

SIX DOLLARS A YEAR—ONE DOLLAR A COPY

June 1953

house + home

Best sellers

An analysis of four of the fastest selling houses in the US (p. 124)

Architects turn builders

And open a whole bag of tricks to increase sales value far faster than cost (p. 116)

Open-plan kitchens

Today's kitchen loses a wall and presents a new series of design problems and possibilities (p. 130)

Vaulted plywood roofs

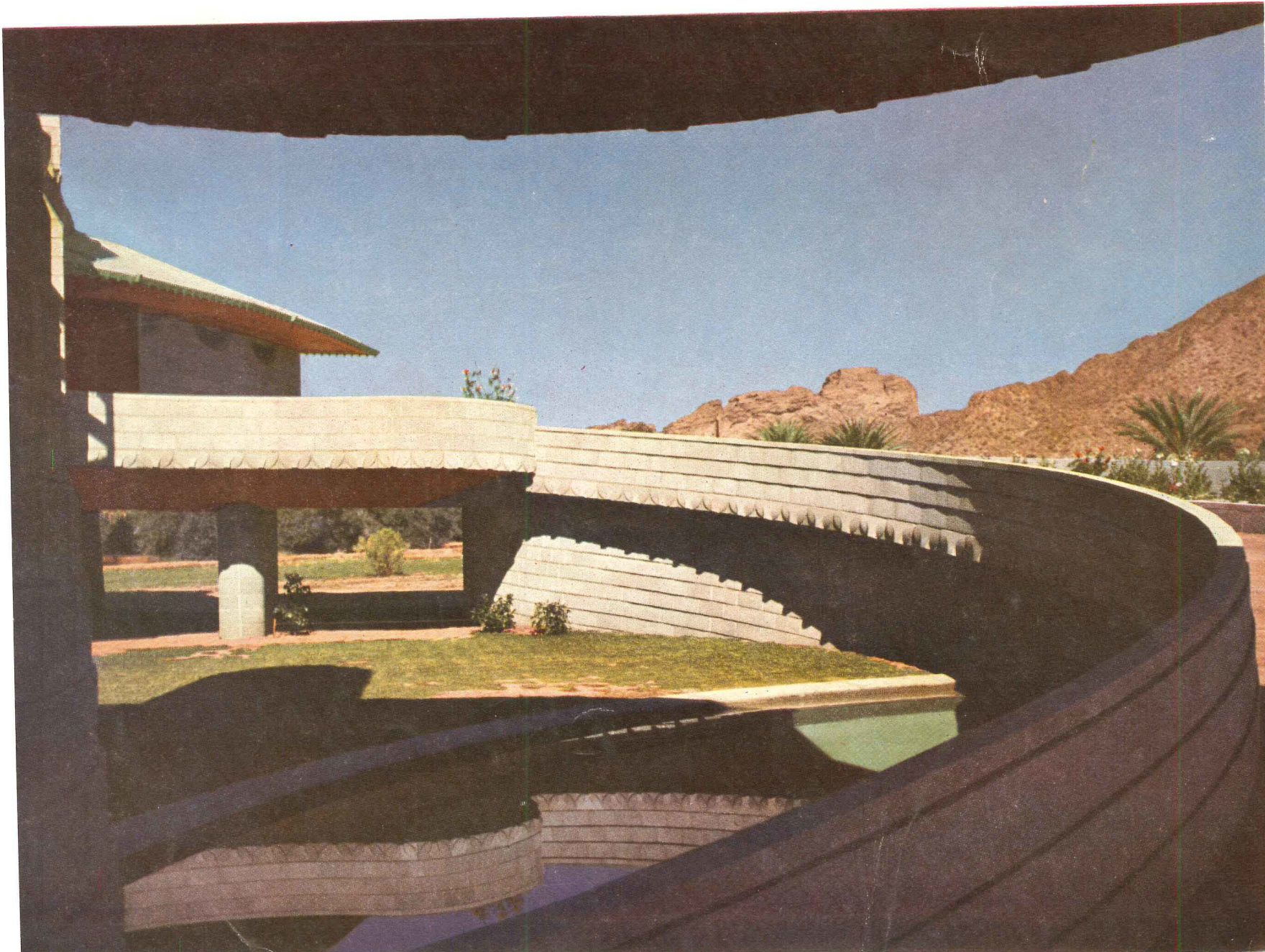
Architect Paul Rudolph continues his experiments toward lighter, lower cost roofs, covers a second-story house with curved sheets of plywood (p. 141)

Regional prefab

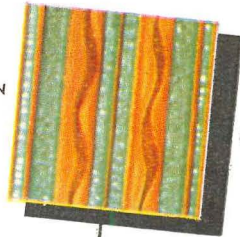
For the first time a maker agrees to meet special local demands (p. 150)

Coiled house in the desert

Frank Lloyd Wright creates a magnificent spiral with concrete block (p. 99 & below)



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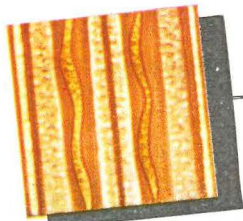


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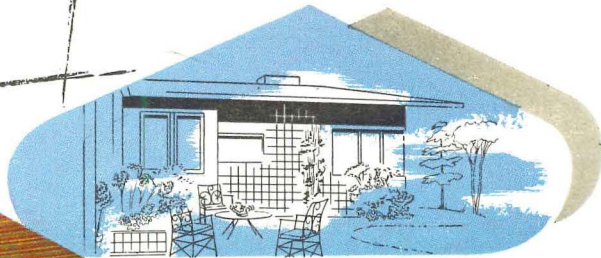
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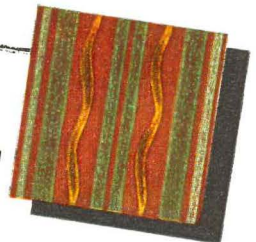


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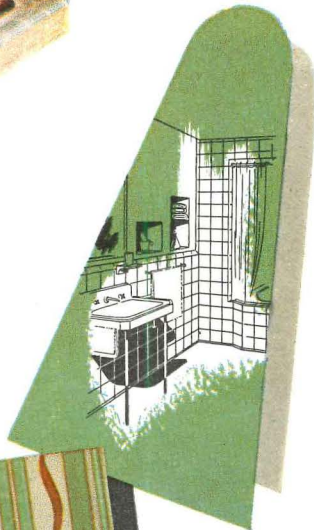
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house+home

June, 1953

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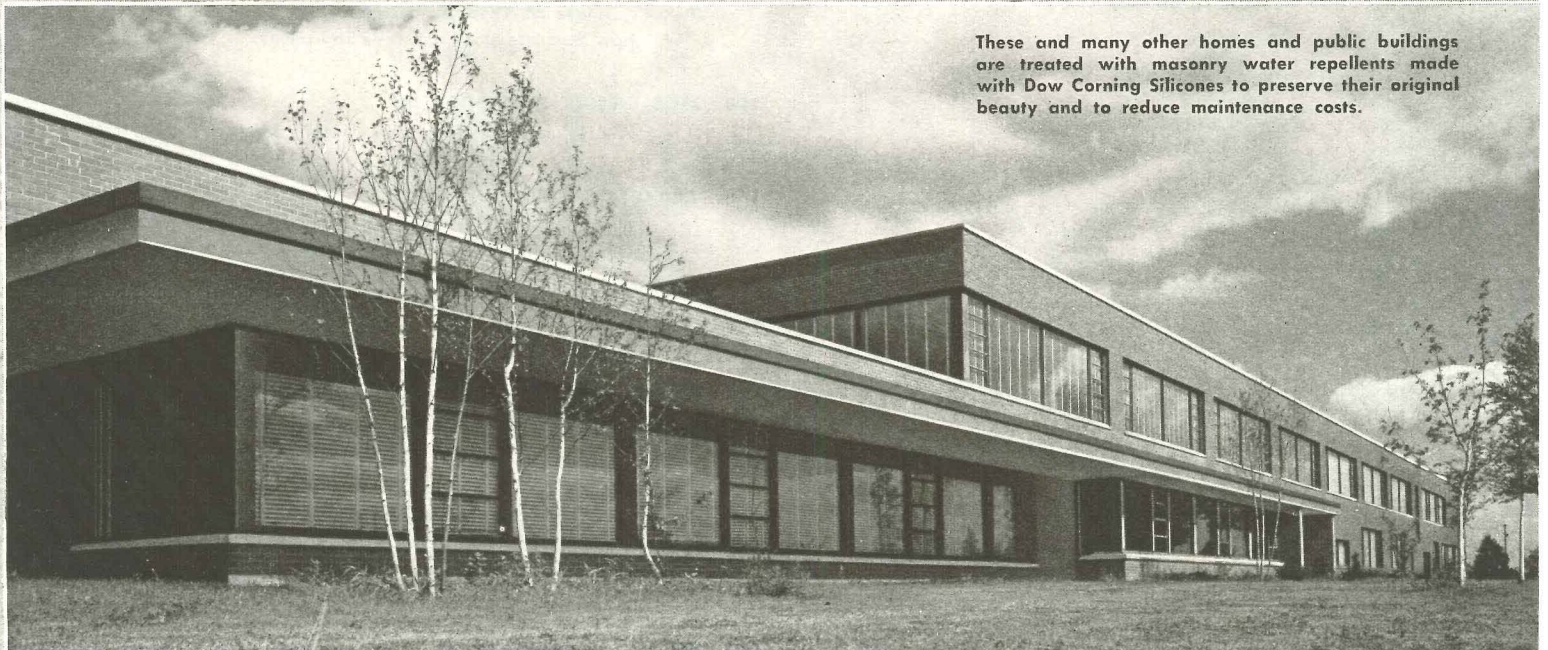
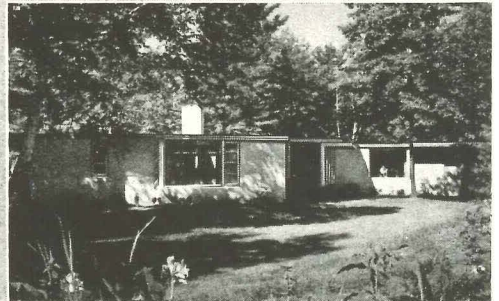
190 Technical publications

VOLUME III, NUMBER 6



Cover: House by Frank Lloyd Wright; photo by Peter Guerrero

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FHA, GI interest hike falls flat as money pinch ups all rates

The money market turned out to be tighter than the experts expected—including even the Treasury's monetary planners. And so last month's rate increase for FHA and VA mortgages (to 4½%) fell a long way short of becoming the cure-all for the pinch on building funds that it was cracked up to be.

Best index of the pinch on money: even the government's new 3¼% long-term bonds, which Treasury officials thought were priced to sell at par, dipped to 18/32% below. That drove net yields up to 3.268%. Ordinarily investors expect government-insured mortgages to yield from 1¼ to 1½% more than government long-term bonds. So again the spread was too thin.

While government bonds wavered roughly between 99½ and 99¾, many a lender decided to sit on his hands until he could figure out where that basic rate would settle. Fanny May elected to do the same. The chaos was complicated by the continuing flood of tax-exempt issues (including public housing bonds). With New York state bonds, generally considered prime in the tax-exempt field, yielding around 2¾% and many other good issues yielding 3% or better, tax-exempts were creating serious competition for the Treasury, and therefore for the entire money market. What FHAs and VAs were moving commanded from 99 to par from insurance companies, but only about 98-99 from many a savings bank.

Result: no change. At mid-month, FHA Commissioner Guy Hollyday told HOUSE & HOME the interest rate boost had made "practically no difference" in the dormant mortgage market because "everybody's waiting to see what will happen." Forecast Financial Vice President Henry H. Edmiston of Kansas City Life Insurance Co.: "If the Federal Reserve continues on the sidelines and lets interest rates seek their own level in a free market, the prospective large volume of new issues of long-term securities points toward still higher yields." Edmiston called it "extremely doubtful" that 4½% FHA and VA rates "will now be sufficient to make them appealing to investors" except at a discount. He suggested a 5% maximum rate for FHA and VA loans, with the market setting a lower rate on some "individual cases."

Savings & loan cheers. Across the nation, the VA and FHA rate increase produced most optimism from savings and loan men. President Charles L. Clements of the US Savings & Loan League forecast savings and loans and cooperative banks would invest \$1 billion in VA loans during the rest of the year (compared to \$466 million in the last eight months of 1952). But Clifford P. Allen III, new presi-

dent of the rival National Savings & Loan League (see below) predicted "even with the new rate [FHA and VA loan volume] probably will not be more than half again as much as it was in 1952." Other savings and loan reactions varied:

▶ Paul Westerfield, president of Cincinnati's Home Federal S&L: "The 4½% almost turned out to be too little, too late. Had it come a year ago, it would have had a very generous and substantial reception."

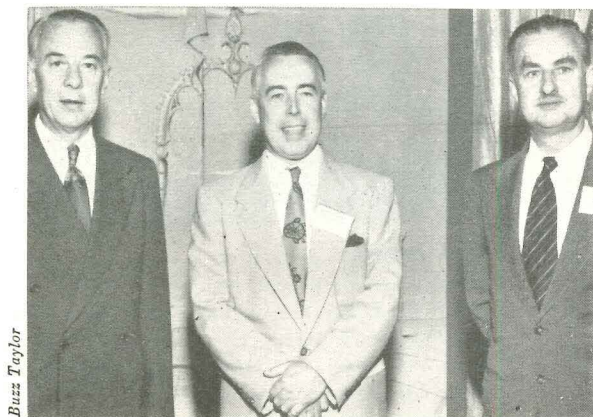
▶ Julian R. Fleischmann, president of New York's Ninth Federal S&L: "The rate raise is certainly going to bring a lot of money out of the icebox. It might even reduce the money available for conventional loans."

▶ Charles Wellman, executive vice president of Glendale (Calif.) Federal S&L: "There is going to be a revival of FHA and GI programs, but they will never be as popular as they were."

Their comments again pointed up the geographical facts of the money market: even at 4½%, mortgage money was remaining scarce at par in the money-shy South and West, was relatively plentiful in the usual spots.

Despite the unsettled market, President Brown Whatley of the Mortgage Bankers Assn. forecast early in the month that "GI's should no longer have to go begging for home loans." He had one reservation: "That the VA will place no new obstacles in the way of a smoothly coordinated program such as new regulations or restrictions on fees and discounts."

Discount crackdown. His words were only a week old when the VA did just what he feared, imposed new rules to "sharply restrict" discounts. Effective May 18, builders were required to certify that they had paid no more than 5% on construction advances actually made, nor more than 2½% for inspection and supervision. VA said the crackdown was intended to prevent builders from incurring discount costs which they might pass on to veteran-buyers. Many a mortgage man, however, felt that VA was up to its old trick of trying to repeal the law of supply and demand—this time by a ukase which seem-



THE HOME LOAN BANK BOARD, whose three members made one of their infrequent joint appearances at the National Savings & Loan convention last month, will come under control of Eisenhower appointees at the end of this month. On June 30, the term of Democrat Kenneth G. Heisler (r) expires. Republican J. Alston Adams (l) has resigned to become president of the San Francisco Home Loan Bank. Chairman William K. Divers, a Democrat, is expected to remain as minority member, but not as chairman.

ed to contradict the Eisenhower policy of encouraging a return to a free economy.

Pinch 'til Christmas? Barring a surprising drop in the demand for money, some economists at month's end were predicting the mortgage market would remain tight the rest of the year. It would ease up sooner if the Treasury reverses its hard money policy. But despite its decision to refinance \$5.7 billion of expiring securities in June with short-term (12 month 2½%) refunding, the Treasury was still committed to deflationary brakes.

Head of 3 savings and loans elected national league chief

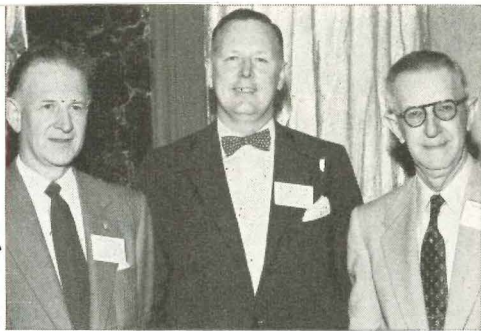
Managing three building and loan associations with assets of \$45 million is a big job—even for a man as big (6' 3", 187 lbs.) as Clifford P. Allen III. It leaves no time for such amenities as lunch.

So Allen begins each day with a hearty breakfast (like ham and eggs). From 8:30 to 11 he is at his office in the \$16 million Unity Building & Loan Assn., where he is secretary and manager. From 11:15 to 1:15 he occupies an office at the \$9 million Penn Treaty Building Assn., as vice president and manager. From 1:30 to 5:30 he works in his most important office at the \$19 million Home B&L Assn., where he is president and manager.

If Allen is spread thin, all three of his associations have grown tremendously un-



ALLEN



NEW OFFICERS elected at the National S&L League's tenth annual convention (except for hospitalized President Clifford P. Allen, 3d) were Secretary George W. Greenwood, Topeka; First Vice President Alfred G. Peterson, Hartford, Conn.; Second Vice President Allen H. Generes, New Orleans. League membership reached 718, members' assets more than \$5 billion.

der his direction. Home had only \$400,000 in assets in 1936; Unity had \$350,000 then and Penn Treaty has come up from \$210,000 in 1932. Much of the growth, he thinks, is due to persistent advertising.

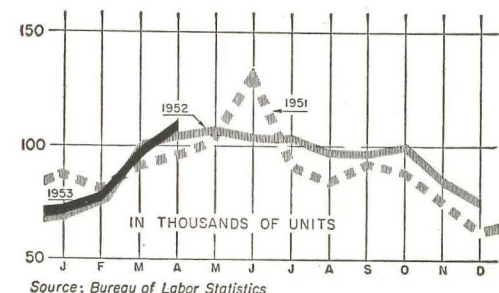
Last month Allen took on still another job, the presidency of the National S&L Assn. He was delayed getting into stride. The third day of the May 10-15 convention in St. Louis, after he had issued a statement predicting a \$4 billion (20%) growth in savings and loan business this year, he was hospitalized (lobar pneumonia) until month's end.

Most of the convention was devoted to discussions of management problems, but through resolutions it also:

► Rejected proposals to prohibit dividend rate advertising in distant locations. "The remedy may be worse than the disease," it declared . . . "no amount of regimentation or discussion or reprimand" can solve problems of this nature.

► Urged members to maintain "a degree of liquidity in keeping with the best recommendations of our supervisory authorities, both state and federal." By this resolution it approved views of Everett C. Sherbourne, of Elizabeth, N. J., who praised associations that "recognize an obligation to pay withdrawals at all times except in a period of general economic disorder," criticized the type that "apparently does not recognize such an obligation, either implied or direct, and wishes to have the right to defer withdrawals when it alone is in distress."

► Proposed separation of public welfare and private enterprise housing programs when HHFA is reorganized; more underwriting and assumption of risk by private enterprise and less government liability "both direct and indirect" in housing.



HOUSING STARTS in April totaled 110,000, a rate of 1,174,000 a year on a seasonally adjusted basis. For the year's first four months private starts were 334,900, public starts 21,200.

EISENHOWER REVEALS A LITTLE MORE OF HIS HOUSING VIEWS

In messages to two building groups, President Eisenhower last month enunciated his views on housing policies more clearly than at any time since he took office. His words, although couched in general terms, reinforced the widely held belief that the Chief Executive is cool toward the idea of public housing, looks to private enterprise to solve the still-unsolved problem of producing really low rent housing in a high-priced economy.

Writing to the National Housing Conference, public housing's chief lobbying organization (see p. 148), the President pointedly avoided endorsing his own administration's request for 35,000 public housing units next fiscal year. In fact, he did not even mention public housing. He wrote:

"Americans of all parties have now accepted as a moral obligation the important task of improving our housing standards and of providing decent housing for those now compelled to live in slums. It is to the work of citizens' groups, so often undertaken on a voluntary basis, that we rightfully look for constructive and long term solutions to problems such as these."

To the National Savings & Loan League, Eisenhower wrote:

"One example of the challenging opportunities before us is the need for housing lower income families. This administration desires to encourage the building of good housing for all our families, and believes that this can be accomplished largely through the efforts of private enterprise with a minimum of federal expenditure. It is our hope that savings and loan associations will assist in the production of the needed housing for the lower income families, as well as those in the middle and higher income levels, by cooperating in the necessary planning and by providing proper financing."

HHFA to press for lower down payments on \$12,000 homes, ask 23 other law changes

The new administration's first 24 legislative proposals on housing were approved secretly last month by HHFA and sent to the Budget Bureau for review before submission to Congress. They comprised what HHFA Administrator Cole called his "short-range, noncontroversial legislative plan." Ex-Representative Cole knew perfectly well he could not get controversial housing legislation passed so late in the year.

Fed unhappy at changes. To builders, the best news was that the HHFA package included lowering FHA down payments in higher price brackets. NAHB has long complained that FHA down payment schedules, geared to prewar costs, are ridiculous in the face of subsequent inflation. NAHB wanted 10% down payments hiked from \$9,000 to \$12,000, with 20% down payments on homes priced up to \$25,000. HHFA kept its proposed step-ladder under wraps, but Washington building experts doubted it went as far as builders wanted. The Federal Reserve was unhappy over the idea of easing credit, even more unhappy over NAHB's suggestion of extending maximum FHA payoffs.

HHFA was also expected to ask that the maximum FHA mortgage be upped from \$16,000 to \$20,000—a move supported by FHA Commissioner Guy Hollyday. The loan limit under Title I, Sec. 8 would be hiked from its \$4,750 ceiling, probably to

around \$6,000. As usual, FHA would need legislation raising the total mortgage insurance it can write. Title II, for instance, was already crowding its \$11.5 billion ceiling. With commitments running close to \$200 million a month, FHA had the usual worries that it might have to slow down processing unless Congress acts soon. This year, the plan was to ask Congress to raise the ceiling for all FHA insurance (now \$20.6 billion) by another \$1½ billion, let all programs draw against it. FHA thought this would tide Title II over until 1954.

Both Titles VIII and IX will expire June 30 and HHFA was understood to favor extending them. The military was particularly anxious to keep the Wherry Act. There was less enthusiasm (especially in Congress) for Title IX defense housing, but it would probably be continued without more insurance authority.

Controversies omitted. Excluded from the legislative bundle this year (as too controversial) would be housing reorganization plans, and such schemes under study by HHFA and FHA as the open end mortgage and a better financing vehicle for urban rehabilitation and redevelopment. (NAHB last month proposed a new FHA Title X to help finance multiunit urban housing renovations and thus help fight slums. FHA, however, was considering changes in Sec. 207 to do the same job.)

RELOCATABLE HOUSING gets its biggest test as first families

move into glued stressed-skin houses at Georgia Army post

HHFA's two-year effort to put the amenities of permanent housing on a portable basis bore its first big return last month. On a pine-clustered sand flat at Camp Stewart, Ga., 41 miles southwest of Savannah, soldier families began moving into the first project of "relocatable houses" ever built.

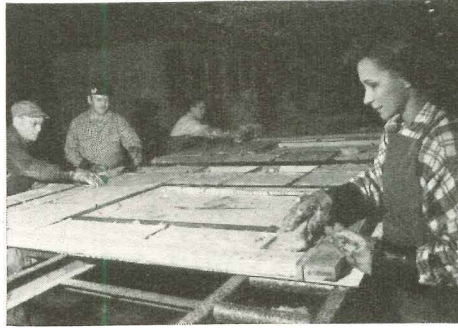
With Camp Stewart's 258 flat-topped, H-shaped units, demountable housing had progressed many a mile since the first experiments by TVA in 1940. Wartime demountables were temporary shelter, sacrificing livability to low cost. "Relocatable houses," designed for today's defense areas where nobody can foretell how long they will be needed, meet HHFA standards for permanent housing. Yet they can be assembled with little on-site labor and, if necessary, later be taken partly apart and moved to another site with almost no damage to the house and with less labor and expense than anybody has managed before.

Stressed-skin monocoque. HHFA experts said the Georgia houses, built by Pressed Steel Car Co., were the first to make such complete use in housing of the stressed-skin principle of airplane body design. Pressed Steel developed the unit out of its experience with a stressed-skin plywood freight car. The house has no nailed studs or joists. Instead, plywood panels are glued together by hand and electronic presses into a *monocoque* shell. Corners are curved nine-ply shapes. The result: units so strong that workmen at Camp Stewart found if they jacked up one end, the other end automatically rose, too. Shipped in three units that fit standard rail and highway clearance, the house is swung onto steel plate foundations by a crane, bolted down with 72 bolts and bolted together with 12 more.

With 18" eaves and a trellis, plus a coat of exterior stippled paint, the freight-car look vanishes. A big window makes the 11'-3" living room seem wider than it is.

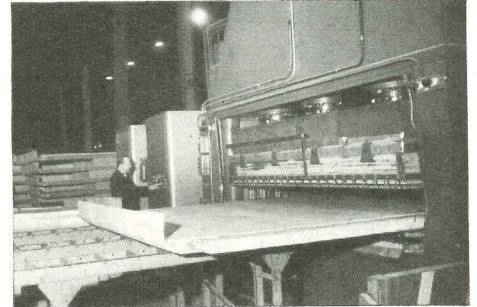
Only \$10 a sq. ft. Despite the expense of a 1,000 mile rail shipment from the Chicago factory to Georgia, the houses cost the US an average of \$9,108 each, including site work. There were 65 three-bedroom units (907 sq. ft.) and 193 two-bedroom units (713 sq. ft.).

Another relocatable test project of 100 prefab homes was underway in Nevada, and three more projects were planned. They might be underway by now, but for the slow pace of PHA staffers who have



PLYWOOD PANELS are honeycombed with 1 x 2" cross pieces (except floors, where 2 x 4" joists are laid conventionally) and stuffed with glass fiber insulation in Chicago factory.

Art Shay



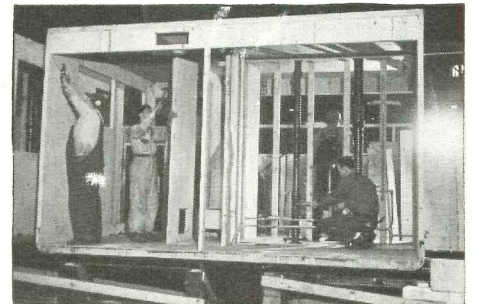
ELECTRONIC PRESSES set phenolic glue under pressure and heat generated by 60 kw current. Principal designer of the house, Electrical Engineer George W. Stanley, is at controls.

Art Shay



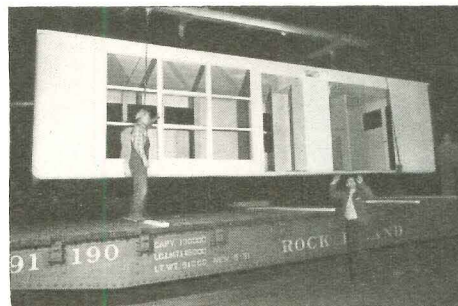
ASSEMBLY LINE 1/3 mile long is between lines building trailers and modifying tanks. CIO-UAW labor averts costly AFL craft division of work. Plant man-hours per house: 500.

Art Shay



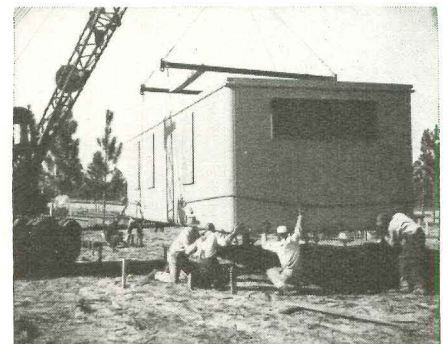
UTILITY CORE, one of three units that make up the house, carries all plumbing and appliances. Ductwork for blower furnace extends into all sections. Roof is designed for 30 lb. snow load.

Art Shay



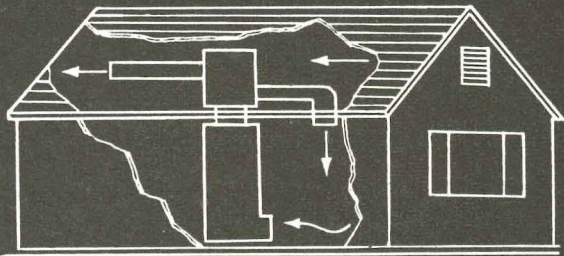
LIVING-ROOM UNIT (17' x 11'-3") is swung by overhead crane onto flat car ready for 1,000 mile shipment to Georgia. Architects McGauhan & Johnson dressed up original design for the test project, considerably enhancing appearance.

AT SITE, crane swings section (with windows still covered for shipment) onto foundations of steel plate atop steel pipe set in concrete. Only 13 piers are needed for three-bedroom house.

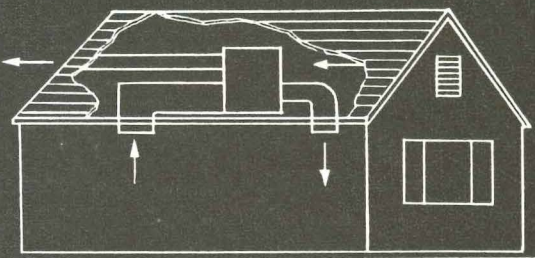


FIRST HOUSE completed was found attractive by Army wives. Ingenious site plan by Eugene R. Martini got five units per acre at site cost of only \$845 per house by running utilities through mid-lot for shorter connections.

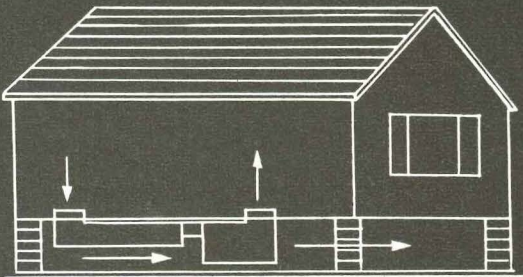




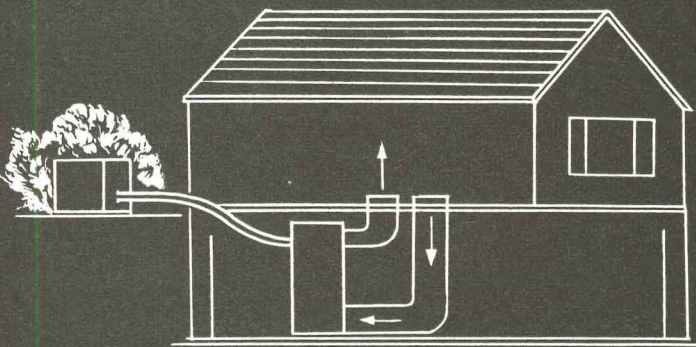
Utility Room and Attic Installation



Attic Installation



Crawl Space Installation



Basement Installation Compressor Outside

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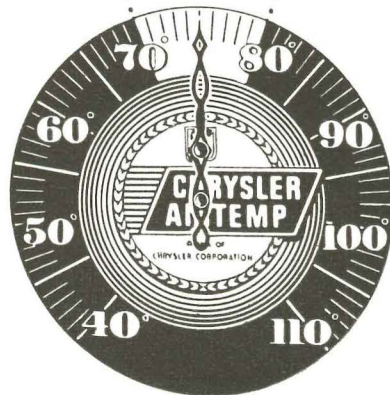
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NAREB urges conservation commissions with tax powers, federal tax aid to fight slums

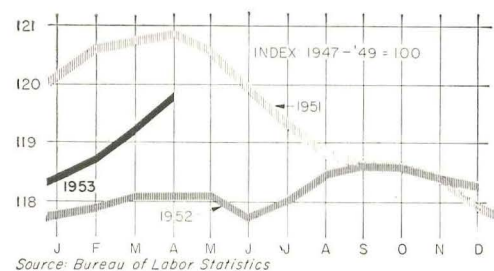
hampered the relocatable program from the start. And the Bureau of the Budget last month recaptured \$17½ million earmarked for later construction of relocatable homes by HHFA. So the government market for Pressed Steel's pioneering house looked dim.

Company executives say the house would meet FHA standards with minor changes, think quantity production would cut costs enough to compete in the low-cost civilian housing market. But the unique structure might run afoul of archaic building codes and AFL labor restrictions in some cities. So far, the company had not decided whether to continue production or not. Another promising house ahead of its time hung in the balance.

FHA opens new office in Texas, names four new field chiefs

Four new appointees were named to top FHA field jobs last month, doubling the number of new faces in such spots since the Eisenhower administration took office. Clyde R. Black, of Logansport, Ind., former state motor vehicle director, succeeded George A. Bremer as Region III director in charge of 10 midwest states that account for 22% of FHA volume. Realtor Charles M. Dawson, former (1911-44) Indiana lieutenant governor, succeeded F. Shirley Wilcox, resigned, as Indiana state director. Realtor Carl A. Wiegand of Birmingham was appointed Alabama state director, succeeding Acting Director William H. Hicks. Realtor Keith McCause of Houston became FHA chief of Houston.

Increasing business led FHA to elevate Lubbock, Tex. from a servicing to a full-fledged district insuring office. Another new district office was to be opened soon on Long Island to relieve New York of single-family home volume.



MATERIALS PRICES rose 0.6 points from mid-March to mid-April on BLS index, mostly because of increases for cement and masons' supplies. Lumber and wood products rose 0.2 points, but since mid-April northwest producers have cut prices on some construction grades \$2 to \$4, while others are working a four-day week to cut big inventories from high production during an exceptionally open winter. At 119.8, the BLS index was 1.6 points above its 1952 average of 118.2 and higher than any month since June, 1951 (120.0). But it was still below the April, 1951, post-Korea peak of 120.9. Since last December, it had climbed 1.5 points.

For more than a year, NAREB had been studying ways and means of putting the fight against city slums on a pay-as-you-go, private enterprise basis. Last month, NAREB's directors approved the resulting plans "in principle." President Charles B. Shattuck hailed the formula as "the most important and constructive action ever taken by our board of directors." Said he: "This plan takes into account everything that has been learned, and every mistake that has been made, in previous attempts to meet the grievous problems of slums, blight and deterioration in our cities."

The realtors' blueprint went beyond mere enforcement of housing ordinances as a tool for rehabilitation—although this, said Shattuck, "is now working on the biggest scale that we have seen." NAREB called for creation of community conservation commissions with broad powers to coordinate local law enforcement in selected areas where blight must be either wiped out or prevented. Specifically, the realtors would empower conservation commissions to:

- ▶ Prohibit occupancy of buildings which do not meet minimum standards of occupancy or maintenance.
- ▶ Acquire (by condemnation if necessary) and raze buildings too blighted to be rehabilitable. (But NAREB would have the land remain in the owner's possession. He would be free to redevelop it or sell it for any purpose consistent with neighborhood conservation plans.)
- ▶ Acquire (by condemnation if necessary) both buildings and land needed for private facilities like parking lots when necessary to carry out conservation plans. Commissions would be required to sell such property within a year by competitive bids.
- ▶ Levy a small tax on all property within a city to provide a revolving fund to administer the conservation program. Part of the fund would be earmarked for advances to property owners who cannot find private financing for repairs ordered by the commission. Advances would become a special assessment lien on the property.
- ▶ Levy special assessments on each parcel of property within a neighborhood conservation area (after a majority of voters in the area approve), to finance purchase of land and buildings to carry out conservation plans. Property owners, NAREB suggested, should have up to 10 years to pay the assessment in yearly installments. Assessments would go to a special bond lien, and the commission would market the bonds.

Tax aids asked. The striking aspect of the plan, noted Chairman Fritz Burns of NAREB's council on conservation and rehabilitation, was that "this is a realtors' group proposing legislation which is going to tax real estate." Burns had this explanation: "It's only a minority who refuse to keep property in repair, who want to milk it. To most realtors, the essence of persuading them to invest in property maintenance

is assurance of uniform standards of maintenance—either voluntarily or backed by law enforcement." NAREB's plan would provide the big stick to deal with recalcitrants.

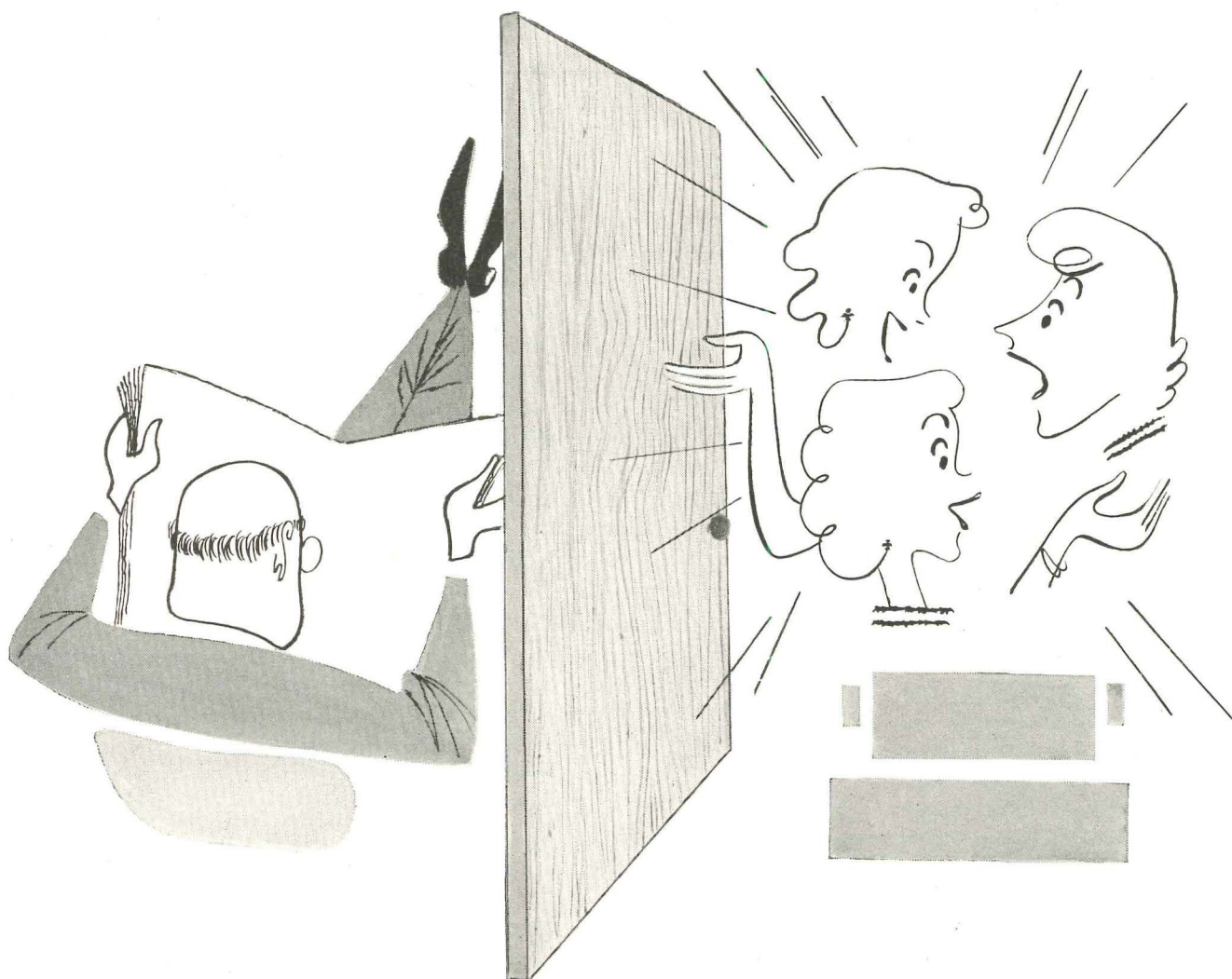
NAREB also called on the federal government for antiblight aid in four ways:

1. Provide "maximum marketability at the lowest possible interest" for assessment bonds by insuring them.
2. Encourage voluntary slum rehabilitation by amending income tax laws to let the residual value of buildings razed by conservation commissions be deductible in one to five years, at the taxpayer's option.
3. Encourage new investment in conservation areas by permitting a five-year tax write off of the total cost—the same as for defense facilities.
4. Amend FHA and/or VA mortgage insurance laws to meet the special needs of conservation areas.

Public houser opposition? In an industry noted for controversy, NAREB's proposals seemed likely to stir up their share. Although the realtors' ideas for government aid involved no direct dollar subsidy and might well cost the government little or nothing in the long run, it was a good bet that public housers would try to smear them as a "steal." Builders and realtors have both touted renovation of slums as a substitute for public housing. NAREB's blueprint made that approach clearer than ever. Public housers, on the other hand, contend the job of wiping out slums can only be done with both public housing and rehabilitation. It was on this basis that



PASADENA CLEANUP, dubbed "Operation Junkyard," has been one of the nation's most successful rehabilitation efforts. Without a cent of federal aid, the city in two years has eliminated 1,260 dilapidated buildings, forced owners to restore another 1,608. Honoring the achievement, President K. S. Senness of Los Angeles' Home Builders Institute (2d from l) gave Pasadena Mayor Alson E. Ebernethy a plaque. Vice President George Byrnes of Pasadena's chamber of commerce (l) and ex-NAHB President Alan Brockbank (r) watched.



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 phia 34, Pa. • St. Louis 16, Mo. • San Antonio 6, Texas
 San Francisco 24, Calif. • San Leandro, Calif.

they were beginning to give rehabilitation wary encouragement.

Federal aid urged. The National Housing Conference, at its annual meeting in Washington, called upon the government for a "major new program to encourage and assist communities in the development of programs of neighborhood conservation and rehabilitation" including "federal technical assistance to local housing, planning conservation and redevelopment agencies, insurance of home repair and modernization loans on special terms and loans to local agencies operating under state law."

Although a federal handout was precisely what private industry did not want injected into urban rehabilitation, support of the idea by public housers could avert time-consuming wrangles as more and more cities across the nation tackled the long neglected slum cleanup job.

Conservation commission. Among the nation's big cities, Chicago continued to make one of the most promising attacks on its slum problem. Last month, the city council set up a Commission on Neighborhood Conservation, the first of its kind in the nation and a model for part of NAREB's still broader plan. Its assignment: to supervise Chicago's effort to keep once-fine residential areas from slipping into slums. Outlining its program, the commission said: "New slums are developing faster than we can clear and rebuild the old ones. We simply cannot afford to wait until older areas reach the slum state."

For ideas on how to tackle its job, the commission needed to look no farther than its own back yard. The South East Chicago Commission, a private civic organization of Chicago university officials, businessmen and neighborhood leaders, was achieving remarkable initial success against deterioration in the Kenwood, Hyde Park and Woodlawn districts. Adopting a practical approach, the commission hired a private housing detective: Otto Novotny, a retired fire battalion chief who had lived in the South Side 30 years, watched and worried over its skid. His job: to ferret out sneak conversions, building, fire and safety violations, follow through with city authorities for prosecutions.

New York failure. New York still fumbled its slum problem, despite the ominous warning of a Brooklyn grand jury: "If no adequate steps are taken to stop housing deterioration and decay, taxes from real property will become less and less until our city becomes a financial ghost town."

NAHB's Yates Cook put it even more bluntly: New York's slum problem is being "grossly mishandled" by city and state officials. Said he: "Many blighted areas of New York can be salvaged at the expense of slum landlords whose neglect and indifference are largely responsible for today's slum crisis. But planners (like City Construction Coordinator Robert Moses) want to tear down structurally sound apartment buildings, rebuild from the ground up and pass the bill on to the taxpayers.

They are trying to bail out the slum landlords at the expense of the already overburdened New York taxpayer."

At mid-month, Architect Frank Lloyd Wright contributed his views to the debate. Said he: "Decentralization is coming in. The city is going to the country. You'll see more greenery in 25 years. Grass will grow where least expected now and flowers will bloom in the concrete. The city is a hangover from feudal times. Once it was necessary, but it reached and passed its peak and now you will see it disappearing."

PEOPLE: Manilow is named Park Forest president

In 1940, Builder **Nathan Manilow** was stone broke. Since then he and his associates have built close to \$180 million worth of homes in and around Chicago, making him the city's biggest builder and one of the largest in the nation. His biggest project has been the \$125 million Park Forest, 27 miles south of Chicago. It began in 1946, now has 21,000 residents and is still abuilding. But although Manilow had the biggest investment in American Community Builders, the corporation building Park Forest (he assembled the 2,500 acres on which it stands), for seven years Manilow had remained in the background as vice president and treasurer. Dominating personality at ACB was President **Philip M.**

(continued on p. 46)

Photos: Robert C. Lautman



An eminent awards jury calls Washington's architecture 'ineffectual,' criticizes winners

"It is difficult to comprehend how a thriving, progressive community, such as Washington, expresses itself so ineffectually in its physical embodiment." So wrote a jury of celebrated architects, O'Neil Ford, Philip Will and Edward D. Stone, after judging the 152 entries in the Washington Board of Trade's biennial architectural awards competition last month. Only 12 rated merit certificates and only three escaped adverse comment. One was the sign for the Wildwood housing project (1) of Alvin Aubinoe (Architects: Aubinoe, Edwards & Berry). Said the jurors: "Effective! Clear, well designed. . . .

An elegant sign, handsomely placed, which leaves a first impression of quality. . . ." Winning project (r) was Luria Bros. Pine Spring development (H&H, Nov. '52) which jurors called "fresh and stimulating after miles of poor Colonial copies. . . well above average in any American city." Architects: Keyes, Smith, Satterlee & Lethbridge. Jurors called "unnecessary variety in shapes, windows, glass, wood and brick panels" a "minor defect."

Other winners (not pictured): residence at McLean, Va. by Architect Harry E. Ormston; weekend residence at Dogue Bay, Va. by

Keyes, Smith, Satterlee & Lethbridge; Howard University engineering & architecture school by Architect Hilyard Robinson; Wyatt Building by Architect A. R. Clas; Congress House apartments by Architect Joseph Miller; The Woodner apartments by Ian Woodner and Wallace F. Holladay, associate; Self Realization Fellowship Church by Architect Walter D. Byrd Kann's department store by Architects DeYoung, Moscowitz, Rosenberg; Schubert theater remodeling by Architect Bernard Lyon Frishman; Candey building remodeling by Architect Harry Barrett. For photos of 4 of these: AF, May '53, News.

BUILDER FAVORS TAKING PROSPECTS THROUGH BACK DOOR RIGHT INTO HEART OF NEW HOMES

Meet Mr. L. B. Lovitt, Jr., partner in the firm, Jacobson & Lovitt. Mr. Lovitt has spent many years in the homes construction business in and around Memphis.



Princeton Park, a new sub-division in Memphis,

"If you've ever had the opportunity to sell one of your new houses personally, you'll understand why I am highly in favor of the 'back door' selling approach," writes L. B. Lovitt, Jr., builder of the new Princeton Park development.

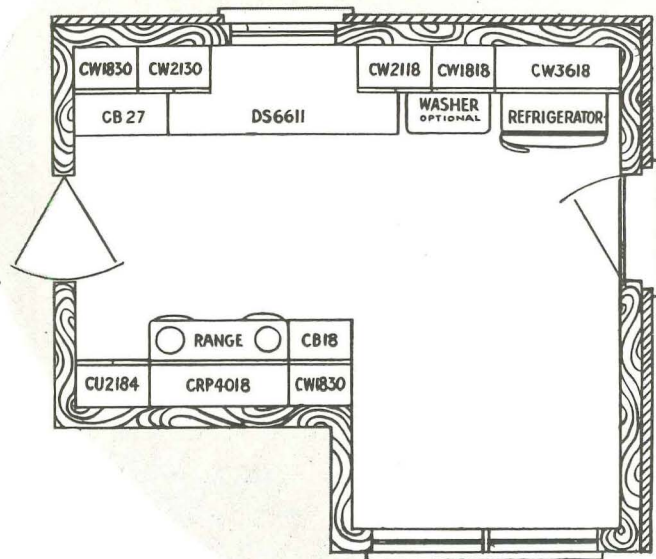
"These days, more than ever before, *both* prospects, husband *and* wife, are mighty interested in the kitchen and kitchen equipment. They know their brands of appliances, and they know just what they want in their homes.

"That's why Mr. Jacobson and I decided to include Crosley Kitchens in *all* of our Princeton Park houses. We were impressed by the ease with which Crosley products adapt themselves to any floor plan. And we were especially pleased with the co-operation we received from the Crosley Distributor when it came down to the actual planning of the kitchens.

"At Princeton Park, when people come out to see the houses, they are taken in through the back door first, straight into the Crosley Kitchen.

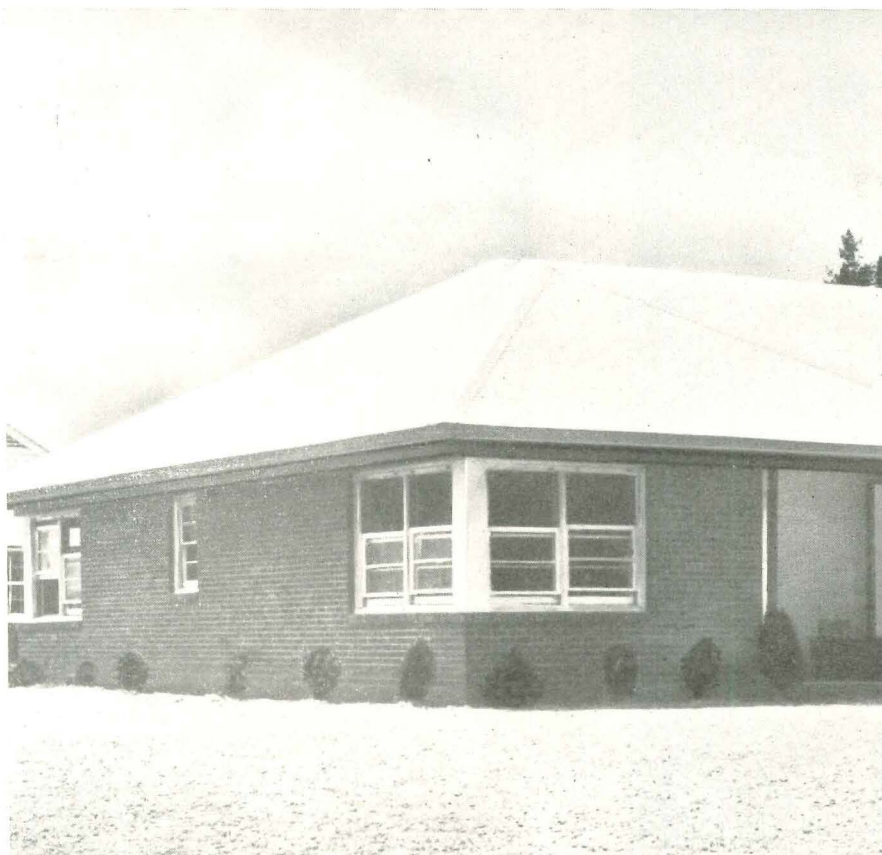
"Once the Crosley Kitchen has put them into a buying mood, the final selling job is much, *much* easier."

SALES MADE EASIER WHEN PEOPLE



Here is just one of the Crosley Kitchens built into the Princeton Park houses. Remember, Crosley will be glad to help you plan a kitchen with sales-appeal that will be ideal for your requirements.

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Tennessee, consists of eighty-six houses, priced from \$12,650.



SEE THIS CROSLLEY KITCHEN!

See how every piece of matching Crosley Kitchen equipment is styled for eye-appeal, engineered for adaptability and easy planning!

Mr. and Mrs. Prospect can see at a glance that *this* kitchen has everything . . . it's work-saving, step-saving, time-saving!

Don't forget to remind them that a wonderful Crosley Kitchen can be included right in their mortgage! It's a strong sales point!

Notice how conveniently the Crosley Steel Wall Cabinets may be grouped about the Crosley Electric Range at one side of the kitchen to provide truly generous storage space. Crosley Cabinets are available in many different sizes and may be combined to fit naturally into any size kitchen.

The Crosley Base Cabinet beside the range has a practical vinyl-on-steel counter top that resists heat and scratches.



Here's another side of the sales-making Crosley Kitchen, complete with a marvelous modern Shelvador® Refrigerator, Crosley Sink, Crosley Wall and Base Cabinets.

Crosley Shelvadors offer prospects such outstanding features as automatic defrosting, across the top freezer with real freezer-locker convenience, and big roomy shelves-in-the-door!

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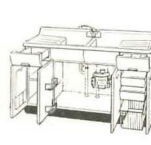
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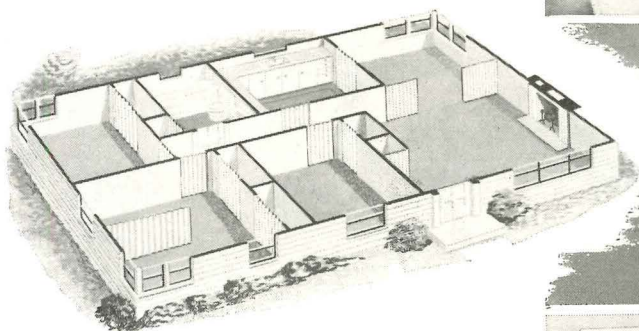


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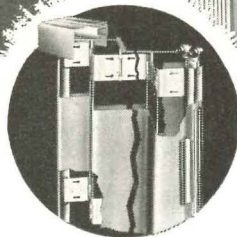
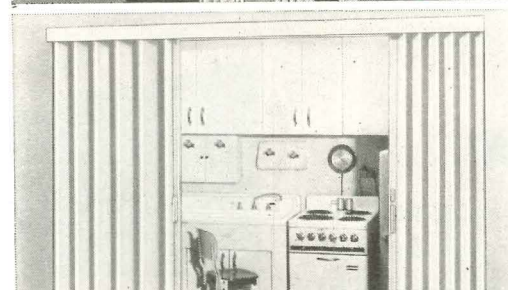
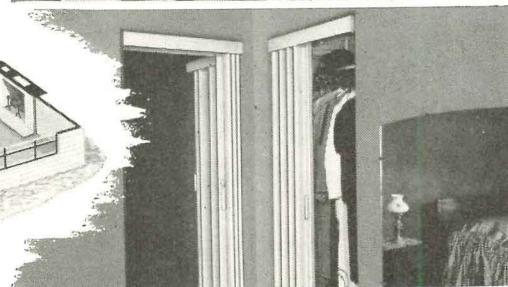
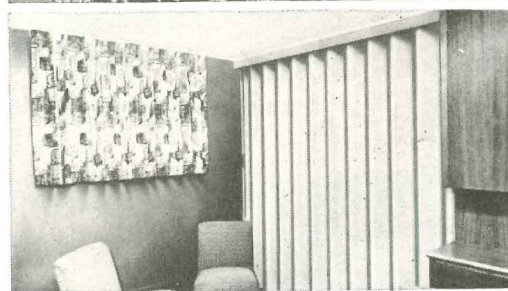
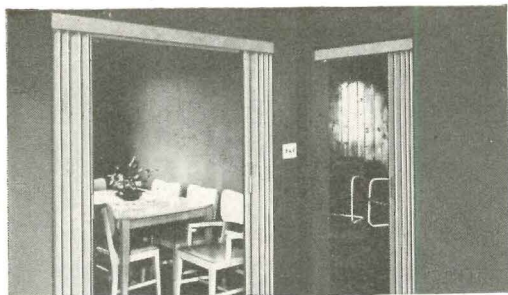


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Construction costs go down when you figure FOLDOOR into your homes—and you give your clients more living space for every dollar invested.

This handsome folding door helps you in planning and helps you in selling. In your plans, every square foot is completely usable—no space is wasted by door "swing" area. You save money and give greater customer value—because you give more actual living space from the same square foot area. Your homes will sell faster, too—everyone appreciates FOLDOOR's wonderful flexibility and beauty.

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NEWS

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MANILOW



KLUTZNICK

Klutznick, former (1944-46) commissioner of the National Housing Authority. Last month, having been elected president of B'nai B'rith, the Jewish service organization, Klutznick moved up to the new post of board chairman to give himself more time for B'nai B'rith work and travel. His successor: Nate Manilow. **Sam Beber**, vice president and general counsel of ACB since its founding, was named executive vice president to direct day-to-day operations.

J. E. Foster award to the Texas Mortgage Bankers Assn. member who renders the year's most outstanding service to the industry was presented last month to **John F. Austin Jr.**, president of T. J. Bettes Co. of Houston, for his work on insurance and savings banks legislation and committee activity for MBA. The Bettes Co., already largest mortgage servicing organization in the country (\$400 million portfolio), grew another \$100 million bigger last month as it took over W. R. Johnston & Co. of Oklahoma City from owner-brothers **W. R., W. E.** and **Paul S. Johnston**.

President **Joseph L. Eichler** and the four architects for Eichler Homes pace setting, contemporary-designed projects around Palo Alto, Calif., **S. Robert Anshen** and **William Stephen Allen** of San Francisco and **A. Quincy Jones** and **Frederick E. Emmons** of Los Angeles, received the 1953 Achievement Award of Arcadia Metal Products, of Los Angeles.

NAMED: L. W. Clarke, sales vice president of the Philip Carey Manufacturing Co., as executive committee and board chairman of the Asphalt Roofing Industry Bureau, association of 25 roofing product manufacturers; **J. R. Bemis**, first vice president of NLMA, re-elected president of Southern Pine Assn.

San Diego's long-drawn VA loan scandal came to a close. For participating in bribery of former VA Loan Guaranty Officer **Francis C. Paige** (H&H, Jan. '52 et. seq.), Builder **Elmer C. Hubner** was given a \$20,000 fine and a suspended two-year prison term. Final score: 18 defendants

(continued on p. 48)

Cut over-all construction costs 20% with Gunnison Homes

• Think what a competitive edge you have when your over-all construction costs are as much as one-fifth less than those of the builder down the street. And that's just the edge you have over comparable conventional construction when you build Gunnison Homes, a product of United States Steel.

There's no compromise with quality to achieve these savings. They are the direct result of on-the-site savings in time and labor due to Gunnison's application of pre-engineering methods to home construction.

These savings are only one of the benefits you receive when you follow Gunnison Homes' "eight-point path to profits." Check the list and you'll see how much each of these points can mean to you. If you are interested in joining this successful enterprise, write to Gunnison Homes, Inc., Dept. H-63, on your business letterhead.

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NEWS

convicted, fines totaling \$104,500, seven prison sentences totaling 16 yrs. 5 mos. On April 24 a heart attack proved fatal for **Roy Edward Hegg**, 62, board chairman of the San Diego Federal Savings & Loan Assn., one of the 18 convicted. Hegg was free on bail pending an appeal from a two-and-one-half year prison sentence on bribery and conspiracy charges.

After 20 years with government agencies Washington's **John L. Haynes**, 51, returned to private enterprise as managing director



HAYNES

^{CAA} of the Producers' Council. A George Washington University engineering and law graduate, Haynes worked for Chicago and Washington construction firms before becoming principal engineer for the Securities and Exchange Commission in 1933. He headed WPB's building materials division from 1941-44, became Commerce Dept. construction division chief in 1945, and director of NPA's building materials division in 1951.

How far will a man go to beat a housing shortage? Last year **Maj. Edwin Austin** left the British Army to move to Canada, was so worried by stories of a Canadian housing shortage that he ordered a four-bedroom prefab to take with him. Lest he face troubles like Mr. Blandings, Austin worked several months in the prefab company drawing rooms, factory and assembly sections. Last month, his abode was reaching the New World in 48 crates and 72 packages for erection in an Ottawa suburb over a waiting basement. A contractor would help set up the shell, then versatile Austin (now a captain in the Canadian Army) would complete the assembly, for good measure build his own living room fireplace. Total cost of house including extras and shipment: \$4,816. A rugged procedure for a mid-20th century immigrant? "Chap wants a place of his own y'know," said Austin.

DIED: Former US Sen. **Robert F. Wagner**, 75, author of the first federal housing and slum clearance legislation, May 4 in New York City; **Oscar Vatet**, 71, AIA, formerly with the PWA, USHA and PHA, specializing during World War II in prefabricated and portable housing studies, May 13 in Washington; **Ray William Heslop**, 56, Akron, Ohio homebuilder who switched to mass market after World War II, erected more than 4,000 single-family houses, May 12 in Akron.



Max Hoffman, President and General Manager of Ludman Corporation—inventor of the world famous Auto-Lok window operating mechanism.

Ever move an entire plant . . . and try to maintain production?

Ludman has! Not once, but twice in 10 short months.

Moving an entire plant with tons of machinery, finished products and stockpiles of raw materials is a major operation any time. Especially when the plant to be moved covers over a hundred thousand square feet of jam-packed production facilities and is operating at peak. Most manufacturers would shy away from it.

But the necessity of having to hurriedly vacate government owned property at Opa Locka Marine base to make way for the military—the necessity of having to take temporary quarters at Miami International Airport while a new plant was being erected—is the problem that faced Max Hoffman and Ludman.

Careful advance planning plus perfect teamwork on the part of every employee—from top management to truckers—made both moves possible in record time. Loss of production was held to a minimum.

"A task seemingly impossible has again been accomplished" stated President Hoffman. "We are proud of our entire employee organization and their whole-hearted enthusiasm, efficiency and expediency which made both moves possible."

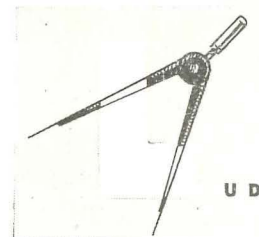
"Now at our new plant" Hoffman said, "only the growing pains of expansion can provide any further problems." And with 6 acres on which to expand and grow this should be no problem for Ludman.

Ludman's new plant is one of the most modern in the world. It comprises over a hundred and forty thousand square feet of floor space.

Designed to afford maximum light and ventilation, Ludman's new plant is a model for other manufacturers to survey. Ludman Auto-Lok awning windows and Windo-Tite Jalousies are used throughout in an expanse of eight-foot high glass walls of light. Engineers who have viewed the new plant are tremendously enthusiastic about the effect this window and jalousie installation will have on employee productivity and well-being.

Building officials state—"the use of Ludman Auto-Lok Windows and Jalousies has increased the value of the plant by many, many times the difference in cost between the Ludman Window and ordinary commercial windows."

Oboler & Clarke were the design engineers with A. Herbert Mathes, AIA, consulting architect. Special electrical installation was made by Henry Nelson. All are Miami Beach firms.



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Does a Real Heating Job . . . and it's sure to work right!

- Simple installation cuts masonry and labor costs
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- "Radiant blades" give 45% more heating surface
- Warm air can be piped to other rooms, too
- Ideal for summer houses and homes in mild climates

Whether you're building one or one hundred houses, be sure you specify a Majestic Circulator Fireplace. It's the low-cost way to offer a much-in-demand extra! And there's no guesswork! Accurate pre-assembly eliminates chance of faulty proportioning. Unit includes damper, down-draft shelf, smoke dome, firebox, and heat-boosting "Radiant Blades". Works fine as supplement to heating plant.

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- Scientifically designed for perfect draft control
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- No fitting necessary — damper rests on rough masonry
- Constant ratio of throat area to fireplace opening
- Available with patented poker control or face control

A Majestic Damper is essential in every conventional fireplace! Easily operated! Designed for simple installation! Extra width of backledge automatically locates damper throat forward an ample distance! Assures effective smoke-shelf area! Offered with poker or face control in formed steel or cast iron. Resists years of exposure to fire, rust, corrosion, soot, and heat! Features extra tight closure so important in air-conditioned homes. A real safeguard in fireplace construction — controls draft, prevents smoking, insures permanent satisfaction.

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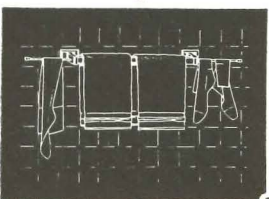
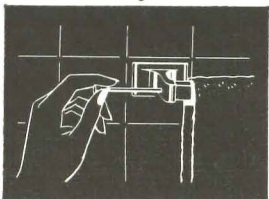
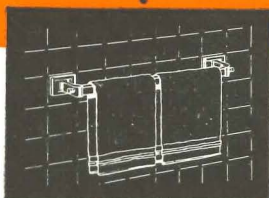
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Huntington, Ind.

Utility

UTILITY has a new and interesting meaning in EXTENDO-BAR...Hall-Mack's latest creation for modern living.

At first glance it's an attractive, conventional-looking towel bar, but there's more! Almost like magic...by pulling the knobs at each end...EXTENDO-BAR becomes nearly twice its original width, providing *extra* space for drying hose, lingerie, children's clothing, guest towels and other things usually fast-dried in the bathroom.



■ EXTENDO-BAR is a new and exclusive Hall-Mack product that's styled to bring EXTRA convenience and utility to modern bathrooms. Hall-Mack bathroom accessories are made in four popular lines...Coronado, Crystalcrome, Tempo and China Vogue... for every bathroom style and budget!

Sold by leading plumbing, tile and hardware dealers everywhere

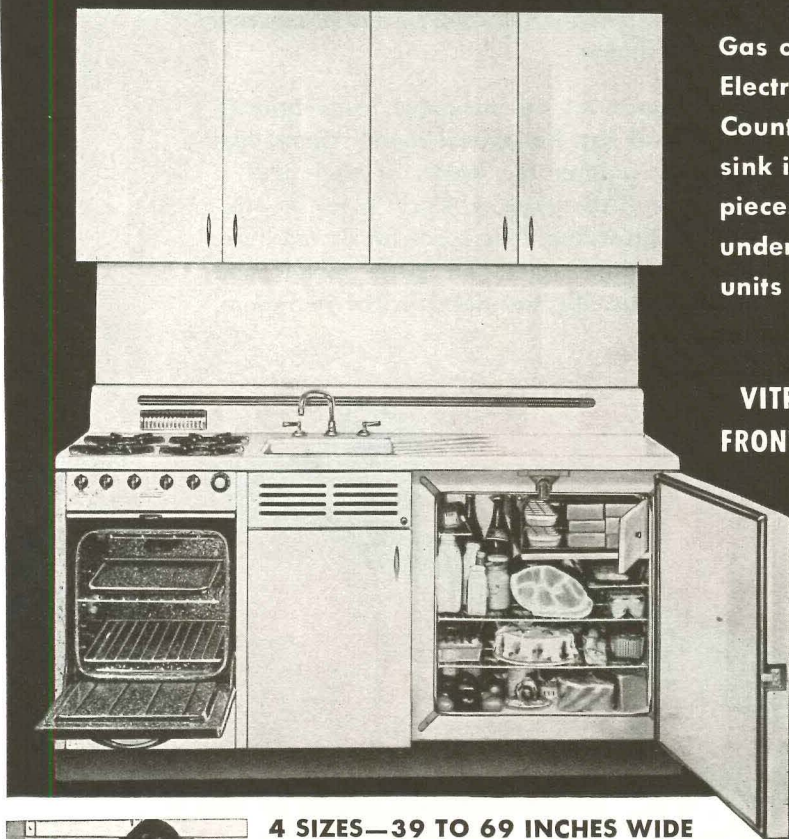
HALL-MACK COMPANY

1344 West Washington Boulevard,
Los Angeles 7, Calif.
7455 Exchange Ave. Chicago 49, Ill. 1000 Main Ave. Clifton, N. J.

DWYER KITCHENS

Gas or electric range.
Electric refrigerator.
Counter, range-top and
sink in one seamless
piece. Cupboard and
undersink storage. All in
units 39" to 69" wide.

VITREOUS PORCELAIN
FRONTS AND WORK TOPS

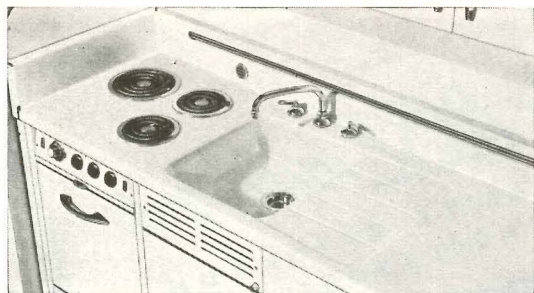


4 SIZES—39 TO 69 INCHES WIDE



Modern Ranges

Electric range Underwriters approved. Gas range AGA approved; burns natural, mixed or bottled gas. Convenient waist-high broiler. Oven heat control. Roller-bearing utensil drawer.



One-piece Sink and Range-top

Range-top, sink, drainboard and work top in one continuous piece . . . rounded corners and not a crack or crevice to harbor dirt or grease. Gleaming white acid-resisting porcelain. Mixing faucet and crumb-cup strainer included. Dwyer Kitchens available in Recess Models (with continuous sink-and-back rail as shown here) or in against-the-wall models as shown in full illustration above.



Electric Refrigerator

Vitreous porcelain interior and front. Sealed unit never requires oiling. 5-year warranty. Freezer compartment for frozen food and ice cubes. Handy push-button door and interior light.

MADE BY SPECIALISTS IN COMPACT KITCHENS FOR 27 YEARS

Dwyer Kitchens are designed, engineered and manufactured entirely in our own plant . . . by men who have concentrated on compact kitchens since 1926. Persistent effort has developed kitchens with maximum facilities in minimum space while retaining practical features of rugged durability.

Rugged construction characterizes Dwyer Kitchens. Mechanical and electrical equipment is unsurpassed in quality. Vitreous porcelain surfaces never require painting; soap and water keep them permanently beautiful. Installation is simple and all mechanical parts can be serviced from the front.

Name _____
Address _____
Town _____ State _____

DWYER PRODUCTS CORPORATION, DEPT. H653, MICHIGAN CITY, IND.

MAIL COUPON OR WRITE FOR COMPLETE BULLETINS.

DWYER PRODUCTS CORPORATION
Dept. H653
Michigan City, Indiana

EVENTS

National Association of Building Owners & Managers' 46th annual convention **June 7-11** at Pittsburgh.

Boston Art Festival for 1953 presents paintings and sculpture by leading New England artists **June 7-14** at the Public Gardens, Boston.

National Store Modernization, Building & Maintenance Show, Madison Square Garden, N. Y., **June 9-12**. Includes exhibition of designs for shopping centers, retail stores and retail-store warehouses completed since 1948, new or remodeled, and for committed projects still on the boards. For details and exhibition entry forms, write: Store Modernization Institute, 20 E. 55 St., New York City.

Forest Products Research Society's 7th annual meeting, **June 15-17**, Memphis, Tenn.

AIA Board of Directors' annual meeting, **June 15-19**, Olympic Hotel, Seattle, Wash.

The American Institute of Architects' annual convention, **June 16-19**, Olympic Hotel, Seattle, Wash.

International Design Conference June 21-28, at Aspen, Col. Conducted under auspices of Aspen Institute for Humanistic Studies with support of leaders in various phases of design ranging from architecture to fashions. Theme for 1953: "Design, a Function of Management." Registration fee, \$35, payable with hotel registration. For information, registration card, address: Aspen Institute, Aspen, Col.

American Society for Testing Materials' annual meeting **June 21-25** at Chalfonte-Haddon Hall, Atlantic City.

Competition. In connection with the Fourth Centenary of the City of Sao Paulo, beginning next November, an international exhibition of architecture will be held at the Sao Paulo Museum of Modern Art. Open to architects of all nationalities, and to officially recognized schools. Awards in 11 categories, with a special prize to a young (under 35) architect, and to a school. Submissions no later than July 15. For information and entry forms, address: Secretariat, II Bienal do Museu de Arte Moderna, Rua 7 de Abril 230, Sao Paulo, Brazil.

National Home Week—the week of **Sept. 20-27**—has been set by NAHB. Among features will be the Trade Secrets house (H&H, Jan. '53) developed by a committee of NAHB architects and builders, and an unprecedented number of air-conditioned houses.

American Bankers Association's 79th annual convention, **Sept. 20-23**, in Washington, D. C.

National Electric Industries Show, **Sept. 29-Oct. 2**, at the 69th Regiment Armory, New York City.

Prefabricated Homes Manufacturers Institute's fall meeting **Oct. 25-27**, at the Hotel Shamrock, Houston, Tex.

American Gas Association's annual convention **Oct. 26-29** at Kiel Auditorium, St. Louis.

National Savings & Loan League's fall conference **Nov. 8-11**, Casablanca Hotel, Miami Beach.

National Association of Real Estate Boards' annual convention **Nov. 8-14**, Statler and Biltmore Hotels, Los Angeles.

Mortgage Bankers Association of America's annual convention **Nov. 13-19** at Miami Beach. In conjunction, a home show conducted by companies offering services or manufactured products related to building.

time and money”

Says Brune-Harpenau, Builders, Inc.

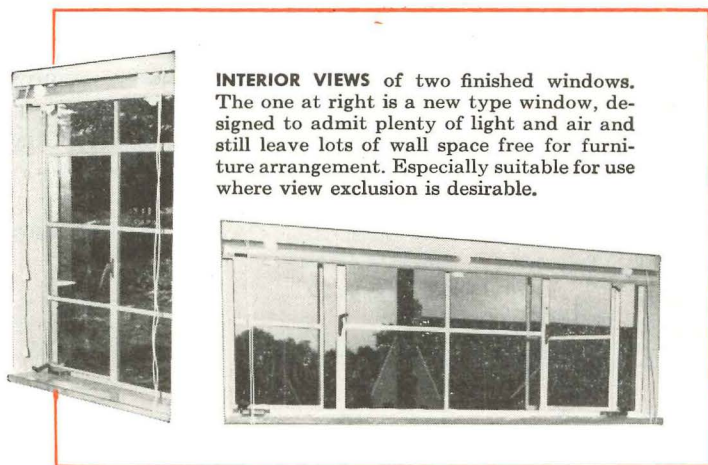
● “We’ve discovered that steel windows are the most economical, most satisfactory type of window we can use.” So reports this rising young Cincinnati building concern. “Steel windows go in faster, are easier to handle, are so rugged it’s possible for even the most inexperienced workman to install them without trouble or damage to the window. When you’re working on a large development like this, if you can save only a few hours and dollars on each house, you have really cut your over-all expenses . . . and increased your profits.”

And these builders—along with many others—will discover another outstanding reason for using steel windows. They make homes easier to sell. Prospective customers like steel windows’ neat appearance, their low upkeep, and their freedom from warpage and rot. Housewives say steel windows are easier to screen, simple to keep clean, and let in more light than other types of window construction.

For more than 40 years United States Steel has been supplying window manufacturers with special rolled section high-grade open-hearth steel.



The builder isn’t the only one who profits from the use of steel windows. The architect’s job of window design is simplified by the great variety of styles available in steel windows. The realtor knows that homes with steel windows move faster than those with other types of window construction. Any building and loan concern would rather hold a mortgage on a house that features modern, well-built equipment like steel windows.



INTERIOR VIEWS of two finished windows. The one at right is a new type window, designed to admit plenty of light and air and still leave lots of wall space free for furniture arrangement. Especially suitable for use where view exclusion is desirable.

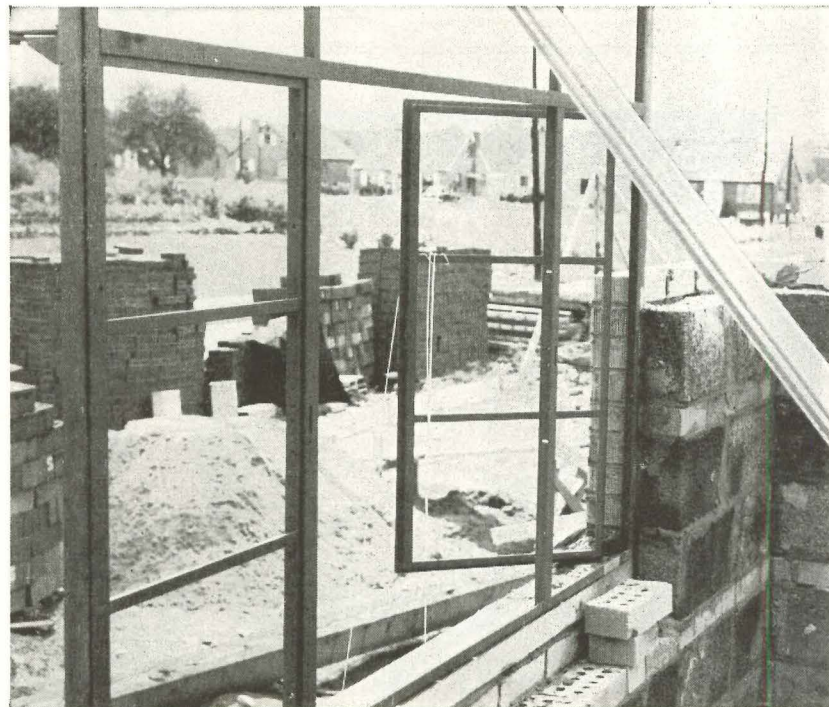
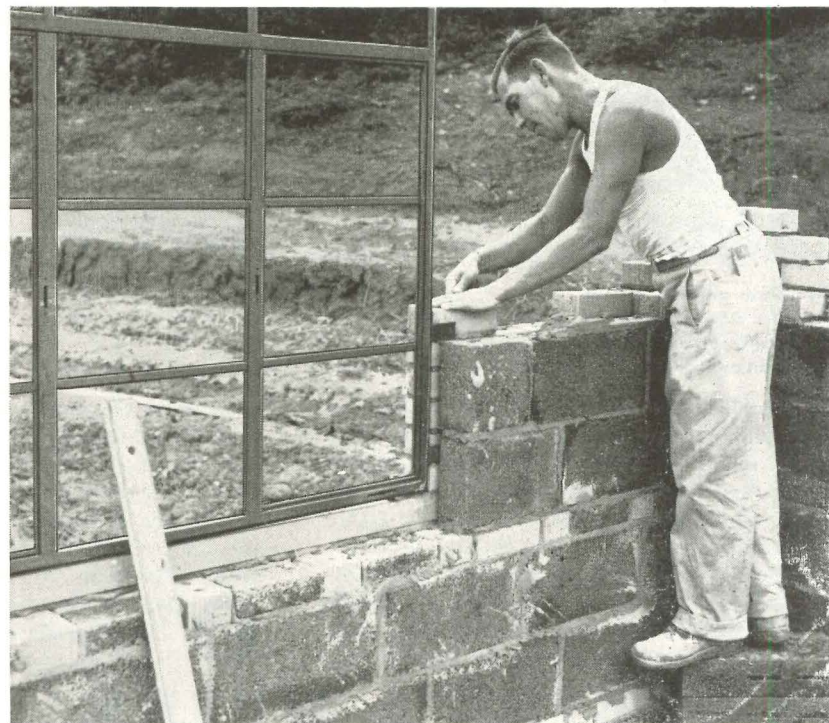
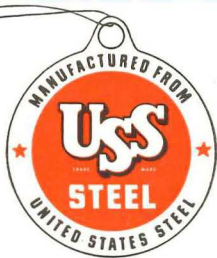


PHOTO SHOWS how simple it is to hold steel windows plumb with a supporting board until brickwork reaches high enough to support frame.



TWO CLIPS on side of frame help hold window firm while mason sets brick. Steel windows are so easy to handle, this workman couldn’t spoil the job if he tried.

Look for this label — it is your assurance that the windows are made from quality steel.



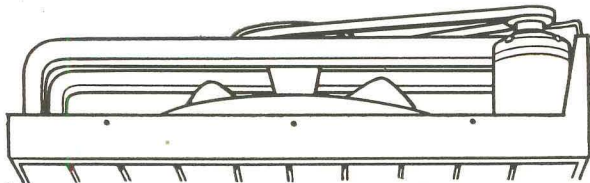
UNITED STATES STEEL CORPORATION, PITTSBURGH • COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
 TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA.
 UNITED STATES STEEL EXPORT COMPANY, NEW YORK

U·S·S STEEL FOR WINDOWS

UNITED STATES STEEL

now! the **SALES POWER** of night cooling

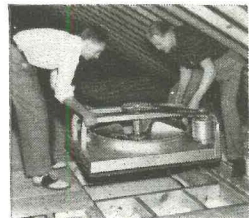
COSTS LESS!



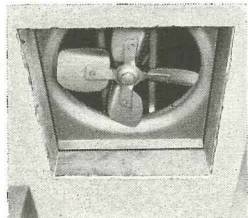
Satisfy your prospects with this complete, dependable home-cooling system. *It's a complete package—no extras needed!* Everything arrives on the job in one easy-to-install unit. Automatic ceiling shutter included, from \$139.95* retail.



*Price subject to change without notice



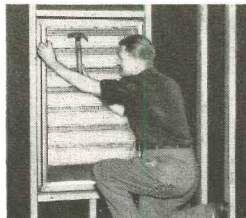
No other attic fan can be installed quicker or cheaper! Fan simply sets over roughly framed opening.



View from below before shutter is installed. No finishing needed. Rubber cushion seals fan to opening.



Complete automatic shutter unit fastens with screws to ceiling opening frame; flange forms ceiling trim.



R & M louvers provide proper exhaust areas. Special sizes should be covered with 1/2" mesh wire.

Lookers become buyers when they see this comfort feature in a house. This "extra" suggests to prospects that you were equally thorough in all your planning. R & M "Package" Attic Fans are ideal for low attics, all standard hallways and "moderns" with limited attic space. Certified air deliveries: 5000 through 16000 CFM. Fan is guaranteed five years; motor and

shutter guaranteed one year.

A reliable 8-page guide to better comfort cooling is yours for the asking. Order this book for your reference file. You'll find it helpful every time you specify cooling and ventilating equipment. Mail the coupon now.



Consult Sweet's Architectural File for complete Robbins & Myers cooling and ventilating data.

ROBBINS & MYERS

"Package" attic fans

IT'S FREE!



Atlanta, Chicago, Houston, Kansas City, Los Angeles, Greensboro, N. C., New York, New Orleans, Oklahoma City, Orlando, Philadelphia, San Francisco, Springfield, Ohio.

A FEW HIGHLIGHTS OF THIS BOOKLET!

- The advantages of attic fan comfort-cooling.
- Description of automatic and manual ceiling shutters.
- Complete instructions for attic fan installation.
- Features and applications of Belt-Driven Fans.
- How to install Belt-Driven Fans.

Robbins & Myers, Inc., Fan Division HH-63
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Please send me your Booklet — "Robbins & Myers Package Attic Fans, Belt Driven Fans." A.I.A. File No. 30-D-1.

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LETTERS

RELATIONS CORDIAL

Sirs:

You are certainly doing an excellent job getting the industry together. As I go around the country talking to builders and architects, I find that you have become the leader of the industry, and every issue of *HOUSE & HOME* is looked forward to with interest and expectation. Keep up the good work.

CLIFF MAY, designer
Los Angeles, Calif.

NONWHITE HOUSING

Sirs:

... The most informed effort in this field (*H&H*, Apr. '53, News) yet undertaken by a responsible trade publication ... should prove helpful in stimulating realistic interest in this neglected market. We could use 25 copies, possibly more.

I must dissent from your report of my reaction to the exclusion of Negroes from Levittown, Pa. I most likely did admit that a possible change in his restricted pattern at this stage might affect his sales. However, we believe no such effect would have resulted if he had started by selling houses to eligible families regardless of their race. Certainly Levitt's procedure in Bucks County, as on Long Island, is dead wrong as far as sound housing and decent democratic principles are concerned—and he may yet be proved legally wrong.

The basic data and approach of the piece is so completely on the positive side that I am prepared to assist in its widest possible dissemination, reading and discussion.

We are informed that the new president of the NAHB has indicated the specific interest of NAHB in the increased production of private housing available to minorities.

You may not realize how gratifying it is for publications of the prestige of *HOUSE & HOME* to take up the cudgels in this effort. You have the profound appreciation of all those who believe that a well-housed American is a better American.

FRANK S. HORNE, *asst. to the administrator*
Housing & Home Finance Agency
Washington, D. C.

Sirs:

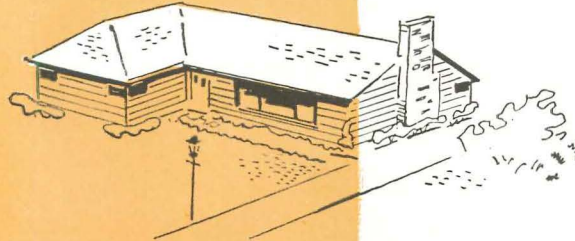
... A fine job.

I was surprised by Frank Horne's admission that a nonsegregated policy by Levitt would have created "sales trouble." The fact is that Levitt's all-white policy is bound to create all sorts of "trouble"—the type faced by Metropolitan in the Stuyvesant Town case.

With Negroes' incomes considerably lower, nonwhites far more overcrowded than whites and not getting any private housing, the pressure by Negroes against public housing has been much greater in cities than ever before. In Philadelphia, nearly 70% of applications

continued on p. 66

Careystone



asbestos siding in colors that resist time and weather

*The color is permanently sealed in by an exclusive
Carey process that seals out rain, dirt, grime, stains!*

Perfected by Carey engineers after years of development, Carey's exclusive sealing process gives Careystone a lasting, armor-tough surface that protects the color from fading . . . repels water . . . resists dirt, grime and discoloration. Careystone is rot and vermin proof, too. Never needs paint, is incombustible. And, for that real luxury touch, it is deeply textured with a vertical striated design of exceptional beauty.

Careystone is installed with ease and economy, too. Specify it for application over wood, using face nails:

over gypsum or fiber board sheathing with the Carey Shadow-line channel system. Or, right over the old siding when remodeling. Give *your* client's homes dramatic new beauty and appeal, with Careystone. Ask your Carey Representative about Color-Sealed Careystone asbestos siding. Or, mail the coupon for detailed literature and samples.

The Philip Carey Manufacturing Company, Lockland, Cincinnati 15, Ohio
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Serving Home, Farm and Industry Since 1873

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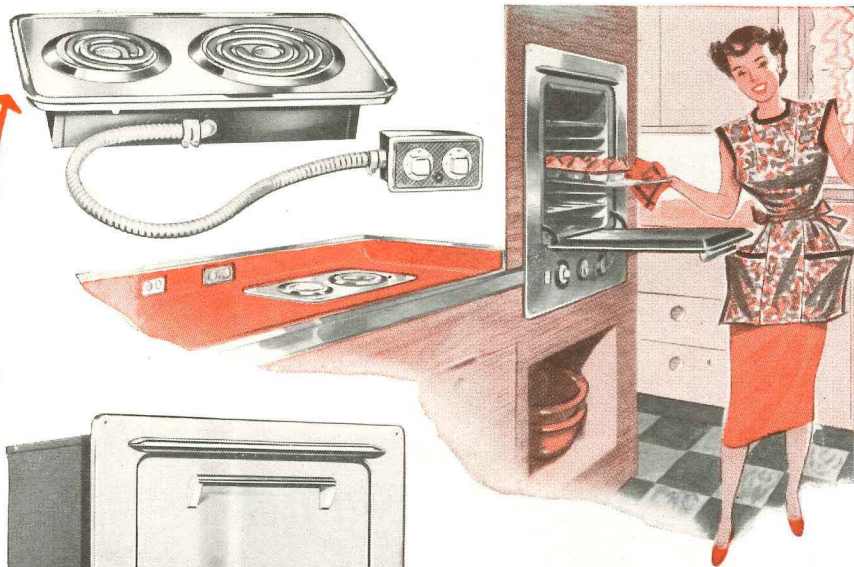
Please rush me samples and complete information on
new Color-Sealed Careystone asbestos siding shingles.

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For that "custom-built"
Sales Appeal
 that sells homes!



Custom-Bilt
**BUILT-IN ELECTRIC
 RANGE COMPONENTS**

Custom-Bilt OVEN

Completely self-contained, with all controls in steel outer shell for cabinet or wall installation. Front and door of stainless steel. Oven chamber is one-piece construction, porcelain enameled both sides. Automatic temperature and time controls. Oven-vent concealed at front. Improved Infra-Red broiling unit.

Custom-Bilt SURFACE UNIT

Available in multiples of two, each consisting of one giant and one regular Monotube single-coil heating unit. Stainless steel top designed for flush mounting in cabinet, bar, or table. Controlled by seven-heat switches with signal light. Supplied with flexible conduit and wiring for remote-control location.

L&H Electric Range Components make it easy to incorporate the potent advantages of an appealing, custom-designed and decorated kitchen in your homes. A good sales feature in any price class is usually worth more than it costs — and the big news, the big swing in home-building today is to the custom installation of appliances. Write today for the facts on L&H Ranges and Oven Components — made by one of America's pioneer electric range manufacturers. Learn how they can help you build extra "sell" into every new or remodeled home.

A. J. Lindemann & Hoverson Co.
 605 W. Cleveland Ave.
 Milwaukee 15, Wisconsin
 Oldest American Electric Range Manufacturer
 Under Continuous Ownership—Established 1875

B-2

Electric Ranges • Water Heaters • Refrigerators • Home Freezers

LETTERS *continued*

for public housing are for Negroes, though the Negro population is only 20%.

We need some real thinking about the public housing problem by those without a vested interest in either direction. Thinking is needed also on the problem of racial groups, and the lowest and that part of the middle-income families whom the private builder isn't serving.

CHARLES ABRAMS
 New York City

BATHROOMS SELL HOUSES

Sirs:

After studying your bathroom article (H&H, Feb. '53) I developed a very practical and economical revision in my plans which incorporated many of your ideas.

I had approximately 15 houses in the rough stage and immediately revised them. A number are now completed and the acclaim by customers and public is phenomenal.

In the past five weeks we have had 25 sales, many of which are due entirely to advanced design in bathroom planning.

JOSEPH ENTRESS
 Coldwater, N. Y.



Pre-Wright corner window, 1634

FRANK LLOYD WRIGHT

Sirs:

I do not seek to detract from the creative ability of Mr. Frank Lloyd Wright, but would it not be better to say that he *improved upon* the corner window born many years before he was (H&H, May '53)?

This photograph is of a corner window in the Popenoe house in Antigua, Guatemala, made famous by Louis Adamic in *The House in Antigua*. In that book Mr. Adamic says this house was finished for its owner, Don Luis de las Infantas Mendoza y Venegas, in 1634.

MARY S. HORSLEY
 Hollywood, Calif.

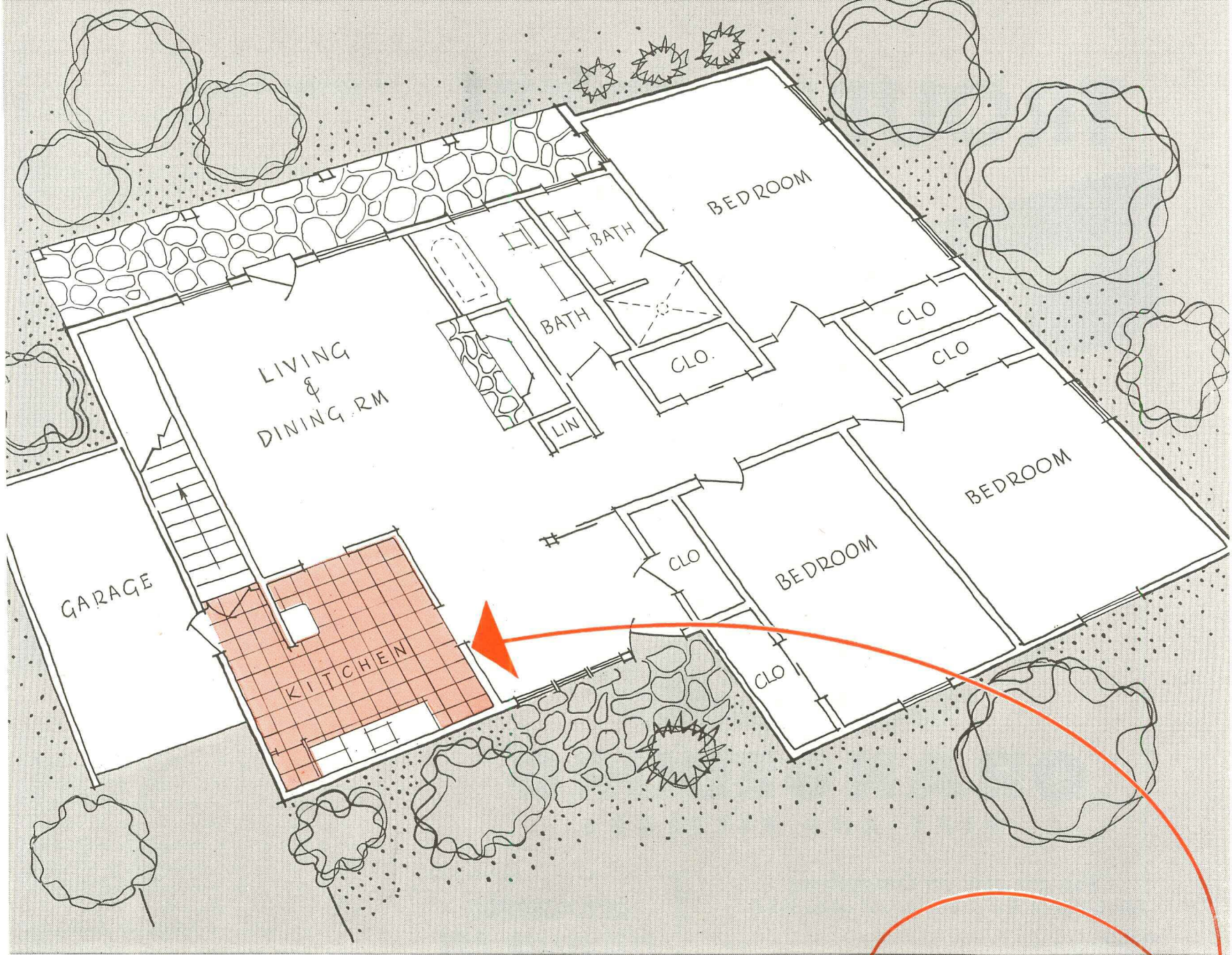
PROGRAM NEEDED

Sirs:

After about a year's intensive work preparing to begin a building project this spring, all at once, "Wham," this money freeze stopped us cold in our tracks.

The fact that we were stopped is relatively unimportant—except to us—but when almost

continued on p. 72



Now you can offer the luxurious beauty of **ARMSTRONG'S RUBBER TILE FOR KITCHENS**

A beautiful kitchen often clinches the sale of a house — especially since the woman's preference is frequently the deciding factor. That's why it's important news that you can now offer the luxury and comfort of Armstrong's Rubber Tile for kitchen floors.

Until recently, most architects and builders agreed that rubber tile should not be used for rooms where grease conditions existed. The basic characteristics of the rubber used in manufacturing rubber tile limited its resistance to cooking oils, fats, and greases.

Since the war, however, improved compounds have substantially increased the

grease resistance of Armstrong's Rubber Tile. As long ago as 1949, rigid laboratory tests indicated that Armstrong's Rubber Tile was ready for home kitchens. But that wasn't enough. Practical testing under varying conditions in actual kitchens was begun. Three years of continuing field tests have proved completely successful. Today you can specify Armstrong's Rubber Tile for home kitchens with complete confidence.

Your buyer prospects already know and recognize the unusual beauty and durability of this "Aristocrat of Floors." Women especially appreciate the gleaming surface, rich handmade graining, and

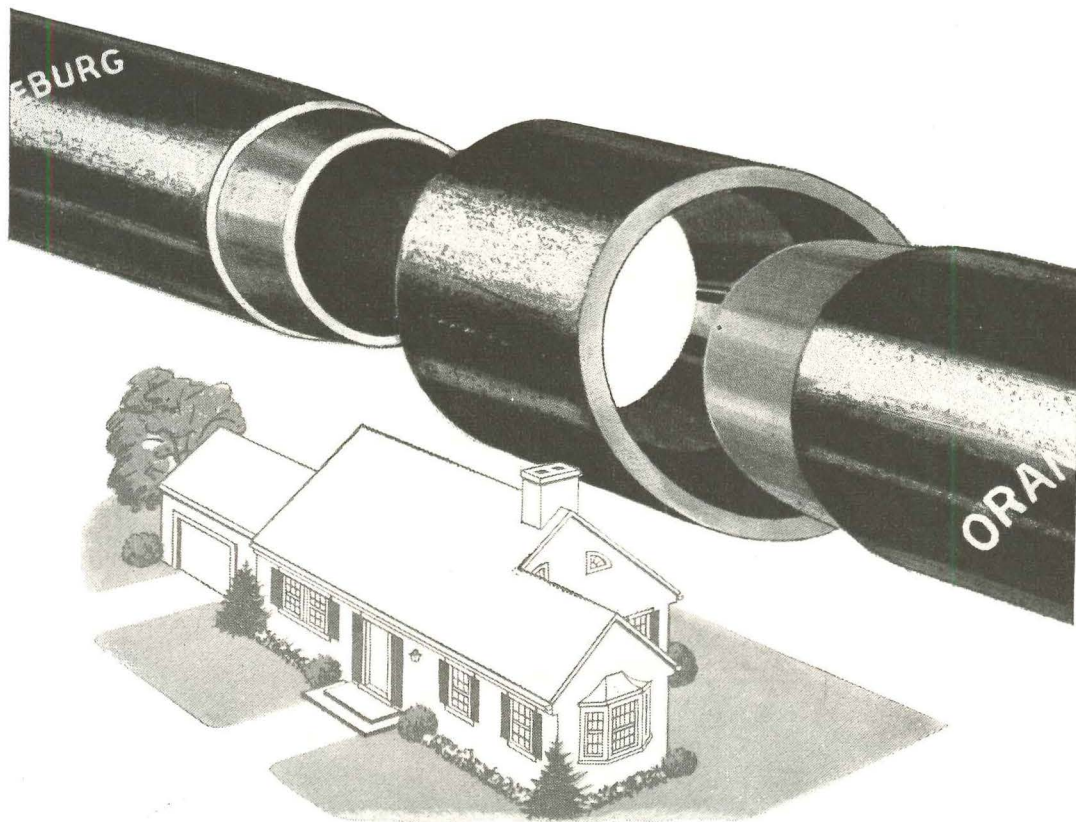
exceptional resilience of Armstrong's Rubber Tile. Its indentation resistance of 200 pounds per square inch is over twice that of linoleum, eight times that of asphalt tile.

When you are designing or building a home, remember that Armstrong's Rubber Tile can now add special attractiveness and sales appeal to the kitchen—as well as to any other room in the house. It is available in a wide range of handsome colors. For specifications and samples of Armstrong's Rubber Tile, see your flooring contractor or write Armstrong Cork Company, Floor Division, 606 Sixth Street, Lancaster, Pa.



ARMSTRONG'S RUBBER TILE

TROUBLE FREE!



ORANGEBURG® PIPE AND FITTINGS

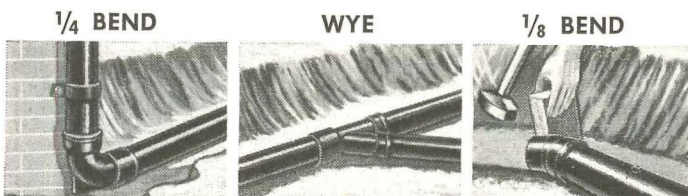
You can rely on Orangeburg for trouble-free root-proof pipe lines.

Orangeburg is the modern non-metallic pipe—strong, tough, resilient. It resists the acids, alkalis, salts and oils found in soils and sewage waste. It withstands normal earth settlements and lasts indefinitely underground.

The Taperweld® Joints are self-sealing. No cement or compound is required. Joints stay tight, sanitary.

Builders, engineers, architects use Orangeburg root-proof pipe extensively for house to sewer or septic tank; for down spouts, storm drains; tight joint drainage lines; potable water supply (non-pressure)—non-pressure outside uses. More than a hundred million feet in use prove its dependability.

You save time and trouble installing Orangeburg root-proof pipe. The 8 foot lengths are easy to handle—the fittings, 1/8 and 1/4 Bends and Wyes, are made of Orangeburg material and are tooled for easy-to-assemble Taperweld Joints.



**ORANGEBURG
PERFORATED PIPE**
Has many uses too!

Use the *Perforated* for septic tank beds; foundation footing drains; draining wet spots in lawns, drive-in theatres, athletic fields, parking lots, airports. Joints are made with snap couplings that keep pipe in line and prevent silting.

Look for the name Orangeburg. Orangeburg is the pioneer—the leader—of this modern type of pipe. Specify it for trouble-free pipe lines.

Send to Dept. HH63 for catalog 306

ORANGEBURG MANUFACTURING CO., INC., ORANGEBURG, N. Y.

LETTERS *continued*

every other builder planning similar developments finds himself in this same spot it is not only important, but very important.

The thing that has knocked planning and active development sky high is the uncertainty of the situation. Washington needs to get down to earth with a definite program very quickly or the steam will be pretty largely taken out of the housebuilding program this year.

Nothing that your publication could do at the present time would bring more cheer to thousands of builders than to do something to clarify the situation.

STANLEY LONG
Seattle, Wash.

● See News.—Ed.



TREES

Sirs:

We do not dispute the fact that trees (H&H, Apr. '53) add immeasurably to a development, but we take exception to the extremely poor photograph which is not at all representative of the Springfield subdivision, and is the poorest photograph in the entire issue and the only one credited to the HOUSE & HOME photographic staff.

We are enclosing photographs showing the many attractive homes with all the other subdivision benefits in the way of lot improvements being erected in Springfield (see cut).

JAMES E. MILLAR
Weaver, Bros., Inc.

Sirs:

If builders in general would only realize how valuable a landscape design and grading plan would be to them as well as to the community, they would not consider the nominal cost as unnecessary.

And why must builders almost invariably plant saplings which by nature are very slow-growing? Many good trees make a rapid growth and could be well used when the builder plants a few trees and shrubs so that he can call the homes "landscaped" in his advertisements!

J. CHARLES HOFFMAN
*Landscape architect
Sierra Madre, Calif.*

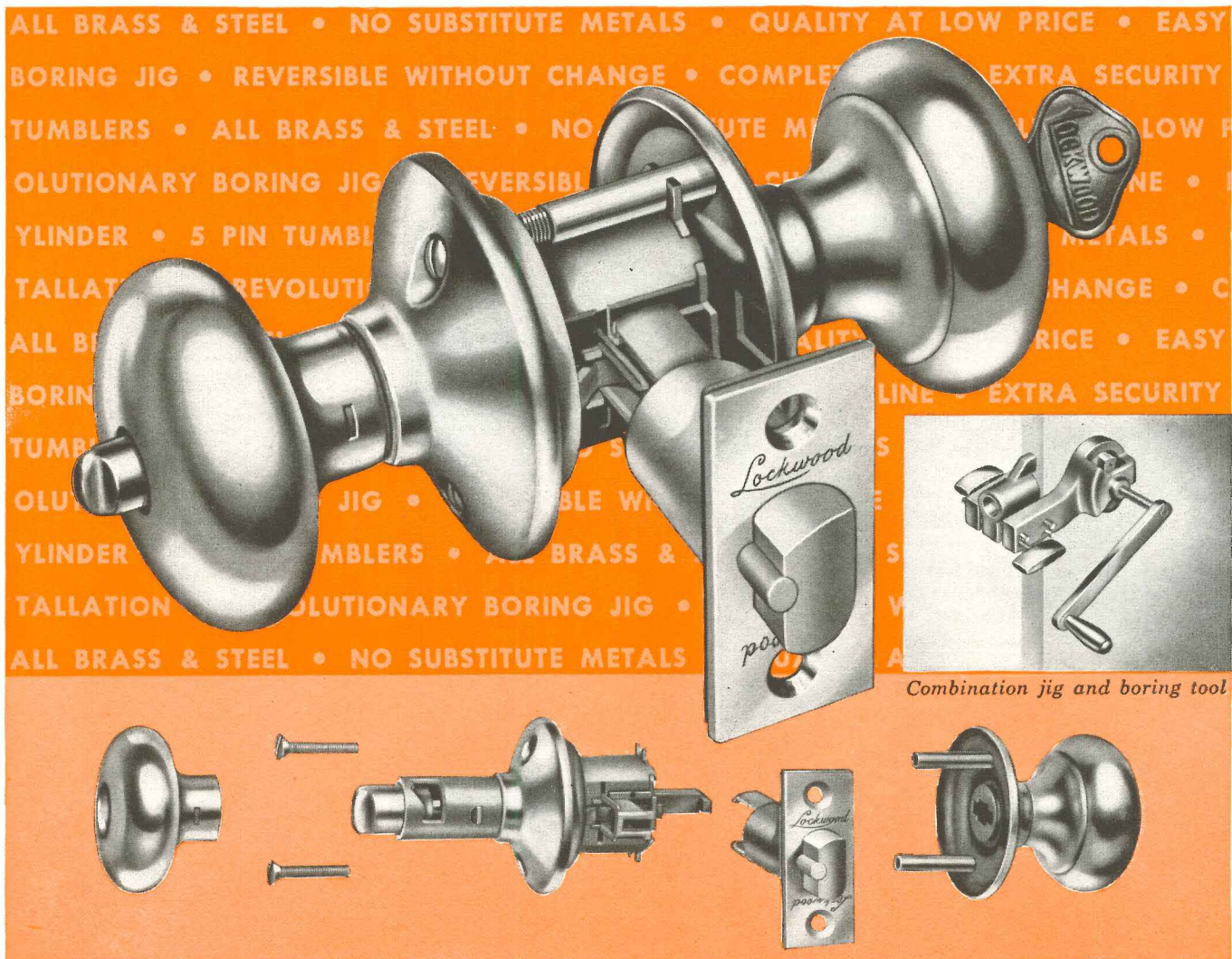
STILT HOUSE

Sirs:

The stilt house (H&H, Feb. '53) may be contemporary architecture to you, Architect Eliot Noyes and some people of New Canaan,

continued on p. 78

LOCKWOOD'S NEW 'C' SERIES... Finest Quality Locksets in the Low-Price Field



Combination jig and boring tool

Creating a new standard of quality in the low-price field, all parts are made of solid brass or steel — no substitute metals are used. Lockwood's new 'C' Series is designed on the sound, basic engineering principles originally developed for heavier, more costly cylindrical locksets.

FIELD-TESTED: All functions in the 'C' Series have been field-tested and proved under the most severe conditions. Cylinder locks have full-size, solid brass 5-pin cylinders, assuring full protection, continuous performance and secure master-keying.

REVOLUTIONARY NEW TOOL CUTS INSTALLATION COSTS

- Reduces boring time as much as 75% below previous hand methods.
- Guarantees smooth holes in perfect alignment.
- Ensures rapid assembly of lock to door without rasping or whittling.
- All Lockwood 'C' Series sets are ready for installation on right or left hand doors without any mechanical change.

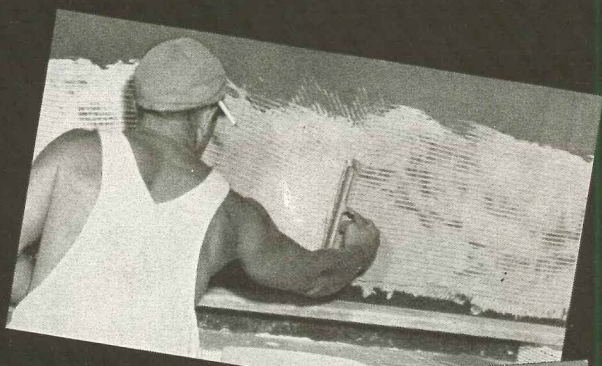


LOCKWOOD HARDWARE MANUFACTURING COMPANY
Fitchburg, Massachusetts

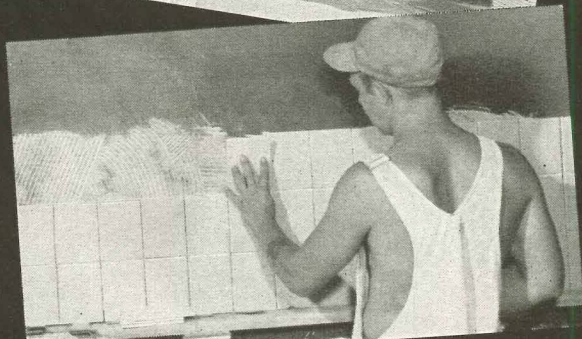


Makes setting tile as easy as

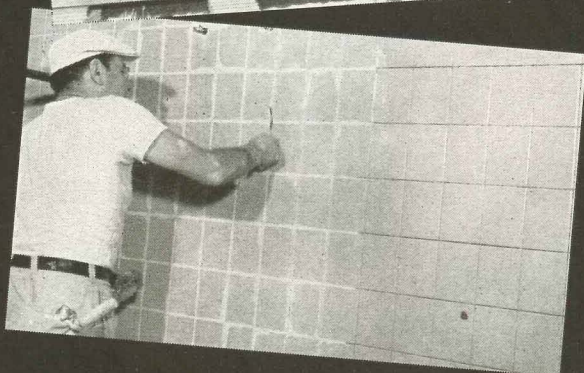
1...



2...



3...



3M CERAMIC TILE ADHESIVE CAN CUT COSTS UP TO 20%

"Easy" is the word for it. First, just "butter" on 3M Ceramic Tile adhesive and trowel it out. Its smooth, buttery consistency makes spreading a fast, simple job. Next set the tile in place. And finally, handle grouting just as always. What could be simpler, faster? 3M Ceramic Tile Adhesive cuts the time-per-job and gives the finest quality tile jobs at up to 20% savings in cost.

There are other advantages, too. 3M Ceramic Tile Adhesive will bond tile to nearly any kind of surface. That means that you can set "dry wall" . . . saving the costly installation of lath, plaster and mortar. Dries so fast that rooms can be used in 24 hours, making it ideal for remodeling. Waterproof, non-freezing, clean and easy to use . . . it's the modern way to set clay tile.



GET THE FACTS ON 3M CERAMIC TILE ADHESIVE
Try it on your next tile job. You'll sell yourself on this better way to set tile. Write Dept. 126 in Detroit for data and specification sheets. Sold everywhere by leading tile supply companies.



MINNESOTA MINING AND MANUFACTURING COMPANY

ADHESIVES AND COATINGS DIVISION • 411 PIQUETTE AVE., DETROIT 2, MICH.
GENERAL OFFICES: ST. PAUL 6 • EXPORT: 270 PARK AVE., NEW YORK 17 • IN CANADA: LONDON

MAKERS OF "SCOTCH" BRAND PRESSURE-SENSITIVE ADHESIVE TAPES • "SCOTCH" BRAND SOUND RECORDING TAPE • "SCOTCHLITE" BRAND REFLECTIVE SHEETINGS • "3M" ABRASIVE PAPER AND CLOTH • "3M" ADHESIVES AND COATINGS • "3M" ROOFING GRANULES • "3M" CHEMICALS

LETTERS *continued*

Conn. but I can assure you that the aborigines of the Isthmus of Darien (and many other equatorial places) have been building stilt houses for something better than 461 years.

Our government has been building stilt houses that I know of in the Panama Canal Zone since 1900. While it is quite true that their houses are not like "birds poised momentarily over the earth" nor do they have any "asymmetrical interplay of advancing and receding planes," they are positively icicle- and drip-proof.

JAMES C. WRIGHT, *designer & builder*
Fresno, Calif.

HOW THEY SELL HOUSES

Sirs:

To conserve sales time and aid in direct selling, we use the garage of a model house as a sales office, replacing the garage door with a window and door. When the house is sold we remove the temporary front and reinstall the original garage door.

All of our color selection panels, wing map holders, and other sales material is placed on demountable panels that can be moved easily to the next model home.

Because of the complexity of the 501 Veteran's Sales Program, we do everything we can to simplify the purchase and processing of papers.

In this project items that appeal most to the public are large window areas, 2" fiber-board roof insulation which gives excellent protection from the hot Santa Clara Valley summers, large fireplaces with large cement-block chimneys carried straight through the roof and the simple modern lines.

DAVID D. BOHANNON
San Mateo, Calif.

Sirs:

We now set up a budget of less than 1% for sales cost. Our greatest emphasis is on selling the community in which we build, rather than the individual houses. We intend to use two model houses, one of which will be completely furnished, the other partially furnished, to show sections of the floor slab, wall construction, and mechanical equipment.

We get particularly good results from bus advertising and large electrically lighted billboards. We also carry on a garden contest, which seems to create a lot of good will.

ALEX SIMMS
Dayton, Ohio

Sirs:

My houses have been dressed up by the addition of colored bathroom fixtures, two lavatories built into a cabinet, a tremendous 5'-8", ceiling-height medicine cabinet, two more base cabinets and a breakfast bar in the kitchen; a dining-room light fixture that rolls up and down; floor-to-ceiling paneling

continued on p. 84

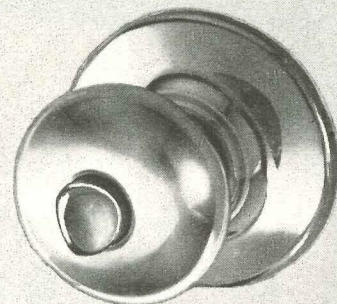
Attractive Styling Precision Construction

The clean, crisp design of "Stilemanor" knobs is sure to appeal to the most discriminating tastes. It has plenty of "eye appeal" and "buy appeal". Now available in wrought brass . . . later, in bronze or aluminum . . . all popular functions . . . includes entrance door set with large escutcheons.

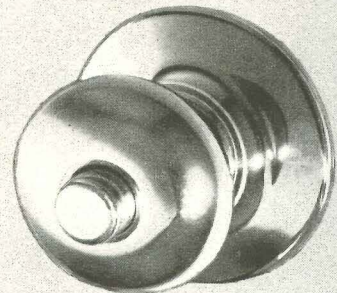
Some of its constructional features include: dual bearings on each knob to assure rigid knob assembly and prevent knob wobble; brass to steel bearings; self-aligning thrust bearing on knob spindle; latch retractor that glides on ball bearings for smooth easy action and long life; knob retainers concealed behind rose; reversible in field without using key; exclusive Russwin ball bearing, 5 pin-tumbler cylinder on all entrance door sets; all parts are precision-made . . . interchangeable.

Be sure to see the new "Stilemanor" line. Check and compare all its features. It's a "standout" for increasing sales and good will. Russell & Erwin Div., The American Hardware Corp., New Britain, Conn.

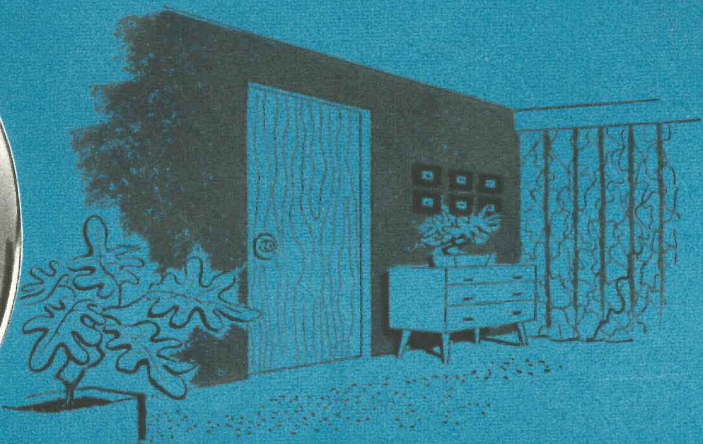
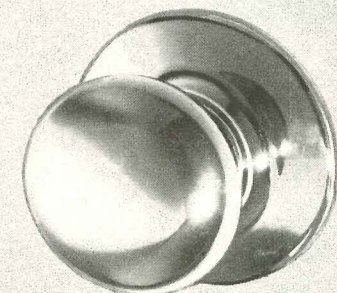
"Stilemanor" 340 entrance door set has turn-button inside, cylinder outside and tamper-proof dead locking latch. 330 . . . same as 340 but without dead locking latch.



"Stilemanor" 320 bathroom-bedroom set has push button, automatic releasing mechanism and emergency key provision. 322 . . . same as 320, no emergency key but has auxiliary latch.



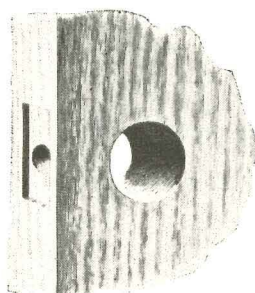
"Stilemanor" 310 passage door and closet set operates by knob either side at all times.



SIMPLE INSTALLATION

Only two holes to bore . . . all alike for every door.

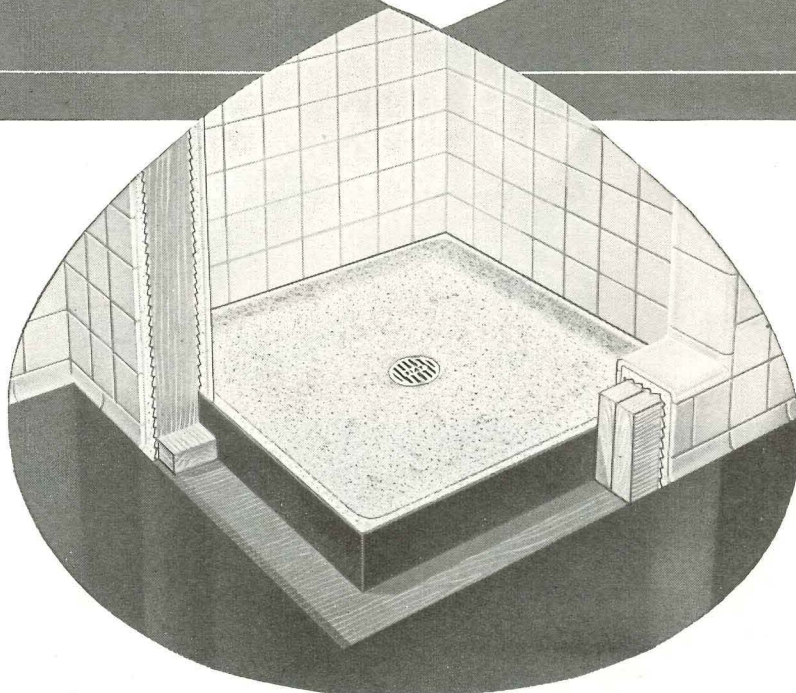
New, handy installation aids . . . available to simplify work.



SINCE 1839
RUSSWIN[®]
DISTINCTIVE HARDWARE

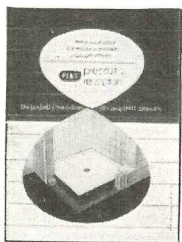
Now BUILD BETTER SHOWERS FOR LESS with FIAT PreCast Receptors!

The ideal floor when shower walls are made of plaster, marble or tile of any kind—metal, plastic, ceramic!



Cut cost, save time—and eliminate one sub-contract by using FIAT PreCast Receptors. When you plan showers with plastic or metal tile walls you save labor—speed completion—by specifying a *plumber-installed* FIAT receptor. You will get a better shower floor . . . attractive . . . one-piece . . . permanently leakproof. There's no lead pan, no multi-layer construction—nothing that can be affected by building settlement. It's the modern, money-saving way to better shower construction.

SEND FOR FREE FIAT MANUAL—
COMPARES methods of shower floor construction
ILLUSTRATES receptor applications with various walls
PROVES many PreCast Receptor advantages



FIAT METAL MANUFACTURING COMPANY
 9301 W. Belmont Ave. • Franklin Park, Illinois — Dept. B

Please send me your new manual on shower floor construction as soon as it's off the press.

Name _____
 Address _____
 City _____ State _____

LETTERS *continued*

in the living room and dining room; some jalousie doors and windows; screening in the carport with a folding front wall so that it may also be used as a porch. Also use of a white marble chip roof exclusively with a wide overhang.

MARTIN L. BARTLING JR.
Knoxville, Tenn.

Sirs:

Last year our development house was just an average \$10,000 house with no unusual features. This year it sells for \$12,000, and includes:

1. Air conditioning, optional for \$1,100.
2. Garbage disposer for a garbage-free community.
3. Color-planned exteriors.
4. Fireplace.
5. More varied exterior materials and architectural design to get away from the "development look."
6. Living and dining room combination and dining space in the kitchen.
7. Written guarantee with each house.

Present sales are averaging one a day. Advertising costs last year were \$20 per house, this year average \$40.

RALPH E. GORDY
Wilmington Manor, Del.

Sirs:

Announcements on two successive Sundays in each of our local newspapers drew about 3,000 people each Sunday, although only the furnished model was complete. We sold six of the ten homes by offering GI terms.

AMES L. GILL
San Antonio

Sirs:

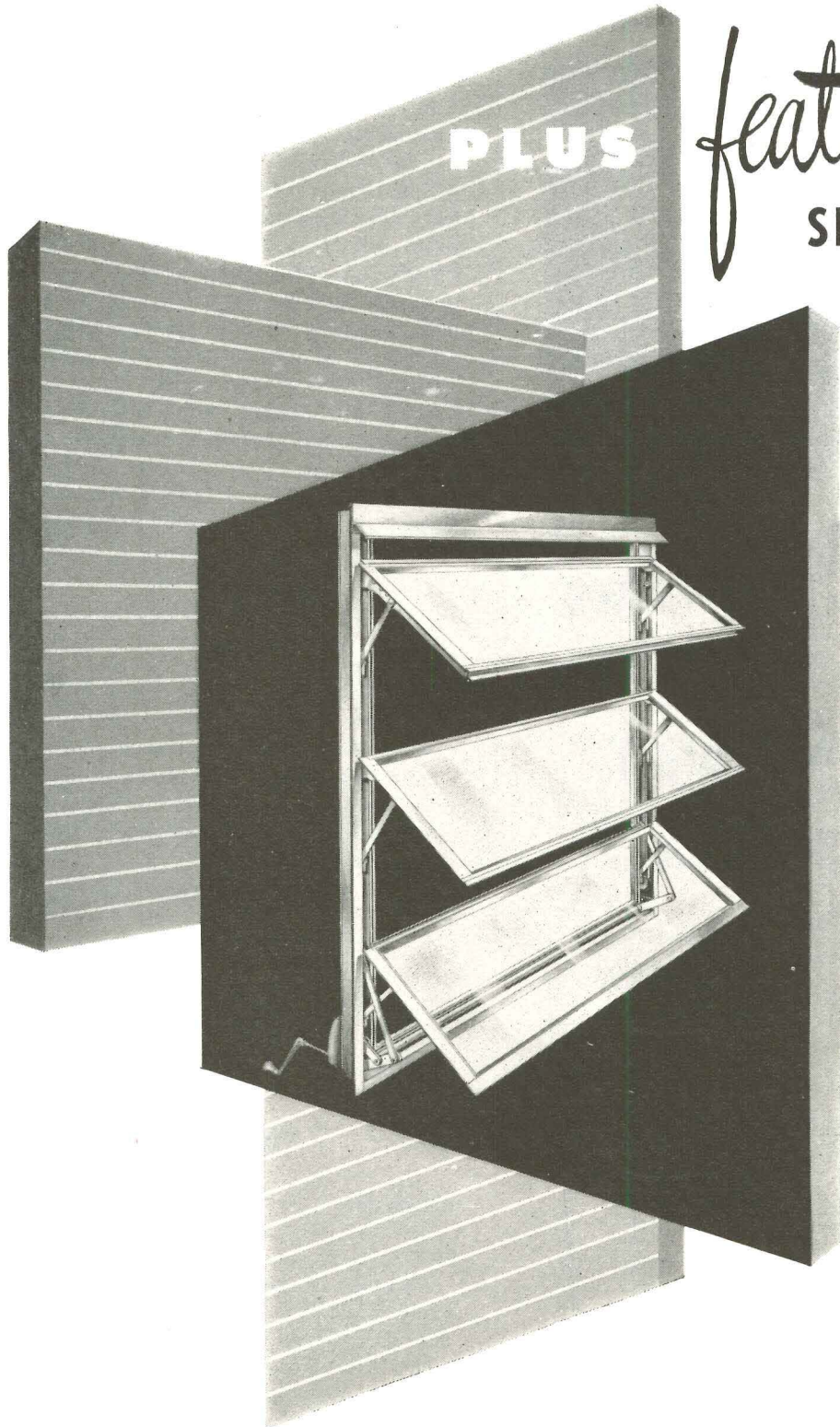
We make surveys over the country from time to time to find out what other builders are building and what type of houses sell best. As a result of a survey two years ago, we completely redesigned our houses using white marble chip roofs with an 18" overhang, gutters, and downspouts, complete landscaping, and much color. Inside we use larger kitchens with more cabinet space, washing machine, double sink, and eating space.

Bathrooms have been made larger. We are adding a dressing table, tile around the tub, a shower with each bath. A decorator designs and specifies materials and colors.

We keep open house daily from 2:00 P.M. till dark with a sales representative on the ground, advertise consistently in newspapers, radio, and theaters, and are now building the "Trade Secrets" LIFE house, the *Living for Young Homemakers* and the *Better Homes and Gardens* houses. We will have two model homes in the Home Builders parade during National Home Month.

FLOYD R. KIMBROUGH
Jackson, Miss.

continued on p. 90



features of the **NEW**
SERIES "54" MIAMI WINDOW

PLUS FEATURE 1. *Every Series "54" window is now acid dipped and lacquered at NO INCREASE in cost. This means there is no possibility of plaster stains.*

PLUS FEATURE 2. *Every standard Miami Window is weatherstripped. Operating vent arm is elongated to insure the tightest closing possible—even in windows 7 or 8 lites high.*

PLUS FEATURE 3. *For large installations you can choose the optional Balanced Bar Operator—the only push-out type operated window made that can be screened. This is important in installations such as hospitals where insect protection is demanded.*

other standard features:

Heavy extruded aluminum construction.

Controlled ventilation because horizontal vents extend beyond frame of building.

Torque bar which actuates both sides of window simultaneously.

DEALERS – DISTRIBUTORS

There are still a few areas open. Write, wire or phone Dept. HH-6 for details today.

MIAMI WINDOW CORPORATION
 5200 N. W. 37th AVENUE • MIAMI • FLORIDA

Miami Window Corporation of Mississippi, Key Field, Meridian, Miss.
 Miami Window Co., N. E. 2077 Elmwood Avenue, Warwick, R. I.
 Miami Window Corporation of Panama, Box 923, Panama, R. P.

Dept. HH-6

MIAMI WINDOW CORPORATION
 Executive Office • 5200 N. W. 37th Ave., Miami, Fla.
 Please send me literature on the new Series "54" window. (Check one)
 I am a: Architect Builder Dealer
 NAME
 ADDRESS
 CITY STATE

Specify

Nationally Advertised

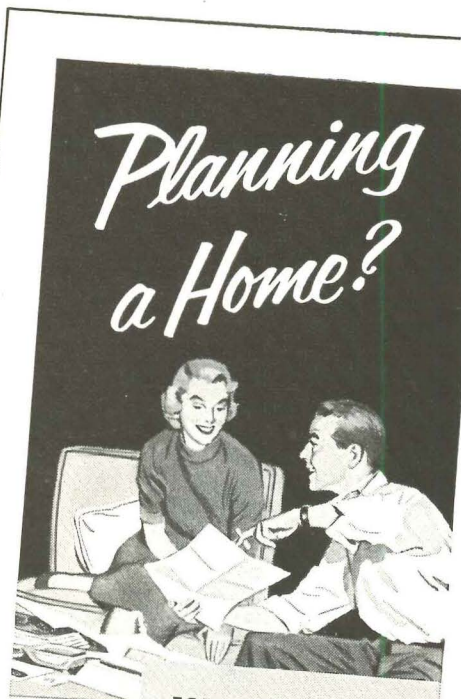
DETROIT CONTROLS

Known to Millions
of Your Best Building Prospects
Through the Powerful Pages
of **BETTER HOMES & GARDENS**
and **TIME MAGAZINE**

Yes, your *best* building prospects—over 5 million of them—are reading regularly about dependable, economical **DETROIT** Heating Controls in two of America's top advertising mediums—*Better Homes & Gardens* and *Time* magazine! These are people who have the means to buy and who know, look for and buy better things. That's why they'll want **DETROIT** Controls. And that's why you can make your houses easier to sell, more comfortable to live in by specifying **DETROIT** Controls throughout. Remember, only **DETROIT** gives you the exclusive *Timed Cycling* thermostat—the “thermostat with a brain” that controls temperature to a fraction of a degree, eliminating over and under heating. So why not cash in on this overwhelming product superiority and the powerful advertising support that goes with it. Always be sure to *specify* **DETROIT** Controls!

If you're not already familiar with the **DETROIT** *Timed Cycling* Thermostat write today for Form No. 1545-A.


DETROIT Controls CORP.
5900 TRUMBULL AVE.
DETROIT 8, MICHIGAN



*Planning
a Home?*



The Thermostat
with a Brain
—exclusive with **DETROIT**

FOR SOLID COMFORT
Plus SOLID SAVINGS
Plan to Have

DETROIT
HEATING
CONTROLS

Positive Protection Against Wasteful over and under Heating!

Right now, while you're planning that future castle, is the time to make sure of season after season of convenient, care-free heating comfort. Have your architect, builder or heating contractor select a heating unit equipped with dependable, economical **DETROIT** Controls. For only **DETROIT** gives you the exclusive “thermostat with a brain”—the built-in device that “thinks” ahead, senses temperature changes long before you can, and keeps room temperature just right for health, comfort and fuel economy. Remember, the finest heating equipment can be no better than its automatic controls, so get the best—insist on **DETROIT** Controls.


ESTABLISHED IN 1877 AS
DETROIT LUBRICATOR COMPANY
DETROIT Controls CORP.
DETROIT 8, MICHIGAN

DIVISION OF AMERICAN RUBBER & STANDARD SANITARY CORPORATION

Canadian Representatives in Montreal, Toronto, Winnipeg
—Railway & Engineering Specialties, Ltd.

AUTOMATIC CONTROLS
for REFRIGERATION

AIR CONDITIONING • DOMESTIC HEATING
AVIATION • TRANSPORTATION • HOME
APPLIANCES • INDUSTRIAL USES

Serving home and industry
AMERICAN-STANDARD • AMERICAN BLOWER
CHURCH SEATS & WALL TILE • DETROIT CONTROLS
KEWANEE BOILERS • ROSS EXCHANGERS

LETTERS *continued*

Sirs:

In our houses all kitchens will be in the front so Mrs. Homemaker can see who is at the door and where junior is playing. They will be equipped with garbage disposers, exhaust fans, and plastic countertops. All living rooms will be to the rear with fluorescent-lighted and double-glazed picture windows overlooking the rear patio. These homes will have automatic warm-air heating systems, summer air conditioning as an extra, and will sell for \$25,900 without cooling.

There will be four display homes furnished with well-proportioned furniture, all major appliances and landscaped lots. In addition, there will be a “*Here's How X-Ray House*,” to demonstrate quality construction.

ROBERT V. MAIN, *exec. asst.*
Marvin Helj, Inc.
Cleveland

Sirs:

We estimate that about 68,000 people visited our “Watch this Home Grow” house.

Showing people every phase of construction of our house instills confidence in its good quality. People felt that we were not ashamed to show exactly what kind of house we were building.

Every week the loan guarantee officer of the VA and the VA architect and compliance inspector tells how each phase of the construction meets or exceeds VA requirements.

During the first ten months of 1952, our firm sold 75 homes, against 55 for the same period in 1951.

VAL ZIMMERMAN, *president*
Consolidated Homes
Milwaukee

TILE COSTS

Sirs:

We would like to know where we can buy adhesive cement at \$3 per gal. (H&H, Mar. '53) F.O.B. New York, and how we can stretch 2 gals. to cover 100 sq. ft.

But the really wonderful figure is that a mechanic can install 100 sq. ft. of tile in eight hours. While it is true that a man might get that many feet on the wall in that time, he certainly cannot grout and clean this 100 sq. ft. without adding many additional hours to the job.

EDWARD D. HURLEY, *president*
Triangle Distributing Co.
Manchester, N. H.

● On a recheck, H&H finds that one New York firm sells adhesives at \$3.10 per gal. to many tile setters and to its own tile-setting subsidiary. A New Jersey tile wholesaler assures us that 1 gal. of adhesive will cover 45 to 50 sq. ft. if the floating method is used. He also maintains that a tile setter, familiar with adhesives, can set 100 sq. ft. a day, including grouting and installation of fixtures, can get as high as 120 sq. ft. a day.—Ed.

A monthly report on important developments in the modernization of mortgage credit with particular emphasis on the expanding potential of the package mortgage, the open-end mortgage and the expandable mortgage

Open-end mortgage: up-to-date credit for today's needs

Add Illinois to the growing list of states where the open-end or additional advance mortgage is making rapid progress.

Chicago Title & Trust Co. met the growing need for long-term, low-cost credit for home modernization and repair when it provided title insurance on additional advances at low cost. Rates: \$10 for a \$1,000 advance, \$15 for \$2,500, proportionate rates for higher sums. Since it began to write title insurance at these rates in September, 1950 Chicago Title & Trust has steadily increased this business: last year it processed twice as many supplemental policies as it did in 1951.*

Almost all the nearly 600 Illinois savings and loan associations (assets: over \$2 billion) now write the open-end feature into all home mortgages. What do lenders think of the open end? Listen to officers of two of Chicago's biggest associations:

ARTHUR G. ERDMANN, *president of Bell Savings & Loan, says:*

"In Chicago the current factor fostering wider use of the open-end mortgage is the development of title protection whose quality and security equal that of the original loan. The cost of the additional loan is a reasonable fee that seldom exceeds \$15 plus the title company charge for amending the policy—another \$10 or \$15."

Debt into credit

"Actually, the open end turns debt into credit. In times past the mortgage was considered a burden to be cast off when a family could find funds—if ever. Then came the monthly amortized mortgage with its systematic reduction of the mortgage eliminating the need for costly refinancing every few years. Mortgages providing for future advances without refinancing are an entirely new conception of borrowing with the home as security. Thus, *turning debt into credit is new* and a tremendous advance in mortgage financing."

Success assured

"The open end is assured of success because it affords advantages to both borrower and lender: the borrower can use the security of his home not only to meet the original cost of building or buying it, but when costly maintenance is necessary, he can borrow again on the same security. The lender who makes an advance can judge the merits of the case on the experience of dealing with the borrower over a long period."

MORTON BODFISH, *chairman of the board, First Federal Savings & Loan says:*

"Although the use of the open-end mortgage is just becoming widespread, First Federal has pioneered in the field: since the forming of this institution in 1934, the open-end provision has been inserted into every mortgage written by our Lome loan department."

Task ahead

"It is evident that more needs to be done to make the open-end mortgage a popular instrument for property improvement credit. The primary task ahead is essentially an educational one: too few people are aware that the open-end device exists or is available. In our promotional activities we regard the additional advance as an excellent sales point and use it continually in our advertising and publicity."

Future purpose

"Looking ahead, it is possible to see some economic and social purpose for the open-end mortgage—not always visible at first glance. If its use is widespread enough in a few years, it could help take up some of the slack if a recession in new house production occurs. Today it can and is being used as a feature in the sale of new houses.

"As it is included in more and more loans on existing homes, it will mean a simultaneous expansion in the neighborhoods in danger of deterioration. It is highly probable that the open-end feature could serve as a valuable weapon against further decay in our major metropolitan centers."

* A new form of policy for protection of mortgagees making additional advances developed by the title company includes a search of the public records and an examination of the original policy. The service protects the mortgagee against the possibility of any intervening liens between the effective date of the original mortgage and the payment of subsequent additional sums. It is available to all mortgagees in Chicago. The title company also aided in the development of a supplement to existing mortgages not containing the open-end feature so the same benefits could be extended to older mortgages.

Glazing the Air-Conditioned Home

WHY AIR CONDITIONING CALLS FOR SPECIAL CONSIDERATION OF WINDOWS

Windows are possible sources of heat gain in summer, just as they may waste heat in winter. That's why, in air-conditioned homes more than ever, windows must be thoughtfully planned to give home buyers the comfort they want, and to assure efficient and economical operation of the air-conditioning system.

YOU HAVE THESE CHOICES FOR BETTER HEATING AND COOLING:

1. Resort to old-style, small windows to reduce heat loss and heat gain.
2. Use insulated windows. There are two ways to do this:
 - a. Storm sash on all windows the year 'round.
 - b. Sealed insulating glass in all windows.

SMALLER WINDOWS

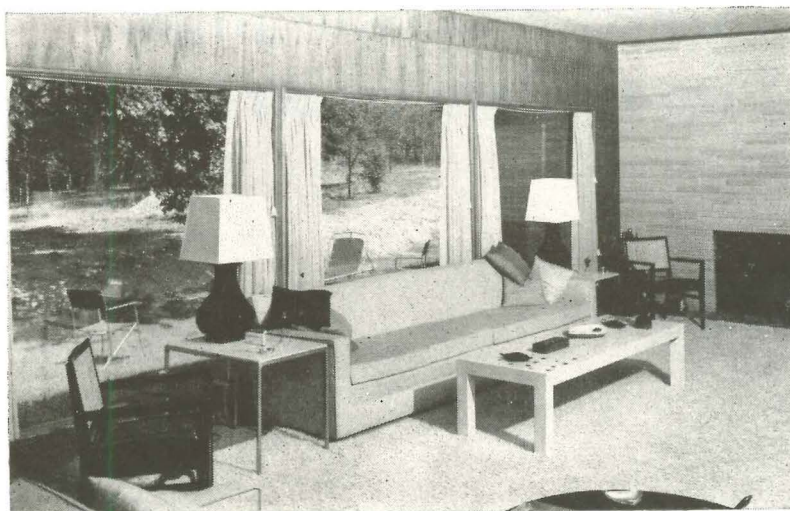
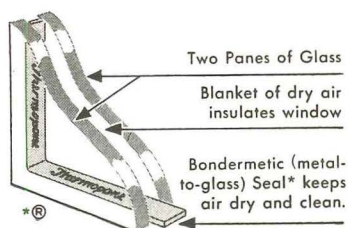
Smaller windows have steadily lost favor with architects, builders and buyers. Home buyers have shown a tremendous and continued desire for picture windows and window walls. To give them smaller windows would be a backward step that is sure to run into sales resistance—resistance which would be felt by builders, architects, real estate people and air-conditioning people, too.

INSULATED WINDOWS

Insulated windows, the other possibility, are a more logical and saleable answer to glazing for air-conditioning and heating economy. With insulated windows you reduce heat loss in winter and heat gain in summer. They save fuel in winter and power in summer, and help make the house more comfortable the year 'round. Consider the two ways of insulating windows:

1. Storm Sash is one means of window insulation. They can be left in all year to provide summer as well as winter insulation. But they must be taken down periodically for washing, since dirt and moisture will infiltrate between them. And storm sash in sizes required for today's larger windows are unwieldy.

2. Sealed double glazing allows the use of large windows for daylight and view without the bother of storm sash. More and more builders have been putting *Thermopane** insulating glass in medium and low-price homes just for its winter benefits. Now, in the air-conditioned home, these become year-round benefits and the extra cost of double



Architect Everett V. Welch, Dallas, Texas, used *Thermopane* insulating glass in this air-conditioned home in Dallas. Says Mr. Welch: "This resulted in savings on both heating and air conditioning, first from the standpoint of initial cost and second, from the standpoint of operational cost".

glazing is doubly justified. The extra cost is minimized by the use of standard size units, standard sash and simplified installation methods.

The table below shows *Thermopane's* effectiveness in cutting down heat transfer by conduction and convection from the warm to the cold side. *Thermopane* saves, roughly, half of the money that would be wasted through single glass by these forms of heat transfer.

Kind of Glass	Thickness	Winter U. Value	Summer U. Value
Single pane (plate or sheet)	1/8"	1.16	1.07
	1/4"	1.15	1.06
<i>Thermopane</i> (double-pane units)	1/2" (1/4" air space)	.65	.61
	1" (1/2" air space)	.58	.56

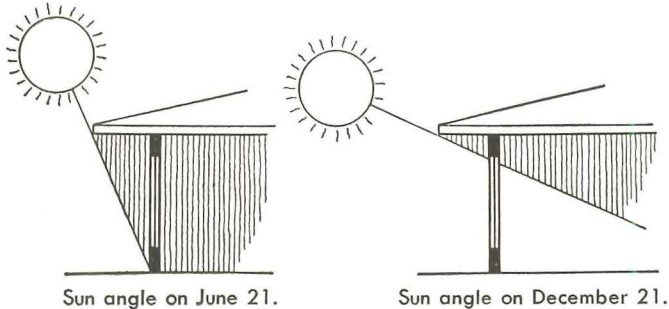
NOTE: Heat transmission coefficients (U. values) vary with ranges of temperature. Winter U. values above are based on 10° outside temperature, 70° inside temperature. Summer U. values are based on 95° outside temperature and 80° inside temperature. Wind velocity of 15 mph outdoors and normal free air movement inside are assumed in both cases.

HOW TO PLACE WINDOWS IN AIR-CONDITIONED HOMES

Insulation, alone, is not enough. Location and exterior shading of windows are vitally important if heating and air conditioning are to work with maximum effectiveness and economy. Energy from the sun and sky place by far the biggest load on air-conditioning systems in homes. The house should be located to make maximum use of the sun for winter warmth, but must have provision for shading certain windows in summer.

SOUTH WINDOWS

To make maximum use of solar heating in winter, the house should be laid out along an east-west axis, with large windows facing south. This brings in the low winter sun for fuel savings and comfort. South windows are easily protected from high summer sun by a roof extension (so designed that the low winter sun enters under it). The diagrams below show how this works. For correct design information for this overhang, see an architect or engineer. Most of them are equipped with the necessary guides to figure it out for your latitude.



Sun angle on June 21.

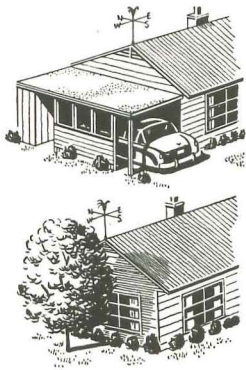
Sun angle on December 21.



This exterior view shows how Architect Welch provided a roof overhang to shade south windows from the sun in summer.

WEST WINDOWS

West windows must be more carefully considered than those on other elevations. Due to the buildup of heat through a hot summer day and the fact that the west elevation is exposed to the low afternoon sun, heat transmission through west windows can place a great load on the air-conditioning system. There are several possible ways to handle the west elevation problem:



1. Some architects and builders solve this problem by placing the porch, garage, carport or utility room on this side of the house.
2. If there are large trees on the site (or if they can be added) to shade west windows, the problem is solved by nature. The leaves provide summer shade—the bare branches let the welcome winter sun come through.

3. Heat absorbing glass is an effective means of decreasing solar

heat gain. This blue-green glass is made with a special chemical composition which enables it to absorb solar energy. Much of this heat is dissipated back outdoors, so that less load is thrown on cooling equipment. For best results in west windows, therefore, *Thermopane* should have heat absorbing glass as the outer pane. This heat absorbing *Thermopane* reduces the heat gain through west windows approximately 50% as compared to single-pane, clear glass windows. This has been determined by calculations made for west windows at 4:00 P.M. in summer, when the sun is considered to be at its worst angle. By reducing the cooling load, heat absorbing *Thermopane* may even reduce the size of the air-conditioning equipment required for the home.

EAST AND NORTH WINDOWS

North windows rarely present a problem of radiant heat gain. Windows in the eastern elevation, if exposed to the morning sun, may require shading as suggested for western windows. An engineer's or architect's recommendations should be obtained on this.

TYPES OF SASH TO USE

Some architects and builders employ fixed sash in air-conditioned homes, relying on the heating and air-conditioning system to provide ventilation. In some cases, louvers or other kinds of openings are used for supplementary ventilation. Fixed sash are usually economical and they do away with the need for insect screens in windows. Standard picture window and window wall frames are available from a number of manufacturers through their dealers—frames of wood or metal. These frames take standard sizes of *Thermopane* insulating glass which is readily available from L·O·F Distributors and Dealers.

However, many people will insist upon having ventilating sash in their homes for psychological reasons and because they may want to use natural ventilation in the more moderate seasons of the year. Their preferences can be satisfied with ventilating sash which take standard *Thermopane* units. These sash, of wood or metal, are available in all common types. Your L·O·F Glass Distributor or Dealer can furnish information about them and

about standard *Thermopane* units for them. Or, write us if you wish more complete information on *Thermopane*, its standard sizes and types of sash for it.



LIBBEY·OWENS·FORD

a Great Name in **GLASS**

FREE FOLDER "Glazing the Air-Conditioned Home"

These two pages are a condensation of a brochure that covers the entire subject more fully with additional technical supporting data. We shall be pleased to have you send for a copy.

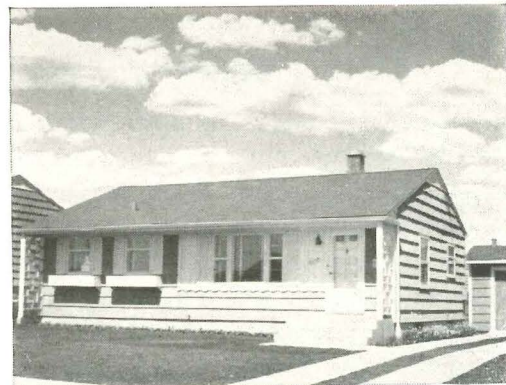
Libbey-Owens-Ford Glass Co.
963 Nicholas Bldg., Toledo 3, Ohio

Please send me a free copy of "Glazing the Air-Conditioned Home."

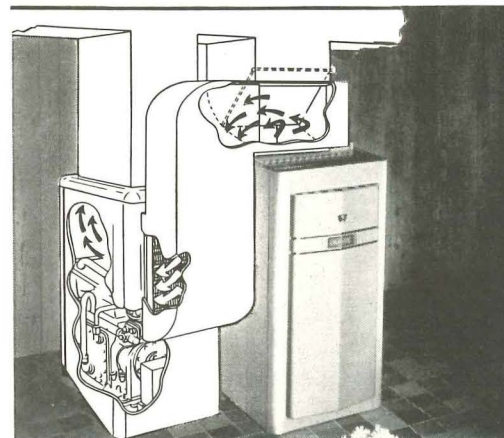
Name _____
(Please print)
Company _____
Address _____ City _____ State _____



"You've got to jump when anything goes wrong with the heating or plumbing in one of your homes," say realtor Jerry Drobnick and building contractor Mel Brauch. "Your homeowners will cheerfully wait a few days for repairs if a hurricane rips off a few roof tiles or even if a pane falls out of a window—but let the heating plant stop, and you'll hear screams for immediate service even at 3:00 A.M. That's why all our oil burners are Eureka Williams OIL-O-MATIC. We know we can depend on Eureka Williams."



Gurnee Heating Co., Eureka Williams dealer and Melvin Brauch, Inc., Building Contractor, have worked with Drobnick Realty Company in developing Park Estates, Waukegan, Illinois, a community of more than 100 homes.

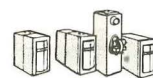


Dependable, economical gas or oil heat now—dependable, economical summer air conditioning for the entire home now or later, at minimum cost—are assured by the teaming of OIL-O-MATIC or GAS-O-MATIC with AIR-O-MATIC.

"To avoid service trouble, insure future sales, we chose Eureka Williams home heating," say the Drobnick brothers

Jerry and Joe Drobnick are the enterprising Drobnick Realty Co., Waukegan, Illinois, developers of Park Estates, consisting of more than 100 homes in the \$12,500-plus bracket. In selecting OIL-O-MATIC for the reasons given above, they also have provided well for their future and the future of the homes they are selling today—for AIR-O-MATIC, Eureka Williams' all-new home cooling unit, teams up with either OIL-O-MATIC or GAS-O-MATIC to provide the answer to progressive architects and builders eager to meet the demand for low-cost, year 'round air conditioning. This is an important selling feature to those thousands of home buyers who are budget-limited now, but who plan on future expansion.

With AIR-O-MATIC and its team-mates, OIL-O-MATIC and GAS-O-MATIC, comes another home-selling advantage: the Eureka Williams name. Nationally known and respected for decades, Eureka Williams' products are noted for their high quality and engineering superiority. They add immeasurably to the value and sales appeal of your homes. Send for the full story today.



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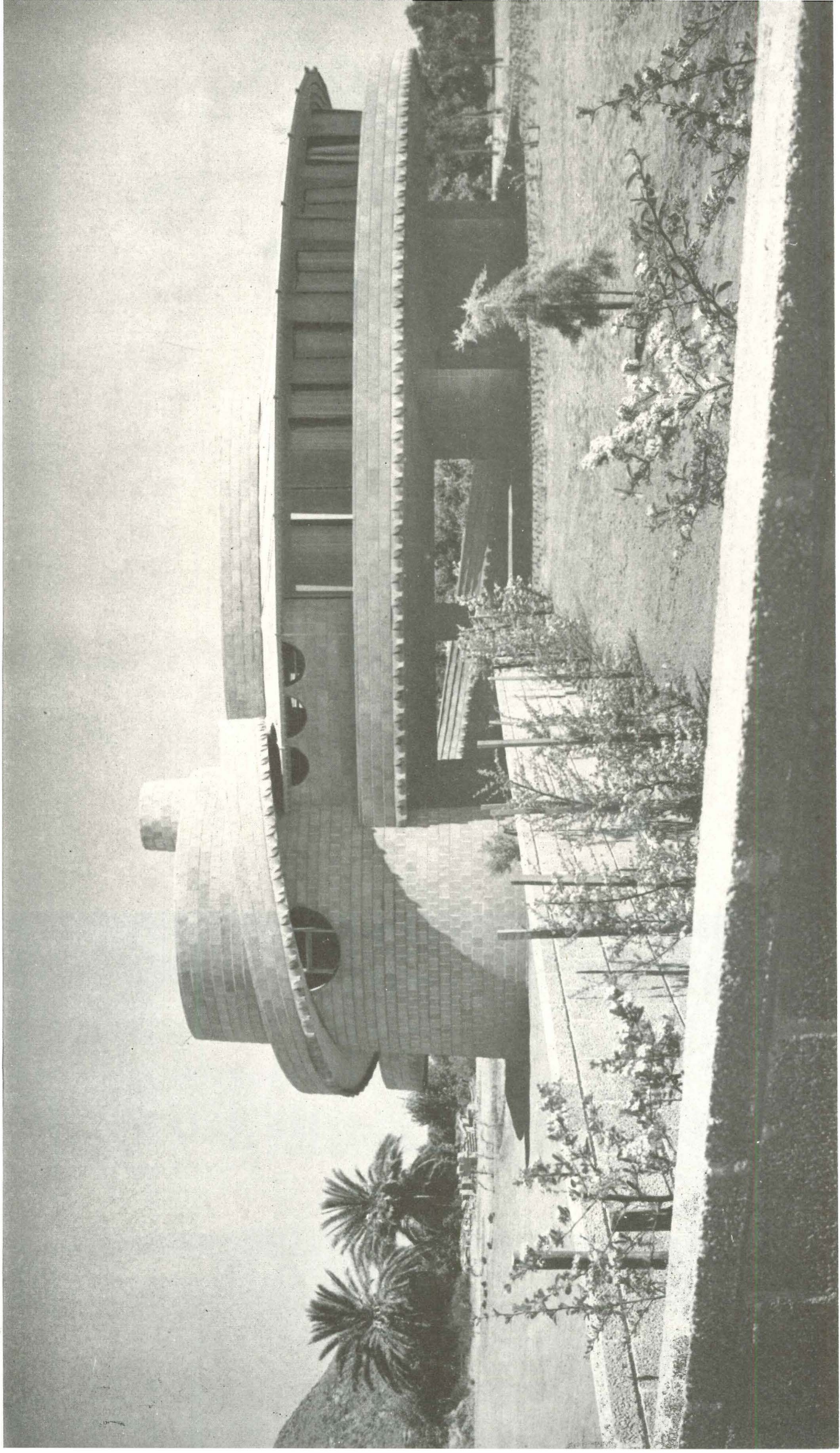
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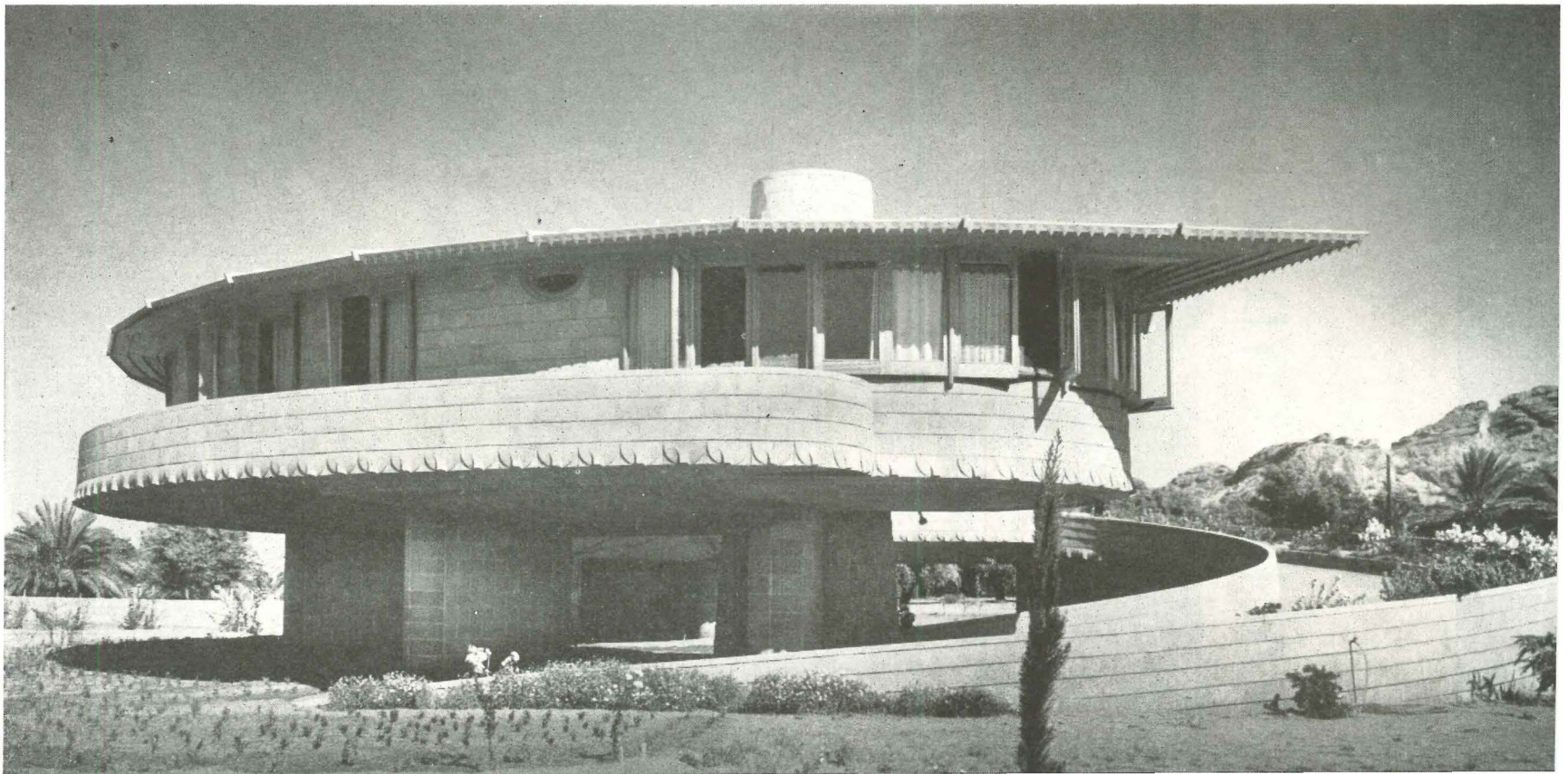
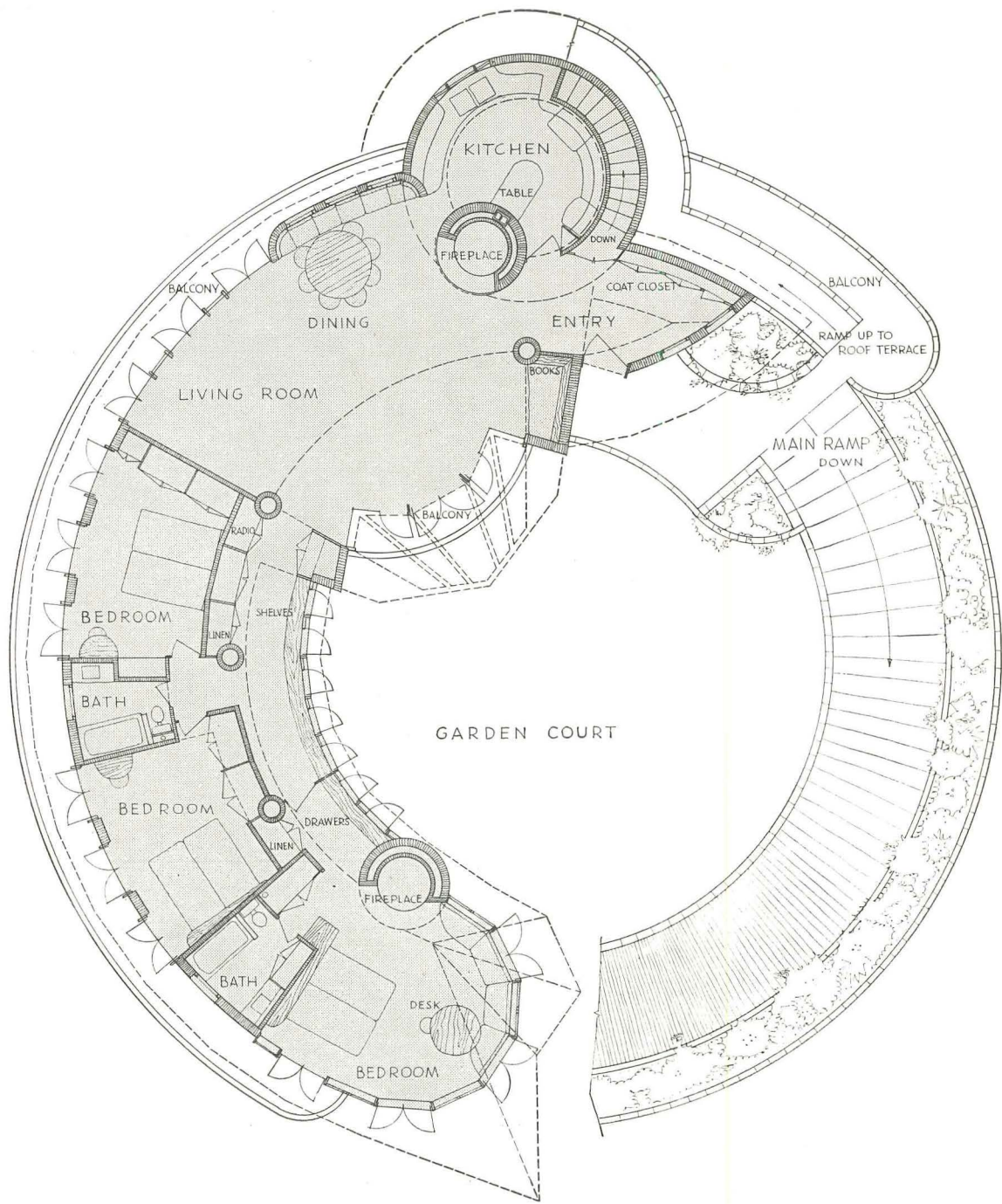
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house+home

FRANK LLOYD WRIGHT: THIS NEW DESERT HOUSE FOR HIS SON IS A MAGNIFICENT COIL OF CONCRETE BLOCK

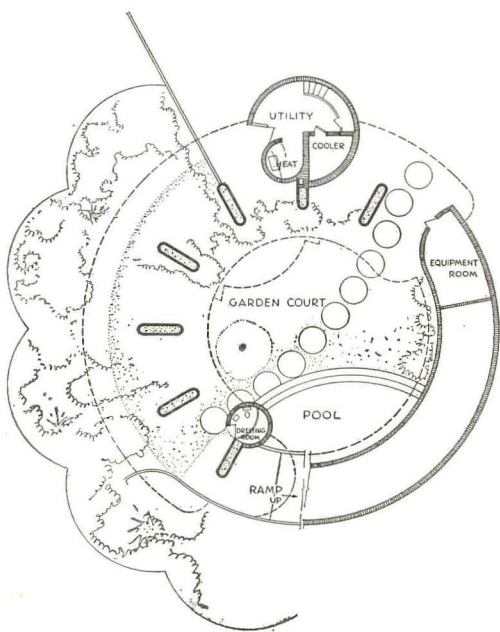






P. E. Guerrero, photos

IN THIS STRANGE AND WONDERFUL HOUSE FRANK LLOYD WRIGHT AGAIN CHALLENGES A DOZEN FIXED IDEAS



Some men grow timid as they grow older — others gain confidence. Only Wright's supreme confidence, at the age of 84, made this house possible: a house that will be praised, talked about — and argued over — as no other Wright house since Falling Water. A house that nobody who has seen these pictures will ever forget.

And that, of course, is the point. In building a house that looks, from some angles, like a Gila monster or a rattlesnake, Wright is not trying to say that everybody should live in a Gila monster or a rattlesnake. He is simply dramatizing some very important ideas, and making very sure that nobody can ignore them.

Wright's ideas have changed the course of architecture for more than 60 years. They have changed it because the ideas were so challenging in themselves, and they have changed it because Wright knew how to drive the ideas home forcefully and dramatically. In this house for his son, David, there are more ideas and there is more drama. Some of the ideas are listed on the next pages; the drama speaks out of every picture.

THESE ARE SOME OF THE PRINCIPLES WRIGHT HAS DRAMATIZED IN THIS HOUSE OF COILS AND CIRCLES:

1. The principle that any material, however humble, should be treated with respect – and that it pays to do so

For example: the humble, standard concrete block will sparkle like a precious stone if you treat it right. It can easily be decorated (as Wright showed years ago) or it can be left plain, as he has shown in this house. So long as you acknowledge its true qualities and let the material speak for itself, you cannot go far wrong. Wright was greatly assisted in this demonstration by his son David, who is the area representative for the "Vibrapac" concrete block machines, and acted as his own contractor. He proved his father's contention that the standard block was one of the most flexible materials known to American building.

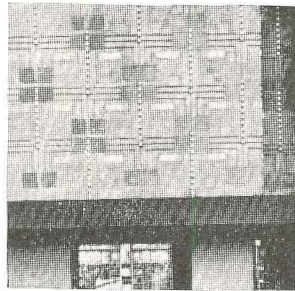
The block, far from appearing cheap or crude, proved also to be an exceedingly handsome building material. Since each block is really tangential to the large circles of the plan, the curved walls of straight block have as many different faces as a cut stone, and the rough texture is given added emphasis by differences in light and shade between adjoining concrete blocks.

Where the blocks are exposed to the weather, they have been waterproofed with a silicone-base paint. The decorative frieze around all floor slabs was specially cast in handmade aluminum forms; these patterned blocks demonstrate yet another possible use for one of Wright's favorite materials.

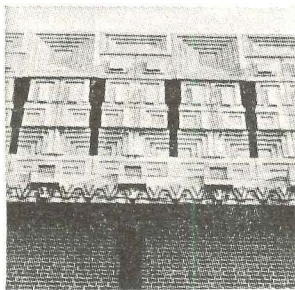
2. The principle that the straight line is often just a shortcut used by "paper-architects"

For example: a room of curves and wide angles is likely to be much more friendly than a room of straight lines and 90° angles – the "embrace" versus the "strait-jacket." Wright believes that Nature (and man) abhors the box (or prison cell). He has always broken through the box – through its corners (with his early corner windows), through its lid (with his roof-ceilings, skylights, clerestories, vaults), and through its sides and bottom (with his glass walls and his changes in floor level). Now he has destroyed it completely, for there is literally no 90° angle in the plan of this house. He was able to destroy it completely because he found that concrete blocks were almost as easy to lay in curves (with reference-radii and templates) as in straight lines. All you have to do is use short blocks for tight curves, and standard rounded blocks for circular piers.

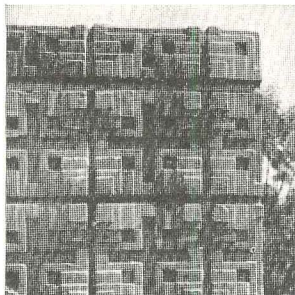
1908



1915



1928

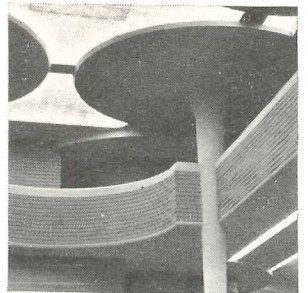


CONCRETE BLOCK PATTERNS: Wright's Coonley house wall (top) was finished with a stucco ornament and tile inserts. The resulting pattern foreshadowed later walls of patterned concrete block, e.g. those at Midway Gardens (1914), the similar blocks in the 1915 Warehouse (center) and the famous walls used in the Millard house (bottom.) David Wright feels that many patterned blocks can be mass-produced, provided the pattern is designed within the limitations imposed by concrete block machinery.

1896



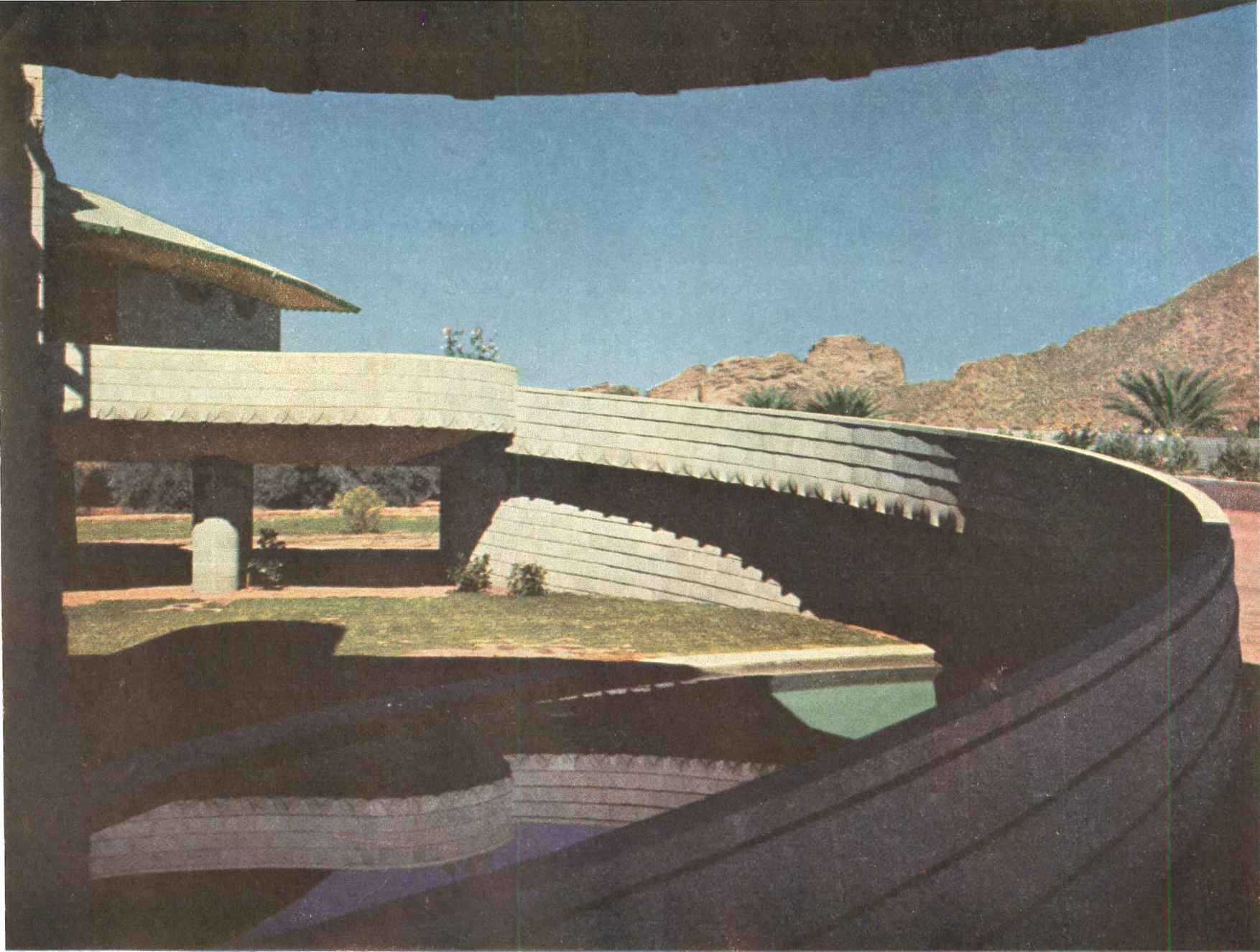
1936



1948

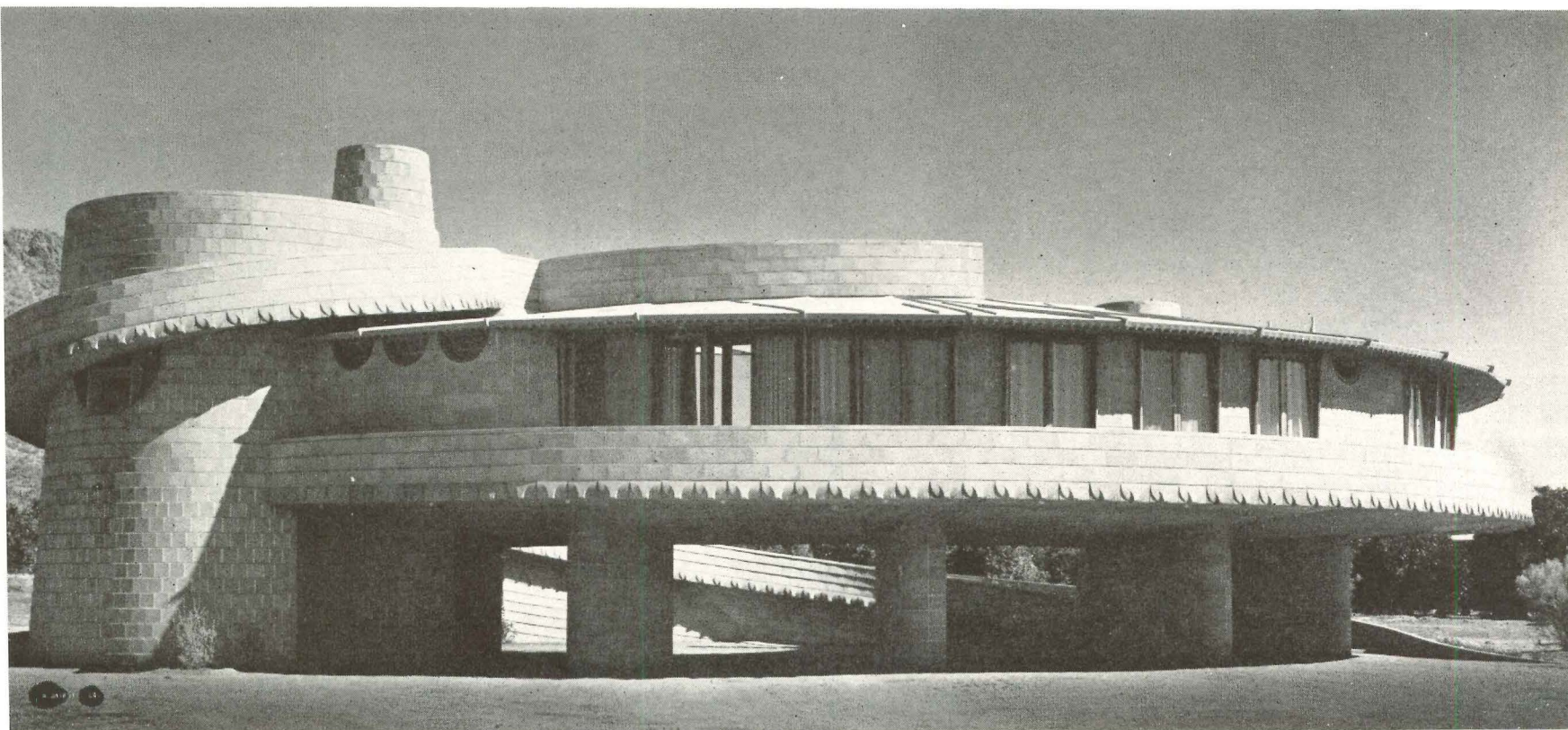


CURVED FORMS: In one of his earliest structures, the "Romeo and Juliet" windmill (top), Wright broke away from the 90° angle, designed a building that is an "embrace of lozenge and polygon." Since that time, in such famous structures as the Johnson Wax offices (center) and the Morris store (bottom), Wright has further exploited the possibilities of dynamic form and space. Soon to come: the giant coil for Manhattan's Guggenheim Museum.



WALKING UP THE MAIN RAMP (above) you pass by the almond-shaped pool on the left and profusely colorful beds of flowers on the right. As you walk up to the main floor and around the patio your views change with every step, and the exciting com-

position of architecture and nature unfolds gradually before your eyes. Below: view of house showing second ramp (left) swinging around kitchen tower and up to roof terrace. Decorative block frieze expresses floor slabs throughout.

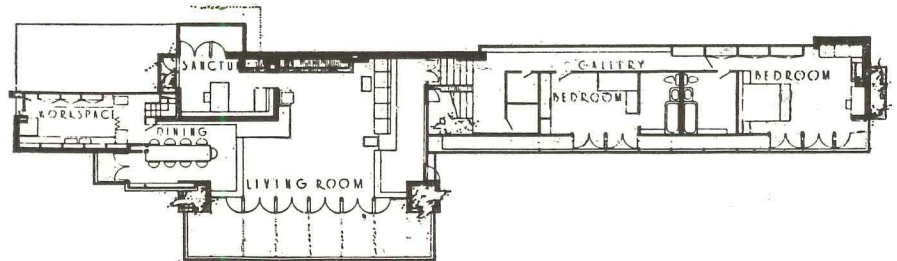


WRIGHT'S NEW IN-LINE PLAN IS BENT AND RAISED UP INTO THE AIR FOR BETTER VIEWS WITHIN AND WITHOUT

3. The principle that a house is something you experience by living in it, not by looking straight at its "facade"

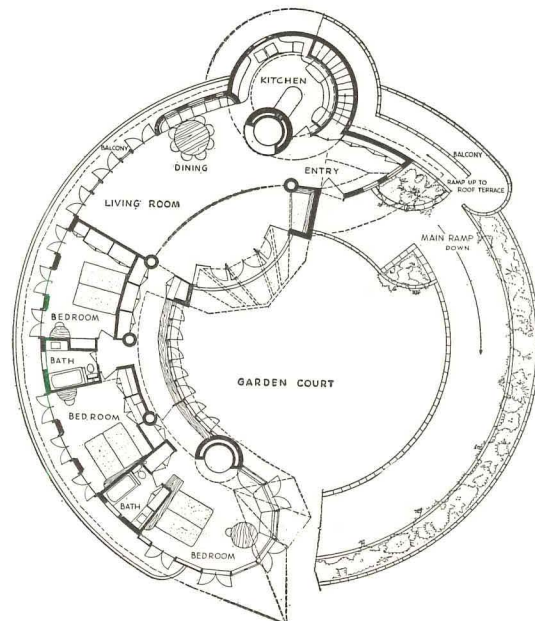
For example: this house is full of surprises as you walk through it. You cannot understand it all at first glance (as you can understand the "box"). You constantly discover more views, within and without. You discover more moods, as the light changes. (You can have the light come in through the windows at night as well as in daytime, as Wright has shown here.) You discover that the house has a life of its own, and you learn to respect the house as you would any living organism.

This house has an "in-line plan" unlike any other done to date. Wright invented the straight "in-line plan" a long time ago. It was and is a good plan — well organized, expressive, structurally sensible. But it has one frequent disadvantage: views from all rooms are more or less alike. Wright has now solved this problem by bending the "in-line plan" so that every pie-shaped room opens out toward its own view, and the corridor looks short and is short.



STRAIGHT IN-LINE PLAN, as in Lloyd Lewis house, 1940 (above), was an important Wright innovation, affected house planning throughout the U.S.

CURVED IN-LINE PLAN (below) of David Wright house has additional advantages of changing views, short corridor, pie-shaped rooms that open out toward landscape.

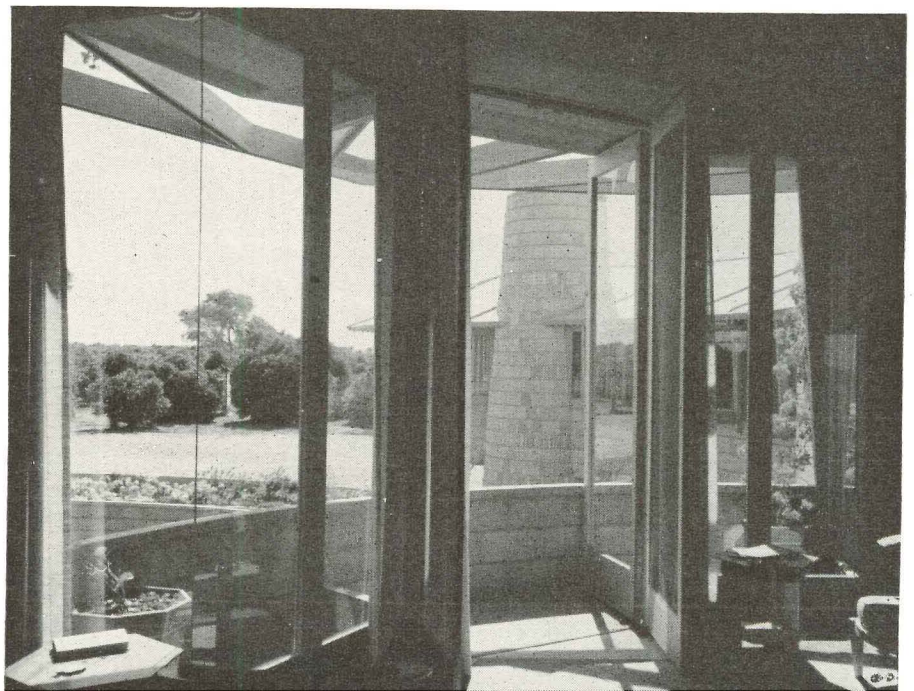


INSIDE BALCONY of living room (below) overlooks patio, opens up view toward Camelback Mountain half a mile to the north. Left: view down into patio from top of main ramp.



4. The principle that a house must grow out of its natural setting

For example: this house rises ever so slowly, ever so gently out of the desert until it is high up in the air, high enough to get the best views over the tops of surrounding citrus groves. It is not (as Wright puts it) a "trolley car on tooth-picks" but a part of the desert, a plant that grows out of the earth and turns its face toward the sun. Quite an achievement: a house on piers and yet rooted to the soil, a house as light as air and yet as secure looking as a desert rock.



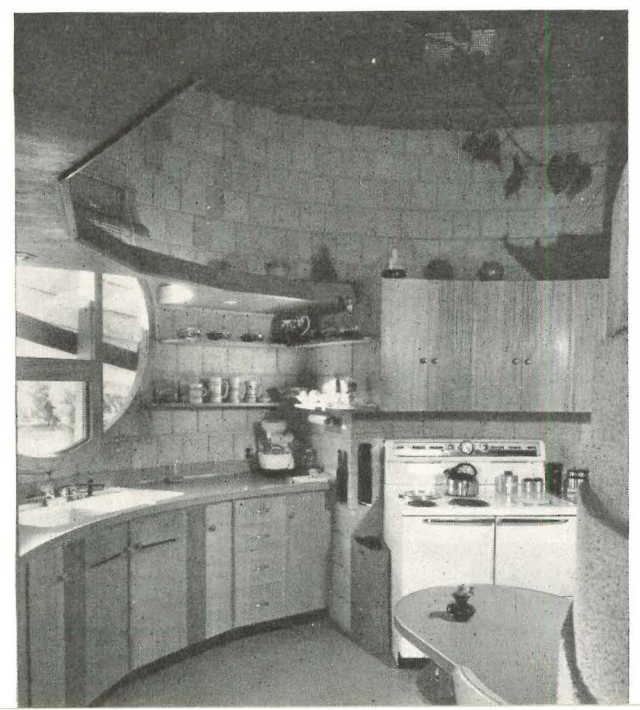
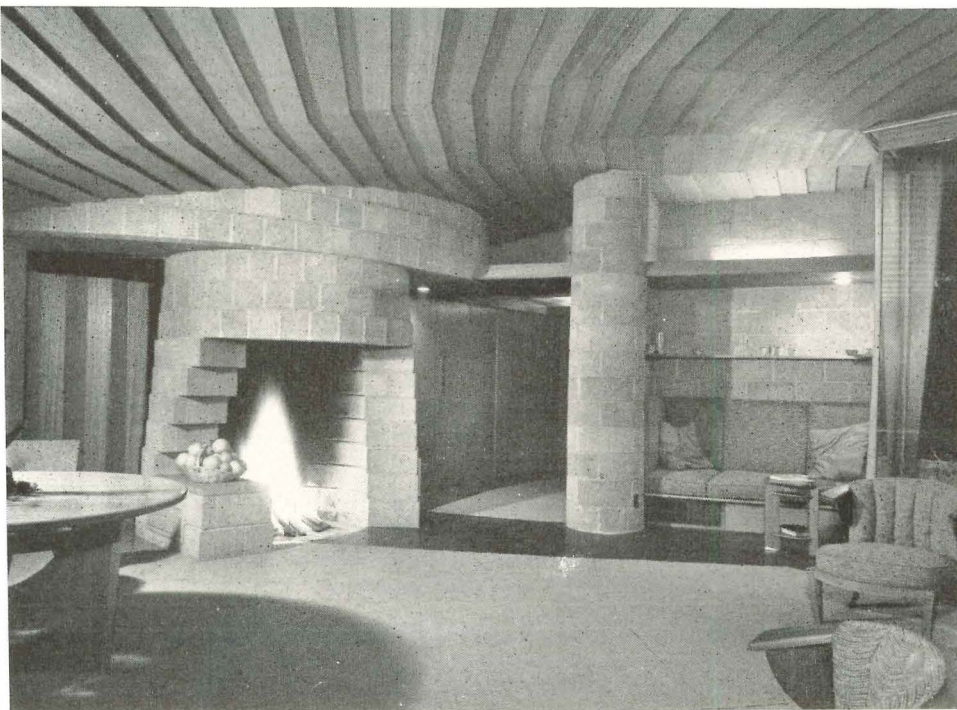


All photos by P. E. Guerrero

LIVING-ROOM CEILING, like ceilings and all wood-work in rest of house, is of red Philippine mahogany, follows in swirling pattern the curves of the plan. House has virtually no freestanding lamps, is illuminated at night with recessed ceiling fixtures. Some of these are in outside roof overhangs, shine back into room to recall rays of sun even at night. Result: a furniture layout designed for daytime lighting will serve just as well at night.

LIVING-ROOM FIREPLACE has concrete block lintel made of U-shaped blocks filled with reinforced concrete. Curved, 24' long concrete block "valance" that sweeps across chimney is similarly constructed.

DOUBLE-HEIGHT KITCHEN is typical Wright detail, gives small circular plan a sense of spaciousness, and permits cooking odors to escape from work area. Note beautiful cabinetwork throughout this house.



EVERY WRIGHT HOUSE is full of imaginative structural details: where necessary, Wright's concrete block serves as formwork for reinforced concrete columns and beams. The heavy piers are shafts of standard block filled with concrete (they support a daring cantilever floor — see opposite). And the fireplace lintels are U-shaped blocks filled with concrete also (result: no visible lintels, little formwork to throw away).

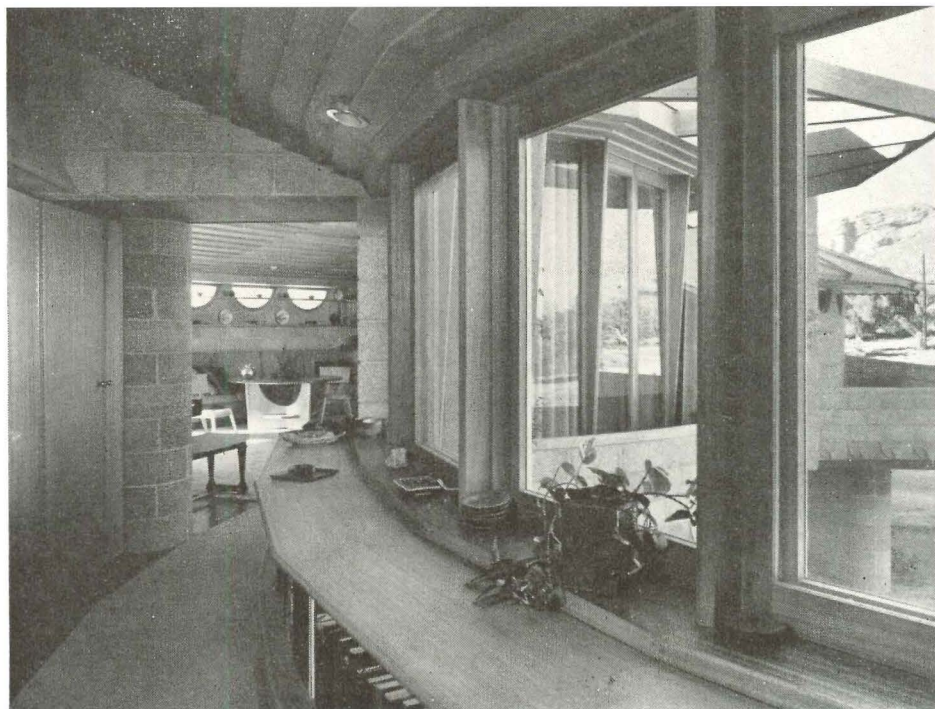
Where others would sense a raft of problems in a curved house, Wright saw many opportunities: for example, straight window units are tangential to the curved walls below them, thus create a series of in-and-out-going reliefs and shadows. For another: the straight block laid according to curved templates has a tight joint on the inside, a wide joint outside. Result: a wall texture that has the glitter of a many-faceted cut stone. A third example: the curved-and-pitched roof (ordinarily a hair-raising problem) becomes for Wright an opportunity to create a lovely pattern of diagonal "folds" in the copper sheets, a pattern of triangles and diamonds that adds another dimension to the sheltering roof. And Wright leads you up to the roof for a good look at it, too.

Like many a Wright house in the past, this one will grow handsomer still with the years. Already the stroll up the ramp is a procession past bright flower beds; already the bougainvillea is beginning to creep across the exterior, up the trellised overhangs. And already the gardens below the house are in full bloom, their beds partly retained in a straight rectangular wall — an excellent foil for the curves.

Wright's houses weather well, not only because he covers them with plants and flowers; they weather well also because he controls the way they will weather. The decorative frieze around the floor slabs of the house is a case in point: it serves as a drip for torrential rains, prevents the stains and cracks that ruin so many badly built houses.

But it is not only its original detailing, its startling plan and its dramatic spaces and forms that make this such an exceptional house. Every onlooker, however unsympathetic, will be moved in some way by this extraordinary, symbolic gesture of a father toward his son — the older man's arm around the younger man's shoulder.

Many architects will be moved by this, and some may be moved to copy the forms and emulate the Wrightian fantasy, with results that are bound to be disastrous. "Romance," says Wright, "like the word beauty refers to a quality" to be found only in originals.

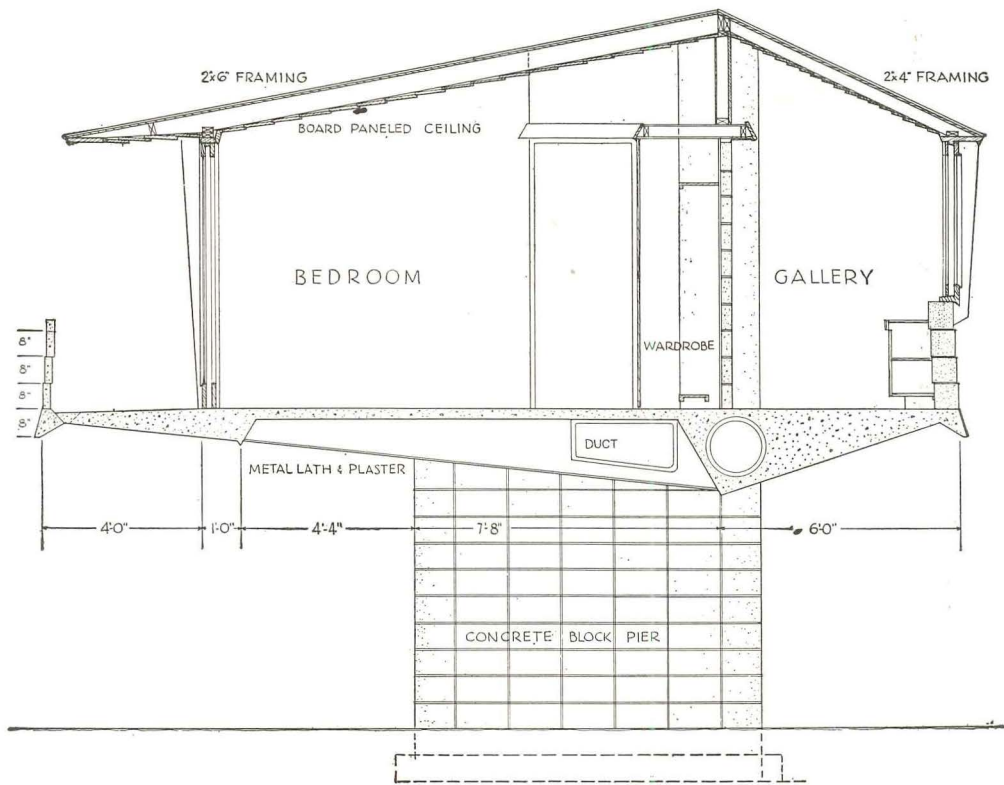


CURVED CORRIDOR is short and looks shorter because you do not see all of it from any one spot, thus avoids "Pullman-car look" of some bedroom wings. Walk-down curved passage opens up succession of surprise views all along the way.



CURVED BEDROOM is "prow" of house (or head of "rattlesnake"), has magnificent views across citrus groves and toward mountains. Fireplace in bedroom is similar to that in living room.

PROW OF HOUSE is daringly cantilevered bedroom that projects out over foot of ramp. Note the pleats in the copper roof, the deep projection of thin-edged eaves. Few pictures better show Wright's success in marrying the light grace of an air-borne structure and the solid repose of a home that is part of the grounds around it.



TYPICAL SECTION shows deep cantilevers, air-conditioning ducts, arrangement of concrete block courses. Cantilevered floor rests on elongated piers; these are continued upward to roof structure in form of circular columns. Note receding concrete block courses that emphasize sweep of horizontal joints. House is air conditioned for desert living.



Let's include everybody in

The way to get the best house for Americans

is to consider all good architect ideas—

regardless of "style," time, or country of origin

One of the many remarkable things about freedom is that it pays off. Take freedom of information, for instance—the freedom to exchange and circulate valuable ideas from all over the world.

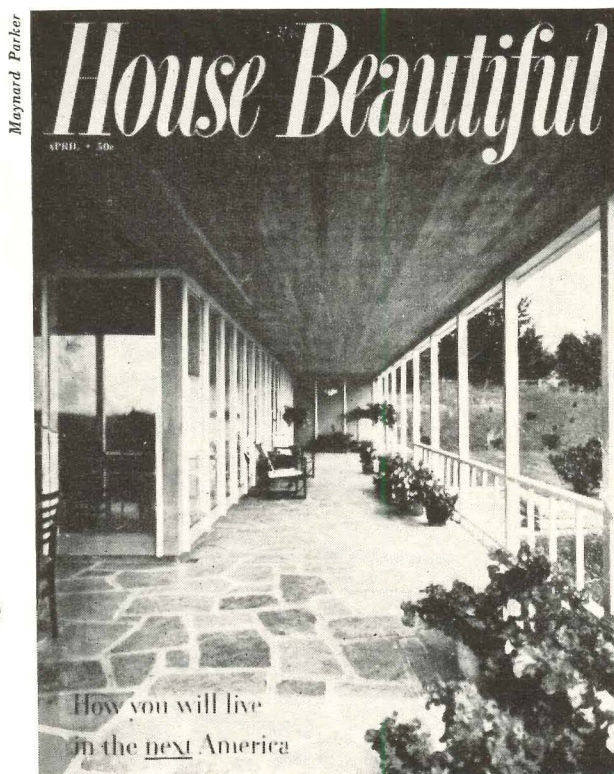
Well, in architecture that particular freedom pays off in a spectacular way: when Mr. and Mrs. North America buy a Levitt house, for example, they buy not only the considerable talent of Designer Al Levitt; they also get, as a free bonus, several dozen brave ideas first pioneered by great architects from all over the world—from Taliesin, Wis. to Paris, France; from the San Francisco Bay area to Dessau, Germany. They get this bonus because, in the free world, there are no travel restrictions on ideas.

Let's compare this, for a moment, with the way things are managed in a typical police state: there architects are forced to stick to native ideas; there they are denounced as threats to the nation if they take a furtive glance across its borders. You think we're fooling? Listen to this, from *Pravda*: "His slavish deference to the decadent art of architecture in America is a slander of Soviet art and on our building industry . . . reactionary *bourgeois* architecture . . . hopeless *impasse* . . . formalistic perversions . . . box-like, soul-less building . . . poverty of spirit and nihilism." And then the naughty nihilists suddenly stop living at the old address.

But was the old address worth living at in the first place? A house is only as good as its design—and chances are that a house developed by the best brains of several continents will be a great deal better than a house cooked up by a bunch of politicians who all carry the same party card.

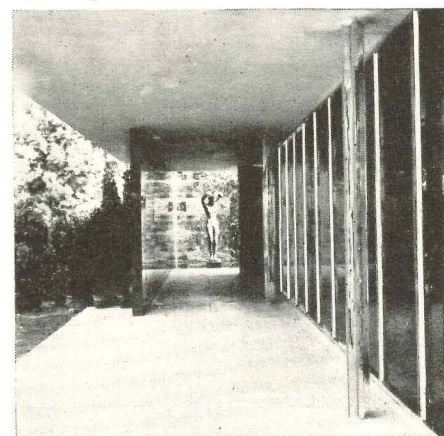
We started to feel so good about our great fortune, our great world-wide architectural heritage, that we decided a few weeks ago to put our theory to a simple test. We took the past year's issues of a popular women's magazine—*House Beautiful* (circ.: 630,000)—and went through these back numbers to see where many of the ideas shown originated. After several hours of historical sleuthing, we started feeling even better and made some notes (see the next few pages).

Now these notes are not supposed to suggest that Architect Smith cribbed his house from Architekt Schmidt, or that l'Architecte



HB, APR. '53 John Yeon, architect

Museum of Modern Art



MIES VAN DER ROHE, 1929

Lebrun plagiarized Architect Brown. All we think we proved is that a few brave pioneers in all parts of the world—led by our own Frank Lloyd Wright—have done something very impressive about architecture. They have established a new climate in Western architecture—a climate in which Architects Smith and Lebrun have been able to work happily ever after. And their work, of course, was bound to be quite a bit like some of the things that the brave pioneers sweated and fought and went hungry for a generation or two earlier.

Is Architect Smith using open plans? If so, take a bow, Frank Lloyd Wright (and keep on taking bows for most of the things we take for granted today). Is Architect Jones using freestanding fireplaces with exposed asbestos flues? If so, we thank you, M. Le Corbusier. Is Architect Brown talking about standardization and prefabrication of storage units? Then let's give a big hand to Professor Gropius and his Bauhaus. Does Architect Black believe that elegance in houses—as in well-tailored suits—can be achieved by quiet and precise understatement? Then three cheers (or should we say dignified applause?) for Mies van der Rohe. Does Architect White like to join his indoor and outdoor spaces? Well, he couldn't like it better than Frank Lloyd Wright, Richard Neutra—or the Japanese architects of 400 years ago. And does the American home owner like all of these things? If he does, he is a very lucky guy, because he is living in a country where nobody—but *nobody*—can tell him that one kind of architecture is subversive and another kind is "loyal," that one kind of architecture is a threat to our way of life, and another kind is "American."

Where were we? Oh yes—we were talking about *House Beautiful*, a popular magazine that decided, not so long ago,* to follow the leadership of the professional press and promote good modern architecture. And here are some of the international ideas that HB's subscribers have been looking at during the past 18 months (quotes are from *House Beautiful*):

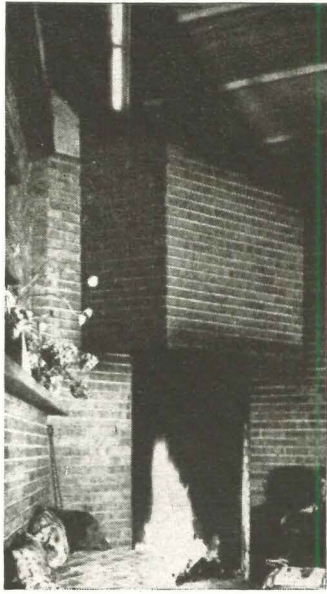
* *House Beautiful* did not publish modern houses consistently until about 1947

Maynard Parker



HB, JAN. '52 Ben Gage house

Joe Monroe



FRANK LLOYD WRIGHT, 1941

Angled corner-fireplace cut off by sloping roof plane.



Maynard Parker



HB, JAN. '52 Harry Blackmun house
"The pass-through counter . . . storage space above . . . is accessible from both sides."



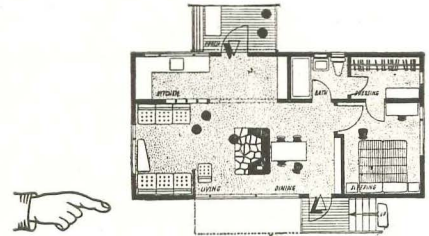
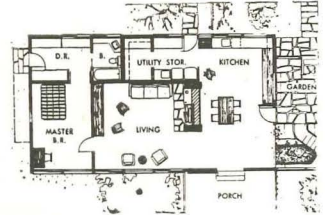
LE CORBUSIER, 1929
Le Corbusier's 1929 design looks remarkably similar.



Maynard Parker



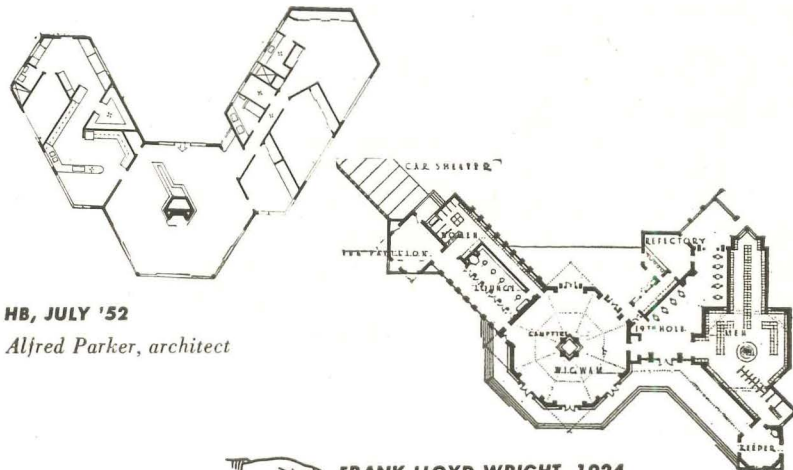
HB, FEB. '52 Danforth Compton, designer
"New wing (added to Connecticut stone house) reflects new way of life."



GROPIUS & BREUER, 1940
Note similarity of Compton plan above to Gropius & Breuer plan of 1940.



HB, MAR. '52 Roger Rasbach, designer
"Lofty ceiling + low furniture = big room."



HB, JULY '52
Alfred Parker, architect



FRANK LLOYD WRIGHT, 1924
Wright's fireplaces are the "heart" of the house, often in the center of a hexagonal or octagonal living space.

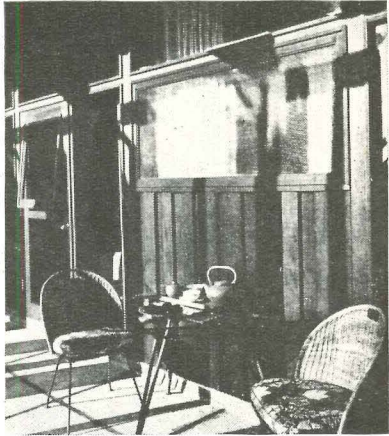
© Ezra Stoller



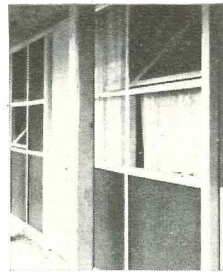
FRANK LLOYD WRIGHT, 1925
Wright proved it 30 years ago in his own living room.



Maynard Parker



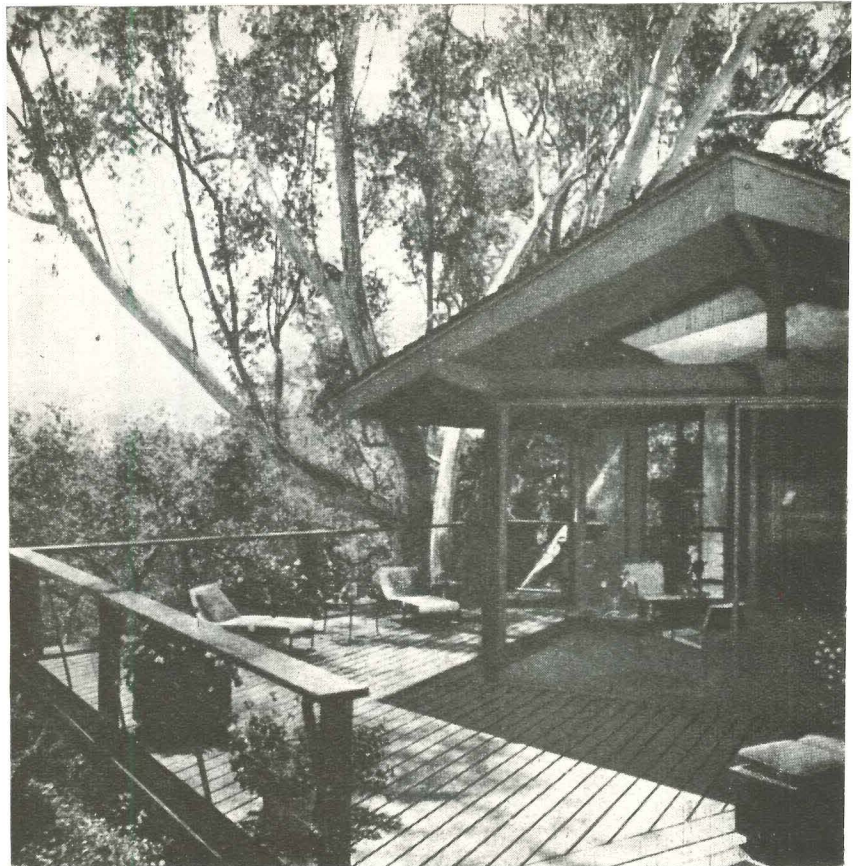
HB, APR. '52 Anshen & Allen, architects



LE CORBUSIER, 1935

Note similarity of facade divisions in California house, left, and Le Corbusier's famous wood-and-stone villa at Mathes.

Maynard Parker



HB, JULY, '52 Henry Eggers, architect

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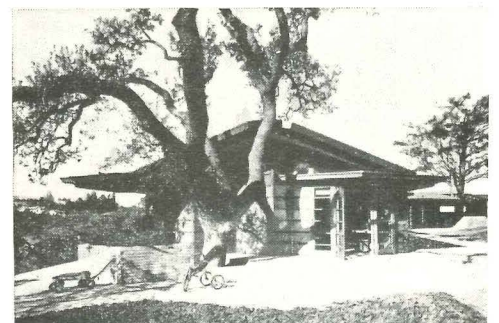


HB, FEB. '52 Minoru Yamasaki, architect
"... This luminous room ... as clean and fresh as a snow crystal."



MIES VAN DER ROHE, 1930

Critics have long been equally enthusiastic about Mies' Tugendhat house.



FRANK LLOYD WRIGHT, 1937

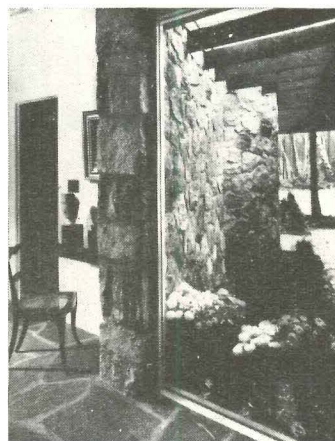
Note expressive roof structure, glass gable end, sheltering overhangs—all introduced by Wright.

Maynard Parker

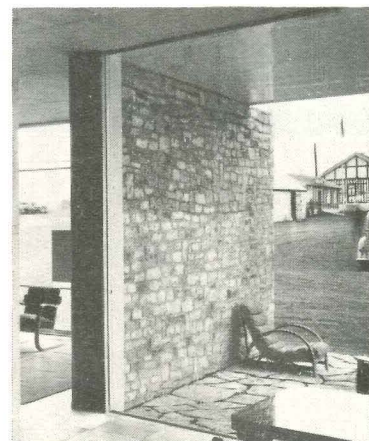


HB, FEB. '52 Rosedale Nurseries
"Plant an air conditioner. . . plant trees, shrubs, and vines in the right locations."

Maynard Parker

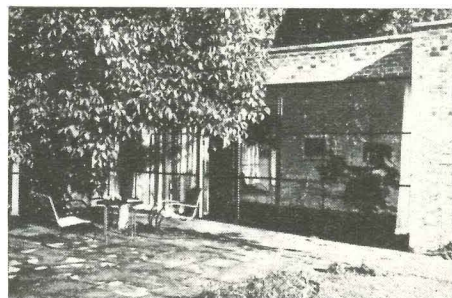


HB, OCT. '52 Elroy Webber, architect
"The house uses . . . wood, native stone and flagstone."



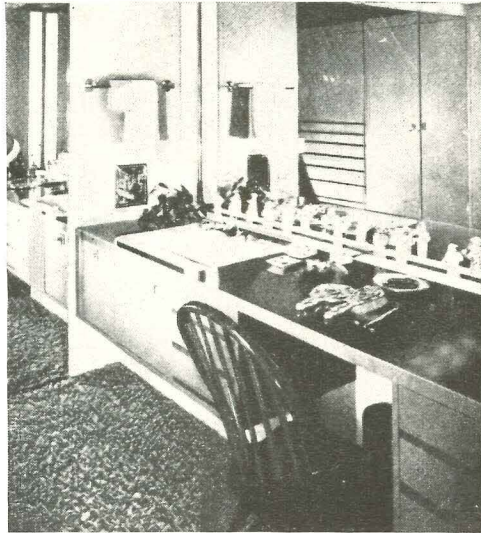
MARCEL BREUER, 1936

Breuer's pavilion at Bristol, England, was an early example of this trend.



As, for example, in front of this early glass wall by **MIES VAN DER ROHE, 1932**

Maynard Parker

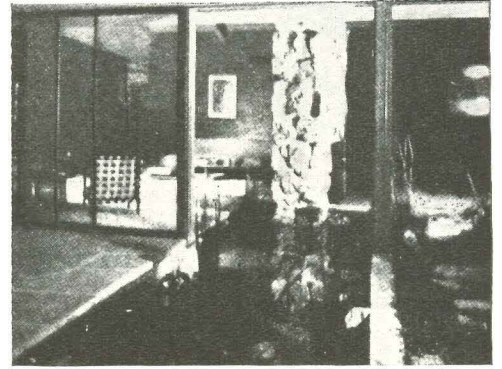


HB, AUG. '52 Welton Becket, architect



MENDELSON & CHERMAYEFF, 1935
Mirrored walls are a good device to make dressing rooms or foyers look bigger—as these architects discovered.

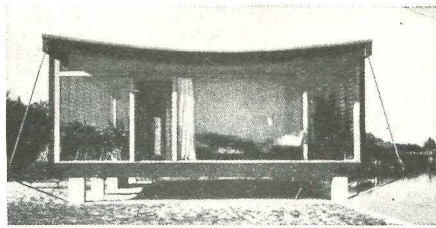
Maynard Parker



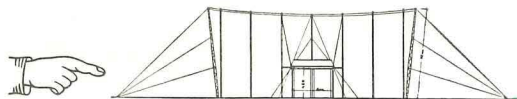
HB, OCT. '52 Welton Becket, architect
“... The pool ... flows under the glass wall onto the terrace beyond.”



© Ezra Stoller



HB, JULY '52 Twitchell & Rudolph, architects
“Suspension roof is flexible.”



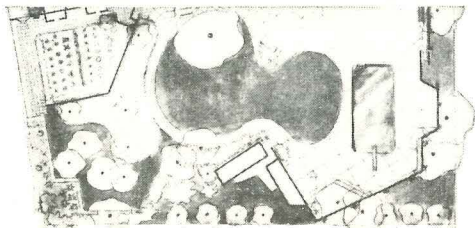
Julius Shulman



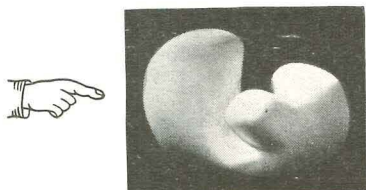
RICHARD NEUTRA, 1942
Neutra showed in his famous Nesbitt House how it could be done.

LE CORBUSIER, 1937

As in Le Corbusier's Pavillon des Temps Nouveaux built for the Paris Exposition of 1937.



HB, MAY, '52 Thomas Church, landscape architect
“Informal architecture never puts on airs.”



HANS ARP, 1935

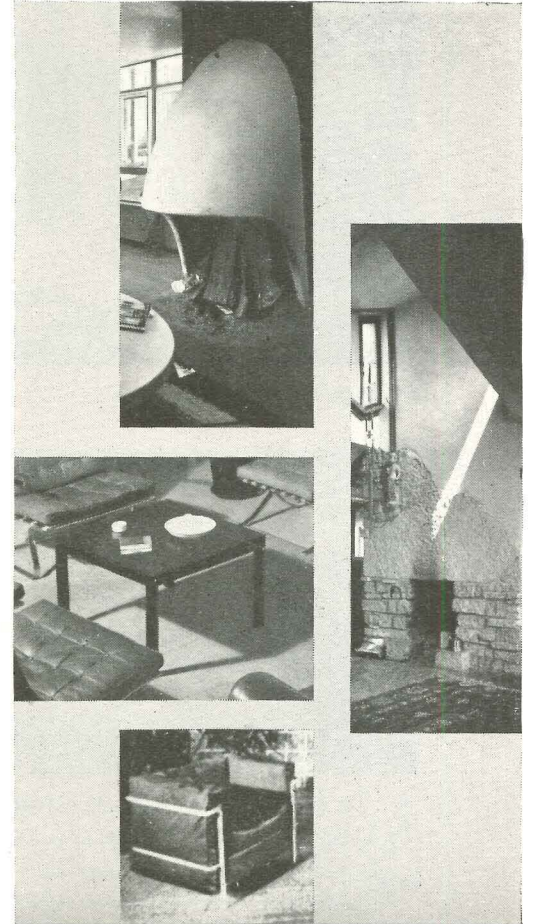
Even when its ancestry is a proud one, includes the granddaddy of the free form, Painter-Sculptor Hans Arp.

Maynard Parker



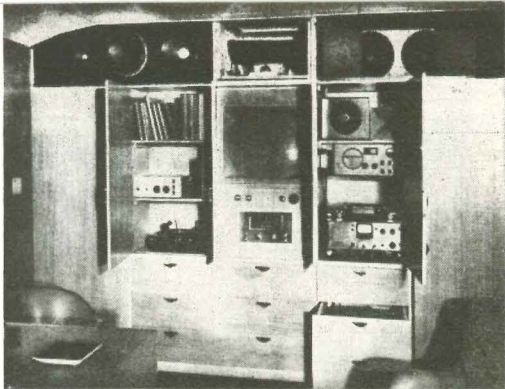
HB, OCT. '52 Elroy Webber, architect

Emelie Danielson
© Ezra Stoller

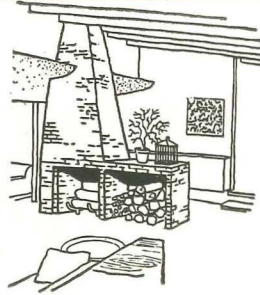


GROPIUS & TAC, FRANK LLOYD WRIGHT, MIES VAN DER ROHE, LE CORBUSIER, ancestors
Projecting fireplace hood—a TAC trademark (see 1947 example); chimney streaked with rays of sunshine—see Wright (1938 example); “modernized Chinese” table—see Mies (1930); for chair, see Le Corbusier (1929).
Result: an American interior!

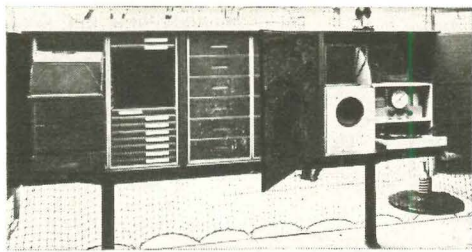
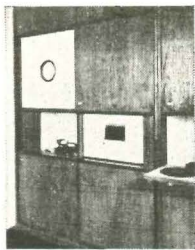
Maynard Parker



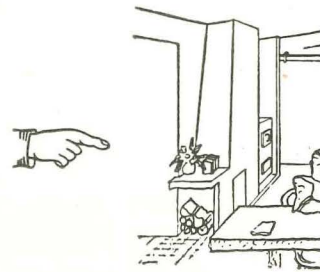
HB, JAN. '53 Altec Lansing installation



HB, FEB. '53 Alexander Girard, architect



SERGE CHERMAYEFF, 1937 and LE CORBUSIER, 1935

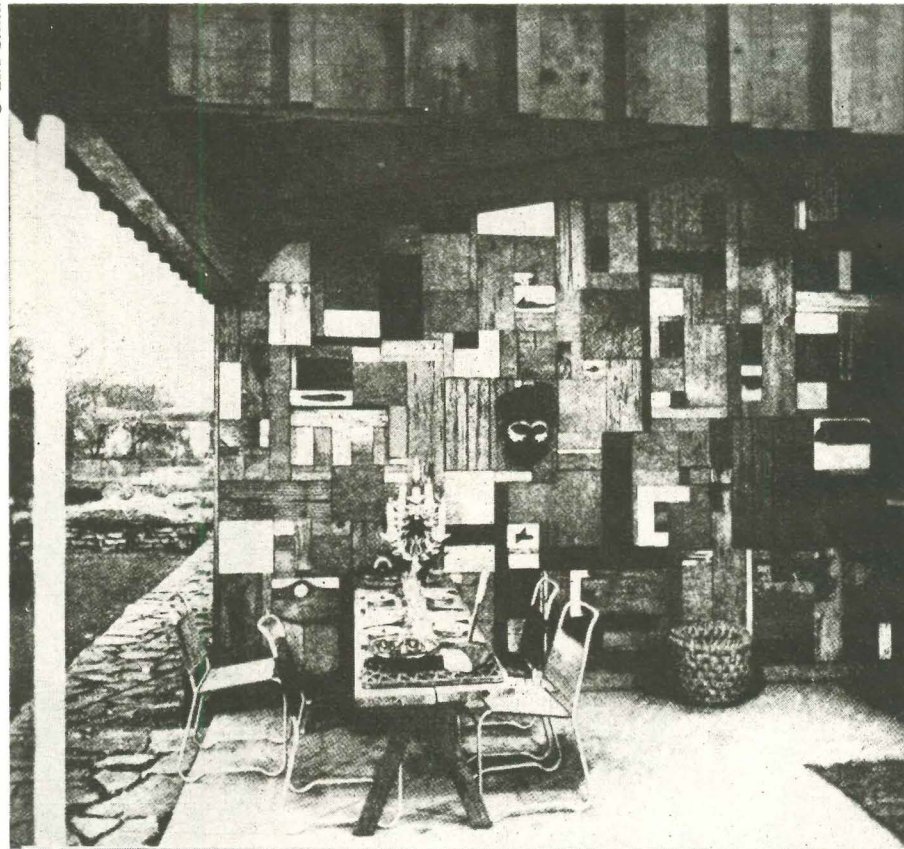


LE CORBUSIER, 1940

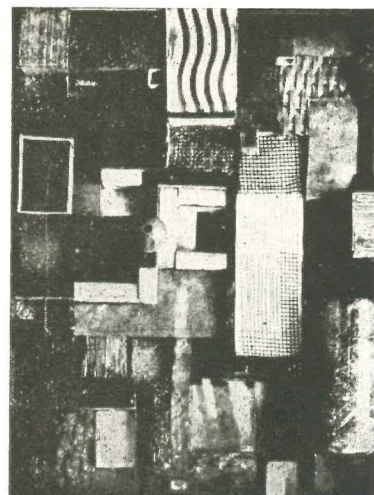
Sensitive Designer Girard selected from wealthy reservoir of modern movement in designing his own house.

Radio-phonograph built into storage wall—as Chermayeff did it in his own house in 1937, and Le Corbusier did it at a Brussels exhibition two years earlier.

© Ezra Stoller



HB, FEB. '53 Alexander Girard, architect
“... Beauty in old boards and driftwood... an exciting, abstract pattern.”



BAUHAUS, 1920s

Girard's handsome mural is reminiscent of early Bauhaus exercises with patterns, textures and colors.

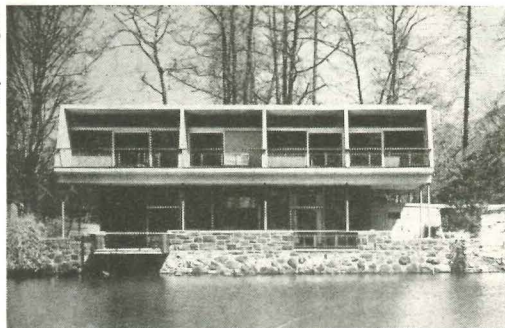


Maynard Parker



HB, MAR. '53 Samuel Marx, architect

Rolf Tiegens



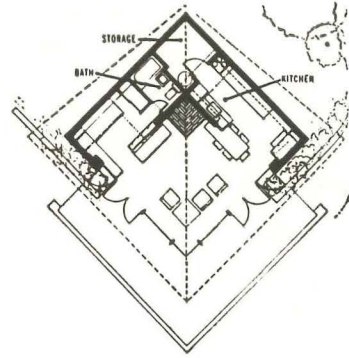
J. L. SERT (pres. of C.I.A.M.), 1948
The concept of a large, squared-off upper story resting on a smaller, recessed base originated with Le Corbusier in the twenties. Here is a recent example by Le Corbusier's associate, J. L. Sert.

Maynard Parker

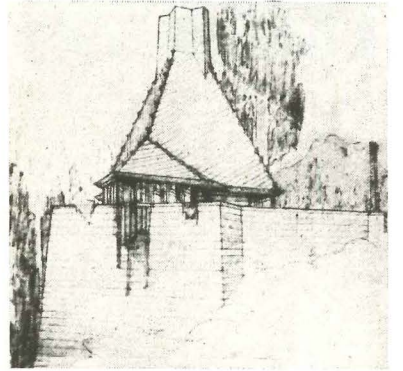


HB, DEC. '52 Thomas Church, landscape architect
"You can double or triple your living space by converting your garden into a big, roofless living room. . . ."

Morley Beech



HB, MAR. '53 Lois Davidson, designer



Julius Shulman

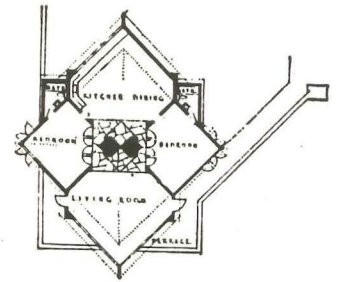


RICHARD NEUTRA, 1936
Neutra has demonstrated it well in his "roofless living room" for Von Sternberg.

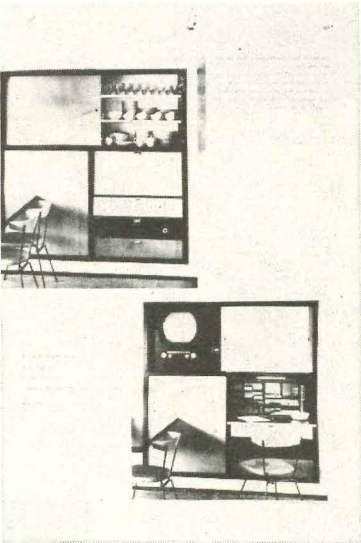


FRANK LLOYD WRIGHT, 1922

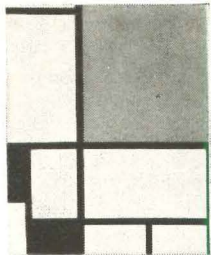
Note Designer Davidson's admiration for Wright's work, whose Big Tree Type Cabin was a forerunner of the Davidson design.



Kranzler Studios



HB, MAR. '53 Ralph Zimmerman, architect

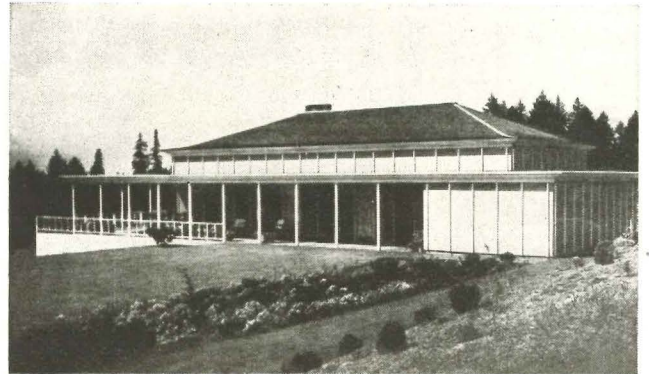


PIET MONDRIAN, 1921

Recent critics have denounced the painter Mondrian's impact on modern architecture. House Beautiful frequently documents it, called this house "a little gem."



Maynard Parker



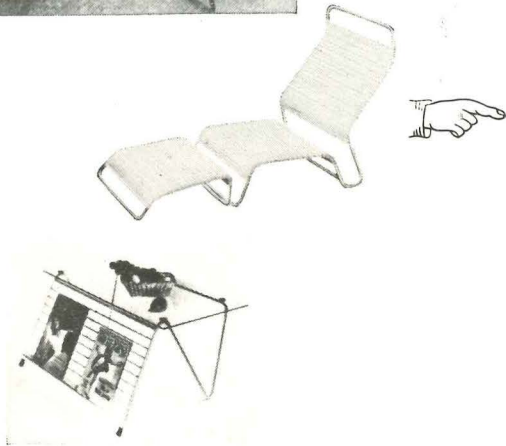
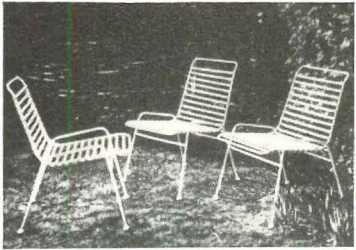
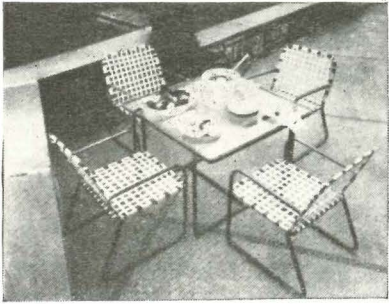
HB, APR. '53 John Yeon, architect
"How you will live in the next America."



KATSURA PALACE, 1590

Architect Yeon's beautiful house is close in spirit to Japan's Katsura Palace of 350 years ago.

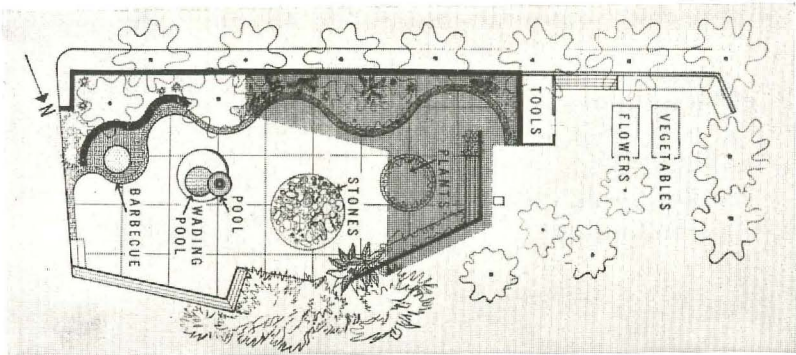
William Howland



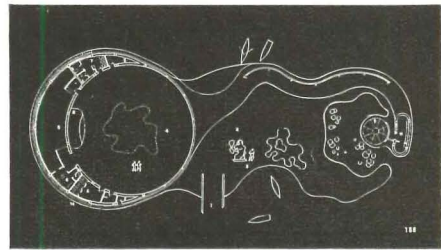
HB, APR. '53 Indoor-outdoor furniture, various designers



BAUHAUS, 1925
 Much of our present tubular steel, aluminum or wrought-iron furniture originated in Germany's Bauhaus in the twenties.



HB, APR. '53 Lawrence Halprin, landscape architect
 "The garden of the next America".....



OSCAR NIEMEYER, 1942



..... seems a lot like this Island Restaurant in the present South America—designed by Le Corbusier's brilliant Brazilian disciple.

Dapprich

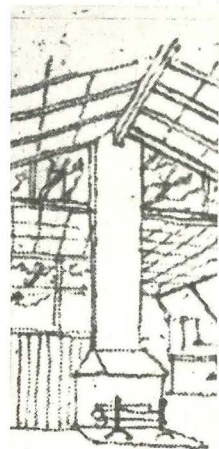


HB, MAY '53 Harwell Harris, designer
 "A perfect expression of organic beauty."

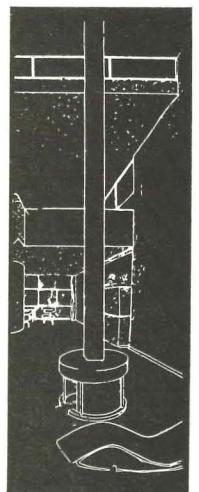
Wayne Andrews



BERNARD MAYBECK, 1912
 Harwell Harris has brilliantly continued in the great tradition initiated by the Greens and Maybeck.



HB, APR. '53
 Wolfgang Langewiesche, designer
 "... Fireplaces that are open on two or even three sides"—with freestanding flues.....



LE CORBUSIER, 1929
 as in many of Le Corbusier's earliest designs.

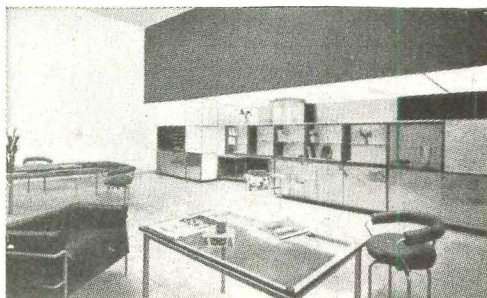


We may have missed dozens of examples and—in all likelihood—there are other and earlier precedents for many of the examples we did pick. But the point is this: here is a popular American family magazine that deals with houses—and this magazine has been publishing a lot of ideas from all over the world that seemed fearfully esoteric and farfetched not so long ago, when only a few people like Frank Lloyd Wright dared to propose them, and only a few people (like the German Publisher Wasmuth, in 1911) dared to publish them.

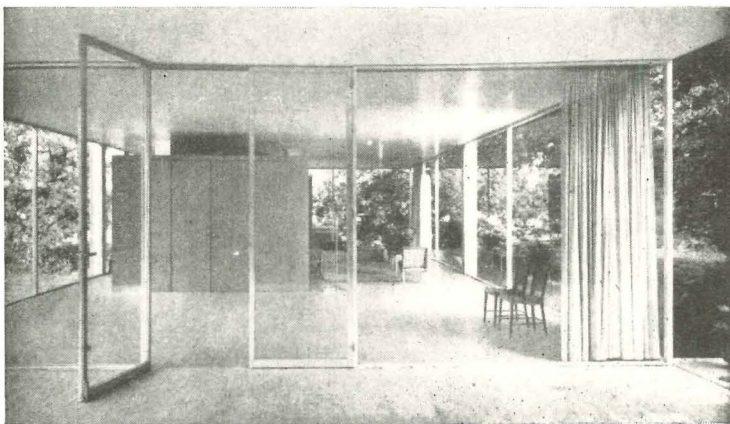
Naturally, the work of a pioneer sometimes seems extreme. That is one of the things that makes him a pioneer. Moreover he may find it necessary at times to dramatize a new idea in order to make people sit up and take notice. That is why suffragettes tossed themselves in front of the king's horses and that is why Lindbergh crossed the Atlantic. When Wright builds a magnificent house over a waterfall he doesn't mean that everybody ought to live over a waterfall—he is dramatizing his ideal of organic architecture inseparable from nature. And when Mies van der Rohe builds a glass box, he does not mean that everyone should build glass houses on 75' lots—he is dramatizing his notions of structure, space, freedom and simplicity. And before long, these dramatic examples begin to affect every home in America.

No one has made this clearer than *House Beautiful's* able and dynamic editor. In her October 1952 issue she listed ten signs of "a basic style shift going on everywhere in America." Here are her most important "signs":

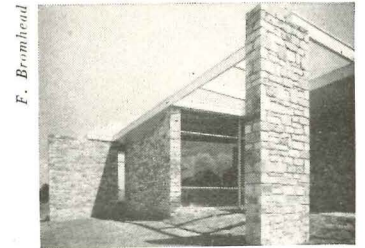
▶ "Watch for the domination of architectural design over the furnishings . . . the domination of the container over the contained." Or, as Le Corbusier said in 1925: "A new term has replaced the old word 'furniture'. . . . That new term is 'equipment'. . . . Standardized, fitted cupboards, built into the walls or suspended from them . . . have replaced all the innumerable varieties of superannuated furniture that were known by half-a-hundred different names. . . ." He did the *Salon d'Automne* interiors in 1929 to demonstrate the "domination of the container over the contained."



▶ "Watch for the gradual disappearance of the opaque exterior wall and the arrival of the lightened glass wall . . . the visual extension of the room beyond its real limits."—As, indeed, Mies van der Rohe demonstrated in his houses over the past 30 years. The latest demonstration is the Farnsworth house near Chicago.



▶ "Watch for the strong trend toward textures"—initiated many, many years ago by Frank Lloyd Wright, revived in other idioms recently by men like Marcel Breuer, whose 1936 Bristol Pavilion shows it well.



▶ "Watch for . . . people . . . using outdoor furniture both inside and out. . . ." Much of the tubular steel, tubular aluminum and wrought-iron furniture so used was originally developed at the Bauhaus, in 1925 (see opposite).

▶ "Watch for, in freestanding furniture, flowing, sculptured lines and transparency of construction"—as, for example, in the furniture designed ever since 1940 by Charles Eames. *House Beautiful*, in the October 1952 editorial, said that the trend toward flowing, sculptured lines and transparency of construction "is one of the most exciting of all the new characteristics."



▶ "Watch for the increasing importance of outdoor spaces around the house."—Frank Lloyd Wright has shown their importance for many decades. A recent example of outdoor spaces well used by a contemporary architect is this Palm Springs house by Richard Neutra (1947).



▶ "Watch how people are exercising FREE TASTE, mixing good things regardless of the rules. They are bringing together things they like from all periods, all countries and all cultures."

Well, that is what we are watching too—and we are delighted with it. There is plenty of room in America for ideas "from all periods, all countries and all cultures." Plenty of room, and plenty of need—that is, if we want the best possible house for Americans.

That best possible house has got to be an "international" house, in the sense that its ideas will be coming from all over the world. And just as America was made by people from all over the world so the American house will emerge from a melting pot of ideas.

So we say with apologies to Mr. Sam Goldwyn: "Let's include everybody in". And let's repay the compliment paid more than 40 years ago to our Frank Lloyd Wright, a prophet without honor in his own country then, whom the Germans and the Dutch were the first to recognize for the genius he was and is. Let's repay that compliment whenever we can, to those who were denounced by their native dictators (of taste and of politics) and who came to the US, the traditional haven of free men and free ideas.

How to sell a \$30,000 house:

Why should a buyer pay \$30,900 for a 1,560 sq. ft. house if he can find a larger house for \$10,000 less?

To this blunt question two New York architects, who turned merchant builders, have an equally blunt answer: in this price class do not try to compete with cheaper houses. Go after the buyer who can afford an even more expensive house by packing your plan with so many custom features it will have a \$35,000 look.

For other builders the lesson of these handsome Split Rock Ridge houses is that buyers will pay extra to get individuality and what they think of as "custom house" features. For other architects who have designed houses and look forward with pleasure to building from their own plans, Vincent Furno and Bernard Harrison say with emphasis: "Come on in, the water's fine." They are having so much fun as builders of their first project that they have bought more land and will put up 80 split levels of a new type they have just developed. For a sketch, see p. 121.

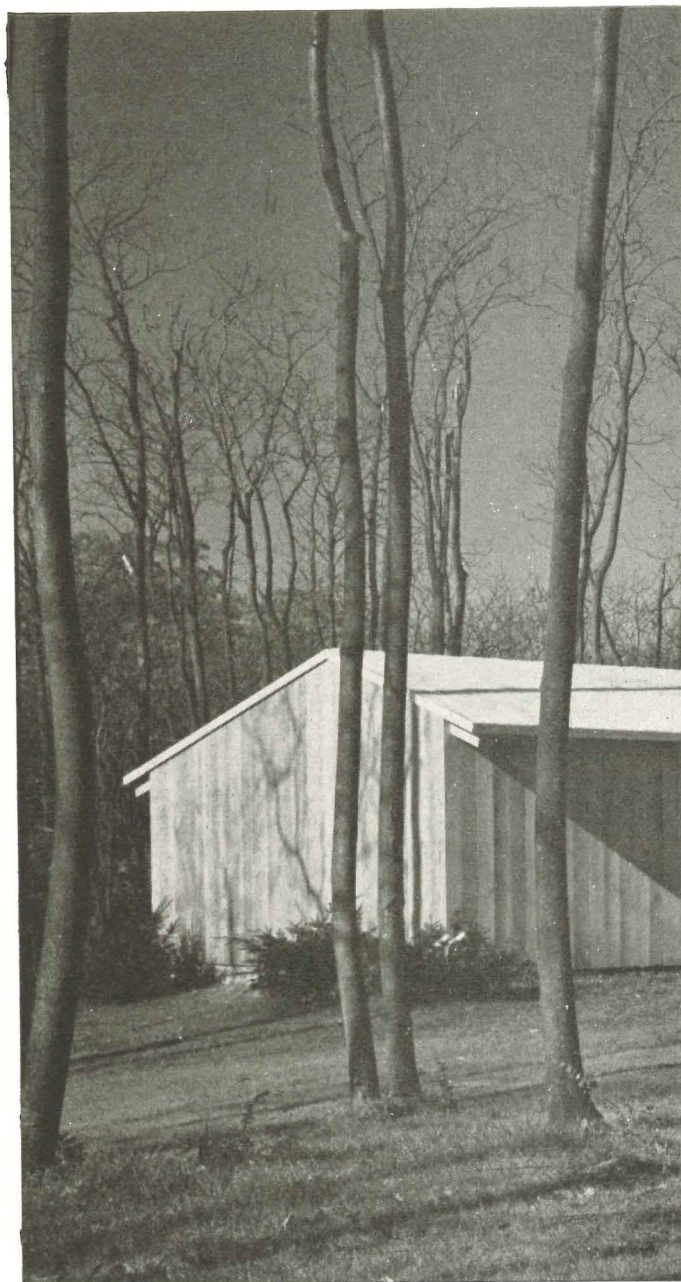
At Split Rock Ridge near Oyster Bay, Long Island, the two architects bought 54 acres—enough land for a loop street and for 44 houses on one-acre or larger plots, as the site plan opposite illustrates. After a slow start last fall, they sold 16 houses by May 15, not a boom by any means but a satisfactory sale in this price class for their first venture.

Long Island house buyers with \$30,000 to spend have a wide choice, as numerous large- and small-volume builders work in this class. In cost per square foot, Furno & Harrison are about in the middle of the group. But they have one advantage over many of their competitors. From their design practice, the two architects know that in this price class people want a combination of features which add up to good living. Space is not the only answer. The combination at Split Rock Ridge is unique. No one else has a contemporary house that fits on its full acre of beautifully wooded, rolling land so well that it looks like a custom design.

What sells a \$30,900 house?

"In this price class," says Salesman Richard Place, "individuality is something every buyer expects. While we have a basic house, we can give buyers a lot of custom-tailored features." Buyers may have three, four or five bedrooms, several dining-room arrangements, such extras as a TV room, porch, maid's room, multipurpose room. A large basement may be finished as desired.

Of the many attractive features of the house, the living room undoubtedly has the strongest sales appeal. It is 23½' x 18½' in size but appears much larger. When a visitor steps into the entry hall he gets a long-range view out through a large east window. As he moves around a head-height coat closet into the main part of the living room he looks out through a south window wall (see photo p. 118) which carries his eye past a terrace and out to distant trees. This end of the house is sited so there is always a pleasant view from the roof-high window. It never looks out to another house. A feeling of spaciousness is encouraged by the high ceiling and also because the architects painted one wall dark blue, the other a light brown to make the walls seem farther apart.



Photos: © Ezra Stoller, courtesy of House Beautiful

The entire 54 acres are such beautiful land, and houses are so far apart, that nearly every window frames a view. "When you look out of the picture windows you really see a picture" said one buyer.

The big windows in the living room were a liability until the display house was decorated. Once the room was furnished it became so popular that another model with the same size living room but without the high windows did not sell at all. People want glass when it is used sensibly, when it does not create a privacy problem and when women can see how to curtain it.

Large windows in the bedrooms are also in direct contrast to the trend to high, strip windows which shut out both light and view. The master bedroom is of generous size, 14' x 19'-9" plus an 8'-6" x 6' dressing room and a bathroom, and its bank of windows opens up the room to the view, makes the room seem even larger. The entire bedroom wing can be shut off from the rest of the house. A good-sized hall in the center of the bedroom wing also adds a feeling of spaciousness and luxury to the house.

give it a \$35,000 look

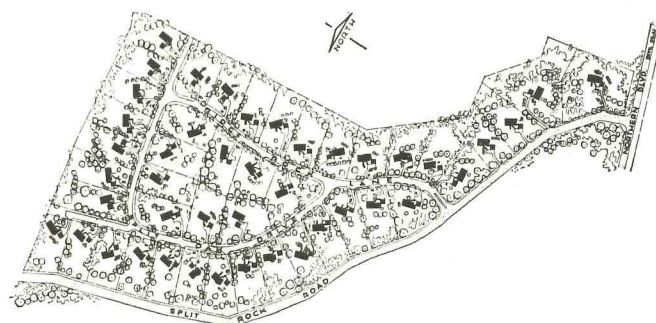


The living-kitchen is popular because the dining area is large enough to seat six people and has a wide window (see p. 119). It is such a pleasant spot no family would be ashamed to eat in the kitchen. The kitchen is close to front door and service door leading to the garage and terrace.

A carefully planned outdoor terrace gives the house real distinction. At the south end of the house, it is in a sun pocket protected from north winds by the house and the garage. A fence gives it privacy from the street. The base price includes a barbecue in the big chimney, but the flagstone terrace costs \$450 extra.

Among the many amenities which spell good living to families in this price class are the two de luxe bathrooms, shoe racks in closets, large storage areas including garage and basement, a basement recreation room with paneled walls and asphalt tiled floor, a package-mortgage kitchen with stove, refrigerator and dishwasher and plenty of electric outlets: dining room six, living room ten, master bedroom 12, other bedrooms six to eight.

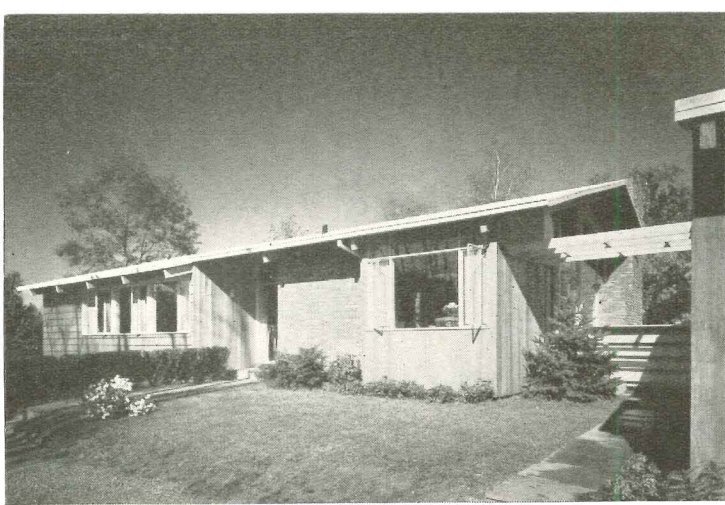
Privacy for living terrace is created by fence and by garage which also makes house look longer. Big glass window and terrace always face south. Plot plan shows how houses are turned on lots.



LOCATION: East Norwich, Long Island, N. Y.

VINCENT FURNO and BERNARD J. HARRISON, architects and builders





Conservative front elevation does not shock traditionally minded buyers as glass gable is hidden from street. **Spacious living room**, opposite, is greatest single sales feature.

Furnishings sold the house

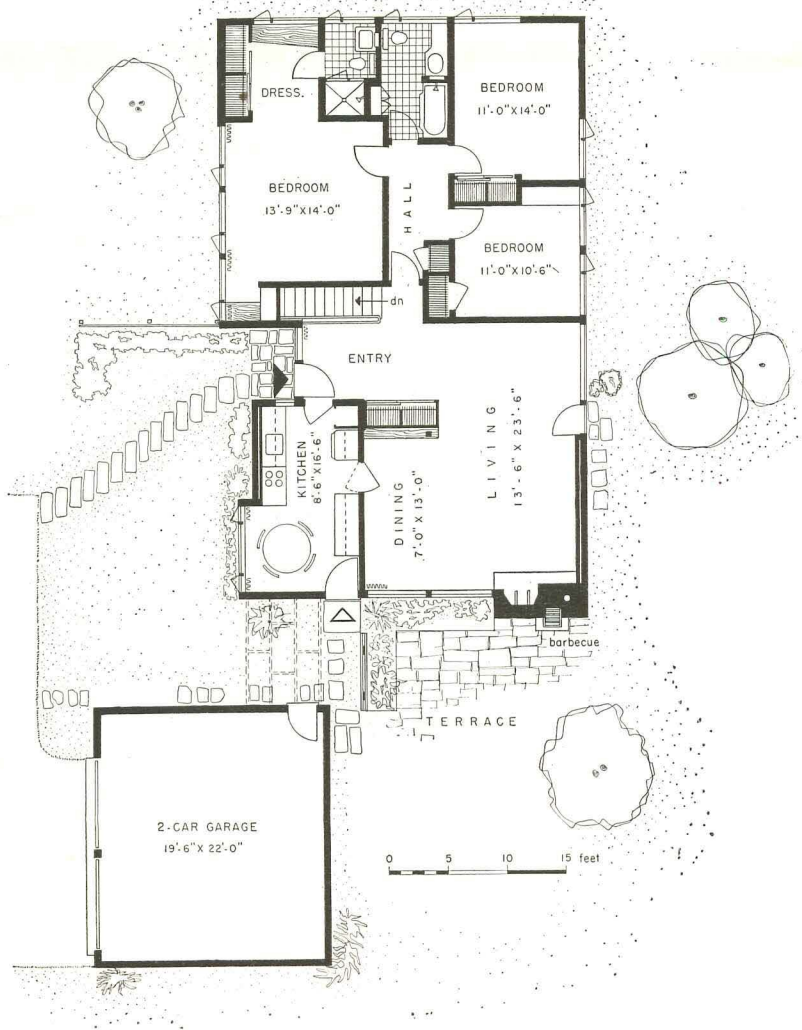
When the model house first opened it was not furnished, and it did not sell. Visitors were troubled by the two large glass areas in the living room, asked, "Where will we put the furniture?" After the house was furnished such questions stopped.

B. Altman decorated the house, was careful not to make rooms look extreme. The 27' x 19' living room gives visitors such a feeling of spaciousness it is now an outstanding sales feature, although it had been a liability before it was decorated.

Several floor plans available

Three-bedroom plan at right is basic, sells for \$30,900. Other models (next page) have four bedrooms, or a separate dining room in place of a fourth bedroom. On sloping lots, \$4,500 extra puts the garage on a lower level and buys a maid's room, bath and recreation room (or whatever the buyer prefers). These go where garage is shown on plan.

The architects act as general contractors, do their own carpentry and labor but subcontract other operations.



Dining area in kitchen is so large it can seat six people without crowding. Round table, big window and attractive lighting fixture turned this area into a highly salable asset.

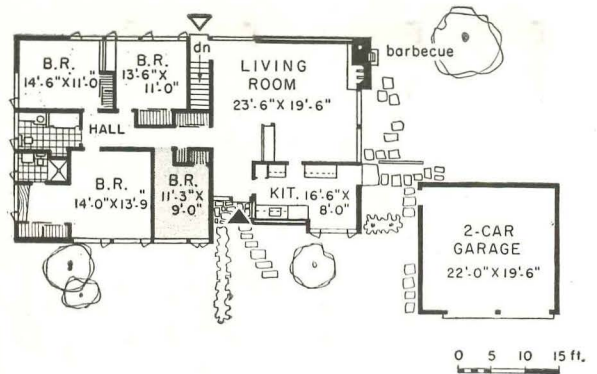


Living terrace with barbecue in chimney turns ordinary back yard into glamorous attraction. Massive brick chimney is an asset both in living room and when viewed from outside.

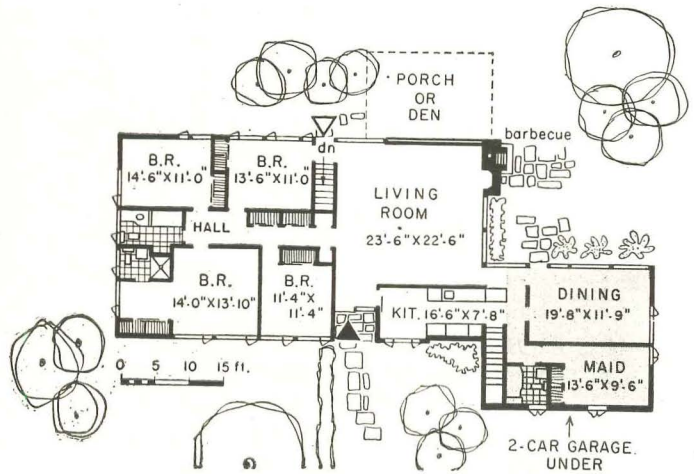
\$30,000 HOUSE



Master bedroom has long bank of windows, walk-in closet at far end with dressing room and bath behind camera location. Its spaciousness is appropriate to this price class.



Fourth bedroom is added to this plan by taking space from master bedroom and moving stairway.

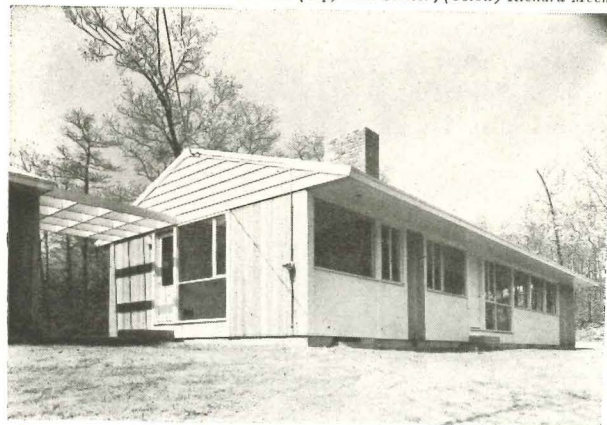


Dining room and maid's room, over garage in this plan, can also be used for special purposes. Dotted line next to living room is for optional porch, TV room or study. Latter cost \$2,500.

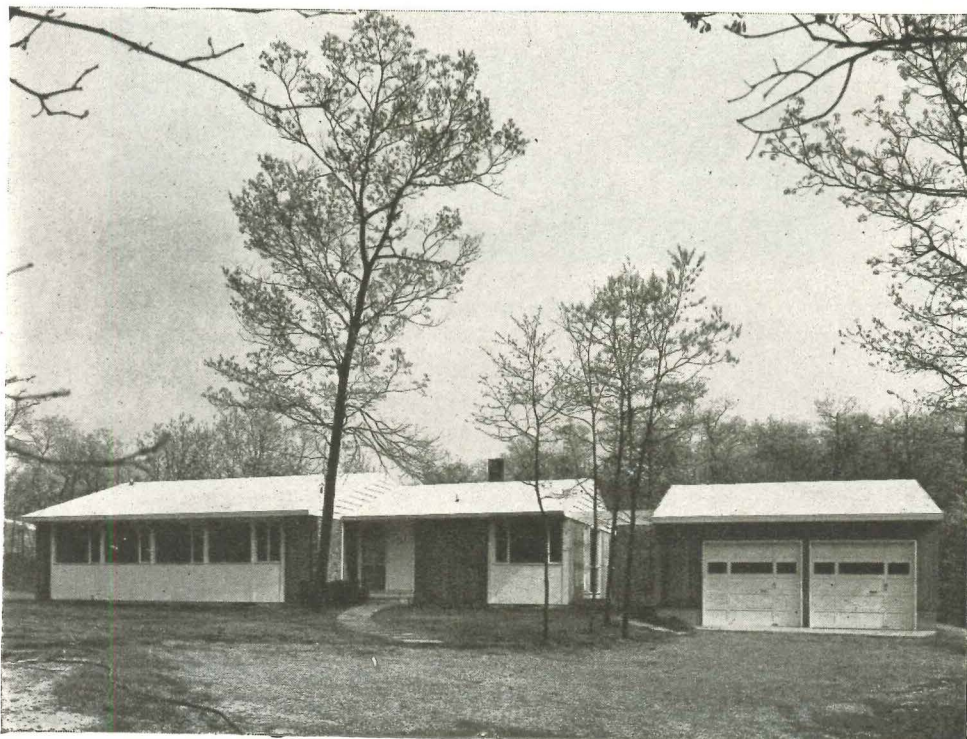
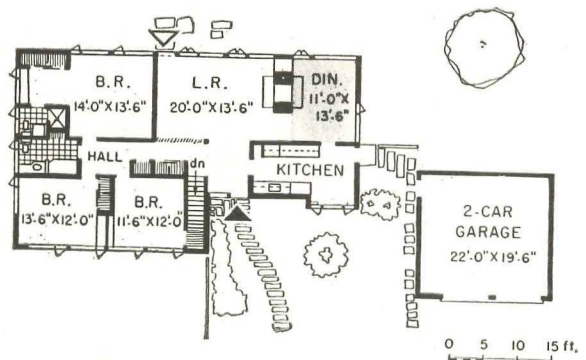
Photos: (top) Ezra Stoller; (below) Richard Meek

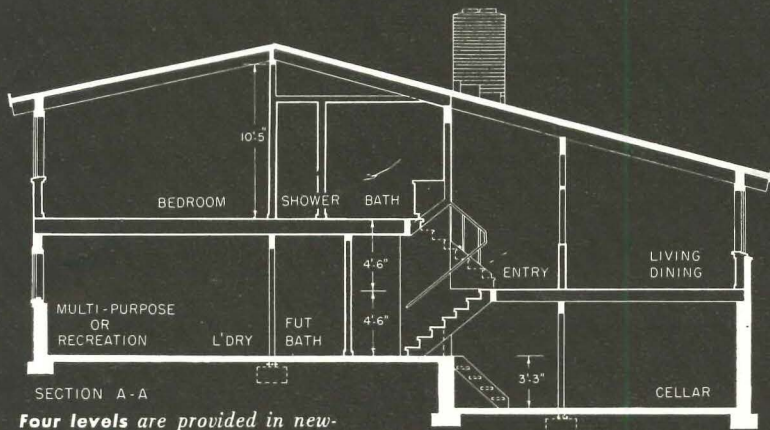
Alternate model house

A second model house (right and below) was built after original model was furnished. It does not have glass gable end, has a dining room separated from living room by a massive brick, two-way fireplace and is priced \$800 higher. This house is not popular and has not sold, perhaps because it is not furnished and because model does not have a flagstone terrace or big glass windows.

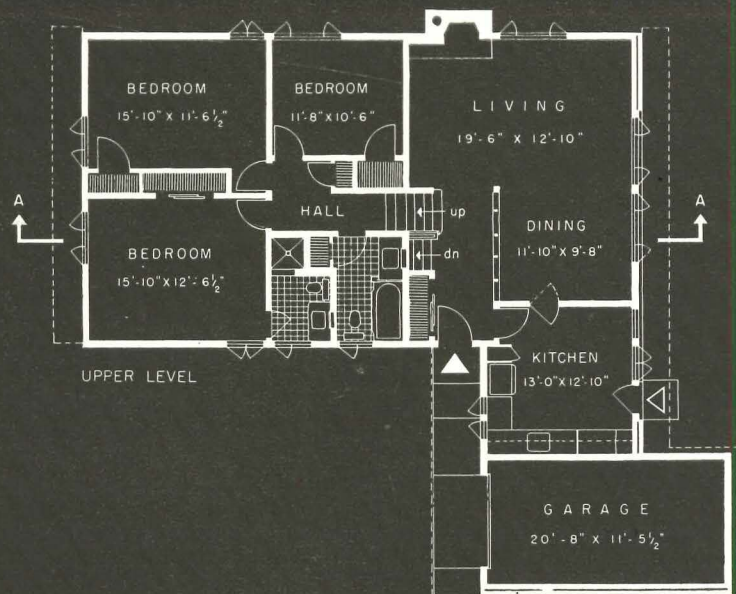


Long bank of windows marks rear of this model which has only a modest window at south end. Plan below shows variations from basic house.



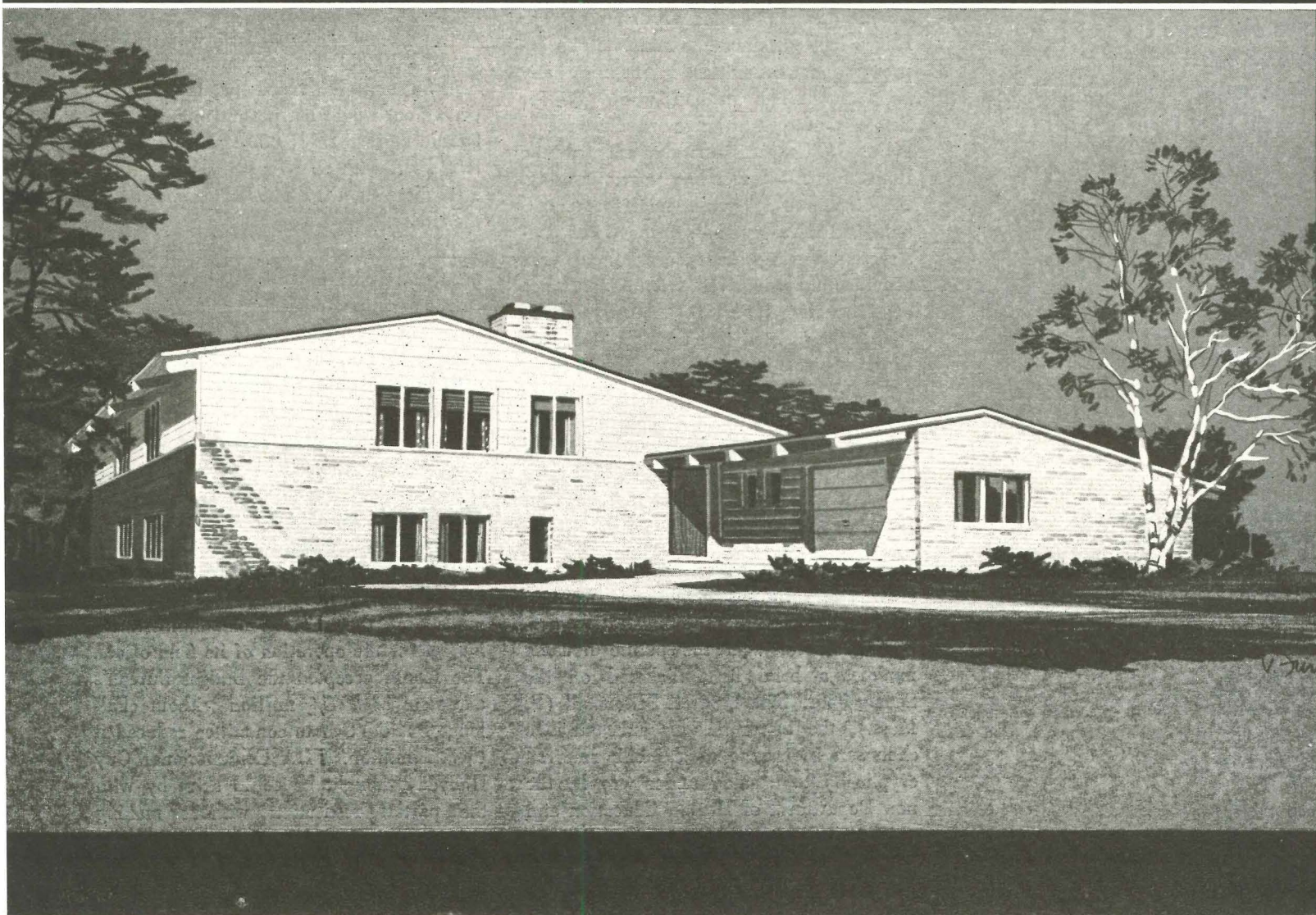
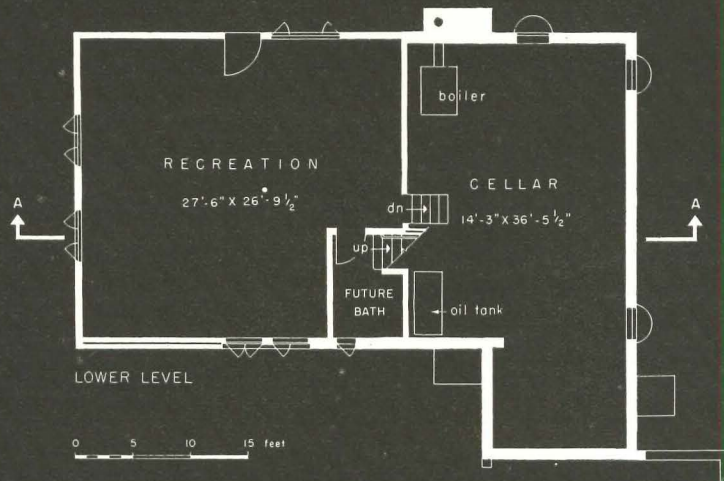


SECTION A-A
Four levels are provided in newest Furno & Harrison house. Eighty such houses will be built to sell for \$19,900.



Proof that Furno & Harrison can also build in a less-expensive price class is the new split level which has 1,350 sq. ft. on the living and bedroom floors plus another 650 sq. ft. of multipurpose space on the ground level in addition to a basement under the living wing and the two-car garage. At \$19,990 on quarter acre lots this is good value even for Long Island.

"Space under the bedroom wing is too valuable for a garage," says Furno. So the garage was moved outside and the 650 sq. ft. of grade-level area will be left unfinished or can be finished as the owner wishes at an extra cost. It can become two bedrooms and a bath, playroom or studio. Counting the basement, this house has four levels. It is still too early to report public reaction.



IN THIS MONTH'S NEWS

(see pp. 37 through 48)

Despite interest boost, lenders shun FHA, VA market as money pinch makes all rates wobble

HHFA readies 24 legislative proposals, including one to cut down payments on top-priced FHA homes

NAREB asks extra city taxes to finance rehabilitation, offset by quick amortization for rebuilt slum properties

Relocatable housing gets a full-scale trial in Georgia with a stressed-skin plywood house bolted to its foundations

President Eisenhower sheds a little more light on his views on housing policies

HHFA research is killed; public housing death in conference seen

There were signs aplenty as the Independent Offices bill went to conference late last month that a prearranged deal at last would kill public housing—and without the usual prolonged wrangle. The tipoff was the strange behavior of the Senate's anti-public housing coterie. Instead of battling on the floor to whittle down the Senate appropriations committee's recommendation of 35,000 starts for the new fiscal year, they confined themselves to denunciations of the program.

An even more specific hint came from Sen. Everett Dirksen (R, Ill.), who has never had a good word for public housing. Dirksen told the Senate he would not bother trying to amend new starts down to zero. Said he: "I prefer to let the conferees fight it out."

Not even a vote. Because the opposition withheld its fire, the 35,000 starts figure sailed through the Senate without a record vote. The disinclination of Senators to commit themselves was still another indication that a dicker was in the making. Why should they put themselves on the hook when the issue was already settled?

The death formula was simple. The House had sustained the action of its appropriations committee in banning any new starts. The method would be for Senate conferees to agree without fuss.

But if Congress merely adopted the House formula for ending public housing, the door would remain open for 62,000 units in PHA's pipelines to move into construction during the ensuing fiscal year provided they received federal assistance contracts by June 30. Actually, PHA spokesmen insisted that no more than half of the projects in its processing mill could get going during fiscal 1954. The rest, it contended, would be held back by problems of site selection and acquisition and relocating evicted families. Despite PHA's views, it seemed a good bet that the conference committee would write in a statutory limitation.

New study hinted. On the basic question of how the new administration proposed to deal with the public housing muddle, a brief light flickered on the Senate floor. Sen. Leverett Saltonstall (R, Mass.), the appropriations subcommittee chairman in charge of the bill, referred cryptically to a study under way by the new Department of Health, Education and

Welfare. Without elaboration, he said:

"If Mrs. Hobby's department should determine that the housing program should be abandoned, there would be no moral obligation on the part of Congress because of any agreement which might be made in getting housing ready to go through the public housing program. In other words, it is an effort to prevent any feeling on the part of an individual who makes an application that he has any moral or legal understanding with the government."

No questions asked. Surprisingly, the Senate received this bombshell phlegmatically. Did Saltonstall mean the Welfare Department was studying whether to end public housing? There was no demurring, no pressing for details. Other Senators agreed that the government could shut off the program whenever it wanted to as long as there was no interference with projects already in operation or under construction contract.

Before washing public housing out of its hair, the Senate sliced PHA's administrative fund by a flat \$1 million and approved a committee rider aimed at the Los Angeles squabble over its efforts to back out of a 10,000 unit program. To no avail Sen. Saltonstall warned that the administrative cut would not permit the agency to handle more than 15,000 starts a year. It left PHA with an \$8 million budget, still a lot more than the \$4,948,000 allowed by the House.

The so-called "Los Angeles" amendment, a rewrite job on a House-approved compulsory termination clause, had the same purpose in mind—to permit a community to bow out of the program. It called for a 180 day halt after local action rejecting a project. During the breather, the locality and PHA would try to negotiate a reimbursement plan.

FHA funds boosted. The Senate disposed of most other housing sections of the bill with only a ripple of debate. It: ▶ Restored by voice vote \$1½ million cut made in the FHA nonadministrative budget for the operation of its field offices. The House accepted the Budget Bureau's allotment of \$27½ million without challenge but the Senate committee reduced it to \$25 million. FHA Commissioner Guy Hollyday thought he could skim by with the partial restitution without making

crippling reductions in his working force.

► Upheld its committee in deleting House language hampering the slum clearance and urban rehabilitation program. The House had voted stiffer cash contribution requirements: sponsoring localities would have been prohibited from counting supporting facilities like schools or parks toward their one-third share of the land subsidy.

► Reinserted funds for the office of the assistant commissioner for co-ops in FHA.

McCarthy as a liberal. The only fireworks came when Wisconsin's Joe McCarthy laid aside Communist chasing long enough to put in a plug for housing research, which both the House and the Senate committees had cut off without a nickel. "It would be poor economy" to ditch housing research, he insisted. He told the Senate it would think differently if it realized what HHFA's research was doing "toward reducing the cost of the average home and toward the unification of building codes." His amendment to put back \$600,000 for a reduced program (the Eisenhower budget had called for \$800,000) was beaten 62-19. The vote produced strange bedfellows; Senate liberals including Oregon's Wayne Morse flocked to McCarthy's banner.

McCarthy then tried to wheedle a token \$300,000 for the program. He was batted down by a voice vote. Finally, the Senate adopted an amendment, sponsored by Saltonstall, to give research "a decent funeral." It allowed \$125,000 for liquidating the four-year-old activity. This might let HHFA publish research now under way.

Warranty bill would withhold 3% of mortgage for 60 days

Builder concern over the availability of financing for government-backed mortgage loans deepened last month when Rep. William H. Ayres (R, Ohio) introduced his long-threatened bill for a compulsory guarantee for buyers.

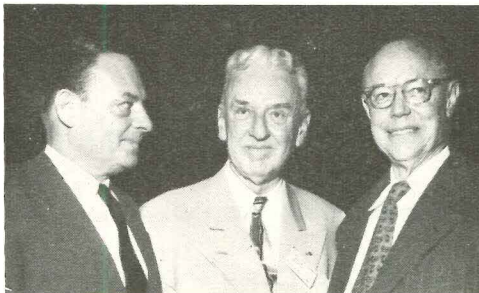
Under the Ayres bill, lenders would be required to withhold 3% of both VA and FHA loans for 60 days after settlement. The money could not be paid until the agency involved certifies that construction was completed "in substantial conformity with the plans and specifications."

The measure was not expected to get far. It faced not only opposition from builders and lenders, but was regarded by FHA and VA as the wrong way of dealing with the problem. However, a "reasonable" guarantee compromise might pass.

NEW PRESIDENT of NHC is Ira Robbins (r), executive vice president of New York Citizens Housing & Planning Council. Others: (front) Lee Johnson, Henry Churchill, Boris Shiskin, (rear) John Lange and Builder Wallace Johnson.



Photos: Walter Bennett



RETIRING PRESIDENT Olin Linn (c) of NHC chats with banquet speakers, Sens. Hennings (D, Mo.) and Taft (R, Ohio). Taft reaffirmed support of public housing, but called it primarily a local and state matter.

Public housers hear call for 'homes instead of projects,' urge aids to private building

With public housing hanging on the ropes, the National Housing Conference, public housing's chief lobby group, met in an atmosphere of deepening worry. Warned Rep. Richard Bolling (D, Mo.), a public housing supporter: "I suspect this program is facing its total and final death next year unless the attitude of the administration and the people is drastically changed."

The 600 delegates to the May 10-11 sessions in Washington's Hotel Statler got little encouragement for public housing's future from the administration. Last year, President Truman made a personal appearance at NHC's annual banquet to thump for construction of 75,000 units a year. This month, President Eisenhower sent the conference a message so cool (p. 38) that its leaders conceded privately it was no help at all in their struggle to save public housing from the Congressional economy drive.

Too slow, too costly? HHFA Administrator Albert M. Cole donned a pair of tortoiseshell spectacles and read the conference a speech in which he argued: "Any fair-minded observer would conclude we need and must develop better means of . . . clearing slums, redeveloping urban areas, providing low rent housing." To a question Cole replied: "If we follow the program we now have it will not be acceptable to Congress in sufficient quantity to do the job" of rebuilding slums for 150 years. Cole also announced that HHFA is going to tighten enforcement of the law requiring rehousing of slum dwellers displaced by urban redevelopment. This could slow down or even block many a pending project.

If public housing was losing popular support, what was the reason? One answer

came from Architect Henry S. Churchill of Philadelphia: "There has been no new thinking, no acceptance of new ideas, no revision of approaches or concepts in the housing movement since 1937." Instead of projects, public housing should be individual homes "that could be accepted as part of the normal city pattern. Projects, in all their hideous conspicuousness, are a prime reason for the contempt in which the housing program is held. It is not that the buildings themselves are any worse architecturally than the stuff around them, but that they stand out from their surroundings like two sore thumbs on a pianist. It is not because they are ugly and dull that arouses animosity. We are quite blind to the squalor and ugliness of our cities, but 'projects' are different. They thus call attention to themselves, and anything that is different is almost certain to be un-American and hateful."

Rehabilitation favored. Besides Rep. Bolling, the conference heard from seven other legislators friendly to public housing, including Sen. Taft. The conference adopted 21 resolutions which:

► Called for a "major new program" of federal aid for urban rehabilitation and neighborhood conservation including federal technical aid and "insurance of home repair and modernization loans on special terms."

► Urged a "special program of mortgage insurance" to speed urban development.

► Asked Congress to create a "national mortgage corporation" in HHFA for co-ops and nonprofit corporations to boost middle-income housing; urged more administrative push behind FHA's cooperative Sec. 213 including "more realistic mortgage ceilings" and advance Fanny May takeouts.

► Endorsed proposed laws to require a warranty from builders of VA and FHA housing.

The fastest-selling houses in the USA

This is the third installment in a grass-roots' survey made each month by HOUSE & HOME to show you the fastest-selling houses in the country and tell you why they set records

Community planning makes a best seller in Pittsburgh

"The market is changing," says Builder Harold Sampson,

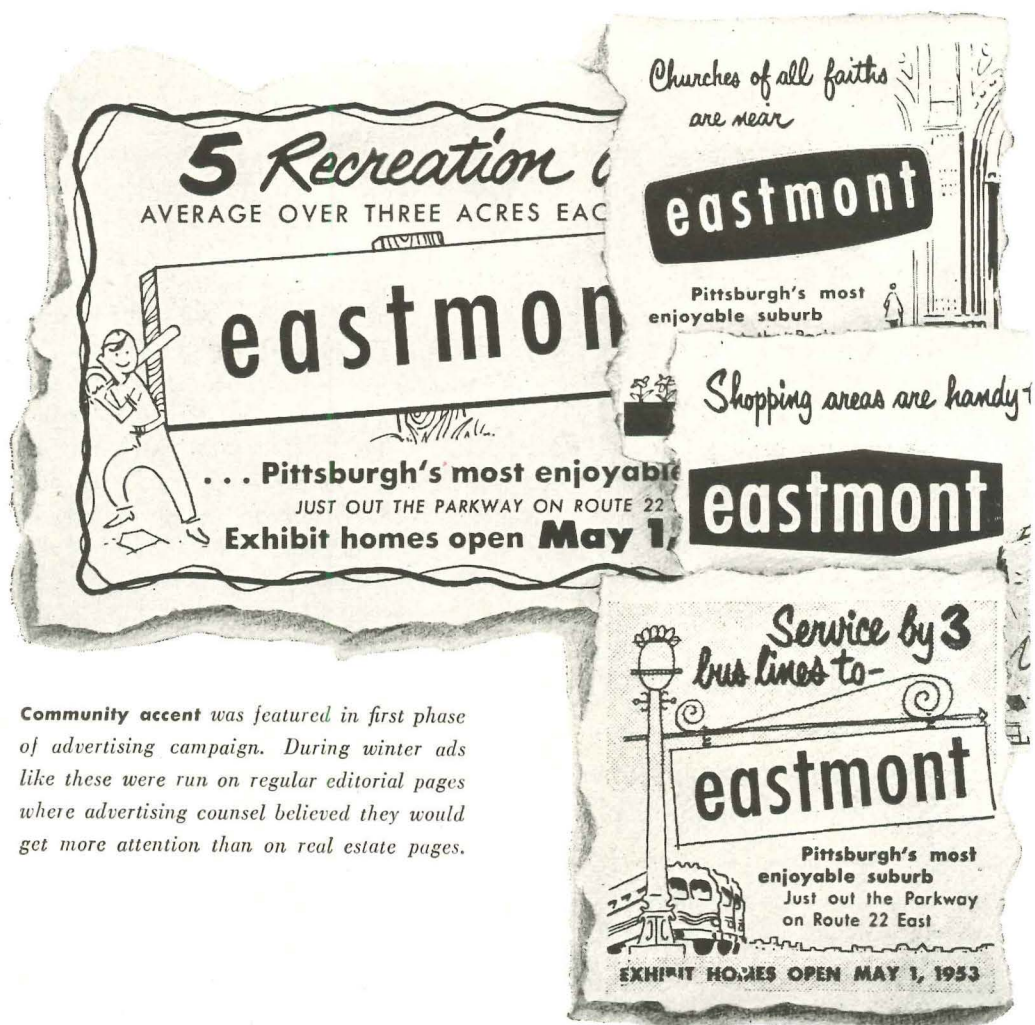
"more eye appeal is needed to sell houses—now we use an architect"

These houses are the fastest sellers in the Pittsburgh area because they were community-planned and because the builder decided to offer new designs.

Last year when sales slumped for Sampson Brothers (western Pennsylvania's biggest builders) they decided to do more about it than grumble about a slushy market. Says young Harold: "In this area builders were building the same house they did 30 years ago. So were we. We asked ourselves why anyone would buy a new house that wasn't *all new*—in design, livability and plan. The automakers don't keep offering the same model year after year. Why should we? That's when we decided to get Architect Richard Benn to design for us."

Popularity poll. Even before they opened their subdivision for public inspection, the Sampsons had made over 80 sales. House shown here proved to be the most popular. Price: \$12,875; area: 855 sq. ft. It accounted for 75% of the sales. Cheapest model, selling for \$10,675, ran last with 12% of sales. A five-room, two-story house at \$11,200 accounted for the rest.

Merchandising with a capital M. The Sampsons didn't stop at new design: they also hired a crackerjack advertising man to help merchandise their houses. Stan Edge figured that Sampson projects amount to small towns in terms of population, decided to accent the community in which the new houses were to be built. All during last winter ads (right) in newspapers, on radio, TV, played up "Eastmont, Pittsburgh's newest, most enjoyable suburb." At first ads did not even mention a house, did not carry the builder's name, nor even a phone number. Says Edge: "People buy neighborhoods as well as houses." East-



Community accent was featured in first phase of advertising campaign. During winter ads like these were run on regular editorial pages where advertising counsel believed they would get more attention than on real estate pages.

mont, Sampsons' major project for '53, was to replace undeveloped suburban hillsides and poor farmland with a community of over 2,000 people, 550 homes.

During the promotion campaign Edge made capital of these facts:

- ▶ The builders would erect a \$250,000 sewage disposal plant at their own expense.
- ▶ They would donate land for a new church.
- ▶ Eastmont was close to shopping centers, handy to downtown Pittsburgh.

▶ A new grade school was proposed for the community.

Says Edge: "Home buyers must be told what good things have been done for them, what advantages are planned for them in a new community."

After announcement of the public opening (following a sneak preview for FHA, VA officials and townspeople in the community), newspaper ads at last began to feature the houses. Final promotional phase will be powerful sales ads.

"The public wants it." Sales success of Eastmont has completely sold the Sampsons on more contemporary design "the magazines feature it; you have ready-made advertising for it". The four Sampson brothers and their associate Russell P. Miller, "the fifth Sampson," believe the public wants contemporary design, "it just needs a little explaining." Says Harold: "It's true that older models don't need as much selling, but in the long run you make more sales with a newer product." Here are some of the techniques that helped sell:

▶ Three furnished models, professionally decorated "in light colors to make small rooms look bigger."

▶ Sales office in a portion of the basement of one model, separated from the unfinished area by a glass-topped partition. It provided a double dividend: prospects could see how easily one part of the basement could be finished off; salesman could keep a wary eye open for prospects touring house and basement.

▶ Photos of every stage of the building operation in the basement of another model.

▶ Cutaway displays of construction. ("Folks really shop around today; they ask a lot of

questions about technical details. We want them to see how we build, welcome their questions.")

▶ Signs to show how houses on these hilly sites lend themselves to additions.

All improvements. The Sampsons have a small building empire, own their own lumber yard, control their own concrete and cinder block plants and roofing and plumbing firms. One big reason why they can offer more house for the money is their ability to develop land at reasonable cost: they own their own modern earth-moving equipment. Lots in their Eastmont subdivision average 7,000 sq. ft., are worth \$1,850 with all improvements, which include water lines, sewage lines, concrete curbs and gutters.

Small builder lessons. Big as their organization is, many of the techniques used by the Sampsons are suitable for the small builder, too. Examples:

▶ Use of powered tools even though much of their lumber is pre-cut in their own shop.

▶ Use of roof trusses. "Soon as you repeat the same house several times, they start to pay off."

▶ Intelligent buying. "We buy in the winter for our entire year's operation. If you don't buy right, you can't sell right."

▶ Preplanning. All phases of the operation from land development to sales are planned in advance. The Sampsons even had studies made on what the average Pittsburgher's income is, design to fit that figure.

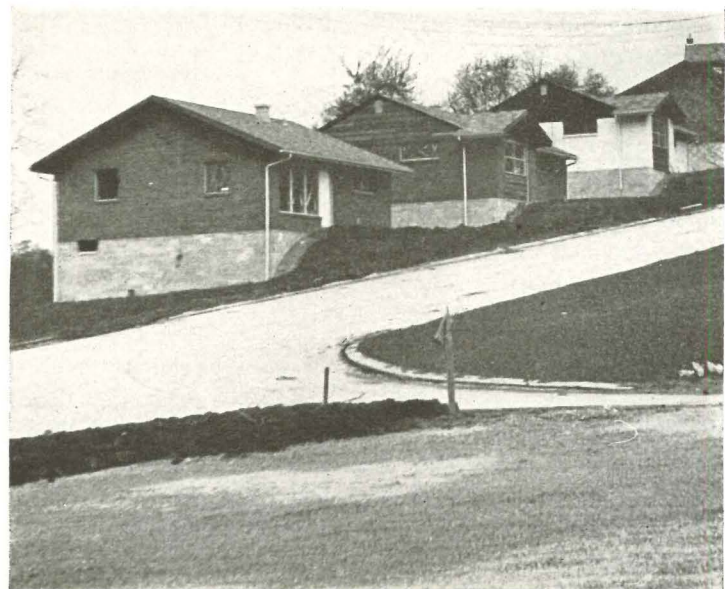
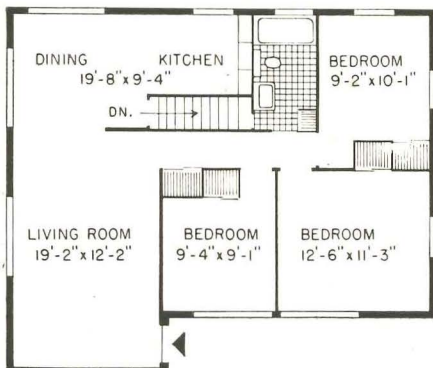
Building techniques. The builders use a 13-stage system to control their operation and their costs, divide the whole development into smaller segments or "projects." The first stage is devoted entirely to planning, the second to foundations for each project, the third to rough framing. Men are trained to do jobs in each phase. No phase is started before the previous stage is complete.

"Piling up of work at the last minute is what really costs money," Fishman says.

Future plans. In the works now is a "junior executive" model to sell around \$15,000 and also to be designed by Architect Dick Benn. On their lower-priced houses the builders recognize buyers are making one of the biggest purchases of their lives, try to approach him in advertising and in design "with dignity."



Sloping terrain permitted basement garages. Since site of development was previously undeveloped land, promotion accented community recreation areas, new gas lines, \$250,000 sewage disposal plant and roll curbs. Wide overhangs, new in this price class, were well liked by buyers. Circulation through living room may be a problem since traffic flow from front door must cross living room to get to the kitchen and bedrooms.



Cleveland fast seller priced below FHA valuation

Precision housing builds efficiently in the nation's

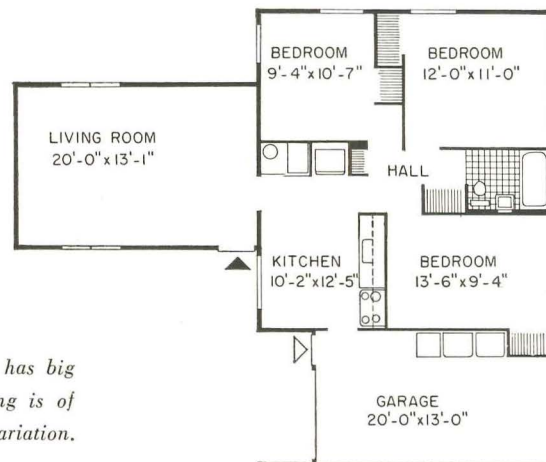
highest building-cost area, can afford to sell contemporary house below valuation

This Cleveland best seller demonstrates how an efficient builder made his house a best seller: he sold from \$500 to \$1,000 below FHA valuation.

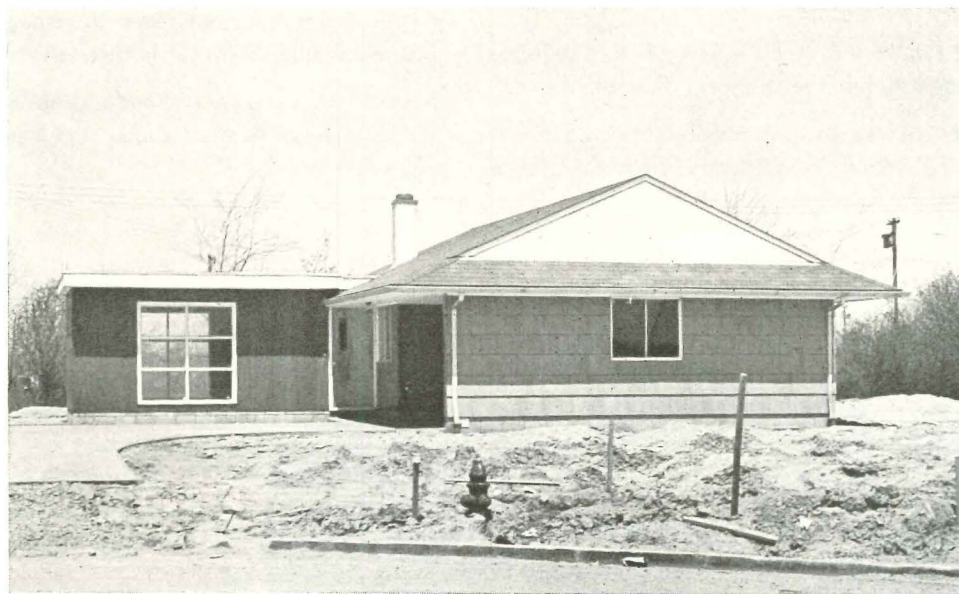
When Maurice J. Fishman, president of Precision, started building his '53 model, he found that local banks wanted as big a down payment on VA as FHA mortgages. This kept most vets out of the market, so Fishman decided to concentrate on FHA sales. His FHA appraisals were as high as \$15,750 on a 980 sq. ft., three-bedroom, attached-garage house, so he sold below the appraisals, took a small markup on the houses. Selling price of model shown here: \$14,750. Because his operation is a model of efficient production in high-cost Cleveland (a recent FHA survey puts it in the top spot), Fishman was able to sell as much as \$1,000 below appraisals and still show a profit. Many builders candidly admit they cannot come within \$1,000 of his costs. Every dollar he reduced his selling price was reflected in a lower FHA down payment. This accounted for 90% of the 120 sales he made since last September. Since the first of the year he has sold over 50, is almost completely sold out on his present project.

Secret of success. Part of the answer to Fishman's lower building costs lies in direct, volume buying. Biggest factor is a smooth-running operation planned from design to completion without waste of labor or materials ("You don't see any scrap lumber lying around our development"). Fishman precuts all his lumber in a millshop located right in the subdivision. He uses roof trusses which alone saved him several hundred dollars per house. He says: "They provide flexibility of room arrangement, allow me to use smaller-dimensioned lumber." Example: he doesn't have to use 2" x 12" ceiling joists across a 15' x 17' room because his outside walls bear all the load; partitions are of 2" x 3"s instead of 2" x 4"s, provide more room in the house.

Production control. Except for licensed subcontracting (plumbing, heating, wiring), his own crews do all the work. He puts in his own streets (buys only the ready-mixed concrete), does his own dry walling, decorating. "I can save enough money by



Projecting living room at side of house has big front and rear windows. Garage overhang is of questionable value except as design variation.



using my own labor force," he says, "to put in a top-quality wall covering of woven fabric."

He uses the tilt-up method for exterior walls but has found he can work more efficiently if he puts sheathing and shingle on when the walls are upright.

"Actually," says Fishman, "precutting is the answer to most high costs. We used to panelize, but every time I saw five or six men drop their tools to haul a panel off a truck, I realized that the cost-savings I had accumulated from working in a jig in a shop were being lost in handling in the field."

Another big time and money saver: streets paved before building. Says Fish-

man: "If you can stay away from temporary roads, you save money."

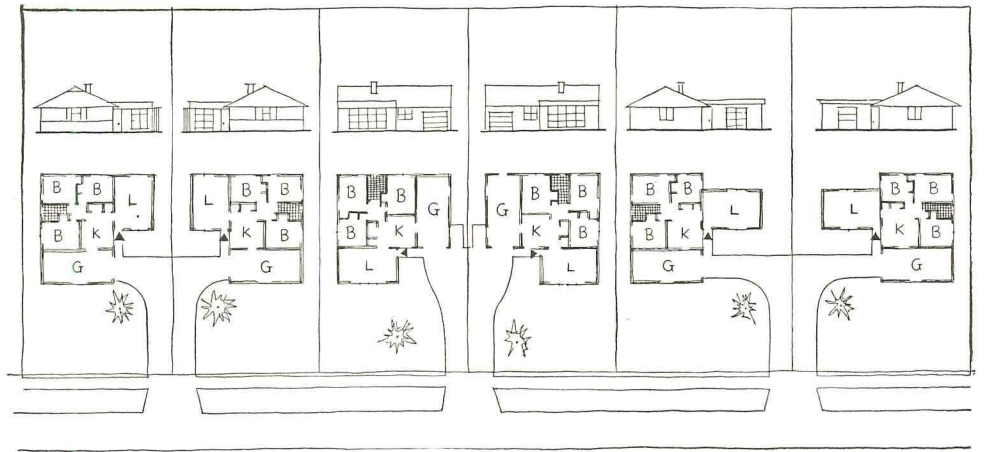
Contemporary transition. Each of the 31½ years he has been building in his Ridgewood Park subdivision, Fishman has moved closer to contemporary design. His project is site planned; streets are curved, cul-de-sacs are used. He has a full-time designer on his staff. "Don Kromer is not yet a registered architect," says Fishman, "but soon will be. He knows this small-house field better than most builders." Kromer's father, Fred H., is a vice president of Precision and general superintendent. Fishman gives both Kromers most of the credit for his top-notch efficiency.

The merchandising pitch. Fishman applies a professional touch to his merchandising, uses a tastefully decorated model, plays up the advantages of sound design in his advertising and promotion: "No more crossing the living room to get to bedroom or bath"; "Large sweeping overhangs for greater summer and winter comfort"; "Protective roof over front entrance"; "Ducts under slab as recommended by University of Illinois."

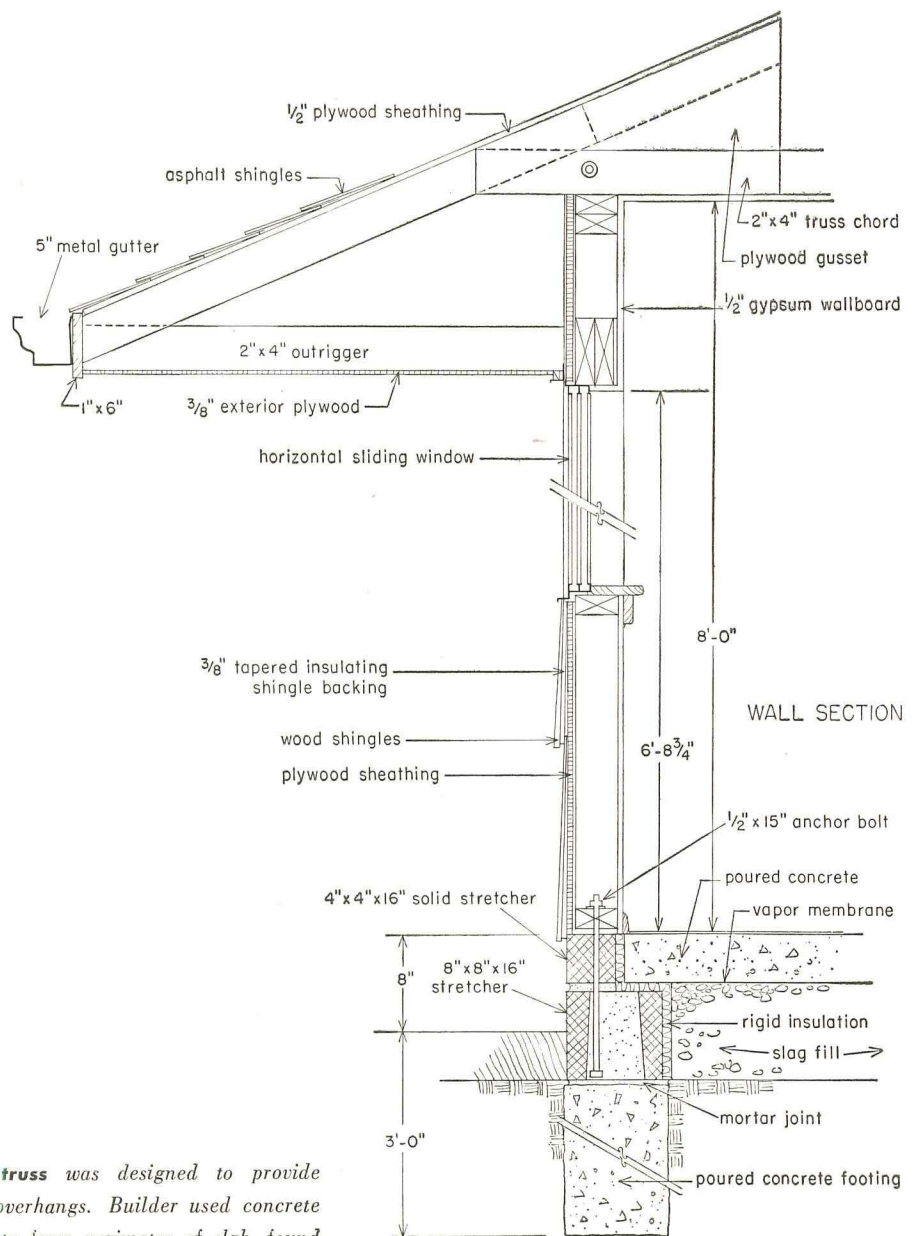
What the customer gets. House shown here sells for \$14,750 on a 52' x 120' lot, for \$15,000 on a 64' x 135' lot. Buyers get an electric garbage disposer, horizontal sliding windows, custom-built kitchen cabinets with plastic tops, birch doors. Disappearing stairway in heated garage leads to overhead storage.

Lessons from Detroit. Like the auto-makers whose mass-production techniques he emulates Fishman brings out a new model each year—either in late summer or early fall. He says: "I'll never be satisfied with the house I am building. Our whole organization is geared to look for ways to improve our design." Now up Precision's sleeve is a rear living-room model.

Because he feared a rear living room would not go over well in Cleveland, Fishman decided on a happy compromise: living room in the present model is both back and front. "That way," says he, "buyers who might have been frightened away by a rear living room, gradually see that the idea has merit." Buyers in Ridgewood Park are used as testing samples. The builder listens to what they like and dislike about houses, believes they give him excellent reactions on how far and in what direction public taste is moving. Says Fishman: "Many of the buyers of our earlier models are our customers for newer models. We'll do anything to make buying a new house easier." One way: trade-ins which accounted for 20 sales this year. A Precision ad reads: "\$100 down will reserve a new home while we sell your property. \$100 returned if we do not sell your house. No obligation." The company is not afraid to tie up new houses, will reserve one from 90 to 120 days while the sales division or a prospect tries to sell the old house.



Doubled-up driveways provide wider runways, yet keep costs down. Living room was turned several ways to provide exterior variations.



Roof truss was designed to provide wide overhangs. Builder used concrete block to form perimeter of slab, found they could be layed cheaper than wood or steel forms and did not need to be dismantled after pour.

In Allentown, Pa., solid bargain in solid brick

Builders Pressman and Hauser's Oxford Park houses were the most house for the money in town. Result: a complete sellout

There are three paramount reasons why these houses were a complete sellout in this medium-size Pennsylvania town:

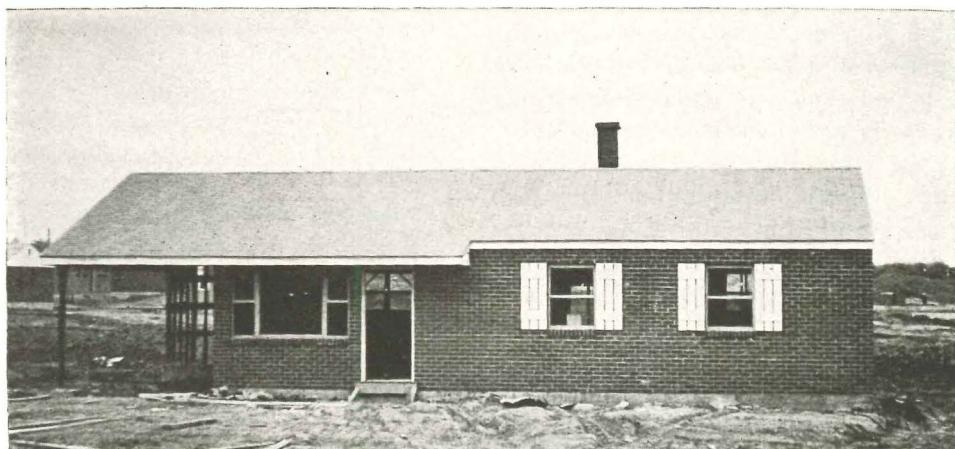
1. They reflect good architect-builder collaboration. "An architect is worth every cent a builder pays him," say Builders Harry Pressman and Louis Hauser. "In Jack Swerman we have one of the finest. He details everything down to the last bolt in a truss and leaves nothing to the whim or imagination of the workmen. He keeps us up on the latest building techniques. And he doesn't really cost us anything because he helped us cut building costs a lot more than we pay him."

2. They were the biggest value in town because they were built to take advantage of cost-saving techniques: trusses for roofs, the one-room principle of applying wall-board on both ceiling and side walls before partitioning. Price of the 960 sq. ft. house shown here: \$11,690; on a slightly modified house without carport: \$10,890.

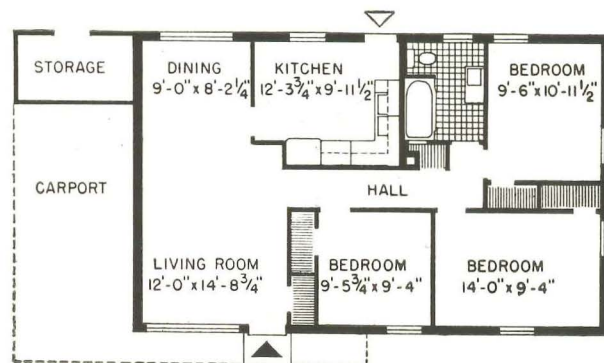
3. They are of solid masonry construction, a "must" for most buyers in Dutch Pennsylvania. Many other builders who migrated to Allentown from Long Island took their frame-and-shingle construction habits with them. The builders, working in Allentown for years, guessed their brick houses would have more appeal. They were right. They built 91 houses of brick last year, sold them all, sold 104 more this year and plan to build more of the same. The few houses that were left before announcement of the 1/2% VA rate increase were sold almost immediately afterward.

Collaboration pays off. Last year the builders used conventional techniques. After conferring with Architect Swerman they decided to use roof trusses and complete most of the interior before partitioning to save money. Pressman believes they easily saved \$100 per house by doing so—\$40 in labor (two mandays saved per house), \$60 in material (trusses are 24" o.c., are made of 2" x 4"s; conventional roof framing was of 2" x 6"s 16" o.c.).

Big help in present construction techniques, say builder and architect, was "the 10 ways to save 10% in construction costs article" (H&H, Jan. '53, p. 152).



Roof overhang wisely extends over big living-room window. Storage in rear of garage unfortunately forces traffic around it to kitchen door in rear. Note compartmentalized fixtures in bathroom, pass-through closet.



Cost comparison. In last year's smaller house (price: \$10,690), customers complained of too-high fuel bills, so the builders switched to an oil-fired, hot-water system that costs more to install. They make capital of this in advertising to thrifty Pennsylvania Dutch buyers. Since they wanted to add new sales appeals to houses, yet keep prices in line with last year's models, they had to find ways to make up for a packaged chimney that cost almost twice as much for an oil-fired system as for a gas-fired system, to pay for a de luxe electric range and to add all-aluminum windows with self-storing screens. They feel that the additional \$200 customers pay for the comparable '53 house is more than accounted for in these features and a bigger house. "We couldn't have offered this much house if we hadn't found ways to cut costs," says Pressman.

Truss dividend. Because of the use of roof trusses and non-loadbearing partitions,

customers can choose the sizes of rooms they desire at no extra cost simply by requesting that a wall be moved to make a room bigger or smaller. This accounted for 13 sales.

All walls are papered at VA insistence. Dry wall is sized so paper can be removed. When buyers of last year's models complained of a 12" wide fascia board ("too much to paint"), the builders switched to a 6" fascia.

Keeping up with the times. They were responsible for introducing the low-pitched roof to Allentown, decided on it when they started to build three-bedroom houses. "The average family has two youngsters and needs three bedrooms," says Pressman. "I think an expansion attic is too hot and not as livable as a ground-floor bedroom."

Although they were dubious at first of building a house with a carport, they soon found that half of the buyers wanted them. Houses with carports accounted for 50% of sales.

Four bedrooms, two baths for \$9,000 in Phoenix

F & S Construction Co. (Sam Hoffman) offers

1,290 sq. ft. houses in the toughest of all US homebuilding markets

These houses are the fastest sellers in Phoenix because they are literally the most house for the money and because controversial Sam Hoffman is willing to take such a slender profit margin on each house.

In rough-and-tumble Phoenix several builders went broke because they could not stand the razor-keen competition (see H&H, Apr. '52, p. 114). Four bedrooms and two baths at \$9,000 indicate what a builder must now offer in this area to stay ahead of competition. Houses are of 4" x 8" x 16" concrete blocks, typical of this area.

Vying with the Levitts for position as the nation's No. 1 builder, Hoffman plans at least 4,000 houses this year. His building philosophy: "Give the customer as much as possible for as little as possible. Design so a family can add rooms as it gets more money."

Hundred-house sales. In his latest and greatest bargain, though, Hoffman gives most families all the rooms they need. He built only one model of his four-bedroom "Valencia," but has already made 100 sales, most on VA no-down-payment loans. Hoffman does not usually start construction until he has sold at least 100 houses so he can operate on a mass-produced basis. In the past he has used down payments to start construction, freely admits it. With 100 sales to his credit, he shoots for a

five-completions-a-day goal. If he builds at that rate and there is no letup in his schedule over an extended period, he says he makes \$500 per house. As the number of houses built each day goes down, so do Sam's profits. He confidently expects to complete 100 houses within five weeks, is almost invariably helped by the Arizona weather: an average of only five working days lost each year.

Buyers' market. "No doubt about it," says Hoffman, "this is a buyers' market." But in his far-flung operation throughout the far west (he pulled up stakes in Cleveland, the nation's highest-cost building area), he says he has built 1,500 houses so far this year, has 2,100 under construction in Phoenix, Denver and Tucson. Soon he says he will hit Las Vegas and Dallas, has already built in Salt Lake City, Pueblo, Albuquerque.

In Phoenix, the \$9,000 Valencia (also for sale in Albuquerque at the same price) sells faster than any of the houses at \$10,000 or \$10,500 prices at which his closest competitors offer four bedrooms.

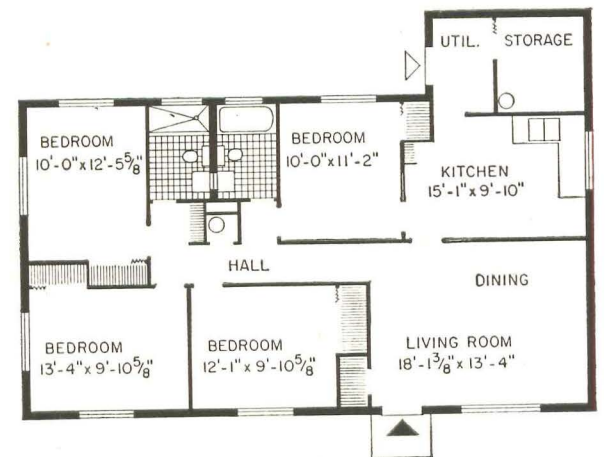
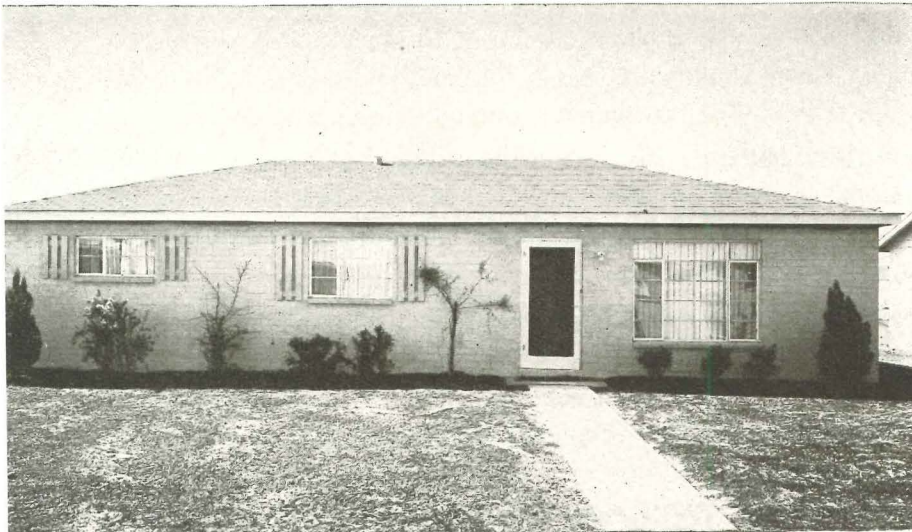
Big market. Hoffman quit building in Phoenix at one time because he believed the market was too thin to permit his 100-house operating principle. But the recent boom in sales may keep him around even beyond his five-week building schedule.

The cream seems to have been skimmed from the \$7,000, \$8,000, and under market for the present. Best values are put in the "higher-price" (\$9,000 to \$13,000) houses. One builder even installs refrigerated cooling in a \$13,000 house.

Wave of the future. Hoffman and other western builders have definitely sold the public on the idea that no family need get along with only one bathroom. To compete for the newly educated-to-two-baths public, even builders of two-bedroom houses in Hoffman-house areas are putting in at least an extra half-bath—toilet and lavatory—and builders of three- or four-bedroom houses just don't consider not putting in the extra bath. Hoffman's "1 $\frac{3}{4}$ " bath house is really a two-bath house. Besides the toilet and washbasin in each bath, master bath gets a shower over tub, "3/4" bath has shower, no tub.

Most builders do not build within the Phoenix city limits for two reasons: 1) land costs are a little higher in town; 2) city building inspectors are very rigid on construction codes.

Building techniques. Hoffman has his own woodworking shop where he makes cabinets, window frames and does his own precutting. He subs plumbing, heating, electrical work, handles his own land improvements with his own equipment.



Builder's promotional theme was: "Wouldn't it be wonderful to have two baths and an extra room?" Indoor-outdoor living may have been improved by plan switch to rear living room.

On the following 9 pages:

How to plan the open kitchen

The kitchen as a family room

10 steps to a better kitchen

15 equipment and storage ideas

Blueprint for tomorrow's kitchen



The Architects Collaborative. © Ezra Stoller

The kitchen opens up:

To the average housewife, the kitchen is the most important room in the house. And since she is the one who casts the deciding vote when the family buys, her current thinking about kitchens means a lot to builders and architects. What does she want in her next kitchen?

She wants control of the house. She wants a command post, not a foxhole. She wants to talk to people while working, watch her children playing indoors or outdoors, keep an eye on the front door. So, she takes naturally to a well-planned “open” kitchen or “living” kitchen. Women all over the US who saw the Trade Secrets houses were sold on the sociability and the control their open kitchens offered.

She wants more space. Given it, she will have a dining table in the kitchen—and not just an undersized, cramped “breakfast nook,” either. If a corner is designed for it, she will bring in a rocker or an easy chair for her five-minute breaks, and a play pen so she can watch the baby and the roast at the same time. Given a bookshelf, a telephone jack and a writing surface, she will be able to do her household officework in the kitchen, where it is most convenient. Given enough space, her husband and older children can come in to help, talk, or just “be there”—without getting in her way.

She wants a convenient layout. She doesn't like to step, stoop, stretch, squint or scratch, bump her head on open cabinet doors or catch her apron on knobs or sharp corners. She has a mixer, toaster and clock and wants built-in storage and electric outlets for them—in the right places.

She wants comfort and good looks. Woman does not live by gadgets alone. She needs bigger windows, cheerful colors and textures, neat built-in lines. She prefers natural wood or colored cabinets to white, tough plastic work counters and springy floors. She needs good lighting at each work surface, a new and more efficient ventilating fan, a sit-down work counter.

She knows what she wants. Will your next kitchen give it to her?

The open kitchen

—6 ways to make it both practical and presentable

The kitchen is losing one of its four walls. In many new houses it is merging with the dining area and the living room, so that the once-isolated housewife can be with her family again, so that today's smaller house can seem bigger and less boxed-up inside.

This means that architects and builders are having to plan their kitchens even more carefully than before, because the open kitchen is often on display from the living area, sometimes actually part of it. It means that new rules have been added to the old ones:

Hide the appliances. Few people want a gleaming white refrigerator sharing their living room, or their stove and dishwasher staring at them while they eat or entertain. Place the appliances on your floor plan before you build, and visualize yourself in the living room. What kind of kitchen will you see from there?

Hide the mess. If sink or counter-tops are in view, dirty dishes, pots and pans will be too. These can be screened out from the dining area by an 8-12" high baffle above the back of the counter, or by sliding doors, blinds or curtains that can be closed at will.

Use "living-room" colors. The over-all color scheme of the open kitchen should be compatible with that of adjoining rooms. This means white cabinets will give way to gray and buff-colored ones, to yellows, greens, blues and natural wood finishes, all of which are on the market and gaining popularity.

Restudy the ventilation problem. Despite the ubiquitous pressure cooker, there will be plenty of kitchen odors drifting out into the living areas unless you really catch them with a well-placed vent fan (details, p. 133).

Cut down the noise. The open kitchen intensifies the problem of clatter from pots, dishes, dishwashers, mixers, etc. An acoustical ceiling has helped solve this in many a kitchen. Acoustical board and tile now come with washable surfaces, colors and patterns.

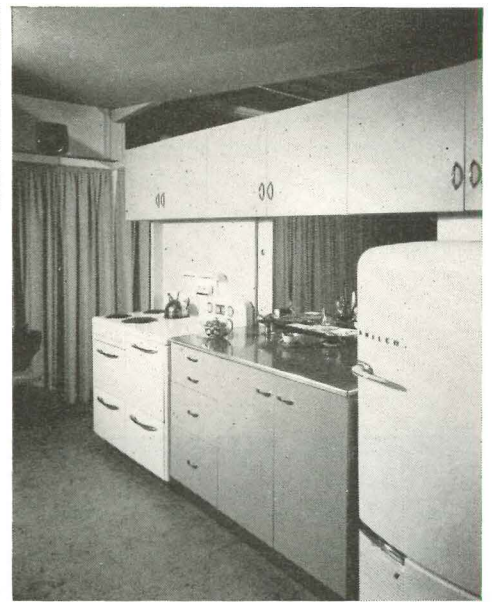
Use the same materials in living room and kitchen. To unify the open kitchen with its neighboring rooms, choose floor, wall and ceiling coverings that are handsome enough for the living room, tough and washable enough for the kitchen. If these surfaces run uninterrupted from one space to the next, a greater sense of spaciousness often will result.

To cut costs in your kitchen:

- ▶ Keep plumbing runs short—back the kitchen's wet wall up against the bathroom's wet wall, if the plan logically permits it.
- ▶ Keep heavy-wiring runs short—locate range, refrigerator, washers and driers as close to the panel box as possible; at about \$1.50 per lin. ft., you can save as much as \$15-\$20 of armored cable.
- ▶ Keep fan ducts short—place the range on the outside wall if possible; then the exhaust fan directly over the range will require little or no ductwork to reach outside. A smaller, less expensive fan properly placed without long ducts (which cut efficiency) can do the same job as a big one in the wrong place.
- ▶ For a list of equipment that can be included in the package-mortgage kitchen see H&H, Feb. '53, p. 79.

On the next pages are many other ways to cut costs, and many ideas for making a kitchen more efficient, pleasant and salable.

Photo: Graham Warrington



Appliances hidden by being placed on either side of dining-room pass-through, which has sliding door. Architect: Robert McKee, Vancouver.



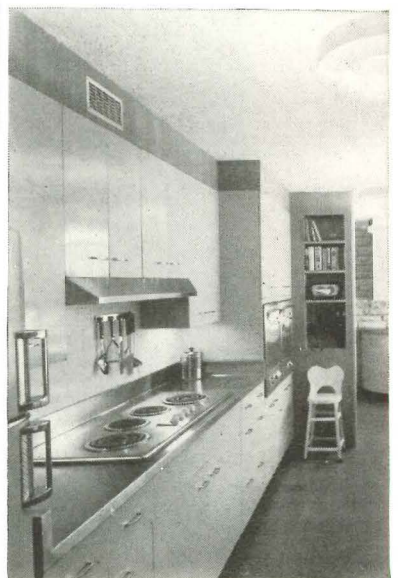
Dorothy C. Mears

Clutter is concealed in this Trade Secrets house kitchen by a low baffle in front of sink and range burners, wide enough for resting plates before serving. Architect: Ned Cole. Below, similar baffle counter, with two-way cabinets above, refrigerator concealed in white cabinet at right. Architects: Byles, Weston & Rudolph.



James H. Reed

Lionel Freedman

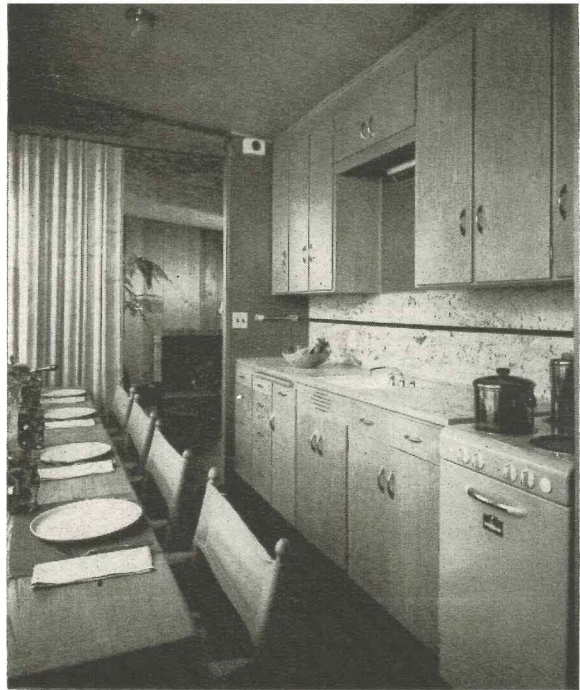


The ventilation problem, more urgent in open kitchens, can be solved by a hood and fan directly over burners, secondary intake near ceiling. Architect: A. L. Aydelott.

The living kitchen is coming back out of the past, and housewives and sociologists are rejoicing. The three kitchens pictured on this page are modern equivalents of our old colonial kitchens, where the mother got both help and companionship from the rest of the family in her daily chores. Today's housewife is once again the center of family life, no longer in solitary confinement.

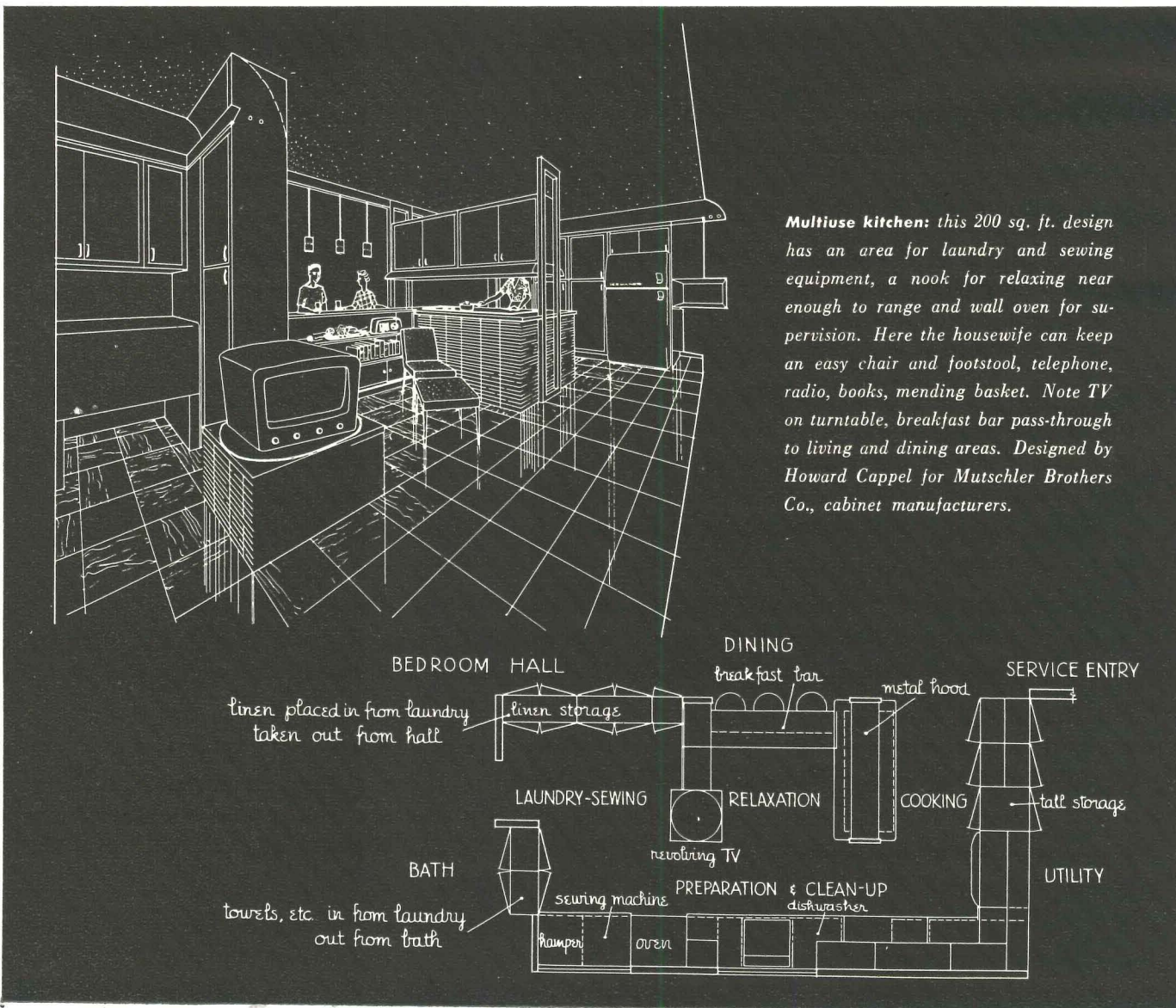


Dearborn, Mass.



Dining kitchen: here kitchen and dining space for ten are in the same room. Natural wood cabinets, pastel range blend into decor; bamboo curtain screens kitchen from living room, background. Architects: Chiarelli & Kirk.

Exhibit kitchen built by the hardwood industry: work area at left is an efficient U-shape, with special drawer-type refrigerator built into wall of striped paldao wood next to gas oven. Sink is under window; gas burners are set in myrtle plywood counter-top, vent hood suspended above. Note dining corner, stone barbecue.



10 steps to a better kitchen

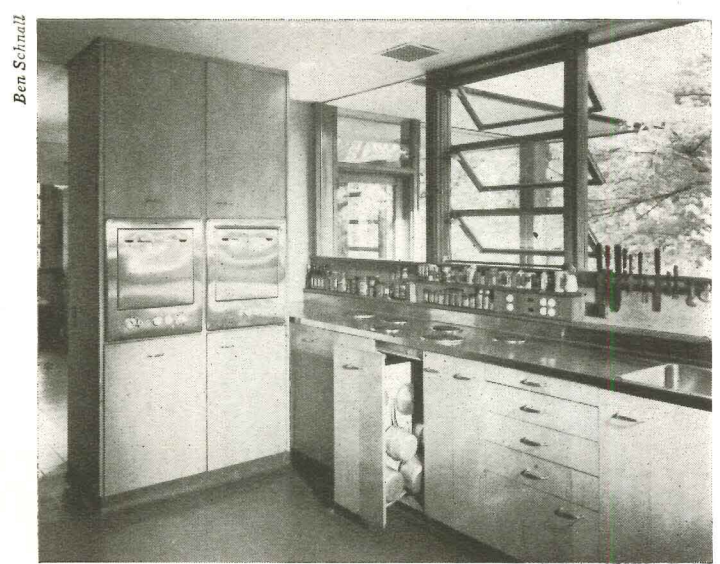
1. A big window or windows: to light work surfaces better and prevent the housewife from feeling shut in. This window should look out on the children's outdoor play area, and the front-door approach if possible. If it faces west or south it should be protected against hot summer sun (which will overheat the already warm kitchen) by properly placed roof overhangs, trees, sun louvers or heat-absorbent glass. If the window goes up to the top plate, eliminating headers and cripples above the window frame, it can be cheaper and at the same time let in more light.

2. Good artificial light: at least 40 foot-candles on work surfaces, range and sink, plus diffuse general lighting of 20 foot-candles. Avoid eyestrain producers: shadows falling on worktops, severe contrasts of light and dark, glare from highly polished materials. Local utility companies will often send an illumination engineer to work out particular lighting problems without charge. Use "warm" rather than "cold" fluorescent tubes; they give less harsh illumination, bring out the natural color of foods, look better from the living room if the kitchen is open. Fluorescents can be mounted under wall cabinets for direct work-surface lighting, above cabinets for indirect ceiling illumination. Some wall cabinets come with fixtures built into their undersides. In an open kitchen with incandescent lighting, a rheostat may be installed at the switch for \$10-12 so that kitchen lights may be dimmed during meals and the dining table spotlighted by a ceiling fixture.

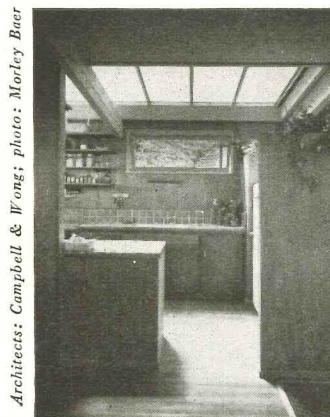
3. Mechanical ventilation: an exhaust fan should be placed directly over the range, preferably with a hood. Best location for an unhooded fan is the ceiling directly above the range; if it is mounted too low on the wall it will have to be more powerful to pull the rapidly rising fumes sideways and out. For maximum efficiency, fan ducts to the outside should be as short as possible, without turns and elbows that cut down air speed. (Here is a good argument for putting the range against an outside wall.) It is generally agreed that a fan should have a capacity of at least 300 cfm to keep cooking odors from spreading through the house, to minimize "greasing up" of walls and ceiling and to remove excessive cooking heat. Ideally, there should be a complete change of kitchen air every 3 to 3½ minutes. To determine the right size fan (assuming it is located over the range), take the cube of the kitchen, deduct 20% to find the actual air content, divide this by 3½. The resulting figure is the number of cubic feet per minute the fan should be capable of pulling.

4. Efficient plumbing: pipe runs can be kept short by having kitchen and bath share a wet wall. Hot water at the sink should be between 115° and 120° F., have between 15 and 20 psi pressure. Electric dishwashers, which require about 7 gals. of 160° water per cycle, usually should have a special line to the hot water heater. Most laundry driers must be vented to the outdoors, and so are best placed on an outside wall.

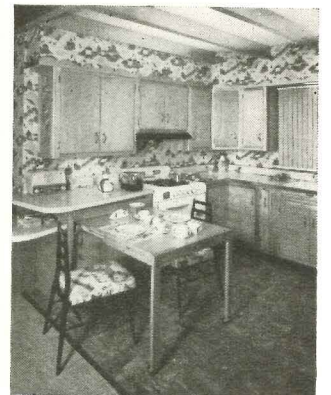
5. Adequate wiring: most kitchens are underwired, with only one appliance circuit of No. 12 wire for refrigerator, clock and two convenience outlets. Such a circuit has a capacity of about 2,000 watts, which a toaster and coffeemaker will use up by themselves. Every kitchen should have at least *two* appliance circuits of No. 12 wire or larger, with outlets at counter-top height for the many small appliances used in the modern kitchen. A plug-in strip run-



Good natural light and view come from extending window the length of room and up to ceiling. Note open spice racks above burners, pull-out pot storage, magnetic knife rack, stainless-steel counter. Architect: Walker Field.

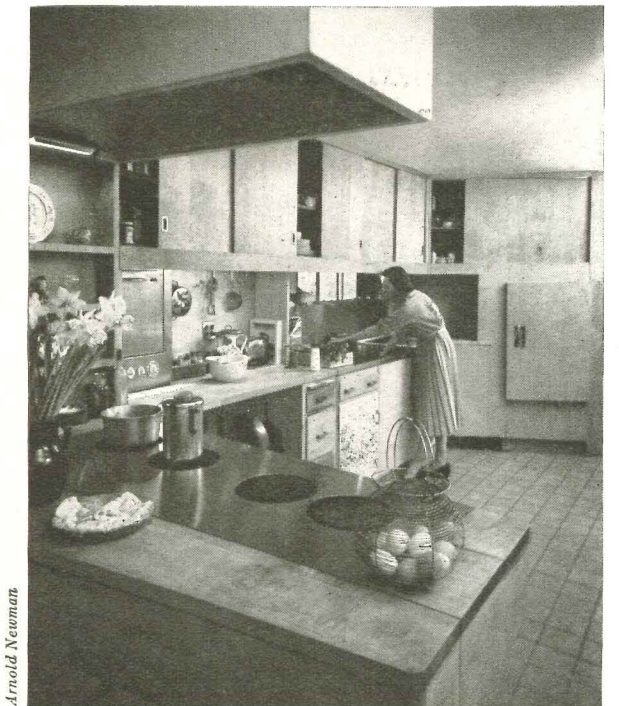


Architects: Campbell & Wong; photo: Morley Baer



Mutschler Bros.

A skylight plus equivalent night lighting, above, or a luminous plastic ceiling, right, can give any kitchen good diffuse light. Note pull-out dining or work table.



Arnold Newman

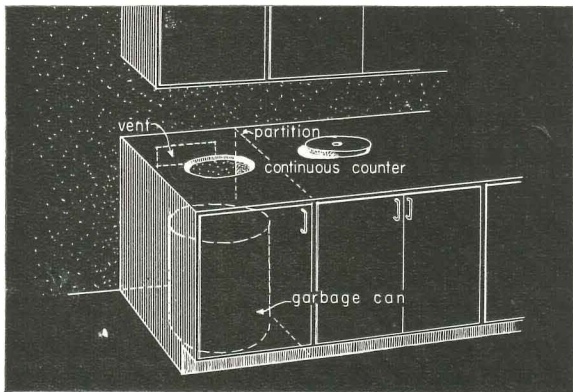
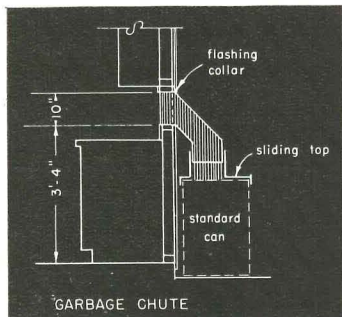
Big hood over counter-top range burners traps cooking fumes until exhaust fan can pull them outdoors. In background, facing dining area, is conventional refrigerator built in and paneled over. Architect: Oskar Stonorov.

KITCHENS



Ernest Braun

Garbage chute (stainless steel door in photo above) is set between sink and range, saves trips to outside garbage can. Architect: George Rockrise.



Inside garbage pail can be located in base cabinet under hole in counter-top. It should have a flush, bevel-edged lid with finger hole, partition and outside vent for odors.

Curtis Co.



Secondary eating space in the kitchen can be supplied by a breakfast counter, without loss of cabinet space above. Natural wood cabinets are all manufacturer's stock units.

ning under the wall cabinets is an inexpensive way of providing these. A telephone extension, or at least a telephone jack, increases the comfort and efficiency of the kitchen.

6. Garbage disposal: sink-installed garbage grinders are becoming standard equipment in more and more localities; surveys in Los Angeles show they have more actual sales appeal than any other feature in the house. Installation points: if they are used in connection with septic tanks, the tank must be 50% larger than for sewage alone and the line should be equipped with a grease interceptor. Grinders should not be connected to a fixture drain having a back vent, but should be separately trapped; when used in a double sink they should have an individual drain to the stack. (For other methods of garbage disposal, see illustrations, left.)

7. Adequate eating space: in the small house, it is well to provide one adequate eating space rather than trying to offer two, both of them too small to be really comfortable. In the larger house, where there is room for eating space in both kitchen and living room, the tables might be designed and located for alternate uses: playing cards, doing homework, making out menus, telephoning, etc.

8. Safety: all kitchen installations should be checked for possible hazards. Sharp, jutting corners and protruding knobs should be kept to a minimum, and swinging-door overhead cabinets should not be mounted where they are apt to be left open, bump heads.

9. Comfort: a chair and footrest at the sink. More work is done here than at any other point in the kitchen, and much of it can be done sitting down. Some stock lines of base cabinets offer filler pieces that make counter-top heights adjustable to the size of the individual woman.

10. Bonus features for added sales appeal: a built-in mechanical rotisserie; an indoor barbecue pit; an ozone purifier to cut odors; a kitchen scale for weighing meats, etc.; a pass-through counter to an outdoor dining terrace; an infrared range lamp for quick cooking of small portions; a built-in wall radio.

Test your kitchen

Against these dimensional standards (drawn from research by Illinois and Cornell Universities):

Distances between appliances: 4-7' between refrigerator and sink; 4-6' between sink and range; 4-9' between range and refrigerator. Sum of this work triangle should not exceed 22', and there should be no traffic through it. Leave 4' clearance for passage between appliances and cabinets which face each other.

Storage space:		Total shelf space,	Total shelf space,
No. of bedrooms	Persons	wall cabinets	base cabinets
2	3	30 sq. ft.	4½-6 lin. ft.
3	4	36	6-7½
4	5	42	7½-9

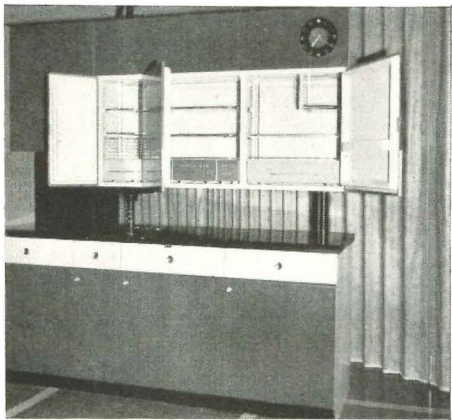
No shelf should be higher than 72" from the floor. Therefore, wall cabinets should be not more than 15" above counters.

Counter space should be 14-20" deep, with these lengths: 15" beside refrigerator; 36" to right of sink, 30" to left of sink; 24" next to range; 36" somewhere in the kitchen layout for mixing.

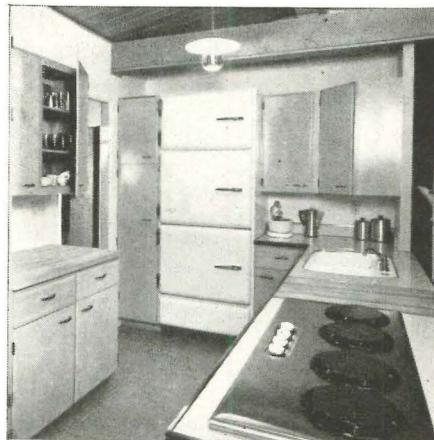
Counter heights: 32" at mix center; 38½" at sink center (bottom of sink bowl at 32"); 36" at range center; 28" for a kitchen planning desk. Toe space should be at least 4" deep, 3" high.

15 equipment and storage ideas

Most of the pictures on this and the following two pages are of custom kitchen installations. *But nearly every idea in these pictures is offered as optional equipment in the stock lines of several manufacturers.* Run through their catalogues and you will see such stock "extras" as: spin shelves, towel-rack drawers, pull-out vegetable bins, planning desks, vertical tray compartments, glass cabinets, two-way cabinets, vertical drawer-racks for utensils, recessed outlets for hanging kitchen clocks, swing-up mixer cabinets, banks of shallow linen and silver drawers, chopping boards of the counter-top insert or pullout types.



1. **Built-in refrigerator:** either a stock model with front spray painted (below) or a special unit such as the Davis, with freezer, dry storage, pastel fronts (right). Future possibility is GE's experimental hanging model (above).



Lattimer Studio



Graham Warrington

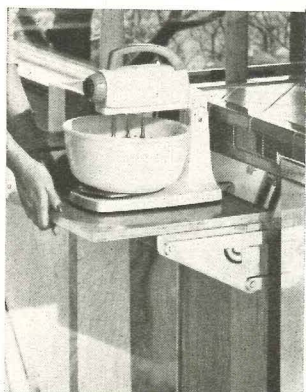
2. **Hanging cabinets:** these can provide a pass-through underneath, general spaciousness without loss of upper-level storage area, accessibility from both sides. Other good ideas: sliding glass doors that show at a glance where stored items are (and stay out of the way when open); fluorescent tubes under cabinets to light work surfaces properly; baffle-board between range and eating counter; slots for tray storage, foreground; continuous counter-tops of tough plastic. Architect: C. B. K. Van Norman, Vancouver.

Richard Fish



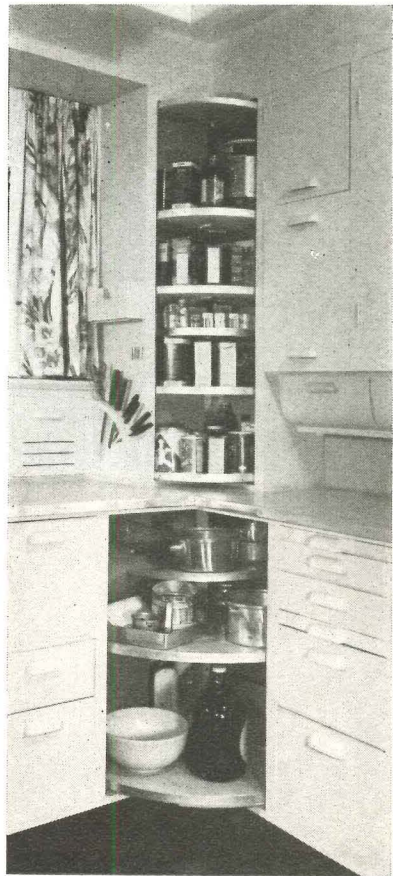
3. **Pass-through counter,** with sliding door to close it off from dining room (center background), is well located between range burners and oven for easy assembling and serving of hot food. Other features in this luxury kitchen can be adapted to less elaborate ones, e.g.: glass-fronted cabinets, acoustical tile ceiling, wall ovens and counter-top burners, wood paneling, down lighting directly over work centers, chopping board set into counter, built-in receptacle that can be emptied from outside, telephone and desk space (foreground). Architects: Riggs & Shaw.

LIFE: F. Lyon



4. Mixer storage: almost all housewives have them, so why not provide outlets and "disappearing" stands at the mix center? Pivot shelves (top) conceal mixers and toasters when not in use; cabinet unit has swing-up shelf on springs.

LIFE: Jim Whitmore



5. Spin shelves (left): one of several types of pivoted storage cabinets that make full use of kitchen corners. Turntables should have raised edges to keep items from falling off.



6. Glass fronts, open shelves: no hunting around for an elusive can of beans. A few open shelves are handy for often-used items. Note knobless drawers below. Architect: A. G. Odell Jr.

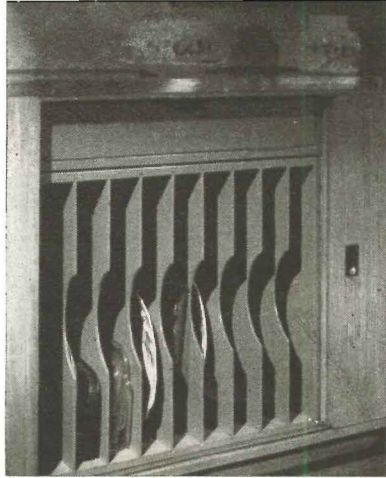
LIFE: Jim Whitmore



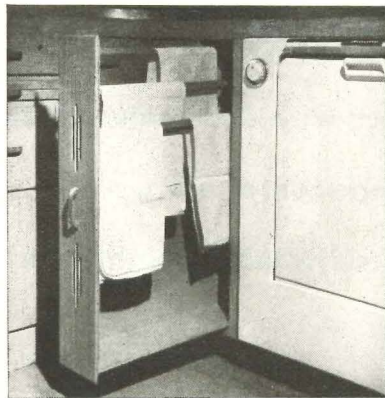
7. Sit-down work space (far left): a chair and a wide-enough knee hole. Note that base cabinets have drawers, not shelves, so housewife can reach back items easily.



8. Over-sink storage: for potatoes, onions, paring knives, detergents, etc., all of which are first used at the sink. Vegetable bins should have vents to outside.



9. **Tray rack:** removable vertical dividers for different-width trays, bowls, platters; near serve center.



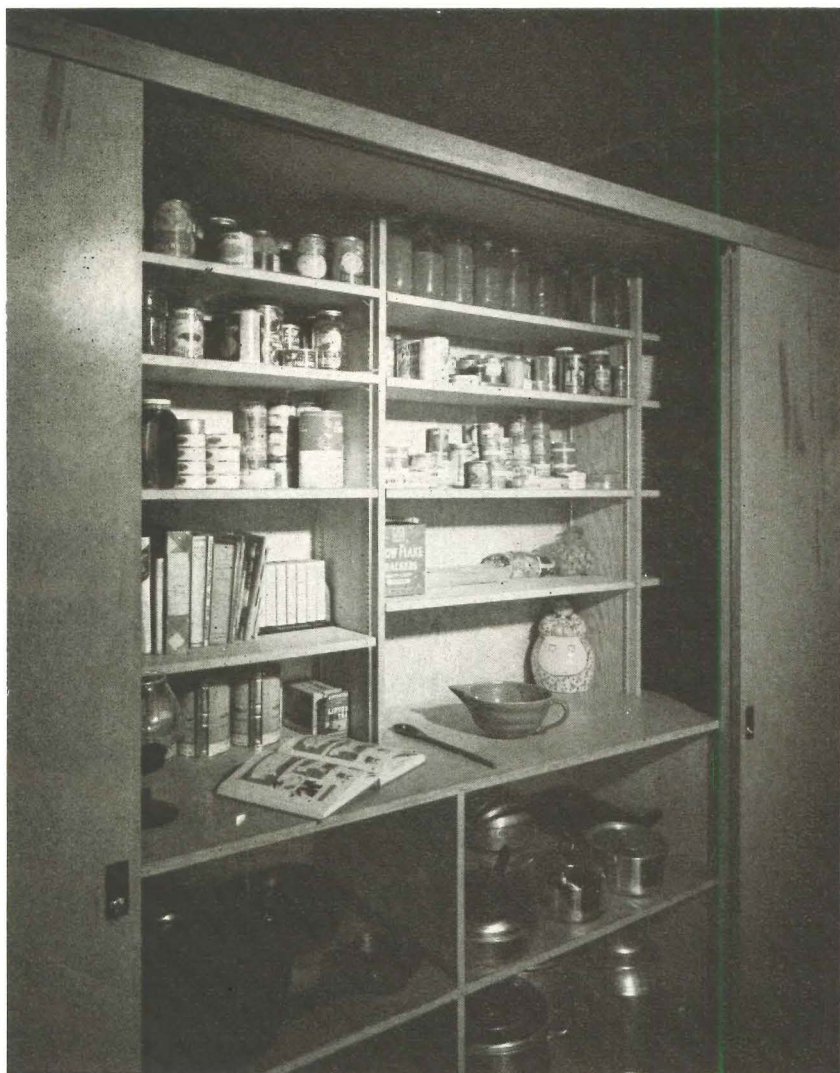
10. **Towel rack:** a pull-out unit out of housewife's way, vented, and warmed by heat from dishwasher.



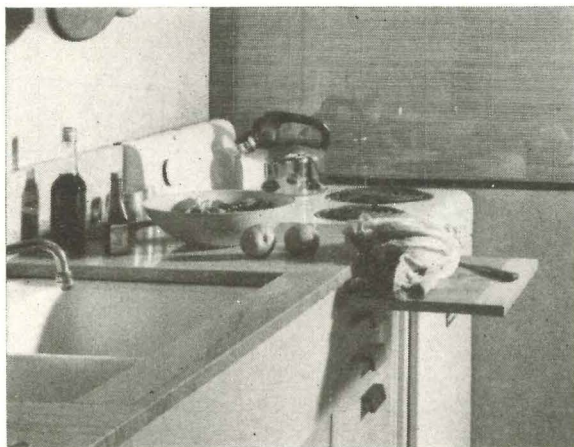
11. **Linen, silver drawers:** wide, shallow pull-outs for table linens; upper ones compartmented for silver.

LIFE: F. Lyon

Dearborn-Massar

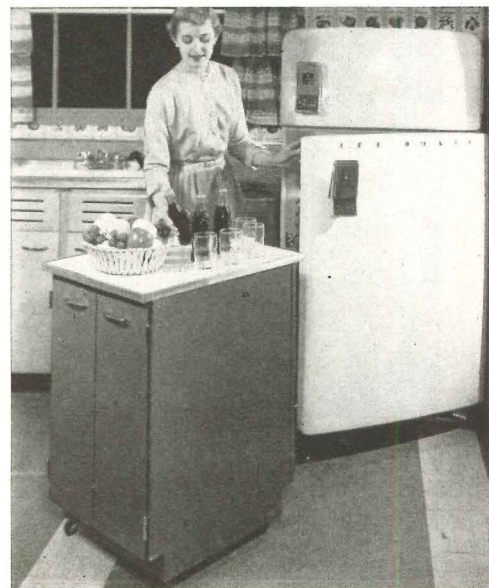


13. **Kitchen storage wall:** like Pullman kitchen, can be totally concealed by sliding doors when not in use, tidy for open kitchens. Architect: Paul Thiry.



12. **Pull-out board:** serves as chopping board and an extra sit-down work surface; should be near sink, 26"-30" from floor, made of hardwood such as maple.

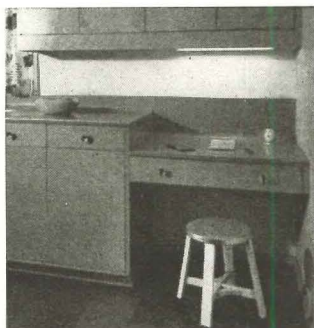
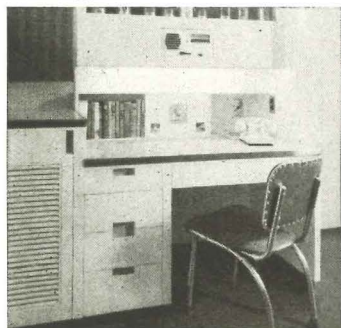
Kitchen Maid Corp.



15. **Serving cart:** can be used for assembling the meal, serving, clearing dishes, and as a movable work surface. Some carts have cabinets, others open shelves; some fit flush with kitchen counter when not in use. Desirable: large rubber tires, low thresholds between kitchen, dining area.

F. R. Dapprich

G. Warrington



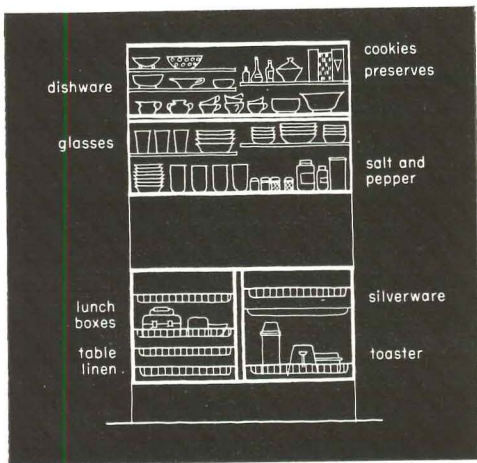
14. **Planning desk:** for telephoning, menus, bills, cookbooks, etc. Desk in photo, far left, has inexpensive built-in radio under house intercom speaker. Other desk is simply a dropped counter-top with drawer and knee space. Manufacturers stock similar types.

Tomorrow's kitchen? Cornell takes the kitchen apart,

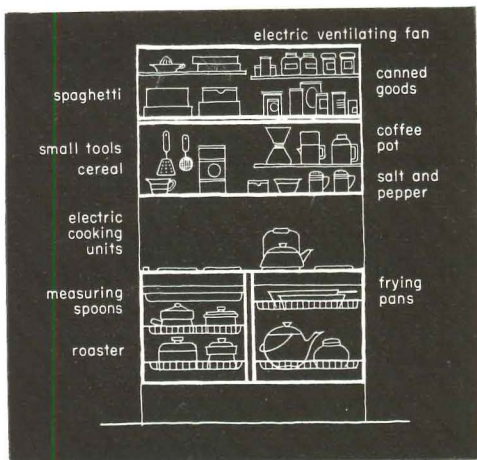
puts it back together with five major changes:

a 2' modular grid, five work-center units,

interchangeable parts, adjustable heights, built-in appliances

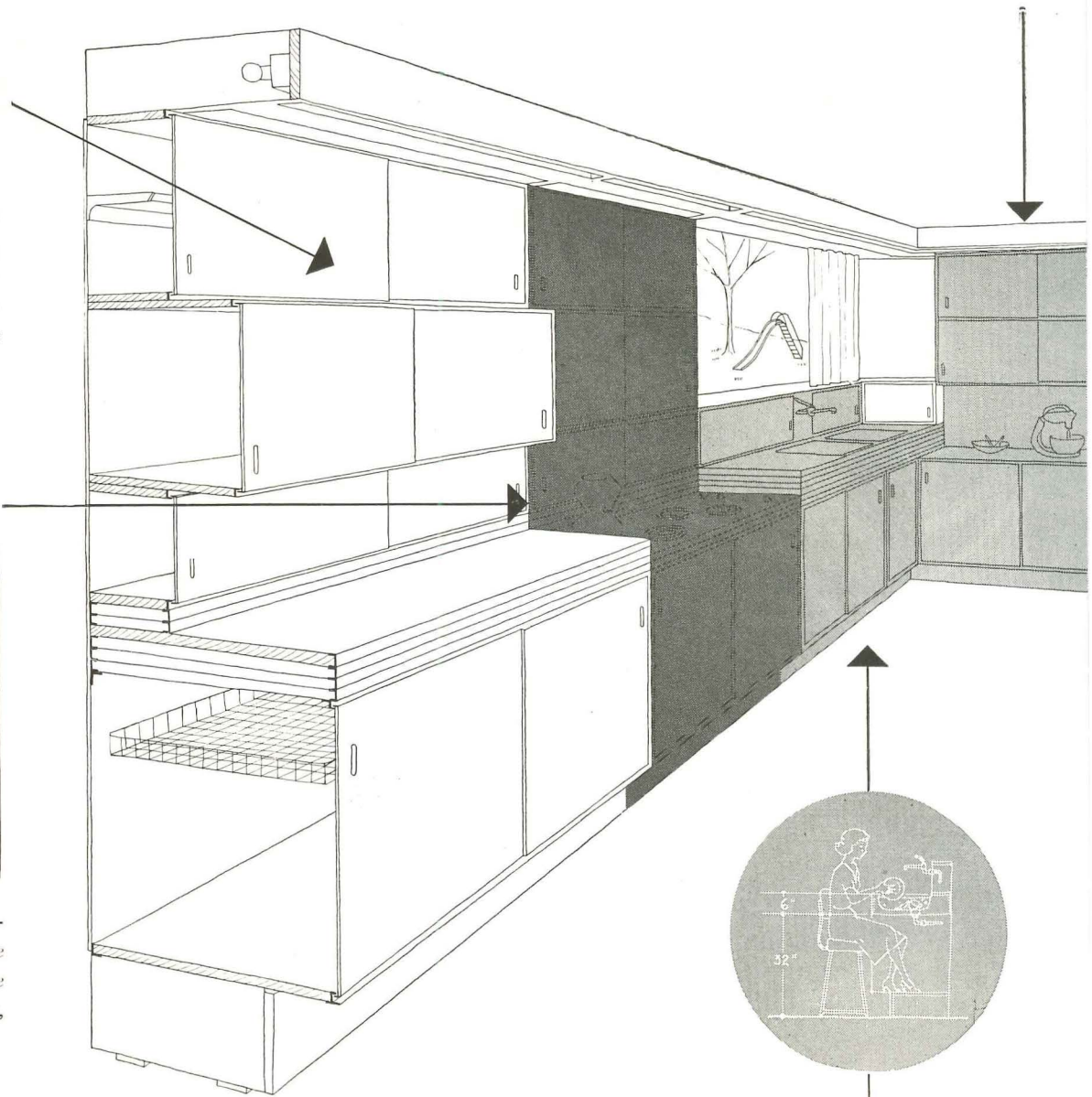
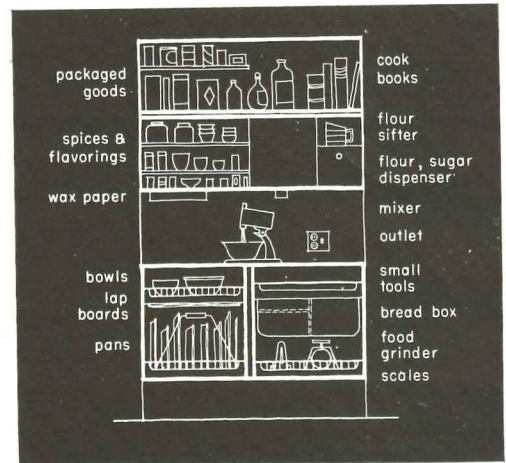


Serve center, another 4' wide unit, is optional in kitchen layouts. It provides storage for china, glassware, silver, table linen, etc. and a counter for assembling plates before serving. Adjusted to a height of about 30", it could serve as a snack bar or kitchen planning desk.

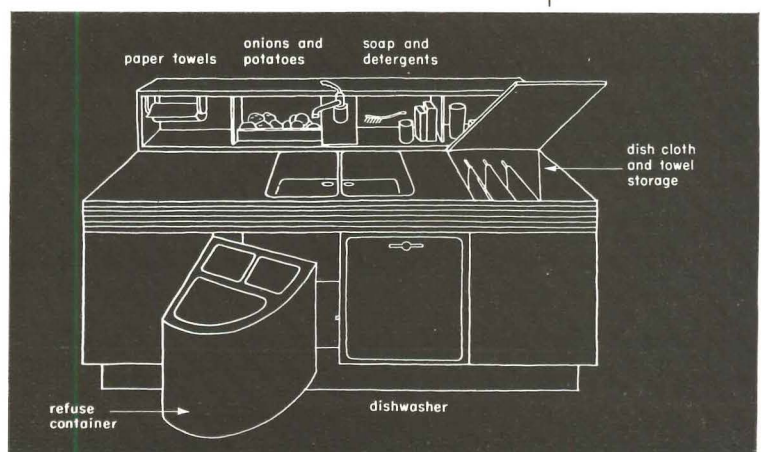


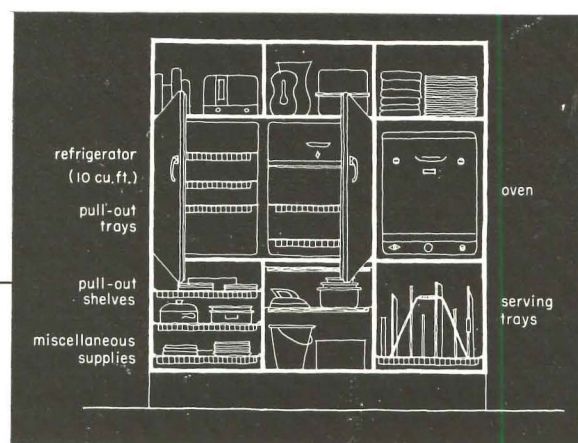
Range center has four electric burners and controls set into counter-top, two removable grease pans beneath. As in other work-center units, base cabinets have slide-out wire trays for utensils, doors that swing out and disappear into slot.

Mix center has an adjustable work top that can be lowered to 32", generally a better height for beating, mixing and chopping than the 36" height common to many kitchens. All items connected with mixing, including flour and sugar bins, are stored here, at point of first use. Work centers could be made of enameled metal or plastic.

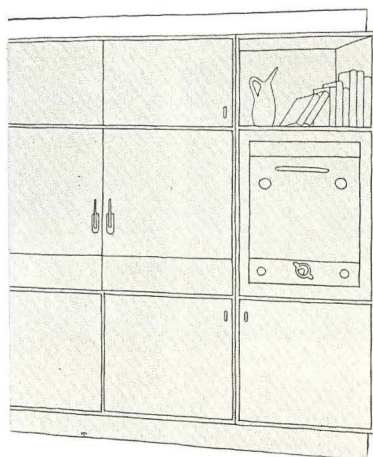


Sink Center is 8' wide with side units designed so they do not open to front; thus when fronts are blocked by other cabinets in U or L plans, corners are still accessible for storage. Three-compartment trash can swings out into knee space from left; unit at right opens upward, contains racks for drying dish towels. Best feature, and one that might be adapted in any manufacturer's sink unit, is long open cabinet across back for storing many small items needed at sink. Open knee space, chair and foot rest allow housewife to sit while working at sink, could be provided with stock equipment by leaving off under-sink cabinet doors.





Refrigerator-range center has new horizontal refrigerator, specially built from stock parts (but not yet in production), and a manufacturer's stock wall oven, both at convenient waist-level height. Both rest on adjustable shelves which can be set at the most comfortable working height for the individual. Their integral insulation has proved sufficient to prevent any appreciable heat or cold transfer between them.



An L-plan layout of the Cornell units, one of several different arrangements possible. Here the food enters at right, is stored in waist-high refrigerator, then moves to the left (most natural for most women, who are right-handed) to mix center, sink center, counter-top range unit, thence to serving counter and dining area, left. Note different heights of counter-tops according to use, vertical spacers which can be inserted under tops to raise or lower them to optimum height for each housewife. All units are supported on a metal C-frame which stands free of the wall, can be demounted when rearrangement, additions or removal is desired. Clean top line of continuous valance (which contains strip lighting and vent fan) reduces need for expensive furring down of kitchen ceilings, although open-top shelf will catch dirt. The sliding-door wall cabinets can have vertical or slanted fronts; the latter are largely a question of esthetics: they provide a more open work counter below but make items on higher shelves harder to reach and remove. In this layout, the serve center could be dropped to range level to eliminate lifting. Wall oven at right has a horizontal pull-out board immediately under it for resting roasts, utensils, seasonings. The five work-center units are compact enough to fit into a kitchen area as small as 8' x 12'.

For nearly six years a group of engineers, social psychologists, home economists and architects centered at Cornell University have been "rethinking" the kitchen—from scratch. Result of their unique collaboration is a thorough report* on criteria and measurements for kitchen design, including specifications for a new kitchen package (see sketches).

The Cornell kitchen incorporates many of the study's general findings (see p. 134). First, to achieve the flexibility found necessary in kitchens, all counter heights, shelving and major appliances were made *adjustable* vertically to fit the job to the woman. All units are *modular* (based on 24"), hence interchangeable. Being freestanding and *demountable* (they are attached to a framework rather than the wall), they can be laid out to fit different buyers' preferences, added to and rearranged to meet the changing needs of a growing family, moved in and out of rental properties. Units are planned in a variety of *color* combinations to suit different tastes and provide a presentable, cheerful work space.

The study introduces five work centers rather than the traditional three, each intended for manufacture as a self-contained unit. The new "serve center" recognizes the common need for pantry storage (silver, glass, china, etc.) and a counter to assemble the meal immediately before serving it. The new "mix center" groups most food-preparation activities, should be next to the refrigerator where most of the ingredients come from.

Each work center stresses the well-proved principle of *storage at point of first use* (see sketches left). Frying pans are stored at the range, potatoes at the sink, flour at the mix center, etc.

So that stored items can be seen and reached more readily, *pull-out trays and drawers* replace all stationary shelves commonly used in base cabinets. Being of standard width, they are interchangeable. To solve the problem of open vs. closed storage, a tricky new "*receding door assembly*" is used for the base cabinets: in each work-center unit the two base-cabinet doors swing open from central pivots; from this position they can be pushed back into a sealed cartridge slot to keep them completely out of the way during meal preparation. (Actual performance of these doors would depend on the precision of manufacture and stability of the materials used.) Wall cabinets have *sliding doors* rather than swinging ones to keep them out of the housewife's way when open.

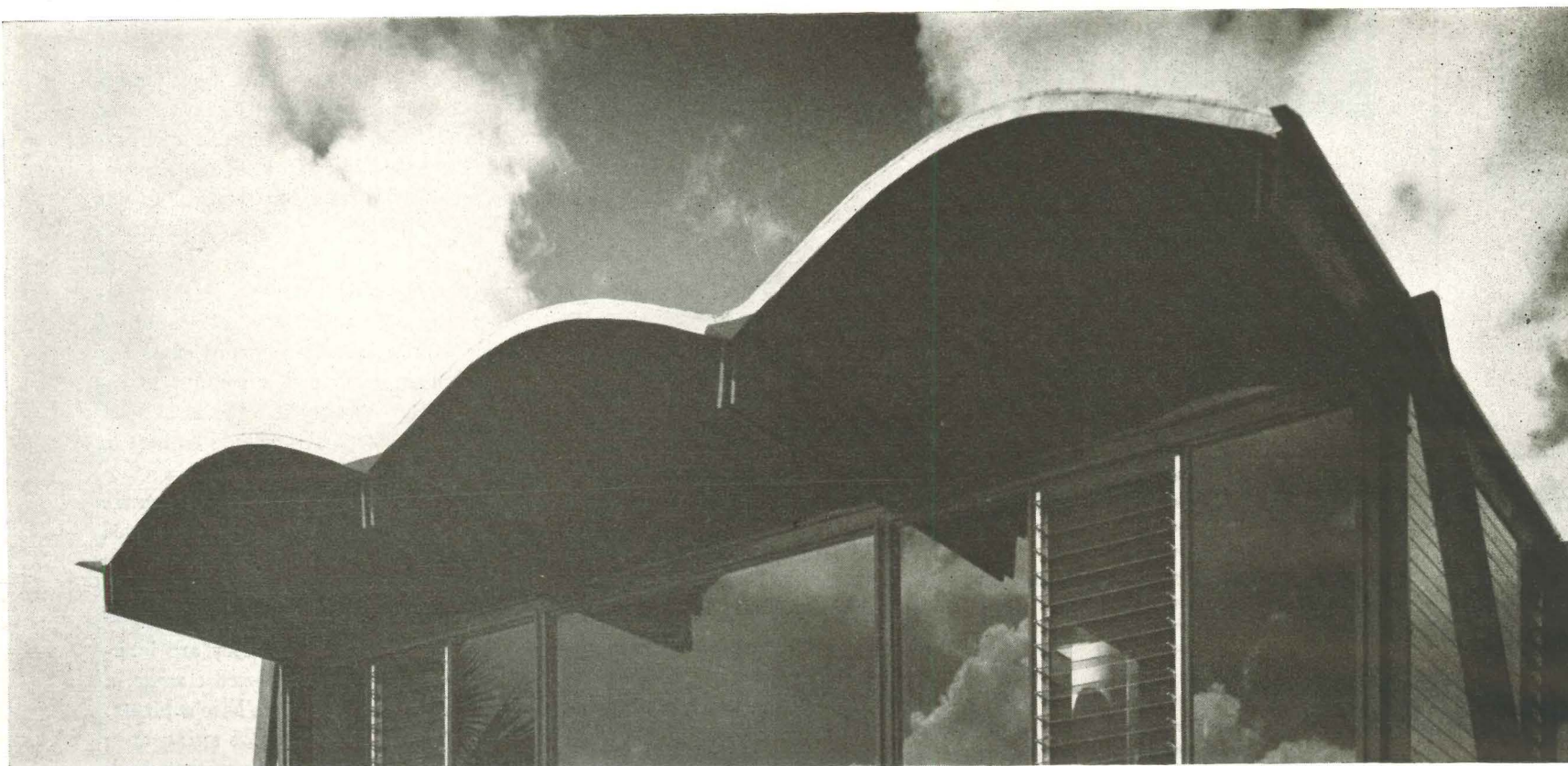
All parts of the Cornell cabinetwork are designed as knock-down assemblies which could be *shipped flat* in tight packages, taking up a minimum of freight and warehouse space. Each work center is to be constructed of standardized parts which could be put together by the distributor, builder, or owner.

The first wooden mock-up of the kitchen was revised and built in steel after extensive time-motion studies on film, bending and reaching trials, storage and materials tests. Final stage in the six-year, \$250,000 project will be testing and observation in actual homes of six Cornell kitchens now being fabricated in aluminum by the Rodman H. Martin Co. of Philadelphia. Negotiations for future mass production are reported under way.

* Based on two projects, sponsored by New York state and the federal government in cooperation with Reynolds Metals, General Electric, Sears Roebuck, Monsanto Chemical, Cooperative GLF Exchange, Inc., Enamel Products Co. of Cleveland and A. J. Lindemann & Hoverson Co. of Milwaukee. Project Leader: Glenn H. Beyer, professor of housing and design and director of the Cornell University Housing Research Center. Architect: Frank Weise. Consumer preferences and storage requirements were based on survey of farm homes in 12 north-eastern states. The report's booklet, "The Cornell Kitchen—Product Design Through Research," sells for \$1, is available through Housing Research Center, Cornell University, Ithaca, N. Y.

Rudolph and the roof

How to make a revolution on a small budget



Every house has a roof. But most houses have more roof than they need. After all, do roofs have to weigh as much as 50 lbs. per sq. ft.? Does each square foot have to be the work of at least three different trades? Does each square foot have to be made up of half a dozen different pieces and materials? And does each square foot have to cost and weigh what it does if all it needs to hold up is a) itself; b) some rain or snow, not a very serious problem in two-thirds of the US; and c) an occasional sparrow?

These are some of the questions that have been bothering Architect Paul Rudolph for the past seven years. And because Rudolph is a good architect, he went to a lot of trouble to find the answers. Some are shown on these pages.

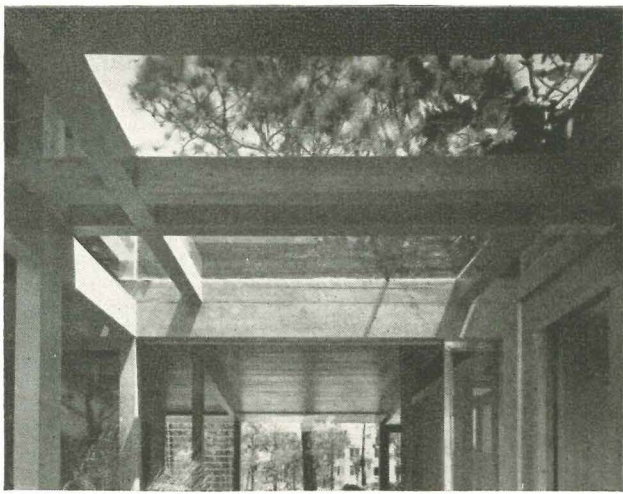
This story, then, is not only about a nice little house in which to sit and look at the cool water when it is hot outside (pp. 142-145); it is a story about what happens when a good architect really gets excited about something, and how much original, concentrated and consistent research you can expect him to do once he gets the bit between his teeth.

But what about the client who just wants a roof over his head—*any* kind of roof? Rudolph's answer is that the client does not have to pay any more for a radically new type of roof structure than he pays for the "old" flat roof. Rudolph has proved it, too: a \$15,000 house gave him

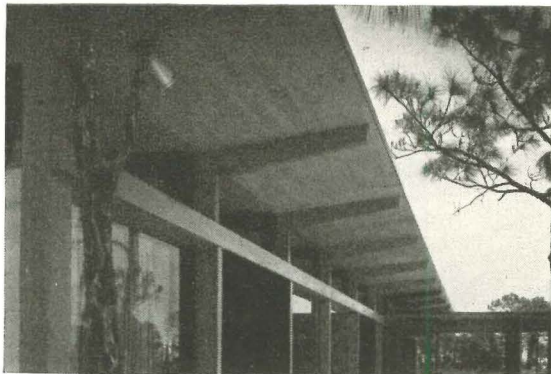
a chance to find out about roofs in tension, and a \$17,000 house answered his questions about vaulted plywood. Moreover, the second and third times around the new type of structure came down in cost very considerably: in his Cocoon houses (of which he built four—see opposite) costs dropped 15% as the contractor became more familiar with the new medium.

Rudolph started out with the proposition that the run-of-the-mill roof simply was not good enough because it made no use of the more advanced techniques known to US building. It was not good enough in the age of shell-concrete, space frames and suspension bridges. Not good enough when compared with the incredibly light and graceful structures in common use in ship construction (which Rudolph knew intimately from his Navy days). And not good enough in the age of plastics, of strong and flexible sheet materials, of stronger steel alloys. Obviously, there must be ways of building thinner, lighter, more economical roofs—out of fewer pieces, or even with a spray gun.

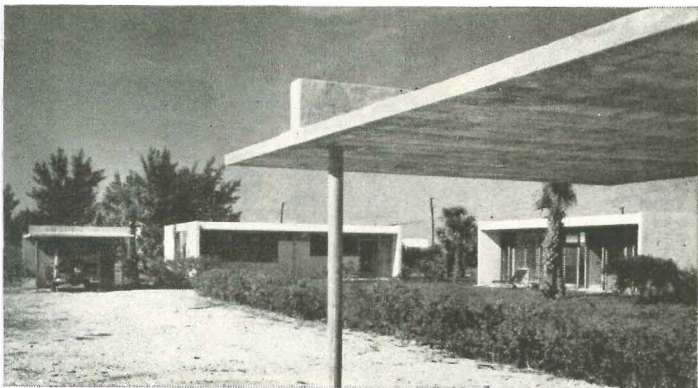
Rudolph spent several years proving his point. First in partnership with Ralph Twitchell, and more recently on his own, he built a number of roofs that ranged from the familiar flat frame to the most advanced plastic tent forms. At the right is a log of his experiments:



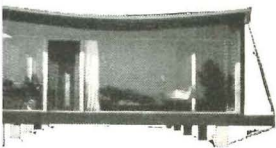
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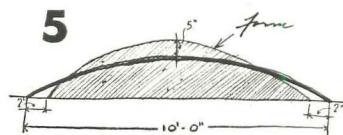
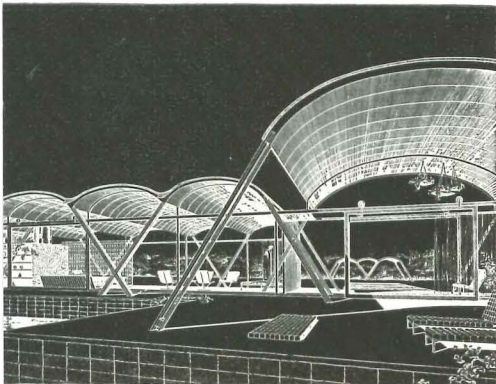
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Photos: (3) Steinmetz; (4) ↑ Jack Holmes; (others) © Ezra Stoller



5

FIRST ROOF: A CHINESE PUZZLE

Analysis of traditional structure—a flat roof framed as elaborately as a Japanese teahouse, with roofdeck-over-joists-over-girders-over-posts (no plaster ceilings). Total thickness: about 18". Weight per sq. ft.: about 20 lbs. (An ordinary flat roof framed with 2" x 10"s, topped with sheathing and five-ply roofing and gravel, and finished underneath with a plaster ceiling may weigh about 25 lbs. per sq. ft.)

SECOND ROOF: SIMPLIFIED MILL CONSTRUCTION

Joists were eliminated next. Roof now consisted of 2" planks spanning 8' between 4" x 10" girders. Total thickness: about 13". Weight per sq. ft. (excluding girders): about 7 lbs. (No plaster ceilings meant no worries about deflection.)

THIRD ROOF: CONCRETE UMBRELLA

For the Lanolithic Industries, Rudolph designed a 4" thick slab roof with girders "dropped" upward to produce a smooth ceiling underneath. Roof was supported on lally columns with plates welded to their tops. Roof thickness (excluding girders): about 5". Weight per sq. ft.: about 50 lbs. Later, Twitchell & Rudolph built a 6" flat slab on lallies without girders.

FOURTH ROOF: STEEL-AND-PLASTIC TENT

Questions: Why must roofs be rigid? Why waste material resisting bending moments? "Steel, when used in tension, is more eloquent than when used in any other way; and sheet materials bent are more eloquent than when used flat," says Rudolph. Problem: a roof sandwich that could stretch and move at will, then return to its original shape. Answer: Cocoon, the Navy's mothballing material, sprayed on both sides of a 1" insulating panel. This Cocoon sandwich is then supported on thin steel straps in tension. Total thickness: 1 5/8". Weight per sq. ft.: about 4 lbs.

FIFTH ROOF: PLYWOOD VAULTS

How about the ancient vault to eliminate bending moments? How about using bent sheet materials (like plywood) that are stronger in compression, stronger when curved? What are the problems?

Problem one: How to bend plywood without heat or steam—how can one man bend it, in fact? First answer: take two 1/4" sheets of 4' x 8' plywood (easier to bend than a single 1/2" sheet), overlap them by 2', glue and nail them, bend them down over a temporary frame erected under apex of vault. Bolt curved plywood sheets to girders and remove temporary frame. Second answer: bend sheets over male form with smaller-than-ultimate radius, glue and nail sheets as above, let them snap back a little to final curve, and bolt them to girders as before (see sketches).

Problem two: How to waterproof roof? First answer: spray with Cocoon. Although this would have eliminated costly flashing, it still proved about 15% more expensive than a five-ply, tar-and-gravel finish which was the second answer.

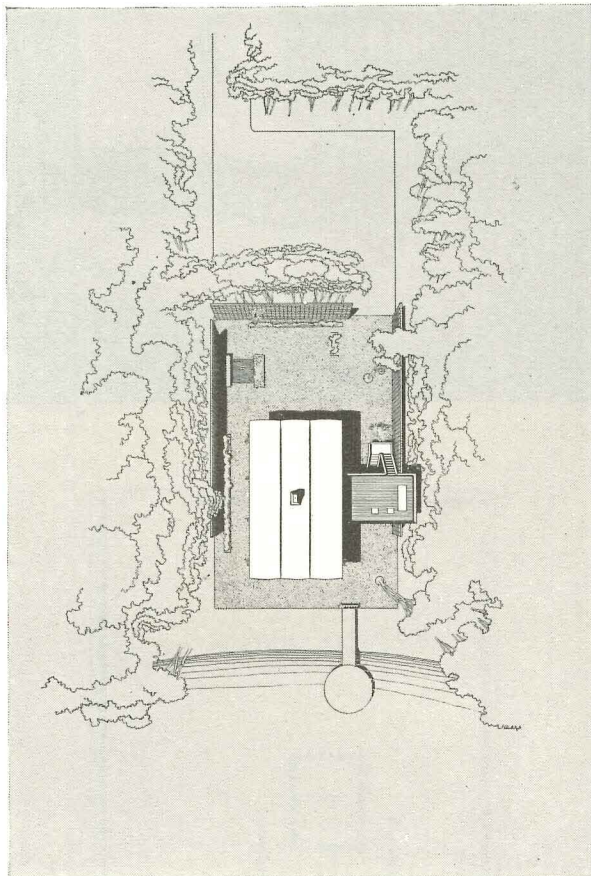
Problem three: How to resolve outward thrusts of end vaults? First answer: introduce tension rods to keep vaults from spreading. Rejected, because Rudolph did not like the looks of tension rods and wanted ends of roof tied down for added safety in hurricanes. Second answer: buttresses at end vaults. These help tie down roof to floor girders.

Problem four: How to handle tops of interior partitions. Answer: cut out nine pieces of glass scribed closely to ceiling curvature and top the partitions with these glass panels. Total roof thickness (excluding 2" x 10" girders): about 2 3/4". Weight per sq. ft.: about 8 1/2 lbs. Cost in place of first plywood structure (including girders, but excluding insulation and roofing): 75¢ per sq. ft. (Comparable flat roof of 2" x 6"s, 16" o.c., with plywood ceiling and plywood sheathing, costs 73¢.) Currently building his second and third vaulted plywood roofs, Rudolph has already cut costs 10%.

For the architectural result, turn the page

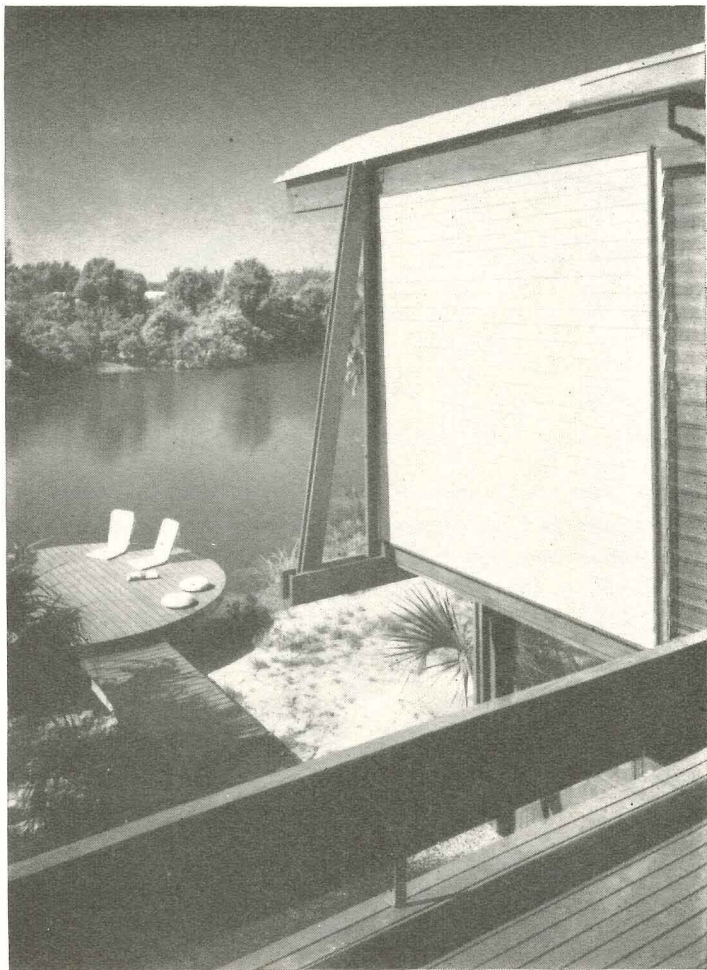


Second-story house stands on eight double posts that raise the living areas into the breeze and give them a good view across treetops. Note concrete block walls next to posts—these are used to brace structure, as well as to enclose ground-floor barbecue area. Outer walls form patio all around base of house.

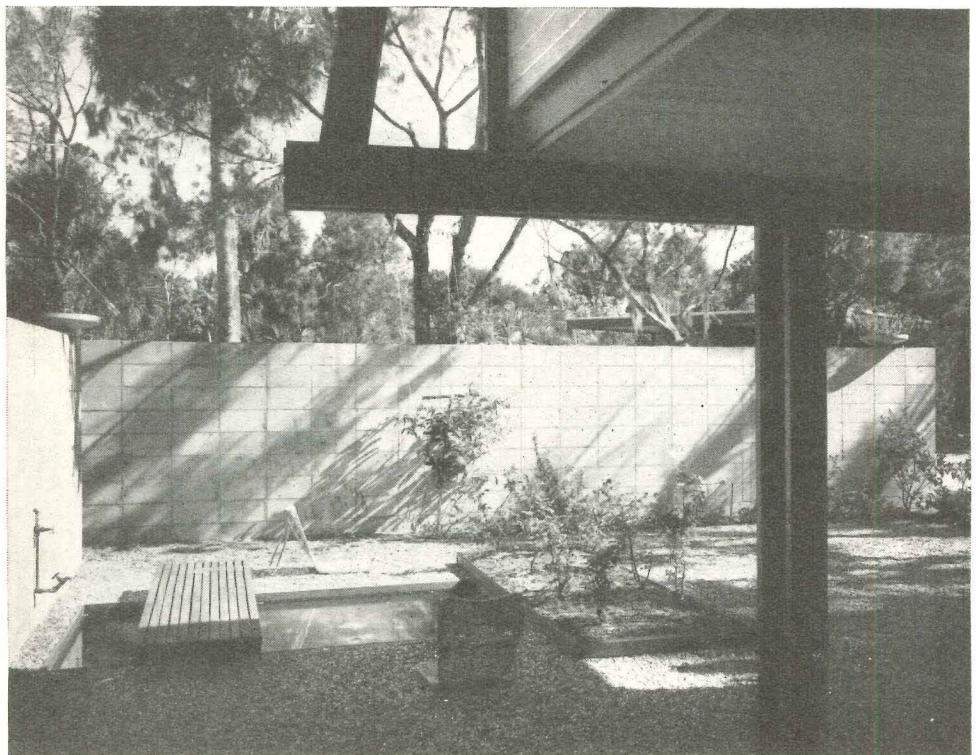


Plot plan shows house in center of grveled patio. Surrounding a house with a formal and protected clearing of this sort is essential in this part of Florida; otherwise junglelike vegetation (see opposite) would soon engulf the unprotected house.

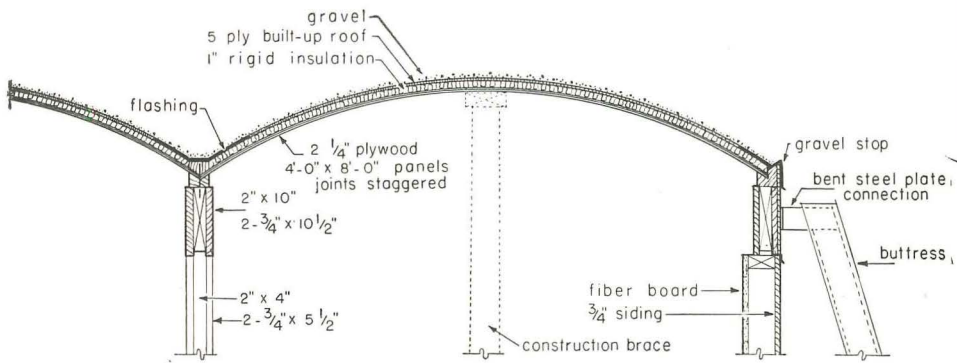
Patio has been treated as big, outdoor living room. Note small reflecting pool, sunny and shaded areas. Space under house is part open barbecue area, part enclosed storage bin.



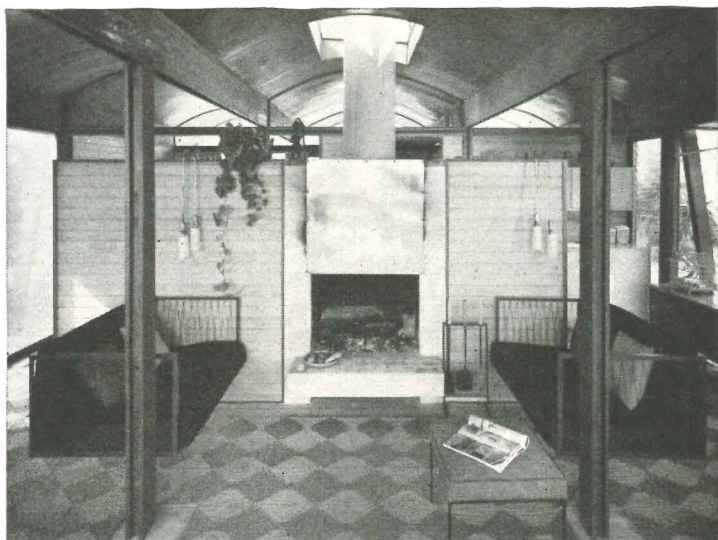
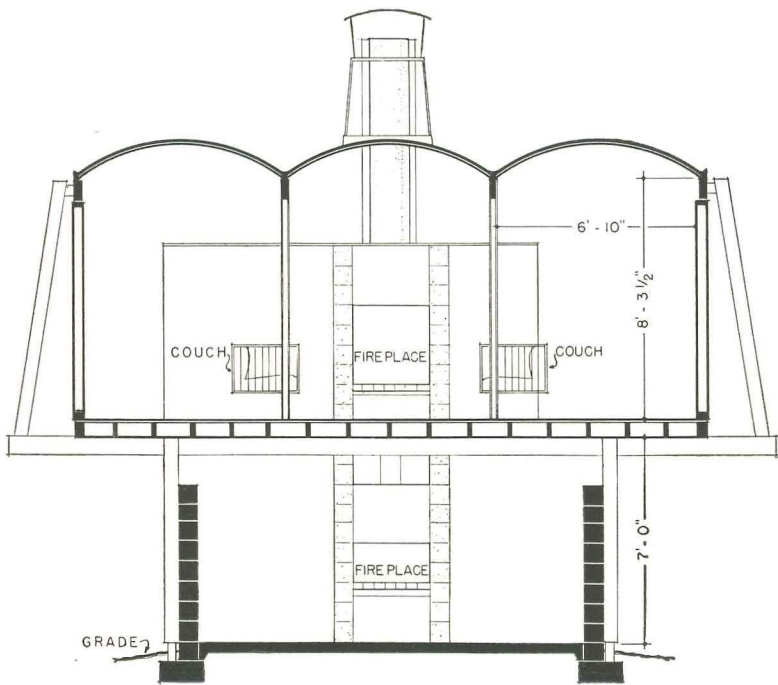
Upstairs view includes wooden "lily pad" platform projecting out over the water. Buttress at end vault consists of 2" x 4" with 6" boards nailed to each side. Special steel connector ties buttress to roof girder. Note use of double members throughout house—a trick that makes each structural member look light and elegant.



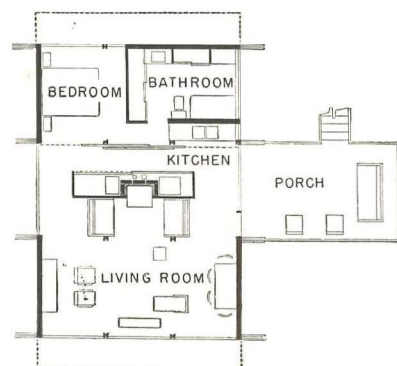
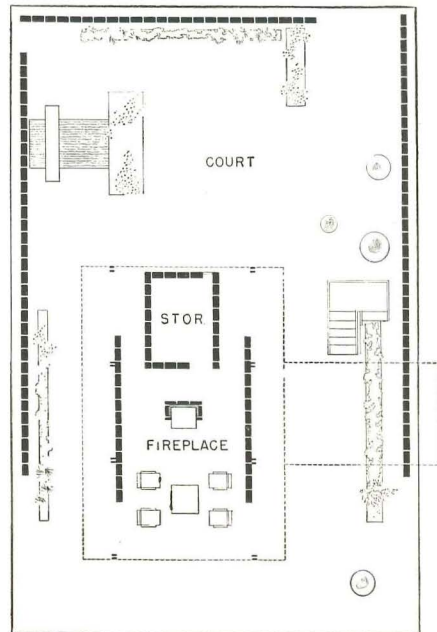
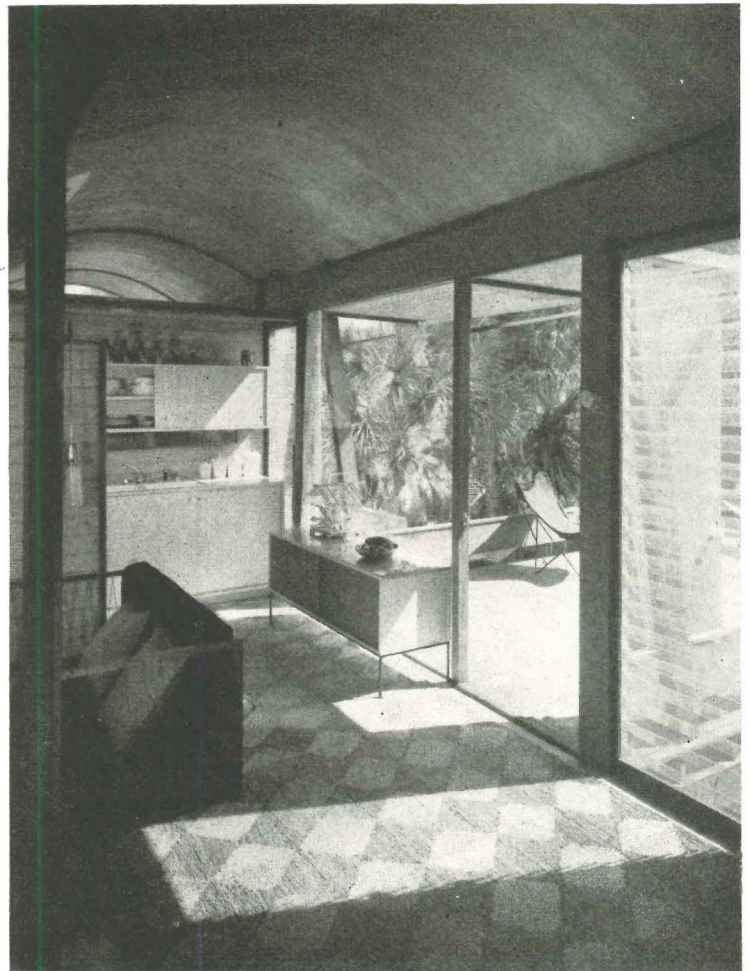
Living-room view shows kitchen and porch. Glass jalousies turn entire house into cool breezeway.



Vault section shows two $\frac{1}{4}$ " sheets of 4' x 8' plywood, glued and nailed together and lapped by 2', plus 1" insulation and five-ply roofing on top. Plywood is bent over temporary frame, then bolted down to girder. Relatively complicated flashing could have been avoided if sprayed plastic roof had been less expensive. Section through house (below) shows simple logic of frame, careful bracing of structure against hurricanes.



Living-room fireplace is topped by its own flue, plus flues from downstairs barbecue and heater. Flues pass through plastic skylight in roof. All partitions in this small house stop short of ceiling, are topped off with scribed glass panel where added privacy was desired.



LOCATION: Siesta Key, Fla.
PAUL RUDOLPH, architect
PAUL ZASADA, general contractor



Western house with a far eastern flavor

How an architect expanded and finished out his old house for relaxed living

LOCATION: Berkeley, Calif.

HENRY HILL, architect

ECKBO, ROYSTON & WILLIAMS, landscape architects

B. J. TIEGLAND, contractor

As men are apt to do when they build for themselves, Henry Hill has finished his house with the things he likes, giving it a personality that is very much his own. Look closely, and you can see the precision of functional architecture, and with it the joy of experimenting with texture, pattern, plant forms; the enthusiasm for Oriental objects that comes so naturally to the West Coast; the love of rich-grained woods from the northwest's forests.

It is houses like this one that AIA members will be talking about this month when they convene in Seattle to discuss the new regional architecture of the northwest.

Henry Hill's house is restrained, the structure itself subordinate to what is placed inside and around it. Hill, steering his usual course around both pure rustic and straight Bauhaus, has made his architecture primarily a setting, a background for people and possessions—a home rather than a masterpiece. Yet, without being obtrusive, it is warm, rich, playful, studded with glittering ornament and spots of color.

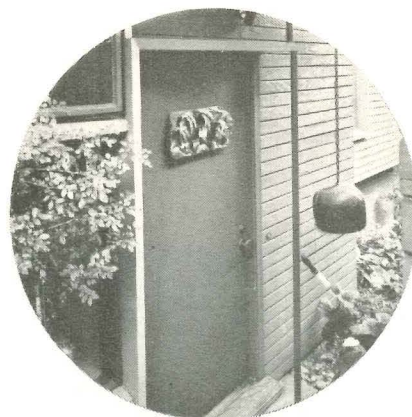
Hill, like the rest of us, is a junk collector at heart. Where others' tastes might run to kewpie dolls and balsam pillows, or Picassos and first editions, Hill surrounds himself with a pleasant jumble of visual effects and miniature compositions, both architectural and ornamental. He collects

colors—such delicacies as wine, chocolate, mustard and olive; odd accents of coral and gold; a mauve wall, a purple door, a red lacquer desk;

and textures—contrasting walls of rough stone, redwood shiplap and half-rounds; floors of plank, stone and tile; fences of staves, waffle glass, ribbed glass, copper and plastic;

and things, mostly from the East—plaques, statues, pottery, scrolls, lanterns, urns, bottles, driftwood, braziers, torches, maps, ferns and potted plants.

To the observer it is a house of small impressions, a sum of a hundred and one human details that suggest not only how to build a modern house, but how to enjoy and relax in one after you have built it.



Chinese temple gong and gilt plaque adorn a purple door



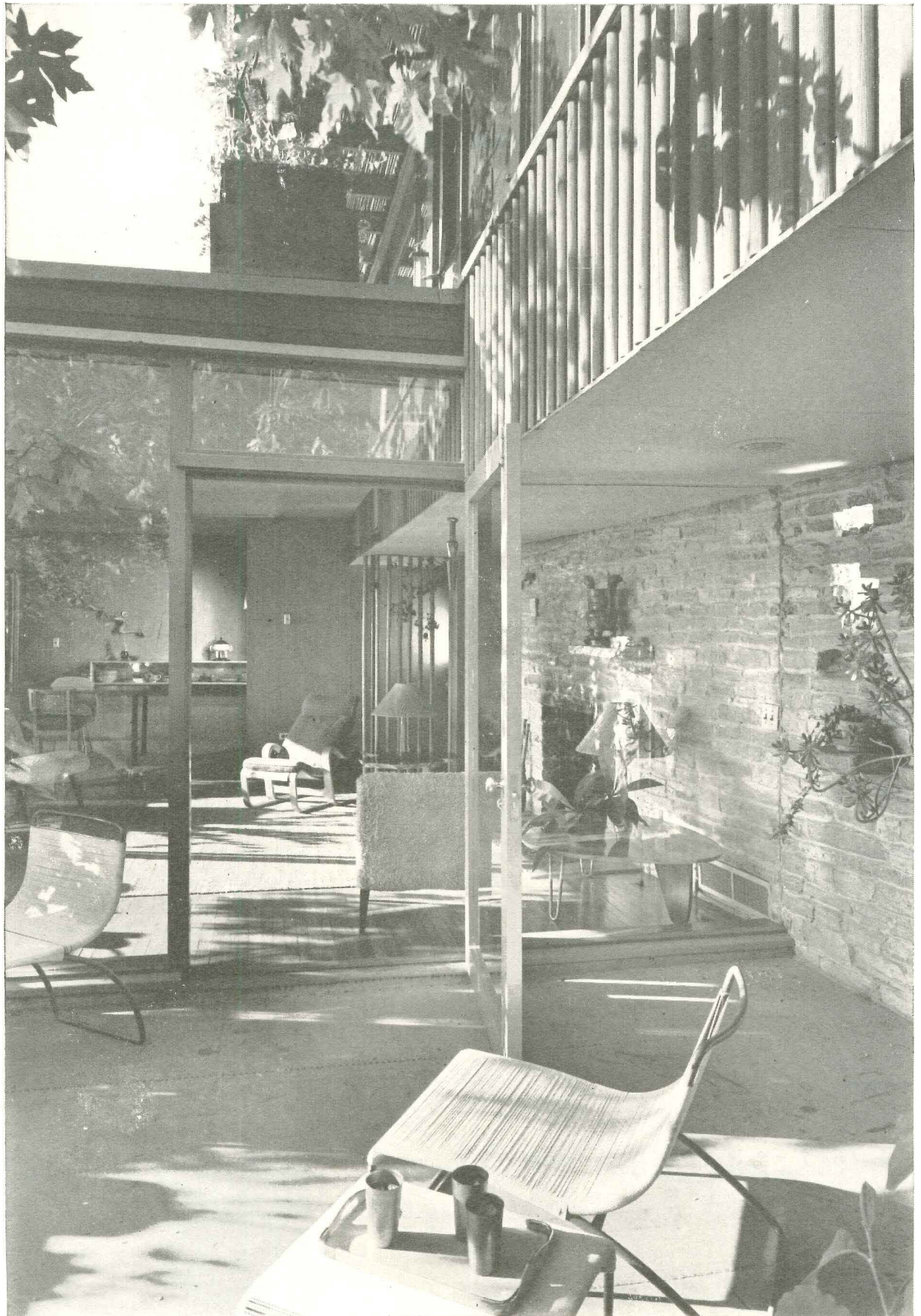
Over the fireplace: an ancient Ming urn



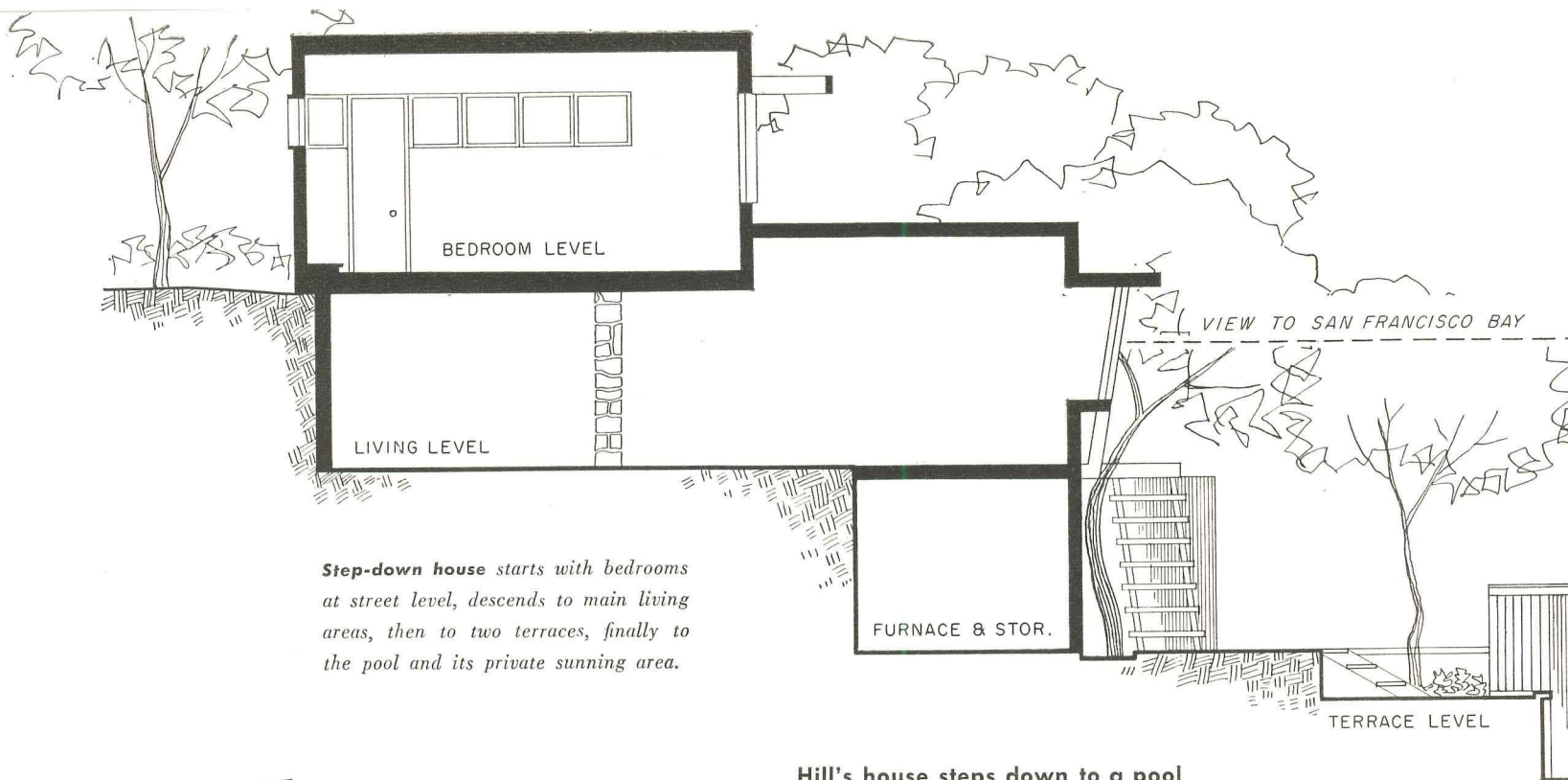
A stone-printed Chinese scroll in the bedroom hall



Above the stairs: a bronze Buddha, madroña branches



Sun deck is an extension of living room and dining area, background. Overhang of the bedroom floor creates an intimate ceiling over the fireplace group and a shaded, sheltered area along back of deck. At right in this picture (and in the picture at the bottom of the next page) is expressed one of the architect's design principles: instead of using an opaque material to form both sides of an outside corner, use glass for one side, and, where possible, continue the opaque wall (or ceiling) out past the glass. Result: the boxed-in feeling of a corner disappears; the eye follows the opaque wall outside, and this makes the house seem bigger inside. In bathroom wall at right, four or five stones were knocked out and fitted with a casement window on the inside.



Step-down house starts with bedrooms at street level, descends to main living areas, then to two terraces, finally to the pool and its private sunning area.

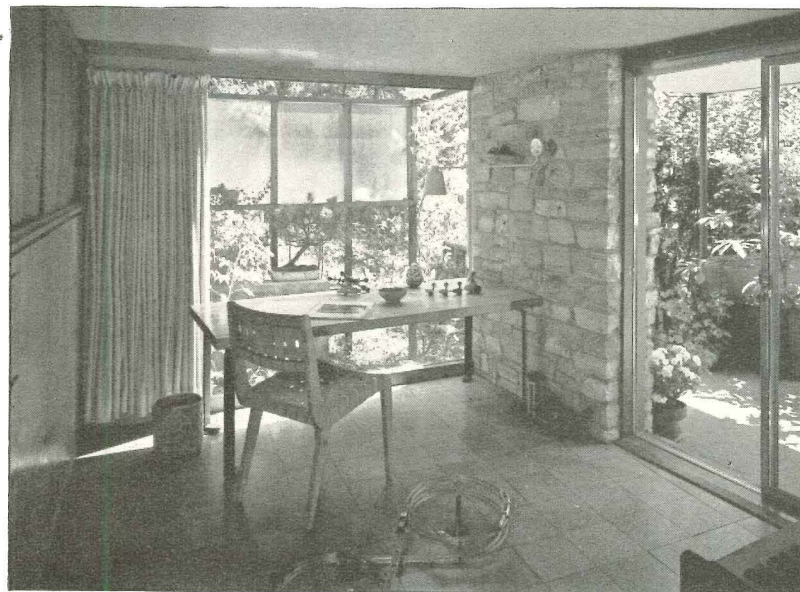
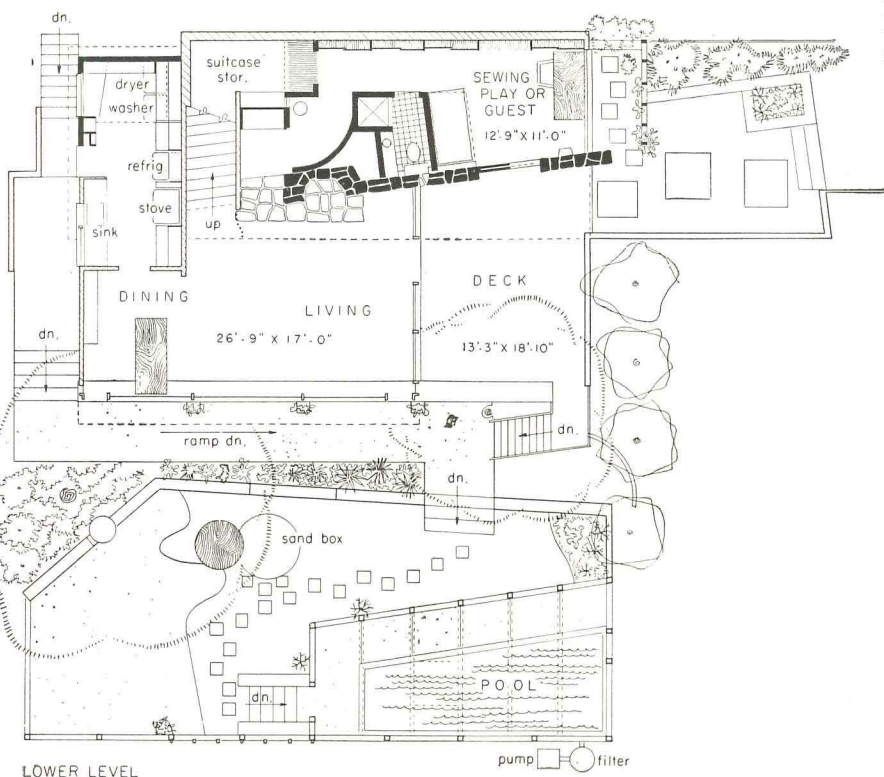
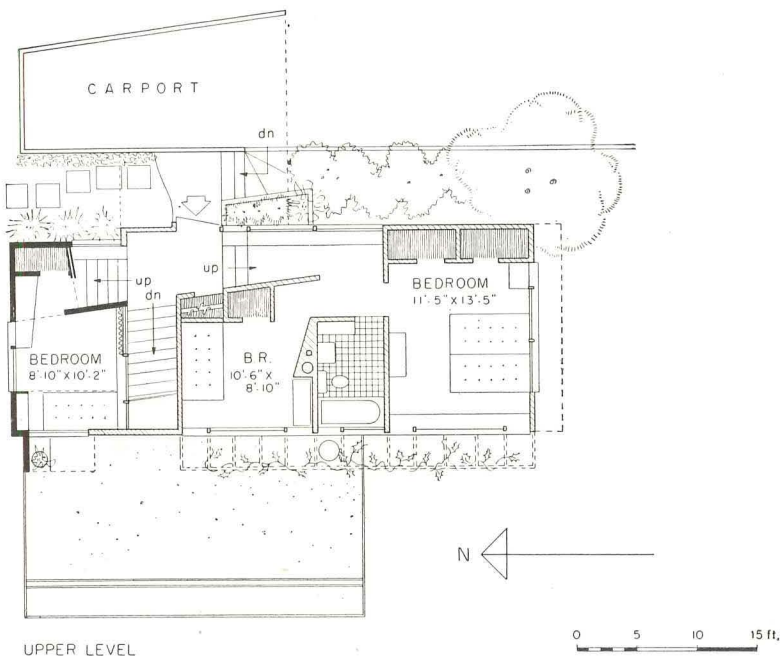
Hill's house steps down to a pool

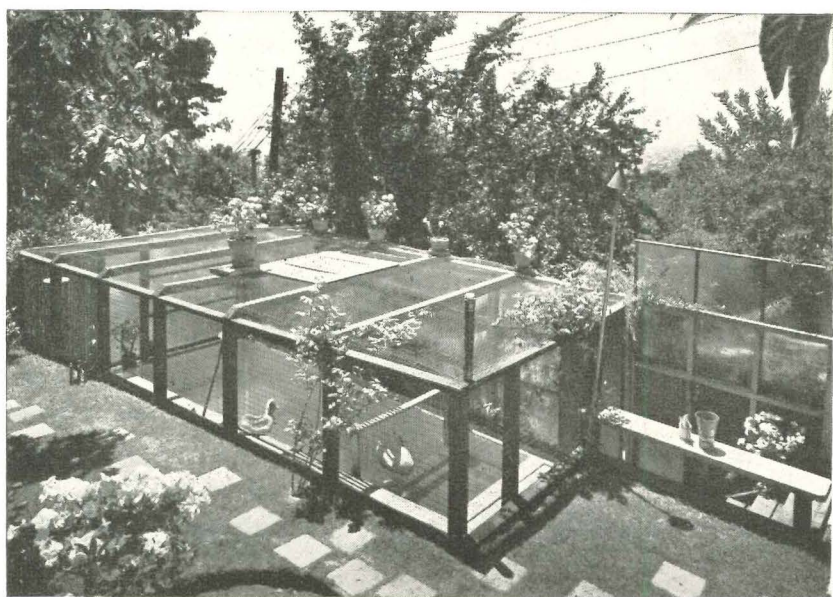
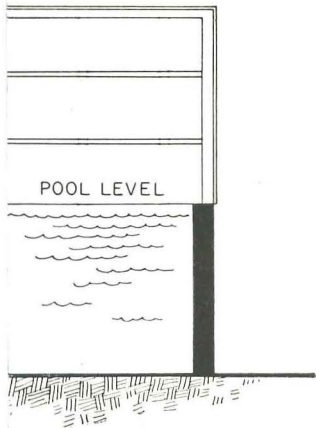
Latest additions to the Hill house (first published in AF, June '42) are an extension of the kitchen, a new bedroom above it, the finishing out of a storage space into a multipurpose room (all marked in black in plan at left), and the rear garden with its enclosed pool, shown in photos at right.

Since Hill ran out of fill when he built the retaining walls at the bottom of his lot, he decided to leave a hole and line it with concrete for a swimming pool. The structure he put around the pool screens out the neighbors, keeps out leaves and animals, and by virtue of lock and key keeps his two young children from falling or wandering in unsupervised. The upper side of this enclosure is angled to allow better circulation from the house down into the screened garden.

The many levels of house and garden create a lively interest as they step down the hillside, and make for a practical seclusion from the street above. The plan and section show how all bedrooms and all major living areas are arranged on two levels to take advantage of a wide view of San Francisco Bay to the west. All storage, halls and service facilities are lined along the uphill side, presenting few windows to the street. The serving-play-guest room pictured below has the bay view too, plus an intimate outlook on a fenced outdoor space that increases its apparent size.

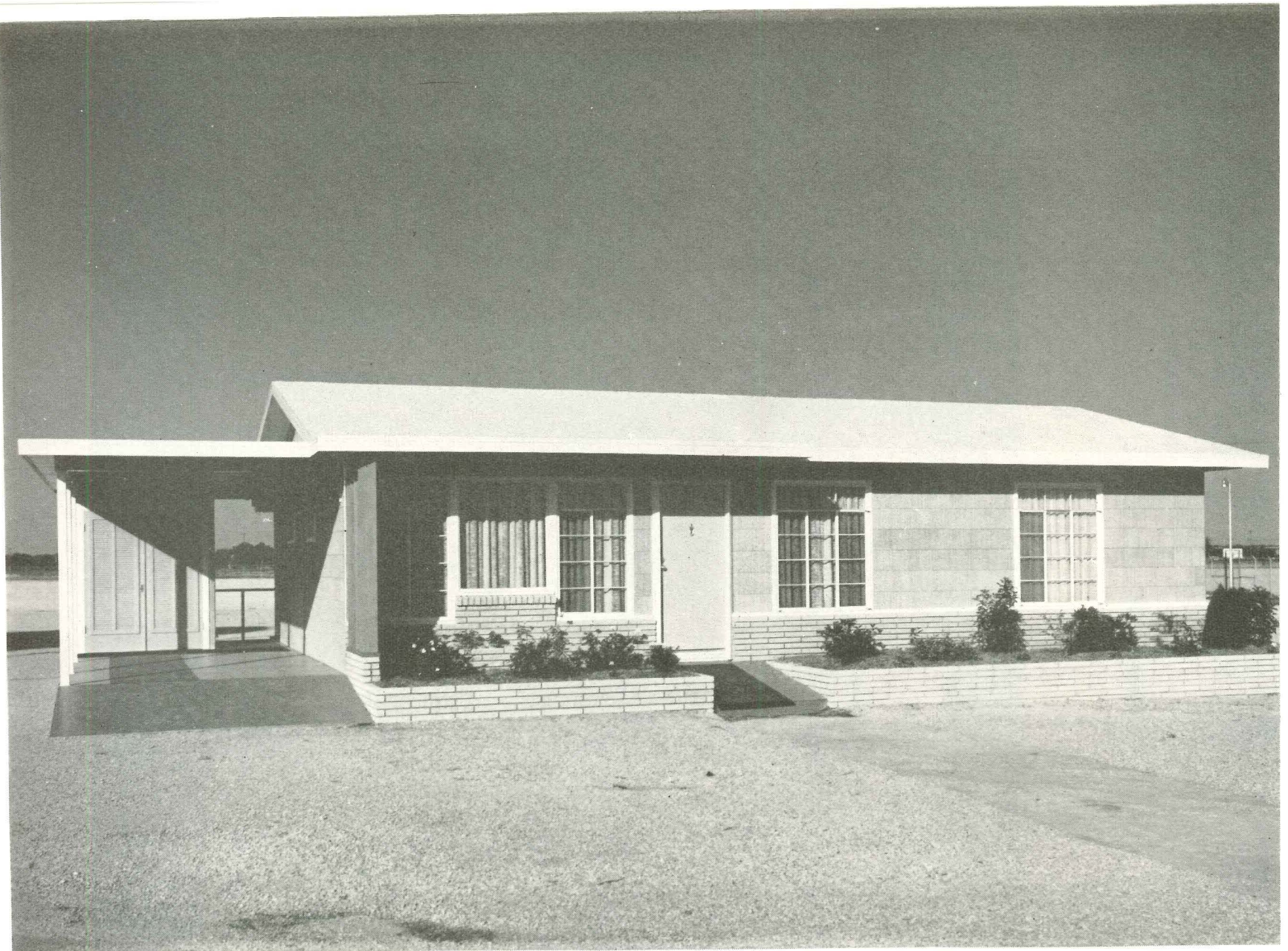
Many-use room opens to deck, right, to screened garden, left





Pocket-size pool is protected, intimate, yet full of light and pattern. Translucent fences of plastic-dipped insect screen, arranged like Japanese shojis, make it neighborproof. Wire-mesh cage and shallow-end pool divider (foreground) make it safe for children. At night it is warm and festive, with smudge-pot stove, Hawaiian torch poles, house floodlights casting textured shadows.

Lush garden, seen from the dining room, is designed for children: kidproof pool, sandbox, playtable and paved play area (see plan, opposite page). Stepping stones lead from stairs at left to pool steps, right behind bench rail.



Prefabrication goes regional

New Gunnison house is first one designed specially for Southwest climate



Chicago Photographers

Talisman model was first introduced at Chicago NAHB meeting last January. Popular in most areas, it did not meet FHA standards for bedroom windows in San Antonio. High, narrow bedroom windows on front and side of house may be compared with larger windows of the new *Westerner* in large photo, taken at San Antonio show.

For the first time, a national manufacturer of prefabricated houses has developed a regional house to suit the climate and needs of one section of the country.

Introduced at the San Antonio home show last month, the new "Westerner" was a quick success with both public and builders. Since the new model's introduction, some 200 houses have been sold and many builders have asked for dealerships.

Popularity of the new model is credited directly to design changes made for the Southwest. A white marble-chip roof reflects heat. Because bigger windows and an open plan provide better ventilation and make the house look larger, and because a new line of mahogany storage cabinets looks expensive, most of the 21,000 visitors who saw the 960 sq. ft. house considered it a good buy at \$10,750, including a 62' lot.

Design was four-way

When the San Antonio FHA office would not approve the high, narrow bedroom windows in the Talisman design, Distributor Roland Bremer decided to ask Gunnison to do something about it. He thought a house based on the company's standard prefab panels was the answer but he was convinced it would have to be modified for the Texas climate.

The new Westerner is the result of a four-way design collaboration. With Bremer worked factory engineers, San Antonio Designer Arthur Guyon and officials of Southwest Research Institute. Working with his partner, J. P. Wilhelm, Bremer builds about 200 houses a year, is current president of the San Antonio builders' association, and believes he knows what people want in a \$10,000 house. His firm also builds storage cabinets.

The house is an innovation for Gunnison not only for its design but also because dealers do not buy the same complete package that is sold with other models. Biggest difference is that Bremer does not take the same interior walls and closet assemblies, but uses his own storage cabinets as partitions. He also supplies the folding doors. He omits the standard furnace, water heater and roofing materials, using his own choice of such items.

To cool the display house at the local builders' show, Bremer used window coolers built into the walls. These are not put in standard models. Buyers may get a two-ton air conditioner with a 100,000 Btu heater for \$1,100 extra to replace the standard 55,000 Btu wall furnace. The 36' model with lot sells for \$9,875. No price has yet been set on the 32' model. All houses have a 12' x 20' carport with a 64 sq. ft. storage room.

LOCATION: San Antonio, Tex.
 BREMER & WILHELM, builders
 MARION PROESEL, decorating consultant
 PRICE, \$10,750 for 960 sq. ft. house on 62' lot

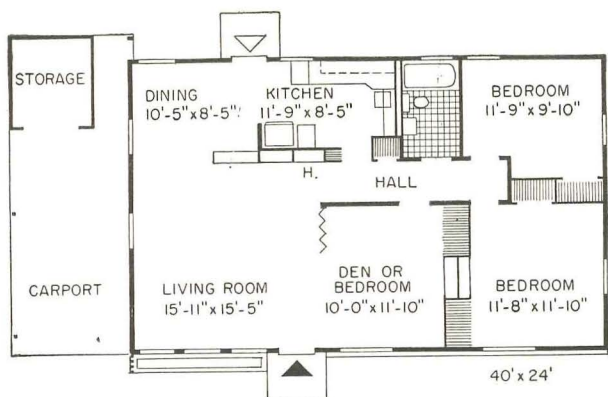
Builder's costs:

40' house package delivered to site	\$3,590
36' house package delivered to site	3,395
32' house package delivered to site	3,010
Slab (prices below for 40' model)	820
Roof & carport	722
Carpentry labor	400
Plumbing	685
Wiring and fixtures	150
Heater	250
Flooring (oak & asphalt)	485
Painting	185
Asbestos siding	160
Storage cabinets	500
Folding doors	148

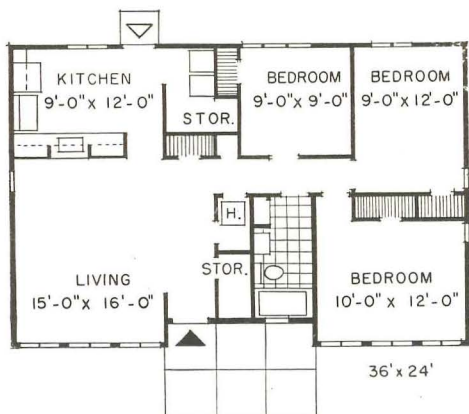
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Living room of Westerner model as seen from dining area shows openness of plan. Large front window with third bedroom or study at left of front door makes living area appear large and spacious, gives better ventilation than a closed plan. Flooring in most of house is of oak squares.



Floor plans compared: new *Westerner*, above, older *Talisman*, below. Third bedroom in new plan has been moved from back to front, kitchen has been put at rear center, a dining area has been added, front facade has been straightened out, and plan of *Westerner* has been opened up.



Folding doors separate third bedroom from living room, help to open up floor plan and make house seem larger. One of Bremer's very popular storage cabinets is seen at far end of the room.



Westerner and Talisman

Here is a comparison between the new 40' model and the Gunnison Talisman designed by Architect Henry Hill which many builders inspected last January at NAHB's Chicago meeting:

Outside appearance is generally similar except that the new house has more and larger windows and a lower-pitched roof. The Talisman has a 4-in-12 roof covered with asbestos shingles. The Westerner has a 3-in-12 built-up roof with white marble chips. Both houses have overhangs on all four sides. Bremer adds considerable stone or brick to his facades to give his houses an individual look. The Westerner has no chimney. A narrow porch cut into the Talisman at the front entrance has been eliminated and this space is used inside of the new house.

Floor plan. Talisman is a conventional three-bedroom design with living room in front and combined kitchen and dining area behind it. There is no door between kitchen and living room, but the plan could not be called open. The Westerner has one of its three bedrooms open to the living room (see above) and the living room, dining room and kitchen are all open to each other, making the house seem larger and more spacious than in a closed-plan house of the same size. This openness also greatly helps ventilation in a hot climate.

Windows. These are among the major innovations, as the new house has considerably larger windows and more of them can be opened. High bedroom windows have been replaced and all windows are planned for better ventilation. In some variations, living-room windows will extend from floor to ceiling. In all

Gunnison houses windows are steel, either casement or awning.

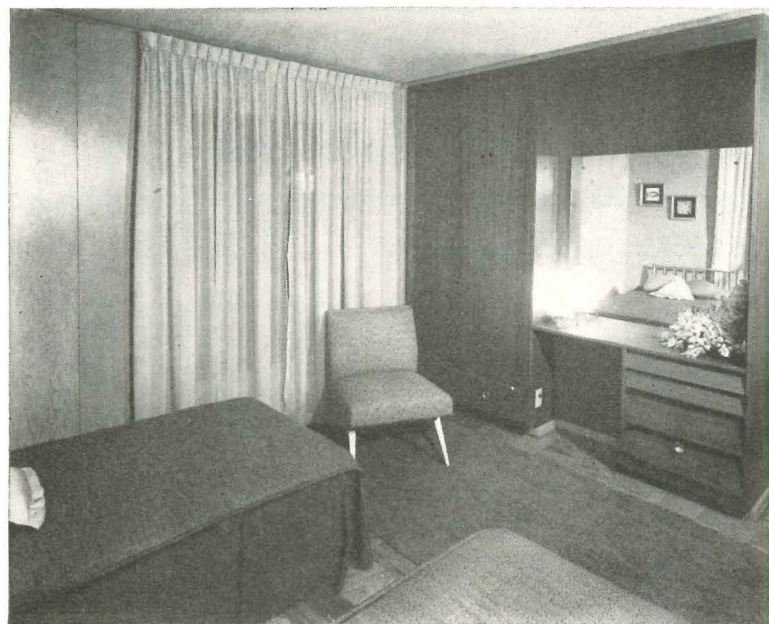
Storage. In contrast with the Talisman, which has standard closets with sliding doors but no built-in fittings, the Westerner has an abundance of freestanding storage walls which have built-in drawers, shelves, bookcases, a desk, bathroom storage and other special-purpose space. These are not part of the Gunnison package but are made by Bremer. Cabinets in the house pictured here are of mahogany, but other woods are used also. Later some cabinets will be on casters so that they can form movable partitions. The Westerner has considerably more usable storage than other Gunnison models.

Kitchen is a basic Gunnison package except that the new house has about 20% more cabinets than the Talisman. The new kitchen is slightly smaller but it is less crowded as it has no dining table. It is well concealed from the living room even though the plan is open.

Variations. Because the FHA office encourages variations and also because Bremer feels it important to give houses some individuality, he has worked out about 30 different elevations, many of which depend on shifting the carport or changing its design. This will give the regional houses a more varied look than other Gunnison models have had.

Furnace-room location. In the Talisman the equipment room is a closet off the bedroom hall or living room. Bremer puts

Kitchen in new house is composed of standard prefab parts although about 20% more cabinets have been added. Bulky refrigerator, usually unsightly, is well hidden from living room.



Storage wall, right, shows dressing table, mirror and built-in drawers with tall clothes cabinet at far left. Ceiling-to-floor window curtains make room seem taller.

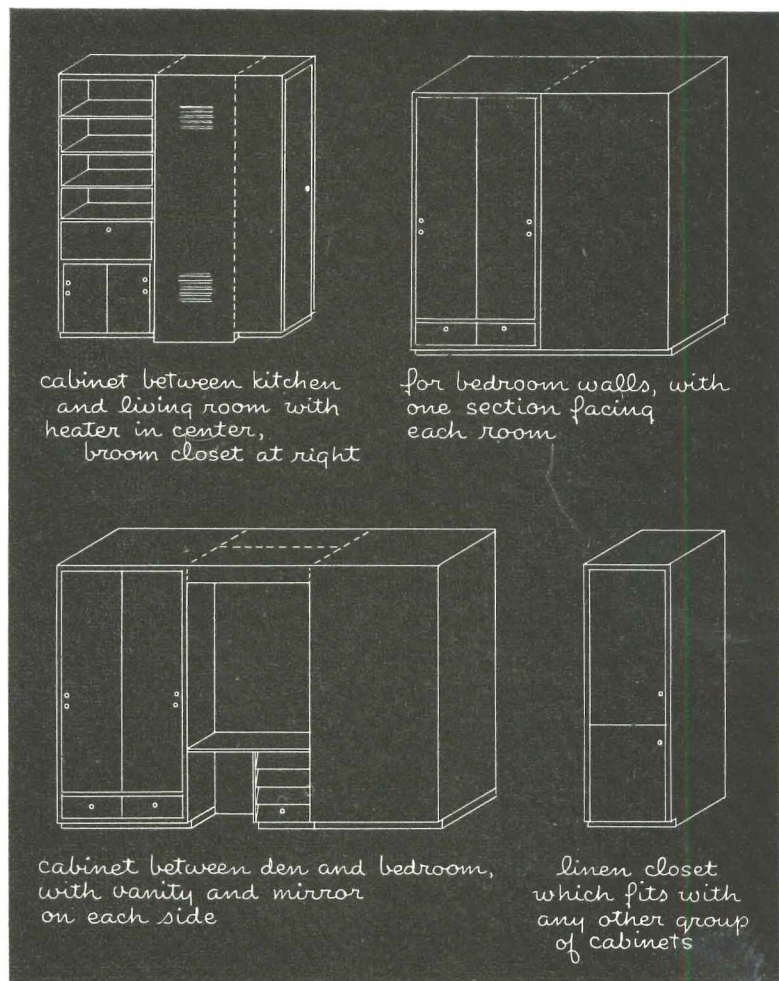
equipment in one of his storage-wall units which backs up to the kitchen. He has more places to put his equipment room because his freestanding storage walls give him flexibility.

Storage cabinets are popular feature. "The storage walls were the hit of the house," says Bremer in reviewing the reaction of the home-show crowds. Finished in rich-looking Philippine mahogany, and with a variety of special-purpose shelves, counters and cupboards, they gave visitors an impression of big-house luxury. This reaction is like the one thousands of visitors had to the storage walls in Trade Secrets houses in every part of the country. They were the one feature that no one criticized.

Influenced by other cabinets on the market, Bremer makes his sections in standard units which can be combined to form walls between living room and bedroom, between two bedrooms, or as part of a hall, bathroom or kitchen wall.

In production houses Bremer will make his cabinets of several kinds of wood, both natural finished and painted. Encouraged by the popularity of Frank Robertson's movable storage walls (see H&H, Dec. '52), Bremer will put casters on some cabinets so that a home buyer can move partitions and create his own rooms at a later date if he wishes.

Significance of this entire project for Gunnison is that for the first time a large southwestern market may be opening up for prefabrication which will help to use factory production during winter months when northern builders tend to slow up. The Westerner will be sold in Louisiana, Arkansas, Oklahoma, New Mexico and Texas. It is not intended for the North.



cabinet between kitchen and living room with heater in center, broom closet at right

for bedroom walls, with one section facing each room

cabinet between den and bedroom, with vanity and mirror on each side

linen closet which fits with any other group of cabinets

Storage cabinets are made so that several different units may be combined into one wall.

Air-conditioned house prize winners

Carrier's \$27,800 competition starts
nearly 900 architects and designers thinking about how
to cool builders' houses

Prize winners

NATIONAL GRAND PRIZE, \$5,000

*Eduardo Fernando Catalano and
Horacio Caminos, Raleigh, N. C.*

EASTERN AND NORTHEASTERN REGION

CLASS I (1,000 sq. ft. and under)

Grand prize, *Richard Dimit, Cambridge, Mass.*

First prize, pitched roof
Robert Geddes and George Qualls, Philadelphia, Pa.

Second prize, pitched roof
Carlton R. Richmond Jr., and F. Frederick Bruck, Cambridge, Mass.

First prize, flat roof
Ronald Gourley, Cambridge, Mass.

Second prize, flat roof
John Michael Godusick, State College, Pa.

CLASS II (1,000-1,800 sq. ft.)

Grand prize, *Abraham W. Geller and William Cox, New York City*

First prize, pitched roof
William Cox and Abraham W. Geller, New York City

Second prize, pitched roof
John Murphy, North Bergen, N. J.

First prize, flat roof
Keyes, Smith, Satterlee & Letherbridge, Washington, D. C.

Second prize, flat roof
Arthur DeSalvo Jr., Rowayton, Conn.

CENTRAL AND NORTHWESTERN REGION

CLASS I (1,000 sq. ft. and under)

Grand prize, *Joseph Barnett, Chicago, Ill.*

First prize, pitched roof
Royal A. McClure, Spokane, Wash.

Second prize, pitched roof
Rourke J. Haas Jr., Roseville, Mich.

First prize, flat roof
John P. Shaw, Omaha, Neb.

Second prize, flat roof
Donald R. Ericson, Yakima, Wash.

CLASS II (1,000-1,800 sq. ft.)

Grand prize, *Tom Bear, St. Louis, Mo.*

First prize, pitched roof
R. J. and G. E. Rafferty, St. Paul, Minn.

Second prize, pitched roof
Donald Panushka, Birmingham, Mich.

First prize, flat roof
Astra Zarina and Douglas Haner, Seattle, Wash.

Second prize, flat roof
Robert and Anna Bliss, Minneapolis, Minn.

SOUTHERN AND SOUTHWESTERN REGION

CLASS I (1,000 sq. ft. and under)

Grand prize, *Larry Mallard and James L. Bennett, Greensboro, N. C.*

First prize, pitched roof
*George C. Schreiter, San Francisco, Calif.
Robert B. Marquis, Sausalito, Calif.*

Second prize, pitched roof
John G. Rauma, Berkeley, Calif.

First prize, flat roof
William Paynter, Bakersfield, Calif.

Second prize, flat roof
Macon S. Smith, Raleigh, N. C.

CLASS II (1,000-1,800 sq. ft.)

Grand prize, *A. L. Aydelott, Memphis, Tenn.*

First prize, pitched roof
Robert C. Wilkanowski, Raleigh, N. C.

Second prize, pitched roof
Harvey Gene Strong, Atlanta, Ga.

First prize, flat roof
Fred Dinger and Frank Goldberg, Los Angeles, Calif.

Second prize, flat roof
Robert N. Walsch and Mark P. Lowrey, New Orleans, La.

Sponsoring the first design contest for an air-conditioned builders' house and putting up \$27,800 in prize money, Carrier Corp. has done the whole homebuilding industry and the whole air-conditioning industry a real service. Nearly 900 architects, designers and students were inspired to think and plan for air conditioning for the first time.

A study of the 31 prize winners, only seven of which can be presented here, shows how important it is to start more designers thinking along these lines. In planning their first houses for air conditioning, most contestants showed only a rudimentary grasp of how to take advantage of air conditioning, how to keep operating costs down and at the same time produce a salable house.

Many of the winning designs have flat roofs, though a pitched roof makes it much easier to provide well-ventilated space above the ceiling to cut one of the greatest heat loads on a house—sun on the roof. Most contestants ignored the use of trees, fences or other vertical shade-making devices which could reduce sun load on the west wall, a helpful factor even when there are no west windows. Many ignored putting a carport on the west as a shading device.

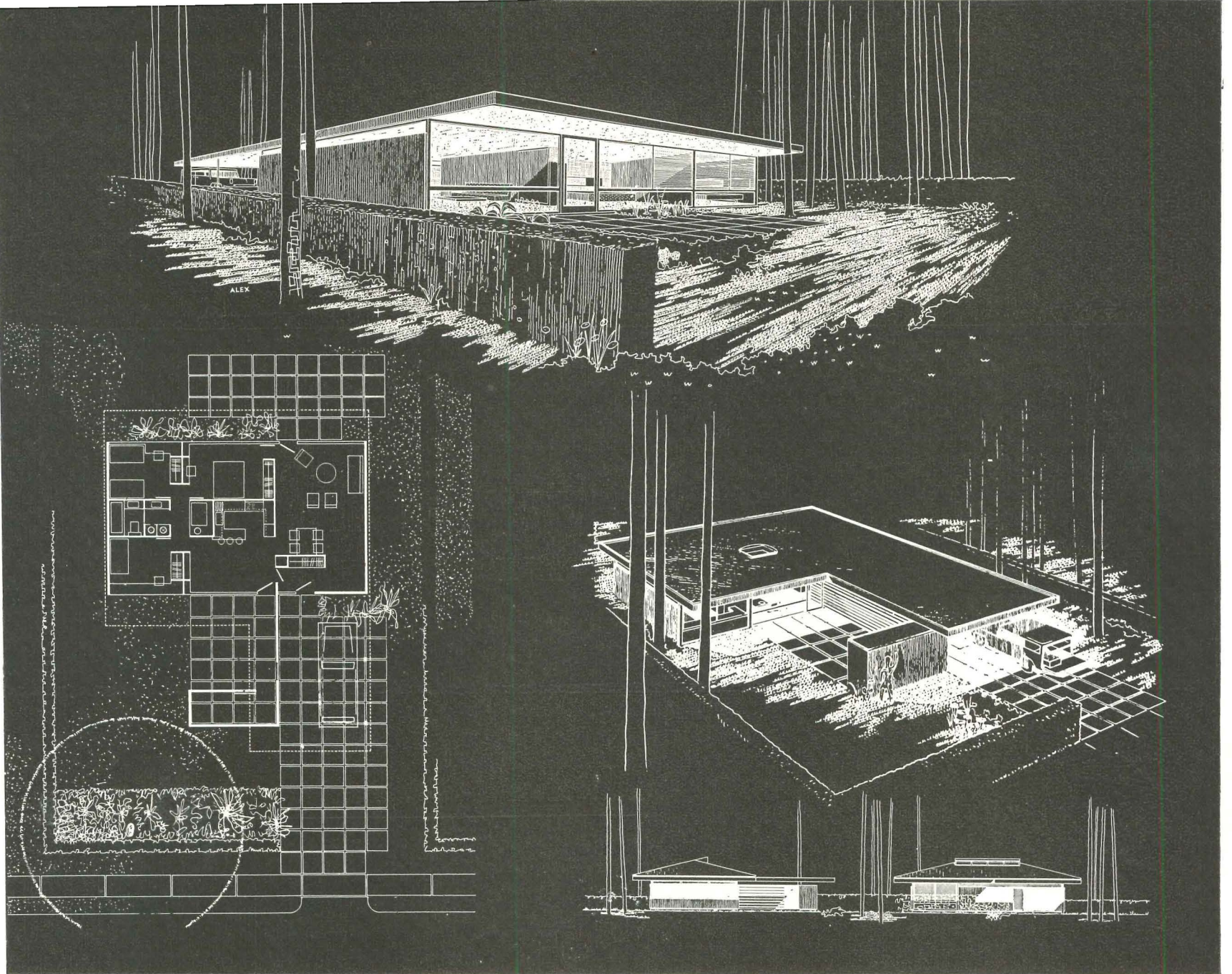
While high ribbon bedroom windows tightly sealed and tucked under wide overhangs are fine from an air-conditioning viewpoint, they darken rooms, cause claustrophobia and ride roughshod over most people's desire to keep windows open part of the year. Builders cannot sell houses in today's market with sealed windows. Many of the contest bedrooms are also far too small for public acceptance. Scores of kitchens show no apparent means of exhausting heat or odors.

Despite such shortcomings, these prize-winning house designs offer many good new ideas for architects and builders.

Maurey Garber



Contest judges in action. Left to right: MIT Architectural Dean Pietro Belluschi, Architect Richard J. Neutra, Industrial Engineer Dr. Lillian Gilbreth, NAHB's Technical Director Leonard Haeger, Architect Edgar Williams, contest-advisor Architect Harold R. Sleeper.



National Grand Prize of \$5,000 was awarded by the judges to the design of Architects Eduardo Fernando Catalano and Horacio Caminos, both visiting Argentinians now on the faculty of the architectural school at North Carolina State College. Renderings above show north view with carport, south view at top with terrace.

What the judges said:

Belluschi: An economical and flexible design, it would suit not only *one* family but the *average* family. The fact that it is small, compact and expansive had a great deal to do with its winning the prize. Everything counts, even the location of storage space and access to it as well as the fence, and the play areas and service areas—all are beautifully related. It is elemental—not subject to tricks or styles . . . should be good for a long time.

Williams: The whole solution shows simplicity and competence. The disposition of parts makes for a free plan, in which parents and children have use of an area separate from the living room. Bedrooms are in a simple package. You can reach the bathroom without being seen from living room or multipurpose room. As to the basic concept, it would hardly be possible or competent without the

Weathermaker, which, in my opinion, is a basic premise. The intelligent arrangement of the buildings permits an open space enjoyed by all the others on the plot. I particularly like the entrance off the main driveway. This gives a single entrance rather than two.

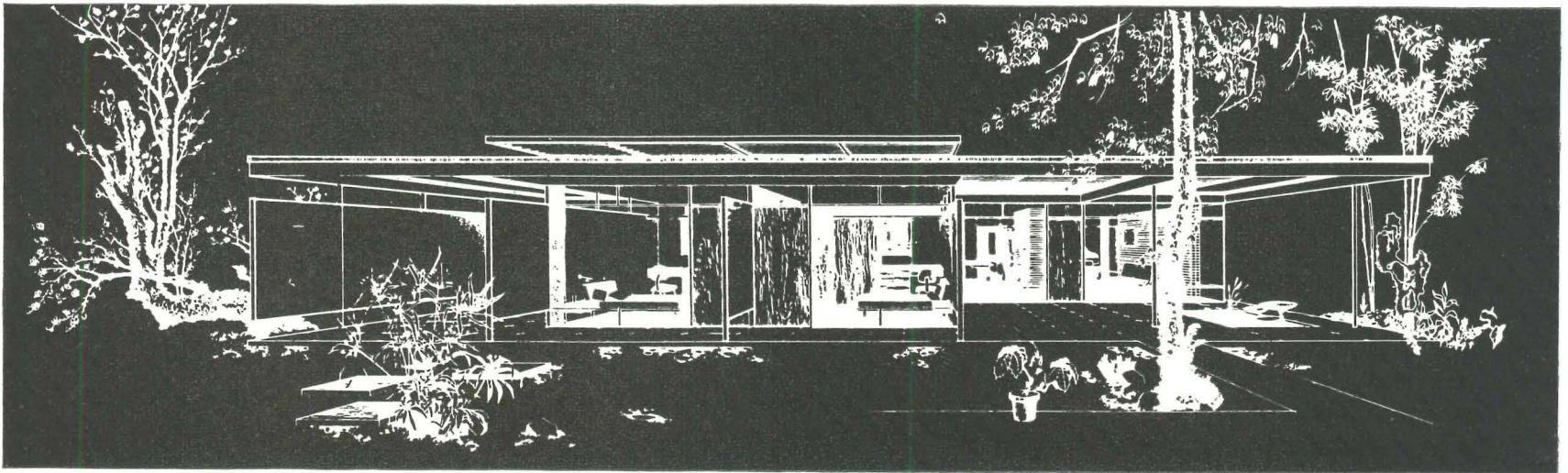
Neutra: The social room is better for family life. Fused into one almost uninterrupted area, it makes for an unusual spaciousness in a 1,000 sq. ft. house. All utilities and mechanical equipment are clustered around the air conditioner in a remarkably compact arrangement. The outside spaces are articulated without lavish spending.

Haeger: It is a simple, straightforward house. It should be very easy to construct. This chap has a nice understanding of the outside, too, especially the children's playground.

Gilbreth: The design, all on one level, makes possible a layout which will be economical from the time and energy standpoint. There is a growing tendency toward flexibility so rooms may be used for different purposes as the size, age and demands of the family group change. The problem of securing privacy for members of the family must be considered along with picture windows, locating the house on the plot and emphasis on a room of one's own versus teamwork and group activity. The home of the future will probably be even more flexible and in its design keep pace with new patterns of family life, such as increased emphasis on comfort, on informal living, on hospitality and on multiple use of space. The homemaker today is interested in her home from both housekeeping and family-relations angles, looks to bring comfort and happiness to every member of the family.

House with an umbrella roof

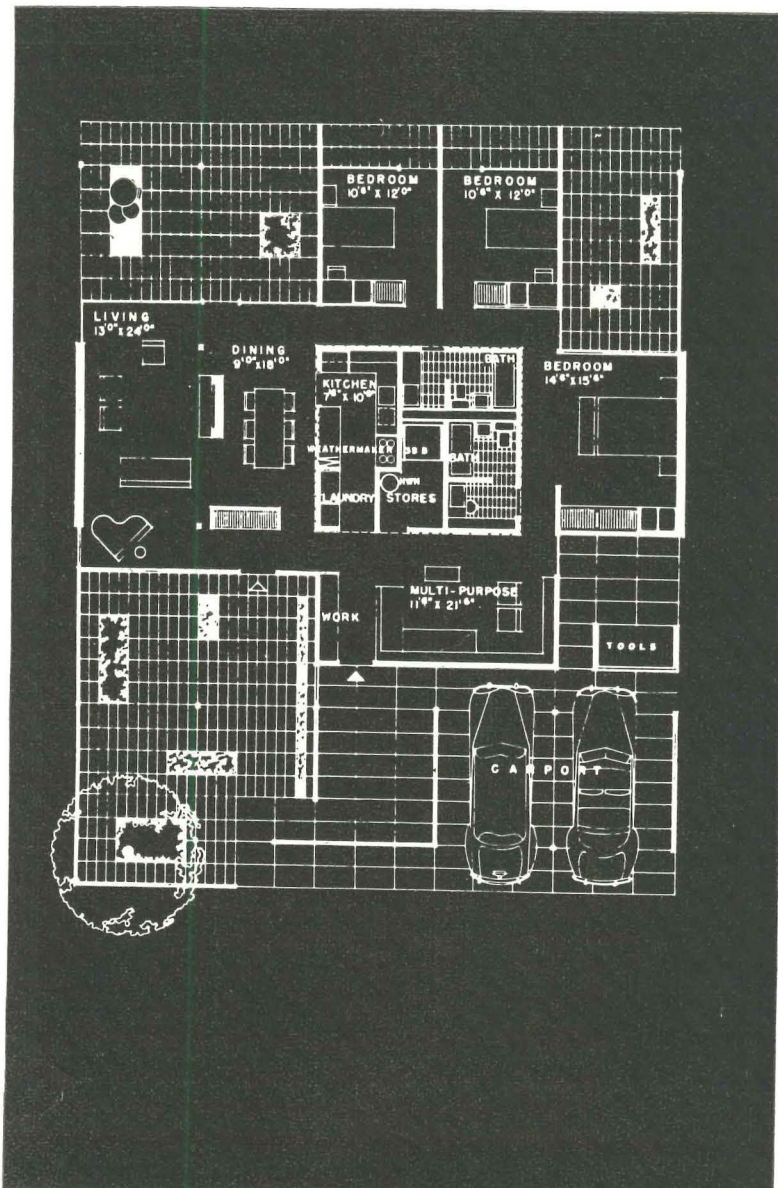
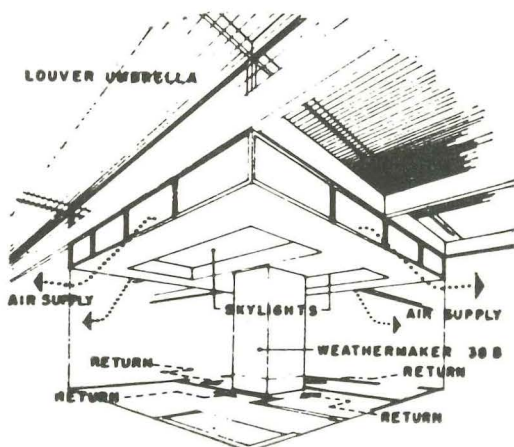
Architect A. L. Aydelott of Memphis won a \$2,000 prize for submitting the best Class II house (over 1,000 sq. ft.) with either flat or pitched roof in the southern and south-western region.



Haeger: It is probably the best example we have seen of technical, engineering competence in tackling the problem.

Williams: I wonder if the use of great glass areas, even though they are set back, are outside the purview of our program? While I recognize a competence and a charm, I am critical in that I don't believe this represents the house I would look for as a design which contributes to the use of air conditioning.

Belluschi: It is not very economical. There is a great deal of the esthetic in the apportioning of space. It has fairly good circulation. The direct rays of the sun in a southern region somewhat minimize the main criticism, which is that it has too much glass for an air-conditioned house.



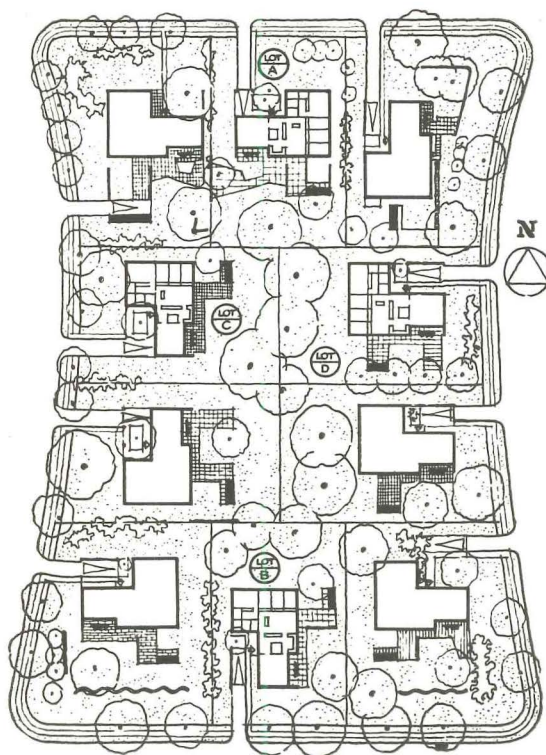
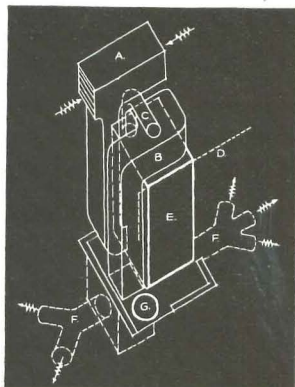
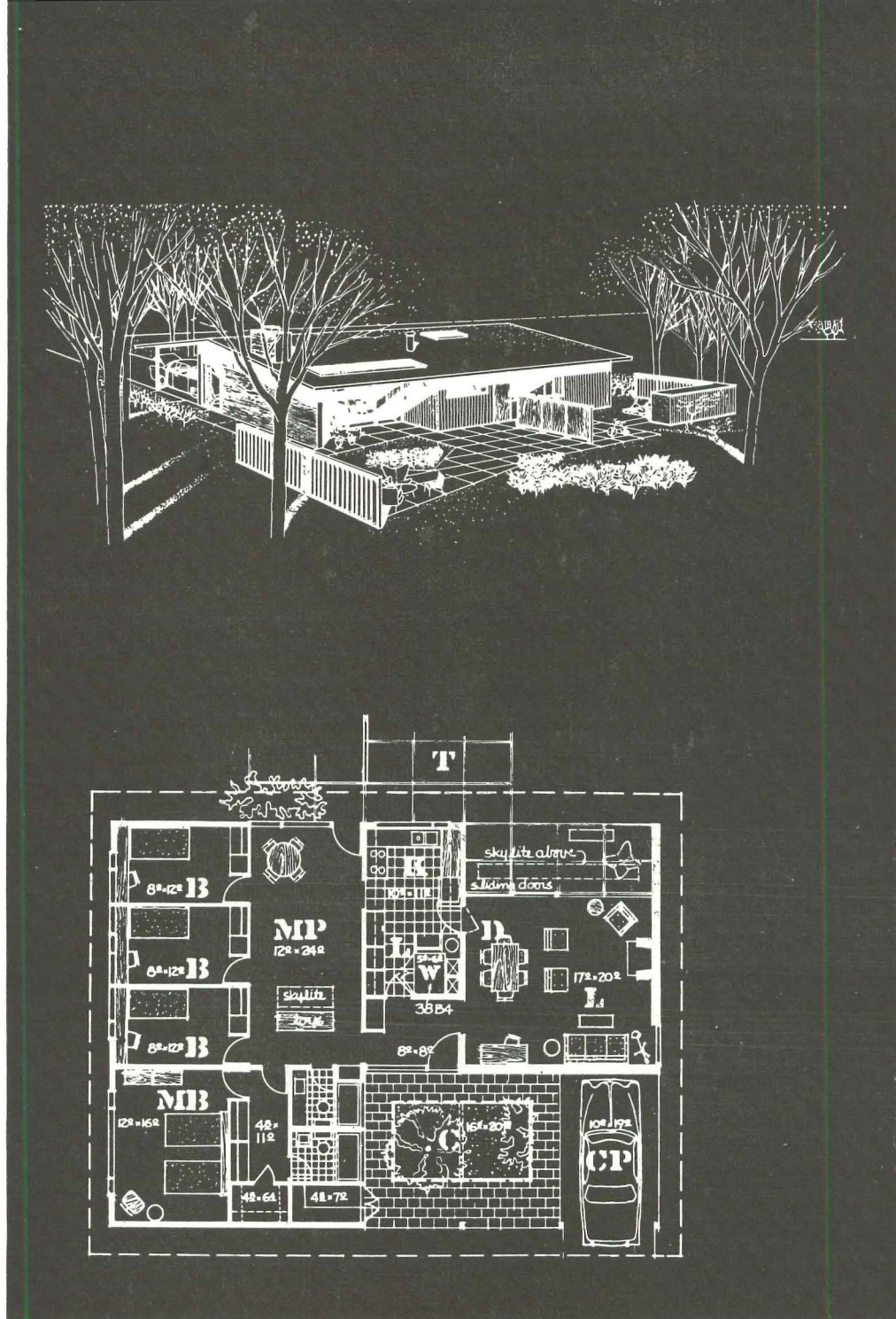
Bedrooms give up space to multipurpose room

Architects Smith, Keyes, Satterlee & Lethbridge, designers of several highly successful builders' projects outside Washington, D. C. won first prize for a "flat roof" house (pitch 3-in-12 or less) of 1,800 sq. ft. or under.

Most unusual feature of the house is a large, 12' x 24' multipurpose room adjoining kitchen and bedrooms, but separate from living and dining room.

This is a 1,712 sq. ft. house designed for a family that needs four bedrooms, presumably parents and three children. It might be a plan offered as one of several by a production builder. Parents' bedroom is 12' x 16' and has a private bath when desired, or the second bath can be made available to the children without their going through the parents' bedroom. Children's bedrooms are small, but a builder could make two larger rooms instead of three small ones. Multipurpose room adjoining the bedrooms is a good idea, provides dining space for children, a place to play or a study table. Bedroom windows on the east wall can be opened. Carport is on the west side. forms shade for a terrace.

Of great importance is that the architects recognize that shade trees on the west help to reduce heat load on west wall and roof. Skylights, however, will let in sun heat unless they are shaded.

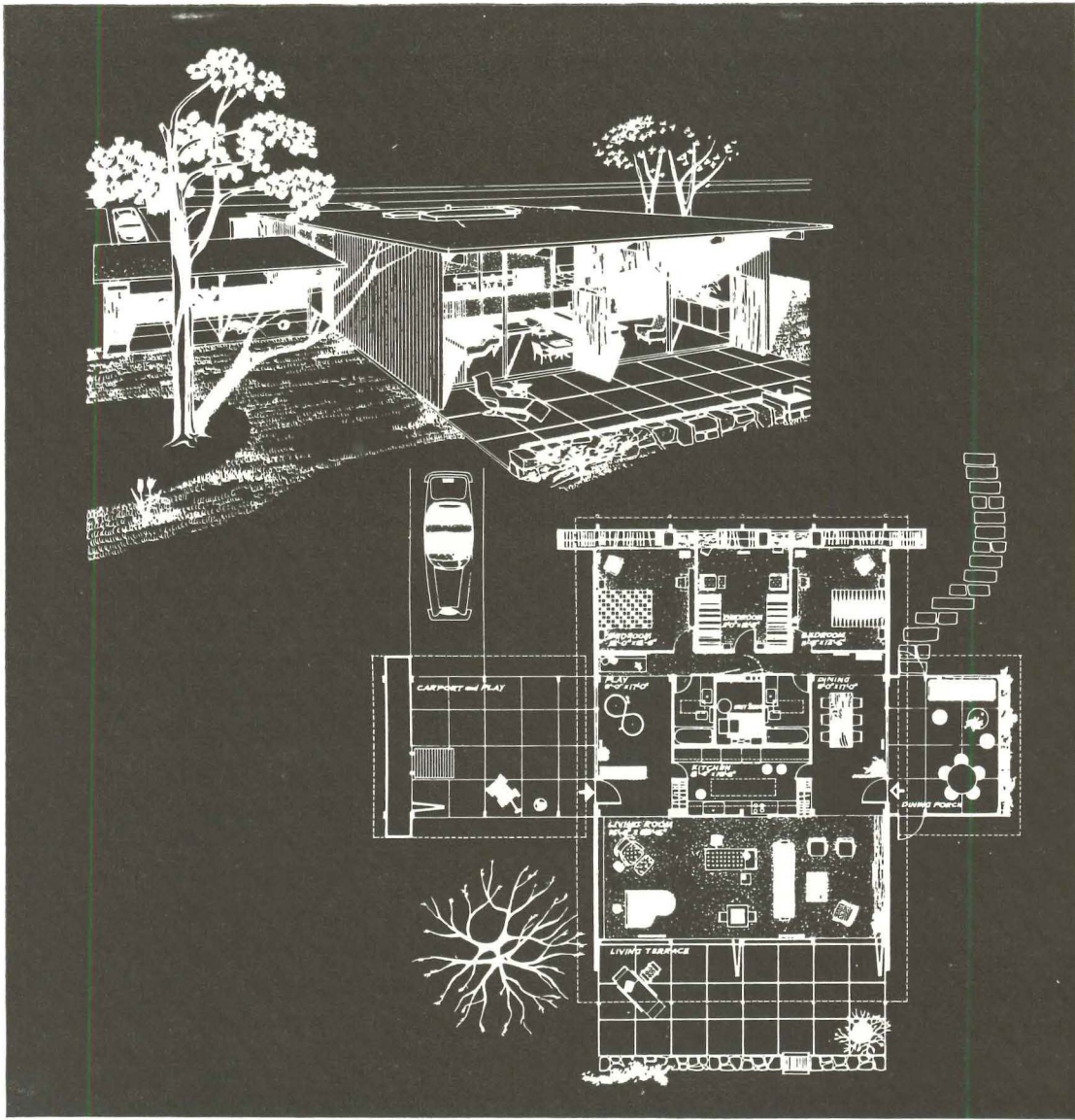


Williams: This plan almost overdoes the multipurpose area. It does provide that kind of retreat from the more formal living areas. The elevations have charm and are in good scale. Access to the garden from the living area makes for good relationship between house and grounds.

Haeger: This plan requires the frank acceptance of the multipurpose room and the confusion of services which in a 1,800 sq. ft. house is a little difficult for me to accept.

Williams: It isn't hard to get from here to there. It is not like going past a kitchen recess as in some of the other plans.

Belluschi: The requirements of air conditioning are fairly well met.



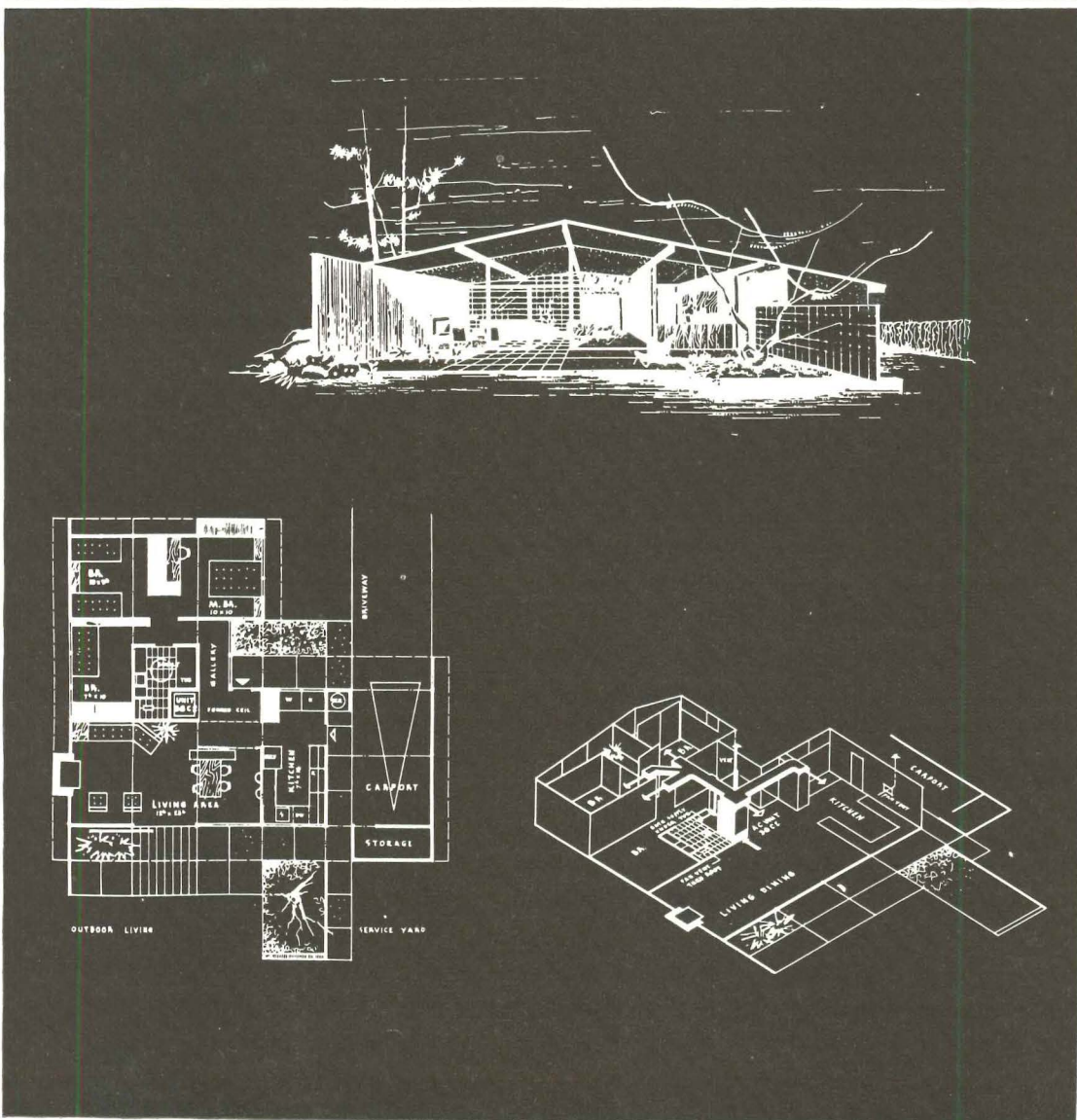
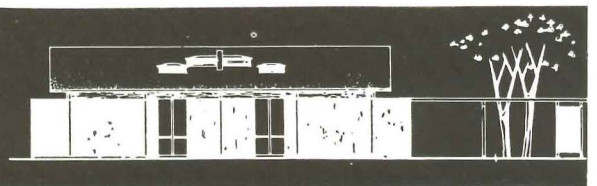
South wall closed by shutters

One of the six grand prizes went to Architects Abraham W. Geller and William Cox of New York City for this 1,799 sq. ft. design. Most unusual feature is a series of large wooden shutters which can be used to close the roof-high south wall.

Williams: Any plan which opens up the living quarters in a charming manner to the garden has already achieved something. While the use of glass goes the limit in a house which pretends to have economy, he has provided a series of shutters which are not only pleasant to look at but quite useful as well.

Belluschi: However, they might be hard to weatherproof. I want to make a negative comment on the location of those closets. [See floor plan for closets which project out beyond wall of house at north end.—Ed.]

Haeger: The jury should request that this designer be made to live in a house with closets like that.



West wall extension shades terrace

Designer William Paynter, of the architectural firm of Robert N. Eddy & Associates of Bakersfield Calif., won a first prize of \$750 for the best "flat-roof" house (with pitch of 3-in-12 or less) of 1,000 sq. ft. or under in the southern and southwestern region.

Despite its enormous glass area to the south, this house more nearly resembles a builder's idea of a salable house than other winners.

The designer has not hesitated to use windows that open on both east and west walls, but he has provided overhangs which partially shield them. With proper shading from trees, shrubs or trellises there might not be too much cooling loss from such windows.

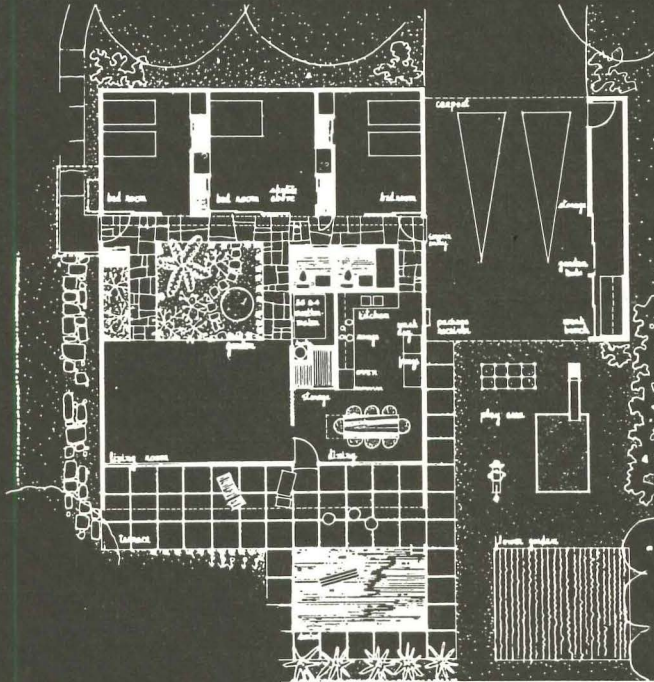
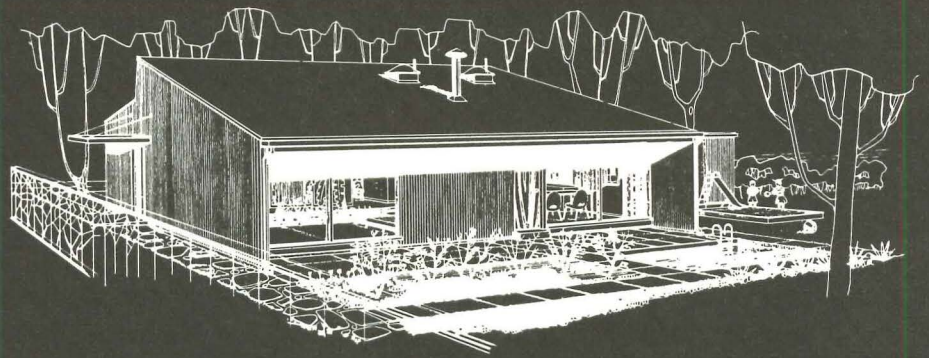
The kitchen has a large southern window, which would be a good sales attraction. An excellent feature is the extended west wall which will provide shade for the southern terrace on summer afternoons. Bedrooms are too small.

A house with four terraces

To students Fred Dinger and Frank Goldberg of Los Angeles went a first prize for the best flat-roof house in the 1,800 sq. ft. class. Their design is a three-bedroom, two-bath house of 1,577 sq. ft. which broke with the precedent set by many entries in that it had high gable windows on both east and west as well as large window areas on north and south.

Most unusual feature is four separate outdoor terraces which emphasize the fact that in southern California a family does not expect to stay cooped up in an air-conditioned house all year.

Neutra: Here is a combination of family and social space in angular form. It is somewhat irregular in the way the layout is handled in elevations but has certain lyrical success.



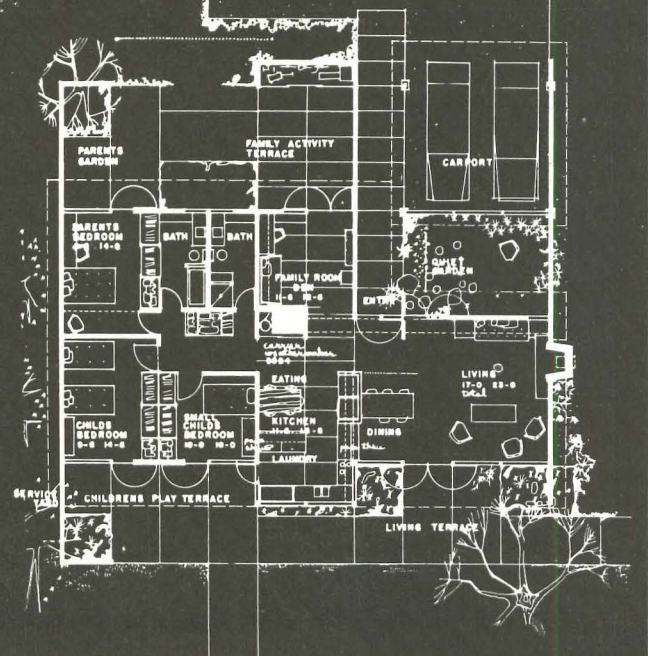
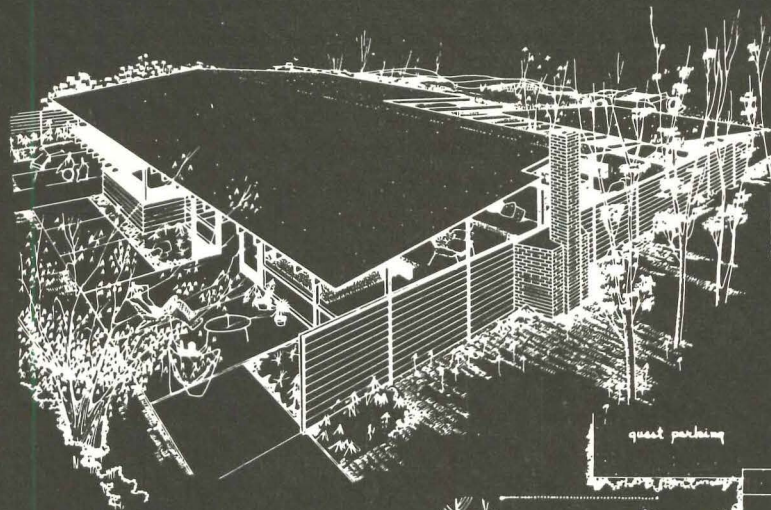
A charming entrance with privacy

Winner of the best prize for either roof type in the 1,800 sq. ft. class for the central and north-western region was Architect Tom Bear of St. Louis. He provided a two-car carport, interior garden, shaded overhangs over east and west doors, an extra half-bath, good carport storage plus a workbench, a play area and a kitchen that can be shut off.

Belluschi: What caught our eye more than anything else is the charming entrance which also lends itself to privacy. The plan works well from the practical point of view. Elevations are simple. He has taken an area [for the garden] which would be more desirably used as a recreation room if there were children.

Williams: You have a simple, square plan where the air-conditioner unit is well located, a simple entrance which is pleasing because it is ample. The roof treatment is interesting and gives the building a character of its own without recourse to tricks.

Haeger: From an air-conditioning viewpoint it is a competent, technical solution. In many places you could probably get by with one plumbing unit.



Wiring tips from an all-electric house

First in a series of three articles on adequate wiring

How much electrical convenience will an extra \$20 buy for your houses? \$40?

How can the location of your electric range save you \$15?

How can you include more convenience outlets at a reasonable cost?

Which particular wiring and lighting ideas are the best sales features?

How can you stretch your electrical budget?

This all-electric house in Reading, Pa., built in cooperation with the local utility as an exhibit, is a good house for the merchant builder to study. Many of its ideas can be adapted to the low-cost house, and any of them can be picked up for a sales feature. The quiz below will help you check on how your wiring measures up to today's high electrical requirements. The Reading house scores heavily by these standards.

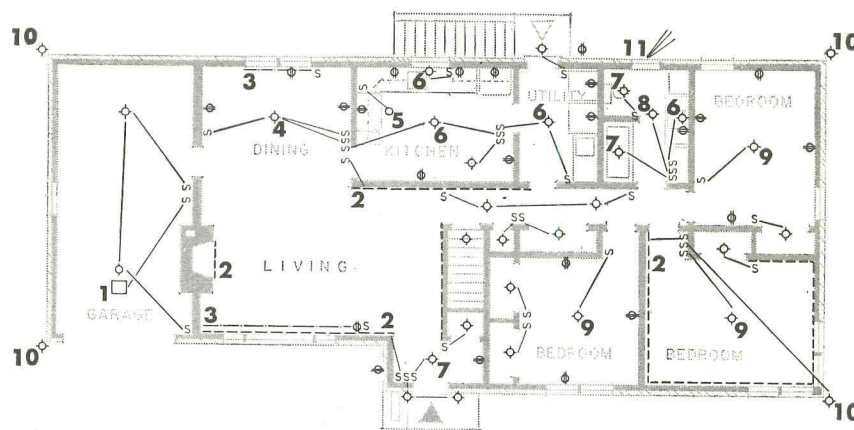
1. Is service capacity planned for both present and future needs? Yes ___ No ___

Service entrance capacity is the keystone to normal expansion of electrical facilities. Since 1940, residential use of power has increased 229%, and the trend is still upward. Air conditioning, with its added load, is growing more common in both old and new houses. The normal 60 amp. panel, with No. 6 service wires, is inadequate for the electrical expansion that many families plan. Yet ample capacity can be provided for as little as \$40, with a 100 amp. panel and No. 2 service wires. (continued on p. 174)



Ceiling fixtures show thoroughness of lighting facilities. Flush fixture (foreground) throws concentrated light on ironing work area.

Service entrance uses No. 2 wires, is heavy enough to permit future air conditioning. Three heavy appliances have direct circuits.



1. Electronic garage door opener
2. Plug-in strips
3. Valance lighting
4. Combination ceiling fixture, providing direct light, plus general illumination
5. Ventilating fan
6. Fluorescent fixtures
7. Recessed fixture
8. Combination light, fan and heater
9. Close-to-ceiling bedroom fixture
10. Outside floodlight
11. Location of service entrance

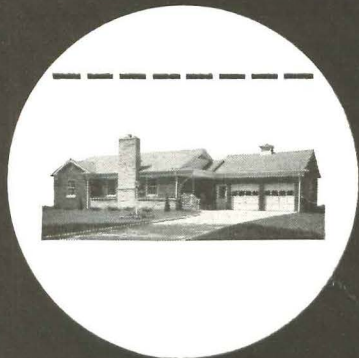


Plug-in strips are economical, permit free furniture placement. Lamps may be turned on or off directly or from central wall switch.



Weatherproof outlets are furnished at front and rear of house, eliminate makeshift arrangements for electric tools or outdoor Xmas lights.

a door
is only as good as its
parts



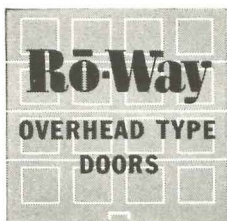
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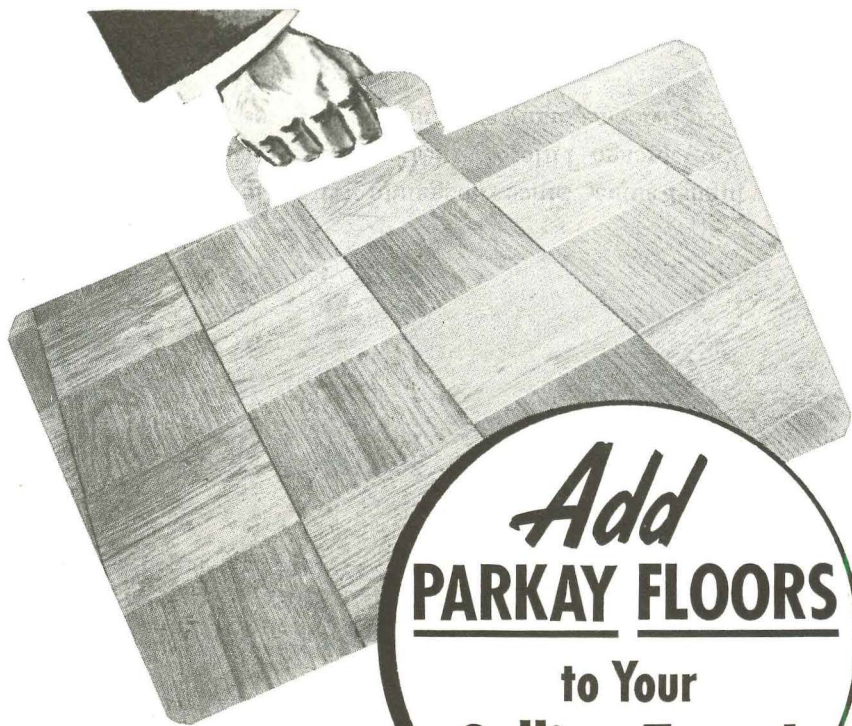
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BOOK REVIEWS

HOUSEBUILDING IN TRANSITION

By Sherman J. Maisel.* University of California Press, Berkeley, Calif. pp. xvi-396. \$5

Mr. Maisel's book, from which this article is abstracted, concerns the emergence, growth and relative efficiency of the merchant builder. The research upon which it is based rests on an examination of all types and sizes of builder operations in the San Francisco Bay area.

The growth in size of housebuilders [has] brought about far less improvement in management than might have been expected. . . . The greatest weaknesses seem to lie in the realms of cost data and research and in a failure to re-examine the over-all problems of the organization and functions of the firm.

Perhaps most important has been the failure to develop adequate record-keeping and methods of production control. Management has remained on a very personal basis. Scheduling has too often been hit-or-miss. Many advantages of specialization have been neglected through inertia and ignorance.

Even among the big firms, the majority had no adequate cost accounting or production controls. As a result, their efficiency was low.

Housebuilding firms have accurate records of their total costs, but have failed to break them down to show the costs of specific parts of the operation. Many examples can be found of builders who have not known whether they should adopt a specific technique because they had no way of comparing relative costs.

Organization is the key

Related to this lack of knowledge about costs has been the failure of firms to re-examine their complete job organization and to introduce new methods and materials. It is true that large builders have emphasized standardization, simplification, and the logic of their production processes to some extent. But on the whole, the field has received far less attention than is its due. If builders knew more about their actual costs in terms of components and individual sections of the house (as compared with their present knowledge of what they spend for materials, labor, and trade contracts) they might find it advantageous to modify and revamp their whole construction process.

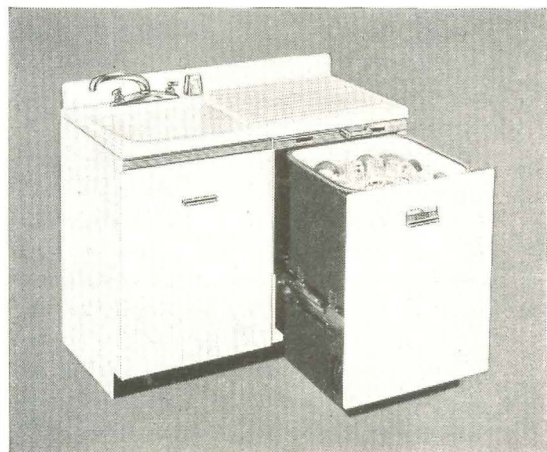
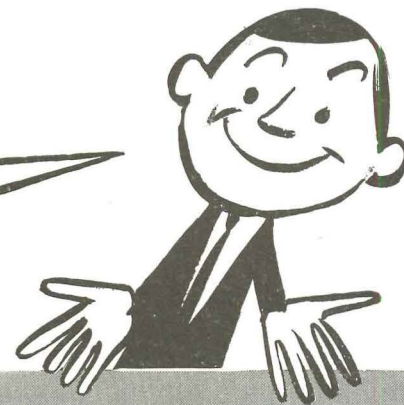
Management skills

New procedures have been developed in the most efficient firms, and it is probable that, in time and with more intensive competition,

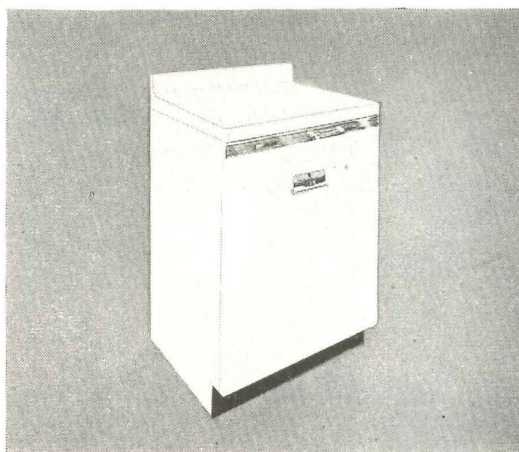
* As Associate Professor of Business Administration at the University of California, Berkeley, the author has, for the past ten years, been closely associated with the real estate field in the area of urban land economics and has written a number of articles and papers on the subject.

continued on p. 166

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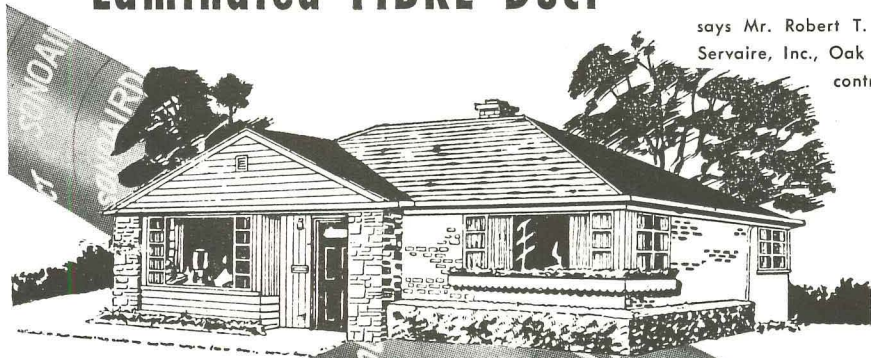
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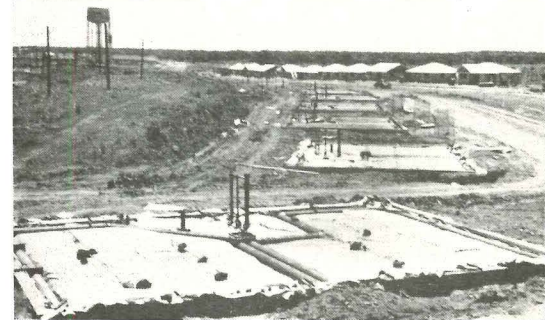
says Mr. Robert T. Curran, President of Servaire, Inc., Oak Park, Illinois, heating contractor.



Servaire, Inc., was one of the heating contracting firms that helped complete 800 homes in

Park Forest
the privately-developed
\$25 million dollar Illinois housing project

Thank you, Mr. Curran! Your statement helps back up the many claims we have been making for Sonoairduct and we are happy to have you join the many hundreds of other heating contractors and builders all over the country who have found this product to be a real time and money saver! Sonoairduct was specifically designed to be used as supply or return lines in slab-on-ground perimeter systems—and has been widely job-tested and is permitted by F.H.A.



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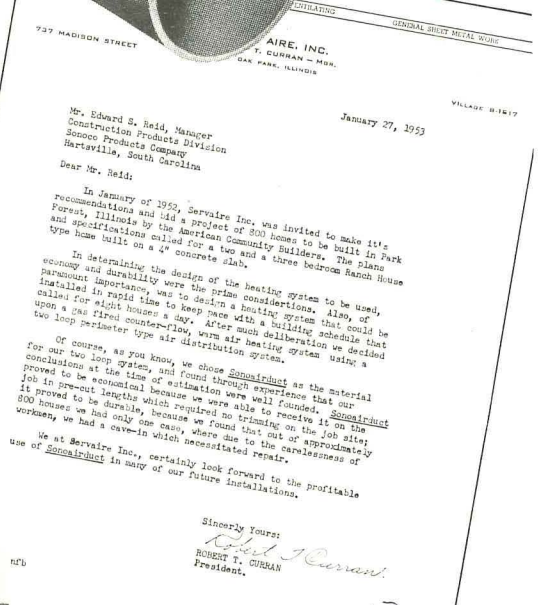
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Sizes 2" to 36" I.D., up to 24' long. Can be sawed to exact lengths on the job! Lightweight and easy to handle.



REVIEWS *continued*

more effort will be made to develop management skills by all firms in the industry. Otherwise, many may fall by the wayside. If the gap can be closed between the best-run firms and the average firm, the entire efficiency of the industry will be greatly improved.

The obvious reluctance of large firms to increase their overhead has been a major drag on progress toward better management. Expanding overhead has meant additional risks, which firms have naturally been hesitant to do unless forced by competition or led on by hopes of much larger profits.

Maintaining that "the final criterion of performance is progress," the author contends that an industry, merely to hold its place in the industrial scheme, must show constant improvement. He finds that such progress as the building industry has made tends to take the form of more skillful performance of traditional processes rather than basic and dynamic changes—such as are found in other industries—and he looks for the reasons:

There are two possible explanations for the relative lack of progress in the housing industry.

The first is that possibly the most efficient firms, using present production methods, have already brought the cost per unit of output as low as it can be with existing knowledge. Further reorganizations would not actually bring about a sufficient cost reduction in the final unit to justify the upheavals attendant upon instituting them.

The second is that, assuming there is ample room for real growth in efficiency, no one has had the vision to perceive in what areas changes should be brought about. Or, if they have they have not had sufficient influence or strength to bring them about within the existing organization of the industry.

Is the industry efficient?

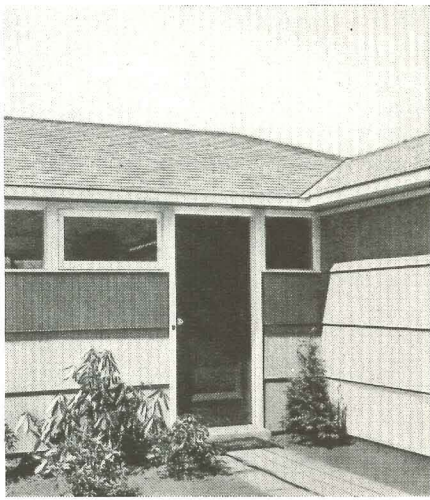
Those who hold the first view claim that the present structure of the industry, with its small overhead, great flexibility, and low profits, is efficient, and that the production process is better than most critics realize. Wood is basically an efficient material, cheap, easy to handle and to work with. A wood frame has great advantages over other materials. A competent large firm can complete the shell of a \$10,000 house, including foundation, subfloor, framing, siding, and roofing, for less than \$2,000—a figure extremely difficult to compete with.

Many builders say no

Those adhering to the second point of view, however, maintain that this appearance of efficiency is an illusion, that the cheapness of the frame of the house is deceiving. Builders find that they cannot beat their present framing costs, and, therefore, continue as before. They ignore the fact that the big expense of a

continued on p. 170





Ready-cut $\frac{3}{8}$ " Weldtex siding like this in strips 48" by 15 $\frac{3}{8}$ " can be used where a dramatic horizontal effect is desired. It is easy to install in shingle style, but goes up faster than shingle-size pieces.



Here's a dramatic and pleasing wall surface using both Weldtex panels and squares. Patented Weldtex panels are available in fir, gum, and Philippine mahogany; squares in gum.



Here's the corner of a playroom designed by Fred Gerstel which shows an interesting built-in and horizontal-vertical Weldtex treatment on the wall. Note bar top of Westinghouse Micarta.

Weldtex adds sales appeal!

New Weldtex advertising to millions of home owners shows how even low-cost homes can have the extra distinction and beauty of the "wood of 100 uses"

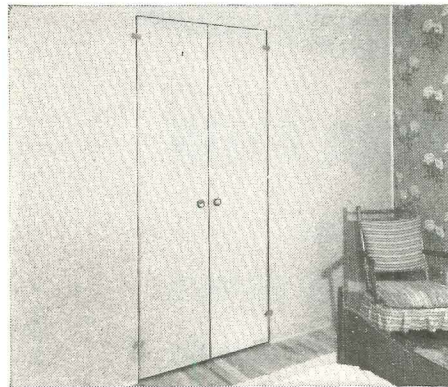
What makes home buyers tick? Today, according to the NAHB, it's the *extras* they receive in the homes they buy that catch their interest and imagination . . . and close sales.

Weldtex paneling by Weldwood is a low-cost investment that pays for itself in faster turnover and satisfied buyers.

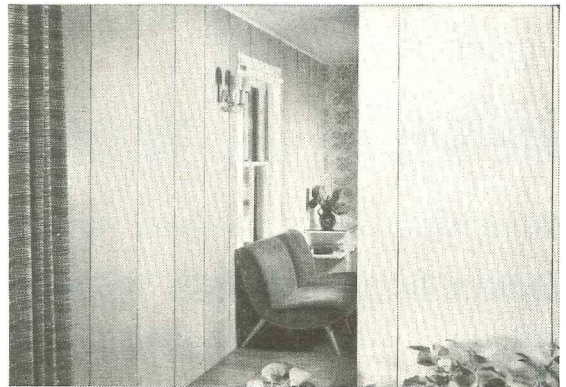
When prospects come to your model homes, let them see the added distinction of a ceiling made of Weldtex pre-cut squares, or a TV room with beautiful Weldtex walls, or outside walls of Weldtex exterior siding. They'll notice the custom appearance of Weldtex—its deep, irregular grooves which add a warm three dimensional quality. They'll compare your homes with the usual run-of-the-mill houses with dull, flat wall and ceiling surfaces. You'll come out on top.

You'll have the added sales advantage of being able to promote a nationally known and consistently advertised brand—*Weldwood*.

Cash in on the growing trend and demand for *real wood* for home design. Use Weldtex and other beautiful Weldwood products for more distinctive, faster selling homes. Complete information can be supplied at your nearest Weldwood showroom . . . or see your lumber dealer for Weldwood products.

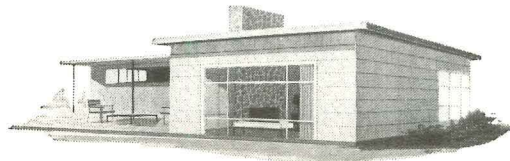


New Novoply is the flattest panel ever made. Doors made of it will not stick, warp, rattle. Beautiful mosaic surface takes high gloss finish. adds beauty to any room.



Builders always find Weldwood products keep sales moving. Here is Plankweld, another beautiful wood in the Weldwood family of real wood for beautiful homes.

There is a Weldwood Product for every part of the home



- Concrete forms
- Wall and roof sheathing
- Cabinets and built-ins
- Interior walls
- Exterior siding material
- Westinghouse Micarta for counters, table tops and bars
- Doors
- Sub-flooring
- Bathrooms and kitchens

Weldwood®

United States Plywood Corporation
55 West 44th Street, New York 36, N. Y.

U. S.-Mengel Plywoods, Inc.
Louisville, Ky.

DISTRIBUTING UNITS IN ALL PRINCIPAL CITIES

United States Plywood Corporation, 55 West 44th St., New York 36, N. Y.

FREE Please send me 24-page Contractors and Builders Book—packed full of Weldwood data and specifications. HH-6-53

Name _____

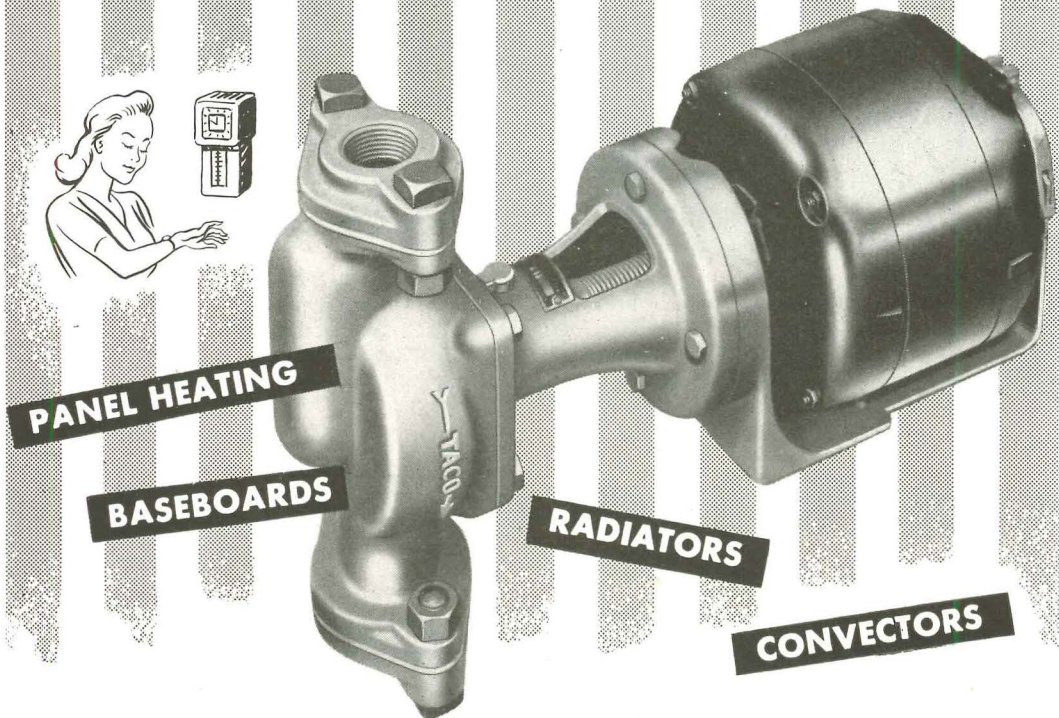
Address _____

City _____ State _____



Novoply, Weldtex, and Plankweld are registered trademarks

get FAST, RESPONSIVE HOT WATER HEAT for



with this popular TACO CIRCULATOR

EVEN LOW BUDGET HOMES CAN NOW HAVE THESE LUXURY ADVANTAGES

RADIANT WARMTH • DRAFTLESS WARMTH • CONTROLLED WARMTH

MORE HOT WATER FOR KITCHEN, BATH AND LAUNDRY

Yes, forced hot water heat with a TACO circulator gives all this *plus* economical warmth. No need for a separately fired water heater. TACO TANKLESS, hooked up to a heating boiler, supplies year 'round low cost hot water.

The TACO circulator delivers heat where it will give the greatest comfort . . . whether you use radiant panels, convectors, radiators or baseboards.

**ARCHITECTS—ENGINEERS
WRITE FOR . . . SIMPLIFIED
SELECTION CHART FOR SIZ-
ING TACO WATER HEATERS
UNDER ANY CONDITIONS.**

Three other famous TACO PRODUCTS for houses

TACO-VENT



eliminates air from hot water radiation automatically

TANKLESS TACO



gives an abundant supply of hot water instantly. No need for storage tank.

TACO TEMPERING VALVE



thermostatically mixes hot water with cold so there's no danger of its being too hot.

**Better Heating-
Better with Taco**



TACO HEATERS, INCORPORATED • 137 SOUTH STREET • PROVIDENCE 3, R. I.

REVIEWS *continued*

house is the equipment and finishing, which are purchased from subcontractors and do not enter the picture when the builder calculates new methods. Efficiency can be increased, but only if someone takes an entirely new view of the complete building process, looking toward elimination of some of the present steps rather than continuing merely to improve present methods gradually. A radical shift in the method of production is called for.

The case for large firms

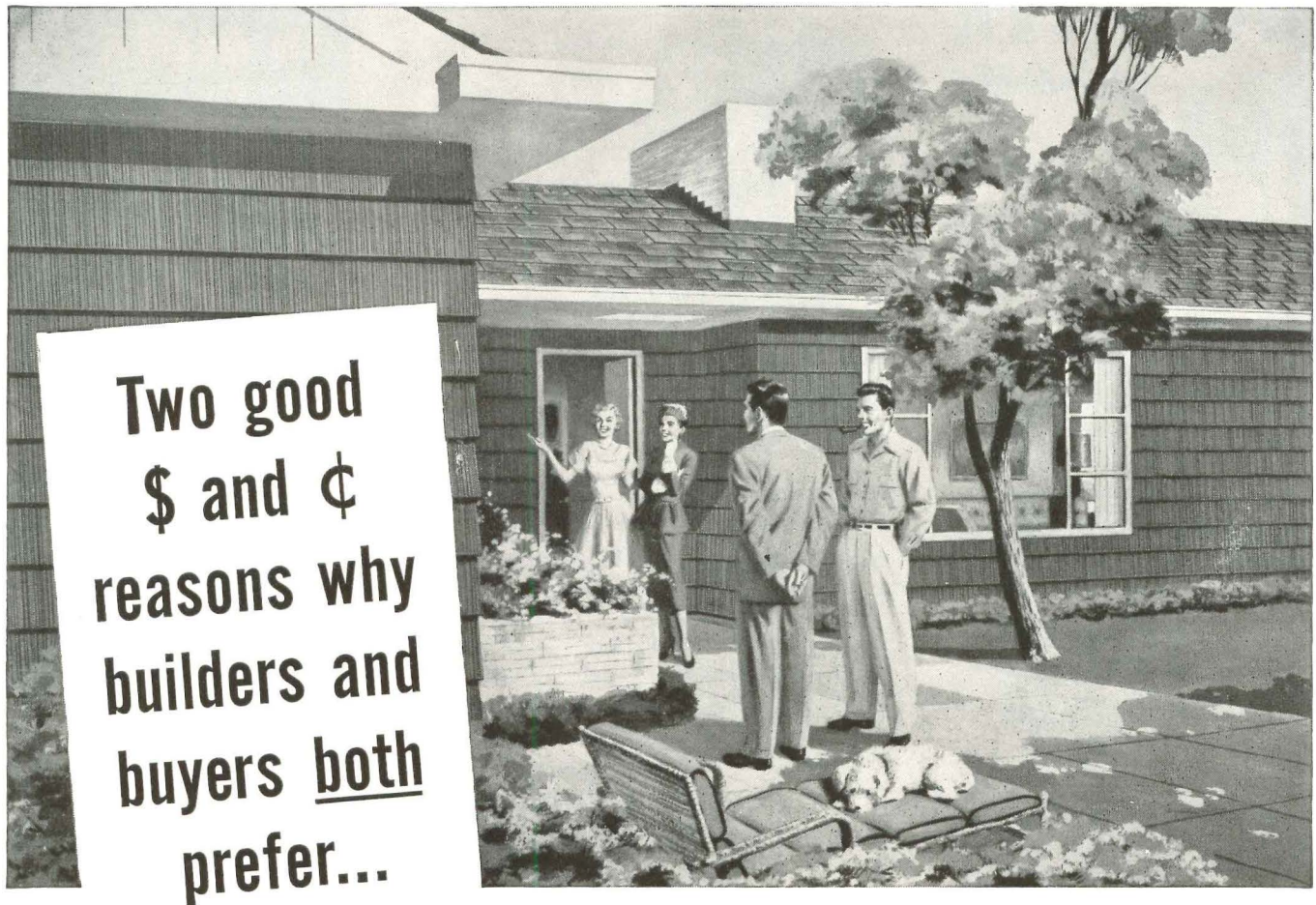
The proponents of this second attitude have, on the whole, held that much larger firms must come into existence for new production methods to be perceived and brought about. Connected with this belief is the idea that the housing industry is too competitive to operate efficiently. They state that, contrary to most industries, housebuilding has suffered from a lack of firms with a monopoly position. Such firms, understanding the need for change, could furnish leadership, undertake necessary research, and introduce radically new methods that would achieve greater efficiency. The present state of housebuilding, with its intense competition, diversity of organization, extreme flexibility, and an unstandardized and complex product, is not conducive to the development of such firms.

Competition vs. research

The excess of competition, it is claimed, leads to a general absence of money for research and a consequent one-at-a-time approach. It is claimed that many of the factors which make entry easy tend to slow down innovation. Innovations may be put off lest new entrants adopt them and the innovators' position be "competed away." In addition there is a strong possibility that firms may find it hard to finance the research from which new products or new methods of production can stem. Lacking firms with a protected position, the industry requires either an outside force, such as aid through governmental policy, or the emergence of an entrepreneur with unusual ability, drive, and luck to achieve any important changes in the production function.

Summing up

On the whole, the organization of the housebuilding industry and the institutional setting in which it operates do not appear to be conducive to rapid change. Some of the very factors that make for ease of entry militate against further dynamic behavior, and some of the developments that make for safety of enterprise (e.g., spreading risk by trade specialization) also make for limitation of enterprise. Granted the possibility of rapid change, those who believe in it must still explain why it has not occurred. There is no indication that the persistence of existing methods is not simply a victory of the most efficient means in a competitive market.



Two good
\$ and ¢
reasons why
builders and
buyers both
prefer...

Color-Grained Siding

1

Ruberoid Color-Grained *asbestos-cement* Siding* has skyrocketed in popularity for one reason you can't ignore. It means money in your pocket. It insures substantial savings on side-wall construction and eliminates initial painting costs. Take this typical cost comparison, for example, of a Long Island home requiring approximately 15 squares (1500 sq. ft.):

	Applied Cost per Square
Wood Shakes	\$35 x 15 sqs. = \$525
Clapboard Siding (Including painting)	\$32 x 15 sqs. = \$480
Color-Grained Siding	\$19.50 x 15 sqs. = \$293

Not only does Color-Grained Siding help you cut building costs . . . it adds to the saleability of your houses.

*Patent Nos. 2307733, 2307734, others pending

The **RUBEROID** Co.

ASPHALT AND ASBESTOS BUILDING MATERIALS

2

The decorator-designed, color-styled beauty of Color-Grained Siding, with its genuine "shake" texture, has revolutionized the siding industry. To give new impetus to the great and growing popularity of Color-Grained Siding, Ruberoid has added a new quality feature. It's *DUROC*, the revolutionary finish that keeps colors fresh and bright, resists dirt, stains and weather.

Color-Grained Siding solves your two basic problems . . . satisfaction for the owner . . . and a profit for you. Ask your Ruberoid dealer to show you samples or write The Ruberoid Co., 500 Fifth Avenue, New York 36, N. Y.

ShadoWedge makes deluxe combination

For a real luxury siding, combine Color-Grained Siding with ShadoWedge. ShadoWedge is a tapered asphalt undercoursing strip with a thicker lower edge that results in rich, deep shadowlines. It provides extra weather protection plus a look of luxury at only slightly greater cost.

Install a Complete VITROLINER CHIMNEY

in 1
HOUR
OR LESS



Save

- TIME
- MONEY
- SPACE

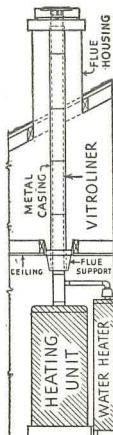
Install modern VITROLINER, the pioneer prefabricated chimney, in new homes or buildings with less installation labor. This provides a complete chimney for 1 or 2 story homes or buildings using any fuel.

VITROLINER is tailor-made, designed to fit the exact roof pitch with made-to-order roof flashing and flue housing, eliminating cutting or fitting on the job, saving time and money!

Installs easily and quickly between ceiling joists directly over the heating plant, saving valuable FLOOR SPACE in the utility room.

Approved by F.H.A., Insurance Rating Bureaus and Local Authorities. Listed by Underwriters Laboratories for All Fuels. Used by large home project builders and single contractors.

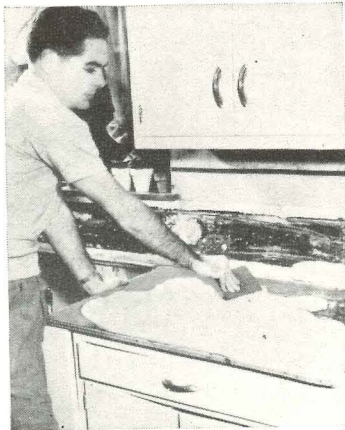
- HIGHEST QUALITY AT LOWEST PRICE
- LIGHTWEIGHT—10 to 15 lbs PER FOOT
- HIGH HEATING PLANT EFFICIENCY
- PROVIDES ATTIC VENTILATION
- MANUFACTURED IN 6", 7", 8" and 10" DIA.



Write for circular and quotation. Available in any quantity.

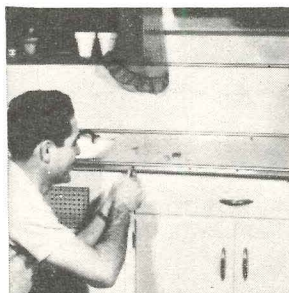
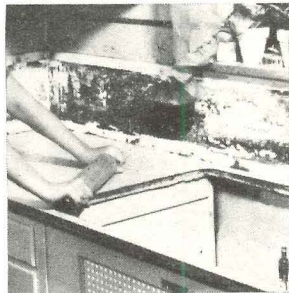
CONDENSATION
ENGINEERING CORPORATION
3511 W. POTOMAC AVE., CHICAGO 51, ILL.

NEW PRODUCTS



PLASTIC COUNTER TOPPING applied with glue and rolling pin

Builders who wish to put the popular *Formica* on kitchen work surfaces no longer have to call in special fabricators. Recent development of a powerful adhesive, *Contact Bond Cement*, takes the high-pressure laminate out of the custom class. To install a sheet of *Formica* (whose top layers are saturated with practically indestructible melamine plastic



resins) a workman merely spreads the new cement on the back of the sheet and also on the counter or wall to be covered. After it sets for 40 min., he puts the two prepared surfaces together. No sand bags or heavy clamps are needed; gentle pressure from a rolling pin seals the bond. Sink rim can be finished with stock moldings and counter edges treated either with strips of the same

continued on p. 180

**YOUR BEST BUY
IN BLOCK FLOORS**



DELFAIR
Oakblok

DELFAIR Oakblok offers to builders a truly distinctive floor, one that is equally suitable for small or large homes, commercial structures, housing projects, schools and institutions. It is especially adaptable to economical installation over concrete.

DELFAIR Oakblok is available in all standard strip flooring grades and also in the following special grades: Prime, Standard and Better, Standard, Tavern and Better and Tavern.

DELFAIR Oakblok is made of either Red Oak or White Oak, and is available either unfinished or prefinished.

DELFAIR Oakblok comes in the following sizes: 25/32" x 6 3/4" x 6 3/4", 25/32" x 7 1/2" x 7 1/2", 25/32" x 9" x 9", 1/2" x 8" x 8" and 1/2" x 10" x 10". All blocks are steel spline joined.

DELFAIR Oakblok's milling characteristics: tongue and groove end-matched—slight vee-edge on prefinished blocks—cross-wise grooves spaced to insure better mastic adhesion.

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WRITE TODAY FOR COMPLETE INFORMATION

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LOUISVILLE, MISSISSIPPI

MEMBER NOFMA

breaks gigantic ad drive on *All-Year*[®] AIR CONDITIONING

OFFER your prospects this tremendous reason to select the homes you build—Servel *All-Year* Air Conditioning for little more than the cost of an ordinary heating system!

Cooling without moving parts

The most amazing Servel feature is the exclusive absorption principle that creates *cold from a flame*. Yes, a clean gas flame both heats and cools a Servel Air-Conditioned home! Oil-fired units also available. There are *no moving parts* in either the heating or cooling unit, for long life, low upkeep, and quiet,

vibration-free operation. Every unit is warranted for five years.

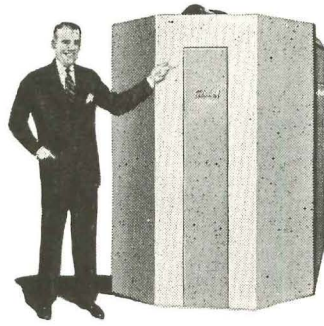
Here are benefits that *sell!* One compact Servel unit gives year-round climate control for every room in the house: 1. Cools by refrigeration in summer; 2. heats in winter; 3. cleans the air; 4. removes excess moisture on hot days; 5. adds needed moisture on cold days; 6. circulates the air; 7. ventilates with outside air.

And Servel offers you a complete line-up of strong promotional and merchandising aids. Contact your Servel dealer now for a showing of all the ways Servel will help you sell . . . or mail coupon today for details.

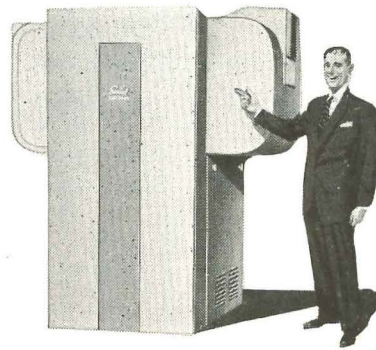
SERVEL *All-Year*[®] AIR CONDITIONING for every size home!



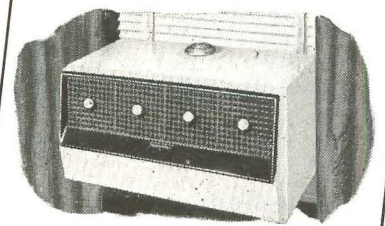
New 2-ton unit for small homes. Budget-priced. Occupies only 8.62 square feet of floor area. Gas-fired.



Popular 3-ton unit. Capacity for majority of homes. Now offered at new low price. Gas- or oil-fired.



Famous 5-ton unit for the large home. High efficiency and low operating cost. Gas- or oil-fired.



NEW WONDERAIR* room air conditioner. Remarkable value with $\frac{3}{4}$ -h.p. unit at the usual $\frac{1}{2}$ -h.p. price.

*Trademark Reg. Pending

Servel

the name to watch for great advances in
AIR CONDITIONING ✓ REFRIGERATION

BUILDERS! MAIL TODAY!

SERVEL, INC., Dept. HH-6, Evansville 20, Indiana

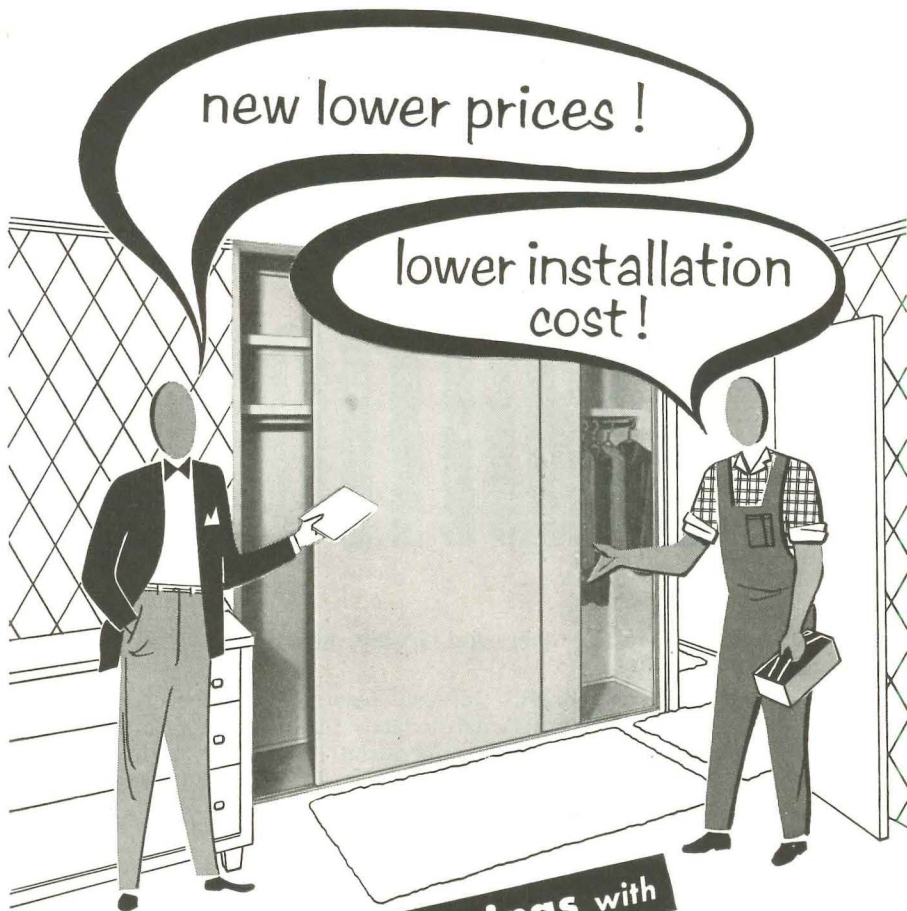
Rush me details on Servel *All-Year* Air Conditioning and how you help me sell homes.

Name _____

Firm _____

Street _____

City _____ Zone _____ State _____



...double savings with
modern • sturdy • smooth-rolling

GLIDE-ALL Sliding Doors

MODELS FOR EVERY BUILDING NEED

- Overhead Hanging Roller Type
- 8' Floor-to-Ceiling Heights
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Glide-All Sliding Doors are "at home" in any surroundings . . . in small, medium or large buildings—moderately priced or luxurious. They are rugged and dependable, easily and inexpensively installed in any type of building. Use Glide-All Sliding Doors for standard closets, wall-to-wall closets, room dividers or partitions. Panels can be painted, papered, lacquered or varnished to match any room decoration.

Write for new low-price schedule and specification bulletin.

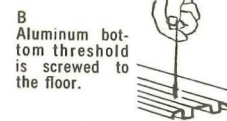
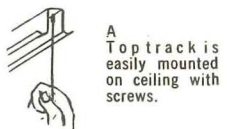
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EASY TO INSTALL AS A B C!



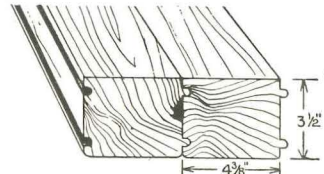
SEE SWEETS' CATALOG—File 25c WO for complete details and specifications.

NEW PRODUCTS *continued*

pattern plastic or metal trim. *Formica* is available in sizes up to 4' x 10' in more than 120 pattern and color combinations as well as 13 solid tones at 62 to 75¢ per sq. ft., depending on quantity purchased. Actual wood veneers are laminated into the luxurious *Realwood* series which costs \$1.20 per sq. ft. *Manufacturer:* The Formica Co., 4614 Spring Grove Ave., Cincinnati 32, Ohio.

T&G'D CEDAR TIMBER stack together for roof, wall or floor

A grown-up "Lincoln log" of rugged Western red cedar, *Unit Deck* is a versatile, attractive, and practical building material. The tongued



and grooved sections, cut from 4" x 5" nominal stock, are shipped in lengths of 8' to 16' for application as roofs, floors, partitions, and outside walls.

Some of *Unit Deck's* inherent, but nonetheless impressive attributes:

Combines lightness and strength. Weighing about 1,750 lbs. per M bd. ft., it presents a dead load of just 7 lbs. for each sq. ft. of roof area, yet will take a safe total load of 30 lbs. psf over an 18' span, 160 lbs. over 8'.

Thermal insulation. *Unit Deck* used with built-up roofing material and no supplementary insulation has a U. factor of .17.

Low cost. F.O.B. prices on *Unit Deck* run \$172 per M bd. ft. standard grade and \$155 in commercial grade. Rafters, sheathing, and finished ceiling all in one, it eliminates the need for purlins, joists, furring, plastering. Processed with a smooth-planed finish, *Unit Deck* can be stained, shellacked, waxed or painted.

Easy handling. The precision-cut sections assure fast, faultless alignment. To join pieces, workmen drive 7" spikes through pre-drilled holes (see photos above); no nails are visible. Butt joints—which do not have to be made over supporting trusses but should be kept from the center of the span wherever practical—are connected by steel splines.

Besides the flat-surfaced sections, the manufacturer fabricates *Unit Deck* with a bevel on

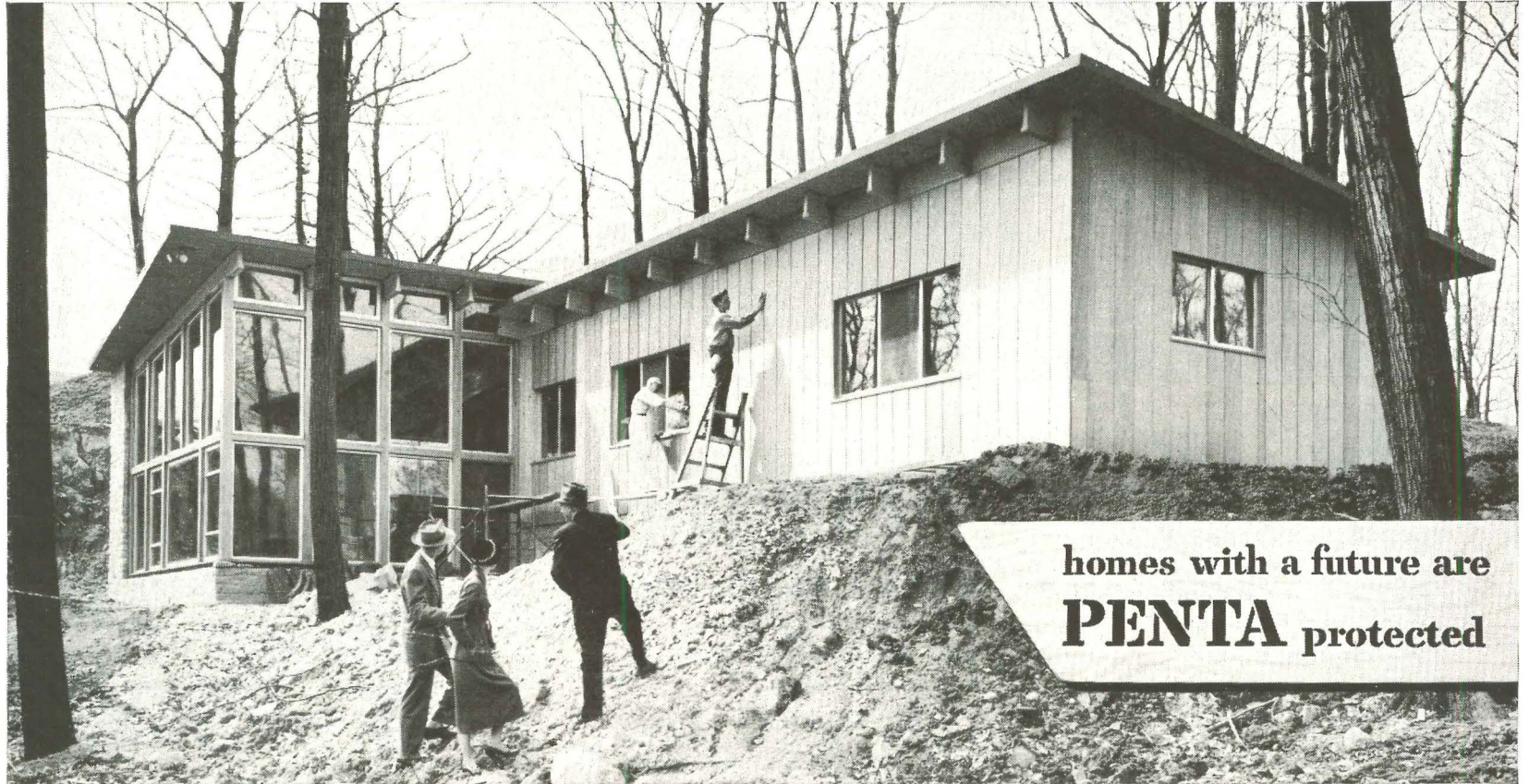
continued on p. 184





THE MARK OF LASTING QUALITY, PENTA PROTECTION THROUGHOUT

Build your reputation for quality design and construction, build the best, using lumber treated with PENTA, the clean wood preservative



homes with a future are
PENTA protected

The Dow Chemical Company
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Please send me without cost:

Information on PENTA and specifications for treating wood.

My nearest supplier for:

PENTA-treated lumber.

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Name _____

Title _____

Company _____

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City _____ State _____

Quality construction is your best salesman in a competitive market. PENTA*-treated lumber spells quality for today's buyer.

PENTA-treated lumber means a great deal to both buyer and builder; it means insurance against early repairs and replacement made necessary by decay and termite damage. But most of all PENTA-treated lumber means *lasting* quality. PENTA *keeps* a home sound and saleable for many extra years.

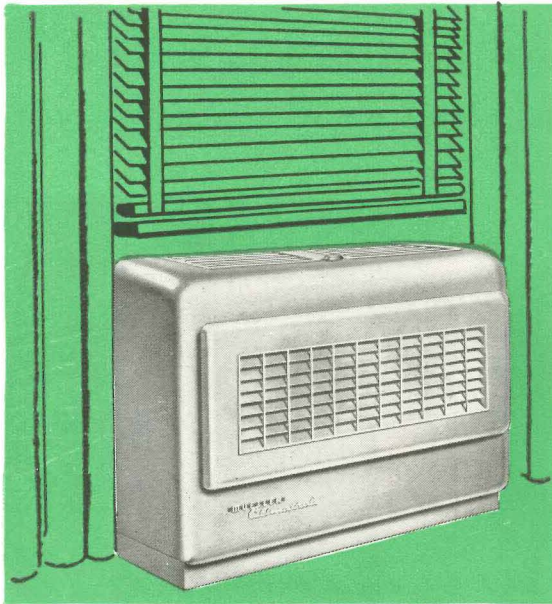
By controlling decay and termites PENTA adds years of reliable service to *all* construction lumber. Exterior wood such as trim, siding, window frames, doors and sash when treated with a water-repellent solution containing PENTA is protected against checking, warping, decay and termites. Other important points such as joists, plates and subflooring need PENTA protection to resist decay and termite attack.

When you specify PENTA-treated lumber you put the stamp of quality on your reputation and your work. Send today for more information about *PENTA-chlorophenol, the *clean*, modern wood preservative. THE DOW CHEMICAL COMPANY, Midland, Michigan.

you can depend on DOW CHEMICALS



NEW PRINCIPLE in Home Cooling! Makes the Homes You Build SELL FASTER!



Mueller Climatrol

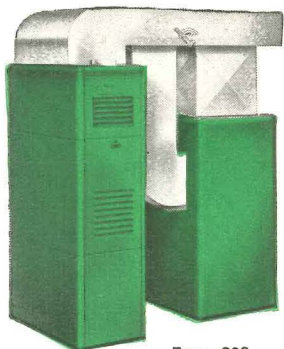
Type 910 Recessed Summer Conditioner

**Low Cost — Built into the Wall —
Fits between Standard Studdings —
Air-Cooled — No Plumbing.**

Any house you build with an integral cooling system sells faster than one without. That's why the new Mueller Climatrol Type 910 is made to order for small-homes builders. Inexpensive — neat, attractive, efficient. Home buyers find the built-in cooling element attractive — they like the way it's included in the mortgage. This unit is also ideal for motels, garden apartments, offices, etc.

No plumbing required, no drain or water connections — the new Mueller Type 910 is air-cooled and simply slides in between standard studdings. You build extra comfort, extra saleability into every home you put up when you include Mueller Climatrol Type 910 Recessed Summer Conditioners.

*for all-season
comfort*



Type 110-80
Winter Air
Conditioner

Type 903
Self-Contained
Cooling Unit

Type 903 Mueller Climatrol — a self-contained cooling unit for installation with any forced warm air heating unit. Available in 2, 3, 5, and 7½ ton capacities. Ideal for installation with high-boy, lowboy, horizontal or counter-flow winter air conditioners. Types 901 and 904 air-conditioning units, also available in wide range of sizes.



For descriptive folder, write the
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2020G W. Oklahoma Ave.,
Milwaukee 15, Wisconsin

L. J. MUELLER FURNACE CO.,
2020G W. Oklahoma Ave., Milwaukee 15, Wis.
Please send me the free descriptive folder on Mueller Climatrol.

- Type 910 Recessed Summer Conditioner Complete line of heating and air-conditioning equipment

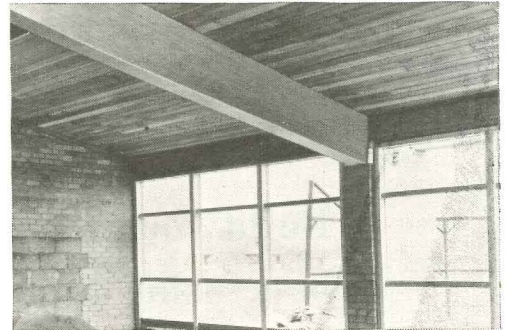
Name..... Title.....

Company Name

Company Address

City.....(.) State.....

NEW PRODUCTS *continued*



one side for use on exterior walls, and also makes laminated structural members of glued wood.

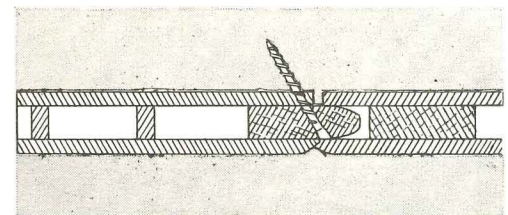
Manufacturer: Unit Structures, Peshtigo, Wis.

PREFINISHED PANELING applied to ceilings and walls without backing or glue

A unique interlocking wood joint on Marlite's new *Korelock* interior panels makes it possible to apply these rigid hollow-core units directly to studs, joists, or furring strips without backing material, adhesives, or clips. Suitable for ceilings and walls in kitchens and bathrooms, the 5/8" thick sections are made in 2' x 4' and 2' x 8' sizes. They are constructed of two sheets of tempered hard-



board over a wood frame which extends to provide a predrilled T&G joint for masked nailing. Slightly rounded edges on the face board create clean V joints that need no additional trim, and also allow the panels to breath, i.e. expand and contract, without buckling. They are factory-finished with a durable baked enamel topcoat in white, cream, and several simulated wood-grain



tones. Fully installed, *Korelock* paneling runs about \$1 per sq. ft.

Manufacturer: Marsh Wall Products, Inc., Subsidiary Masonite Corp., Dover, Ohio.

ELECTRIC HEATERS set between studs make up furnaceless warm-air system

Taking up zero sq. ft. of usable floor space, *Electrend* heaters comprise a complete, com-

continued on p. 186

Products Designed to Cut the Cost of Building... FROM CELLAR TO ROOF!

SAVINGS...
FROM THE GROUND UP!
 available to the architect,
 builder and designer



● Homasote Big Sheets. Save time, labor because of easy handling and unusual size—up to 8 x 14 feet.

Savings may take the form of lower initial cost, enhanced investment and resale value, or a longer span of service.

Every product or material we recommend to you has proved its ability to save in one or more of these ways. It may be the simple addition of Novamix to the concrete batch that lets 6 men pour 4 slabs in half a day. It may be the extra sales appeal contributed by the Nova-Vita Horizontal-Sliding Window that brings a better price to the seller. Or it may be the inclusion of Nova Wall Units which enables you to achieve substantial reduction in cubage.

Our know-how in the field of down-to-earth building practice comes from 43 years' experience in serving architects, designers and build-

ers in all parts of the country. Equally instrumental were the half-million dollars we spent in pure research . . . and the experience we later gained, the hard way, when we put up thousands of soundly constructed homes in record time and at lowest cost.

This reservoir of experience is yours to tap at any time through our descriptive literature or — better yet — through our trained representatives. Their ability to serve you includes assistance in designing, scheduling construction operations and setting up site or factory fabrication.

The coupon will bring you the kind of help you wish — without any obligation on your part.



● Nova-Vita Horizontal-Sliding Windows. Revolutionary design. Panes instantly removable. With screens.



● Nova Precision-Built Wall and Furniture Units. Space savers! Money savers! Assembled in 30 minutes.



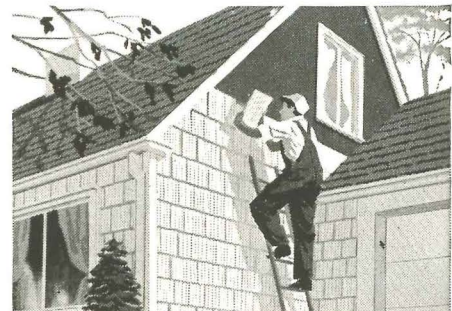
● Wherever you want to keep water in or out, time-tested Novaproofing methods afford lasting protection.



● Nova Roller Doors. Installed in only 30 minutes. For closets, passageways.



● Striated (or Wood-textured) Homasote offers infinite variety of design for attractive interior finishes.



● Nova Insulated Roofs and Sidewalls. Sheathe, shingle and insulate in one operation. Give double-coursed effect.

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Co. Trenton 3, N. J.



HOMASOTE COMPANY, Trenton 3, N. J., Department 81-C

- Send detailed, illustrated literature on all Homasote-Nova products
- Have representative contact us

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Address.....

City & Zone..... State.....

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YOU WANT SUMMER AIR CONDITIONING FOR YOUR HOMES THAT

- filters, circulates, dehumidifies, cools
- requires no water
- fits in waste space
- is easily installed
- is installed separately from the heating system

AND ADDS LESS THAN 3% TO THE COST OF A \$12,000 HOME (LESS INSTALLATION)

THEN

GET THE FACTS ON THE SENSATIONAL 2-PACKAGE



YORK-SHIPLEY, INC., YORK 10, PA.

Please send data on 2-package Shipley Air Conditioner.

Name _____

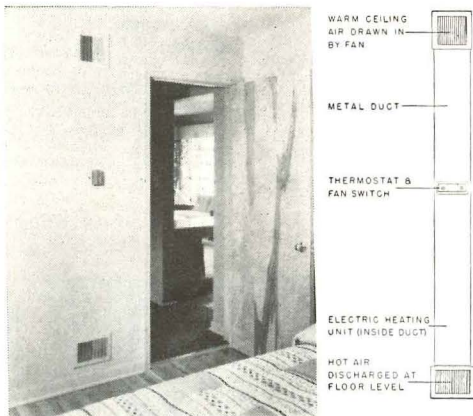
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City _____ State _____

I am planning to build _____ homes.

NEW PRODUCTS *continued*

portable and practical warm-air system. The new units stand 7' high and are 8" wide and 3" deep to fit inside the wall between studs. While electricity has been economical for heating only in properly insulated homes and/or low power-rate areas, the *Electrend* may prove to be competitive in operating cost with



gas and oil units in most parts of the country. Reversing the usual pattern of forced warm-air distribution, the unit draws in *warm* air that has risen to the ceiling (where it goes to waste in some systems), carries it down through a metal duct past a heating element to boost its temperature and then discharges it at floor level. Each unit is controlled by its own thermostat, and so rooms not in use can be kept cooler, bathroom and nursery warmer, without adverse effects on the rest of the house. During hot weather, the fan in each *Electrend* can be switched on independently to circulate the air. The heaters cost \$99.50 each; seven units—enough for the average five-room basementless house—can be fully installed for about \$776. (Warm-air systems with furnaces and ductwork usually run about \$1,000.) Also, the 6 to 10 sq. ft. of space (at \$10 minimum per sq. ft.) otherwise lost to the furnace can become part of the living area.

Manufacturer: Electrend Products, Box 110, St. Joseph, Mich.

LIGHTING FIXTURES coordinated for through-the-house use

Although their diffuser-shades and frames are made of the same basic materials—mesh-textured translucent plastic and black wrought

continued on p. 188

Residential Design Unlimited!

with original

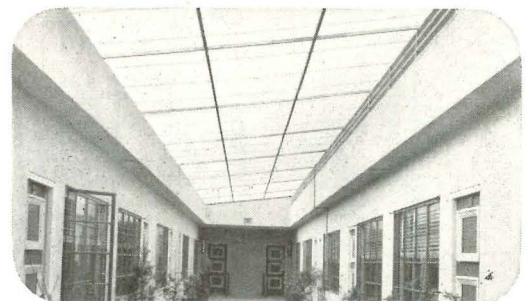
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in the brilliant design above, Raphael Soriano has utilized Alsynite to provide complete privacy without sacrificing daylight. Because of its light weight, Alsynite requires minimum supports. The photo below indicates the unlimited possibilities of Alsynite as a roof or ceiling material.



homes ... for skylights, window walls, patio roofs, awnings, shower stalls ...
commercial ... for store fronts, office partitions, luminous ceilings, signs ...
industrial ... for unlimited daylighting ... skylights, side walls, etc. No framing needed.

ALSYNITE COMPANY OF AMERICA

Dept. HH-2, 4670 DeSoto St., San Diego 9, Cal.

Please send me illustrated folder on Alsynite without obligation.

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Company _____

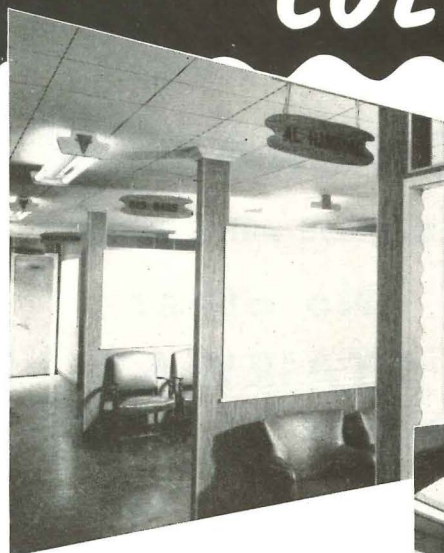
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Plants in California and Ohio. Distributors in Principal Cities

COLOR · LINES · BEAUTY ...

with RESOLITE Shatterproof Glazing



Home patios are beautiful and protected with a canopy of colorful, translucent Resolite — easily installed on metal or wood framing.

Shatterproof Resolite is durable and safe for partitioning in home or office. Color and corrugations adaptable to any decorative plan. Resolite needs no refinishing, easily wipes clean.



Treat your clientele to the glamour of color and translucency . . . the economy of permanent finish . . . the safety of shatterproof, crackproof glazing.

For decorative or utility partitioning in homes, office or shop, Resolite's wide variety of beautiful colors makes it the ideal paneling material. Unusual lighting effects are easily devised because of its translucency. Its corrugations are useful in obtaining special effects of height or breadth.

Patio canopies of colorful translucent Resolite afford protection from sun and rain yet avoid the gloom of opaque coverings.

Resolite is made of polyester resins, reinforced for strength and rigidity with an interwoven mat of glass fibers. Resolite is unaffected by weather extremes of heat, cold or moisture. Resolite needs no surface treatment or refinishing; its colorful glossy surface easily wipes clean.

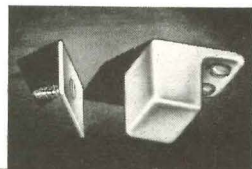
For complete information on Resolite, including sheet specifications, colors and installation methods, and name of your nearest distributor, write

RESOLITE
CORPORATION
P. O. BOX 506
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2 GREAT CABINET LATCHES!

★ No Moving Parts. ★ Easily Installed. ★ Trouble-free, Lifetime Service. ★ No Slamming to Close! ★ No Jerking to Open! ★ Clean — Sanitary.

for Kitchen and Bathroom Cabinets — for Built-Ins — for Furniture



MAGNETIC LECO-LATCH
with built-in permanent Alnico magnet. Never loses its power to hold!



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neoprene cylinder cushions action—lets door close silently!



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ROOF FRAMING IS EASY

SHARP'S AUTOMATIC FRAMING SQUARE SOLVES ALL PROBLEMS INSTANTLY!



ALL YOU NEED TO KNOW IS THE WIDTH OF BUILDING AND PITCH OF THE ROOF

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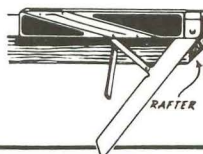
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A sturdy, all-metal tool that folds up into one compact unit. . . 1 foot long, 2 inches wide. Fits in pocket easily. Full money-back guarantee.

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One Setting gives you the marking for both Plumb Cut and Mitre Cut

Blade gives marking for Plumb Cut of Common and Hip Rafter.



Bevel Bar automatically adjusts itself for all Mitre Cuts on Hip, Valley or Jack Rafters.

SHARP'S
Automatic FRAMING SQUARE

The

*beautiful
pastel tones*

on the
Flint
"trade-secrets"
house



N.A.H.B. Trade Secrets House
Builder: Robert Gernholz, Flint, Mich.

ARE CABOT'S

*Ranch
House
Hues*

Latest in house finishes! Cabot's Ranch House Hues give you the traditional soft, pastel colorings of the Spanish Southwest. Ideal stain finish for new or weathered redwood, cedar, fir, pine, Philippine mahogany and other woods.

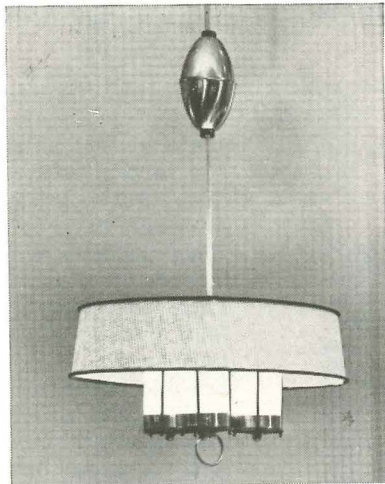
Cabot's Ranch House Hues combine a unique flat stain finish with effective hiding power . . . bring out the attractive texture of exterior woodwork, siding, shingles, clapboards . . . add the right finishing touch to your ranch houses.

write today for color card showing Ranch House Hues in Alcazar Brown, Coast Guard Gray, Puget Sound Green, Philippine Mahogany and 8 other colors. Many available from no other source.

SAMUEL CABOT INC.

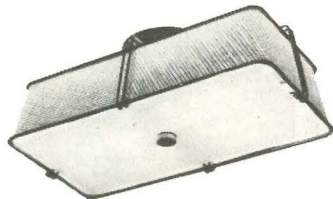
630 Oliver Bldg., Boston 9, Mass.

NEW PRODUCTS *continued*



iron—each of the *Young Moderns* fixtures is handled to meet different household lighting needs. Airy and neat, the group is well suited to small-roomed, casual contemporary homes. And prices are reasonable. Retailing at \$8.95 the conical ceiling light (above right) could be placed in a hallway, entrance, or stairwell. Most expensive (\$37.95) in the line is the hanging lamp (above left) designed for living and dining areas. A spring-triggered reel inside the brass ball raises and lowers the fixture. The wall bracket lamp (below right) also glides up and down on a pulley for general room illumination or close desktop work. Round and square snug-to-ceiling units are available as well as the rectangular one pictured (below left).

Manufacturer: Lightolier, 11 E. 36 St., New York, N. Y.

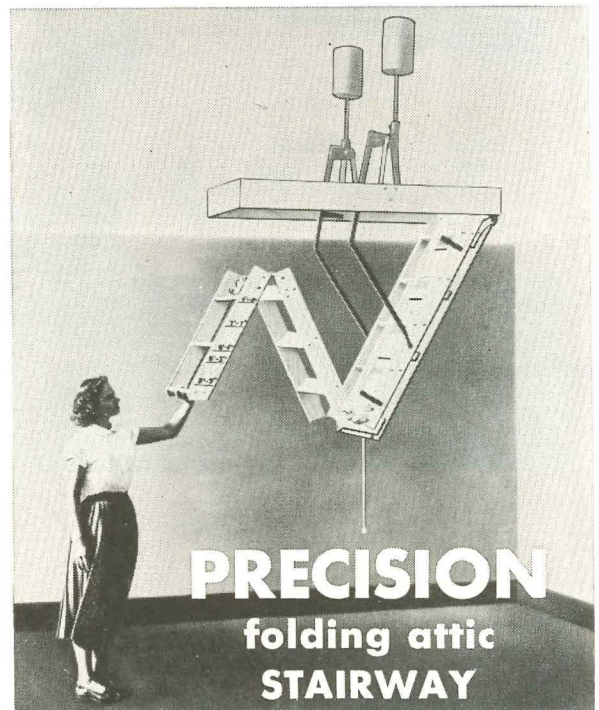


Technical Publications on p. 190

**FIVE-YEAR
WRITTEN
GUARANTEE**

furnished with each unit

**No other
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**PRECISION
folding attic
STAIRWAY**

5 exclusive features

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2. Operates on roller bearing which makes raising and lowering practically effortless.
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Easy to handle -- Easy to install. Shipped in 1 package assembled. Requires no attic space. No adjustments, no springs. Fits all ceilings from 7 feet to 9 feet 9 inches. (Runners graduated, all you do is measure from finished floor to finished ceiling and saw off runners at desired height.) Accepted by F.H.A. Listed in Sweets. Specified by leading architects. Sold by more than 12,000 dealers in U. S. A. and Canada.

Contact Precision Jobber for attractive prices.

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Silent Automatic's

5 PROFIT POINTS

mean more and faster home sales
for you!

1

FAMOUS NAME—Silent Automatic Heating Equipment is produced by Timken Silent Automatic Division, famous for nearly thirty years as a leader in automatic home heating. Customers will recognize the Silent Automatic name because they know its reputation for dependability!

2

QUALITY PRODUCT—You lay a solid foundation of customer satisfaction when you install Silent Automatic Heating Equipment in the homes you build. No other heating equipment performs better, has better engineering or better manufacturer's reputation behind it!

3

COMPLETE LINE—No matter what type of homes you build, there's a Silent Automatic model just right for the installation. You can choose from multi-element gas-fired hi-furnaces, lo-furnaces and counter-flo furnaces; gas boilers, optional oil-or-gas hi-furnaces, lo-furnaces, counter-flo furnaces and gravity furnaces; gas conversion burners and oil conversion burners.

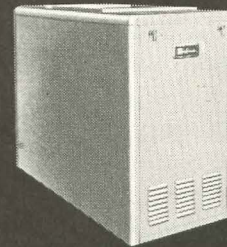
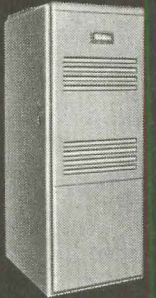
4

AVAILABILITY—You can get the Silent Automatic model you need, *when and where you need it*. Silent Automatic Heating Equipment is sold nation-wide through wholesalers who stock the complete line of furnaces, boilers and conversion burners.

5

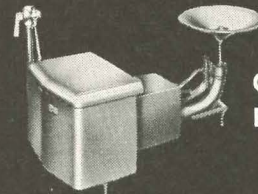
EASY INSTALLATION—Most Silent Automatic Equipment comes factory-assembled. This handling of complete packages cuts down installation time—saves labor costs! Add up *all* the advantages—and then compare Silent Automatic. We think you'll find it good building business to install Silent Automatic in all your homes!

MULTI-ELEMENT
GAS FURNACES



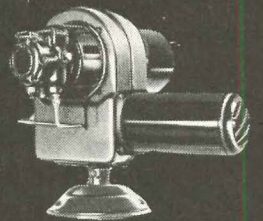
OPTIONAL
GAS-OR-OIL
FURNACES

GAS BOILERS



GAS CONVERSION
BURNERS

OIL CONVERSION
BURNERS



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specify...*

Silent Automatic
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TIMKEN SILENT AUTOMATIC DIVISION
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AS SHOWN BELOW —



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levels.



Fig. II
Stadia hair
arrangement for
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Fig. III
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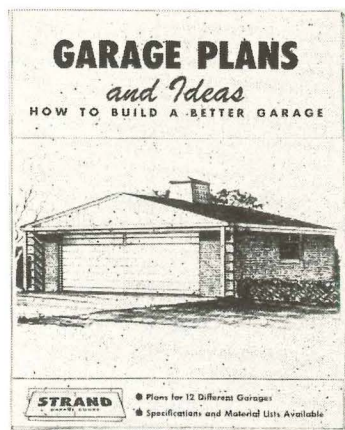
TECHNICAL PUBLICATIONS

CONSTRUCTION. Penmetal Lightsteel, Catalogue No. SS-1. Penn Metal Co., Inc., 205 E. 42 St., New York 17, N. Y. 12 pp. 8½" x 11"

Prepared for designers and engineers of small buildings—homes, stores, etc.—the catalogue provides complete framing details for assembling and welding *Lightsteel* structural members. The complete line of the new light-weight steel sections is pictured: single and double studs, joists, track and bridging. The publication also gives framing details for doors, windows, and roofs as well as data on *Lightsteel's* physical and structural properties.

GARAGES. Garage Plans and Ideas: How to Build a Better Garage. Strand Garage Door Div., Detroit Steel Products Co., 3111 Griffin St., Detroit 11, Mich. 32 pp. 8½" x 11" 10¢.

Twelve different plans for brick and frame garages are contained in this new booklet. Structures for one, two and three cars are



illustrated and instructions given on how to lay out driveway of various types. Several of the garage plans include space for a work bench or storage. The designs utilize the manufacturer's *Strand* overhead door unit. Available in canopy and receding track models, the galvanized steel doors come in standard 8' x 7' and 9' x 7' sizes as well as 16' x 7' units for double garages.

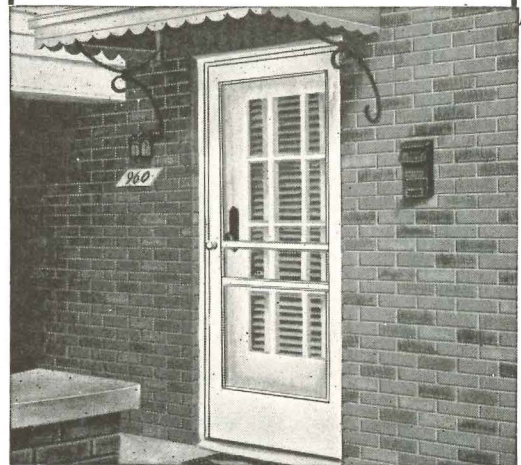
AIR CONDITIONING. Mueller Climatrol Cooling Manual. L. J. Mueller Furnace Co., 2005 W. Oklahoma St., Milwaukee 15, Wis. 24 pp. 8½" x 11". 75¢

This design manual provides a simple method of estimating heat gains and requirements for residential cooling systems. The essential difference between computing heat loss and heat gain calculations, the booklet points out, is that the effect of the sun in internal heat gains—which acts as a safety factor for heating equipment—must be accounted for in determining summer cooling needs. Also, summer air conditioning involves moisture removal. A step-by-step outline explains each

continued on p. 194



these Special sash
attract home buyers



Home owners appreciate the value of year-round screen and storm sash for windows and doors. It simplifies their housekeeping.

One kind of combination sash is made of Armco ZINGRIP. Its protective zinc coating clings tightly through all kinds of weather to assure long service life. And the zinc surface is especially treated to take and hold paint longer.

Other combination screen and storm sash are made of Armco Stainless Steel, Type 430. They require no paint. Their soft-toned surfaces harmonize with any color scheme.

For names of manufacturers of Armco ZINGRIP and Stainless Steel screen and storm sash, write us at the address below.

Armco Steel
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Export: The Armco International Corporation

Earl W. Smith

Earl Smith is head of Earl W. Smith, Inc., builders and developers of low-cost modern homes on the West Coast for more than 30 years. His firm is responsible for the introduction of many contemporary design ideas to the field of mass-produced, low-income housing in California. Active in the National Association of Home Builders for many years, Mr. Smith is currently chairman of the NAHB Technical Committee and a trustee of the NAHB Research Institute.



“In today’s competitive market, home seekers buy only when they find sound, easily recognized value. In our developments, we depend on nationally advertised products to help tell the value of our homes. When a prospective buyer sees name after name he knows from his familiarity with manufacturers’ advertisements, he feels sure he’s getting his money’s worth. Well-known brands aid us greatly in turning home seekers into home buyers.”

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reaches 86% of all the households in America with incomes over \$7,000. And LIFE reaches more than 58% of *all* home-owners.*

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*Figures above are from *A Study of the Household Accumulative Audience of LIFE (1952)*, by Alfred Politz Research, Inc. A LIFE-reading household is one in which one or more of the adult members reads one or more of 13 issues.

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FEATURE

"Comfort from Moving Air"

Builders today know that buyers, above all else, want *comfort!* The house that sells is the house that has comfort *built-in!*



FEATURE a master Home-Conditioning Fan in the attic; say, "This house stays up to 15° cooler in Summer, fresh all year"

FEATURE a Kitchen Ventilator; say, "No greasy smoke, no cooking smells! This house stays clean!"



FEATURE a Bathroom Ventilator; say, "No musty moisture, no lingering odors in *this* bathroom!"

These are features that turn *prospects* into *buyers* at little extra investment!



For accurate, illustrated, detailed information on how to install and sell "Comfort from Moving Air" in the homes you build, send for this comprehensive 200-page book, the most complete guide to air-moving equipment ever published. Produced by Torrington in cooperation with more than 100 American makers, it's your fastest guide to speedy sales. It's FREE — write for your copy today!



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TORRINGTON, CONNECTICUT

Western Div. Van Nuys, Calif. • In Canada: TM Co., Ltd., Oakville, Ont.

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Please send my FREE copy of the '53 GOLD BOOK "How to have Comfort from Moving Air"

NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

TECHNICAL PUBLICATIONS *continued*

of the considerations in the design procedure, and tables are included for figuring register, duct, and equipment sizes.

WATER SYSTEMS. Thrush Water Circulator, Form No. HC-352. H. A. Thrush & Co., Peru, Ind. 6 pp. 8½" x 11"

The folder contains performance chart, capacity table, and dimensional data on the manufacturer's horizontal and vertical water circulators. Pointing out that pipe sizes in a domestic hot-water supply system can be reduced by as much as 50% by the use of an efficient water circulator, the publication shows diagrams of several typical layouts.

WATER SYSTEMS. Water Supply Brochure, MS-53. F. E. Myers & Bros. Co., 903 S. Orange St., Ashland, Ohio. 8 pp. 8½" x 11"

Written in an informal manner, the three-color folder presents Myers' line of water systems, pumps, and conditioning equipment. It tells how in many areas water softening can benefit entire households.

ROOFING AND SIDING. Careystone Corrugated Asbestos-Cement Roofing and Siding, Data Manual No. 52. Philip Carey Manufacturing Co., Cincinnati 15, Ohio, Dept. CM. 82 pp. 8¾" x 11" 50¢

Specs and installation data for *Careystone* corrugated roofing and siding products are presented in this technical manual as well as numerous drawings and photographs showing proper application methods. The guidebook also tells how to estimate quantities of the materials for particular jobs.

OFFICE EQUIPMENT. Figure Fact Efficiency for Contractors and Builders, Booklet No. AD535. Remington Rand Inc., 315 Fourth Ave., New York 10, N. Y. 16 pp. 8½" x 11"

The *Printing Calculator*, according to this bulletin, provides short-cut multiplication, automatic division, high speed listing, addition and subtraction, together with printed proof of every factor on tape, assuring top speed for figuring estimates, costs, payrolls, taxes, etc. Five data sheets which explain various construction engineering and other figurework procedures are available with the booklet.

AIR CONDITIONING. Fourth Dimension of the Modern Home. Servel, Inc., Evansville, Ind. 20 pp. 8½" x 11"

Through air conditioning, this colorful booklet points out, year-round comfort can be obtained in a home's "fourth dimension—ideal indoor climate." The importance of air conditioning to the homebuilder, the book stresses, is that he is emancipated from such design

continued on p. 200

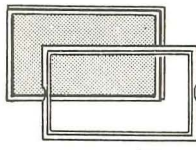
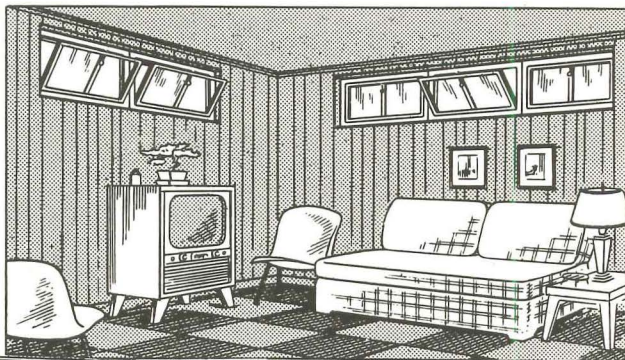
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Screens and Storm Sash to match

MORE BASEMENT LIGHT with MONARCH In-A-Slide Windows and Mullions

For the better and more economical lighting of those too-often-underlighted basement rooms, up-to-date home builders and contractors are using Monarch Multiple Window Units.

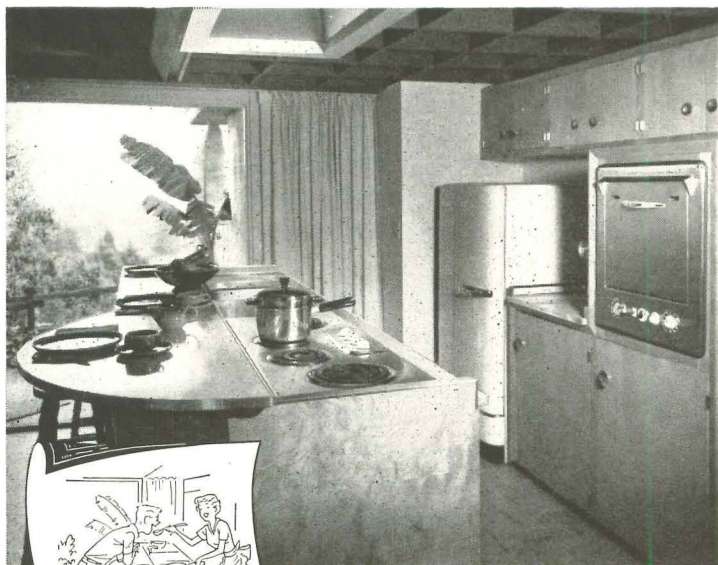
These are built up of Standard In-A-Slide Basement Windows and Monarch Weather Tight Mullions, in units of from 2 to 6 windows and are ideal for better lighting in private home basements, apartment houses and all small commercial buildings.

For further information write us today.



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When you think of Basement Windows... think of
NEW MONARCH MACHINE & STAMPING COMPANY
406 S. W. NINTH STREET DES MOINES 9, IOWA



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- Builders are learning that homes equipped with Thermador Bilt-in electric cooking units sell faster and at a higher profit.

- People are sold on the design flexibility and custom convenience achieved with Thermador units as well as the beautiful way they blend with any color or building material.

- They provide an extra profit item for the builder and allow the owner to purchase his range as part of the house mortgage — so everybody wins.

- Available in five cooking top models, two ovens, griddle and warming drawer.

Send for complete catalog

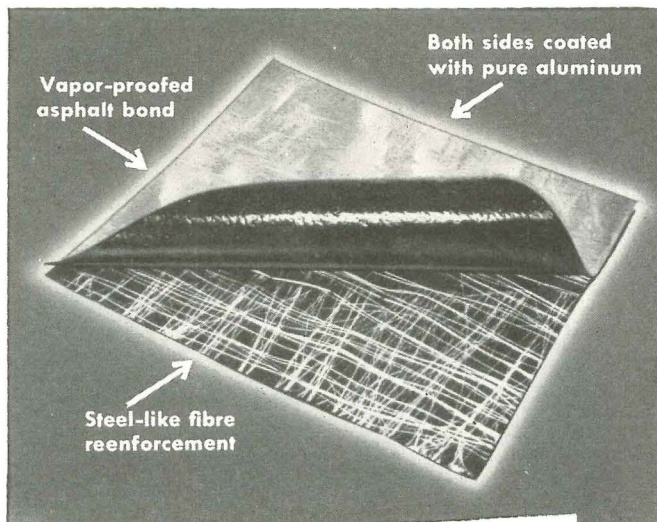


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- 3 Protection against entry of drafts, dust, etc.
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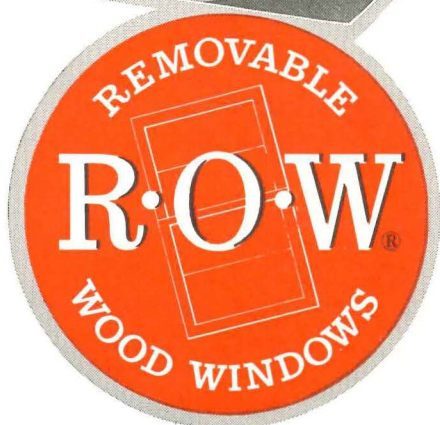
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THE ALL-ELECTRIC HOUSE *continued from p. 160*

If this change has to be made after the house is built, it will cost upwards of \$100. In small houses, a switch to No. 4 service wires will almost double the capacity of the panel at a cost of \$20-\$30.

2. Are there sufficient appliance branch circuits? Yes ___ No ___

There are some 55 electrical appliances that might be found in a modern house, most of them in or near, the kitchen. The usual single appliance circuit is not enough, especially when refrigerator and wall clock are plugged into it. A toaster and coffee maker in use at the same time will completely load a branch circuit, so a minimum of two should be provided. Cost of the extra circuit: about \$10. The all-electric house has two kitchen circuits for portable appliances, as well as separate circuits for refrigerator and dishwasher. Good rule for kitchens: an outlet for every four linear feet of work surface, and if divided, an outlet at each work unit.

3. Are there enough special-purpose circuits? Yes ___ No ___

Even the smallest house should have at least four special-purpose circuits (if electric cooking and hot water are planned): range, water heater, furnace control and motor, and automatic washer. Individual circuits are especially important where the appliance is motor driven, for they provide the extra power needed at the moment of starting. If dishwasher, garbage disposer, drier, auxiliary heater or air conditioner are installed or anticipated, provision should be made for these circuits. Price for wiring: \$10 to \$25 each. Price for leaving space in entrance panel for such circuits: practically nothing.

4. Are there sufficient lighting and convenience outlets? Yes ___ No ___

Reading's abundant wiring is a housekeeper's dream of convenience outlets, the feature that makes the strongest impression on home buyers. Multiple outlet strips in living room and master bedroom provide an outlet every 18", and other rooms have at least one outlet on every wall. Plug-in strips can be installed at no extra cost on any 10' wall, if two ordinary outlets were planned and if the installation cost per outlet is \$5. The 50¢ per ft. cost of the strip is offset by the fact that only one connection is necessary. Among all the de luxe items in the Reading house, the plug-in strip got the most approving comments, even more than the popular valance lighting. Inconspicuous, this strip can be an effective sales item at little extra cost to the builder. Good rule of thumb for any house: no point on a wall should be more than 6' from an outlet, except on spaces less than 3' wide, considered unusable.

5. Are there enough switches? Yes ___ No ___

Barked shins and dangerous falls can often be avoided through the simple expedient of having a

switch at each entrance to a room if they are more than 10' apart. In Reading, rooms with two entrances have switches at each. Exterior floodlights are all controlled from a master bedroom switch. Garage lights operate from both the interior and exterior entrances. Each extra switch will cost just the price of one outlet at the local rate. The national Adequate Wiring program boosts a "path of light" theory as safest and best for any house, especially larger ones. This means switch facilities for lighting your way ahead of you through the house, and for extinguishing lights behind you, without having to walk through dark rooms or halls.

6. Is there provision in the main panel for future circuits? Yes ___ No ___

Even with three lines wired directly into the service center (oil burner, water heater and drier) and 18 circuits provided, this house left two additional openings in the panel to allow for any unforeseen future needs. In the average small house, with its six or eight circuits, it would cost practically nothing to leave two or even four knock-out spaces in fuse box or panel. Circuit breaker boxes can be installed with vacancies for additional pairs of breakers. When a need arises, new circuits can be wired into the box without installing a new panel. The cost of each new pair will be less than \$2.

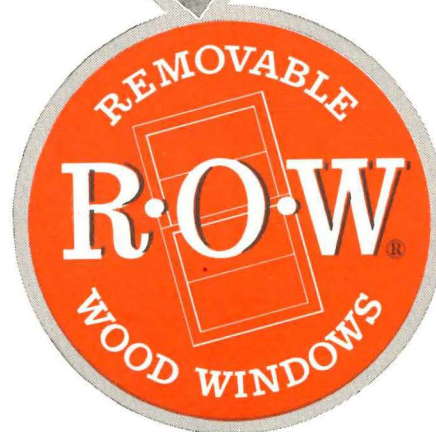
Back-to-back wiring, too

Like plumbing, wiring efficiency can gain from careful preplanning of the house. Heavy-duty circuits are expensive (No. 6 range wire runs as high as \$1.50 per ft. so runs should be as short as possible.) A short run for the range circuit is more important than for the kitchen appliance line. Locating a stove on the opposite side of the kitchen can cost an extra \$15. However, the relative smallness of the electrical contract (2-3%) makes its layout secondary to a more expensive item, like plumbing. But wherever there is a choice in the location of a wired appliance it should be kept near the main. Already wired plug-in strips will shorten some general purpose circuits. Water heaters can often be located for minimum wiring if kitchen, laundry and bath are planned with the panel location in mind, as well as the plumbing stack.

What extras?

When it comes to spending more money for wiring, where should the builder put it for best effect? Increased service capacity should be first choice. Plug-in strips and provision for future circuits cost little. TV and telephone raceways—luxury features impressive to buyers—can be installed in most areas for \$10 per outlet. Extra bath heat can come from a heat lamp socket, which will not require a separate circuit, or a built-in auxiliary heater, which will. But a heavier wiring budget will bring a return only if the sales force uses the added convenience of adequate wiring to put your house out in front of the competition.

SAVE TIME
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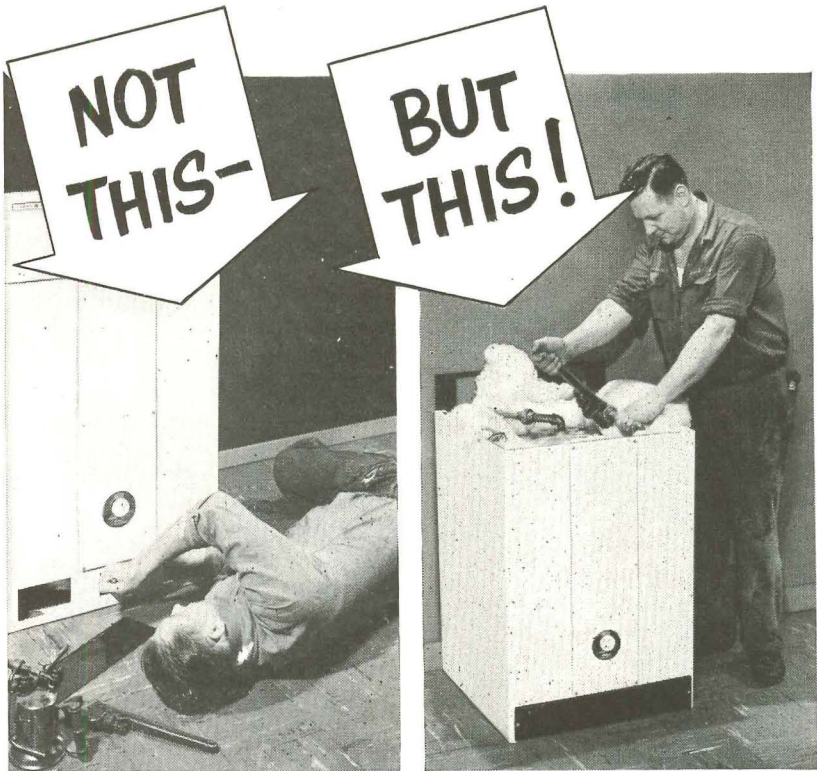


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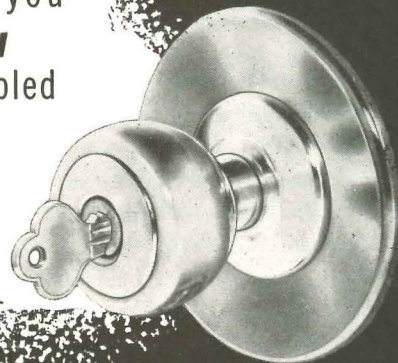
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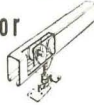
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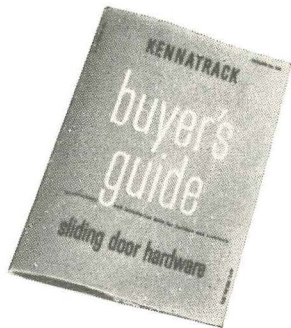
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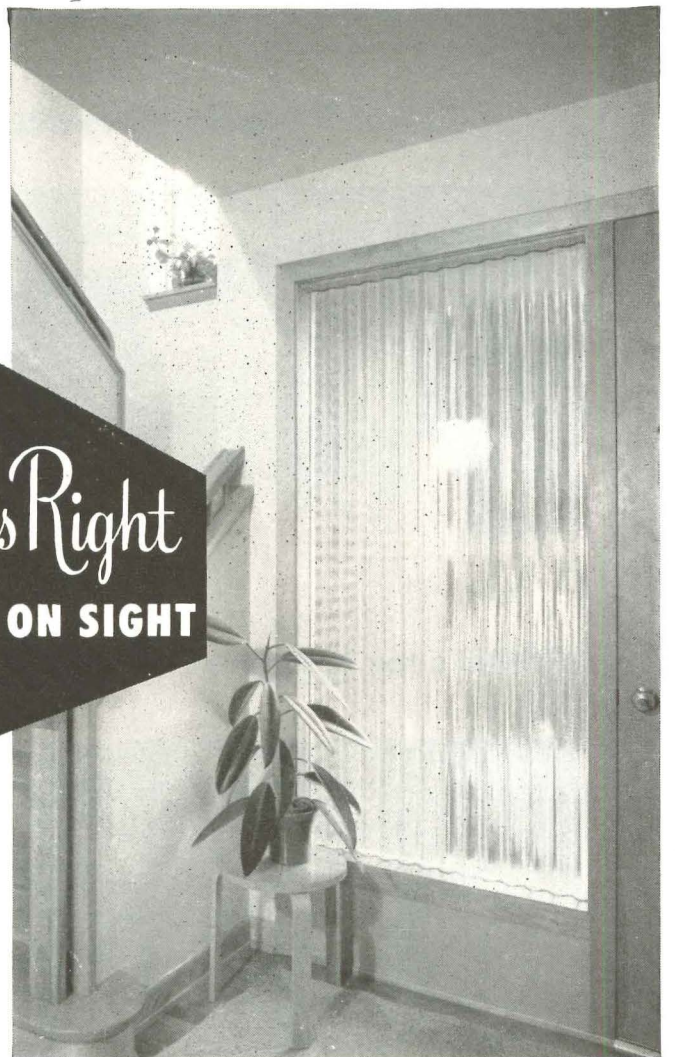
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Structural Corrugated glass installation at main entrance of L. M. residence in Seattle, Washington. Architect, Gerhard E. Karplus, New York City.

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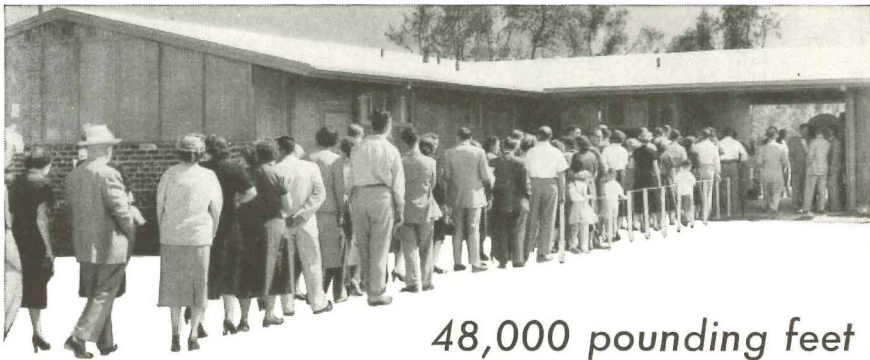
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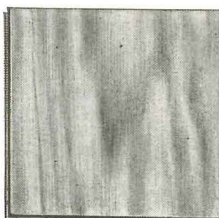
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TECHNICAL PUBLICATIONS *continued*

rules of yesterday as cross-ventilation. This freedom not only affects window location but materials used in the entire structure and room sizes and relationships.

PLASTIC SKYLIGHTS. 62% More Overhead Daylight with Wascolite Skydomes. Wasco Flashing Co., Cambridge, Mass. 8 pp. 8½" x 11"

Pictured in this two-color file folder are several residential applications of prefab translucent and clear plastic skylights. Shipped complete with curb and attachment accessories, the *Skydomes* are reported to be easy to install. Square, round and rectangular units are illustrated.

WIRING DEVICES AND SWITCHES. Electrical Availability Important to Architectural Design. Arrow-Hart & Hegeman Electric Co., Hartford 6, Conn. 16 pp. 8½" x 11"

Not only does this catalogue illustrate a complete line of electrical outlets, switches, and wiring devices, but it also shows basic wiring plans for each part of the house—inside and outside. The diagrams indicate clearly the type and number of outlets and equipment required in each area for convenient living.

RADIANT HEATING. Avon Radiantweld Solid Wall Steel Tubing. Avon Tube Div., Higbie Mfg. Co., Rochester, Mich. 6 pp. 8½" x 11"

Describing a steel tubing processed especially for radiant heat installations, the folder cites advantages for the product and suggests piping layouts. A typical ceiling panel plan is diagrammed and section views are shown of ceiling, ceiling and wall, and floor installations.

HEATING. How to Obtain Better Results from an Air Heating Installation. Air Heating, Inc., 5714-16 W. Chicago Ave., Chicago 51, Ill. 8 pp. 5" x 7"

The function of a blower in a warm-air heating system is explained in this booklet and the heating contractor is shown how to determine the correct blower speed for the required volume of air delivery.

MASONRY CONSTRUCTION. Results of a Concrete Masonry Study. Research Foundation of the University of Toledo. The Besser Mfg. Co., 610 46th St., Alpena, Mich. 7 pp. 8½" x 11"

The results of a study of masonry construction sponsored by government housing and defense agencies and several manufacturers' associations are contained in this report. It describes five basic ways to minimize or completely eliminate shrinkage and cracking in masonry walls.

continued on p. 204

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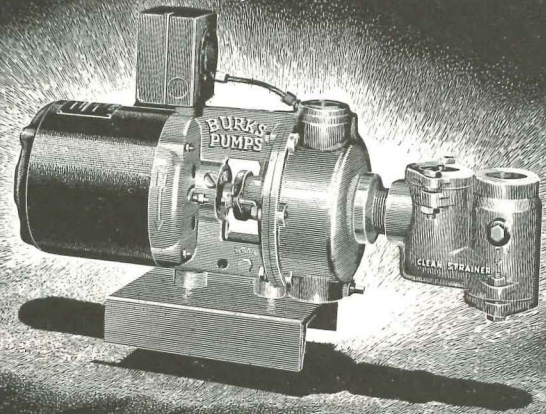
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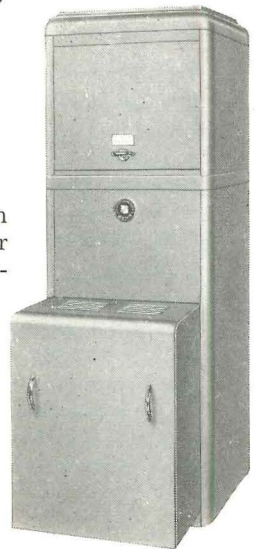
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REMODELING. Remodeling Magic—Some Tricks You Can Do with Gold Bond Gypsum Wallboard. National Gypsum Co., 325 Delaware Ave., Buffalo 2, N. Y. 14 pp. 8½" x 11"

The full-color booklet offers pictorial suggestions for finishing basements and attics with gypsum wallboard, and gives application instructions.

LIGHTING. Swivelier University Adjustable Lighting Products, Bulletin 132. Swivelier Company, Inc., Dept. F, 43 34th St., Brooklyn 32, N. Y. 100 pp. 8½" x 11"

Ten new lighting fixtures and several units recently redesigned are featured in this comprehensive catalogue covering more than 300 fixtures, wiring devices, and accessories. Lithographed in two colors, the publication divides the products in eight categories: canopy shade units, portable units, *Vogue-Lites*, recessed fixtures, wiring devices, outdoor units and lighting accessories. Photos and line drawings illustrate each item, and the text offers suggestions for possible applications of the units. Of special interest to architects and electrical contractors are the explanations of Swivelier's patented socket and *Shur-Mount* method of wall attachment.

FIREPLACES. Book of Successful Fireplaces and How to Build Them. The Donley Brothers Co., 13945 Miles Ave., Cleveland 5, Ohio. 78 pp. 8½" x 11". 50¢

CONSTRUCTION EQUIPMENT. Parsons 250 Trenchliner. The Koehring Co., Milwaukee 16, Wis. 16 pp. 8½" x 11"

GAS STORAGE. Scaife FuelPack Above-Ground Tanks. Scaife Co., Oakmont, Pittsburgh District, Pa. 4 pp. 8½" x 11"

FLOORING. KenRubber Tile Floors—An Investment in Better Living. 8 pp. 8½" x 11". Color illus.

WIRING. Indoor-Outdoor Current Transformers, GEA-5874. General Electric, Schenectady 5, N. Y. 12 pp. 8½" x 11"

HEATING. The Kewanee-Iron Fireman Boiler-Burner Unit, Form No. 2314. Kewanee-Ross Corp., Division of American Radiator & Standard Sanitary Corp., Kewanee, Ill. 12 pp. 8½" x 11"

PIPING. Staynew Pipe Line Filters, Bulletin 210. Dollinger Corp., 11 Centre Park, Rochester 3, N. Y. 4 pp. 8½" x 11"

CONCRETE FORMS. Masonite Concrete Form Presdwood. Masonite Corp., 111 West Washington St., Chicago 2, Ill. 8 pp. 8½" x 11"