

# House & Home

MANAGEMENT MAGAZINE OF THE HOUSING INDUSTRY

MAY 1964



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## House & Home

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MAY 1964

## Materials prices and wage rates edge higher

The nation's record tax cut has been followed by a spate of actions spelling higher costs for housing men.

Producers of basic materials like copper, aluminum and glass—whose prices have been stalled on dead center for almost three years—are testing higher price schedules (*see p. 14*).

Other producers have already seen an end to the profitless prosperity plaguing the early 1960s. A HOUSE & HOME survey (*see p. 11*) shows sales or earnings of 31 of 51 producers are running at or near record levels. And more producers than ever are strengthening their financial and operational ties to the homebuilding market (*see p. 6*).

Building-trades wage rates, fastest rising construction cost since 1955, seem poised for another upward step. Contracts in key trades expire in 40 large met areas and union demands so far are far above last year's 4.3% increase (*see p. 15*).

Mortgage discounts are bucking the trend. A hint of higher discounts three months ago is all but ended. The new outlook: steady (*see p. 35*).

The Administration wants to keep the lid on price and wage boosts that could be inflationary (i.e., outstrip productivity increases). So look for officials to urge restraint on both industry and labor.

Builders, either hoping to beat higher prices or expecting a sales surge, are swamping FHA with applications. Backlogs over ten days hit 22 of 75 offices, most in the Midwest and West. Highest: Detroit's 32 days.

But lenders are slowly applying brakes to apartment loans. S&Ls in Chicago are making fewer loans, and FHA nationally is making apartment builders put up deposits, bonds or irrevocable letters of credit to cover FHA estimates of operating deficits during two rent-up years.

## Delaware builders endorse open housing

The Home Builders Assn. in the old southern border state of Delaware has become the first NAHB state association to adopt an open-occupancy policy without the goad of state anti-bias law.

Only one local—Tuscon, Ariz.—had done so (NEWS, Nov. '63).

Delaware's state HBA members are joined in their stand by all other major builders in the Wilmington area and by the Greater Wilmington Board of Realtors. Their joint declaration applies in the two northern counties of Kent and New Castle (Wilmington) but not to the state's third and southern county, Sussex, almost as large as the other two.

HBA President Sidney Paul cites two reasons for this stand:

1. To avoid pressure by rights groups. Says Paul: "Integration was bound to come and it was better to accomplish it voluntarily."

2. To protect all builders from a few who had pulled out of FHA after the November 1962 federal anti-bias order and who were refusing to sell to Negroes. The association's success in getting non-FHA builders to adopt the open policy puts all builders on the same footing.

## FHA's first-ever look at appliances shows some surprises

The biggest shocker is that even with the rapid growth of the package mortgage so few FHA builders are selling a modern appliance package with their house, according to data FHA has been collecting for nine months now.

Only two appliance items come with more than half of FHA's homes: ranges, included in 61% of all homes at the latest count in 1963's third quarter, and ventilator fans, 51%.

But even in FHA's low price ranges (median value: \$15,871) central air conditioning is gaining consistently in each quarterly report and was included in 5.4% of FHA homes. By contrast, the number of installed window air conditioners has dropped slightly from 0.8% to 0.5%.

FHA says its builders offer garbage disposals in 32% of homes, dishwashers in 15%, refrigerators in 9%, and washers and dryers in 6%.

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# Producers strengthen ties to builders

The roll call of producers taking an active part in housing continues to grow into a quiet revolution, bringing both drawbacks and aid to housing men

The list below contains the newest evidence of the dramatic changes in one of housing's most fluid areas: the ties of materials producers with homebuilders.

"There's a lot of ferment in this field and there will be more before there is less," sums up one veteran observer.

A HOUSE & HOME survey turns up 18 materials producers and none-housing concerns who now have strong financial ties to builders or are active in management of homebuilding companies.

The trend is accelerating so rapidly that the picture has changed in myriad ways since HOUSE & HOME's last look at it (The Emerging Giants, H&H, 'Jan. '63). Some companies then active in housing have dropped out: Armstrong Cork has quit the remodeling business and National Gypsum has stopped its financial aid to the Bureau of Advanced Housing, forcing its death in bankruptcy (NEWS, July).

But they have been replaced by a host of newcomers; 10 of the 18 companies listed below have started or taken the corporate wraps off plans in the intervening 16 months. Among the newcomers: Union Carbide, which bought part of ML Development Corp. in Columbus to build in four

Midwestern cities, and Gulf Oil Corp. which will put up \$15 million working capital for the new town of Reston, Va.

**New slants on new products.** Three of the housing tyros want to get closer to house building to further their own re-

search plans. Union Carbide, the nation's second largest chemical company, long has been interested in the engineered uses of plastics like urethanes and epoxies in housing. It decided the only reliable information it could get would be from direct participation in homebuilding, says General Manager R. S. Abrams of the building materials department. First, Carbide worked out a research contract with ML, a new company formed in 1961. This proved unsatisfactory so Carbide took both an equity and debt position with ML. ML has been proceeding slowly (60 homes last year). This spring, it divulged plans to have 11 subdivisions open by year-end in Columbus, Dayton, Cincinnati and Indianapolis. Homes will sell from \$14,000 to \$30,000—"the boundaries of the mass housing market," says Abrams.

Abrams says ML homes so far have been conventionally built with few new products. "One of the sobering things is that anything we do in this area we must do within the limits of marketability," says Abrams. "We don't try to do the thinking for the customer."

Farther down the experimental road is a Carbide rival, Koppers, which bought General Homes, a Fort Wayne home manufacturer, in November 1961. General switched its entire production method after that to build all its one-family homes with Koppers panels with an expanded polystyrene core. President William B. F. Hall of General Homes says: "Acceptance of the panel has not been as rapid as we had expected. Building codes have had to be overcome. We haven't had any turn-downs but you have to work with each city separately and this delays the work. One of the crying needs is for one central place for product approval."

Other producers are following the Stanley Works-NAHB Time and Materials Analysis (H&H, Sept. '62 *et seq.*) by sending observers to Builder Robert F. Schmitt's operation in Berea, Ohio. Potlatch Forests has a full-time engineer studying possible new uses of wood, and both Clark Equipment and Goodyear have part-time men analyzing fork-lift and adhesive uses.

**New money sources.** Practically every appliance maker is now offering a financing plan for customers and would-be customers. Most companies duck discussing exact terms publicly, but industry sources say most offer three to seven year terms at 5% to 6% add-on interest (or 10 to 13% simple interest). Most will lend no more than the builder's cash investment.

Westinghouse has been giving financing aid for 2½ years now (although it has pushed the plan only in the last year) and

## HOW PRODUCERS ARE HELPING BUILDERS

### Financing plans

Who	Does what
AMERICAN PLYWOOD ASSN.	Guarantees top 20% of conventional loans for selected builders
AMERICAN STANDARD	Finances air conditioning and plumbing through GE Credit Corporation
CALORIC	Finances twice the amount of appliance purchases up to five years on varying terms
CERTAIN-TEED PRODUCTS	Arranges 90% home mortgage loans through pledged accounts with S&Ls
GENERAL ELECTRIC	Offers second mortgages to apartment builders on varying terms
WASTE KING UNIVERSAL	Helps negotiate second mortgages with credit companies for builders
WESTINGHOUSE	Offers second mortgages to apartment builders on varying terms

### Operating and research tie-ins

Who	Does what
ALUMINUM CO. OF AMERICA	Owens fully or partially 18,707 built or planned apartments and 562 town houses in seven cities with projected investment of \$29 million
CHRISTIANA OIL	Converted to a land developer at Huntington Harbor, Calif.
GULF OIL	Will advance nearly \$15 million to Reston, with option to take equity position in this planned community
HUMBLE OIL	Joint venturer with Del Webb in Clear Lake City near Houston
KOPPERS	Owens General Homes, Fort Wayne, Ind. home manufacturer
LIBBEY-OWENS-FORD	Has \$10 million investment and commitment in stock, debentures and loans to Alside Inc.
MCCULLOCH OIL	Owens McCulloch Properties, co-developer of 16,500 acre planned community at Lake Havasu, Ariz.
REYNOLDS METALS	Sponsor 12 urban renewal projects planning 8,128 units of housing; investment to date \$4 million
SUNSET INTL. PETROLEUM	Converted to a land developer in five California subdivisions or new towns
UNION CARBIDE	Owens part of ML Development Corp., Columbus, O., homebuilder
U.S. PLYWOOD	Owens Weldwood Structures, a components manufacturer which has built experimental apartments

perhaps does the biggest financing volume although totals are closely concealed company secrets. Westinghouse will give builders of conventionally financed apartments second mortgages through its industrial finance department. The loans are granted independent of product purchases.

General Electric has similar financing for apartment builders through its subsidiary GE Credit Corp. GE Credit also is financing air-conditioning and plumbing products made by American-Standard.

Other appliance plans vary in detail. Waste King Universal helps builders arrange second mortgages and Caloric Corp. through its Caloric Acceptance Corp. offers a one-and-one deal: each dollar of appliances purchased lets apartment builders borrow \$2 from Caloric. Terms: 90% financing at 5% interest or 100% financing at 6%, both for five years.

Some multi-line companies use an internal guarantee plan: for each product division which agrees to pay the finance subsidiary for any losses from a customer-builder loan, the interest rate drops a notch. Some companies will accept similar guarantees from sellers of related equipment and furnishings, such as central air conditioning, light fixtures and elevators.

**Loan guarantees.** American Plywood Assn. (the renamed Douglas Fir Plywood Assn.) has for over a year guaranteed the top 20% of 90% conventional S&L loans for seven selected builders in Oregon and Washington who erect seven models of 1,000 sq. ft. homes designed to sell for \$12,000 or less on a lot.

Only 30 homes were sold. "We found that very few people had lots and those who did were often in locations not acceptable to the lender. We found that families want more than the minimum house," relates Don Jaenicke of APA. "We concluded the guarantee did not stimulate sales."

Undaunted, the group has extended its guarantee to one of California's biggest on-your-lot builders, Hicks Homes of Fresno. Hicks sells 50 homes a month, hopes the plan will help it qualify marginal buyers.

**Cash for land.** Gulf Oil Corp. and McCulloch Oil Corp. are two new oil companies putting considerable cash into land ventures. Gulf is providing working capital — about \$15 million, say insiders — for Robert E. Simon's planned new town of Reston, 18 miles from Washington (H&H, Feb.). The first 340 housing units are underway now on the 6,800 acre site.

As part of the deal Gulf takes an option to acquire equity in the sponsoring Pallindrome Corp. Gulf not only wants an outlet for money but also is interested in acquiring well located service station sites. And it hopes to work out a way to supply fuel oil for homes. Some Baltimore projects recently have experimented with central fuel oil tanks serving clusters of homes.

McCulloch Oil Corp. has taken over full ownership of McCulloch Properties. The subsidiary is joint venturing with Holly Corp. in developing a 16,500 acre recreational town near Lake Havasu, Ariz.

—KENNETH D. CAMPBELL



**FIXED-UP FORECLOSURE** is part of five-house package bought by St. Petersburg Builder Frank Strumm. He spent some \$1,000 to repair each

three-bedroom house, sold the houses for \$12,000 to \$12,500 and took a \$200 to \$300 loss on each to help his nearby subdivision.

## Wholesaling helps FHA unload houses

For the first time in five years, FHA has sold more foreclosed Florida homes in a single month (February) than it acquired. The score: 742 sales to 541 foreclosures. Sales have been rising steadily from 290 in November, while acquisitions are holding steady. National resales of foreclosed homes are 79% above a year ago.

One big reason is FHA's growing success at wholesaling foreclosed homes to housing professionals—the people the agency was created to deal with—instead of trying to sell direct to the public.

In the fourth quarter of 1963, FHA's Tampa office sold 150 homes this way (it has sold 502 since the program began more than a year ago). Ft. Worth, where Past NAHB President Richard G. Hughes tested the program (NEWS, Oct. '62), was second highest with 133 wholesale units. All told 13 FHA offices wholesaled 585 homes for 9% of FHA's 6,354 sales.

Builders are the biggest wholesale buyers. They take low profits or even losses

but point out that fixing up FHA foreclosures keeps idle crews busy and helps rid subdivisions of derelict houses. St. Petersburg, Fla. Builder Frank Strumm says he lost \$200 to \$300 on each of the five foreclosures he bought. But that didn't faze him because the renovations spruced up the approach to his Bahama Isles subdivision and helped new-house sales.

Here is how the wholesaling program works: FHA packages a group of foreclosed homes, generally less than ten, for bid. It sets a minimum price (lower than the appraisal) that allows for required repairs and expenses that FHA would pay if it held the houses. But FHA requires no financial payments for six months, during which the top bidders repair and promote the houses.

Dick Hughes, in some 45 purchases, has yet to pay a cent on financing because most of his resales came quickly. Overall, his profits amount to 5% of sales price, less 2½% to 4% for sales commissions.

### MARKET MURMURS

*Many a shout begins as a murmur. Some recent signs that may point to significant changes ahead in the housing market:*

#### ►Merchant builders try odd-lots

Three big merchant builders in widely scattered locations are turning to odd-lot selling. The trio: Albert E. Riley of Chicago, Roland Catarinella of Pittsburgh and Meyers & Lanzeau of Jacksonville.

Builder Charles Huber of Huber Homes in Dayton says he is offering more options than ever before, including choices in paint, wall and floor tile, bath fixtures, plus marble window sills and silent light switches. Huber calls it "individualizing" his homes: "We found that's where the demand is."

#### ►Builders woo architects

In an effort to bridge the gap between them, the Niagara Frontier Builders Assn. (Buffalo) invited three architects and three builders to tackle the topic, "Who is . . . responsible for the mess?" Architect Nelson Palmer suggested build-

ers lack a good 1,000 sq. ft. home and blamed low sales on poor design. Realtor-Builder Arthur Lewin contended builders in the \$13,000-\$20,000 bracket need architectural services only for elevations and plans. Result: a builder-architect committee to study services for builders in the \$13,000 to \$20,000 range.

#### ►Shopping center churches?

Developer and Mortgage Banker James Rouse of Baltimore has signed up United Church Center as tenant for 1,500 sq. ft. in his Harundale Mall three miles south of Baltimore on the road to Annapolis. It will be open during business hours.

#### ►Builder shifting to trailers

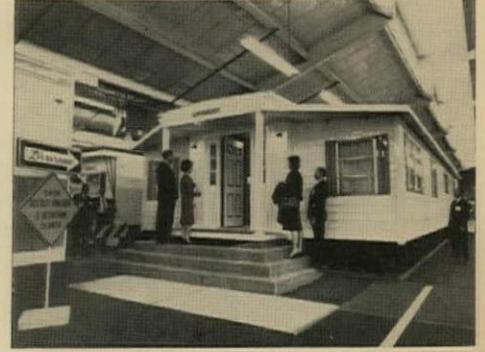
Persistent reports say one of Phoenix' biggest builders will soon manufacture and sell a 55' mobile home selling in the \$5,000 range with air conditioning.



Mac Mizuki

**BREAKTHROUGH FOR MOBILE HOMES** is this 70-acre \$7.5 million development near St. Louis,

which gives mobile units equal status with apartments. Project is near college and industry.



Louisville Courier-Journal

**EXPANDABLE MODEL** unfolds from 10' width to 24'. Maker: Magnolia Homes, Vicksburg, Miss.

## Mobile homes lose gypsy image, get zoned with apartments

In Wood River, Ill. (pop: 11,694), where Lewis and Clark camped before exploring the West, Builder Edward Fischer is exploring a new frontier for mobile homes. In what he says may be the first project of its kind anywhere, Fischer is integrating 115 utility-equipped mobile home pads into a 70-acre tract of 23 four-family apartment buildings, shopping center, 600-car drive-in theater and nursing home.

Says Fischer, who left Fischer & Frichtel last year to build on his own: "I feel that the kind of people who live in apartments are very similar to the people who live in mobile homes." He accords mobile home dwellers equal status with

other residents, giving both ready access to a pool, a service building and shopping. The mobile home sites are wide, landscaped and carefully planned into a curved street layout (*see photo*) to avoid the parking lot parallels of ugly trailer camps. Sites rent for \$35 a month, compared with \$85, \$95, and \$110 for the apartments.

Builder Fischer's acknowledgement of the place of mobile homes is supported by the statistics of their growth. They account now for 33½% of one-family housing priced under \$10,000. And they will take half the market in a decade, says the Mobile Home Manufacturers Assn.

Last year, 143,000 mobile homes were

produced, up 20%, plus 73,700 house trailers, for a total of 216,700. The Commerce Dept. expects 250,000 this year.

Builder Earl Smith, 1955 NAHB president, also sees opportunity in mobile homes. He plans 170 sites, and has room for 1,000, near Pittsburg, Calif. Says Smith: "We're shooting at the retirement market. We think this is going to be a better investment than apartments."

Art Craft Mobile Home Mfg. Co. has started using its assembly lines to build single-family homes constructed of 12-ft. wide sections that can be hauled on trailers. The two sections are joined at the site on a standard foundation.

### DESIGN

## Why FHA will now let apartment builders spend 1% on art

FHA has just reversed its long-standing non-policy against beautifying its projects. The agency is telling its underwriters to let apartment builders include in their mortgages up to 1% of building cost for works of art. The ground rules:

- Works of living Americans will be stressed, although others are not excluded.
- Sculptures, mosaics and murals will be eligible if they are a permanent part of the real estate. Works may be free standing, attached, or parts of the structure.
- Art works must be accessible to all occupants.
- Design and materials must resist exposure, vandalism or theft.

The turnaround from FHA's traditional reluctance to underwrite artistic embellishments to apartments reflects a new climate of design emphasis among FHA's top brass.

FHA explains the reasons for the new rule like this: "By increasing the pleasure of tenants and reinforcing their pride in and desire to live in the project, works of art may justify their presence through esthetic contribution without necessarily having a utilitarian or practical function."

Agency insiders say what put the change over was a report by a committee named by the late President Kennedy which urged more art in public buildings.

Some disagree. NAHB Multifamily Housing Director John Gallagher points out that conventional lenders have recently

been allowing more and more art as a part of the mortgage loan, especially in luxury apartments. He sees the change as a practical way FHA apartment builders can compete. But even before the new ruling some FHA builders included art in their decorating cost (*see photo*).

Harry Kalmus



**FHA-APPROVED ART** until now has consisted largely of lobby murals. A current example: this

metal mural by Nikos Bel-Jon in Cassis Construction Co.'s Freeport, L. I. apartments.

## What can psychiatrists teach housing about human needs?

Up to now, the industry that has produced the greatest outpouring of good housing the world has ever seen and the scientists—psychiatrists, psychologists, anthropologists and sociologists—who know what makes people tick haven't even been talking to each other.

Now, a dialogue has begun—belated recognition of the abiding truth in Winston Churchill's observation: "We shape our buildings and then our buildings shape us."

It began with a two-day conference on "Human Needs in Housing" in late March in Topeka—a conference sponsored, intriguingly enough, by the U.S. Savings & Loan League and the famed Menninger Foundation (whose psychiatric plant is Topeka's fourth largest private industry).

The central aim of the 36 participants was both clear and noble: asserting leadership in upgrading American housing standards. How to upgrade housing was much less clear, for as Mortgage Banker James W. Rouse of Baltimore pointed out, many of the evident human needs in housing and residential neighborhoods (e.g., access to a variety of built-in recreation, community textures that give residents a sense of involvement in local affairs) are beyond the financial capacity of most of the men who will actually reshape the face of the nation in the next 20 years.

Yet the need is pressing for better answers than the nation has yet put to use. The next 20 years will probably see U.S. population grow 70 million to 260 million—and all of the 70 million will be added to cities and suburbs. As Rouse noted: "This means a transformation within the lifetime of those of us here of the essential atmosphere and environment of our country from rural, small-town population to intensely urban population . . . Yet as of today it seems to me that about the best prospect that we have is that we will become a nation of Los Angeleses. We don't have the plans, the programs, the ideas, the capacity or the determination to marshal the growth of American communities that are human-being oriented, that are human in scale, that seek to avoid the oppressiveness, the massiveness of the metropolis."

**Rx: new towns?** Rouse himself has placed a major bet on new towns (H&H, Feb.) as one good way to cope with the nation's upcoming torrent of metropolitan growth. On 14,500 acres of land in the Baltimore-Washington corridor (which may well house 1 million more people in the next 20 years), Rouse is laying plans to build "what we avoid calling a city because of the image it provokes in the people's minds." Instead, he plans a series of villages of 10,000 to 15,000 people, each village different from the others in physical form, recreational emphasis and spectrums of income level "but none of them being narrowly stratified so older people and younger people, apartment peo-



**CONFERENCE AIM.** noted Moderator Norman Strunk (*seated*), executive vice president of the U.S. Savings & Loan League, was to let experts in behavior tell housers how to build a product

that would contribute to healthier families and communities. Host Karl Menninger (*standing*) observed: "The main thing [the meeting] shows is the necessity for more such meetings."

ple and townhouse people and people on larger estates all share the total life of the community, with the stores and the medical facilities, the junior high and the high school, and the churches clustered in the lively village center which is meaningful to people."

As Rouse also noted, the fact that more than 50 such new-town projects are under way or being planned across the U.S. means that a whole new movement is starting "based on developers' awareness that a better job of the physical articulation of the components of a community can be done."

**Linkage.** How does physical form tie up with human needs? Four major themes emerged from the far-ranging talkfest:

1. "The kind of a house a person lives in and the kind of a community he lives in define what he can be, what he can do," observed Dr. Harry Levinson, Menninger Foundation manager. "It makes possible or inhibits certain kinds of behavior, it can limit a person or it can free his potential for innovation." As Dean Burnham Kelly of Cornell's school of architecture observed: "Part of the reason the suburbanites love the suburbs is that they are one place they can do something with their own lily white hands even if it is only running a snow plow down the driveway. What we need in the environment is the opportunity for people to make creative improvements at home."

2. *Today's affluent society, with high incomes and rising education levels, is demanding not only quality in housing but also quality combined with variety.* This is true not only in housing but also in clothes," noted Levinson. "There is a wide variety of clothing today which makes it possible to disguise poverty."

As Planner Robert M. O'Donnell of Denver pointed out, today's housing market is already veering sharply toward variety. Developers "are going in for areas designed specifically for junior executives, or

for family living, or adult living," he noted. Some projects "are designed to eliminate maintenance of yards and open space; some are even designed to follow mobile-home park concepts."

3. *Housing should let people control their distance from others, have privacy when they want it, sociability when they want it.* Dr. Karl Menninger, chairman of the Menninger Foundation, compared human needs to those of hedgehogs: they need to be close to other hedgehogs for support, warmth and strength; yet if they are confined too closely, "they stick each other painfully and perhaps even die."

4. *How well neighborhoods work has a big influence on whether responsible self-government persists.* How big should a neighborhood or a community be, several analysts wanted to know. How big can it be and still give its residents a feeling they have something to offer, some way of contributing to and influencing what happens to them and the rest of their community.

Observed Paul Gump, psychology professor at the University of Kansas: "The larger the population [of a community], the less the participation, the less leadership opportunity, the greater the anonymity in the coal mines, airports, rotary clubs, Sunday schools . . . More and more people feel abandoned and useless."



**DEVELOPER ROUSE**  
Rx: villages in clusters



**In these apartments for low income families, what was the builder's biggest sales asset?**

*The comfort-designed living room?  
 The hand-laid ceramic tile bath?  
 The double-hung colonial windows?  
 The master television antenna?  
 The liberal closet space?*

**No, it was the  
 Kelvinator kitchen!**



**Big 12-cu.-ft. Refrigerator** provides ample storage, has 68.6 pounds of frozen storage, butter chest, door shelves, giant crisper.



**Kelvinator Gas Range** has giant 24" oven, lift-up top, automatic ignition.

"In selling family-type cooperative apartments such as Stone Ridge," writes Donald Tarinelli, vice president of the Palmer Tarinelli Construction Co., Bridgeport, Conn., "we have found that an attractive kitchen is our biggest asset. The inclusion of Kelvinator Ranges and Refrigerators implements this sales approach.

"Prospective buyers recognize the quality of Kelvinator, and thereby compliment the quality of our kitchens."

Whether it's apartments for low income families or luxury town houses, Kelvinator quality helps sell the kitchen that sells the tenant or buyer. You can choose from a wide range of Kelvinator Appliances to fit any type of apartment. To make your next project successful, include Kelvinator in your plans now.

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## MATERIALS &amp; PRICES

# Profits soar as producers stress new products

Eleven companies report record earnings and 31 of 51 show record sales for 1963 operations

"Those golden sixties have finally arrived," says General Manager Walter D. Dance of General Electric's Hotpoint division.

Behind his exuberance: materials producers rode the 1963 boom to peak sales and spectacular earnings.

Thirty-one of 51 companies surveyed by HOUSE & HOME sold more building products than ever before. Nine translated peak sales into record earnings and two others, appliance makers Emerson and Maytag, achieved the near-miracle of record earnings on less than record sales.

Private housing's 1,561,200 starts—up 8.5% from 1962 and second only to 1950—were a primary reason. New residential housing totaled \$20.1 billion—8% ahead of 1962—and most predictions are that 1964 will be as high or higher.

"Many observers expected that private non-farm residential construction expenditures would no more than hold their 1962 level," explains White House Economist Walter Heller. "Instead, because of the boom in construction of multi-family units, such expenditures increased by \$1.5 billion for the year as a whole, and the fourth-quarter-to-fourth-quarter advance was even larger."

**New products on parade.** Comparative labor peace, a strong market abroad and the prospering domestic economy all helped the producer. (More American corporations made more money in 1963 than ever before.)

But if the building-materials industry had to award an Oscar for sales performance, it would have to go to that market wonder of infinite variety and unbounded imagination: the new product. Almost invariably when sales records were broken, new products sparked the performance. Said Masonite typically:

"More than 40% of [our] 1963 sales volume is represented by products not in our line four years ago."

The rundown—industry by industry:

**Lumber.** The big news in the wood industry was the dramatic comeback of Weyerhaeuser. After halting a three-year profit slide in 1962, the company posted a 13% earnings increase on record sales.

"We've become market oriented," says President Norton Clapp. "We long ago figured out how to cut trees down, but we traditionally haven't learned much about how to sell them."

Clapp increased sales impressively in logs, containers and paper products although lumber billings dropped. He perked up Weyerhaeuser's marketing with these innovations:

- Sixty-seven distribution centers for fast delivery and inventory flexibility.
- A customer service and marketing program for the builder.
- A cost-cutting method of shipping wrapped lumber on flatcars.
- Beveled siding, painted at factory.

- A German-patent process for molding wood particles, or fractions, much as plastic is molded for table tops, furniture and other interior items.

Georgia-Pacific, reporting record sales and earnings as the world's largest producer of hard and soft plywood, stressed its spending on advertising and promotion of new products. U.S. Plywood notes that 80% of its \$34 million sales increase represented products other than fir plywood. USP's sales hit a record \$339 million.

**Wallboard and roofing.** Ten of the 15 wallboard, roofing and tile producers had their best sales year. Armstrong Cork's profits leaped a dazzling 28% and Allied Chemical's earnings were up 26%. Both set profit records along with Bestwall, Goodyear and Masonite.

Armstrong's \$7.5 million outlay for magazines and television advertising was obviously a big item in its performance. A HOUSE & HOME survey found that nine of the biggest building supply companies spent less on advertising in 1962 than in 1955 but that Armstrong had doubled its outlay to \$6 million in the same period.

Some wallboard companies changed their product mix. Celotex moved boldly into the large-volume fiberboard field and got its profits back up to \$1.7 million, about what it lost in 1962. Congoleum-Nairn is shifting from smooth-surface floor covering to more expensive, permanently installed vinyl sheet surfacing. One reason: its 1963 net was off 73%.

**Heating and plumbing.** American-Standard set a sales record with the help of expanding operations in Europe, where a rising living standard is boosting demand for better plumbing equipment. Trane, the only other plumbing company to post peak sales, leased a plant in Scotland.

**Cement.** Overproduction once again sandbagged the cement industry, and profits sank faster than a load of concrete. Demand set a record at 344 million barrels, up 12.4 million, but production in-

continued on p. 14

## LAST YEAR'S PROFIT PICTURE

### Record sales and record earnings

Company	Revenues (000)	% change from '62	Net income (000)	% change from '62
Allied Chemical <sup>a</sup>	\$938,038	4	\$72,237	26
Armstrong-Cork	344,021	6	27,062	28
Bestwall	51,594	5	5,848	19
Georgia Pacific	451,000	19	28,540	15
Goodyear	1,738,132	9	81,129	14
Masonite	88,675	8	6,238	11
Minn-Honeywell <sup>b</sup>	648,437	9	34,661	29
Nutone	36,322 <sup>c</sup>	7	2,617	10
Yale & Towne <sup>d</sup>	115,198 <sup>c</sup>	10	4,950	55

### Record earnings only

Emerson	208,898 <sup>c</sup>	(-4)	12,993 <sup>a</sup>	9
Maytag	117,249	5	14,007	10

<sup>a</sup>—Includes other income: Allied Chemical, \$72,237,438.  
<sup>b</sup>—Plans to shorten name to Honeywell. <sup>c</sup>—Net sales. <sup>d</sup>—Ten month data. Became member of Eaton Manufacturing Co. Oct. 31. <sup>e</sup>—Fiscal year ends Sept. 31, 1963.

### Record sales

Company	Revenues (000)	% change from '62	Net income (000)	% change from '62
Alcoa	\$972,117	4	\$51,078	(-10)
American Motors	1,217,932	7	37,807	10
American St. Gobain	38,519	31	(4,262) <sup>a</sup>	—
American Standard	528,787	6	16,675	28
Borg-Warner	688,547	4	37,715	14
Carrier	299,038 <sup>b</sup>	10	8,189	5
Flintkote	280,228	2	13,379	6
General Electric <sup>d</sup>	4,918,716	2	270,639	2
Johns Manville <sup>d</sup>	419,374	0.7	27,681	16
National Gypsum	252,250	8	22,501	4
Owens-Corning	276,867 <sup>d</sup>	8	12,480	(-13)
Permanente	86,847	15	7,731	28
Pittsburgh Plate	778,531	19	45,624	6
Potlatch	127,943	15	3,470	63
Reynolds	572,437	6	27,801	5
Stanley Works	128,270	7	4,225	25
Trane	120,209	2	8,309	(-0.35)
U.S. Gypsum	305,790	5	40,145	8
U.S. Plywood	338,541	11	13,043	7
Westinghouse	2,146,975	9	47,824	(-16)
Weyerhaeuser	592,662	7	44,167	13
Whirlpool	538,704	16	15,050	(-19)

<sup>a</sup>—Net loss. <sup>b</sup>—Net sales. <sup>c</sup>—Less discounts and allowances.  
<sup>d</sup>—Includes other income: General Electric, Non-operating net income of \$67,538,220 and \$41,760,077 for 1962; Owens-Corning includes gross revenues from royalties of \$2,639,968 for 1963 and \$3,374,000 for 1962; Johns-Manville includes other income of \$4,493,000 for 1963 and \$3,374,000 for 1962.

### Non-record sales and earnings

Company	Revenues (000)	% change from '62	Net income (000)	% change from '62
Alpha Portland	\$39,709	(-8)	\$2,174	(-39)
Celotex <sup>a</sup>	81,676	39	1,738	—
Certain-teed	133,214	(-12)	3,058	94
Congoleum Nairn	50,342 <sup>b</sup>	10	359	(-73)
Crane	337,366	71	5,447	5
Fedders	51,165	(-16)	1,689	(-33)
General Portland	60,404	3	7,932	0.8
Ideal	127,113	0.1	15,211	(-5)
Kaiser	441,280	(-1)	23,359	(-25)
Lehigh Portland	83,390	(-3)	4,151	(-31)
Libbey-Owens-Ford	239,958	3	39,307	4
Lone Star	130,259	(-0.4)	14,489	(-2)
Marquette	79,960 <sup>c</sup>	(-3)	8,808	(-8)
Medusa	39,299	(-1)	3,718	(-8)
Penn Dixie	52,121	(-0.75)	3,516	(-26)
Philip Carey	69,560	(-5)	2,142	(-18)
Rheem	118,229	3	4,143	297
Ruberoid	117,659	(-3)	3,762	1
Schlage	11,713	NA	2,278	0.2
Worthington	190,904	2	4,215 <sup>d</sup>	42

<sup>a</sup>—Ten months report. <sup>b</sup>—Including gains of sales of investments of \$125,702 for 1963 and \$121,898 for 1962. <sup>c</sup>—Preliminary figures. <sup>d</sup>—1963 net compared with \$2,973,488 net before special charges of \$1,956,420. NA—No comparison available.



# And she'd love an Intercom in a \$14,000 house!

The less her husband makes, the more a mink means to her. The tighter her budget, the surer she'll be to pick the house with the intercom.

In today's highly competitive market, it's the house that offers the most for the money that sells faster, easier. And an intercom is an ideal 'plus' because it is a status item, usually found only in houses costing \$25,000 or more.

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most sound systems is installation. But Emerson-Rittenhouse has developed an exclusive wiring system that's pre-assembled at the factory... hooks up merely by *plugging in* six cables. In fact, installation is so simple that it *cuts time-and-labor costs in half!*

*Progressive builders everywhere are finding that in all their homes, modest or magnificent, Emerson-Rittenhouse intercoms are a sound idea. Right now, Emerson Electric will make it worth \$5 for you to give one a try. Read the coupon offer below for details.*

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Worth \$5 on the cost of one Emerson-Rittenhouse sound system in your model home.

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SUBDIVISION OR LOCATION OF MODEL HOME \_\_\_\_\_

Wholesaler's signature \_\_\_\_\_

**NOTE TO WHOLESALERS:** Return this coupon with your next order for Rittenhouse intercoms and \$5 will be credited to your account.

This offer good through June 30, 1964. Coupon must be presented to an Emerson Electric wholesaler at the time an Emerson-Rittenhouse sound system is purchased. Offer limited to one coupon per builder or contractor.

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creased 13 million. Eighteen million barrels of capacity were added, and both overt and covert price cutting resulted. Only Permanente, stepping high with the California housing boom, recorded higher sales. Its \$86 million total was up 15% for a record, and its profit of \$8 million, up 28%, was the second best in its history.

**Hardware.** The Stanley Works attributes its sales record to new products and aggressive marketing. Also a factor: Stanley's key role in Project TAMAP (Time and Materials Analysis Program), the industrial engineering study that showed how to save \$700 to \$1,000 in the construction of a \$16,700 house.

Yale & Towne, bought in October by Eaton Manufacturing, did not release its own figures for the year but says both net sales and profit set records. The nine-month figures: sales were \$115 million,

up 10%; profits \$4.9 million, up 55%.

**Appliances.** "Last year was probably the greatest single year in the history of appliances from the standpoint of product introductions," says President Robert O. Fickes of Borg-Warner's Norge division.

From the sales standpoint, it was the best year since 1956—more than 21.5 million major home appliances shipped.

American Motors, Borg-Warner, Carrier, General Electric, Minneapolis-Honeywell, Nutone, Westinghouse and Whirlpool all had record sales. And Minneapolis-Honeywell and Nutone—like Emerson and Maytag (*above*)—had peak profits.

Sums up Hotpoint's Walter Dance:

"The apartment and home construction boom have given the appliance industry a good base. The drop-in range, water heater, dishwasher and disposal are becoming as standard a package in the

kitchen as the toilet and tub in the bathroom."

**Glass.** Declining prices skimmed much of the profit off glassmakers' sales. Prices of plate, for example, were 25% lower than in 1955. Pittsburgh Plate rolled up record sales but fell short of peak profits. And American Saint Gobain recorded its highest revenues at \$38.5 million only to suffer a net loss of \$4.3 million—its fourth in a row and the worst so far.

**Aluminum.** Shipments rose 8% to a peak 2,353,624 tons in 1963. But because prime-metal prices dropped from 24¢ to 22½¢ a pound in December 1962 and crouched there until last October the industry turned in a lackluster financial performance. Alcoa and Reynolds reported peak sales, but nobody set earning records.

## Does building face another round of materials price boosts?

Hard on the heels of the tax cut, price increases are spreading through basic building materials.

Other signs of inflation ahead: business profits are up spectacularly (*see p. 11*), and labor leaders are moving in fast for their share (*opposite*).

The Johnson Administration is already concerned about the upward spiral. It has deployed an anti-inflation task force of economists and cabinet officers to urge price restraint on industrial executives. Says one official: "We'll jawbone, arm-twist and needle."

**How firm are raises?** "Everybody is trying to grab what he can," says Cost Analyst Everard H. Boeckh of Washington, D.C. He doubts all the price increases will stick.

BLS' wholesale price index for all construction materials rose 0.4% in February to 99.2% of the 1957-9 base average—

the first jump since last August.

Lumber is a big gainer, its index jumping from 99.2 to 100.3. Plywood is up from 91.1 to 91.8. West Coast mills are selling green fir 2x4s at \$68 per 1,000 board feet, up \$5, and index-grade, sanded, ¼" fir plywood at \$64 per 1,000 sq. ft., up \$2. Gypsum products also jumped—from 106.1 to 108.

**Aluminum up.** One-fourth of the nation's aluminum goes into housing. So in December 1962 the primary metal's tumble to 22½¢ a pound was good news to builders. But producers advanced to 23¢ in October 1963 and to 23½¢ in March. When Aluminium Ltd. of Canada jumped the world price outside North America to 24¢, all three major American companies followed but left the domestic quotation at 23½¢. How long the split will hold is anybody's guess.

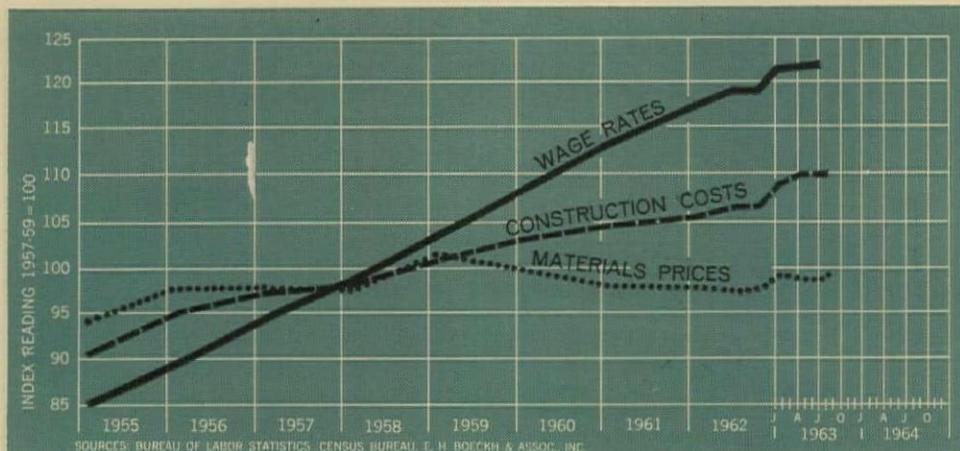
Already one maker of storm windows

and doors, Warrenville (Ohio) Window and Door Co., has raised prices 5%. But increases are far from universal among aluminum product makers. And price cutting had broken out on aluminum siding. Alside of Akron, Ohio, dropped \$1.50 per 100 sq. ft. and Alcoa Building products of Pittsburgh cut \$2 before Kaiser Aluminum moved to restore the cut by increasing its price \$2. Kaiser said first-quarter industry shipments of siding were up 15% over a year ago.

**Copper advances.** Domestic copper prices have risen—to 32¢ a pound—for the first time in almost three years. They had held steady at 31¢ since May 1961. Then a strike at the Anaconda Co.'s Chilean properties, plus heavy demand here and in Europe, broke the line established by Rhodesian producers. Now some users predict further increases will develop by July, when contracts run out.

Anaconda, American Brass and Revere Copper & Brass have already increased prices on fabricated copper goods by 1¢ a pound in proportion to the amount of copper present in the product alloys. Cerro Copper & Brass and Reading Tube had previously raised 4%, or 2¢ a pound, on copper and brass tube and pipe—products used primarily for plumbing, heating and air conditioning. Other major makers of these products did not follow immediately, saying they were studying the situation. But they agree generally that prices for tubes and pipe have been "depressed."

**Another round for glass.** Libbey-Owens-Ford led a 5% price increase on single-strength and thinner window glass and on all thicknesses of window and sheet used for mirrors. Pittsburgh Plate fell in line. Manufacturers had raised 5% to 9% on all window grades only last summer. L-O-F Chairman George P. MacNichol blames rising labor costs.



**WAGES RISE FASTEST** on 10-year graph of the builder's expenses. All three indexes are converted here to 1957-59 base of 100, including the widely

known Boeckh index of construction costs. The Boeckh, using both wages and prices in averages, usually appears with 1926 base of 100.

## LABOR

## Building unions gird for big wage push

The pattern of labor demands before the building industry shows that most trades in the East, South and Midwest expect generous raises in 1964. Most contracts in California's big building market do not expire until 1965, and pacts there usually set the pace for the Coast and the Rockies.

Bricklayer contracts expire this year in 40 of 110 cities surveyed by the Bureau of National Affairs. Carpenter agreements end in 42 and plumber pacts in 38. All three crafts are seeking new contracts in such key cities as Baltimore, Chicago, Cleveland, Detroit, Newark, N. J., Milwaukee, Pittsburgh, San Antonio, San Francisco and Syracuse.

Automatic increases taking effect this year are already provided in many contracts. For example, they will bring common labor another  $16\frac{1}{2}\text{¢}$  an hour in at least 11 cities. That is up 5.3%, compared to a 4.8% increase in 1963 for common labor nationally. New contracts are being negotiated in Atlanta, Birmingham, Boston, Cincinnati, Cleveland, Detroit, Kansas City, New Orleans and Pittsburgh.

**Skilled rates going up.** Existing contracts will bring increases of 4.3% to skilled craftsmen, primarily bricklayers and carpenters. That is about even with the 4.2% rise in 1963.

The building trades—skilled and unskilled—have added from  $13\text{¢}$  to  $15\frac{1}{2}\text{¢}$  an hour to their average pay for each of the last six years. The last (Jan. 31) Bureau of Labor Statistics index puts the industry average at \$4.13. Some idea of the bargaining picture for 1964 is now coming out of demands in five cities.

**The 35-hour week.** The short week is likely to be a major issue in Chicago, Cleveland and Dayton. Bricklayers and ironworkers have asked a seven-hour day with eight hours' pay in Cleveland, and the Chicago and Dayton Building Trades Councils have declared for the short day.

These two crafts in Cleveland want a  $40\text{¢}$  hourly raise on rates of  $\$4.30\frac{1}{2}$  and  $\$4.46$  respectively—about 9%. That is far beyond the 3.2% guideline President Johnson is urging on the basis of the economy's expected 2.7% increase in productivity.

Industry-wide negotiations affect 40,000 workers in 20 crafts in Cleveland this year, and Business Manager Thomas E. McDonald of the Building Trades Council says the average demand will be for  $25\text{¢}$  an hour more. For instance, carpenters make  $\$4.35$  an hour, with another  $21\text{¢}$  in fringe benefits. Plumbers get  $\$4.36$  plus  $20\text{¢}$  fringes. A 25-cent raise would be 5.7%.

**Hidden cost boosters.** Cleveland's carpenters have submitted 32 pages of work rule changes that builders say would add another  $\$1.25$  an hour to costs. Among the demands:

- A pension and hospital plan costing  $25\text{¢}$  an hour.
- Full day's pay for Election Day and half day off for primaries and Good Friday.
- A working foreman, at  $75\text{¢}$  an hour above scale, for every two workmen. The differential is now  $42\frac{1}{2}\text{¢}$ . A non-working foreman, at  $\$1.50$ , for every four.
- A shop steward on every job.
- An agreement that all management orders go through the working foreman.

**Attack in the Senate.** Chairman William J. Hunkin of the employers' bargaining committee calls the carpenters' demands ridiculous and says bargaining will be extremely difficult. Sen. Frank J. Lausche (D., Ohio), noting the demands in a Senate address, asserted that soaring building wages are "impeding government programs to bring better housing within the financial reach of more people." So far, such warnings have had little effect. Six hundred bricklayers and helpers struck 25 Baltimore contractors to demand a  $55\text{¢}$  hourly raise over three years. The rate now:  $\$4.25$ . Milwaukee builders are already talking of raising the price of a typical house by  $\$500$  to cover pay increases the crafts are expected to seek when contracts expire May 31. Fringe benefits of  $30\text{¢}$  an hour are high, but base wages are somewhat below the average for the nation's 100 largest cities. Bricklayers get  $\$4.26$  against the  $\$4.61$  national average, carpenters  $\$4.01$  compared with  $\$4.26$ .

## CODES

## Disasters spur study of building laws

Anchorage and Louisville are looking hard at their building laws in the wake of earthquakes and floods.

In Alaska, sparse settlement cut damage below the near-record quake's potential. FHA expects its loss will stay within  $\$4$  million, confined largely to high-rise multifamily projects.\* Few, if any, of the 4,500 FHA-insured single-family homes in Anchorage were covered by quake insurance, but the agency is not liable for loss (although help to homeowners is likely). About 75 expensive homes on a bluff along Cook Inlet were wrecked, some simply sliding into the inlet.

To what extent the loss in the city of 83,000 was minimized by good engineering remains one of the most interesting questions to arise from the quake. New buildings in Anchorage are required to meet

\*The McKinley Apartments and the 1200 L Street Apartments, both 14 stories, will probably have to be razed. FHA's multifamily rules say that, if the agency did not require an owner to insure against a specific type of disaster, FHA must assume loss. It did not require quake insurance in Alaska.

Philadelphia Evening Bulletin



PENNSYLVANIA APARTMENTS AFTER BLAST

### Builders ask police protection as bombings hit construction

Philadelphia's Home Builders Association has joined brothers Thomas and James J. Fisher Jr. in a plea for more police protection at a motel and apartments their Fisher Construction Co. is putting up in suburban Lester. The Associated Builders and Contractors of Delaware Valley have offered  $\$1,000$  for information leading to arrest and conviction of bombers whose blasts have damaged the two structures.

The brothers signed last year with the Associated Builders, an open-shop group. Philadelphia's Building & Construction Trades Council promptly chose the motel for a showdown, but lost two court battles. First the motel was bombed, then twin explosions rocked a Fisher apartment project in nearby Kirklyn, injuring one workman and shattering windows (see photo).

the earthquake provisions of the Uniform Building Code of the International Conference of Building Officials.

The city is certain to get a new arrangement of building sites. Seismic teams of the U. S. Geological Survey are studying soil makeup and geographical composition of the areas hardest hit. Construction experts says those sections lying above the earth fault may be barred to construction.

Heaviest damage occurred in bluff areas of mixed clay and gravel, and soils of this type will likely be judged unfit for building.

In Louisville, Staff Director Ernest Hampton of the City-County Planning Commission is recommending new floodplain zoning to bar subdivisions and home building in areas liable to floods.

Two floods washed Louisville and hit hardest at  $\$10,000$ -to- $\$12,000$  homes in a low-lying subdivision called Valley Village, all sold VA.

The VA has 113 repossessed homes on its hands in Valley Village. It has rented out another 15. NEWS continued on p. 18

Beautiful 5 million dollar San Francisco high-rise apartment building equipped with MUELLER BRASS CO. *Streamline*<sup>®</sup> plumbing and heating products throughout



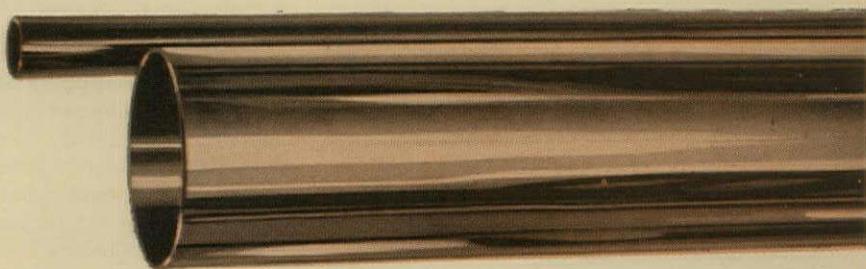
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Everything about the new and exciting Laguna Eichler apartment project in San Francisco is crisp and modern . . . including the all-copper radiant heating installation, and the supply and drainage plumbing systems. Streamline copper tube and fittings, manufactured by the Mueller Brass Co., were used exclusively for all above-ground installations. Copper fits perfectly into this scheme of gracious living because of its dependability and long service life without troublesome repairs caused by rusting, leaking or clogging.

Streamline copper tube and fittings offer many other advantages, too. They are easy to handle, require fewer connections because of the convenient 20 foot lengths of tube, and a compact copper system actually adds available space because no furring out to accommodate bulky fittings and cumbersome pipe is needed.

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"Model codes have differences"

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BOCA's BASELER

"More uniformity than ever before"

Pics Chicago



NLMA's PRANGE

"Model codes are democratic"

## Home manufacturers back move for performance standards

Last month at Colorado Springs, the sixth annual president's council of the Home Manufacturers Assn. became the first full dress meeting ever called by a major trade association in housing for the express purpose of tackling the code problem and the desirability of performance standards. Panelists stated the problem in four ways:

1. Said outgoing HMA President James L. Pease Jr.: "If we're going to survive we have to do something about codes. We can't go on shipping one house to town X and another to town Y. We have been urged on all sides to promote adoption of the model codes, but my question is which model code. This is the problem that we home manufacturers face—lack of uniformity. There are differences between these codes (H&H, Apr.)—differences that are not resolvable because of geographic or other variations."

2. Said President Glen Buckingham of Midwestern Homes, Rapid City, S.D.: "To meet code competition we must build in four different ways: precut, 4' panels, full wall panels, and core houses. But we can't put a core house in one out of 100 towns over 3,000 people. We have to put out 1,000 houses a year just to exist, and we have to have four different plants to do it, primarily because of the great difference in codes in our marketing area."

3. Said Executive Vice President James Turnbull of the American Plywood Association (formerly DFPA): "We spend annually no less than a quarter of a million dollars on what I call unproductive work on codes, unproductive because of the lack of performance criteria, or unproductive because all we are doing is straightening out a local misinterpretation of the code. Sometimes these are willful misinterpretations, like the building inspector who said, 'I know what the code says and you can use any plywood you want as long as it's at least 3/4" thick.' We could be doing the industry a great service if we could divert more of this essentially wasted money into support of long-term solutions."

4. Said Vice President Perry Prentice of Time Inc.: "It doesn't make any more sense to let local government decide on how big a pipe should be on the advice of the local plumber than it would be to let

the local draper tell them how long a yard of cloth should be. Another paradox: FHA actually operates on the premise that the greater the waste required by codes, the higher the appraisal FHA should insure."

**Federally developed standards?** Consensus of the home manufacturers present: the housing industry needs national performance standards developed with the help of the federal government as a first step in solving the tangled code problem. Their conclusions are similar to views aired at an American Standards Assn. conference earlier in the year (NEWS, Apr.).

But the role government should play was questioned—to no one's surprise—by Gerald Prange of the National Lumber Manufacturers Assn. and Executive Director Paul Baseler of the Building Officials Conference of America. Both said that any participation by the government in such a program could only lead to more unpleasant federal controls over the industry, and that the job could be done better by code bodies and industry working together.

Retorted Turnbull: "Although we feel that independent bodies free of government control, influence and pressure are desirable, that does not mean that we also feel that the use of government facilities to arrive at meaningful standards is not desirable. I am willing to consider anything that will lead toward the development of uniform performance standards."

Said J. M. Robertson, secretary to the Associate Committee on the National Building Code of Canada: "About six years ago I visited Paul Baseler and told him we planned to write a set of standards under which the National Housing Agency could be used to supplement our national code, which is not mandatory. He shook his head and said it couldn't be done. But in our ignorance we went ahead and did it anyway and it's working."

Said Prentice: "Basic to the problem of standards is the fact that the model code bodies do not have the resources to do anything about developing performance standards. The largest of the three code groups has a budget something over \$300,000 at last reading and this compares with the \$300,000-plus that the Public Health

Service paid for a not very conclusive study of septic tank standards."

Prentice summed up the feelings of most home manufacturers when he said: "I'd be the first to agree that whatever federal agency gets charged with responsibility for federal aid to building research [that would lead to standards] must be protected from the kind of political interference with technical standards that has disgraced the Commerce Dept. handling of proposed new standards for lumber (H&H, Apr.)."

**Code uniformity.** To charges that code groups have so far failed to bring about uniformity among their model codes (H&H, Jan.), BOCA's Baseler asserted: "It's not true that we have been fighting uniformity. Efforts of the existing code organizations have shown substantial progress toward uniformity of building regulations. Greater harmony now exists between the several organizations (model code groups) than ever before and this is improving rapidly."

In reply to home manufacturers complaints that code non-uniformity in the field is a much tougher problem than any of the model groups seem to recognize, Baseler said: "The National Coordinating Council of the three basic codes (ICBO, BOCA, SBCC) has found abundant evidence that local codes, drafted by local communities, contain many requirements not related to safety and therefore beyond the proper scope of the building code." He suggested, in a proposal to maintain the status quo of the model codes, that the industry could help solve this problem by 1) promoting adoption of the proprietary codes *without change* and supporting enabling legislation—if need be—to permit local governments to adopt codes *by reference*; 2) providing an independent agency to review standards and resolve differences.

Siding with Baseler to maintain the status quo (which few home manufacturers thought would be changed by Baseler's proposal of an independent agency to push uniformity) NLMA's Gerry Prange said: "We believe that the model code system is the most democratic and expeditious method for us to secure code changes involving new materials and methods."

NEWS continued on p. 23



*Designed by William J. Mouton, Structural Engineer and Assistant Professor of Architecture, Tulane University*

## Designed for Better Living with SPA Southern Pine

This unusual home reaches the ultimate in livability with \*SPA Southern Pine. The setting blends breathtaking beauty with gracious warmth. All rooms share a sense of spaciousness and casual comfort.

The details reflect a new freedom of form and styling. This is made possible by the strength and precision of SPA Southern Pine.

The floor system employs new techniques of timber engineering. The resiliency of wood decking over solid beams alleviates fatigue of household work and walking. The high strength of the engineered wood roof permits larger rooms . . . with complete freedom of vision. With all its exceptional qualities, this home was remarkably economical to build.

*Send for free copy of "New Dimensions of Design", with color illustrations and descriptions of new techniques in many forms of building. Write: Southern Pine Association, HH-5, P. O. Box 52468, New Orleans 50, Louisiana.*

*\*Trade-Marked and officially Grade-Marked*

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TWO WAYS TO WIN A WOMAN: **MINK WHITE...**

## URBAN RENEWAL

# Renewal robs poor, enriches the rich, charges U.S. Chamber

The U.S. Chamber of Commerce has finally unleashed a much anticipated, documented attack on urban renewal and public housing. Its indictment can be summed up in a single word: inequity.

Says the Chamber: not only have subsidies for public housing and urban renewal been distributed unevenly across the country, but the unevenness is of a malicious sort. Areas where incomes are high and housing relatively good have been favored (*see map*).

Specifically, the Chamber charges that:

- Housing in subsidized communities is 12% substandard\*—compared with 25% in non-subsidized jurisdictions. This could mean, of course, that federal grants help upgrade housing in aided areas. Not so, argues the Chamber. The percentage of substandard housing was cut in half between 1950 and 1960 for *both* subsidized and non-subsidized areas.

- "In subsidized areas, 27% of the families had incomes of less than \$4,000 in 1959, while in non-subsidized areas, 35% of the families had such incomes." The net impact of the federal government's combined tax-and-grant power is thus "to subsidize the relatively well off at the expense of the relatively ill off."

**Cheating the states.** Federal subsidies for renewal and public housing are distributed unequally among the states, the Chamber finds—regardless of whether the criterion for apportionment is low income or poor housing. Using a housing criterion, 39 states received less than \$1,000 per substandard unit. But seven got between \$1,000 and \$2,000, while New York and Rhode Island got between \$2,000 and \$3,000. Connecticut and New Jersey got more than \$3,000 per unit.

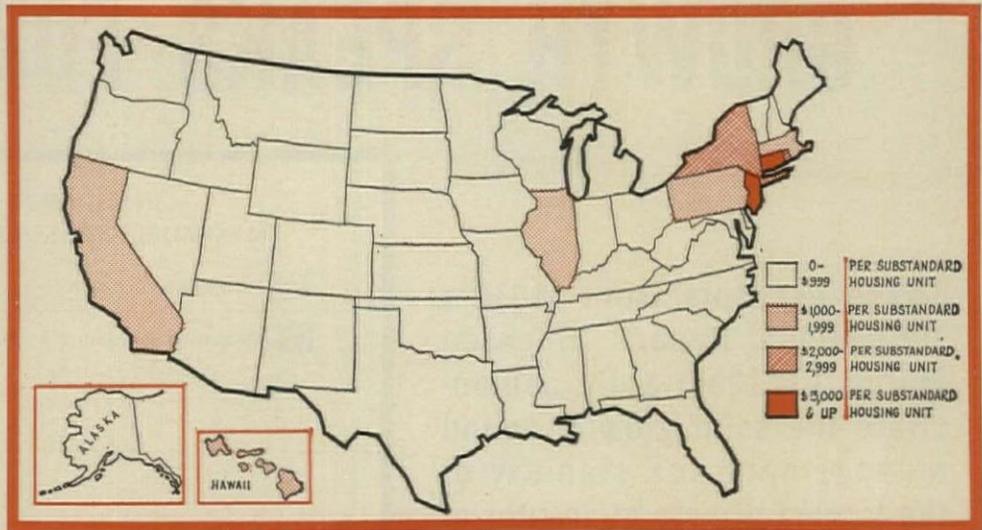
Moreover, these inequities grow worse with time, says the Chamber. States and local governments that receive proportionately greater shares of federal funds tend less to utilize their own fiscal capacity to fight housing problems.

Federal subsidies should be distributed on an equal basis, or both public housing and urban renewal should be dropped, the Chamber contends.

One way to be fair, says the Chamber, would be to give each community \$10,774 for each substandard housing unit, or \$7,169 for every family whose income is less than \$4,000. This is what one unidentified city is getting in a grant authorized after 1960. The national cost of this spread-the-subsidy operation would be a staggering \$109 billion! Through fiscal 1962 only \$1.659 billion in subsidies had been disbursed.

As an alternative the Chamber proposes a moratorium on all subsidies—until "reasonable new courses can be evaluated."

\*The Chamber defines substandard as all dilapidated units and all without plumbing facilities. It includes 4.2 million structurally sound units (7.2% of the total) whose lack of plumbing could be corrected.



**UNFAIR DISTRIBUTION** of federal funds for urban renewal and public housing grants the

biggest subsidies to the states that need them least, claims the Chamber of Commerce.

**Rockford war dance.** The impact of Chamber's report was reinforced by a meeting in Rockford, Ill., which turned into a full-scale attack on urban renewal. Two hundred persons from 15 states, invited by ten Rockford businessmen and the Rockford Chamber of Commerce, heard eight conservative congressmen blast away at "federal encroachment of private property, 'the high-rise slum' that is public housing, and the 'corruption and dishonesty' that infest renewal programs. Rep. William B. Widnall (D., N. J.) and Rep. John Dowdy (D., Texas) urged a special Congressional investigation of urban renewal.

**Venial critic.** The Chamber's attack has stirred renewal defenders, whose opening tactic was to try to discredit the Chamber, not refute the charges.

Said Chairman Albert Rains of the House housing subcommittee: the Chamber "lives in the wrong century."

Rep. Wright Patman (D., Tex.) chairman of the House banking committee, tore into Chamber President Edward Neilan, calling him a "venial man" who attacks federal grants with one hand while taking federal handouts with the other. Patman had dug into federal files and found that Neilan, as president of a Wilmington, Del. bank, received almost \$10 million in interest-free federal deposits last year, and that Neilan's 207-acre farm in New Castle received \$2,158.81 through feed-grain and lime subsidy programs.

There were other guns leveled at the Chamber.

The U.S. Conference of Mayors polled local chambers of commerce and found only six out of the first 100 replying sided with the U.S. Chamber.

The U. S. Chamber quickly noted its anti-renewal stand had been affirmed "without a single voice of opposition" at its annual meeting last May.

Assistant HFA Administrator Fred A.

Forbes, speaking in Indianapolis, aimed a statistical counterattack at the Chamber's inequality argument. Said Forbes:

- Twenty states, with 78% of the urban population and 77% of the deficient housing in urban areas, have received 78% of the public housing dollars and 77% of the urban renewal grants.

- The 20 states with 77% of the urban population and 78% of the low-income families (income less than \$4,000) have received approvals for 82% of public housing dollars and 78% of renewal grants.

Forbes challenges the Chamber practice of lumping rural and urban families together, "thereby making it appear that rural areas have been discriminated against."

## Cities list residential land for sale during 1964

Twenty-one cities have told the Urban Renewal Administration they will offer 317.6 acres of land to builders of one-family homes this year. Apartment builders will be invited to buy another 419.8 acres in 24 cities.

Nationally, URA reports cities have bought 22,000 acres of land since 1949 with federal renewal subsidies but have only 58% (12,700 acres) sold or under contract to developers. Another 15% (3,300 acres) are cleared but unsold, and 27% (6,000 acres) are uncleared. Cities offering the largest tracts for one-family homes are:

Gadsden, Ala., 23.6 acres; High Point, N.C., 10.3; Inkster, Mich., 35; Jeffersonville, Ind., 11.7; Louisville, 11.5; Nashville, 33.4; North Las Vegas, Nev., 68; Port Arthur, Tex., 18.3; San Francisco, 10; Swarta Township near Harrisburg, Pa., 15.7; Sylacauga, Ala., 11.5; Toledo, 28.3. Largest apartment sites are in Chicago (seven sites), High Point, Louisville, Redondo Beach, Calif., and San Francisco. The complete list is available from URA, Washington, D.C. 20410.

# THE RECORD OF MGIC

## GROWTH SPEAKS FOR ITSELF

These excerpts from MGIC's 1963 Annual Report\* (released March 13, 1964) aptly demonstrate the solid growth, sound management and stability of the largest private guarantor of mortgages.

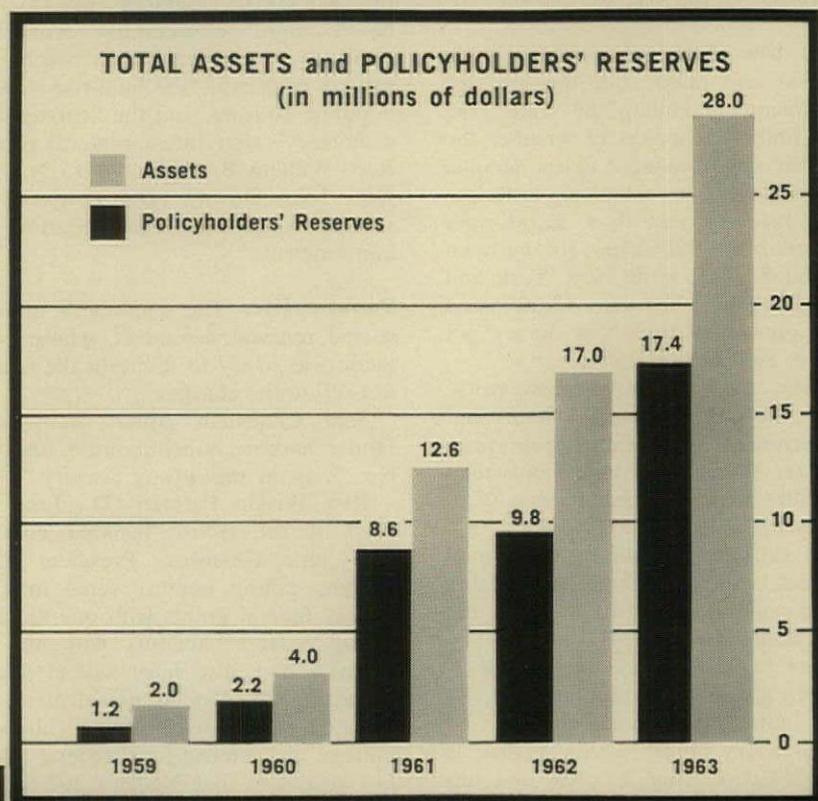
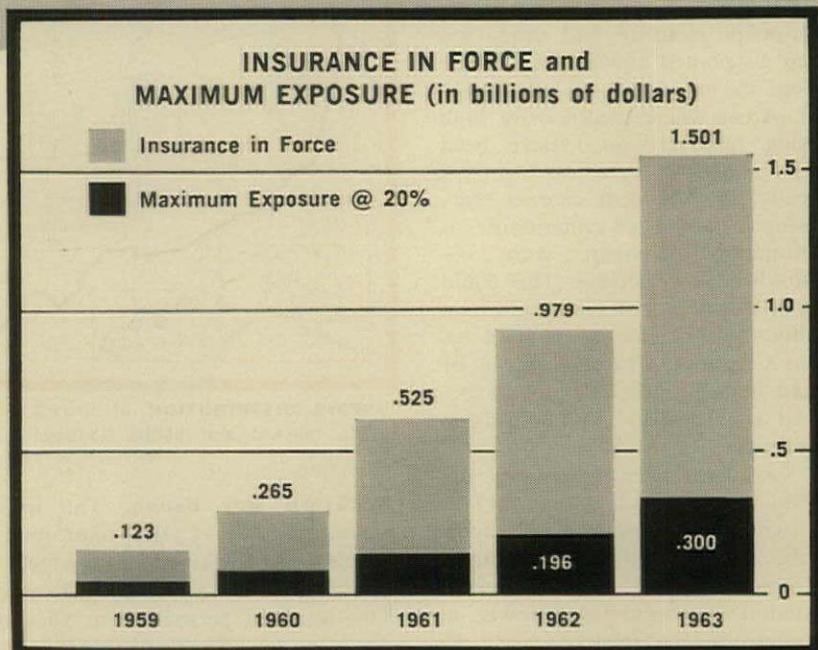
MGIC is proud to present this graphic glimpse of two key factors in its business, as of December 31, 1963. The full report\* is available to interested parties.

Note in Graph #1 the five-year record of a steadily growing business, with steadily increasing acceptance among lenders and the housing industry—with controlled maximum exposure to liabilities.

Note in Graph #2 the parallel five-year record of total assets and policyholders' reserves—with insurance in force rising to the billion-and-a-half mark.

MGIC's experience is convincing evidence of the advantages of private mortgage loan insurance, and its contribution to financing the housing needs of America's home buyers.

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MGIC/64/S

## MORTGAGE MONEY

## FHA, VA discounts push back to 98; lenders doubt FHA comeback this year

Three months ago, when the big Massachusetts Purchasing Group shaved ½ point off its offering prices for FHA and VA mortgage loans, it looked as if mortgage yields might be headed up. Now, signs are that the boost in discounts will not survive—just as price boosts by materials producers sometimes fall flat in today's competitive economy.

President Robert Morgan of the Boston 5¢ Savings Bank, who is also group spokesman, says his banks "are sensing that 97½ does not produce the quality of loans needed." He insists no 98 prices are being paid and says the group still resists any posting of the higher price. But mortgage men elsewhere predict a change is coming soon.

It has already come in Florida, one of the first states where Morgan's group buys heavily. Says Mortgage Banker Lon Worth Crow of Miami: "The market's upper limit—quality merchandise—has risen half a point."

Crow's prices followed Morgan's downward with seismographic sensitivity in March. The Miami quotes are now back to 97-98, up from 97-97½, on the FHA 30-year market leader and its VA companion. "The savings banks suffered a lull in offerings after lowering the price," explains Crow.

### Mortgage bankers doubt forecasts of a comeback for the FHA

President George W. DeFranceaux of Washington's giant Associated Mortgage Cos. (servicing: \$640 million) predicts a recovery for the FHA in residential mortgaging. Associated is deep in urban renewal, and its Washington operations keep it in constant touch with the agency. DeFranceaux insists that builders are calming down over the federal anti-bias order, that FHA's cumbersome processing is improving and that the Home Loan Bank Board is curbing FHA's No. 1 rivals, the S&Ls.

But FHA's share of private nonfarm starts tumbled to 12.1% for the first two months of 1964, its lowest ever and 25% below the 16.1% it held for the same periods last year. A sampling of HOUSE & HOME's 18 key market cities turns up very little agreement with DeFranceaux's optimistic forecast.

Bob Morgan sees no change for FHA volume in New England. William Curran of Franklin Capital Corp. in Newark forecasts flatly: "No comeback in 1964, anyway." Detroit agrees, and President Aubrey M. Costa of Southern Trust & Mortgage, Dallas, adds: "FHA is burdened with too many special-purpose operations."

Vice President Christian Gebhardt of the Colwell Co. says FHA is making only a modest rally in the booming Los Angeles tract market, partly because it is conservative at best in issuing commitments. And one Southern correspondent, asked if the agency could ever again get up off the floor, replies: "Hell, no."

### VA is falling farther behind in paying off its claims

The agency has a \$300-million ceiling on payment of claims out of receipts from its home loan guarantee program. It paid out \$203 million in the first two months of 1964, and because of this and because the year's claims are expected to reach \$360 million, the agency is now spacing out its reimbursements.

The average wait is from 30 to 45 days. The Mortgage Bankers Assn. is protesting to the House veterans committee. President Johnson proposes lifting the ceiling to at least \$360 million, but Congress has not acted.

### Insurance companies are going into and out of home mortgaging

One New York mortgage banker reminds his investors that major life insurance companies are now arranging more sophisticated deals to skim the cream off top-price commercial and apartment mortgages. He cites leasebacks, leasehold mortgages and land loans. Some mortgage men agree that some insurance companies do seem to be shifting from the one-family-house field, and Executive Vice President Harold Finney of Citizens Mortgage in Detroit says: "They are being forced out by the S&Ls." But if some are leaving, others are certainly moving in. Bankers Trust Co. of New York City forecasts insurance companies will put \$900 million into home mortgages this year—\$100 million more than in 1963 and \$300 million more than in 1962.

### Another mortgage banker sells out to a bank

American Fletcher National Bank & Trust of Indianapolis is acquiring Indiana's largest mortgage banker, Savill-Mahaffey.

President Albert A. Savill will become a vice president of the bank and will direct its new mortgage banking and servicing division, retaining his staff. The concern services \$160 million. The sale for an undisclosed price does not include Savill-Mahaffey branches in Gary, Ind., Louisville, Ky., and Dayton, Ohio and its insurance division in Indianapolis. Savill is founding a mortgage company to run them.

Savill started Savill-Mahaffey in Indianapolis in 1953. A year and a half ago Savill sold out to Alleghany Corp. (NEWS, Nov. '62), but regained control when Clint and John Murchison lost control of this large holding company.

**Merger in Milwaukee.** President Sheldon B. Lubar of Bankers Financial Corp., a year-old company in the financial service field, has bought Mortgage Associates Inc. for \$2.3 million. President William W. Bunge and the 150 employees of the new subsidiary keep their posts. Mortgage Associates services \$190 million and deals heavily in home improvement loans.

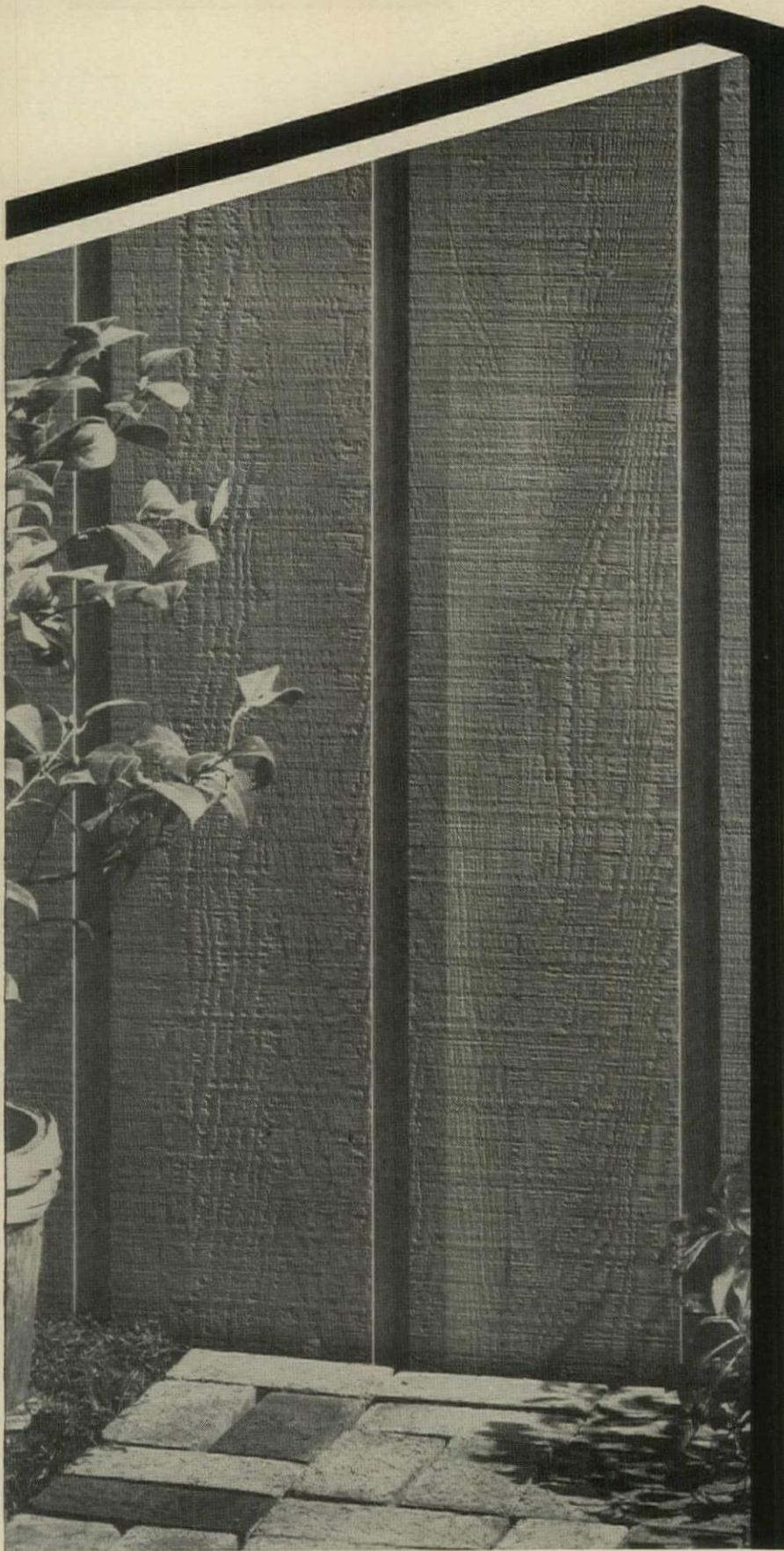
**Tharpe bucks the trend.** Both mid-western deals follow the mortgage banking industry's trend of sales to financial institutions (NEWS, Apr.), but an exception developed in Atlanta. Tharpe & Brooks Inc., a partnership servicing \$163 million, bought the \$3.3 million servicing account the Liberty Bank & Trust Co., Savannah, Ga. (resources \$35 million) held for John Hancock Life Insurance.

**No. 6 for Associated.** In Washington, President George W. DeFranceaux revealed his Associated Mortgage Cos. has paid \$1.4 million for Crawford Home Loan Corp. and Crawford Insurance Agency of Baton Rouge La., a mortgage financing company and a general insurer operating in Alabama, Georgia, Louisiana and Mississippi, and Crawford Housing Services, a national mortgage brokerage with headquarters in New York.

The package makes the sixth purchase for Associated since its founding more than a year ago. The Crawford companies, operating under present names, will add \$88 million to Associated's portfolio, taking it beyond \$640 million. The parent company's other subsidiaries\* service in the District of Columbia, Maryland, Virginia, Pennsylvania, New Jersey, the Carolinas, Louisiana and Puerto Rico.

The selling Crawford Corp., Baton Rouge, is a publicly owned former prefabricator turned community developer (NEWS, Jan.). President W. Hamilton Crawford says sale of his manufactured

\*Frederick W. Berens Inc., Washington; J. Maxwell Pringle & Co., New York City; Southern Mortgage Co., Aiken, S. C.; South Jersey Mortgage Co., Camden, and Tidewater Mortgage Co., Hampton, Va.



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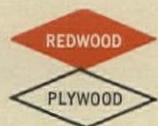
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RELY ON



**SIMPSON TIMBER COMPANY**



home division (see p. 41) eliminates any need for the three mortgage subsidiaries. He says their sale will provide capital for community developments in Alabama, Florida, Georgia, Louisiana and Maryland.

**Coast builder gets 20 years in loan fraud case**

A California judge has just sentenced Oscar Jordan (Jay) Parker, 45, to a maximum of 20 years in prison for two convictions in one week on grand theft charges. At the same time California has revoked or suspended an unspecified number of real estate broker and salesmen's licenses because of misrepresentations to get higher-than-normal loans.

One jury convicted Parker, a Sacramento subdivider, of defrauding West Coast S&L of Sacramento of a \$373,600 construction loan for 29 homes that were never built. Another found him guilty of embezzling down payments totaling \$17,000 from four homebuyers.

Parker, selling 350 homes and grossing \$8 million in 1961, went through a \$17-million bankruptcy in 1962. His troubles are part of a larger legal action that began last fall when a Sacramento grand jury indicted Parker, former President Robert G. Joseph of West Coast S&L, former Vice Presidents William J. McCormick and John L. Pierce, and William P. Dwyer, Parker's lawyer (News, Nov.). The jury charged that West Coast's \$1.3 million loan to buy a ranch exceeded the legal 70%-of-valuation limit.

Parker faces a third trial on charges of conspiring with others to obtain the \$1.3 million loan. Joseph pleaded no contest to charges that, as president of West Coast, he made illegal loans to Parker and Dwyer. He left Sacramento county jail, where he is serving seven months, to testify against Parker at the first trial. The others have not been tried.

In a related action California's board of accountancy has found the nationwide accounting firm of Touche, Ross, Bailey & Smart did not violate the State Accountancy Act in its examination of the West Coast S&L in 1961. State S&L Commissioner Frederick E. Balderston had disapproved Touche Ross as an auditor for one unnamed association's books in 1963 (News, Jan.). Balderston has not decided what effect the board's clearance will have on Touche Ross for 1964 audits.

Real Estate Commissioner Milton G. Gordon has revoked and suspended real estate broker and salesmen's licenses because of misrepresentations made to lending institutions to induce them to make higher than normal loans on property. Criminal actions have been filed against licensees and others collaterally involved for using inflated appraisals, double escrows and fictitious sales prices.

"One broker was not content with falsifying the price of a property," Gordon says in his official *Real Estate Bulletin*. "He falsified the buyer's net worth, income, amount of life insurance and age."

MONEY continued on p. 41

**MORTGAGE MARKET QUOTATIONS**

(Sale by originating mortgagee who retains servicing.) As reported to HOUSE & HOME the week ending April 3, 1964.

City	Conventional Loans <sup>w</sup>		Construction Loans <sup>w</sup>		FHA 207	FHA 220	FHA 203 <sup>b</sup>
	Comm. banks, Insurance Cos.	Savings banks, S & Ls	Banks, Ins Cos. & Mtg. Cos.	Interest + fees Savings banks, S & Ls			
Atlanta	5 1/2-6	5 3/4-6 1/4	6+1	6+1	a	a	97 1/2-98
Boston local out-of-st.	5 1/4	5 1/4 <sup>n</sup>	5 1/4-5 3/4	5 1/4-5 3/4	a	a	a
Chicago	5 1/2-5 1/2	5 1/4-6 1/4	5 1/2-5 3/4+1-1 1/2	5 3/4-6+1-2	99-par	99-par	97-98
Cleveland	5 1/2 <sup>v</sup>	5 1/2-6	6+1	6+1	99-par	99-par <sup>b</sup>	97 1/2-98 1/2
Dallas	5 1/2-5 3/4	6 1/2-6 1/4	6 1/2-6+1	6 1/2-6+1	99-99 1/2	a	98-99 1/2 <sup>p</sup>
Denver	5 1/2-6	5 1/2-6 1/2	6+1 1/2-2	6+1 1/2-2	99	a	a
Detroit	5 1/4-5 1/2	5 1/4-5 1/2	6+0	6+0	99 1/2-par	99 1/2-par	97 1/2-98
Honolulu	5 1/4-6 1/2	6-7	6+1-2	6+1-2	a	a	97
Houston	5 1/2-6	5 1/2-6 1/4	6+1	6+1	98 1/2-99 1/2	98 <sup>bd</sup>	98-98 1/2
Los Angeles	5 1/2-6	5 3/4 <sup>h</sup> -6.6	6+1 1/2	6-6.6+1 1/2-2 1/2	99 1/2	99 1/2	98
Miami	5 1/2-5 3/4	5 1/2-6	5 3/4-6+0-1	5 3/4-6+0-1	a	a	97-98
Newark	5 1/2-5 3/4	5 1/2-6	6+1	6+1	99-par	99-99 1/2	98 1/2 <sup>b</sup>
New York	5 1/2-6	5 1/2-6 <sup>r</sup>	5 3/4-6	5 3/4-6 <sup>s</sup>	par	par	par
Okla. City	5 1/2-6 <sup>b</sup>	5 3/4-6 1/2	6+1-2 <sup>h</sup>	6+1-2	a	a	97 1/2-98 1/2 <sup>b</sup>
Philadelphia	5-5 3/4	5 1/4-6	5 1/2+1	5 3/4+1	par	par	99
San Fran.	5 1/2-6 <sup>h</sup>	5 1/4-6.6	5 3/4-6+1-1 1/2	6-6.6+1 1/2-2 1/2	99-99 1/2	99 1/4-99 3/4	98 1/2
St. Louis	5 1/4-6	5 1/2-6 1/4	5 1/2-6 1/2+1-2	5 1/2-6 1/2+1-2	a	a	a
Wash. D.C.	5 1/2-5 3/4	5 1/2-5 3/4	5 3/4+1	6+1	99	par	99

City	FHA 5 1/4s (Sec. 203) (b)				VA 5 1/4s		
	FNMA Scdry Mkt <sup>xy</sup>	Minimum Down* 30 year Immed Fut	New Construction Only 10% or more down 30 year Immed Fut		FNMA Scdry Mkt <sup>xy</sup>	New Construction Only No down 30 year Immed Fut	
Atlanta	97 1/4	98-98 1/2	97 1/2-98 1/2	98 1/2 <sup>b</sup>	98 <sup>b</sup>	97 1/2-98 1/2	97 1/2-98 1/2
Boston local out-of-st.	98 1/4	par-101	par-101	par-101	par-101	par-101	par-101
Chicago	97 1/4	98 1/2-99 1/2	97 1/2-99	98-99 1/2	98-99 1/2	99-100	97 1/2-99
Cleveland	97 1/4	98 1/2-99	98-98 1/2	99-99 1/2	98 1/2-99	98-98 1/2	97 1/2 <sup>b</sup>
Dallas	97 1/4	97 1/2-99	97-98 1/2	98 1/2-99	98 1/2-99	97 1/2-99	97-98 1/2
Denver	96 3/4	96-99	97 1/2-98 1/2	98-99	97-99	98-99	97 1/2-98 1/2
Detroit	96 3/4	98 1/2	a	99-99 1/2	a	98 1/2	a
Honolulu	96 3/4	97-97 1/2	96 1/2-97	97 1/2-98	97-97 1/2	97-97 1/2	97
Houston	97 1/4	97 1/2-99	97 1/2-99	99	a	97 1/2-99	97 1/2-98 1/2 <sup>b</sup>
Los Angeles	96 3/4	98	97 1/2	98 <sup>hc</sup>	98 1/2	98 1/2	97 1/2
Miami	97 1/4	97-97 1/2	a	98 <sup>b</sup>	a	97 1/2 <sup>b</sup>	a
Newark	97 1/4	99-par	99	par	99	par	99
New York	98 1/4	par	par	par	par	par	par
Okla. City	96 3/4	97 1/2-99	97 1/2-99	98-99	a	97-99	97-98 1/2 <sup>b</sup>
Philadelphia	97 1/4	par	par	par	par	99 1/2	99 1/2 <sup>b</sup>
San Fran.	96 3/4	98 1/2-99 <sup>l</sup>	98-99 <sup>l</sup>	99	98 1/2	98-98 1/2 <sup>h</sup>	98-99 <sup>l</sup>
St. Louis	97 1/4	97 1/2-99	97 1/2-99	98-99	98-99	97-99	95-99
Wash. D.C.	97 3/4	99	99	99	99	99	99

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

Sources: Atlanta, Robert Tharpe, pres., Tharpe & Brooks Inc.; Boston, Robert M. Morgan, pres., Boston Five Cents Savings Bank; Chicago, Robert Pease, pres., Draper & Kramer Inc.; Cleveland, David O'Neill, vice pres., Jay F. Zook Inc.; Dallas, Aubrey M. Costa, pres., Southern Trust & Mortgage Co.; Denver, C.A. Bacon, asst. vice pres., Mortgage Investments Co.; Detroit, Harold Finney, vice pres., Citizens Mortgage Corp.; Honolulu, Howard Stephenson, vice pres., Bank of Hawaii; Houston, Ross Fox, vice pres., T. J. Bettes Co.; Los Angeles, Christian M. Gebhardt, vice pres., Colwell, Co.; Miami, Lon Worth Crow, Jr., pres., Lon Worth Co.; Newark, William W. Curran, Franklin Capital Corp.; New York, John Halperin, pres., J. Haperin & Co.; Oklahoma City, M. F. Haight, first vice pres., American Mortgage & Investment Co.; Philadelphia, Robert S. Irving, vice pres., First Pennsylvania Banking & Trust Co.; St. Louis, Sidney L. Aubrey, vice pres., Mercantile Mortgage Co., San Francisco, Frank W. Cortright, sr. vice pres., Bankers Mortgage Co. of California; Washington, D.C., Hector Hollister, exec. vice pres., Frederick W. Berens Inc.

Footnotes: a—no activity, b—limited activity, c—for local portfolios, d—on spot basis, f—98 for loans over \$20,000, h—limited 6%, j—some 5 1/2 and 5 3/4 available, k—for 25 or 30 years, l—in isolated circumstances on choice loans, m—no fee if permanent loans included, n—limited 5%, p—1/2 point differential has generally disappeared, r—depending on % of loans, s—no fees to 1%, t—higher price offered by correspondent for one insurance company, v—limited 5 1/4, w—interest charged to borrower, x—FNMA pays 1/2 point more for loans with 10% or more down, y—plus 1% stock purchase figured at sale for 75¢ on the \$1, z—on houses not over 30 years old of average quality in a good neighborhood.

\* Immediate covers loans for delivery up to 3 months, future covers loans for delivery in 3 to 12 months.

\* Quotations refer to prices in metropolitan areas, discounts may run slightly higher in surrounding towns or rural zones.

\* Quotations refer to houses of typical average local quality with respect to design, location and construction.

**NEW YORK WHOLESALE MORTGAGE MARKET**

FHA, VA 5 1/4s  
Immediates: 97-97 1/2 Futures: 97-97 1/2

Note: prices are net to originating mortgage broker (not necessarily net to builder) and usually include concessions made by servicing agencies. Majority of loans being sold today are spots.

FHA, VA 5 1/4 spot loans (On homes of varying age and condition)

Immediates: 97-97 1/2

Prices cover out-of-state loans, reported the week ending Apr. 3 by Thomas P. Coogan, president, Housing Securities Inc.

**NET SAVINGS DEPOSIT CHANGES**

(in millions of dollars)	% change			
	Feb. '64	Feb. '63	Year to date from 1963	% change from 1963
Mut. sav. banks <sup>a</sup>	224	36	674	71
S&Ls <sup>b</sup>	830	(-1.4)	1,235	(-32)
Commercial banks <sup>c</sup>	1,100	(-27)	3,800	6

<sup>a</sup>National Association of Mutual Savings Banks, <sup>b</sup>United States Savings & Loan League projections, <sup>c</sup>Federal Reserve Board.

**CONVENTIONAL LOANS** (combined averages)

	December	January	February
New homes	5.80	5.83	5.81
Existing homes	5.98	5.98	5.95
(interest charged by various lenders, new homes)			
S&Ls	5.91	5.92	5.94
Life Ins. Cos.	5.52	5.53	5.42
Mortgage Companies	5.75	5.78	5.73
Commercial Banks	5.62	5.67	5.61
Mut. Sav. Banks	5.53	5.61	5.55

Source: Federal Home Loan Bank Board.

## Prevent Plumbing Perils

A little planning for your new home will go a long way in preventing some of those annoying woes that might pop up years later.

The simple act of making advance plans with a qualified licensed plumbing contractor is one of your best safeguards in preventing trouble, according to the Cast Iron Soil Pipe Institute.

## Failure of Some Materials Can Haunt Plumbing System

It's the things you can't see that can cost you money. Particularly in the plumbing system.

## Unseen Items in House Often Costly Trouble

CHICAGO — It's the things you can't see that can cost you money. A homeowner in Fairfax, Va., used liberal doses of a plumbing inspector's advice.

## Roots Threaten Sewer Lines

When it comes to seeking a source of moisture, tree roots are not one bit particular about where they go or what sort of moisture they find. That's why they end up inside the sewer line and if left there will soon block up sewer lines because the roots are able to grow through the joints made of clay tile with cement mortar in this joint.

## Early Planning Can Pare Plumbing Costs on Home

The institute makes these suggestions for a plumbing system in a new home.

## Cast Iron Pipe Keeps Out Gas

The best protection against the dangerous gases which often develop in the plumbing system is the Cast Iron Soil Pipe.

## Plumbing Check Is Advised In Buying Home

Now is good time for prospective home buyers to consult a local plumbing contractor to obtain the facts about materials used in the drain-

## INSPECTOR GUARDS PLUMBING CODES

Unsung Official Very Important In Keeping Public Healthy

Not many homeowners meet a plumbing inspector, but he is one of the most important local officials on the scene to protect public health.

## LONGER SEWER PIPE CAN BE MONEY SAVER

When you build a new home be sure to ask your plumbing contractor about the new modern 10-foot lengths of cast iron pipe, the Cast Iron Soil Pipe.

# PRE-SELLING FOR YOU... HOME BUYER EDUCATION IN CAST IRON SOIL PIPE VALUES

79 million readers of daily and weekly newspapers across the country—and more than 87,000,000 radio listeners and TV viewers—are being told regularly through CISPI editorial releases—the important story of cast iron soil pipe values. These reader-viewers are learning to associate cast iron soil pipe plumbing drainage systems with quality home construction—and the integrity of the builder. We advance sound reasons why home buyers should choose a home which offers a cast iron soil pipe plumbing drainage system—why

it protects family health...prevents flooded basements...never needs replacing...resists the corrosive effects of household chemicals and the acids and alkalis in ordinary sewage—why these and many other advantages make cast iron the preferred plumbing drainage piping. This deep penetration of the home buying market will have significant influence in your community. A FREE supply of selling-help literature for distribution to your prospects is yours for the asking. Mail the coupon.



## CAST IRON SOIL PIPE INSTITUTE

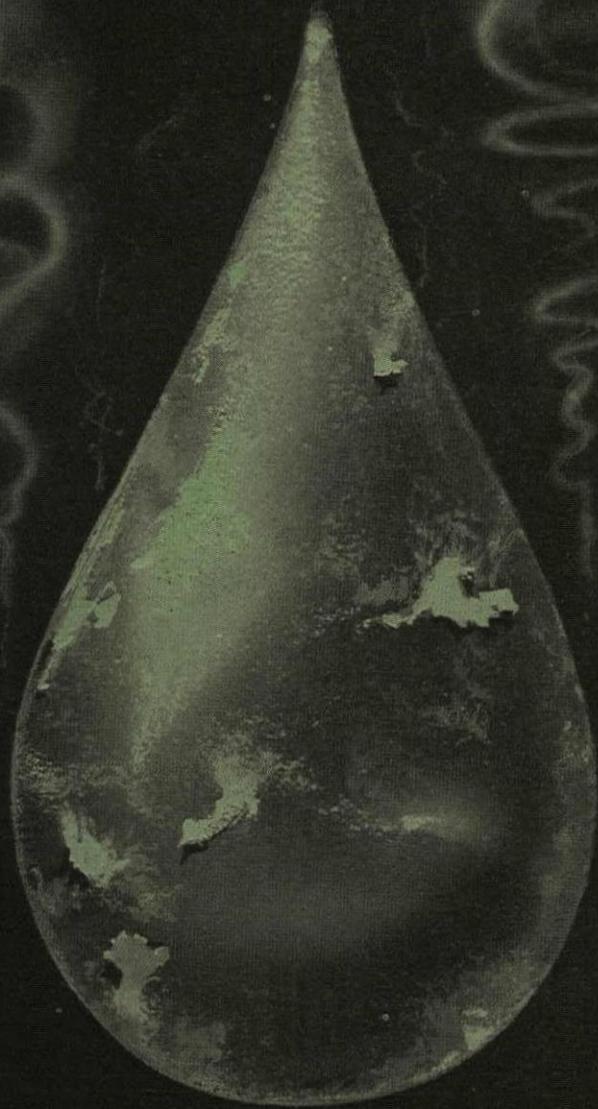
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## CORROSIVES...CAST IRON SOIL PIPE STOPS THEM!

Household chemicals and the acids and alkalis in bathroom waste have virtually no effect on the strong, dense walls of  Cast Iron Soil Pipe—even after generations of service. This is but one distinct advantage of cast iron soil pipe that makes it the most durable and economical installation for drain, waste, vent and house sewer—even in low-cost homes. Only cast iron pipe is approved by all plumbing codes in the nation. Sell the advantages of  cast iron soil pipe to help sell your homes!



### More Features!

- Puncture-proof
- Smothers noise
- Stops roots
- Lasts a lifetime
- Every code O.K.'s 5-ft. lengths
- Now made in 10-ft. lengths —needs fewer joints
- Won't crush
- Plumber installed
- 1st choice for big buildings and homes

*"You can See...Feel...  
Hear the Difference!"*



Cast Iron Soil Pipe Institute, Dept. K  
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Gentlemen: Send a FREE supply of your literature for distribution to our prospects. We can use \_\_\_\_\_ copies.

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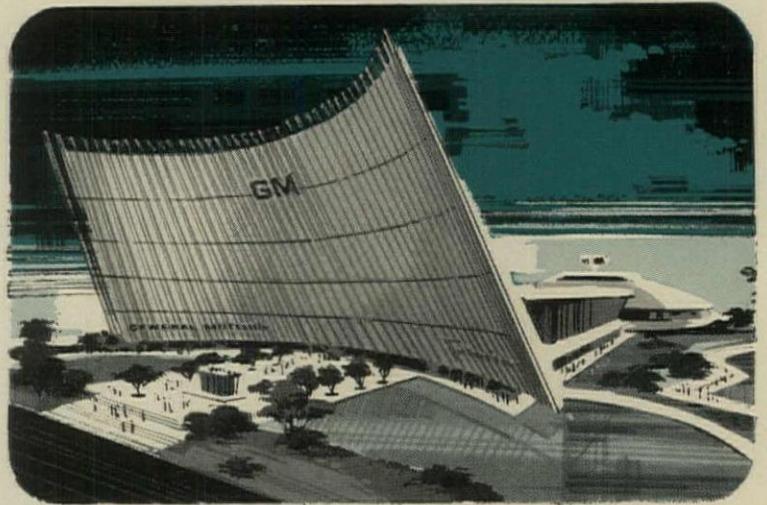
# GM-DELCO DRAMATIZES HOME CONDITIONING PROGRESS at the NEW YORK WORLD'S FAIR!



GM-Delco joins the manufacturers of the world under the Unisphere®, the symbol of the 1964-65 New York World's Fair. GM-Delco greets the 70 million anticipated visitors to the Fair with its own symbol of progress in year-around heating and air conditioning equipment.

Unisphere® presented by  United States Steel  
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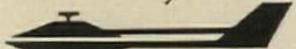
GM-Delco's unique exhibit at the GM Futurama Building dramatizes in color, movement and sound the latest revolutionary innovations in increased *housewide* comfort, health and well-being.



GM-Delco is proud to have been selected for the famous Edward Durell Stone home at The House of Good Taste Exhibit. GM-Delco's contribution in advanced heating and air conditioning equipment becomes a part of this modern architectural triumph.

SEE THE FAIR AND SEE GM-DELCO'S CONTRIBUTION TO HOME CONDITIONING PROGRESS!

**GM Delco 365**  
**CONDITIONAIR**

GENERAL MOTORS *Futurama*  
  
NEW YORK WORLD'S FAIR

DELCO APPLIANCE DIVISION • GENERAL MOTORS CORPORATION • ROCHESTER, NEW YORK

HOUSING STOCKS

# New round of S&L offerings heads for market

California's Lytton Financial Corp. is the first s&l holding company to ready a secondary stock issue in what looms as a spring rush of offerings.

Tycoon Bart Lytton (salary: \$78,625) is seeking to register 500,000 new shares with the Securities & Exchange Commission. Underwriters say the issue will be offered at market prices—\$26.125 bid in early April—or about \$13 million gross.

Wall Street sources say two or more stock s&ls and s&l holding companies are readying similar issues for the market. One will be for 100,000 shares, another for \$15 million. Two Gibraltar Finance holders are registering 150,000 shares to sell at market prices (currently \$31.75).

**Behind the flurry.** The spurt in stock issues arises from the Home Loan Bank Board's new reserve rules for s&ls, which now must put into reserves the greater of either 1) 10% of annual earnings or 2) 6% of the increase every six months of risk assets (defined as mortgage loans and foreclosed property).

But s&ls can escape the second rule if net worth exceeds 8% of risk assets.

Mutual s&ls have almost no way to change their net worth quickly, but stock s&ls can. Sample: Lytton says he will use \$6 million of his proceeds to increase the capital structure of his two subsidiary s&ls, Lytton s&l in Los Angeles and Lytton s&l of Northern California in Palo Alto. Lytton has not revealed the ratio of net worth to risk assets of his two s&ls but industry analysts say they are below 8%.

Another s&l readying a stock offering figures it will boost its net worth from 7.45% of risk assets to 8.45%.

## Bankruptcy petition filed by publicly held builder

The SAMPSON MILLER ASSOCIATED COMPANIES, one of Pittsburgh's biggest home-builders (318 homes) when it went public in 1960 (NEWS, Nov. '60) has asked federal court for protection under Chapter XI of the bankruptcy laws while it reorganizes. The company says it is meeting current obligations but its liabilities exceed assets by \$627,000. Company officers refuse comment on the cause of its problems, but Pittsburgh sources say it lost \$2,000 a house in Washington, Pa. by misjudging sewage disposal cost. The company originally sold 100,000 shares at \$9.25 a share; present price is \$1 bid, no stock offered.

### Other activities by public companies:

HARNISCHFEGER HOMES, wholly owned subsidiary of Harnischfeger Corp., is building a 31,200 sq. ft. plant in Jacksonville, Ark. near Little Rock. The plant can produce 1,500 manufactured homes yearly and Harnischfeger plans to ship them into Oklahoma, Kansas, Missouri, Mississippi, Alabama, Tennessee and Arkansas.

CRAWFORD CORP. has completed its shift out of home manufacturing by selling its Gloster, Miss. plant to SWIFT HOMES of

Pittsburgh. President W. Hamilton Crawford says Crawford sustained its first loss in history in 1963 but the plant sale will cut \$750,000 from annual overhead and free \$1 million of working capital.

## Housing stock prices jump

Buoyed by s&l and shell and pre-cut home issues, HOUSE & HOME's average of housing stocks rose 7% to 10.95 in early April. Shells gained 9% led by Jim Walter. s&ls rose 10% paced by Far West Financial, up 6 1/4 to 31 1/8, and Financial Federation, up 12 1/8 to 65 1/2.

Here are HOUSE & HOME's averages of selected stocks in each housing group:

	Feb. 4	Mar. 2	Apr. 1
Building	6.31	5.97	5.84
Land development	5.56	5.79	5.91 <sup>a</sup>
s&ls	18.67	21.26	23.34
Mortgage banking	8.67	9.13	9.88
Realty investment	5.95	5.83	5.95
REITs	10.87	11.43	11.38
Prefabrication	6.94	7.18	7.53
Shell and Pre-cut homes	9.28	9.83	10.68
AVERAGE	9.56	10.27	10.95

<sup>a</sup>—Consolidated Development dropped from land development category.

## HOUSING'S STOCK PRICES

Company	February 4		March 2		April 1	
	Bid	Ask	Bid	Ask	Bid	Ask
<b>BUILDING</b>						
•Adler-Built Inc.	20e	35e	15e	25e	20e	30e
•Capital Bld. Inds.	1.75	1.90	2.85	3.00	1.40	1.50
Cons. Bldg. (Can)	107/8	11	11 1/2	11 3/4	11 3/4	11 3/8
•Dev. Corp. Amer.	3/4	1	1 3/8	1 7/8	1 3/8	1 7/8
Dover Const.	3 3/4	4 1/8	4 1/8	4 3/8	3 3/8	4
Edwards Eng.	2 1/2	3	2 7/8	3 1/4	3 3/8	3 3/4
Edwards Inds.	3/4	1 1/4	3/4	1	3/4	1 1/8
Eichler Homes <sup>a</sup>	7 3/4	8 3/4 <sup>d</sup>	6 5/8	6 1/2		
First Natl. Rlty. <sup>b</sup>	27 1/2 <sup>d</sup>	3	27 1/2	3		
•Frouge	4 1/2	5	4 1/4	4 3/4	5 1/2	6
General Builders <sup>b</sup>	2 3/8	2 1/2	2 1/2	2 3/4 <sup>d</sup>	2 3/4	2 7/8
Hawaiian Pac. Ind.	4 3/4	5 1/4	4	4 1/2	4 5/8	5
S. V. Hunsaker	4 1/8	4 5/8	5	5 1/2	5	5 3/8
Kavanagh-Smith	3 3/8	4	3 3/8	3 7/8	3 3/2	3 7/8
Kaufman & Broad <sup>b</sup>	27	26 1/4		26 1/2		
Louis Lesser Ent. <sup>b</sup>	47 1/2	5	47 1/2 <sup>d</sup>	4 1/8	4 3/8	5 1/8
Levit <sup>b</sup>	6 1/8	6 1/8		6 1/2		
Lusk	2	2 1/4	3	3 1/4	3 3/8	3 1/2
Pacific Cst. Prop. <sup>b</sup>	18 1/2 <sup>d</sup>	19 1/4	18 1/2 <sup>d</sup>	19 1/2	10 3/4	
U.S. Home & Dev.	1 1/8	1 1/2	1 1/8	1 1/8	1 1/4	1 5/8
Del E. Webb <sup>c</sup>	8 1/4	7 1/8		7 7/8	8 1/4	
Webb & Knapp <sup>b</sup>	7 1/16	7 1/16		7 1/16		
<b>S&amp;LS</b>						
American Fin.	16 3/4	17 1/2	16 1/4	17 3/4	16 1/2	17
Brentwood	10 3/8	10 3/8	12 1/8	13 1/8	12	12 1/2
Calif. Fin. <sup>c</sup>	6 7/8		7 7/8		8 3/4	
Empire Fin.	14 1/4	15 1/4	15 1/4	16 3/8	16 7/8	18
Equitable S&L	28 3/4	29 3/4	29 3/4	31 1/8	31 3/4	32 1/4
Far West Fin.	20 1/4	21 3/4	24 7/8	26 5/8	31 1/8	33 1/8
Fin Fed <sup>a</sup>	45 7/8		53 1/8		65 1/2	
First Charter Fin. <sup>a</sup>	36 1/8		43 1/2		44 3/4	
First Fin. West	11 1/2	11	12	11 5/8	12 1/8	12 1/2
First Lincoln Fin.	18	19 3/8	21 1/4	22 3/4	26 3/4	28 1/2
First Surety	15 3/4	16 7/8	17 1/8	18 7/8	17 1/4	18 1/2
First Western Fin.	18 1/4	19 1/2	18	19 1/4	18	19 3/8
Gibraltar Fin. <sup>c</sup>	26 5/8	31 1/4		31 3/4		
Great Western Fin. <sup>c</sup>	15 1/8	17 1/2		17 3/4		
Hawthorne Fin.	8 3/4	9 1/4	10 1/4	11 1/8	9 7/8	10 3/4
Lytton Fin.	24 3/4	26 1/2	27 1/2	29 3/8	26 1/8	27 7/8
Midwestern Fin. <sup>b</sup>	4 3/4			5 3/8		
San Diego Imp. <sup>c</sup>	10 1/4			11 1/8		12 1/4
Trans-Cst. Inv.	13 1/2	15	14 1/2	15 1/2	17 7/8	19 3/8
Trans World Fin. <sup>c</sup>	14			16 3/4		18 3/8
Union Fin.	7 1/2	8	8 1/2	9 1/2	8 5/8	9 1/4
United Fin. of Calif. <sup>c</sup>	22			27 3/8		33 3/8
Wesco Fin. <sup>c</sup>	40 3/8			47 3/8		54 3/8
<b>MORTGAGE BANKING</b>						
Advance	9 1/4	9 3/4	9 1/8	9 1/2	8 5/8	9
•Associated Mtg. Cos.	8 3/8	8 3/4	9 1/8	9 3/8	8 3/4	8 5/8
Charter	17 1/2	21 1/8	19 1/4	2	1 5/8	1 7/8
Colwell	15 1/4	16	15 1/4	16	16 1/2	16 3/4
•FNMA	86	89	83 1/4	86 1/2	84	87
MGIC	23	23 3/4	25 1/2	26	29 1/2	30
Palomar	4	4 1/2	3 3/8	3 7/8	3 3/8	3 7/8
Stockton, Whatley	9 1/4	10	11 1/2	12 1/4	12 1/4	12 1/2
United Imp. & Inv. <sup>b</sup>	2 1/2		2 1/4		2 1/4	
Wallace Invests.	4 1/2	5 1/4	4	4 1/8	4 3/4	5 1/2
<b>REALTY INVESTMENT</b>						
•Brookridge Dev.	3 1/16	3 1/4	3e	8e	1 1/16	3 1/16
Disc Inc.	3 3/4	3 3/4	3	3 1/2	2 7/8	3 3/8
Gt. Amer. Rlty.	35e	50e	3/8	1/2	5/16	7/16
Herman & Appley	4 1/4	4 5/8	4	4 1/2	4	4 1/2
Income Props.	3	3 1/2	2 7/8	3 1/4	2 3/4	3 1/4
•Kaymarq Cons.	3/4	3/4	1/2	3/8	5e	10e
Krattner <sup>b</sup>	9		9		9	
Mensch Inv. & Dev.	13	14	13	13 3/4	13 1/4	13 3/4

Company	February 4		March 2		April 1	
	Bid	Ask	Bid	Ask	Bid	Ask
<b>SHELL AND PRE-CUT HOMES</b>						
Albee Homes	3 3/4	4 1/2	4	4 5/8	3 3/4	4 3/8
Modern Homes Const.	5 1/2	5 7/8	5 1/2	5 3/4	5 3/4	6
•Morris Homes Corp.	e	f	1/8	1/2	1/4	1/2
Nationwide	3/4	1	3/4	1	3/4	1
U.S. Finance	6 3/4	7 1/4	7 1/2	7 7/8	8 3/4	9 3/4
Jim Walter	29 3/4	31 1/4	31 3/8	33 1/4	34 3/8 <sup>c</sup>	
<b>REAL ESTATE INVESTMENT TRUSTS</b>						
•American Rlty. Trust	9 1/8	9 1/2	9 1/2	10	9 3/4	10 1/8
Contl. Mtg. Inv.	15 7/8	16 7/8	16 3/8	17 1/8	17 3/8	18 1/2
First Mtg. Inv.	15	16 1/8	16 3/8	17 1/4	15 5/8	16 3/4
First Ntl.	9	9 1/2	9 1/2	10 3/8	9 1/8	9 3/2
Liberty	5 5/8	6	5 5/8	6 5/8	5 1/4	5 1/2
U.S. Realty Inv.	8 7/8	9 5/8	9 1/8	10	9 1/2	10 3/8
<b>PREFABRICATION</b>						
Admiral Homes	1 1/4	1 5/8	1 3/8	1 5/8	1 3/8	1 5/8
Great Lakes Homes	6 3/4	7 1/4	6 3/4	6 5/8	6 3/4	7 1/4
Harnischfeger <sup>b</sup>	19 1/2	22		22 3/8		
Hilco Homes	3/4	1	3/4	7/8	7/8	7/8
Inland Homes <sup>b</sup>	7 3/8		7 1/8		7 1/2	
Madway Mainline	14	15 1/2	14 1/4	15 1/4	14	15
Natl. Homes A.9	3 3/8	3 1/2	3 1/2	3 3/4		
Richmond Homes	5 3/4	6 1/2	5 1/2	6 1/2	6	7
•Seaboard Homes	3/8	3/4	3/4	1	1/2	1
Steel Crest Homes	7 1/2	8	8	8 1/2	9 1/2	10
Swift Homes	2 3/8	2 5/8	2 3/4	3 1/2	3 3/8	3 7/8
•Western Shell	5e	50e	1 1/16	3 1/16	3/8	5/8
<b>LAND DEVELOPMENT</b>						
All-State Props. <sup>b</sup>	2 1/2		2 3/8		2	
•American Land	1 1/8	1 3/8	1 1/4	1 1/2	1 1/4	1 1/2
Amer. Rlty. & Pet. <sup>b</sup>	2 3/8	2 5/8	2 3/4	2 3/8	2 3/8	2 5/8
Arvida	5 1/4	5 7/8	5 3/4	6 3/8	5 1/4	5 3/4
Atlantic Imp.	16 1/4	17	17 1/2	16 3/4	17 1/2	
Canaveral Intl. <sup>b</sup>	4 3/8		4 1/8		4 1/8	
Christiana O. Corp. <sup>b</sup>	5		6 1/8		5 5/8	
Coral Ridge Prop.	1	1 1/4	1 1/16	7/8	1 1/16	1 3/8
Cousins Props.	14 1/2	15 1/2	15	16	14 3/4	15 1/4
Crawford	29 1/8	33 1/8	27 1/8	34 1/4	4 1/2	4 3/4
Deltona Corp. <sup>b</sup>	11 1/4		11 1/8		11	
Fla. Palm-Aire	1 3/4	2 1/8	2	2 1/4	2 1/4	2 5/8
Forest City Ent. <sup>b</sup>	5 1/2	5 1/4	5 1/8		7 1/8	
Garden Land	6	6 1/2	6	6 3/8	6	6 3/8
Gen. Devel. <sup>b</sup>	4 3/4		4 3/8		4 1/4	
Gulf American <sup>b</sup>	4 1/8		4 5/8		5 3/8	
Holly Corp. <sup>b</sup>	15 1/16		15 1/16		15 1/16	
Horizon Land	3	3 1/2	3 1/4	3 3/4	3	3 1/2
Laguna Niguel A	8 7/8	9 3/8	8 7/8	9 5/8	9 1/8	9 7/8
•Laguna Niguel B	a	a	4 3/4	5 1/4	4 5/8	5 3/8
Lake Arrowhead	7 7/8	8 1/8	8 1/2	8 3/4	7 3/4	8 1/4
Wacco Rlty.	7	7 1/2	6 1/2	6 7/8	7 1/2	8
•Major Rlty.	15e	25e	3/4	3/8	18e	25e
So. Rlty. & Util. <sup>b</sup>	3 3/8		1 3/4 <sup>d</sup>	1 7/8	1 3/4 <sup>d</sup>	1 7/8
Sunset Int. Pet. <sup>b</sup>	6 3/4		7 3/8		7 1/2	

<sup>a</sup>—stock newly added to table. <sup>b</sup>—closing price (ASE). <sup>c</sup>—closing price (NYSE). <sup>d</sup>—not traded on date quoted. <sup>e</sup>—no bids. <sup>f</sup>—no offer. <sup>g</sup>—closing price (MSE). <sup>h</sup>—closing price (PCSE).  
Sources: New York Hanseatic Corp., Gairdner & Co., 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 whose stocks are either listed or actively traded.

## PROFITS AND LOSSES

Company	Fiscal year ends	1963		%	
		revenues (000)	change '62	1963 from net (000)	change '62
All State Prop.	Dec. 31 <sup>a</sup>	4,267.9	(-4)	299d	(-77)
Amer. Mtg. Ins.	Dec. 31	320c	103	124	94
Cont. Mtg. Ins.	Dec. 31	223	218	(59)	9
Laguna Niguel	Jan. 31 <sup>a</sup>	3,492	243	529	b
Realty Equities	Dec. 31	8,976 <sup>of</sup>	91	269	58

<sup>a</sup>—6 months report. <sup>b</sup>—no comparison—net loss of (\$223,216) in 1963. <sup>c</sup>—premiums earned. <sup>d</sup>—excludes special charge of \$2,194,233, representing net loss on disposal of Seatwater, Tex. gasoline plant. <sup>e</sup>—includes gross profit on sale of real estate, etc., of \$1,459,479 in 1963 and \$798,593 in 1962. <sup>f</sup>—third consecutive record year. <sup>g</sup>—lost \$143,230 preceding year.

"This won't sell your house...but it'll help"

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Patent Pending



TM



for



**WALL HUNG**  
to keep floor  
clean & clear

**PERMANENT**

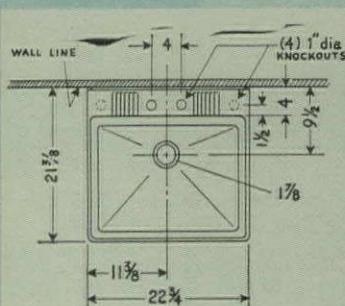
stronger because it's made of  
marvelous **MOLDED-STONE\***

**EASY TO CLEAN, SANITARY**

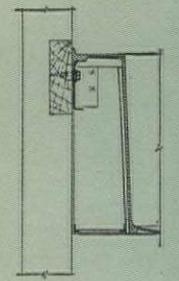
and virtually stainproof  
—beauty like a bathroom

**IDEAL REPLACEMENT**

for dingy, hard to clean  
old-fashioned laundry tub

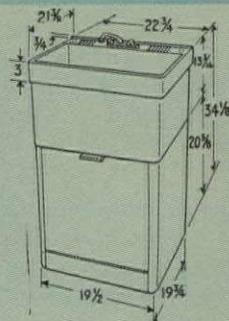


PLAN VIEW—DIMENSIONS



WALL BRACKET  
INSTALLS ANYWHERE

**ALL ACCESSORIES:**  
 FAUCET WITH SWING SPOUT  
 OVERFLOW TUBE  
 AUTOMATIC WASHER  
 HOSE CONNECTORS  
 BLOCK FOR TOP  
 MOUNTING FAUCET  
 HANDY TOP COVER



OVERALL DIMENSIONS



OPTIONAL METAL  
STORAGE CABINET

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a fresh, new look in the laundry room!

**Here's why you're better off with Fiat:**

**X** *Not a fragile fiberglass laminate  
subject to sagging, splitting and puncturing*

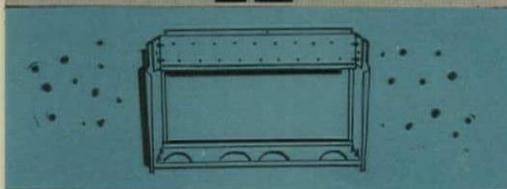
**SERV A SINK IS STRONG**



Strength built-in where strength is needed: heavy top rim; solid walls; bottom heavier than sides. Tested to support 600 lbs. static load on outer edge.

**X** *Eliminate ugly legs and instability  
of support by flimsy metal cabinet*

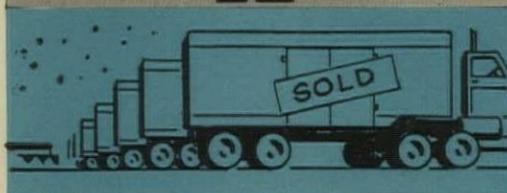
**SERV A SINK INSTALLS RIGIDLY**



Metal bracket mounts flush to wall, sink slips into bracket. Preserves unobstructed floor area—makes solid installation—eliminates wracking side to side.

**X** *Overcome customer resistance to cheap  
plastic—avoid complaints and call-backs*

**SERV A SINK SELLS EASIER**



Looks like a plumbing fixture should! Confetti white resists stain; easy to keep clean and sanitary; faucet mounts on self-draining back ledge. Designed in cooperation with plumbers, builders, home economists.

**FIAT METAL  
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## Horne leaving HLBB post to head regional bank in San Francisco

**John E. (for Elmer) Horne**, 56, will likely resign as one of the three Federal Home Loan Bank Board members to become president of the Home Loan Bank of San Francisco July 1. He would succeed **J. Alston Adams**, who died last summer. The bank is a reserve facility for member savings and loan associations in Arizona, California and Nevada.

Horne says he will accept the offer unless **President Johnson** asks him to stay at the HLBB until after the November election. This would relieve the President of making a new appointment during a political campaign.

Horne hopes to complete some pet HLBB projects before leaving. These include regulations to permit 50-50 S&L participation lending and to liberalize land loans.



Vincent Finnigan

**HLBB's HORNE**  
He gets his own bank

He would like to see final action on proposals to give S&Ls a wider lending base. The House has passed one such bill, letting associations lend on mobile homes.

Horne was for 14 years an administrative assistant to Sen. **John J. Sparkman** (D., Ala.). **President Truman** named Horne as deputy administrator of the Small Defense Plants Administration in 1951 and he became administrator before returning to Sparkman's office in 1953. **President Kennedy** appointed him as administrator of the successor agency, the Small Business Administration, in February 1961, and shifted him to the bank board rather than reappoint **Joseph J. Williams**, a Byrd Democrat from Virginia, when his term ran out last year (NEWS, Sept.).

Horne took a \$1,000 salary cut to \$20,000 to go to the bank board. He will draw about \$37,000 in San Francisco. The appointment must be approved by

the HLBB, a condition that puts Horne in the unusual position of passing on his own new job.

**LENDERS:** **Donald L. Newton** is the new president of Home S&L of Phoenix. He had just resigned from Home S&L of Los Angeles (nation's largest S&L with \$1.5 billion assets) where he was senior vice president in charge of Home's 28 branch offices. Newton, the second key officer to leave Home/Los Angeles, after the departure of President **Kenneth Childs** (NEWS, Feb.), had been slated for other duties. Secretary-Treasurer **Charles H. Brinton**, who joined Home/Los Angeles in 1952, takes over Childs' job. But Chairman **Howard Ahmanson** resumes Childs' title of president.

## Four builders in giant new projects

With spring and a housing boom, builders are announcing some unusually ambitious projects. Items:

- **President Frank E. Mackle Jr.** of Deltona Corp. plans a \$500 million residential development on San Marco Island and 20 other islands just off the Gulf Coast of Florida near Naples, including a tract of nearby mainland. Deltona has joined with investors **Peter N. Thomson**, **Gerry Brothers**, **Barron S. Collier Jr.**, **Mrs. Isabel Collier Read**, and a private New York investment firm to form Marco Island Development Corp. The corporation, 50% owned by Deltona, purchased 10,000 acres for \$7 million from the Collier family. Deltona, itself a new corporation, was formed by the Mackle brothers (Frank, Elliot and Robert) via merger with C.K.P. Developments (H&H, April).

- **Frank W. Sharp** unveiled a \$250 million condominium project for his nine-year-old Sharpstown development in Houston. The project calls for 42 buildings, from 6 to 32 stories, including two twin 15-story towers by architect **Claude E. Hooton Sr.** already under construction. They will surround a central garden. An 18-story condominium, Houston's first, is under construction near Sharpstown. Builder: **Claude E. Hooton Jr.**, Sharp's son-in-law.

- **President Leon Panitz** of Panitz & Co. has announced a \$60 million waterfront addition to Joppatowne, his 1,400-acre community near Baltimore (H&H, Feb.). Planners **Tippetts**, **Abbett**, **McCarthy** & **Stratton** will include in the 500-acre supplement single-family houses, townhouses, high-rise apartments (from 15 to 20

stories), plus riverside sites on Little Gunpowder River.

- **President Morton A. Sterling** of Sunset International Petroleum Corp. paid \$43,000 an acre (\$6,150,000 in cash) for the 143-acre Tanforan Race Track on the border of South San Francisco and San Bruno, Calif. Sterling is betting he can turn the track into a winning combination of garden units, townhouses and medium-rise apartments. Sunset has five other major developments under way in California.

**BUILDERS:** **Ernani Bernardi**, West Coast builder whose avocation is politics, is a candidate for supervisor in Los Angeles County. Bernardi is now a Los Angeles city councilman.

### Big builder finances research on the aged

**Ross W. Cortese**, 47, fast growing builder of retirement housing, will give \$4 million over the next five years to set up a retirement-study institute at the University of Southern California. USC President **Norman Topping** says the institute will seek ways to help old people find new goals, gain economic security and adjust to the fragmentation of their families. Cortese leaped to renown as a retirement-housing builder when he started his \$90 million **Rossmoor Leisure World** at Seal Beach, Calif., in 1961. Since then, he has opened two more **Leisure Worlds** in California (H&H, Apr.) and is planning others in Illinois, New York, Florida, Washington, D.C. and Hawaii.

**ASSOCIATIONS:** **Paul Van Auker**, a key man behind the growth and financial success of NAHB's Chicago shows, has retired as convention and exposition director. His successor: Convention Program Director **Damon R. Elder**.

**Rose McKee** moves from NAHB's public relations staff to the Small Business Administration. Her new job: SBA's director

of information. Miss McKee was a long-time Capitol Hill reporter for International News Service.

**WHERE ARE THEY:** Former Executive Vice President **Jerome Madigan**, 49, of the Home Manufacturers Assn. is the new executive officer of the Colorado Springs Home Builders Assn. He left HMA in 1963 to build pre-fabbed homes (NEWS, Apr. '63).

## OPINIONS AND INSIGHTS

▶ Home Loan Bank Board Member **John deLaitre**, noting the changing activities of banks and S&Ls: "What every financial institution needs is a vice president for tomorrow."

▶ Economist **Gary Driggs** of Western S&L in Phoenix, sizing up today's market: "Today being three years too early with a development is the difference between profit and bankruptcy."

▶ Architect **Jack D. Train** of Skidmore, Owings & Merrill in Chicago: "The day of the one, two or three-man architectural office is past. Refinements in communications and transportation have been so vast that architecture has become a team effort made up of experts."

▶ Executive Vice President **Norman Strunk** of the U.S. S&L League, cautioning S&L men to tighten up lending practices: "We are in a period of transition, and if we recognize this fact and don't attempt to act

today as if conditions are as they were ten years ago, we will come through the real estate adjustment in excellent shape."

▶ Architect **Edward Durell Stone**, on modern building: "In this era of overabundance, we seem to be able to afford everything except beauty."

▶ Treasurer **Bert A. Betts** of California, testifying on a proposed \$100 million bond issue to finance low-cost farm-worker housing: The plan could strain "the capacity of the national bond market to absorb more California bonds per year."

▶ Builder **Charles Huber** of Dayton, telling why he reversed his policy against offering many optional extras in his homes: "We found last year that the larger we made our houses, the more luxury items we added, the better they sold. Of course that increases the price some but it doesn't seem to make much difference."

## FHA sidesteps local politicians

FHA Commissioner Philip Brownstein has been under pressure to name minor politicians to FHA directorships, notably in Philadelphia, Cincinnati and Phoenix. He has resisted and last month appeared to have won his point. In Philadelphia, he named Thomas J. Gallagher Jr., 50, who was assistant director there since 1949. Herbert J. McGlinchey, a Philadelphia ward leader, had the backing of the late Rep. William J. Green (D., Pa.). In Cincinnati, Brownstein bypassed former Reading (Ohio) Mayor Harry A. Sand, who was supported by Sen. Stephen M. Young (D., Ohio), and appointed John Wayne Kirkwood, 40, for four years assistant director in Grand Rapids.

For Phoenix, Brownstein picked Charles R. Johnston, 36, from a list of applicants reportedly suggested by Sen. Carl Hayden (D., Ariz.). Johnston was field counsel for the Federal National Mortgage Assn.

Brownstein fired Pittsburgh Di-

rector Sidney E. Rosenblum, 59, on the ground that his poor sight had incapacitated him for the job. Rosenblum, a Republican, appealed to federal court to halt his ouster but his plea was denied. Other new directors:

Wallace M. Bostwick Jr., 44, former staff member of FHA multifamily zone office in San Francisco, new Spokane director; James H. McLaughlin, former chairman of the Michigan Workmen's Compensation Appeal Board, director in Grand Rapids; and Andrew S. Hess, 41, manager of King County (Seattle) Airport, director in Seattle.

**ARCHITECTS:** Italy's Pier Luigi Nervi has been awarded AIA's gold medal for 1964. Engineer Nervi's thin concrete shells revolutionized building design.

Brooklyn-born Albert Szabo takes over as chairman of Harvard's department of architectural sciences. Szabo has been teaching at Harvard since 1954.



**RESEARCHER QUEER**  
Five years to probe

### \$100,000 grant for no-strings research

Professor Elmer R. Queer, 59, has been named director of a new building research institute set up at Pennsylvania State University by a no-strings-attached \$100,000 grant from the Alcoa Foundation. Queer and a staff of 18 architects, home economists, sociologists and engineers have an almost unlimited franchise to study all phases of construction for five years. Alcoa's grant also provides

for an Alcoa professorship of building research.

Dean Merritt A. Williamson of the university's engineering college expects the institute to delve into man's relation to his environment, pressures of urban-suburban expansion, the ramifications of mass transport and the socio-economic aspects of building. The institute will study codes and standards.

Queer's first project will be evaluating exterior wall panels. Its laboratory: the Place Victoria Building, planned for Montreal, whose panels will be subjected to broad ranges of temperature, humidity and wind.

**PRODUCERS:** Ben J. Staal takes over the No. 2 spot in Briggs Mfg. Co., under President Milton J. Stevens. Staal steps in a chief of operations of Briggs (a producer of plumbing, heating and cooling equipment), which last year estimated a \$1 million profit on sales of \$22 million, after a \$1.2 million loss on \$19 million sales in 1962. Much of Briggs' sales increase comes in the West Coast and Texas.

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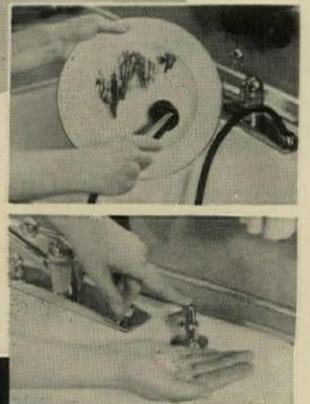


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HMA's TANDY (l.) AND DIBBLE  
New mission for an ex-pilot and an ad man

## HMA head seeks new image

The Home Manufacturer's Assn.'s No. 1 goal under new President A. R. "Bill" Tandy will be to promote a more favorable public impression of manufactured houses.

As a first step in that direction, HMA expects to erect a show house demonstrating top design and top-quality products. The house, in the \$40,000 range, is in Washington, D. C. HMA will

design a completely new house to show, but it may later become a production model for some members.

Tandy, president and board chairman of Southern Mill & Manufacturing Co., Tulsa, succeeds two-time HMA President James L. Pease Jr. He was elected at the HMA presidents council meeting (see p. 18).

Also elected: Vice President

Allan Dibble, advertising and public relations director of National Homes Corp., Lafayette, Ind., and Secretary-Treasurer Graham Schadt, president of Holiday House Manufacturers Corp., Fort Worth.

Tandy, 42, and his family bought Southern Mill in 1957 from its founder, past HMA President ('43 to '45) Walter Ahrens. Last year the company shipped 450 houses (priced from \$10,000 to \$20,000) into 11 states. HMA's new chief, a World War II bomber pilot with 60 missions over Germany, attended Texas Christian University, the University of Minnesota and Loyola University.

**DIED:** Edmund Randolph Purves, 66, quiet mannered executive director of the American Institute of Architects for 11 years before retiring in 1960, April 7 in Washington.

Ned Purves, Croix de Guerre winner in World War I, left private architectural practice in Philadelphia in 1941 to become Washington representative for the 3,000-member AIA. During a

World War II stint with the Air Force, AIA named him a Fellow and in 1949 promoted him from director of public and professional relations to executive director. He was noted for his skill at representing AIA before government agencies, and when he retired AIA had grown to 14,000 members.

He then became an associate of Chatelain, Gauger & Nolan, Washington engineers and architects. In 1961 he won the F. Stuart Fitzpatrick Memorial Award for "individual contribution to unification of the...building industry."

Purves' years as staff head of AIA saw developing ferment within the profession for architects to try to assume a broader role in planning and building. Purves urged caution. His last words on the subject were these: "Let the architect nibble if he wishes at the magic mushroom, but let him never forget that the greatest contribution he can make...is to perfect himself as the professional purveyor of his own service—architecture."

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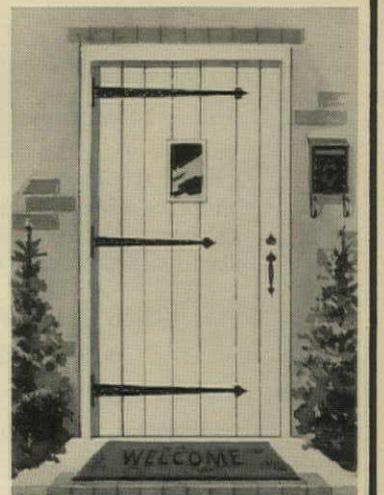
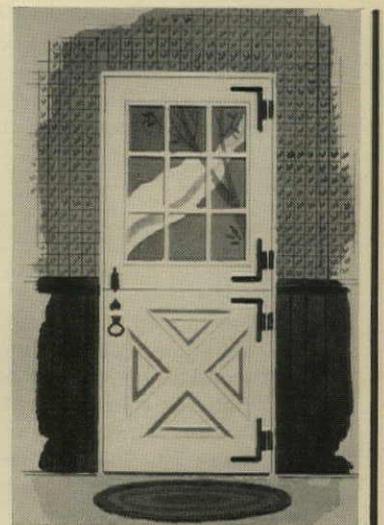
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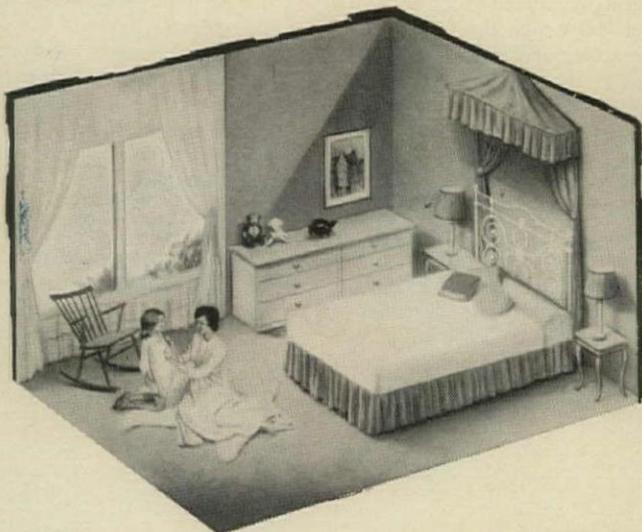
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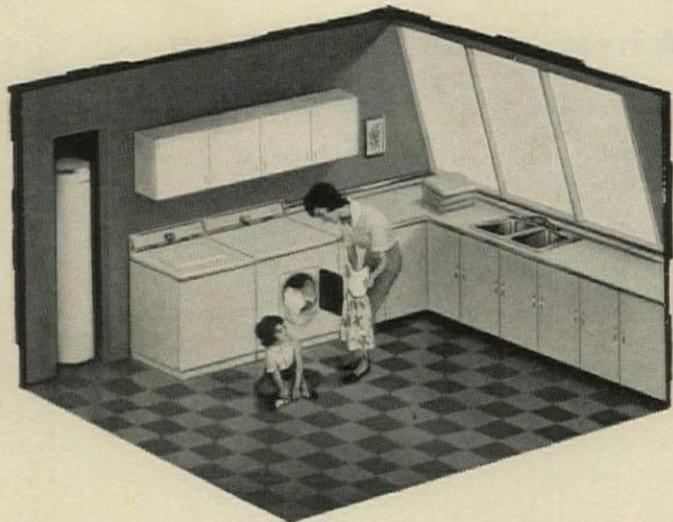
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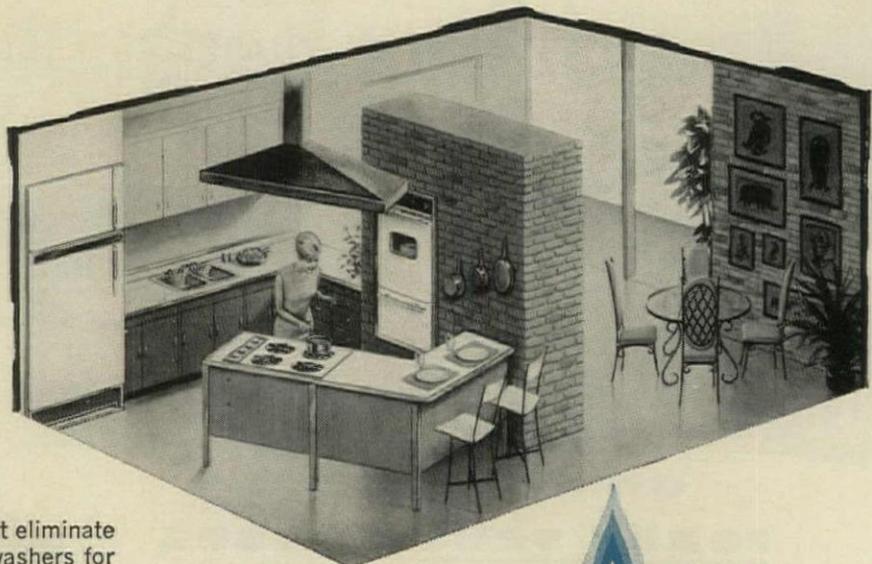


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\*A.G.A. Mark



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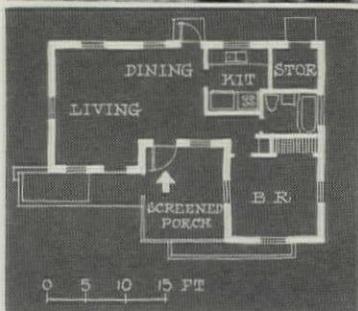
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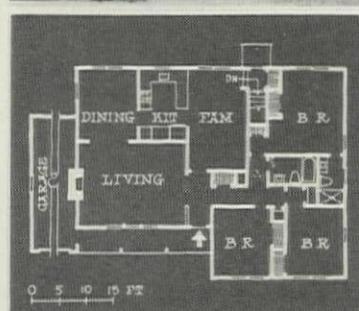
**GAS**

# Best-selling houses show variety of regional tastes

Ben Schnall



**ONE-BEDROOM HOUSE** is the most popular of 15 models sold by Florida's Deltona Corp. (the Mackle brothers) in its 15,000-acre Deltona community near Orlando. The house appeals to older families, retirees and buyers who want a second house. The 635-sq. ft. model sells on easy terms: \$240 down, \$49 per month, thus its 12-month cost is little more than a short winter hotel stay. FHA mortgages run for 35 years, conventional mortgages for

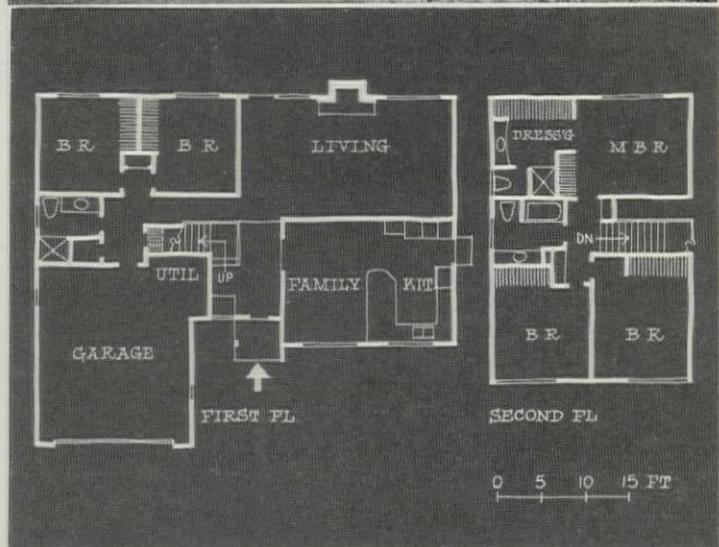


**ONE-STORY HOUSE** for first-time buyers and families who like one-floor living made this \$19,500 ranch model a favorite (22 out of 120 sales) at Robilt's Brookwood project in south-central New Jersey.

It replaced a two-story model as the best seller. Explains Builder Robert Schmertz: "There have been few one-floor houses in our market for some time, and we noted a preference for one-floor living among many potential buyers."

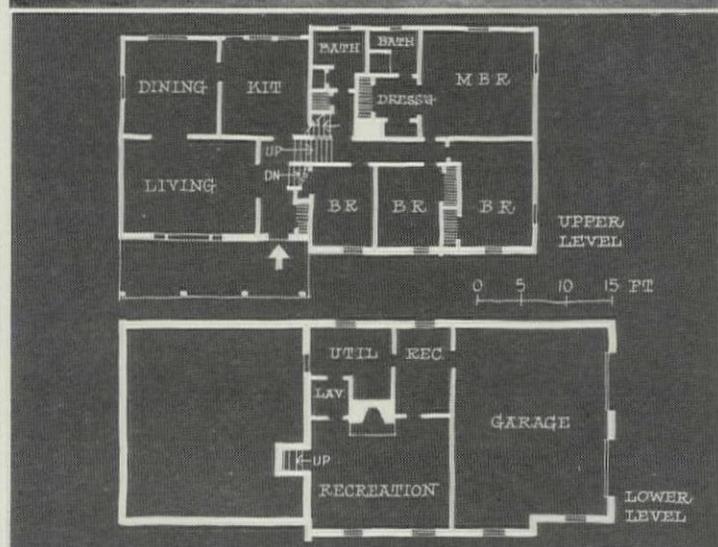
Horst Ahlberg

Cortlandt Hubbard



**FIVE BEDROOMS** is the lure of this \$29,950 leading seller for the Macco Corp. in Costa Mesa, Calif. Since October 1963, it has accounted for over 100 sales. Big families like it for the number of sleeping rooms. Others combine the first two floor

bedrooms into a recreation room and convert the original family room to a separate dining room. Some competitors are offering second-floor unfinished bonus rooms, but Macco's 2,240 sq. ft. is completely finished space.



**FARMHOUSE LOOK** of this stone front, split-level Westtown model made it the most popular (11 of 19 sales) of eight models in Arters Brothers' Timberwyck community near Media, Pa. Base price is \$31,300 with an added \$1,100 for a

fifth bedroom (built over the living room), taken by a majority of Arters' buyers who spend as much as \$2,700 on extras and custom changes. Arters' biggest problem with the house has been to devise more facade variations.

Marketing roundup continued on p. 65



# WHAT EVERY BUILDER SHOULD KNOW ABOUT

## KEMPER

# KITCHENS

There are reasons why each month more and more builders are installing Kemper Brothers wood kitchen cabinets in their homes. Here is a brief outline why *you* should seriously consider Kemper Kitchens if you have not already done so.

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A remarkable finishing process that is exclusively Kemper Brothers increases toughness and moisture resistance many times over other finishing methods. Provincial door frames and drawer fronts are completely submerged (not just sprayed) in a deep penetrating polyurethane dip and all cabinets are treated with vinyl sealers . . . this means positively no warping through moisture penetration. Then, after vinyl based toners are applied to bring out and preserve the natural beauty of the wood, all door frames, drawer fronts and overlays are finished with a high temperature, baked-on plastic type finish that lasts a lifetime. Modern conveyorized ovens provide unequalled quality control and uniformly fine cabinet finish. The elastic qualities of this exclusive Kemper finish allow it to expand and contract with the wood it covers. This is the secret behind Kemper's long lasting finish that never cracks . . . never checks.

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### DEPENDABLE DELIVERY

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### FURNITURE QUALITY GUARANTEE

Kemper Brothers is the *only* kitchen cabinet manufacturer licensed by the National Association of Furniture Manufacturers to display the NAFM seal and to offer this exclusive warranty to builders. *"Furniture which carries the NAFM seal of integrity is warranted by the manufacturer to be free from defects in workmanship, material and construction for a reasonable period of time, but not less than (12) months from the date of delivery to customer."*

There are still more reasons why you should install Kemper Brothers quality wood kitchen cabinets in your homes. Don't you agree it's time for you to talk to your local Kemper Distributor? He's listed in the Yellow Pages.

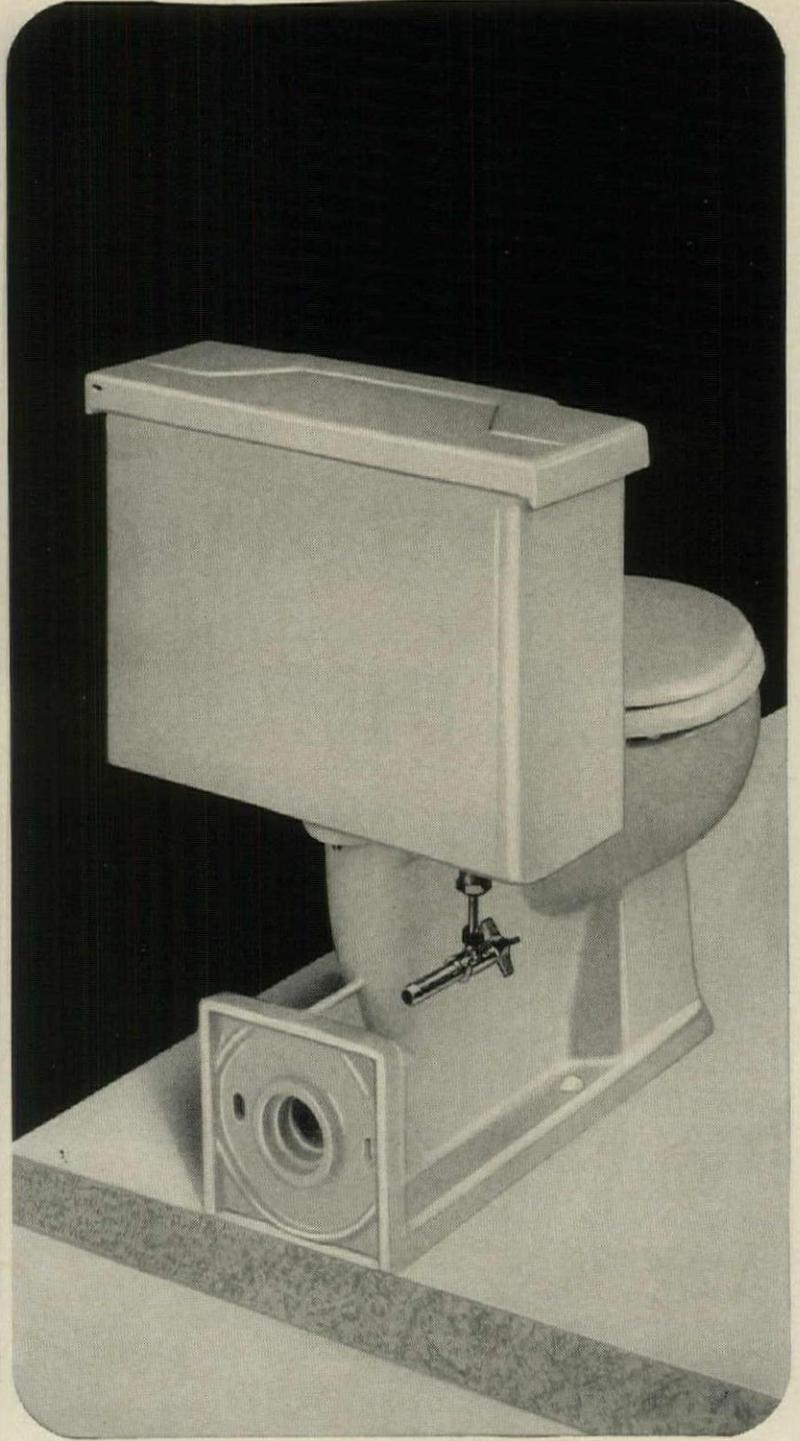
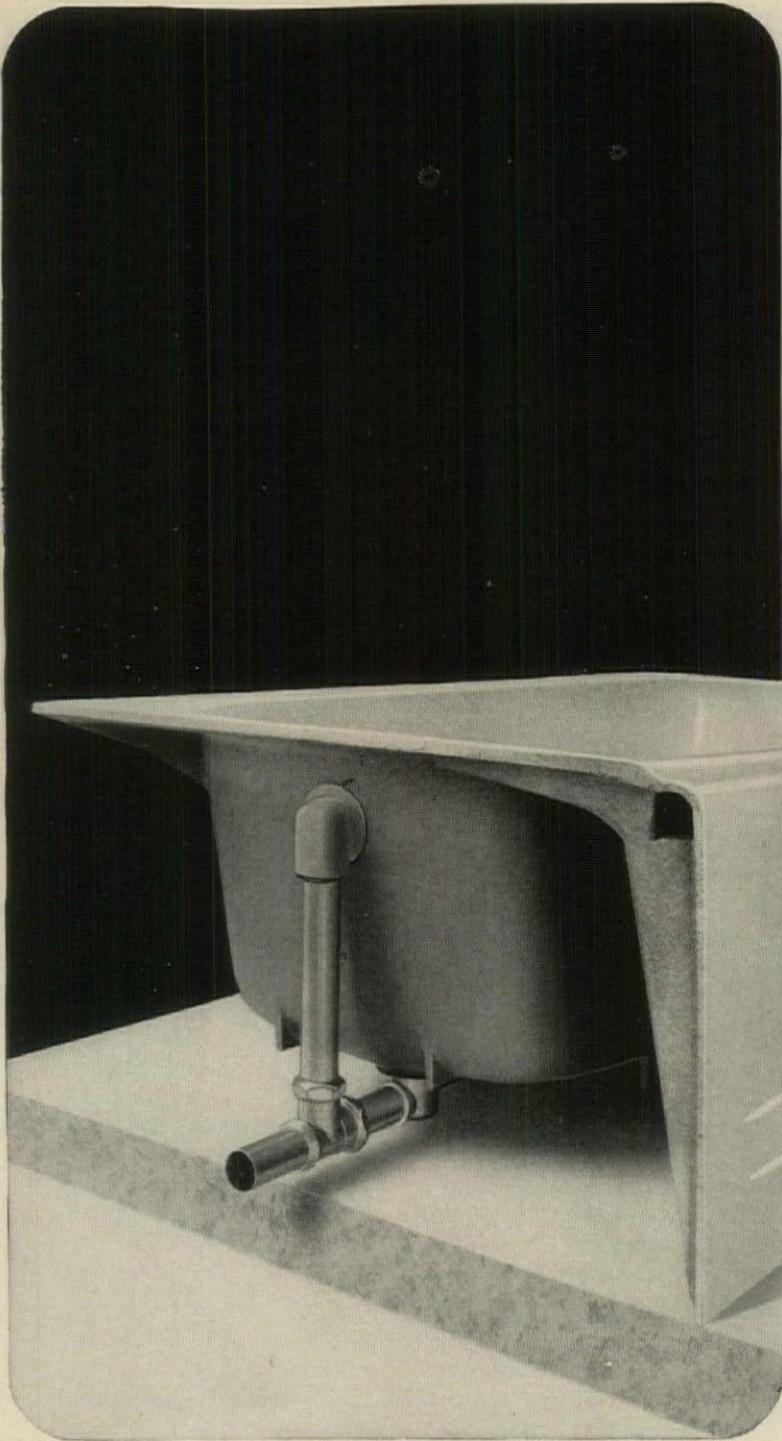
◀ Illustrated at left is Kemper's Colony Kitchen in genuine American Cherry veneers. Note V grooved doors and authentic Early American hardware. Write for Kemper's full line catalog today . . . It's free.



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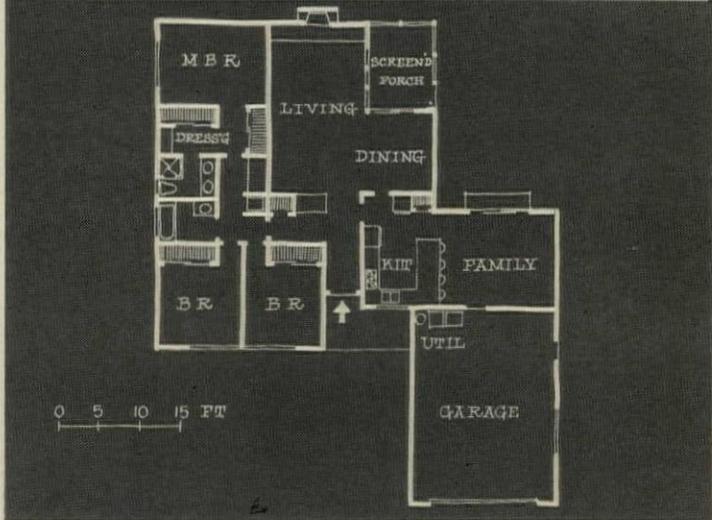
The bottom of the Dynametric tub has been raised  $2\frac{3}{4}$  inches to provide room for the horizontal drain without altering the appearance or comfort of the tub. The Barlow closet is designed for concealment of the drain, which enters the wall 4 inches above floor level. For complete information on the Dynametric Barlow see your Kohler Distributor, or write, Kohler Co., Kohler, Wisconsin.

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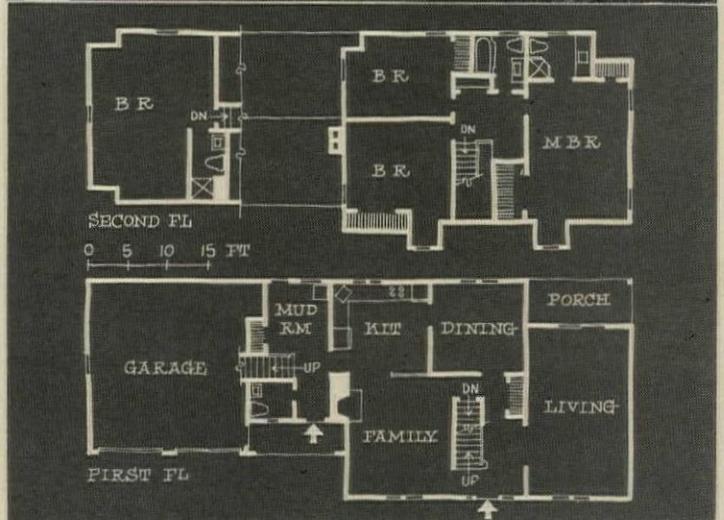
Glen Fishback



**NO. 1 SELLER** for Builder Richard Price in his Rosemont subdivision near Sacramento is this \$22,800, three-bedroom, two-bath model. The kitchen location at the center of the plan gives housewives access to the dining room, family room

and front door—even while preparing meals. A screened and roofed garden room opens off the living room through sliding glass doors, and permits outdoor entertaining even in bad weather. Of 31 sales, 12 were this house.

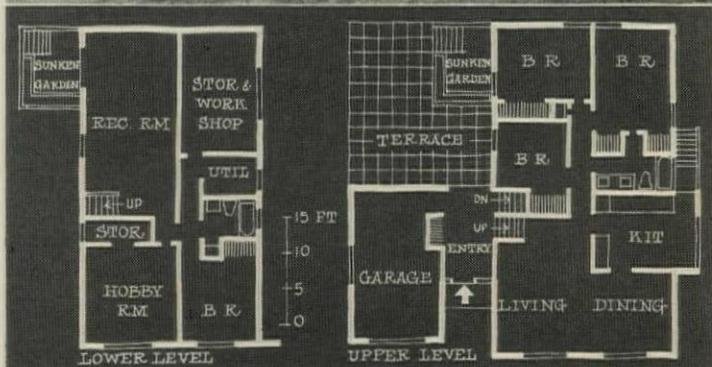
George B. Biggs



**GAMBREL ROOF HOUSE** is Hillsborough, N. J. Builder Melvin Konwiser's best seller (15 sales in two months). He surveyed 4,000 past buyers and found they gave priority to two-story living, family rooms and kitchens and a master bedroom

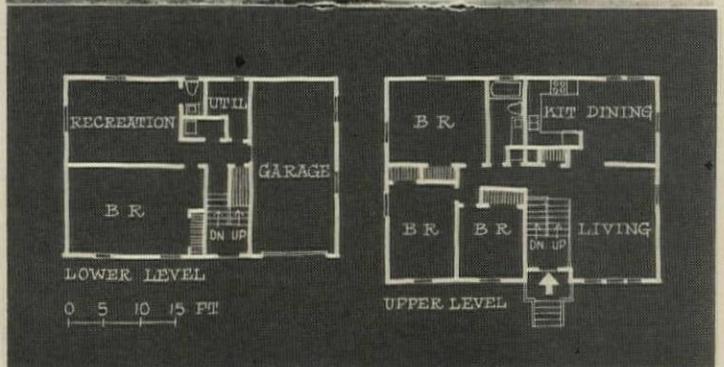
suite. So he built a gambrel roofed two-story model with a fireplace as focal point of the family room, located close to the kitchen; and he made the master bedroom into a separate adult suite with two closets. Price: \$31,990.

Bob Hand



**FIVE-BEDROOM MODEL** (for \$24,750) and lots of living space (2,477 sq. ft.) made this Kingsberry Homes Stratford the top seller for Atlanta's King-Williams Land Co. Out of 74 lots in the subdivision, 20 buyers picked this house while the other

54 spread over a dozen other models. The sales effort was based on a marketing analysis of potential buyers and competing houses. King-Williams then picked Kingsberry models that fitted this buyer profile most closely.



**SPLIT-ENTRY MODEL** at \$17,500, is Builder Steven Day's best seller in Danbury, Conn. A no-painting-for-15 years guarantee on the house's film-coated siding (plastic covered plywood) brought out a crowd of 3,000, and resulted in 75 deposits in

two days for the 49 lots in the subdivision. Twenty-four of these ended as firm sales. DuPont provided a demonstration machine for the opening that showed off the film's long lasting quality by its resistance to abrasion and damage.

*Letters start on p. 77*

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No. 1300 DRAWER SLIDE

## **K-V drawer slides glide smoothly, freely every time!**

K-V 1300 drawer slides add the finishing touch that tells customers you've built cabinets of quality! K-V drawer slides are easy to install. They're inexpensive. They're built of high-grade steel to hold up to 50 lbs. with no wobble or sag, and they glide noiselessly on nylon ball bearing wheels. Positive stop keeps drawer from coming out too far. But at the touch of a finger, stop lever can be released for easy drawer removal. The K-V 1300 slide comes in lengths from 12" to 28". Ask your K-V representative or distributor about the complete line—from light-weight to heavy duty. Or write for our free catalog.

**KNAPE & VOGT MANUFACTURING COMPANY**  
Grand Rapids, Michigan



*New 1320 self-closing drawer slide automatically closes drawer when front is within 4 1/4" of cabinet. Same easy action as 1300 slide and available in 18", 20", 22" and 24" lengths.*



Manufacturers of a complete line of quality drawer slides, sliding and folding drawer hardware, closet and kitchen fixtures and Handy Hooks for perforated board



## At the Riviera it's Herculon<sup>®</sup> in every apartment

( the builder of this luxury apartment house in Corpus Christi, Texas, selected carpet  
of Herculon because of its good looks, easy cleaning, and minimum maintenance )



48 families enjoy its wall-to-wall luxury — the builder enjoys its economy and low-cost main-

tenance — the dealer enjoys a healthy profit on a high-yardage sale! That's the success story of residential-grade carpeting of 100% Herculon\* polypropylene olefin fiber in the modern Riviera Apartments of Corpus Christi, Texas — wall-to-wall in all living rooms and bedrooms in every apartment! The carpet is

Monarch's "Sabena" quality. Here are the facts about the amazing performance of Herculon in



the dealer's and builder-owner's own words:  
"Carpet of Herculon is more stain resistant, and therefore easier to clean than any other conventional soft or hard floor covering on the market today," says the dealer who made the sale, Melvin K. Heath, president of Heath Floor Company.  
This opinion is confirmed by the builder-



owner, Henry G. Tromm, president of Henton Construction Corporation, who states:

"Our costs to maintain Herculon fiber carpeting in 48 apartments during

the past seven months have been less than \$100!"

Find out how Herculon can help you write your own success story with the high-volume, high-profit sales in your area! Write or call Fibers Department, Hercules Powder Company, 380 Madison Avenue, New York, N. Y. 10017, OXford 7-0010.



**HERCULES**



Back in **1950**, the latest in model home features was the garbage disposer. Boy, did it sell homes!



In **1954**, it was kitchen built-ins...



in **1960**, central air conditioning...



in **1963**, refrigerator-freezer combinations were great motivators.



See us at the  
New York  
World's Fair!



## For 1964, the hot sales feature is **AUTO<sup>®</sup>-MATE** automatic garage door operator

This year, professional builders are selling homes faster by giving the public what they want—the convenience and safety of **AUTO-MATE**!

It makes a convincing self-demonstration. Home buyers want to try for themselves the push-button convenience, when you show them how they

can avoid exposure to bad weather and night-time dangers. They're quick to see the safety factors, too, when you demonstrate and describe safety reversing, overload protection, extra garage-lighting circuits, separate radio, UL approval—features that have made "OVERHEAD DOOR"

operators famous for years.

Here's sales appeal that can help you close a sale faster—save on interest costs—with top mortgage evaluation. And the best part is the low cost to you—less than \$150 installed\*! Contact your "OVERHEAD DOOR" Distributor today for details.

\*Overhead Door Corporation announces it is producing a quality operator at a price to its distributors which will permit them to sell for a price of less than \$150 installed (less wiring and travel).

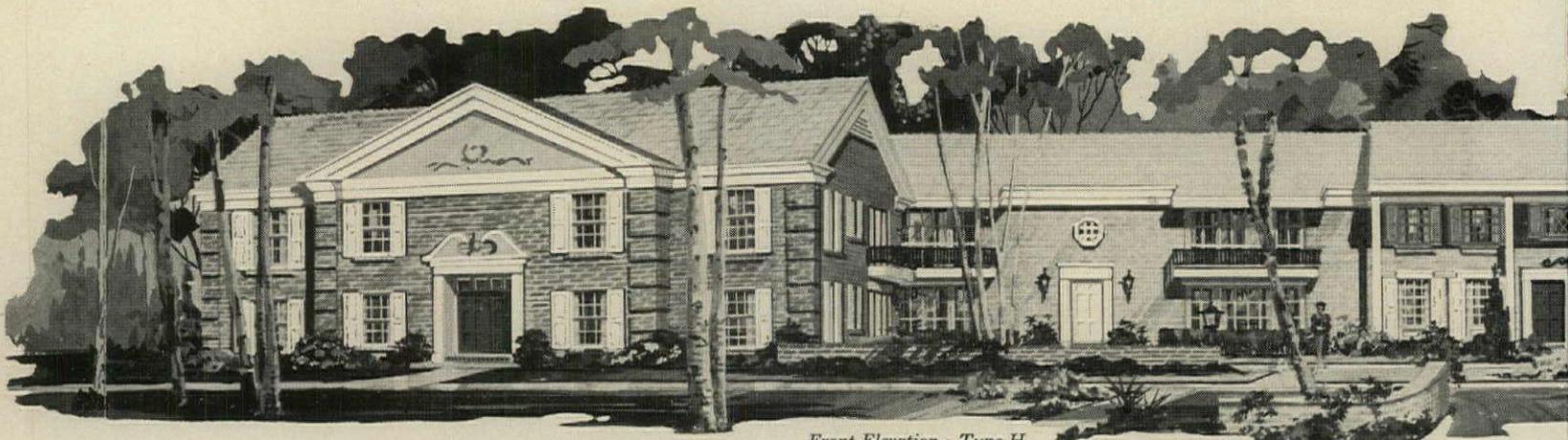


made only by

**OVERHEAD DOOR CORPORATION**

General Offices and Manufacturing Division: Hartford City, Indiana. Manufacturing Distributors: Dallas, Texas; Portland, Oregon; Oxnard, California; Cortland, New York; Hillside, New Jersey; Lewistown, Pennsylvania; Nashua, New Hampshire. In Canada: Oakville, Ontario.

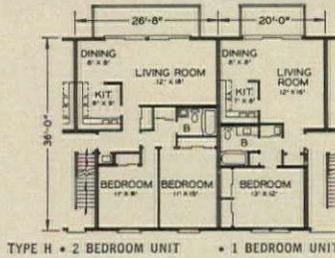
# Famed SCHOLZ



Front Elevation • Type H

## Type H

1 & 2 BR. Multiple Unit. Partial basement for central heating system and laundry facilities. Also available in 2½ story—3 level split foyer arrangement. Available in any multiples.



Scholz Homes, Inc. is the nation's largest manufacturer of luxury homes with five plants serving the country from coast to coast. It is also the nation's largest manufacturer of units for the apartment field.

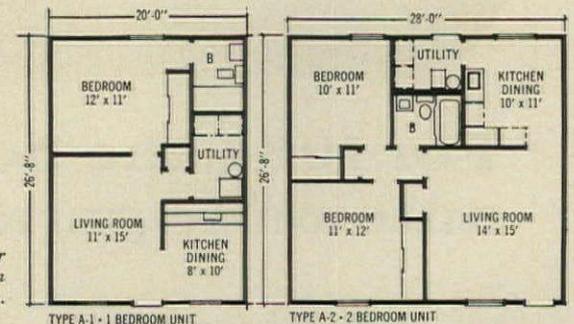
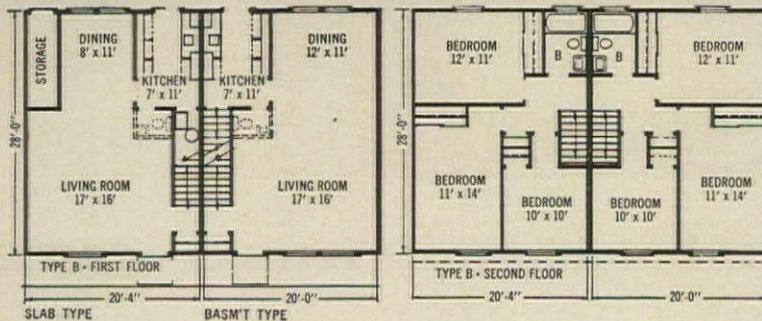
Many investors are not aware of the high rates of return which prevail in apartments nor of the inevitably increasing demand for such rental housing in the next decade.

Economists predict that the present rate of housing starts of 1,400,000 units for 1963 (one-third of which is now in



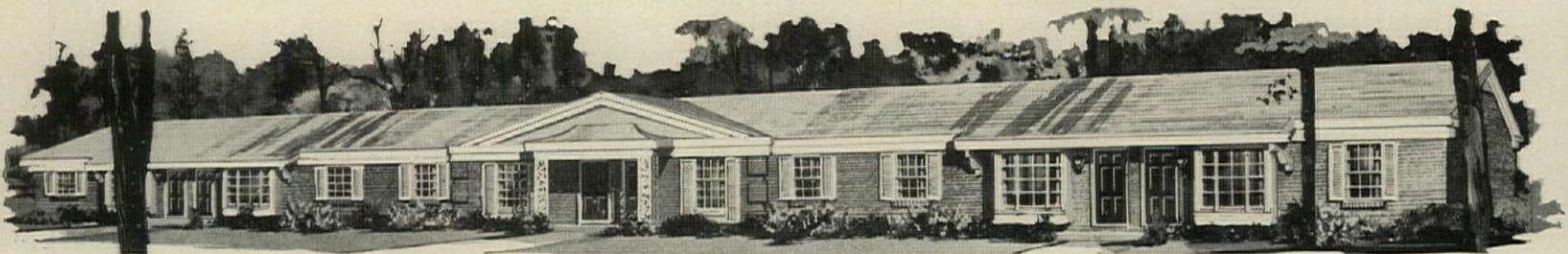
## Type B

3 BR.—2 Story, Row House, basement or slab in any multiples.



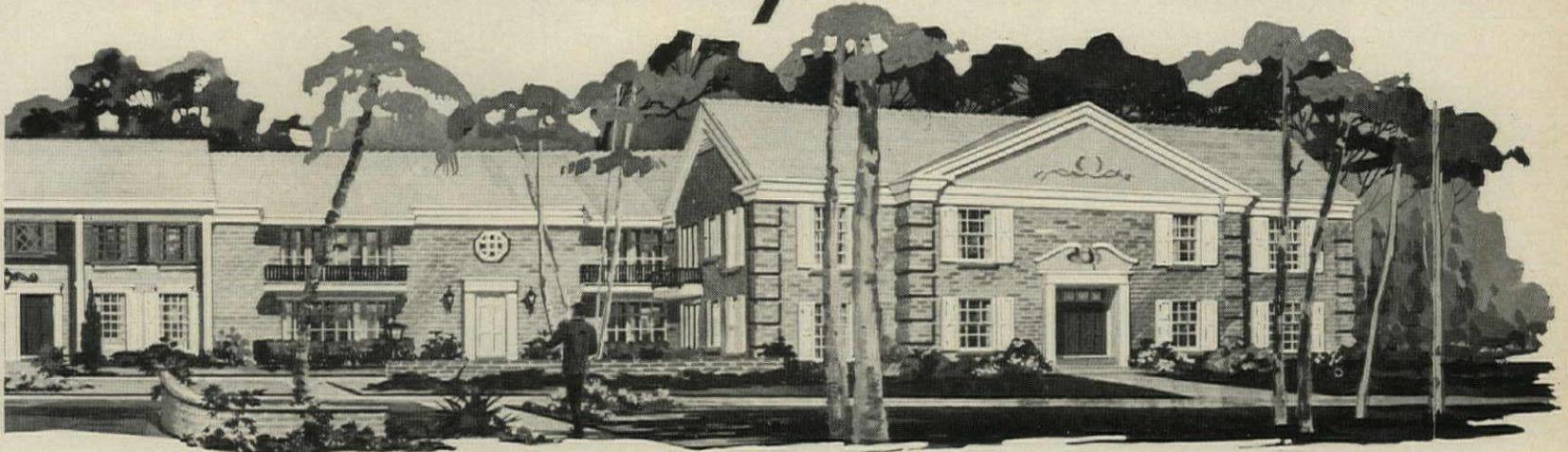
## Type A

1 & 2 BR. Used as duplex unit or assembled in any multiples in straight line, U or ELL Arrangements.



Send for Complete Information on SCHOLZ

# DESIGN *Apartments!*



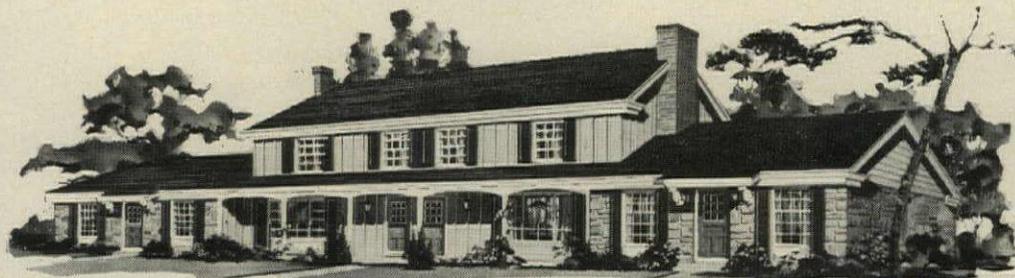
apartment units), will have to increase to 2,000,000 units by 1970 to satisfy demand.

Such investments can produce a rate of return substantially greater than that of almost any other form of secure investment available today. Cash investment is usually limited to less than the cost of the land on which the buildings are placed and the initial high-rate of return increases substantially with the years.

The various types shown here provide units with a proven

appeal for every type of rental market from a low rental unit up to luxury garden type units. In addition to these outstanding designs and quality construction, Scholz supplies:

- Secondary financing; makes possible a program with minimum investment.
- Determination of economic feasibility.
- Layout; especially adapted to your site and market.
- And for investors; delivery of finished building at firm cost through builders we can supply.

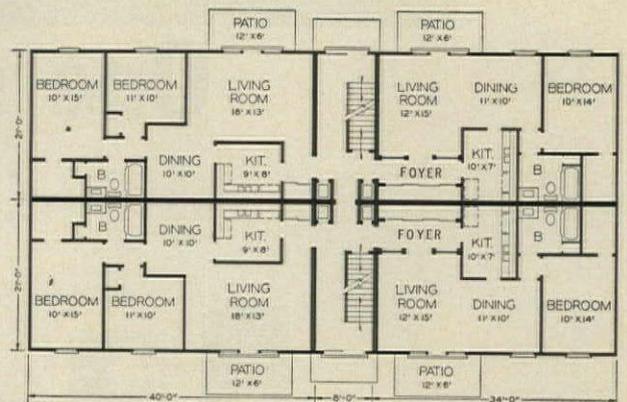


*Type D & H* Luxury Garden Apartment Unit used in any multiples of center or end sections, as shown.



*Type F* CONTEMPORARY  
Shown in 2½ Story

*Type F* COLONIAL  
Shown in 2 Story



TYPE F • (2) 2 BEDROOM UNITS

TYPE F • (2) 1 BEDROOM DELUXE UNITS

## DESIGN *Apartments...*

Please have your representative call on me with complete details of the SCHOLZ PROGRAM.

Name \_\_\_\_\_ Address \_\_\_\_\_  
City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_ Phone \_\_\_\_\_

I presently have land zoned for apartments  yes  no.

I am interested in \_\_\_\_\_ type units.

Mail to: SCHOLZ HOMES, Inc. • 2001 N. Westwood, Toledo 7, Ohio.



# One sub can heat and cool

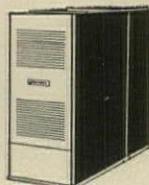
(...the name is in the Yellow Pages)



Year Round Systems



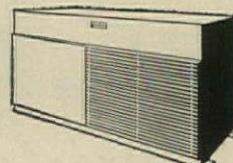
Gas Furnaces



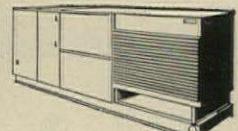
Oil-Lowboy



Electric-Cooling



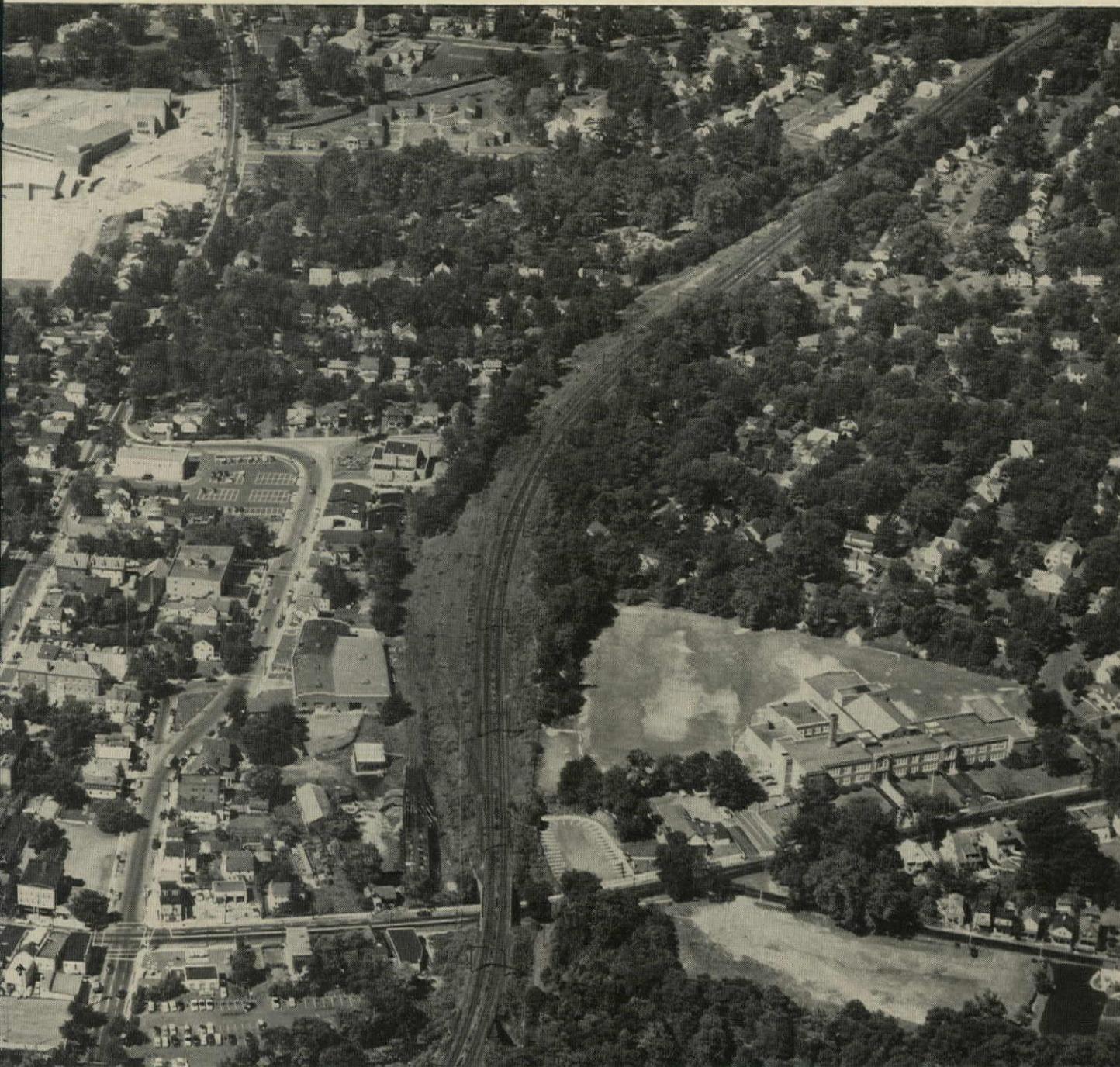
Gas-Cooling



Skyliner



Unit Heater



## every building in this community

JANITROL HEATING AND COOLING

**JANITROL<sup>®</sup>**  
HEATING AND COOLING

The complete line of heating and air conditioning equipment for residential, commercial and industrial applications.

*"WHERE TO BUY IT"*

**ABC HEATING AND COOLING CORP.**

That's right. Any Janitrol heating and cooling contractor can help you handle any job. The new Janitrol heating and air conditioning line includes models in a wide variety of heating and cooling capacities to meet all your needs—from small homes and individual apartment units to roof top combinations for your commercial buildings. Factory trained crews assure expert installation. Janitrol quality means more customer satisfaction, fewer call-backs too. Contact a Janitrol heating and cooling contractor for prices and specifications. He's in the Yellow Pages.

**JANITROL DIVISION**  
Midland-Ross Corporation  
COLUMBUS, OHIO      PHOENIX, ARIZONA



# Who says a compact range can't be beautiful?

General Electric's economical, new Mark 21 combines slide-in versatility with a true built-in look!



MODEL J-245



Built-in as in main illustration except with standard brush-chrome base as accent.



With backsplash, entire unit slides between cabinets or at end of cabinet row.



Extra economy, free-standing unit with both sides completely finished.

THE NEW MARK 21, inspired by the enormously successful Mark 27, is just 21" wide, superbly designed. It brings, for the first time, real, big range convenience and beauty to the smallest kitchen.

Choice of 4 different installations, 3 with that distinctive built-in look. Or, for additional installation economy, a handsome free-standing unit.

CONSIDER THESE OTHER MARK 21 FEATURES: Push-button controls • large-capacity oven-broiler • hi-speed Calrod® surface units • removable oven door • includes terminal block for electrical connection • brush-chrome backsplash and base panel standard • trim kits optional at extra cost • Model illustrated J245 • J235 (3 surface units) also available • White and Dark Coppertone.

GENERAL  ELECTRIC

## Readers' views on housing problems: renewal . . . subsidies . . . costs . . . codes

### Quality design in renewal

H&H: Bravo for your coverage of the San Francisco urban renewal story. The profile of M. Justin Herman [Feb.] should be required reading for every renewal agency in the country.

AARON LEVINE, AIP  
Oahu Development Conference  
Honolulu

H&H: I am pleased that San Francisco's urban renewal is so highly evaluated.

JOHN F. SHELLEY, mayor  
San Francisco

H&H: As builders of the St. Francis Square Apartments shown on the cover, we were disappointed that no recognition or mention was given us. . . . When the project was originally put out to bid (we did not bid it), the low bid was \$500,000 over the FHA replacement cost, making the project unworkable. By working with the architect closely, we were able to effect a redesign that came within the FHA budget and also to secure a negotiated contract for ourselves.

JACK BASKIN, builder  
Los Angeles

### Myths of mid-income housing

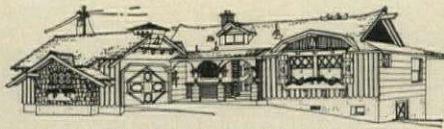
H&H: Your detailed and well documented article on the myths of middle-income housing subsidies [Mar.] was excellent. It eliminated homework in California for the Home Builders Council. All we have to do is plug in California statistics.

WILLIAM T. LEONARD  
executive vice president  
Associated Home Builders, Berkeley

H&H: Your statement that large-scale, mid-income subsidies would undermine the market for housing built without them, and your three conclusions about the effect on the nation of such a bill should be a red flag to the building industry and all who are interested in fighting this trend.

Please continue to keep the industry informed on this issue.

MAX A. TRAYER  
Yucaipa, Calif.



TACK-ON DESIGN (from H&H, Oct.)



BEST-SELLING MODEL (from H&H, Mar.)

### Tack-on best seller?

H&H: Do you notice any resemblance? I did.

TODD WEXMAN, president  
Component Homes  
Barrington, Ill.

### Instead of subsidies, cut costs

H&H: Your publication is the finest available in our field today.

Your article [The Albatross of Localism—H&H, Dec.] is a sad but true summation of the altogether too common plight of developers and builders. Petty politicians are more concerned with pampering voters than with facing area needs so they frequently administer codes on the basis of politics and personalities. Why should an industry accounting for roughly 10% of the gross national product tolerate this?

This problem has long been considered local and has never been attacked on a broad or direct political basis. Won't some existing organization (like NAHB) activate national and local politically effective units? Legal recourse to conspiracy suits for the deprivation of property rights may be an effective way of obtaining the constitutionally delegated rights of property owners.

HHF administrator Weaver promises new federal aids for land developers [NEWS, Feb.] but a better way to produce reasonably priced building lots for middle-income families is to fight against localism.

GENE A. SEHRT  
Sehrt Realty Co.  
Milwaukee

### President Johnson's housing plans

H&H: The Johnson program is substituting money for policy. Instead of specific medicines and operations, the program basically prescribes new injections of antibiotics. Municipalities expect builders to perform municipal functions that constantly push up capital requirements per dwelling unit. Financing the builder at 6% interest rates is a poor substitute for municipal responsibility for improvements at bond rates of 3% or less. There is no shortage of mortgage money and many banks would lend even on land improvement, if the banking law were changed to allow it.

I am disturbed that there should be so little courage and so little understanding about

what really ails the industry. I would hope to see a federal program extend sewer lines and build sewage disposal plants on its own initiative or in partnership with localities. One mile of new sewer trunk line or one strategically placed disposal plant could do more for housing today than a few million dollars of subsidy and special incentive programs.

Regardless of subsidies for public housing and urban renewal, formation of blight will outpace renewal as long as present zoning policies remain what they are. Public programs tend merely to shove the slum next door to the nearest area of beginning obsolescence. As long as suburbs continue by zoning to try to exclude people of lower incomes, the housing inventory available to [them] will not be significantly enlarged. Here in Westchester County, builders are champing at the bit because municipalities use a double standard of zoning, one for private unsubsidized builders and another for builders of public or subsidized projects—in locations carefully controlled to assure the *de facto* perpetuation of racial and income ghettos—while spouting a lot of humanitarian nonsense. Builders have housing on the drawing board for people in moderate-price ranges, but they are unable to obtain the zoning.

I also regret the absence of research funds, particularly for municipal cost-analysis studies, and the costs of comparative types of growth patterns. Statistical research might show some tendencies which currently defeat government's attempt to stimulate private housing where needed. NAHB and the Urban Land Institute, as well as some foundations, have tried to tackle municipal cost research but are defeated by the magnitude of the job. Government could perform a useful function here.

GERALD D. LLOYD, builder  
White Plains, N. Y.

### Rx for the building code mess

H&H: A federal building code could put us in a straight jacket that would make FHA restraints look like barely visible fragments of disintegrating threads.

Performance codes are a theoretically desirable answer, but performance codes must be translated into specific decisions. If a builder asks for a permit to build a house with pressed cornflakes, most building inspectors would be helpless to judge whether it met minimum requirements. We would have to agree on means for translating performance standards into specific performance tests and on who could make such tests and how.

We are making progress in the building-code field. If enough angry men keep shouting themselves hoarse, and keep pushing too, we will continue to make progress.

ROBINSON NEWCOMB  
Newcomb, Gillogly & Associates  
Washington, D. C.

H&H: Compliments to you! I sympathize with anyone who tries to change the building code picture. It will be very slow in coming, but it's worth keeping after.

EUGENE P. CONSER, executive vice president  
National Association of Real Estate Boards

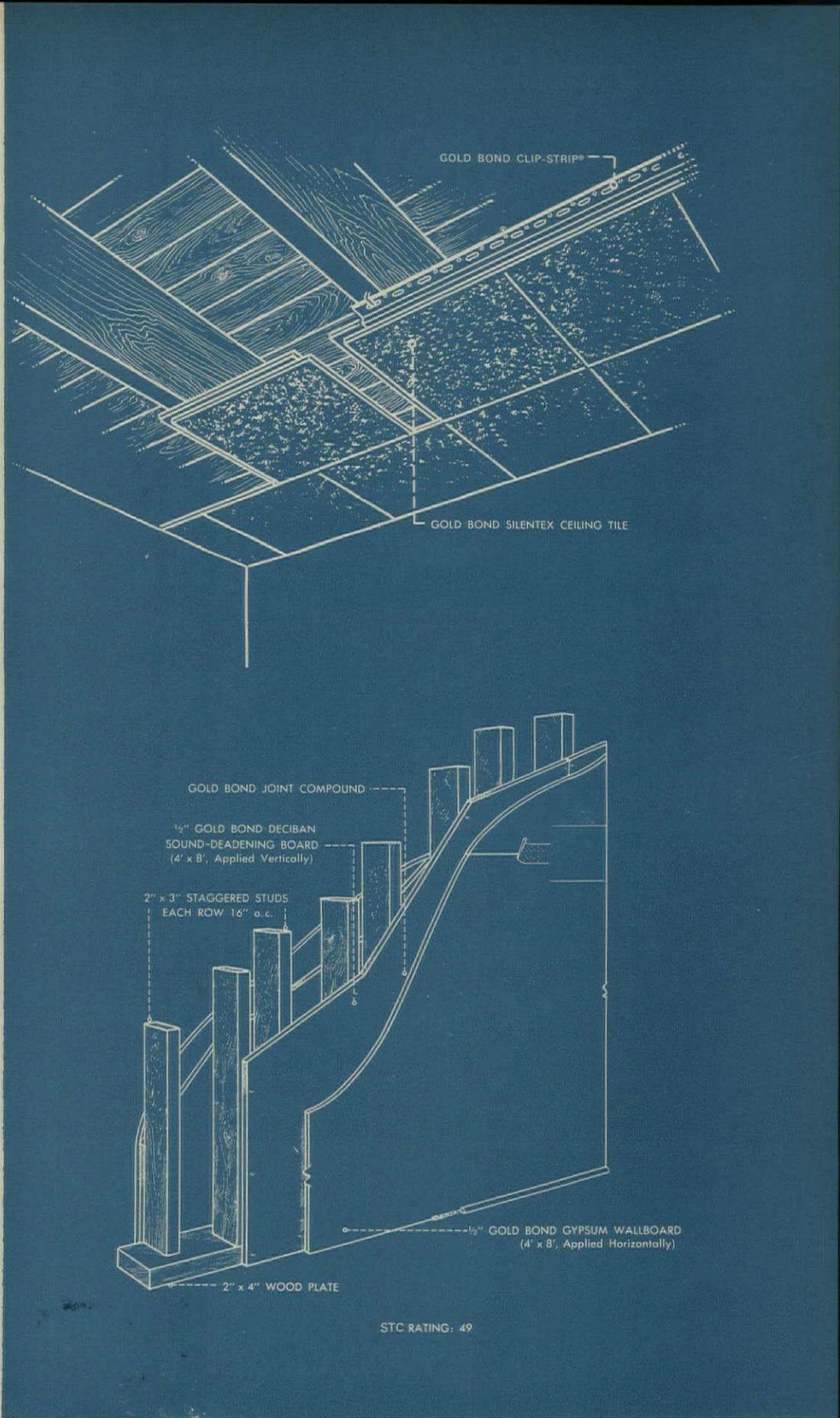
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**The Gold Bond difference: Systems to quiet  
down homes and apartments — even better!**





This handsome family room contributes to a Home of Quiet that exceeds I.B.I. standards, for example. The ceilings are Gold Bond Silentex® Acoustical Tile that absorbs up to 80% of the noise that strikes it—the most effective residential ceiling tile on the market. And Gold Bond Deciban Sound-Deadening Board gives you a choice of systems for sound isolation in walls and partitions. The system diagramed gives an STC rating of 49 with 1/2" Gold Bond Gypsum Wallboard laminated

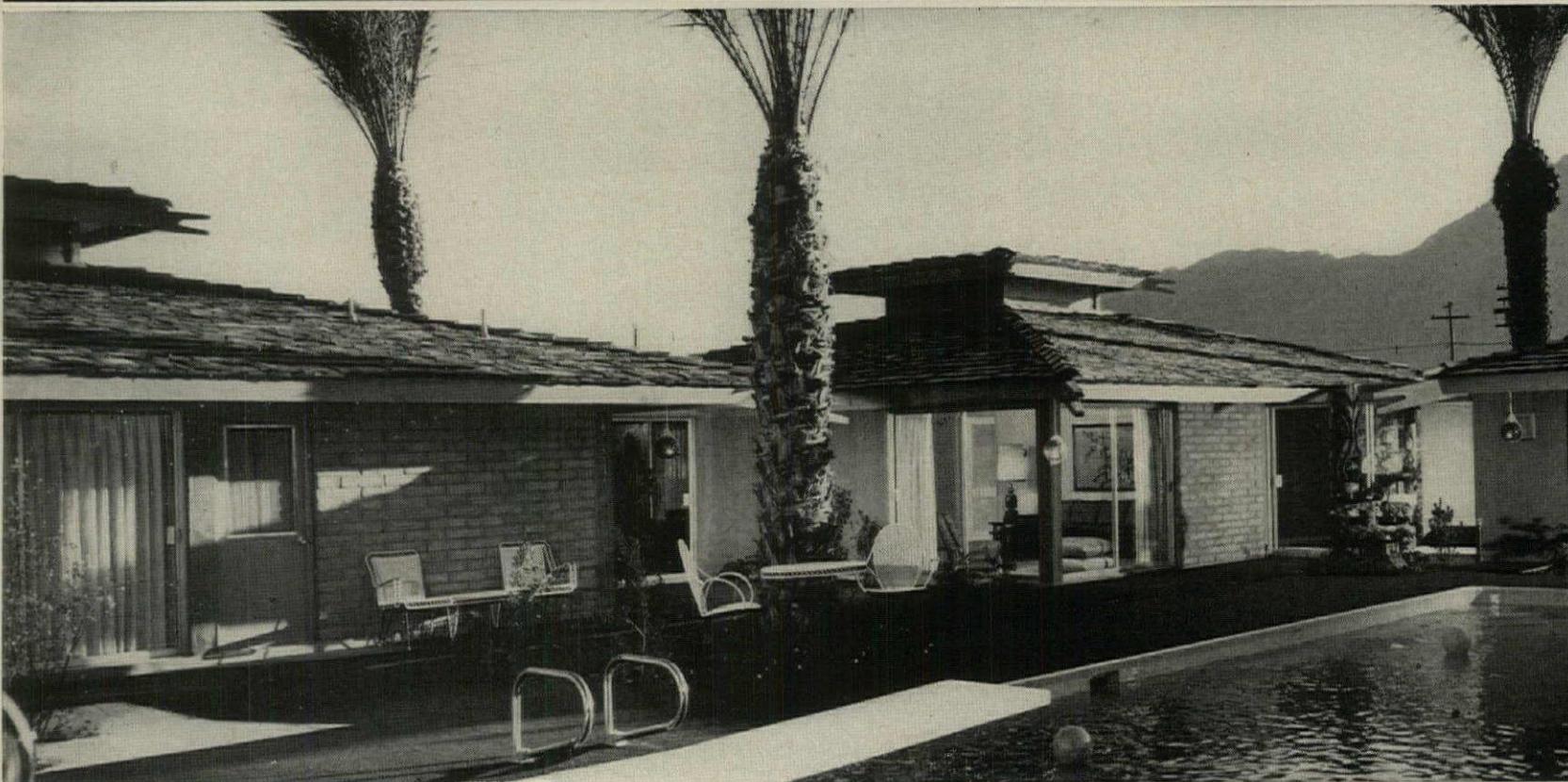
to Deciban. Before you plan your next project, consult your Gold Bond® Representative. He can show you a variety of systems on wood or metal studs, including some offering complete fire protection and with STC ratings all the way up to 58. Or write for more information to Department HH-54, National Gypsum Company, Buffalo, New York 14225.

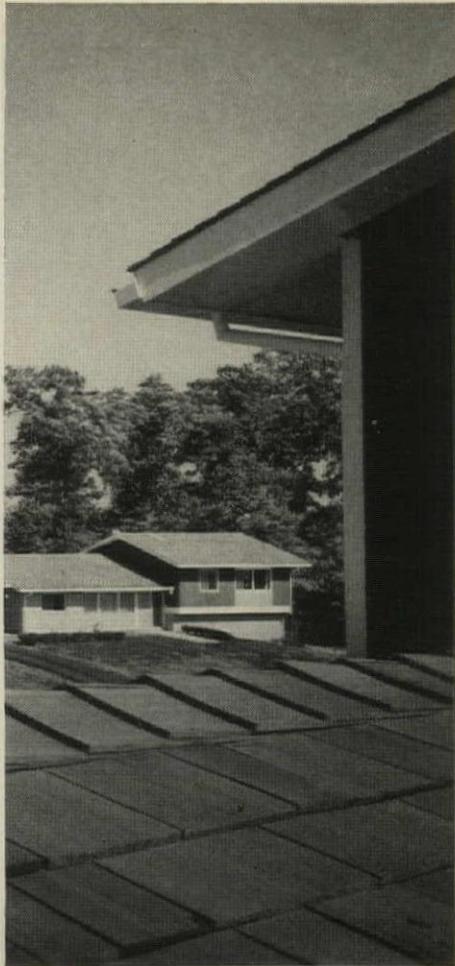
**Gold Bond materials and methods make the difference in modern building**





How to build interest with:  
**Red Cedar Shingles & Shakes**





1

Cedar roofs and sidewalls offer something to sell. The beauty and quality of red cedar shingles and handsplit shakes offer an obvious and unique "point of difference." Nothing matches cedar's color and texture, nothing matches its resistance to wind and hail, its insulative values, its rugged durability and long life. And, red cedar shingles and handsplit shakes are versatile.

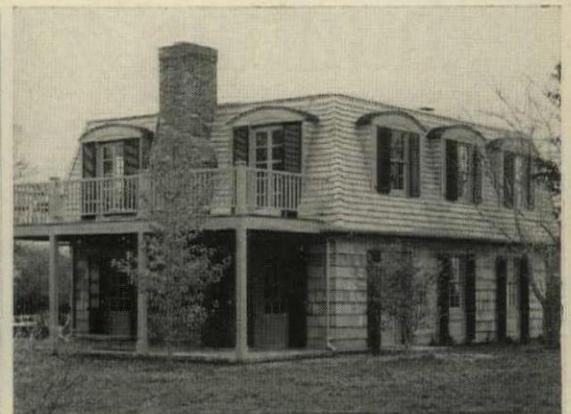
They provide flexibility and "difference" for variable designs within developments. These are some of the reasons why successful builders across the country are featuring cedar roofs and sidewalls. If you would like more information, write: Red Cedar Shingle & Handsplit Shake Bureau, 5510 White Building, Seattle, Washington 98101; 550 Burrard Street, Vancouver 1, B.C.



The Certigrade, Certi-Split and Certigroove labels are your guarantee of consistent quality and grade based on rigid inspection and quality control.



3 4



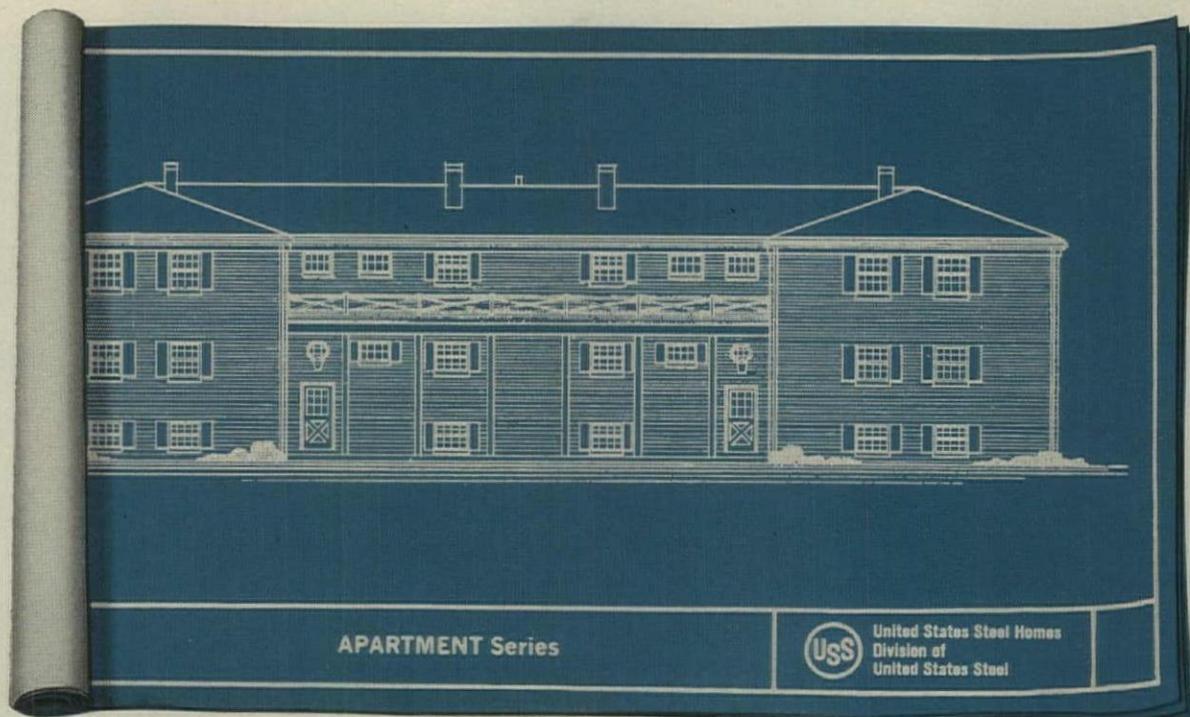
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2

(1) Carderock Springs, Maryland/A community of 350 homes by Bennett & Matthews Construction Co., all with Certigrade cedar shingle roofs. (2) Model residence for Deise & Deise Homes, Scottsdale, Arizona/Certi-Split handsplit shakes give a sense of "customness" and prestige to help sales in the \$22,850 to \$47,400 price range. (Shakes are 24" x 3/4" - 1 1/4" handsplit-resawn with 10" exposure.) Architect: Alfred N. Beadle. (3) A Tsawwassen, B.C., builder combines cedar shingle roofs with handsplit shake ridge units to give an extra touch of variety and sales interest to the roof line. (Shingles are Certigrade 18" Perfections, shakes are Certi-Split 24" x 3/4" - 1 1/4" handsplit-resawn.) (4) Builder Clinton Clement, New Jersey/This remarkable home has a spacious 2,600 sq. feet of living space. Certi-Split handsplit shakes are used for sidewalls. The cost of construction: approximately \$30,000. (Shakes are 24" x 1/2" - 3/4" handsplit-resawn with 11 1/2" exposure.) Architect: William Thompson. (5) Harold Skidmore, Westhampton, N.Y./This charming French Provincial on the Eastern coast incorporates two Certigrade products: 18" rebuted-rejointed shingles on the mansard roof, 24" Royal shingles on the sidewall, both allowed to weather naturally to a silver gray. Designer-Owner: William E. Hague.





APARTMENT Series



United States Steel Homes  
Division of  
United States Steel

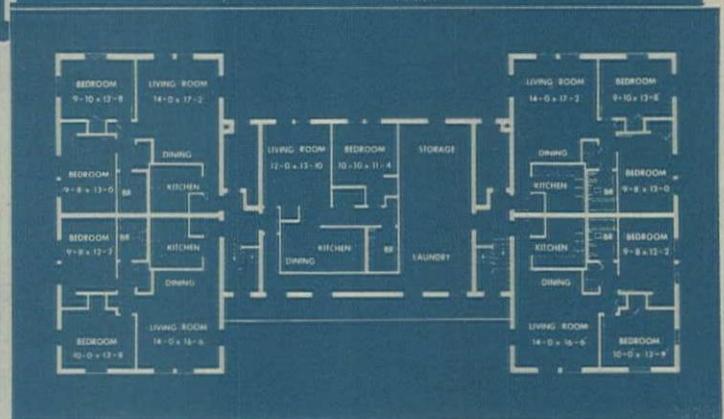
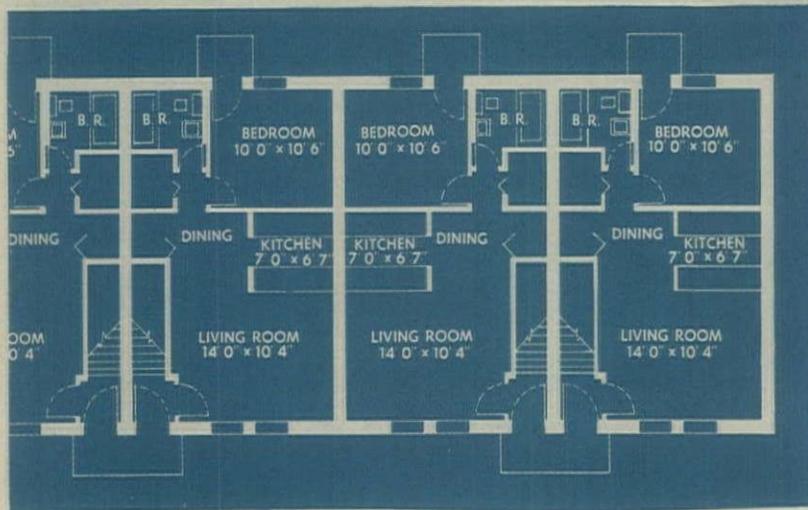
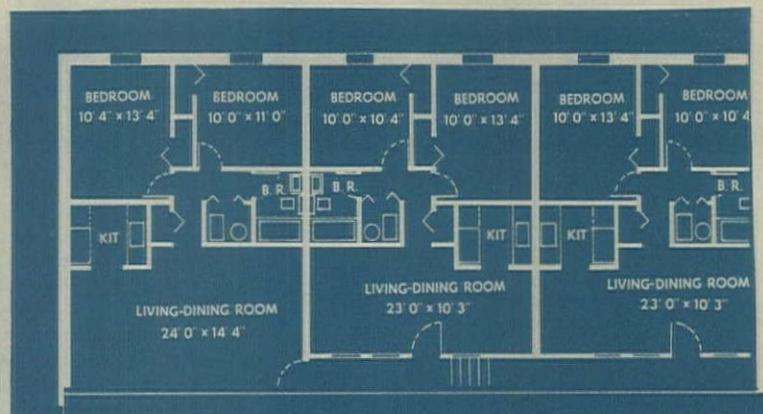
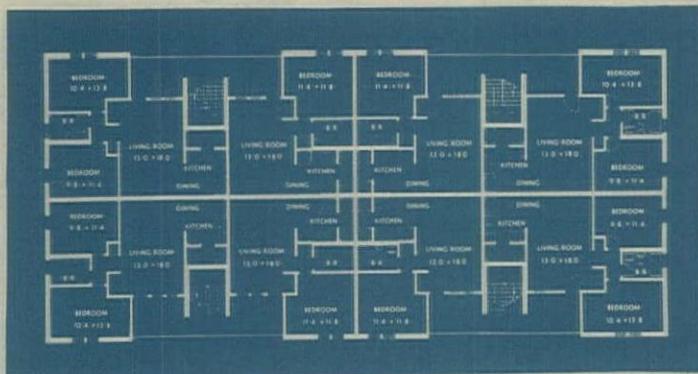
# Apartment hunting?

Look no further than U. S. Steel Homes' great 1964 selection. Several basic models offer an almost endless variety of combinations. The exclu-

sive steel framing system assures a more stable, maintenance-free building. All components are rigidly factory inspected, giving you top quality throughout. The USS Homes apartment package is as complete as you want to make it... from the foundation, up. And they go up quickly so your money turns over faster... and their many tenant-pleasing features make them easier to sell or rent.

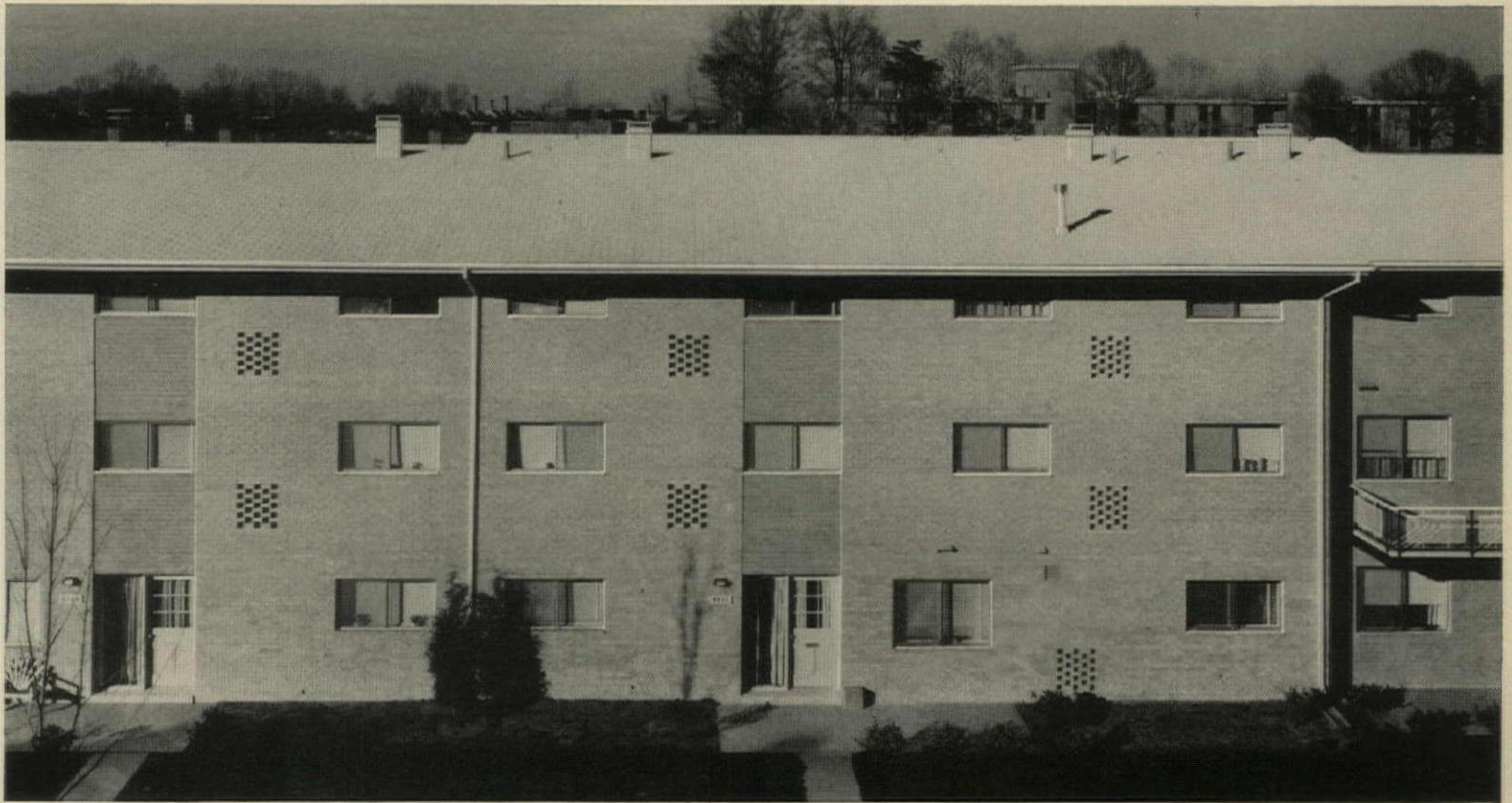
U. S. Steel Homes Dealers have a

complete range of quality products to sell including a wide variety of single-family homes and the very popular town houses. All U. S. Steel Homes products are framed with our exclusive steel structural system for greater dimensional stability. For more information on how you can become a U. S. Steel Homes Dealer, call or write U. S. Steel Homes, 2549 Charlestown Road, New Albany, Indiana, 47150. USS is a trademark.



United States Steel Homes  
Division of  
United States Steel

ATTENTION, APARTMENT BUILDERS:



Attractive Apartments conceal Moncrief condensing units behind brick grilles.

...INDIVIDUALIZED  
**MONCRIEF**  
HEATING / COOLING SYSTEMS  
MEAN ATTRACTIVE EXTERIORS,  
SUBSTANTIAL SAVINGS...  
AND MORE RENTABILITY!

You can save as much as \$300 per suite, and get greater rentability when you specify Moncrief *individualized* heating/cooling systems for your apartments. Tenants prefer to select their own year 'round temperatures. There'll be lower maintenance costs, too, because no employee is required to operate these systems.

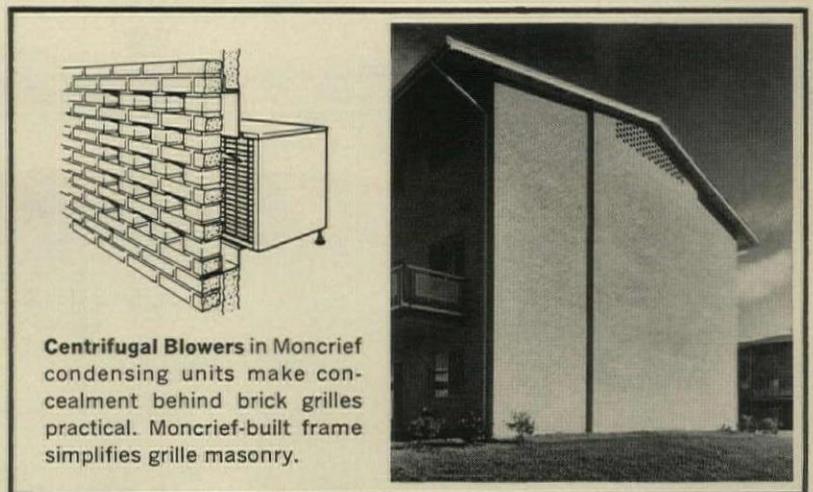
Moncrief offers local design service; a wide range of components to meet every apartment need; local Moncrief installation supervision; local Moncrief maintenance service.

Contact your local Moncrief distributor when you plan your next apartment. Let him show you the Moncrief way to greater rentability at lower cost!

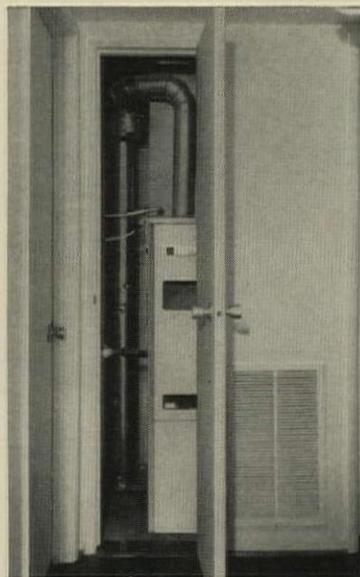
**MONCRIEF**

THE HENRY FURNACE COMPANY • MEDINA, OHIO

MAY 1964

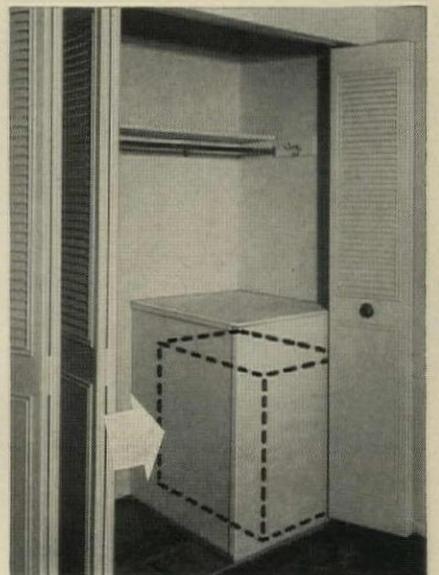


Centrifugal Blowers in Moncrief condensing units make concealment behind brick grilles practical. Moncrief-built frame simplifies grille masonry.

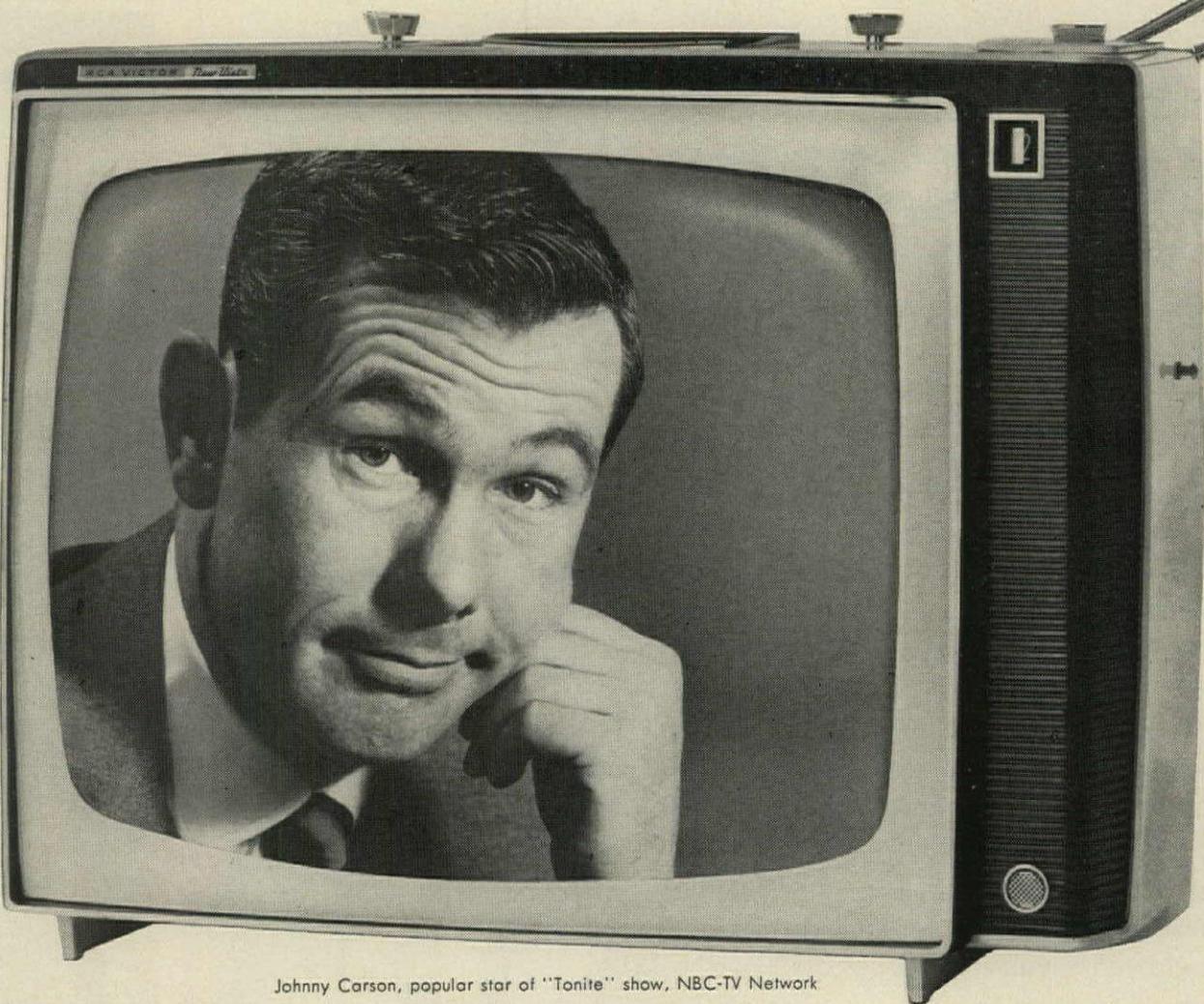


Compact Moncrief Heating/Cooling Components require as little as 2 square feet of floor space.

Through-the-wall Condensing Unit is hidden in apartment closet, covered with pressed fiber-board soundproofing.

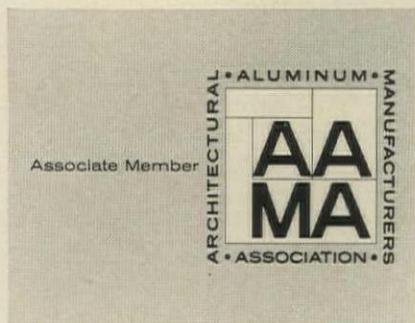


**Big TV Push sells  
sliding glass doors  
with the extra safety  
of PPG Herculite® K  
Tempered Safety Glass**



Johnny Carson, popular star of "Tonight" show, NBC-TV Network

STARTING on June 1st we're putting the selling power of the "Tonight" show behind HERCULITE K Tempered Safety Glass. Commercials will demonstrate the superior safety of sliding glass doors equipped with PPG HERCULITE K. Johnny Carson, the "Tonight" show and HERCULITE K will be on an NBC-TV station in your area. Make the most of this powerful selling push.



**Quality Manufacturers  
display the  
"Shield of Safety"  
on their sliding  
glass doors.  
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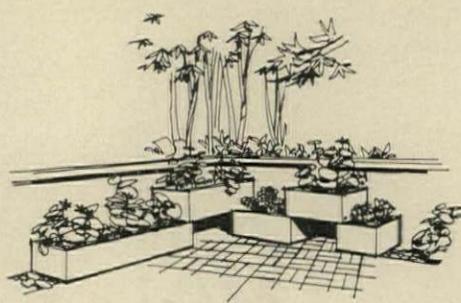
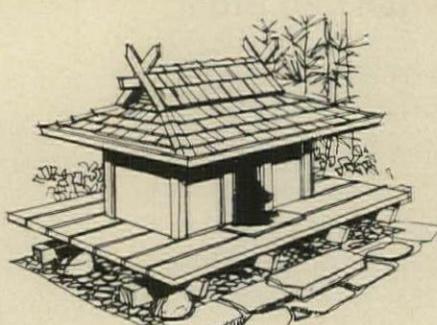
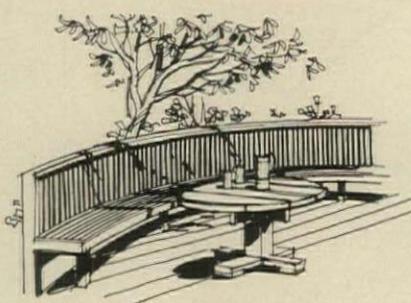


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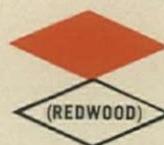


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*An editorial by Perry Prentice*

## **Q: Who really cares about the new housing bill?**

## **A: Almost nobody in the housing industry.**

Not many homebuilders seem to care; not many realty men; not many manufacturers; not many dealers; not many mortgage lenders (except they are aghast at the threatened raid on FHA reserves).

Just about the only cheers and the only pressure for passage comes from the city politicians who would get to pass out the fresh subsidies proposed. They seem to think the bill is wonderful.

The housing industry's ho-hum reaction may well be the most significant fact about the multi-billion-dollar-Johnson-Weaver housing program. To us it seems by far the most disturbing, for it dramatizes how far and how fast the government's housing plans are drifting away from the housing industry on which the government used to rely to make its housing programs work.

Not so long ago a new housing bill would have been the biggest news of the year for everyone in the housing industry. Everybody would be talking about it; everybody would be figuring how it would affect his own operations and wondering what changes he could and should be making in his own operation to adjust to the changes in the government's program.

But not today. And this brings us to a question the government would be wise to face: why is the housing industry losing interest in the government's program? And our answer, alas, would be: "Mostly because the government is showing less and less interest in the private housing industry."

*Yesterday's housing program was a bipartisan (and therefore nonpolitical) attempt to help the*

housing industry meet the nation's housing needs by helping it get around the financial and governmental roadblocks that had made it difficult or impossible for the housing industry to do its job unaided. That bipartisan program began with a study of just why private enterprise in housing needed help and what help would be most effective. It developed into America's most outstanding example of how government and industry could work together to achieve great public good *at no cost to the taxpayers*. This cost-free teamwork is what made today's homebuilding industry possible—the industry that broke the housing shortage, built the best 15 million new homes any country has ever built and did wonders to raise the American standard of housing.

*The housing program outlined in the new housing bill is something very different.* It is anything but cost-free; on the contrary, it is a multi-billion dollar package of subsidies, some open, some half-concealed. It is not a free-market program; on the contrary its frankly avowed purpose is to divert homebuilding into otherwise-uneconomic markets. It is not a nonpartisan program; on the contrary, it is a highly political program aimed at the minority vote and the low-income vote. It is not a teamwork program developed in consultation with the housing industry's leaders; on the contrary, it was sprung on most of them as a pretty complete surprise.

So small wonder the housing industry is not much interested.

Oaks Apartments, Austin, Tex., designed by R. Gommel Roesner, AIA, built by Robert C. Gray. Photo: Mears Photography



The same thing is beginning to happen to the apartment market that has already happened to one-family housing in most cities. Consumers, with rising incomes and a wider and wider choice of accommodations, are choosing to pay a little more for better quarters—at almost all rent levels. A new trend emerges . . .

## Rental housing's swing to quality

One big reason for today's pursuit of excellence by apartment consumers is the ease with which they can move. In fact, rental dwellers move about three times as often as home owners. Another reason is the sharpening competition in apartments produced by their six-year-old boom—a boom which seems sure to set a new all-time record this year.

About 36% of this year's 1.6 million nonfarm housing starts will be in multi-family structures. That means some 580,000 rental, cooperative and condominium units, the bulk of them rentals. This is almost double what the nation was building only three years ago. Some of this surge is fueled by easy financing and seems likely, in more than a few spots, to lead to temporary overbuilding. But vacancy rates have steadied recently and the major underpinning of the rental market, the under-25 and over-55 age groups, will continue to grow. Next year may bring a slowdown in rental housing. But the long term trend still points up, bolstered as it is by the age composition of the population, problems of land prices and urban transportation. Today's rental market is laced with pitfalls for the careless.

*Local market research, always important, is now crucial because cities do not have a single, monolithic rental market, but many.* Even in the weakest markets, some new apartments are opening with 100% occupancy and waiting lists—as did Frank Braggiotti's 59-unit building in Phoenix (see p. 108) where the city-wide vacancy rate is close to 30%. "All of today's markets are special situations," says Realty Analyst James Downs Jr. of Chicago. To state it another way, the days are long gone when national statistics were a pertinent guide about what to build. In Philadelphia, for example, builders are finding an in-town rental market for space at the lowest possible price while suburban apartments must have a rainbow of recreational facilities and services. The suburban market is today's big one, in rentals as in for-sale housing. One study finds 75% of multi-family starts are now garden-type units on the edge of central cities and in their suburbs. Only 25% are high-rise apartments close to downtown.

*More and more, the difference between quality that clicks and mediocrity that flops in apartments is a matter of only a*

*few dollars.* As Researcher Sanford Goodkin points out, what apartment dwellers *don't* like is lack of noise privacy, cheap cabinets and hardware, skimpy closet space, cheap vanities and lighting fixtures, master bedrooms too small for a king-size bed and a triple dresser. Building to avoid such pitfalls shouldn't add more than \$300 to \$500 to a \$9,000 apartment unit—or perhaps \$3 to \$5 a month to rents.

Adds Goodkin: "Poor apartments have trouble renting today even if they cut rents to try to meet stiffer competition." Instead, "as apartments become more competitive to each other, the floor plans grow better, interior finish becomes finer, and apartments get more refinement in architectural detailing." Savvy lenders are getting this message, too. Says Gary Driggs of Western S&L in Phoenix: "People are not ready to live in junk for \$20 a month less."

Much of today's new quality in apartments is going into community and recreational facilities and services—the amenities of suburban life which make apartments live much more like houses than they once did. Consider these examples:

- In suburban Philadelphia, Fox-Bilt rented out the first section of its two-story units (96 apartments) in three months. Amenities: private terraces, air conditioning, private lake, community barbecue area. Rents for a one-bedroom unit start at \$119. Says President Richard Fox: "Either you put in the amenities that people want today or you don't rent. Or the guy down the street puts them in and empties you out."

- In Houston, renters are moving from year-old apartments into new ones that offer such improvements as four-pipe central air conditioning, more and better parking and landscaping.

- In Bethesda, Md. 30 tenants moved into an incompleting building. Its amenities: sauna bath, garages, tennis courts. Now, Builder Sidney Mensh ponders adding maid service.

*On the next 32 pages: a close look at how successful apartment builders are upgrading quality by good land plans (p. 90), floor plans and exteriors (p. 102), how they are coping with noise control (p. 112), borrowing sales tricks from for-sale builders (p. 116) and even persuading localities to give them the zoning they need (p. 98).*

## Land planning: newest weapon in today's battle to grab—and keep—tenants

The apartment projects shown here and on the following seven pages range in size from 71 to 5,000 units, and in cost from \$800,000 to \$50 million. But they have two important things in common: 1) each has been full since the day it opened and 2) their builders agree that unusually good land planning is the biggest single reason why they have been full.

"Land planning is the key to any successful apartment job today," says President Hermen Greenberg of Community Builders of Washington, D. C., whose project is shown at the right. "Lots of new apartments have good plans, good kitchens, good locations. But good land planning is rare. Yet this is *the* plus item that separates the good project from the so-so."

Adds Architect Richard Shelley, who designed the project on page 92: "Too few developers are willing to spend the extra 5% that can make a project really outstanding."

The developers whose projects appear here were willing to spend something extra on land planning. And all of them own their projects and plan to hang on to them as investments. So their planning is based on long term economics.

"Today we'd have no trouble renting a mediocre apartment project," says Greenberg. "But ten years from today could be a very different story. Good land planning is the best way we know of to protect our investment."

To see how Greenberg and three other top developers have used good land planning to attract—and keep—tenants, begin at the right.



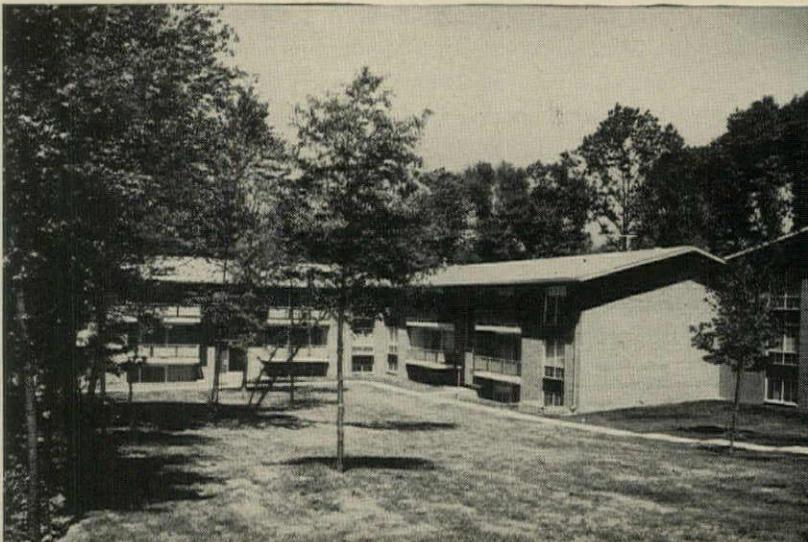
Robert E. Hurwitz



J. Alexander

**COMMUNITY CENTER** faces the lake. Its cost—\$100,000—amounts to only \$20 per apartment.

**GREEN AREAS** (below) result from low site density. Apartments have from one to three bedrooms.





**MAN-MADE LAKE** was scooped from low land. Photo from the deck of the community building.

LOCATION: *Greenbelt, Md.*  
 BUILDER: *Community Builders Inc.*  
 ARCHITECT: *Cohen, Haft & Assoc.*

**You can create your own natural features even in low-to-medium rental apartment projects**

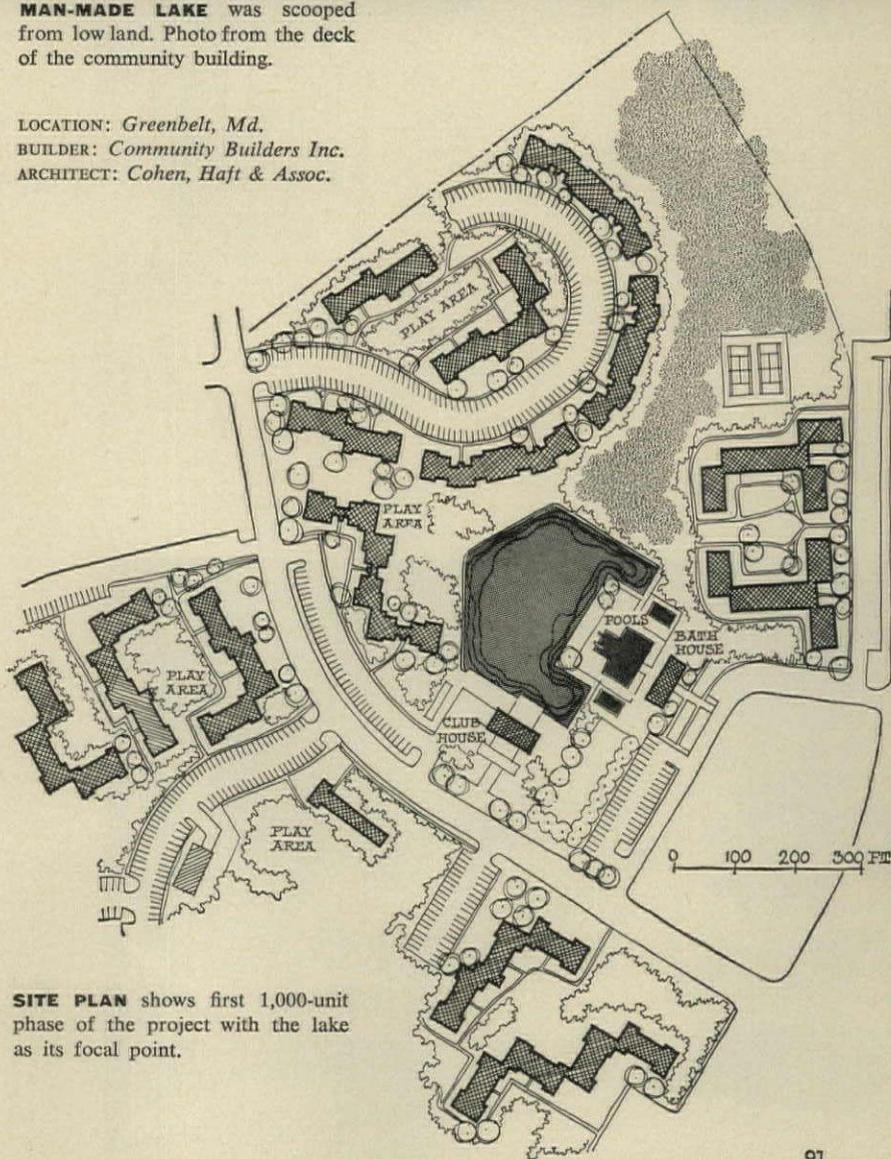
These handsome apartments rent for \$116 to \$165, and they pose a happy problem for their builders: they are renting faster than they can be finished. The reason, says President Greenberg of Community Builders, is their carefully-planned country-like setting. Specifically:

A man-made, five-acre lake creates a focal point for the project. "It was bulldozed out of a low area," says Greenberg, "and cost \$17,000—little more than filling and seeding the area would have cost."

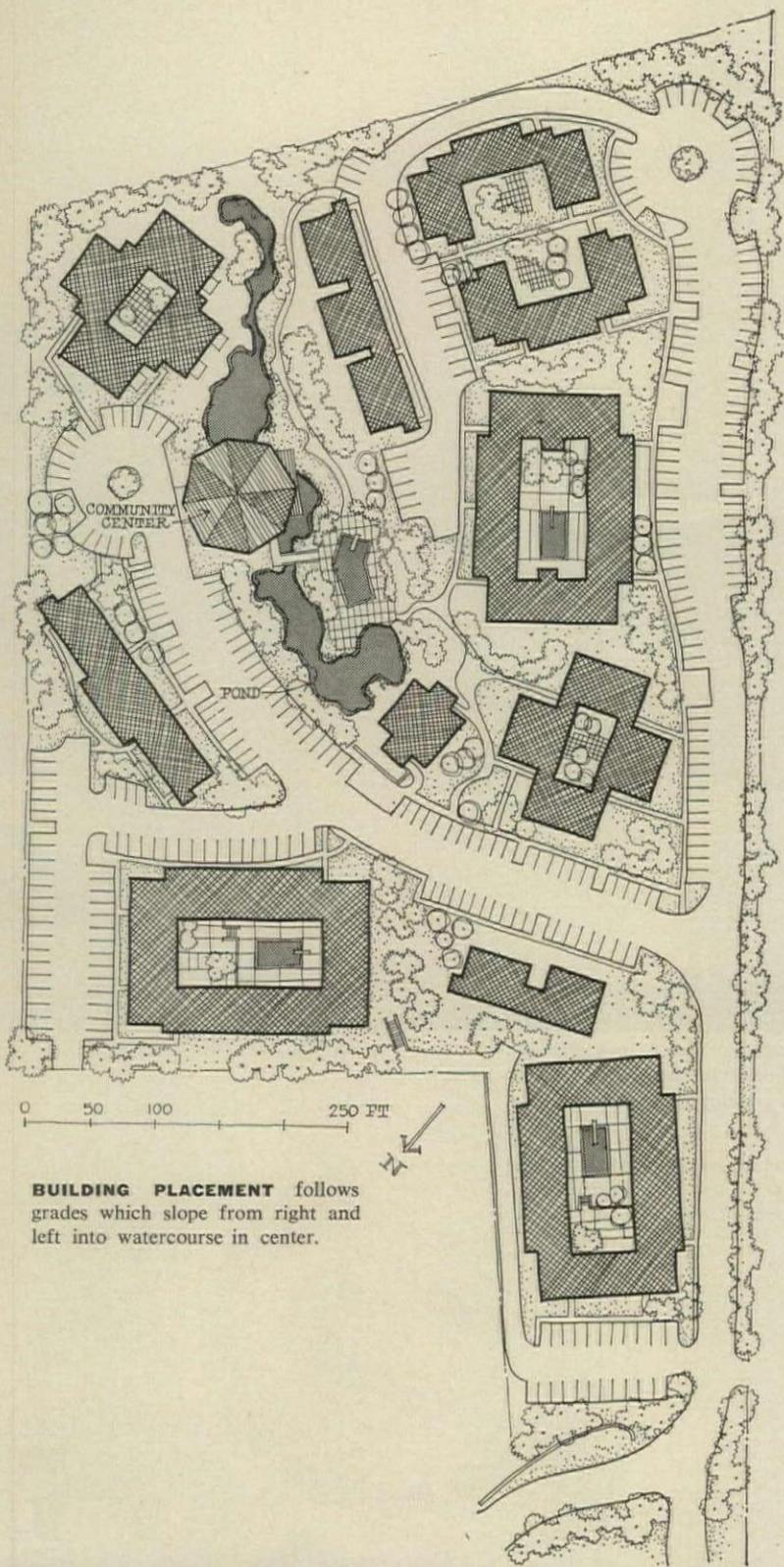
Spacious green areas were made possible by keeping the density low. "We could have built 24 units per acre," says Greenberg, "but we are holding to 14 units per acre."

Recreation facilities currently include a community center, nursery school and two swimming pools; a second community center will include another lake, more pools and a pitch-and-putt golf course.

When the 5,000-unit project is complete (1,000 units are now finished or under construction), the cost of land, improvements and amenities will be 30% (or \$15 million) of the \$50 million total.



**SITE PLAN** shows first 1,000-unit phase of the project with the lake as its focal point.



**BUILDING PLACEMENT** follows grades which slope from right and left into watercourse in center.

**You can turn the disadvantages of bypassed land into features that tenants can't find anywhere else**

The site of this 204-unit project is so hilly that for years apartment and homebuilders passed it up—despite its location in a top St. Louis suburb. Yet its current success (100% rented since it opened) is due in large part to imaginative handling of this unbuildable terrain. "It turned out so well," says Wilbur R. Rosenblum, the developer, "that I'll never use a flat site again."

Careful building placement made an asset of the steep grades. Buildings are stepped down and staggered so that most apartments have fine views. And a drainage ditch in the center of the site was widened and dammed up to provide a series of waterfalls.

"Our extra costs were remarkably low," says Rosenblum, "because our architect followed the land instead of moving a lot of dirt. Grading was about \$20,000 more than it would have been for a flat site. Retaining walls cost another \$20,000 and the waterfalls, including a pumping system to recirculate water, cost \$15,000."

Total cost for the project was \$3 million. Of this, \$110,000 was for raw land and \$130,000 for swimming pools (there are four) and a recreation center.

Two distinctly different types of living are provided by the project. Most one-bedroom units (\$119 a month) are in courtyard buildings with a central swimming pool (*bottom, left*). No children are allowed in this area. Two-bedroom units (\$144 a month) are in a straight-line building so the noise of children won't reverberate in courtyards. All apartments have balconies which overlook pools or recreation areas.

LOCATION: *Crestwood, Mo.*  
 BUILDER: *W. R. Rosenblum*  
 ARCHITECT: *J. Richard Shelley & Assoc.*  
 LANDSCAPE ARCHITECT: *Robert Goetz*

**COURTYARD APARTMENTS** overlook pool. Retaining wall, left, is made of old railroad ties.

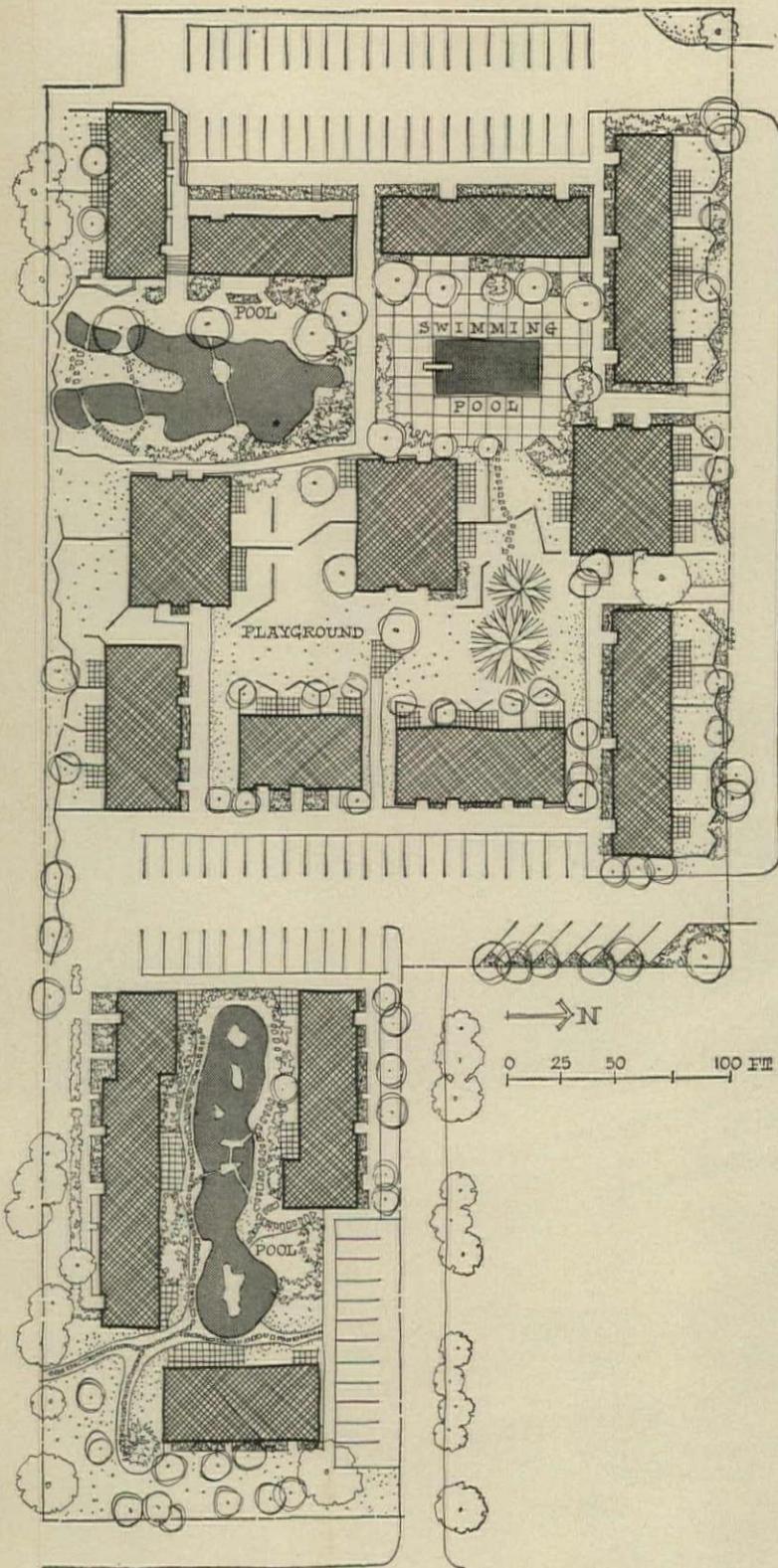
**COMMUNITY BUILDING** and pool form project's recreation center. Pool cost \$25,000, building \$90,000.





**STEPPED-DOWN ELEVATIONS** matched buildings to grades, kept earthmoving to a minimum. Pool is part of a watercourse in the middle of the site.





**RECTANGULAR SITE PLAN** is broken up by ponds, planting and privacy fences around patios.

LOCATION: *Vancouver, B.C.*  
 DEVELOPER: *International Land Corp.*  
 ARCHITECTS: *Lund, King & Assoc.*  
 LANDSCAPE ARCHITECTS: *Philip Tattersfield & Assoc.*

**SHRUBS** are planted all through the project. Path border, left, is made of cut-up phone poles.

**You can keep your development costs down if you take advantage of your site's natural assets**

The extravagant-looking landscape of this four-acre project cost only \$50,000. Yet it is the No. 1 reason why there have been virtually no vacancies since the apartments were opened a year and a half ago. (It also helped the project win a National Design Award from the Canadian Housing Design Council.)

"We started with a plateau on a wooded hillside," says Gilbert Bradner, general manager of the project, "and based our landscaping on features that were already there." Specifically:

Trees were left standing wherever they did not actually interfere with buildings. "We have evergreens up to 100' tall all through the project," says Bradner.

Several thousand shrubs and bushes were brought in and planted. "Our own earth-moving crews did the digging and planting," says Bradner, "which saved us money."

A small, natural pool was enlarged, and another was bulldozed out of a low area to create focal points for the two sections of the project.

The need for good land use figured in the developers' plans right from the start. "We were the first apartments in an area of custom houses," says Bradner, "so we had to design a project that would look handsome in comparison with \$30,000 homes—most of them beautifully landscaped."

The 71-unit project has two types of apartments: one-story, two-bedroom units renting for \$145, and townhouse three-bedroom units renting for \$170 or \$175. Total project cost was \$800,000.

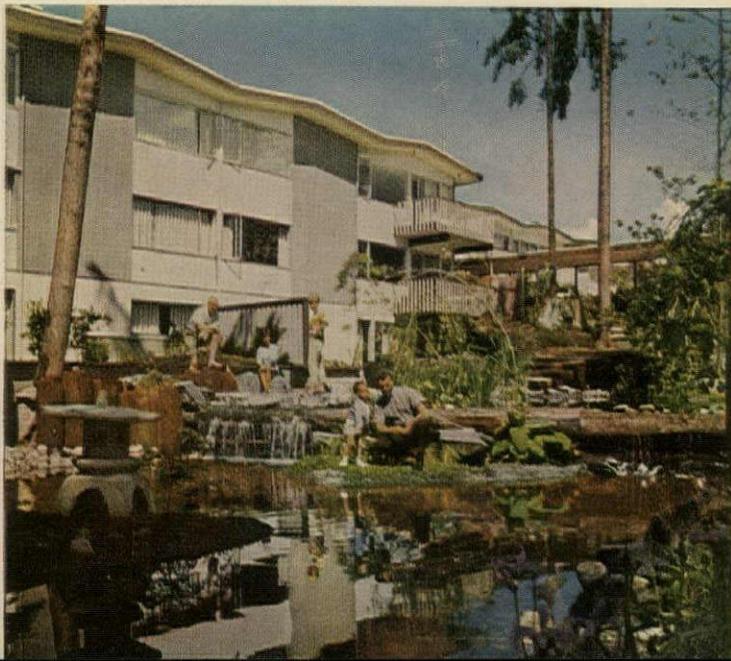
Photos: Selwyn Pullan





**SWIMMING POOL** is heated, can be used most of the year in Vancouver's temperate climate.

**NATURAL POOL** has waterfall, which is fed by water pumped from a nearby stream.





**LUXURIOUS ATMOSPHERE** is created by swimming pool and deck, docks and landscaping. Land spit beyond the boat is site of future apartments.





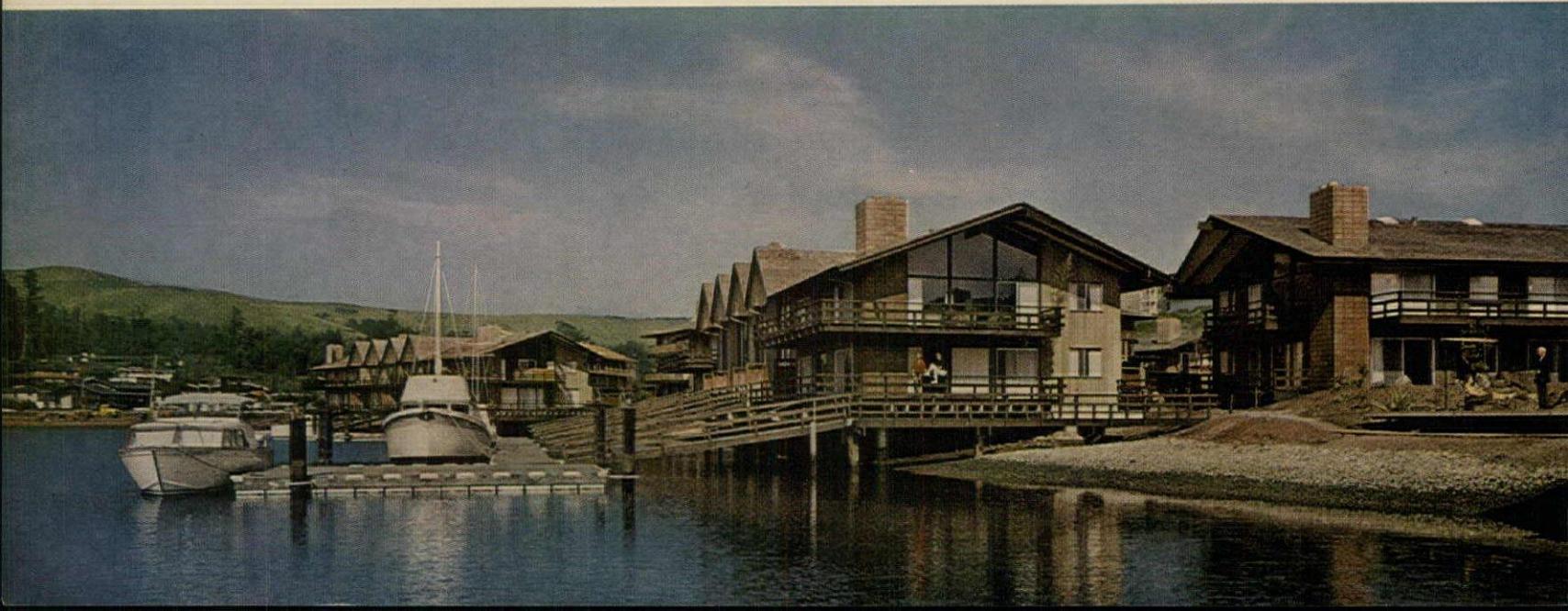
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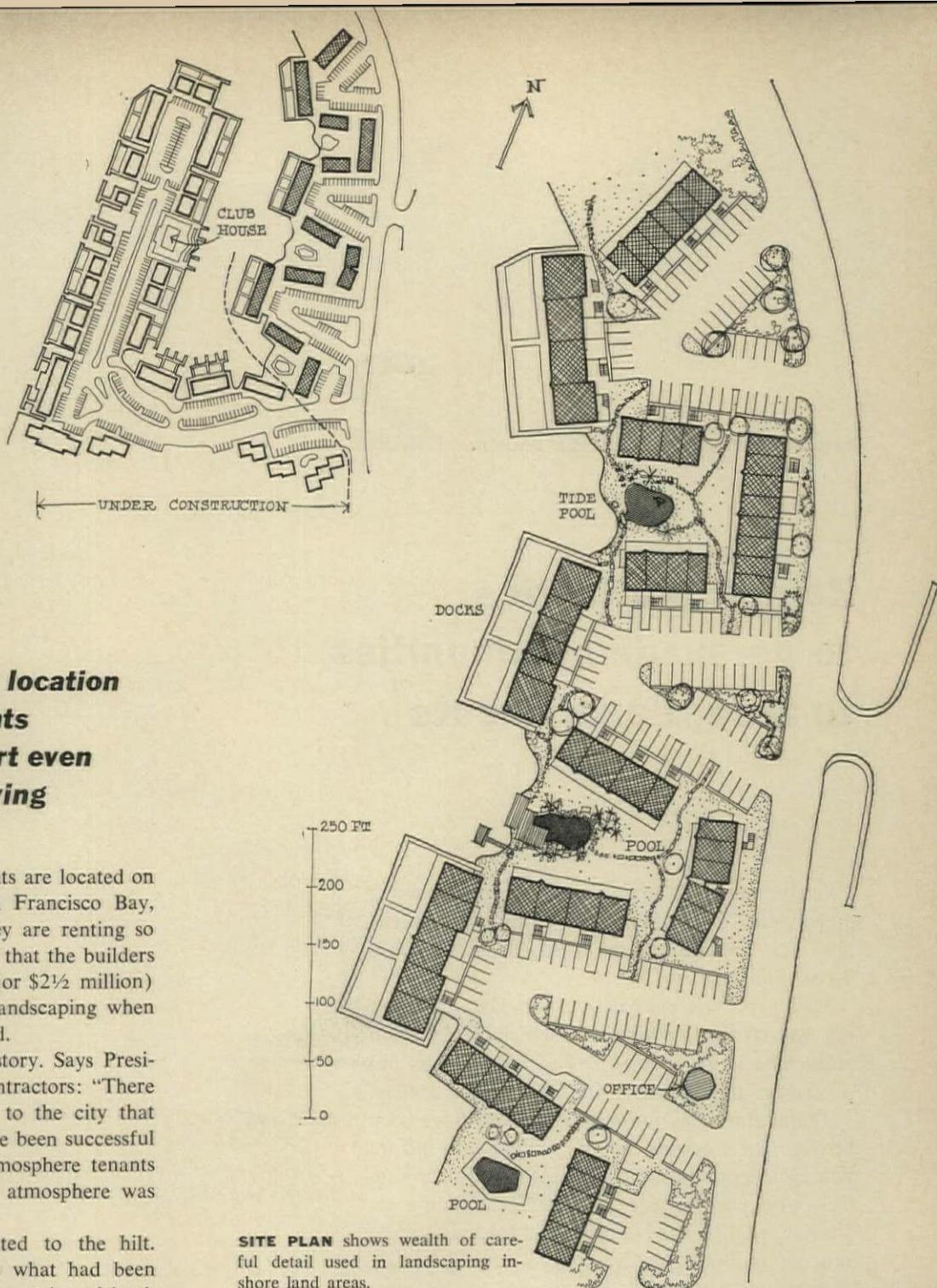
**NATURAL POOL** has waterfall, which is fed by water pumped from a nearby stream.





**LUXURIOUS ATMOSPHERE** is created by swimming pool and deck, docks and landscaping. Land spit beyond the boat is site of future apartments.





**If you can find the right location for upper-bracket tenants you can afford to convert even tidelands into luxury living**

These stunning waterfront apartments are located on what was a swampy cove off San Francisco Bay, just eight miles from the city. They are renting so well (from \$250 to \$525 a month) that the builders are almost cheerful about the 31% (or \$2½ million) they will have spent on land and landscaping when the \$8 million project is completed.

But location is only part of the story. Says President Harry Hicks of Associated Contractors: "There are other apartments just as close to the city that haven't done as well. We think we've been successful because we provide the kind of atmosphere tenants expect in luxury apartments." The atmosphere was created in two ways:

The waterfront site was exploited to the hilt. Dredge-and-fill operations built up what had been largely marsh and mud flats into two strips of land, and deepened the lagoon for boats. Cost: just under \$1 million.

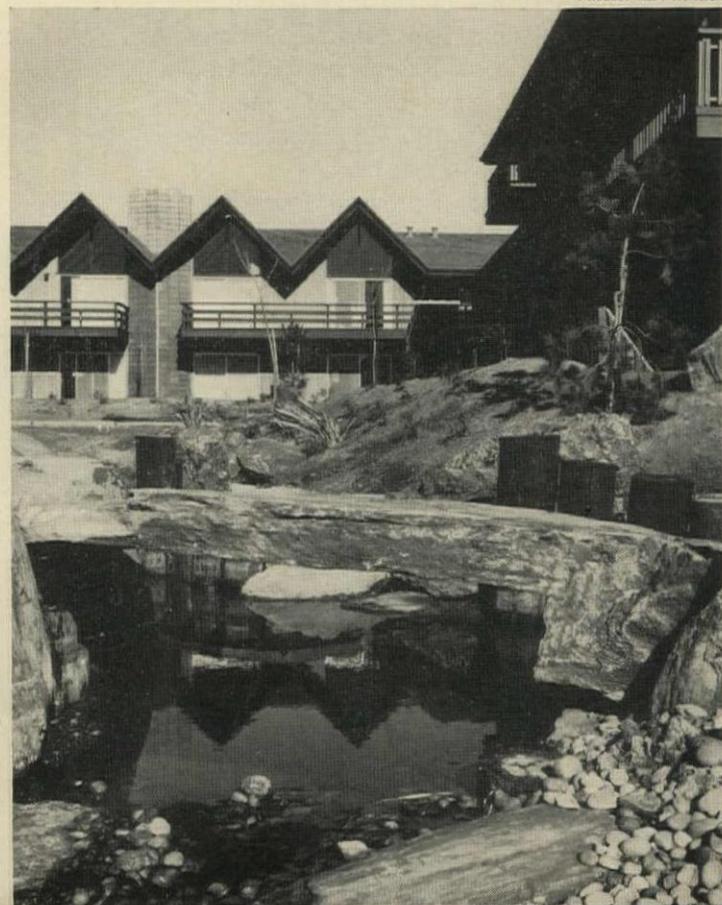
The inshore land was sculptured to give it a natural, yet dramatic, look. "Much of the land was filled," says Hicks, "so we had to give nature a hand." Small hillocks were built up, pools were dug and large boulders were brought in (*below, right*). One hundred trees—all over 30' high—are now being planted. And all utilities are buried.

The finished project will have 270 units. Of these, 119 are now either completed or under construction (shaded buildings in the plan above).

LOCATION: Tiburon, Calif.  
 BUILDER: Associated Contractors  
 ARCHITECT: John Lord King  
 LAND PLANNER: Elmore Hutchison

**SITE PLAN** shows wealth of careful detail used in landscaping in-shore land areas.

Photos: Karl H. Riek



**WATER VIEW** of apartments shows combination of Bay-Area style design with modern glass.

**TIDAL POOL** is bridged by a massive stone. Dark objects behind it are retaining pilings.

## Zoning: 20 tactics to persuade communities to accept apartments

"We prepare for a zoning case the way a lawyer prepares for a Supreme Court case," says Executive Vice President Byron Lasky of Kaufman & Broad Building Co.

Lasky speaks from recent experience. Last year big K&B chalked up almost half of its \$31 million sales volume in apartments and townhouses and put across nine petitions for high-density zoning.

Preparation, say most builders who have been through the rezoning wringer, starts long before you even scout out an apartment site. It starts, in fact, with your local reputation for building attractive, well planned housing and for living up to your word. Both must be above reproach.

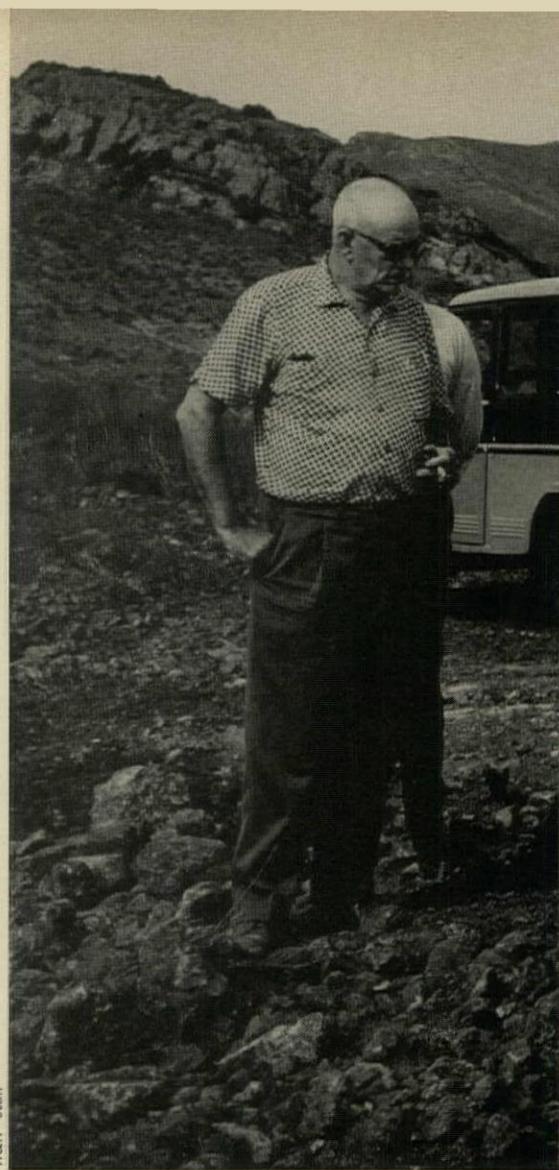
Preparation also calls for answers to the overriding argument against multi-family housing: the claim that rental units boost municipal costs—particularly school costs. Recent tax studies have countered the claims, and one of the best—by the Prince George's County, Md. Economic Development Committee—shows that:

- A single-family house produces four times as many school pupils as an apartment—0.943 pupils per house in 87,000 houses vs. 0.242 pupils per apartment in 32,000 rental units.

- Houses cost the county more than they pay in taxes while apartments cost less. The average house pays \$267 in taxes and costs \$392 (including \$298 for schools). An apartment pays \$189 in taxes, costs \$170 (including \$76 for schools).

- And when state and federal aid are figured in, houses pay \$167 less than they cost and apartments \$134 more.

Convincing statistics? To you, perhaps. But it takes more than statistics to persuade local officials. For other ideas, start reading at right.



H&amp;H staff

- 1. Show up at zoning hearings.** That's the advice of Builders Ben Deane of Los Angeles, Vern Donnay of Minneapolis and George Achenbach of Stratford, Conn. who point out that a personal appearance is assuring to local officials and the public. Says Deane: "It's all right to send an engineer or a lawyer to work out preliminary details. But when the hearing comes, builders should speak for themselves. The people want to see and hear the principals."

- 2. Keep your temper no matter how insulting the comments and questions get.** Observes Deane: "The worst thing you can do is blow up, act as if you know all the answers and give the impression that you're there to tell *them* what *you're* going to do—take it or leave it."

- 3. Retain a local lawyer with a reputation for asking only for proper zoning.** He should be respected by the zoning board, know enough about local people to predict their objections. Says Builder Coleman Peskin of Philadelphia: "In one recent case, our lawyers told us there was no local objection to apartments *per se* but merely to having them in long rows."

- 4. Hire a land planner who thoroughly understands the locale and the problems**



**FIELD TRIP WITH PLANNERS** helped Builder Edwin Janss Jr. (hand on hip, right) of Janss Co. win approval of planned-unit-density zoning for 2,000+ acres in Conejo Village, Calif. He took members of the Ventura County Planning Commission and Janss officials (including Janss President Victor Palmieri, center with hands on hips) on a morning-long tour of his rugged range country in jeeps. From a crest overlooking the whole tract, Janss executives laid down an aerial map with plat lines to show what Janss proposed for the more than three-square-mile section.

**faced by the planning board.** Washington Builder Carl Freeman took on William C. Burrage, former planner for two Washington-area counties. And Baltimore Developer (and Mortgage Banker) James Rouse hired Director William E. Finley away from the National Capital Planning Commission in Washington and made him vice president of Community Facilities & Development Co.

**5. Get other experts to help you**—appraisers, architects, engineers, market researchers and advertising and public relations men. Los Angeles Builder Ray Watt, who relies heavily on outside professionals, uses Stanford Research Institute to handle his land-economics studies, then presents localities with an appraiser's estimate of the project's assessed valuation.

**6. Plan your site to avoid garden-apartment monotony.** Save trees and natural contours. Leave plenty of green space. Don't site buildings in a rigid pattern. In the Philadelphia area, Industrial Designers Raymond Loewy and William Snaith, working with Architect Theodore Brandow, planned Fox-Bilt Homes' Sherry Lake project so that buildings would not be at right angles to each other as on most urban sites. This helped Fox-Bilt over-

come a major community objection to garden apartments: the lined-up, formal, institutional look.

**7. If you can, offer a planned-unit community**—mixing houses and apartments and hiding the rental units in the center of the site. That was how Builder Eugene Elish won ready acceptance of a large new development in Suffern, N.Y.

**8. Be able to modify your designs so they fit in with local architecture.** Philadelphia Builder Peskin pitched the roofs of his apartments after facing objections to the flat roofs shown in his renderings. In Connecticut, Builder I. R. Stich agreed to planners' suggestions that he use colonial design to blend his apartments with nearby houses.

**9. Make sure your apartments are attractive to nearby homeowners.** That means from the back as well as from the front. Builder Stich got rezoning in Windsor, Conn. because he showed the zoning board how he would make his rear elevations as good looking as his facades.

**10. Show how your project won't snarl traffic in the area.** Whenever Chicago Architect Seymour Altman is involved in a zoning case, he has a traffic engineer plan traffic flow into and out of the project,

then presents the plan to local officials. Washington Builder Freeman prepares studies that predict hour-by-hour traffic-flow counts on streets near his proposed apartments. And when Baltimore Developer Rouse submitted plans for a shopping center in his Cross Keys project, he pointed out that this would keep tenants from shopping elsewhere and thus hold down traffic around his site.

**11. Show how you'll keep tenants from parking in front of nearby houses by planning ample parking space inside your project.** Gary Driggs of Western S&L in Phoenix says he has frequently persuaded developers to provide more parking by building fewer units. This can make the difference between a successful rezoning petition and an unsuccessful one, says Driggs.

**12. Convince nearby homeowners that you'll be a good neighbor.** First explain how your apartments will be managed (you might even introduce your resident manager). Then, suggests Philadelphia Realtor William J. McCarter, you should anticipate questions about fencing and buffer strips, bright lights shining into adjacent houses and late-night swimming if your project has a pool.

*continued*

**13. Show renderings of your project.** Better yet, display a scale model. St. Louis Builder Wilbur R. Rosenblum, who got the zoning he wanted after 17 hearings in eight months, used a model of his cluster project. The cost? \$1,000—and well worth it, he says.

**14. Show pictures of other apartments you have built**—or take local officials out to see them. Says Los Angeles Builder Watt: "We've flown eight groups up to Santa Barbara to see our New Horizons project."

**15. Point out the area's present shortcomings** (if there are any) and how your project will correct them. A color movie helped Los Angeles Builder Deane get approval for high-rise housing in an urban-renewal area. Says Deane: "We showed the film to city officials—planners, police and fire commissioners and building department men—and convinced them the area was in even worse shape than they had thought. After that we got quick action on variances and vacating streets."

**16. Look for communities where officials are hungry for construction activity.** And if you can, pick a municipality that will annex your site because it is seeking customers for its utility services.

**17. Try to avoid homogeneous communities**—particularly those where everybody is a homeowner. Says Builder Richard Hunsaker of S. V. Hunsaker & Sons of Los Angeles: "We steer clear of primarily single-family areas and look for places where apartments have already been built. That, I think, is why our zoning requests have been 95% successful."

Suggests Developer Gerald Lloyd, a veteran of zoning battles in conservative, well-to-do Westchester County, N. Y.: "Pick an area with a mixture of large and small landowners, old and new houses in different price classes and a variety of economic and social interests. Worst of all is an area of high-income homeowners. Their view is that renters are riff-raff."

**18. Don't ask for a zoning change just before an election.** "That's exactly the time when no one will help you for fear of sticking his political neck out," says Developer Lloyd. "But it's wise to work with strong local political leadership—either the entrenched elite or a newly elected group."

**19. Get local merchants' support by showing what your tenants will spend locally.** St. Louis Builder Rosenblum won over nearby merchants by pointing out that

the 204 new families in his project would each spend an average of \$3,000 a year in the immediate area.

**20. Approach homeowners' and civic groups early.** Explain exactly what you want, and listen for hints on how you can work their suggestions into your plans.

**21. Back up your promises to civic groups by offering to make them legally binding.** Developer Rouse clinched his presentation to a strong neighborhood association by agreeing to sign a contract under which he could be sued if his project were not built as promised.

**22. Show that apartments will not depress the value of nearby houses.** In Maryland, Builder Freeman surveyed re-sale prices of houses close to several of his apartment projects. His findings? Prices went up after the apartments were built.

**23. Make sure local officials grasp the economics of apartment housing.** Builder Freeman warns planners of the dangers in severely limiting apartment acreage: when builders get hold of rare pieces of apartment land, they have a virtual monopoly and thus care less about how their project looks or how well it is built.

Long Island Builder Herbert Z. Gold adds another point: if planners restrict densities to as little as 15 or 16 units per acre, builders are encouraged to put up larger apartments with more bedrooms. Upshot? More tenants with school-age children.

**24. Show evidence that most of your tenants will be local people and few will have school-age children**—if those, indeed are the facts. That way, you'll rebut two traditional—though usually false—arguments against apartments: that they bring in unwanted outsiders and overload schools.

Builder Rosenblum answered the school-child question by pointing out that no children would be allowed in his 140 one-bedroom units and only 40 would be likely to live in his 64 two-bedroom units.

Developer Rouse noted that his rentals (\$275 to \$375) would be too high to attract tenants with school-age children. And he capped his contention with figures supplied by the school board itself: the board estimated that only 200 pupils would come out of his 1,200 units.

**25. Show how your land planning will avoid fire hazards**—a worry often voiced by local planners. Point out that your buildings will be far enough apart so fire-

men will have no trouble moving equipment between them. It's also wise to consult planners on problems like drainage, snow removal and trash disposal.

**26. Be ready to face stated or unstated fears that Negroes will rent your units.** Whether or not bias is justified, it exists. As one Chicago planning consultant says: "The race question never comes out in these suburban hearings, but it's there all right. People hint at it when they ask whether the project will be federally financed."

Builder Rosenblum went straight to the point at a zoning hearing. He said his apartments would not be FHA insured but added that no one in a single-family-house area can be certain that minorities will not become his neighbors.

**What about under-the-table deals?** There's a natural reluctance to discuss this touchy question. But most of the builders, developers and lawyers questioned by HOUSE & HOME agree that shady deals are a rarity rather than the rule.

Says Chicago Zoning Lawyer Fred Bosselman (*see p. 101*): "You hear lots of stories, especially from people who have been turned down by zoning boards. But I'd say that in most cases no bribery or graft is involved."

Says Los Angeles Builder Watt: "Nearly all cases are decided on their merits. Sometimes they'll make an extra request—such as paving a section of road a quarter mile from your project, on the contention that added traffic will make it necessary—but I can honestly say that all the people I've dealt with are sincere."

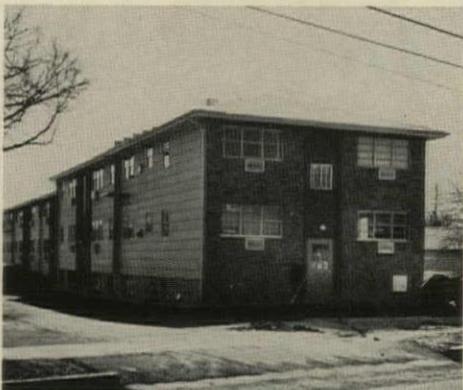
On the other hand, a New York zoning lawyer who has handled cases in many areas has found "there is generally a deal though I've never known of anyone handing an official money outright. But a politician usually wants something—perhaps a lumber contract or a campaign contribution."

And a land planner hints at hanky-panky. He says he no longer works with builders on zoning "because they hire lawyers who go into executive session with the zoning people and come out with what the builders want."

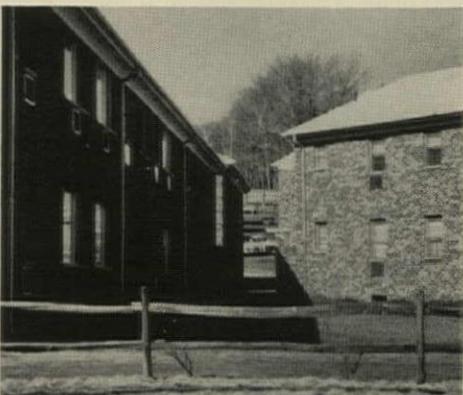
The consensus: avoid the few communities where officials have their hands out, and if you have to play the game—perhaps by buying tickets to \$100-a-plate political dinners—decide how far you will go and don't go a step further.

**Here are four ways to make enemies of local planners**

—four real examples from around New York



**SQUEEZE IN TOO MANY UNITS** on a small lot with barely enough space for a few cars to park along one side—and a skimpy veneer of brick.



**SPACE BUILDINGS TOO CLOSE**, making it impossible for firemen to move equipment between them (also note distance to parking in rear).



**EXPAND AN EXISTING HOUSE** by building an attached structure with several apartment units that take up almost all of the rest of the lot.



**SQUEEZE IN BASEMENT UNITS** under a regulation two-story apartment building by taking advantage of loophole in the local zoning.

**Have the courts produced today's zoning furor by shirking their duty to drop invalid notions?**

The answer was clearly spelled out last year by a 52-page article, "Suburban Zoning and the Apartment Boom." It appeared in (of all places) the University of Pennsylvania Law Review. This is a penetrating, heavily documented (310 footnotes) and often witty attack on current zoning law by two Chicago lawyers, Richard F. Babcock and Fred P. Bosselman. It is a white paper that separates facts from fiction and exposes the myths upon which most anti-apartment zoning is based.\*

Here are some of the main points covered plus apt quotes from the article:

*Multi-family housing has a second-class status in law.*

Why? Courts still follow zoning precedents that can be traced back to the 19th century, when tenement slums constituted almost the whole apartment supply.

"Many state court opinions dealing with early zoning ordinances . . . characterized multiple-family housing as productive of congestion, fire, dirt, noise, disease, crime, and lower moral standards. Single-family housing, however, was romanticized as contributing to patriotism and exemplifying in every respect the American way of life."

In the early 1920s a few judges held that zoning restrictions against multi-family housing were unconstitutional, but this view was overwhelmed by the Supreme Court's 1926 decision in *Euclid v. Ambler*. The court upheld the right of Euclid, Ohio to segregate multi-family housing from "residential" (i.e., single-family) areas. The court noted that "very often the apartment house is a mere parasite which comes very near to being a nuisance." The authors add:

"Although modern courts hesitate to talk of pestilence, fire, and immorality as did their brothers of 40 years ago, they continue to assume the validity of the segregation of housing types without contributing to a reasonable solution of the dispute . . ."

"The old litany drones on. The segregation of the apartment building, since its initial acceptance by the judiciary in the 1920s, has become an unspoken premise."

*Courts are shirking their implicit duty to think the problem through.*

"No legislator, whether at the state or local level, can be expected to initiate, much less carry through to its challenging conclusions, a serious re-examination of the premises on which the present fractured system of decision-making over private land use has been based.

\*Any apartment builder with zoning troubles might well circulate the article to local officials and community leaders. Reprints are available from the law school, 3400 Chestnut St., Philadelphia 4, at \$1 a copy.

"As in the passionate areas of school segregation and reapportionment, legislative action in the agitated field of private land use will probably be forthcoming only when the bench challenges the principles of another era . . ."

"If the segregation of dwelling types can no longer be justified under the rubrics of 'health, safety, and morals,' then what is the nature of the 'general welfare' by which the enshrinement of the detached dwelling is validated?"

*Suburbanites say they oppose apartments on four main grounds.*

These reasons are heard at public hearings. None makes much sense logically the authors say. The reasons:

1. "Apartments don't pay their own way. If we allow apartments to come in, our taxes will go up." The authors point out that municipal services are lower for apartment projects on a per-family basis, particularly in good, new suburban buildings, and no study yet has shown that school taxes are forced up by apartment building.

2. "The builders of suburban apartments are constructing tomorrow's slums." This argument, the authors say, is pure speculation, and hardly more applicable to apartments than to single-family houses.

3. "Apartments reduce property values." Also sheer speculation, and ironic, too, the authors point out, in view of the high value of apartment land which often adds speculative value to surrounding real estate.

4. "The character of the neighborhood will be ruined." The authors' retort: "The suburbanite should note that in the opinion of the best architects a mixture of dwelling types is desirable for aesthetic reasons. Anyone who chooses the tract house as an aesthetic ideal must expect that his judgment will be questioned."

*But many suburbanites are actually motivated by "whispered reasons" you seldom hear at public meetings.*

1. "Apartments will attract persons of the lower classes." The authors point out this depends entirely on the rentals to be charged.

2. "Apartments will bring in a lot of transients who have no interest in the neighborhood." The authors point out that apartments attract a wide variety of residents, many of whom move less frequently than some home-owning families.

3. "They'll be rented to Negroes." But, the authors note, Negroes have "typically entered formerly white neighborhoods by purchase rather than by rental." And, they add, "the President's executive order restricting discrimination in federally assisted housing may have greater impact on single-family housing, since a higher proportion of single-family housing receives federal assistance."

Photos: H&H staff

# 3

NEW OPPORTUNITIES IN RENTAL HOUSING

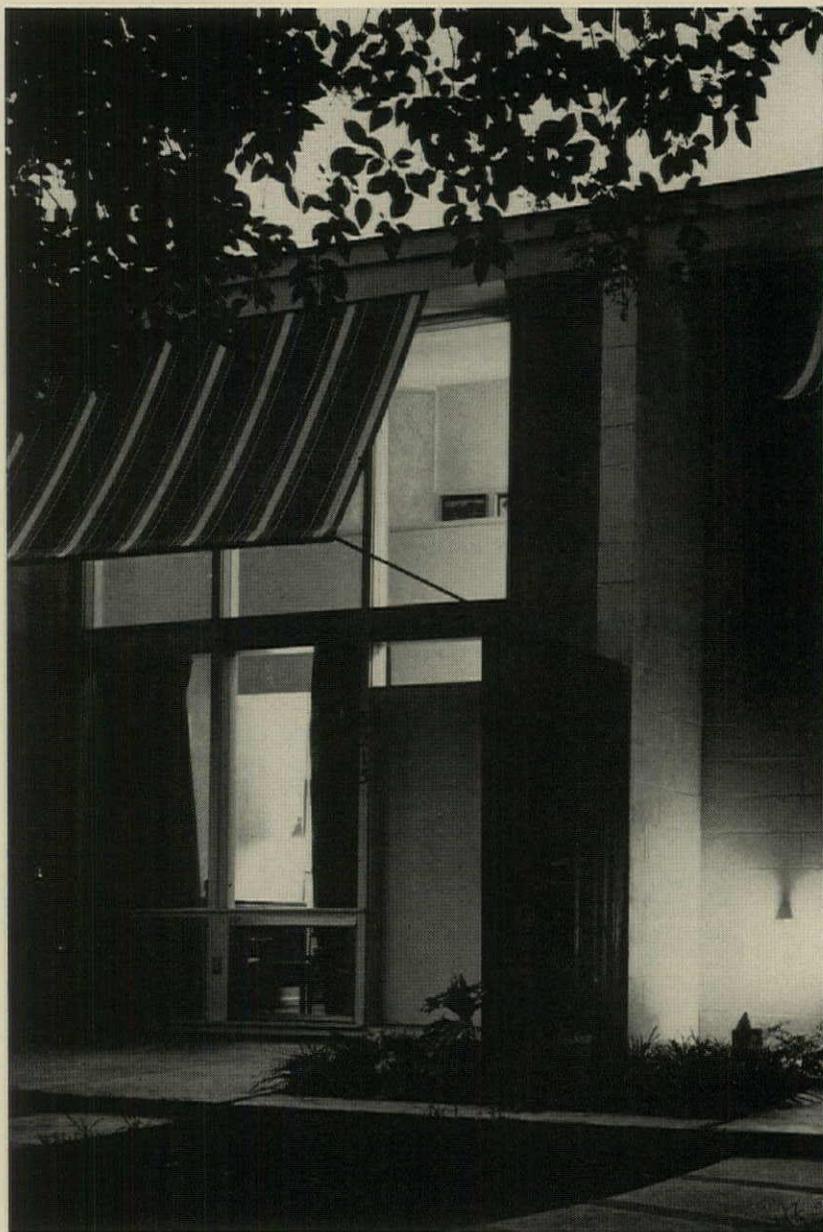
## Design: 22 fresh ideas that make apartments live — and look — better

Apartment design has come a long way in the past five years, as the pictures at right and on the following eight pages show. There are far fewer brick boxes with impossible floor plans—and all the outdoor living you can get by opening a living room window. There are far more handsome apartment buildings with excellent floor plans, big private outdoor living areas and design features that match or top those of today's best custom houses.

Five years ago, after a country-wide survey for one of its first major issues on rental housing (Oct. '59), *HOUSE & HOME* urged would-be builders of successful apartment projects to incorporate such features as these in their designs: private patios; big private balconies for upper-level units; glass walls to integrate indoor and outdoor living areas; better planned kitchens with more storage; more glamorous baths; more interesting facades; bigger rooms; more private entrances and more townhouse units.

The following pages show that these ideas have taken hold; in fact many of them—notably private balconies and patios—have become standard features rather than extras. And a host of new design ideas is emerging.

Five years ago, *HOUSE & HOME* said that the best new apartments lived like new houses. Today more and more of the best new apartments live better than many new houses. *To see why, begin at right.*



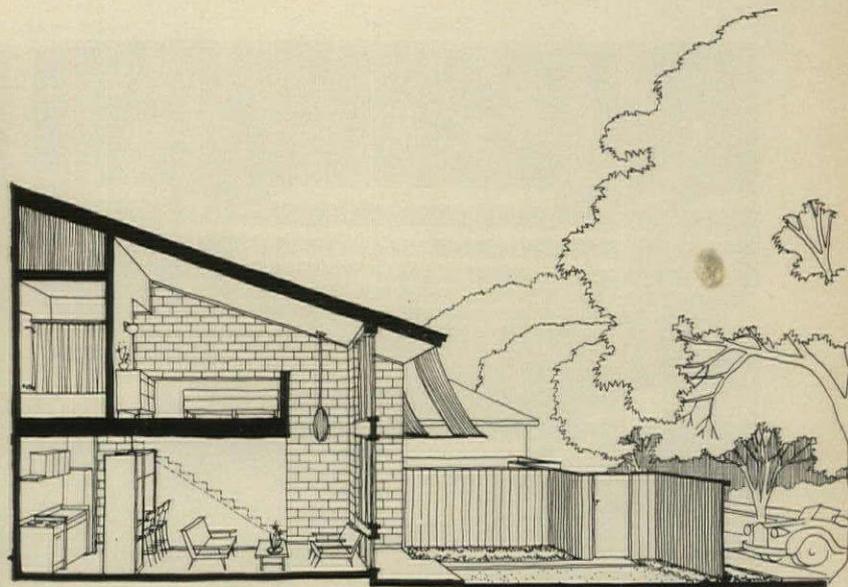
Warren Ballard



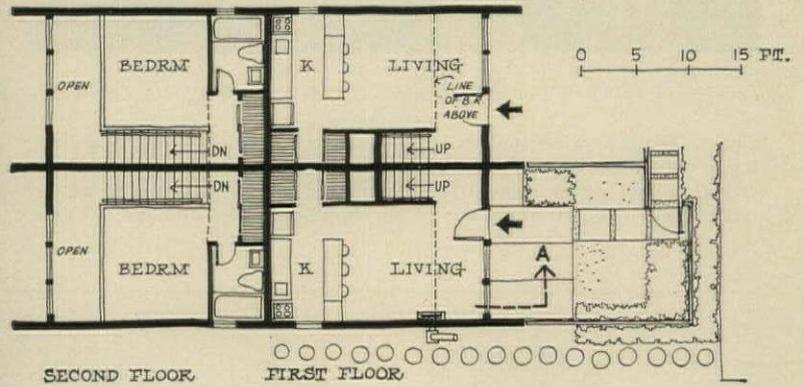
### Setbacks serve a triple purpose

They add depth to the facade and provide privacy and shelter. Two kinds of setbacks are used in these townhouses: the houses themselves are staggered and window and door areas are recessed between brick walls. Builder: Carl Freeman Assoc., Silver Springs, Md.

Gleason



SECTION A

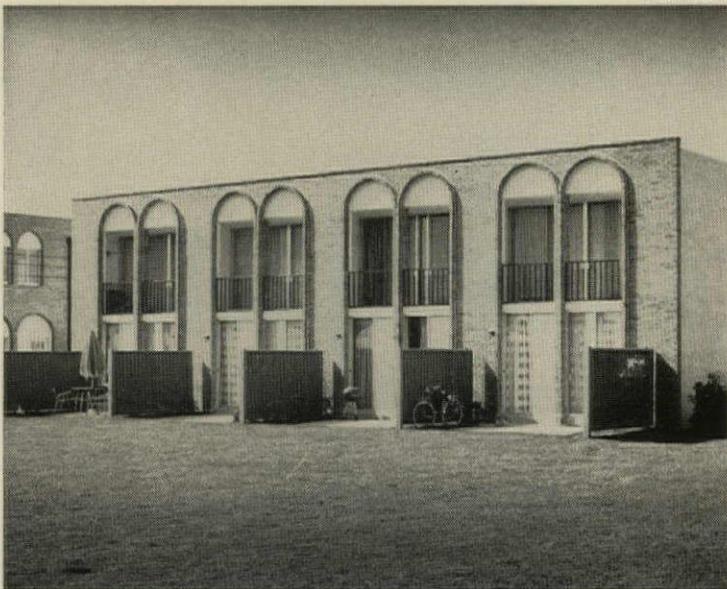


SECOND FLOOR FIRST FLOOR

### Balcony bedroom opens up a small apartment

The second floor of this 476 sq. ft. apartment in Baton Rouge stops 5' from the all-glass front wall. So the living room has two ceiling heights—one high and one low—that add interest, light and spaciousness. Architects: Berenson & Glenny. Builder: A. L. Drumright.

H&H staff



### Two-story arches soften an angular facade

They also contrast strongly with the windows and doors which they frame. And by projecting the one-brick-wide arch out from the wall, Architect Charles Pattillo has added a strong sculptured feeling to the facade. Builder: Morris Construction Co., Jacksonville.

F. Wilbur Seiders



### Mansard roofs give buildings an intimate scale

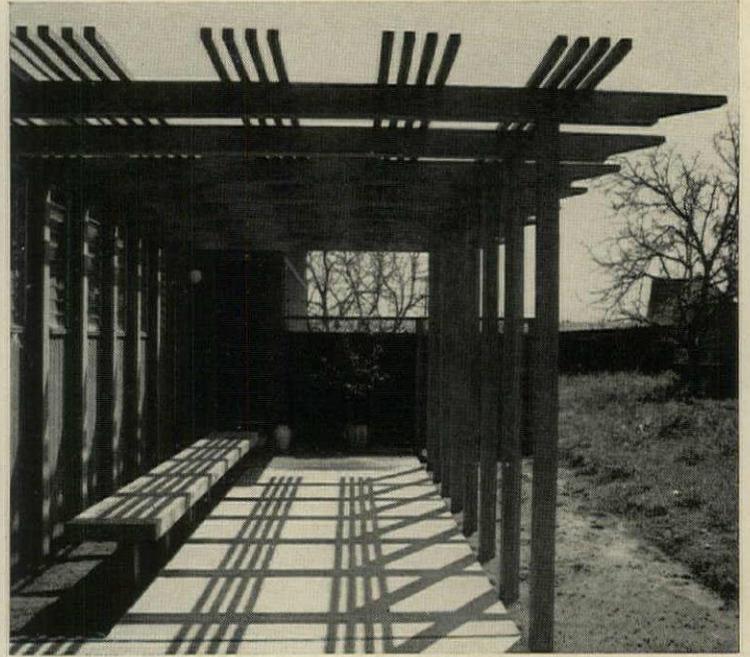
Houston Builder John K. Williams combined the mansard roofs with high chimneys to lower the typically tall-and-narrow townhouse facade and to create the nostalgic atmosphere of a French Provincial village. High fences screen private patios from the swimming pool area.

*continued*

Gerald Ratto



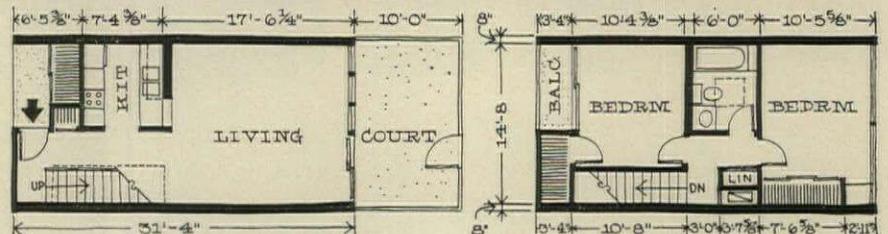
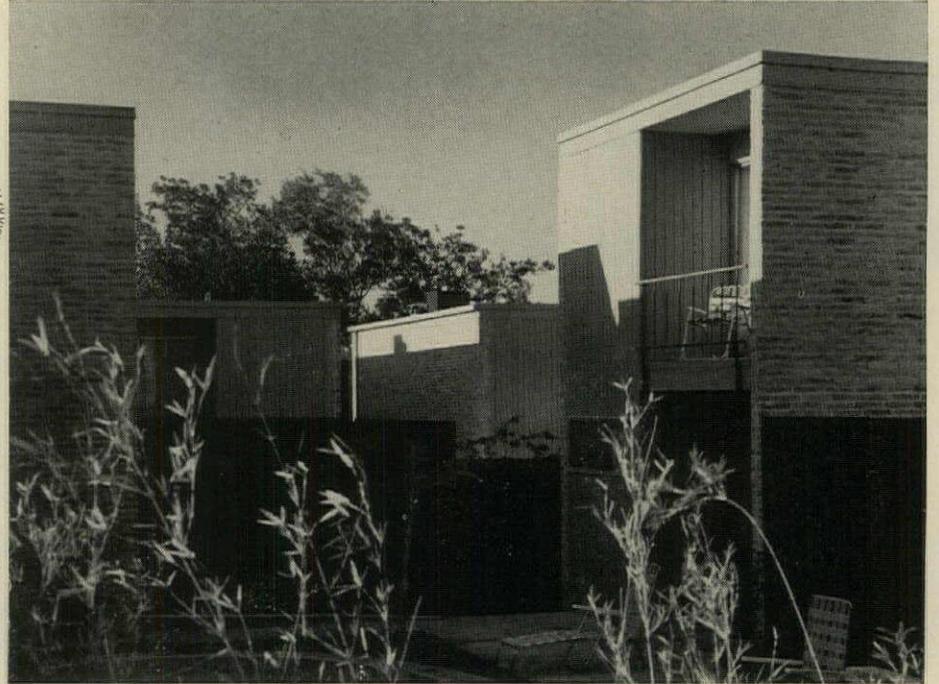
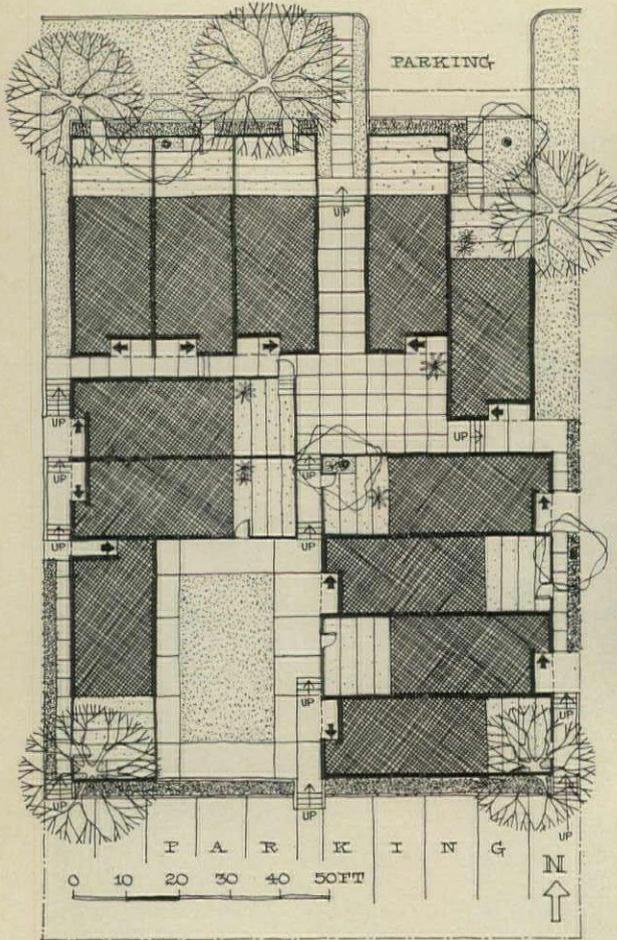
Rondal Partridge



Trellises: a simple way to define—and dramatize—apartment entrances

The entrance to a 144-unit project (left) in Hayward, Calif. is simply a gap between two buildings, but Architect Roger F. Hooper dramatized it with a heavily timbered trellis, supported on concrete posts, which blocks out much of the view of the building walls. Builder: Felson

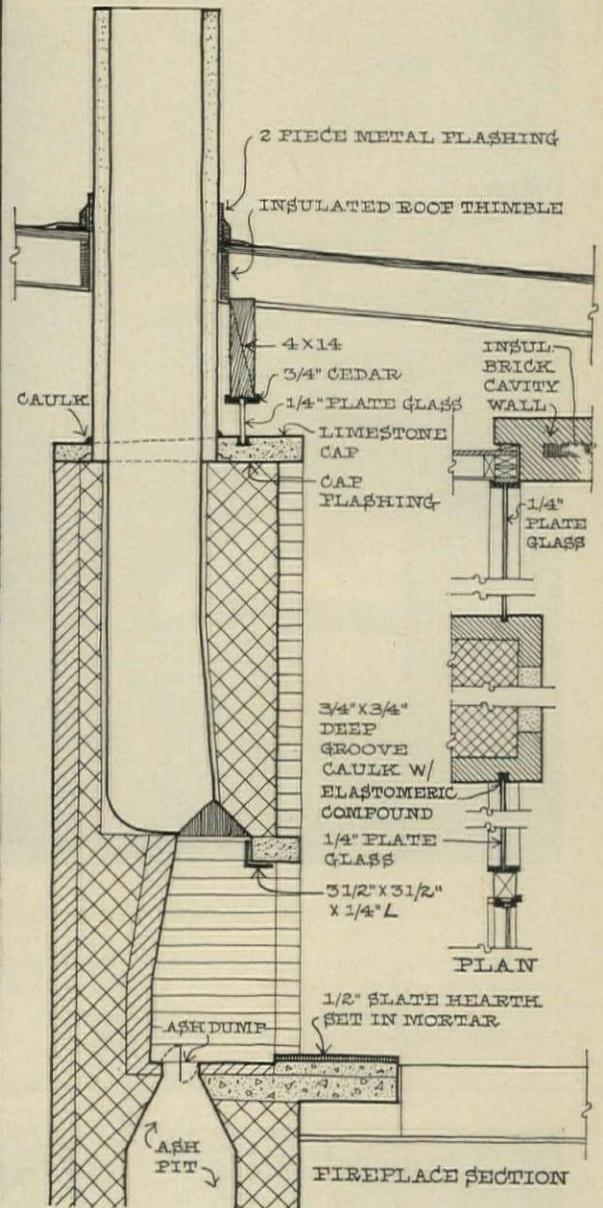
Builders Inc. The trellis at right marks the entrance to a much smaller building—a duplex in Walnut Creek, Calif. It is both smaller in scale and lighter in feeling. Architect-Owner Charles Delk framed the trellis with redwood posts and beams covered with longitudinal strips. Builder: Bernard Lumber Co. of San Antonio.



Flexible placement of simple townhouse units creates outdoor privacy on a tight site

The site plan above covers little more than one-third of an acre; yet it includes 12 townhouses and their patios, plus parking space for 12 cars. Architect Allison Peery enclosed the patios with high fences, placed the houses so that most second-floor balconies faced blank

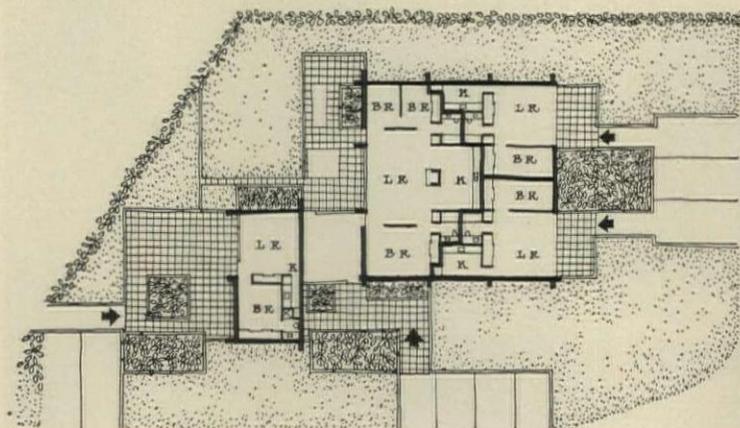
walls of other houses and reversed the plans of some adjacent houses so that their entrances are at opposite ends. The result: excellent privacy on both first and second floors despite the relatively high density. Builder: Bernard Lumber Co. of San Antonio.



Free-standing fireplace wall dominates the facade of these rental houses

The wall, which stops just short of the roof, is a strong vertical element that contrasts with the horizontal line of the balcony. The cross section at right shows the wall's construction, and the detail drawing points up a novel method used by Architect Carl Luckenbach to join

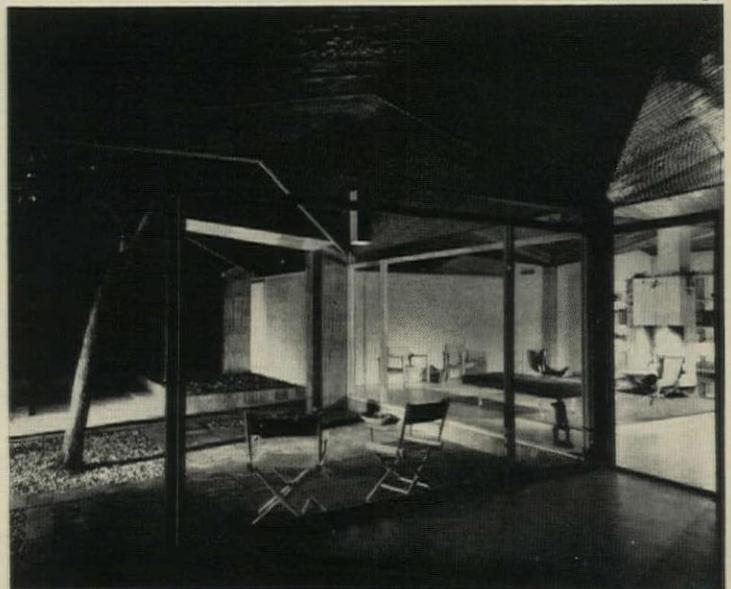
glass and brick: the brick is grooved, the glass is set into it and a silicone compound secures the glass and seals it against the weather. This split-level house is one of five detached rental units built in a cluster by Willits West Co. of Birmingham, Mich.



Entry terraces double as outdoor living areas

And Builder C. J. Bonner arranged the four units in this Tustin, Calif. apartment to isolate the terraces from each other. Result: tenants enjoy outdoor living and floor-to-ceiling glass walls without sacrificing privacy. Photo shows the second unit from the left in plan above.

Alexandre Georges



continued

Roger Sturtevant



Maurice Miller

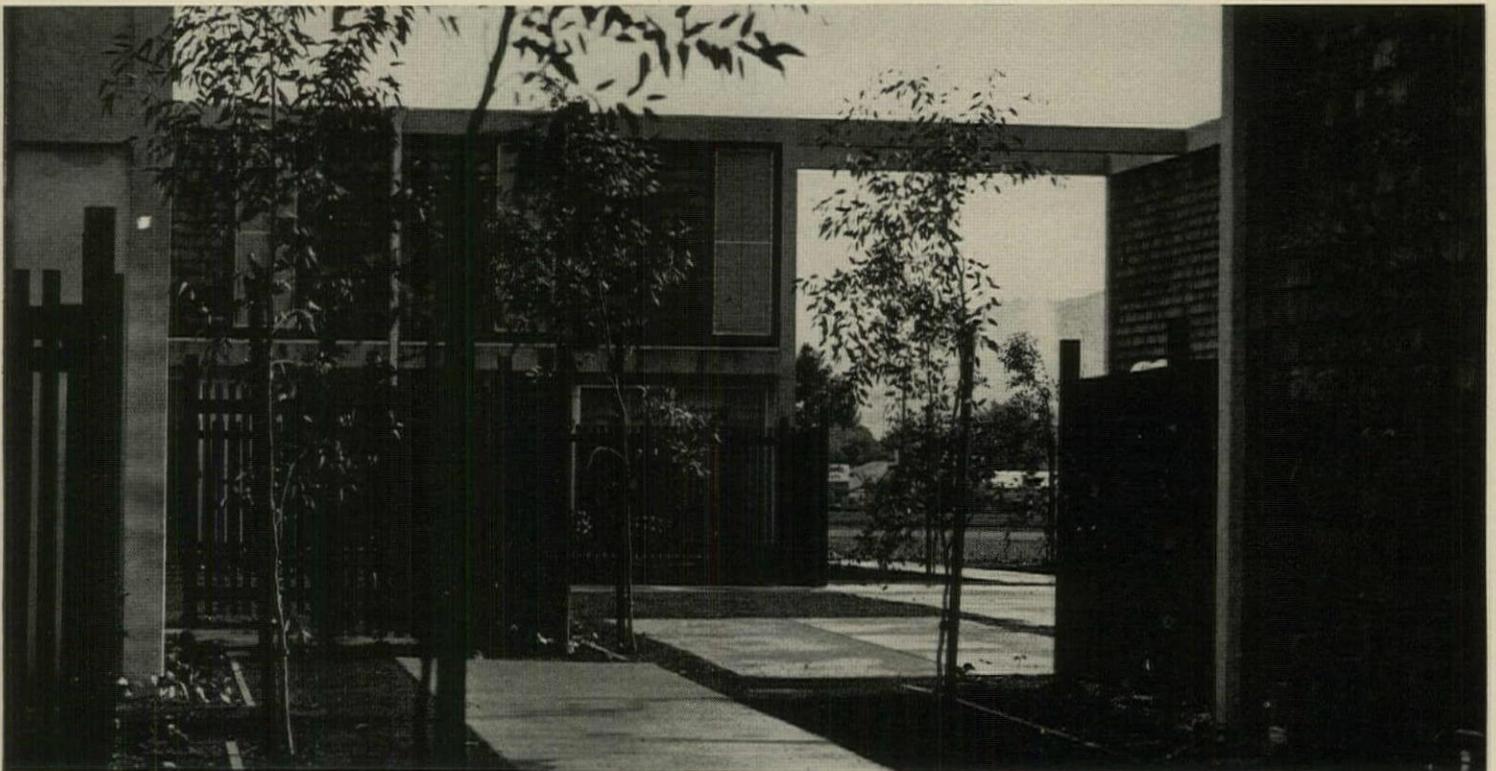


Open stairways with slender railings brighten entries—both indoors and out

The inside entry at left is only 8' wide. But open-tread stairs and wrought-iron railing, combined with a two-story glass wall, give it a light, spacious feeling. Architect: Roger Lee Assoc. Builder: Conrad Ambrose, Berkeley, Calif. The outdoor entry at right, designed by

Architects Jenkins & Hoff for Tex-Craft Builders of Houston, also benefits from open stair and railings (both metal to withstand weather). A peaked roof bridges the entry, heightens its open feeling and protects tenants and visitors from rain and hot sun.

M. Beebe



Traditional shingles add warmth to a contemporary facade

They keep the apartments in character with their country surroundings in Napa, Calif. They emphasize the strong outlines of Architect Lawrence Freels' contemporary design, but their natural weathered finish also keeps the design from looking stark. The shingles are ap-

plied in panels, not merely for design emphasis but also because the resulting absence of corners makes shingling faster and hence less costly. The panels are outlined with stucco-covered framing members. Builder: Rubin Glickman.



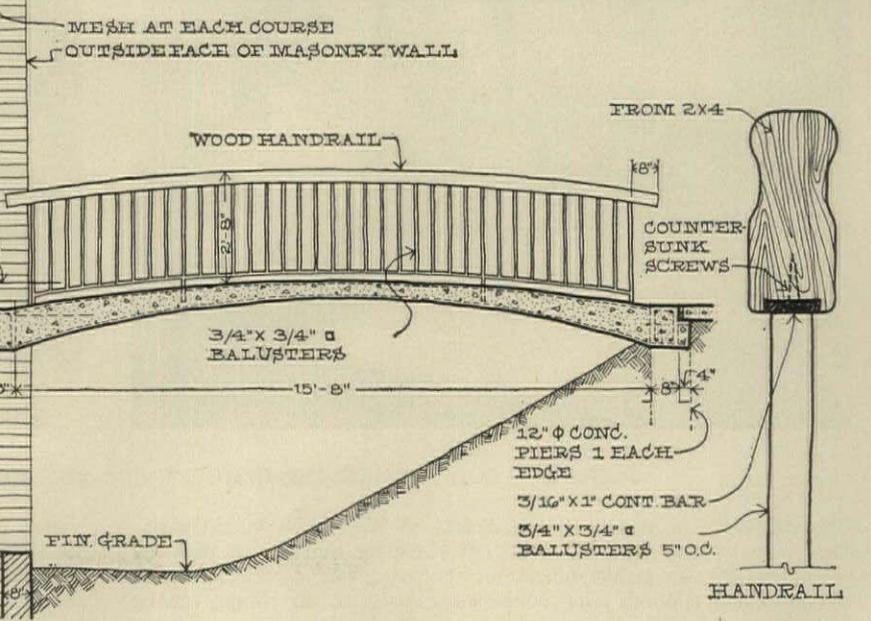
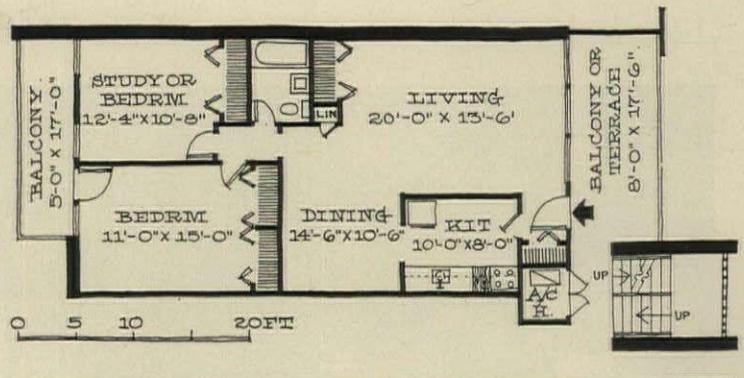
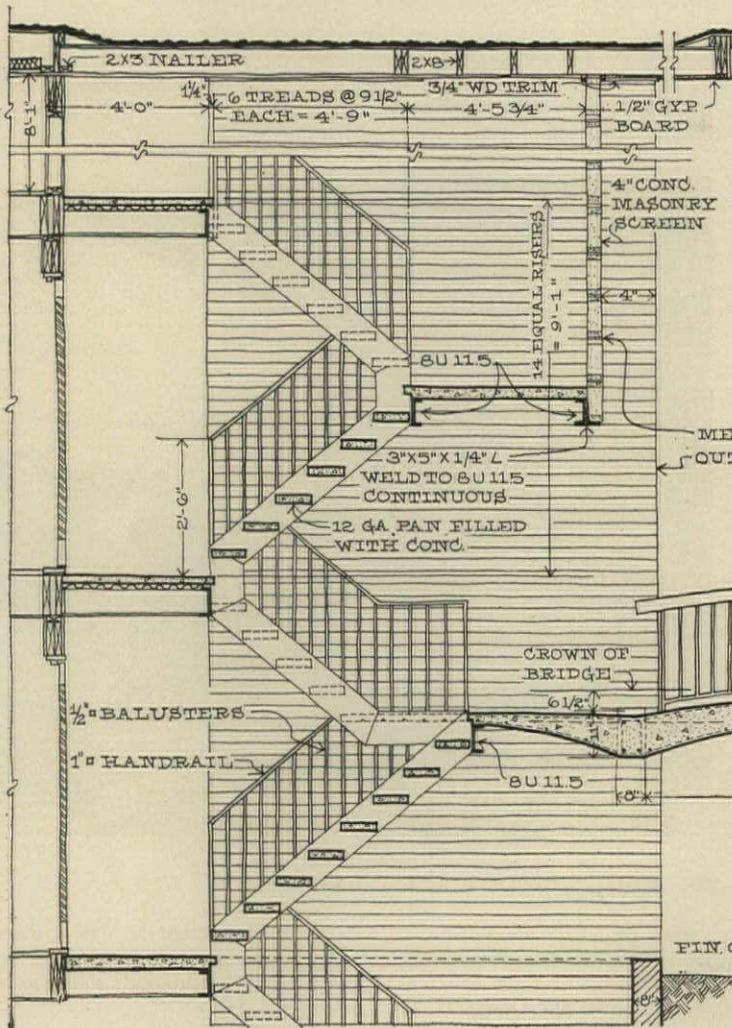
Entry bridges cope with a steep site

This site slopes so steeply that the lower-level apartments open to grade in the rear. The bridges (details below show how they are supported) permit building entrances a half-story above grade. Architect: Robert Calhoun Smith. Builder: Koch & Kehoe Inc., Bethesda, Md.



Big balcony works like an old-time porch

Most of it serves as an outdoor living area, but the near end includes the entry stair landing and front door. This 8'x17' balcony—recessed and partly screened for privacy—is one of two in each second and third-floor apartment in the buildings at left (see plan below).

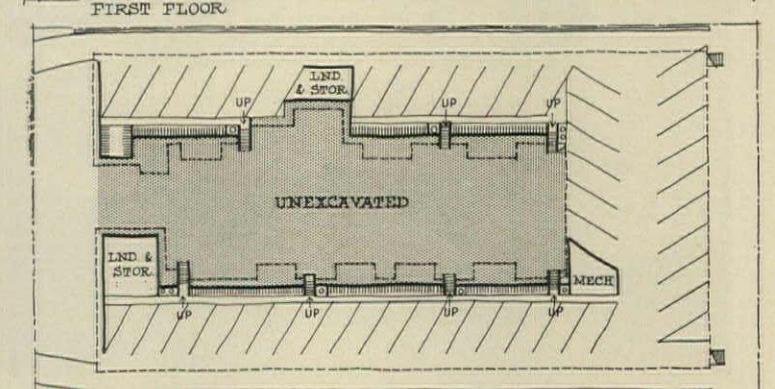
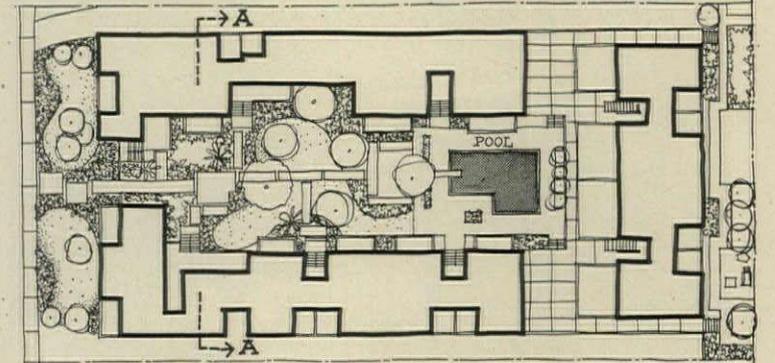
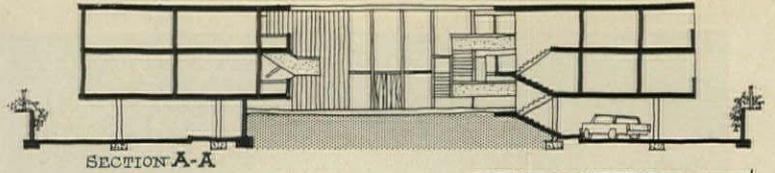


Beinlich



Plastic screen makes an overhead sunshade

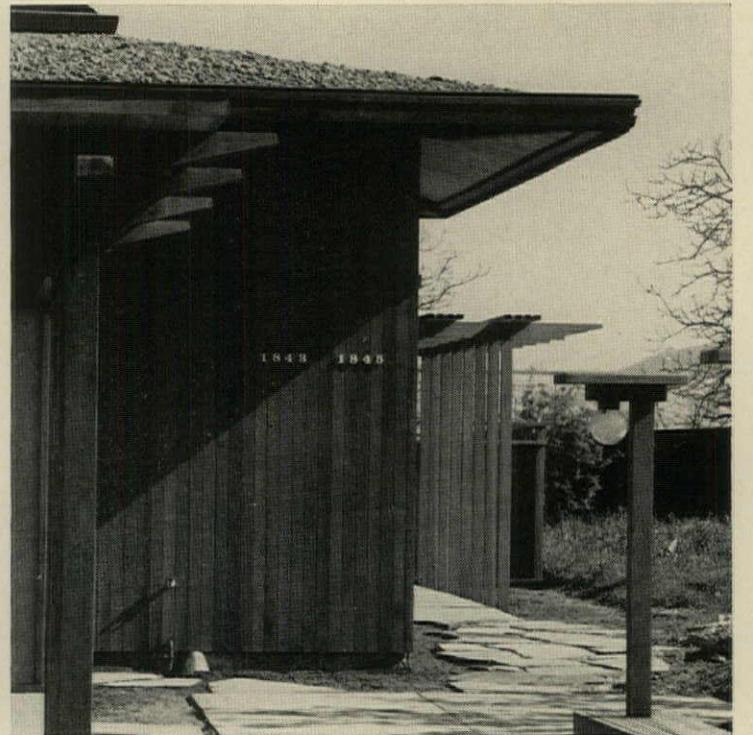
Rain is seldom a problem in Phoenix, but the hot sun is. So Builder Frank Braggiotti covered all walkways of his 59-unit project with screens of vinyl-covered glass fiber which let in light but ward off the sun. Designer: Alfred Beadle.



Reverse-doughnut excavation makes room for parking

Cars can drive in under this 32-unit building in San Jose, Calif., so they are hidden from view and handy to stairs that lead to apartment entrances. Method: D. K. & H. Development Co. excavated under the perimeter of the building. Architect: Fred Marburg.

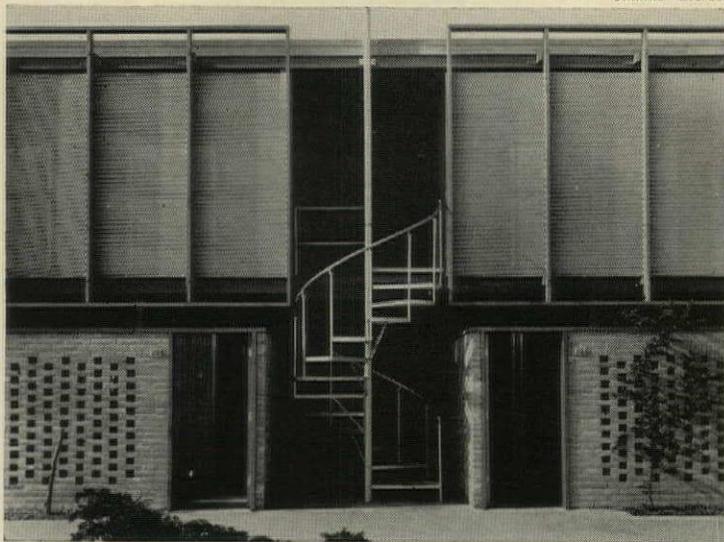
Photos: Rondal Partridge



Natural wood finishes cut maintenance and unify indoor and outdoor design

This duplex is in Walnut Creek, Calif., so Architect-Owner Charles Delk picked native redwood as his finish. On the outside, the redwood is 1x4 rough-sawn planks which can be coated with a preservative or left untreated. Smooth redwood paneling, used on the inside, can be

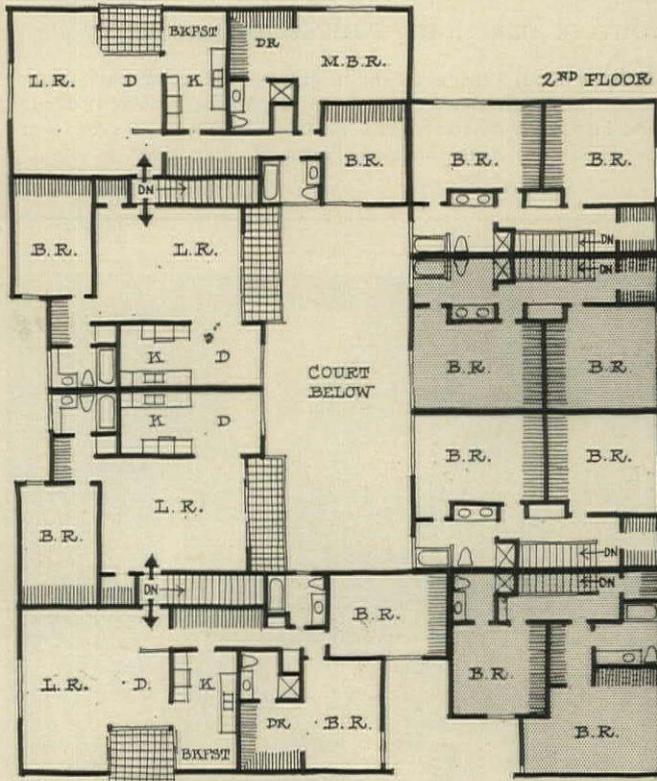
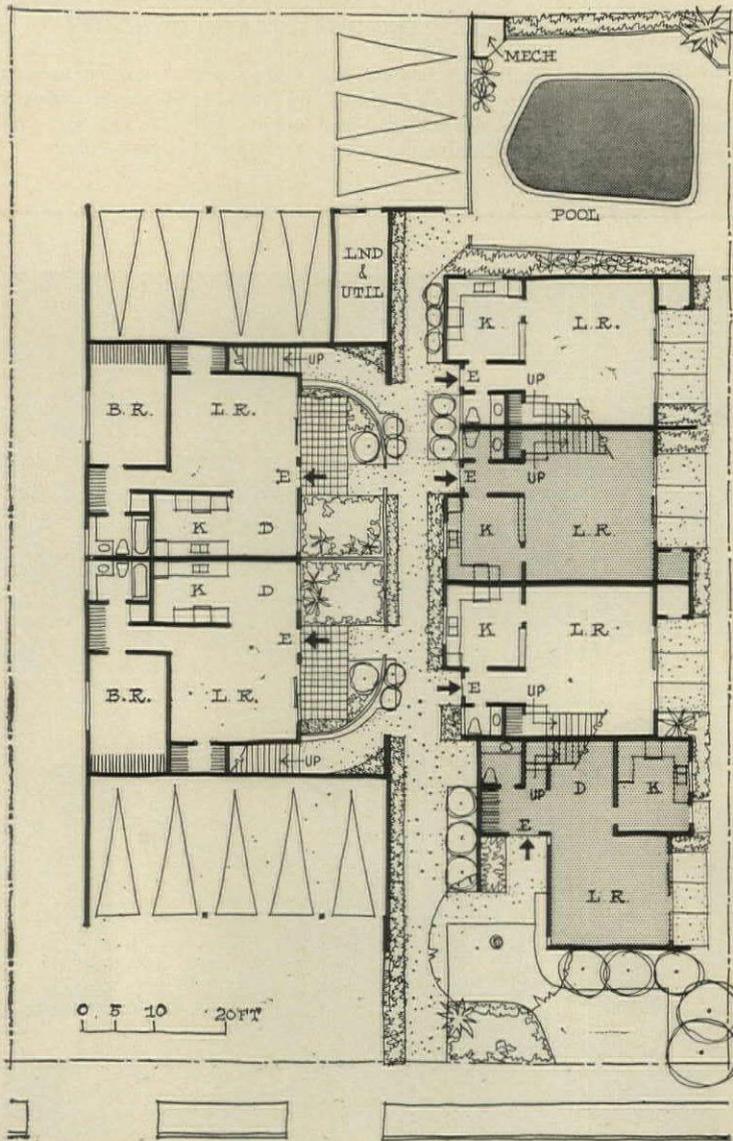
waxed or left in its natural state. High ceilings keep the darker-than-usual interior from becoming oppressive, and horizontal molding, set at door-header height both inside and out, brings the high walls down to a more intimate scale.



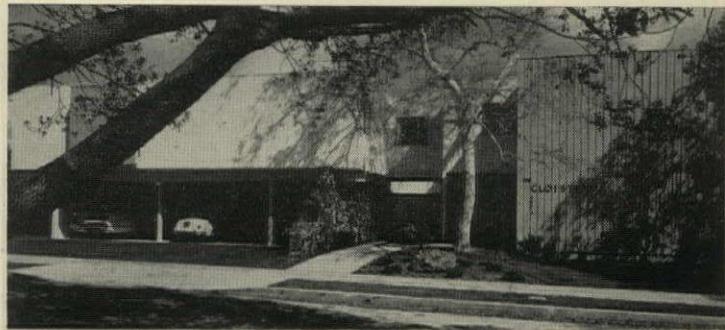
Screens create low-cost privacy and distinctive facades

Low cost was a key goal in the apartment at left—14 one-bedroom units built by Stephen Flowers for students and teachers in Port Arthur, Tex. Architects Moore & Stansbury designed a simple, straight-line plan, then screened outdoor areas with pierced brick on the

ground floor and aluminum screening on the second. The six-unit apartment at right was built by Tex-Craft Builders among single-family houses in Houston. Sunscreens break up the facade so it is in keeping with the neighborhood. Architects: Jenkins & Hoff.



Amir Farr



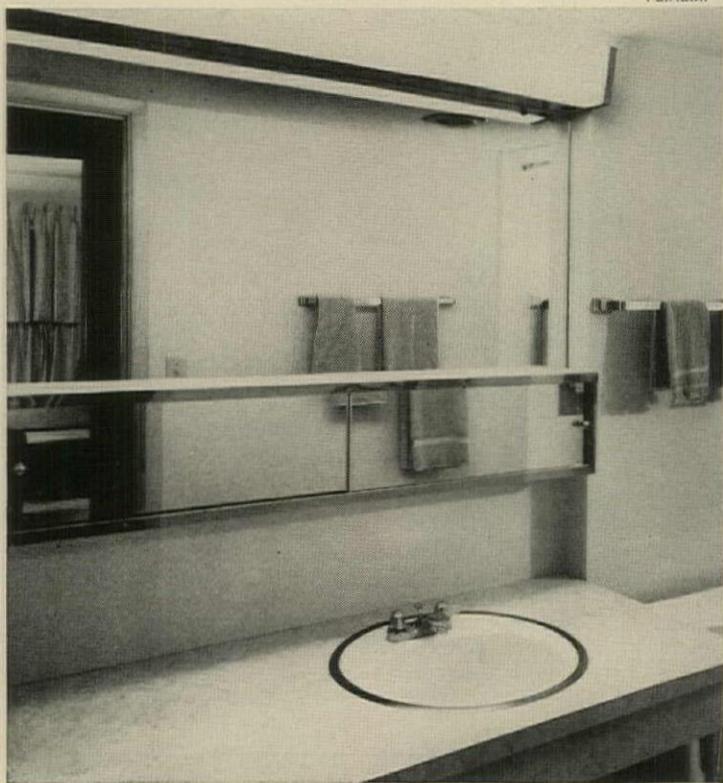
Courtyard plan combines townhouses and one-story apartments in one building

Architect Harold Levitoff placed six apartments on one side of the court and four townhouses on the other. And by putting four apartments upstairs and two down, he provided covered parking for nine cars. Although the lot is less than one-third of an acre, all units have

ample, well-screened outdoor areas—front patios off the downstairs apartments, large balconies off the upstairs units and patios behind the townhouses. Another plus: only two windows face the street. Location: Toluca Lake, Calif. Builder Max H. Resnick.

continued

Fairlawn



Mirrors make a big bath seem even bigger

Architect John Lipaj runs a ceiling-height mirror along half of the long wall in this apartment bathroom to emphasize its 6'x10' dimensions. And he uses a mirror-fronted medicine cabinet above an oversized vanity. Builder: Alan Newman, Parma Heights, Ohio.

Rondal Partridge



Paneled dressing room is a practical luxury

It requires minimum maintenance and underscores extensive use of redwood elsewhere in the unit. Located in 50 sq. ft. of space adjacent to a full bath, it has a marble-topped vanity with storage, left and below, and a dropped luminous ceiling. Architect: Charles Delk.

Lawrence S. Williams



Extra storage makes a small kitchen more efficient

Fox-Bilt Homes gives the kitchens of these suburban Philadelphia apartments an unusual expanse of ceiling-height cabinet storage. And the kitchen is laid out to conform to the efficient range-sink-refrigerator triangle. Design is by Loewy/Snaith Inc. and Howard Krasnoff.

Rondal Partridge



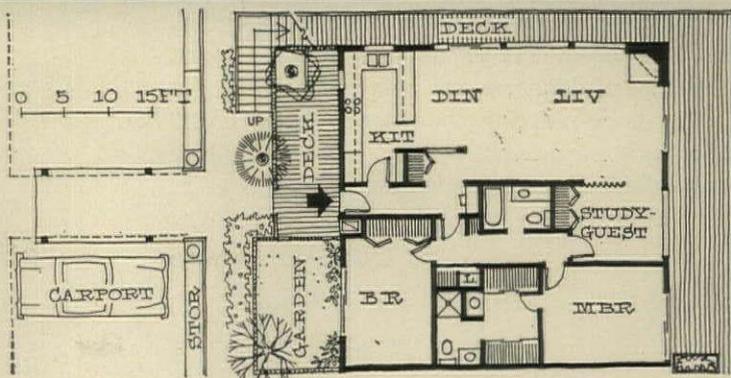
Skylight emphasizes the warmth of a wood ceiling

More than functional, it provides a bright contrast to the dark planking and points up the major design element of the apartment: a high, pyramidal ceiling supported by four heavy timbers. The skylight is of translucent plastic. Architect: Charles Delk. (For exteriors, see p. 104.)



### Cathedral ceiling makes a glass wall bigger

It lets the glass be carried up to a full 12' at the ridge to take fullest advantage of a spectacular waterfront view (see cover and p. 96). And its deep overhang shelters that part of the wrap-around deck (plan, right) most directly related to the living-dining room area. Exposed beams and roof decking, design features in themselves, contrast strongly with the unusually-shaped brick fireplace—tucked away in the corner so it does not interrupt the view. Architect: John Lord King. Builder: Associated Contractors, San Francisco.



## How to keep noise from leaking through the floor under party walls

# 4

NEW OPPORTUNITIES IN RENTAL HOUSING

## Noise control: 20 ways to cut down the biggest cause of tenant complaints

Ridiculous as it seems, the success of a new apartment project sometimes hinges on how well a tenant can hear his neighbor's television set. A key characteristic of today's rental market is that tenants demand—and will move to get—quality (see p. 89). And just about the most important aspect of quality is *quiet!*

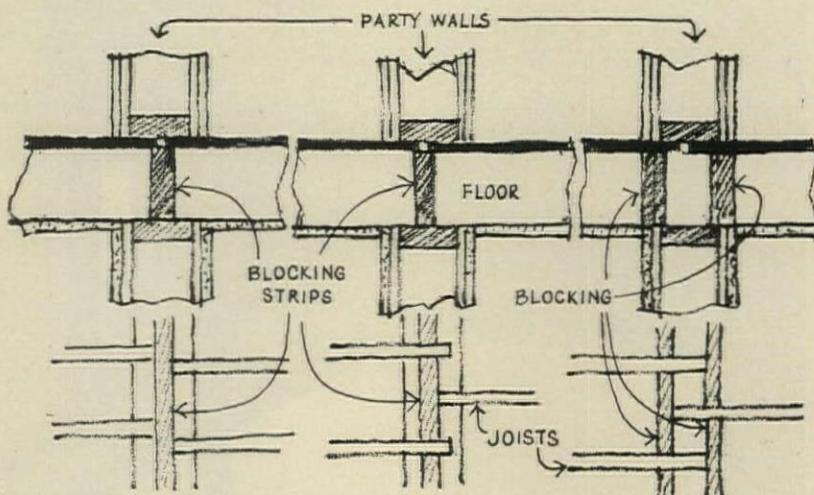
Unfortunately, there is more noise than ever in today's apartments—noise from air-conditioning equipment, garbage grinders, dishwashers, extra baths, washers and dryers. Not only does this equipment create noise, it requires additional ducts and pipes that are in themselves pathways that can carry noise all through the building.

"The nervous system of the apartment house today is almost as complex as the people who occupy it," says New York Architect Samuel Paul.

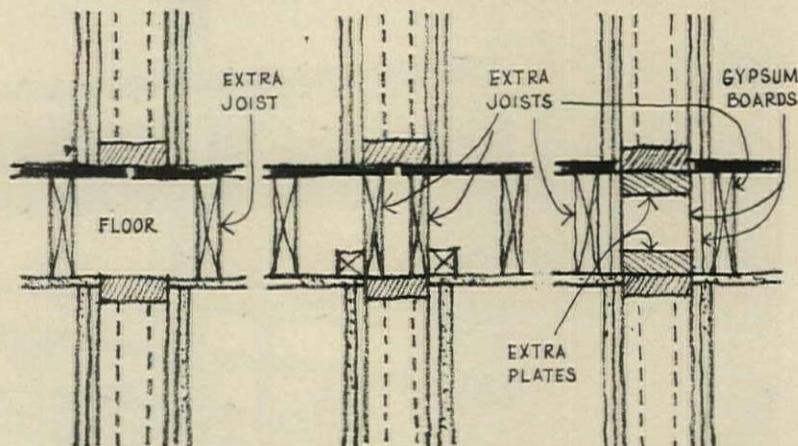
Add to this the people-produced racket of turned-up television and hi-fi sets and the need for effective noise control becomes obvious.

Starting at right are 20 methods designed to achieve this noise control. They are taken from a new—and excellent—booklet with a formidable title ("Solutions to noise control problems in the construction of houses, apartments, motels and hotels"), written by Physicist Hale J. Sabine and Engineer Dan E. Morgenroth and published by Owens-Corning Fiberglas Corp. Its 64 well-illustrated pages cover sound control all the way from basic theory to actual construction details. The selections shown here should be of special interest to apartment designers and builders.

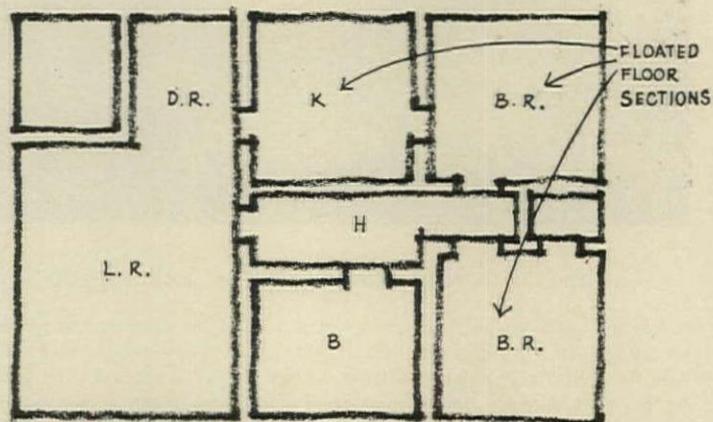
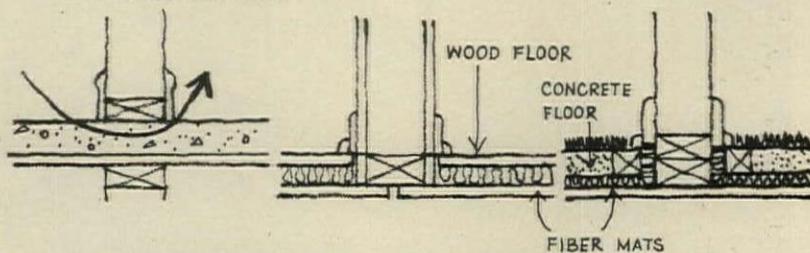
Does noise-reducing construction boost costs? In most cases, yes. But, builders report, the added costs are more than offset by low-vacancy rates.



**BLOCK BETWEEN END-TO-END JOISTS.** A single blocking strip (left) closes joist tunnels. Better system (center) offsets joists to reduce impact transmission and breaks the blocking strips between joists. Best system (right) uses two blocking members, offsets joists and breaks up blocking strips.

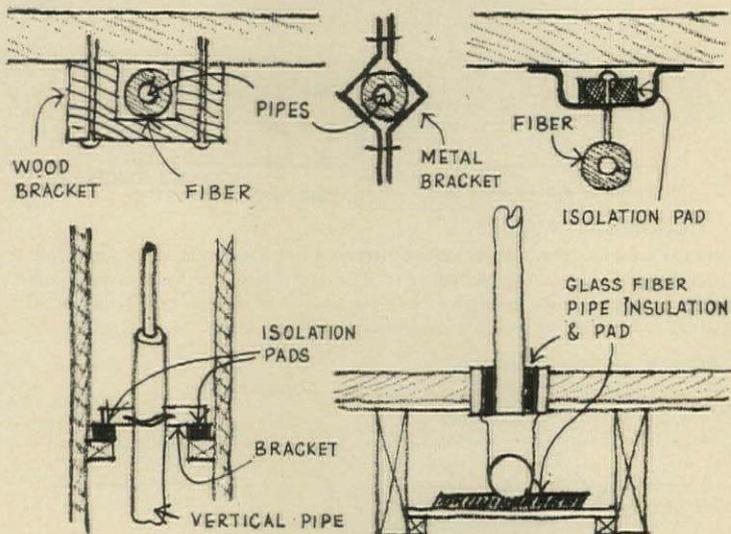


**USE EXTRA PARALLEL JOISTS.** If the wall is close to a regular joist (left), add a joist on the opposite side. If the wall falls between regular joists, put two extra joists under it (center). Best method (right): install extra plates and gypsum joist backers.

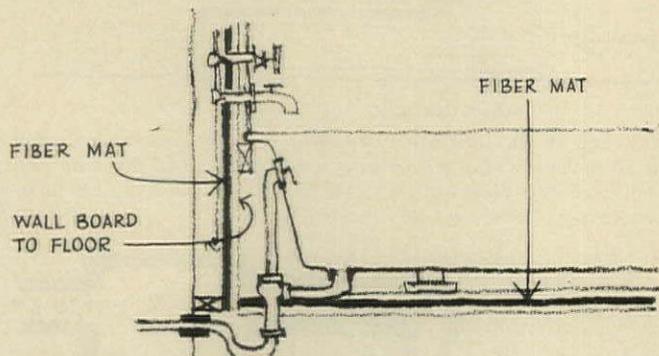
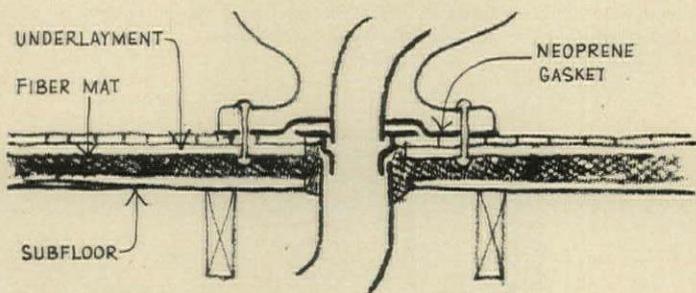


**FLOAT THE FLOOR.** Laying concrete (top, center) or wood (top, right) floors on fiber boards, and stopping the floors short of the walls, reduces under-wall transmission. Sills are fastened to the subflooring. Floor plan (bottom) shows how every room can be isolated with floating floors.

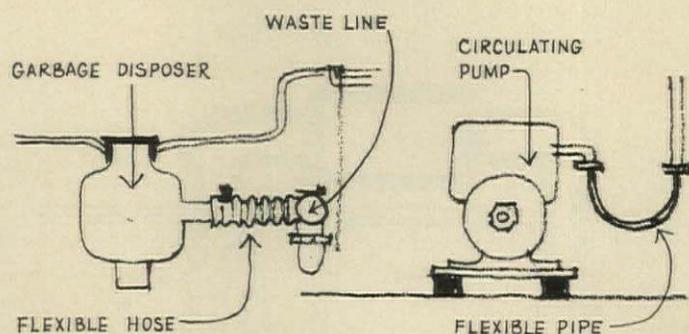
## How to reduce vibration by isolating plumbing pipes and fixtures from the structure



**CUSHION WASTE AND VENT LINES.** Fiber doughnuts (upper left and center) at support points will isolate water noises from the building. Fiber pads will isolate pipe brackets from framing (upper right and lower left) and cushion vertical waste lines at bottom.

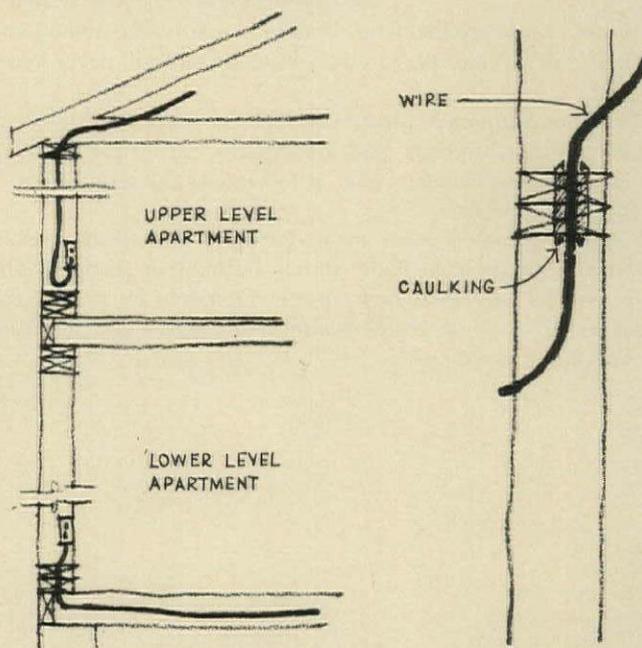


**CUSHION TUBS AND TOILETS.** Fiberboard between underlayment and subfloor will keep water noises in toilets from vibrating the floor (left). Set tubs against the wallboard, not the studs (bottom), and put fiber between the wall and studs and between underlayment and subfloor.

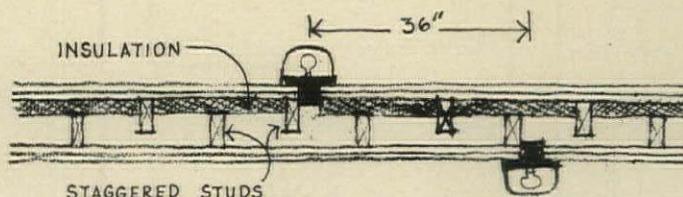


**USE FLEXIBLE COUPLINGS.** A rubber hose between garbage disposers and waste pipes (left) will keep vibrations from passing through the whole waste system. Flexible piping (right) prevents the noise of circulating pumps from being transmitted to convectors in apartment rooms.

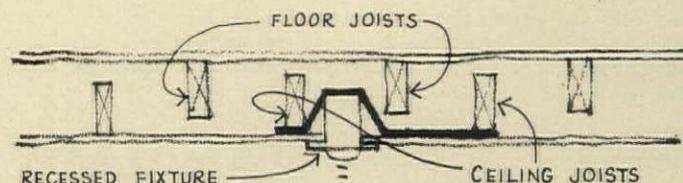
## How to wire, install outlets and mount fixtures to avoid noise leaks and vibration



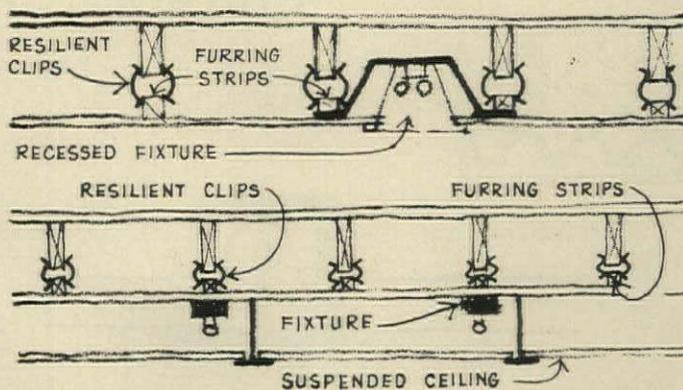
**AVOID THROUGH-FLOOR WIRING.** Even wiring holes will pass sound between upper- and lower-level apartments. Solution (left): wire one apartment from above and the other from below. If through-floor wiring holes are unavoidable, caulk them with plastic or dry packing (right).



**STAGGER PARTY-WALL OUTLETS.** Never set them back-to-back in the same stud space. Convenience outlets should be at least 36" apart (drawing above) and switches and wall fixtures at least 24" apart. And all openings both around and in the outlet boxes should be carefully sealed.



**DON'T MOUNT FIXTURES ACROSS STAGGERED JOISTS.** Attaching one side of a fixture to ceiling joists and the other side to floor joists provides a sound path between ceiling and floor. Instead, fasten the second side of the fixture to the nearest ceiling joist.



**DON'T HANG FIXTURES FROM FLOOR FRAMING.** Instead, hang them from furring strips attached to the framing by resilient clips (top). Better yet, surface-mount them under the ceiling so the ceiling board is left unpierced (bottom). In either case, use extra clips above fixtures.

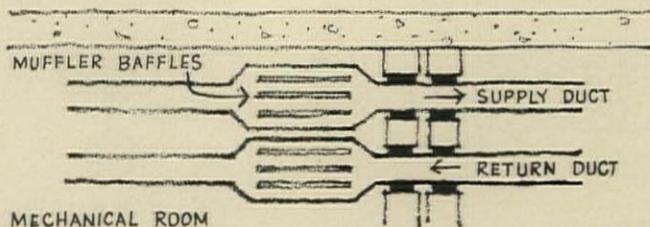
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## How to install mechanical equipment to isolate its vibration

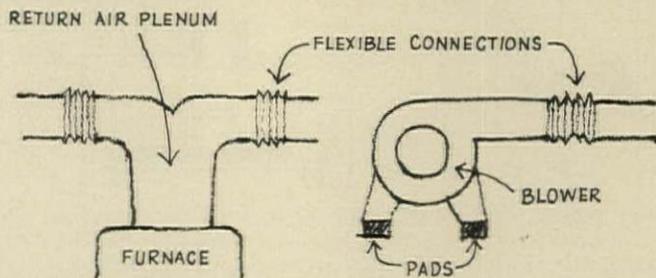
There is more noise-producing machinery in apartments today than ever before; but if these rules are followed, tenants will never know it is there:

1. *Buy quiet equipment.* Most manufacturers have reliable noise-level data on their products, and it is usually cheaper in the long run to buy quieter machinery and install less sound-reducing construction.

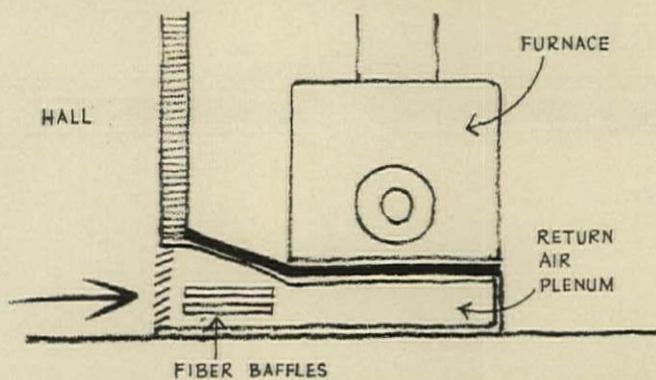
2. *Confine equipment noise to equipment rooms.* Walls should be sound-conditioned, and doors should be weather stripped. The drawings on this page show how machinery should be located and mounted so its vibration is not transmitted to the main structure of the apartment building.



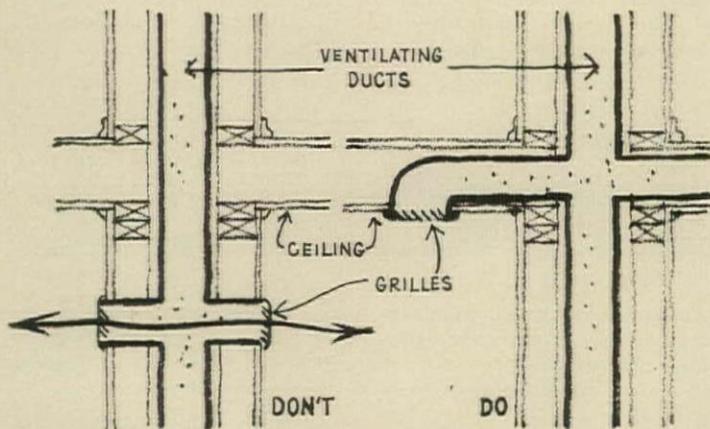
**MUFFLE DUCTS NEAR THE NOISE SOURCE.** If the sound of motors, fans and compressors is cut down before it gets into the duct system, sound control in the apartments themselves will be easier. Mufflers—usually made of glass fiber—should be installed in both supply and return ducts.



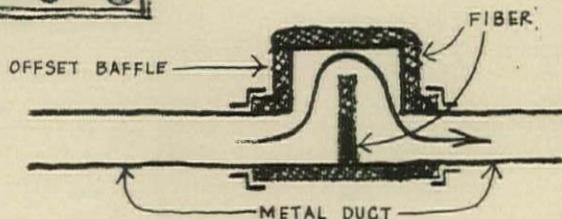
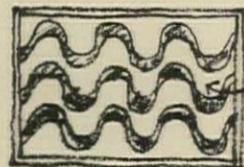
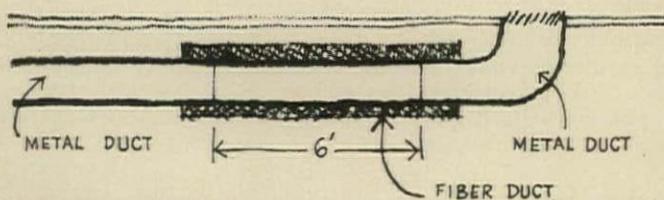
**USE FLEXIBLE CONNECTORS AT EQUIPMENT.** Metal ducts will carry and even amplify the vibrations caused by mechanical equipment. Connectors of soft material should be used to break the duct near the equipment so that this vibration does not get into the main duct system.



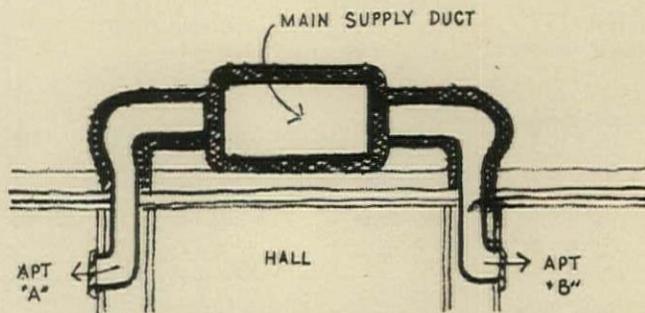
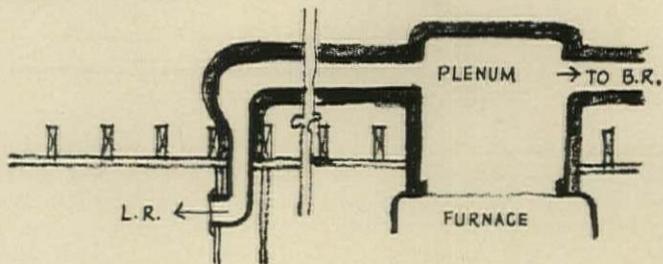
**USE BAFFLES IN RETURN-AIR PLENUMS.** Individual heating and cooling systems are often installed in apartment closets with raised floors for return air chambers. Baffles and fiber lining will keep these chambers from blasting blower and burner noise back into the apartment.



**DON'T PUT AIR VENTS BACK TO BACK.** This is like cutting a hole right through a party wall (*left*). Instead, run the vent ducts in the ceiling (*right*) so that right-angle fittings can reduce noise transmission, and grilles can be further apart. Grille dampers will also cut down sound.



**MUFFLE METAL DUCTS NEAR OUTLETS.** A 6' length of fiber duct (*top*) will dampen most normal through-duct sound. If space does not allow this method, a section of egg-crate baffles (*center*) or a single fiber offset (*bottom*) will do a good job and take up less room.

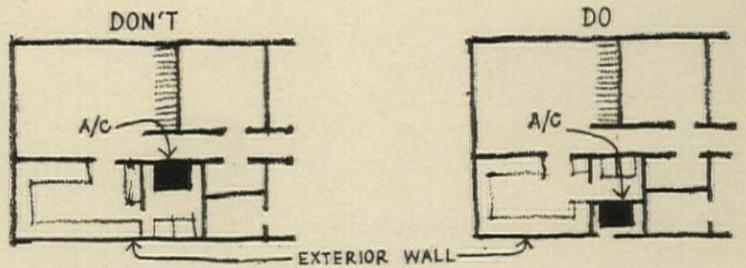


**USE FIBER DUCTS FOR MAIN DISTRIBUTION.** This will keep a duct that feeds several apartments from carrying excessive noise from unit to unit (*bottom*). And in individual-unit heating systems, main fiber ducts will cut down on noise transferred from room to room (*top*).

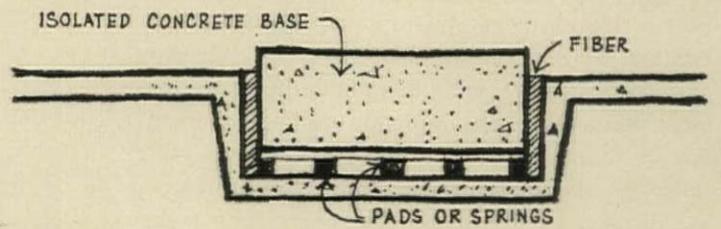
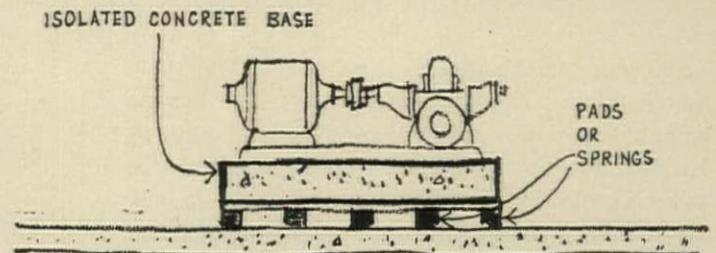
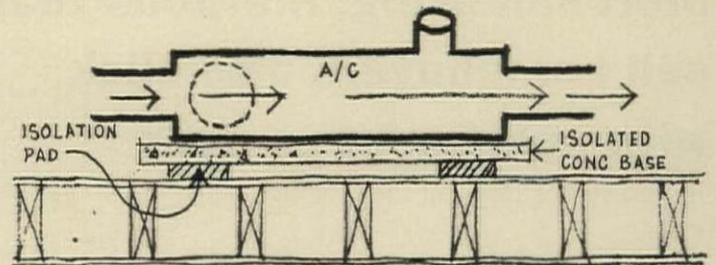
## How to keep heating and cooling ducts from becoming noise tunnels

Ducts are potentially the biggest noise problem in today's apartments. For one thing, they provide air-borne sound with a direct path between rooms, between apartments and between apartments and noisy equipment rooms. For another thing, there are more of them than in older buildings. New building codes permit more inside baths and kitchens, which require ventilating systems. Air conditioning, a luxury ten years ago, is fast becoming standard, so even hot-water-heated apartments are honeycombed with ducts.

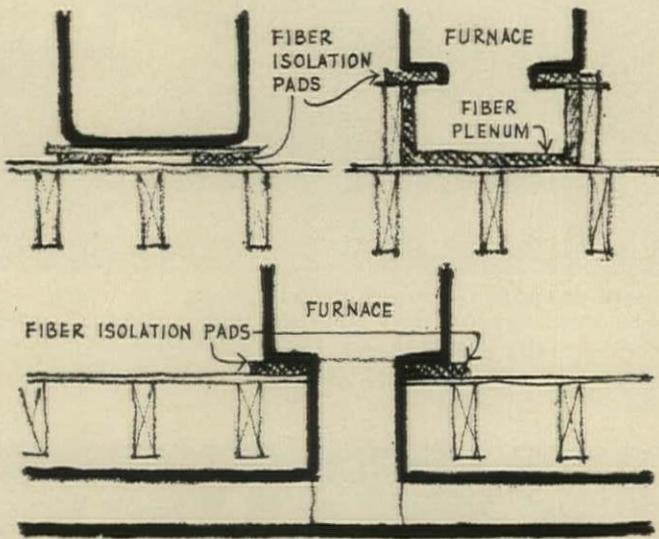
If ducts are to be kept from acting as noise tunnels, they must be sound-conditioned just as effectively as the walls and floors through which they pass. The detail drawings on this page show the basic ways this can be done.



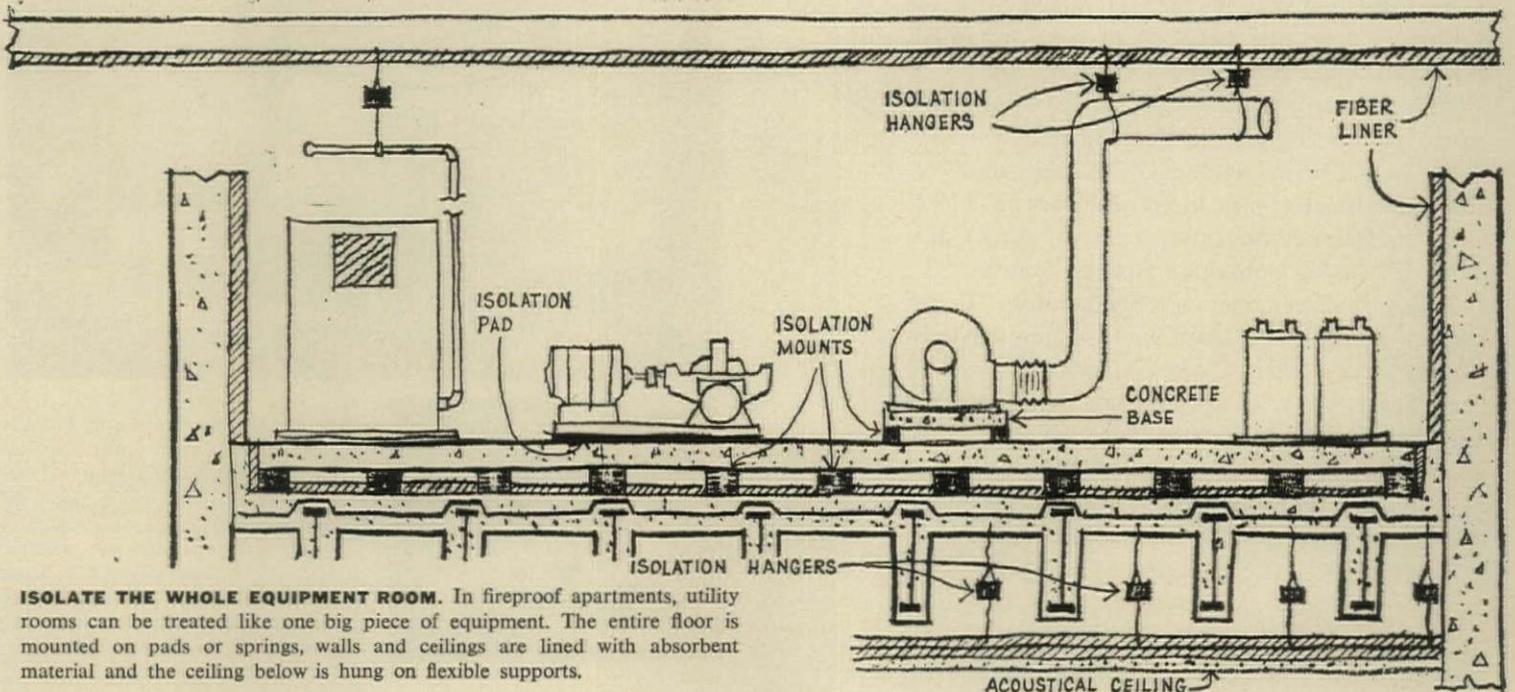
**PUT HEATING AND COOLING UNITS AT OUTSIDE WALLS.** This will shunt a good portion of the operating noise to the outdoors (right). If the equipment is placed inside (left), it will use up less valuable exterior wall area, but all of its noise will have to be absorbed within the apartment.



**MOUNT EXTRA-NOISY UNITS ON FLOATING SLABS.** The attic unit (top) is on a precast concrete slab which is heavy enough to damp out most vibration. Pads separate the slab from the concrete floor. Drawings at center and bottom show two ways to float-mount heavy machinery in a basement.



**MOUNT MACHINERY ON VIBRATION-DAMPING PADS.** Fiber pads will keep vibrations of heating and cooling equipment and washers and dryers from reaching the floor framing (left). The drawings at right and bottom show how pads can be used around supply and return air ducts.



**ISOLATE THE WHOLE EQUIPMENT ROOM.** In fireproof apartments, utility rooms can be treated like one big piece of equipment. The entire floor is mounted on pads or springs, walls and ceilings are lined with absorbent material and the ceiling below is hung on flexible supports.

# 5

## Merchandising: methods that sell homebuyers also click with apartment renters

"You can merchandise apartments the way you merchandise houses because renters and buyers want so many of the same things." So says Builder Richard Fox of Plymouth Meeting, Pa. who is using identical methods (*photos at right*) to sell houses and rent apartments around Philadelphia.

Fox's approach testifies to what is becoming a near revolution in apartment merchandising. Many builders who once used only classified advertising and were content with handout brochures from local utilities are now adopting the big-sell methods of the built-for-sale market. They are using full-page ads, four-color brochures and eye-catching displays of floor plans and community facilities. They are furnishing two, three or more model apartments. And they are even erecting temporary off-site models before their buildings are up. Example: Jupiter Corp. of Chicago rented 80% of a 40-story apartment house from three furnished models in a loft three blocks from the site.

*Why this stepped-up merchandising effort?* Industry experts cite three major reasons:

1. Tougher competition. "The big surge in apartment building has forced builders to adopt more sophisticated marketing methods," says California Marketing Consultant Sanford Goodkin.
2. Homebuilders entering rental housing. "These builders are quick to adapt house-selling methods to apartment renting," notes Goodkin.
3. The spurt in condominiums. "Many rental-apartment builders overlooked all the merchandising opportunities until condominium builders showed them the way," says Jeanine Paquette, builder public relations counsel in California.

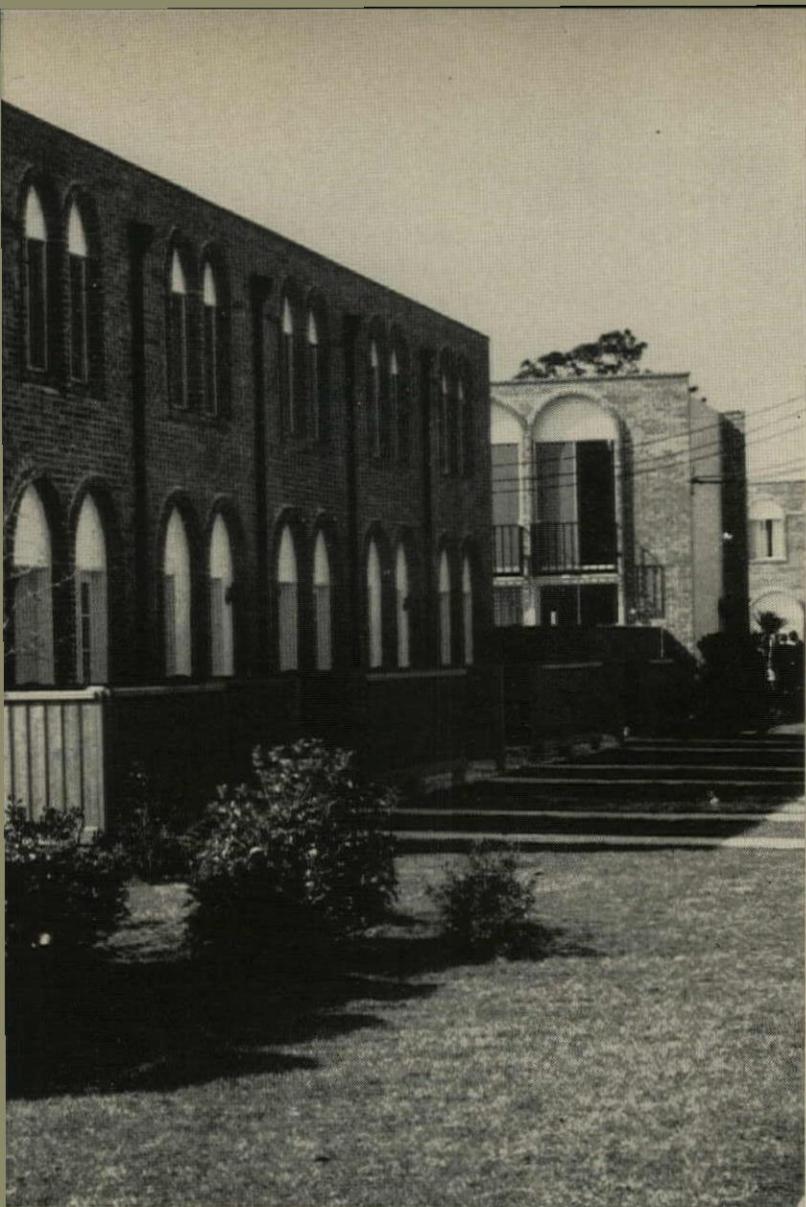


**ON-SITE BILLBOARD** carries the kind of messages seen on many for-sale housing signs. Arched billboard panels were used by Morris Construction Co. of Jacksonville to echo the design of the apartments at right. Perspective rendering shows private patios that can't be seen from the street.

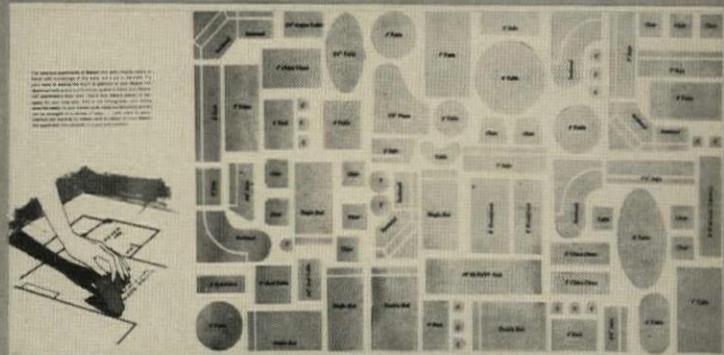
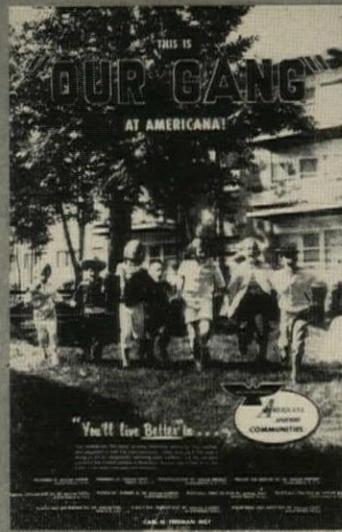
Lawrence S. Williams



**APARTMENT REPLICA** by Fox-Bilt of Plymouth Meeting, Pa. is typical of temporary models built by for-sale housers who move into the rental market. This model duplicates apartments in a six-story building, cost \$15,000 and pays off in leases signed before the building is up. Fox-Bilt displays (*left*) are just like those at its for-sale subdivision.



H&H staff



**FULL-PAGE AD AND WAY-OF-LIFE BROCHURE**, standard for-sale merchandising tools, are used by Carl Freeman of Washington, D. C., a former for-sale builder. Furniture cutouts by Fox-Bilt help prospective renters try furniture placement on scale-model floor plans.

Adams Studio



**FURNISHED MODEL** by Decorator Melanie Kahane adds eye-appeal to Mensh Corp.'s Linden Hill Towers, Bethesda, Md. where community facilities include pool, a sauna bath and tennis courts. Jam-packed closet (right) shows Fox-Bilt prospects how much they can store in their apartment's large utility closet. Rental agents demonstrate like salesmen.



Photos: Lawrence S. Williams



**PUBLIC RELATIONS**, adapted by Fox-Bilt from its for-sale housing experience, includes (top) a construction-site tour for women, (top right) clinic for renters run by Decorator Beatrice West and (bottom right) coffee for commuters who are told: "You'd have time for a second cup at home if you lived in Beaver Hill closer to the station."

# 6

NEW OPPORTUNITIES IN RENTAL HOUSING

## How to organize your projects for profit despite higher taxes

The 1964 tax law gives builders of apartments, like other housing professionals, a new maze of do's and don'ts to thread their way through. Some of the surprising results:

- Congress has struck a blow at large combines that like to get taxed as small companies by splitting their operations into multiple corporations. Despite the crackdown on multiple surtax exemptions, builders can still use the multiple setup and come away with substantial tax savings.

- Congress has redefined personal holding companies in such a way that many unsuspecting builders may find their rental income is suddenly taxed at 70% instead of at 50% or 22%. The new rules will force many builders to juggle investments, perhaps liquidate whole companies.

- New rules aimed at taxpayers who shelter real estate income behind accelerated depreciation can hurt builders who are used to taking fast write-off, then selling apartments when they incur taxable income. But for most builders, the net effect of the change is only to delay by two years the maximum tax incentive to sell apartments.

These and other modifications in federal tax law make it harder than ever for builders to avoid tax traps while taking advantage of tax shelters. And 1964 holds other complications for apartment builders. With every apartment started, competition grows keener and the penalties for a flop grow more threatening. Never before was it more vital for builders to tap the apartment market without tying up scarce capital.

*For new pitfalls in taxes, start at the right; for how to stretch equity dollars farther, see p. 120.*

The biggest new opportunity in rental housing created by the 1964 tax law is also the broadest. Across-the-board cuts in personal income tax brackets will let apartment builders compete for the extra cash in everybody's pocket. This year, a married taxpayer with \$12,000 income will save \$300 in taxes—or \$25 a month he could put into extra rent if his other expenses remain constant. Next year, a married couple with two children and income of \$7,500 a year will save \$156 in taxes—or \$13 a month on tap for higher rent.

The new law also helps apartment builders ease elderly homeowners into apartments. Now, homeowners over 64 pay no capital gains tax on the sale of their homes when the adjusted sales price (price less commissions and fix-up costs) is \$20,000 or less. Where it is more, the seller must pay capital gains on part of his profit, as in this example: an owner over 64 sells his home for \$31,800, after paying a broker \$1,590 and spending \$210 on fixup. The base price of \$20,000 is two-thirds of \$30,000. Two thirds of \$30,210 (including fixup cost), or \$20,140, is excludable from all tax.

Homes involved must have been taxpayers' chief residences for at least five of the preceding eight years. A taxpayer can sell his home tax free this way only once.

For apartment builders, the new law is more restrictive in five ways. It offers four ways—two new—to cut tax liability.

### Multiple corporations: still useful despite stiffer taxes

The new tax law imposes much stiffer taxation on the kind of multiple corporate organization commonly used by builders: separate companies under 80% common ownership or control.

Up to now all corporations in a multiple group enjoyed \$25,000 exemptions from basic corporate rates (cut from 52 to 50% in 1964 and to 48% thereafter). Under the new law, builders get only one \$25,000 exemption no matter how many subsidiaries are involved, unless the builders elect to pay a penalty. Builders have three alternatives.

1. The single exemption may be split among all companies in the multiple setup. This way, the tax is 22% on \$25,000 income as apportioned.

2. The group of companies may file a single consolidated return, taking a single exemption again. A 2% penalty formerly charged against such consolidations has been dropped. Where losses can be played against gains, this may be advisable.

3. Each corporation may take a \$25,000 exemption, but each must then pay a 6% penalty. This makes the effective rate 28% for the first \$25,000 in income for each corporation. Advises Tax Lawyer Sylvanus Felix: "Despite the penalties, it

is still advisable for builders to establish multiple corporations." Any multiple setup that earns about \$31,000 or more altogether would pay less tax by choosing the third alternative, he says.

A builder who is willing to reduce his control over his subsidiaries can avoid the 6% penalties entirely. By selling off enough stock (perhaps to a key employee) to cut his ownership of each corporation below 80%, a builder can enjoy a \$25,000 exemption in each company.

As before, builders must convince Internal Revenue Service they have a sound business reason for every separate company. To reinforce IRS' efforts to balk creation of tax-dodge companies, the new law prohibits transfer of property (other than money) by five or fewer individuals who control a corporation to another corporation created to acquire the property, or to a corporation not actively in business and controlled by the transferees.

#### Income averaging: new way to make a good year better

Builders who anticipate unusually high income in 1964 need not worry about equally high taxes. The law now lets individuals with sharply fluctuating income treat the sudden peak-earnings year as if the income were spread over five years to get more of it into lower tax brackets. Income from good years must be 33% (and at least \$3,000) higher than the average of the preceding four years. If it is, here's how to minimize your tax:

- Figure your tax on the current year after subtracting out the excess above the average of the four preceding years.

- Put one fifth of the excess back and figure your tax again.

- Multiply the added tax by five.

This produces a tax rate equivalent to spreading income from the current year across five years. It can only be used on ordinary income. Capital gains already get preferential treatment, the Treasury reasons.

There are subtleties to taking full advantage of the new rule. The trick is in keeping income from the preceding four years as low as possible. Tax Man Felix advises that builders review their income since 1960. If 1960 was a good year, but 1961 through 1963 were poor, keep 1964's income down, too (by postponing income or prepaying expenses). This should concentrate income in 1965. And the comparison period trades a poor year (1964) for a good year (1960), which lets more income be spread to get lower taxes.

#### How to use homeowner's exemptions to build capital

You can generate working capital for apartment building and move into a new house every year. Felix outlines how: a builder builds himself a home for \$14,000.

He gets a \$14,000 mortgage. A year or two later, he sells the house for \$17,000, builds a new home for \$17,000, gets a new mortgage for the full cost. The maneuver yields him \$3,000 tax-free in working capital because the out-of-pocket cost of both houses are fully covered by the loan. As long as an owner reinvests the profit from sale of one home in another new one within 18 months, he pays no capital gains tax. The law imposes no limit on how many times the process can be repeated. At 65, you can stop, pocket the gains and pay no tax at all.

#### Depreciation remains the No. 1 tax lure—despite new restrictions

Ever since the 1954 tax law let income-producing real estate qualify (like factories) for fast depreciation, apartment builders have been turning profitable apartment projects into even more profitable tax losses. Accelerated depreciation (usually

double straight-line on a new building) shields income from taxes for five or six years. After that, when a project must begin to pay taxes, many builders sell to a new owner who could begin the process over again. Such tax incentives, both the Kennedy and Johnson administrations argued, promoted shoddy construction and irresponsible management.

The 1964 tax law cracks down on fast write-offs, but not too harshly. Builders still can—and should, according to many tax advisors—take accelerated depreciation. But if they sell projects before ten years they will be penalized: a portion of the accelerated depreciation taken will be taxed as ordinary income. This is the new formula: for a sale in the first 12 months, no depreciation at all is permitted. Between 12 and 20 months, excess depreciation (the difference between accelerated and straight-line) will be taxed as ordinary income if the project is sold. After 20

### How to cut your taxes 33% via a subchapter S corporation

Example: Married taxpayer with three children making \$19,000 from apartments and homes.

#### Costly method of computing tax

Net profit .....	\$19,000	
Less: Standard deduction .....	\$ 1,000	
Personal exemptions .....	3,000	(—4,000)
Taxable income .....	\$15,000	
FEDERAL TAX—1964 RATES .....		\$3,230

#### Tax saving method: form subchapter S corporation and give 3/4 of stock to children under custodial arrangement

Father's tax		
Salary from corporation .....	\$ 7,000	
1/4 of profit		
Net before salary .....	\$19,000	
Less salary .....	(—7,000)	
1/4 to father .....	\$12,000	3,000
Net to father .....		\$10,000
*Less: Standard deduction .....	\$ 1,000	
*Personal exemptions .....	3,000	(—4,000)
Taxable income .....	\$ 6,000	
FEDERAL TAX—1964 RATES .....		\$1,080
Children's tax		
1/4 of profit from corporation .....	\$ 3,000	
*Less: Standard deduction .....	\$ 300	
*Personal exemption .....	600	(— 900)
Taxable income .....	\$ 2,100	
Tax—one child .....	\$ 360	
Tax—three children .....	X 3	\$1,080
TOTAL TAX AFTER PLANNING .....		\$2,160
TAX SAVINGS .....		\$1,070

\*Doubles standard deduction and personal exemptions

**SUBCHAPTER S** corporations give builders the limited liability of corporations while taxing income as a partnership. Another advantage, spotted by Consultant Sylvanus Felix: they let a builder take a standard deduction and exemption for all his minor children (and his wife). The children, reporting a share of the Sub-

chapter S profit as their own income, can also take a standard deduction and a personal exemption for themselves. In the example, a married builder with three children divides ownership between them and himself, cuts his taxes on \$19,000 income from his building operations from \$3,230 to \$2,160.

months, 100% of excess depreciation minus 1% for each month the project is held, will be taxed as ordinary income.

The effect of these rules is to encourage retention of ownership about two years

beyond the cross-over point at which depreciation normally falls below income. After seven years, accelerated depreciation leaves so much operating profit exposed to income tax that it promotes selling.

### How new depreciation rules encourage holding apartments

Example: a \$100,000 project, generating \$4,000 income yearly, is sold for \$100,000

If you sell at the end of	Income	Accelerated depreciation	Income from operations	Add back depreciation	Your total taxable income is
1st year	\$4,000	\$5,000	(\$1,000)	\$5,000	\$4,000
2nd year	4,000	4,750	(750)	2,160	1,410
3rd year	4,000	4,513	(513)	1,691	1,077
4th year	4,000	4,287	(287)	1,286	999
5th year	4,000	4,073	(73)*	943	870
6th year	4,000	3,869	131	657	788
7th year	4,000	3,675	315	423	738*
8th year	4,000	3,492	508	238	746
9th year	4,000	3,317	683	78	781
10th year	4,000	3,151	849	0	849

\*Sell point: if held beyond this year, taxes will increase, assuming all other factors (income, maintenance, etc.) remain constant.

**CAPITAL GAINS** tax treatment for profits from resale of apartments is now fully available only to the owner who holds a property for ten years. For each month new projects are held (after 20 months), the law lets you count as a base for capital gains 1% of the difference between straight-line and accelerated

depreciation. In the example, a \$100,000 project with a steady income of \$4,000 uses fast write-off over 40 years. After five years the project begins to show taxable ordinary income. After seven years, this income grows faster than penalized depreciation drops—making it an attractive time to sell.

Other considerations complicate this decision. If a builder operates his rental project through a holding company, he may want to depreciate his building slower to increase his net rental income (see below). On the other hand, builders who carry rental income—or losses—directly into their personal income account should feel free to take as much fast depreciation as they can. The new tax law lets an individual carry losses forward indefinitely on his income tax until charged against subsequent income. For corporations, losses can be carried forward only five years.

The new law gives builders a bigger tax incentive to buy capital equipment—from adding machines to power shovels. The law allows you a 100% depreciable basis for equipment in which a 7% investment credit is taken. Here's how this will help: assume that you buy a \$10,000 truck this year. The 1962 tax law lets you deduct \$700 from your 1964 tax bill. But up to now Treasury also required that you figure your depreciation on the truck as if it cost \$9,300. Under the new tax law the full \$10,000 becomes the base for depreciation despite the tax credit. For equipment purchased prior to this year, builders can in-

## How to build rental property without tying up scarce capital

The first place to save money in apartment financing is in the land.

If you can sell a slice of your apartment land as commercial property, it will likely bring far more than you paid for it. S. V. Hunsaker, publicly-owned Los Angeles builder, bought 20 acres for \$18,000 an acre, resold one acre for \$75,000—conditioned on getting it rezoned commercial. Thus 5% of the parcel paid for 20% of its acquisition cost.

Many landowners will accept deferred payments. Says Builder Carl Freeman of Washington: "There are no rules for this. Every deal is unique." Freeman says he generally can keep his initial land payments below 30%, with the rest paid over three to five years. Some landowners, not pressed for cash, will permit 10 years, says Freeman. "But the kind of people we do business with buy land to make a quick profit. They won't wait that long." Typically, says Freeman, landowner liens can be subordinated to the construction financing, but not to the first mortgage.

Suppliers can be tapped for secondary financing. Big Louisville Builder Joshua Adams gets help from Westinghouse and General Electric. Not only will these suppliers take back second mortgages when their appliances are used, but they will also

lease appliances. Adams pays \$4.35 a month for a refrigerator or range over a five-year period. After that, he can buy the appliances for \$1 each.

A Houston builder gets similar help from suppliers. He reports that on, say, a \$1 million project he borrows \$100,000 from an appliance supplier, to be repaid over five years at 6% discounted. "It's all hard cash," he says. "Other suppliers [of furniture, carpeting, building materials] will take a chattel mortgage for three years. On a \$300,000 deal, they may offer \$15,000. They don't hold the mortgage, they just discount it to someone else. It doesn't hurt them so why shouldn't a builder take advantage of it. It sure helps get working capital."

Caution: secondary financing by suppliers can be costly and constricting. Says Builder Robert Lanier of Houston: "It is too costly. A builder pays 10%, 12% and more for these second liens. It can break him by restricting his flexibility." Lanier suggests this rule: for every 1% increase in over-all interest costs, a builder's breakeven occupancy level jumps 5%. Lanier, preferring to keep his breakeven point at about 66%, says: "There are a lot of builders with breakeven points above 80%. With vacancies rising to 20% in some

fairly new apartments, that's pretty risky financing."

A cheaper way to reduce equity is a higher first mortgage. But here, too, a builder must be on guard. Occasionally timid long-term lenders establish an occupancy level below which they will not release funds. This hurts a builder's chances of getting comfortable construction financing. One Houston builder presses for a modification of the clause. He gets 80% of his first mortgage financing at completion, the rest when occupancy reaches the required level. Bob Lanier demands that the occupancy clause be deleted entirely from his loans. His argument: the clause fosters uneconomic practices (builders cut rents to reach the desired occupancy) and gives the lender an escape from a loan that was probably poorly conceived in the first place.

Another way lenders try to protect themselves—while endangering the project—is to require accelerated mortgage curtail in the early years. This can lift the financial load as fast as costly secondary financing.

Today's pressure on lenders to invest is clearly making some of them appraise generously. Some builders almost blush when asked how much they get on permanent loans. "If I told you what I get and

crease the base by the amount of the credit they took. Result: a bigger return on new equipment.

Consultant Felix is concerned about a counter pressure on apartment builders. IRS, following the lead of guidelines set up in 1962, has been pushing for longer depreciable life on real estate (up to 40 years) and now frowns on breaking depreciation of apartments into components (elevators, air conditioners, swimming pools, etc.) for which short depreciable lives apply.

#### **Holding company shelter is converted to a tax trap**

Builders who have shielded income from stocks, bonds and other passive investments such as second mortgages by lumping it with income from rentals in a holding company will have to scramble for tax protection.

Up to now, if 50% of a corporation's gross income came from rents, it enjoyed corporate tax rates. That is unchanged. *But* the new law redefines rental income. It used to be gross rent. Now, it must be net rent *after* depreciation, amortization, taxes and rents paid. Builders who use rapid depreciation write-offs will generally

have no rental income at all for tax purposes—thanks to the new definition.

If rental income drops below 50% of a corporate holding company's total income, the law defines it as a *personal* holding company—to be taxed at a prohibitive 70%. This is a slight reduction from the 85% tax levied prior to the change, but it is still so high a rate as to destroy a tax shelter apartment builders could use until now.

The new law also boosts from 20% to 40% the income a holding company must derive from active businesses (such as building and selling an apartment) to escape classification as a personal holding company. Capital gains do not count.

Taken together, the changes in the new law will have the effect of converting many builders' holding companies into personal holding companies. The only escape may be through liquidation. Advises Felix: "Certain relief provisions are available where a corporation was not a personal holding company under prior law but becomes one under the stricter rules. For instance, you can liquidate it under special preferential treatment to the stockholders."

Or a builder can avoid the personal holding company trap, suggests Tax

Lawyer Leonard Silverstein of Washington, D. C., if his holding company gets rid of its passive income by selling its stocks and bonds to its stockholders. Or, a builder may shift to straight-line depreciation on his rental property to make his net rental income bulk larger in the holding company's total.

The law tightens up two items:

- *Land sellers can no longer agree to interest-free deals.*

For all sales after July 1, 1963 in which payments are spread beyond a year, the law requires interest be charged. If none is provided, IRS is empowered to set one—probably 5%. The law bans interest rates below 4%. This provision will apply only to sales over \$3,000. Net effect should be to inflate land prices.

- *Stock options for key employees become less attractive.*

The law now requires that option prices be 100% instead of 85% of market price when granted. Employees must hold stock three years instead of six months before selling to qualify for capital gains. If the value of the stock drops below the option price, that price may no longer be reset. Employees must use stock option offers within five years instead of 10.

you wrote it, you'd be getting a lot of lenders in trouble," says one builder in the East. In the Southwest, a typical comment is: "I wouldn't touch a deal unless I could get all my costs back." Mortgage Banker Glenn Justice of Dallas notes that builders who try this may not get away with it in today's competitive market. High vacancy rates would force them to cough up equity to meet interest payments.

Builders approached by HOUSE & HOME are generally sour on borrowing from subcontractors as a means of reducing their own equity investment. "You lose your competitive bidding advantage," explains a builder in Milwaukee. A builder in the East observes that taking money from subs can weaken their working capital position, causing construction delays.

#### **How to reduce your equity and still avoid added risk**

Sophisticated builders expand borrowing without incurring higher interest charges. Here are four ways to do it:

1. *Postpone amortization on a first mortgage while you pay off a junior lien.*

Consider this example, revealed at a Chicago workshop of mortgage bankers: a builder of suburban apartments can pay no more than \$56,000 a year in mortgage

payments. He needs a \$750,000 loan. His lender, restricted to 66% loans, can offer only \$7,000. Yet this much principal alone requires payments of \$55,275. How to get the other \$50,000 without exceeding the \$56,000 limit? Solution: a second mortgage, to be repaid in 38 months at 5½%, is arranged. This generates payments of about \$17,240. The annual expense of the first mortgage is reduced to \$38,500 by delaying first repayment of principal for three years. Total annual charge: \$55,640. In the fourth year, charges drop to \$54,950, as the second mortgage is paid off and principal payments on the first begin.

2. *Speed construction so you can ride the construction loan and perhaps swing a better deal.*

Long Island Apartment Builders Nat Kramer and Wally Cosel increased their permanent financing from 60% to 72% by presenting the lender with 100% occupancy—*before* they finished building. They did it by lining up tenants at a pre-built model apartment. By speedy building, Kramer and Cosel saved more than enough in taxes to cover the increased carrying cost of the higher ratio loan. And they collected rents for 18 months from property still appraised as unimproved land.

Builder Ray Watt of Los Angeles shoots

for six-months' building time on a one-year construction loan so he can get his apartments filled up while he pays only interest on the interim financing instead of interest plus principal on the permanent financing.

3. *Sell part of the equity to partners—or a small syndicate.*

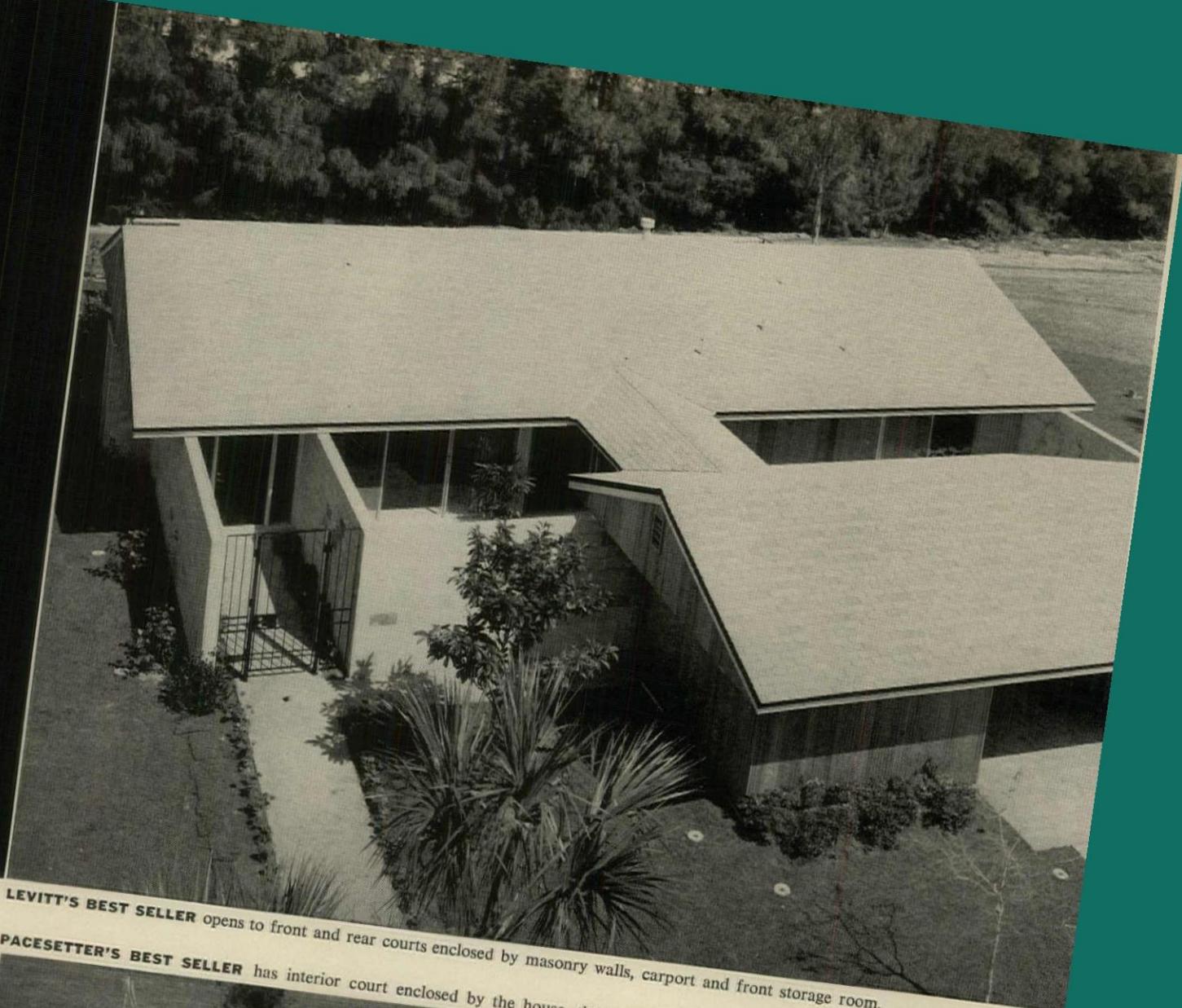
Ray Watt turns to investors when he can't borrow enough from suppliers (who can only lend up to the value of their products in the project). Investors usually earn 8% to 10%, says Watt. Where does he find investors? "They find you. But if you have to look for them, there are always loan brokers who can locate them."

Developer Philip Seltzer of Philadelphia observes: "Although syndication has not been popular recently, the syndication of sound deals still goes on in a limited way with well-to-do investors—four or five persons putting up \$25,000 cash."

4. *Build an apartment project as a group of four-unit structures.*

This lets S&Ls for instance, make 80% loans (their limit for one- to four-family structures). If you put all the units in one or two buildings, most S&Ls will allow only 70% to 75% of appraisal. This approach requires land priced under \$30,000 an acre, builders warn.

**IN  
FLORIDA...**



**LEVITT'S BEST SELLER** opens to front and rear courts enclosed by masonry walls, carport and front storage room.

**PACESETTER'S BEST SELLER** has interior court enclosed by the house, the garage and a high fence at the lot line.

**IN  
CALIFORNIA...**





## IN TWO BRUISING MARKETS

# Two fresh best sellers tap demand for outdoor privacy

The houses at left point up a strong planning trend—to inner courts or atriums introduced to merchant building by Eichler Homes and now included in garden apartments by Ross Cortese, the nation's most successful retirement builder (H&H, Apr.). Like Eichler's atrium models and Cortese's apartments, these houses were an instant hit with buyers.

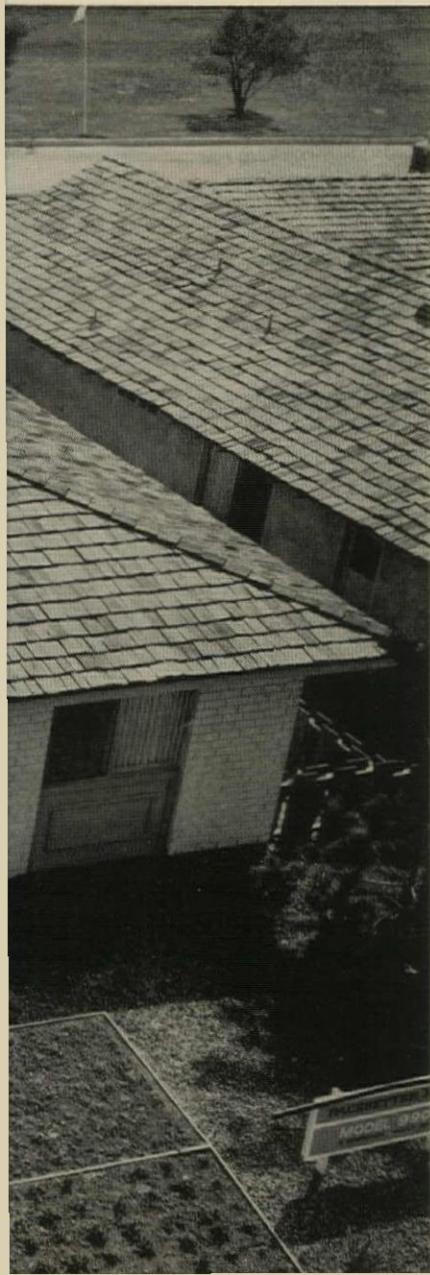
Big Builder William J. Levitt's model (priced at \$20,990) got his first Florida venture off to a flying start. One of five models at Levitt's new 450-acre tract near Cape Kennedy, it accounted for 40 of the first week's 60 sales (20 closings and 40 deposits). Says one local mortgage man: "This new house is the talk of the Cape."

Pacesetter Homes' model tops six others at the company's San Clemente, Calif. subdivision (on the coast between Los Angeles and San Diego). Even though it is the highest priced (\$32,000 to \$36,000 depending on site), it has cornered 100 of 250 sales in the past year. Says President John Klug: "We have yet to finish one of these houses before it's sold."

The two best sellers differ radically. Levitt's model—designed by award-winning Architect Gene Leedy (H&H, July '59 and June '61), who has done similar houses for custom clients—opens every room to front and rear courtyards and bypasses the front court with a high-walled entry walk (see plan, p. 125). The two courtyards add up to a whopping 1,760 sq. ft. Pacesetter's U-shaped model, designed by Will Foster Assoc., encloses a single 760-sq. ft. courtyard through which visitors walk to the front entry (see plan p. 127).

Both Architect Leedy and Designer Foster solved one of the tract builder's knottiest problems: how to create private indoor-outdoor living in cheek-by-jowl houses on small lots (Levitt's lots are 75' wide, Pacesetter's as narrow as 60'). Both Leedy and Foster make the private courts integral parts of their plans. Thus indoor and outdoor areas borrow space from each other. Both used high walls or fences, as well as the house itself, to screen the family within from the neighbor or stranger without. Both place the garage forward on the lot so that it, too, is a privacy screen.

For a closer look at these two best sellers, see the next four pages (and for a quick look at eight other best sellers, turn to p. 81 and 83).



Don Bush

Alexandre Georges



**IN FLORIDA: Front and rear courts with access from every room**

In an area where people spend most of their time outdoors, Levitt's new model carries indoor-outdoor living to the ultimate: every room in the house opens onto front or rear courts enclosed by 7' 2" concrete-block walls. Deep (4') roof overhangs and an 8'-wide roof-link between the house and the carport-storage room shade the courts and keep sun glare and rain off the big windows and sliding glass doors (*photo, opposite*).

Levitt held down costs with standard dimensions and components plus masonry construction, but used wood for the front storage room to perk up the facade. The house has 1,624 sq. ft. indoors plus the 144-sq. ft. storage room. Its \$20,990 price includes central air conditioning, range, oven, disposer, refrigerator and clothes washer. Financing: VA 30-year no down or FHA 35-year with \$1,290 down. Other models range from \$15,990 to \$21,500.

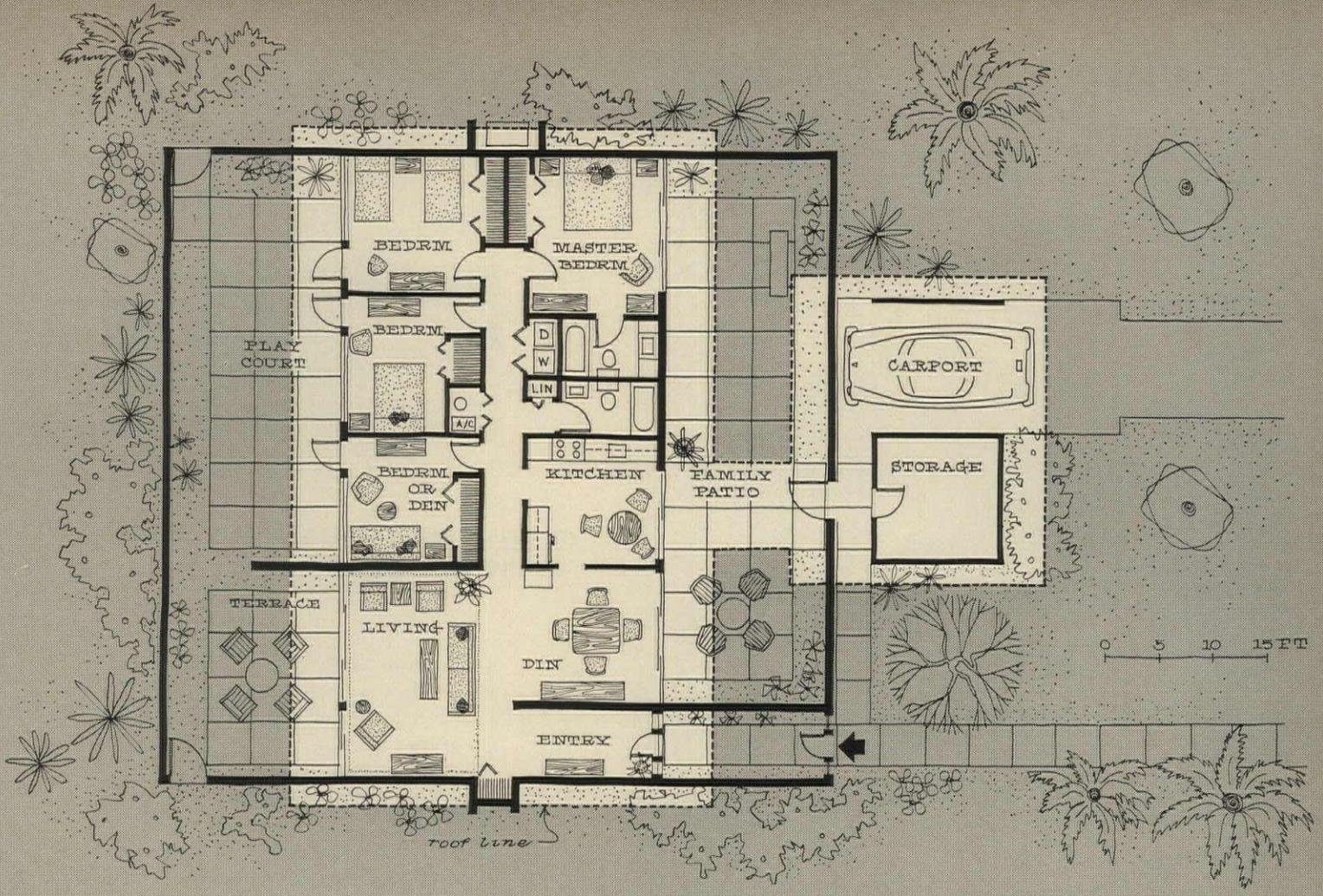
**REAR COURTS** have entries at both ends through wrought-iron gates which relieve the heaviness of concrete-block walls. Spur wall separates the play court, in foreground, from formal terrace off living room (*photo, below*).



**LIVING ROOM** is free of cross traffic (*see plan, opposite*) and opens wide to the rear courtyard through two sliding glass doors. Glass sliders also open the dining room, kitchen and master bedroom (*right*) to courtyards.



**MASTER BEDROOM** is the only bedroom facing the front court (three children's bedrooms open to the rear). It is buffered from the rest of the house by back-to-back closets and back-to-back baths.



**PLAN** makes courtyards extensions of indoor living areas, lets guests enter without crossing front court. Convenient laundry is in bedroom hall.

**FRONT COURT** is partly shaded from Florida sun by 4' roof overhangs and 8'-wide roof link, in foreground, between house and carport-storage room.





Don Bush



**IN CALIFORNIA: A protected court at the hub of the house**

The interior court in Pacesetter Homes' model offers not only outdoor privacy but also shelter from winds that sweep in off the nearby Pacific.

And the court is just one of many appeals in this 2,042-sq. ft. house. Here are ten others: 1) a separate master bedroom wing; 2) a broad terrazzo-tiled entry foyer; 3) a well-located family room—between the kitchen and the children's bedrooms; 4) a convenient laundry—in the children's bedroom wing but near the center of the house; 5) 16 lin. ft. of storage in the master bedroom's walk-in closet; 6) a compartmented children's bath; 7) double sinks in both baths; 8) luminous ceilings in the kitchen and baths; 9) a bar sink in the living room; and 10) carpeting.

Buyers also get a fireplace, TV jack and all kitchen appliances except a refrigerator. Financing: 25-year mortgages at 5½% with 25% down.



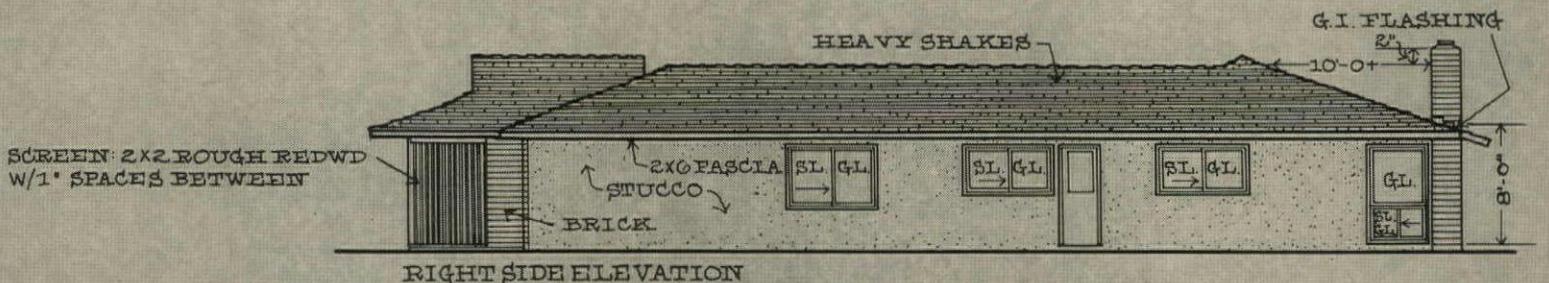
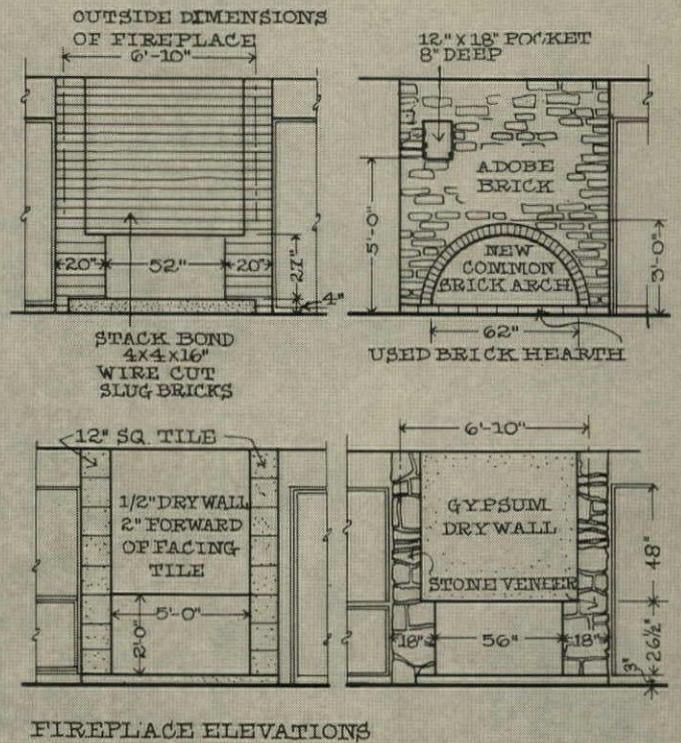
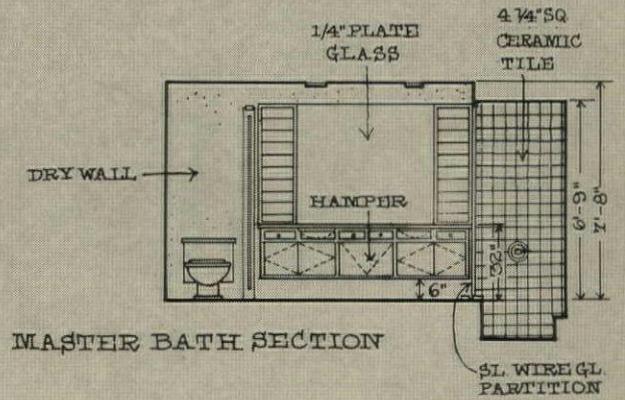
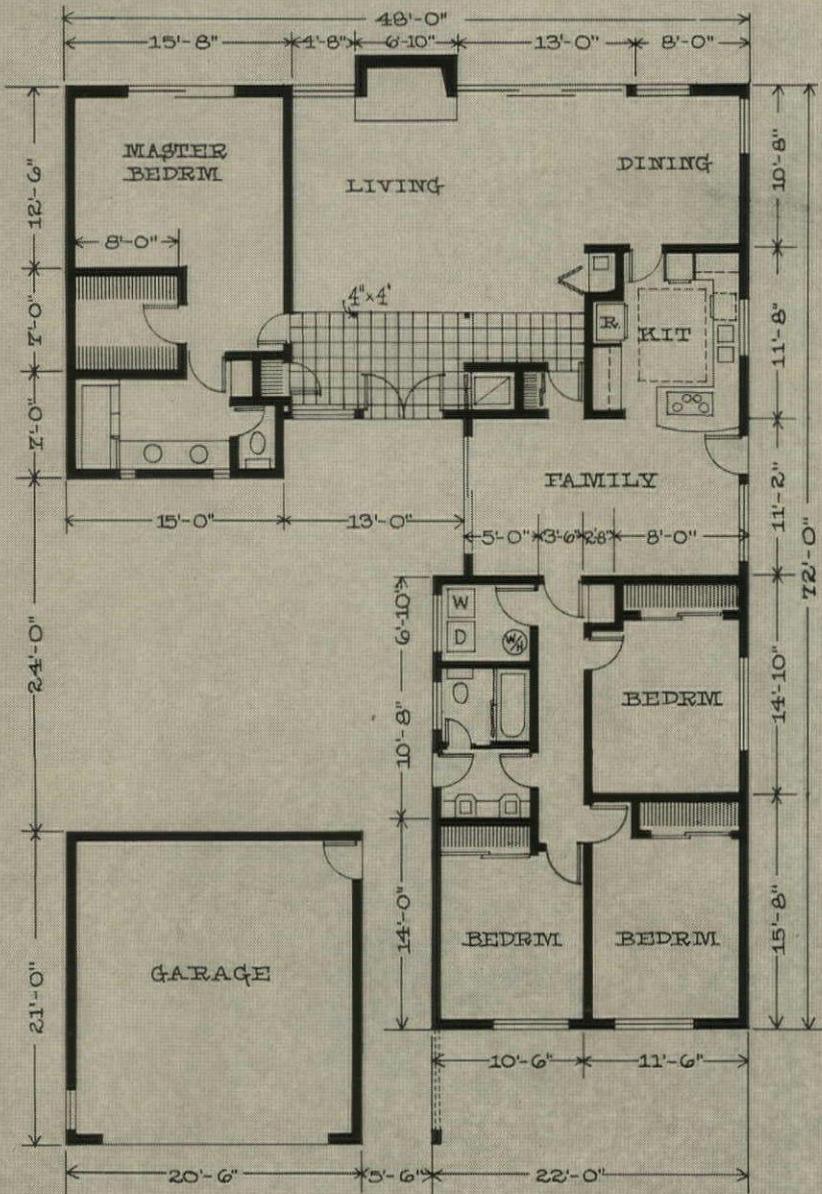
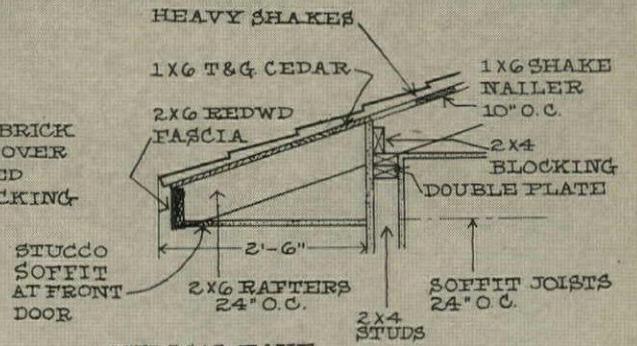
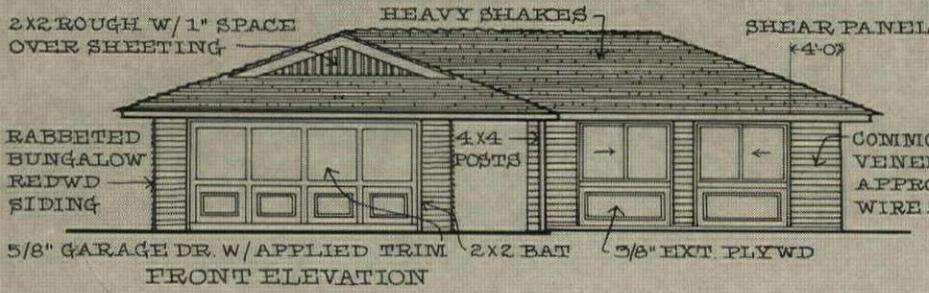
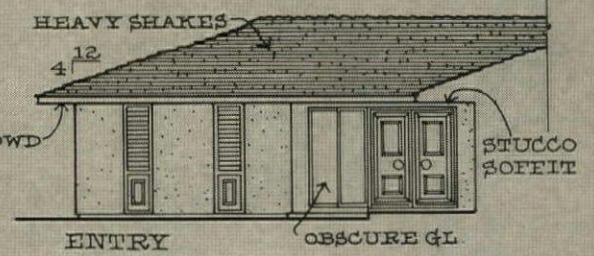
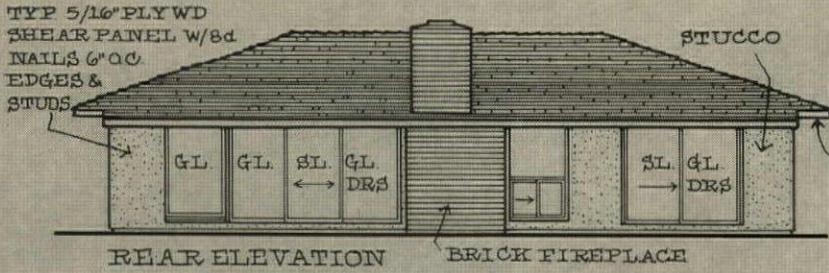
**RECESSED ENTRY** is reached by a walk that takes visitors from a narrow (3½') passage between house and garage to the big center court. Their reaction: a sense of surprise reminiscent of Frank Lloyd Wright's houses.

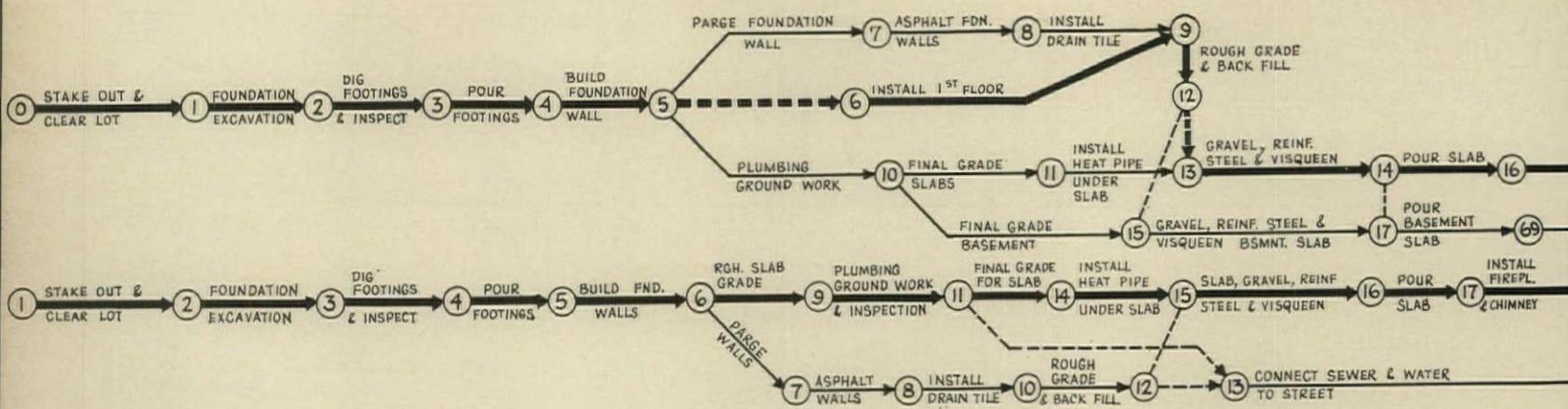


**BIG FORMAL LIVING AREA**—dining room in foreground and living room—is 32½' long and opens to the rear yard through sliding glass doors out of photo at right. In background: entry foyer and door to master bedroom.



**FAMILY ROOM**, seen here from children's bedroom wing, has beamed ceiling, vinyl-tile floor and breakfast counter which backs up to the kitchen range. The entry foyer and living room are through the door at left.





In three years, Critical Path Method—probably the first major breakthrough toward better construction management in 25 years—has shown that it can cut construction time 10 to 20% (H&H, Apr. '63). Its growing importance to housing comes from the proven adaptability of small-scaled CPM programs to electronic computers. So housing professionals all across the U.S. want to know more about . . .

## How computered CPM saves builders money

It took decades for plastics to break into model building codes. It took 20 years for roof trusses to break into merchant-built houses. It has been almost 30 years since stressed-skin panels were developed—and they have yet to make much mark in housing. The gap between innovation and adoption in housing often runs as long as ten years. As lately as 1959, Dean Burnham Kelly of Cornell's school of architecture added: "Even worse, managerial innovation, in which the U.S. has always been strong, has almost bypassed the housing industry."

Not so with Critical Path Method and its latest hookup: computers. Computered CPM gained its first foothold in housing just over a year ago.

A growing body of testimony now shows it can save money even for a 20-house builder. Putting CPM on computers, not nearly so costly as it was widely assumed only a year ago, makes it a sharper management tool in myriad ways. Computered CPM lets homebuilders: minimize their investment, build in minimum time, use a minimum of men, materials and equipment without incurring costly delays.

*Item:* Builder D. Thomas Stapley of Mesa, Ariz. says computered CPM cut costs 9% from \$530,000 to \$480,000 on 194 units of a condominium retirement project.

*Item:* Builder John R. Minchew of Annandale, Va. credits computered CPM with saving \$600 per house in a 65-house project and with slicing working days 28%. Minchew now builds in 46 days the same house he used to estimate for 60 days—but usually completed in 80 to 90 days. His cost savings lie not only in labor, overhead and financing, but in time saved on equipment use. Not counting the operator's wages and equipment—operating costs per hour can run from \$2 for a pickup truck to \$35 for a power shovel or a big backhoe.

*Item:* Builder Frank Braggiotti of Phoenix began using CPM on 22 apartments last year and finished them in 120 working days. As he became more familiar with computered CPM, his next 37 apartments took 90 days and his next 56 apartments only 69 days. On this last group he will save \$100 a day in interest on construction money alone.

*Item:* Builder Richard Fox of Philadelphia has used computered CPM on high-rise and low-rise apartments for a year and will use it on single-family houses this year. Says he: "It's forcing us to build on schedule. We used to run a month or more over schedule—on a seven- or eight-month project. So it earns an extra month's rent

for us without even figuring what we save in labor and overhead."

### What does computered CPM cost?

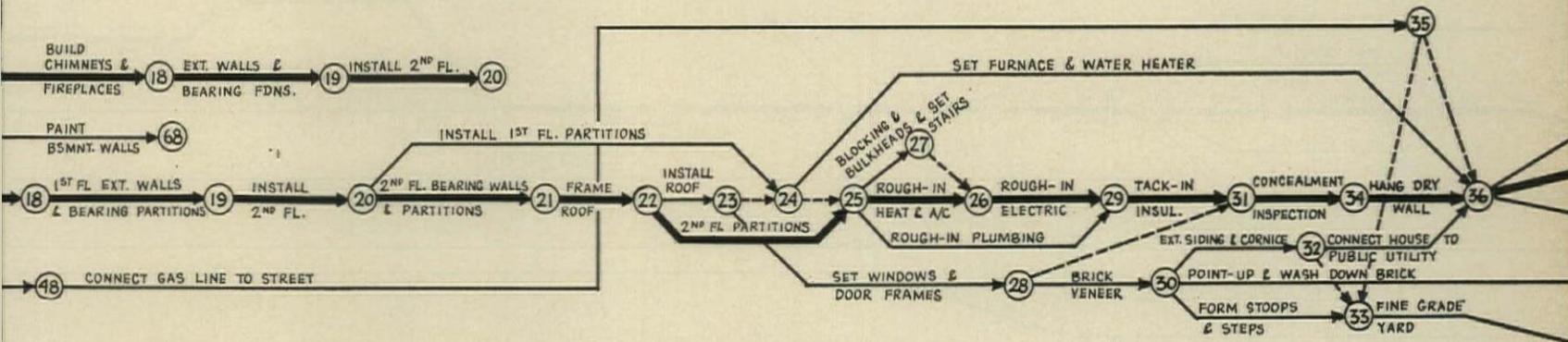
"It's hard to put a price on CPM because we don't know what we'd do without it," says Richard Fox. "Its cost is certainly not more than the salary of one top-caliber man." Says Frank Braggiotti: "On our 56-unit apartment in Phoenix we're paying the G.E. center \$900 for the whole operation, including monitoring."

John Minchew pays \$130 per house (while he saves \$600 per house with it).

Martin Quinn says that computered CPM costs less than 0.1% of the cost of construction—and is well worth it.

Costs for computer time run from \$120 per hour to about \$500 per hour, but seldom is more than one-third of an hour needed to do all the schedules for a building project. At processing centers, computer programmers cost about \$20 an hour; punch-card operators cost about \$6 an hour and handle about 200 cards (jobs) per hour. Usual cost ranges from 0.05% to 0.1% of construction cost.

Users of computered CPM advise against buying a computer. There is no question about their availability: some 20,000 computers are in action around the country today, ranging from desk-sized models to mammoth machines that fill six-story



**CRITICAL PATH DIAGRAM** for a two-story \$30,000 house (either basement or slab). A computer uses the same critical path (*heavy*

*black line*) for every similar house, produces calendar schedules for each, varying with starting dates. Diagram continues on next page.

buildings, and cost from \$20,000 to \$7 million. Unused computer time can cost an owner up to \$500 an hour; some experts estimate half of today's computers make no profit for their owners.

Critical Path Method not only takes the guesswork out of scheduling construction; it also shows the precise interrelation of every individual job that must be done to complete the project (*for details, see box opposite*). With basic CPM, if you must speed up a job, deciding where to pour in more money and manpower at least cost is fiendishly hard to figure out.

Computers make it easy. Computers don't do the deciding. They *do* provide the figures to make it easy for you to decide. Here's how. First computers figure out how much direct costs will rise as you cut construction times. Against this, you balance what you can save via lower overhead. One schedule emerges as the optimum schedule for the project, weighing savings vs. the costs of speed.

Arriving at this schedule is a three-step process. Step one is to find the cost slope of each job on the critical path and each job in the project. The cost slope is the relationship between the normal cost of the job and speeded-up crash cost of the job.

Cost slope tells a builder how fast costs will rise as jobs are speeded up. It is determined by simple arithmetic, *but by an estimator who must be thoroughly familiar with the type of project.*

$$\text{Cost slope} = \frac{\text{Crash cost} - \text{Normal cost}}{\text{Normal time} - \text{crash time}}$$

JOB	CRASH TIME	NORMAL TIME	CRASH COST	NORMAL COST	COST SLOPE
A	4 days	8 days	\$ 4,000	\$ 3,000	\$250/day
B	10 days	15 days	\$15,000	\$12,000	\$600/day
C	5 days	15 days	\$ 9,000	\$ 5,000	\$400/day
D	6 days	15 days	\$22,000	\$17,500	\$500/day

**COST-SLOPE TABLE** shows dollar costs of speed on each job. Low slope jobs (least dollars per day) are speeded to shorten project cheapest way.

### Did you just come in? Here's how basic CPM works

"CPM will force you and your people to think a project through, in great detail, so you can analyze your men, money, and materials and get them all to mesh nicely with your cash flow." So says Builder John Minchew. First, you figure out the time it takes to do every job in a house. If one job takes two trades, it is split into two jobs. Even deliveries and required inspections are listed as jobs.

When the job-time list is completed, an arrow diagram is drawn like the one across the top of the page. Each arrow represents a job. For example, the first job that can be done (stake out and clear lot) is the first arrow. The tail of the arrow is the start of the job, the head of the arrow is the end of the job. The length of the arrow has no significance. Arrows proceed in sequence, and if more than one job can be started at the completion of another job, then arrows for each of those several new jobs are drawn. You ask three questions about each job to determine where each new arrow starts and stops: 1) what jobs must be finished before this job can begin? 2) what jobs can be accomplished concurrently with this job? 3) what jobs cannot begin until this job is finished?

Beside each arrow (or job listing) you jot down an estimate of how many days it will take for each job to be completed. Now the critical path can be drawn.

The critical path is the bottleneck route, the *longest* path in time through the diagram, arrow by arrow, from start to finish. Only by shortening jobs along the critical path can total construction time be cut. In most building projects only 10 to 30% of jobs are on the critical path. So if a project must be speeded up and *all* jobs are put on a crash basis—critical and noncritical alike—over 70% of the crash effort is wasted. But if the project is CPM-oriented, you know exactly which jobs need to be put on a crash basis.

Should delays strike any noncritical job, the delay should have no effect on the over-all project time; it depends on what CPM experts call float: an *extra* amount of time over and above the *estimated* time it

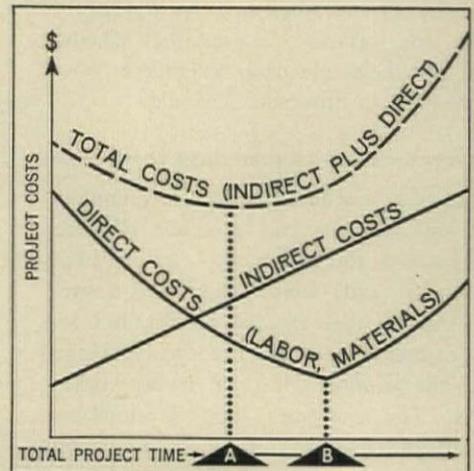
normally takes to do the noncritical job. Noncritical jobs with float can be shifted *backwards* in the time schedule. When the project goes on a crash schedule, the float may be taken away and the jobs will be completed in the normal time.

(The problem of dependency—where separate job paths are inter-related—is solved with the use of *dummy jobs*. These are represented in the network by dotted arrows and usually involve no work or time at all.)

A separate critical path does not have to be drawn for each house in a project, but separate critical path diagrams must be drawn for each type of house—splits, ranches, two-stories, etc.

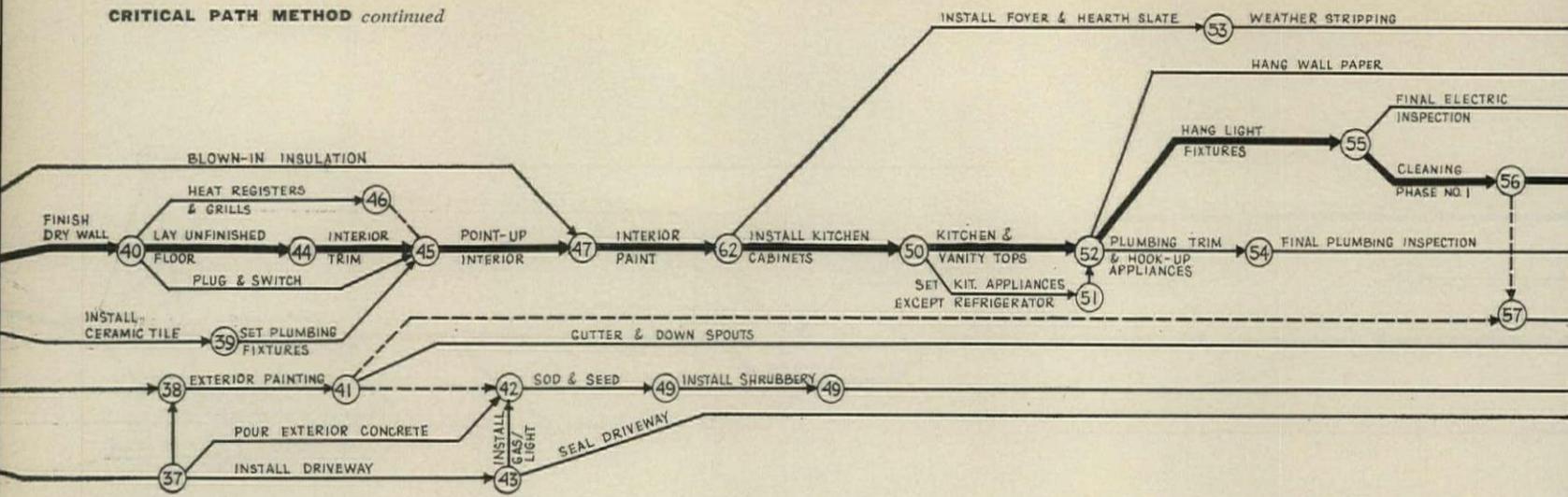
CPM does not make decisions; it gives you alternatives. Time and cost are inter-related, and most projects can be done in a number of different ways from minimum direct cost-maximum time to maximum direct cost-minimum time.

Builders using CPM assume that the project time calculated on the first critical path diagram is a maximum time. Shortening the project time—by speeding up some of the jobs on the critical path—always saves some money.



**HOW SPEED SAVES MONEY** shows up when direct and indirect costs are balanced against each other. Optimum project time (A) is shorter than the lowest direct-cost time (B).

*continued*



Second, a computer is fed cost-slopes of jobs on the critical path to arrive at a table of schedules, and determine which crucial jobs should be speeded up first. Jobs that will speed up at the lowest cost in dollars per day are picked first. Most jobs have minimum times in which they can be done, no matter how much new equipment is used on them or how many men are put on overtime. When jobs with low cost-slopes have been used up, the computer starts shortening the jobs with higher cost-slopes to make even tighter schedules. As it works, the computer gives the total direct cost—an increasing cost—for each shorter schedule. The computer stores all of these schedules in its memory in case any is needed later.

Third, the estimator balances declining indirect costs against increasing direct costs to arrive at the right schedule.

Indirect costs include whatever the CPM user wants to include: interest, normal overhead, taxes, insurance, benefits, bonus and penalty clauses in his contract, loss of market, seasonal variations in operating costs. If the project has a target date—like National Home Week or a spring opening date—the builder chooses the schedule that will meet that date, whether or not it represents an optimum schedule.

**Computers cut 14 man days to minutes**

When the schedule analysis is completed and an optimum cost schedule has been determined, the computer is told (usually by punch card) which schedule is desired, the starting date for the project, holidays to be observed, weather dates to be skipped and the number of days in a working week. The computer then develops and reports these details of the optimum cost schedule:

1. Status of each job in the schedule, whether critical or not.
2. Duration of each job in the chosen schedule.

3. Cost of each job.
4. Float time available in each job.
5. Earliest start and finish dates for each job.
6. Latest start and finish dates for each job.
7. Scheduled start and finish dates for each—these reflect the amount of float assigned.
8. The day-by-day cash flow of the project, if this is desired.

To determine the optimum cost schedule and its details by hand would take a good estimator two or three weeks. The computer does it all in minutes—plus roughly a day of make-ready time by a computer programmer.

Make-ready time for the computer is a two-step operation done by an experienced computer programmer at a computer center. First, working with the builder or his estimator, the programmer sets down on a special form for each job in the schedule: 1) event numbers at the tail and head of each job arrow, 2) normal time and crash time, 3) normal cost and crash cost, 4) cost slope and 5) job description. Second, the programmer uses this information to make out punch cards for the project. He may have to make out 100 or 1,000 depending on the size of the project. When the cards are finished, he runs them through the computer to develop a series of schedules in ever-decreasing time allowances. The final schedule (*box, right*) came from a G.E. 225 computer.

Computer manufacturers point out that today's computers are basically stupid. They cannot add 2 + 2 unless told to do so in exhaustive detail. (To program John Minchew's initial schedule the G.E. 225 was given 25,000 instructions via punched cards.) If any of the instructions fed to a computer are wrong, the final schedule may be next to worthless. However, an experienced programmer can spot a mis-

take running through a computer (by reading the output), stop the operation, punch a new card and run the whole thing over again in just a few minutes.

Actually, the arrow diagram is not an essential part of computered CPM: a good programmer can handle the whole thing from a good job list. But the arrow diagram is handy to the supervisors on the job every day and also serves as a good check on the computer's schedule. If there is an error, it can be spotted easily and a new schedule run through the computer.

**Computered CPM has eight benefits**

All other building control systems are clumsy compared with computered CPM: it moves with the project and reflects the current status of every activity every day. Its eight major benefits are:

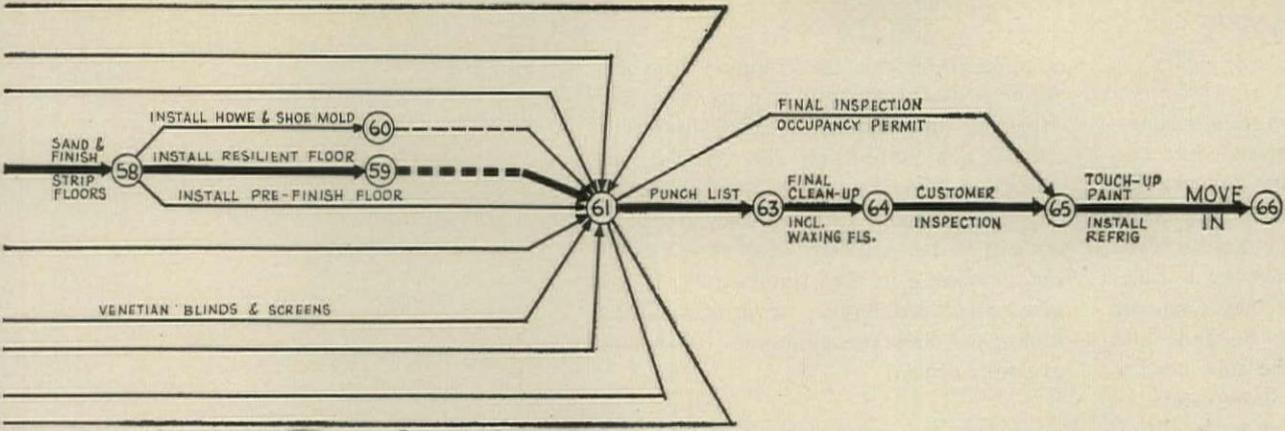
1. *Better supervision.* A copy of the computer's CPM schedule in the hands of all field superintendents gives them a daily checklist—for every house or unit in the project—on what must be done within the time limits of each day or groups of days. The computer can develop status reports, on a weekly or monthly basis, as the project moves along. These reports are developed with time, cost and work-completed reports from superintendents and bookkeepers, all of whom may file daily or weekly with the punch card operator at the computer center. The ensuing status report, often called a monitor, will show, for every week:

Status of the entire project—on schedule, or ahead or off schedule by so many days.

The new expected project—finish date compared with the original schedule finish.

Status of each activity—on, off or ahead of schedule.

Actual time used up, compared with scheduled time.



Amount of float time left for each activity.

Whether any activity's status is accelerating or decelerating the project and by how much.

A complete revised schedule for the remainder of the time allotted to the project, listing only unfinished activities and putting critical activities on a crash basis that may be needed to make up lost ground.

**2. Better accounting.** As the computer produces its monitor report, it also produces a cost-status report. The bookkeeper files invoices and payrolls with the punch-card operator who keys them to the proper activity cards and maintains a comparison of estimated and actual field costs on them. The resulting cost-status schedule then shows:

Currently estimated total cost of each finished house or unit and the original estimate.

Estimated cost to complete the house. Estimated and actual costs to date for each house or unit.

Ratio of actual costs to estimates so far.

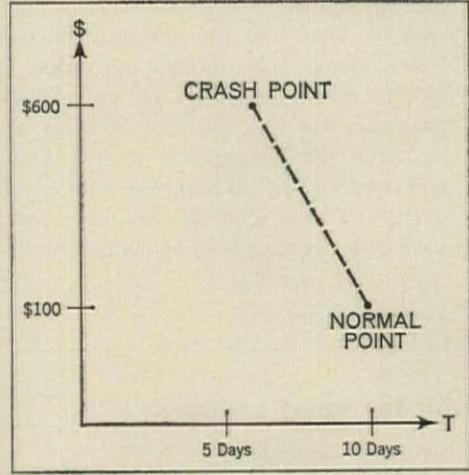
Percentage of completion expense for each.

Estimated and actual costs to date for each activity's expenses in each unit.

Cash flow of the entire project to date, both estimated and actual.

**3. Better use of manpower.** The original computer schedule and all subsequent status reports let management avoid peaks and valleys in manpower-usage. Jobs with some float time give the superintendents some discretion as to when to start them. Superintendents can use men in fill-in jobs when they are not needed on critical work. On peak days, when critical jobs are near deadline, superintendents can shift jobs with float to their late starting dates to put

**Computered CPM means new concepts, new ways of scheduling**



**COST-SLOPE** gets its name from the angle of the dotted line between high cost reflecting crash schedule and lower cost reflecting normal time.

CPM SCHEDULE SUMMARY				
SPECIAL SHORT SUMMARY				
APT. AT ELM AND PINE				
SCHEDULE NUMBER	PROJECT DURATION	DIRECT COST	INDIRECT COST	TOTAL COST
0	104	33514	10400	43914
1	99	33554	7900	41454
2	97	33554	9700	43254
3	95	33594	8500	42094
4	87	33774	8700	42474
5	85	33704	8700	42404
6	82	33784	8700	42484
7	80	33844	8000	41844
8	78	33904	7800	41704
9	76	34004	7600	41604
10	75	34074	7500	41574
11	71	34474	7100	41574
12	68	34849	6800	41649
13	67	35089	6700	41789
14	66	35314	6600	41914
15	65	35614	6500	42114
16	64	36014	6400	42314
17	63	36889	6300	43179
18	62	37764	6200	43364

**CHEAPEST CONSTRUCTION SCHEDULE** is picked by combining direct costs (from computer) and indirect costs (pencil in by builder).

APT. AT ELM AND PINE CONSTRUCTION SCHEDULE														
SELECTED FROM SCHEDULE 010 OF CPM-A														
PROJECT DURATION IS 76 DAYS														
START DATE - 25JUL63 FINISH DATE - 11NOV63														
ACTIVITY	J	STATUS	DURATION	SCHEDULED	EARLIEST	LATEST	WK/DA	FLOAT	COST	CASH FLOW				
0	1		DAYS	START	FINISH	START	FINISH	START	FINISH					
0	CL	01	OBTAIN BLDG PERMIT	0/2	25JUL63	29JUL63	25JUL63	29JUL63	26JUL63	30JUL63	0/1	50	50	
0	G	02	CRIT SITE LAYOUT	3	25JUL63	30JUL63	25JUL63	30JUL63	25JUL63	30JUL63	600	650		
0	G	17	AWARD GRADING CONTRACT	2/2	25JUL63	29JUL63	25JUL63	29JUL63	26JUL63	30JUL63	0/1	0	650	
0	G	03	PURCH REINF STEEL	0/1	25JUL63	26JUL63	25JUL63	26JUL63	29JUL63	30JUL63	0/2	0	650	
0	G	06	PURCH HOLLOW METAL	1/1	25JUL63	26JUL63	25JUL63	26JUL63	07AUG63	08AUG63	1/4	0	650	
0	G	10	PURCHASE MASONRY	2/2	25JUL63	29JUL63	25JUL63	29JUL63	09AUG63	13AUG63	2/4	0	650	
0	G	12	PURCH BAR JSTS STEEL DECK	1/1	25JUL63	26JUL63	25JUL63	26JUL63	01AUG63	02AUG63	1/0	0	650	
0	G	15	AWARD ROOFING CONTRACT	1/1	25JUL63	26JUL63	25JUL63	26JUL63	29AUG63	30AUG63	1/0	5/0	0	650
0	E	25	AWARD ELECT. CONTRACT	2/2	25JUL63	29JUL63	25JUL63	29JUL63	29JUL63	31JUL63	0/2	0	650	
0	M	29	AWARD PLAC. HEAT CONTRACT	2/2	25JUL63	29JUL63	25JUL63	29JUL63	06AUG63	08AUG63	1/3	0	650	
0	I	77	OBT ELEC APPROVAL	30	25JUL63	06SEP63	25JUL63	06SEP63	09AUG63	23SEP63	0/2	2/1	0	650
1			DUMMY	0	29JUL63	29JUL63	29JUL63	29JUL63	30JUL63	30JUL63	0/1	0/1	0	650
5	G	04	REINF STL. DRGS APPROVALS	1/1	25JUL63	05AUG63	26JUL63	05AUG63	30JUL63	07AUG63	0/2	300	950	
7	G	07	HOLLOW MTL DRGS APPROVAL	1/2	25JUL63	06AUG63	26JUL63	06AUG63	08AUG63	19AUG63	1/4	200	1150	
9	G	11	MASONRY APPROVALS	3	25JUL63	01AUG63	29JUL63	01AUG63	13AUG63	16AUG63	2/1	2/1	0	1150
10	G	12	STRUCT STL. DRGS APPROVAL	10	25JUL63	09AUG63	26JUL63	09AUG63	02AUG63	16AUG63	1/0	1000	2150	
11	G	44	ROOF APPROVAL	10	02AUG63	16AUG63	26JUL63	09AUG63	30AUG63	16SEP63	3/0	5/0	0	2150
25	E	17	PROVIDE TEMP. POWER	1/1	29JUL63	30JUL63	29JUL63	30JUL63	01AUG63	02AUG63	0/3	300	2450	

**COMPUTERED CPM SCHEDULE** (shown in part) tells at a glance when each job may—and must—begin and end. Letters and numbers I and J (top left) denote the tail and head of arrows from CPM diagram. Float time at right is shown in weeks and days. Cash flow is a running total.

continued

more men on critical jobs.

4. *Better subcontractor relationships.* Both the original computer schedule and the subsequent status reports can provide monthly schedules by trades to show what work each trade must accomplish each day. Subs like to have their own trade-oriented schedules because they eliminate arguments about what's to be done and when. Also important to the subs are the cost-status reports, which show estimated and actual expenditures by trade. Progress payments can be governed by the reports—a much better system for both the builder and the sub than the old percentage payment system.

5. *Management-by-exception.* Management men get time to think ahead, plan new developments and scour the country for new ideas. Supervision can be left in the hands of superintendents and CPM schedules. The status-reports system means management must be asked for new decisions only when something goes wrong with the project.

6. *Less sting in work stoppages.* Blizzards, floods, wildcat strikes, jurisdictional disputes, law suits and injunctions can and have ruined project profits and have sometimes bankrupted builders. When a work

stoppage threatens, the computer can develop revised schedules that are five, ten, fifteen or any number of days shorter to meet a new completion date. And it can quickly develop new costs over and above original estimates. In most cases, the project can be rescheduled (in minutes) without increasing its cost significantly. If the new cost is prohibitive, the project can be redesigned and recomputered for higher prices or rents.

7. *Time and cost analysis.* Says John Minchew: "I always knew what the total bill for each sub was on any particular house, but with weekly status reports and cost reports, I know exactly how long it takes to put in a particular subfloor and exactly what it costs me." Further, reports can be studied in detail for any part of the house and can be used to develop new designs and new engineering methods.

8. *Better sales.* Sales managers get copies of all original CPM schedules and status reports. They can thus promise firm delivery dates, even though deliveries are months away. Customers like not only this assurance but also the idea of being able to check the progress of their houses—and tell their friends about it—on the sales manager's CPM schedule. So the schedule itself also becomes a good selling tool.

### Is computered CPM too complex for most builders?

Yes, say many builders who have looked into it—despite the evidence of computered CPM's advantages. Here's a rundown on their reasons—and the answers from CPM enthusiasts:

Builder Robert Schmitt of Berea, Ohio says builders who build less than 50 houses a year in the same style and price class probably don't need CPM if they really know their business. "In repetitive operations like this, you know what's holding you up now and what may hold you up on the next house. So you can take measures immediately to see you don't have a bottleneck next week or next month. Besides, it's difficult to get superintendents and middle management to understand and work with computered CPM."

Stanley Works' Harry Lake, an engineer with a close knowledge of NAHB's TAMAP study (which speeded up Bob Schmitt's building time as much as 40%) and a thorough familiarity with CPM, says: "CPM is no panacea. If you and your staff are not thoroughly familiar with apartment or homebuilding, a computer process center is not going to solve your problems. CPM is best used by those builders who have formerly had to buck hundreds of bottlenecks in day-to-day building. When they apply their deep knowledge to computered CPM, it becomes a good management tool. For those without experience in building, CPM can be just a lot of added

paperwork headaches."

Replies CPM-user John Minchew: "When I was a 15-20 house-a-year builder, I could make money being practically everything myself—accountant, superintendent, estimator—because up to that point I could control everything with progress charts and a big notebook. But as our building business grew bigger, I was continually in hot water with everything from delivery dates to money requirements. I defy any builder to keep in hand himself all of the interrelationships and activities involved in any project planned for much more than 20 or 30 houses. It just isn't possible to keep on the track and to delegate authority properly without the management blueprint I get with computered CPM."

CPM users say the trouble with simple construction-progress bar charts (Gantt charts to statisticians) is 1) they don't show interrelationships among jobs, 2) they cannot define those jobs that are genuinely critical, 3) they cannot show the entire plan of the project, 4) they cannot be modified when unexpected problems occur, 5) they cannot indicate a correct course of action when delays arise, 6) they are either over-simplified or are too detailed in one area and too sketchy in another, 7) they are developed on a time base alone so they cannot be used to tell managers who is available to speed a critical area or what it would cost.

# HEATRIM\* BASEBOARD PANELS

**Cost less to install  
...please both apartment  
owners and tenants**

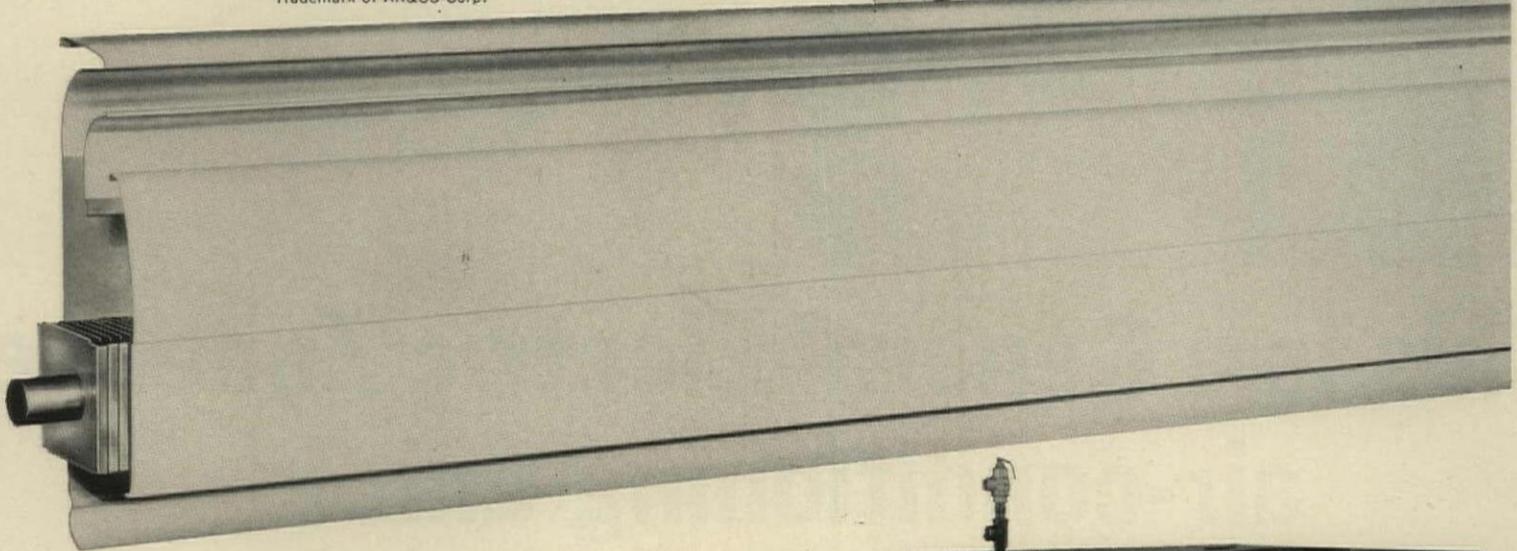
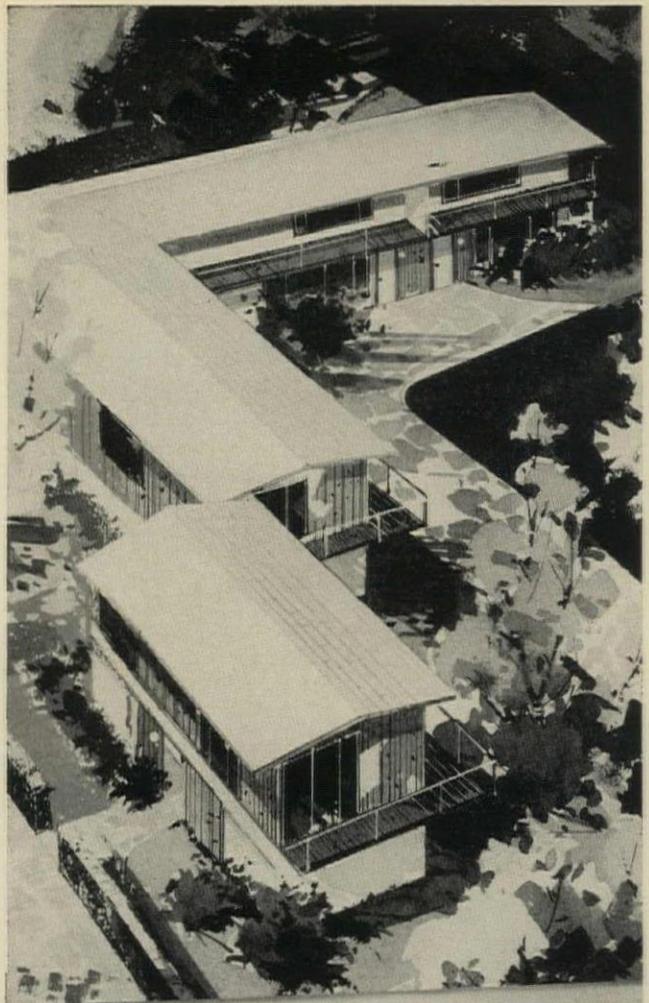
*A hydronic heating system with modern HH Heatrim by American-Standard costs you less than a conventional one-pipe system with convectors or radiators because:*

*(1) Materials cost less. (2) Less piping is required.*

*The finned copper tubing in the heating panels becomes part of the piping system, eliminating the complex under-floor piping arrangements needed for a one-pipe system. Both labor costs and installation time are reduced.*

*Owners appreciate a Heatrim installation because it cuts maintenance and fuel bills. Tenants like the trim styling that saves room space, the even, draft-free comfort, the individual controls for each apartment.*

\*Trademark of AR&SS Corp.



**For maximum economy, combine  
with a long-life cast iron boiler**

*Compact American-Standard boilers are designed to give high heat output with minimum fuel consumption.*

*Planned for easy installation, they have durable cast iron sections for long, efficient service. Many models for individual-apartment or central-system use, for hot water or steam, gas or oil.*

*For details see your American-Standard heating contractor. Or write American-Standard, Plumbing and Heating Division, 40 W. 40th St., New York, N. Y. 10018.*

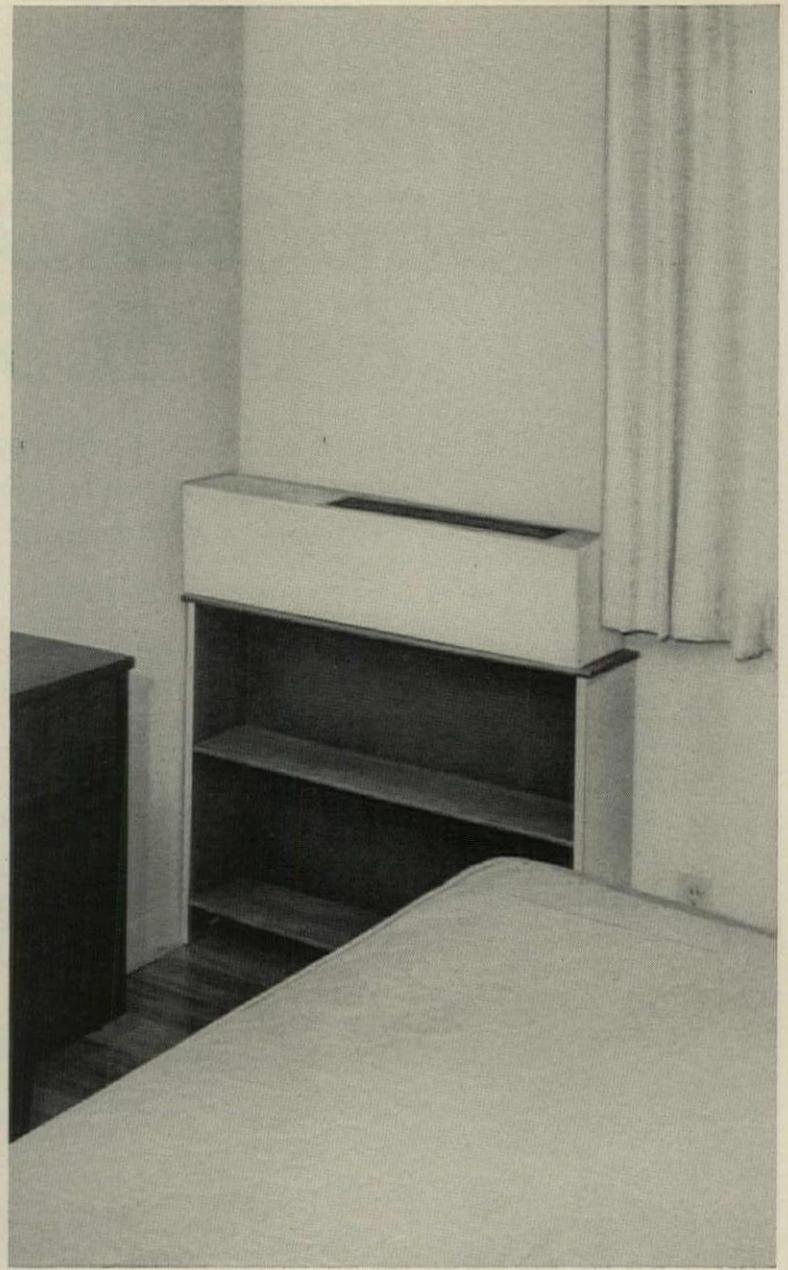
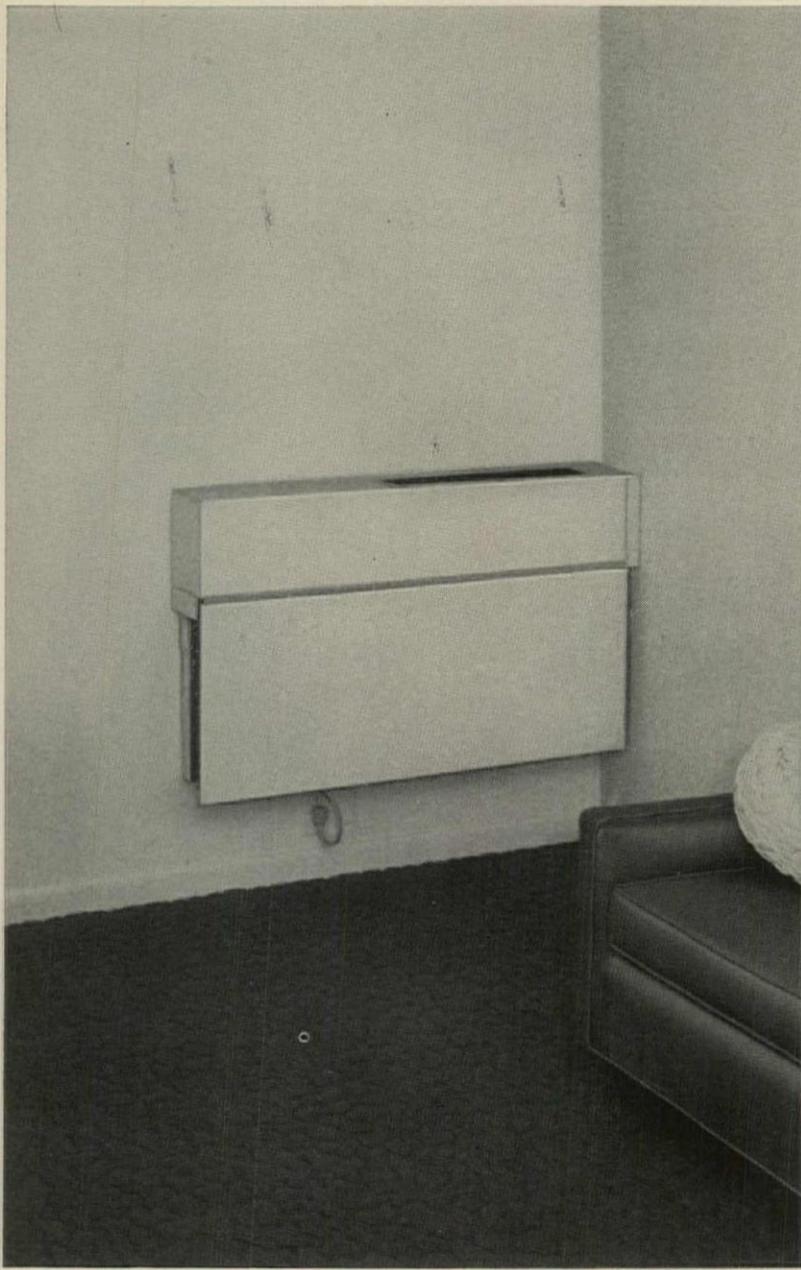


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**AMERICAN-Standard**  
PLUMBING AND HEATING DIVISION



**MODEL G-40**  
Gas-fired for hot water  
or steam. A.G.A. outputs  
12,000 to 540,000 Btu/hr



# This is a General Electric Zoneline air-conditioning unit in Juliana Patricia apartments.

**Ducting from the same unit heats and cools another room at about half the cost of a second full unit.**

The flexibility of G.E.'s Zoneline air-conditioning units allowed builder Enrique Pantoja to use one air-conditioning unit per apartment with ducting to the second room. This saved about half the cost of a second full unit for each room. This kind of flexibility lets Zoneline meet any cooling or heating need.

Money-saving flexibility and custom design were just two of the reasons why Enrique Pantoja chose Zoneline for his Juliana Patricia apartments in Louisville, Kentucky.

Mr. Pantoja also chose Zoneline "instead of conventional through-the-wall units, because of Zoneline's exceptionally quiet operation. I liked Zoneline's operating cost, too. Our local utility estimated that the *total* electrical bill for each G-E Gold Medallion apartment would average \$15 a month.

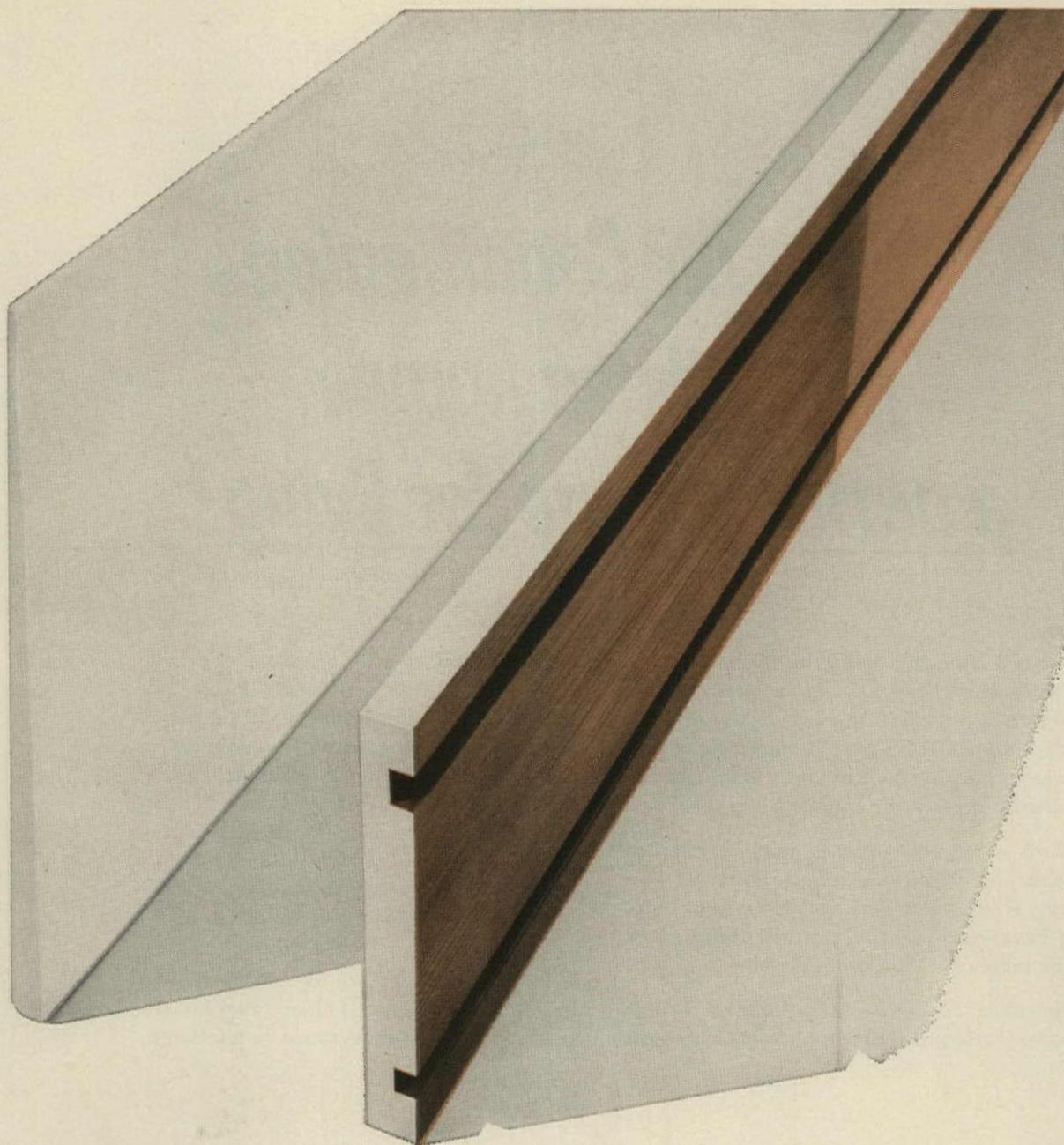
"Another thing that decided me on Zoneline was that there is less upkeep

such as painting and cleaning, because of the cleanliness of electric heating.

"My tenants are happy with Zoneline, too. They can regulate the temperature in their apartments as they like. They're also pleased with the low electric bills and absence of gas fumes. In fact, everybody is so happy, that Zoneline will be a part of any building I do in the future."

There's a model for almost every wiring or installation need. For details, write General Electric Co., Air Conditioning Dept., Appliance Park, Louisville 1, Ky.

**GENERAL  ELECTRIC**



## **COST CUTTERS**

### **PALCO PAINT-PRIMED REDWOOD PLOWED FASCIA, SIDING**

*NEW! PALCO DOUBLE-PLOWED FASCIA BOARD* cuts on-site labor. One plow on back fits  $\frac{1}{4}$ " soffit, the other,  $\frac{3}{8}$ ". Eliminates cost to apply soffit mouldings. Available in any combination of specified lengths — and mill primed! With Palco primed fascia and siding, or paint prefinished siding, you save many ways!



**PALCO**<sup>®</sup> PAINT-PRIMED REDWOOD  
*Architectural Quality*

**THE PACIFIC LUMBER COMPANY**

San Francisco • 100 Bush Street • Chicago • San Marino, Calif.

6586

# ***YORK Air Conditioning gives these homes a better climate for living!***

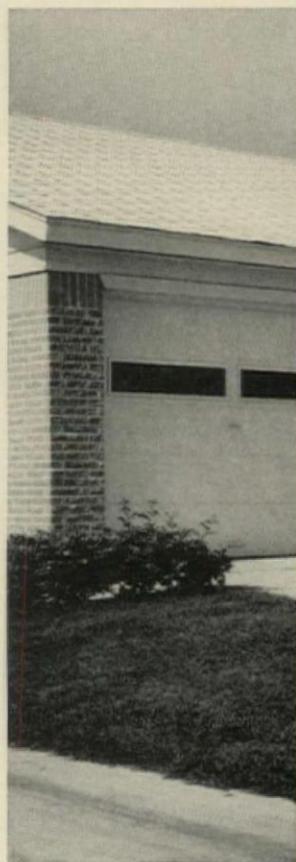
Central air conditioning by York can be a "sales closer" for you . . . a profit-maker, not an added cost! As more and more home buyers want and expect year-round comfort, you can set the pace in your community by offering quality air conditioning, by York.

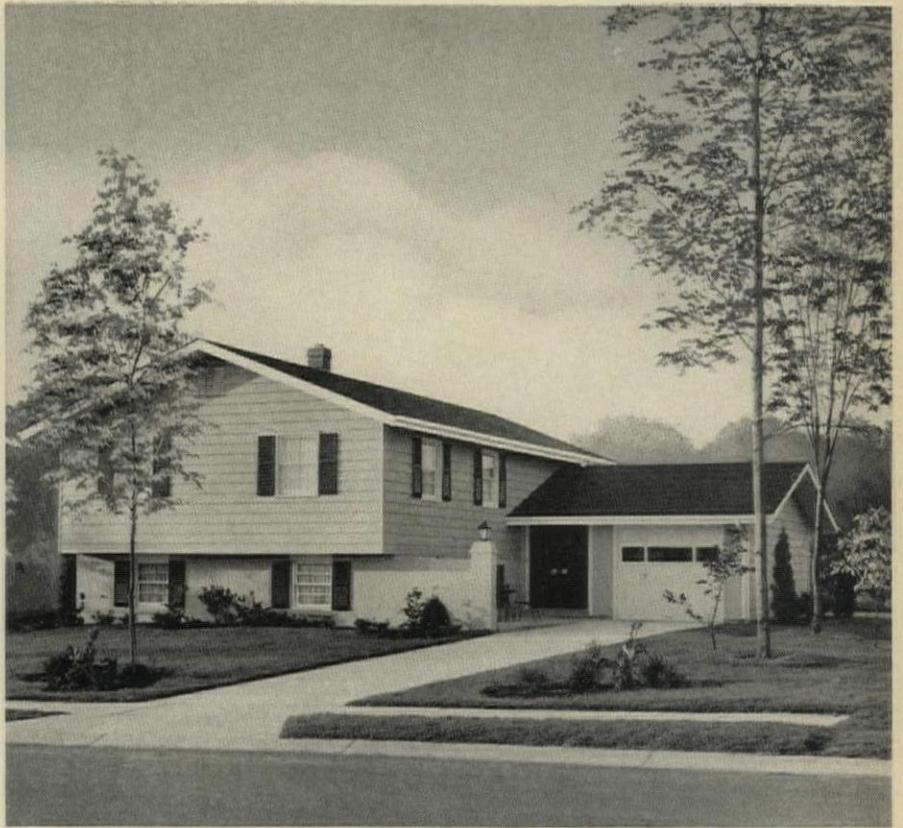
*York systems are versatile*, may be installed with any type of heating system. Or you may select a complete package that includes a Borg-Warner oil or gas-fired furnace and the matching York cooling system.

*Advanced York features* for builders include factory-charged systems, with Quick-connect

couplings that speed and simplify installation on the job-site; a complete line of units that adapt to your specific needs: units that tuck away in attic, carport, basement or utility room. And in every case, each system has been designed with the builders' needs in mind . . . has been engineered to give your homes sales appeal. Yet, York air conditioning systems are competitively priced, give you maximum value for every dollar.

*Mail the coupon to York* for complete information on the York Builder Program and detailed facts on York systems for fine homes.





Builder Frank Robino offers York Central Air Conditioning in these homes at Heritage Park near Wilmington, Delaware. Both the Holiday House (left) and the Crestwood House (right) were designed by John A. Falini, Architect.



Builder Fred Peek specified York Central Air Conditioning for these fine homes in Richardson, Texas. Architect is David M. Sweeney.

**YORK** CORPORATION  
 Subsidiary of Borg-Warner Corp.  
 YORK, PENNSYLVANIA



THE QUALITY NAME IN AIR CONDITIONING AND REFRIGERATION

**WANT MORE FACTS?**

YORK CORPORATION  
 York, Pennsylvania

HH-54

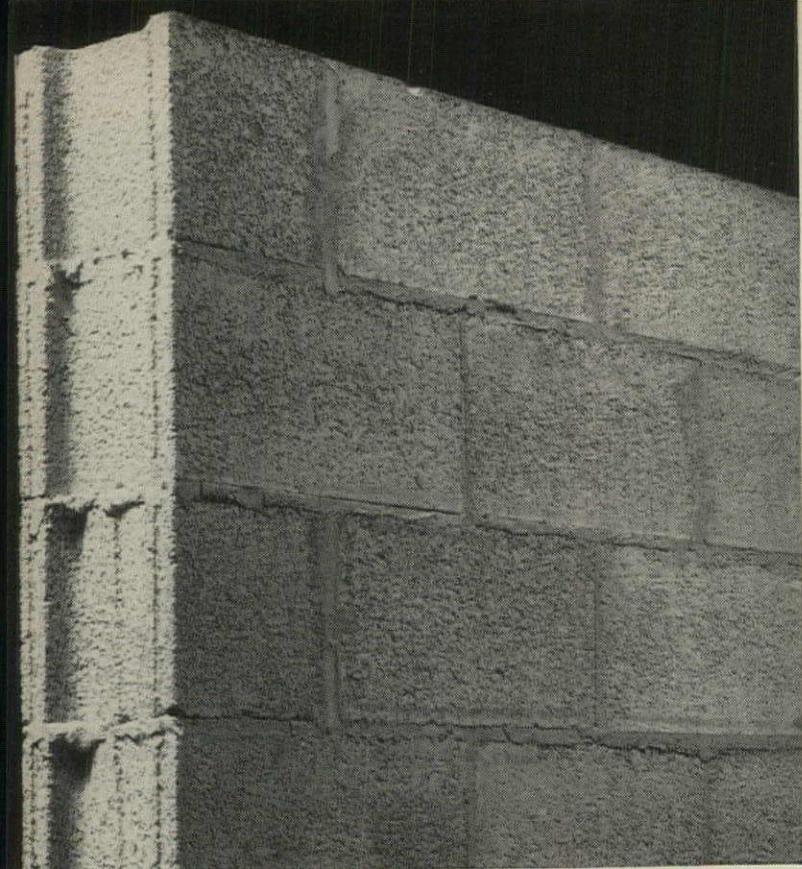
Send me complete information on York Central Air Conditioning.

Name \_\_\_\_\_

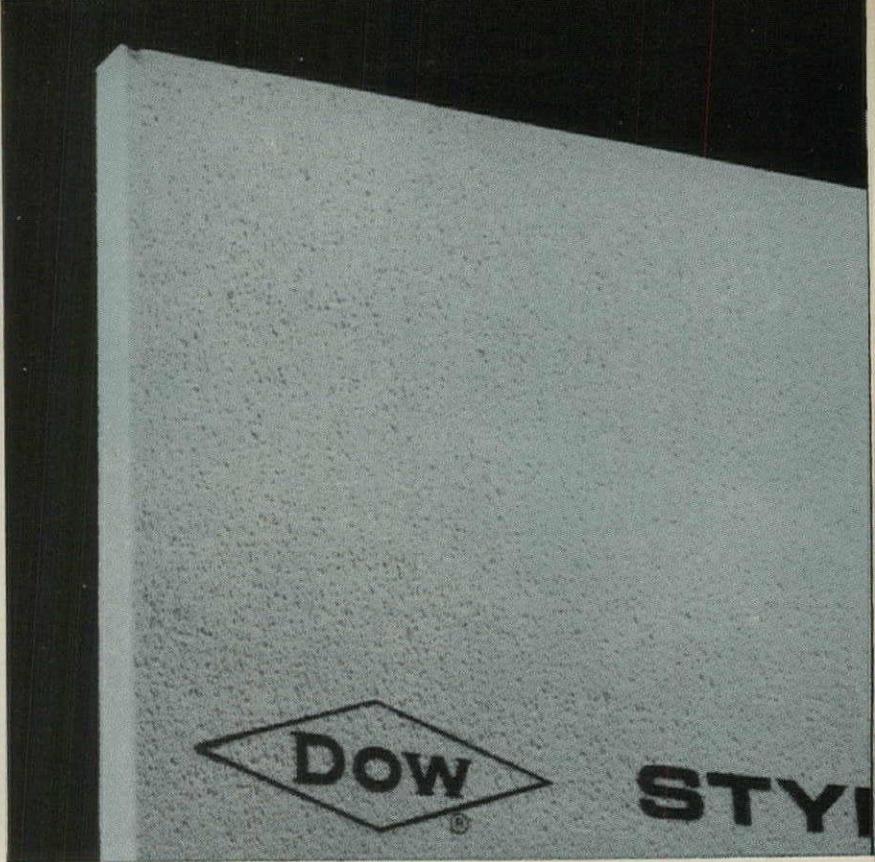
Address \_\_\_\_\_

City \_\_\_\_\_

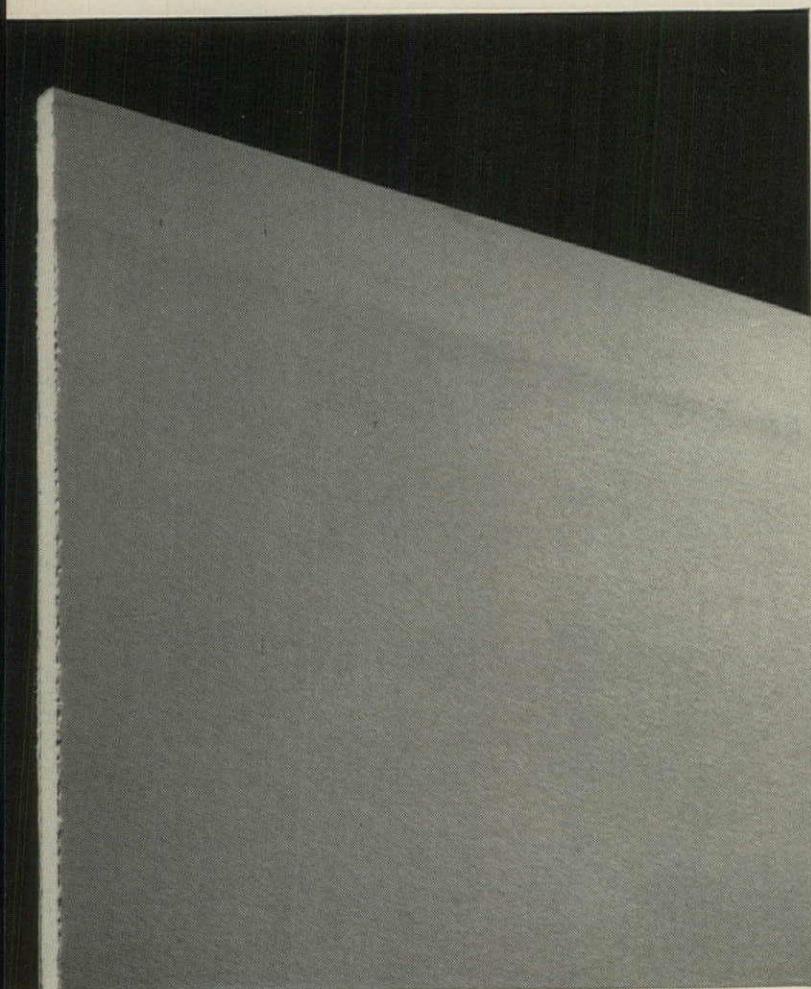
State \_\_\_\_\_



**1. To insulate masonry walls economically:**



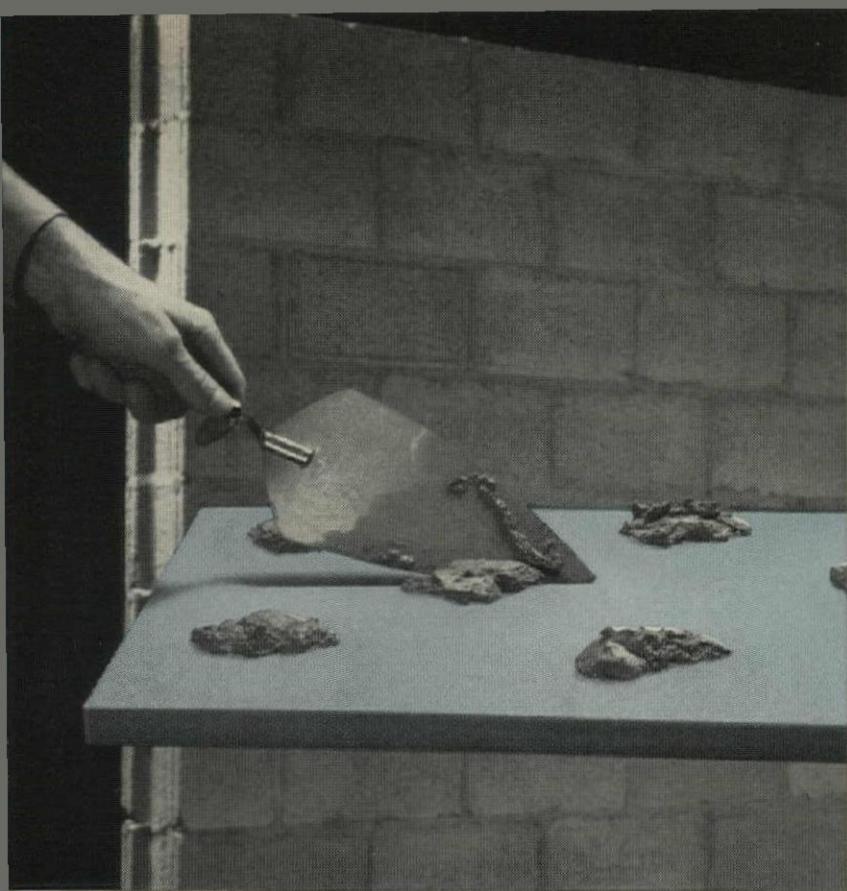
**2. Remember Styrofoam® FR insulation board, and use it. If it isn't blue, it isn't Styrofoam.**



**5. Take wallboard. (No vapor barrier, no furring. You get a solid, insulated wall at almost the same cost as a furred, uninsulated wall.)**



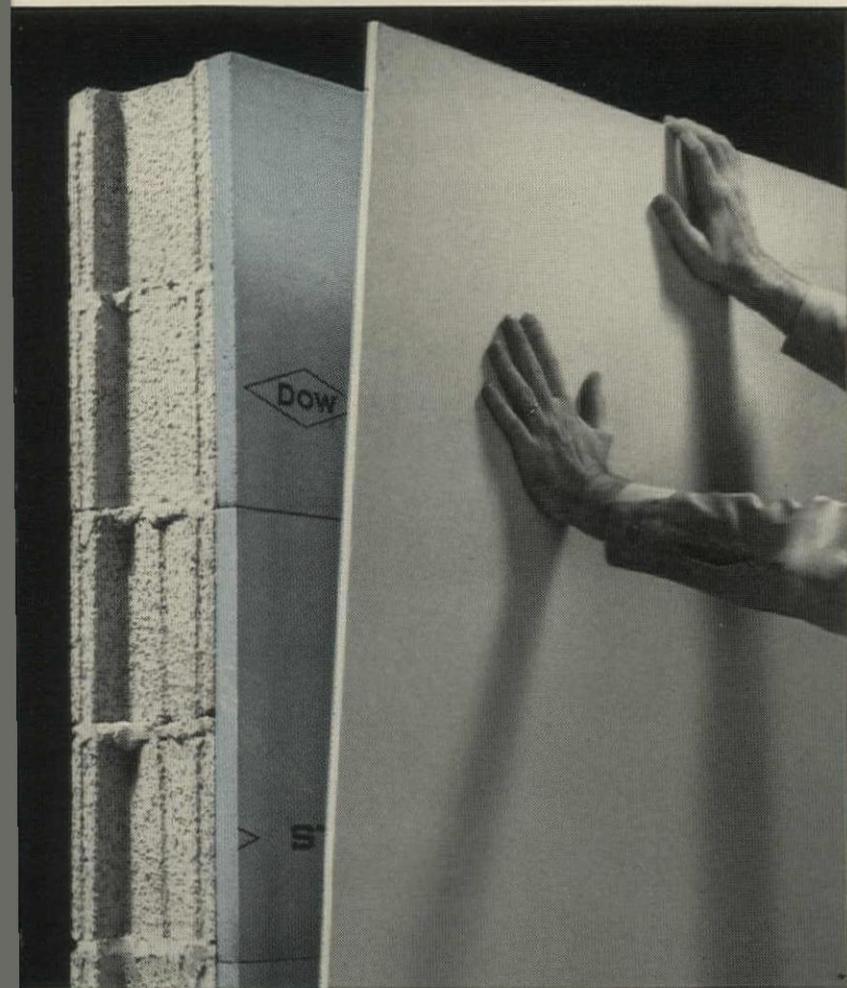
**6. Apply Styrotac—no nails to “pop,” no holes to fill.**



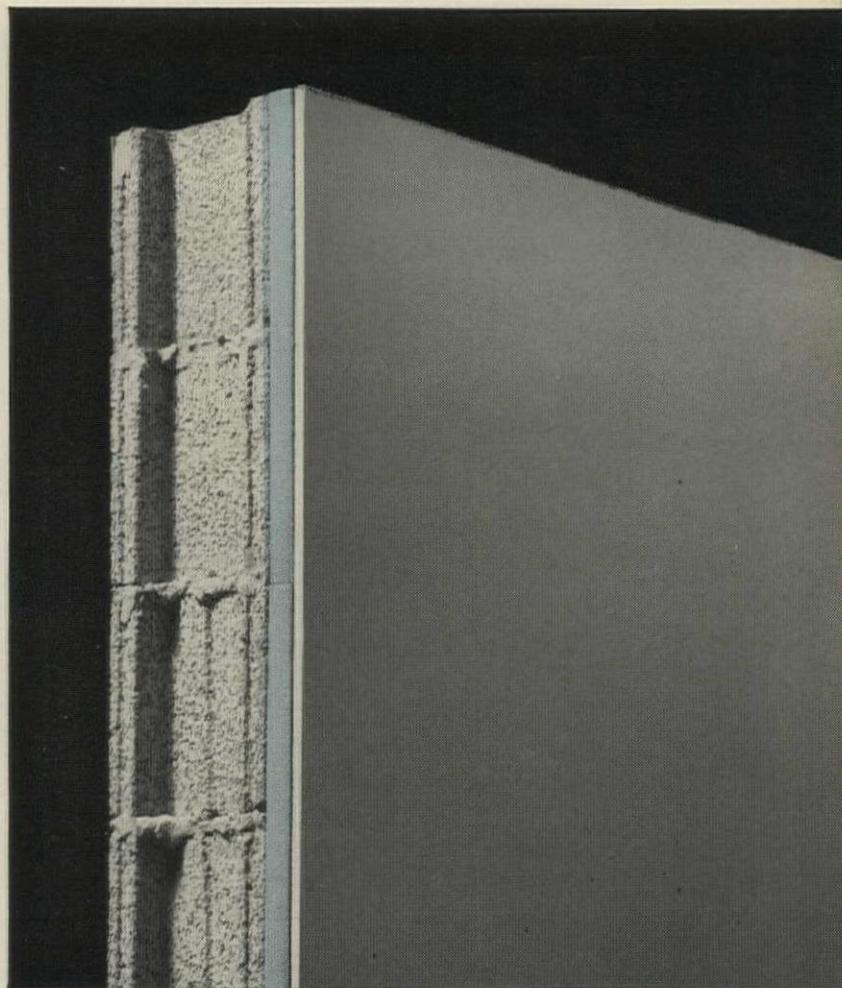
**3. Apply Styrotac® bonding adhesive.**



**4. Press Styrofoam FR into place. It installs fast, resists heat transfer, stays dry for year-round comfort.**



**7. Take your last look at Styrofoam FR. Press on wallboard.**



**8. OK. Now forget it. Styrofoam FR won't absorb water, won't let moisture pass, won't need attention —ever. Any questions? See Sweet's Light Cons. File 4a/Do. The Dow Chemical Company, Midland, Mich.**





↑ **This one couldn't be more handy.** Here's a new special-purpose body that gives you a place for everything; enables you to carry more tools and supplies and get your work done with less waste motion. Riding on a tough Chevrolet Series P20 Forward Control chassis, it's ideal for hauling appliances and plumbing, electrical or building materials.

Side loading ramp model (*below*) is just one of four different kinds of Chevrolet pickup trucks. Your choice also includes conventional Fleetside and Stepside models and the handsome El Camino. The Corvair 95 Rampside features the ease of a unique side loading ramp plus the extra efficiency and load space provided by rear engine design.



↑ **Chassis cab with special utility body** provides a handy repair shop on wheels. You can choose from five Chevrolet light-duty chassis-cab models in a wide range of wheelbases; get one that's just right for your special body. All feature 34-inch-width frames and independent front suspension.



# Which truck is the Chevrolet?

**The answer, of course, is that all of the trucks pictured here are Chevrolets . . . despite their widely varying appearances. We point them out as evidence that Chevrolet now offers an exceptionally broad, versatile line of trucks for your kind of work . . . trucks with more quality and money-saving features than ever before.**

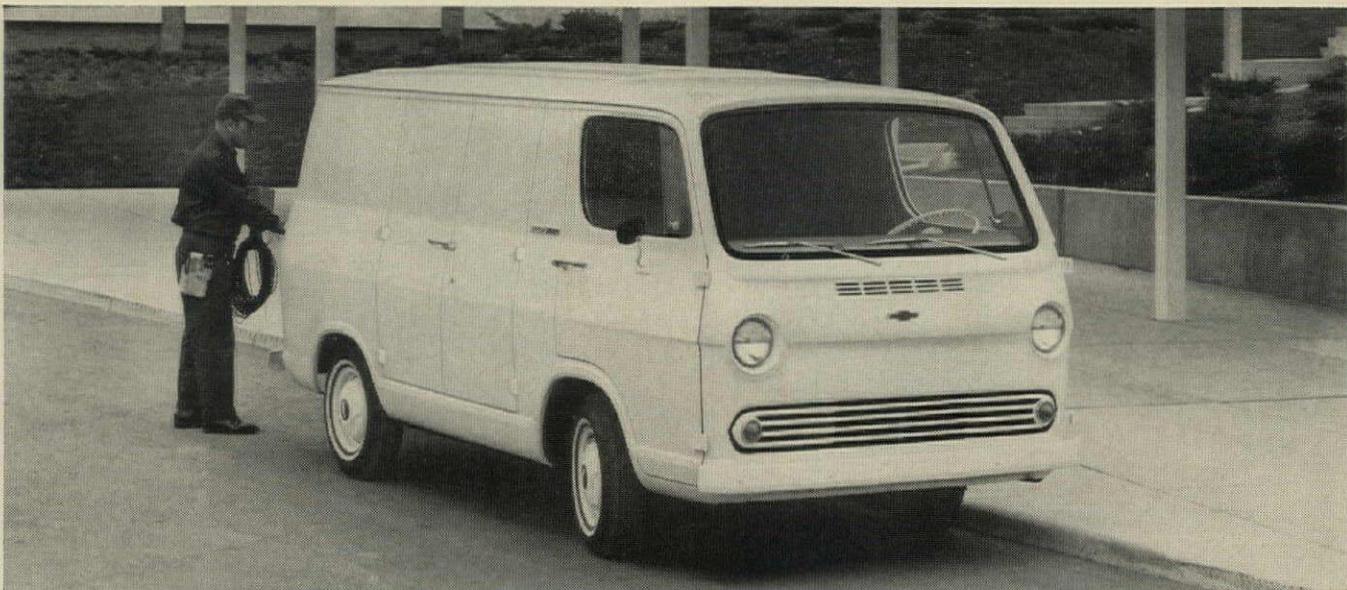
Year by year, the Chevrolet truck line has grown broader and more versatile. The model choice has never stopped expanding.

The result, as indicated by these pictures, is that you can now get a Chevy that's virtually tailor-made for your work. A truck that does your job more efficiently, in the manner best calculated to save you money, time and work.

One of the trucks shown here should suit your needs perfectly. If not, just see your Chevrolet dealer. There are others he can show you.

And be assured of this: whichever one you pick, it will be a lot more truck than your money bought last time. Because, just as the Chevrolet model choice has increased year by year, so too has Chevrolet truck quality. Engines are now more powerful, bodies stronger, chassis more durable.

See your Chevrolet dealer soon. You'll be surprised at how perfectly he can now match a Chevy to your job. . . . Chevrolet Division of General Motors, Detroit, Michigan.



**All new for '64—low-cost Chevy-Van!** Here's the newest of the economy vans, built to keep your costs down through the years. Tough unitized body-frame construction makes the truck strong, rigid and stable. You can load a full ton

of cargo into the big body. High, wide doors save work. And for low day-to-day operating costs, a rugged 90-hp four-cylinder engine (more powerful than some sixes) is standard. 120-hp 6 is optional at extra cost.

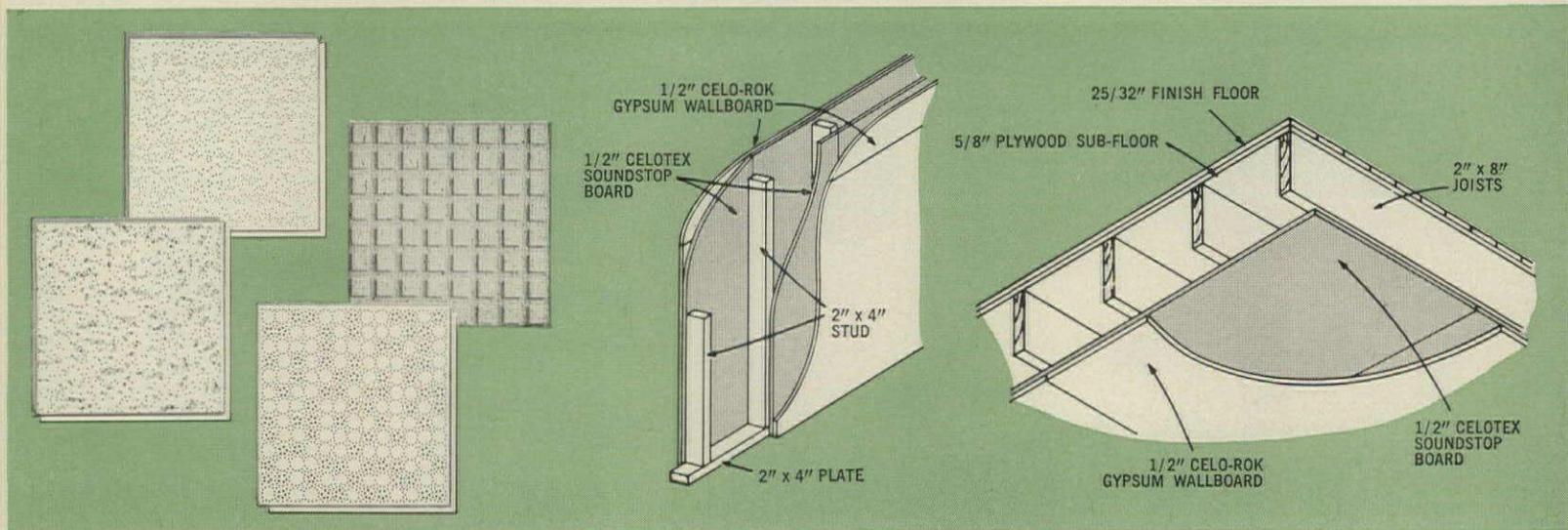
**QUALITY TRUCKS COST LESS**



# Quiet Conditioned Living scores again as a sales clincher



Exterior view of Redwood Garden Home, pioneering concept in modern living developed by First Construction, Inc., Kansas City, Kansas. Homes combine the cost advantages of multi-unit construction with the benefits of single-family home ownership. James L. O'Bryan, F, A.R.A., Project Architect.



**Quiet Conditioned Living begins** with Acoustical Ceilings by Celotex. In model homes or apartments, prospects can see and *feel* the benefits of quiet, as these ceilings absorb and hush irritating noise. Little wonder that Celotex acoustical ceilings dramatically, convincingly demonstrate extra value! Choose from a wide variety of exclusive Celotex patterns, designed especially to give homes added decorative appeal.

**Partitions that reduce sound transmission:** This sturdy 2-layer construction provides Sound Transmission Loss vastly superior to ordinary partitions.

Both sides have 1/2" Celotex Soundstop\* Board nailed to studs and laminated facing of 1/2" Celo-Rok® Gypsum Wallboard. Sound Transmission Class (STC): 46. With 5/8" instead of 1/2" Celo-Rok wallboard, STC is 50. (Ordinary single layer construction with 1/2" gypsum board has STC of only 33.)

\*Trademark

**Sound-deadening ceiling-floor assembly.** This 2-layer ceiling reduces transmission of both *airborne* sound (e.g., loud voices) and *impact* sound (e.g., footsteps, dropped objects). Sound Transmission Class (STC) for airborne sound: 42. On ceiling side, 1/2" Celotex Soundstop Board is applied to floor joists, with facing of 1/2" Celo-Rok Gypsum Wallboard.

Kansas City Redwood Garden Homes Feature

# CELOTEX

Reg. U. S. Pat. Off.

## QUIET CONDITIONING PRODUCTS AND RATED CONSTRUCTIONS



Builders Walter Klassen and Paul Hansen.



Model family room offers the "comfort of quiet" with Celotex Acoustical Tile ceiling. Walls are Celotex Woodgrain Hardboard Paneling.

"Here is a new type of house with all the features of homes selling for much more," say the builders of Redwood Gardens. "One of the most important of these is Quiet Conditioned Living. All party walls are built with Celotex Soundstop\* Board and Celorok® Gypsum Wallboard on both sides, to provide the utmost privacy. Prospects like the 'solid' sound of this double-layer construction. And they are quick to appreciate the extra value of Celotex Acoustical Tile in the family room. Sales have been excellent."

Quiet Conditioning in single family homes, town houses, apartments, and garden homes, can range from the primary need—acoustical ceilings—to complete treatment, including partitions and ceiling-floor assemblies. The Celotex Corporation has pioneered new products and quiet-rated constructions to meet builders' needs. Send coupon today for free brochure showing variety of quiet-rated assemblies.

\*Trademark



Dept. HH-54, THE CELOTEX CORPORATION  
120 S. La Salle St., Chicago 3, Illinois

Please send me, without obligation, the FREE 8-page brochure, "New Building Techniques for Quiet Conditioned Living."

My Name.....

Firm Name.....

Address.....

City..... Zone..... State.....

# CELOTEX

Reg. U. S. Pat. Off.

BUILDING PRODUCTS

THE CELOTEX CORPORATION  
120 So. La Salle Street • Chicago 3, Illinois

Subsidiaries: The South Coast Corporation . . . Crawford Door Company . . . Big Horn Gypsum Company . . . O. P. Grani, Inc. . . . Canadian Celotex Cweco Industries Limited (Canada).  
Affiliates: South Shore Oil and Development Company . . . Celotex Limited (England).

# Q: What is a low-cost way to provide central cooling in homes or apartments

...even those heated by electricity, hot water or steam?

**A:** Specify a new Carrier Quick-Coupled Weathermaker® System with fan-coil units.

**Q:** How do I save money?

**A:** In the first place, the air ducts to each room will be extremely short and easy to install. You simply hang the fan-coil unit in a central location in the apartment or home.

**Q:** Did you say hang?

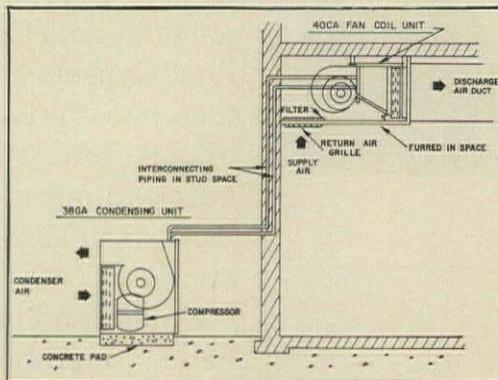
**A:** Yes. This unit is so light and compact it easily hangs overhead. It can go over a closet, above a furred-down hall ceiling or even in the attic.

**Q:** What about the compressor and the condenser?

**A:** They are in a separate cabinet that installs outdoors or through a wall. See the diagram.

**Q:** How do you connect the two units?

**A:** With precharged tubing fitted with quick couplings. No refrigeration experience is required. And the power and control connections are equally simple.



**Q:** Sounds good, but what about quality?

**A:** The fan-coil unit is remarkably quiet, moves plenty of air and can easily be equipped with a filter and humidifier. So you gain the benefits of air cleaning and winter humidification at very low cost—big features not available with electric heat or wet heat.

**Q:** Is the cooling system completely independent of the heating system?

**A:** Yes, it can be. This makes it ideal as a means of adding cooling to homes and apartments that already have good heating plants.

**Q:** What do you mean—"it can be"?

**A:** In places where the winters are mild and you don't need perimeter heating, you can save money by tying the cooling and heating systems together. Just add an electric strip heater or wet heating coil at the outlet of the fan-coil unit and eliminate baseboard heaters, radiators or convectors. The fan will circulate the warm air through the ducts.

**Q:** How do you handle two-story or split-level situations?

**A:** Simple as ABC! Use two systems with two fan-coil units for easy installation that gives your customer unbeatable zone control. The low cost will amaze you.

**Q:** You keep harping on low cost. Are these stripped-down cheapies?

**A:** Definitely not! These are Carrier units, with Micromite® compressors, Weather Armor cabinets, staggered coils, centrifugal blowers, fully factory-wired, 24-volt control circuits, ARI capacities, UL approved, certified by *Good Housekeeping* and *Better Homes & Gardens*. Next question!

**Q:** Where do I get complete information?

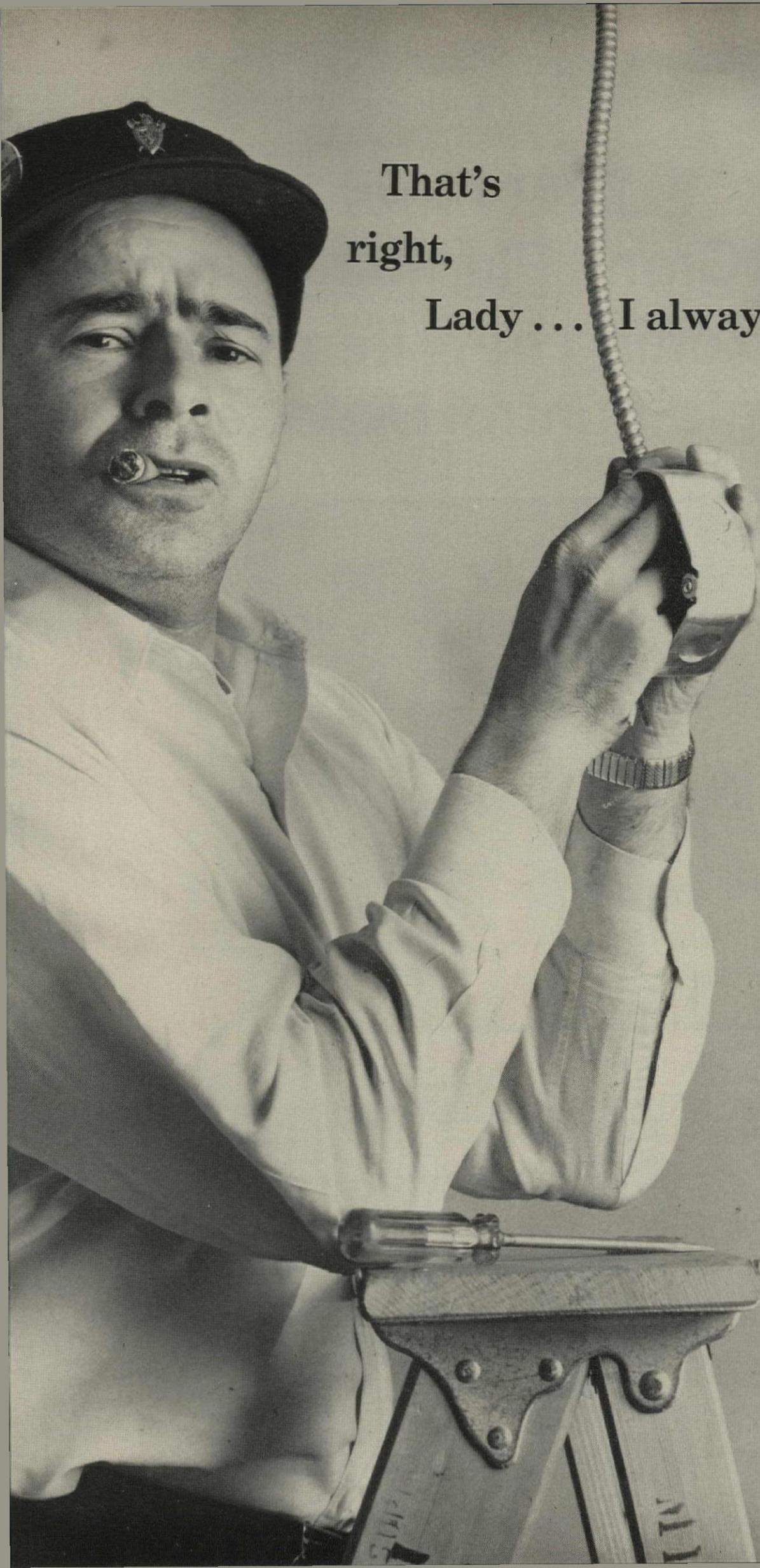
**A:** Call your nearest Carrier representative and ask him about 38GA Quick-Coupled Weathermaker Systems with 40CA fan-coil units. Or write us for Bulletin No. 38GA243. Carrier Air Conditioning Company, Syracuse 1, New York.

See a complete Carrier residential air conditioning system in the Traditional Home of the "House of Good Taste" at the New York World's Fair.



**Air Conditioning Company**

HOUSE & HOME



That's  
right,

Lady . . . I always install Broan!



As an electrical contractor, I know what's going on *inside* your kitchen built-ins. And I know Broan's got other hoods beat by a mile.

Take this Dual Blower range hood I'm putting in for you. See those seams? Heliarc welded and hand polished. See that smooth finish? See the shape of the thing? Designed to pull in kitchen odors with extra efficiency. Pretty good looking, too, if you ask me. And a perfect match with the rest of your appliances — I know you ladies always go for the big choice of colors with Broan.

But I'm no interior decorator. All I know is, Broan hoods have a pair of "squirrel cage" blowers inside that do the job better than any I've seen. They're certified by HVI, too — HVI's the Home Ventilating Institute that tests the power of blowers like these at the engineering labs of Texas A&M—and that's good enough for me!

And frankly, Lady, putting in a Broan saves *me* a lot of headaches. Easy to install. Practically no service calls. Fast delivery on special orders. And happier customers — that's a fact. Funny, I've been installing Broan range hoods, exhaust fans and bathroom heaters for over 30 years now. But some people are just finding out about 'em. I see lots of contractors, builders and distributors switching to Broan, more dealers beginning to stock Broan products.

You take a look around, too, Lady. Bet you're not the first on your block with a Broan!

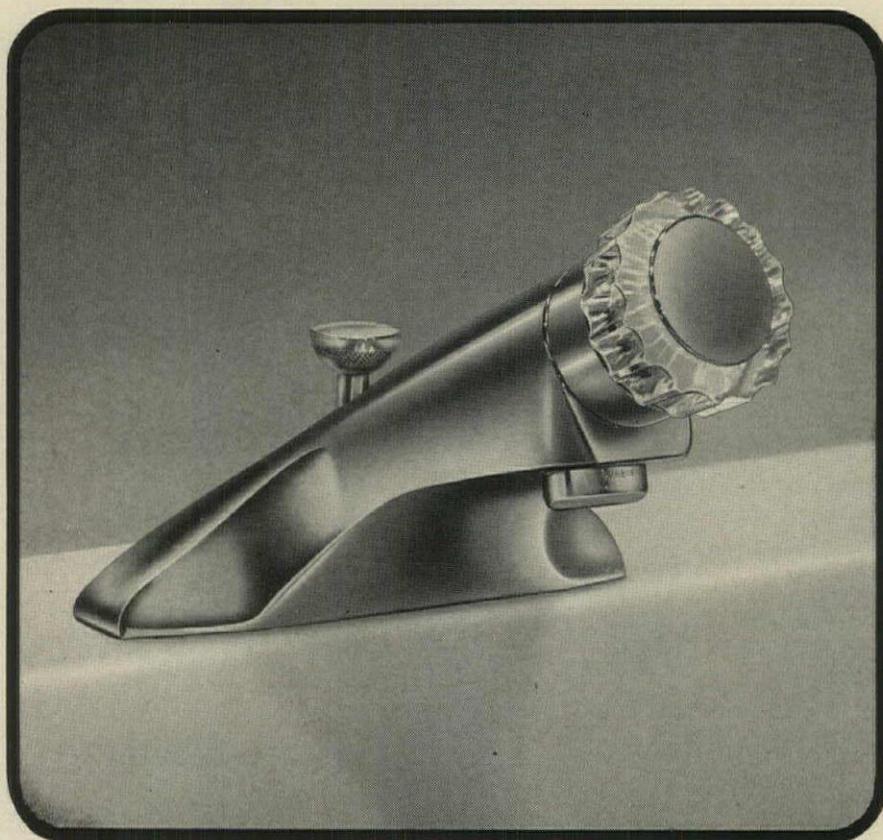
**Kitchen Range  
Hoods by**



**BROAN**

BROAN MANUFACTURING CO.  
HARTFORD, WISCONSIN  
Manufactured in Canada by  
Superior Electric Ltd., Pembroke, Ont.

# It's a great year to be selling Crane Plumbing Brass -with exciting new items like the single-control Dialette



**The Latest:** The new Dialette line of single-control lavatory and bath fittings is designed for smartness and engineered for convenience (push-pull for volume, dial for temperature). The Dialette is our hottest new item! It offers functional beauty for modern baths and powder rooms.

**The Most:** There's everything here! Crane brass is available in the luxurious Criterion line for the finest homes, ho-

tels and motels. There's also the moderately priced Capri in addition to the economical Crestmont line—and all are designed and engineered for Crane quality.

These first fruits of Crane's four million dollar expansion in brass facilities are now available.

No one—but no one—is today better equipped to give you the best in plumbing trim than Crane. Quality has never

been higher...or production greater. Crane can deliver the goods...when you want them...as you want them...with assurance that they will give full satisfaction in service.

You can see why all the news about Crane brass is good. For you, that is!

For even more news about Crane brass, get in touch with the Crane contractor now. Or write to Crane Co., Box 780, Johnstown, Pennsylvania.

## CRANE

PLUMBING—HEATING—AIR-CONDITIONING GROUP, BOX 780, JOHNSTOWN, PA.

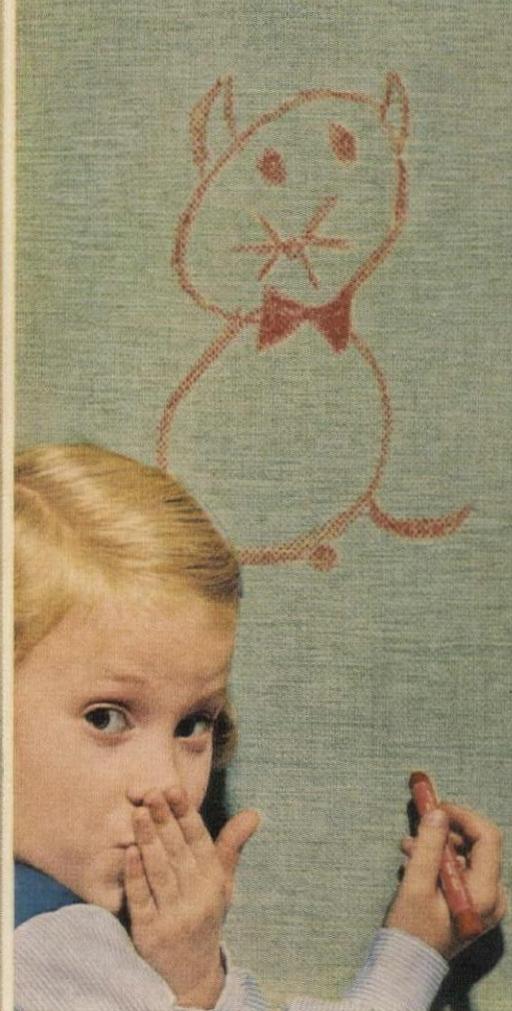
...EASY TO CLEAN



...SCUFF RESISTANT



...STAIN REPELLENT



## The Gold Bond difference: Everybody loves Durasan. Especially home buyers.

Gold Bond® Durasan is wallboard and decorative surface all in one. The gypsum-rock core is fireproof. Its rich-textured, pure vinyl surface is *people*-proof. You know what careless people can do to painted walls. But Durasan resists scuffing. Won't crack. Won't chip. Smudges and marks wash right off with soap and water. Year after year your walls stay as handsome as the day they were installed. Durasan® can be installed right over existing walls, if you wish. Price is no problem. The panels cost no more than many vinyl wall coverings alone. They go up fast, saving time and construction cost. For samples and technical information, write on your letterhead to Dept. HH-54, National Gypsum Co., Buffalo, New York 14225.

**Gold Bond**  
DURASAN



Gold Bond materials and methods make the difference in modern building

THIS IS THE NEW  
**HUNT**  
ELECTRONIC  
DIMMING CONTROL

TAP OR TAP OFF  
AT ANY  
LEVEL OF LIGHT  
TRY IT!

# HARD SELL with SOFT LIGHT

## Both Provided With Hunt Electronic Dimming Controls

Take two, they're small. (The low-cost PC-6-I, 600 watt capacity unit pictured above fits standard 2" deep single gang box.) Install one in the dining area and one in the nursery or children's room... Hunt provides the "Hard Sell" with the clear plastic wall guards to keep face plate areas clean and at the same time call attention to the modern lighting flexibility you have added in your home design. The "Soft Light" from Hunt Dimming Controls is available at low intensity settings; a romantic, candle light effect for the dining area... a soft, glowing night light for the nursery. Full brilliance, or any desired level of light, for any activity, is of course available with Hunt Dimming Controls, and so is economy, too. (Incandescent bulb life is extended over 1000% when burned at 75% of maximum rated wattage.)

Chances are, that later on you will have other ideas about where Hunt Dimming Controls should be used,

but right now start with two... two Hunt Electronic Dimming Controls, fully guaranteed and ruggedly built for long reliable operating life.

For complete information and specification data on the complete line of Hunt Electronic Dimming Controls and Systems for residential and light commercial lighting control, contact your local Electrical Distributor, the Hunt Representative in your area, or write: The People Who Bring You The Brightest Ideas in Dimming.



**HUNT ELECTRONICS  
COMPANY**

2617 ANDJON DRIVE / DALLAS, TEXAS 75220  
SEE OUR CATALOG IN SWEETS

# NOW!

Hotpoint's exclusive slide-out oven walls



in a 30" Hallmark range!

This range is different. The sides — back — even the floor of this big, wide oven — *slide out, individually!* So they can actually be washed at the sink, as easily as dishes. And the walls are coated with Dupont Teflon®, the great new finish that spatters won't stick to. They wipe clean in seconds, without scouring.

Hallmark also features the exclusive Vacuum-Aire vent system that (1) "vacuums" off steam, smoke and odors from the cooking units...and (2) permits electric broiling with the oven door closed! And outside venting is unnecessary, unless you desire.

A Hotpoint Hallmark, in the 30" king-size oven or 40" double oven size, goes a long way toward helping you sell your kitchen — the room that can make or break the deal. Call your Hotpoint distributor today for full information and prices on both 30" and 40" Hallmark electric ranges.

## Hotpoint

FIRST WITH THE FEATURES WOMEN WANT MOST  
A Division of General Electric Company • Chicago 44, Illinois

Millions of home buyers see Hotpoint appliances on THE TONIGHT SHOW, NBC-TV, starring JOHNNY CARSON



## This is a vinyl floor. You don't believe it? Thank you.

If you think a bricklayer built it, we're flattered. Actually, it's Luran Regency Antique Brick. All the warmth and charm of weathered red brick sealed deep under a solid vinyl wear surface. A wear surface so tough, this floor is guaranteed for life! \* And it's vinyl by the roll for fast, neat installation; even in

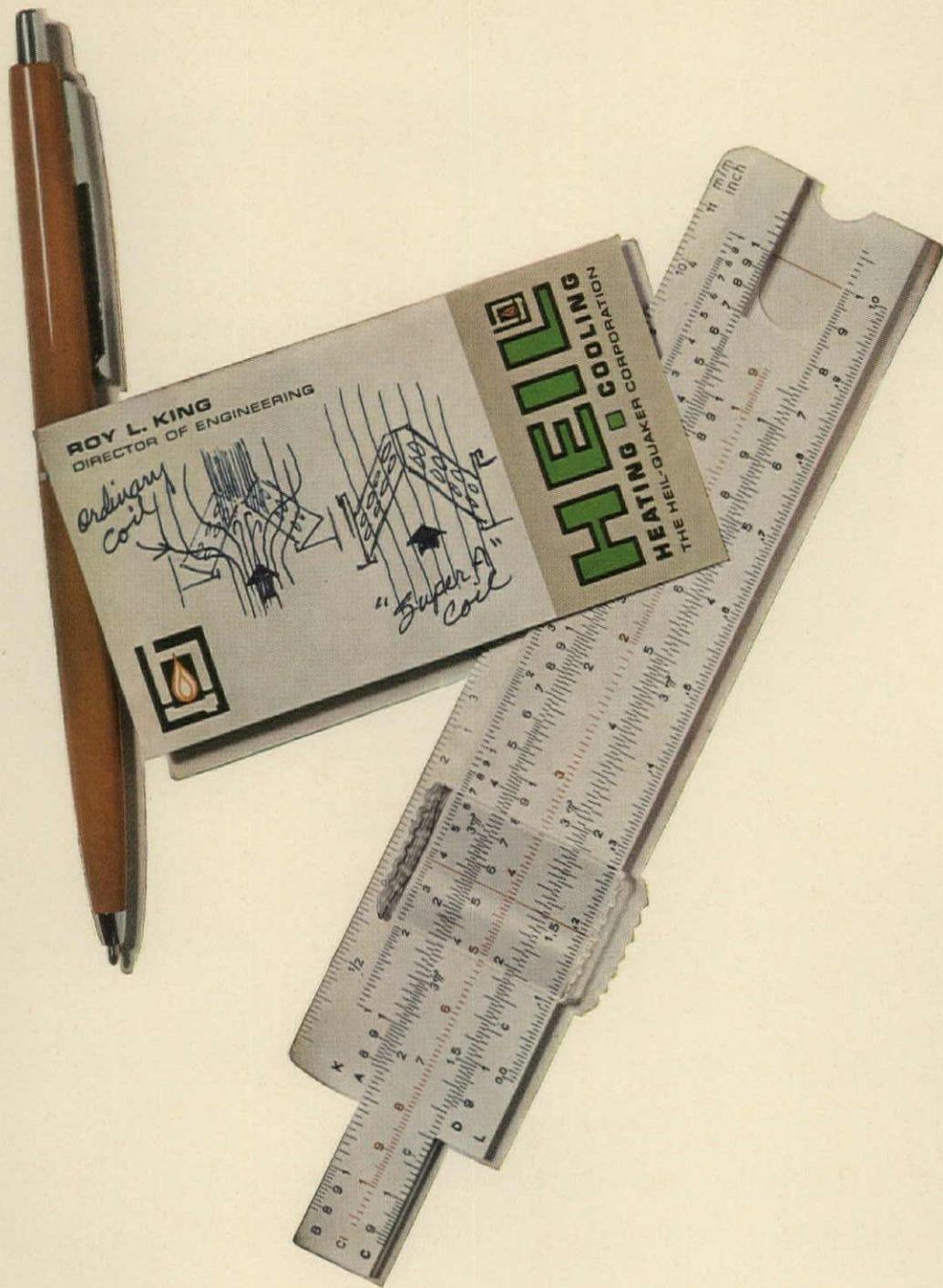
freezing weather. You lose no time warming it up. Luran Regency goes down at any temperature the adhesive will spread. Lies flat, coves beautifully, cuts like butter. Goes on, above, or below grade. And with Sandura's exclusive Vinylweld® process, 6 foot widths can be welded wall-to-wall. No

open seams to trap dirt and water. Want to create excitement? Install Antique Brick in kitchens, foyers, playrooms, dens, even basements. Antique Brick (also Antique White and Antique Beige) will make your homes more attractive to prospects, more *saleable*. Shown this spring in full color in McCall's, House

Beautiful, American Home, Farm Journal. For more information on Luran Regency Vinyl Floors contact your Sandura distributor or write to: The Sandura Co., Benson-East, Jenkintown, Pa.

**Luran Vinyl Floors**  
Fine Floors for Forty Years.

\*Lifetime Guarantee. Sandura Company will furnish new material to replace Luran Regency or Luran Imperial vinyl flooring that becomes worn out in normal use in your home under these conditions: 1. Any area of the vinyl wear surface is worn through to the backing during your lifetime and during the time you, the original purchaser, continue to occupy the home in which the flooring is originally installed. 2. The flooring is installed and maintained according to Sandura recommendations. On board floors it is necessary to install over underlayment plywood unless boards are less than 3 in. wide, in which case lining felt may be used. 3. Sandura's liability does not extend to freight or cost of installation. 4. Claim must be accompanied by the original bill of sale to claimant and approved by Sandura Co. prior to replacement.



## POCKET DRAWING BOARD

Could be. As a matter of fact so could table cloths, the backs of envelopes . . . just about anything that's handy will serve when a Heil engineer gets a new idea for a product improvement. That's because he never knows where he'll be when an idea strikes. He's not a 9-to-5 man when it comes to developing new and better ways to design heating and air conditioning equipment. □ Take the unique design of Heil's Super-A coil over conventional evaporator coils. The illustration on the card above shows the obvious advantage of more coil surface with less resistance to air flow. □ Heil's new Durafused® heat exchanger is another example of creative engineering, meeting the increased demands of today's heating and air conditioning systems. □ Perhaps you'd like to get better acquainted with Heil equipment. That can be easily arranged. Just drop us a line. Dept. SM, The Heil-Quaker Corporation, 647 Thompson Lane, Nashville, Tennessee 37204. □ In the meantime, Heil's engineers will keep right on working on new ideas to meet your needs—on drawing boards, business cards, table cloths or wherever they happen to be.

**HEIL**  **HEATING AND AIR CONDITIONING**  
**THE HEIL-QUAKER CORPORATION**  
647 THOMPSON LANE - NASHVILLE, TENNESSEE



# Sustained Excellence

Sustained excellence in manufacturing kitchen cabinets is the sum total of hundreds of successful operations, from the engineering that predetermines the construction of every part of every cabinet . . . through fabrication by skilled personnel working with the finest tools and machinery available to the industry . . . to utterly dependable shipping demonstrated by years of not missing a scheduled shipment. We are proud of assurances we constantly receive from customers that we have passed every test of excellence, and that for quality alone, or *quality-at-a-price*, or *quality-at-a-price-plus-service*, we have no equal in the kitchen cabinet industry.



*"The most beautiful kitchens of them all"*

BRONZEGLOW® BIRCH • ROYAL® BIRCH • HEATHER® BIRCH



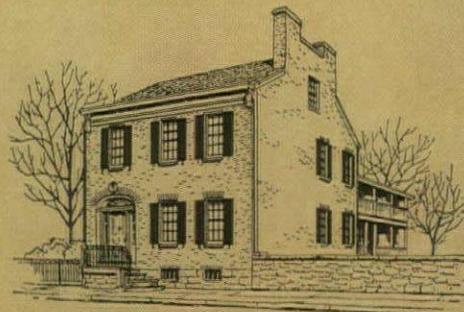
**H. J. SCHEIRICH CO.**  
250 OTTAWA AVENUE, LOUISVILLE 9, KENTUCKY

Please send full information on Scheirich Kitchens in Bronzeglow Birch, Royal Birch and Heather Birch. Also include literature on Scheirich Bathroom Vanities.

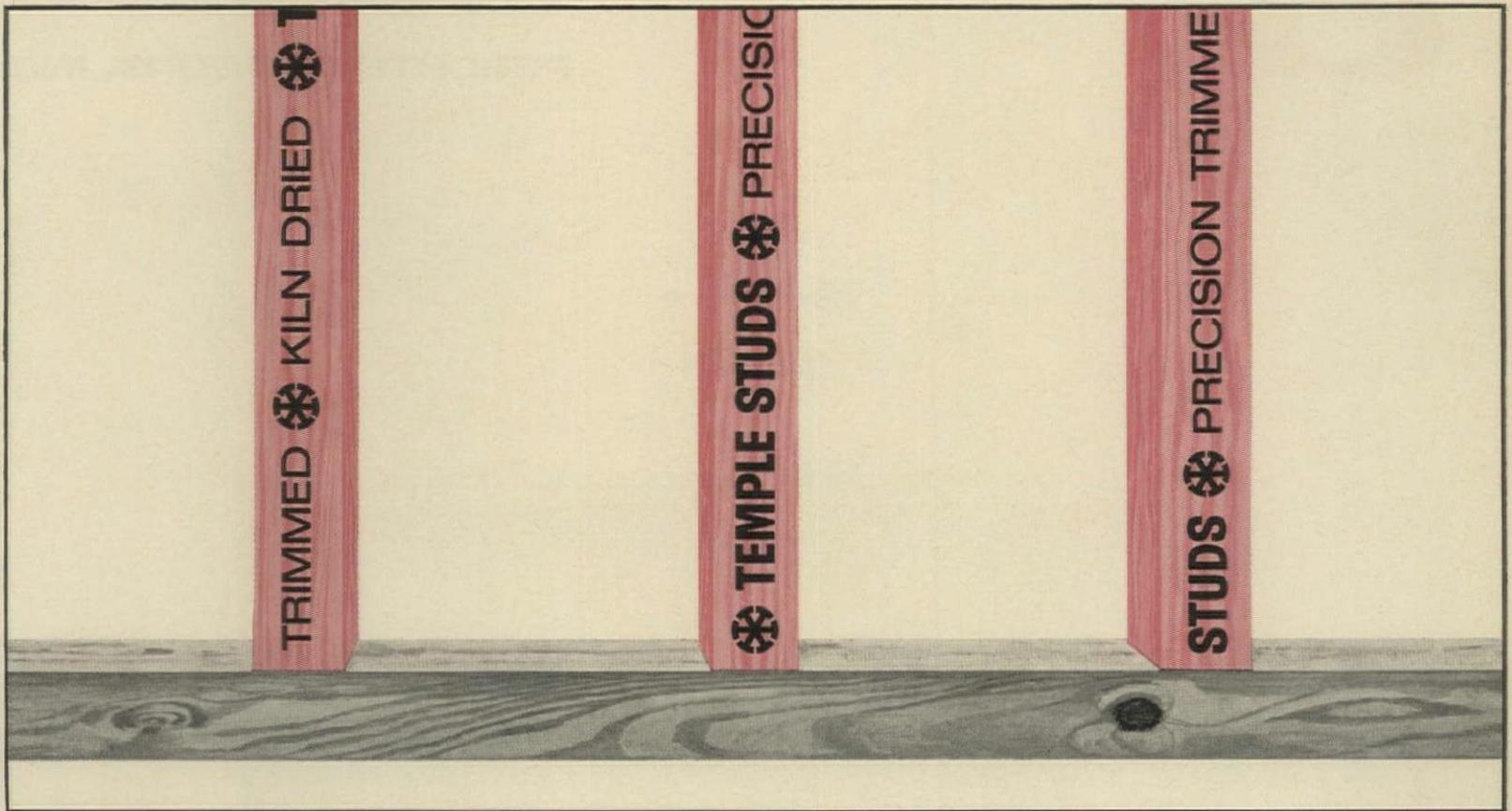
Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City & State \_\_\_\_\_  
 County \_\_\_\_\_

H&H-1263

*The Judge Jeremiah Sullivan House at Madison, Indiana, was built in 1818 and is one of the finest examples of Federal architecture in the Middle West. It is now being restored under the auspices of Historic Madison, Inc. The H. J. Scheirich Company is serving as co-sponsor of the restoration of the first floor kitchen.*



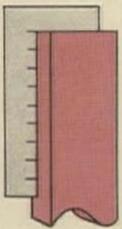
# Q. Why a special color for studs?



**A** Because these are very *special studs*, we've made them a special color so they can be easily identified in shipment, in the lumber yard, and on the job.

How are Temple studs different from other studs? In a lot of ways:

**TEMPLE STUDS ARE STRAIGHT!** They're cut from logs that have been pre-graded before sawing to assure freedom from "compression wood" that causes crooking.



Each Temple stud also is processed in the amazing new Temple-Jones Crook Reducer after kiln drying to assure straightness. Walls are straighter when they're put up around Temple studs!

**KILN DRIED!** Kiln drying uniformly removes moisture from the stud before final planing. This guards against crooking after the stud is installed. *ALL* studs *should be* kiln dried — *ALL* Temple studs *are!*

**TEMPLE STUDS ARE PRECISION END TRIMMED TO SIZE!** Temple studs are exactly the length ordered — and the ends are precisely square. There's no need for sawing on the job — the carpenter can simply place the stud into position and nail. You make important savings in labor costs! The precision-squared ends make possible a tight, firm joint.

**TEMPLE STUDS ARE PROTECTED FROM MOISTURE!** A water-repellent fungicide (a lavender Convoy\* made exclusively for Temple) is applied to all Temple studs to protect them from weather damage and discoloration. Ends are



waxed for additional protection. Temple studs stay straight, sound and clean from the mill all the way through construction!

**TEMPLE STUDS ARE COMPRESSION STEEL BANDED DURING SHIPMENT AND STORAGE!** They stay straight during handling and shipment because they're compression steel banded to prevent damage.



**TEMPLE STUDS MAKE STRONGER BUILDINGS!** Because Temple studs are made from selected Southern Yellow Pine, the studs hold nails better... make it easier to keep walls in position... add the *extra* strength of Southern Yellow Pine to the structure. Temple studs are *bonus stress rated* under the new SPIB stud grade.



A powerful newspaper advertising campaign is telling home buying prospects about the advantages that Temple studs give the home owner. They'll be looking for the lavender colored studs in the homes you are building, because they'll know that lavender colored studs are a mark of quality construction.

Tell your lumber dealer you want cost-cutting Temple studs for your next project!

\*Trademark of Protection Products Co.

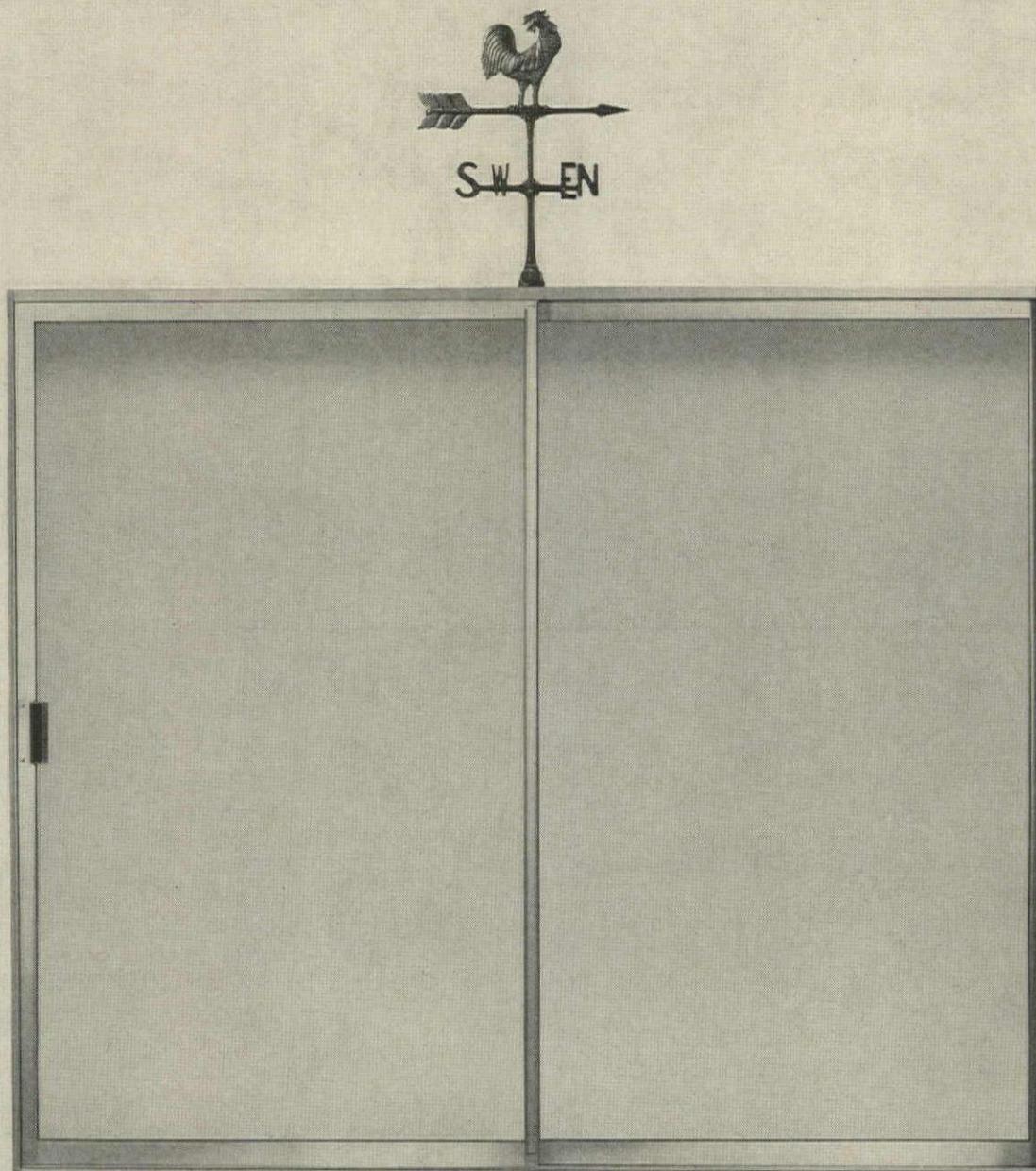


**TEMPLE STUDS**  
TEMPLE INDUSTRIES/DIBOLL, TEXAS  
SOUTHERN PINE LUMBER COMPANY DIVISION

**pd**

p o box 19682 / atlanta georgia 30325 / telephone 404 448-2171

**PEACHTREE DOORS, INC**



**EVERYBODY TALKED ABOUT THE WEATHER,  
BUT WE DID SOMETHING ABOUT IT**

We stopped it.  
Not just almost, but all the way.  
The wind. Rain. Heat. Cold.  
If the air or water gets inside, it means one thing.  
The panel is open. Seriously.

Because that's about the only way it can get in.  
It can't come in via the head. Or the jambs.  
Or the corners. Or the sill.  
If you tire of just hearing about the weather, contact us.  
We'll throw in some blue skies for you.

OUR DOORS EXCEED THE STRICT STANDARDS ESTABLISHED BY THE ARCHITECTURAL ALUMINUM MANUFACTURERS ASSOCIATION



## All This in New Caravelle Profit Package

6 new split foyer designs with garage

Over 1287 sq. ft. living area, not including stair wells or garage

3 big bedrooms, each with plenty of window light

Separate utility-laundry room

Double louvered doors between living and dining rooms

Spacious storage areas, double and triple size closets

Step-saver kitchen

Natural birch wood kitchen cabinets

Factory-assembled counter top, postformed back-splash, double bowl sink, faucets, fixtures comply with FHA 203B specs

Tappan "400" range, base and wall cabinet part of kitchen

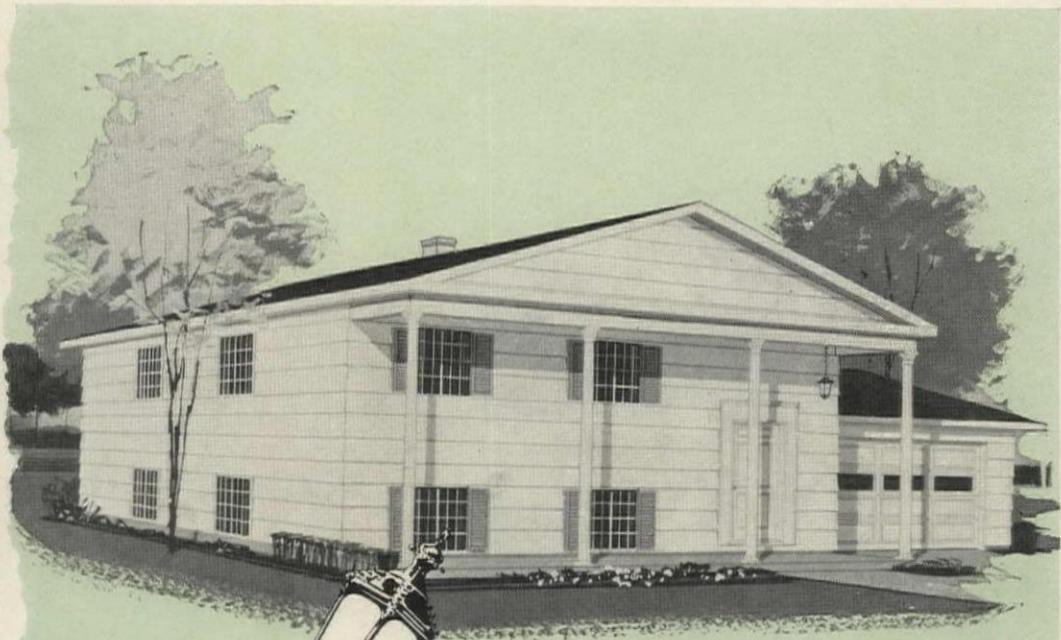
Finest construction materials engineered for maintenance-free living

Solid 2" x 4" construction throughout

All architectural exterior trim furnished

Package available with factory applied siding materials... for brick veneer... for field applied siding

Finished stairs, handrail, platform, wrought iron railings included



CARAVELLE DESIGN 6-G, Georgian Colonial

# Caravelle

## New Inland Homes Series with a Step-by-Step Selling Plan

### *Trims Builder Expense! Fattens Builder Profits!*

With Inland's great new Caravelle house series you'll sell more efficiently, more profitably. Each step of the way you can count on Inland to save you time, expense, red tape.

Through Inland Mortgage Corp. you can obtain all your mortgage processing *at no cost*, close with a lender of your choice—or IMC will provide you with permanent and/or construction financing.

An Inland expert, armed with an expanded co-op advertising plan, will make your newspaper, radio-TV advertising more effective, your open house build-up more exciting.

Get professional help with market analysis, site selection, model and furniture programs, latest sales promotion techniques.

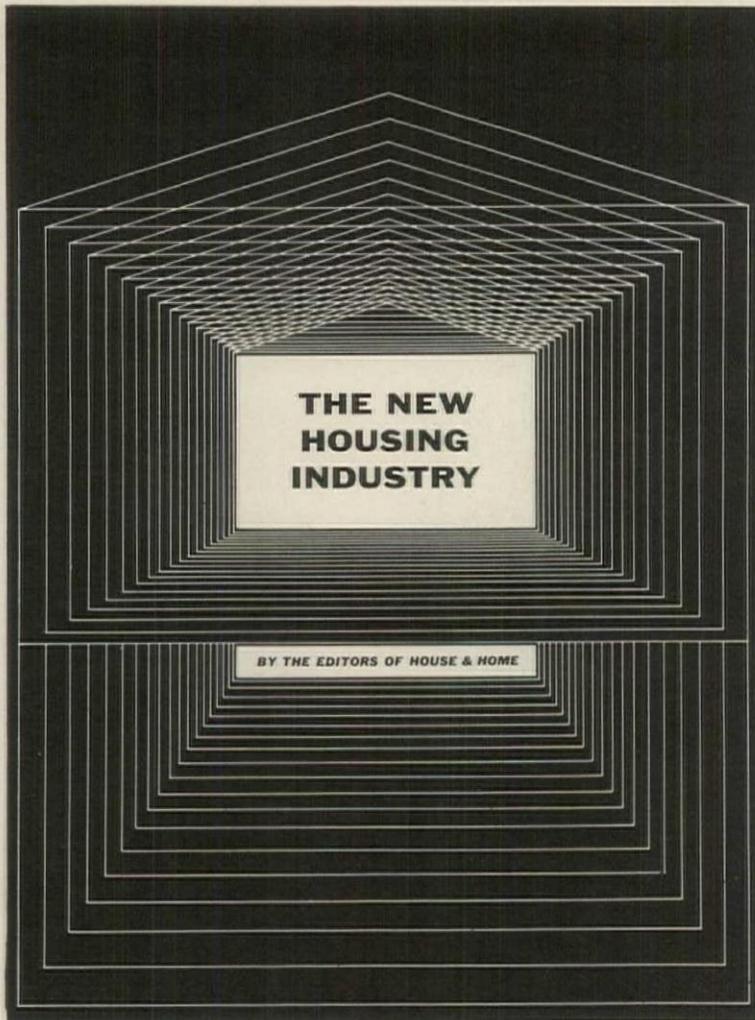
Act now! Look into our low package prices, quantity discounts, cash discounts. Contact Inland Homes Corporation, Dept. H-5, Piqua, Ohio.

# INLAND HOMES



**INLAND HOMES CORPORATION**  
Manufacturer of America's Finest Homes  
Plants in Piqua, Ohio; Hanover, Pennsylvania; Clinton, Iowa; Cedartown, Georgia

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by the editors of HOUSE & HOME  
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122 magazine-size pages,  
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Anyone in housing can benefit from this searching analysis of the fundamental changes taking place in America's biggest manufacturing industry—by the editors of the industry's leading magazine.

**The Emerging Giants**—effect of the industry's managerial revolution on building operations of all sizes.

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**The Many-Fingered Federal Puppeteer**—are all the governmental strings attached to housing really necessary?

**The Hope for Better Architecture**—why home designs aren't better, and why they soon may be.

**The Distribution Dilemma**—problems of pricing and communications along the supply lines.

**Technology's Promise and Performance**—still around the corner, the long-awaited industrial revolution.

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**Nowhere else is such a concentrated mass of information about the problems and opportunities facing today's housing industry.**

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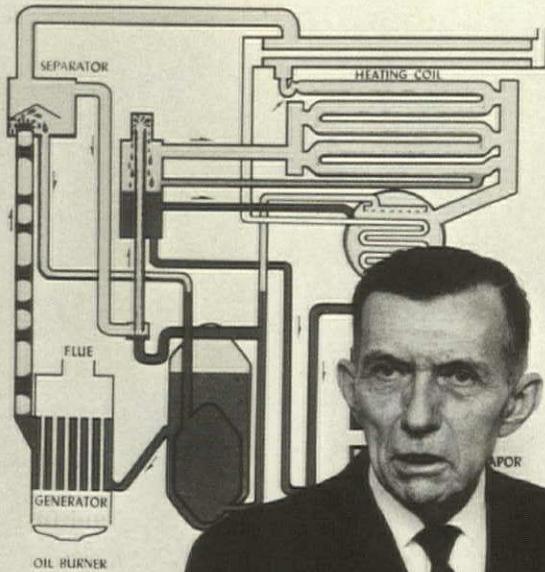
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company \_\_\_\_\_

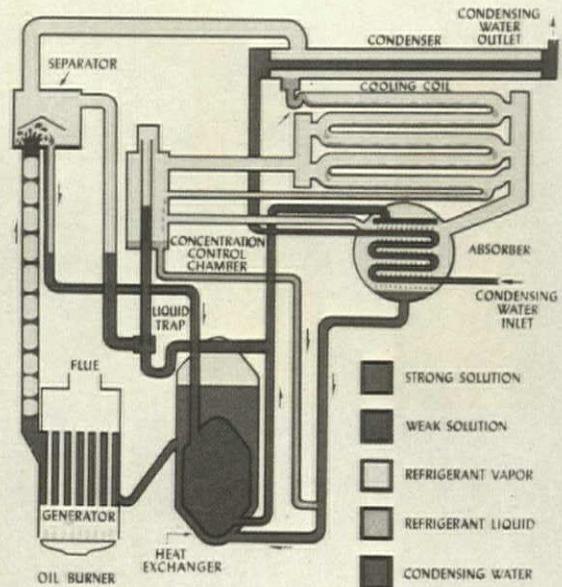
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city \_\_\_\_\_ state \_\_\_\_\_ zip code \_\_\_\_\_

## HEATING CYCLE

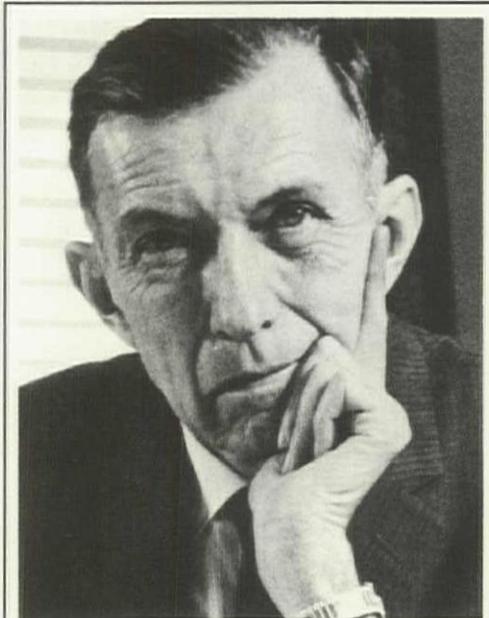


## COOLING CYCLE



**What's so hot about  
this new Oil heating system?  
It cools, too!**

Mike Reed, NOFI's building consultant, explains the advantages to you on the next page...



**Mike Reed, NOFI's advisor to the building trade, brings you the biggest comfort-conditioning news in years.**

Now you can build and sell homes with a single-unit system that provides complete comfort-conditioning all year round. Heating in winter. Cooling in summer.

Think what this means to your home buyers. When they buy from you, they can get one fully integrated, circulating hot-or-cold-air unit. They don't have to face the extra expense, now or later, of having a separate air conditioner installed.

They won't have to face big maintenance bills, either. In "torture tests" approximating 10 years of full-time use, this unit required only one service check. Because this is a heat-exchanger unit with no moving parts, no

compressor to go on the blink. It comes factory-tested and factory-sealed, ready to install. Fully guaranteed for five years, but good for the mortgage life of the house.

And it's completely powered by Oil. Clean, dependable, safe fuel Oil. Oil heat helps sell homes in other ways, too. People have confidence in Oil heat. They've grown up with it. They know—in many parts of the country—it can save them money. And deliver all the hot water they need—three times faster than any other fuel.

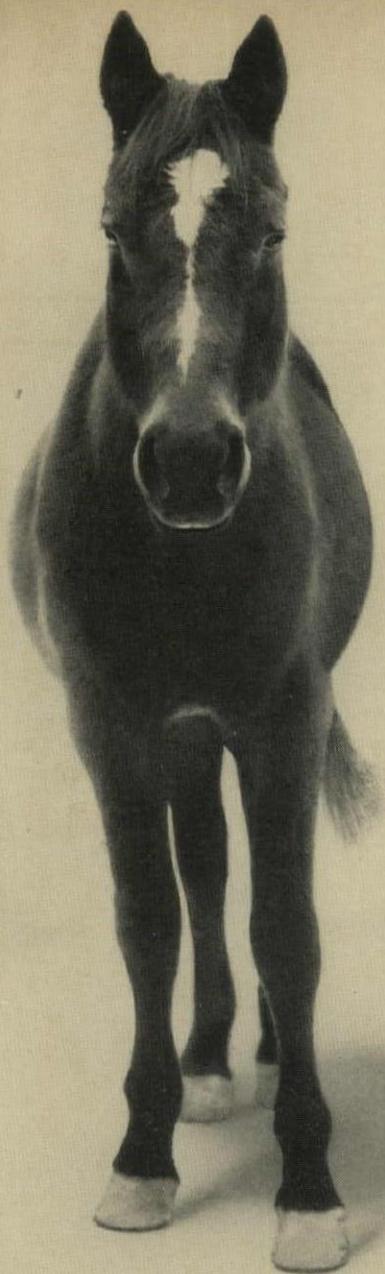
Oil heat can help you build homes more efficiently, too. When you want to build them. No waiting for mains and later-

als to be run. And if you build in winter, you won't go broke heating your homes until they're sold. In some cases, Oil can save you as much as \$40 to \$50 per month per house.

And this newly developed comfort-conditioning unit is no "pipe dream." It's in production now. Write me, and I'll send you all the details you need about this modern, trouble-free comfort-conditioning system. It ought to give your new homes quite a competitive edge!

M. J. Reed

NATIONAL OIL FUEL INSTITUTE, INC.  
60 E. 42nd St., New York, N.Y. 10017



It doesn't matter who lives upstairs when there's Acrilan® on the floor.

Prospective tenants stop worrying about neighboring noise when you show them a carpeted apartment. They know carpeting gives them privacy. Turns an apartment into a home.

Besides cutting down on sound, it adds color.

Luxury. Is it any wonder that a carpeted apartment rents much more easily than an apartment with floors as bare as its walls?

Builders all over the country are choosing carpets made with Acrilan acrylic fiber in the pile. Acrilan has the rich look of wool. But it behaves like Acrilan.

It is more resilient, more durable, less prone to shed than wool. It resists fading, staining, moths, mildew—is non-allergenic, too. And it's not as expensive as it looks.

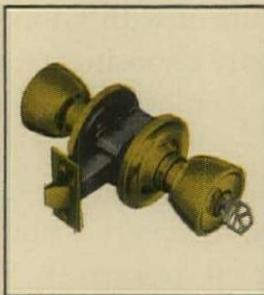
Any questions? Write Contract Carpet Merchandising, 350 Fifth Avenue, New York 1, N.Y.





**IT'S BECOMING THE CUSTOM**

All over America, apartment building owners are featuring all-steel-and-brass CUSTOM LINE locksets by Kwikset. They've found that the new, heavier duty CUSTOM LINE is specifically designed to meet the high performance and dependability requirements of apartment use. Requirements like these; pin-tumbler locking for greater safety, durable plastic



protective coating for the brilliant finish, and modern beauty of design to complement any architectural style. Best of all, owners have found that CUSTOM LINE, Kwikset's premium lockset, has so much to offer, yet costs significantly less than comparable locksets.



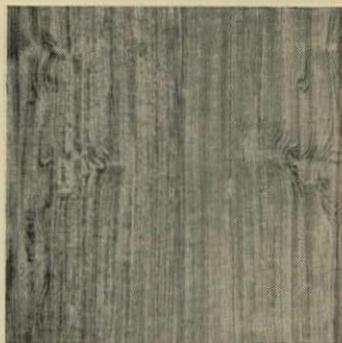
America's largest selling residential locksets

Kwikset Sales & Service Company, a Subsidiary of The American Hardware Corporation, Anaheim, California.

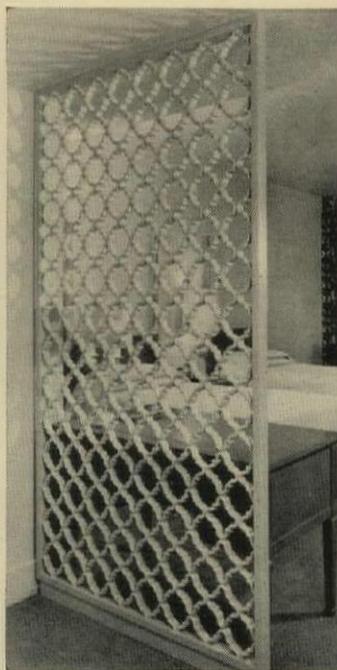
**Decorative materials**



**Carved door** is made from modular redwood panels with weathered finish. Panels have T&G edges for easy assembly. They measure 9"x36"x1-1/16" and list for \$9.50 to \$16. Assembled doors list from \$175 to \$250. Panelcarve, Santa Barbara. For details, check No. 1 on p. 203



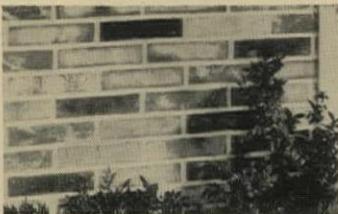
**Plastic laminate** for either vertical or horizontal surfacing comes in five new exotic wood-grain patterns: Paldao (above), Rift Sliced White Oak, Sequoia, Provincial Cherry and Ribbon-Striped African Mahogany. Formica, Cincinnati. For details, check No. 5 on p. 203



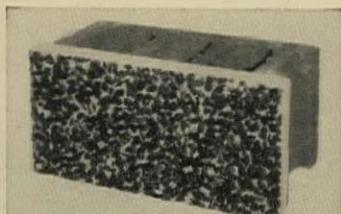
**Plastic grillwork** for room dividers is molded of white Eastman Tenite. Persian Sculpta-Grille is 1 1/4" thick, weighs 1 lb. per sq. ft., and can be installed without structural reinforcement. Harvey Design Workshop, Lynbrook, N. Y. For details, check No. 4 on p. 203



**Embossed ceiling tile** has a deep over-all geometric pattern with a scattering of sparkling crystals on a white background. Somerset ceiling tiles have T&G edges. Dimensions are 12" x 12" by 1/2" thick. Johns-Manville, New York. For details, check No. 6 on p. 203

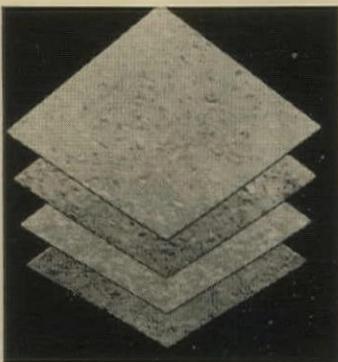


**Norman brick veneer** for interior or exterior walls is applied with an adhesive that also serves as the joint mortar. Lightweight Z-brick needs no foundation. It comes both in used brick (above) and new brick styles. Z-Brick Co., Seattle. For details, check No. 2 on p. 203

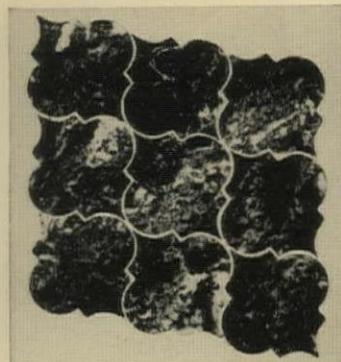


**Aggregate-faced block** combines the economy of concrete block with the texture of exposed aggregate panels. In-place cost per sq. ft. of Jewel-Tex block is said to be about half the cost of aggregate panel. Preco Chemical, Westbury, N. Y. For details, check No. 3 on p. 203

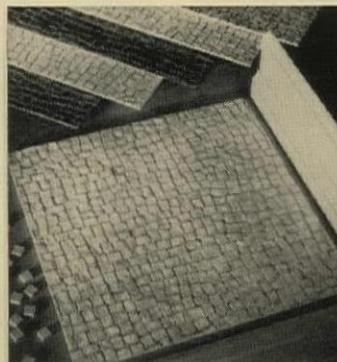
**Flooring**



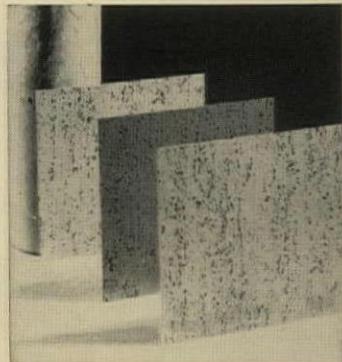
**Pebble-finished** vinyl-asbestos tile comes in three new colors: white, olive and smoky. Pebbled Onyx tile is made by encasing real marble particles in translucent vinyl on a vinyl asbestos background. Azrock, San Antonio. For details, check No. 7 on p. 203



**Manufactured marble** tiles are made in 11 colors for floors and 14 colors for walls. Sevelle Interlock Marble Tile lists for \$4.25 sq. ft. Maker calls it non-staining and four times stronger than quarried marble. Venetian Marble Co., Dallas. For details, check No. 8 on p. 203



**Mosaic tile** of solid vinyl has a deeply embossed textured surface that reflects highlights as do glass mosaics. Gravura comes in six solid colors: bronze, peacock, pearl, blue, beige and white shard. Tiles measure 12"x12" and are 1/8" thick. Kentile, Brooklyn, N. Y.



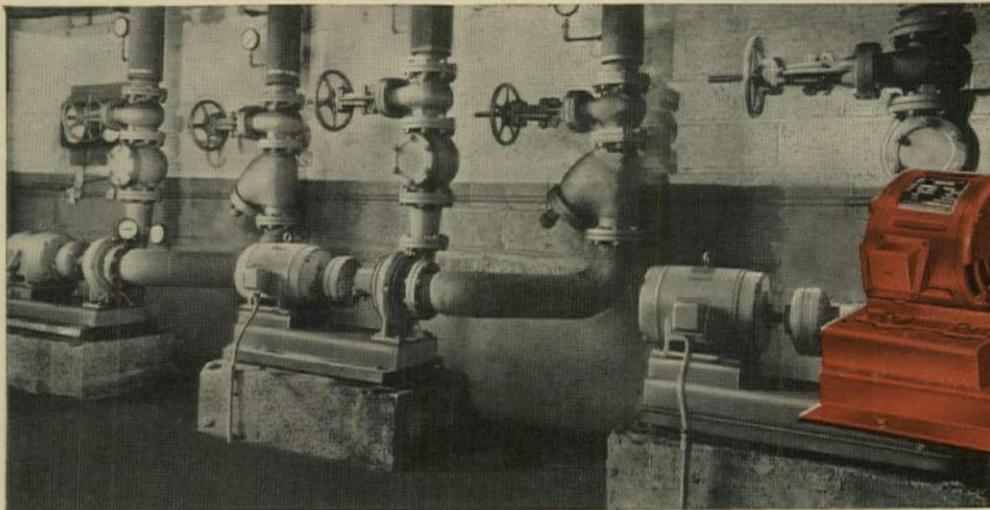
**Travertine** vinyl-asbestos tile is an accurate reproduction of natural Italian travertine marble. This low-priced tile comes in five colors and is made in both 1/8" and 3/32" thicknesses. Tiles measure 12" square. Ruberoid, New York. For details, check No. 9 on p. 203

New products continued on p. 177

# B&G<sup>®</sup> PRIMARY AND SECONDARY PUMPING METHOD IDEAL FOR GARDEN APARTMENTS



Architect: Offices of Irwin S. Chanin, New York City  
 Mechanical Engineer: Cosentini Associates, New York City  
 Mechanical Contractor: Murphy and Ryder, New York City  
 Builders: Dyker Building Co., Inc., New York City



B&G UNIVERSAL PUMP

Battery of B&G Universal primary circulating pumps



At Green Acres Garden Apartments, Valley Stream, N.Y., 61 two-story units containing 294 apartments are heated by a B&G *Hydro-Flo* forced hot water baseboard system. The system is designed for primary and secondary pumping, a method conceived and developed by B&G engineers.

Where multiple buildings or multiple zones are to be heated with circulated water this pumping method *reduces the pump horsepower required, improves heat control and saves fuel.*

A typical system consists of a primary main, continuously circulated by a B&G Universal Pump, with smaller B&G Pumps drawing on the primary main to supply separate heating zones. Each zone pump is under individual thermostatic control, so that each zone can be supplied with exactly the amount of heat required by its function or exposure.

The Green Acres installation has six secondary heating zones and six domestic water zones.

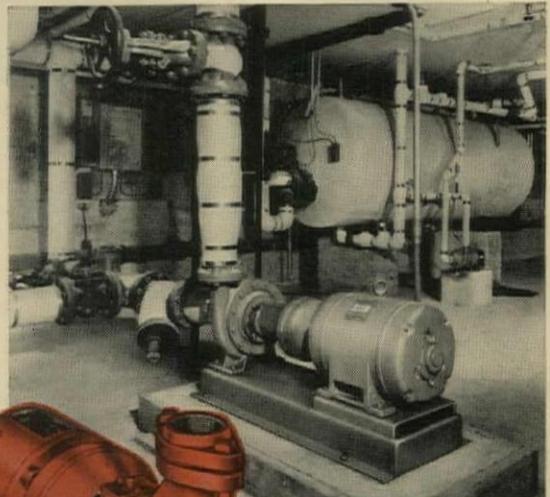


Photo shows secondary heating pump, domestic water secondary pump and domestic water recirculating pump.



B&G  
BOOSTER PUMP

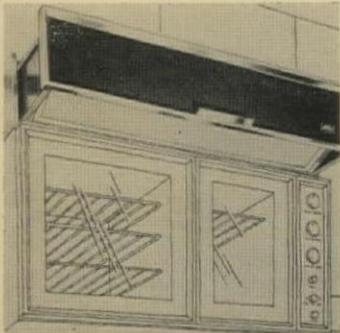


B&G SERIES 1522 PUMP

For manual on B&G Primary and Secondary Pumping, send to ITT Bell & Gossett Inc., Morton Grove, Illinois, Dept. IA-10.

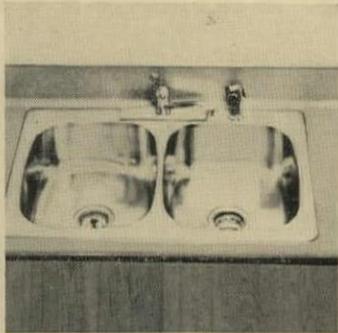
**ITT BELL & GOSSETT INC.**  
 A SUBSIDIARY OF INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION

**Kitchens**



**Overhead oven hood** is only 5½" high so a 12" cabinet can be installed above it. Both ducted and ductless models are available in 30" and 40" sizes. Hood rolls in flush with the wall when not in use. Brown Mfg., Hartford, Wis.

For details, check No. 10 on p. 203



**Stainless steel sink** is designed for post-formed counter tops. Continental measures 31" x 20½" x 7", has factory applied adhesive under the rim, positive waterproof seal and a back-ledge moisture barrier. Ziegler-Harris, San Fernando, Calif.

For details, check No. 11 on p. 203



**Electric built-ins** include seven new single and double ovens and five range tops. Ovens have removable doors, clock timers, contour-glass control panels. Cooktops, in 26" and 36" widths, have infinite-temperature controls. In lusterloy and five colors. O'Keefe & Merritt, Los Angeles. (For details, check No. 13 on p. 203)

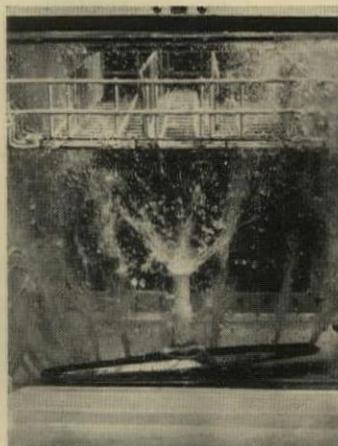


**Furniture-designed cabinets** have solid-core door fronts with raised center panels and picture frame moldings around the edges. Drawers have fluted solid hardwood fronts. Finish is baked lacquer. I-XL, Goshen, Ind. (For details, check No. 12 on p. 203)



**Steel cabinets** have wood fronts in a choice of 15 different finishes plus a choice of contemporary, traditional or provincial styling. Century cabinets are available with rope or bead molding, or no molding. Geneva Industries, Geneva, Ill.

For details, check No. 14 on p. 203



**Dishwashers** have improved water distribution systems: model 500 (shown) has pop-up secondary water source in addition to a full-width arm under lower basket: Model 700 (not shown) has two full width arms. Waste King, Los Angeles.

For details, check No. 15 on p. 203



**Self-cleaning oven** is key feature of this deluxe, 40" two-oven range. Large right-hand oven bakes grease and dirt to a fine ash with 880F heat (door automatically locks for 2½ hours until temperature drops to 550F). General Electric, Louisville.

For details, check No. 16 on p. 203



**Two-oven range** combines eye-level oven, 24" wide under-counter oven, three center-simmer burners and a thermostatically controlled top burner—all in a 30" range. Duette is fully automatic. In white or color. Crown Stove Works, Chicago.

For details, check No. 17 on p. 203

New products continued on p. 179

# TAKE THE GUESSWORK OUT OF BUILDING WITH

# CONSULTRON

**Plan your project for profit every step of the way with this new Barrett home builder marketing service!**

How? Easy! Simply give us a few basic facts about your proposed project. William Smolkin, noted building consultant, will process the data through an IBM 1620 Computer in a matter of minutes. Result: a custom-tailored, multi-page Consultron\* service report containing detailed information on these "make-or-break" areas:

- Optimum price range
- Types of homes to be built
- Optimum costs for labor, materials and sub-contracts
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- A detailed merchandising and advertising budget
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This is the kind of up-to-the-minute information you need to keep your operation profitable and on a firm business

basis from initial planning stages to the final sale. It is coordinated marketing data intended to produce houses that the customer *wants, when and where* he wants them and at a price he can afford to pay.

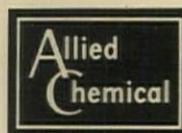
Act now! Hundreds of smart home builders have already requested the Barrett Consultron Service. See your Barrett representative or Barrett dealer for more information ...or mail the coupon.

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In addition to the Consultron service and other unique builder services, Barrett offers an impressive line of quality building materials. Many of these have been developed through the research and facilities of Allied Chemical Corporation, one of the world's largest producers of chemicals.

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about the comprehensive Consultron marketing  
program offered to builders by Barrett.

Name \_\_\_\_\_

Company \_\_\_\_\_

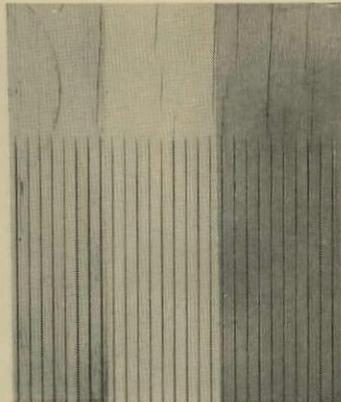
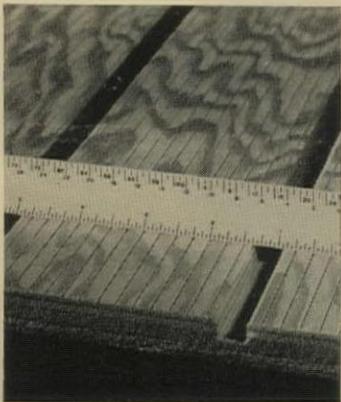
Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

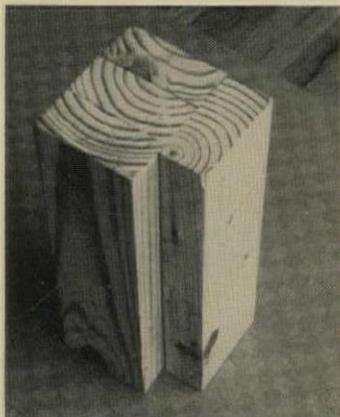
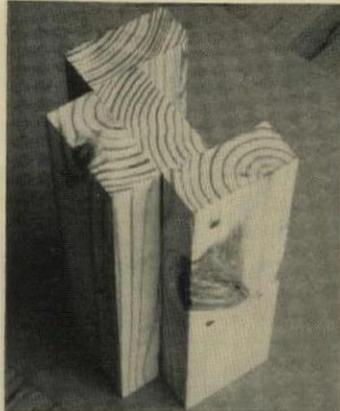
HH-5



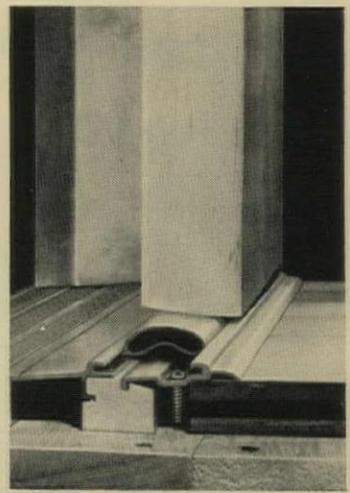
**Construction materials**



**Check-resistant plywood siding** has fine vertical striations every 1/4" to prevent cracking of face veneer. No-Check siding comes sanded or unsanded, solid or textured 1-11 panels, in sizes to 4'x10'. Pope & Talbot, Kalama, Wash. (For details, check No. 18 on p. 203)



**Framing parts** are manufactured at mill. Stud-tee (top) is used at wall intersections. Corner-post (bottom) is used for either inside or outside corners. Priced slightly higher than raw lumber, both parts are 8' long. Potlatch, Warren, Ark. (For details, check No. 20 on p. 203)



**Adjustable door frame** fastens directly to subfloor, has tilting saddle to fit any thickness of finished flooring from 3/8" (bottom) to 3/4" (top). Aluminum parts are separated by a wood thermal barrier. Rock Island Millwork, Rock Island, Ill. (For details, check No. 21 on p. 203)



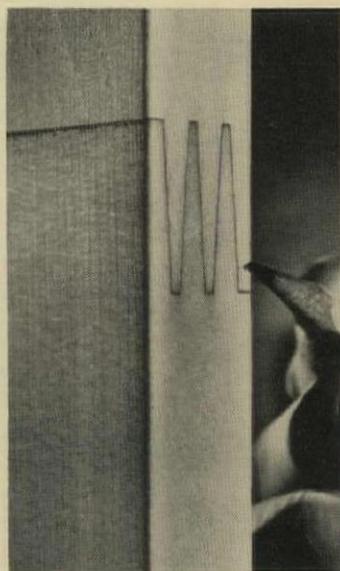
**Double-thick decking** combines sub-floor and underlayment in a single 1 11/32"-thick panel. Four-way nails directly to joists, serves as base for tile or carpet. T&G panels measure 2' x 8'. Homasote Co., Trenton, N. J. (For details, check No. 19 on p. 203)



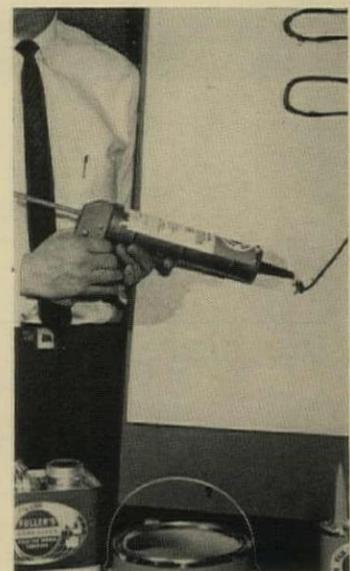
**Silicone sealant** for expansion joints, glazing and caulking costs about two thirds as much as similar industrial products. It can be used at sub-zero temperatures, cures to form a durable seal that remains flexible. G. E., Waterford, N. Y. (For details, check No. 22 on p. 203)



**Water-resistant drywall** is designed for bathrooms, laundries, kitchens and utility rooms. Sheetrock w/r has chemically treated faces and water-resistant core. In 4' x 8' and 4' x 12' sheets, 1/2" thick. U.S. Gypsum, Chicago. (For details, check No. 23 on p. 203)

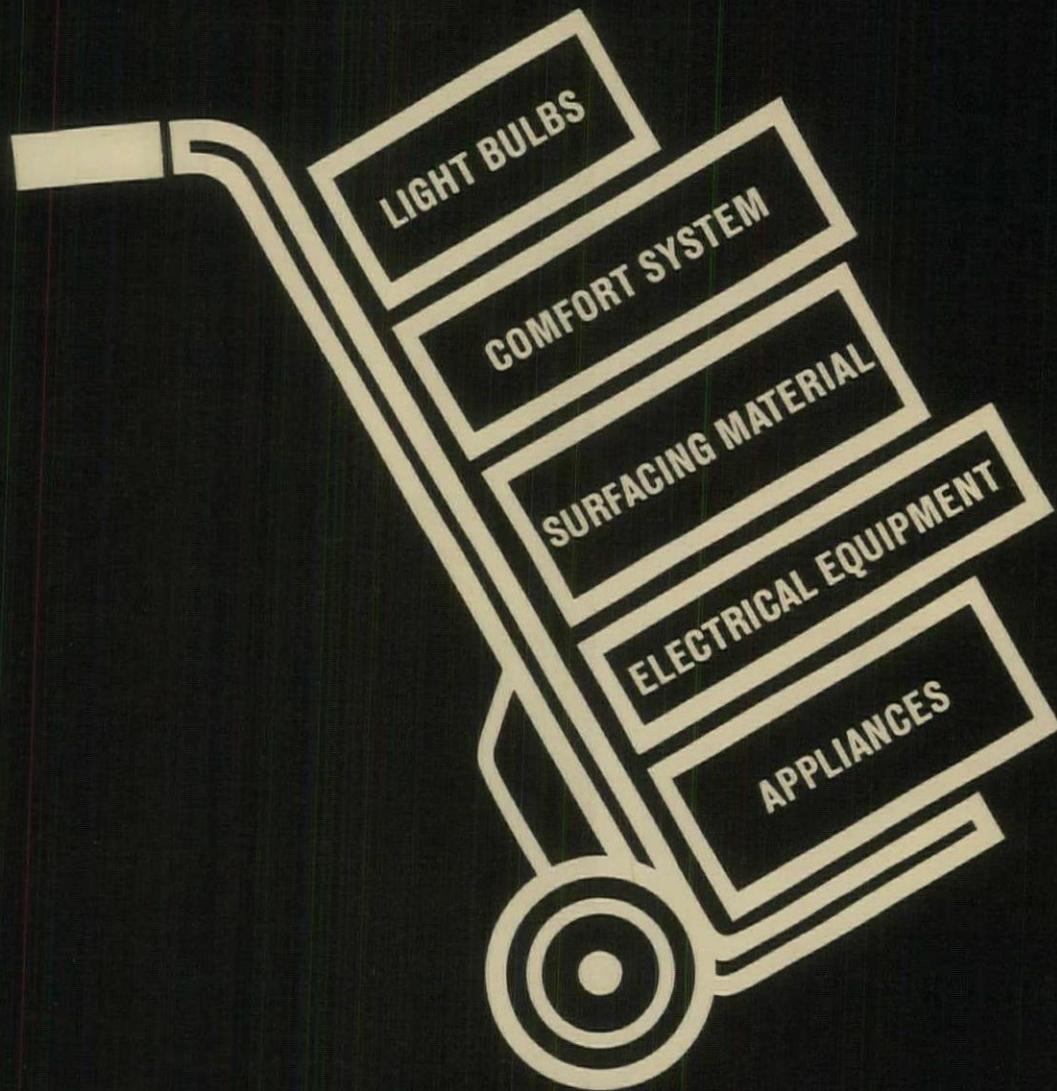


**Finger-jointed pine** is manufactured in sizes up to 4' wide by 24' long. Lockwide pine, made of electrically glued strips of Eastern pine, resists warping, cupping and checking better than most natural woods. U.S. Plywood, New York City. (For details, check No. 24 on p. 203)



**All purpose mastic** is used for laminating wallboard, paneling, bonding foam insulation and as a stud adhesive. Black Stuff forms an immediate and lasting bond. It comes in cartridges, quarts, gallons and 5-gallon pails. H. B. Fuller Co., St. Paul. (For details, check No. 25 on p. 203)

*New products continued on p. 183*



## Coordinated Deliveries

When you order Westinghouse electrical equipment and appliances, let us help you arrange a delivery schedule that will bring you what you need—when you need it. The man to see about coordinating deliveries is your Westinghouse Residential Sales Manager. He'll point out the many advantages of working with . . .

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### One man

a single point of contact for the complete line of Westinghouse Residential Products. Your Westinghouse Residential Sales Manager is as near as your telephone.

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### One plan

specially tailored by your Residential Sales Manager to merchandise and promote your project—whether your homes are Westinghouse-equipped, or Total Electric Gold Medallion.

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### One brand

one respected name on a matched line of quality home products. A name that stands for value and satisfaction in the minds of your prospects.

For complete details, contact the Residential Sales Manager at your Westinghouse Major Appliance Distributor. Ask him for the new 1964 Residential Catalog . . . or look it up in Sweet's File. It provides information on appliances, heating and cooling products, lighting, wiring devices, Micarta<sup>®</sup> plastic surfacing, and elevators . . . all available from Westinghouse.

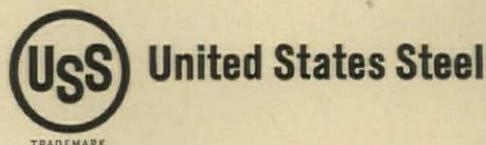
You can be sure if it's Westinghouse

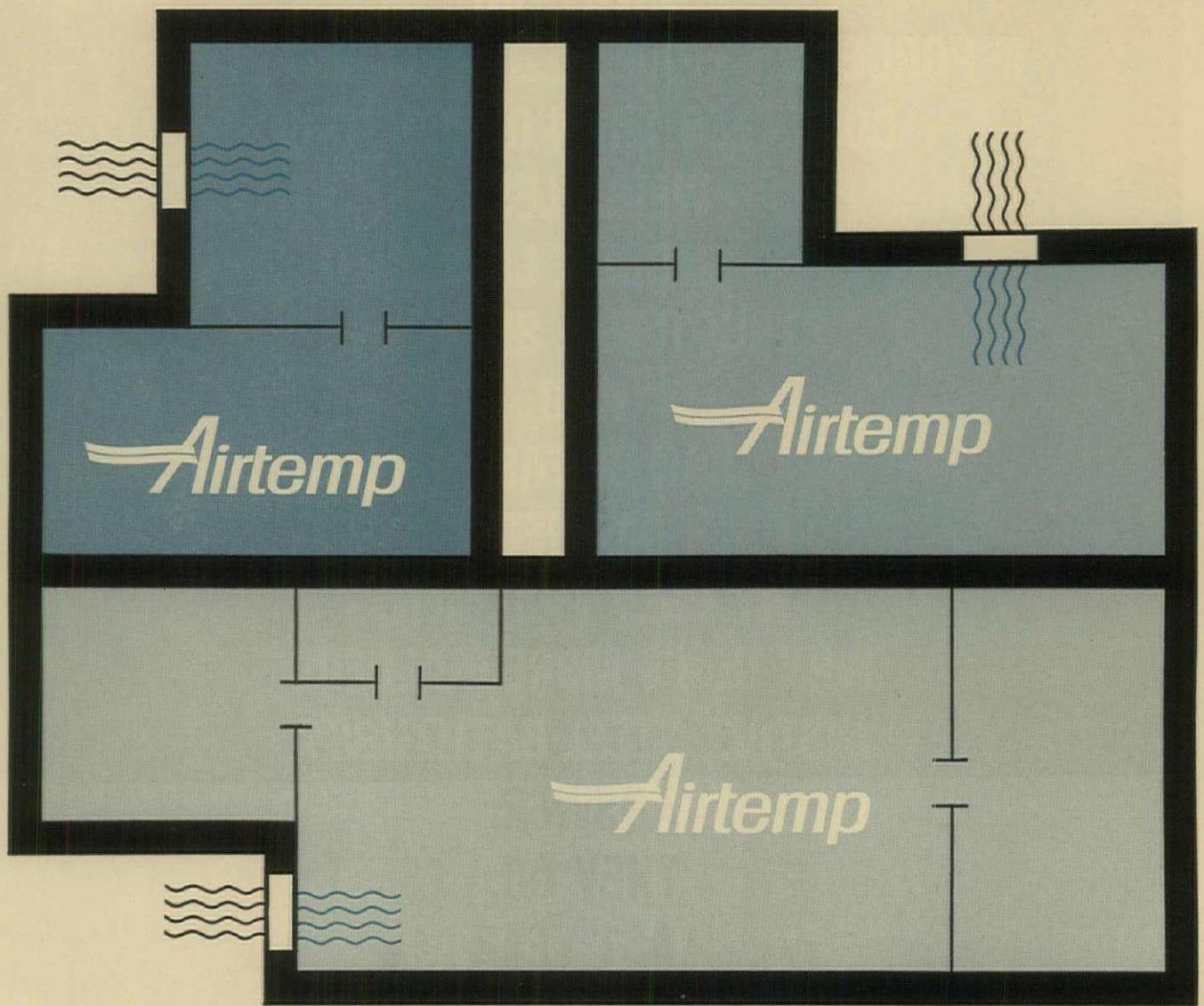


**QUESTION:**  
**IF PORCELAIN-ENAMELED STEEL BATHTUBS  
COST LESS THAN OTHER TUBS,  
WEIGH LESS,  
REQUIRE LESS  
STRUCTURAL SUPPORT,  
AND  
CAN BE EASILY  
CARRIED  
BY ONLY TWO MEN,  
WHY DON'T MORE BUILDERS  
INSTALL STEEL BATHTUBS?**

**ANSWER:**  
**THEY DO.  
LAST YEAR  
BUILDERS INSTALLED  
NEARLY  
A MILLION STEEL  
BATHTUBS.**

Here are some additional reasons why:  Steel bathtubs have up to one full inch of tiling-in-flange which means no water seepage, no call backs.  An acid-resistant, higher quality porcelain enamel finish with superior adherence properties is standard on all steel bathtubs. While you're ordering steel bathtubs, also order porcelain-enameled steel lavatories.  United States Steel Corporation, 525 William Penn Place, Pittsburgh, Pennsylvania 15230.





## Now zoned air conditioning that snaps in... is designed for apartments...fits in walls

**Attention: high- and low-rise apartment builders.** Airtemp has designed two all-new, low-cost zoned air conditioners specially for you.

Model 1251-00 produces 19,000 BTUH and Model 1252-02 provides 24,000 BTUH of cooling. Both Airtemp models are so very compact you can put them in walls.

So very flexible, you can install them remotely on rooftops. And they're designed for "snap-in" installation to cut costs on your end. Even the refrigerant lines are factory-precharged, for all lengths.

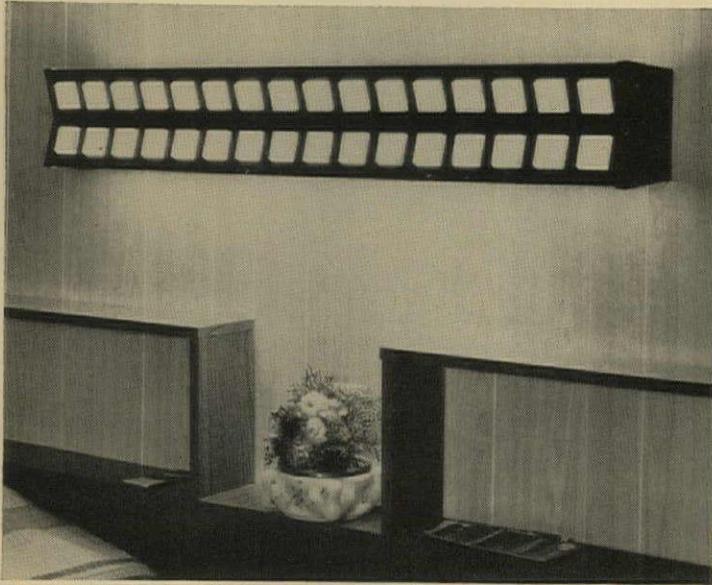
Learn how these two new Chrysler-Engineered air conditioners can fit into your current apartment

planning. Just contact your local Airtemp distributor. Or you can write to Tom Kirby, Vice-President-Marketing, Chrysler Corporation, Airtemp Division, Post Office Box 1037, Dayton 1, Ohio.

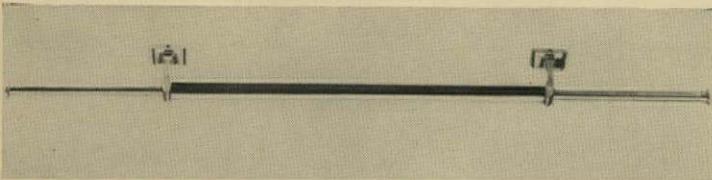
AIRTEMP DIVISION  CHRYSLER CORPORATION

## NEW PRODUCTS

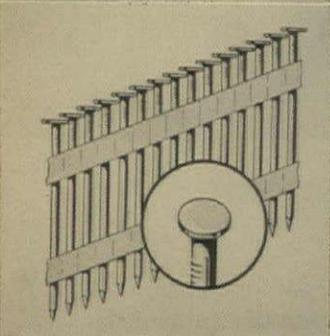
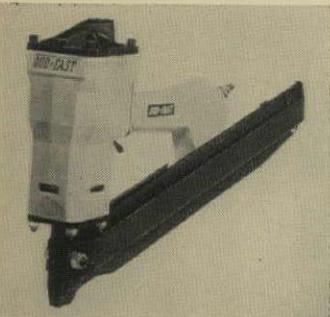
start on p. 175



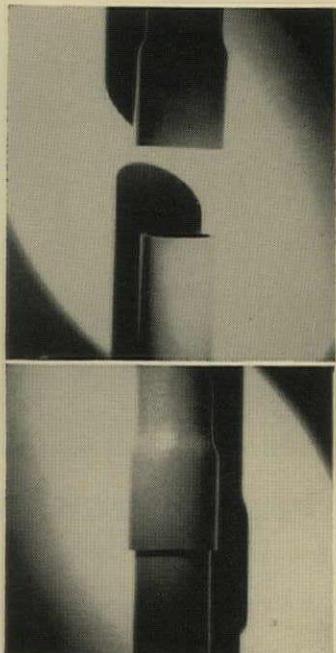
**Wall fixture** for fluorescent strips diffuses light through square or round decorative inserts of amber, blue, green or white vinyl. Colorescent fixtures are made in wall brackets (*above*), ceiling and wall strips, and ceiling panels up to 2' x 4'. Prescolite, San Leandro, Calif. (For details, check No. 26 on p. 203)



**Telescoping towel bar** has round extensions 11" long which pull out from each end for extra hanging space. Extensions push into bar when not in use. Center bars come in 24", 30", 32" and 36" lengths. Hoover Bathroom Accessories, Fowlerville, Mich. (For details, check No. 27 on p. 203)



**Round-head nailer** drives strip-mounted common nails. Duo-Fast CN-135 needs only 80 psi to drive 9d nails in hardwood with a single impact. Also drives 6d, 7d and 8d nails Trigger or touch-trip operated. Fastener Corp., Franklin Park, Ill. (For details, check No. 28 on p. 203)



**Bell-ended pipe** made of polyvinyl chloride saves coupling at joints and cuts installation time. Bell-end is solvent welded to any straight section. Made in 1/2" to 6" sizes and 10' and 20' lengths. NSF approved. Plastex Co., Columbus, Ohio. (For details, check No. 29 on p. 203)

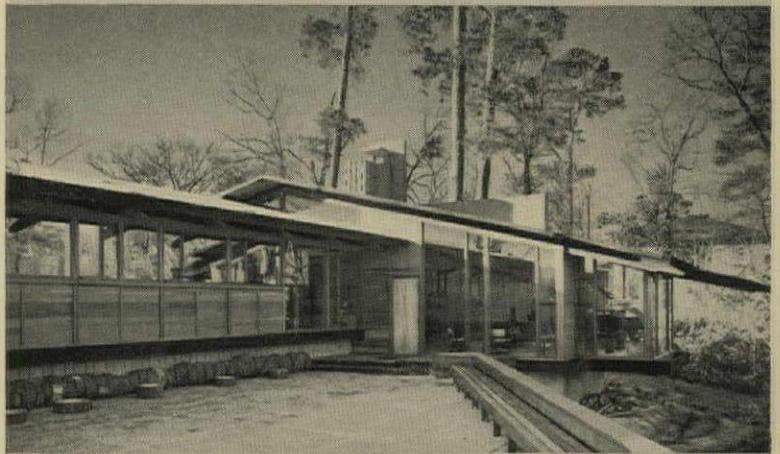
New products continued on p. 187

## ASK THE MAN WHO MAKES ONE

As homebuilding technology grows more and more complicated, it becomes increasingly difficult to remember every detail of every building product development. But the manufacturers of the products do. And the best of them advertise in House & Home.

In House & Home's advertising pages you meet the most enterprising manufacturer with whom it pays to do business. Their up-to-the-minute technical experience and creative thinking are yours for the asking. You will find a letter or a telephone call to any one of them is much more productive than a frustrating search through mountains of year-old brochures and manuals.

## A Natural "Driftwood Gray"



Home in Houston, Texas. Architect: MacKie & Kamrath, Houston, Texas. Cabot's Bleaching Oil on siding.

**Cabot's #241 BLEACHING OIL**  
Unique Beauty at 1/2 the Cost of Paints



When applied to untreated wood surfaces, Cabot's Bleaching Oil imparts a delicate gray tone which, in very few months, weathers to a beautiful, natural "driftwood gray" . . . a color effect ordinarily found only in seacoast areas after years of exposure to salt air.

- For exterior wood surfaces: shingles, shakes, siding, trim . . . all species of lumber.
- Easy to apply . . . will not crack, peel, blister.
- Trouble-free: minimum maintenance, outlasts paints.

### SAMUEL CABOT INC.

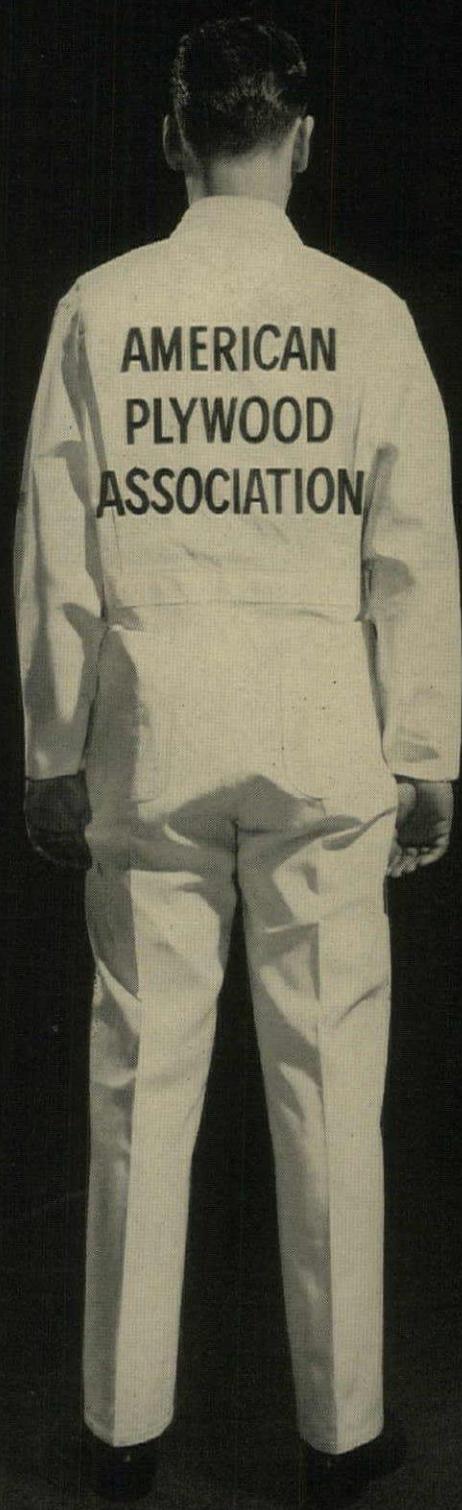
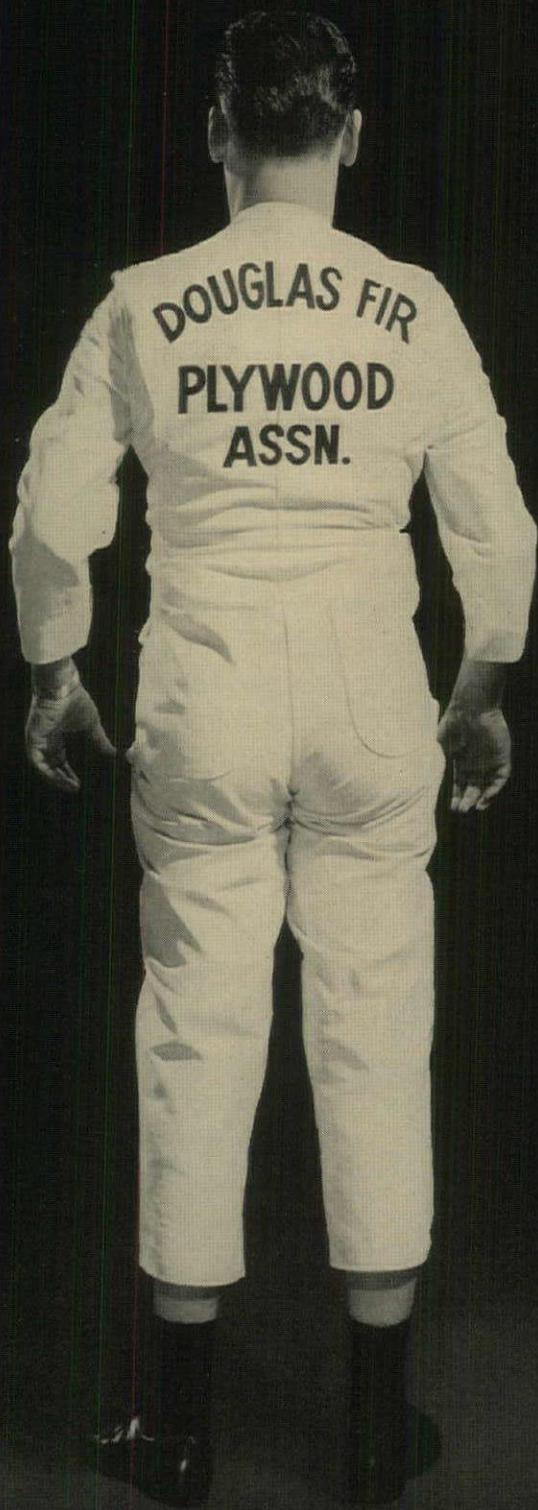
530 S. Terminal Trust Bldg., Boston 10, Mass.

Please send information on Cabot's #241 Bleaching Oil.

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## Douglas Fir Plywood Association has outgrown its name

The industry we represent has undergone some big changes in recent years. Our old name no longer fits.

Instead of making plywood only from Douglas fir—and only on the West Coast—the industry now makes a wide range of products from some 20 different species of

wood—and in plants in many parts of the country.

The new name reflects our members' growth and progress.

Even though the name is new, you can still specify DFPA plywood. These familiar letters still stand for quality in plywood certified by the

association and you'll continue to see them in our grade trademarks. Instead of Douglas Fir Plywood Association, though, they now stand for Division For Product Approval.

And we're still headquarters for all kinds of plywood information. Write us at Tacoma, Wash. 98401.

**AMERICAN PLYWOOD ASSOCIATION**

The new name for Douglas Fir Plywood Association.  
Quality-tested by the Division For Product Approval.



# TAPPAN

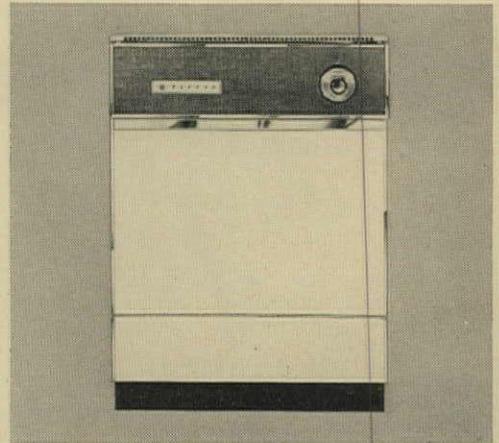
Now, an electric kitchen package for your popular-priced homes!



**Tappan 'Fabulous 400' Electric Model EV 4300**—The Tappan 'Fabulous 400' is the range that has set today's trend in cooking. Now you can include this sensational eye-level oven electric range in your kitchen package for virtually the same cost—or less—than conventional slip-ins or wall ovens. Installs easily in 30" of space without costly cut-outs. Provides over 12 cubic feet of additional cabinet or storage space below (often an important factor in financing approval). And, the 'Fabulous 400' is loaded with woman-appeal features . . . automatic clock, easy-to-clean all porcelain oven, eye-level controls, hideaway top, timed convenience outlet.



**Tappan Disposer, Model TA 44**—This economy model Tappan-built disposer grinds food waste quickly and efficiently. Absorbent barrier and sound control jacket for quiet operation. Shreds and grinds the most difficult food waste . . . bones, corn cobs and other fibrous materials. Twist-on key-hole installation. *Five-year warranty.* Deluxe models also available.



**Tappan Dishwasher, Model UCC-2**—The budget priced matching dishwasher can be installed under or at end of counters. Wood front can be easily installed to match cabinets. Exclusive two-way wash action, thorough drying, large family-size capacity, dual detergent dispenser, extra quiet operation. Step-up models also available.

## With Tappan you can pick your package from a complete quality line

One source, one service responsibility guarantees you a better deal when you pick kitchen components by Tappan. And no matter what price or style of home you sell, there's a Tappan quality kitchen to match your exact needs.

Tappan offers broadest choice of gas and electric cooking units . . . refrigerator freezers . . . dishwashers . . . sinks and disposers . . . vent hoods. Wide choice of colors, too. Find out more about Tappan's complete, quality line. See your Tappan distributor or representative. Or send coupon at right.

**TAPPAN** THE TAPPAN COMPANY, MANSFIELD, OHIO  
TAPPAN-GURNEY, LTD., MONTREAL

The Tappan Company, Dept. HH-54  
Mansfield, Ohio

Please send me details on  Tappan package kitchens;  Built-in oven and surface units;  Free-standing and slide-in ranges;  The 'Fabulous 400' ranges;  Dishwashers;  Refrigerator-freezers;  Disposers;  Sinks;  Vent hoods;  Icemaker.

Name \_\_\_\_\_

Firm \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_



Model DW-IUH

**The only cost that matters  
is cost installed**

A Frigidaire Under-counter Dishwasher is one of the finest, most effective "built-in bonuses" you can offer your prospects. You can add this extra value to your homes for minimum extra cost, thanks to fast installation. And that cost is more than repaid by the *competitive edge* a Frigidaire Dishwasher gives you!

New countertop mounting simplifies installation. Once under-counter opening has been provided, and plumbing and wiring roughed in, just slide dishwasher in place, level, and

**That's why this beautiful  
Frigidaire Dishwasher gives you  
such a solid sales advantage!**

fasten two 6" mounting straps (pre-attached to dishwasher) to underside of counter.\* Connect easily accessible fill line, drain, electrical points . . . and dishwasher is ready for operation.

Installation speed is a quality feature of all Frigidaire Built-Ins . . . a feature that'll pay off for you *and* your customers! Frigidaire Division, General Motors Corporation, Dayton, Ohio.

*\* Countertop must accommodate 3/4" wood screw. Otherwise choose from two floor installation kits also furnished (and also easy to install).*

*Frigidaire Under-counter Dishwashers are available in 4 rich colors, white, and brushed chrome.*

**Build In Satisfaction . . . Build In**



**FRIGIDAIRE**

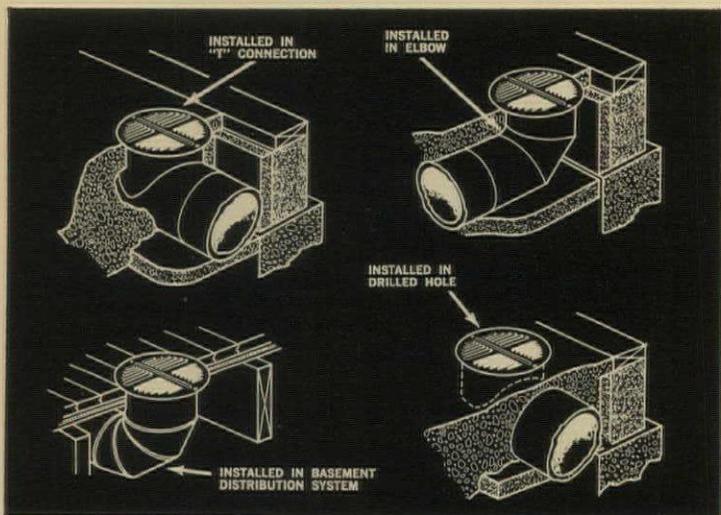
RANGES • WALL OVENS • COOKING TOPS • DISHWASHERS  
DISPOSERS • REFRIGERATORS • FREEZERS • WASHERS • DRYERS

HOUSE & HOME

## NEW PRODUCTS

start on p. 175

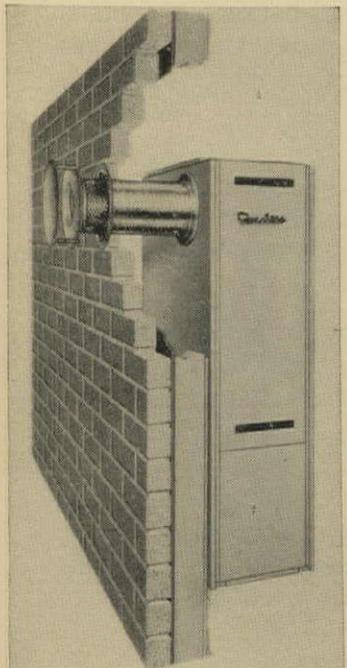
### Heating and cooling



**Round floor register**, developed from the TAMAP program, cuts installation costs as much as 40%. It drops into a 6" hole bored in slab or wood floors, eliminates formwork, tile-scoring or sawing. Adjustable butterfly dampers control air flow. Stanley Works, New Britain, Conn. (For details, check No. 30 on p. 203)

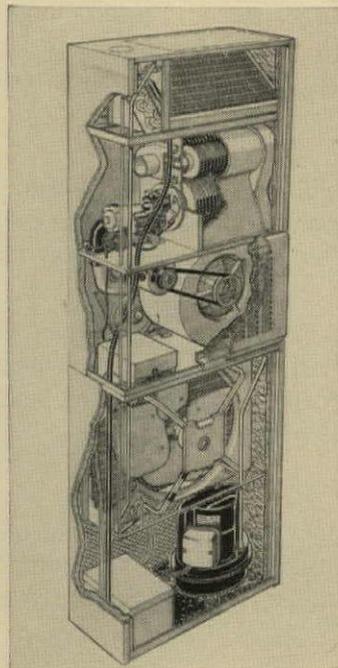


**Water chillers** for high-capacity cooling systems are packaged in units only 35" wide and 6' 8" long—small enough to go through a standard exterior door. Airtemp units are rated from 20 to 100 hp., operate with a single compressor. Chrysler, Dayton. (For details, check No. 31 on p. 203)



**Chimneyless gas furnace** is designed for apartments, motels and small houses. Combustion system is sealed and a through-wall pipe carries both combustion air and exhaust. Unit is rated at 55,000 BTU. Peerless Corp., Indianapolis.

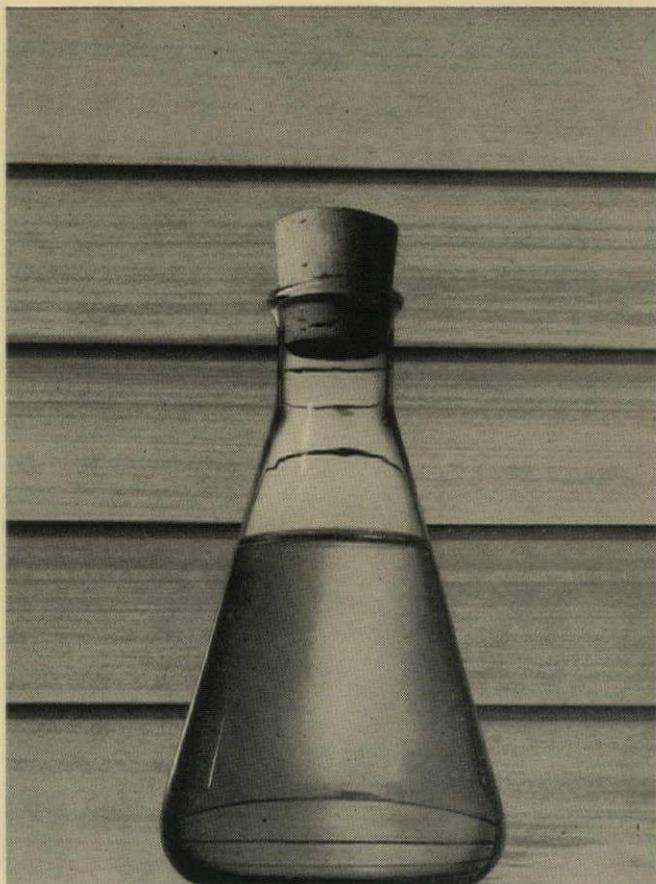
For details, check No. 32 on p. 203



**Compact heater-cooler** is only 30"x13"x80", has a heating capacity of 80,000 BTU and a cooling capacity of 23,000 BTU. Gas-fired heating system has a power vent, needs no chimney. Compressor is built into the unit. Delco, Rochester, N.Y.

For details, check No. 33 on p. 203

New products continued on p. 189



(Western Red Cedar Bevel Siding, Clear Vertical Grain, All Heart)

## This preservative would have cost us \$10 million to develop

(Thank goodness nature provides it free in Western Red Cedar)

Nature built into Western Red Cedar preservatives that perpetuate its warm beauty for generations. You'll find that this product — whether utilized for exterior or interior use — adds distinctive personality to any structure. Write now for information about the other fine qualities of Western Red Cedar.

see our catalog in Sweet's 



Please send me more information on Western Red Cedar Bevel Siding and the following patterns and subjects:

- Bevel Siding  Tongue & Groove  Saw Textured  
 Finish Lumber  Factory Primed  Channel

NAME \_\_\_\_\_

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_

**WESTERN RED CEDAR LUMBER ASSOCIATION**  
 4403 White-Henry-Stuart Building, Seattle 1, Wash.

**QUIET**  
**YOUR HOMES**  
 LOWER YOUR FEATURE COSTS

NEW



**SUSPENDED GRID CEILING SYSTEM**



Tailored to keep the "Quiet Home" concept within profitable building cost boundaries, Simpson's new Suspended Grid Ceiling System offers a new feature of growing interest to prospective home buyers... and provides a tremendous range of advantages for either new construction or renovation of existing structures.



Easy leveling hanger system requires no support between 4' centers, snaps into grid in a second. Interlocking connections require no tools or time consuming fitting, just a twist of the wrist and they are securely fastened.



The inherent flexibility of the Simpson grid system allows use of a wide variety of inexpensive lighting fixtures or diffusion panels, heating or air-conditioning systems and provides easy access for maintenance.

Because there is no taping, patching or waiting for paint to dry, the overhead can be left exposed right up to the minute of job completion... then the system completed by slipping beautifully textured Forestone® acoustical panels into place.

Check with your Simpson acoustical products supplier for complete information on the suspended grid ceiling system and the full range of Simpson acoustical and insulating board products for your "Quiet Home" construction planning, or write to: Simpson, 2001 B4 Washington Building, Seattle, Washington 98101.

RELY ON



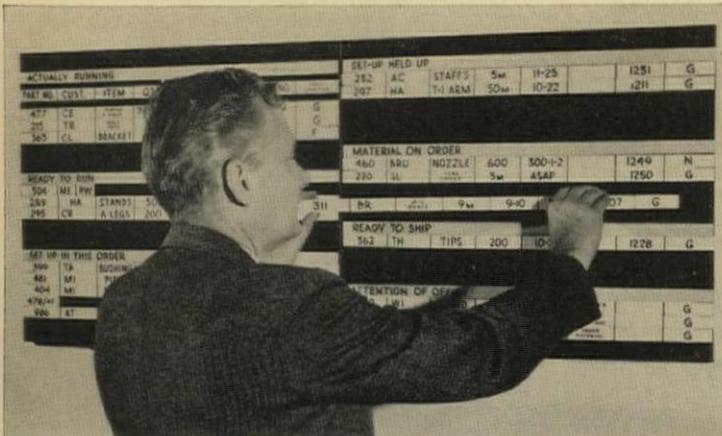
**SIMPSON TIMBER COMPANY**



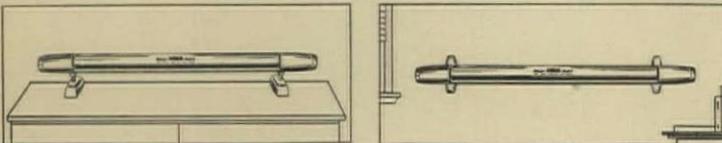
## NEW PRODUCTS

start on p. 175

### Office equipment



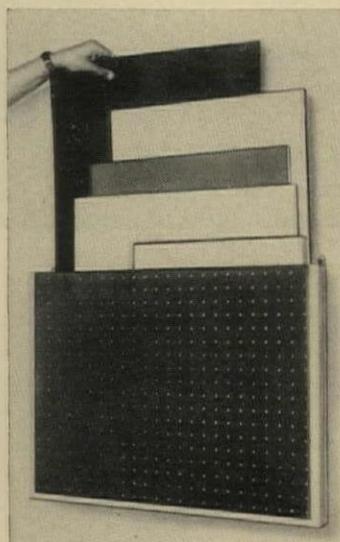
**Visual control chart** has magnetized data strips which cling to wall-mounted board, can be easily shifted or removed. Strips can be permanently lettered, or data written on pressure-sensitive tape may be stuck to the strips. Set with two 24" x 21" boards costs \$59. Status Systems, Chicago. (For details, check No. 34 on p. 203)



**Portable diazo whiteprinter** can be wall-hung or set on a table. It makes copies up to 42" wide, any length desired. Original and diazo paper are fed into printer and exposed; the diazo copy is developed in the tube. No warm-up time necessary. Price: \$209. Reproduction Engineering, Essex, Conn. (For details, check No. 35 on p. 203)



**Low-price photocopier** retails for \$69.95, weighs only 9½ lbs., takes up 18½"x10" of desk or table space. Cartridge loading system in Copy-Quik eliminates handling the developing solution. American Photocopy Equipment, Evanston, Ill. For details, check No. 36 on p. 203



**Wall-mounted rack** holds office and drafting supplies in sizes up to 20"x30". Pegboard front can be used to hang drafting instruments, tools, etc. Hang-It-All costs \$3.95, is 24" wide and 18" high. Hang-It-All Co., Lynbrook, N.Y. For details, check No. 37 on p. 203

Publications start on p. 194

# "Why do I specify ARI-Certified Central Air Conditioning? Because I want my houses to deliver what I promise."

Jack L. Wallick,  
Columbus, Ohio

"Most new houses in our building area feature central air conditioning. One of the strong points in our sales talk is *certified* equipment. The ARI seal means protection all around—for me as a builder and for the people who live in the houses I sell. I like the security it provides my customers."



When you specify *ARI-Certified* for unitary air conditioning, you're sure that the equipment will produce the cooling capacity claimed. Equipment bearing the ARI Seal of Certification must function satisfactorily under maximum operating conditions, resist ice formation, provide adequate insulation and condensate disposal. Certified equipment is subject to random selection from field stocks by the Institute. An independent lab subjects this equipment to intensive testing and verification under adverse conditions. The seal is withdrawn if the equipment fails to deliver. Members' equipment claims are subject to challenge by other members. Ratings are in precise British thermal units per hour rather than in imprecise tons or horsepower.

Supported by manufacturers making more than 90% of all unitary\* air-conditioning equipment rated below 135,000 Btuh, the ARI Certification Program removes all doubt about the capacity of specified equipment.

Consult your local air-conditioning contractor—and specify *ARI-Certified* for your next project. Free directory of certified equipment upon request. Write Dept. 205.

\*Unitary includes packaged air conditioners, whether single units or two-piece ("split") units, less than 135,000 Btuh in capacity, but not including room air conditioners.

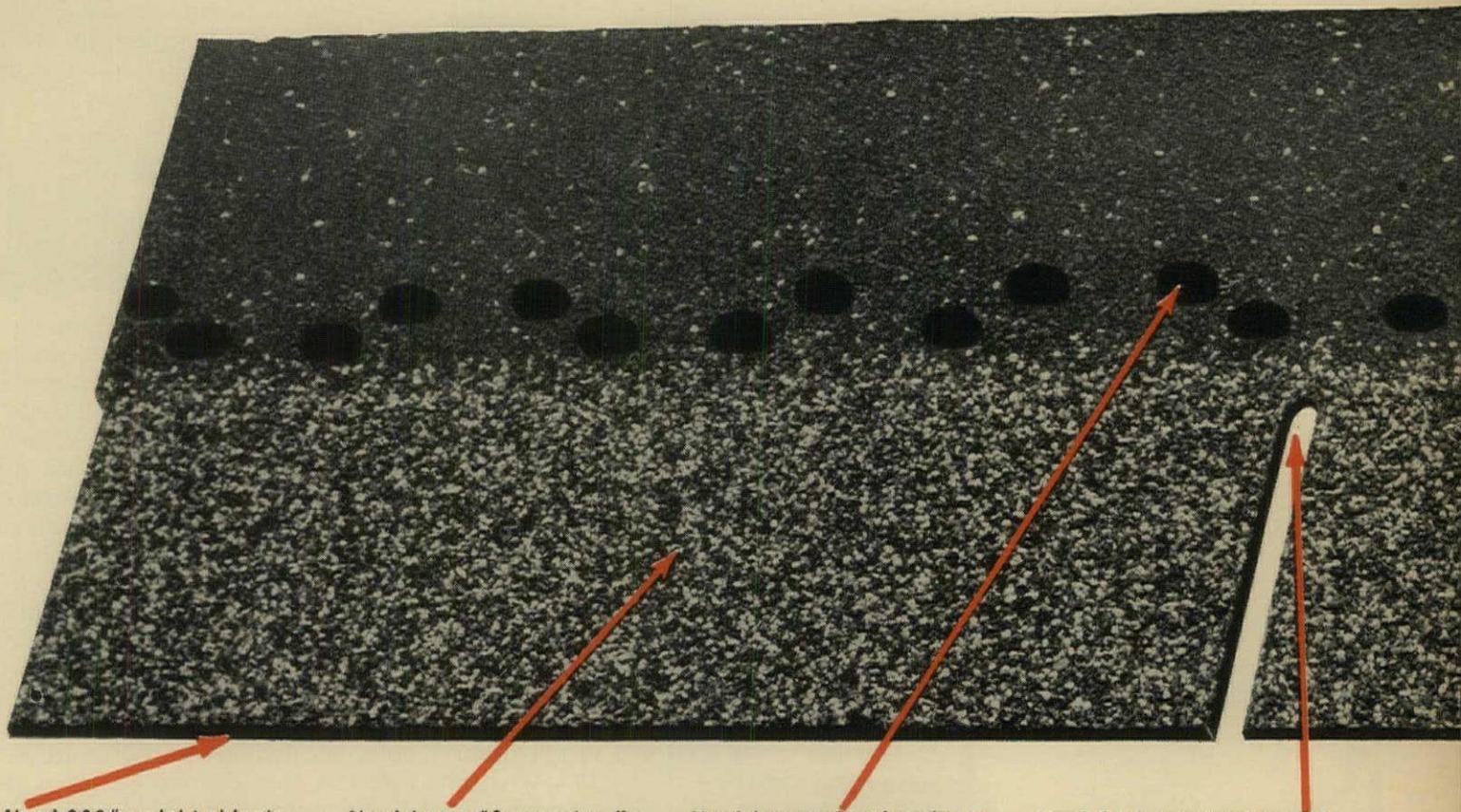


## AIR-CONDITIONING AND REFRIGERATION INSTITUTE

1815 North Fort Myer Drive • Arlington, Virginia 22209

*Another "first" from Ruberoid...*

# New Ruberoid



*New! 300# weight shingle—new long-life balance of finest quality roofing felt, asphalt saturant, coating and granules. Only SOVEREIGN has this perfect balance of ingredients.*

*New! Large #9 granules (instead of the ordinary #11) gives greater protection from damaging rays of the sun as well as a look of luxury.*

*New! Improved self-sealing to provide complete weather protection. Each tab solidly bonded down along its front edge in 12 places.*

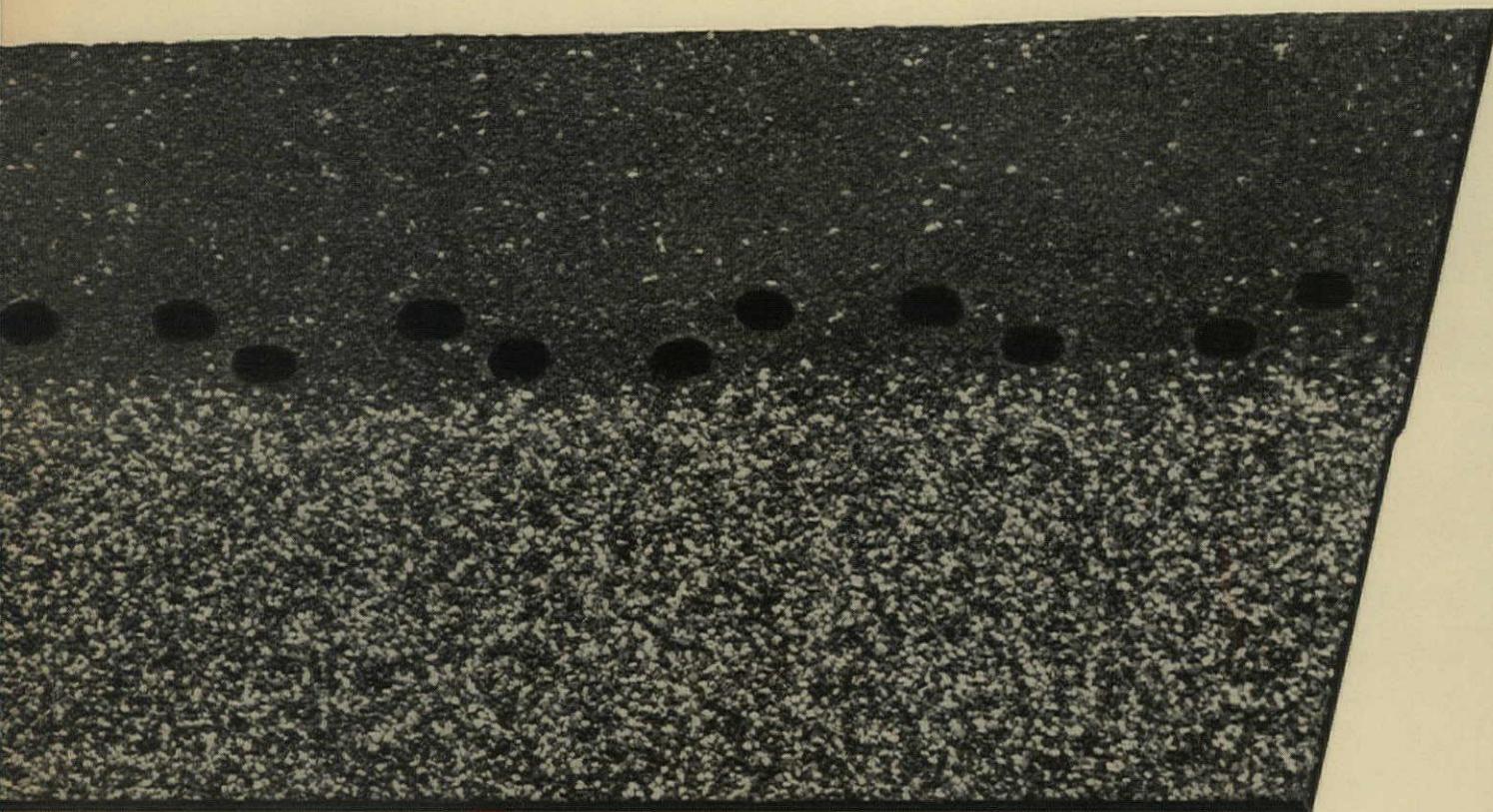
*New! 2-tab construction adds to the heavy rugged attractive appearance home owners want.*

***Made to outperform  
and outlast  
ordinary asphalt roofing  
shingles by years!***

Quality sells homes—value sells homes—beauty sells homes—and new SOVEREIGN has them all. Offer home buyers a distinctive appearance at a low asphalt roofing price. SOVEREIGN is virtually trouble-free. No wonder it's the "King of Asphalt Shingles": looks best, performs best. See it today at your Ruberoid dealer—or write to us for details. There's no obligation.

# Sovereign<sup>®</sup>

asphalt shingle  
with the massive,  
distinctive look  
home buyers want!



*New! Improved wind resistance tested in laboratory-produced winds that are greater than hurricane force.*

*New! Thicker butt gives a more solid look to roof. Deeper shadow lines accent the color, add to appearance.*

*New! Choice of 6 latest "trend colors" selected by Color Helm, one of the country's leading color experts, for roof beauty. (Ermine White, Oxford Tweed, Sherwood Green, Fawn Beige, Canyon Glow, Windsor Black.)*



**The RUBEROID Co., 733 Third Avenue, New York, N. Y. 10017**

***THIS IS  
THE NEW GLENWALL\*  
THAT LOWERED THE BOOM ON  
OFF-THE-FLOOR INSTALLATION COSTS***



Off-the-floor toilets used to be a much-admired "luxury." Today, they are practical for any home. The new Glenwall is priced to compete with floor-mounted toilets. Experienced plumbing contractors are installing them as fast as conventional toilets, sometimes faster. Costs have been reduced all along the line. Now this off-the-floor toilet—the bathroom fixture that women admire most—has an installed cost just a little higher than a toilet without its selling power. Let the Glenwall give your model homes that extra edge. For more information see your plumbing contractor or write American-Standard, Plumbing and Heating Div., 40 W. 40th St., New York, N.Y. 10018. \*TRADEMARK OF ARASS CORP



AMERICAN-Standard and Standard® are trademarks of American Radiator & Standard Sanitary Corporation

**AMERICAN-Standard**  
PLUMBING AND HEATING DIVISION

# New Metalbestos Venting Technique for Apartments HELPS SAVE *OVER \$13,000* ON HEATING AND COOLING



Oak Crest Gardens,  
Salt Lake City  
Builder: Robert D. Sawyer  
Architects: Ashton,  
Evans & Brazier

"Individual apartment control of heating and cooling is one of our biggest sales assets," reports Robert D. Sawyer, Builder of the elegant Oak Crest Garden Apartments in Salt Lake City.

"We sought a system that was simple, economical for the owners and had a minimum of controls. And we found it with gas — individual heating and cooling units that utilize a new concept in venting."

Mr. Sawyer, a graduate mechanical engineer, had made a two and one-half year study of apartment construction before plans were drawn by his architects, Ashton, Evans & Brazier, for the twin tower condominium.

"We studied all types of apartment heating and cooling, particularly the three-pipe system. A cost analysis showed us that individual, forced-air systems for each apartment would save more than \$300 per installation for each of 44 units."

The heating and cooling units, ranging from 70,000 to 130,000 BTU, are housed unobtrusively in a 4 x 4 outside corner of each apartment (see illustration below).

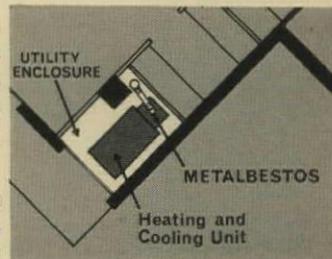
"This set-up was all the more practical when our heating contractor, Bob Sorenson, showed us how all 44 units would be vented by only eight Metalbestos gas vents."

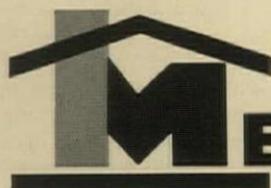
Mr. Sawyer was referring to a new concept in gas venting developed by the Metalbestos design and engineering departments for medium and high-rise apartments. Data and sizing information on this system, the first of its kind in Salt Lake City, were submitted to Clifford M. Reynolds, Superintendent of Utilization for Mountain Fuel Supply Company, the utility. Mr. Reynolds and his staff made an intensive study of the proposed installation and subsequently accepted it.

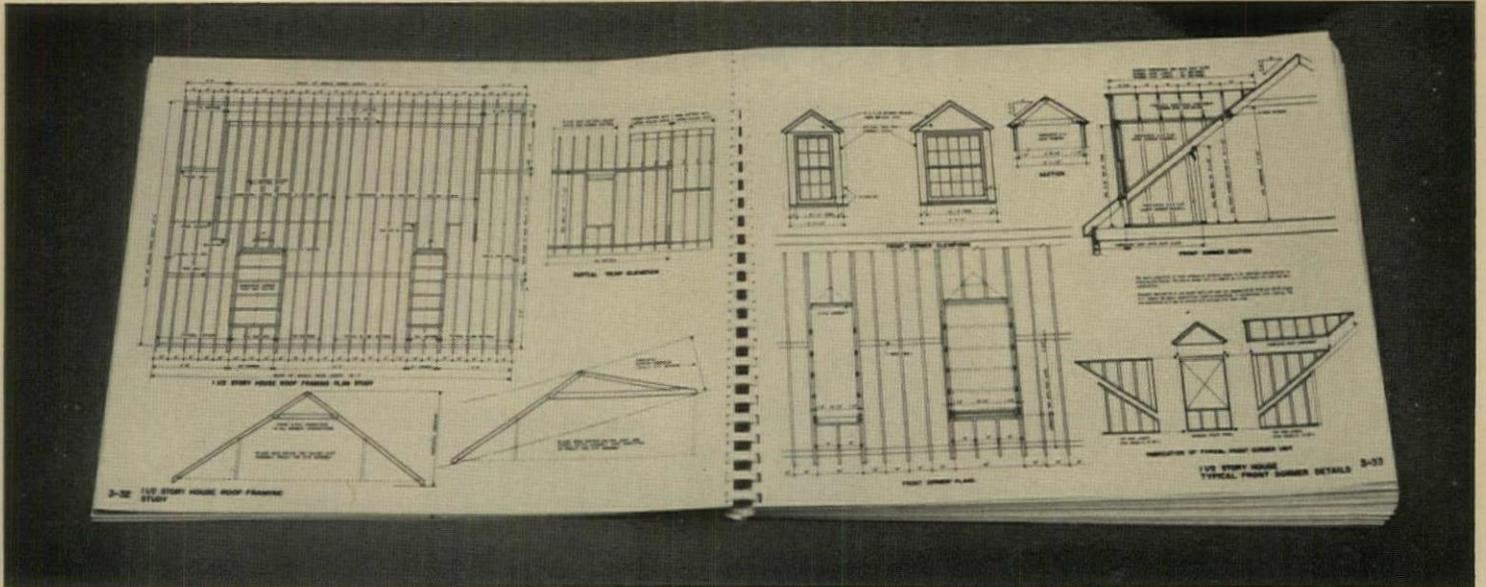
Across the country, builders are discovering how modern venting techniques can save money and permit highly desirable heating installations. There's a Metalbestos representative near you with all of the details. May we send you his name? Write P. O. Box 137, Belmont, Calif.



ROBERT D. SAWYER



 **METALBESTOS**  
DIVISION OF THE WILLIAM WALLACE COMPANY - BELMONT, CALIF. - LOGAN, OHIO  
METALBESTOS IS THE REGISTERED TRADEMARK OF THE WILLIAM WALLACE COMPANY.  
WORLD'S LARGEST MANUFACTURERS OF TYPE B GAS VENT AND ALL-FUEL CHIMNEYS.



## New manual packs 2,500 component details into 248 pages

And just a sampling of their variety is shown here. Unicom (for Uniform Components) Manual No. 2 is the most complete collection of house-framing details and dimensions ever published. Its format is extra-large—14"x18".

The manual was published by the National Lumber Manufacturers Assn. as a handbook for makers of standardized components. Its predecessor, Unicom Manual No. 1 (H&H, June '62) is a design handbook that is in-

tended primarily for use by architects.

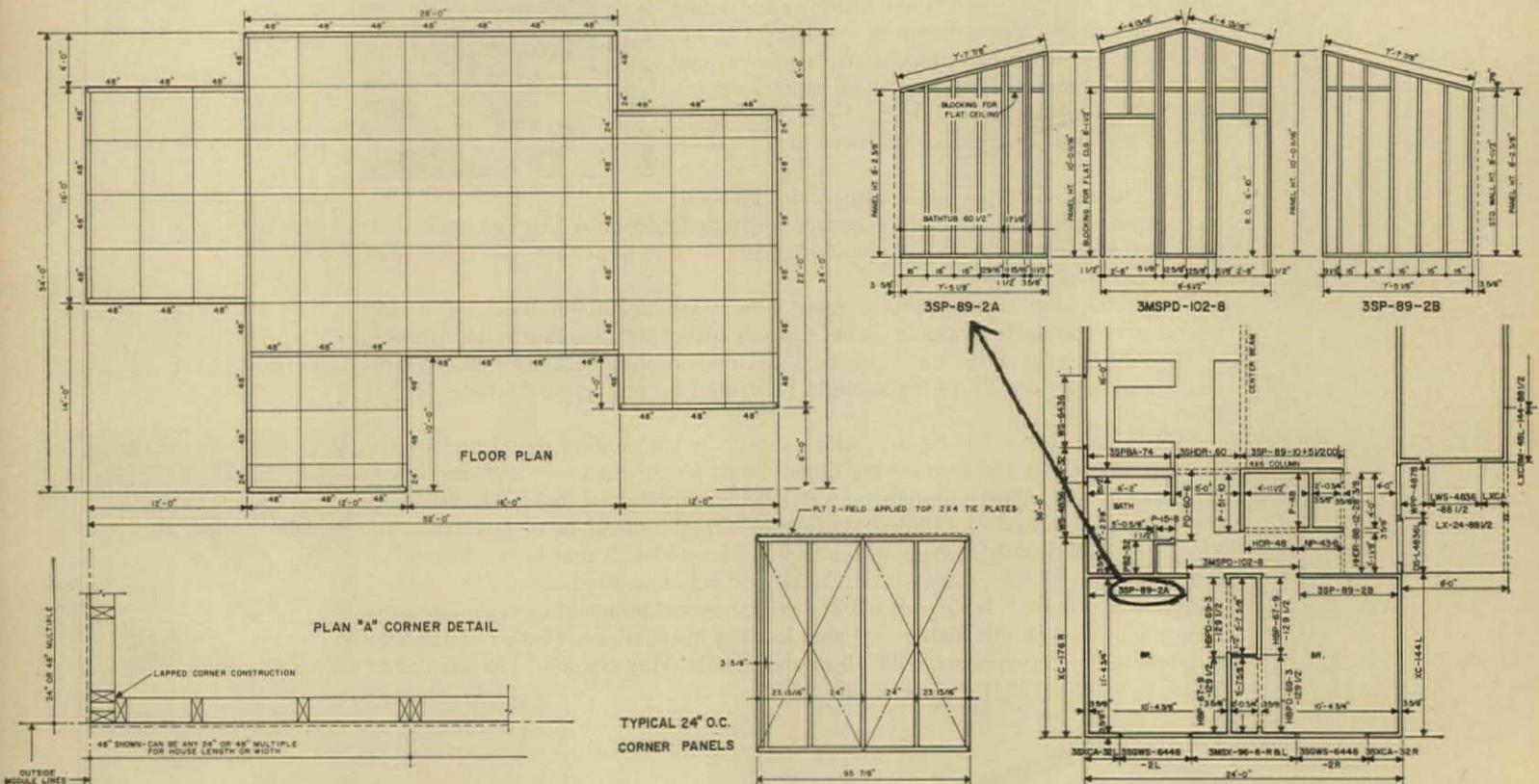
Unicom differs from other components systems—LuReCo's, for example—because it is based on a 4' modular grid divided into 4" increments instead of simple 4' and 2' panel widths. This means it can be applied to all types, styles and sizes of houses and any floor plan can be made to work with it by altering a few dimensions.

Manual No. 2 includes sections on nomen-

clature, basic design, basic house types, floor-construction standards, roof-framing standards, exterior walls, windows and doors, interior partitions and gable-end components.

Roughly 150 lumber dealers, builders and prefabricators are already using the new manual as a shop guide, according to NLMA Engineer John Zerbe. For a copy, send \$5 to the National Lumber Manufacturers Assn., 1619 Massachusetts Ave. N. W., Washington.

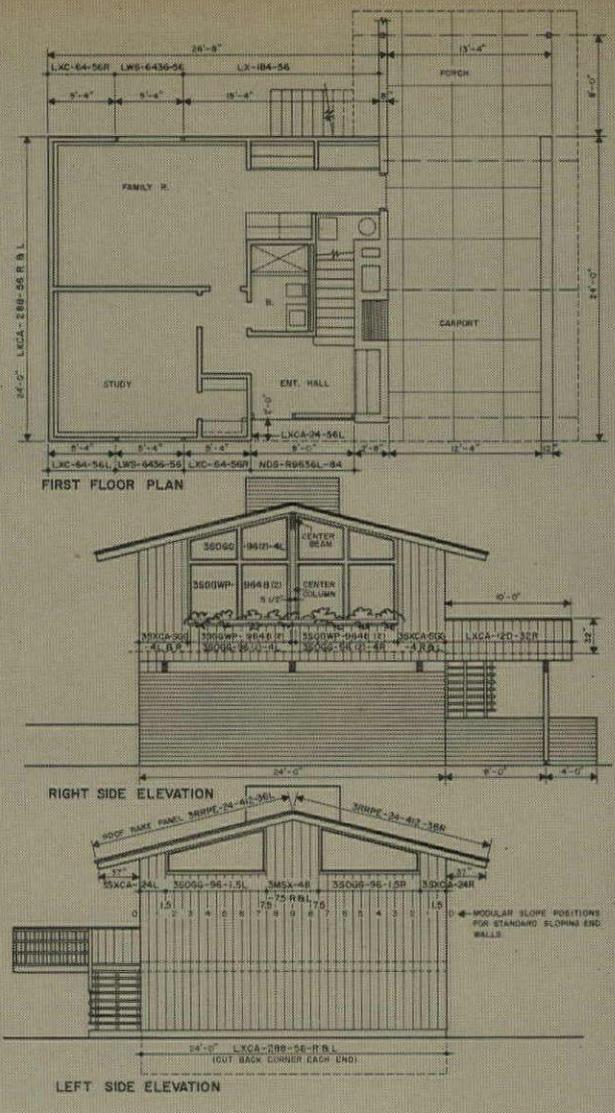
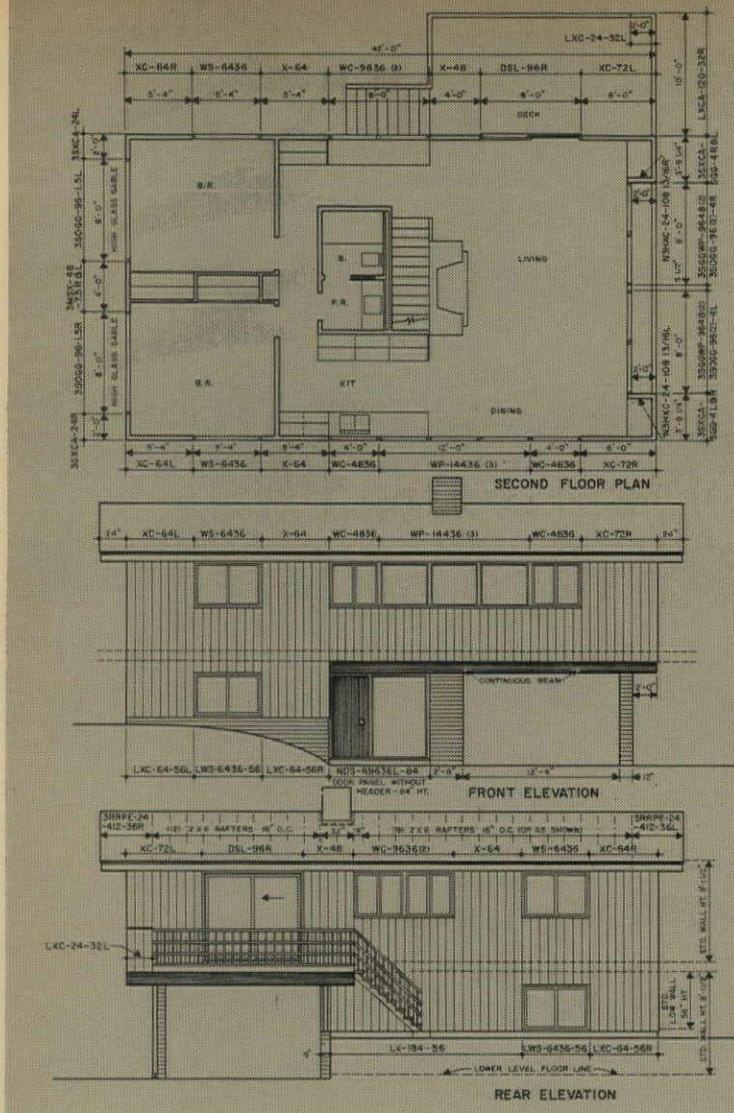
*Publications continued on p. 201*



**UNICOM MODULE** is a 4' grid (dotted line in corner detail) that extends  $\frac{3}{8}$ " beyond the outer faces of  $1\frac{1}{2}$ "x $3\frac{3}{8}$ " dry studs. Floor plans are usually laid out in 2' (half-grid) increments.

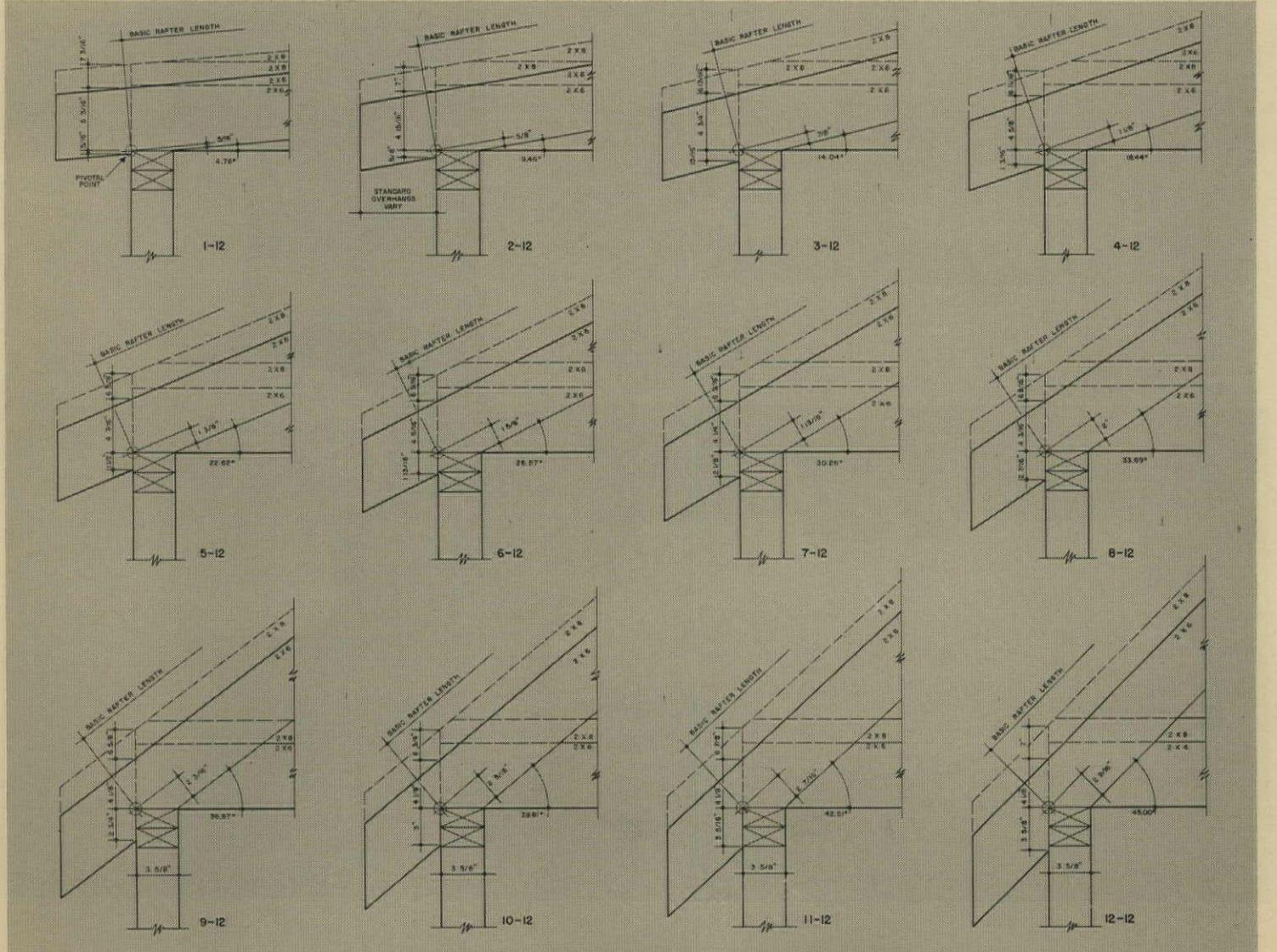
**UNICOM PANELS**, usually designed to work with 2' floor-plan panels, normally are  $\frac{1}{8}$ " less than any multiple of 2'. So stud spacing at each end of a panel is  $23\frac{15}{16}$ " instead of 24".

**NUMBERS ON PLAN** specify panels to be used and describe them. For example: No. 3SP-89-2A is a 3-in-12 sloped panel, 89 $\frac{1}{2}$ " long, and the left panel of a pair (2A and 2B).

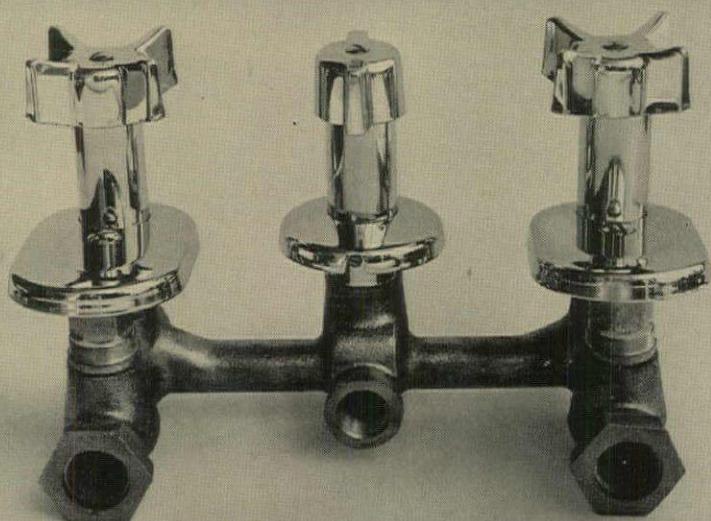
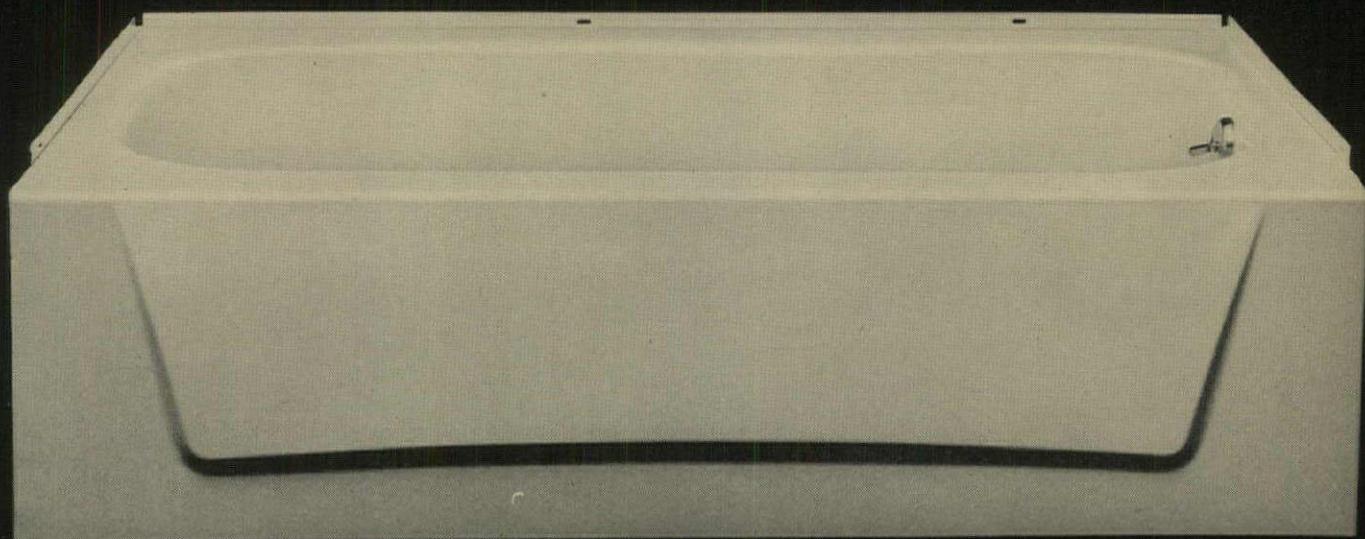


**TYPICAL PAGES** from new manual show (above) two floors, four elevations, dimensions and panel numbers for a two-bedroom contemporary house and

(below) full range of dimensions for end cuts on rafters and ceiling joists in roof with slopes from 1-in-2 to 12-in-12.



LOOK WHAT GERBER DOES . . .



**... WITH BRASS, CLAY, AND STEEL**

## **FOUR-PIECE HARMONY FOR THE BATH**

Designers at Gerber have imparted to their fixtures a harmony of matched design that will satisfy the most discriminating taste. In each product, designers have let form follow function to produce designs, both contemporary and conventional, that will delight any woman. To further please her, most Gerber fixtures are available in Petal Pink, Forest Green, Wedgewood Blue, Driftwood Tan, Cloud Gray, or Daffodil Yellow, as well as Stainless White.

Craftsmen at Gerber also play an important part in giving the homeowner more value per dollar; more satisfaction with your building and remodeling projects. For example, lavatories, tubs, and closets are painstakingly finished with a heavy, abrasive-resistant, impervious porcelain finish that maintains its deep brilliance throughout a lifetime of use. All fixtures are inspected in the minutest detail. True alignment with walls is assured; closets are double-flush tested.

Brass is made with equally careful attention from a Gerber-formulated ingot of high-copper-content brass, and is cast into sturdy, one-piece bodies. Special long-wearing bonnets are your assurance of years of trouble-free performance. Castings are plated first with copper, then with nickel, then with chrome. Fixtures are triple-tested before shipment.

Gerber fixtures add extra value without adding extra cost. Are we biased? Perhaps. But the value is there—check with Gerber soon and prove it for yourself! A complete catalog of lavatories, bathtubs, closets, shower cabinets, and matching brass is yours for the asking.



# plumbing fixtures

VITREOUS CHINA    BRASS    SHOWER CABINETS  
CAST IRON ENAMELWARE    STEEL ENAMELWARE

GERBER PLUMBING FIXTURES CORP., 232 N. CLARK ST., CHICAGO 1, ILLINOIS    Factories: Kokomo, Ind., Woodbridge, N. J.,  
Delphi, Ind., Gadsden, Ala., West Delphi, Ind.    Export Division: Gerber International Corp., 500 Green St., Woodbridge, N. J.



ARCHITECT: Crosfield and Kern, A.I.A.



## **“I build on a basic framework of VERSATILE WESTERN LUMBER,”**

says Builder Joe Warner, Portland, Oregon

“I keep my building activity keyed to profitable projects, and my knowledge of Western Lumber plays a big part in making money. Using the standard grades and sizes of Western Lumber, I am in a position to bid on any type of construction.

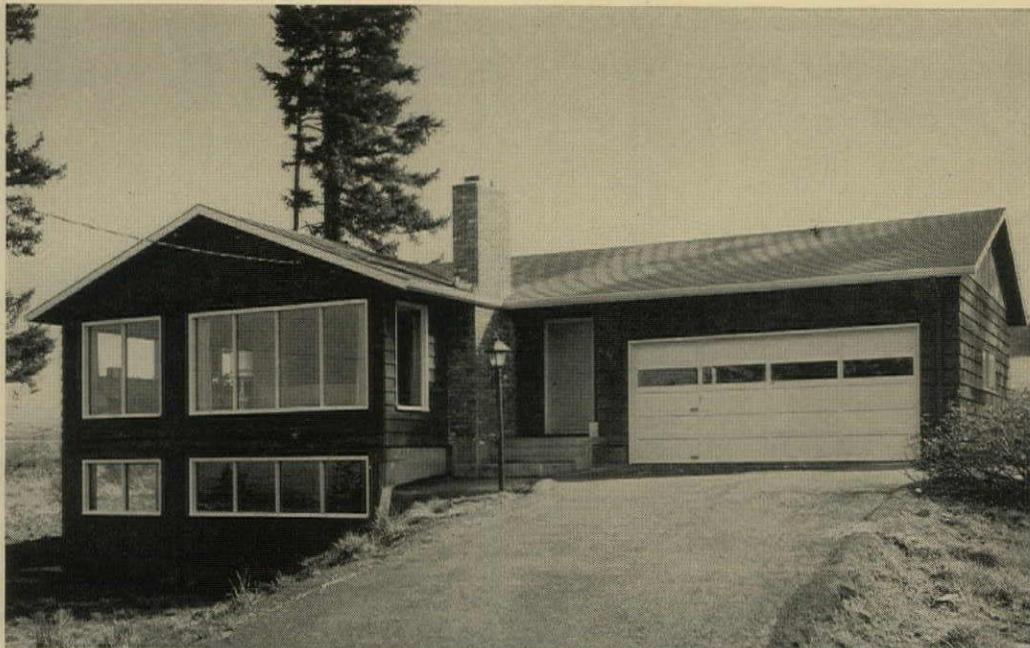
“The greatest advantage is using the right grade for the right purpose. This makes a difference. Instead of using all one grade of framing lumber, I match the grade to the purpose and take advantage of the price difference. Where I use dimension lumber for appearance, I buy the best grade, but for wall framing and joists, I buy the grade that will

provide the required performance.

“I have built houses and clinics, and have modernized restaurants, cocktail lounges and other types of light construction profitably with a dependable framework of Western Lumber.”

Builder Warner's flexibility in the building business is a good example of how the standard sizes and grades of Western Lumber can do a job for you. Grade conscious is profit conscious.

Western Lumber is available from your local retail lumber dealer. There is no need to wait for standard sizes and grades. He has them. Ask him!



DESIGNER: W. F. Waymar, Home Planners Clinic



DESIGNER: Robert F. Smith, N.S.I.D.

Builder Warner uses the following grades in various standard sizes for framing:



Douglas Fir and West Coast Hemlock for all types of wall framing and joists.



Douglas Fir and West Coast Hemlock for framing where a lower grade will perform satisfactorily.



Douglas Fir and West Coast Hemlock for wall framing.

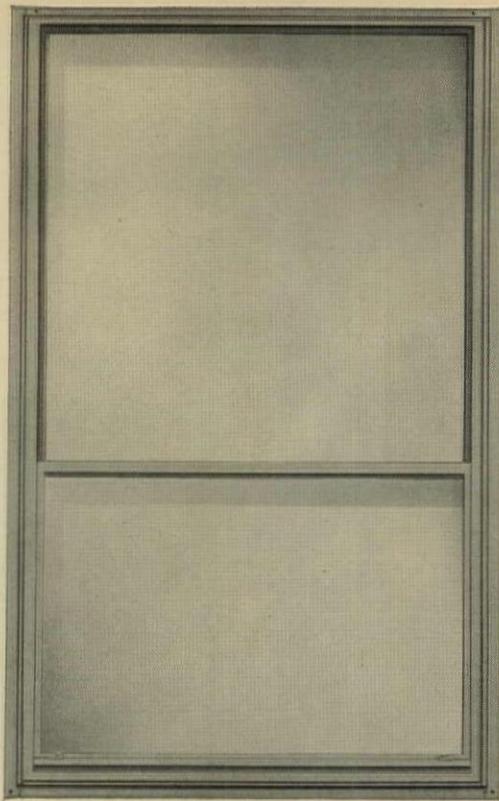


## WESTERN WOOD PRODUCTS

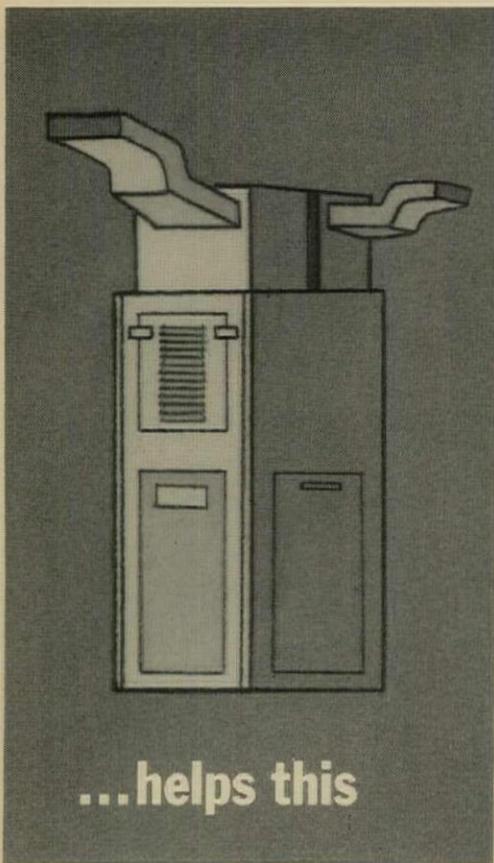
FROM THE MEMBERS OF **WEST COAST LUMBERMEN'S ASSOCIATION**

**FREE** Write us for your personal copy of Grades, Uses and Specifications for West Coast Lumber. P. O. Box 2845, Portland, Oregon 97205.

**DOUGLAS FIR ■ WEST COAST HEMLOCK ■ WESTERN RED CEDAR  
SITKA SPRUCE ■ WHITE FIR**



**Rigid Geon vinyl here...**



**...helps this**



**...do a better job here**

That's one of the new Caradco Vinyl window units at the top of the page. Its inside frame, trim and sash are made of Geon vinyl, reinforced with aluminum. Because Geon vinyl will not conduct any appreciable amounts of heat or cold, it shuts the window on heat loss. □ This and many other products of construction are now being designed to take advantage of the

properties of rigid Geon vinyl, "The Material Difference in Building." Many of them are identified by our new emblem, shown below in red and black. □ Rigid Geon vinyl gives products durability, toughness, resistance to corrosion and moisture; it minimizes maintenance and eliminates the necessity for painting. Learn more about the properties of Geon vinyl:

write B.F. Goodrich Chemical Company, Department EN-5, 3135 Euclid Avenue, Cleveland, Ohio 44115. In Canada: Kitchener, Ontario.

*Vinyl window unit by Caradco, Inc., Dubuque, Iowa, who specify rigid Geon vinyl. This window featured at the N.A.H.B. Research House, Rockville, Maryland.*



**B.F. Goodrich Chemical**

a division of The B.F. Goodrich Company

For copies of free literature, check the indicated number on the coupon on page 203.

**Technical literature**

**TAMAP-DEVELOPED MASKING FILM** is sprayed or brushed on. Data sheet. Multi Mask penetrates unpainted wood or hardboard, but it forms a tough masking film on glass or other smooth non-porous materials and can be peeled off after painting. Stanley Works, New Britain, Conn. (Check No. P1).

**INSULATION.** Three booklets: 1) Engineering data and installation procedures for insulating walls, roofs and foundations; 2) Styrofoam used as roof insulation material; and 3) uses of Styrotac adhesive for bonding insulation boards and for bonding to insulating walls. Dow Chemical, Midland, Mich. (Check No. P2)

**TRANSLUCENT PANELS.** 4 pages. Light-transmission charts, construction details, recommended spans for safe loading. Alsynite, San Diego. (Check No. P3)

**LUMINOUS CEILING SYSTEM.** 12 pages. Data on lighting, air distribution and acoustical performance. Photos and specs. Armstrong Cork, Lancaster, Pa. (Check No. P4)

**CODE REQUIREMENTS FOR REINFORCED CONCRETE.** 144 pages. Revised 1963. Design and construction requirements, tests, structural analysis. Paperbound: \$3. For copy, write American Concrete Institute, Box 4754, Redford Station, Detroit, 48219.

**Catalogs**

**BUILDING MATERIALS AND PRODUCTS.** 132-page mail-order catalog includes everything from siding and paneling to appliances and shelves. Photos, sizes, styles, finishes and prices. Morgan-Whitman, St. Louis. (Check No. P5)

**PORTABLE PAINT SPRAY EQUIPMENT.** 20 pages. 14 models are shown with specs and accessories. Chart shows approximate amount of paint for various interior and exterior applications, gun capacities and drying times. Thomas Industries, Louisville. (Check No. P6)

**BUILT-IN KITCHEN APPLIANCES.** 12 pages. Nine cook-top models, nine ovens, two vents and a warming drawer. Photos, finishes and sizes. Thermador, Los Angeles. (Check No. P7)

**BATHROOM CABINETS.** 24 pages. Photos and sizes of models with mirrors and lights. Accessories. Grote Mfg., Madison, Ind. (Check No. P8)

**WOOD BOARD PRODUCTS.** 56 pages. Photos, product descriptions and specs for hardwood paneling, fir plywood, siding, hardboard and composition board. Georgia-Pacific, Portland, Ore. (Check No. P9)

**PLASTIC-FINISHED PANELING.** 8 pages. Patterns, finishes, installation accessories and procedures for wall and ceiling panels. Marsh Wall Products, Dover, Ohio. (Check No. P10)

**BATHROOM CABINETS AND MIRRORS.** 32 pages. Photos, installation details and specs of each cabinet model. Accessories also are shown. Miami-Carey, Cincinnati. (Check No. P11)

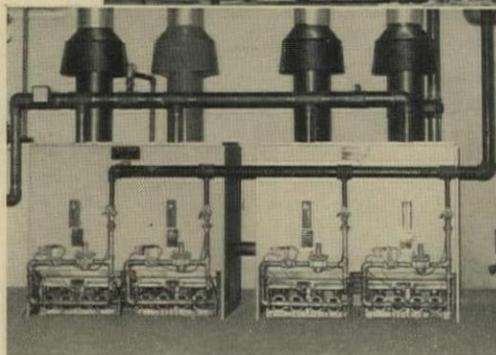
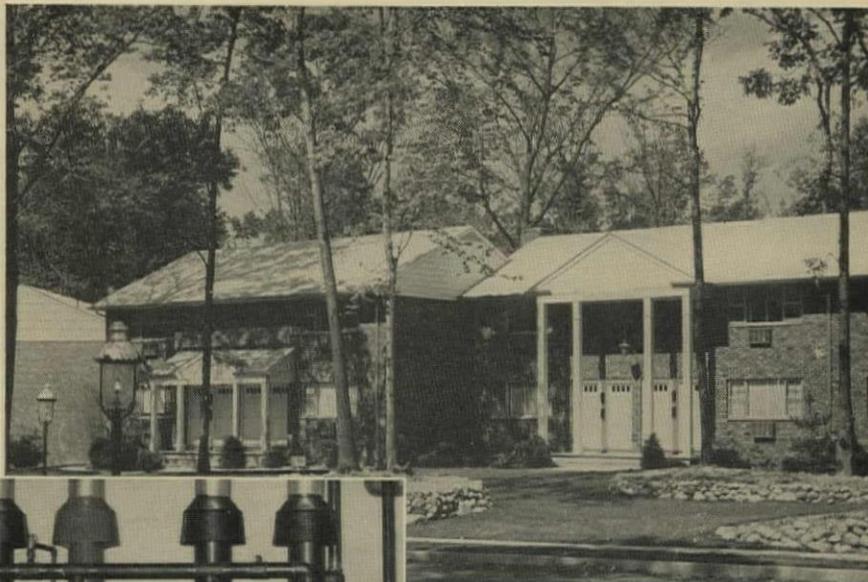
**Management aids**

**MANAGEMENT FORMS AND SYSTEMS.** 76 pages. Wide selection of forms for builders and architects to save paperwork. Included are bookkeeping and cost keeping systems, labor distribution and cost, time-keeping methods, estimate blanks, purchase orders, material and construction reports and contract forms. Frank R. Walker Co., Chicago. (Check No. P12)

**STEEL STORAGE EQUIPMENT.** 48-page catalog of shelving, bins, cabinets, benches, tables, lockers. Applications and specs. Penco Products, Oaks, Pa. (Check No. P13)

Publications continued on p. 203

# MULTITEMP\* Gas Heat Pays Off Early in N. J. Garden Apartments



▲ Franklin Square Apartments, Ramsey, N.J. 11 Buildings, and a Total of 124 Apartments Ranging from 750 to 1,000 Sq. Ft. Each. Builder, Lee Riffe; Heating Contractor, Charles J. Reid

◀ Hydrotherm Model MR-1000 Gas Boiler, 1,000,000 BTU/hr Input is Used to Heat a 24-Unit Apartment Building Totalling 21,000 Sq. Ft.

## Installation and Operating Economy Spell Success for Heating Contractor and Builder

The attractive 124-unit Franklin Square Apartments are heated by Hydrotherm Multi-Temp hydronic gas boilers—the most efficient, most economical system the builder could find . . . and savings began even before the system was turned on!

Each of the eleven buildings is equipped with an all cast iron Multi-Temp gas heating plant with step-controlled combustion chambers, each with a capacity of 250,000 BTU/hr.

Space-saving Multi-Temps, compact enough to be delivered to the site in a light truck, fit easily through 2' 6" doors without requiring rigging. And, because they arrived fully-assembled and wired, they were installed in one-third the time allowed for conventional boilers of equal capacity.

Operating economies come into play when Multi-Temp's outdoor thermostat modulates water temperature by simple step firing without the use of mixing valves. This eliminates fuel-wasting short cycling in mild weather, and permits the system to adjust to seasonal changes. Service interruptions, too, are practically eliminated since individual units can be serviced without shutting down the entire system.

Easy-to-install Multi-Temp heating plants are of all cast iron, 100-Lb. ASME construction and are available with capacities up to 3,600,000 BTU/hr. They're ideal for high rise buildings, churches, motels, schools and other big jobs. For details on how you can save with Multi-Temp and free brochure "Modern Heat For Modern Buildings", showing Multi-Temp in action, write:



DEPT. HH-23, NORTHVALE, N. J.

**ALL MULTI-TEMP BOILERS CARRY A 10 YEAR GUARANTEE**

\*REG. U.S. PAT. OFF.



Romanesque textured sheet vinyl

## New homes sell faster with GUARANTEED\* Goodyear Vinyl Floors...lowest-priced of all luxury vinyls

Goodyear Vinyl Floors can reduce your building costs and, at the same time, help sell your new homes faster—for better profit.

Here's why: You can offer home buyers the latest textured or smooth-surfaced floor fashion in tough, wear-resistant vinyl that doesn't require waxing and that is covered by the impressive *Goodyear Flooring Lifetime Guarantee*. Yet, the installed price is lower than many part-vinyl and non-vinyl floors.

So build your sales from the ground up with this luxurious, low-cost, all-vinyl compounds flooring. Available in textured and smooth 72-inch-wide sheet vinyl and in 12" x 12" and 9" x 9"

tiles. See your Goodyear Flooring Dealer or Distributor. Goodyear, Flooring Dept. Q81-403, Akron, Ohio 44316.

**\*Lifetime Guarantee for Goodyear Vinyl Flooring**

Goodyear will replace floorings that wear out in normal use in home, under these conditions: 1. Flooring must be installed and maintained according to Goodyear recommendations. 2. Flooring must be in home which was continuously occupied by flooring purchaser since installation. 3. Purchaser must present original guarantee certificate. 4. Claim must be approved by Goodyear, prior to replacement. NOTE: Replacement offer does not extend to installation costs.

**GOODYEAR**  
FLOORING PRODUCTS

## PUBLICATIONS

start on p. 194

### Product bulletins

**SOFFIT SYSTEM.** 4 pages. Photos, cross section drawing and sizes. Ventilation guide. Georgia-Pacific, Portland, Ore. (Check No. P14)

**TOILETS.** 16-page booklet shows 11 models in six colors. Kohler, Kohler, Wis. (Check No. P15)

**DRYWALL-METAL SYSTEMS.** 8 pages. Photos and descriptions of metal stud and wallboard non-bearing partitions and of furring systems for ceilings and exterior masonry walls. Specs and application data. Celotex, Chicago. (Check No. P16)

**PORTABLE NAILER.** 4 pages. Types of nails and staples. Charts of spacing of different size nails

for sheathing, subfloors, roof shingles, etc. Spotnails Inc., Rolling Meadows, Ill. (Check No. P17)

**SEAMLESS RESILIENT FLOORING.** 4 pages. Photos and specs. Torginol, Huntington Park, Calif. (Check No. P18)

**WOOD WINDOWS.** 20 pages. Construction features, sizes, specs, installation details. Rolscreen Co., Pella, Iowa. (Check No. P19)

**SPECIAL DOORS:** roof scuttles, smoke hatches, floor doors, sidewalk doors, ceiling access doors and basement doors. 12 pages. Photos, drawings, sizes, features. Bilco, New Haven. (Check No. P20)

**For more information** circle the numbers below (they are keyed to the items described on the New Products and Publications pages) and send the coupon to: HOUSE & HOME, Rm. 1960, Time & Life Building, Rockefeller Center, New York 20.

Note: HOUSE & HOME's servicing of this coupon expires July 31, 1964. If you contact manufacturers directly, it is important that you mention the issue of HOUSE & HOME in which you saw the item.

### New products

1.  Panelcarve redwood door
2.  Z-Brick veneer
3.  Preco Chemical aggregate-faced block
4.  Harvey Design Workshop grillwork
5.  Formica plastic laminate
6.  Johns-Manville embossed tile
7.  Azrock pebble-finished tile
8.  Venetian Marble manufactured tiles
9.  Ruberoid travertine tile
10.  Broan oven hood
11.  Ziegler-Harris stainless steel sink
12.  Goshen furniture-designed cabinets
13.  O'Keefe & Merritt built-in stove
14.  Geneva Industries steel cabinets
15.  Waste King dishwasher
16.  General Electric self-cleaning oven
17.  Crown Stove Works two-oven range
18.  Pope & Talbot plywood siding
19.  Homasote double-thick decking
20.  Potlatch framing parts
21.  Rock Island Millwork adjustable door frame
22.  General Electric silicone sealant
23.  U.S. Gypsum water resistant drywall
24.  U.S. Plywood finger-jointed pine
25.  H. B. Fuller all-purpose mastic
26.  Prescolite fluorescent wall fixtures
27.  Hoover expanding towel bar
28.  Fastener round-head nailer
29.  Plastex bell-ended pipe
30.  Stanley round floor register

31.  Chrysler water chillers
32.  Peerless gas furnace
33.  Delco compact heater-cooler
34.  Status Systems control chart
35.  Reproduction Engineering whiteprinter
36.  American Photocopy low-priced copier
37.  Lynbrook wall-mounted rack

### Publications

- P1.  Stanley masking film
- P2.  Dow Chemical insulation booklets
- P3.  Alsynite translucent panels
- P4.  Armstrong Cork ceiling system
- P5.  Morgan-Whitman building materials
- P6.  Thomas paint spray equipment
- P7.  Thermador built-in kitchen appliances
- P8.  Grote bathroom cabinets
- P9.  Georgia-Pacific wood-board products
- P10.  Marsh plastic-finished paneling
- P11.  Miami-Carey bathroom accessories
- P12.  Walker management forms
- P13.  Penco steel storage equipment
- P14.  Georgia-Pacific soffit system
- P15.  Kohler toilets
- P16.  Celotex metal-drywall framing systems
- P17.  Spotnails portable nailer
- P18.  Torginol seamless flooring
- P19.  Rolscreen wood windows
- P20.  Bilco special doors

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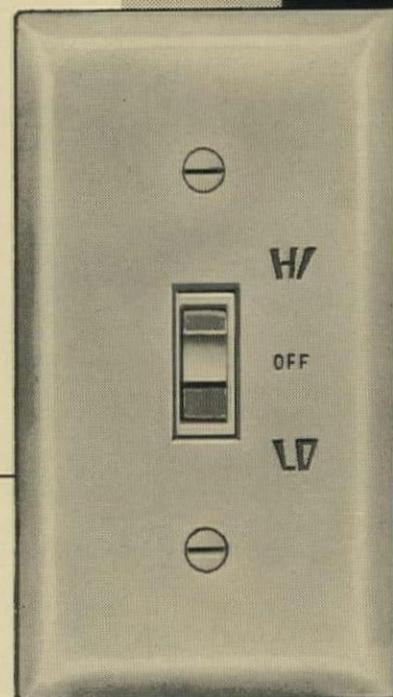
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