



py

December 1952

house + home

The election

What changes in housing policy are likely under the Republican administration? (News)

Frank Lloyd Wright

His principles, formulated 50 years ago, produce an exciting house today (below and p. 66)

The adjustable house

Rooms within its perimeter can be added or subtracted to fit family needs (p. 114)

Levittown, Pa.

First complete story of the biggest new city in the US: its layout and landscaping, houses and services (p. 80)

Modern for New England

With three terraces, on a low pedestal, it makes a case for symmetrical design and orderly planning (p. 74)

Two small-module wall systems

They offer flexibility of design and speed of erection (p. 108)

Open plan and closed plan

How they combine to create family living areas and private sleeping quarters, in two houses (p. 96)



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house+home

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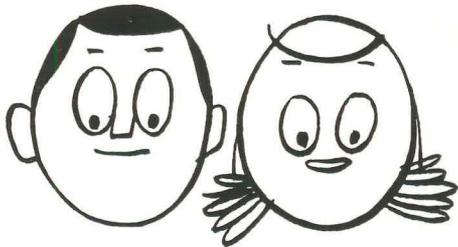
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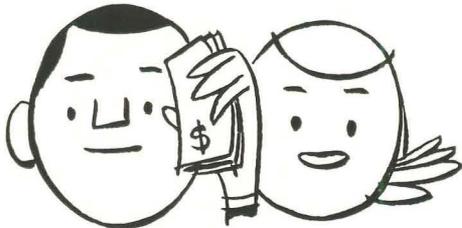
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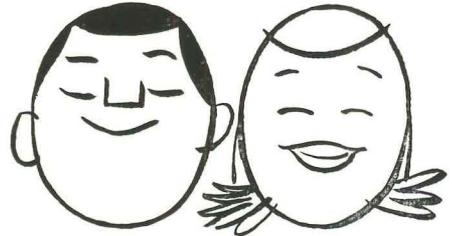
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GENERAL  ELECTRIC

GOP seen ready to overhaul housing policy, may kill HHFA

Was the housing industry strong enough to walk without some of its federal crutches? By the end of November, as the post-election haze lifted a little, it looked as though the Eisenhower administration would try to remove at least the props the building industry has denounced as roads to socialism. The trick would be to do it and still maintain high housing volume—an almost indispensable part of business prosperity the GOP must foster or risk losing control of the House of Representatives in 1954 and perhaps thus the presidential election in 1956.

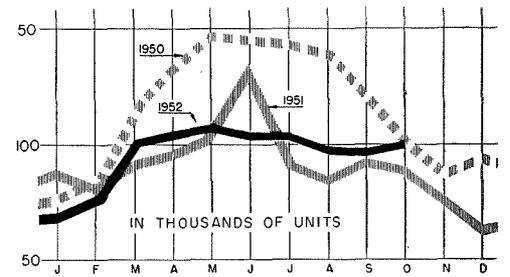
So far, the most authoritative indication of what lay ahead was Senator Taft's announcement that he and the President-elect had discussed creating a special commission to study the proper role of the federal government in dealing with state and local governments on matters like housing, social security, health and welfare services. In that, it was easy to see the first manifestation of Eisenhower's ideas. Observed NAHB Executive Vice-President Frank Cortright: "It has been made abundantly clear that Eisenhower's basic philosophy of government is the decentralization of power and expenditures from Washington to the community and state levels."

Kill HHFA, Fanny May? The policy commission approach also suggested a probability that the Republicans will go slowly in revamping US housing legislation and administration. A fair bet was that it would be the second half of the year, and perhaps as late as 1954, before a thorough overhaul would be completed.

A lot of Washington trend-sniffers fig-

ured that GOP would eventually abolish HHFA, scatter its operational functions among other agencies. Technical research, for instance, might be given to the Commerce Department's Bureau of Standards, statistical research to the Bureau of Labor Statistics or Census Bureau. Although the top housing agency cost only \$4.6 million this fiscal year, killing it would restore autonomy to FHA which homebuilders would applaud. It might leave the Home Loan Bank Board independent, which would be popular with savings and loan men. Abolishing HHFA, however, would be up to Congress as would the future of public housing—another candidate for oblivion. One guess: public housers will be lucky to get as much as 5,000 units for fiscal 1953-54, might get none at all. Nobody yet had figured out a way to avoid keeping the Public Housing Administration going on a skeleton basis to supervise the 500,000-odd units already built.

Interest rate rise seen. The odds looked better and better each week that the Re-



Source: Bureau of Labor Statistics

HOUSING STARTS jumped to 101,000 units in October as homebuilders reacted to dry weather and suspension of Reg. X. The total was 3,000 more than in September and 11,000 more than in October, 1951. In the first ten months of 1952 builders had started 966,400 units, 10,400 ahead of last year. Allowing for seasonal adjustments, BLS projected that to an annual production only 44,000 units short of the 1.2 million unit ceiling which could bring back credit controls.

publican administration would raise interest rates on VA loans as builders and mortgage bankers demand (see p. 41). FHA rates might go up, too. The future of Federal National Mortgage Association, beloved by many a builder but long damned by bankers, looked dim (see p. 38). Wage, price and rent controls would be allowed to die April 30 and controls on all but a few materials (including building steel, copper and aluminum) would probably be removed soon after the new administration takes over in January. There was some speculation that the Veterans Administration home loan program might be merged with FHA. In fact, only two housing agencies, FHA and the Home Loan Bank Board, seemed to be safe from major changes.

An immediate problem that the new regime will not be able to sidestep was that FHA's Title I (repair and remodeling) section had reached its \$1.25 billion insurance ceiling. Since summer, FHA had been able to write only as much new insurance as the total of payoffs on old loans. That has been only about \$75 million a month. Applications for Title I loans have averaged \$115 million. When Congress convenes, FHA intends to ask for a \$500 million boost in its Title I ceiling.

Defense housing puzzle. Hardest for crystal-ball gazers to dope out is what the new administration and Congress would do about the Defense Housing Act, which expires June 30. Biggest remaining need for defense housing (see p. 39) lay in areas where private capital had shown no inclination to underwrite loans. But public housing—even for defense—was anathema to most Republicans. NAREB was touting the possibility of using rapid tax write-off as a substitute for the cumbersome provisions of Title IX. In one such deal already approved by DPA, an Alcoa subsidiary

PUBLIC HOUSING WINS LOCAL ELECTIONS; \$1.3 BILLIONS IN BONDS VOTED

On a local level, the Nov. 4 elections created a whopping market for construction: voters approved some \$1.3 billion in municipal bond issues to finance schools, hospitals, parks, roads, garages, bridges, sewers, airports. That was 93% of the offerings on the ballots and tops since the war.

In six local elections involving public housing voters sided with public housing in four, against it in two. CINCINNATI defeated (113,671 to 76,025) a charter amendment that would have killed public housing by: 1) requiring a popular vote approving every site before work could begin, and 2) forbidding the city to sign any contract for public housing that would not pay full taxes. TOLEDO rejected (78,813 to 53,100) a charter amendment that would have required a popular referendum on all public housing. ELIZABETH, N. J. advised its city council (17,683 to 11,129) to apply for more public housing units when it can get them. RIVER ROUGE, MICH. advised its city

council (4,356 to 3,333) that it approved public housing in principle.

The village of OSSINING, N. Y. advised its governing board (3,300 to 1,310) that it disapproved public housing there. The board promptly began maneuvers to break its contract with PHA. MANSFIELD, OHIO voted (11,270 to 5,686) to cancel its cooperation agreement with the Mansfield Metropolitan Housing Authority.

On urban redevelopment issues, CLEVELAND approved (154,630 to 103,042) a \$7 million bond issue to finance the city's share of a federally aided program. (The bonds cannot be sold until the Ohio supreme court rules constitutionality of the state's urban redevelopment law.) PORTLAND, ORE. rejected (75,000 to 93,000) a \$2 million bond issue to finance its share of a federally aided program.

LOUISIANA became the 5th southern state to authorize municipalities to float bond issues to build plants for private industry.

was permitted to write off 80% of a \$2.4 million rental development built to house workers at a new aluminum plant in Pt. Comfort, Tex. The big difficulty with tax write-off as a defense housing inducement was that most defense housing involves low-rent buildings in high-cost areas, so that the 2 to 3% depreciation normally allowed is about all such structures would earn a year, anyway. While Congress might well continue rent controls in critical defense areas, the GOP administration could

be expected to re-examine the list of them, whittle out questionable spots.

Before the election, the building association man was half-kidding when he said: "If Ike gets in, no doubt the construction trade groups will have a lot less to keep them busy in Washington." By the end of November, that wry remark looked like a pretty good capsule of what the Republicans' "new climate for business" could mean to the regulation-ridden, politics-dominated building industry.

Photos: A.P., U.P., LIFE, Harris Ewing, U.P.



WOLCOTT

CAPEHART

BEALL

BROYHILL

MRS. ROGERS

Wolcott and Capehart to control housing legislation; bureaucrats await shakeup

The new faces of 1953 would tend to be hard money men. For the housing industry, that was emerging this month as the No. 1 fact of the personnel turnover in Washington that would follow the GOP sweep.

As mortgage bankers saw it, the "most important" election-caused shift would be the return of Rep. Jesse P. Wolcott (R, Mich.) to the chairmanship of the House Banking and Currency Committee, which handles housing legislation. He is rated as a foe of public housing and Fanny May, a supporter of FHA and Federal Reserve independence in setting credit policy. Speaking to an NAHB conference in Oklahoma City last month, Wolcott forecast that VA interest rates would be hiked to $4\frac{1}{4}$ or $4\frac{1}{2}$ %. He added: "We'll have to work out something to produce about a million homes a year."

Wolcott can be expected to run his committee with a firm hand—in contrast to the easygoing approach of Sen. Homer Capehart (R, Ind.) who is in line for chairman of the Senate Banking Committee. Chairmanship of the House Veterans Affairs Committee will probably go to Mrs. Edith Nourse Rogers (R, Mass.) who told HOUSE & HOME last month she was opposed to raising VA interest rates. Reason: veterans are entitled to a better break than the rest of home buyers.

Administrative housecleaning. In picking President Joseph M. Dodge of the

Detroit Bank as his liaison man with the Budget Bureau, President-elect Eisenhower bore out the industry's expectations he would choose conservative aides. As president of the American Bankers Association in 1948, slight, plain-spoken Joe Dodge had attacked the easy credit terms for housing that most homebuilders hold dear. Said he: "Extra inflationary credit for housing was passed at the time installment credit was being limited for those who wanted to buy goods to furnish and equip houses. . . . If we really intend to stop inflation, money has to be made hard to get from the government. We must stop generating inflation by a strong and consistent disinflationary policy with respect to budget, loans, guaranties, subsidies.

Washington speculation over who would be named to the top housing job, HHF Administrator, included such names as former NAHB President Rodney Lockwood of Detroit; Charles P. Taft of Cincinnati, the Senator's brother who was defeated for governor of Ohio; and Ralph Cake of Portland, Ore., former president of the US Savings and Loan League and former Republican national Committeeman. One possibility who could be counted out was Mortgage Banker Aksel Nielsen of Denver, an old friend of Ike's. He told reporters he simply had no thought of 1) being offered or 2) accepting a federal post.

Whoever Eisenhower picked to head the government's housing and construction

agencies, it was a safe bet that the personnel upheaval would go deeper than many a second echelon bureaucrat thought. Not only the head men (see below), but also a surprising lot of assistants in FHA, PHA, HHFA and other agencies will either quit or be shuffled into positions of obscurity. As one of the country's top housing technicians put it last month: "The trouble is that the people in the housing agencies—especially FHA—have lost sight of the original objective to improve housing standards. The way FHA has been run lately makes it an awfully safe bet. The idea of improving standards is forgotten. Everybody is 20 yrs. older, fatter, tired. There isn't the gleam to do the social job that needs doing."

Top housing men (and their annual pay) whom the Republicans could be expected to replace at once:

HHF Administrator Raymond M. Foley, \$17,500. Deputy Administrator B. T. Fitzpatrick, \$15,000. Housing Research Director Joe Orendorff, \$15,000. Slum Clearance and Redevelopment Director Nat Keith, \$15,000. Ass't. HHF Administrator Neal Hardy, \$12,000. FHA Commissioner Walter Greene, \$15,000. PHA Commissioner John Taylor Egan, \$15,000.

The Home Loan Bank Board's three members serve term appointments. First to expire will be that of Kenneth Heisler, in June. Because the law requires one member from an opposition party, a GOP successor would give the Republicans control of the board. Chairman William Divers, whose term runs until 1955, told HOUSE & HOME he has no plans to resign. He can be replaced as chairman, however, by the President. Of the six directors of Fanny May, one (board chairman) is the HHF Administrator, one is designated by the V Administrator. The HHFA chief names four more from his family of agencies. So control of FNMA is entirely within the grasp of the GOP at once.

Realtors in Congress. On Washington's Capitol Hill, the private building industry scored a gain. Although Sen. Harry P. Cain (R, Wash.), NAREB's great and good friend, lost his try for re-election, Realtor J. Glenn Beall of Frostburg, Md. won the seat being vacated by retiring Sen. Herbert O'Connor. Rep. Paul F. Schenck, Dayton realtor, was re-elected in Ohio's third district. Homebuilder Joel T. Broyhill, 32, won a House seat from the Virginia suburbs of Washington. When his opponent made a campaign issue of the Teague committee's charge that the Broyhill family firm had built defective VA homes, Broyhill took to television, pointed out that some buyers of his houses have resold them at profits from \$2,000 to \$10,000.

Prefab Institute designs 'dismountable' house in bid to eclipse eyesore PHA 'temporaries'

A multicornered tug of war was developing this month over a defense housing problem the government has never wholly solved: what kind of house should be built in areas where the foreseeable need is too temporary to permit Title IX or Wherry Act construction; who should build it? Involved were the Defense Department, HHFA and its subordinate Public Housing Administration, the morale of thousands of US troops and millions of dollars of taxpayer money.

So far, Congress had authorized \$100 million for public defense housing in areas where private enterprise has been unable or unwilling to build it. All of the \$87.5 million actually appropriated has been allocated—mostly for flimsy temporary units little different from the eyesores that sprouted in World War II, lived on through the postwar housing pinch to become slums before their time.

More of the same? One of the first requests likely to go before the 83rd Congress will be a plea for more money—perhaps as much as \$100 million—to build public housing in neglected defense areas. Most of these are towns around military camps. Even HHFA officials involved in the mistake were admitting last month that defense housing needs in many critical areas has been grossly overestimated; but at the same time, they said defense housing needs in many a military defense area had been far from met. (Where the defense need is purely military, FHA has often cut Title IX programs in half to be safe.) Last month, there was no money left in HHFA's public defense housing kitty to meet the need for temporary housing for construction workers at AEC's new plant at Portsmouth, Ohio.

The push for public defense housing will not come from public housers. It will come from the AEC and from the armed forces who want soldier families well enough housed to reduce the staggering cost of high personnel turnover. The AEC, which wants no more headaches of operating government towns, would like a housing agency to wrestle with the job. The armed forces can be expected to make another try to get their hands on funds to build themselves. Up to now, Congress has been unwilling to trust the military with this phase of housing on the ground they are extravagant, too rank-conscious. And whether a Republican-dominated Congress will appropriate much money

for government-built housing—even for defense—is open to serious question.

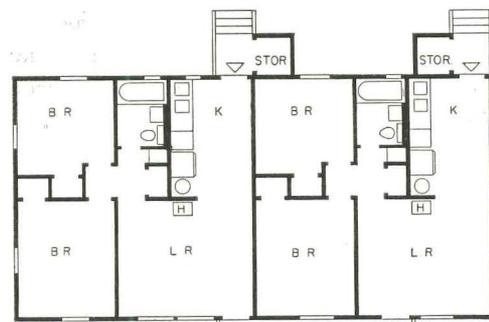
Improved designs. This month, at the Naval Powder Factory in Indian Head, Md., an hour's drive down the Potomac from Washington, HHFA unveiled two sample houses (see cuts) that will vie for installation in temporary military defense areas—both at projects in the works now and those planned for next fiscal year if Congress votes more money.

One, designed by the Public Housing Administration's slow-moving architects, was a disappointing re-do of the decade-old flat-top temporary war house. Windowless at one end, it reminded many a viewer of a railroad boxcar—an effect not softened by its reddish-brown paint. It *did* provide 643 sq. ft. of living space for \$6,500 (not including lot). The other was a duplex developed by the Prefabricated Home Manufacturers' Institute. Though far from handsome, and smaller (592 sq. ft. per unit) than the PHA model, the PHMI house achieved more grace at a comparable price (\$5,375 per unit). Moreover, it was designed for later conversion to a one-family, three-bedroom house (with addition of brick or shingle siding and a new roof)—which should pack a lot of sales appeal for military men. The Navy already has indicated its approval. PHMI also makes much of the fact that their house can be built by any prefabricator, shipped without special equipment.

Best dismantlable? HHFA claimed both houses were dismantlable and relocatable. But neither model had actually undergone



PHMI 'DEMOUNTABLE' two-bedroom duplex is built of insulated plywood panels with flush exterior joints, rests on masonry piers. It comes with space heater, electric stove, refrigerator, water heater, softwood floors.



PHMI MEETING participants included (l to r): Host Peter S. Knox Jr. of Thomson, Ga.; Dr. Arthur R. Uppgren, economics professor at the University of Minnesota; Sen. Burnet R. Maybank (D, S. C.); Hart Anderson of Shakopee, Minn.; and PHMI President John C. Taylor.

dismantling and re-erection. And their basically conventional construction suggested redeployment would prove costly.

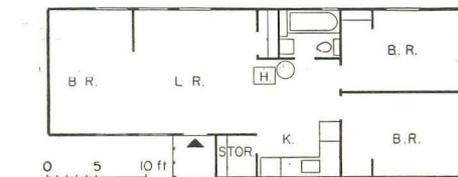
Left in the background for the moment was the most promising scheme of all—HHFA's field-tested dismantlable defense houses (H&H, July '52, News). They offer more living space plus permanent construction at a higher initial cost, but can be redeployed in 175 man-hours for 10% or less of the first cost. Two reasons for the delays: PHA has dragged its feet in letting contracts for erection of large blocks of them; some prefabbers object to the program.

Develop market for used homes, prefabbers urged

In the heady atmosphere of Augusta's Bon Air Hotel (where President-elect Eisenhower's staff was quartered at the same time), the Prefabricated Home Manufacturers' Institute found its fall meeting a good time to air proposals for changes in federal housing laws. Said PHMI Presi-



PHA TEMPORARY has painted pressed board and batten siding, casement windows, two bedrooms and an alcove usable as a third, same equipment and foundation as PHMI unit. The shell was erected in 6½ hrs.



dent John C. Taylor Jr.: "If the homebuilding industry is going to really do a job in marketing larger and higher-priced homes and apartments, it will need to develop a used house market . . . as the automobile people (did) around 1925-26." Taylor urged the government to amend its laws and administrative regulations to permit a deal like this:

A prospect who wants to buy a \$20,000 house tells the builder he must sell his old home to raise the down payment. So the builder calls an FHA inspector, who appraises the old house, says if specified repairs are made, FHA will issue a mortgage, say for \$8,100, on it. The builder figures the improvements will cost him \$1,000 including profit, after which he figures he can resell the old house for \$9,000. So he tells the prospect he will give him \$7,300 on his old house as a down payment on the new one.

Another needed change, said Taylor, was bigger fees for servicing small mortgages so servicing agencies will not lose money on them. He also urged that minimum (5%) down-payment ceilings on FHA loans be upped from \$7,000 (for a two-bedroom house) "to \$10,000 or \$12,000 or even higher."

With prefabricated home shipments (for the first nine months of the year) running 14% ahead of 1951's rate, many a prefabber optimistically thought this year's sales by the industry might top the all-time record, 55,000 units in 1950. To keep sales rising, Taylor predicted more and more prefabbers would turn to the middle-bracket market (\$15,000 to \$25,000) "where the more pressing demand will be found." The trend was already underway. In a recent survey, PHMI found that 60% of its members' homes produced this year were in the \$8,000 to \$12,000 bracket, compared with 31% in 1950. Moreover, three- and four-bedroom homes accounted for 53% of shipments.

\$300,000 ad splash launches prefab model

Not since the late Lustron Corp. had the homebuilding industry seen anything like it.* To launch its 1953 model, National Homes Inc., the nation's No. 1 prefab maker, splurged with a half-million-dollar promotion campaign suggestive of the big-gun sales offensives that usher in new automobiles. In issues timed to jibe with model showings in some 300 cities, National bought \$200,000 worth of page and two-page color ads in 12 national consumer magazines, another \$100,000 worth of full-page ads in 242 US newspapers. It put

* In 1948 Lustron spent some \$410,000 for display space to promote its ill-fated steel prefab, but never used such a concentrated splash.

up \$250,000 as its one-third share in providing 325 dealers with furniture for display homes.

Explained ebullient President James Price: "The market looked like the best in two years and we had a home we felt was structurally and architecturally right. . . ." The results, he said, were "phenomenal": In St. Louis, a dealer sold 24 homes

in three days. In Bloomington, Ill., 15% of the population (of 50,000) was reported to have visited the display homes. More than 3,000 letters a day poured in on National's headquarters at Lafayette, Ind.

Not only National, but the whole US prefabricated home industry would profit by Price's trail blazing, which marked another milestone in the industry's growing up.

Will rising competition cut building prices in '53? BLS aide expects million houses

Just as construction costs started to edge down in 1950, the Korean war gave them another 20% shot of inflation. But in the last year, the rise has slowed almost to a halt. Only rising labor costs (up about 8% in the last 12 months) have given construction costs the final push to today's all-time high. Did this hint that a long-range cycle of costs had reached its peak, was poised for decline?

One expert who thinks so is Dow Service's Myron L. Matthews. Said he last month: "All the natural economic laws are tugging at the phenomenally high construction-cost level and given half a chance will pull it down." Matthews' "best guess": a drop of "10 to 15%" beginning next year and ending by 1954. He expected prices to drop for building materials, products, accessories and services (e.g. profits). One reason: "Prices never remain static for very long and if they can't go up they must go down."

Spotty, regional? Most other construction prophets were forecasting no such price slump. More typical was the viewpoint of Economist Walter E. Hoadley Jr. of Armstrong Cork Co.: "Some slight easing in costs may be in prospect later next year after the seasonal upturn during the spring and early summer. . . . [But] with activity in general continuing at a high level, such cost reductions as materialize promise to be rather spotty by type of project and, no doubt, regionally as well."

Reported Lumberman Norman Mason, after his semiannual survey of retail lumber dealers: "Suppliers are going along at a very even level and expect to continue so." Said a highly placed official in the government's defense production hierarchy: "With price controls going off and with the cost of producing steel still rising, there is no outlook for a decline in materials prices. Labor wages are rising and I think there is enough demand so there will not be much of an increase in productivity. Labor costs are probably not going to drop. . . ."

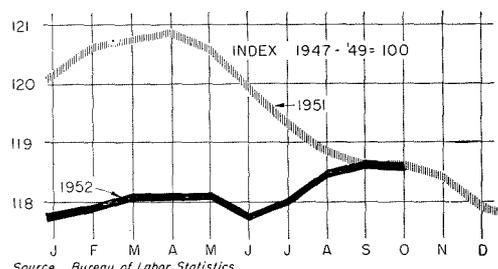
Symptoms of change. Despite the preponderance of feeling that building costs are likely to be stable next year (and certainly for the first six months), there were symptoms of change.

Most significant factor: increasing competition was beginning to be felt all along the line in the building industry. To hold big building organizations together as the peak of defense industrial expansion and postwar homebuilding passes, profit margins would be shaved. Items:

▶ Reported Dow's Matthews: "Where a 10 to 20% difference between three low-bidders on a job used to be common, now three low bids are often within 5% of each other, sometimes closer."

▶ Reported Lumberman Mason: "There is a tremendous competitive situation in the building industry [in which] the manufacturer has or will have a capacity for overproduction. There may be too many distributors, and contractors are bidding at below the normal margins."

Million homes seen. Because construction forecasting involves not only economics, but politics, it entails an extra risk. So most predictions come pretty well hedged. A big though indirect influence on next year's construction prices will be US monetary policy. If—as some economists expect—money gets easier by next May or June, construction should get a shot in the arm which might pull costs up. But meanwhile, a better flow of materials, as the effects of the steel strike are overcome, should help cut construction costs. Adding it all up, Ass't. Commissioner Herman Byer of the Bureau of Labor



Source: Bureau of Labor Statistics
MATERIALS PRICES remained on an even keel in October continuing a year-old trend. BLS index stood at 118.6, or one point below a month ago.

Statistics (whose forecasts have often been uncannily accurate in the past), said: "I don't look for the slump in prices some think is going to happen in the last half of next year. They're ahead of time—as they are ahead of time in predicting a slump in housing. I expect we'll build a million houses in 1953. If there is a business dip (which would pull construction costs down) it isn't likely to come before the first part of '54. Even then, I don't expect any pronounced drop—just a slackening off. Not a slump or a recession."

Pension funds in Michigan start buying FHA, VA loans

In the 1951 mortgage crisis, mortgage bankers decided what the homebuilding industry needed was new sources of money, began trying to persuade the nation's pension trusts to shift some of their \$10 million assets from bonds to home loans.

The first fruits of that effort were budding last month in Michigan, thanks to three months of crusading by Benjamin Levinson of Detroit, president of the Michigan Association of Approved Mortgagees. In Michigan, 4% money for GI loans had all but vanished. In September, Levinson petitioned the Detroit city council to have the city retirement and pension fund switch some of its \$34 million of government securities earning about 2.75% into VA loans which would net 3.5%. Forthrightly, Levinson told the council the city "made a mistake" in not buying GI loans "that have been selling at a ridiculously under par figure. . . . If the pension board had been alert, they could have earned a fabulous amount of money." The council ordered the retirement board to meet and study the idea. Meanwhile, Levinson went before a meeting of 20 leaders of Michigan veterans' organizations (membership 185,000), persuaded them to adopt a resolution asking every pension fund in the state to study investing in VA loans.

With that political push, and assurance from Detroit city counsel John Wither- spoon that it was legal, the Detroit retirement board on Nov. 20 approved government-backed mortgage buying. The board planned to begin slowly, but might eventually invest about \$16 million (20%) of its \$80 million assets in VA or FHA loans.

The Wayne County (Detroit) Employees' Retirement System has invested \$4 million in FHAs since 1950, upped its earnings \$60,000 a year. So far, it has shied away from VA loans because of the 4% rate. "FHA mortgages," said Executive Secretary L. P. Allcut, "give us 1 1/4% more than bonds."

Support grows for VA interest rate boost; survey shows loans still moving at 95-6

There had been hints that FHA might boost its interest rate after the election, thus forcing the reluctant VA to follow suit. Last month, lame duck FHA Commissioner Walter Greene dashed such hopes. Said he: "I doubt we'll do anything before the new administration. . . ."

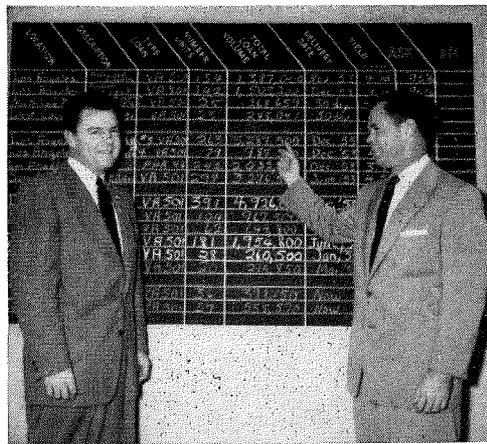
If Treasury-Secretary-designate Humphrey and the new Veterans Administrator needed persuading to exercise their statutory power to raise the VA mortgage rate to 4 1/4 or 4 1/2%, there were more and more important groups who seemed ready to do some persuading.

Item: the US Savings & Loan League, at its New York convention (see p. 43), began trying to work out a formula for flexible interest rates on FHA and VA mortgages, pegged somehow to another index of the price of money. The big hurdle was what index? One possibility under study: government bond prices.

Item: the powerful American Legion, whose assent would make an interest boost on VA mortgages politically palatable, began a committee study of the frozen 4% rate. The committee, headed by Attorney Tom Moses of Charleston, W. Va., huddled first with homebuilders and prefabbers who pointed out that a 1/4% interest jump on a \$10,000 loan would add only \$2.08 a month to payments. The committee was scheduled to report to Legion brass in March. Legion Commander Lewis K. Gough told HOUSE & HOME a "clear-cut" recommendation by the committee for a rate hike would stand a good chance of adoption.

VA Loan Guaranty Chief Bert King was still saying what he had been saying for a year: the pinch on 4% money may ease in a few months. Last month, for the first time he got some slight backing. Predicted Economist Miles Colean, in a talk to the National Retail Lumber Dealers: "Interest rates generally are not likely to rise beyond present levels and in the latter part of 1953 may recede slightly, although nothing as happy from the borrower's point of view as the conditions that prevailed in 1950 and early 1951 is expected. Some time in the second quarter there is a good probability that we shall begin to have a more ample supply of mortgage funds than has been available recently."

At the moment, however, the facts of the market gave proof positive that 4% interested few investors. A HOUSE & HOME survey in 11 major cities showed VA's were still going as low as 95 in the West, and virtually nowhere at par. FHA's, at 4 1/4%, were selling far closer to 100.



Two mortgage exchanges open in New York City

To many a mortgage banker, the two mortgage exchanges which opened in New York last month looked more like a smart piece of sales promotion than a creature akin to a stock exchange. Reason: instead of being a meeting place for all brokers, the mortgage exchanges dealt either exclusively or chiefly in their own loans.

James F. Rigsby Co. opened its exchange (above) Nov. 17. In its first week, it listed 26 offerings worth \$32 million—all from California, where James (l) and Eugene (r) Rigsby formed their business five years ago.

Harry Fromkes' Lawyers Mortgage & Title Co. titled its exchange the New York Mortgage Exchange, classified mortgages into five categories according to price: AA, from par up; A, 90 to par; B, 80 to 90; C, 70 to 80; D, 60 to 70. The exchange dealt only in conventionals, required a 30-day exclusive listing, charged both buyers and sellers a 1% commission. Chairman is Thomas G. Grace, former New York FHA director. Despite jibes of competitors, exchange operators felt their idea was a sound step toward giving the industry a quick-working open market for first and second mortgages.

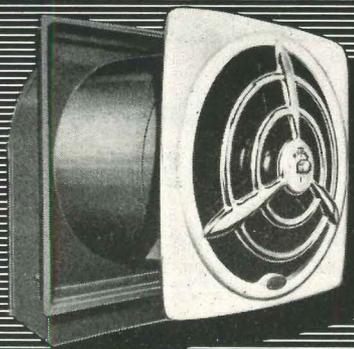
CITY AND SOURCE	FHA 203	VA 501
HOUSTON—John F. Austin Jr., pres., T. J. Bettes Co.	par	97-97 1/2 (SO)
SMALLER TEXAS CITIES—Same as above	99 1/2	96-96 1/2 (SO)
WASHINGTON, D. C.—Oliver Walker, Walker & Dunlop	99-100 (SO)	96-97 1/2
BOSTON—Robert M. Morgan, vice pres., Boston 5¢ Savings Bank	Local: par-101, small volume Out of State: 93-par	par-101 95-97
DETROIT—B. B. Wolfe, pres., First Mortgage Corp. of Detroit	98 1/2	no market
SAN FRANCISCO—William A. Marcus, senior vice pres., American Trust Co.	99 to par	97-97 1/2, out of bank portfolio; 95 on forward commitments
SEATTLE—Don Hedlund; Carroll, Hedlund & Associates	99 1/2 to par	95-97 1/2
NEW YORK—J. Maxwell Pringle, pres., Pringle-Hurd & Co., Inc.	par (SO)	99 (SP)
DENVER—Aksel Nielsen, pres., Title Guaranty Co.	par	96-98
PHILADELPHIA—N. N. Wolfsohn, pres., Eastern Mortgage Service Co.	par-100 3/4 (SO) 101-101 1/2 (SP)	97 1/2-99 (SO) par-98 (SP)
KANSAS CITY, Mo.—Byron T. Shutz, pres., Herbert V. Jones & Co.	99	97-99
CHICAGO—Ferd Kramer, pres., Draper & Kramer	98-99 (SO)	95-97 (SO)

SO: Servicing rendered by originator
SP: Servicing done by purchaser

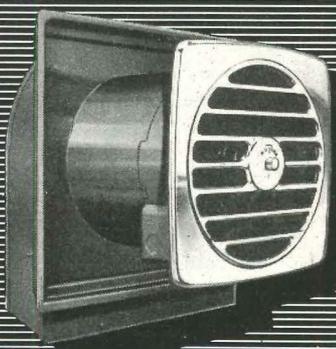
NUTONE

VENTILATING FANS

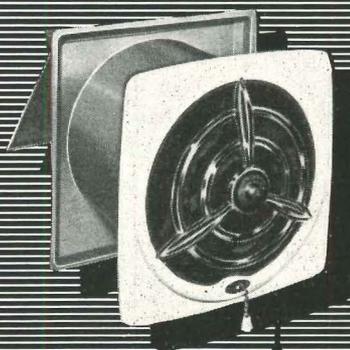
7 basic models to fill every need



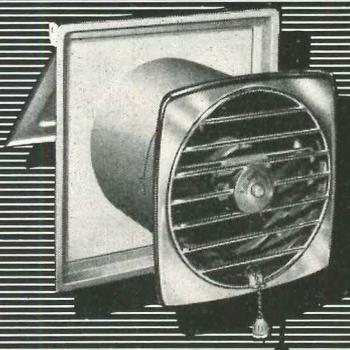
816 — 10" Automatic Wall Fan



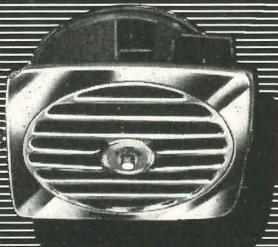
806 — 8" Automatic Wall Fan



810 — 10" Wall Fan (Pull Chain)



800 — 8" Wall Fan (Pull Chain)



820 — 8" Vertical Discharge



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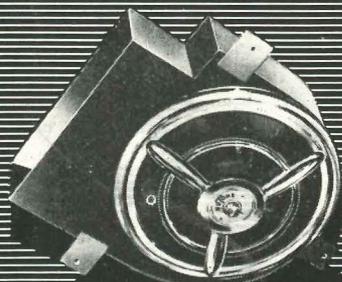
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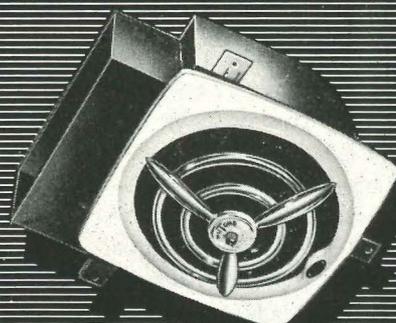


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US Savings & Loan League talks reunion with rival league; Morton Bodfish to retire

For 21 years, Morton Bodfish, 50, had been strong man and chief spokesman of the US Savings & Loan League. As executive vice president since 1931, and as chairman of the executive committee since 1945, he had upped its membership from 1,506 to 4,000, watched assets of the nation's savings and loan associations grow from less than \$5 to nearly \$22 billion. He also had found time to push his own First Federal Savings & Loan of Chicago (he is president) into position as the third largest in the nation (\$111 million assets), and lead his industry in lobbying crusades against targets like public housing, Fanny May.

Last month, the long reign of Morton Bodfish appeared to be drawing to a close. At its 60th annual convention in New York's Statler Hotel, the US League moved Bodfish up to chairman of the board of directors, a step Bodfish started in 1945 when he asked to be upped to his present title. President Ben Hazen announced Bodfish now would serve "in an advisory capacity" without presiding at meetings. By June 30, 1954, Hazen said, Bodfish will retire. Meanwhile, Executive Vice-President Norman Strunk will assume "full administrative and executive authority."

Many observers thought Bodfish's forthcoming retirement was linked with another behind-the-scenes convention development: talks aimed at bringing about a united front with the US League's smaller rival (600 members), the National Savings & Loan League. The National League, led by Oscar Kreutz, has kept mum on issues like public housing, Fanny May. The US League convention also:

► Turned a conciliatory cheek to commercial bankers who were stepping up their drive to impose tighter curbs on savings and loan branch expansion. The American Bankers Association, however, said it will press Congress to make Federally-chartered savings and loans subject to the branch bank regulations of states where they operate. The Supreme Court ruled last month that the Federal Home Loan Bank Board may grant branch charters even where they be illegal under state laws.

► Heard a recommendation by Chairman William K. Divers of the Home Loan Bank Board that savings and loans be required by law to double their reserves for losses. Present law requires 5% reserves after 20 years of membership in the Federal Savings & Loan Insurance Corp. Divers suggested 10% reserves after the next 20 years. Present average is 8%, he said, but "there are laggards."



INTERNATIONAL Home Loan Bank was proposed by white-bearded Wilhelm Flatz (r), president of Austria's largest savings and loan society. He argued rise in home ownership in Europe would help fight Communism. Flatz and Dr. Hermann Schuon (l) gave peace pipe to Morton Bodfish (c).



AMERICAN LEGION Commander Lewis K. Gough outlined aggressive 10-point plan to end Korea war. It included raids by Chiang Kai-Shek's forces, bombing Manchuria, blockading China coast, use of tactical A-bombs if military chiefs think it will help.



CHARLES L. CLEMENTS (l), 58, of Miami Beach, was elected league president succeeding Ben H. Hazen (r) of Portland, Ore. Clements, a tall, spare grandfather (of two), became a bank cashier in Lakeland, Ga. at 19, switched to retail drugs two years later, was mayor of the town (pop. 1,551) at 26. He succumbed to Florida boom fever in 1925, worked nine years for Miami Beach Bank & Trust Co. before organizing the First Federal S & L there (later renamed Chase Federal). He is president.

Clements was a city councilman from 1927 to '33, was president of Miami Beach chamber of commerce in 1942-3. His hobbies are golf (in the 90's) and hunting (quail and ducks).

The No. 1 problem confronting "every business in the country," Clements thinks, "is a dangerous tendency to clamor for federal legislation to subsidize ourselves and restrict our competition." He shares outgoing president Hazen's lack of enthusiasm for expanding the Home Loan Bank into an overall central mortgage facility for fear it would thus support a speculative realty market.

Elected vice president was Ralph H. Crosby, 48, who is president of the \$80 million Old Colony Co-operative Bank in Providence, R. I. Crosby, who has been in the savings and loan field since 1929, is a director-at-large of the Boston Federal Home Loan Bank and active in many Rhode Island civic organizations.

COLUMNIST DOROTHY THOMPSON ADDRESSED FINAL SESSION; 2,803 REGISTRATION SET RECORD



Photos: Three Lions

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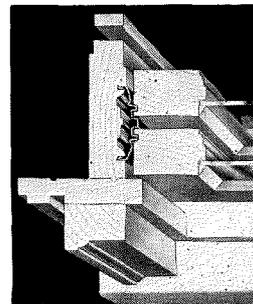
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Colleges promote homebuilding to major degree subject with four-year courses

In 1938, before FHA production financing, the average professional builder put up 4.8 city houses a year,* was too close to the hammer-and-saw end of his business to bother with training executive aides, who generally rose from foremen's ranks. Now that the last 14 yrs. have transformed homebuilding into a bigger, better-heeled, more complex business, homebuilders were beginning to look to colleges to provide them with managerial talent.

Observes John S. Wright, executive vice president of the New Jersey Homebuilders Association: "When a guy gets through four years of engineering he can design a house and set it up but he doesn't know how to run the business."

Four-year training. Colleges are slowly coming around to garbing homebuilding in academic robes.

At the University of Denver, a four-year major in building industry (there is a similar one in real estate) leads to a Bachelor of Science degree in the College of Business Administration. Department Chairman Donald W. Decker explains the course was started six years ago "because of the demand for postwar housing. Men entering this field must be equipped with a sound business background as well as a training in the complete art of homebuilding."

Success. Denver currently has 141 students enrolled, has graduated 225 since 1948. "We have five requests for job placement for every graduate," says Decker. Students take such basic business subjects as economics, accounting, statistics and business law during their first two years. In the last two years, they elect such additional subjects as architectural design and planning, real estate and lumber distribution—according to which part of the industry they're gunning for. Decker thinks all his graduates should feel at home in land economics, community planning, mortgage lending, architectural design, real estate and the mechanics of material distribution.

Local building industry leaders advise on the curriculum, serve as faculty members, encourage a part-time work program (where half the student's day is spent in actual job training) and see that interested contractors, realtors and building-material manufacturers get a list of graduating seniors. So far most of Denver's home-

building students have come from Wyoming, Nebraska, Illinois, New York, and, of course, Colorado.

No vacation. At Trinity University, in San Antonio, a four-year homebuilding course opened this fall with the blessings of the NAHB, Southwest Research Institute (whose campus adjoins Trinity) and HHFA's housing research division. After a four-year course, students will be awarded a B.S. degree in Business of Homebuilding. Students specializing in the course only in their junior and senior years will get a B.S. in business administration with a *major* in homebuilding.

Between the junior and senior years, Trinity students will forego their summer vacation. Instead, they will learn construction management as assistant superintendents for builders. "The course," according to Trinity President James W. Laurie, "will be equally valuable for training contractors who intend to custom-build homes or for future merchant builders." For most courses, Trinity plans to draw on its existing faculty.

The University of Houston opened a similar course and enthusiastic homebuilders put up the money for nine \$100-a-year scholarships.

Since 1945, Temple University, in Philadelphia, has had a two-year light home construction course under its Community College setup. A certificate of completion is given students matriculating in such subjects as math, blueprint reading, architec-



TERM PAPERS in the University of Denver's home construction course were scale-model houses which students (left to right) Bill Topel, Ed Davis and Wayne Coykendall displayed at the Denver home show.

tural drawing, strength of materials and ramifications of FHA.

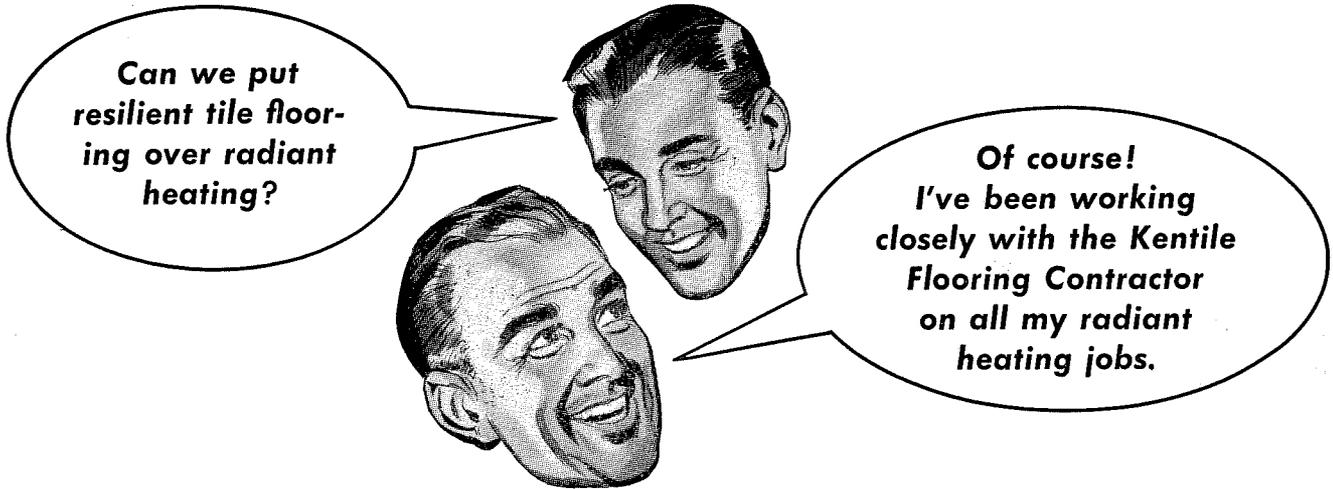
A slightly different type of course, a "School of Construction Arts and Sciences," embracing architecture, building and an understanding of the problems of manufacturers and suppliers of building materials, was proposed by Tyler S. Rogers, technical director for Owens-Corning Fiberglass Corp., at a recent Producers Council meeting. Said Tyler: "[with such a school] we would be training men who would be specialists in these several arts and sciences, as we do now, but without barriers between them and with mutual understanding and respect for each other's field of interest." Columbia University this fall set up a four-year major in construction management in its undergraduate school of general studies. The course is divided half and half between cultural and academic studies and professional training in architecture, engineering, law, business, finance, labor and building materials.

Other schools. The NAHB, in a quick check of college-level homebuilding courses, recently found 44 institutions offer some kind of degrees, 28 offer short courses and 27 offer night courses. Further checking is now underway to see how close these courses approach the NAHB "ideal" at Trinity. For instance, Massachusetts Institute of Technology, which has had a course in building engineering and construction since 1929, discontinued this course's elective in light construction last semester. Hereafter MIT's B.S. degree in building engineering and construction will be limited to students in heavy construction.

Following close behind homebuilders in promoting professional training, public housers at the October convention of the National Association of Housing Officials held a panel on four-year college courses in their kind of housing. Dr. Alonzo G. Moron, president of Hampton Institute, announced he is taking steps to start a full housing curriculum, emphasizing management of rental housing.

Night courses. On a part-time basis, the New Jersey Home Builders Assn., and later the Long Island and Westchester builders, have been sponsoring homebuilding classes at the City College of New York for the past three years. Enrollment has fluctuated from 48 to 24. This fall, NJHBA switched its sponsorship, persuaded Rutgers University extension to set up classes on two campuses at Newark and Camden (the latter to accommodate the Home Builders League of South Jersey which now sponsors a night course across the river at Temple University). Some builders consider the

* BLS survey of urban homebuilders, 1938.



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increases proportionately with an increase in the temperature difference between the top and bottom of the tile; e.g., with 1/8" KENTILE, heat transmission rate would be 180 BTU/sq. ft./hr. if there were 5°F difference between top and bottom of tile.

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CCNY course so valuable they pay their employees' tuition—to be sure they go.

"We had a young Gross and a young Morton last year," said New Jersey builder official John Wright. "I asked them: 'Why didn't you sit in your old man's parlor and learn the business?' They told me their dads thought they'd learn more with us."

The biggest hitch so far is what happens to students who do graduate in homebuilding. Joseph B. Haverstick, head of the NAHB's committee on professional education, made a study of what happened to the University of Denver graduates and found most of them went to work for large material manufacturers in their sales, research and engineering departments. The NAHB hopes its new godchildren at Trinity will stick closer to home.

Realty ads translated by Chicago architects

In real estate, things are not always what they seem in the ads. Chicago's AIA chapter bulletin last month provided some tongue-in-cheek translations:

CUTE—Applied to a house, it means scallops everywhere. Jigsaw, chintz and rotted pine.

QUAINT—This is a real bargain; it's cute and decrepit, too. When you slam the front door the third-floor toilet flushes.

CHARM—What a house is alleged to have when it ain't got nothin' else.

DELIGHTFUL NEIGHBORS—You participate in community dramatics, pinochle, cub-scout work, dirty stories in the garage and other organized play or get read out of the community. These people are going to be charming if it kills you.

BEST BUY ON THE NORTH SHORE—We're trying to unload this one before the roof caves in.

CONVENIENT KITCHEN—Better get a small-size cook; your wife won't fit.

NEAR PUBLIC AND PAROCHIAL SCHOOLS—Your front lawn is where the little braves from Happy Glen Public School and the cavalry from Faith, Hope and Charity re-enact the Battle of the Little Big Horn every afternoon. At least you won't have to worry about the grass; there isn't any.

AIRY ROOMS—You said it. Just try and heat them.

NEAR TRANSPORTATION—Either the house is a) in the same county with a train, or it is b) an upstairs apartment in the station.

Fanny May profits for fiscal 1952 reach \$31 million

Federal National Mortgage Assn. which many a private enterpriser would like to see liquidated or turned over to private control, is a handsome profit-earner for the US Treasury. Since its birth in 1938, it has bought some \$3 billion worth of mortgages, sold \$750 million worth, netted \$100 million profit. In the fiscal year ended last June 30, reported Fanny May President J. Stanley Baughman last month, the agency earned \$31.5 million profit after paying \$4 million in expenses.

Builder wins court test against code waste; AFL fights for code changes for new brick

Although senseless code provisions probably add \$1 billion a year to the cost of US homes, only rarely does a builder or prefabricator challenge a wasteful provision in court. If the builder has enough at stake to make it profitable to pay attorney's fees and wait for legal machinery to creak out a decision, local officials often back down before a clear cut ruling can be rendered.

In Montgomery County, outside Dayton, Ohio, a test case gave builders new confidence last month that courts will not enforce code-dictated waste, because the only legal basis for building codes is the state's police power to protect the health and safety of its people. At NAHB trade secrets meetings, Builder Alex Simms discovered he could save about \$160 a house by using only foundation walls for footings instead of walls plus T-shaped footings as required by county building officials. Soil experts determined his sites had a load bearing capacity of 7,750 lbs. per sq. ft. With only foundation wall footings, Simms' one-story homes would only load 2,520 lbs. per sq. ft. But building officials refused to accept the tests under a local code provision permitting alternate methods if based on "sound engineering practice," obtained an injunction which halted Simms' construction. Before Common Pleas Judge Don R. Thomas, Simms' soil experts and engineers testified, in effect, that the building officials did not know their business. The judge upheld Simms.

Union aids new brick. A subtler approach was being engineered by the Structural Clay Products Institute in clearing away code roadblocks confronting its new SCR brick. The SCR brick, sized 5½" x 2 1/6" x 11½", was designed to permit through the wall construction, cut costs to make brick compete again with frame. But many a specification code calls for 8" walls if made of brick.

For the nation's brickmakers, the AFL Bricklayers' Union, convinced it should cooperate with SCPI to get more work for its members, was putting the heat on local authorities to change local codes—with spectacular results.

On Long Island, President John E. Long of the AFL Building Trades Council spurred a change from 8" to 6" walls in the Suffolk County code that resulted in the sale of 100,000 of the new bricks in ten days. In Ohio, President Tom Davis of the Ohio Bricklayers' Conference ranged across the state to promote code changes. In Cleveland, where an enabling code amendment

was in the works, the bricklayers local put up \$15,000 to build a model home with SCR brick. In Seattle, the bricklayers took an ad in local papers to proclaim their endorsement of the new brick when the first SCR home was completed.

In five months, SCPI officials counted 260 codes converted or undergoing necessary changes. There were some hard spots ahead. Richmond, Va. code officials adamantly refused to approve the new brick. In St. Louis, union leaders conditioned by depression memories had so far barred SCR brick (which goes up far faster than conventional brick because it is bigger and contains core-holes planned with the aid of bowling ball makers to fit a mason's hand). But SCPI officials thought progress so far was most encouraging.

Seven cities vote to free selves from rent control

The Office of Rent Stabilization's mid-September maneuver to keep rent control in cities where local authorities favored letting it die was turning out a half-success.

Last month, only about half of the 15 communities where Washington imposed a critical defense-area designation to keep rent lids had fought back by voting themselves free of rent control as the law permits. They were: Akron, Denver, Highland and Griffith, Ind.; Casper, Wyo.; Jersey Shore-Muncey, Pa.; Battle Creek, Mich. In some towns local politicians shied away from a decision. Cedar Rapids, which had voted to let controls die in September before being declared critical, decided to wait until the present rent control law expires April 30 before acting. The Bremerton, Wash., city council held a hearing Nov. 26 but put off a decision.

Some communities might escape from rent control through the Defense Areas Advisory Committee, which makes the government's decisions whether a city shall have critical area housing aids and, or rent control, either, both or neither. It was studying a half dozen recommendations for decertifying critical areas. Reversing its month-old proclamation that it would tell the public what it was doing, the committee kept its deliberations largely secret. It admitted only that it was considering a decontrol recommendation by the local rent advisory board of Wichita Falls, Tex.; and petitions for removal of the critical area tag (for housing aid) by Akron, Massillon and Youngstown, Ohio.



TEMPERATE LEADERSHIP is expected from Charles B. Shattuck (l), 1948 head of the Appraisal Institute, who will succeed Joseph W. Lund (r) as NAREB president in January. Shattuck is a shrewd appraiser of men as well as realty. Asked at a realtor's meeting to predict the next real estate downturn, he asked: "How many here bought real estate for their own account in 1935?"—None. "In 1940?"—One. "In 1945?"—Four. "During the past year?"—Almost every hand went up. Answered Shattuck: "Then look for the slump in another few years."

A lifelong Los Angeleno, 50-yr.-old, Shattuck heads a small (7-man) realty firm that specializes in business property and appraisals. His most satisfying job: the involved appraising, and negotiating the financing for the new Pershing Square garage in Los Angeles on a subsurface leasehold from the city.

Shattuck's University of California studies were cut short for service in France and Germany in World War I (discharged as a 1st Sergeant). He worked for his father's general contracting firm from 1920-23; then started his own real estate business. In 1924 he married Edith "Polly" Philippine, of San Francisco. Their son, William N., recently started his own real estate and insurance firm in Los Angeles.

Shattuck's brother, Edward S., was California State Republican chairman in 1950, figures as a possibility for appointment to the Senate vacancy caused by Nixon's election as Vice-President. Another brother, David S., is president of Technicolor, Inc.

Photos: Photo Arts



HERB NELSON was in a happy mood as the final session ended at what may have been his last convention as NAREB's executive vice president. A plan for him to retire on a progressively smaller fraction of his \$25,000 salary has been worked out, might go into effect next spring. First, NAREB's board of directors must find a satisfactory successor—no simple job. Nelson, 66, has been NAREB's executive head since 1922, directed its growth from 16,377 to almost 50,000 members.

REALTORS CONVENTION: Tax aid sought for rehabilitation; '53 homebuilding prospects favorable

At a first-night banquet, just five days after the election, an entertainer asked realtors at NAREB's 45th annual convention to sing "Happy Days Are Here Again." They tried, eagerly but sheepishly and haltingly. They faltered and stumbled over both the words and tune. Their readjustment to Republican freedom was equally awkward.

Principal fluffs at the Miami Beach sessions would hardly win NAREB a reputation with the public for astute, unselfish thinking. Samples:

▶ At a press-conference opening day, President Joseph Lund said NAREB wanted no special legislation from the Republicans "in favor of our business"—simply an end to rent control, public housing and legislation against real estate. But five days later the annual policy statement adopted by the convention advocated that real estate brokers be allowed to trade in real estate for their own accounts subject only to the federal capital gains tax. (Like everyone else, they already have this privilege in true *investment* transactions, as distinguished from trading in real estate *as a business*.)

▶ Addressing the first general session, Lund picked up an idea first aired by Exec. Vice Pres. Herb Nelson early this fall, recommended that taxpayers be allowed to reduce their federal tax payments by the amount of any real estate taxes, instead of deducting these from income before calculating federal taxes. A person or corporation whose realty taxes exceeded federal taxes would pay no federal taxes under the plan. Although more realistic heads prevailed and a resolution favoring Lund's proposal died in committee, the AFL's weekly, *News-Reporter*, was quick to sneer: **REAL ESTATE BOARDS SEEK TAX MELON.**

▶ Some forthright realtors agreed the real purpose of the "tax offset" proposal, in the guise of special assistance for real estate or home ownership, was to prevent federal spending by choking off federal income. As in years past, the convention recommended a constitutional amendment limiting federal taxing, spending and borrowing. (A week later a published letter by President-elect Eisenhower revealed he does "not believe that the wise approach to the problem of reducing taxation is through an amendment to the constitution.")

Familiar tunes. NAREB's '52 platform contained few changes from previous years. There was a new twist to its anti-public housing resolution: it requested a "full-scale" Congressional investigation, and meanwhile a moratorium on any further authorizations. Instead of last year's resolution to convert Fanny May itself into a private institution, NAREB headed back to its 1950 stand by urging "continued study" for establishing a new private central mortgage bank (and liquidating Fanny May). Definitive recommendations from a

\$5,000 mortgage-bank study that NAREB authorized a year ago did not materialize.

As usual, the association favored scrapping rent and property controls, unfreezing FHA and VA interest rates.

The realtors had few specific suggestions for changes in the federal housing setup. All president Lund had to say was that it is time "to take a damned good squint at the whole agency setup of HHFA" and its components.

▶ Former president Al Summer regretted that FHA had been "used politically" since it was placed in HHFA; but otherwise praised both FHA and VA as "good agencies" of the government that had been helpful to homebuilding and real estate. "The new administration will not be a cure-all," he added. "There are many New Deal Republicans, and it will still need a coalition to defeat socialistic trends. The Realtors Washington Committee will have to work harder; not relax."

▶ Walter Dayton, of Bayside, L. I., former RWC chairman and newly elected Brokers Institute president, called HHFA "too cumbersome"; said FHA should be given independence and eventually converted into a private mortgage insurance operation.

Booby traps? NAREB's new "law-enforcement" housing rehabilitation program should solve the problems created by rent control and public housing, said Lund. To give this a boost a convention resolution advocated accelerated *federal* tax depreciation for properties rehabilitated within "conservation areas" to be established by *local* governments.

Chicago Builder Philip Klutznick, former FPHA commissioner, warned NAREB that extensive rehabilitation would cost \$15 to \$25 billion in a generation. Since private funds could not meet this need, he said such a program "evidently" would require government financial assistance, a principle generally condemned by NAREB. Another possible drawback was cited by a leading Boston realtor and rental property owner: the expense of rehabilitation would often produce rents considerably higher than rents for other housing in comparable neighborhoods; many rehabilitated house rents would be only a little below rents for new construction.

NAREB's rehabilitation program stops short of condemnation or compulsory evacuation of the worst housing, said Lund. It is directed primarily at "slum prevention rather than slum clearance." He added, to the surprise of his own press staff, NAREB

(continued on p. 51)



All photos but bottom, right: Photo Arts

Build America Better speakers outline ways to halt central city deterioration

Most informative session at NAREB's convention was a panel on the need for urban conservation and preventing needless, economically unsound decentralization. Said moderator and former NAHB president **Fritz Burns** (right of speaker): "This program could provide the basis for economic stability without war . . . protection against the boom and bust cycle."

William L. C. Wheaton (3d from l), Harvard professor of regional planning: "Central cities face an 8 to 15% loss of population in the next decade if present trends continue. . . . Some would face disaster in two decades. People are leaving obsolete, crowded, dirty cities because they are not fit to live in." But in the suburbs, "the typical house doesn't pay enough taxes [to cover] its own municipal services. . . . Present zoning laws are paving the way for future blight by allowing too high coverage of the land [in suburbs as well as cities]."

Builder **Philip Klutznick** (2d from l), former Federal public housing commissioner: "Builders build on the outskirts of the city because they are not given the opportunity to build in the city. . . . We have been destroying the central cores of our cities by default. . . . We also have permitted building in our suburbs without adequate facilities. . . . Many unnecessary separate water districts, school systems, etc. will bankrupt one little town after another in the future."

Harley P. Swift (3d from r), president of the Harrisburg (Pa.) Railways: "People, not vehicles, make an area prosperous. When cities will subsidize the users of public transit to the extent they have subsidized users of private automobiles, the traffic problem in downtown areas will be well on the way to solution, if not entirely cured. Transit could be subsidized . . . simply by restricting, not entirely eliminating, automobile use in business areas, . . . facilitating buses and other public transit. . . . Public transit carries 70% of the people coming into a business area in 6% of the vehicles and uses only 20% of the streets available, while 65% of the remaining 30% are people who will not use their cars between morning and evening."

Thomas McCaffrey Jr. (extreme r), Society of Industrial Realtors president: "If your city has no planned industrial section you are going to be out of luck for new plants. Industry just won't bother to buck zoning and other restrictions. . . . Factories and houses don't mix. But don't be misled by the beauty of a modern plant; have a

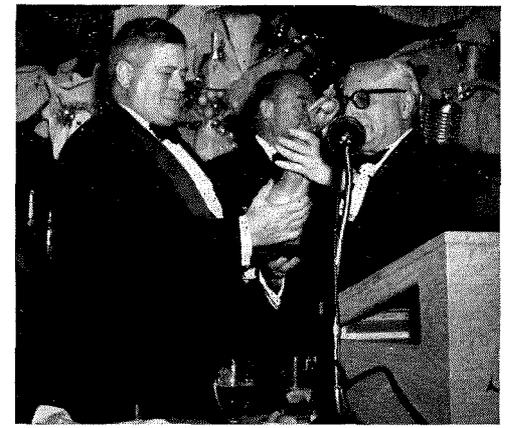
protective strip so your factories won't be heckled by homeowners."

Richard J. Seltzer (speaking at center), former president of the Urban Land Institute: "Among the most critical problems of downtown centers are constantly decreasing accessibility [caused by traffic congestion], and constantly increasing and excessive off-street parking charges." Prospective solutions: "It may be possible to close certain

shopping streets to all vehicular traffic during business hours . . . proper highway planning to remove the 40-50% of through traffic that now funnels through the heart of central districts in many cities but which has no business or desire to be there . . . more night shopping hours. . . . If we take care of the inner cores of our cities, later we won't need to take care of their peripheries."



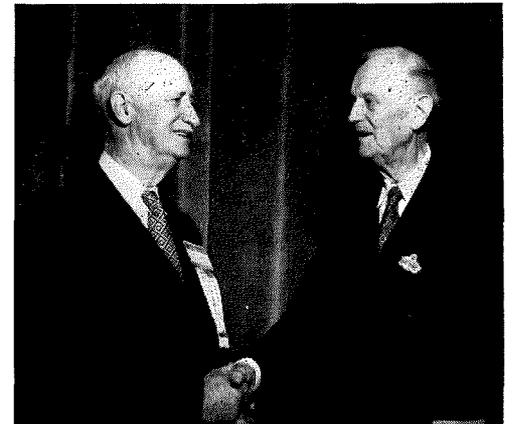
MARKET REPORTS PANEL of the Brokers Institute included Darrel M. Holt, Minneapolis; Fred C. Tucker, Jr., Indianapolis; Ed Mendenhall, High Point, N. C., the moderator; Win L. Cooper, Port Huron, Mich.; and Henry H. Robinson, Atlanta. All were primarily optimistic.



DEFENSE DISPERSION calls for convertible plants near population (labor) centers, said K. T. Keller (l), Chrysler Corp. chairman and Guided Missiles director, shown receiving SIR's Industrialist of the Year award from movie mogul Louis B. Mayer.



EXECUTIVE COUNCIL of the Realtors Washington Committee discussed federal legislation and regulations affecting real estate. Across the head of the table were chairman Paul B. Guthery (standing), Calvin K. Snyder, the committee's executive secretary who, said Guthery, "moulds the bullets and supervises the firing;" Marion Moran, and Henry Waltemade of the Bronx.



GENERAL CHAIRMAN for the convention was Myers Y. Cooper (l), broker-builder since 1896, former governor of Ohio, and NAREB's taxation committee chairman. With him: Louis F. Eppich, of Denver, oldest NAREB ex-president (1923) at the meeting. Cooper also served as general chairman for the 1951 convention, held in his own city of Cincinnati.



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also would favor repeal of Title I (urban redevelopment) of the Housing Act of 1949. Why? "Because in any federal grant-in-aid program 50¢ of each \$1 is thrown away in bureaucracy; because it gives the US control over municipal governments."

Market optimism. There were occasional notes of caution, but most realtors were optimistic over the coming year. James Hanson, New Jersey chapter SIR president, reported he got the go-ahead sign for a 150,000 sq. ft. chemical plant near Newark as a direct result of the election. Other brokers, appraisers and realty consultants felt that 1) many uncertain industrialists would now proceed with expansion plans, 2) a greater volume of money would be available for mortgages, although rates would probably be firmer, 3) construction costs would probably decline a trifle (partly because the value of the dollar would increase, partly because labor would become more conciliatory and more productive), and 4) homebuilding and sales would continue around the 1 to 1.1 million rate.

Surplus shopping centers? There was concern about shopping centers. Said Darrel M. Holt of Minneapolis: "Centers are coming out of our ears. Tenants are leasing anything. Who will get hurt?" Said Miller Nichols of Kansas City: "Unless we have more inflation and local population increases, there are many that have bad leases. We have eleven old, established centers, but there are only three of them we figure could be built and financed economically today" (under the present outlook). Appraiser Thurston H. Ross warned of leases to "name" stores at low percentages without safe minimum rents. "Big names can fail," he noted. And some big organizations, he added, are saying their store rents "would be cheaper than warehouses if business declined."

Two minor problems: some realtors complained that large sales volume forces them to keep model homes open on Sundays. TV has not turned out to be a perfect advertising medium; "it's too difficult to make a \$20,000 house look like \$20,000."

Soaring farmland prices leveling off, says gov't

Sales values for farmlands soared 20% the first year after Korea, have now leveled off at an average 24% above pre-Korean values, the Department of Agriculture reported. From March to July the increase averaged only 1%; only Maine had an increase over 3%.

Air conditioning to be offered in prefabs

Air conditioning was still spreading through the homebuilding industry like a grass fire in a high wind.

Gunnison Homes became the first prefab maker to announce that year-round air cooling and heating units will be offered as optional equipment in all of its models to be marketed in 1953. Cost of the equipment will be covered in the initial mortgage financing.

Chrysler Airtemp surveyed 23 homebuilders who plan to build more than 12,000 houses in 12 major cities of the East, Midwest and South, from Detroit to Miami. They reported:

▶ Seventeen definitely will include packaged air conditioning in houses for the 1953 market. Twelve of the 17 already were using it.

▶ Most of these homes will sell from \$12-23,000. One Miami builder was aiming for a \$7-8,000 house.

Though air-conditioning manufacturers were delighted with this year's spread in home air conditioning, one note of worry arose. At an air-conditioning trade show sponsored last month by the Long Island Home Builders Institute one manufacturer complained that some cost-conscious builders were skimping on cooling equipment to save money. One new development involving several hundred houses offers a two-ton unit where company engineers thought three was minimum. Result: on an 83° day, the unit could not pull the inside temperature below 77°. All such builders promised was "comfort cooling." But it looked as though next summer's first heat wave might produce many a disgruntled customer.

On the design front 100 architects and engineers met at the University of Illinois for a three-day course in "Planning for Heating and Air Conditioning in Small Buildings," heard Ass't Prof. S. F. Gilman predict: "If you fail to plan now for year-round air conditioning, you will be designing structures that in a few short years may very well be obsolete."

On the consumer front, house buyers in impressive numbers were buying air-conditioned homes even before models were opened to the public.

▶ In St. Louis, Builder Melvin Glick totted up 49 sales in a 69-unit development before opening day. Forty-five of these were to be air conditioned. House price: \$20,000.

▶ Stratton Heights Inc. of New Rochelle, N. Y. counted 22 advance sales in a group of 185. Price-tags start at \$27,000.

▶ Builders Ernest J. Calcagni and Edwin Bayer sold almost 50% of the 125 units they planned for Saxon Woods Park in Westchester County, N. Y., before completion of the models. Price range: \$14,250-16,500.



NRLD OFFICERS elected at its Washington meeting were Henry J. Munnerlyn (r) of Bennettsville, S. C., president, and Watson Malone 3d of Philadelphia, vice president.

Lumber dealers told to sell public on value of housing

The retail lumber industry needs to sell the public on the fact that good housing is well worth its cost, a housing panel advised the annual convention of the National Retail Lumber Dealers Assn. in Washington last month. Panel members were former president Norman Mason, and Walter J. Howard and Findley M. Torrence, secretaries of the Montana and Ohio retail lumbermen's organizations. They also urged: industry participation in a sound plan for slum clearance, FHA approval for open-end mortgages.

The National Lumber Manufacturers' Assn. meeting, a week earlier, devoted itself to attacking the President's Materials Policy Commission report (H&H, July '52, News). Forecast timber shortages will never materialize, declared President John B. Veach. "In 20 years we will have trees running out of our ears."

NLMA asked the government to spend \$150 million over the next five years for access roads to make it easier to harvest government forests, heard US Chamber of Commerce President Laurence F. Lee urge Congress to halt further federal land acquisitions pending a restudy of the problem.



HEADING NLMA for 1953 (l to r) will be First Vice-President J. R. Bemis; Board Chairman John B. Veach, and President R. R. Macartney.

PEOPLE: Frank Cortright to retire March 1 as executive vice president of NAHB; Hudnut raps industrialization

Frank W. Cortright, 54, executive vice president of NAHB since its founding in 1942, will retire at his own request March 1. The announcement was not unexpected. A seige of polyneuritis (an inflammation of the nerve ends) kept hard-working Cortright in bed four months last spring. Since then, NAHB members noticed he walked with difficulty although without cane or crutch. Cortright said doctors promise him 100% recovery next year if he trims his work load (often 100,000 mi. a yr. for speeches and meetings alone). In his ten-year reign, Cortright helped build NAHB from an initial membership of 1,249 to more than 25,000—second biggest association in the industry (its parent NAREB is first). Under his retirement plan (which includes a pension), Cortright becomes a life-long member of NAHB's top policy-making executive committee. New Jersey-born, Cortright began his career as a salesman for his grandfather's Cortright Coal Co. in Philadelphia, he was a Philadelphia homebuilder and realtor from 1927-41.

Dean **Joseph Hudnut** of Harvard's Graduate School of Design, in California to give the annual Hitchcock lectures at the University of California, recalled a vaudeville skit presented lately by his students:

A woman is sitting on a couch. The door behind her opens and a man steps in, fires three shots from a pistol and kills her. Then he looks at her, cries: "My God! Wrong house!"

Philosophized Dean Hudnut: "People resist standardization, but standardization is being impressed on us by . . . industrial civilization [which depends on standardized methods and mass sale, to the common man of uniform products]. In the case of housing, standardized houses are forced by economic necessity—people [the common man] just can't afford individual architect-designed houses. . . . Very few industrialists give any thought to establishing well-planned communities around their factories. On the other hand, when they do, occasionally, people do not take well to them. . . . The city of the future will only require engineers, and architecture, as an art, will be possible only in the suburbs and nonindustrialized cities."

Federal Judge J. Frank McLaughlin meted out a surprisingly stiff sentence to **Alton B. Jackson**, former vice president of San Diego Federal S&L, convicted of making false statements to the VA in obtaining GI home loans. The penalty, imposed on

Thanksgiving Eve: five years imprisonment and a \$24,000 fine (\$3,000 each on eight counts). Jackson was allowed to remain free on bail for ten days pending possible appeal. He was the first of 24 defendants in San Diego VA scandal to be tried and convicted. His wife, Irene, and brother-in-law, Charles Robert Fass, codefendants, were found innocent. Testimony at trial showed that Jackson paid veterans \$100 to \$300 for their loan-entitlement certificates.

NAMED: **Erwin Schneider**, as Builder Best Citizen of the year, by the Greater St. Louis Home Builders Assn. for his efforts for modernizing codes; **Morton Bodfish**, board chairman of the US Savings & Loan League, as president of the municipal-efficiency Chicago Civic Federation, and **Arthur Rubloff**, shopping-center and community builder, as a member of its advisory committee; **Edwin W. Chase**, of Lombard, subdivider and director-chairman of the Northern Illinois Home Builders, as president of the Illinois Association of Real Estate Boards; **Donald F. Coenen**, managing editor of Chicago's *Realty & Building*, as editor of NAHB's monthly *Correlator*, succeeding **Maud B. O'Neal**, editor since the publication was founded in 1947, who resigned to move from Washington to California.

DIED: **William T. Vanderlipp**, 70, director of planning and development of the



NEW ASSOCIATION: Watching (l to r) as Circuit Judge George Holt signed incorporation papers for the new Home Builders of Greater Miami were: John F. Beatty Jr., Charles I. Babcock, Eugene R. Jones Jr. and Scott Braznell Jr. Only operative builders can join the new organization, which was formed by members who felt the Builders Association of South Florida included too many nonbuilders.

New Jersey Department of Conservation and Economic Development and former State Housing Authority chairman, Oct. 31 at Orange, N. J.; **C. Victor Sturdevant Jr.**, a director of NAREB and 1948 president of the Pasadena Realty Board, Nov. 1 in an automobile accident; **Harry E. Smith**, 83, New York property title expert who did exceptional work in clearing titles for Jones Beach State Park and the 1939 New York World's Fair site, Nov. 10 at Hempstead, L. I.; **James W. O'Connor**, 77, FAIA, architect for eastern estate homes, public housing, schools, churches and commercial buildings, Nov. 17 at Glen Cove, L. I.



Miracle Pictures

Housing Research Council Tours Texas

The semiannual meeting of the Housing Research Council late in October included a trip to inspect construction and Research activities in San Antonio, Austin and College Station, Tex. Twenty-nine of the party were photographed in Austin; kneeling, l to r, J. E. McKee, Joseph Mason, Bob Haener, W. G. Demarest, W. W. Coates, C. W. Smith, Raymond F. Dawson, Fred

Cox, Wayne Long and Joseph Orendorff; standing, J. Neils Thompson, Bill Demarest, Galen Oman, Ogden Tanner, Ben Evans, James Pollard, W. R. Woolrich, Bob Reed, Charles Williams, Virgil Place, Jim Lendrum, Herman York, William H. Scheick, LaVern Burmester, John Callender, Ted Larsen, Tom McGovern, Glenn Beyer and Tyler S. Rogers.

Dear Architect:

Architects today have so many special problems in trying to help produce better homes that we are dedicating this page, from time to time, to our architect readers and to them alone. Any other reader enters here at his own risk (*and any plugs for this magazine are purely intentional*).

Problem No. 1 for the house architect comes straight out of the statistics. What proportion of new US homes is architect designed? Answers vary (Ralph Walker has suggested it may be as small as 20%)—the exact ratio doesn't matter when you compare it with the 90-98% of our hospitals and schools designed by architects. Since most people agree that having all homes designed by a good architect would be ideal, the short percentage actually so designed can easily be ascribed to "encroachment" of others.

"Encroachment," said Ken Kischmeyer, first vice president of the AIA (at the regional meeting at Kansas City), "is indeed a problem in many fields" and he listed quite an array of encroachers.

Among the groups he named, I would like to concentrate here on just one: "the homebuilders." Quickly Ken modified his statement, said that in this case the "encroachment" was largely the architect's own fault. And he spoke glowingly of the past two years during which the architects' AIA and the homebuilders' NAHB campaigned jointly to replace any antagonism and rivalry, which might have existed, by understanding and cooperation.

Still, it was highly interesting that the word "encroachment" was used, for it verifies the feeling of many an architect whose reasoning goes something like this: "Houses *should* benefit from architects' services. But many and many a house does not. This is because others have stepped in and taken the architect's place. Aha, encroachment!"

There are some architects who go further. They are so annoyed because others often undertake to design houses that they would rather not even speak, in their indignation, to such people. These are the architects to whom this letter is addressed, because we at HOUSE & HOME believe there is one very, very important fact these architects overlook. It's this:

The homebuilder is probably the only rival of the architect who can be converted into a client for the architect

Let's say it again: If the architect who fears "encroachment" wants to remove a rival and secure a client, if he wants to erase a minus and add a plus, all in a single move, his best move is to sell the value of architectural design to the homebuilder. In place of an "encroachment" *against* the architect there will be an expansion *for* the architect.

This is what Ken meant in urging more attention by architects to the new architect-builder committees.

Now there are a few architects who think so poorly of the whole idea, that they cite some unfortunate public declarations by isolated builders who have said that they would rather see builders trained in design than see architects train themselves to design production houses for builder developments. Well, it is possible to work one's self into a fine indignation over such isolated assertions—but it butters no bread. Would it not be wiser and more profitable to concentrate on the many builders who are following their NAHB leadership and are genuinely anxious to get the benefit of architect design—and pay adequately for it? Those architects who are devoting themselves actively to such enterprise are making genuine progress, and every step, big or small, is pure gain for all concerned.

The most important part of the contribution we are trying to make to this at HOUSE & HOME is showing thousands of builder subscribers the very best custom houses that architecture produces, and giving the architectural explanations, the design story, no less than the "practical" side. The aim is greatly to increase the effective audience for architecture. This will perhaps answer those architects who ask why we don't put out a magazine "just for architects."

The most important thing for architects today is not to belong to an exclusive club but to gain the bigger audience for architecture

Randon notes: At Kansas City, in the course of the Central States Regional conference, there cropped up a new word for the housebuilding vocabulary. So far as I know, credit goes to Bruce Goff. The word: "ranchburger."

Thousands of little differences add up to the big difference between designing for custom construction and for volume construction. During a tour in Washington with Chuck Goodman, seeing both kinds, I was struck by two different ways of making a porch post. At a fair-sized development he was working on, Chuck had been showing me a compound post, a sort of up-ended box girder made up of four pieces that were ripped, planed and nailed together at the site. But at the site nearby of a custom-built house, the lumber pile showed trim, sharp-edged 4 x 6's all piled up ready for the same use. Said Chuck: "If I were to have this choice material delivered to a big building site for a big development, the edges would be nicked beyond recognition before the house was ever put up. So I have the posts made up of smaller, easy-to-handle pieces prepared on the spot. But on a single house site the contractor can look after the finer material." That's know-how, thought I.

Douglas Haskell



Photos: © Ezra Stoller

A HOUSE BY FRANK LLOYD WRIGHT FOR MR. AND MRS. HERMAN T. MOSSBERG

IN SOUTH BEND, IND. WILLIAM REINKE, GENERAL CONTRACTOR

This is the first of a group of Frank Lloyd Wright houses that will appear in *HOUSE & HOME* from time to time during the year ahead, continuing the Architectural FORUM's publication of his work highlighted by special issues in 1938, 1948 and 1951.

THE big, bold house on these pages is unadorned Wright — forceful, masculine, with a simplicity that harks back to his earlier building. Its very directness dramatizes familiar FLLW principles constantly at work on or under the surface of his architecture:

... the sense of the ground — sweeping horizontal lines that marry the structure to the land.

... the sense of shelter — great, protective roof planes and heavy walls. And the genius with which Wright combines these with

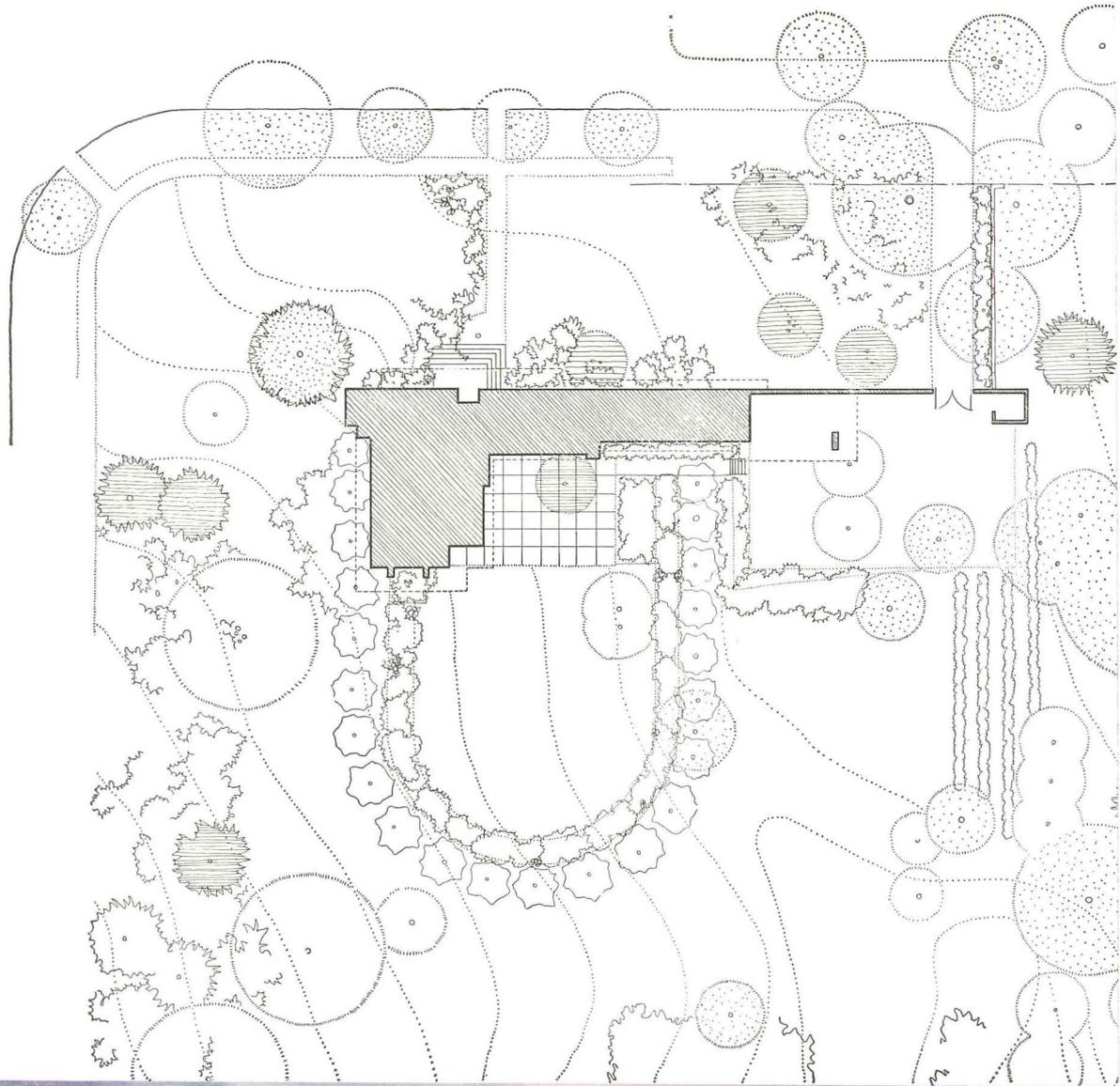
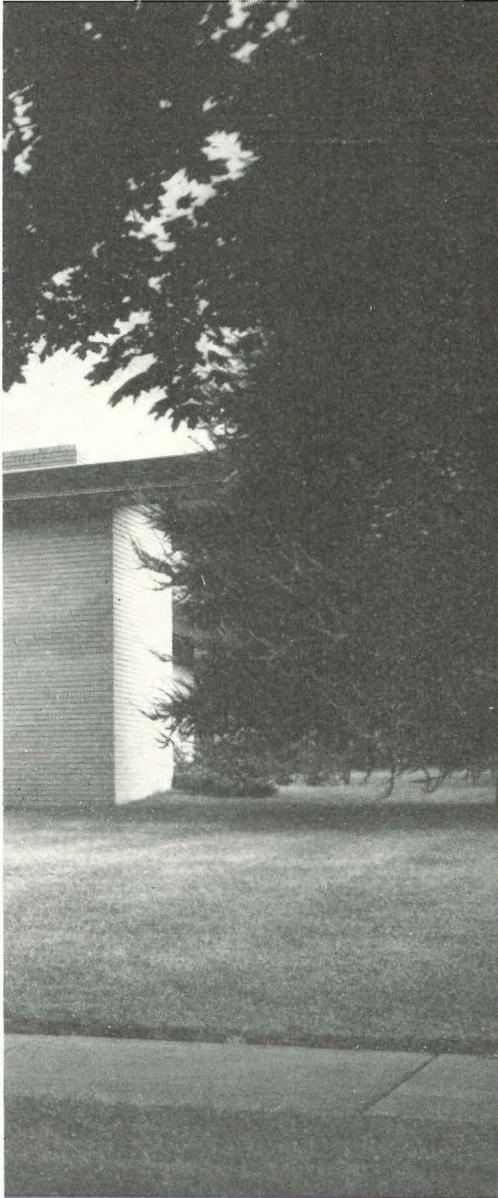
... the sense of space — the box partially "destroyed" and unnecessary walls abolished, rooms running together and into the outdoors; the attention not to walls and roofs but rather to the volumes enclosed by them.

To these can be added a "sense of permanence" lent by honesty of line, solidity of masonry forms. And a feeling of timelessness.

This is a corner-lot house with streets to the north and west. Shelter takes the form of fortress-like brick barriers punched with a minimum of narrow

lights (north elevation above), and a completely solid wall to the west, shutting out neighborhood activity, winter winds and hot afternoon sun. In contrast, the L-shaped plan wraps protectively around its terrace and gardens to the south and east and opens out on them through full walls of glass (right).

As in the past, all of Wright's architectural elements add up to produce a rich emotional effect, appealing primarily to the senses. This house speaks of sanctuary, and of the vitality and dignity of the individual.





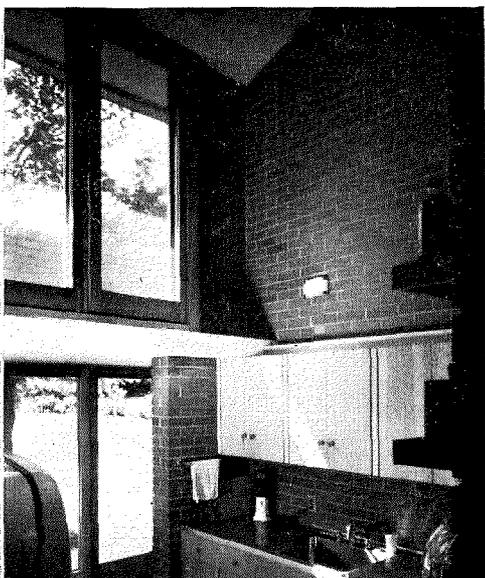
The terrace, opposite, extends the house out of doors; its floor is scored in bold 5' squares—the module of the whole house. The visual transition from indoors to out is almost imperceptible. At the extreme left the corner of the gallery is mitered glass, wonderfully light and open. Floor-to-ceiling doors, center, lead to the dining room. Beyond, the bedroom wing and carport step down the slope.

A pattern of shadows, right, is cast by the basket-weave mullions of a glass panel beside the front door, on the rich texture of bricks and grained wood in the front hall. The strong, simple lighting fixture directs light downward toward the polished brick floor, upward onto the sand-finished plaster ceiling.



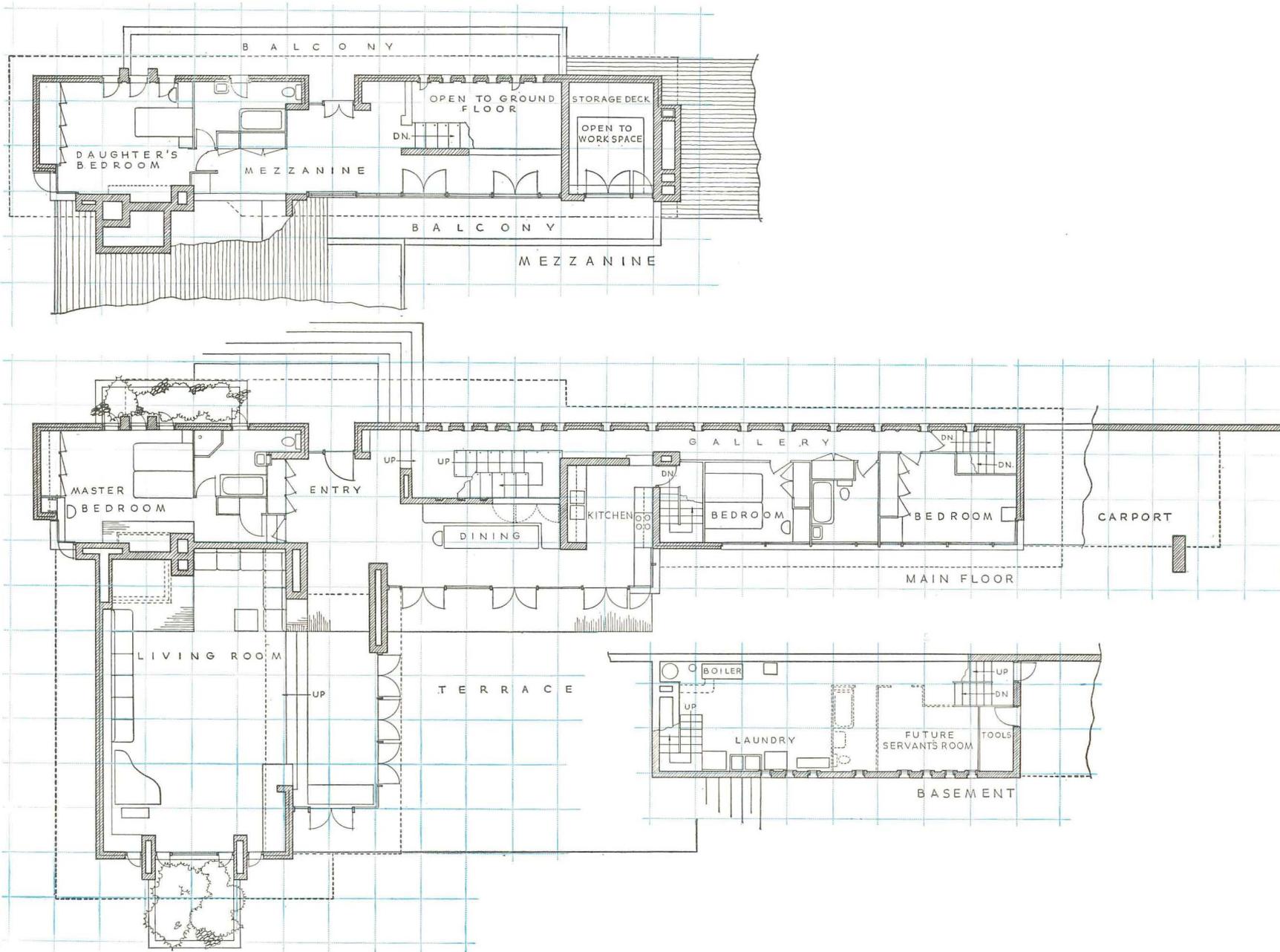
The flow of space from entry to dining area, right, is interrupted by a brick wall which sets off the stair hall. A low counter, high shelves and the precise design of the tall windows punctuate the quiet expanses of brick.

The enclosed kitchen, below, draws light and height from windows of the dining area and the balcony above, seclusion from the way it angles off from the dining area.



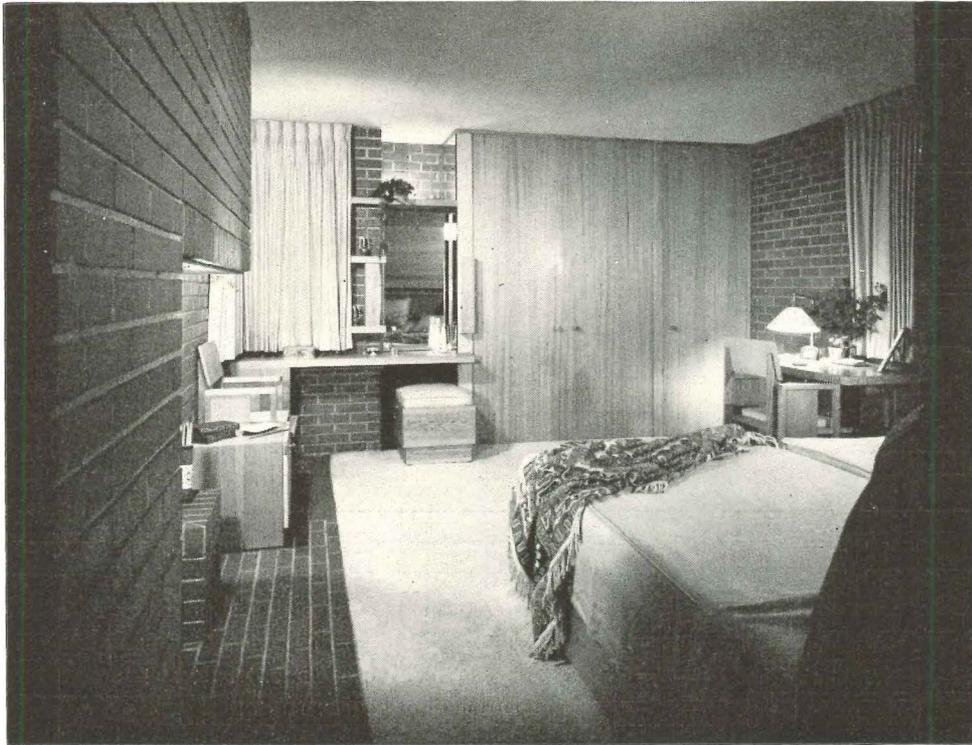


Diagonals in the big living room window wing upward, form a counterpoint to the wide-angled pitch of the ceiling, which is etched with slender wooden strips. For all its monumental scale, this room is warm and human with its below-ceiling light cove and its friendly corner fireplace, which juts out into the room.



Frank Lloyd Wright has an abiding belief that a floor plan should be both beautiful and sensible. In this house the central hall has no obvious terminals, leads gracefully and hospitably to living and dining rooms. Yet this is anything but a wide-open plan. Short brick walls demarcate and dramatize space, give it a sense of enclosure, security and privacy. Space flows upward as well as outward. The second floor looks down into high rooms on the ground floor so that the eye is constantly charmed by unexpected vistas. Doors play a minor role in this house but by the remarkable originality with which Wright uses short walls, even large areas convey a sense of intimacy. The living-room fireplace, seen at the right, has a high opening, in scale with the size of the room.



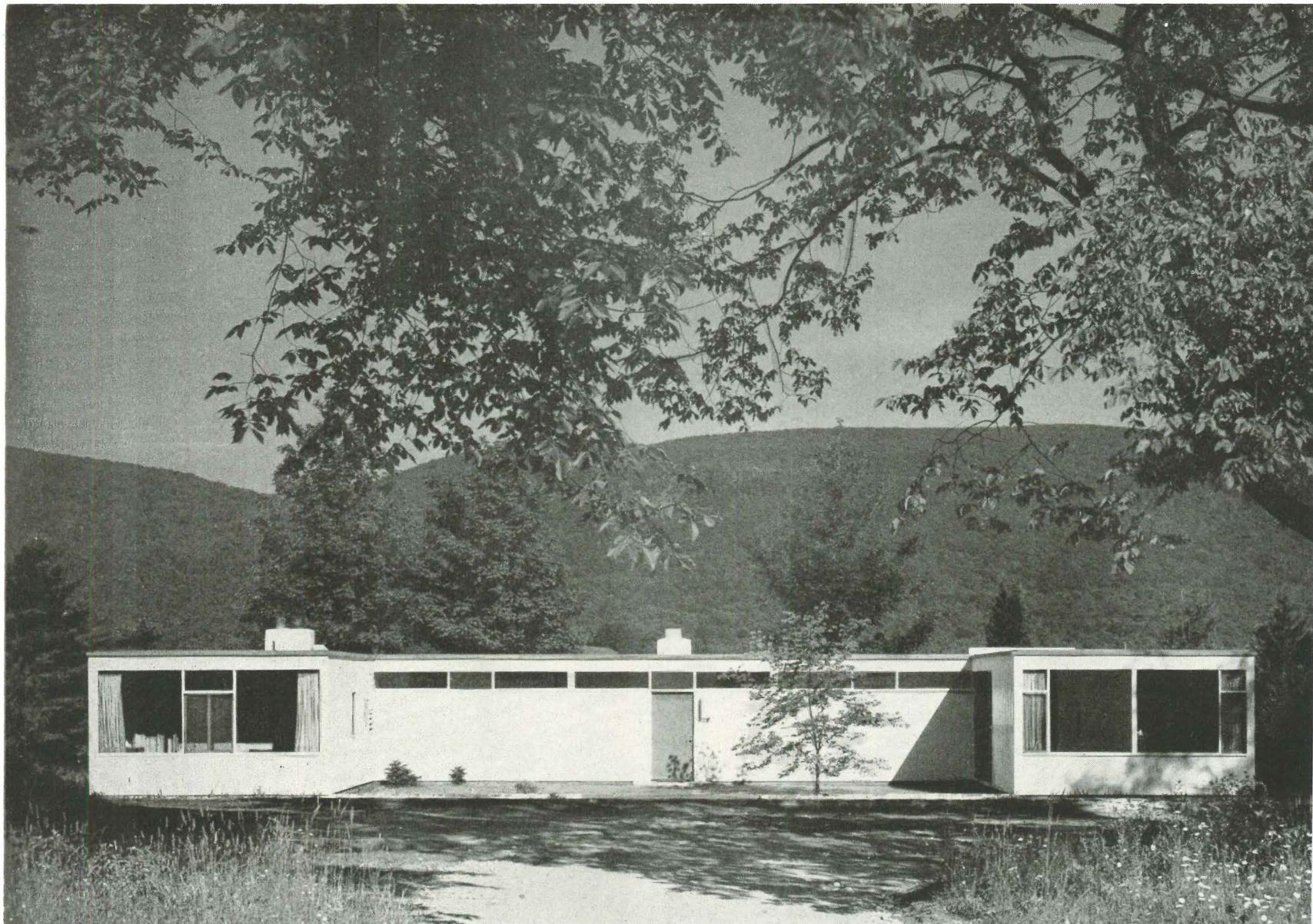


Alternating with the extrovert pattern of the downstairs living areas, the master bedroom, left, is self-contained, even compact. A fireplace faces the foot of the beds, wardrobes and a dressing table dominate the far wall, introduce a broad panel of wood, in its turn set off by the texture of the rug.



On the way to her room, the daughter of the house looks down from a small mezzanine hall, into the tall living room. Storage cabinets, large and small, attest to Wright's concern with practical planning. The soaring stairwell, opposite, carries the eye upward along slender steel rods. On these ride concrete treads, wrapped in soft carpeting. The windows rise dramatically.





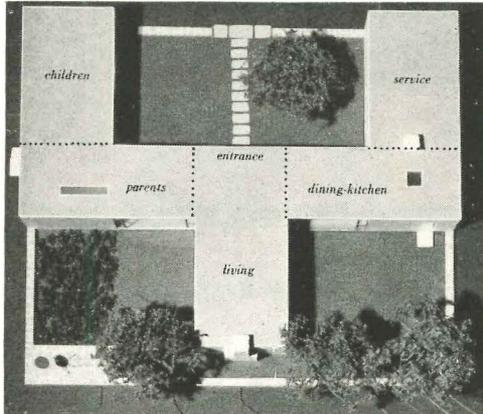
Photos: Ben Schnall

This house is as modern as a Palladian villa . . .

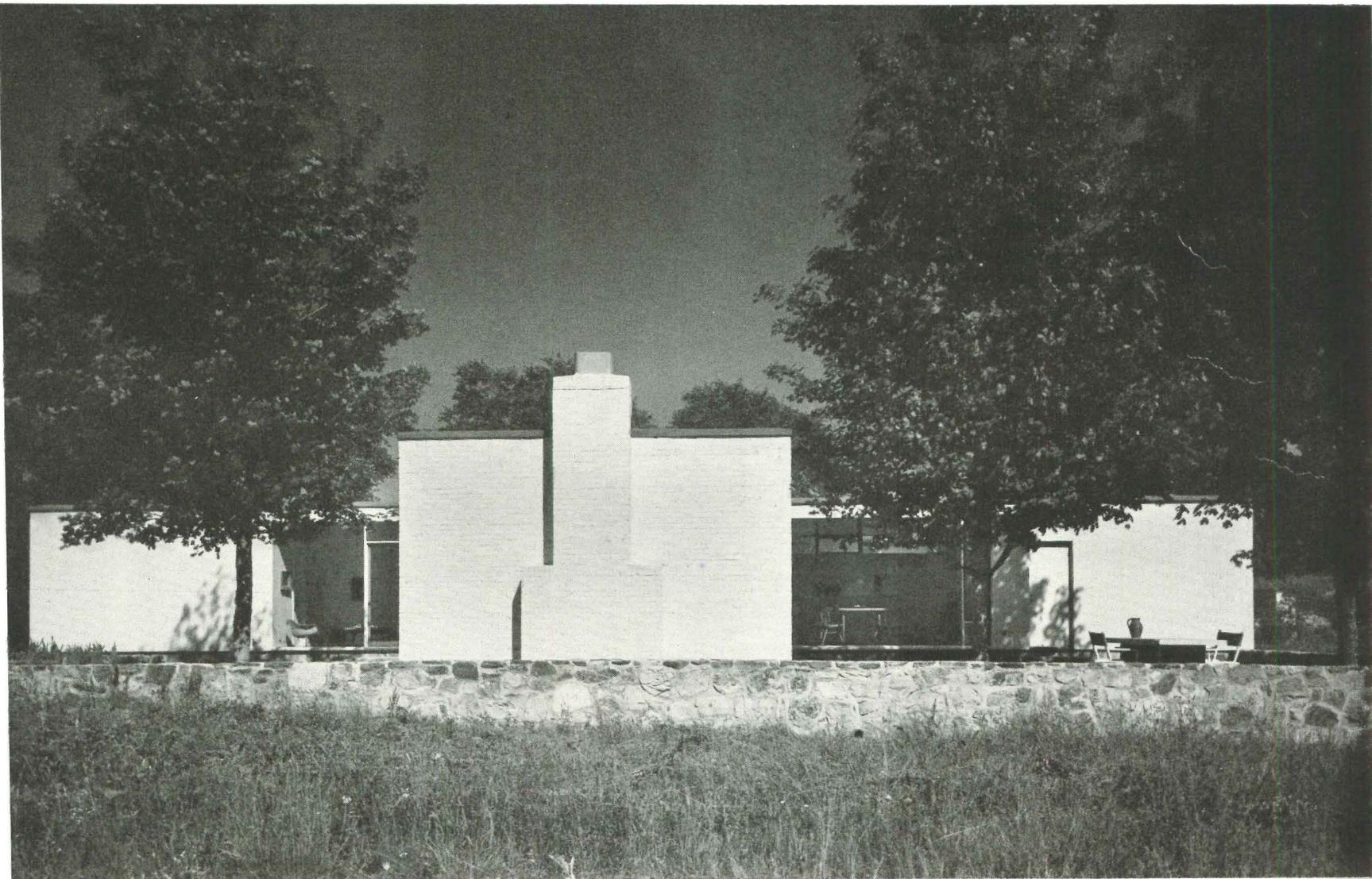
. . . and as Palladian as a wall of glass—in short, this is a very unusual modern house. It may shock those among Edward Barnes' contemporaries who have made dynamic asymmetry their axiom; for this house in the Berkshires is as symmetrical as a Rorschach test. It may shock Barnes' former associates out West, who have long emphasized the low-slung roof planes over their houses to carry the eye to some distant Pacific horizon; for this house is tightly circumscribed on a rectangular pedestal that encloses three rectangular patios—hallmarks of the vertically oriented, crowded civilization of the Mediterranean basin. It may shock those who believe that exposed natural materials are needed to lend warmth to residential architecture; for Barnes' house is pure white, inside and out—the pure white of French and Italian stucco houses. And it may shock those who feel strongly that American architecture should be exuberant and free; for Barnes has designed a quiet, immobile monument to classical discipline and plane geometry.

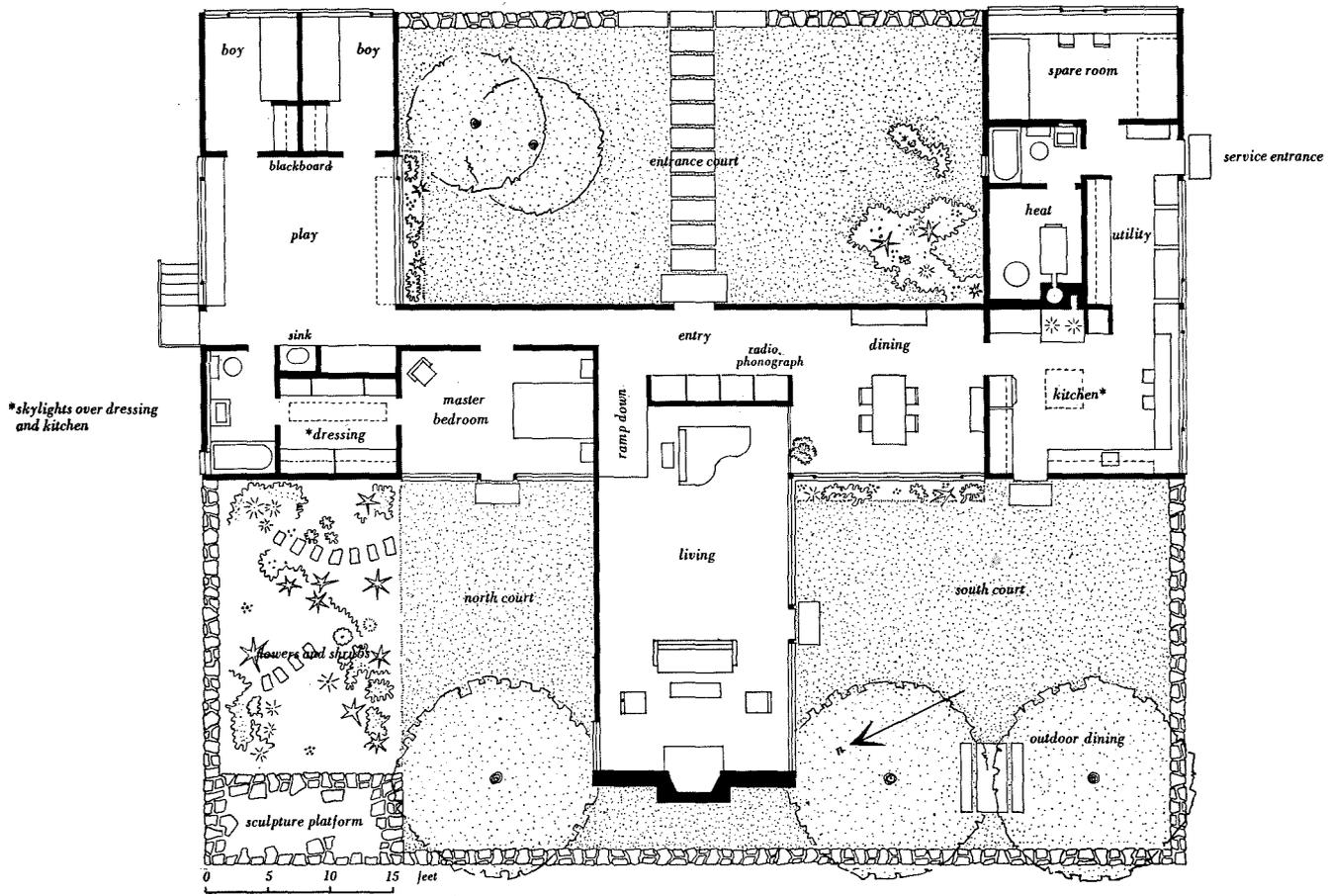
These qualities are not accidental.

Barnes' client, the cartoonist Robert Osborn, wanted something that would remind him of the simple elegance he had found in French houses and in the ruins of Roman villas. As the plans progressed, Osborn bombarded his architect with faded snapshots of Pompeian patios, of stuccoed French country inns whose stone tables were loaded down with carafes of wine and loaves of white bread. There were generally no captions, since both architect and client understood the same visual language. This pretty white monument on a rectangular stone pedestal is the result.



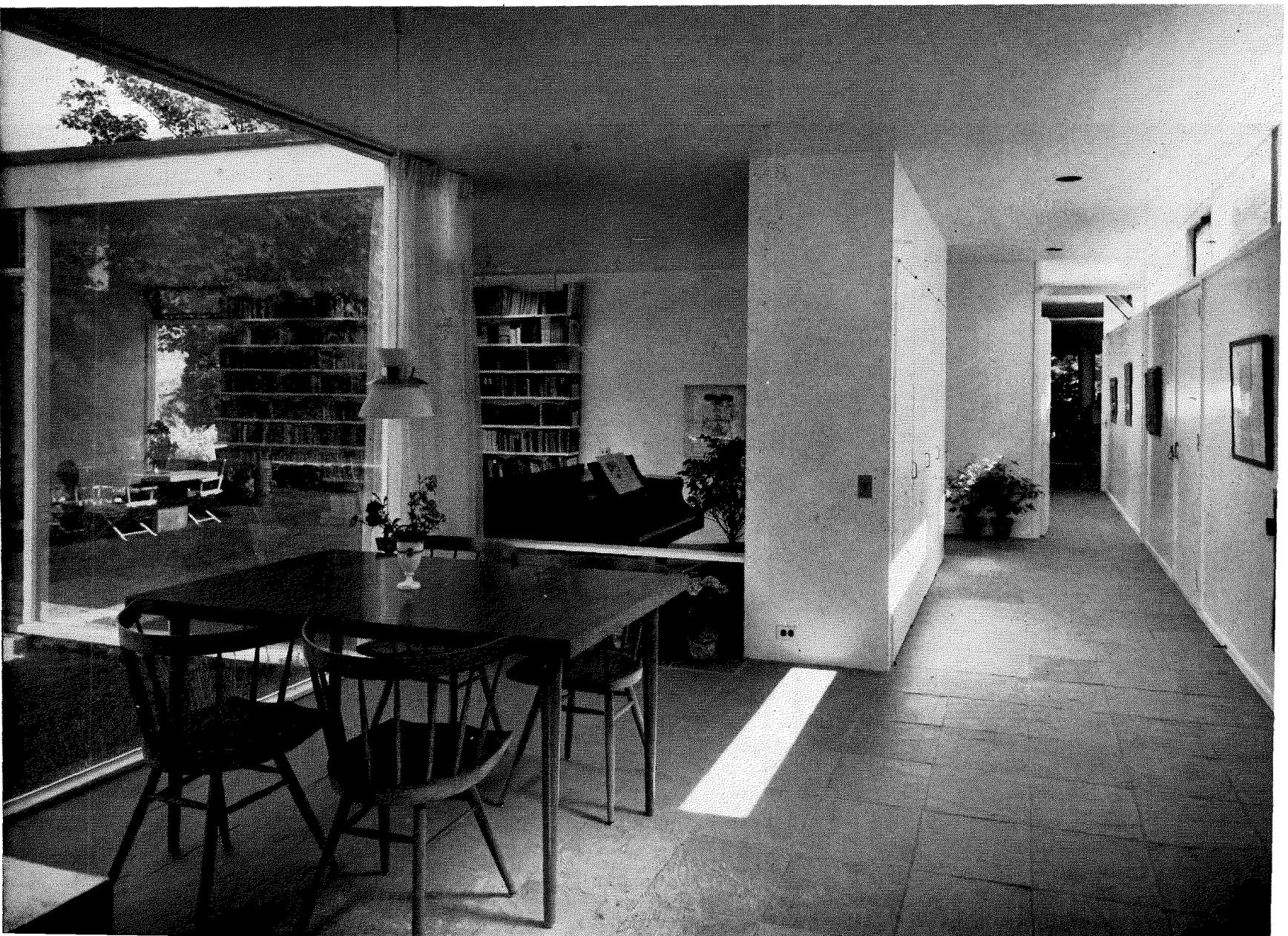
There was a very practical program as well. The model above explains program and solution in diagrammatic form.

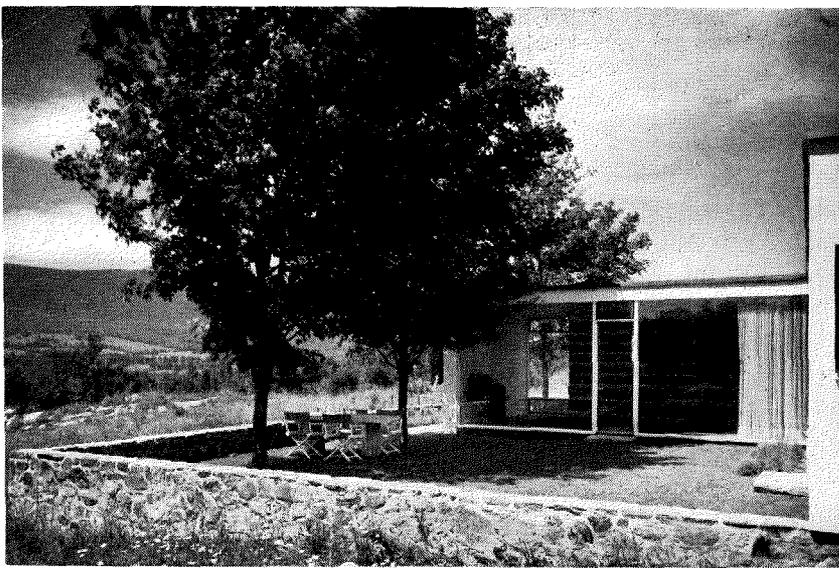




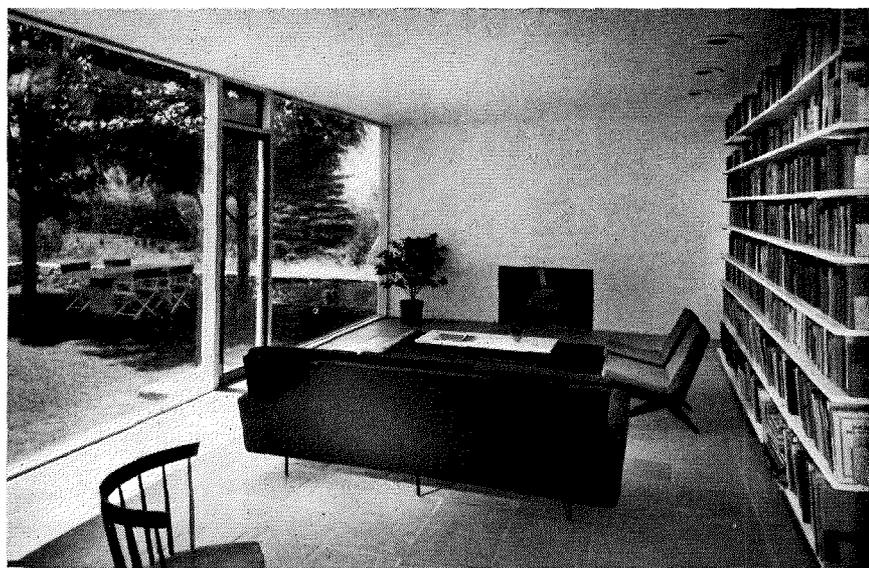
EDWARD L. BARNES, architect ELESTER PATCHEN, general contractor BENJAMIN L. SPIVAK, mechanical engineer TWINING & BUCK, furnishings

Above: plan of Osborn house. Below: view from kitchen door. Dining area with living room beyond is at left, entrance and picture gallery at right



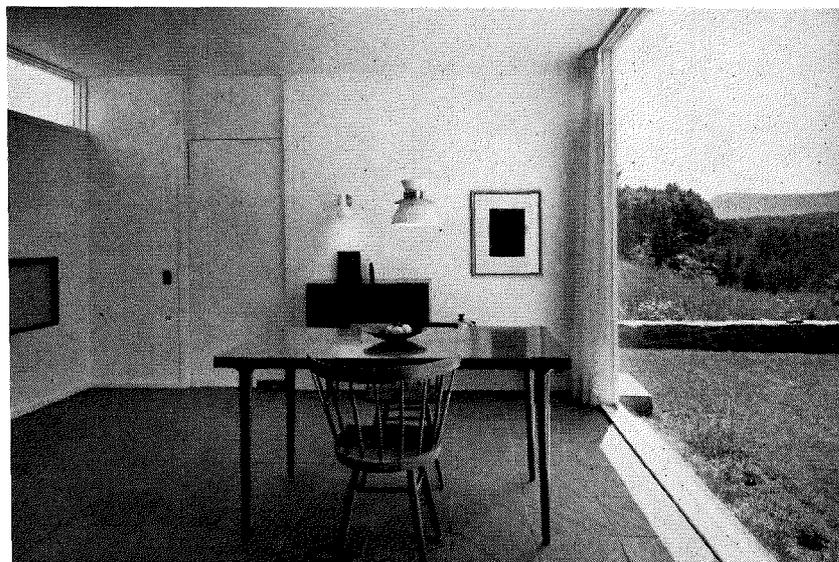


ve: south court for outdoor dining



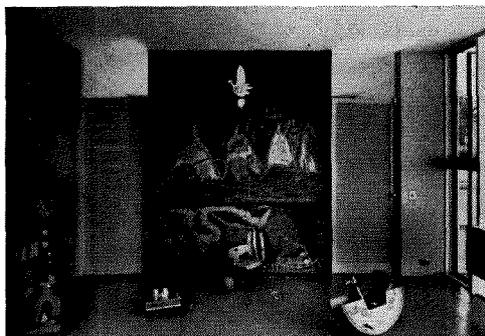
Below: dining area Above: living room

Below: children's eating counter in kitchen



The program presented to Architect

Barnes was drawn up with great care by Mrs. Osborn, included such items as the sizes of spice bottles, the running footage of closet space required. Barnes translated these notes into a plan that is a combination of a T and a U shape, contains three separate wings—one for the children (see insert), one for services, one for living—and

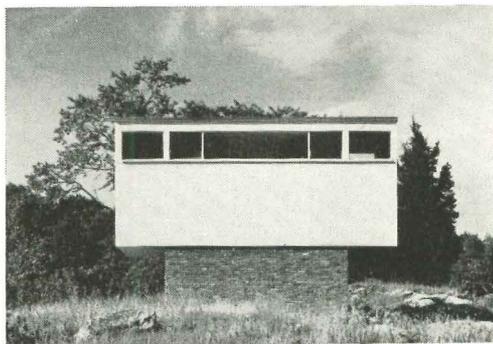
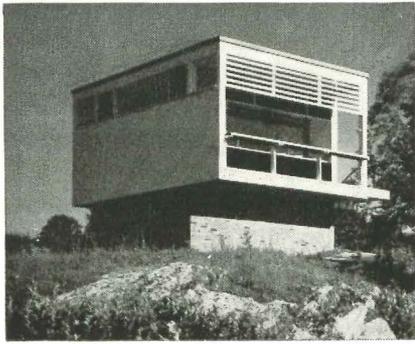


a link that forms the entrance and gallery for the Osborns' paintings, and contains also their own bedroom and the dining area. The over-all plan shape does two things: it creates formal patios to the north, south and east; and it permits cross-lighting of most important rooms. The raised platform on which the house stands also defines the garden area; its lawn takes 27 minutes to mow by hand; beyond the platform, the grounds can be left to their own devices.

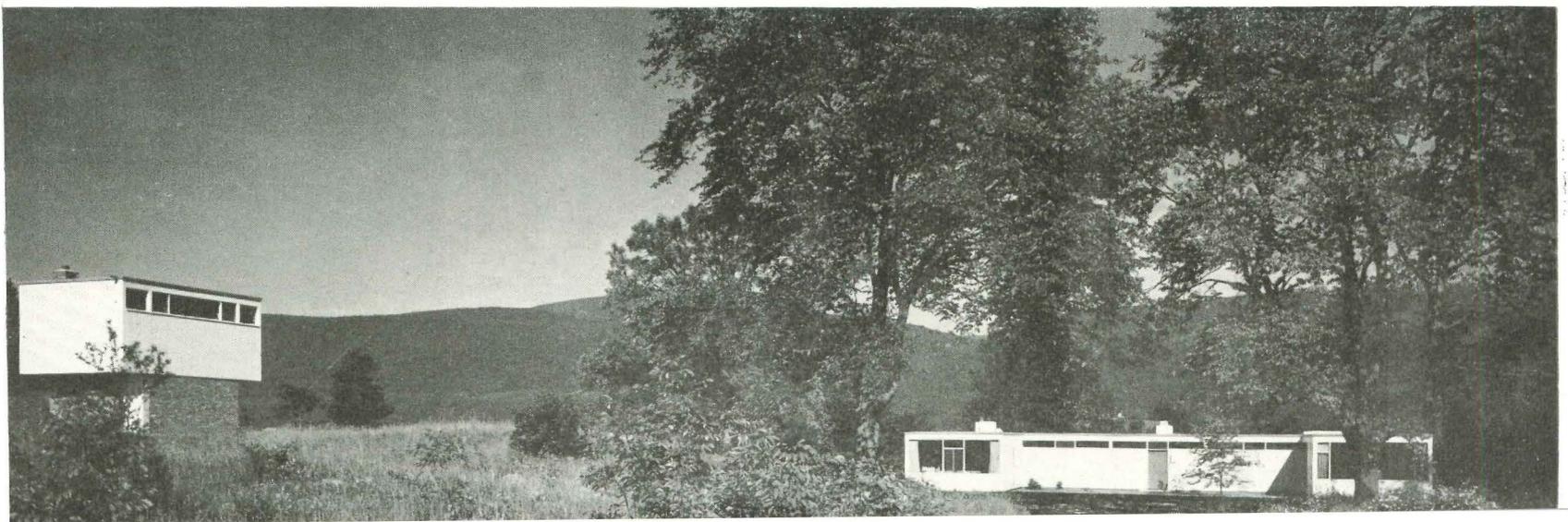
Near symmetry is continued indoors as well. Both end walls of the long living room have it, and so does the children's playroom. Yet near symmetry is not the only device used to achieve formality. Note that all wall openings stretch from floor to ceiling, that standard doors are topped off with fixed flush panels set between the doorjambs (the doorjambs extend all the way up to the ceiling). Here, again, there



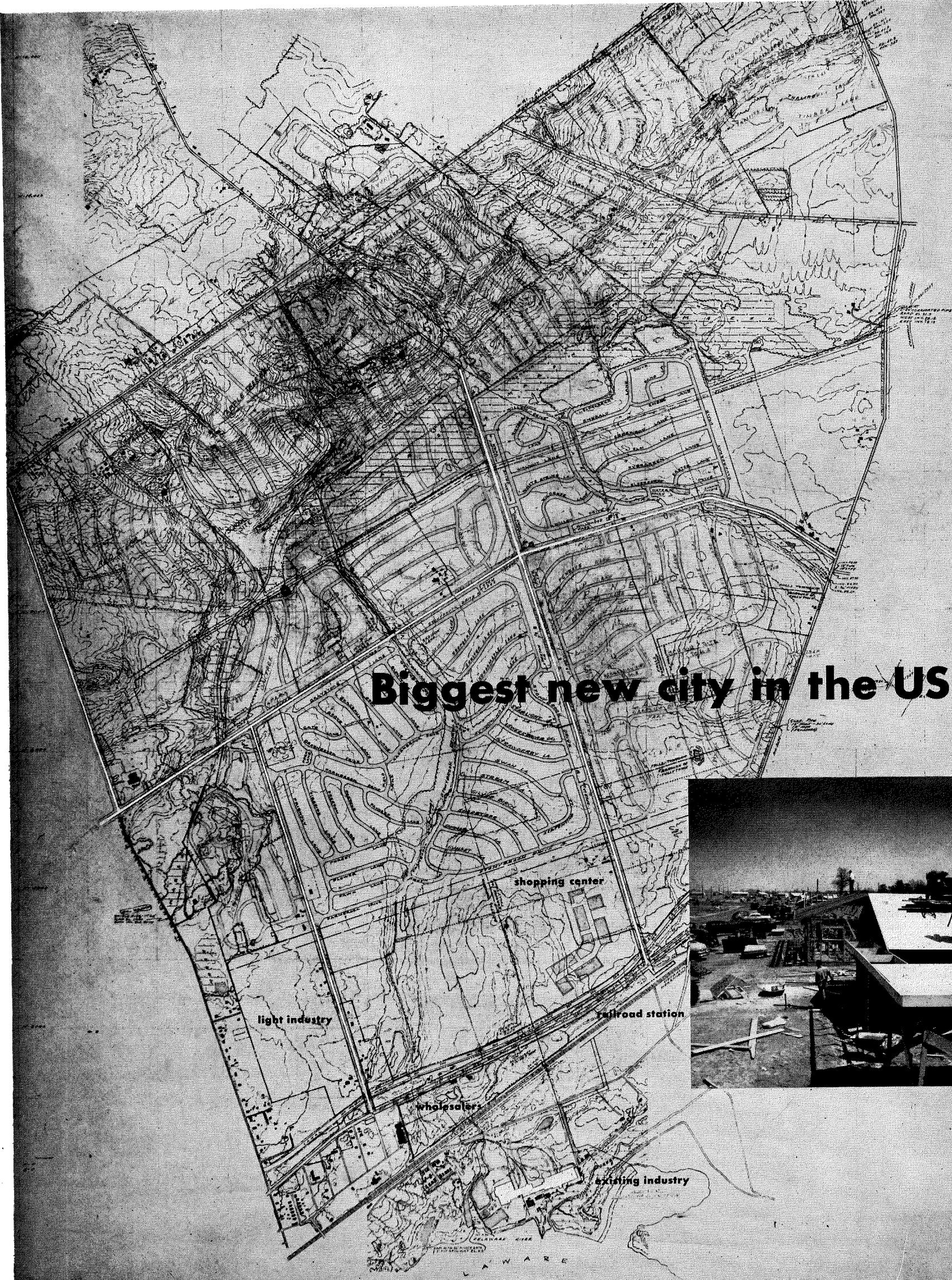
is the verticality so characteristic of Mediterranean architecture and so unlike some modern American work. Whether or not you agree with Barnes' position—a position founded partly in the pioneer work of Le Corbusier, Gropius and Breuer—it is, at least, clearly consistent. To add one further detail: compare the Barnes fireplace (p. 77)—a plain rectangle in a plain white wall, much like a bake oven in an Italian farmhouse—with the exuberantly plastic fireplaces you find in many contemporary houses.



Osborn's studio is the counterpoint in this formal composition (see pictures at top and bottom of this page). Like the house, it is near symmetrical on two sides. But unlike the house, it is a "big box on a small base," rather than a "small box on a big base." The difference is worth noting. Most Harvard-trained architects (like Barnes) might be expected to do what he did in the Osborn studio; few would be expected to do what he did in the house. Explains Barnes: "Before the war we seemed to delight in things that looked light and *experimental*. Since the war I have felt that we need an expression of security and permanence. In several recent designs I have set the house with its gardens on a raised and formal platform, and I was amused to hear from one old-time contractor that he had last seen that device used by Delano & Aldrich. I myself prefer a comparison with Le Corbusier's house for Mme. de Mandrot, where the terrace is elevated and sculpture is placed on smaller pedestals against the sky. A sculpture platform, incidentally, is part of the north court of the Osborn House." Barnes says that his friends out West have criticized the platform idea because it puts a frame around the immediate outdoor area. "I don't deny that it does—in fact, I like it, because it produces as much formality outdoors as indoors," says Barnes. "The platform-plan surrounded by a low retaining wall gives the *sense* of enclosure that you get in a walled-in patio without cutting out the country views."



Biggest new city in the US





**The Levitts changed nearly everything
in planning their new town.**

**12 pages of news describing how the new Levittown
is different from anything
these famous builders have done before**

Few men in their lifetime have the excitement of planning and building a city for 60,000 people.

Brothers Bill and Alfred and father Abraham Levitt have not only planned an entire city down to the location of every store, filling station, school and house but they have designed each house, chosen its colors, named the streets, located over 250,000 trees and shrubs and carried their meticulous construction to a point where 8 lbs. of yellow nails are delivered (*on time*) to every seventh house—which happens to have yellow siding.

Most American cities have taken 100 yrs. or more to reach the 60,000 stage. The miracle of Levittown, Pa. is that it will be complete in three years. Nothing like it has ever happened before. This is the free enterprise system at its lustiest. The Levitts, with considerable justification, believe it is all to the good. In this their newest venture of turning raw land into going communities, they are sure that they are doing the best jobs of their lives.

In Levittown I the Levitts didn't know their own strength. They bought land in relatively small parcels, filled it up with houses, bought more land and gradually built a town. Of necessity the town grew irregularly, streets were sometimes a maze, commercial areas were located by chance.



Levittown, Pa. is better. "Here is a town that has been planned in its entirety," says Bill Levitt. "We bought 5,000 acres and we have planned every foot of it."

There is a good reason for the location of each of the city's major groups of buildings:

1. Segregated commercial areas are along a main highway, near the railroad. Garages, automobile salesrooms, wholesalers and other such businesses are grouped together.

2. An area reserved for light industry is in the southwest section; the Levitts want to attract certain kinds of industry.

3. The main shopping center is well located in the downtown area. It will be supplemented by three or four small groups of neighborhood stores. (See details pp. 84 and 85.)

4. A professional building for doctors, dentists, lawyers, etc. will be built in the northeast part of the shopping center. Eventually office buildings will be grouped east of the center.

5. Filling stations (always eyesores) will be kept out of the residential districts. A large station will soon be built in the shopping center, later one more will be built elsewhere.

6. Intercity traffic has been carefully studied and Alfred Levitt believes he has solved most of the ordinary problems. Through streets carry fast-moving traffic; residential streets will be relatively quiet. Streets are easy for strangers to locate and small children will not cross main streets going to school. School busses are not needed.

7. Neighborhoods for family living combine to form master blocks, each with an elementary school and recreation facilities.

8. Ten elementary schools, two high schools, about 18 churches will be located where they make the most sense.

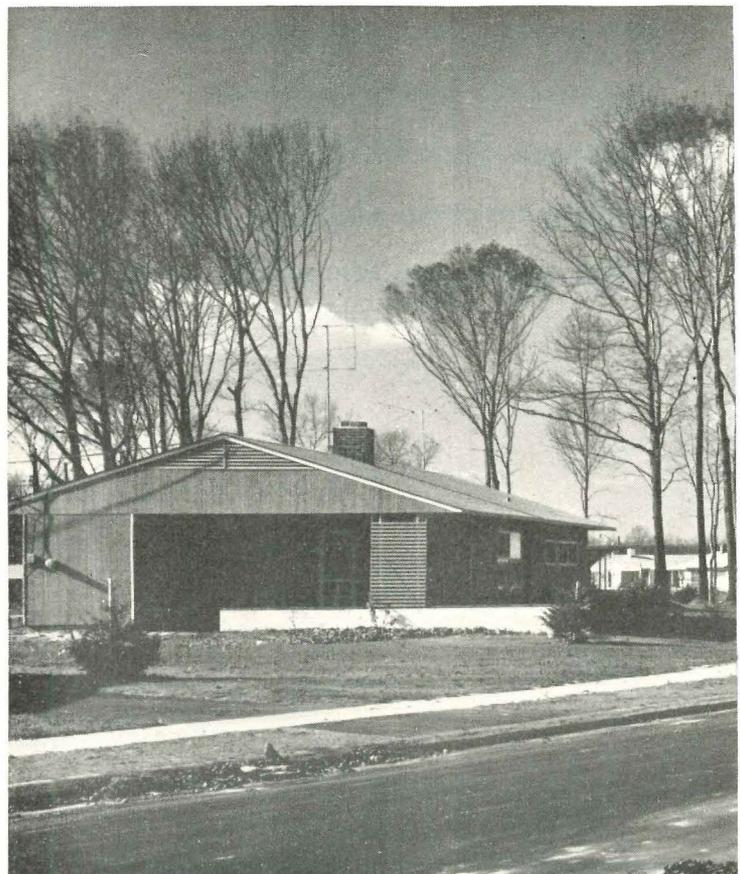
9. In contrast with Levittown I, there will be no small parks, where there is nothing to do but sit. The Levitts discovered on Long Island that people prefer to sit in their own yards, will go off to a park to swim, play games or for special facilities.

10. The Levitts believe they have gone beyond the idea of the greenbelt towns of 20 yrs. or more ago which concentrated more on families cooped up in small apartments than on families living in decent-sized houses of their own on fairly large lots. The Levitts shun apartments but recognize that a day could come when they will be justified and if so, will build some.

Street layout in Levittown I: In the old Levittown (map above) even the postmen got lost. If there was a failure in planning it was failure due to astounding success: the town grew beyond all expectations. Begun in 1947 as 2,000 rental houses for veterans, its success was so immediate that large section after large section was soon added. Not even the self-confident Levitts had foreseen how many young families wanted their houses.

As the Levitts bought parcel after parcel of land, their street layout reflected their improvising. Finally the town stretched around and through great groups of existing houses.

Lionel Freedman



Neighborhoods have their own community facilities. Levittown II is divided into approximately eight "master blocks" of about 1 sq. mi. each. The first to be completed is shown in map below and air photo, right. Each such block will have three or four neighborhoods. In center will be a school, recreation area and swimming pool. The last two will serve children and adults.

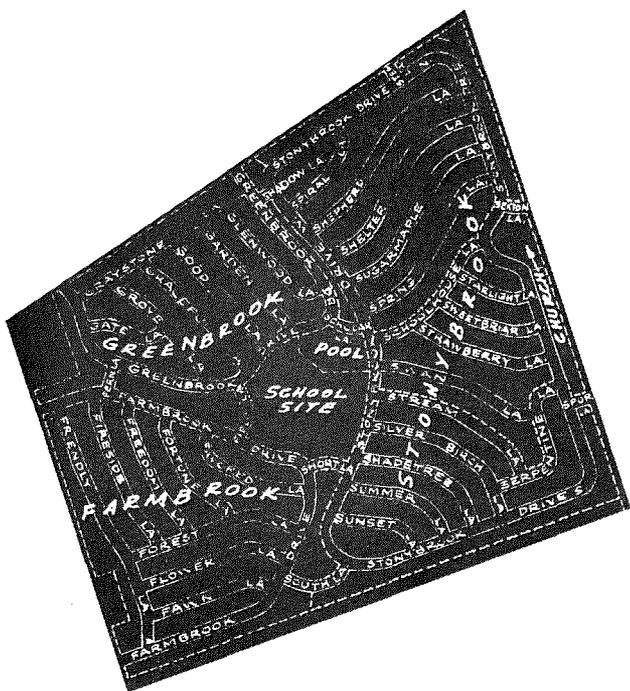
The neighborhood concept is the heart of Levittown planning. "Each family will identify itself with the other 400 to 600 families in its neighborhood, will not lose its identity," says Bill Levitt. Kids will go to same school, will be on neighborhood teams just as their parents will join in neighborhood activities.

Neighborhoods have appropriate names. Streets in each begin with same letter for easy identification, can be found quickly by driving around circumferential street which all other streets cross.

Because children can walk the short distances to school without crossing a main thoroughfare, no school busses are needed, which will save thousands of dollars to taxpayers.



Recreation areas include not only those in the center of each master block but numerous others. There will be some 250 acres of "forest preserves"—heavily wooded sections clean of underbrush but otherwise as natural as possible. A large gravel pit will be transformed into a community lake after all construction is finished. Each school will have its athletic field, and a professional baseball field and other sports grounds will adjoin the downtown shopping center. No other city of comparable size in the country will have as much usable recreation space.



Every house will have its own "park" when all the trees are grown. Minimum lot is 7,000 sq. ft., many are more spacious. Since half the houses have their narrow side to the street, and because back yards are ample, houses seem much less crowded than in most new developments. While fences are forbidden, families may plant more trees on property lines if they wish privacy.

Typical reaction to neighborhood came recently from a furniture-van driver. "Only \$10,000 for all this," he said. "I'd work like a dog for the rest of my life if I could only live here."



In Levittown, L. I., the shopping centers were entirely different from the one shown here. Originally there were no plans for stores; as the town grew, the Levitts gradually built nine village greens, each with its small group of stores. But they did not control adjoining land, so outsiders built a large shopping center which took much business away from the smaller stores. There never was a single "downtown" area.

In their new shopping center, the Levitts use their land generously and landscape it handsomely.

The Levitts have reversed the usual policy of entrepreneurs who crowd their shopping-center buildings together, begrudge the cost of every tree and shrub and put utility ahead of beauty in their acres of barren parking areas.

Bill and Alfred Levitt, with their Consulting Architect Lathrop Douglass, have tried to give their stores such an attractive setting that people will want to come there. Guided by the still-forceful hand of 72-year-old father Levitt, they have arranged their landscaping so lavishly that they feel it will make Levittowners proud and bring merchants good will and cash.

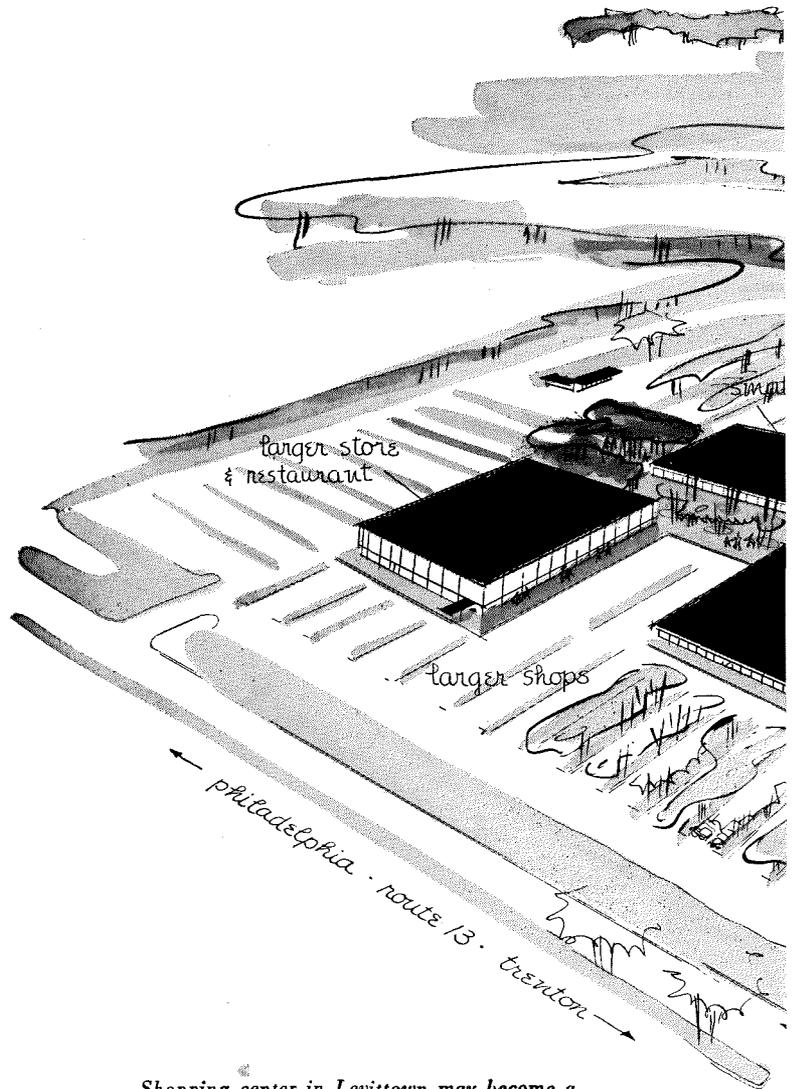
A wide, landscaped mall flowing in a pleasant curve will separate two rows of stores. At the far end the visitor's eye will carry across an uncrowded grassy area to the community building (see photo, opposite). Thousands of trees in the 5,000-car parking lots will surround the stores. In the years to come families parking their cars in the shade on hot summer days may well bless the name of Abraham Levitt. For every strip that separates the cars will have its trees, and scores of acres will be transformed from scorching blacktop to a leafy bower.

Why not a central location? The big shopping area is at one end of the city, not in the center. This location seemed logical to the Levitts because it is in the downtown and business area. It can be reached easily by everyone in Levittown, and is at the intersection of two boulevards that will bring out-of-towners in to shop. Between the residential area and the railroad station, it is convenient for commuters, and equally convenient for people driving to work in nearby areas.

"These stores are not revolutionary," says Lathrop Douglass, "but we tried to eliminate the faults that have occurred in some big centers. The department store, for example, blends in well with the rest of the shops and is not incongruous as it is in some places. The visitor's interest does not peter out as he walks around the center. The long mall ties the stores together and simplifies the design. With the mall we also can get greater concentration of stores. In several places we have brought the parking area right up to the mall, because people like to feel they can get close to the center of things if they want to."

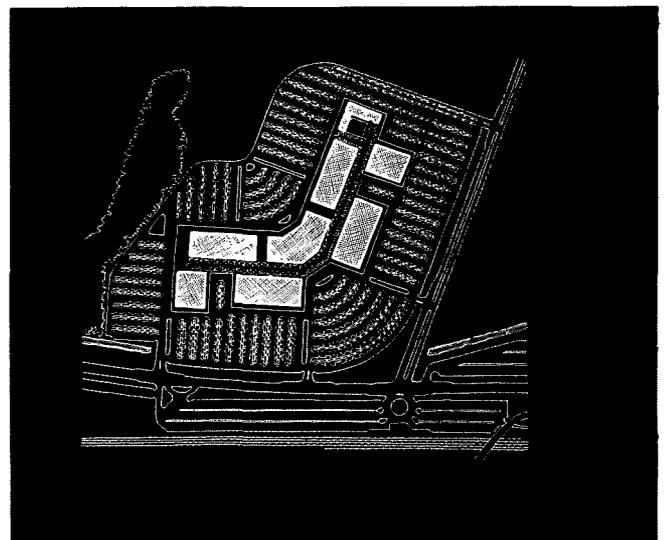
The Levitts' name and their reputation for success brought some 500 applications from merchants who clamored for space. The problem of Lionel Friedmann & Co. of Philadelphia, which leases all space, was not in locating tenants but in choosing the ones that were wanted. Says Friedmann: "This location will undoubtedly become the economic center for lower Bucks County and will have a drawing power with a radius of 15 to 25 miles."

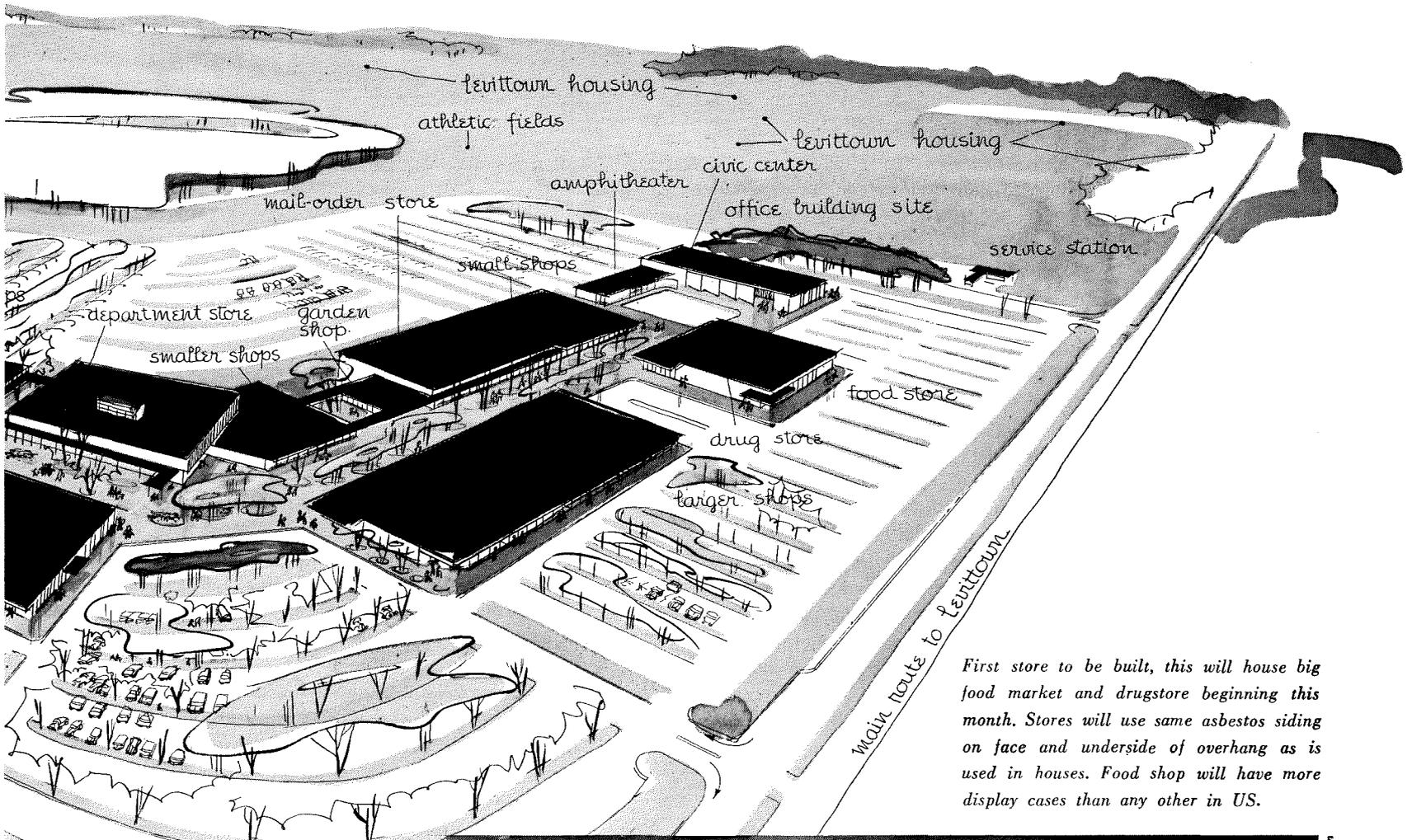
There will also be four other small groups of neighborhood stores located strategically in residential areas. These will each have a food- and drugstore and perhaps two other shops.



Shopping center in Levittown may become a Mecca for visiting architects and builders as it will be one of the most attractive in the US. Thousands of trees plus hundreds of planting beds will fill its 55 acres. Even parking areas will be landscaped.

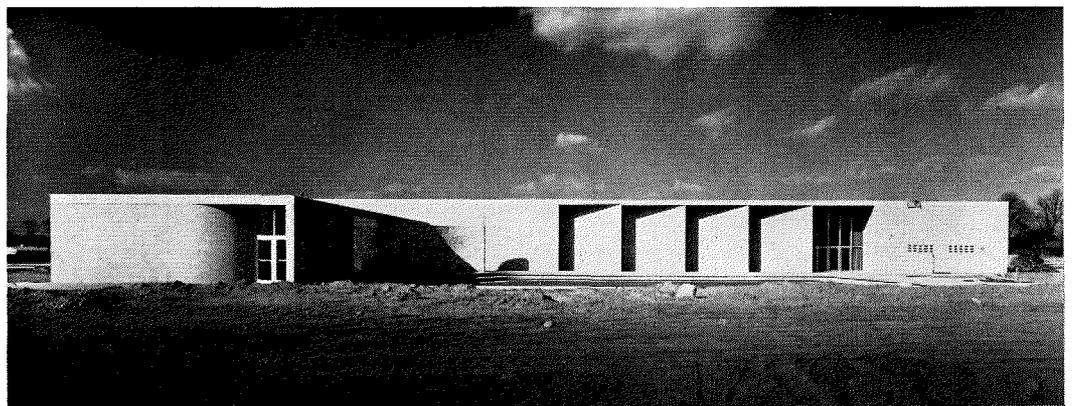
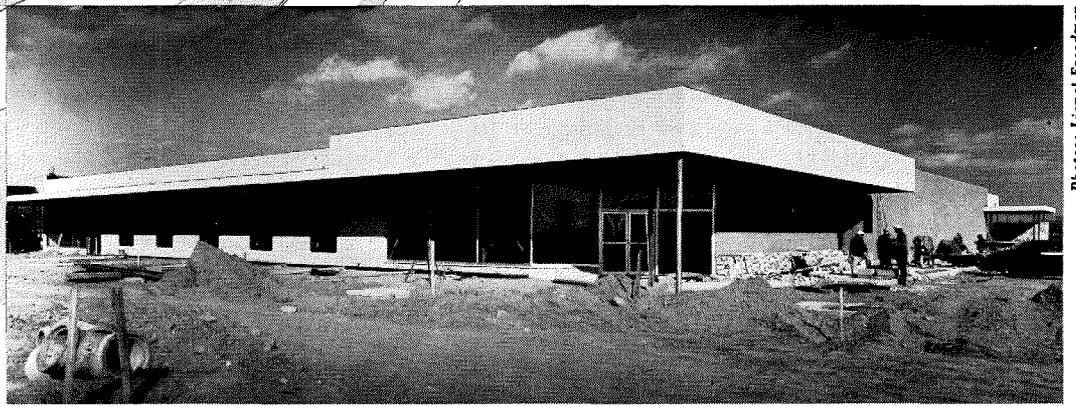
Parking area will take 5,000 cars in its tree-shaded lots, which is 1,000 more than Northgate in Seattle, but 1,000 less than shopping center at Framingham, Mass. or Hudson's in Detroit.





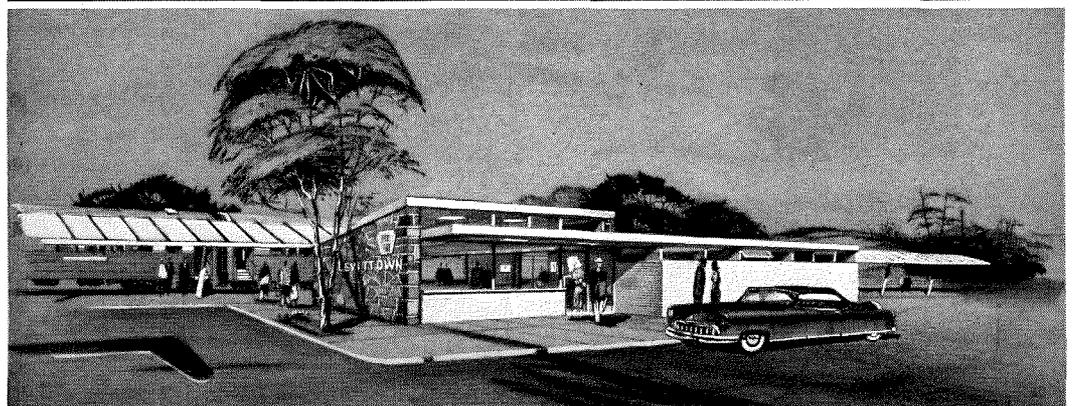
First store to be built, this will house big food market and drugstore beginning this month. Stores will use same asbestos siding on face and underside of overhang as is used in houses. Food shop will have more display cases than any other in US.

Levittown RR station (main line - P.R.R.)



Community building or civic center is enlarged copy of one at old Levittown. This has two auditoriums, the larger with a full-size stage and seats for 800. It is now being used as Levitt offices, will be given free to community in 1955.

Railroad station, designed by architects of the Pennsylvania Rail Road, will be on main line of the road between New York and Philadelphia. Just across a main road from the shopping center, it will be easier to reach than was station at old Levittown.



Photos: Lionel Freedman

The Levitts' greatest problem: how to avoid monotony? A few critics of the new Levittown are already saying they would not want to live there. "Those acres of houses all looking alike will be monotonous," they complain. The Levitts, well aware of this danger, took a number of bold steps to overcome it.

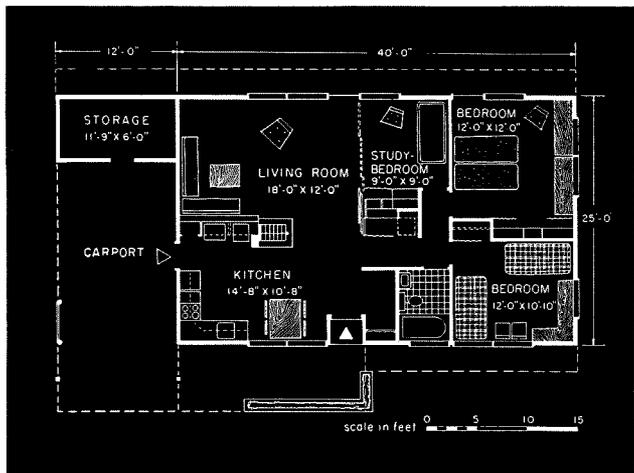
It is true the basic Levittowner will be repeated thousands of times in four variations (opposite). There will be other houses: 500 of the larger Country Clubber at \$17,990 will begin building next spring. Possibly a new design, still in the dream stage, may be built at a price between these two. But the Levittowner, originally priced at \$9,990 and now at \$10,500, will fill most of the city. (For a detailed description of the houses see H&H, Feb. '52.)

The answer to why the Levitts chose to build one basic house is simple: to keep the price down. Alfred Levitt, and his staff of technical experts, had to design a house of 1,000 sq. ft. plus carport which, with all its extras and equipment, could be sold for around \$10,000. No outsiders know what the Levitt costs are but "educated guesses" are that land, the vast network of utilities, the costly recreation areas, the big town hall, free church sites and all the extras in the package, plus a reasonable profit come to about \$5,000 per house. This meant that Alfred Levitt had to produce a house which, with its kitchen equipment, would cost about \$5 a sq. ft. (with the carport and outdoor storage area thrown in free). This is a price to make strong builders shudder and government public housers drop dead.

A visit to the construction site where the blue-ribbon framing crew of three men once set an all-time record by framing an entire house (including partitions and roof) in five hours is convincing proof that construction speed depends on repetition and simplification. The Levitts believed their buyers would prefer one basic house at \$10,000 to a wider choice of models at more money.

They pooh-pooh the very thought of monotony. "This will be the least monotonous mass-housing group ever planned in America," Alfred says. To his basic rectangle he has added four different carports and the photos show how they affect the house. Variation also comes from the fact that half the houses face the street the long way, half the short way.

Financing for the entire operation is handled by Jack Halperin & Co., Inc. It is perhaps the largest deal of one-family houses in this country.



Other means which Alfred used to give individuality:

► Trees and shrubs will make this the most completely landscaped city in the country: evergreens screening houses, around each lot, plus thousands of trees along the streets (see photos). In addition to the slow-growing evergreens already planted, each back yard will get three fruit trees.

For an airplane passenger there will be no sight in America quite like Levittown in April when 48,000 fruit trees are in bloom, when new green leaves are sprouting on several hundred thousand trees lining the streets and turning the 55-acre commercial area into a young forest. It is not likely anyone will write a song called, "When it's apple blossom time in Levittown, . . ." but it could happen. Abraham Levitt is indeed God's gift to the nurserymen, for he is buying on a scale never known before.

► One-story houses will appear less monotonous than two-story because plantings will be proportionately taller, will shield houses more quickly.

► Variety in houses also comes from seven different colors of siding and trim.

► Any group of small houses crowded close together seems dreary but the Levitts have a minimum lot width of 70' and many lots are wider and irregularly shaped.

► Back yards, as well as side yards, are large, as the photos opposite illustrate.

► Much of the land is gently rolling (see p. 80), giving a change of elevation.

► Families will create individuality by changing their houses. Already scores of families are turning their carports into garages or enclosed rooms, or are adding patios, screen porches and other individual touches.

► The Levitts know that houses do not appear monotonous if you do not see too many at one time. The curved streets are not only pleasant but confine the view to a couple of dozen houses. There are few long, straight rows of houses.

► Monotony is further avoided by the use of the master block with its winding street and its school and recreation area.



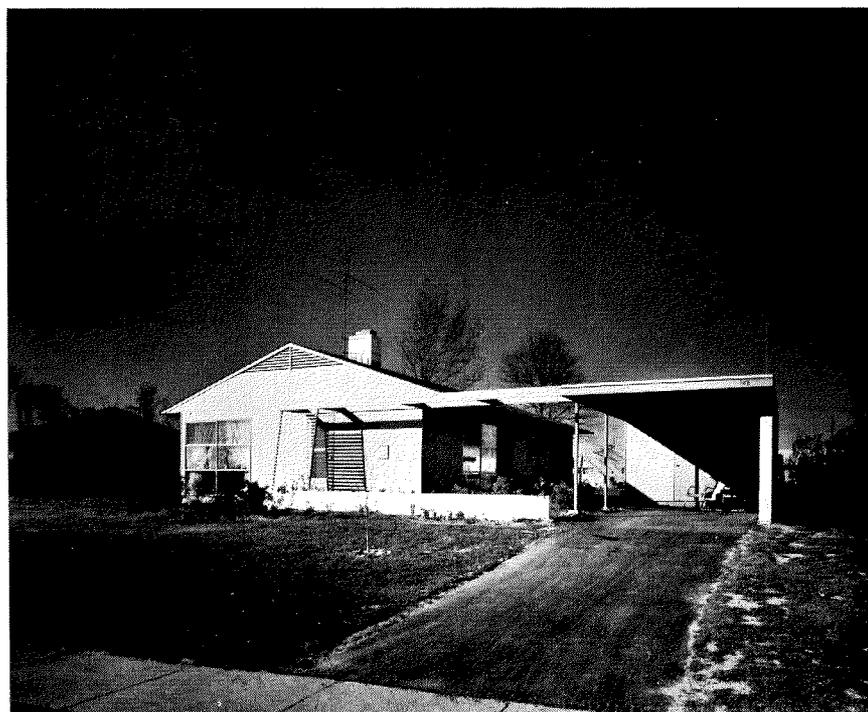
All the Levitt houses are good sellers but salesmen report that house at left is most popular. Its long side faces street, and carport completely under main roof makes it look larger than other models. When these photos were made last month the street trees which will be just inside of sidewalk had not yet been planted.

House at right is second choice. It has same plan and arrangement as house above except that carport roof is flat. Each carport has a 12' x 6' storage room. Entrance is always at same position in house, although it may face the street or one side. Asbestos siding is of seven different colors.

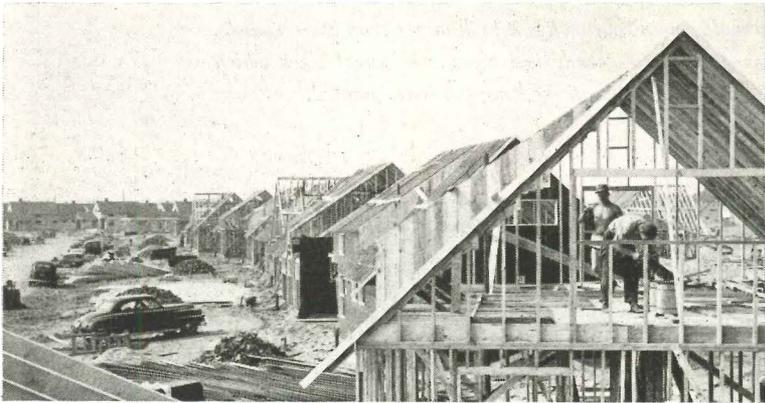


House at left, with end to street and wide roof over carport was third in popularity. But it was best liked by families who wanted to put a freezer in the storage room which is close to kitchen door. Extra space made by wide overhang also gives this house a covered porch next to carport. Each house has same floor plan.

House at right was most popular with physicians or dentists but least popular with average families. Professional men and some families bought it because it can be easily expanded. Carport can be enclosed as separate room or porch. Dozens of families have already made changes in their houses by adding rooms or porches.

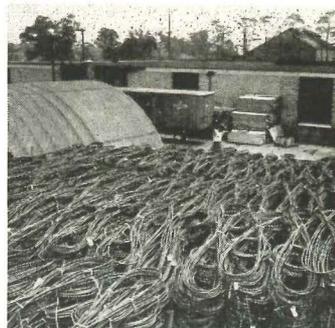


LEVITTOWN



In Levittown, Long Island (photos left and above) the older, expandable-attic house was built with approximately the same construction methods as Levitt uses today. New house has 1,000 sq. ft. on ground floor vs. 800 in old house. New house takes less framing lumber, but uses 16 squares (or 75 large sheets) of siding compared with ten squares (or 570 small shingles). Levitt still subcontracts all labor, uses same subs and many mechanics he used on L. I. He averages 25 houses per day, reached 40 last summer.

Construction operations start at big new yard below, where 48 carloads of materials arrive daily. Everything possible is packaged in house-size amounts, is handled mechanically, moved quickly to the house site. Scores of operations are timed so that materials flow out from here to exact spot where needed.



Steel pipe for radiant slab heating is piled high in yard, looped and tied for quick delivery to site. When copper shortage developed Levitt switched to steel pipe, plans to return to using copper. Levitt's old slab rested on 6" of bank-run sand and gravel, now is on 6" of gravel with a membrane.

Below: all framing lumber for one house is precut in yard, dumped close to slab with pieces used first on top. While Levitt furnishes lumber and power saws, the millshop cutting operation is subcontracted including deliveries to the site. New yard is larger than Long Island's and has three more power saws.

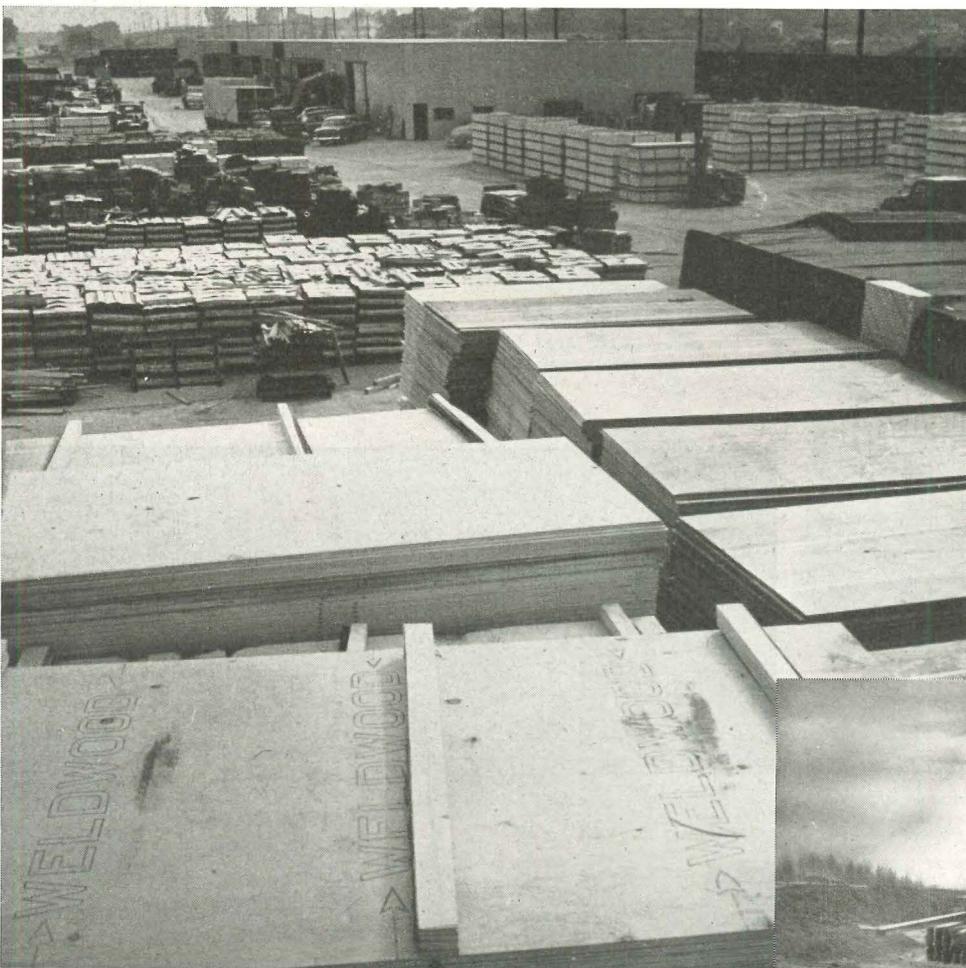


Photo for Fortune by Ralph Steiner

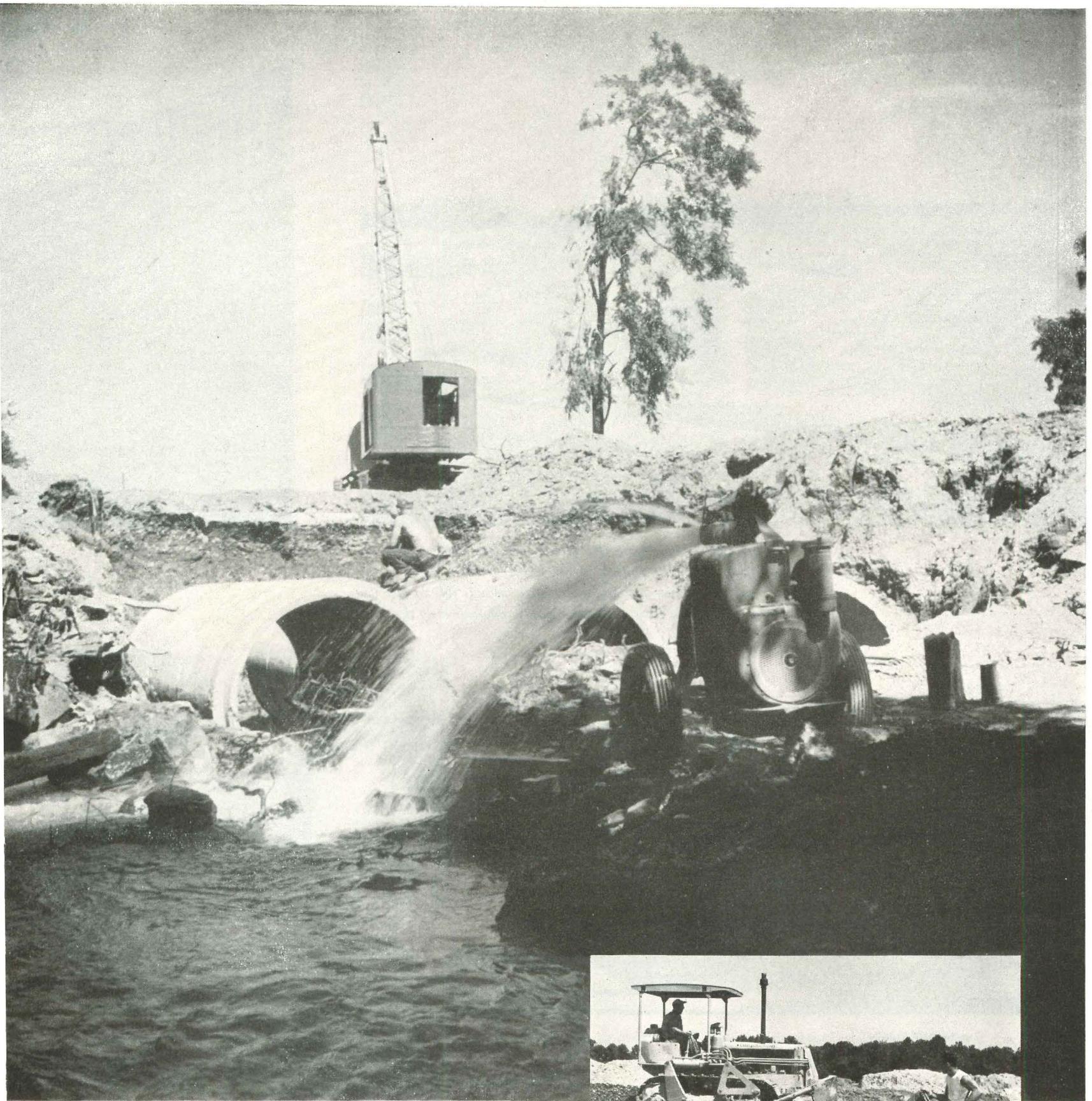
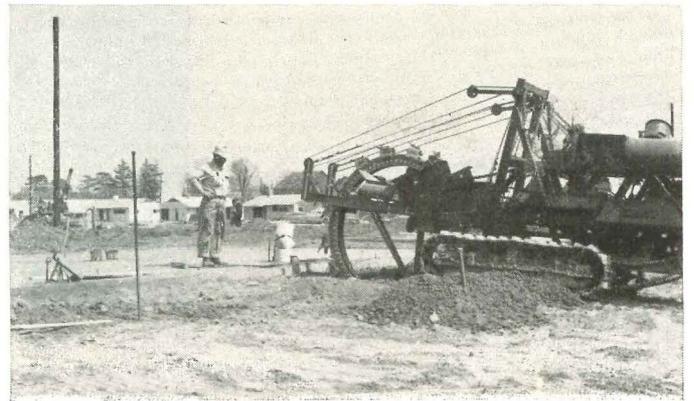
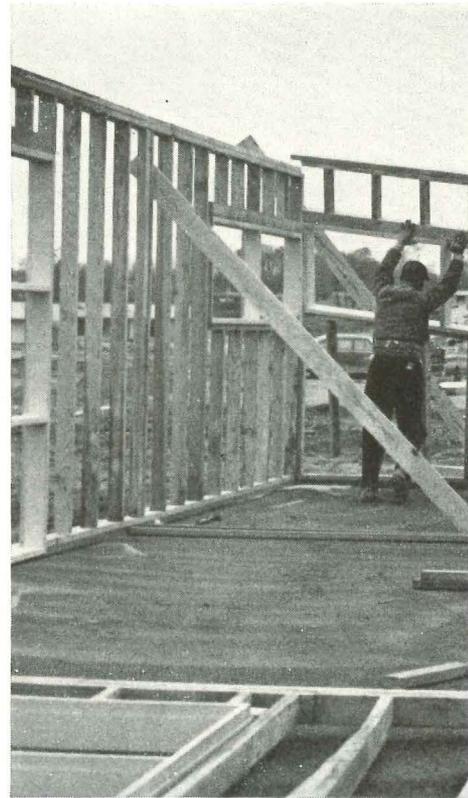


Photo: Ralph Steiner for FORTUNE

Chief difference between new Levittown and old is enormous amount of utility work the Levitts have done. They built a complete water and sewer system for a city of 70,000 people which cost several millions, all to be passed on to the people "who will have the lowest utility rates in the state," according to Bill Levitt. Nearly half of man-hours go into site preparation and community facilities. Upper right: baby bulldozer that can scuttle around inside of foundation to smooth out gravel for slab preparation. Lower right: rotary trencher which digs 6" trench for footings, instead of 8" as on Long Island. Getting in utilities has been somewhat slower than planned, has slowed housing schedule. During winter Bill Levitt plans to get ahead on utilities, may boost production next year to 6,000 houses.



LEVITTOWN



Layout man is key figure. He installs sills for exterior wall and partitions and marks position of every stud, window and door. He lays out four or five houses per day. His speed is due to fact that except for window locations, every house is approximately the same.

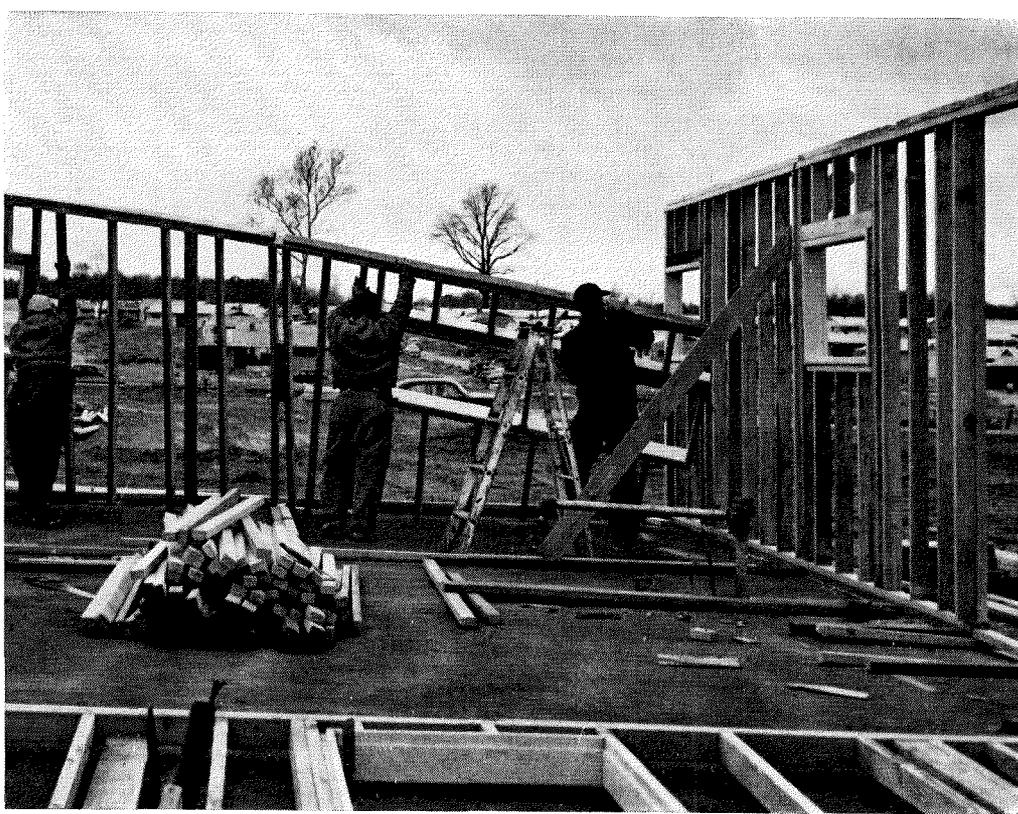


Asbestos siding, packaged with right color, is fork-lifted to each house

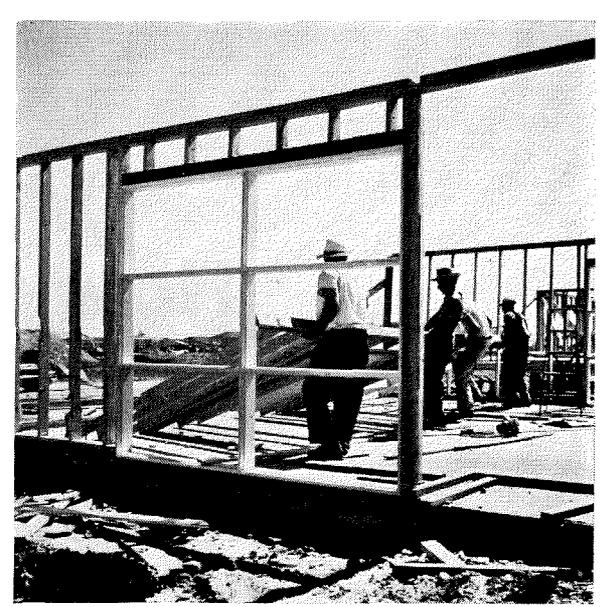


Two men average one house a day with siding, the fastest earning \$200 weekly. Levitt switched from composition board sheathing to plywood because latter holds nails better if nailers miss studs. All sheets are 32" wide, come in five heights, go on faster than small shingles on earlier Levitt house (see earlier photo p. 88). There is still considerable hand cutting (photo at left) of Colorberstos sheets which slows up the job.



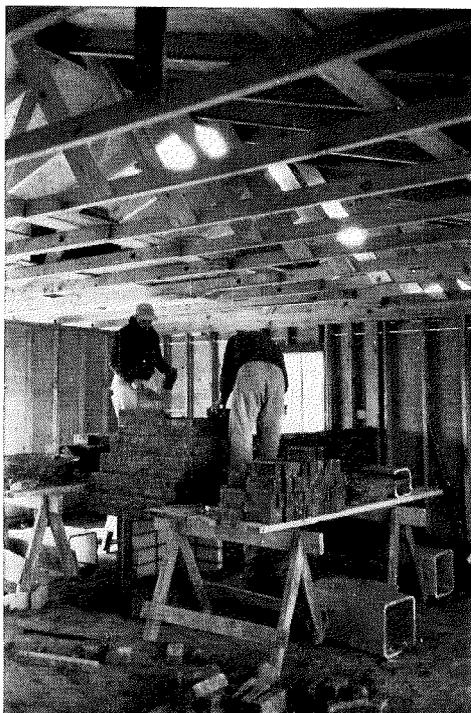


Framing crew is usually four men who build panels from pre-cut lumber, window frames, tilt them into position. Including partitions and roof, best crews frame house in five hours, and an average crew requires eight or nine. The crew gets \$115 for framing each house.

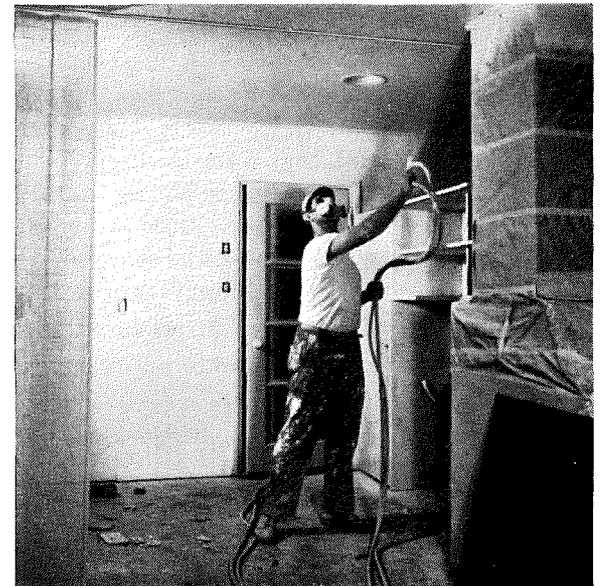


Wall framing goes fast because of simplified design plus fact each house has four prefabricated window sections. Framers say this house is framed faster than old because no scaffolding is used.

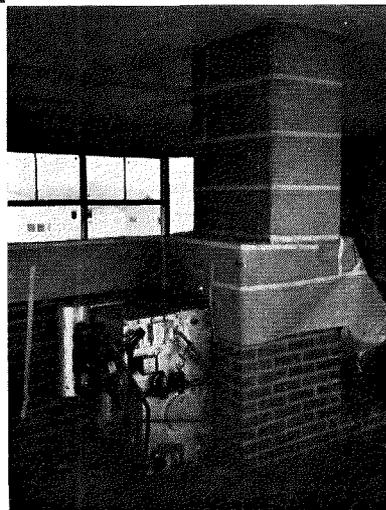
Photos: (above, right, & below) Ralph Steiner for FORTUNE



Interior photo with masons building fireplace and chimney also shows roof rafters which are not a truss but nailed to ridge beam, bolted with ring bolts. Levitt believes these go up faster than trusses. At right is compact York-Shipley oil-burning boiler that supplies heat to radiant floor coils. Teams of three men move rapidly from house to house, "pipe up" boiler, make all connections. Chimney is masked for painting.



Spray painter comes in after house is finished (except for tile floor) and puts on two coats of primer and one finish coat of Plextone. Average time per coat is one hour. Advantage of two-tone paint is that it covers everything including trim and window frames, can be easily washed or patched if damaged. Another man brush-paints outside trim, door, garage posts in 1½ hrs.



How to profit from the Levitts' pioneering

Long Island builder shaves profit, cuts cost, duplicates Levitt house and price

Builders have always said no one can duplicate Levitt value. Long Island Builder Irving Warfield has accepted this challenge—he produces houses practically identical to Levitts' three-bedroom best seller and *sells them at the same price—\$10,500.*

At the same time Warfield freely admits his debt to the Levitts for their pacemaking accomplishments, says, "Every Long Island builder should thank heaven for the Levitts!"

Warfield's 515-house project, Southwood-at-Syosset, suggests sound ground rules for all builders, especially those who copy Levitt houses at prices up to \$17,000! Specifically:

- ▶ Take less profit per house to get faster turnover.
- ▶ Slice overhead to a bare minimum.
- ▶ Obtain the economies of mass purchasing and production by giving subs blanket orders covering a whole project.
- ▶ Omit some extras (such as the Levitts' appliances and swimming pools) to offset higher building costs on smaller projects.

Modest profits. Warfield originally planned to build only 200 houses at \$1,000 profit each. Instead he decided to create a bargain by slicing the profit to \$500 per house. Reason: he figured that smaller profits on more houses meant less risk and about 25% more total profit. The Levitts' profits, a guarded secret, are estimated at \$1,000 per house.

Low overhead. "You've got to watch every dollar," says Warfield, "or overhead overwhelms you." Like Levitt, he subs his work. Unlike the Levitts', his staff is small. Whereas the Levitts have a 30-man design team, Warfield called in outside architects to adapt their design for him and to do land planning.

With only nine employees on his payroll (a superintendent, two assistants, an engineer, three office employees and two salesmen), Warfield turns out three houses a day. And, using the first house as an office, he has literally slashed overhead to less than \$125 a house, chicken feed compared to most builders' 5 to 8% overhead and a reported \$700 for the Levitts' vast organization.

Luis Azarraga



Big orders. Unlike Levitt, Warfield is not big enough to by-pass the middleman and buy directly from manufacturers. He must depend on volume buying and good deals with subcontractors for his biggest savings. "Without wholehearted cooperation from subs, these houses would cost \$1,500 more," he says. (None are ex-Levitt contractors and many work simultaneously on other projects. Levitt subs are tied exclusively to Levittown.)

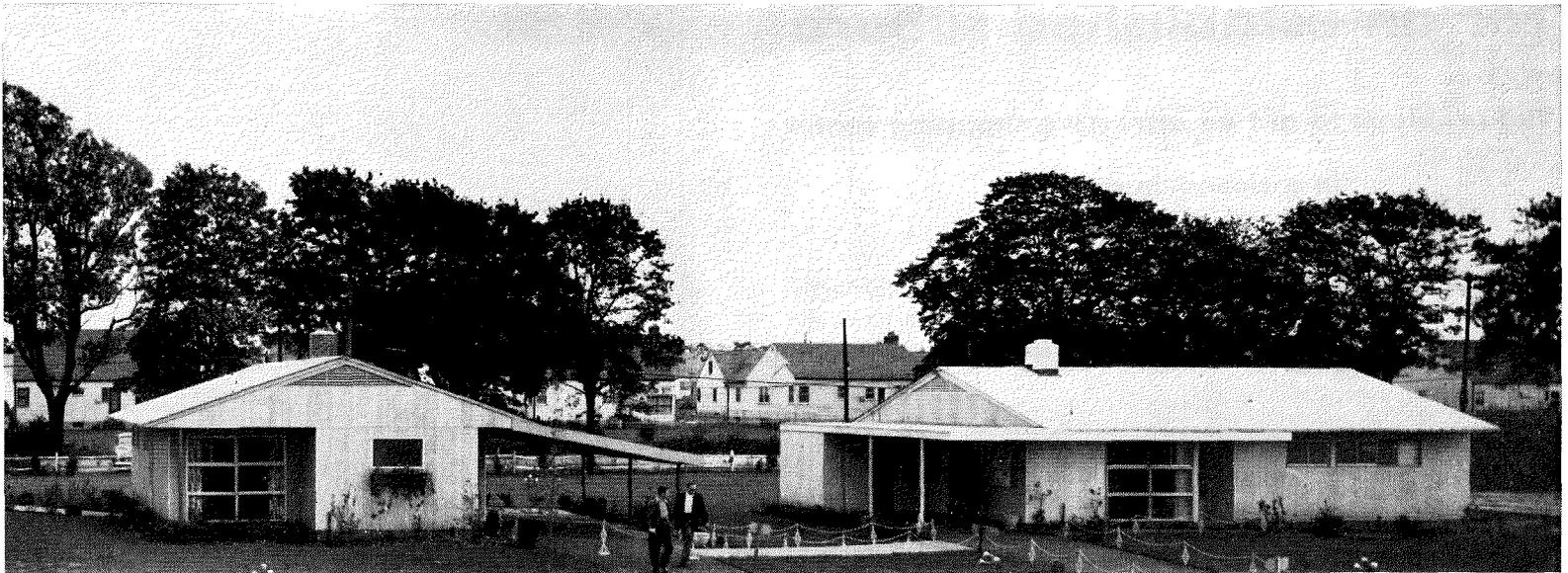
Unlike most builders who parcel out orders as work progresses, Warfield gives his subs blanket orders for 515 houses. Then he maintains a fast, tight construction schedule so they can avoid costly delays. "This way I can cut \$250 from my price," says the plumbing-and-heating contractor, who in turn gets bigger discounts from his suppliers. Like Levitts' plumbers, he subassembles all piping in his shop. Similarly:

- ▶ Concretework is 15% cheaper because men pour 12 to 14 slabs a day and work ahead on the same number of footings. The subcontractor uses big machinery like pin-wheel trench diggers, as Levitt does.
- ▶ The bricklayer builds chimneys for \$100 less because "it's mass production when I can figure on 515 chimneys at once."
- ▶ Kitchen cabinets are 10% less and \$26 is saved per house on asphalt tile compared to the price for 50 or 100 houses.

Spread over 38 different subs and suppliers, such savings easily amount to \$1,500 a house.

Methods. Other savings result because Warfield uses many low-cost products pioneered by the Levitts; e.g., the table-top boiler and bamboo screens for closet doors. (Screens alone save \$50 a house.)

Warfield does some things differently from the Levitts. (He closely watched Levitts' operation but never got direct help.) For instance, the union spiked Warfield's plan to use paint sprayers; he must use brushes "at twice the cost." (Levitt runs an open labor shop.) Levitt uses steel coils for slab heating but Warfield has switched to higher-priced copper because it can be installed faster and Long Island buyers prefer it.



Although Levitt precuts all wood in a central shop and trucks it to houses, Warfield, whose operation is not geared to keep trucks busy every day, does his cutting on the site. Here carpenters move jigs and tools to a new section of houses from week to week. Four men turn out 90 trusses (30 per house) and two men cut all wood for three houses a day. But like the Levitts, Warfield tilts up his framing, uses 2 x 4's on 16" centers plus dry-wall construction.

Warfield really profits from the Levitts' pioneering use of asbestos-cement exterior wallboard. Two men cover an entire house in one day—just 14 man-hours all told. It takes only 85 sheets (32" x 96") per house. Material cost is slightly more than for the approximately 1,000 asbestos shingles that would be required, but is more than offset by saving labor.

Fewer extras. Despite higher costs than mass-production Levitts', Warfield cuts down on extras to reproduce the house at the same price. Levitt gives 13 trees and over 50 shrubs and flowers per house compared to a more modest offering by Warfield, who also cuts down on big appliances and community extras. (For detailed comparison, see next column.)

Similar design. Warfield has achieved standardization without producing rows of identical boxes. Houses are varied from lot to lot; the model set end-to-the-street is always flanked by the other two models set lengthwise to the street (see photo above). The curse of the house-on-its-end look is avoided by extending the roof over the carport to give added width to the narrow front model.

To avoid monotony further, Warfield hired an architectural consultant for outside color design. He judiciously combined six different exterior wallboard colors with three different shingle colors. And, instead of ending up with a riot of different colors, Warfield got 18 blended color schemes.

"We knew the Warfield house would sell because its prototype in Pennsylvania was a big success," says a spokesman for J. Halperin & Co., which also handles the Levitt loans. FHA and VA paper is placed with the County Trust Co. of Tarrytown, N. Y., and New York's Dry Dock Savings Bank.

County Trust also advances construction money at the prevailing N. Y. rate: 5%, no service charge.

Biggest sales feature. Warfield achieves high value at low cost: three bedrooms and 1,000 sq. ft. priced at \$9,900 last July. Within four hectic weeks buyers snapped up 300 of his houses. Although he stopped advertising and later had to raise the price to \$10,500 (after the Levitts did the same), sales have since climbed above 400. At this rate all houses will be sold long before the last is finished next July.

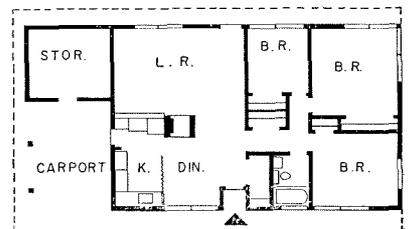
A comparison. Except for a solid rather than a folding wall between the third bedroom and living room and the absence of a range and clothes washer, these houses are practically identical to Levitts' 1,000 sq. ft. 1952 model (H&H, Feb. '52). Missing, however, are swimming pools and other community facilities that Levitt gives and which must cost him at least \$1,000 per house. On the other hand, Warfield's raw land at \$1,100 a plot is at least twice the Levitts' cost. Also, Warfield operates under union conditions and a rigid local code makes plumbing, framing and other items more expensive.

	Levitt	Warfield
Size	40' x 25'	39'-11" x 25'
Exterior storage	11'-9" x 6'-0"	11'-6" x 6'-8"
Minimum lot	70' x 100'	65' x 100'
Fireplace	3-way	2-way
Range	19½" electric	36" electric
Clothes washer	included	excluded
Refrigerator	included	excluded
Ceiling joists	2" x 4"	2" x 6"
Roof trusses	24" o.c.	16" o.c.
Closing costs	None	\$195

How do Warfield's 1,000 sq. ft. houses priced at \$10.50 a sq. ft. compare with others in the same area? A mile away are 875 sq. ft. ranch houses with basement but no garage for \$10,990—more than \$13.50 a sq. ft. Other nearby houses with 1,200 sq. ft. sell for \$13,500 with basement and garage. Near Warfield's project are 1,100 sq. ft. packages at \$14,900; they include basement and expansion attic but the garage is extra. None of these approach the Warfield or Levitt house in livability per dollar.

COMPARE THESE MODELS

with their Levitt prototypes on pages 84 and 85. Not adapted was the Levitts' breezeway model; it is too wide for a less-than-70' lot. (This model, incidentally, is the fourth choice among the Levitts' Pennsylvania buyers.) Warfield's best seller is center model.



Basic plan

For an established suburb

The problem: to get an attractive shopping center in a closed-in area

Unlike the shopping center built on the fringe of a new community where large areas are available and the architectural character of the community is already established, this shopping center was erected:

- ▶ in a built-up area;
- ▶ on an irregular tract (the only one available, unfortunately divided by a suburban thoroughfare);
- ▶ where the grade differential was 12' to 14';
- ▶ in a "prestige" neighborhood (homes range up to \$50,000).

After LaGrange Park's Homestead Garden apartments were built in 1949, only 6½ acres were left zoned for business. Maximum overall length and width of buildings for the shopping center were established by lot dimensions after necessary allowances for parking (3 sq. ft. to every square foot of store area; cost: \$230 per car space). The architects took advantage of the natural slope of the site by designing the center on two levels, thus economizing in building costs and conserving the scarce land area. They created a restrained exterior of limestone and brick, inviting to the eye and closely related to the suburban landscape.

The upper level seems to be a one-story structure, faces a heavily trafficked road; lower level is two stories facing garden apartments.

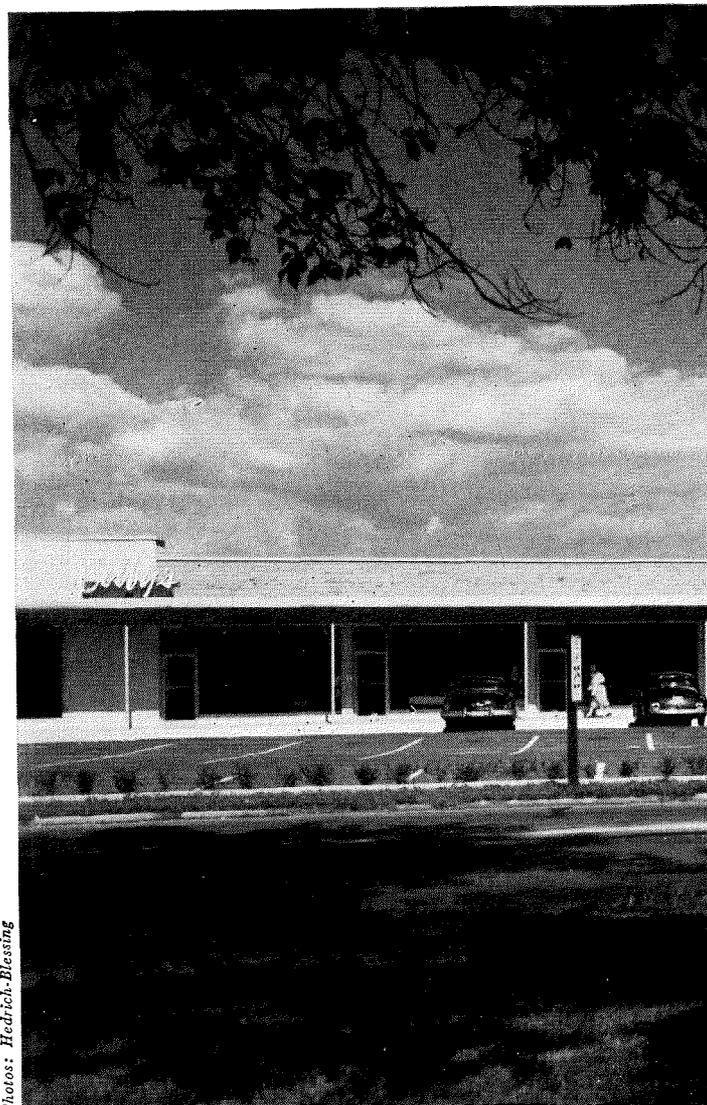
In varying degrees Architects Mittelbusher and Tourtelot put many elements of a model shopping center into the Village Market.

Tenantwise. All services enter buildings at the lower level. Hand-truck corridors on this level extend indoors, out of view, but are something of a compromise since all tenants must handle goods from relatively cramped service areas. Flexibility for smaller stores on upper level is possible because there are no interior masonry bearing walls, and only alternate lines of roof columns extend through the upper-level floor construction. Location of the center precludes a competing shopping center from being built in the suburb. Primary trade area is within a two-mile radius (15,600 families with a disposable income of \$116 million). Secondary trade area is a ten-minute drive from the market. The Chicago Loop is a minimum of 30 min. drive away.

Customerwise. Each unit has adjacent parking (1,049 cars all told) and continuous walks ramped to make possible a round-robin tour of all the stores with no back-alley views. Besides visiting the usual soft-goods stores a suburban housewife can take junior to a doctor or dentist (medical center), have her hair done (beauty salon), shop in comfort (100% year-round air conditioning), and have dinner in pleasant surroundings (terraced restaurant).

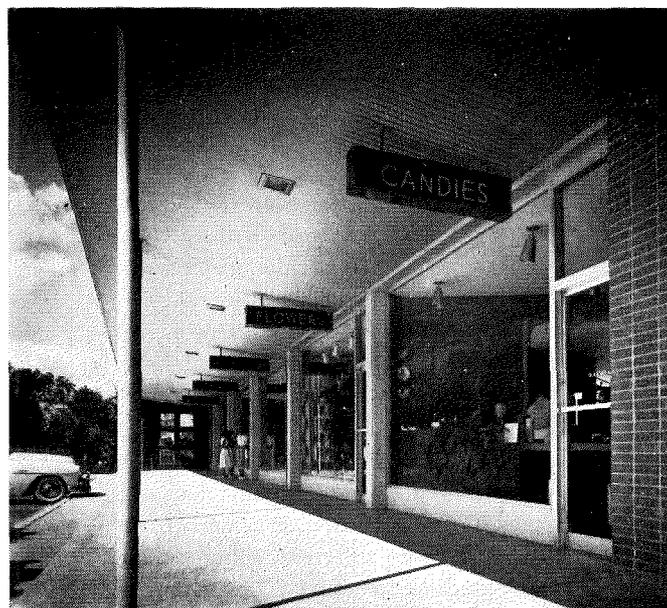
Ownerwise. For his investment of \$1.9 million, excluding land, the owner got 102,000 sq. ft. of rental space, 135,734 sq. ft. gross area. Including canopies and loading docks, cost of building was \$10.17 per sq. ft. Two central plants, one for each section of the market, provide electric, gas, water-heating and refrigeration services. Tenants are charged on a square-foot basis for services.

Maintenancewise. Central-plant treatment eliminates storage tanks and smokestacks; maintenance is possible without long transmission line and attendant high first costs. Service corridors are a natural for keeping pipes and ducts accessible.

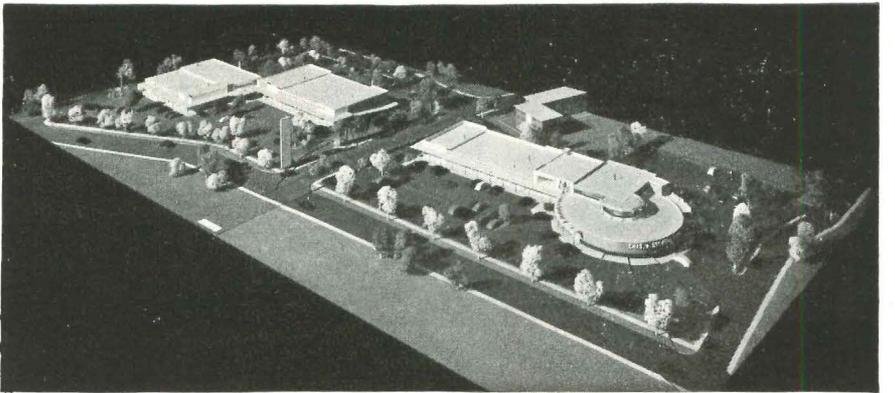
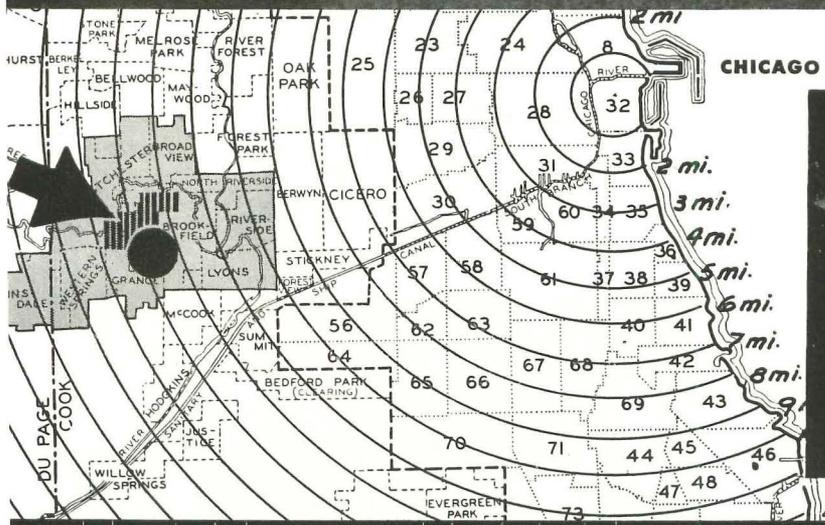
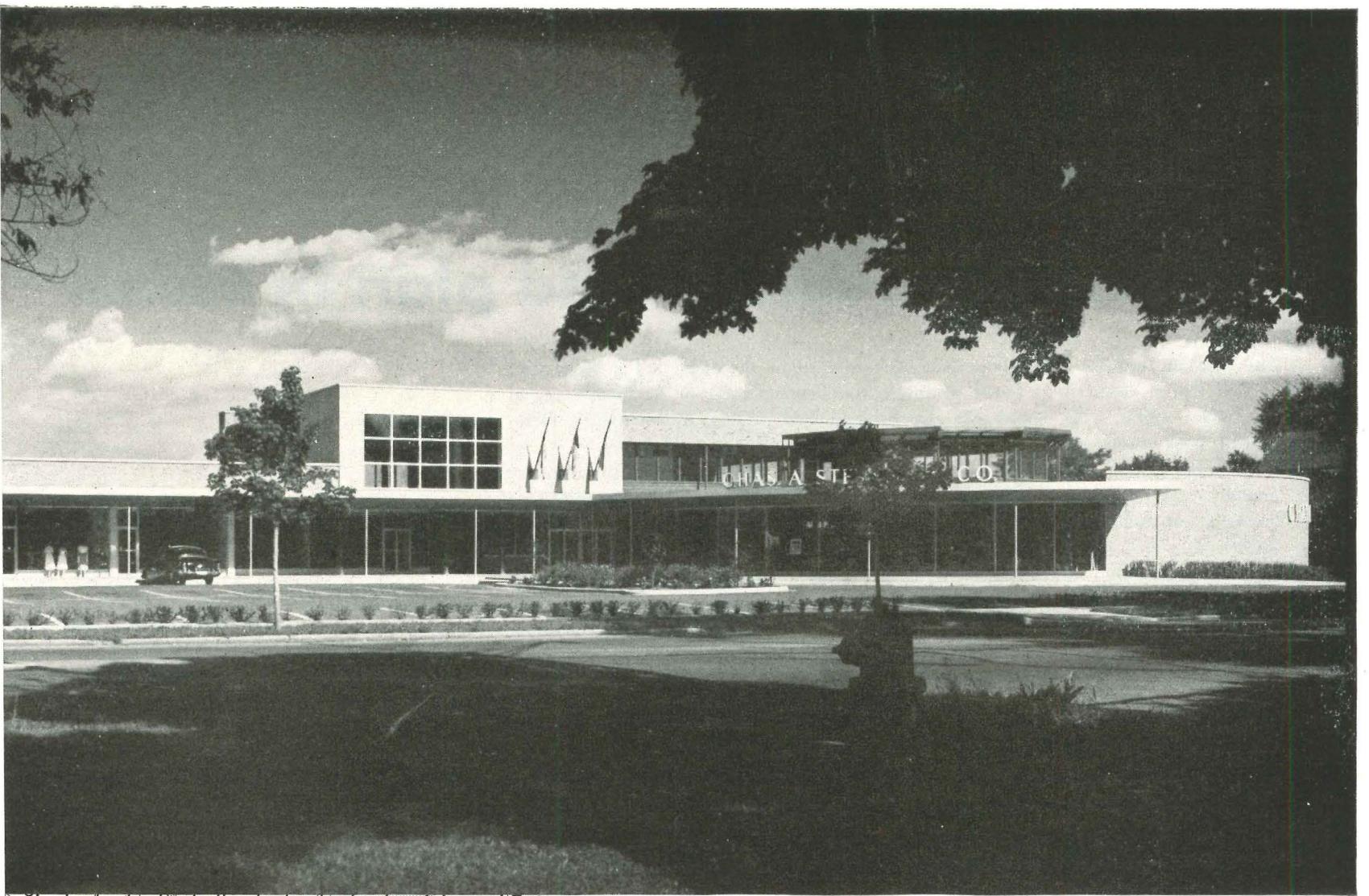


Photos: Hedrich-Blessing

Upper-level small stores spread bland, business-like glass fronts along heavily trafficked highway. Terraced restaurant above circular women's apparel shop is attractive come-on to passing motorists, convenient facility for day-long shopping.

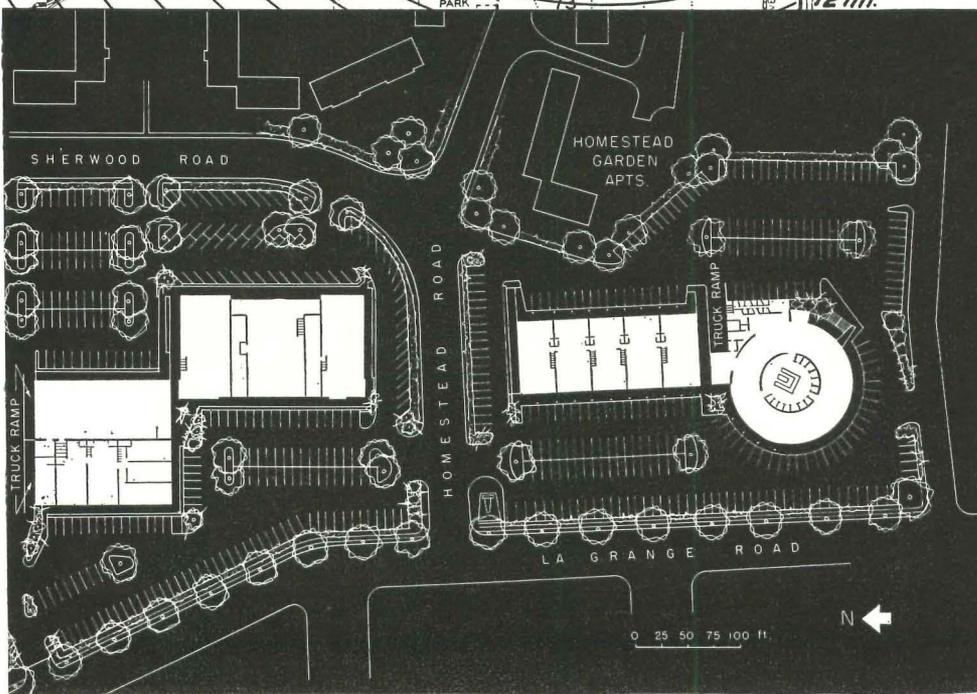


Canopies over walks are wood supported by steel beams and columns, with corrugated aluminum sheets on the underside. Signs are high enough to be seen easily, small enough to avoid clutter.



Each of two self-sustaining shopping units has essential prerequisite of a modern shopping center: the big store. Decoy for north section is supermarket, for the south section a dress shop.

Lightly traveled road dividing shopping center is principal west entrance to apartments which provide a walk-in market: trade from 366 families.



LOCATION: LaGrange Park, Ill.
 MITTELBUSHER & TOURTELOT, architects
 FRANK REIDERER, consulting mechanical engineer
 SYBEREN F. NYDAM, consulting structural engineer
 SEWARD H. MOTT, site-plan consultant
 WM. JOERN & SONS, builder-developers

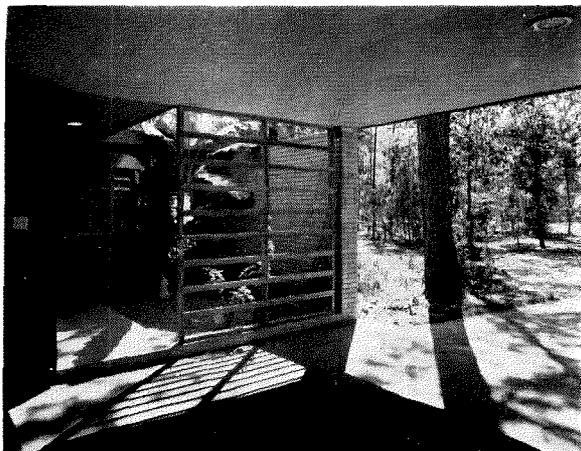
The two houses shown on these ten pages have three things in common: both were designed for fairly large families; both permit members of the family to work (or pursue their hobbies) at home; and both architects came up with solutions that combine the open plan for daytime living with the closed plan for areas used at night.

1. Open plan and closed plan in Texas

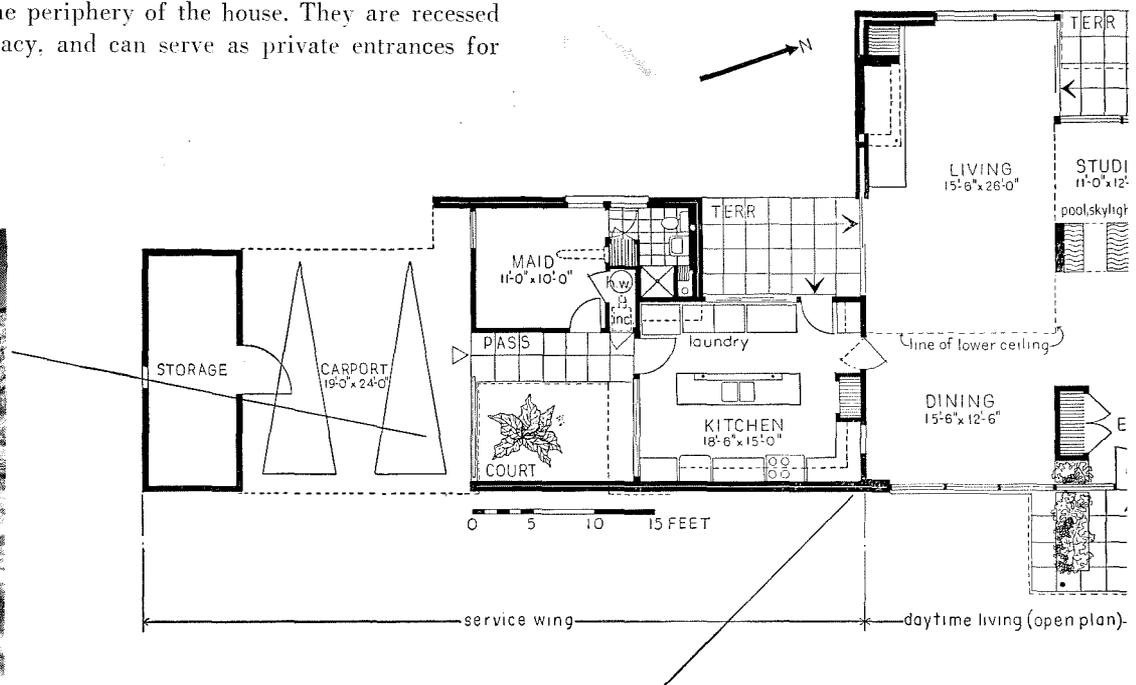
This pleasant, unpretentious house makes the point about the open vs. the closed plan so well that it received an honor award in the Texas Society of Architects' recent state-wide exhibit. (The house will also be published in Jean & Don Graf's forthcoming book, *Practical House for Contemporary Living*.*)

For a big family (parents and four adolescent children) the house has six bedrooms, including one for the maid and a master bedroom that doubles as a quiet study. Five bedrooms are contained in a 37' x 50' wing that is strictly compartmentalized (as in a traditional plan), with banks of closets and utilities forming heavy sound insulators between rooms. By contrast, the daytime wing (26' x 40') is one very modern, open room, with space divisions barely suggested by free-standing walls and closets. The 60' long service wing (including carport) completes the three-zone plan. To give its inhabitants individual "outdoor rooms" as well, Architect Hamilton Brown has designed a number of small terraces all around the periphery of the house. They are recessed behind the building line for added privacy, and can serve as private entrances for each member of the household.

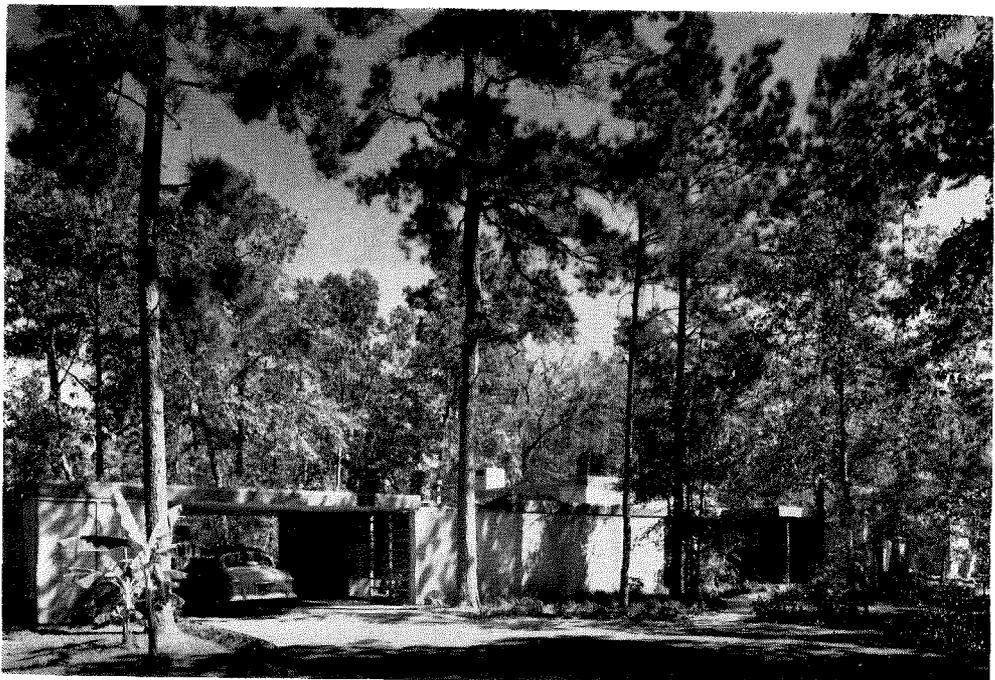
* F. W. Dodge Co., New York, N. Y.



Carport in service wing adjoins service patio which, in turn, leads to kitchen and maid's entrances.



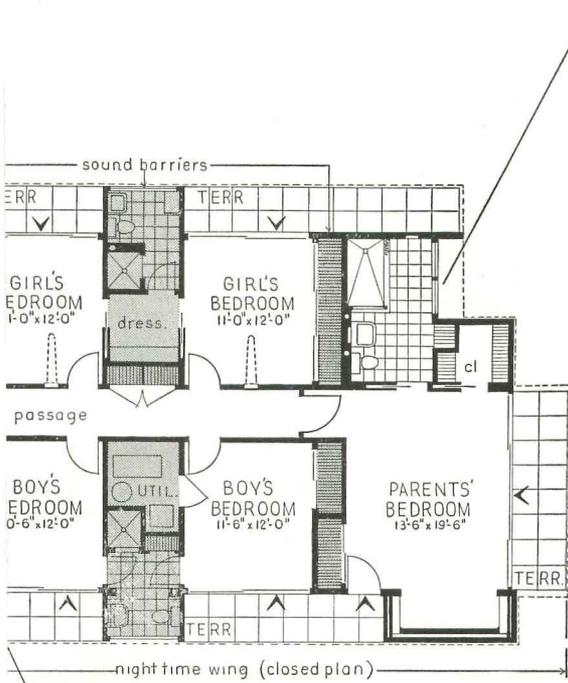
Approach to house is from southeast. Picture, right, shows service wing with carport and 8' x 20' storage room at far end. Long brick walls and dense pines assure privacy, shade.



Photos - Shoemaker-Stiles



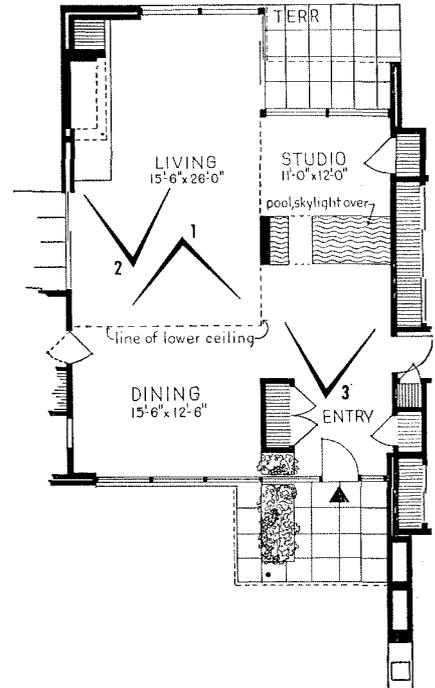
LOCATION: Houston, Tex.
 HAMILTON BROWN, architect
 HULL & HULL, general contractor



North end of house shows long, narrow terrace outside girls' rooms, taller living wing in the distance. Deep overhangs protect windows against torrential Texas rains. Large window in foreground serves master bathroom, enables the owner to enjoy view while sitting in tub.

Bedroom wing has a small, roofed terrace for each child and for parents. Projecting bath-dressing-room units separate terraces, form sound insulators between rooms. Porches can serve as private entrances for children's friends, may be screened when used for outdoor living in spring and fall.

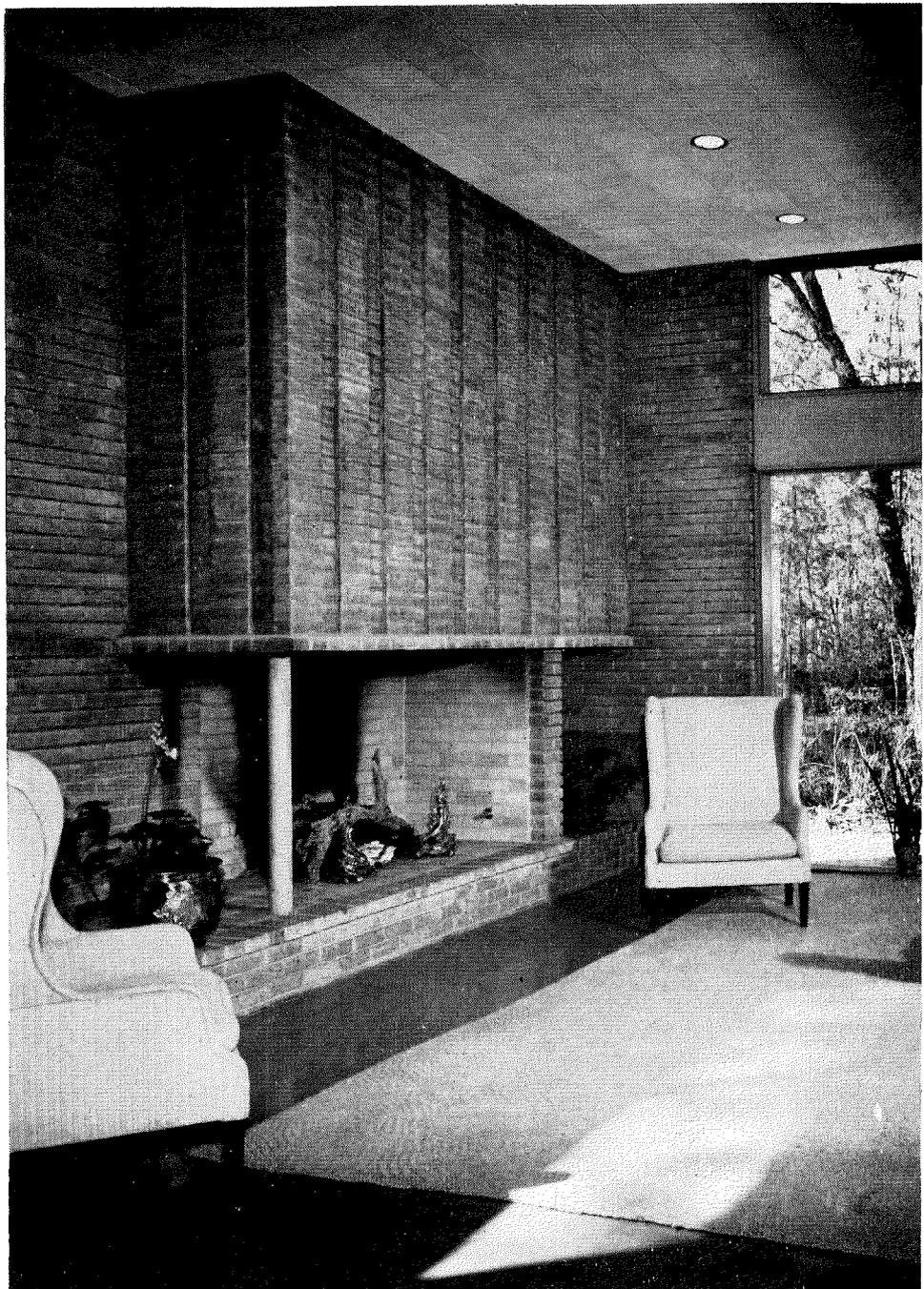




1.

Waxed concrete floor makes excellent dancing surface. Acoustical treatment of ceiling and ductwork cuts down reverberation and noise transmission. Entire house is air conditioned so that views and existing trees alone dictated orientation. Night lighting of trees outside glass walls is spectacular.

2.



Each activity area in living space has its own views. Note raised ceiling over central portion of room, skylight over pool with bridge at right. Architect Brown says he learned plenty from this job about volume and space relationships, interplay of solid and glass panels (note simple, successful brick texture above fireplace). However, Brown feels that he might handle a few details differently now. Unit cost of house was about \$15 per sq. ft.

Open plan for daytime living. The open plan has been one of the chief principles of modern architecture. But, like many innovations, it has sometimes become a cliché—used where it made little sense.

Here Architect Brown used the open plan in the daytime area of his house (and divided the nighttime area into tight bedroom compartments insulated for privacy and against noise). The open plan enables the owners to entertain in the casual, large way characteristic of Texan hospitality. The subtle organization of the 26' x 40' living area into barely separated spaces for dining, conversation and hobbies (the wife paints, weaves and sculpts) keeps the large room from shapeless emptiness.

To articulate his 140' long facade, the architect raised the ceiling over the living area, thus stressing its importance. The ceiling over studio, entrance and dining room is low, penetrated only by a plastic skylight above the pool.

Says the architect: "This is a house for a family of individualists, independent yet fond of each other. Each must be able to go his own way or get together with the others at will." This disarming combination of open and closed planning, together with the many separate entrance porches, enables them to do just that.

3.



2. Open plan and closed plan in Maryland

Though less sharply zoned than the Texas house, Architect Percival Goodman's home for a family of four (husband an amateur recorder of modern music, wife a gifted painter, two small daughters) makes the point about open vs. closed planning with marked subtlety.

The open 22' x 44' living area is here subdivided not merely by free-standing elements but by dramatic changes in level as well. Yet the two-level solution is not determined by dramatic intent alone. For one thing, the sloping site is ideally suited to such a scheme; for another, the higher-level areas (including an elaborate recording booth) have a perfect view of the sunken area, and across it toward terraces and slopes to the south; and of course, changes in floor level mean changes in ceiling height—so that the living area proper is made more important by its greater height without resort to unsightly, costly breaks in ceiling (and roof) lines.

LOCATION: Pikesville, Md.

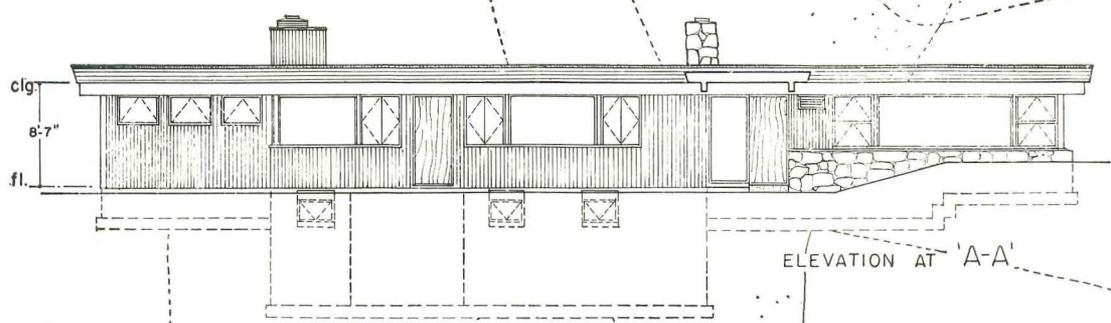
PERCIVAL GOODMAN, architect

GORN BROTHERS, INC., general contractor

Sheltered terrace seen from southwest at left, open sun terrace at right

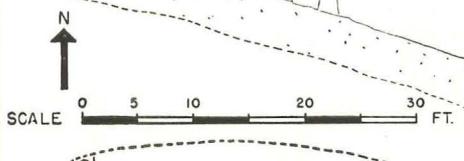
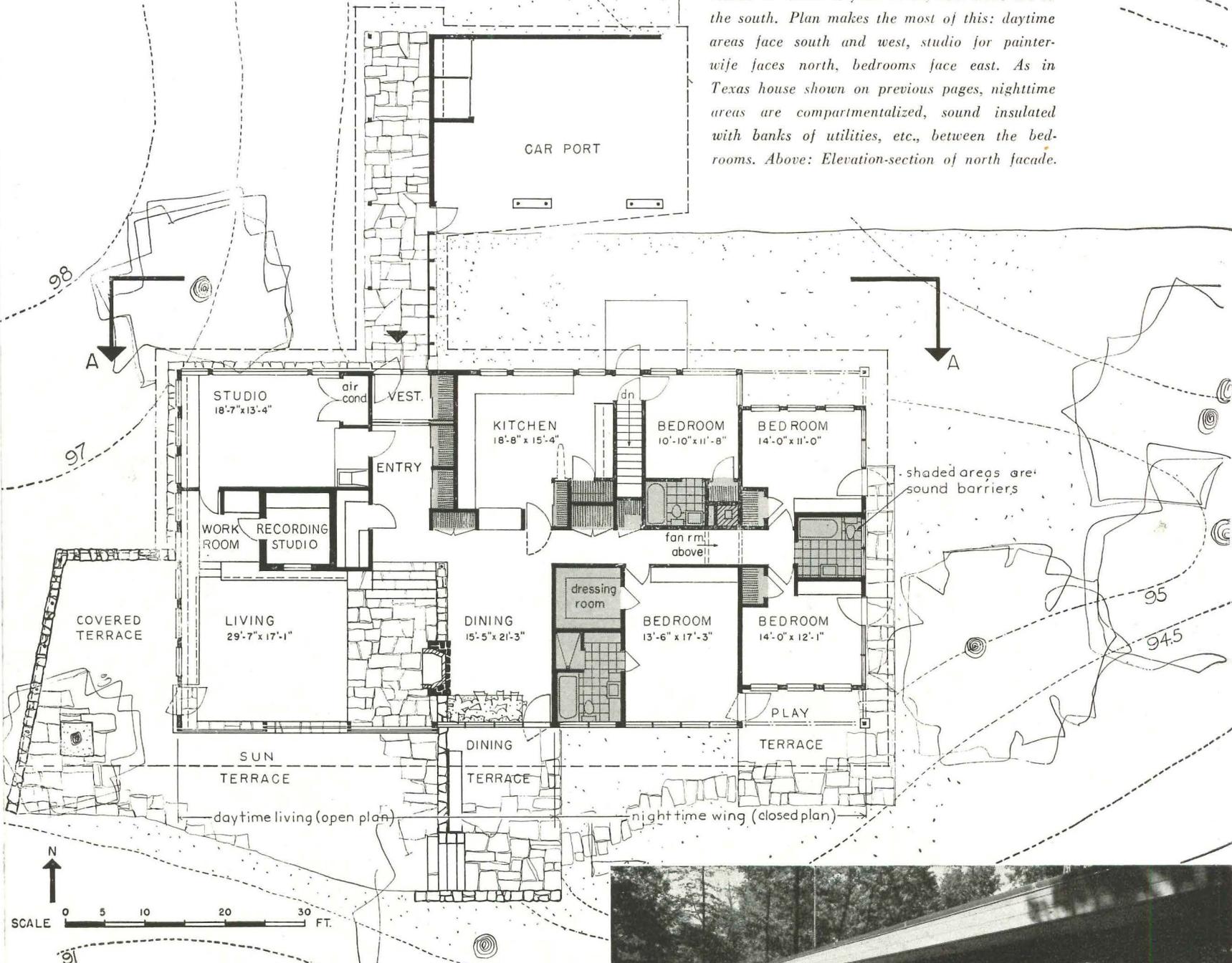
Photos: Alexandre Georges



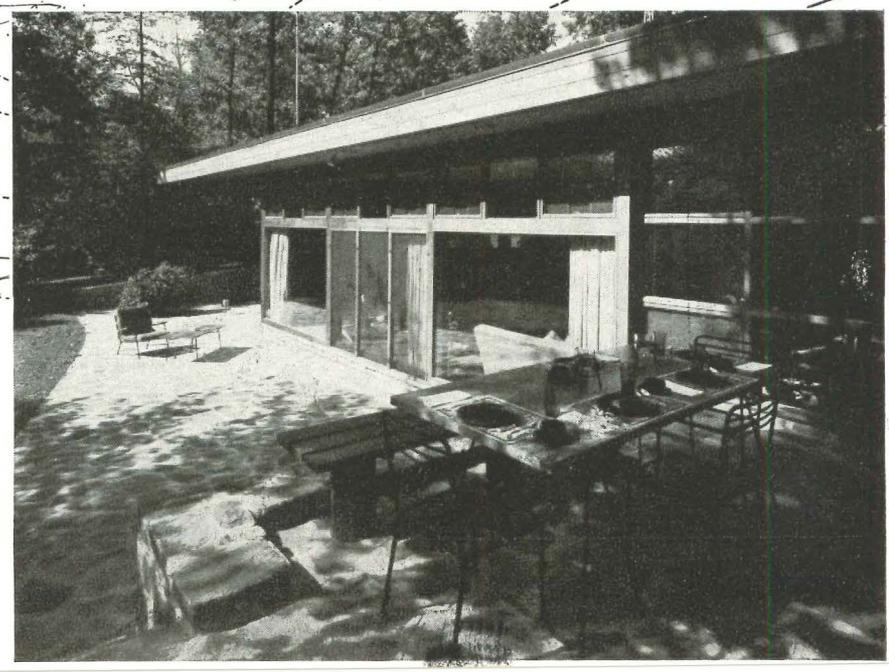


ELEVATION AT 'A-A'

Access to house is from north, best views are to the south. Plan makes the most of this: daytime areas face south and west, studio for painter-wife faces north, bedrooms face east. As in Texas house shown on previous pages, nighttime areas are compartmentalized, sound insulated with banks of utilities, etc., between the bedrooms. Above: Elevation-section of north facade.



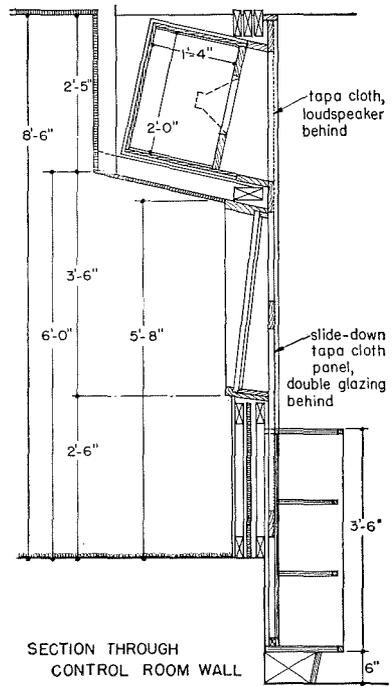
Flagstone-paved terraces and courts ring the plan: a covered terrace to the west, an open sun terrace to the south, a higher-level dining terrace farther east, a play terrace near children's rooms, a service court to the north. Right: view from the raised dining terrace looking toward the west.



FAMILY HOUSE IN MARYLAND

Two-level living area. The pictures on these two pages show that the open, "split-level" plan does three things for the living area: first, it divides the room—so that, for example, the dining area is not just a corner in an amorphous space, but a raised platform of some formality. Second, it gives the husband (whose hobby is recording music) a conning tower position in his raised recording booth (right)—so that he can watch recitals that take place in the living room below him. Third, it produces all the added interest that goes with changes in volume, changes in vistas and changes in *apparent size* that you get as you walk around (and up and down) in a room of this sort.

These pictures emphasize one aspect of the split-level plan that is sometimes overlooked: the fact that an area will look larger from above than from normal eye level (because you see more of the floor). The total result, here, is that a trip through the living area produces a succession of space sensations that no one-level scheme could hope to provide.



From entrance level, view is across sunken living room toward terraces and trees beyond





Recording booth is behind sliding panels at left, dining area is on raised platform at right

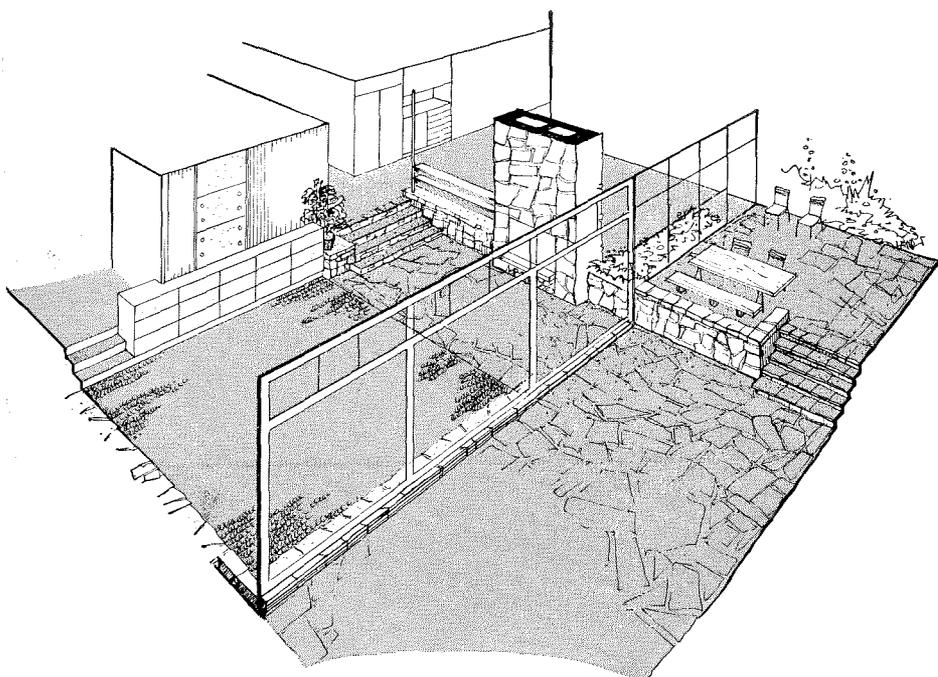
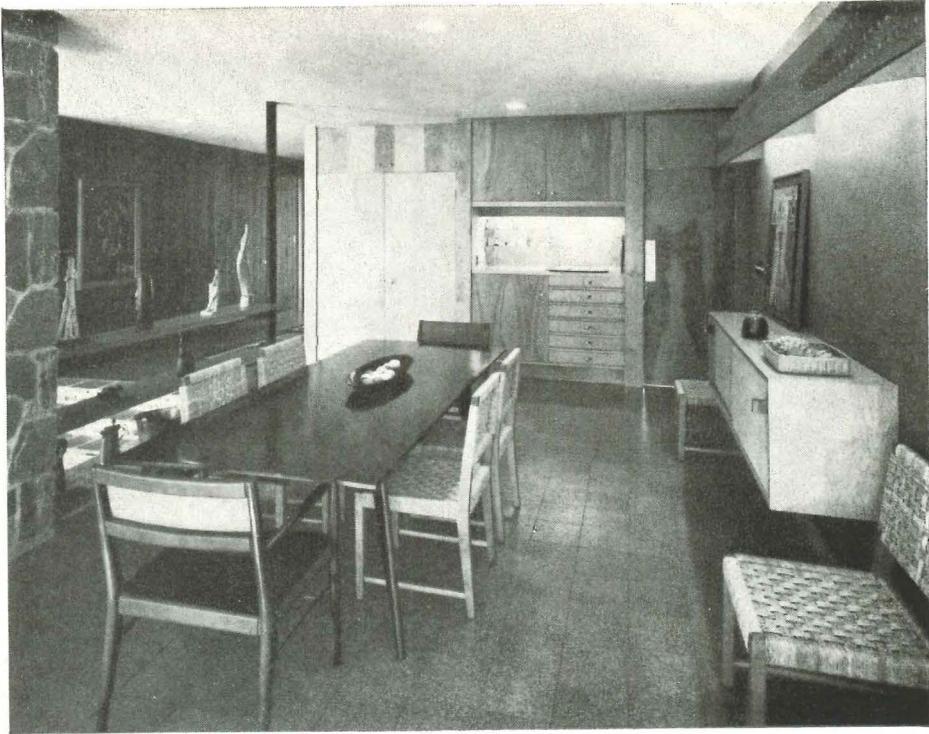


Diagram explains changes in level both in- and outdoors. Steps at left lead to recording room and studio (the only air-conditioned areas in the house). Recording room works three ways: to record recitals in living area; to record broadcasts of modern music from nearby Library of Congress; and to play back recordings to living area.

FAMILY HOUSE IN MARYLAND

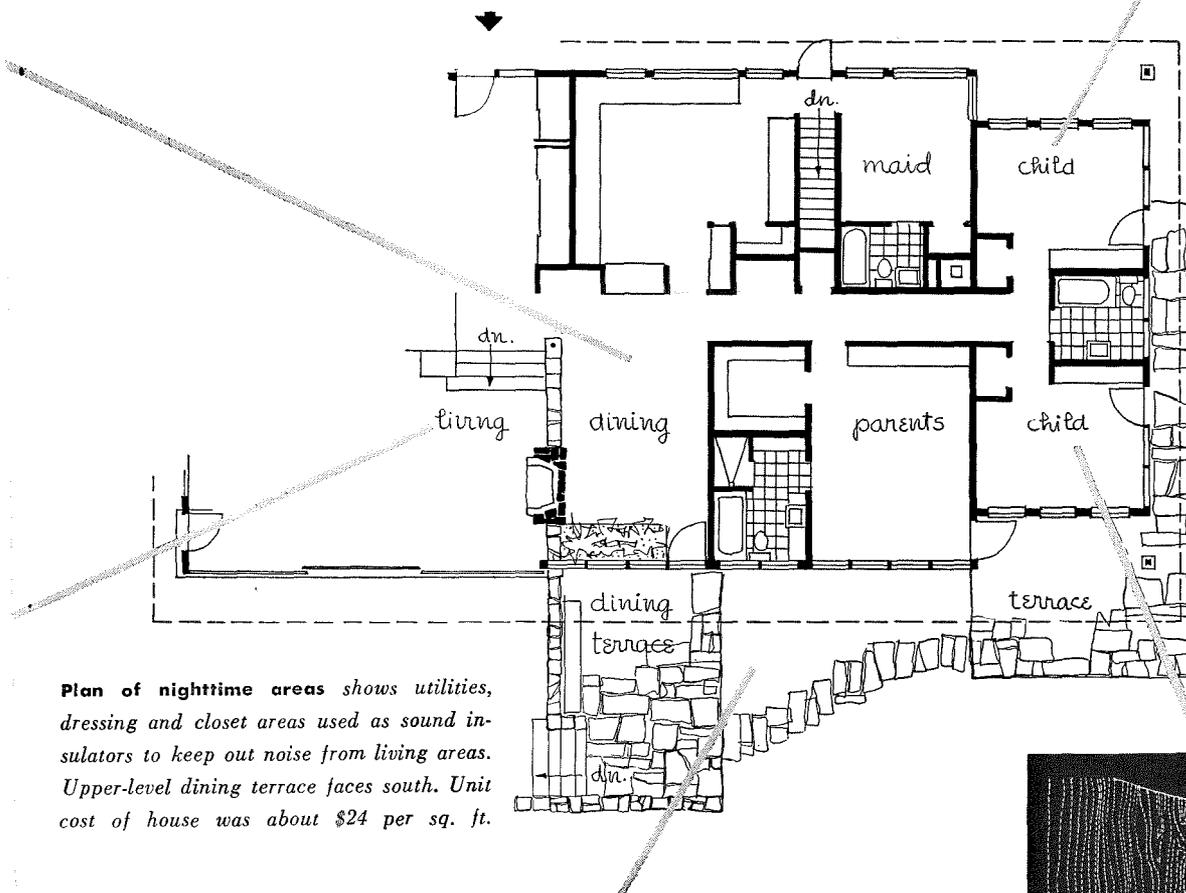
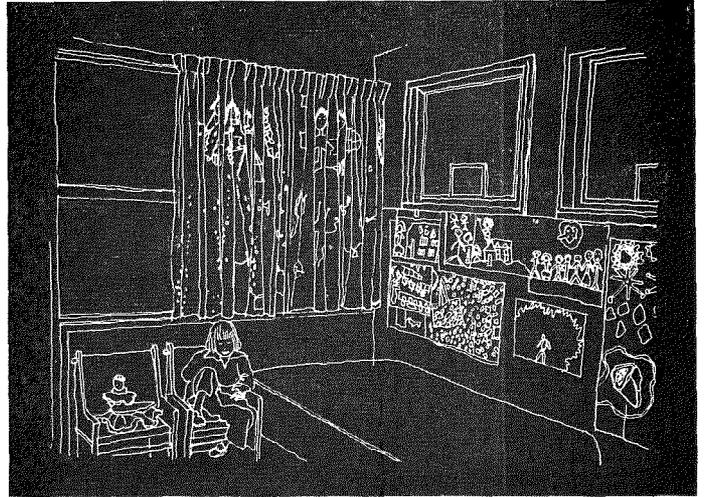
Dining area is made more formal by its raised location overlooking sunken living space. Bar counter in rear is pass-through to kitchen. To the left: entrance hall on same level as dining space.



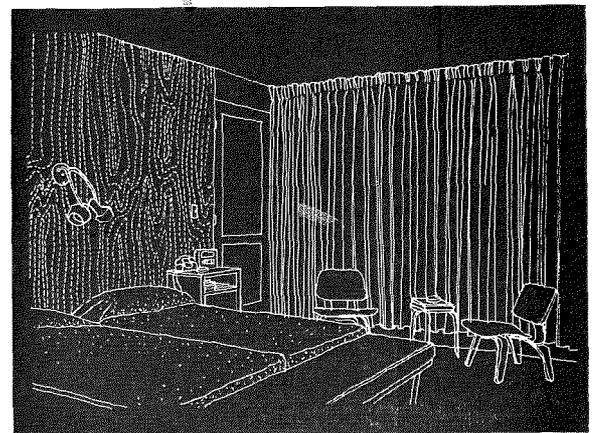
View from dining area across sunken living space. Small windows in rear, along west wall of living room, contrast pleasantly with large glass areas to the south. do not admit low west sun. A special problem throughout the interior was to find enough wall space for the wife's paintings.



Since daughters are still small, one bedroom is currently used for play only. Door from this room leads to terrace at east end of the house.



Plan of nighttime areas shows utilities, dressing and closet areas used as sound insulators to keep out noise from living areas. Upper-level dining terrace faces south. Unit cost of house was about \$24 per sq. ft.



Daughters' bedroom is in southeast corner. As children grow up, this end of house can become their private domain.



"Toward New Towns for America"

by Clarence S. Stein,
with an introduction by Lewis Mumford
The University Press of Liverpool

Reviewed by John Hancock Callender, AIA

The making of towns

Here is the documented history of two decades of pioneering by Clarence S. Stein and his associates. Their new world: the making of complete towns—garden cities.

Major experiments, beginning with Sunnyside Gardens in 1923 and ending with Baldwin Hills Village in 1941, are described, re-examined and evaluated. The story of each project from its inception down to the year 1949 is reviewed by the author and recent photographs furnish a good supplement to his appraisals and criticisms.

Heresy within a conventional gridiron

In 1924, Stein first set out to build a garden city. Sunnyside Gardens in N. Y., undertaken merely as a preliminary exercise, turned out to be an extensive project of great intrinsic interest. On a 56-acre site (about the area of ten city blocks), living quarters for 1,200 families were provided in row houses, 2- and 3-family flats and 4-story apartments. Types were mixed throughout the project to avoid an "assembly-line look." Owners and tenants were permitted in the same project and this seemed to cause no difficulties, social or administrative.

This heresy against the canons of zoning was possible only because the site was zoned for industrial use. Parks were developed in the center of each block of houses and the houses faced inward. Private deed restrictions dedicated the rear portion of each lot to community use.

Sunnyside Gardens demonstrated that even within the rigid pattern of a conventional city gridiron, dynamic and almost rustic patterns of living may be created.

A world-famous city

Radburn, N. J. was planned to be the first garden city in America. Two square miles of farmland were set aside in 1928 on which to build a city for 25,000 people. The plan, as developed by author Stein and Henry Wright, is by now world-famous. For those who came in late, its most significant design features are:

1. *Superblocks*—from 30 to 50 acres, their perimeters are indented by cul-de-sacs, with a park at their center.
2. *Specialized roads*—service lanes, collector streets, main streets and through roads are of a width and type of construction appropriate to their use—a principle generally accepted in present-day subdivision work, but a radical idea in 1928.
3. *Separation of traffic*—access to the houses by car is through cul-de-sac service lanes; pedestrians use walkways through the parks; where walks cross main streets, grade separations are used.
4. *Houses facing the park*—living and sleeping quarters front on the park; service rooms face the street—another revolutionary idea in 1928.
5. *The park*—the real heart of the town; neighborhood circulation—school, shopping and recreation—is through this area.

6. *Clarence Perry's neighborhood unit principle*—each unit has a radius of half a mile, centered on an elementary school; each has a neighborhood shopping center.

Radburn is primarily a community of free-standing single family houses with attached garages built for sale. The large park areas (essence of the Radburn plan) were inexpensive in first cost and are easily and economically maintained. Today, Radburn is a more attractive living area than is any private development built in this country before or since.

Chatham Village: 4.2% profits

Chatham Village in Pittsburgh, a 197-unit all row-house rental development, was an investment project of the Buhl Foundation and demonstrated conclusively the security of such investments. Average annual returns have been 4.2% and half of the original investment was paid off in 15 years.

With a site of 45 acres two miles from Pittsburgh's Golden Triangle, the planner used only 16 acres for housing. The remaining 29 acres form a protective greenbelt around three sides of the property.

Row houses cost about 20% less than detached houses; garages are in separate compounds. A hilly site added greatly to the architectural interest of the project and added very little to its cost.

Garden cities within city limits

The 660-unit Phipps Garden Apartments, adjacent to Sunnyside in N.Y., and the 1,400-unit Hillside Homes in the Bronx (1932-36), bring many of the amenities of the garden city into the conventional city apartment house. Both projects used a combination of 4-story walkups and 6-story elevator buildings; both made use of large, pleasantly landscaped interior courts. The walkups, Stein concludes, are preferable to the elevator buildings, being cheaper in both first cost and maintenance and providing superior livability.

Plans to make the 26-acre Hillside site a single superblock had to be abandoned after an unsuccessful two-year struggle with the city to close off the already mapped-out streets.

The New Deal's greenbelt towns

To provide employment, demonstrate the soundness of garden city principles, and to furnish low-rental housing in healthful surroundings, three greenbelt cities were built by the New Deal's Resettlement Administration headed by Rexford Guy Tugwell.

Sites of 3,000-4,000 acres were selected for four greenbelt towns: Greenbelt, Md., 13 mi. from the center of Washington; Greendale, Wis., 7 mi. from Milwaukee; Greenhills, Ohio, 5 mi. north of Cincinnati, and Greenbrook, N. J. (never built). In the two western projects, the extensive greenbelts were used for agriculture, as well as for county parks and recreation areas.

No one of the towns has ever succeeded in attracting any industry although they were planned for such expansion. Like Radburn, they have remained strictly suburban communities. But in every other respect, the greenbelt towns have proved highly successful.

Municipal costs

One of the most valuable features of Mr. Stein's book is his detailed analysis of Greenbelt, Md., particularly in terms of municipal costs as related to the size of a community. His figures indicate that a town of less than 1,000 families will suffer from high operating costs.

Luxury at 25% more

Baldwin Hills Village, a private rental project for 627 families, covers an 80-acre site and was treated as one superblock. The plan went through only after a long struggle with the City of Los Angeles which objected to the closing of (in this case) unmapped streets. FHA and RFC also had to be fought to a standstill.

The central park area is about half a mile long and no buildings are higher than two stories. The effect: one of

spaciousness and luxury. Standards of unit planning and equipment are considerably higher than for any previous project described by Mr. Stein. But the price came to only 25% more per unit than the average cost of public housing projects in Los Angeles.

In Baldwin Hills, garage compounds and visitors' parking are provided in the cul-de-sacs. Although 100% parking facilities were provided, present owners are adding more. This Los Angeles project is the only one in Mr. Stein's book which has fireplaces but, unlike Radburn and Greenbelt, it has no swimming pool.

The esthetic of row housing

In all projects except Radburn, row houses are the predominant housing type. This is partly because of the greater economy of constructing the row house as compared with the detached dwelling. But it is also done for purely esthetic reasons.

"Row houses," writes Mr. Stein, "are long enough and sufficiently varied in length to permit freedom of composition and adequate scale as part of the design of a large development. The typical American . . . small free-standing dwelling is too spotty to count as a related part of a general picture."

Economy and appearance also favor the use of garage compounds. Stein deplors "the American habit of keeping a car in the house as some European farmers keep their cattle."

Finger exercises

New towns, the author advises, should incorporate the principles of garden cities, the Radburn plan and the neighborhood unit. They should provide for safety, spaciousness, and neighborliness, closeness to nature and beauty. They should be economical—saving money, time, and energy. They must be designed for investment rather than for quick profit. Therefore, they are a proper field of activity for insurance companies, foundations, cooperatives and unions. The participation of government will be necessary.

In his introduction, Lewis Mumford notes that ". . . no one knows better than Clarence Stein that the work he has here described is but a beginning—finger exercises preparing for the symphonies that are yet to come. . . ."

In anticipation of these brave new worlds, it would perhaps be wise to point out the serious defect characteristic of all large-scale housing projects, whether public or private. Tenants of any one project are usually of one income level. It seems to this reviewer that a healthy American community should encompass the full normal range of American income groups, just as it should include the normal range of religious, racial, social and occupational groups.

Photos: © Ezra Stoller

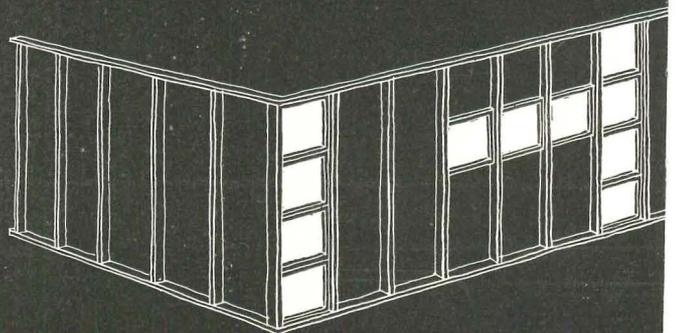
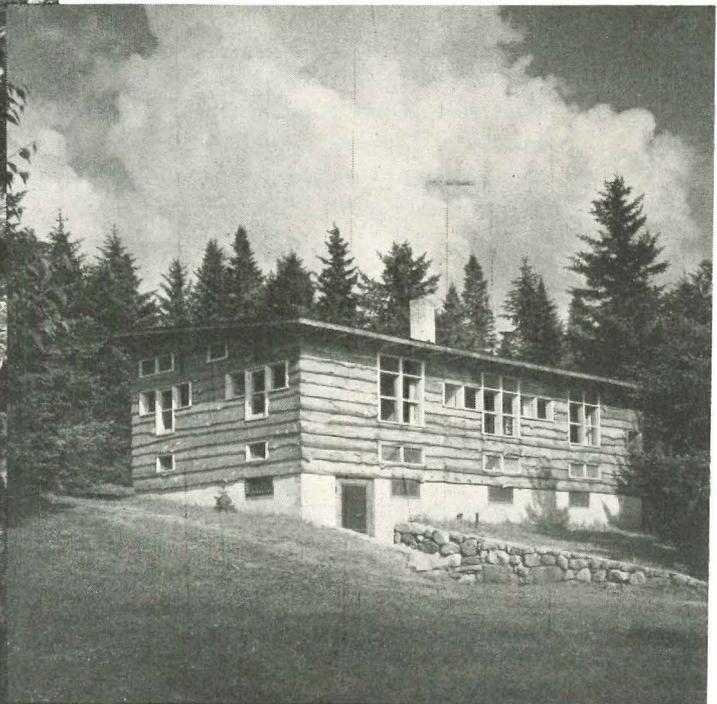
TWO WALL SYSTEMS

1. Simple frame

and trim yield decorative
checkerboard windows

LOCATION: Lake Placid, N. Y.
OWNER: North Country School
DOUGLAS HASKELL, designer
BRANCH & CALLANAN, contractor

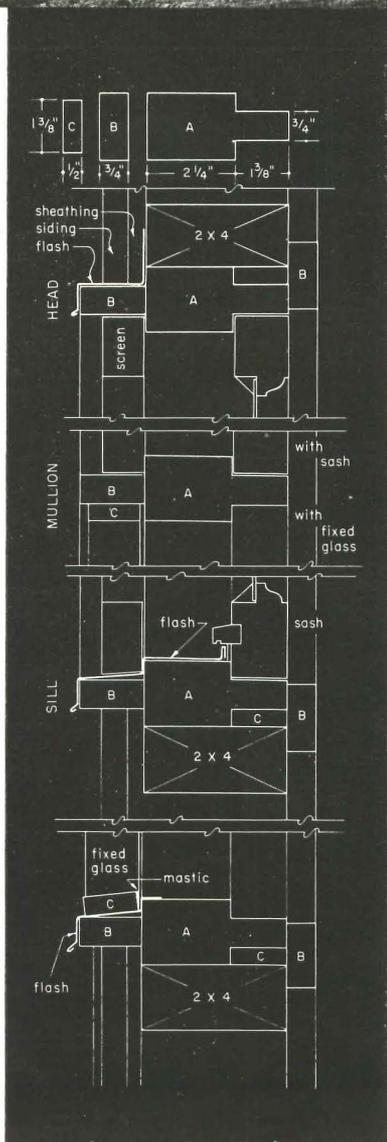
First section of double house shows how window frames slipped between studs at 2' spacing produce checkerboard pattern. Siding is "barnstorming"—wedge-shaped hemlock board whose edge retains the natural profile of the log.





Lionel Freedman

Vertical pine boarding of second section fits more snugly to thinner trim. Simpler openings still fit between studs at 2' spacing, require no cutting or complication of structural frame except at 4' corner windows needing headers.

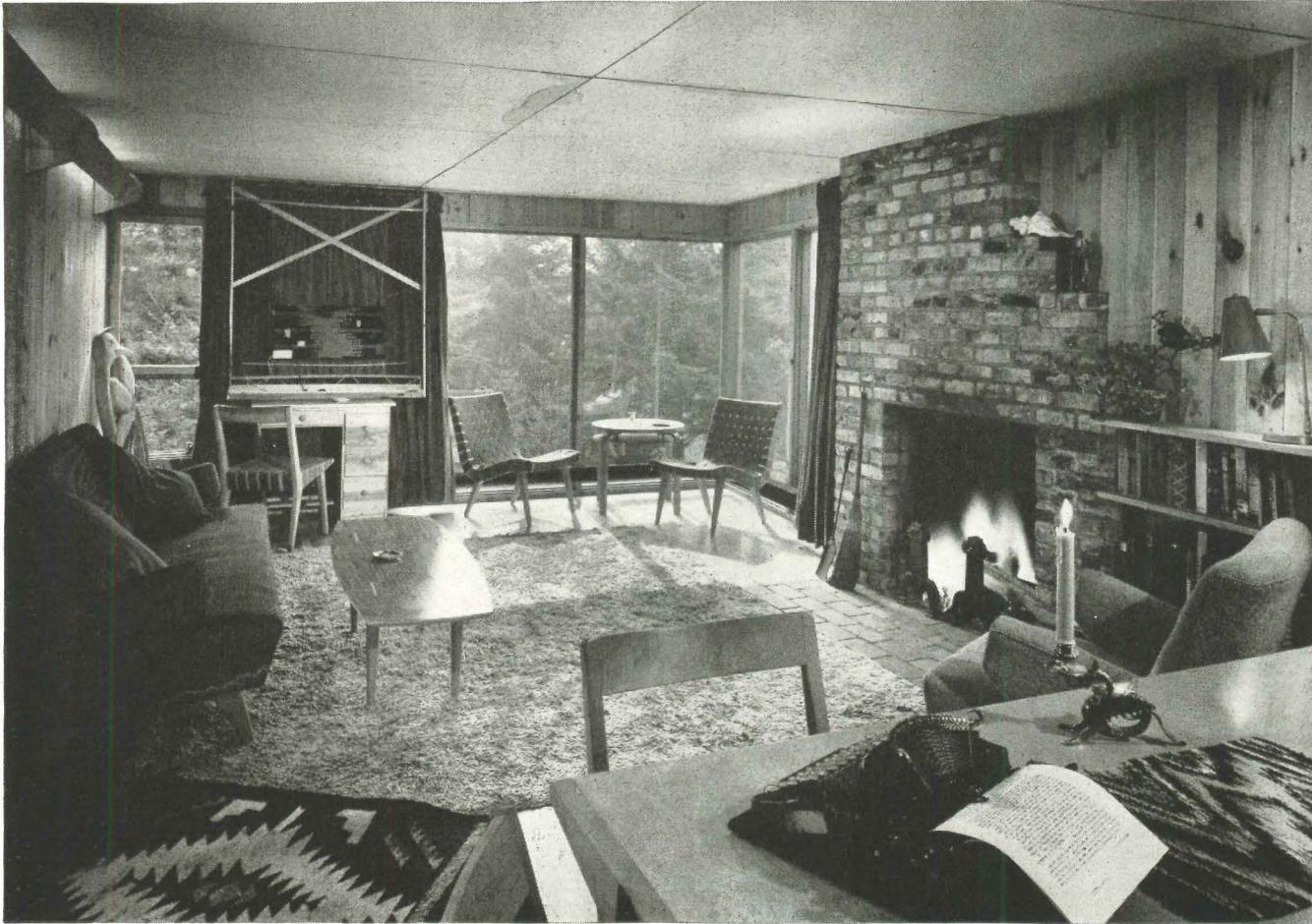


This odd little double house didn't get its checkerboard window pattern by caprice. In the first part (left) conventional framing was brought down to an ultimate simplicity hard to beat; in the second part (above), the same was done for millwork. The checkerboard freedom of design was a dividend.

The framing idea was to keep putting up standard studs every 2' all the way around the house without stopping. There were to be no special window openings and therefore no jack studs either below or above, no stools, no headers, no doublers, no complications beyond two exterior doors.

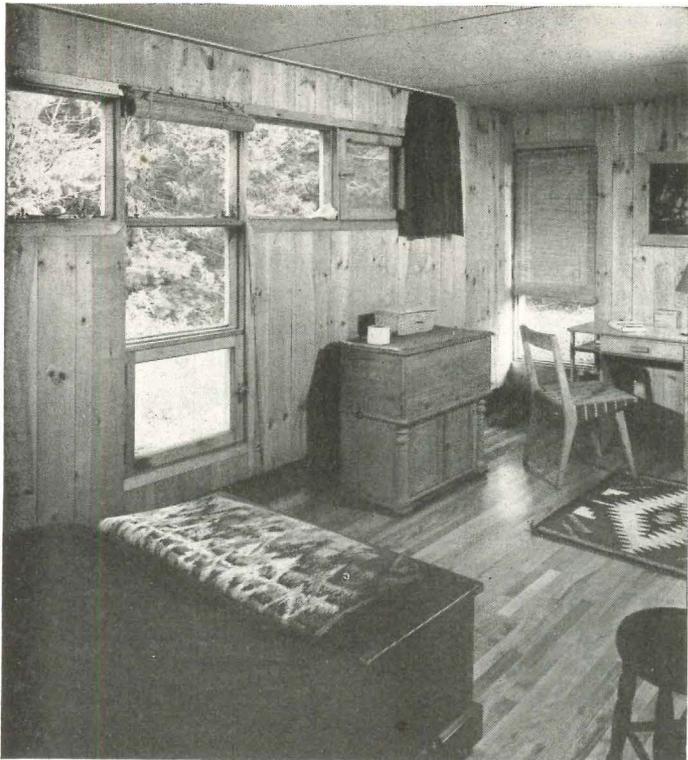
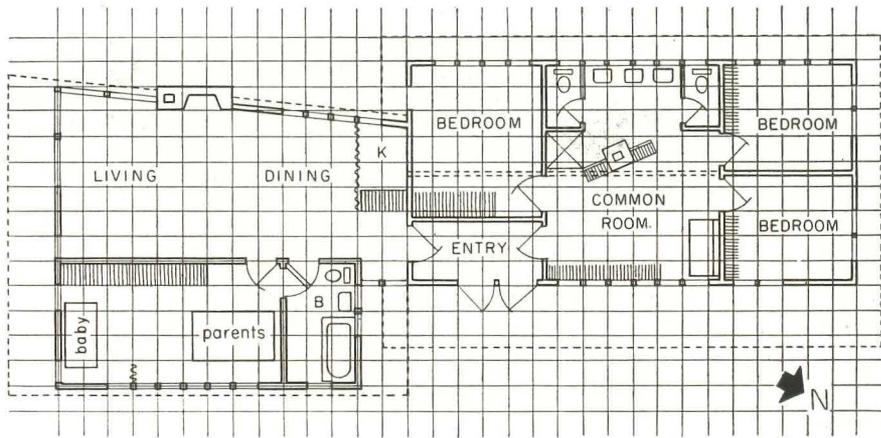
Obviously a frame could be built that way, with the simplicity of a picket fence, only if the window frames were small enough to slip in *between* the regular studs on their 2' centers, with no need for cutting. Such windows could be slipped in singly, or in vertical stacks, or in horizontal rows—any checkerboard pattern limited only by the vertical guide lines of the studs. (Of course, you must first give up the modern shibboleth of the universal big glass sheet. But then, this was a northern house, a mountain house, a children's house.) The simple idea proved to have no hidden complications.

The trim was simplified as radically in the extension built seven years later. Just three pieces: a rabbeted 2 x 4, a trim board, a stop, served every purpose in the wall, and all "millwork" except sashmaking was done on the job. In fact, the rabbeted studs served as jambs and mullions, too. This made for more elegant thinner lines but required better framing lumber and demanded that all studs be set truly plumb. Under shop conditions such an uncomplicated wall might be cheaper to build than many a panel system. The first section, built in 1942, cost \$4.45 per sq. ft.; the 1949 part, \$7.90.



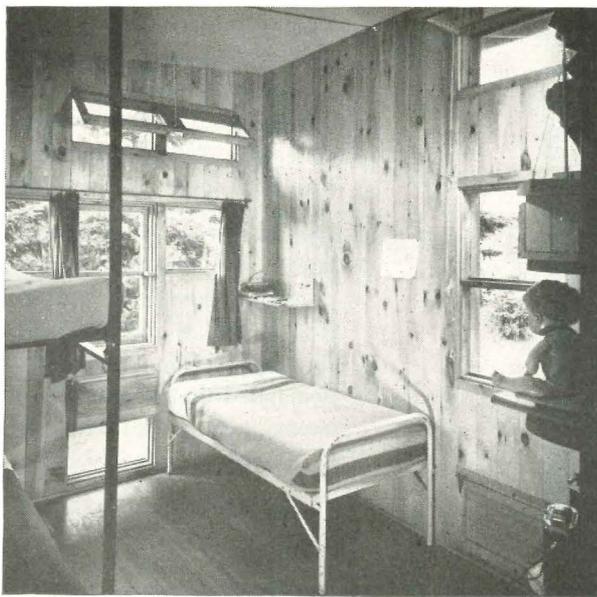
All-glass corner makes only break in 2' framing rhythm. Finned pipe in front of glass provides heat, 7' ceiling height conserves it.

Right-hand half of plan is children's dormitory for a private school, left-hand half an "apartment on the ground" for teaching couple.



High windows (left) give teachers' bedroom light and privacy; vertical "view slot" aids ventilation, too. Long bedroom yields sitting space.

Photos: (top and left) Lionel Freedman; (below) © Ezra Stoller



"Windows for mice and windows for birds" in children's bedroom are for ventilation. Fixed-glass system has one double sash for safety.

2. Modular "building blocks"

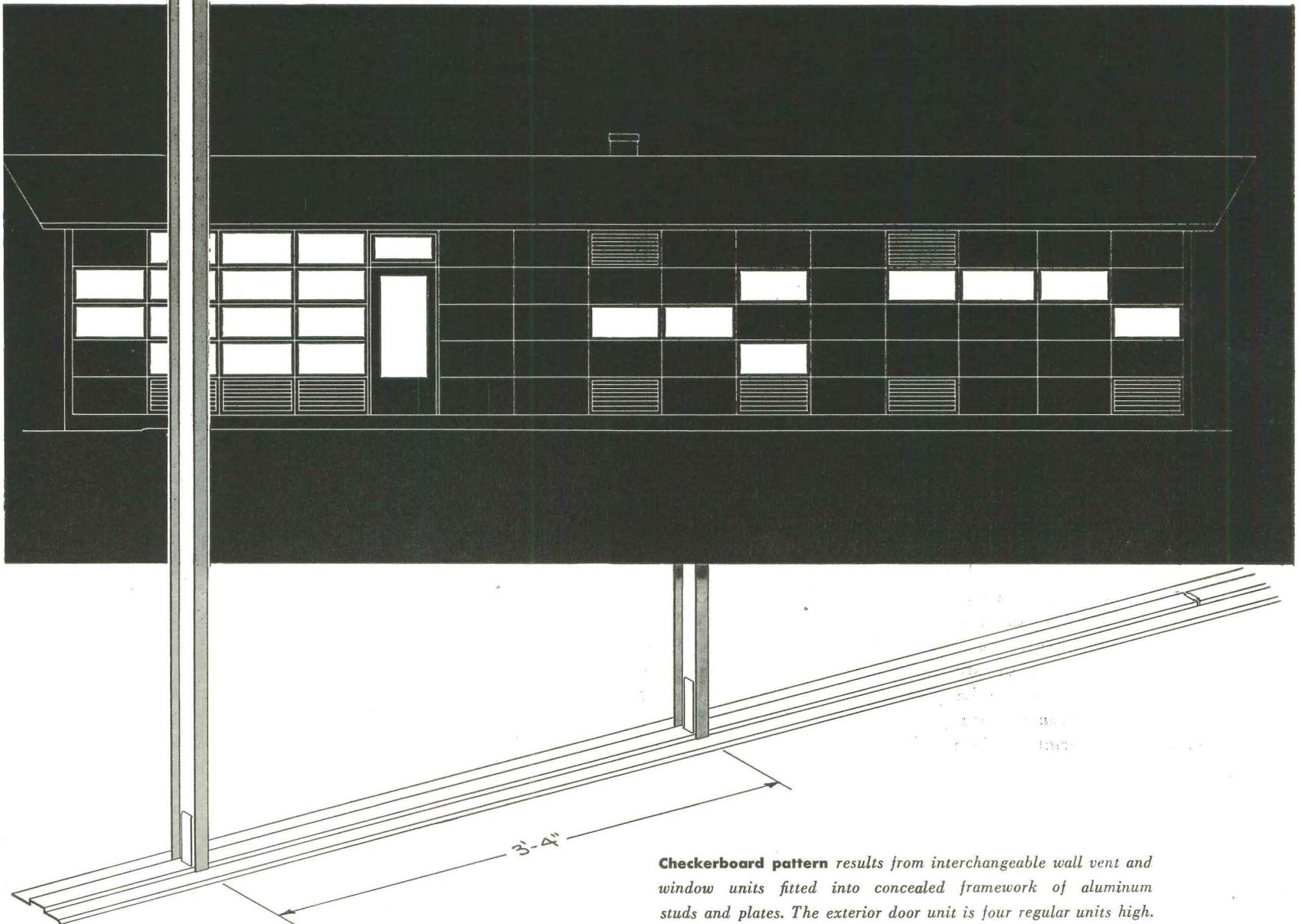
combine speed of prefabrication with flexibility of design

This checkerboard-patterned house goes several steps further than the "simple frame" system outlined on the preceding pages: it breaks down solid wall and ventilating functions, as well as windows, into standard-sized units—and then prefabricates all of them off site.

Southwest Research Institute's "Techometric* House," recently developed under HHFA contract, takes prefabrication to a unit size largely untried to date. Exterior walls are divided into a modular grid of relatively small (20" x 40", 25-lb.) panels that can be built in a local millshop, easily handled by one man, slipped into place one atop another in a special aluminum framework like children's building blocks.

LOCATION: San Antonio, Tex.
KEPPEL O. SMALL, architect
G. S. McCRELESS, builder
HONIGBLUMS, decorators

**Southwest's own catch-name; no technical significance*





Wood trusses carry roof load to exterior walls, allow freedom of planning inside. Wall units, held in position by aluminum frame, bear most of load.

It took two men only 8 hrs. to erect the four finished walls of the 1,400 sq. ft. pilot house pictured here—without any on-site measuring, cutting, nailing or wasted material. Total construction time from slab to roofing: one month.

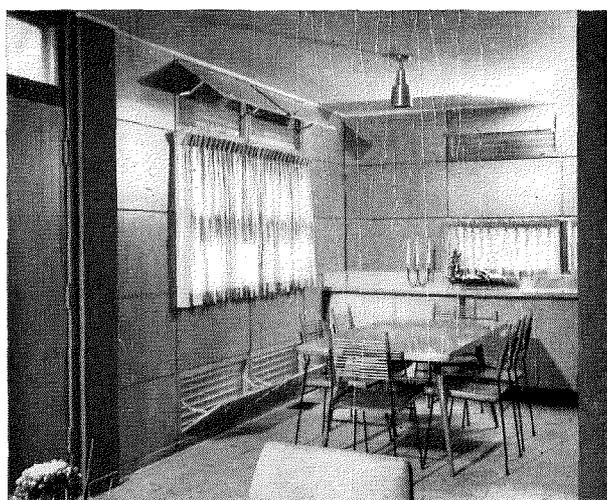
In addition to one-man handling, Southwest's units offer what few commercial prefabricators have been able to with their wide, ceiling-high panels: great flexibility of window, vent and door placement. The modular panels come as 1) solid-wall units of a plywood and glass fiber sandwich, 2) louvered ventilation units, 3) fixed glass units for light and view. Since all three types are identical in size and interchangeable, they can be assembled in an almost infinite number of patterns, depending, of course, on the requirements of the floor plan inside. Thus a group of houses built on the same floor plan could provide variety of elevations and the different panels could give close control over weather and view.

The first model, erected by San Antonio volume builder G. S. McCreless, received SWRI's Certified Quality Design seal and attracted some 10,000 visitors during the first two weeks. Basic price of the 1,400 sq. ft. house (plus 500 sq. ft. carport-storage): \$13,100. The builder's sample sales tag of \$17,850 included improved 60' x 125' lot (\$2,000), landscaping (\$150), central air conditioning (\$1,200), carpets and curtains (\$1,100) and kitchen range (\$300).

Techometric incorporates other cost-cutting items as well:

- ▶ A simple wood truss of precut and prebored fir members which can be bolted together in 45 mins. without a jig table.
- ▶ Prebuilt storage walls, since the clear-span trusses make bearing partitions unnecessary. These give greater freedom in room planning.
- ▶ Roof sheathing of 4' x 10', 3/4" plywood sheets bonded to the 40" o.c. trusses with a rubber-base adhesive, using only a few holding nails. Sheets are held in alignment by metal H-clips between horizontal joints.
- ▶ A special 11" thick "flat slab" without beams or footing, poured on stone and sand fill and reinforced against the severe ground movement of the region by a diagonal web of 1/2" steel rods 12" o.c., both top and bottom. This "floating" slab requires only perimeter forms, simplifies excavation and installation of the ground moisture barrier and has proved stronger for the money than a thinner slab with beams.

Southwest hopes to extend its research program to investigate: other panel "skin" materials such as aluminum, pressed wood, cement asbestos board; combination vent-view units to reduce cost; a more flexible panel which could become wall, vent or view unit before or after completion of the house; 1" panel frames rather than the extra-strong 2" frames used; a lightweight metal roof truss to reduce weight and bulk; more economical ceilings and interior partitions than the conventional construction used. Since the Techometric wall and truss system can be disassembled, it may prove useful for relocatable defense housing. Construction movies will be exhibited and blueprints made available to builder and fabricators.



Dining alcove shows all three units used together. Varnished natural wood panels, finished at mill, need no paint on exterior or interior. Joints are wide to accentuate decorative grid pattern.

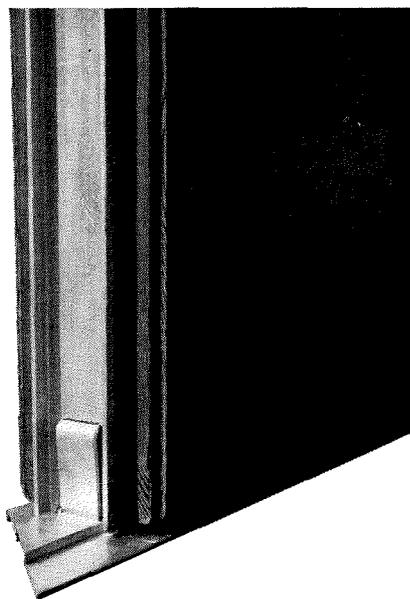
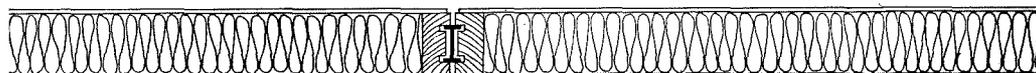
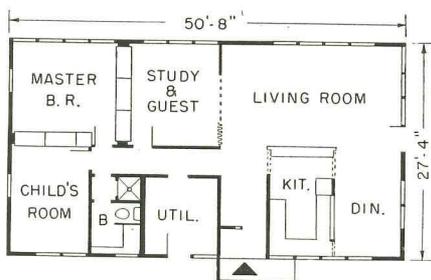
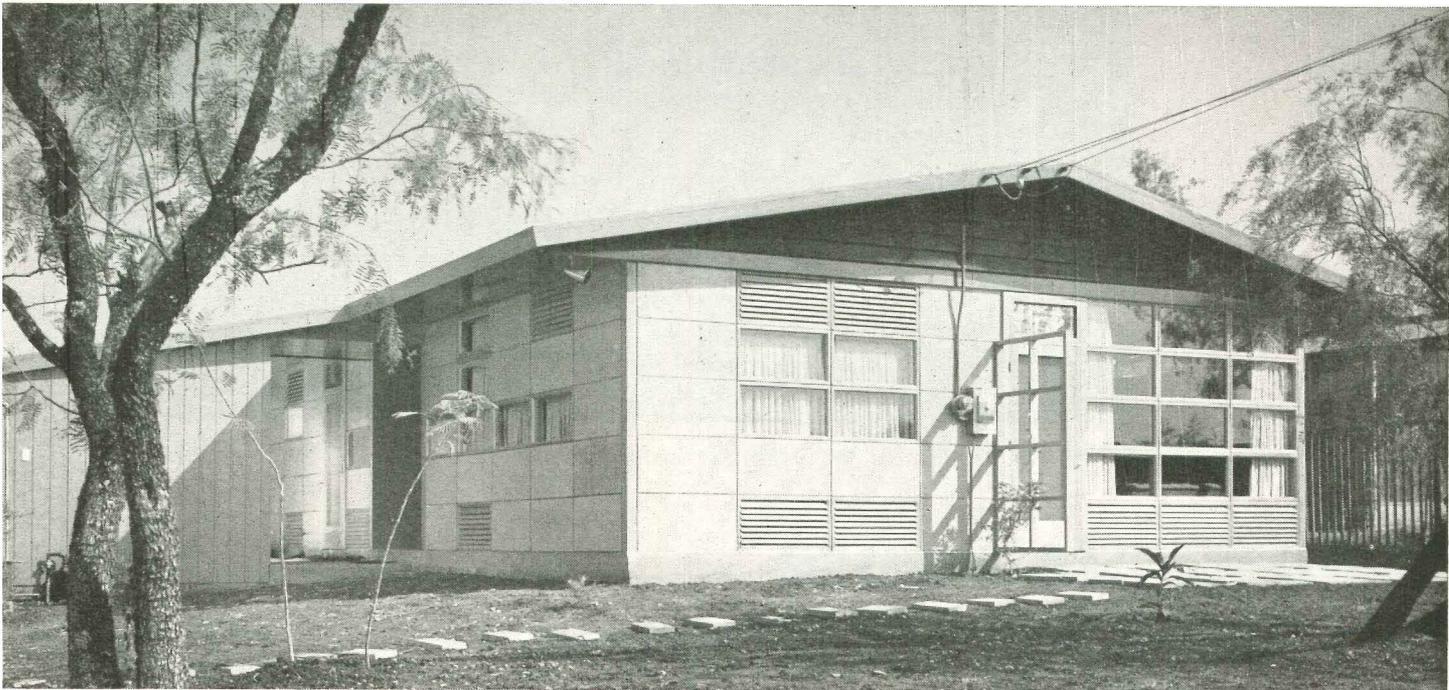


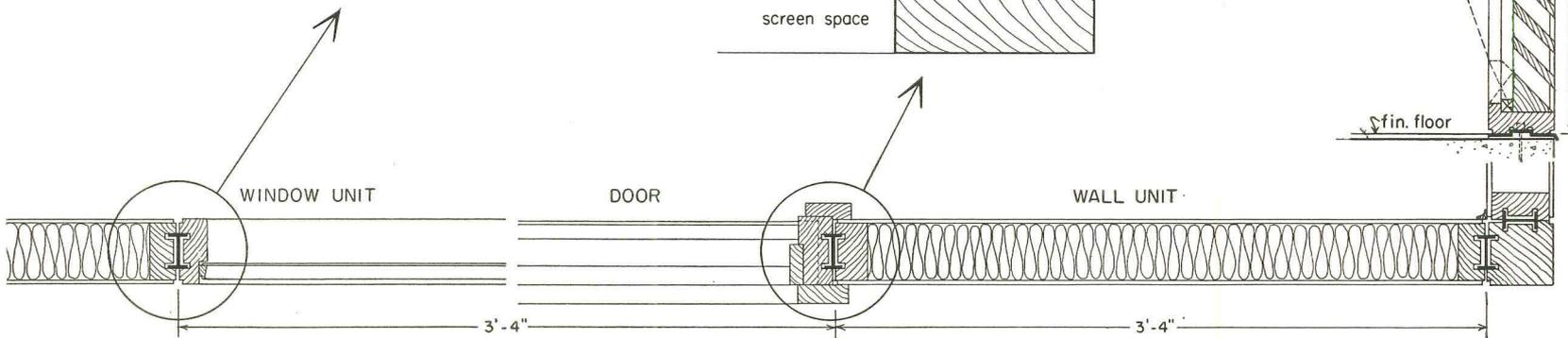
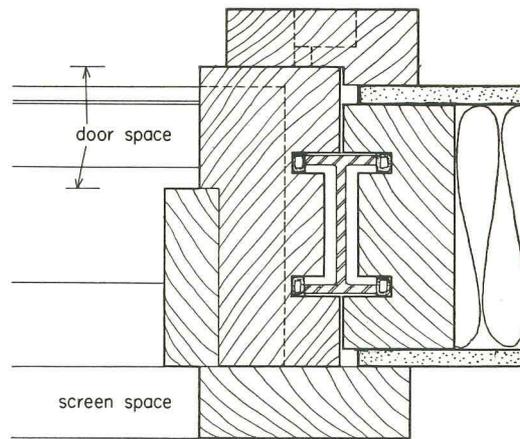
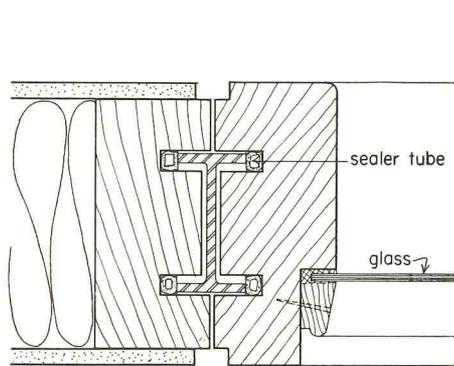
Plate is spiked to slab by gun; stud is held in groove by Z-clip and wall units set in place. Flanges of stud compress two strips of plastic tubing to make a weathertight joint.



Photos: Ulric Meisel—Dallas



Living-dining end of model house faces rear garden through big view window made simply by grouping modular window units. House and carport, left, are built on separate flat slabs without perimeter footings to combat severe earth movement of the region.



LOCATION: San Antonio, Tex.
FRANK ROBERTSON, builder

Photos: Utric Meisel—Dallas



One of five demonstration models, this house has T-plan, clerestory louver vents, fence shielding carport

The adjustable house

movable closets, retractable walls permit 72 variations on one floor plan

The flexible floor plan, long used by far-thinking architects in office and factory layout, has finally caught up with housing. A versatile design recently built in San Antonio by Merchant Builder Frank Robertson comes the closest of any so far to complete flexibility—a house that can change with the requirements of its owners virtually from cradle to grave. If it falls short of perfection under the test of actual living, its provocative concept should suggest ideas for further development by architects and builders.

Unlike most expandable houses, the "Flexabilt"* home adds (and subtracts) rooms *within* the fixed perimeter of the original house. Essentially, it is an elongated plan with a 12'-wide living space open from end to end, its service areas and plumbing ranged out of the way along one side. At any one or more of a half a dozen points this 60' "tunnel" can be sealed off into separate use areas by means of specially designed "Mobile Wall" space dividers: 1) 4'-wide, 2'-deep storage components (six per house) that can be rolled anywhere on castors and adjusted to fit snugly to floor and ceiling, 2) a set of 3'-wide wall panels that can be unstacked and pivoted into place to form a partition, 3) 4'-wide "stub" wall panels that can be set in place to span smaller gaps and 4) book-case-wall-shelf units. All can easily be installed by the owner without carpentry.

Robertson has blueprinted 72 different ways to combine space dividers, feels his system is flexible enough to meet the changing requirements of a family from early marriage to old age.

As can be seen in the floor plans opposite, a newlywed couple could arrange the layout as a two-family house, install a small kitchen appliance unit, occupy the "efficiency" apartment and

* (patent pending)

rent the larger quarters to help pay off the mortgage. After arrival of their first child, they could move into the large apartment and rent the smaller, or occupy the whole house. The plan is then divisible into one, two, three or four bedrooms as family size increases. Later, as the children marry and move away, the parents could rearrange walls and return to their efficiency apartment, turning over the main quarters to a married child or renting it for supplementary old-age income. For a widow, this has an element of insurance as a guaranteed source of steady income.

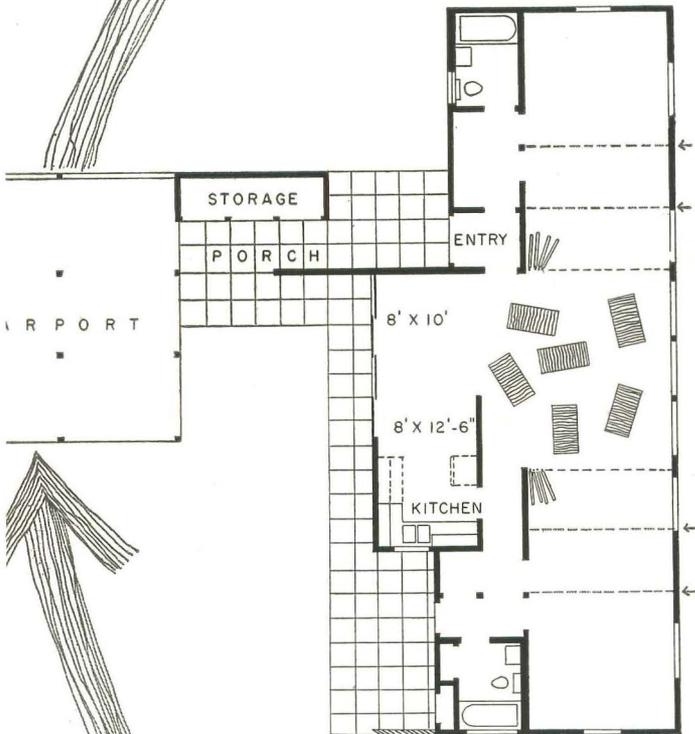
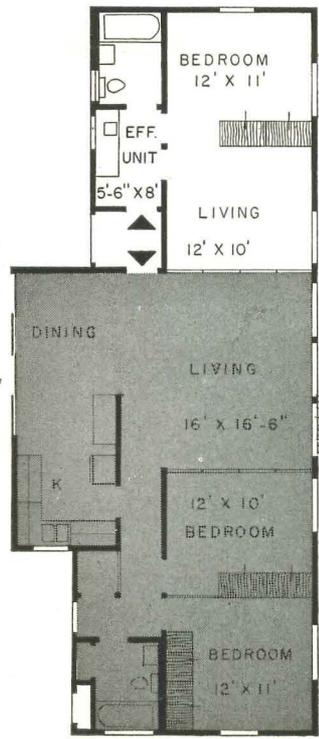
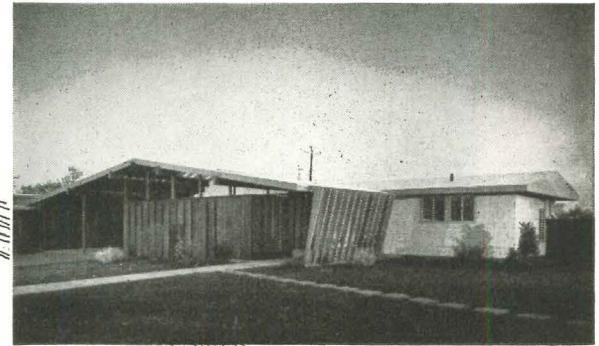
To builders, this built-in expandability means a wealth of selling points, and is certain to attract, *with only one basic house type*, a wider range of prospects—from single persons to families of varying size, to older couples.

The five demonstration homes recently opened are the realization of an idea that Robertson, a 200-house-a-year, 25-year career builder, has been developing since the end of the war. In the past he had sold many veterans their second and third houses, which seemed to him an expensive way for them to have to meet their changing family needs. And he suddenly discovered that with two of his three children married, his own house, built for a family of five, would soon be unsuitable for only his wife and himself, a situation typical of thousands of families.

First he experimented with fixed walls and movable closets, then tried out movable cabinets and folding walls in some 40 of his regular houses. Then he and his son, Frank Jr., a 24-year-old architectural engineering student, worked out the new plans for the current models, which have two baths, 1,250 sq. ft. (plus carport) and sales prices of from \$17,500 to \$19,500. Now under construction are 15 smaller homes, in the \$11,000-\$13,000 bracket, which incorporate the same principles. Robertson has applied to Washington for a patent on Flexabilt, has already licensed another San Antonio builder and plans to make his system available to other builders.

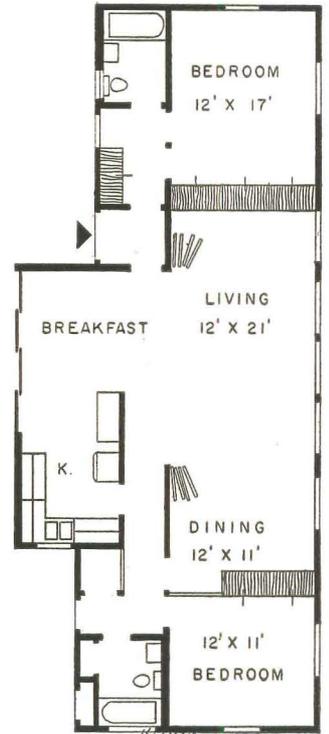
2. Young married owners could close off main part of house (gray area in plan), rent it as a one- or two-bedroom unit, and live in a one- or two-room "efficiency" apartment.

Another model has same basic plan, different exterior



THEORETICAL FAMILY CYCLE starts with 60' x 12' open living area, left. Dotted black lines are tracks for partitions; arrows point to four possible locations for storage walls. Cycle can start with any of four plans shown (representative of the 72 variations possible), move in any direction.

3. With arrival of children, entire house is occupied, arranged with one, two and then three bedrooms. One end of still-sizable living room could be used for study, dining, TV.



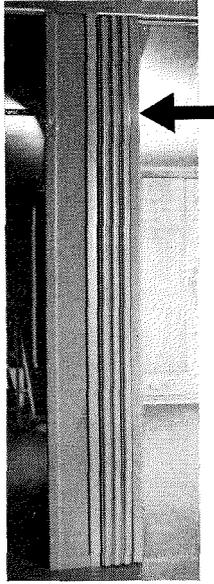
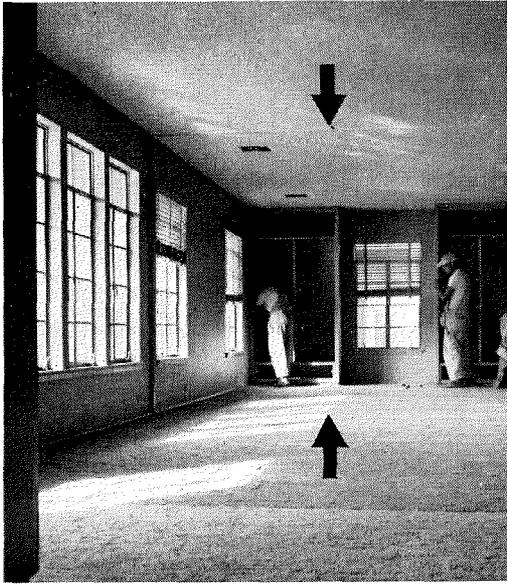
1. When owners first move into adjustable house (plan above) they have a wide choice of room arrangement, depending on their requirements. Note clerestory in picture above to give the living area light and ventilation.



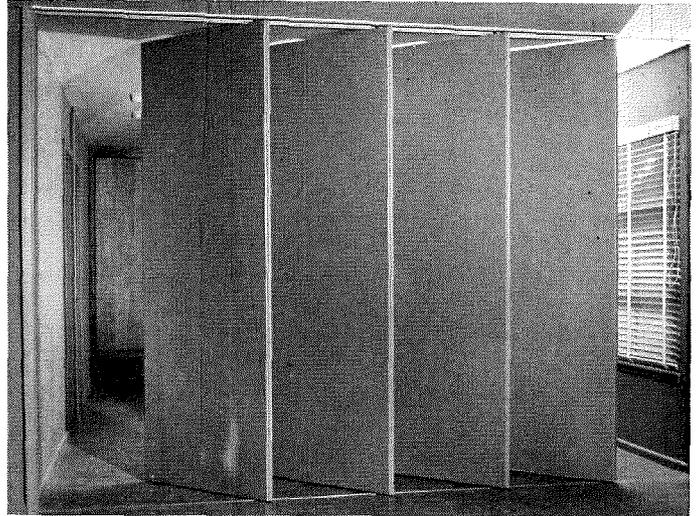
4. As family grows, a fourth bedroom is added. When children marry or move away, parents can reduce number of bedrooms (plan 3), finally return to a small apartment with rental unit (plan 2), completing cycle.

ADJUSTABLE HOUSE

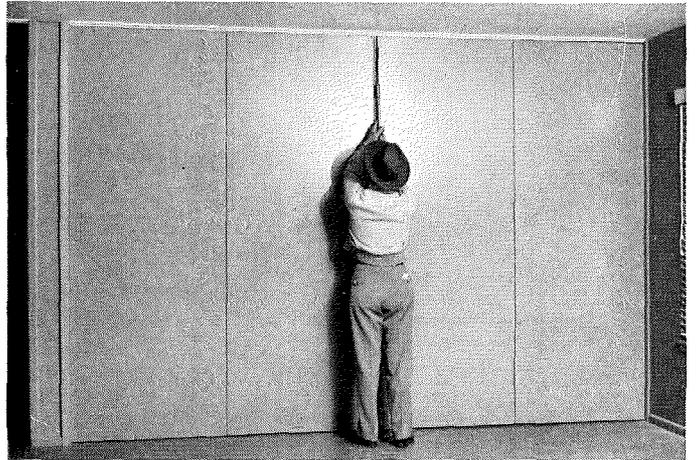
WALL PANELS



1. Arrows in main living area indicate tracks in which 3' sectional wall panels slide. At far end workmen adjust two of the houses' six mobile storage units, installed in corners of a bedroom. Small photo at right shows panels in retracted position.

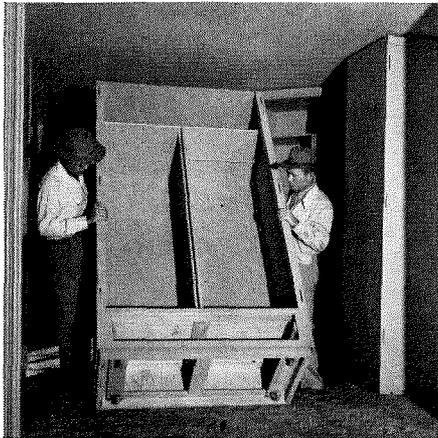


2. To create a separate room, plywood "sandwich" panels are unstacked. Each is sound-insulated, has a tongue and a groove. . .

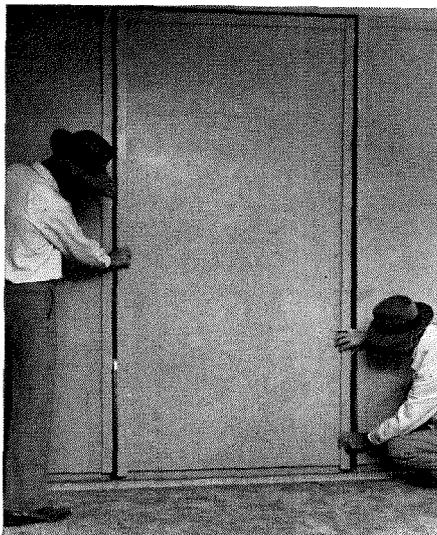


3. . . . which lock with adjoining panels. Here workman unscrews strip molding which drops out of ceiling slot to hold panels in place.

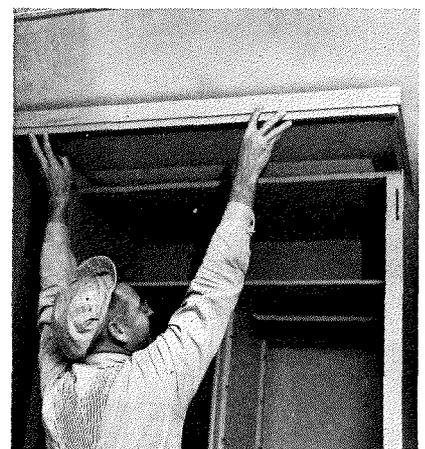
STORAGE UNITS



1. Castors inside adjustable base frame permit units to be rolled anywhere in the house.



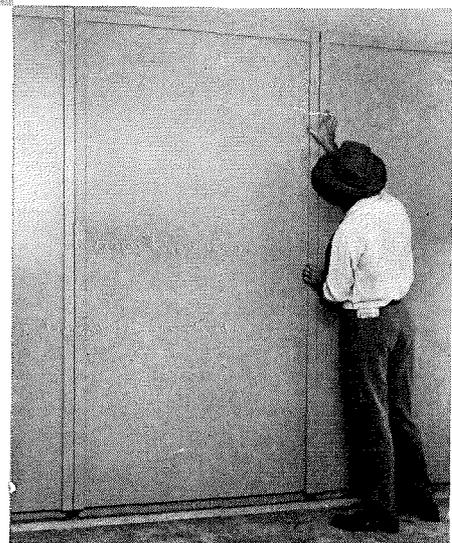
3. Third wardrobe is trundled into position, slip moldings moved laterally to close the narrow gap between units.



4. Workman inserts removable top frame which brings wardrobe nearer the ceiling.



5. Four built-in screw jacks are hand-operated to lower base, lift unit off its castors into contact with ceiling. Base-board strip on floor completes wall.



PROGRESS
SING NEEDED
TIONAL SCALE

Dwellings in Metropolitan Area Projects Featuring Split-Level Design

MODELS DISPLAY AS BUILDERS' NEW L. I. P.R.

ARCHITECTS DESIGN FOR HOUSES AT RIVERBANK
Boundary Line

MODERATE PRICES

Split-Level Homes

Split-level homes are the new design for the metropolitan area. They are built on a split-level lot, with the living level on the upper level and the sleeping level on the lower level. This design provides the best of both worlds: the spaciousness of a two-story house and the convenience of a one-story house. The split-level design is ideal for the metropolitan area, where lots are small and the need for space is great. The split-level design is also ideal for the suburban area, where the need for space is also great. The split-level design is the new design for the metropolitan area.

CELEBRITY TYPE HOUSE
SHOWN IN PARAMOUNT

Colony of 425 Houses and Shopping Center
Started on Tract of 92 Acres in Bethpage

CELEBRITY TYPE HOUSES
SPLIT-LEVEL HOMES

Bigger rooms in a Brilliant SPLIT LEVEL Design

Alden Terrace Homes
Built by Gardner & Whitcomb

THIRD SECTION Now Open
Split-level Living Meets Popular Approval

IS QUEENS, NEW YORK CITY
In a superb location overlooking LONG ISLAND SOUND and harboring ALL THE BEST PARKS

\$26,900

AVAILABLE

POST HOMES
Morace Harding Blvd. & 232nd St., Queens, N. Y. C.

WALK TO SUBWAY
SPLIT LEVEL

HARBOR ISLE ESTATES
1042 SQ. FT. OF LIVING SPACE PLUS EXPANSION ATTIC & GARAGE, SEPARATE DINING AND LIVING ROOMS, 32'4" x 13'4" BEDROOMS, 12'8" x 11'8" UTILITY REAR PORCH, HOT WATER HEAT, OIL FIRED CONVENIENT PRIVATE BEACH

\$12,490

MAYFAIR Park
MAYFAIR PARK adds a sensational SPLIT LEVEL home to its parade of "best sellers"

\$11,990

THE NEW YORK TIMES, MONDAY, OCTOBER 4, 1954

WANTED! A NEW SPLIT LEVEL

WANTED! SPACIOUS ROOMS

THE JEFFERSON

\$14,500.

CAUGHT: at Hillside Terrace

Hillside Terrace
MICKLEVILLE LONG ISLAND

Greenwood Village
\$11,990

SENSATIONAL PREVIEW

HIGHPOINT ESTATES
brilliant custom construction
midst rolling, elevated estates
in the famous beacon hill section
port washington

Split Level Custom Built Homes with Bulkheading right on the Waterfront

2,700 Down for Value. Priced from \$1,500

ALL ELECTRIC PERISH: ELECTRIC KITCHEN-LAUNDRY RANGE - REFRIGERATOR - DISHWASHER - WASHING MACHINE

FROM 1000 TO 1200 SQ. FT. LINDSEY APARTMENTS

Split-levels set the sales pace

The hottest, fastest-selling houses around New York City these days are split-levels. They have come down off the hillsides (where they belong) and are running the ranch house a stiff race on level Long Island.

To New Jersey and Long Island builders, the split-level house is clearly the best way to attract customers:

▶ "When selling got tough about a year ago, the splits pulled us out," says Charles Costanzo of Teaneck, N. J. "They revolutionized the homebuilding industry here in the East."

▶ "In five weeks recently our firm sold over 120 houses at from \$12,000 to \$14,500. Almost 70% were splits," says Long Island Builder Joseph Waner.

▶ "Last year we built one-third splits and two-thirds ranches. But this year we just reversed that and built two-thirds splits and one-third ranches," says James D'Agostino of Haworth, N. J.

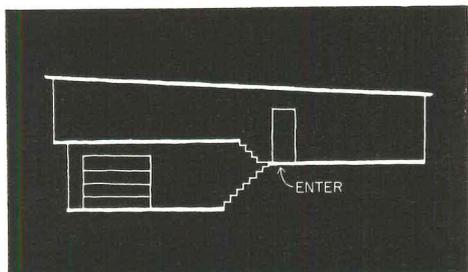
And the enthusiasm of dozens of others bursts into print every Sunday in New York City newspapers. About half the advertisements feature the story.

Revolt against the ranch?

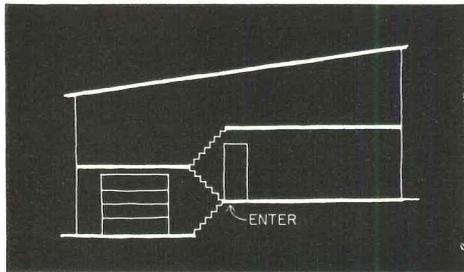
The surprising willingness of housewives to climb stairs is clearly a reversal of a national trend. After the war anything but a one-story house was a dead pigeon in a good many towns. Yet if the New York metropolitan market is any indication of a future trend, many families would rather live on two floors today.

Buyers like the split-level because it is a change. It is higher, so it looks bigger than a one-story house. In fact, it has three floors—all clearly in sight so neighbors can count them and be impressed. For many housewives the split-level is obviously a return to their idea of what a house should be: a kitchen, dining and living room on one floor with bedrooms separate from the living quarters and upstairs where no one can peek in the windows. The utility room with its furnace and the laundry room with washer and dryer are down six steps. And there is usually a finished or partly finished room suitable for many purposes: TV, study, guest bedroom, sewing room, workshop, children's play area. The garage is warm in the winter and is part of the house, not tacked on one end. The split-level seems to have all the advantages of a real two-story house but with only half a dozen short steps to climb between levels. The additional advantage of a split-level over a ranch house without basement is that it utilizes ground-level area for utilities and laundry facilities without cutting into the expensive living-level area.

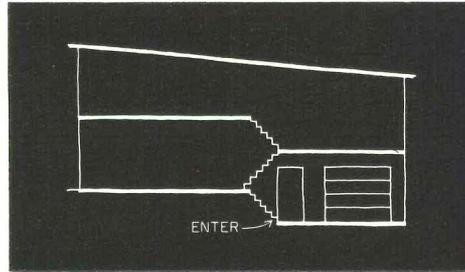
Long Island Builders Greenman & Grundt ran a preference check on three models they built in their Mayfair Park development. The split-level model was preferred by 43%, the two bedroom expansion attic by 31%, the ranch style by 26%.



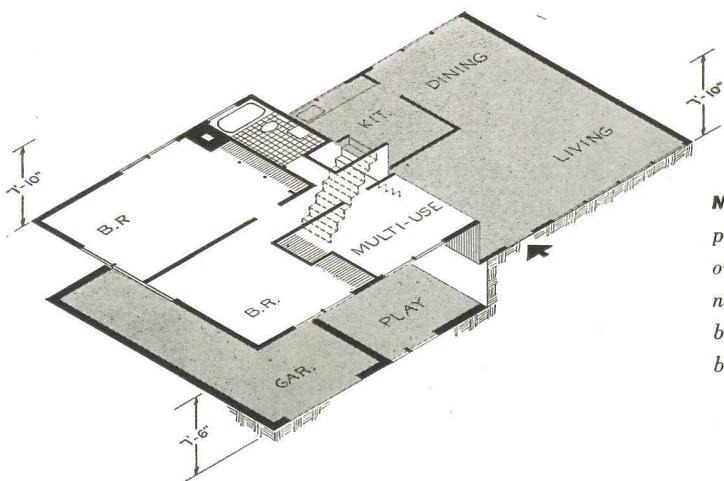
Predominant split model has entrance on the living level, bedrooms and bath over garage.



Alternate is really two two-story units side by side with six stairs connecting the levels.



Difference between this and model at left: entry is at garage instead of middle level.



Most commonly built split model in metropolitan area has three bedrooms and bath over garage, utility room and play area. Economical design is on slope with crawl space beneath living area, but today many splits are built with full basement and on flat ground.

Builders like them, too

For builders, split-levels have several attractions:

1. They sell faster than one-story houses, so sales costs are lower.
2. They are not so wide as ranch houses, crowd lots less and give a more spacious feeling to the neighborhood.
3. On sloping ground they cost little more than one-story houses.
4. They offer more chance for cross-ventilated corner bedroom.

They make most sense on sloping ground

Does the split-level make sense or is it a passing fancy like the foolish vogue for dropped living rooms in apartments?

A sound answer should start with the site. Much of the economics of split-level building depends on whether the house is to be set on level or sloping ground.

On sloping ground, the builder usually has a choice of

- a) a one-story house without a basement;
- b) a one-story house with basement or basement garage;
- c) some form of multilevel house that utilizes ground-level space.

Whether he should build a one-story house with or without basement depends largely on the cost of bulldozing or shoveling vs. the extra foundation cost. Usually a house with either ground-level or basement storage will bring a higher sales price. The hillside houses of Norwood Village, Seattle (H&H, Sept. '52, p. 88) and the Luria houses near Washington, D. C. (H&H, Nov. '52, p. 147) are excellent examples of how to turn daylight basements into valuable space. The ground-level space is comparatively inexpensive, too.

On sloping ground what are the advantages of a split-level house over a one-story house with full basement? They depend on three fundamental cost factors:

1. **Excavating.** On gentle slopes the split requires relatively little excavating. Only half of the basement is utilized since the half under the living portion is usually left as crawl space.
2. **Foundation.** Since the garage is tucked under the bedrooms in the split, less of the length of the house needs foundation than a ranch with attached garage.

3. **Roofing.** Again because the garage is under the house, the split requires less roofing. If there are roof breaks, as in most splits, the economies are not so great as they would be if the roof were continuous.

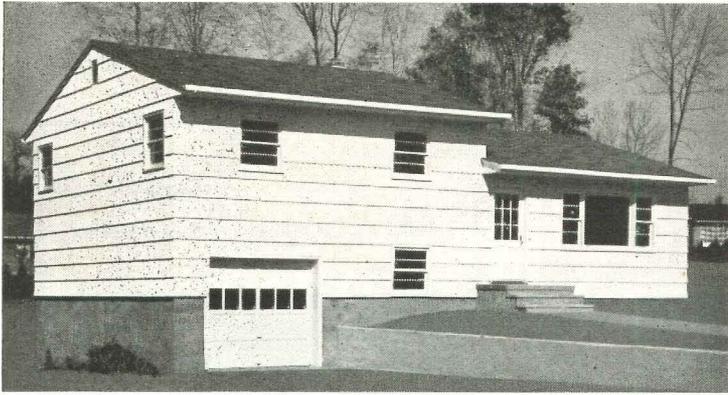
Case study in costs

One Jersey builder who puts his splits on sloping ground sells a 1,050 sq. ft. split for \$15,750. He built comparable-area, full-basement, ranch-style houses (1,050 sq. ft.) for \$17,000. Ranch-house costs were higher on these items: excavation (\$50); foundation (\$400 for five additional block courses in the full basement); framing (\$200); roofing and siding materials (\$35). Split-level costs were higher than costs on the ranch for these items: carpentry labor (\$200 because of time spent jumping from one level to another and the need for extra scaffolding for the roof break); painting (\$25 because of work on higher ladders and covering greater face area in height); heating unit (\$25 because of additional time spent in crawl space); stairs (\$30).

Builders do not agree on the costs of building split-levels. The chief reason: few have been building them long enough to make accurate cost breakdowns. Some builders will agree they get their split-level plumbing and heating costs at the same price as ranch utilities. Subcontractors are willing to average out the costs either because they do not yet know their costs or because split-level building affords them a larger volume of work.

Many Jersey builders agree that sloping terrain is the greatest single factor that can keep the costs of a split-level on a par with ranch construction. Sam Klotz, building in Mountain Lakes, finds that a split-level house costs less than one-half of 1% more than a ranch house the same size. His Locust Hill development is on gently rolling terrain.

Although Jersey and Long Island builders generally agree that a split-level costs more and is harder to build than a comparable-sized ranch house without basement, they think the split offers more for the money. Says Builder Brill of Brill-Tishman, L. I., "You're throwing in the garage at very little extra cost."



J. Leigh Sheridan



The split on level ground

On flat ground it is necessary to shift the earth around to create an artificial site for the multilevel split. That drives the cost higher, frequently as high as putting in a full basement. Long Island builders don't mind, though. They can sell the split-levels faster and often at a higher price. One builder sells a ranch house for \$13,500, a split for \$15,500, both 1,000 sq. ft. The ranch has an attached garage and a full basement; the split, crawl space beneath the living area. The split costs \$1,200 more to build. Foundation is \$85 higher because of walls to retain crawl-space earth and poured concrete wall for the utility room. Framing is \$300 higher for the built-up frame area over the garage and the extra room at ground level. Roofing and siding are \$100 extra because the split has gutters or leaders; the ranch has not; extra flashing is needed for the split. Carpentry labor is higher on the split because of roof breaks. Painting is \$50 more. Plumbing and heating are \$300 higher for splits.

One Long Island building firm, Greenman & Grundt, is able to build split-levels and one-story ranches for the same figure—\$11,990—but the ranch has no garage. Builder Greenman says rough and finish lumber and carpentry costs are higher on the split-level because of roof breaks and stairs.

If, as many architects say, the split-level does not make sense on level ground, the builders can always retort: they may not make sense, but they make us money.

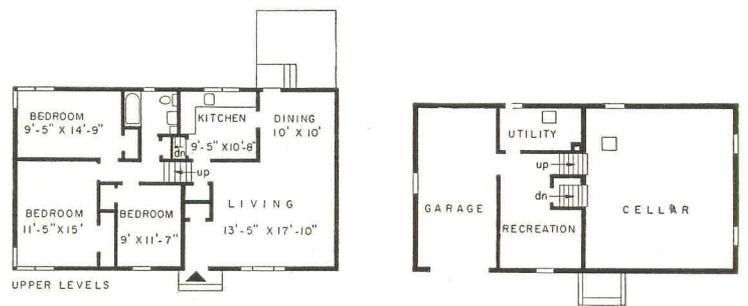
Design is a stumbling block

"The split doesn't lend itself to good design," admits an architect who designed several. "But it's a challenge. This can be said in its favor: it's not so top-heavy as a boxy two story."

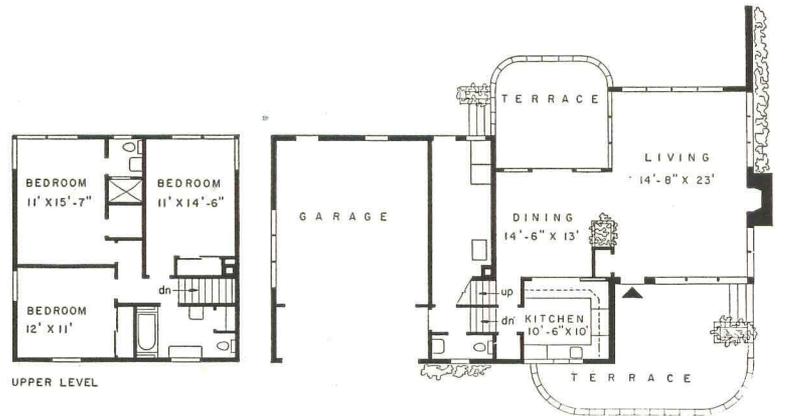
One harsh critic believes there are more bad split-level designs right now because there are too few good designs to copy.

That better design is possible is illustrated by the work of Olindo Grossi (see p. 120). For another excellent split-level design, see the Percival Goodman house (p. 100).

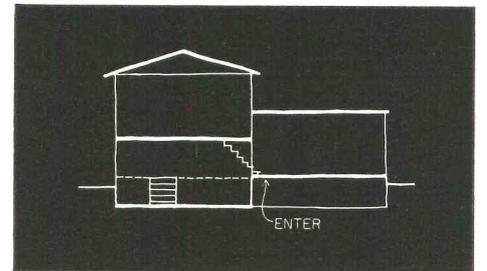
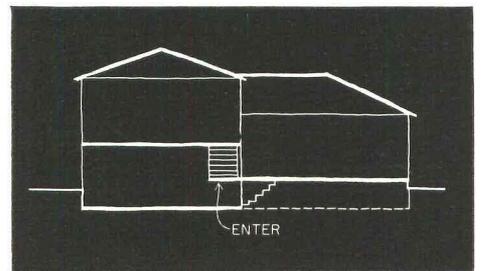
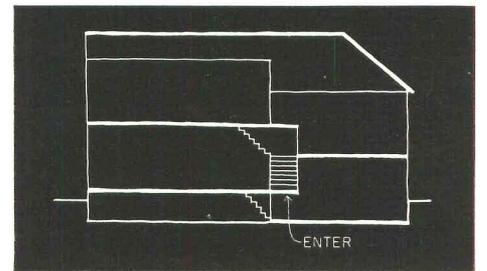
"I don't know of a house that is built that uses the cubage as well as the split-level," says Architect Rudolph Matern.



Gently rolling land of Mountain Lakes, N. J. enables Builder Sam Klotz to build split at almost same cost as comparable ranch house.



Living room opens to ocean breeze in rear of Stoeco Corp.'s house in Ocean City, N. J.



Prototypes of today's split-levels are these designs built on Chicago's North Shore in 1940. ARCHITECTURAL FORUM wrote at the time: "Modern houses sell a subdivision, feature three levels, built-in sales appeal."

Architect and merchant builder collaborate

To get buyers used to contemporary design in split-level houses, Builder Philip Kruvant of Cedar Grove, N. J. did some simple, logical things:

He hired an architect, Olindo Grossi, chairman of the department of architecture, Pratt Institute, Brooklyn, who drew up three plans, traditional, contemporary and a more modern.

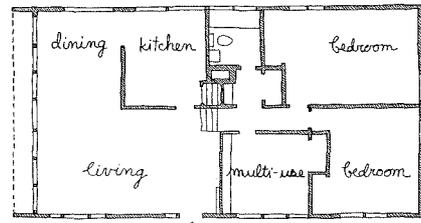
By choosing the less extreme of the two modern designs (see photo), Kruvant figured to stay one jump ahead of the field in split-level building. He did. A second section of his 110-house development (36 houses) had a modern-to-conventional split-level ratio of 3:2. They sold so well he decided to build Grossi's more advanced design. Kruvant has just completed the shed-roof design and believes it will not pose any sales problem. He thinks people are now used to the contemporary design.

A 70-year-old couple who looked at his houses surprised him. "Because of their age, I thought they would want the more conventional split-level. But they wouldn't have any part of it. They liked the modern one and bought it."

For builders afraid of modern design, Builder Kruvant has some comforting facts. It took him 200 man-hours to get his split-levels ready for roofing and finishing (from foundation through roughing in). When he started the first Grossi-designed house it took 250 man-hours to get the same amount of work done. But Kruvant shaved that time back to 200 hrs. in short order. "It was just a matter of getting my work force familiar with the design."

He can get more money for his modern house than for the conventional model: sales price on the conventional model is \$16,700; for the modern, \$18,200. Part of the increased price is accounted for by the increased glass area, more mirrors, etc.

The modern house was cooler than the conventional model last summer because of vaulted ceilings in the living-dining area and light-colored crystal chips spread on the low-pitched roof to reflect the sun's heat.

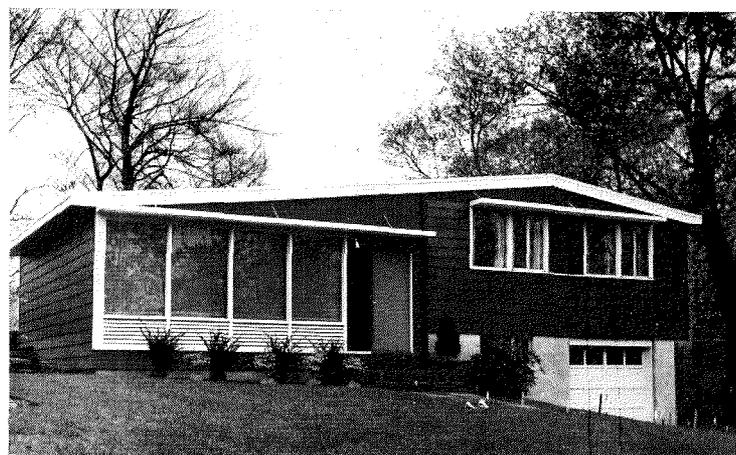


Sales success of earlier Grossi model (below) prompted Builder Kruvant to try more advanced design (above). Shed roof eliminates roof break, flashing, complicated carpentry. Model shown is best where lot affords privacy at one end or is at end of street. Alternate design has windows in front.

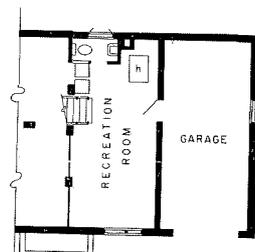
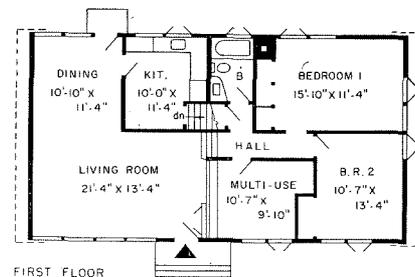
Photos: Town Advertising

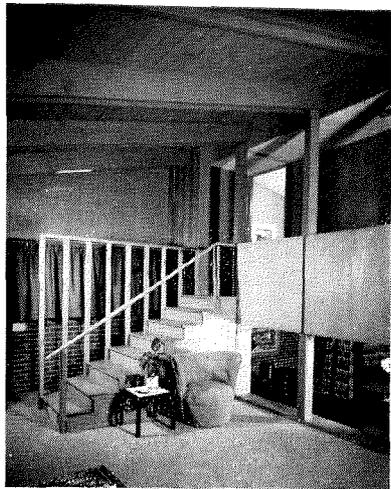
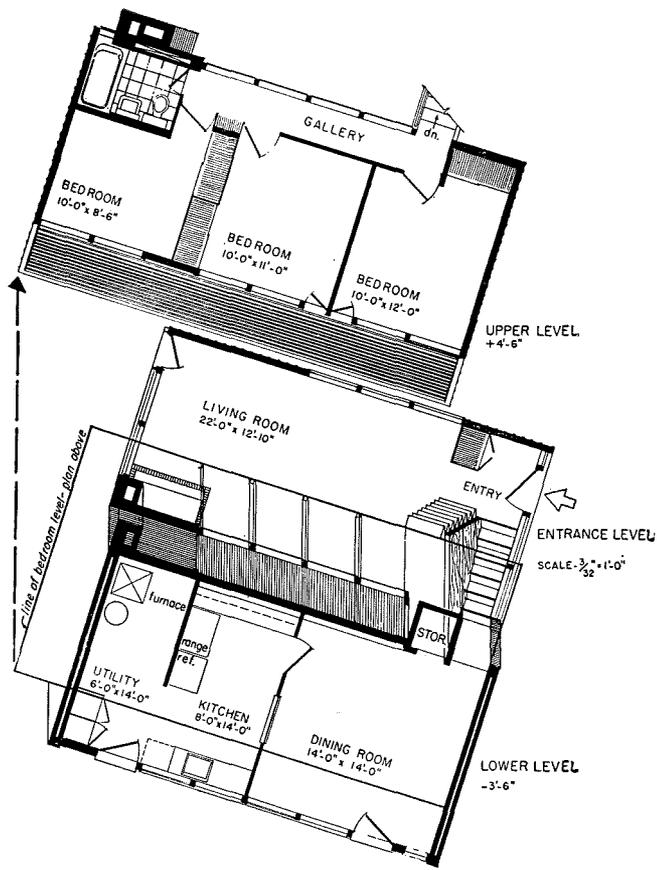


Continuity of space ties living area to multipurpose room at higher level. Coat closet near entry is same height as bookshelves facing into higher-level room. Living room has more glass area than most merchant-built splits. Louvered windows are stationary; panels behind them are movable for venting.

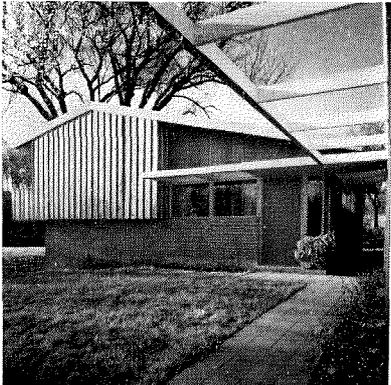
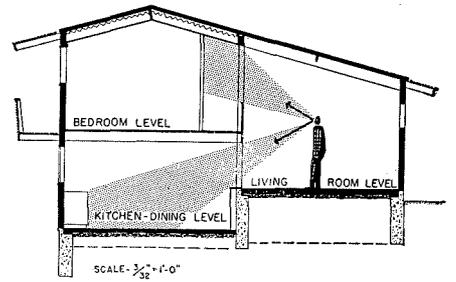


Cost-saving feature, cantilevered end, shrinks foundation perimeter





Handsome living room measures 13' x 22', has 13' ceiling and a gallery.

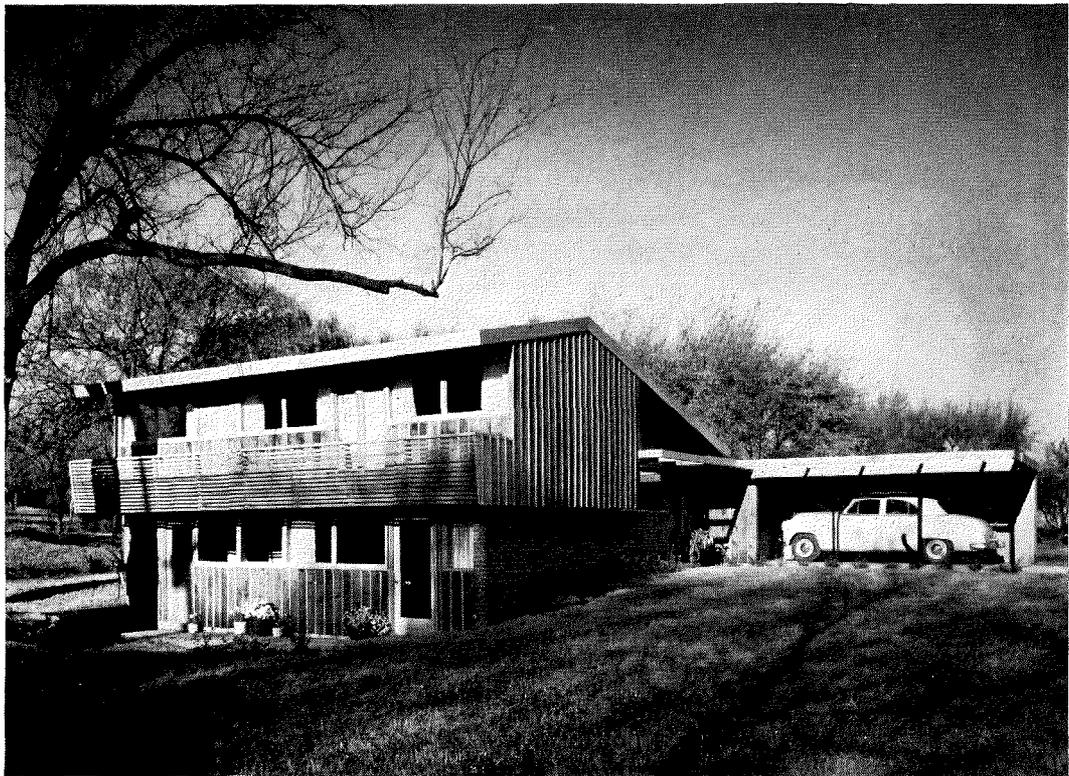


Entry to house is from intermediate level. Photo taken alongside garage.



Living room is lit from high small windows on side, huge glass wall opposite the entry.

Photos: Hedrich Blessing



The current success of split-level building is by no means new to builders. This split-level house was built by Don Drummond in Prairie Village, Mo. early in 1950. It met with instant success, no small part of which was due to Architect Dave Runnells' effective use of basement and roof to overcome the "minimum" feeling of the small house. Three-bedroom house sold for \$15,100. Because the first nine houses sold like hotcakes, Builder Drummond ventured 20 more, some with butterfly roofs.

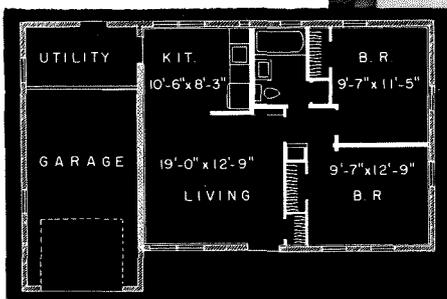
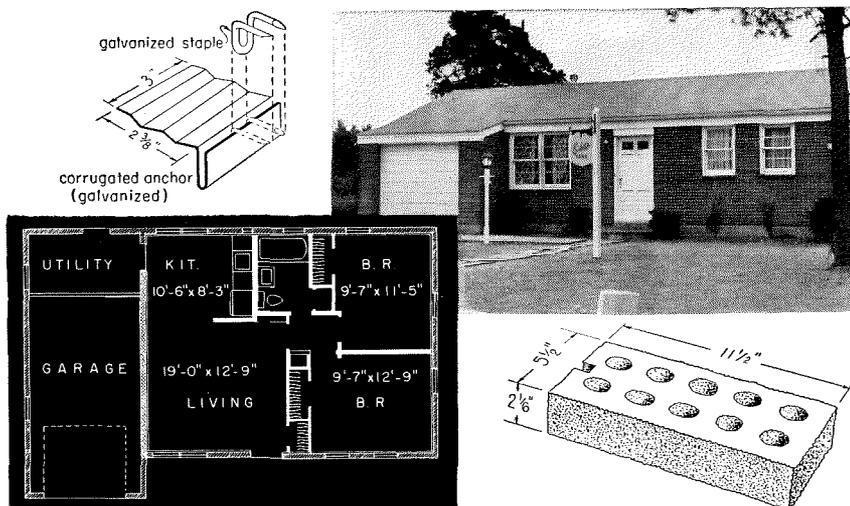
Solidly based in the gently sloping hillside, the house is entered through door close to carport. Living room rises full height to the sloping roof. A short flight of stairs, close to the entrance, leads to ground-floor dining room, kitchen and utility room. A short flight leads to bedrooms, which, though small, have an adjoining gallery. House benefits particularly from foundation savings of the basement with two windows, two doors to add utility.

Brick house at \$7,790—new oversize brick speeds up building time, cuts down labor costs

The largest all-masonry, low-priced housing group in the country is now being built at Bay Shore, Long Island. Basis of the project is the new, oversize SCR brick, which speeds construction and eliminates the customary masonry-block backing.

The new brick is so much faster to use that even with bricklayers getting \$3.55 per hr., as they do on this job, builders can deliver a 972 sq. ft. house (with garage) on a half-acre lot for \$7,790, including all closing costs.

Buyers liked the houses (right) so well that Builders Edward W. Doyle and Harold F. Goetz sold nearly 150 in two week ends and are so encouraged they may build hundreds more. Sales costs were \$10 per house instead of an estimated \$50. Introduced last spring, the new brick is being used by about 60 US builders who may build some 5,000 houses with it next year.



So fast were the 17 bricklayers that the builders had to buy this Clark fork lift to speed up brick handling. It cost \$3,000 secondhand, but saves \$40 per day by eliminating two men. One man now unloads truck and distributes loaded pallets. House has 3,229 bricks plus 244 cinder blocks.



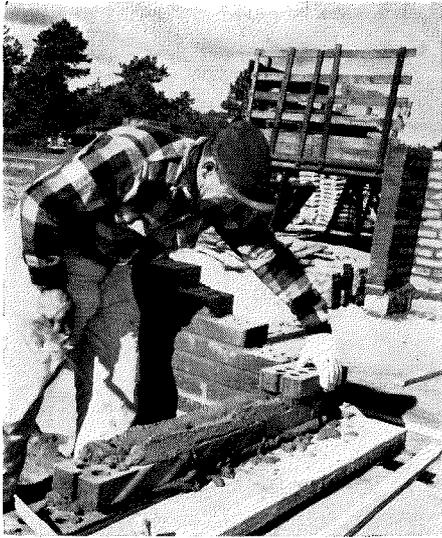
Great economy comes from 6" thick through-the-wall bricks which are not backed up by masonry block as is customary in all-masonry house construction. Furring strips are fastened to wall to which are nailed dry-wall panels backed with reflective insulation. Bricklayer's helper gets \$2.27 hourly base pay.



Nearly two houses per day are now built by 17 bricklayers who use so much mortar that one man spends all his time at this mixer. Fork lift also moves this equipment from house to house. Cement and sand cost \$45 per house, bricks \$105 per M plus \$40 delivery. Job is fully unionized.



Masonry labor on each of first six houses cost \$421 including block partitions. Masonry materials cost \$379. Each man lays approximately 350 bricks in a seven-hour day, which is considerably less than on some jobs in the Middle West where men frequently lay as many as 500 to 700 bricks in an eight-hour day.



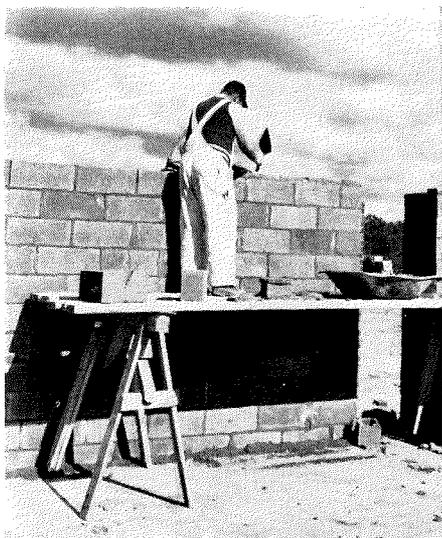
Labor unions encourage SCR bricks because through their use more bricklayers will be employed on residential jobs. Holes (as in bowling ball) make brick easy to pick up.



Door and window positions are marked by this wood template. Conventional footings and slab cost builder \$525. Sheet-metal ducts for warm-air furnace are embedded in slab.



Each man lays about 350 surface feet per day—double the amount built in this area with conventional bricks. Rate will probably rise as men become more familiar with brick and house. Metal strips hold furring staples. (See sketch.)



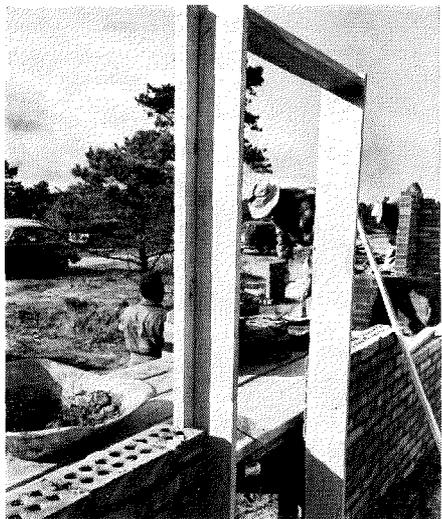
Masonry block walls that form garage and utility room are laid by one man in 7 hrs. Furnace and hot-water tank are in utility room at rear of garage. See house plan opposite.



Gasoline generator provides power for cutting rafters, interior partitions and other necessary lumber. Carpentry labor costs \$475, lumber \$640, trim and windows are \$360.



Windows slide easily into position because slot in each brick forms T & G arrangement with frame. Foreman works inside of house, makes sure of window and door locations, gives general supervision to two houses under construction.



Slot in brick end, which holds front door, shows how new brick design speeds work. Entire attic of house, which is entered from the garage, is available for storage use.



Conventional wood-frame partitions go up quickly once the brick exterior walls are finished. VA financing was so attractive to a local bank that no premium was asked for.



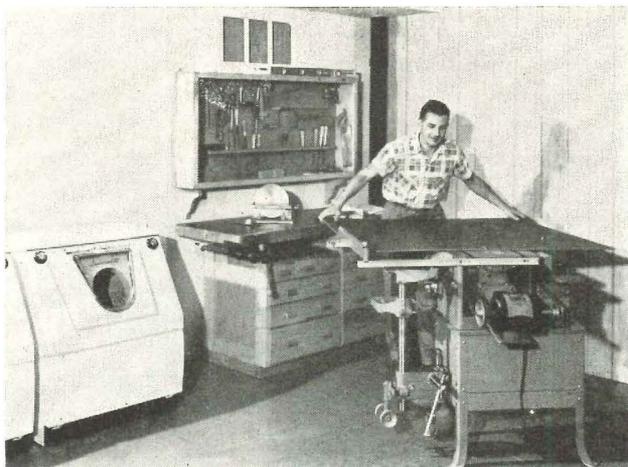
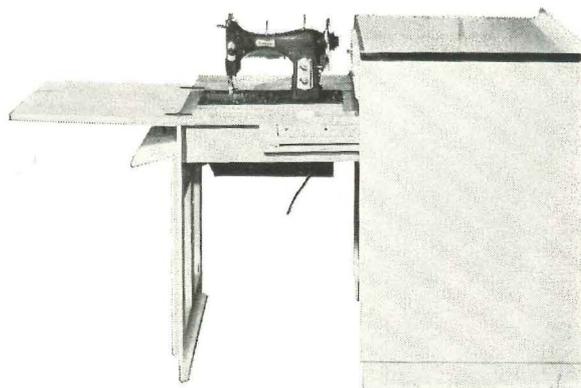
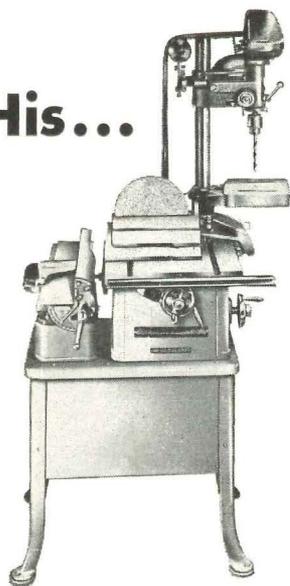
Other costs to the builders were: roofing \$165, heating including a G. E. furnace and ducts \$400, plumbing \$740, electrical \$170, plasterboard \$100, flooring and tile \$160, and painting \$305. Land costs totaled only \$550 per lot.

PRODUCT NEWS

His... and Hers

SAWING AND SEWING MACHINES designed as utility room appliances

Equipment-stocked homes have more than proved their merit—to mortgagors in practical value, to buyers in convenience, and to builders in sales. Approval agency FHA has been deluged with devices and, wisely, has stemmed the onrush lest gadgets in the small home outbalance building features. Nevertheless,



WORKSHOP ENTHUSIASTS might regard builders who furnish their homes with power-tool appliances as philanthropists. Each of these compact units, the *Shopsmith* (left) and *Deltashop* (right) takes up about 9 sq. ft.

SENSIBLY DESIGNED for installation in laundry or kitchen, Domestic's new sewing machine comes in a white standard-size cabinet—3' high 2' deep, and 2' wide. It nests a work table which glides out when needed.



two current products boasting intense popular appeal as well as long-term utility deserve serious consideration for inclusion in the mortgage.

The first, a combination power-tool appliance, is a second cousin to construction once removed, and as such makes sound house-investment sense. With a power-tool equipped workshop the homemaker can help hold up his end of the mortgage by doing divers maintenance jobs, by building storage cabinets, even by expanding the house itself. Two packaged workshops are on the market. One, the four year-old *Shopsmith* already has made its way into 165,000 homes—and demonstration enthusiasts still outnumber cash customers. Taking up a floor area 1'-6" x 5', the husky multi-purpose unit incorporates a wood-turning lathe, circular saw, drill press (usable vertically or horizontally), and disc sander. Rabbeting, routing, shaping, jointing, planing and mortising are its basic wood-working repertory, and the applications in homecraft are legion. Retail price, complete with 1/2 h.p. motor and bench ends, is \$233. A second combination tool introduced last month is the compact *Deltashop*, which consists of a tilting arbor circular saw, jointer, drill press, and sander. With a little practice, the user can switch in less than a minute from one woodworking operation to another. It sells for \$252.25, including a 1/2 h.p. motor and 3' x 3' steel stand.

On the distaff side of the picture is a sewing machine conceived and dedicated as a utility appliance. Instead of the conventional piece of parlor furniture, Domestic's new machine is encased in a white cabinet sized to line up with standard base models in the kitchen or laundry. In either location its table top and drawers add to the counter surface and storage space. Telescoped into the neat cabinet is a generous work table as well as the sewing machine. Retail price will be approximately \$235.

Manufacturers: Shopsmith — Magna Engineering Corp., Menlo Park, Calif. *Deltashop* — Rockwell Mfg. Co., 400 N. Lexington Ave., Pittsburgh 8, Pa. *Sewing Machine* — Domestic Sewing Machine Co., Cleveland, Ohio.