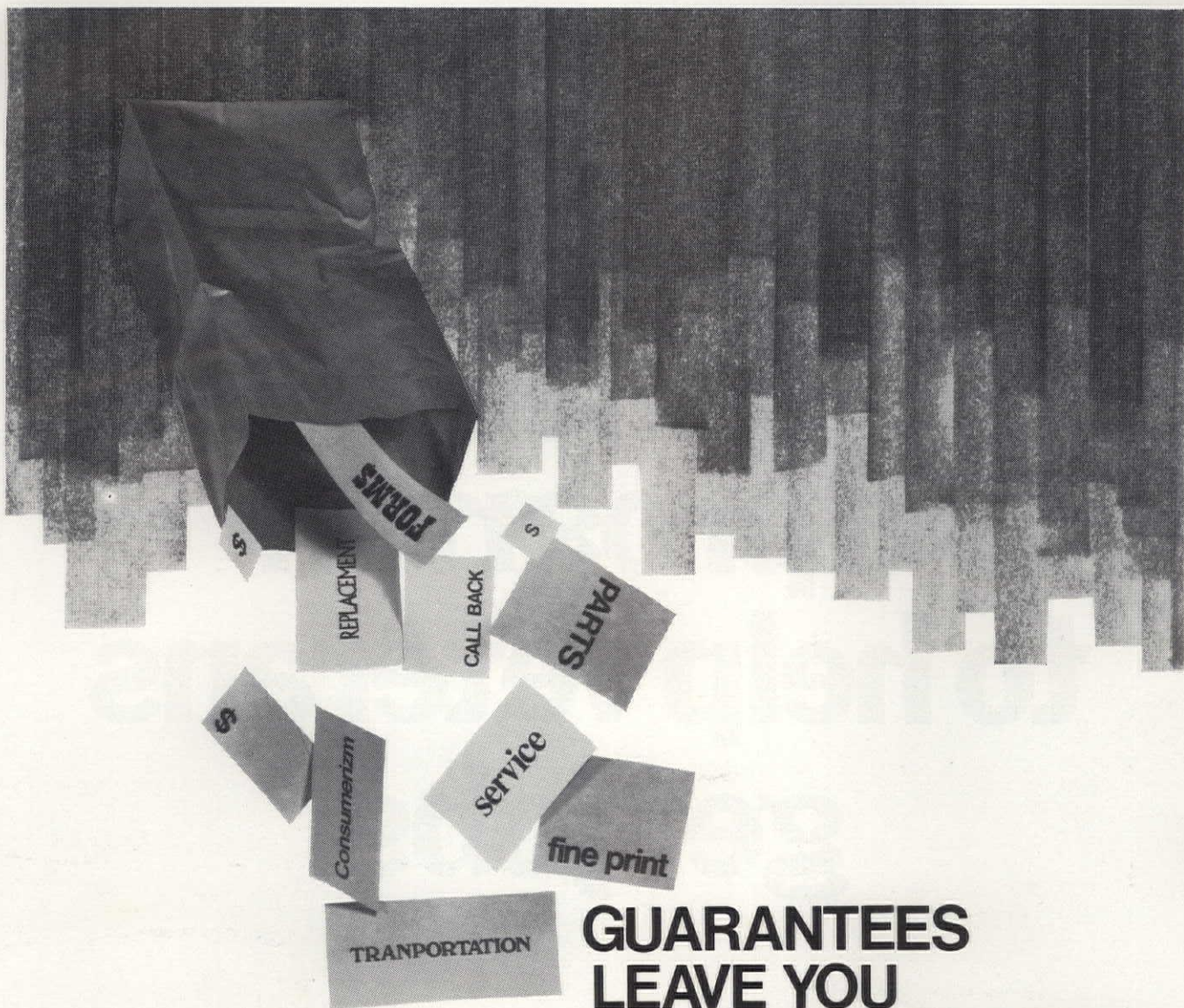
Edison Electric Institute, 750 Third Avenue, New York, N.Y. 10017



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"This year over one million servicemen and women will complete their military service in the Armed Forces and return to civilian life. Almost four million Vietnam era veterans have already returned to civilian life. These servicemen and women deserve every opportunity that a grateful nation can provide."

Richard M. Nixon

The President has announced a program to help veterans get jobs.

Now he's asking for your help.

Most veterans returning to civilian life seek jobs. For many, this is a period of uncertainty... perhaps difficulty. Veterans not only *deserve* your help, but they have something extra to offer—clerical, trade, technical, professional, and supervisory skills learned in the service—plus the use of the GI Bill to learn while they work. Equally important, they have maturity, self discipline and motivation!

The Jobs for Veterans program is designed to widen job and training opportunities for veterans. The Federal Gov-

ernment is mobilized. States, cities and counties have been encouraged to form local Jobs for Veterans Task Forces.

Do your part! Urge your firm to hire and train vets. Work with your local business, labor, government, veterans and civic organizations to help veterans find meaningful jobs.

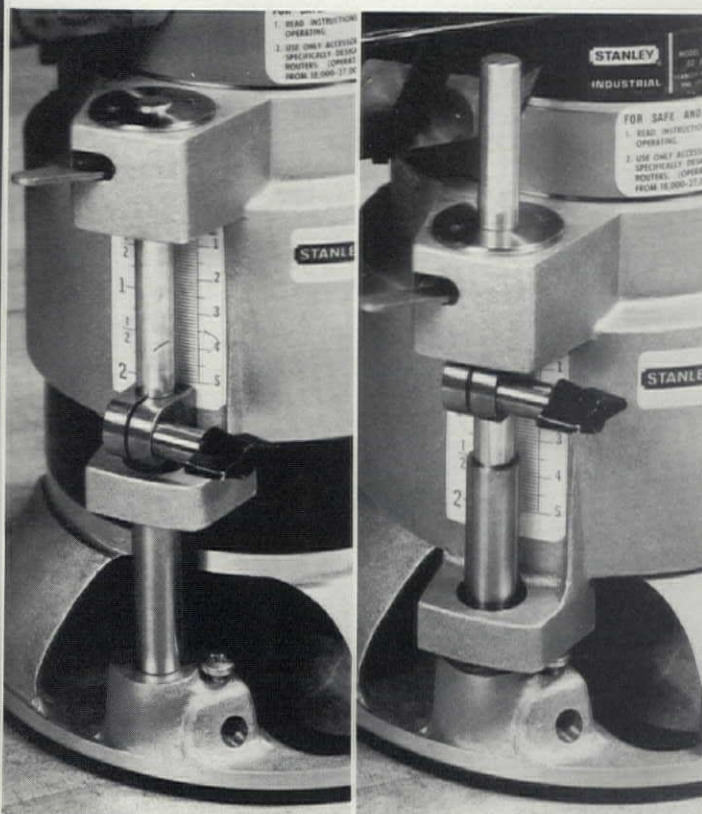
To hire a veteran—see the local office of the State Employment Service. For information on training programs for veterans, contact the local office of the Veterans Administration.

DON'T FORGET. HIRE THE VET.

James F. Oates, Jr., National Chairman—Jobs for Veterans



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Production router with plunge-through bit eliminates tough starts

Production router is designed to let operator plunge bit directly through the work material (above, left), rather than tipping the bit through. The depth of cut is preset on an adjustable gauge that is scaled in inches and millimeters. Bit can be set low (center) or shallow (right) and the motor shaft will lock automatically when bit reaches

preset depth. Fingertip control unlocks motor shaft and retracts bit up into base after cutting, eliminating danger of gouging workpiece. Bits can be changed easily by just turning a knob on top of the motor housing. No tools are required for the change that can be made only when the shaft is in lock position. Another safety and convenience

feature is that the handles are located on the motor housing rather than on the base and a trigger switch is built into the handle for easy handling. The 2½ hp. router weighs less than 16 lbs. and operates at 21,500 rpm. Base remains flat on the work. Stanley, New Britain, Conn.

CIRCLE 201 ON READER SERVICE CARD



Rotary hammer has twice the blow-per-stroke rate of conventional electric hammers; hits on up and down strokes. Alternate hammer rotation clears cuttings immediately. The 9.0 amp motor delivers 2,800 blows per minute,

and handles all ½" to 2½" diameter rotary drilling requirements. All metal parts are double insulated, and no grounding wire is needed. Weighs 14½ lbs., and is 15" long. Rockwell, Pittsburgh, Pa.

CIRCLE 202 ON READER SERVICE CARD



Compact loader with hydrostatic drive has infinite forward and reverse speeds from 0 to 8 mph. The ¾-ton loader is designed to work in small areas, pivots in its own length, works under 6' clearance, and passes through 4'-wide open-

ings. Available with ½-yd. bucket and 8' backhoe. Bucket has 45° dumping angle at maximum height; loader capacity is 6.8 to 20 cu. ft. International Harvester, Chicago, Ill.

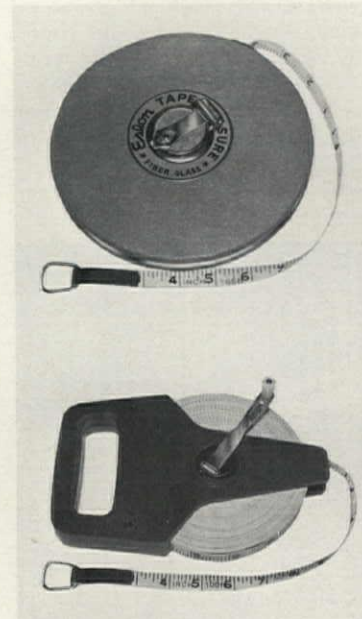
CIRCLE 203 ON READER SERVICE CARD



Ladder platform hoist moves construction materials, masonry, panel board, roofing, or appliances up to 44' high. Either gas or electric powered motor. Two sizes—with capacities of 200 or 400 lbs.—are

available. Power unit is easily attached to ladder and material is unloaded over the top of the ladder. Accessories are available. Reimann and Georger, Buffalo, N.Y.

CIRCLE 204 ON READER SERVICE CARD



Fiberglass tape measure, in lengths from 50' to 300', is stronger than steel, more flexible than cloth, according to manufacturer. Thousands of glass fibers coated with polyvinyl chloride make a substance that will not stretch, shrink, or deteriorate and is non-conductive. In metallic case coated with PVC or in open ABS reel. Keson, Berwyn, Ill.

CIRCLE 205 ON READER SERVICE CARD



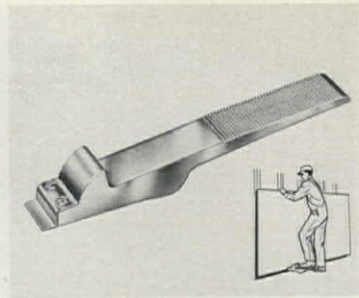
Flat paint applicator is a 6" x 4" foam-mounted nylon fiber pad on an adjustable handle. Makes thicker application of paint than possible with brush or roller and thus one-coat painting without streaks or texture. Paints 2 sq. ft. with one filling. Guide wheels on sides make sharp edges for baseboard and window trim. PPG, Pittsburgh, Pa.

CIRCLE 206 ON READER SERVICE CARD



Extending backhoe makes possible working close to walls, fences, or among obstructions, as above. Eliminates need for extensive turning and maneuvering by hydraulically reaching the boom through narrow openings and over obstacles. J.I. Case, Racine, Wis.

CIRCLE 207 ON READER SERVICE CARD



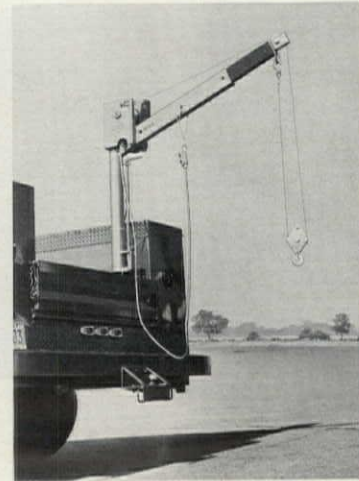
Wallboard lifter of cast aluminum has a 1/2" replaceable steel lifting lip that is heat treated for added strength. Weighs 24 oz., is 15" long, 2" wide, and has 1"-high toe tick. Heal rest has non-skid, checkered surface for added traction. Goldblatt, Kansas City, Kans.

CIRCLE 208 ON READER SERVICE CARD



Standoff attachment for extension ladders also includes 236-sq.-in. shelf that holds up to 70 lbs. of tools, paints, or materials. When retracted, shelf supports make handy brackets for hanging cans, rags, etc. Fits any wood or metal extension ladder and can be adjusted to hold workman 18" to 30" from vertical surface. Simple adjustment makes it possible to straddle outside corners of buildings. Wokasch, Whittier, Calif.

CIRCLE 209 ON READER SERVICE CARD



Truck crane has 2,000-lb. capacity on telescoping 3' to 5' boom. With recessed or surface-mounted sockets and gravity seating, crane swivels 360°, can be removed or moved on truck. All electric operation has controls on a 20' coil cord. Overall height is up to 80" with surface-mounted socket, 68" with recessed socket. A short 22" mast is available for use on top of utility body or economy van. Santa Anita Mfg., Temple City, Calif.

CIRCLE 210 ON READER SERVICE CARD



Utility bodies with two extra top-opening compartments are part of a line of 18 low-profile and standard models for chassis from 1/2 to 1 ton. A slide-fold brace engages automatically to hold each lid in open position. 15 removable bin dividers, adjustable on 1" centers, equip each compartment. Units are only 1 1/4" higher than standard for good visibility. Reading, Reading, Pa.

CIRCLE 211 ON READER SERVICE CARD



14-horsepower trencher has 4-cycle, air cooled, cast iron engine, hydraulic transmission with oil bath lubrication, and selective differential lock. Features also include matched 4-belt digging drive, tubular booms in 2 1/2', 4 1/2', 4 1/2', and 5 1/2' lengths, with hardened chain guides and spring-loaded boom-end sprocket. Cutter chain strength: 46,000 lbs. John Deere, Moline, Ill.

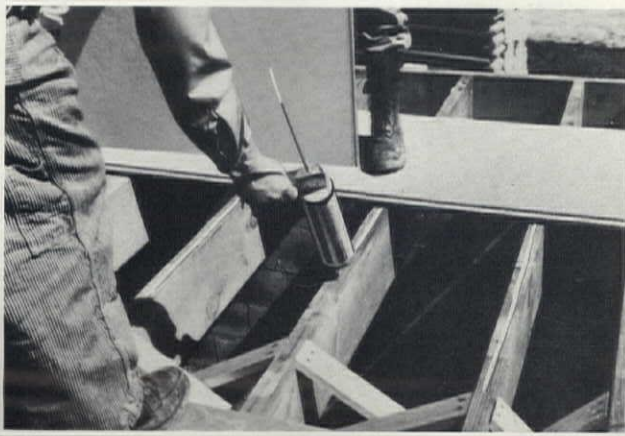
CIRCLE 212 ON READER SERVICE CARD

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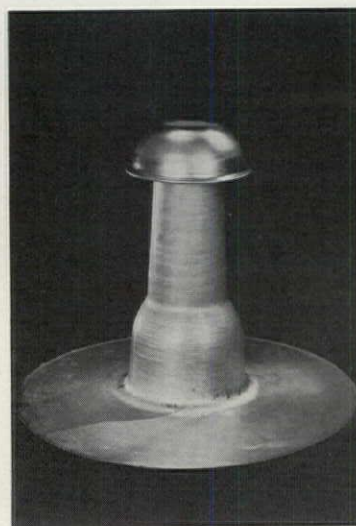
PRODUCTS/STRUCTURAL MATERIALS



Roof deck panels of bonded wood fibers are light in weight, easy to lift (*top photo*). Urethane insulation, foamed onto surface, penetrates 1/4" into fibers and expands to form a 3/4" skin (*bottom photo*) that makes

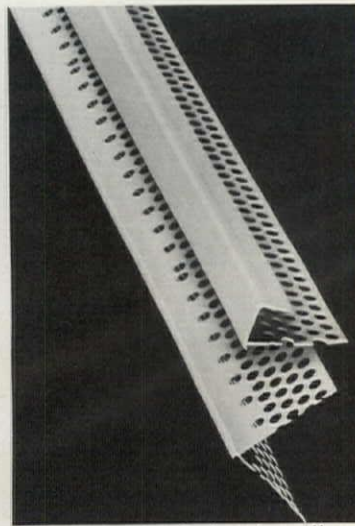
panel stable and protects it during application of built-up roofing. Panels come in many sizes; attached by clips to joists as shown. National Gypsum, Buffalo, N.Y.

CIRCLE 213 ON READER SERVICE CARD



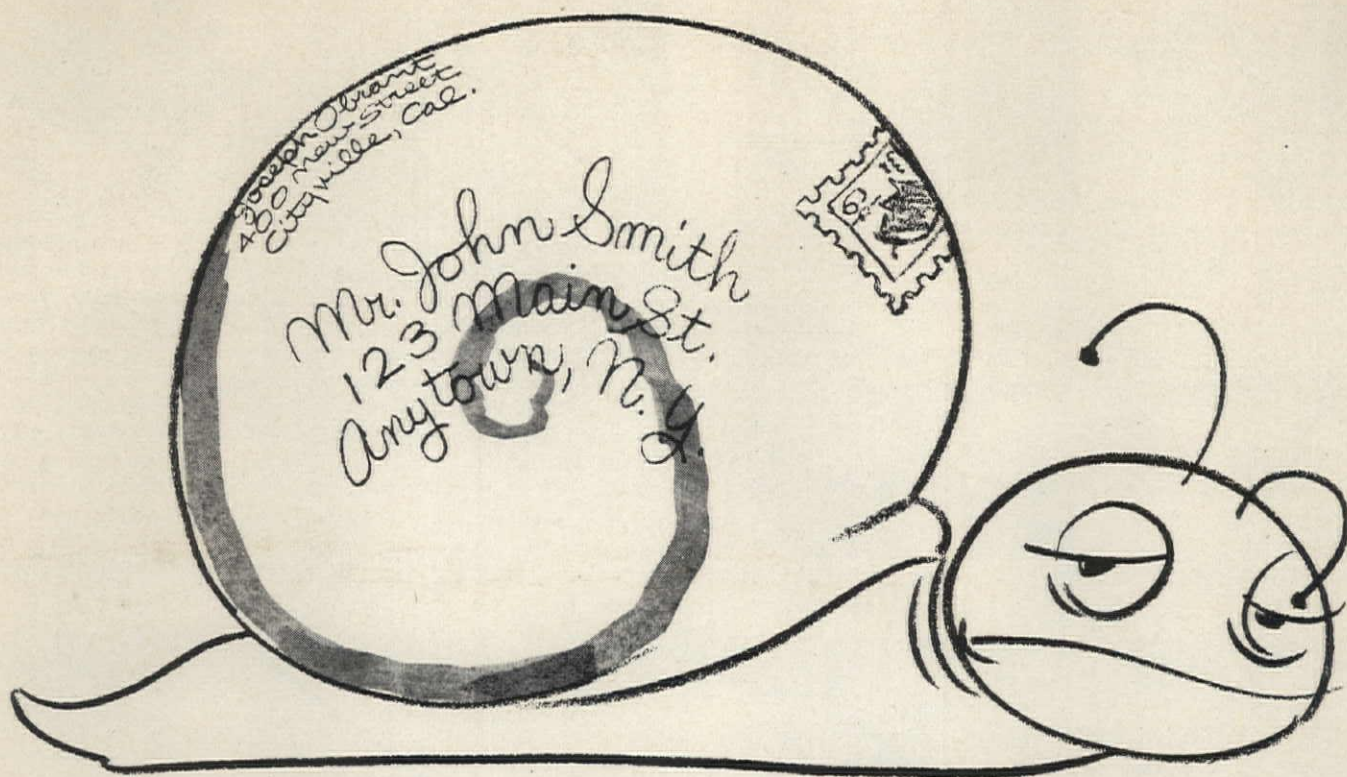
Roof vent dissipates moisture, with or without vapor barrier, to relieve vapor pressure that damages built-up roofing. Made of spun aluminum, its base flange and stack are one piece to eliminate leaks. Mushroom cap prevents vapor feedback. Dimensions: flange, 12" dia.; stack, 10" high. Lexsucu, Solon, Ohio.

CIRCLE 214 ON READER SERVICE CARD



Thin vinyl bead, for drywall or veneer coat plastering, needs only one covering coat. Outside or inside corner strips come in several lengths from 7' to 16', can be cut with shears, stapled into place. White beads can't rust through and discolor, have no sharp edges. Rimar, Manheim, Pa.

CIRCLE 215 ON READER SERVICE CARD



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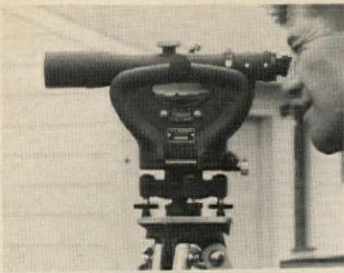
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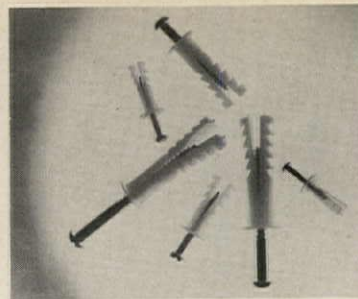
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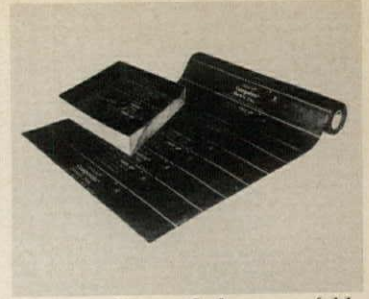
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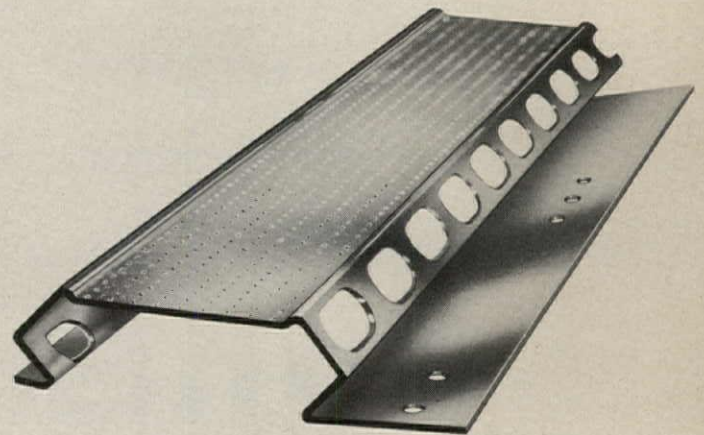
City _____ State _____ Zip _____



Nylon anchors attach straps, hangers, or framing to such low-strength materials as brick, plaster, or cinder block. When nail or screw is hammered or threaded through, the split and serrated shank spreads and firmly holds loads from 460 lbs. in brick to 1,150 lbs. in block. Molly, Div. USM, Temple, Pa.
CIRCLE 216 ON READER SERVICE CARD

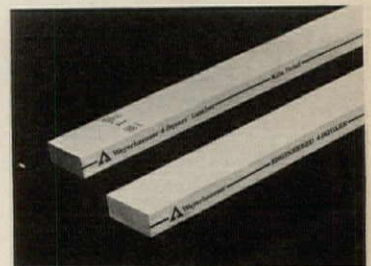


Waterproofing underlayment folds to form shower pan, turns corners under brick veneer, goes under masonry partitions. Eight kraft paper plies are saturated with asphalt, reinforced with fiberglass, then faced with polyethylene. In 100' rolls 48", 54", 60", or 72" wide. Compotite, Los Angeles, Calif.
CIRCLE 217 ON READER SERVICE CARD



Resilient furring channel has one fastening leg, right, that is placed on top for starter course, on the bottom of each succeeding course. The 2 3/8" strips, applied horizontally

24" apart, offer a 1 1/2"-wide knurled surface to which wallboard is screwed 12" on center. Casings, West Middlesex, Pa.
CIRCLE 218 ON READER SERVICE CARD

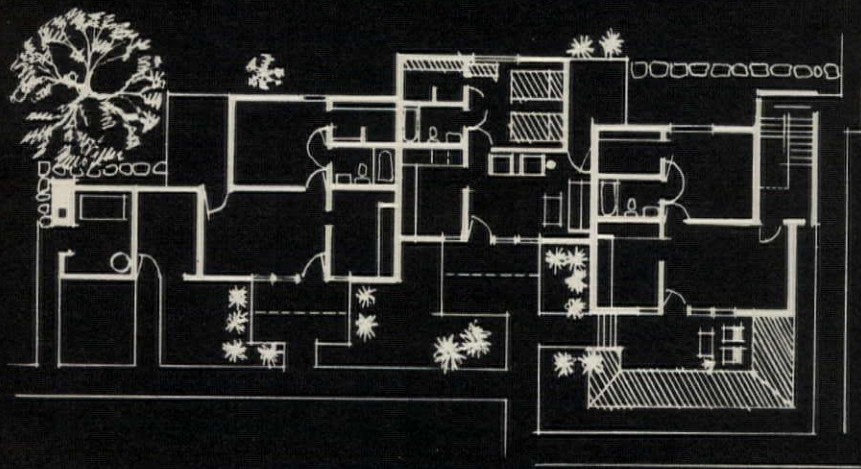


Lumber size identification readily separates inventories. New lumber is marked in red, old in black. Also manufacturer's 4-Square trademark is printed in red on edge branding, top, of kiln-dry lumber. Weyerhaeuser, Tacoma, Wash.
CIRCLE 219 ON READER SERVICE CARD

Combination fastener is a 12-14 1" self-drilling screw with a six-lobed recess pan head for more torque without damage to head or to finished surfaces. Fused color-coated head matches building materials. Elco, Rockford, Ill.
CIRCLE 220 ON READER SERVICE CARD



Red cedar shingles make low-cost housing highly inviting.



Apartments at Wayne, Michigan. Certigrade Shingles No. 1 Grade, 16" Fivex. Architect: William Kessler. Builder: Holtzman and Silverman.

Public housing. A neighborhood of appealing garden apartments. The two can be synonymous. Proof is this 36-unit development for the elderly in the Detroit suburb of Wayne, Michigan.

Open spaces, varying elevations, and attractively landscaped courtyards all help. So does the use of red cedar shingles.

As a sidewall material, cedar shingles

meet the most stringent requirements for economy. And their worth grows. They require no maintenance for decades, are naturally insulative, and withstand even hurricane winds.

But probably their greatest asset is beauty. Cedar has a way with people. It's inherently warm-looking. It turns public housing into someone's

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CIRCLE 123 ON READER SERVICE CARD

H&H APRIL 1971 123



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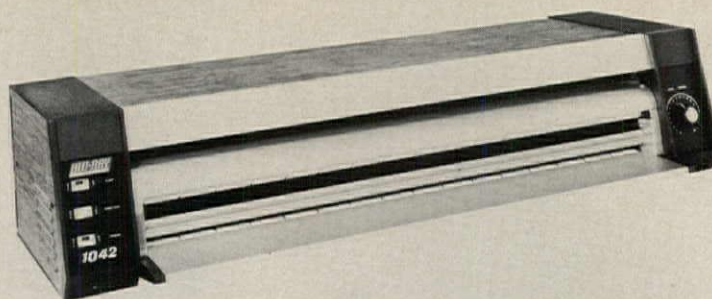


Table-top whiteprinter has fully electronic speed control and synchronized printing and developing process capable of producing up to 400 prints per hour or 22' per minute with high-speed papers. 12"

high and 55" wide, the unit has a 43¾" throat. It requires no special wiring; can be plugged into any 120-volt outlet. No warm-up time is required. Blu-Ray, Essex, Conn.

CIRCLE 221 ON READER SERVICE CARD

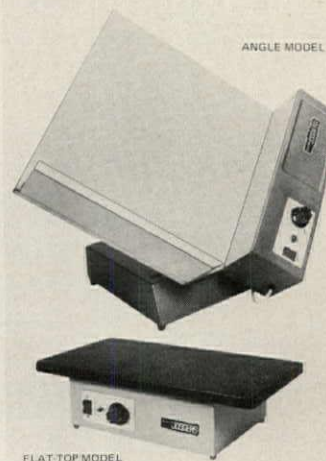


Estimating calculator with built-in memory may be used with take-off features or independently. Can take off count and length or area, volume, pricing, and scale conversions. Standard architectural and engineering scales are selectable on panel. Diversified Electronics, Sunnyvale, Calif.

CIRCLE 222 ON READER SERVICE CARD

Joggers, in either angle model (*top right*) or flat-top model (*bottom right*) work on stock up to 17" x 22". Multiple-direction vibrating action jogs paper to eliminate adhering and static electricity. Units use 110-v house power and come with 8' grounded cable with adaptor plug. Michael Lith Sales, New York City.

CIRCLE 223 ON READER SERVICE CARD



Billing and invoicing system is programmed by tape cassette, and uses standard typewriter keyboard plus a 10-key numeric keyboard. System consists of a modified Selectric printer (*left*) plus a desk-top computer (*right*). Memory bank

makes common billing words and phrases available at touch of a key. Price includes development of individualized program for the user's requirements. Wang, Tewksbury, Mass.

CIRCLE 224 ON READER SERVICE CARD

Aquarian. We put the CeRamix cartridge in and left the washers and service problems out.



Our new CeRamix™ cartridge makes the Aquarian™ line the most trouble-free fittings you can install.

This unique cartridge is hidden

inside a handsome single lever fitting. It provides perfect water temperature and flow without any metal-to-metal contact. There are no washers. And there's never a need for any kind of lubrication.

There is virtually nothing to wear out.

The remarkable CeRamix cartridge with its jewel-hard ceramic discs is immune to sand, silt, grease and other impurities that cause wear and dripping. And if service ever is required, the entire cartridge can be slipped out and replaced in seconds.

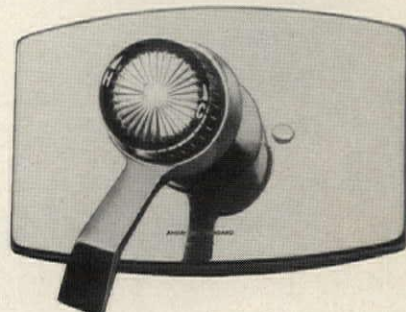
Installation couldn't be simpler either. All Aquarian fittings come with copper tubing that installs easily in any piping system.



And if you think the Aquarian line looks good on this page wait till you actually see it. These are design classics that fit in anywhere. With the everlasting beauty of the American-Standard Chromard® finish. Plus the durability of brass and stainless steel.

So if your buyers want fittings with the utmost in looks, convenience and reliability, be sure you have the Aquarian line.

For complete details on the full line of long-lasting Aquarian Fittings, call your American-Standard plumbing contractor. Or write American-Standard, P. O. Box 2003, New Brunswick, N.J. 08903.



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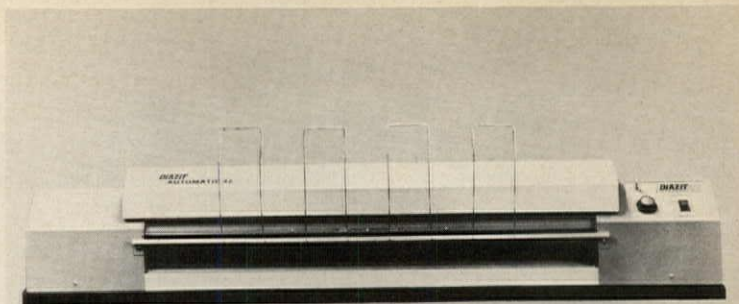


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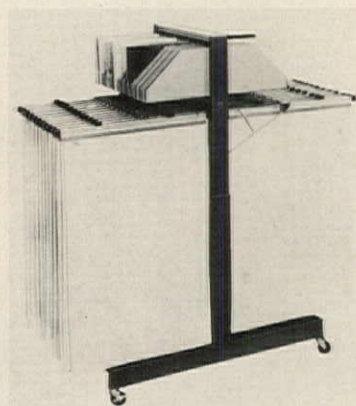
CIRCLE 141 ON READER SERVICE CARD



Whiteprinter (above) provides 42"-wide copies and automatically separates copy and original. The unit uses dry ammonia; no liquid enters machine. No venting, special plumbing, or wiring are required. And

there is no warm-up time. The printer—13" high, 68" wide, and 18" deep—prints and develops dry diazo paper, film, foil, and sepia. Diazit, Youngsville, N.C.

CIRCLE 225 ON READER SERVICE CARD



Vertical filing system (left) is one of a variety of models that hold any cut sheet material without hole-punching, stapling, folding, or damaging. The double mobile rack shown holds up to 2,400 sheets. Manufacturer's line includes cabinets, fire-insulated files, tub files, and wall racks. Stacor, Newark, N.J.

CIRCLE 226 ON READER SERVICE CARD

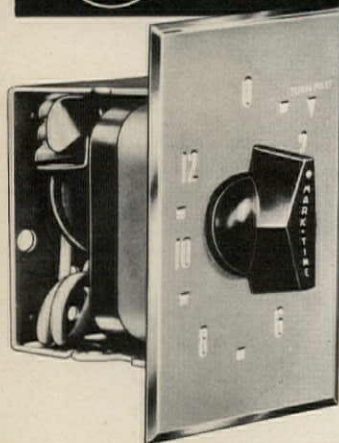
Facsimile telecommunications unit couples with telephone and transmits documents, drawings, photographs. A 3- or 6-minute transmission may be selected depending upon volume, distance, and speed desired. Manufacturer says phone costs can be cut by up to 50% with this system that speaks to many other facsimile systems in the country. Magnavox, Saddle Brook, N.J.



CIRCLE 227 ON READER SERVICE CARD



Wall Box Time Switch



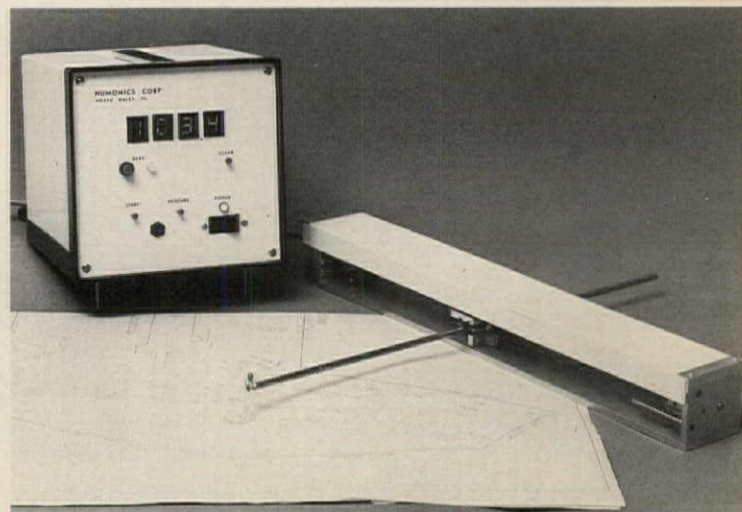
**THE ONLY TIMER
WITH DIAL FACE PLATE
THAT MOUNTS
FLUSH TO THE WALL!**



**Turn "OFF" lights, heaters
-automatically- after 3 minutes to 12 hours**

Save electricity, add comfort and convenience, extend life of equipment. Easily installed in standard wall boxes. Recommended for hotels, motels, homes, apartment houses, public buildings. Available through wholesalers everywhere. Send for literature.

M. H. RHODES, Inc. HARTFORD, CONN. 06101
In Canada—M. H. Rhodes (Canada) Ltd., Ottawa 5, Ontario



Digital electronic planimeter measures closed-figure areas on maps, plans, or drawings. Answers in sq. inches, feet, yards, or acres are directly to scale. For volume measurement in cut-and-fill estimating, a constant depth factor can be

added. Pointer (center) is moved around the perimeter of an area; answer is read directly from digital display (left). Standard working area: 25" square; larger ranges available. Numonics, North Wales, Pa.

CIRCLE 228 ON READER SERVICE CARD

You don't have to know anything about shingles to know this one's exceptional.

It's thicker. Heavier. Looks like a wood shake. It's random-edged like a wood shake. Has character like a wood shake. But it isn't wood.

A wood shake can't begin to protect like this one. Against hurricane winds. Fire. Rain, snow and melting ice.

We've taken the best protection features of highest quality asphalt. And added the heart warming look of natural wood. The result is a distinguished shake shingle of uncommon beauty, ideal for gambrel or mansard roofs on traditional or modern homes.

Because it's thicker, heavier (half again as heavy as an ordinary shingle) and embellished with jumbo granules, the Bird

Bird architect® 70 asphalt random shake shingles

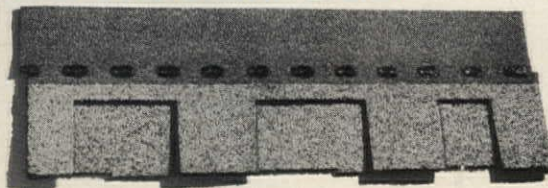


Bold, Brawny, Beautiful

Architect 70 brings massive dimension and character to your roof.

And the random edging, as with natural wood shakes, gives a deep, sculptured shadow line for a look of strength and substance. Warm nature tones of Cypresswood, Oakwood and Ebonywood enhance even more the captivating good looks of the Bird Architect 70.

Planning to build or re-roof? Look into the bold, brawny, beautiful one. See your Bird dealer or send coupon now. See our catalog in Sweets.



**BIRD
& SON**
INC.
QUALITY PRODUCTS SINCE 1795

Bird & Son, Inc., East Walpole, Mass.

Please send me all the facts on the bold, brawny, beautiful one - Bird Architect® 70 asphalt random shake shingle.

Name _____

Street _____ Cty _____

City _____ State _____ Zip _____

House & Home - April



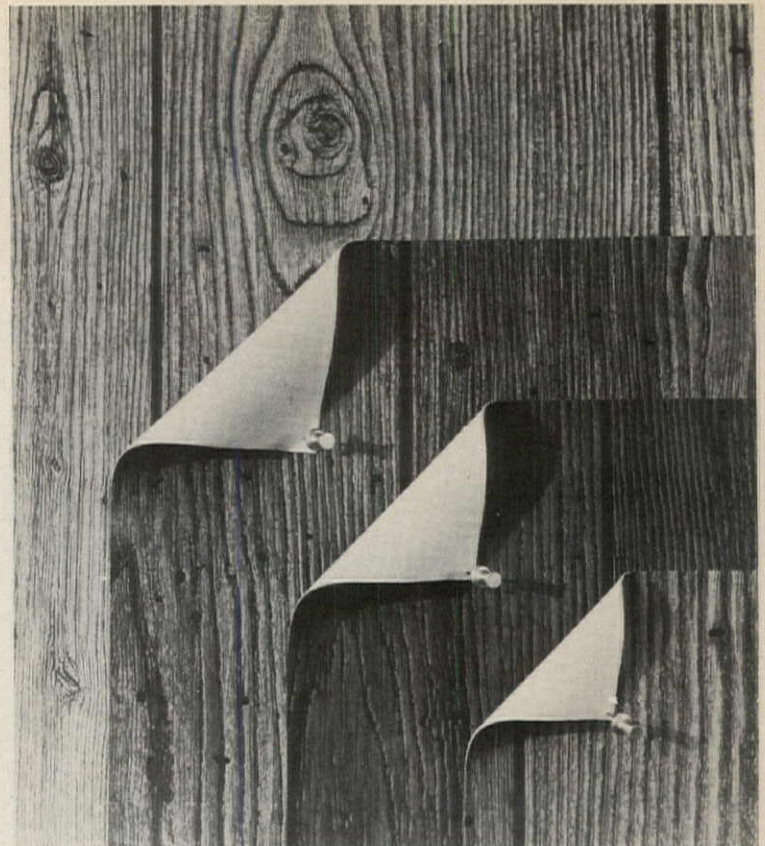
HE BEAT HEART ATTACK

This farmer is back at work because of improved methods of diagnosis, treatment and rehabilitation developed by medical research. Most heart attack victims survive first attacks. Of those who do, 4 out of 5 go back to work. Close to 164 million Heart Fund dollars channeled into heart research since 1949 helped make this progress possible.

GIVE...
so more will live
HEART FUND

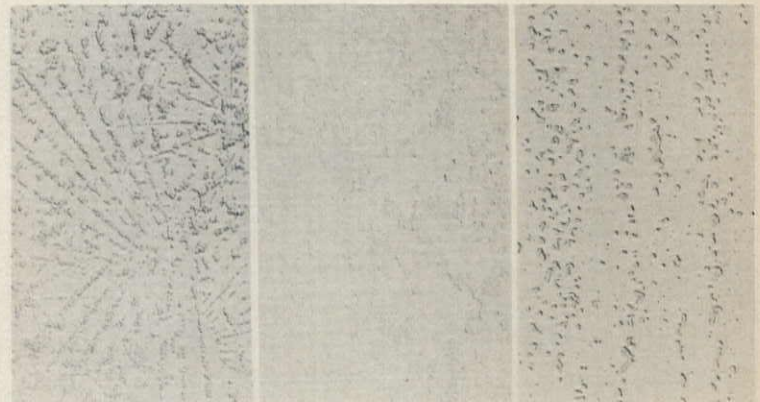


Contributed by the Publisher



Vinyl wallcoverings simulate the look and texture of antique barn siding. Produced by a patented system of chemical embossing, they are available in four colors in either

random planked or unplanked designs. From top to bottom: Weathered, Sandrift, Tobacco, and Tanbark. Inmont, New York City. CIRCLE 233 ON READER SERVICE CARD



Gypsum ceiling panels, with embossed, valley-printed surface, are designed to withstand washings, moisture, and termites, are also non-combustible. In three patterns—(left to right), Libra, Cirrus, Trav-

ertine—the panels are 4' wide, 3/8" thick, and any length up to 16'. Designed primarily for mobile homes. National Gypsum, Buffalo, New York. CIRCLE 234 ON READER SERVICE CARD



Simulated stone wall is a tough, lightweight polyester that resembles various sizes, shapes, and colorings of natural stone. Easy to install with a base coat of adhesive

(left) and the same adhesive on each stone (right). Colorfast, non-porous, and washable with a damp cloth. Dacor, Worcester, Mass. CIRCLE 235 ON READER SERVICE CARD

It's not just another pretty face.

The Bryant 567. A builder's dream.

It's slim and trim. Beautiful. But it's got talent too. All any builder could ask for in a condenser.

All because the 567 is a different kind of condenser. A unique engineering accomplishment in condenser fan design, with a new fan setup that moves more air more efficiently. And more efficiency means less noise and less cost to run.

Which gives a homeowner who has one advantage he'll really appreciate. Peaceful quiet, for one. Quiet enough for us to call our 567 the Quietline[®].

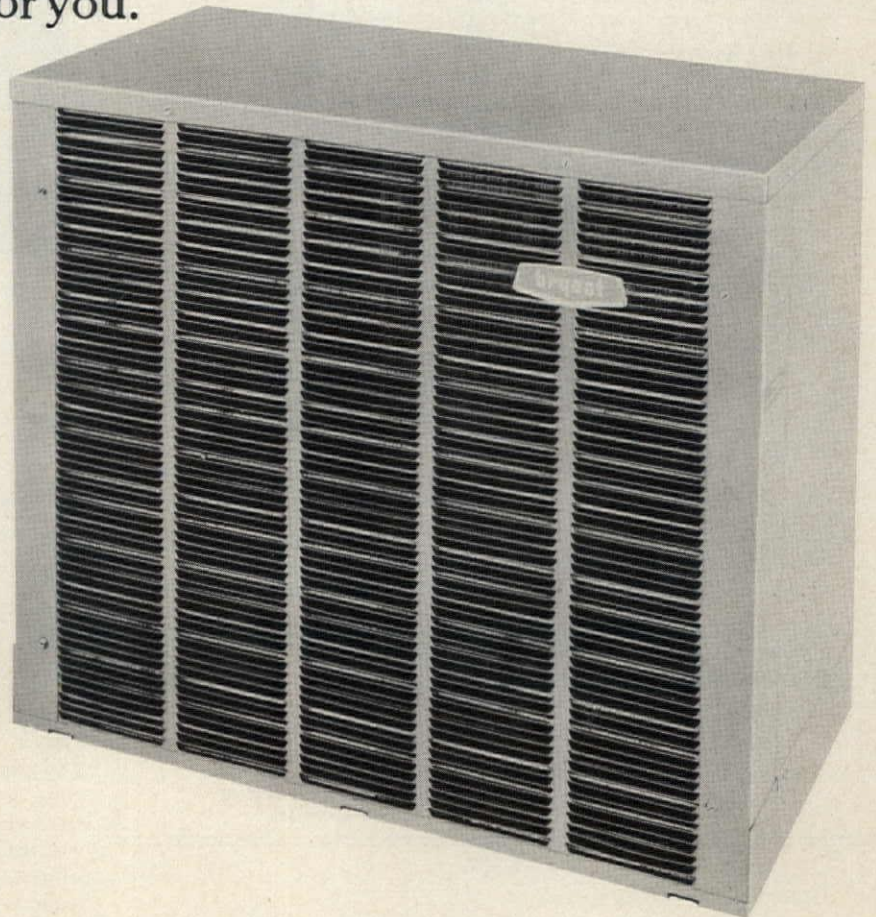
There's more, of course. Like a lighter, really compact body. Solid 20-gauge steel that's galvanized, bonderized and welded into one strong piece. And 20 separate, fussy inspections before it leaves the factory. To make sure it runs quieter longer.

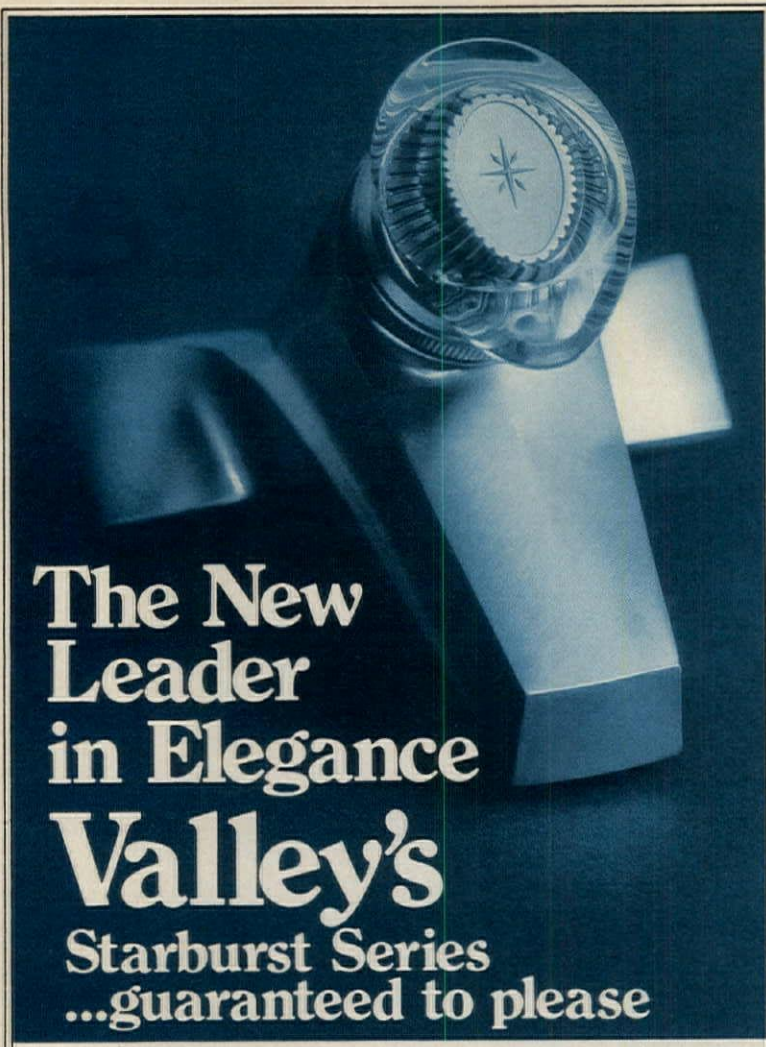
All of which adds up to plenty of peace and quiet for the people that bought your house. And for you.

See your Bryant dealer for all the details. Or write Bryant Air Conditioning Company, 7310 W. Morris Street, Indianapolis, Indiana 46231.

The Bryant 567 Quietline[®] condenser. Proof that beauty isn't everything.

The Great Indoors[®]
People 

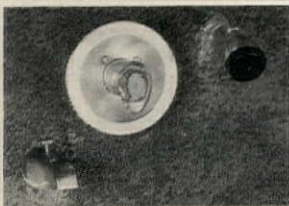




The New Leader in Elegance Valley's Starburst Series ...guaranteed to please

a new elegance at your fingertip

Something really new has burst upon the horizon of functional beauty in the bath. It's Valley's Starburst lavatory series that features a completely new shape in acrylic handles... a shape that combines the lever type flow control and temperature control in a unique configuration. All the other Valley features are here too, five-year parts warranty, one year no-call-back guarantee with \$10 labor allowance*, the durability of Triplate finish, and



trouble-free Hydroseal control action with the Feather Touch. See your Valley distributor for all the good news about Starburst, and how you can profit from this new innovation in elegance from Valley.

Including the Industry's Outstanding Warranty

\$10 bucks says you won't have to disconnect a Valley faucet for a year after proper installation.*

*Full warranty and guarantee detailed in package.

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UNITED STATES BRASS CORPORATION



SUBSIDIARY OF HYDROMETALS, INC.
901 TENTH STREET, PLANO, TEXAS 75074



VALLEY TRIMWARE • SPEEDFLEX SUPPLIES • DURO FITTINGS • CONNECTORS
LOOK FOR THESE MARKS FOR SUPERIOR PLUMBING QUALITY

CIRCLE 130 ON READER SERVICE CARD



Textured spray paint speeds up interior renovation because it goes on over irregular and unprimed surfaces. It produces a sag-free dry film up to 40 mils thick that covers hairline cracks, patches, nail holes, and other irregularities. It can be

sprayed onto plasterboard, plaster, masonry, poured concrete, or Masonite. The paint comes in three finishes: medium rough, sand-finished, and very fine sand-plaster. PPG Industries, Pittsburgh, Pa. CIRCLE 229 ON READER SERVICE CARD



Fire retardant paint is demonstrated at left by girl who holds a match. It burns brightly till it hits the area protected by the paint, then it goes out. Paint foams up, creates a barrier of bubbles to keep flame away from combustible material, and smothers it. Available in a wide range of colors. Goes on with brush, roller, or sprayer. Good-year, Akron, Ohio. CIRCLE 230 ON READER SERVICE CARD



Waterproofing sealer fills up cracks, crevices, and fissures in concrete, brick, tile, and wood. It ends leaks, so prevents scaling, spalling, cracking, peeling, flaking, staining, and general corrosion. Of rubber and resins, it stays flexible. Elite Waterproofing, Portland, Ore. CIRCLE 231 ON READER SERVICE CARD



Liquid plastic comes in 16 colors that intermix for an infinite variety of hues. Provides a smooth, diamond-hard surface that looks more like tile than paint; goes on over wood, plaster, or metal; resists alcohol, acids, abrasion, chipping, weathering. Flecto, Oakland, Calif. CIRCLE 232 ON READER SERVICE CARD



Doors with this seal of quality cut finishing time and reduce call-backs.

Doors that offer distinctive styling minus traditional problems. Doors with one-piece molded faces that are factory-primed . . . ready to paint.

Surfaces that are smooth and need no sanding, no filling. Joint-free one-piece molded faces that keep their beauty.

This is why they cut finishing time and reduce call-backs. (They even cost less than conventional panel doors.) Try them on your next job.

The seal is new. But already builders have used over half a million doors with these molded faces. The seal is removable; just lift off and paint.

A dozen companies make these doors. See names at right.

This
quality door
manufactured with
Weyerhaeuser®
Molded Faces

One-piece face. Factory-primed.
Joint-free. Needs no sanding.



Weyerhaeuser

LIFT HERE

American Door Co. of Michigan, Inc.,
Walkerton, Ind.

American Door Distributors, Inc.,
Needham, Mass.

Artesia Door Co., Artesia, Calif.

Crown Door Corp., Tampa, Fla.

General Plywood Corp., Louisville, Ky.

Glen-Mar Door Mfg. Co., Phoenix, Ariz.

Lifetime Doors, Inc., Livonia, Mich.,

Denmark, S.C. and Hearne, Tex.

Mohawk Flush Doors, Inc., North-
umberland, Pa. and South Bend, Ind.

Morgan Co., Oshkosh, Wis.

Pease Co., Hamilton, Ohio

Premium Forest Products, Ltd.,

Scarborough, Ontario, Canada

Walled Lake Door Co., Richmond, Ind.,

Stanley, Va., Tupelo, Miss. and

Cameron, Tex.

Young Door Co., Plymouth, Ind.
and Sunbury, Penn.

The working class



Our Model 1042 is the class machine among table-top whiteprinters. Engineered for the long pull, the 1042 is ruggedly constructed of aluminum extrusions and castings, with heavy duty operating parts that mean dependable durability—that mean day-after-day performance without breakdowns or maintenance. As fool-proof as a machine can be made. As low cost as a precisely engineered quality whiteprinter can be built, the 1042 is the class of the working class. And for hundreds of dollars less than floor model machines of similar capacity, the 1042 with speeds up to 22 feet per minute and a 42-inch width may be all the whiteprinter you'll ever need. Would you like free literature, a demonstration, or both?

Ask your Blu-Ray dealer about the low cost monthly lease plan.

BLU-RAY

INCORPORATED

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Phone (203) 767-0141

CIRCLE 132 ON READER SERVICE CARD

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LITERATURE

Wood mouldings. Close-up details and idea sketches for rooms are featured in a comprehensive guide to the selection, carpentry, and installation of prefinished wood mouldings. Popular patterns are shown trimming doors, windows, wainscoting, floor tiles, ceilings, and corners. Basic installation steps are also included. Western Wood Moulding & Millwork Producers, Portland, Ore.

CIRCLE 300 ON READER SERVICE CARD

Latex for portland cement mortar.

A detailed bulletin is divided into four main sections giving information on latex-modified portland cement systems for specialty construction applications. The first section gives general information on improving portland cement systems with latexes; the second describes various latex mortar formulations. It discusses underlayment mortars, patch kits, resurfacing mortars, LMC stucco formulation, and an experimental concrete mix. Section three discusses placement of LMC mortar systems with information on surface preparation and mixing procedures. The final section is a product evaluation. Dow, Midland, Mich.

CIRCLE 301 ON READER SERVICE CARD

Wood stains. A concise guide to wood and wood stains is now available from a manufacturer of stains and paints. The booklet deals with types of stains, application details, color effects, exterior and interior staining, stains for furniture, when to stain, and when to paint. Copies are available for \$25 each from Samuel Cabot Inc., Dept. AB—H&H, One Union St., Boston, Mass.

Fork lift trucks. A brief yet comprehensive discussion of the cushion and pneumatic tire gas-powered models of lift trucks offered by this manufacturer is available in a series of information sheets. The series covers electric cushion and pneumatic tire fork lift trucks with capacities ranging from 3,000 to 25,000 lbs. Towmotor, Cleveland, Ohio.

CIRCLE 302 ON READER SERVICE CARD

Fibrous glass insulated ductboard. Savings of up to 25% can be made, according to the manufacturer of a system of easily installed ductboard that needs no lining or wrapping. It is lightweight—weighs ¼ what insulated or lined metal duct weighs—but is still strong enough to handle long runs of ductwork. PPG Industries, Pittsburgh, Pa.

CIRCLE 303 ON READER SERVICE CARD

Fiberglass benches. Parks, patios, campuses, shopping centers are enhanced by use of reinforced fiberglass benches, according to the

manufacturer of the outdoor furniture described in a new brochure. Impervious to extremes of temperature, the benches are compatible with a variety of settings, and can also be used indoors—in lobbies, museums, terminals. They are easy to clean, are rodent-proof, and will not dent, discolor, or nick, says the maker. Six models are described and illustrated with specifications on size, weight, color, and optional features. Lynema Enterprises, Bronson, Mich.

CIRCLE 304 ON READER SERVICE CARD

Parquet floors. A new full-color catalog pictures many of a line of 150 parquet floor patterns available in teak and other hardwoods from all over the world. Not only can the floors be installed as shown, but patterns can also be combined for more versatility. The flooring is available in unfinished, paper-fronted panels or pre-finished, felt-backed panels. Installation details and technical specifications are included. Bangkok Industries, Philadelphia, Pa.

CIRCLE 305 ON READER SERVICE CARD

Power tools. The manufacturer's complete line of air and electric power tools for industry and construction is described in the 1971 catalog which was recently released. Several new tools are introduced in the 80-page loose-leaf sized catalog. Black & Decker, Towson, Md.

CIRCLE 306 ON READER SERVICE CARD

Sound conditioning. Insulation board sheathing and its effects on sound conditioning and bracing thermal insulation are described in an illustrated booklet which also includes information on applications in single- or multifamily units. Acoustical and Insulating Materials Assn., Park Ridge, Ill.

CIRCLE 307 ON READER SERVICE CARD

Trowelling machines. Complete specifications for the manufacturer's line of trowelling machines in diameters of 29", 36", and 45" are included in a new bulletin. Features of the tools include stationary guard ring; long, adjustable handle; handle-mounted blade pitch control; and sliding sheave-type clutch, which stops the blades as soon as the operator releases the handle and allows the machine to be started at any throttle setting. Stow, Binghamton, N.Y.

CIRCLE 308 ON READER SERVICE CARD

Paint costs. A value analysis of the cost of paints shows that inexpensive paints often cost more in the long run, because they require more frequent repainting. The study was conducted by a manufacturer of urethane chemicals

TO PAGE 134

Your kid shouldn't know more about drugs than you do.

A FEDERAL SOURCE BOOK:

Answers to
the most frequently
asked questions
about drug abuse

Get wise.

Get the answers.
Send for this booklet.
Then talk with your kids.

Write to:
Questions & Answers
National Clearinghouse
for Drug Abuse Information
Box 1080
Washington, D.C. 20013



advertising contributed for the public good

for the paint industry. An extensive table compiles information from several surveys on costs of different types of coating on wood, steel, plastic surfaces in corrosive and non-corrosive atmospheres. The brochure is illustrated in full color. Mobay Chemical, Pittsburgh, Pa.
CIRCLE 309 ON READER SERVICE CARD

Major appliances. This fully illustrated catalog provides complete information on the manufacturer's 1971 line of major appliances for new and remodeled buildings. Covered are: free-standing and built-in electric ranges, built-in ovens, cook-tops, range hoods, air conditioners, dishwashers, garbage disposers, refrigerator-freezers, and washers and dryers. Cost, size, installation, and feature information is also included, along with a section on an appliance planning service offered to builders and architects. Hotpoint, Louisville, Ky.
CIRCLE 310 ON READER SERVICE CARD

Lighting fixtures. A full-color catalog pictures the manufacturer's 1971 line of residential lighting fixtures including crystal chandeliers, imported bronze and crystal pieces, Americana lighting fixtures, and Tiffanys, swags, and

accent fixtures for interior and exterior use. A full range of bath and powder room lights and flush ceiling panels are included. Prestigeline, Amityville, N.Y.
CIRCLE 311 ON READER SERVICE CARD

Folding shower doors. Standardized sizes of folding shower doors for fiberglass tub and shower modules are now available. A specifications brochure lists models now available from leading manufacturers. Standard sizes make custom doors unnecessary. Tub-Master, Orlando, Fla.
CIRCLE 312 ON READER SERVICE CARD

Molded urethane. A concise information bulletin discusses a casting process that produces a hard, self-skin plastic surface for urethane products. The cellular core sandwich construction provides a strong substance for use in furniture, cabinets, and other applications. Uniroyal, Naugatuck, Conn.
CIRCLE 313 ON READER SERVICE CARD

Guide to residential management. First written as a handbook for a large Washington, D.C. management firm, this manual contains forms, checklists, form letters, and information on all phases of residential management. Included are rent-

ing procedures, rent collection, controls and computer procedures, delinquent rents and security deposits, tenant-management relations, inspection and maintenance, and administration and personnel procedures. The book has recently been revised and is now issued by the National Association of Homebuilders. \$8.75 per copy, from the NAHB office at 1625 L St., N.W., Washington, D.C. 20036.

Partitions. Organizing interior space in an office or work station is simple with the help of this manufacturer's interior partitions. Three basic combinations are shown for use in office, gallery, or drafting station. Accessories are available to customize and rearrange work spaces. A four-color information folder describes the partition system. Conwed, St. Paul, Minn.
CIRCLE 314 ON READER SERVICE CARD

Uses for plywood. The American Plywood Assn., Tacoma, Wash., offers the following brochures on construction uses of plywood:

Plywood sheathing for floors, walls, and roofs—with building code requirements, installation instructions, and grade guide tables.
CIRCLE 315 ON READER SERVICE CARD

Plywood grades. A loose-leaf or pocket size folder gives definitions, and tables of grade use for interior and exterior uses, engineered plywood, and veneer grades.

CIRCLE 316 ON READER SERVICE CARD
Plywood underlayment. Text, tables, and drawings illustrate installation methods of plywood and combined underlayments and sub-floors.

CIRCLE 317 ON READER SERVICE CARD
Plywood diaphragm construction. This booklet contains extensive information on definitions, advantages, design methods and examples in roofs, end walls, and side walls. Photographs, drawings, and tables illustrate.

CIRCLE 318 ON READER SERVICE CARD

Annual H&H indexes

Copies of House & Home's editorial indexes for 1966, 1967, 1968 and 1969 are still available. Each is an eight-page, cross-referenced listing of subjects covered that year by this magazine. To get copies (there's no charge) write to: Editorial Index Dept., House & Home, 330 West 42nd St., New York, N.Y. 10036.

Former 7 time All Star N.Y. Yankees 2nd baseman, Bobby Richardson demonstrates the TM500. Bobby is currently the baseball coach at the University of South Carolina and still finds time to be an active board member of the Fellowship of Christian Athletes.




Two Champions - Bobby Richardson and Tee-M Storage Systems.

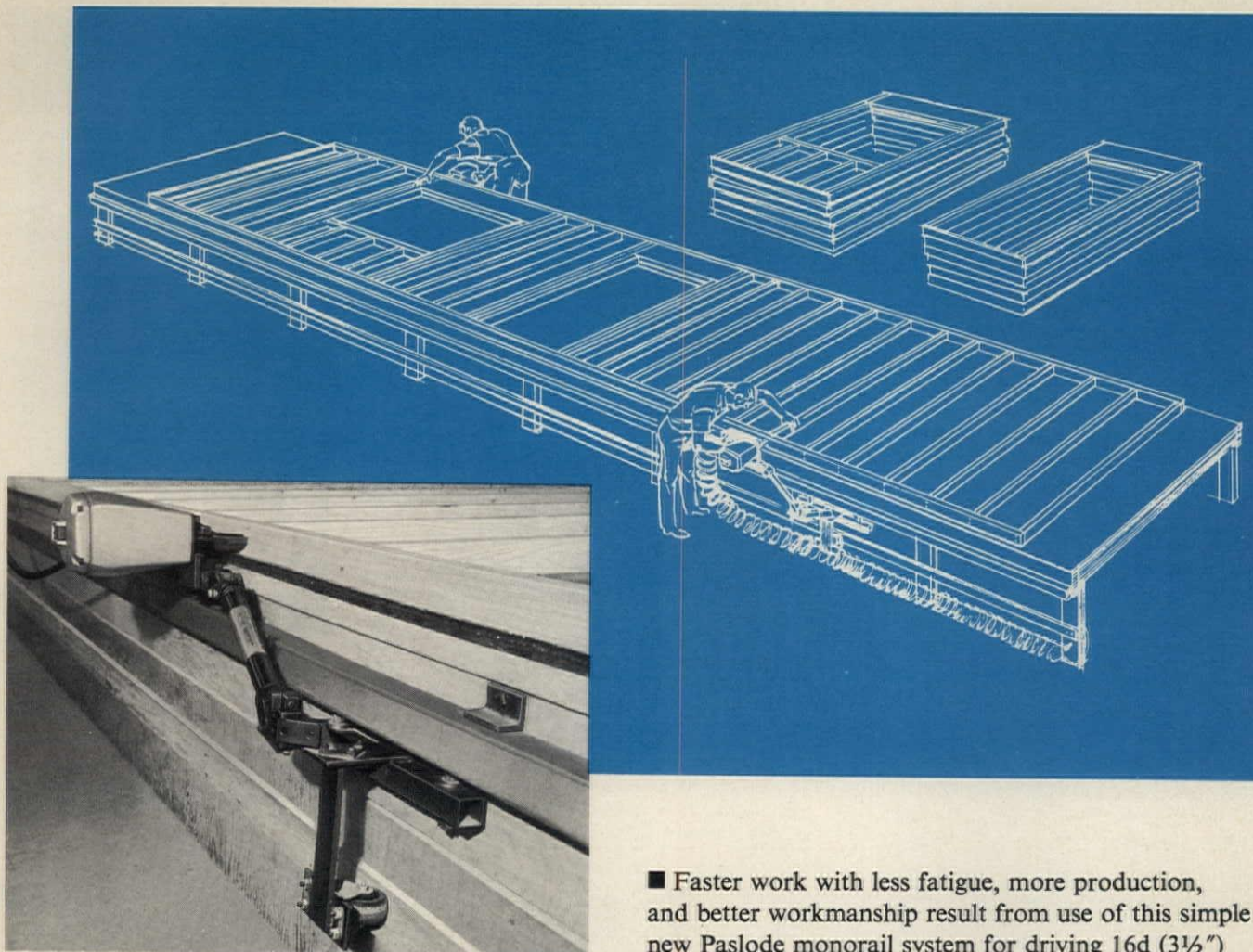
FOR A CLEANER AMERICA

Keeping grounds clean is no chore for Tee-M Containers. A Tee-M Storage System can solve your storage problems because Tee-M Containers are easy to operate, give years of service, are more economical to handle than expensive trash hauling systems, and improve the appearance of building grounds. There's a size for every need from two to ten 30 gallon cans or drums.

| MODEL DESCRIPTION | | | | | |
|---|---------------------|-----|-----|------|------------|
| Standard Tee-M Units for 30 gallon cans | | | | | |
| Model No. | Cap. (30 Gal. Cans) | D | H | L | |
| TM 200 | 2 cans | 27" | 55" | 49" | 350 lbs. |
| TM 300 | 3 cans | 27" | 55" | 74" | 450 lbs. |
| TM 400 | 4 cans | 27" | 55" | 97" | 600 lbs. |
| TM 500 | 5 cans | 27" | 55" | 121" | 750 lbs. |
| Special Units for 55 gallon drums | | | | | |
| Double Depth Tee-M Units for 30 gallon cans | | | | | |
| TM 4430-DD | 4 cans | 54" | 55" | 49" | 650 lbs. |
| TM 6630-DD | 6 cans | 54" | 55" | 74" | 750 lbs. |
| TM 8830-DD | 8 cans | 54" | 55" | 97" | 875 lbs. |
| TM 1030-DD | 10 cans | 54" | 55" | 121" | 1,000 lbs. |
| Special Units for 55 Gallon Drums | | | | | |

The  WILSON Corporation
PRECISION ROLLING DOORS SINCE 1876
DEPT. H & H, P.O. BOX 589, NORFOLK, VIRGINIA 23501





New, low-cost Paslode framing system speeds panel assembly

■ Faster work with less fatigue, more production, and better workmanship result from use of this simple new Paslode monorail system for driving 16d (3½") common, box, or sinker nails. A 50% increase in production with half the labor force is reported by the components shop where this picture was taken.

A spring loaded balance arm supports a Paslode Stallion® cartridge-fed pneumatic nailer. The balance arm rides on ball bearing rollers enclosed in a track on the side of the framing table. Extra strength and a steadying effect are provided by a large support roller close to floor level.

The balance arm carries the weight of the tool and permits smooth, almost effortless tool positioning. The operator squares up the framing member with one hand and power-drives the nails accurately with the other. Splitting is greatly reduced. A safety stop keeps the Stallion below the top of the plate, so you can safely have operators driving nails on both sides of the framing table at once.

For more information, call the Paslode man near you, or write us. On request, we will also send information on automated panel assembly systems.



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COMPANY, DIVISION OF SIGNODE®
8080 McCormick Blvd., Dept. HH, Skokie, Ill. 60076
In Canada: Paslode Canada Registered

ADVERTISERS INDEX

Pre-filed catalogs of the manufacturers listed below are available in the 1971 Sweet's Catalog File as follows.

- 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 Air King Corp. | 26 |
| American Gas Assn. | 48 |
| A American Olean Tile | 35 |
| A-I-L American Plywood Assn. | 43, 44, 45 |
| American Standard Inc. | 125 |
| A-L Andersen Corp. | 14, 15 |
| A-I-L-D Armstrong Cork Company | Cov. III |
| B | |
| B.F. Goodrich Chemical Co. | 57 |
| Berger Instruments | 122 |
| A-I-L Bilco Co. | 116E1, N2 |
| A-L Bird & Son, Inc. | 127 |
| Blu-Ray, Inc. | 132 |
| Boise Cascade Building Products | 116S4-S5 |
| Bostitch (Textron, Inc.) | 28 |
| A-L Bruce Co., E.L. | 13 |
| Bryant Air Conditioning Co. | 129 |
| Business Week Guide | 108 |
| C | |
| A-L Cabot, Inc., Samuel | 41 |
| Cameron Brown Co. | 116S3 |
| A-I-L Caradco | 37 |
| Columbus Coated Fabrics | 9 |
| A-L Compotite Shower Pan | 126 |
| Computer Sciences Corp. | 102, 103 |
| D | |
| duPont Glare Forgan Inc. | 24 |
| E | |
| Econo-Car International, Inc. | 111 |
| Edison Electric Institute | 89 |
| F | |
| First General Resources Co. | 120 |
| Float-Away Door Co. | 124 |
| A-I-L-D Formica Corp. | Cov. II |
| G | |
| A-L General Electric Co. | 50, 51 |
| A-I General Electric Industrial Sales Div. | 109 |
| Georgia Dept. of Industry & Trade | 107 |
| A-I-L-D Georgia-Pacific Corp. | 29 |
| Gravelly | 97 |
| H | |
| Homasote Co. | 119 |
| Home Comfort Products Co. | 91, 92 |
| A-L Hotpoint Div./General Electric Co. | 56 |
| Hunter Div. (Robbins & Myers, Inc.) | 59 |
| I | |
| A In-Sink-Erator Div. (Emerson Electric Co.) | 120 |
| International Harvester Co. | 46, 47 |
| J | |
| A-I-D J.G. Wilson | 134 |
| K | |
| Kenwood | 100 |
| Kingsberry Homes | 21 |
| A-L KitchenAid Home Dishwasher Div. (Hobart Mfg. Co.) | 53 |
| Kwikset (Div. of Emhart Corp.) | 5 |
| L | |
| Lear Siegler, Inc. | 116M1, S2 |
| Leigh Products, Inc. | 40 |
| A-I-L Libbey • Owens • Ford Co. | 52 |
| A Lyon Metal Products, Inc. | 112 |
| Lyon Van Lines, Inc. | 106 |

M

| | |
|---------------------------|----------|
| A M.H. Rhodes, Inc. | 126 |
| Marvin Windows | 31 |
| A-I-L Masonite Corp. | 18, 19 |
| Modern Maid, Inc. | 113, 114 |

N

| | |
|------------------------------------|---------------|
| National Particle Board Assn. | 58 |
| Noblecraft Ind., Inc. | 116W1 |
| NuTone, Inc. | 1, 2, Cov. IV |

P

| | |
|---|----------------|
| A-I-D PPG Industries | 6, 7 |
| Pacific Lumber Co. | 23 |
| Paslode Co. | 135 |
| Payne Co., The | 116W4, S1, SW1 |
| Penna. Grade Crude Oil Assoc. | 100 |
| D Pomona Tile (Div. of American Olean) | 35 |
| Ponderosa Pine Woodwork Assoc. | 54, 55 |
| Prestige Structures, Inc. | 116N2A-N2B |
| Price Pfister | 60 |
| Progress Lighting Co. | 49 |

R

| | |
|---|-----|
| A-L Red Cedar Shingle & Handsplit Shake Bureau | 123 |
| A-L Rez Co., Inc. | 16 |
| Rheem Mfg. Co./Califone Roberts Div. | 105 |
| A Rohm and Haas Co. | 25 |

S

| | |
|---|-------|
| Senco Products, Inc. | 33 |
| Sharp Electronics | 101 |
| Slater Electric | 17 |
| A-I Sonoco Products Co. | 104 |
| Southern California Gas Co. | 116W3 |
| State Farm Insurance | 94 |
| Sperscope Inc./Sony Tape Recorders | 99 |
| Sweets Light Construction File | 136 |

U

| | |
|-------------------------|----|
| A-L-D U.S. Plywood | 39 |
|-------------------------|----|

V

| | |
|--|-----|
| Valley Faucet Div. (U.S. Brass Corp.) | 130 |
|--|-----|

W

| | |
|-----------------------------|-------|
| W.A. Sheaffer Pen Co. | 108 |
| Walter Carpet Mills | 27 |
| A-I-L Weyerhaeuser Co. | 131 |
| Williamson Co. | 116N1 |

Y

| | |
|--|----|
| A-I York Div. (Borg-Warner Corp.) | 88 |
|--|----|

Advertising

Sales Staff

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

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

CHICAGO 60611
 Karl Keeler Jr.
 James R. Schaffer
 645 N. Michigan Ave.
 (312) 664-5800

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

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

DENVER 80202
 Richard Powers
 1700 Broadway
 (303) 266-3863

DETROIT 48226
 Edward E. Schimer
 2600 Penobscot Bldg.
 (313) 962-1793

HOUSTON 77002
 Jerry Ambrose
 2270 Humble Bldg.
 (713) 224-8381

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

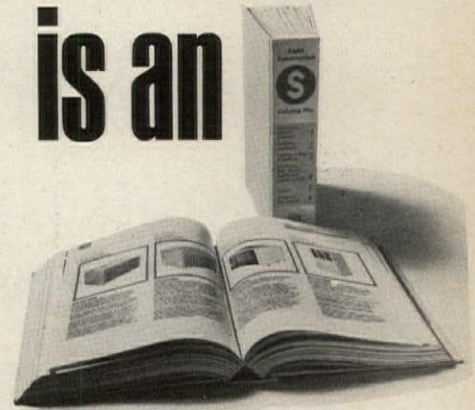
NEW YORK 10036
 David Persson
 500 Fifth Ave.
 (212) 971-3686

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

SAN FRANCISCO 94111
 Stephen D. Blacker
 425 Battery Street
 (415) 362-4600

BUSINESS MANAGER
 Vito De Stefano
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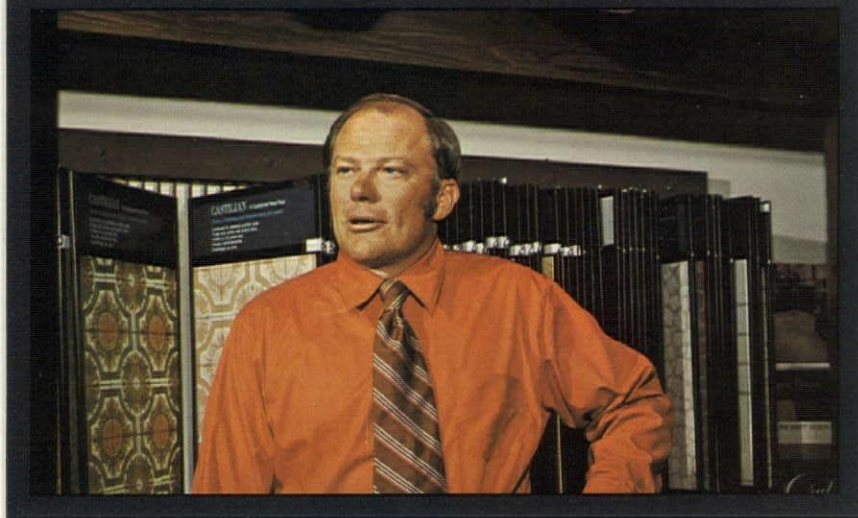


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