

# ARCHITECTURAL RECORD

MID-MAY 1964 ISSUE

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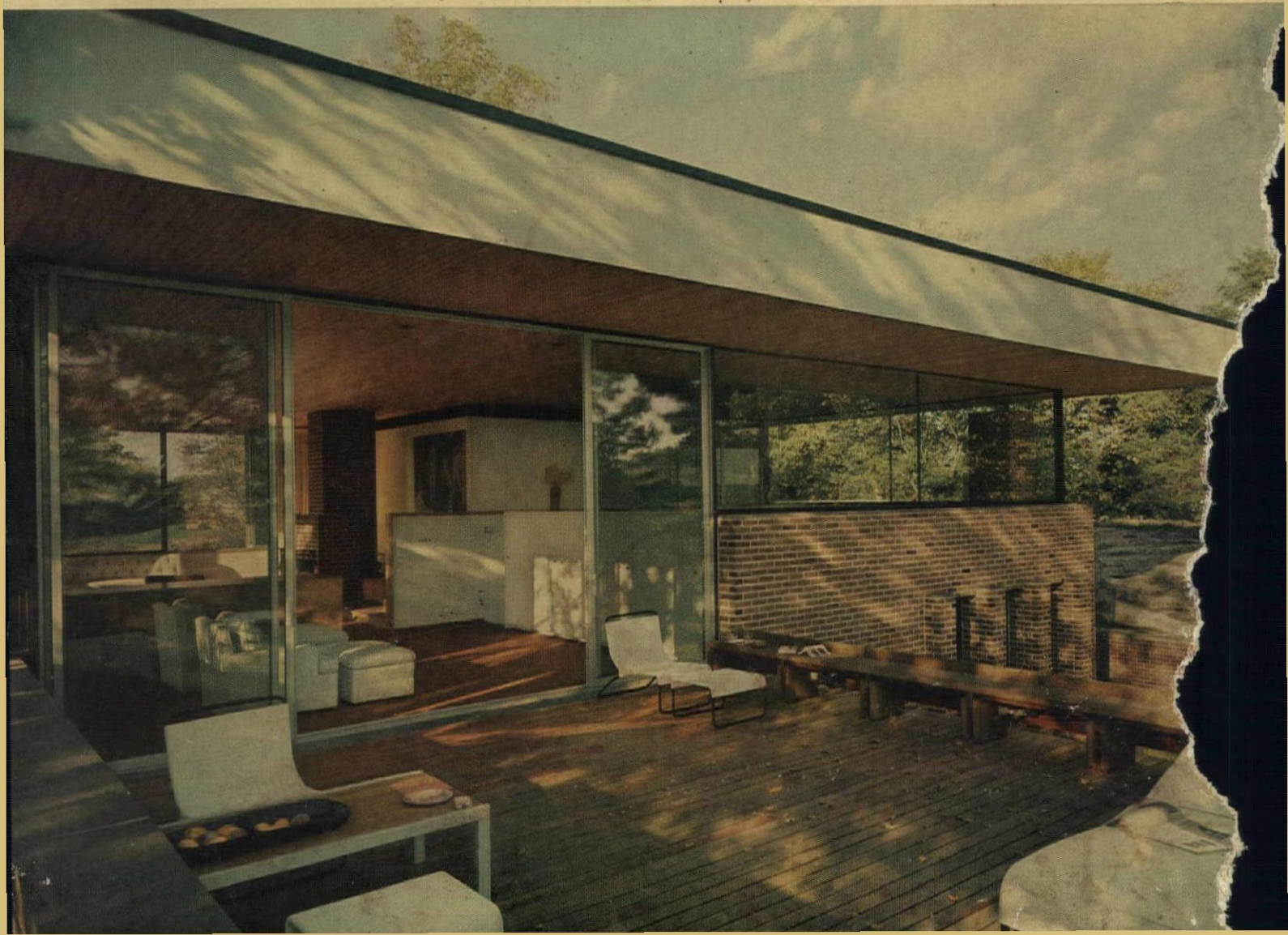
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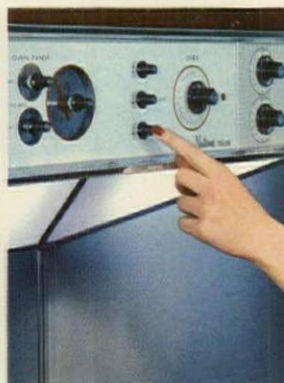
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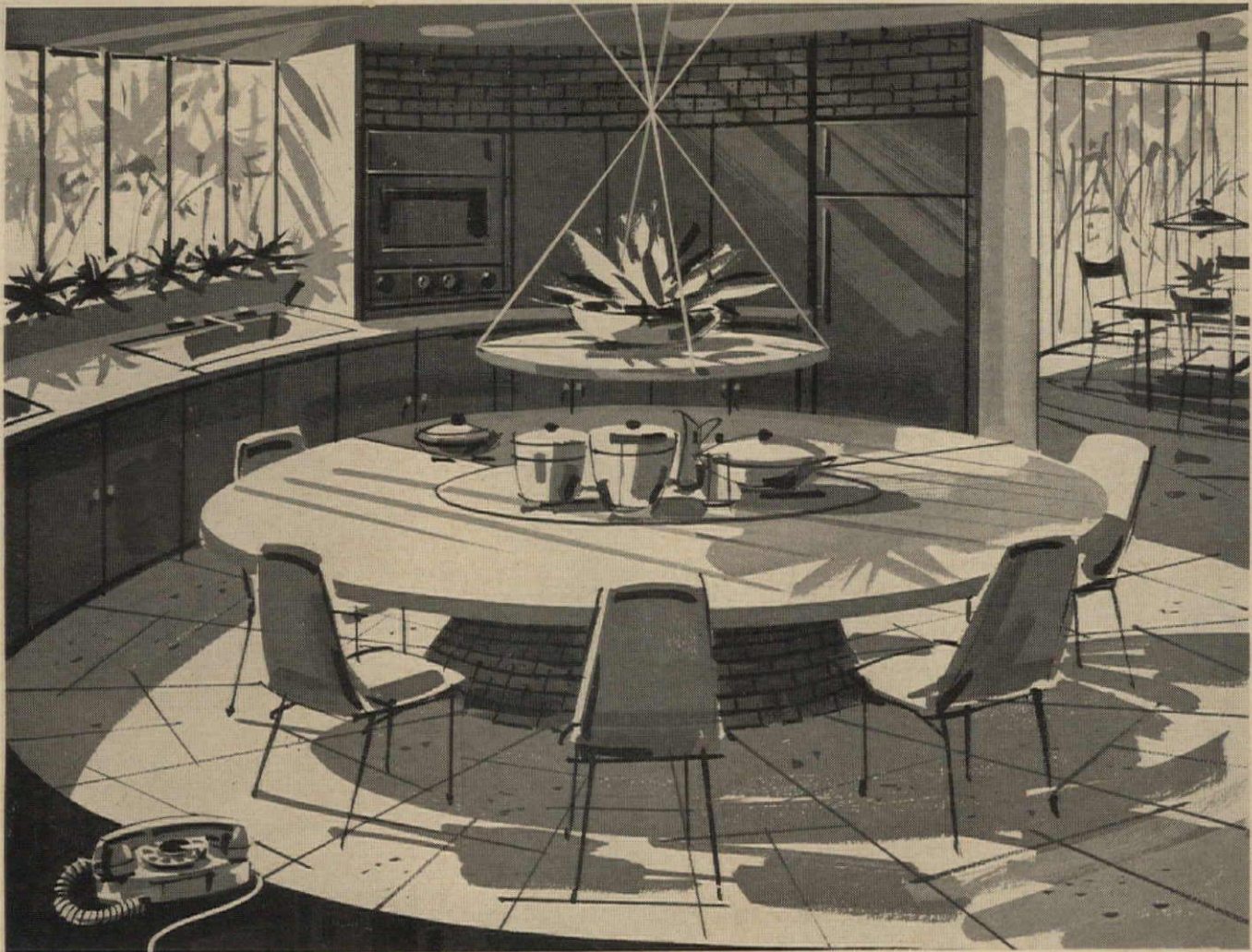
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# ARCHITECTURAL

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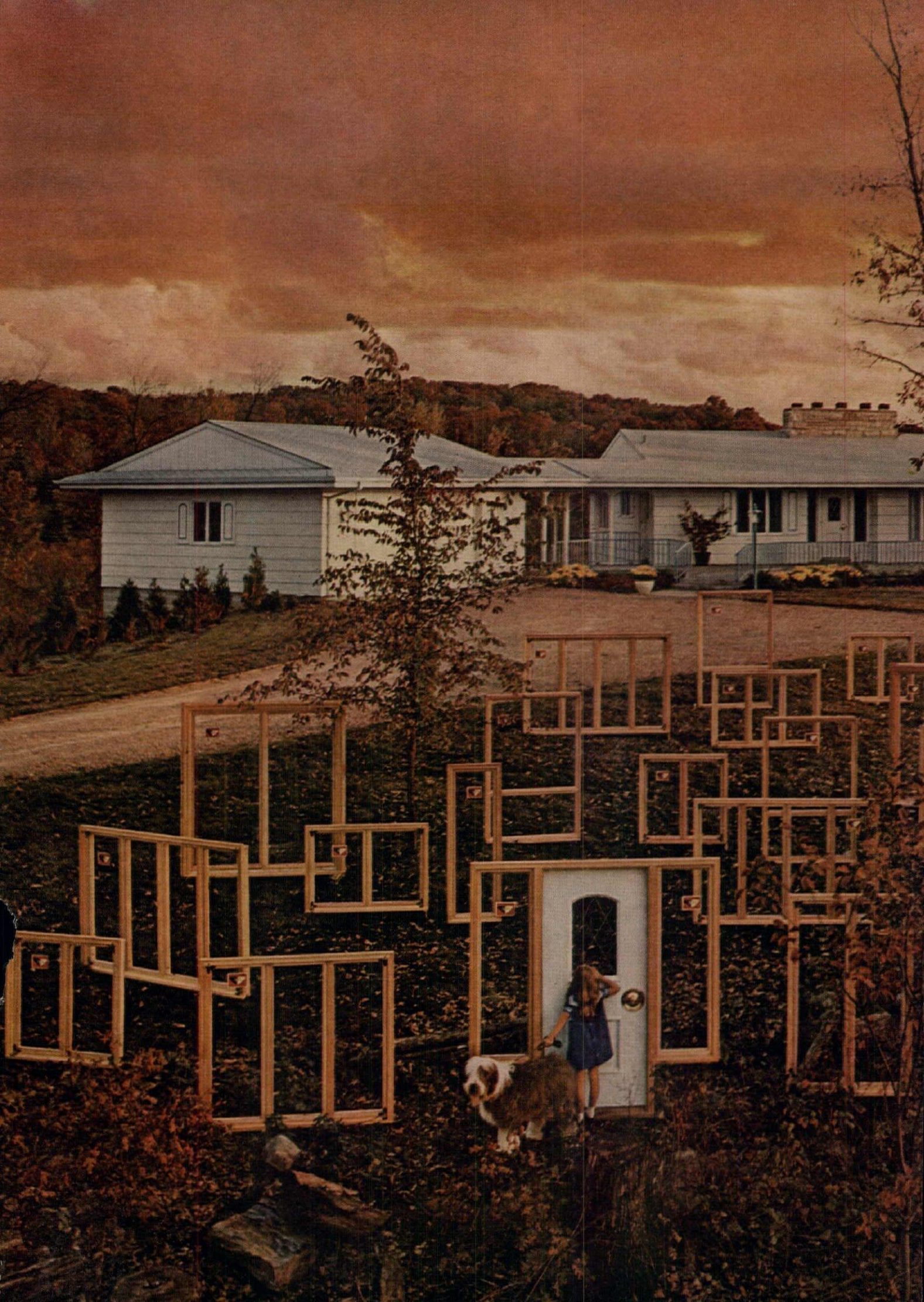




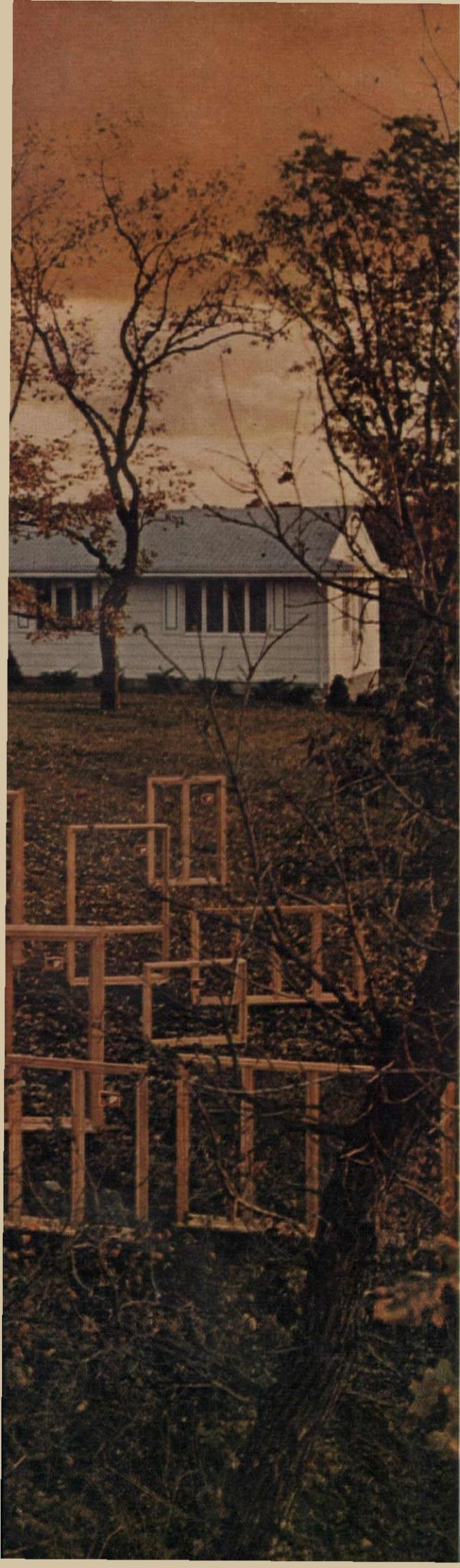
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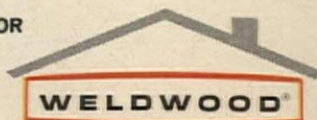
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# HEAT CONSERVATION IN THE ELECTRICALLY-HEATED HOUSE

A Discussion on Reducing Costs of Electric Heating by Control of Heat Loss

By *E. R. Ambrose, Head of the Heating and Air-Conditioning Division, American Electric Power Service Corporation*

What's the reason for the steady growth of electric space heating? It is automatic and uniform. There is no combustion and, therefore, no smoke or fumes. The equipment is practically maintenance-free. And it takes up very little living space.

But no matter how comfortable and convenient a heating system might be, it will have to be competitive—in both installation and operating cost—with other systems. These costs *are* competitive and, in many cases, less than those of fuel-burning systems. By installing electric heating in a house, one can realize—in many cases—a significant reduction in total construction cost. Admittedly, the unit cost of electrical energy is comparatively high. But actual operating cost is not proportionately greater since electric heat is 100 per cent efficient. None of the heat is lost up the chimney, and no combustion air is required.

The efficiency of electricity as a heating source is only part of the story. In order to keep the operating cost of electric heating within an acceptable cost range of other systems, structural heat loss must be kept to a reasonable minimum.

This leads, quite logically, to a discussion of heat conservation. Generally speaking, it is not a new subject. Electric heating specialists, as well as builders and contractors, are well aware of the necessity for reducing heat loss in order to correspondingly reduce the amount of electrical energy which will be required. Of course the same point applies, and with equal force, to all types of heating systems. Whether the house is heated by electricity or by fuels, a reduction in heat loss will automatically reduce the amount of heating energy required.

Some may think of heat conserva-

tion only in terms of thermal insulation. It is, of course, a major part of the heat conservation concept. But the recent studies on infiltration and transmission through windows and doors show additional possibilities for reducing heat loss. And there are other heat-saving devices which should also be considered.

## Total Heat Conservation

In short, thermal design of the electrically heated house must be based on the concept of total heat conservation. This is a new approach. With the continuing growth of electric heating, it will become an increasingly important one.

A discussion of heat loss and how to control it involves four available possibilities. They are:

1. Full insulation in ceilings, exterior walls, and floors over unheated spaces.
2. Effective use of precision-built, weatherstripped windows and doors, and of insulating glass and storm sash.
3. Self-contained dehumidifier and filter-odor removal units, or comparable devices, to keep the infiltration air requirement to a minimum.
4. Fireplace enclosures and similar heat-saving accessories.

Of these four possibilities, the first two are the most significant. But the other two must be included in any *total* heat conservation concept.

## Minimum Ventilation Rates

Under point three, for example, it should be noted that in an electrically-heated structure, minimum ventila-

tion rates are permissible. The reason for this, of course, is that an electric heating system does not require combustion air. Therefore, the amount of infiltration, or ventilation, air can be sharply reduced.

Infiltration generally accounts for 20 to 30 per cent, or even more, of the heating load. But in the electrically-heated house, the amount of infiltrated air that will be needed is *not* governed by the oxygen requirements or the carbon dioxide liberated. It depends, instead, on the need to expel moisture and odors.

One remedy is to vent moisture and odor-producing appliances to the outside. However, this is not always practical, since an equal quantity of outside air must be introduced with a corresponding increase in the heating cost. A more satisfactory solution appears to be the use of a dehumidifier-filter-odor removal unit.

Such a unit—a small, self-contained, forced-circulation type—can be located in the vicinity of the moisture and odor producing appliances. Recent field tests indicate that the device is both feasible and practical to maintain the optimum indoor relative humidity level, clean and purify the air and, at the same time, reduce the infiltration of ventilating air to an absolute minimum.

## Fireplace Enclosures

Fireplace enclosures are fourth on the list of available heat-saving devices. Some houses—and possibly a larger percentage of multi-family units—may not have a fireplace. But if they do, and if it is frequently in use, it can add substantially to the heating bill by causing warm air to

*continued on page 9*





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be drawn up the flue. One way to stop this costly draft is installation of a tempered glass fireplace enclosure equipped with adjustable draft doors to regulate the amount of combustion air taken from the room. Another device is an inner wall firebox designed to circulate warm air, by gravity, to and from the room. Either the enclosure or the firebox will offset the cold drafts produced by an open fireplace.

### Thermal Insulation

Returning to thermal insulation—first on the list of available possibilities for controlling heat loss—the basic point to be made is that the necessity for fully insulating electrically-heated structures is now generally accepted. The reason for this acceptance can again be summed up in a single word—economics.

Compare, for example, the heating requirements of a house with minimum and with recommended amounts of insulation. This comparison, as shown in Figure 1, is based on a typical ranch-type house with an indoor-outdoor design temperature difference of 75 F. The test residence is located in Huntington, West Virginia. It is a modern one-story, brick veneer home with seven rooms (including three bedrooms) and two full bathrooms. With the carport, the house covers a total area of 1,700 square feet. The net heated area is 1,383 square feet. Minimum insulation is defined as insulation with an installed resistance of R-7 in the ceiling, and none in side walls or in the floors over the crawl space. Under such conditions, heat loss for this ranch-type house is calculated at 82,000 Btuh.

Recommended amounts of insulation will depend, to some extent, on the type of structure, the geographic location, and the related electric energy cost. Normally, the Quality Home Requirements of the National Mineral Wool Insulation Association or the NEMA All-Weather Performance Recommendations will be applicable. Both specify R-19 or R-24 in ceilings, R-11 in exterior walls, and R-13 in floors over unheated spaces. The "R" numbers, which represent installed resistance, are finding increasing favor—compared to thickness in inches—as the only dependa-

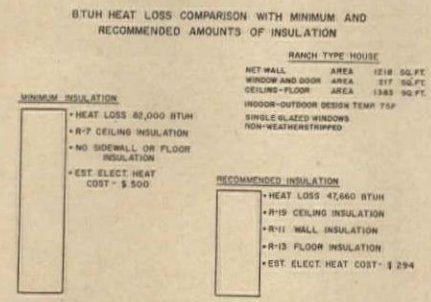


Figure 1.

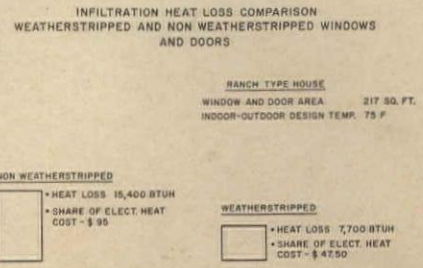


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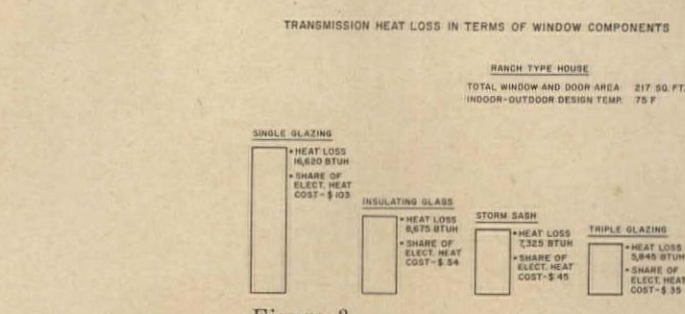


Figure 3.

ble measure of insulating value. The R-19, R-11, R-13 formula is recommended by most electric power suppliers, and it is almost certain to be specified by electric heating and insulation contractors.

Assume, now, that recommended amounts of insulation are installed in the ranch-type house being considered in Figure 1. This means the installed resistance in the ceiling is increased from R-7 to R-19. Insulation with a value of R-11 is installed in exterior walls, and R-13 in floors over unheated spaces.

When recommended amounts of insulation are used, heat loss in the house would be reduced from 82,000 to 47,660 Btuh—a reduction of 41 per cent.

In an area with 5,700 degree days and 1.5 cents per kilowatt-hour energy rate, estimated electric heating operating cost for the house with minimum insulation would be a prohibitive \$500. By comparison, the same house insulated to the R-19, R-11, R-13 formula would cost only \$294 to heat electrically. This represents a decrease in operating cost of \$206—a direct result of full thermal insulation. The additional installed cost for the full insulation would be approximately \$400. This could be amortized in less than three years

against the savings in annual operating cost.

Full thermal insulation also reduces the cost of electric heating equipment. Heat loss for the house with minimum insulation was estimated at 82,000 Btuh. Full insulation cut it to 47,660 Btuh. This reduction of 34,340 Btuh is equivalent to about 10 kw. Figuring the installed increment cost of electric heating equipment at \$20 per kw, this will add up to a saving of \$200.

### Windows and Doors

Control of heat loss from both infiltration and transmission through windows and doors is also a major part of the total heat conservation concept. The emphasis on it in this study of total heat conservation, therefore, represents a new—and more detailed—approach to the subject. It should also make it apparent that we can no longer afford to underestimate the role of windows and doors as they relate to heat loss.

A study conducted at the University of Minnesota concluded that "air infiltration through windows and doors may account for a substantial part of the heat loss from a building."

continued on page 11





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The report added: "The use of weatherstripping on windows may reduce the infiltration losses to 17 per cent of the total heat loss from a house, with a corresponding saving of approximately 24 per cent in the total fuel cost."

Figure 2 relates the importance of controlling infiltration in terms of the typical ranch-type house described previously. If the windows are not weatherstripped, it is assumed there would be an average infiltration rate of one air change per hour. Weatherstripping could cut this to one-half or even lower. In calculated heat loss, the reduction is from 15,400 to 7,700 Btuh.

Figure 2 also indicates the economic advantage of reducing infiltration. Based on 5,700 degree days and a power rate of 1.5 cents per kwh, the infiltration heat loss for non-weatherstripped windows would represent \$95 of the annual electric heating bill. For the weatherstripped house, the cost would be cut one-half to \$47.50.

### Transmission Heat Loss

The most practical means of controlling transmission heat loss through windows and doors is use of insulating glass or storm sash, and storm doors. Before discussing this, it may be advisable to define the terms which will be used. *Insulating glass* consists of two panes of glass, hermetically sealed, with an air space between them. The resulting unit is installed in a prime window sash. *Double glazing* refers to the prime sash containing a single pane of glass plus either a storm panel attached to the prime sash or a separate storm window, each with an air space of one inch or more. *Triple glazing* is the prime sash with insulating glass plus either a storm panel or storm window.

The advisability of double or triple glazing will depend on the geographic location and on the local electric energy cost. But with proper evaluation, it will usually be concluded that insulating glass or double glazed windows and doors can easily be justified in most areas, and triple glazed windows will frequently be found practical in many northern sections of the country.

Figure 3, also based on the ranch-type house previously described, compares window and door transmission heat loss under various conditions. They are: windows and doors with single glazing; with insulating glass; with storm sash; and with triple glazing.

As shown by Figure 3, transmission heat loss through single glazed windows in the ranch-type house is 16,620 Btuh. With modifications of the glass area, substantial reductions are possible. After substitution of insulating glass, the transmission heat loss would be reduced to 8,675 Btuh, double glazing would cut it to 7,325 Btuh and triple glazing to 5,845.

As these comparisons indicate, the possibilities for controlling heat loss through glass areas are well worth considering. The difference between heat loss through single glazed windows (16,620 Btuh), for example, and the corresponding figure for triple glazing (5,845 Btuh) is 10,775 Btuh—a reduction of approximately 65 per cent in total heat loss by transmission through window glass.

Figure 3 also provides operating cost data relative to each type of glazing. In the house used in this example, transmission heat loss through single glazed windows would represent \$103 of the annual electric heating operating cost. The comparable costs are: with insulating glass, \$54; double glazing, \$45; triple glazing, \$35.

The additional cost of multiple glazing and storm doors can usually be amortized in a reasonable period of time. In the typical ranch-type house, cost of storm panels or storm sash could be amortized in 4 to 4½ years, and the triple glass combination in 5½ to 6 years.

In a house of proper thermal design there will be less heat loss from infiltration and transmission through windows. Consequently, as in the case of full thermal insulation, there will be an additional saving in electric heating equipment cost. For example, the 7,700 Btuh reduction in heat loss resulting from weatherstripping is equivalent to about 2 kw—which at \$20 per kw means a saving of \$40 in equipment cost. The 7,945 Btuh reduction attributed to use of insulating glass—instead of single glazing—also means an additional saving of

approximately \$40 for every year.

### Wood and Metal Sash

The transmission heat loss data presented is based upon use of windows which have wood sash. Metal sash, unless it has an efficient thermal barrier, will have a higher heat transmittance with a correspondingly higher heat loss.

According to the ASHRAE Guide and Data Book, a given single glazed window with wood sash and 80 per cent glass area has a heat transfer rate of 1.02 Btuh (square foot) (F). In comparison, windows with steel and aluminum sash, assuming the same glass area and over-all dimensions without a thermal barrier, have heat transfer rates of 1.13 and 1.24 with a corresponding heat loss increase of 11 per cent and 22 per cent, respectively. Similarly, if insulating glass with ¼-inch spacing between the panes is used, the wood, steel, and aluminum sash have a Btuh heat transfer rate of 0.58, 0.73 and 0.79, respectively. Insulating glass windows with steel or aluminum sash, therefore, transmit 26 per cent and 36 per cent more heat than windows with wood sash and the same percentage glass area.

Such comparisons show a definite relationship between window construction and its performance, in terms of comfort and economy, at the optimum indoor temperature and relative humidity. It is indicated that for satisfactory performance, metal sash should be equipped with a thermal barrier which would prevent metal-to-metal contact between the inside and outside surfaces.

### Moisture Condensation

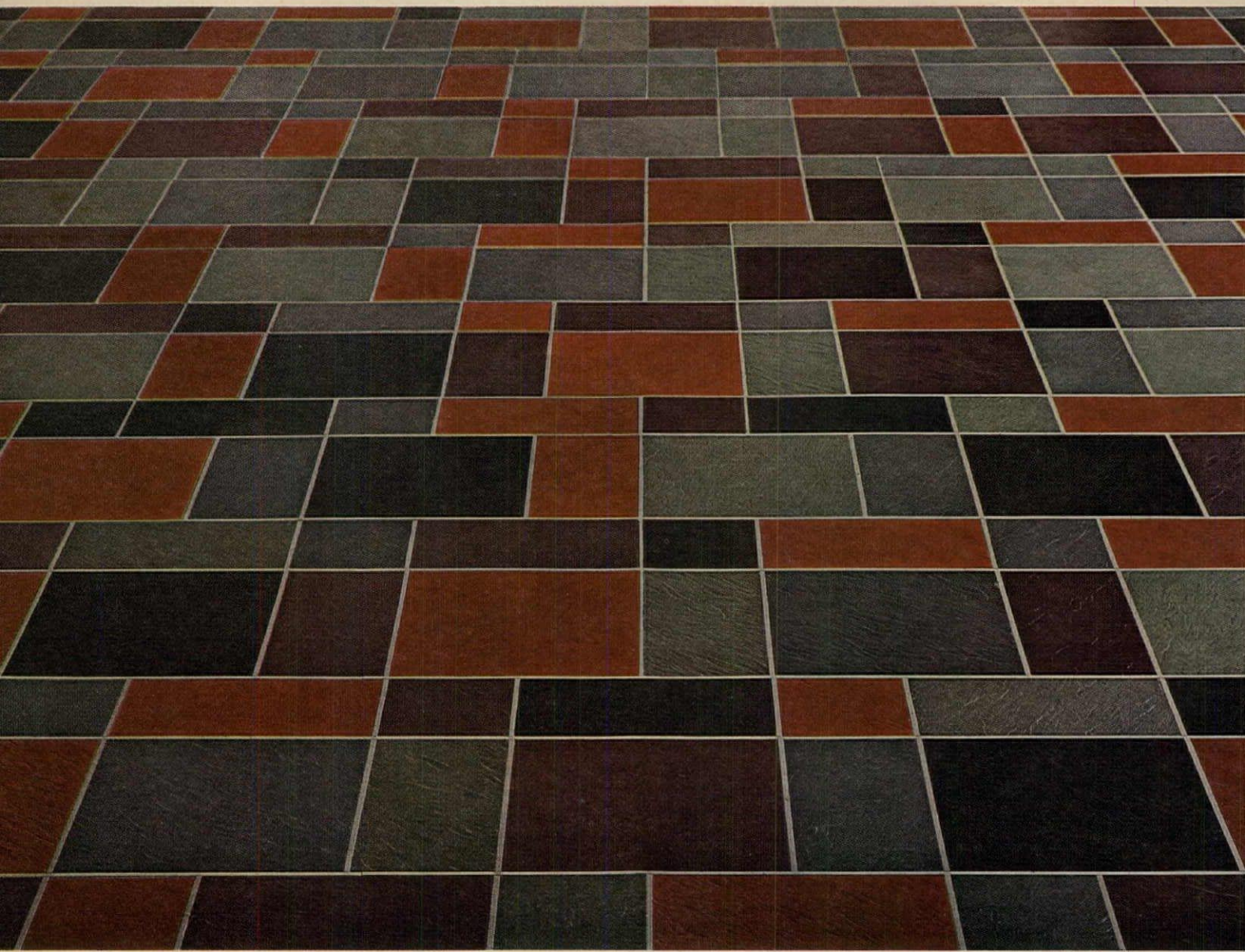
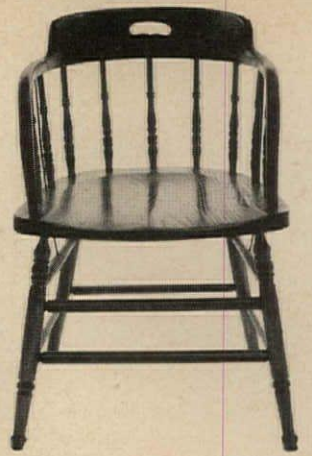
A reduction in the outdoor air infiltration rate causes a corresponding reduction in the heat loss. In turn, as the infiltration rate decreases the indoor humidity level increases because the moisture generated by cooking, bathing, laundering, dishwashing, etc., is not removed as rapidly.

This increase in indoor relative humidity is desirable up to a certain point. It is generally accepted that a

continued on page 13



# Early American



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range of 30 to 50 per cent, with a corresponding indoor dry bulb temperature of 70 to 75 F, is the optimum for comfort and health. When these desirable relative humidities are maintained, however, proper precautions must be taken to prevent the possibility of condensation on the windows.

Visible condensation occurs when the temperature of any inside surface is below the dewpoint of the nearby air. This will, of course, be affected by curtains, draperies, Venetian blinds, and the like, which will lower surface temperatures of the windows. The indoor relative humidity at which visible condensation appears, with a fixed indoor temperature, will vary directly with the outdoor temperature and inversely with the heat transmittance "U." In other words, the higher the transmittance value of the material the lower must be the inside relative humidity to prevent surface condensation.

The relationship between window condensation and outdoor temperature is illustrated by Figure 4, which shows the relative effectiveness of single, double and triple glazing, and insulating glass. It is apparent from the comparisons that with a 30 per cent relative humidity, condensation will form on single glass when exterior temperatures are 23 F or lower. In contrast, with double glazing a relative humidity of 30 per cent can be maintained without condensation at outdoor temperatures down to 30 degrees below zero. With triple glazing relative humidities of 50 per cent, or even higher, could be maintained without fear of condensation at temperatures far below zero.

#### Condensation on Sash Material

The chief cause of condensation is not always the glass itself. As shown by Figure 5, condensation may form on aluminum or steel sash if the indoor relative humidity is approximately 27 per cent and outside temperature is 20 F or lower. At the same outdoor temperature, condensation will not form on wood sash even if indoor humidities should rise above 65 per cent.

Considering the glass area alone, relative humidity must be 28, 51, 56 and 65 per cent or higher, when out-

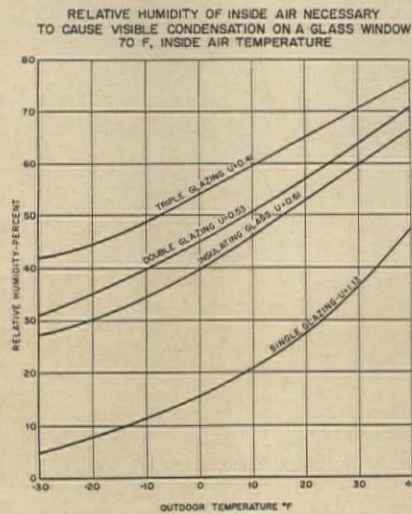


Figure 4.

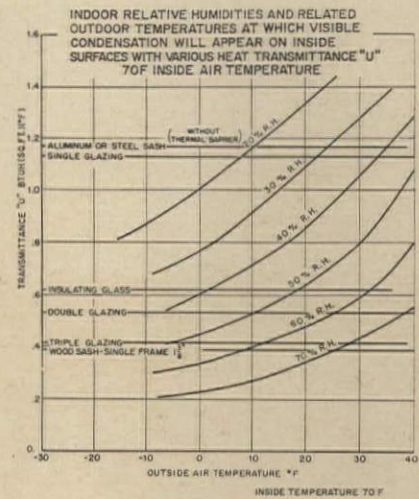


Figure 5.

#### ANNUAL ELECTRIC HEATING OPERATING COST IN DIFFERENT GEOGRAPHICAL AREAS

(Based on 1,383-square-foot ranch-type house; R-19, R-11, R-13 insulation in ceiling, sidewalls, floors, storm windows and doors)

	Degree days	Rate in cents per kw	Annual cost in dollars
Atlanta	2,826	1.2	\$ 76
Indianapolis	5,611	1.5	186
Chicago	6,310	1.5	207
Dallas	2,272	1.25	62
St. Louis	4,700	1.5	156
Topeka	5,209	1.25	144
Lynchburg	4,153	1.2	110
San Francisco	2,015	1.2	57

(Costs based on applicable electric heat rate for respective area)

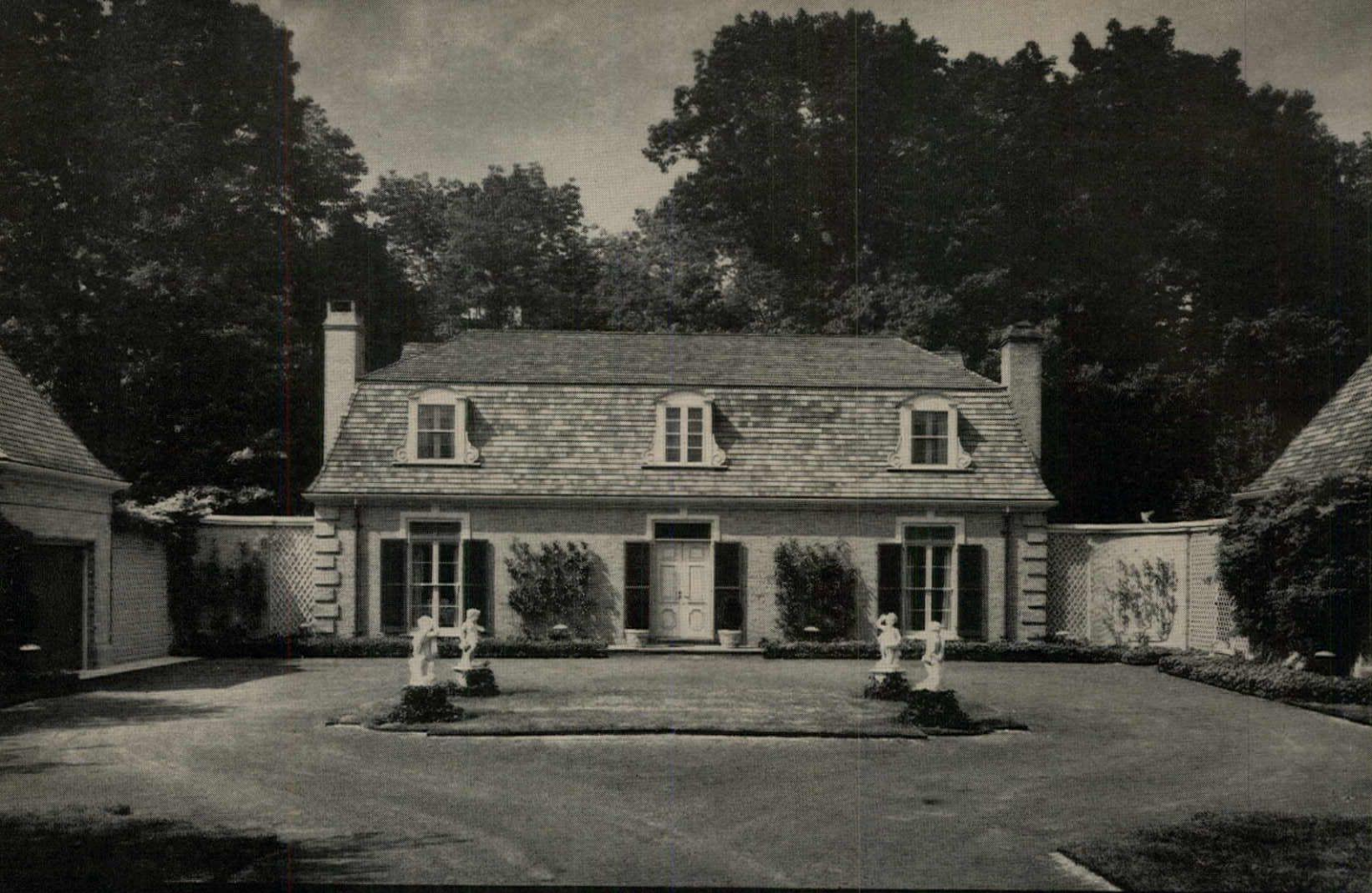
Figure 6.

side temperature is 20 F, before visible condensation will form on single glass, insulating glass, double or triple glazing. Consequently, to prevent excessive condensation, the general recommendation of the American Electric Power operating companies is that the rate of heat transmission through the prime window sash and frame be equal to, or lower than that of the glass.

As the points made above indicate, utilizing the concept of total heat conservation in the electrically heated house can have two results. It will contribute to a more healthful and comfortable indoor environment. It will also materially reduce the equipment and operating cost.

As for the economics of the concept—full thermal insulation and precision-built wood windows with complete weatherstripping, storm panels or storm windows, and storm doors for the typical ranch house used in the illustrations, would cost a total of about \$850. But this limiting of structural heat loss would result in an equipment cost saving of \$280 and an annual operating cost reduction of approximately \$300. Such an investment, which can be amortized in less than three years against savings in annual operating cost, is certainly very acceptable. It offers a most effective approach toward stimulating and encouraging the growth of electric heating.



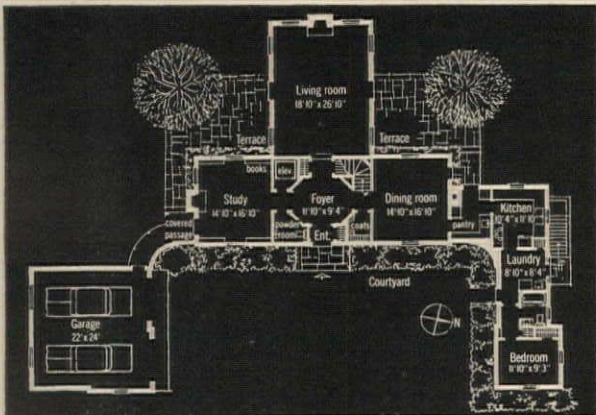


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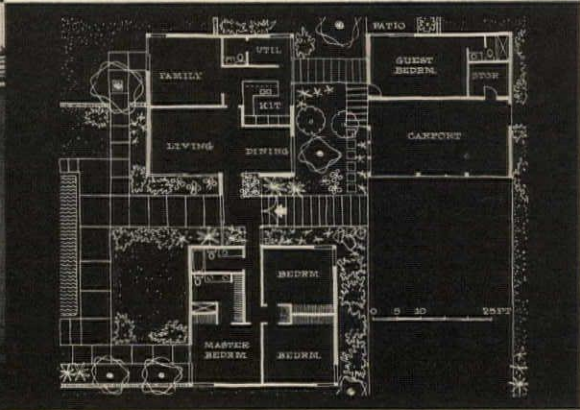
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Above left: **Residence / Greenwich, Connecticut.** Architects: George Hickey III Associates. The mansard roof is Certigrade No. 1, 16" Fivex shingles with a 5" exposure.

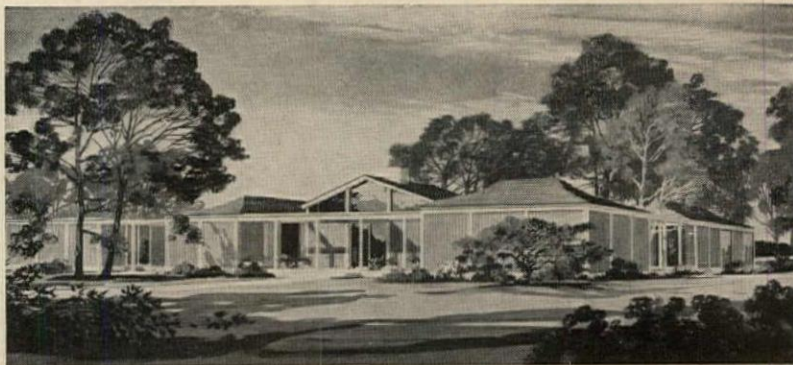


Below, left: **Residence / Scottsdale, Arizona.** Architects: Alan Dailey Associates. The roof is Certi-Split 18" x 3/4" — 1 1/4" handsplit-resawn shakes with 5 1/2" exposure.





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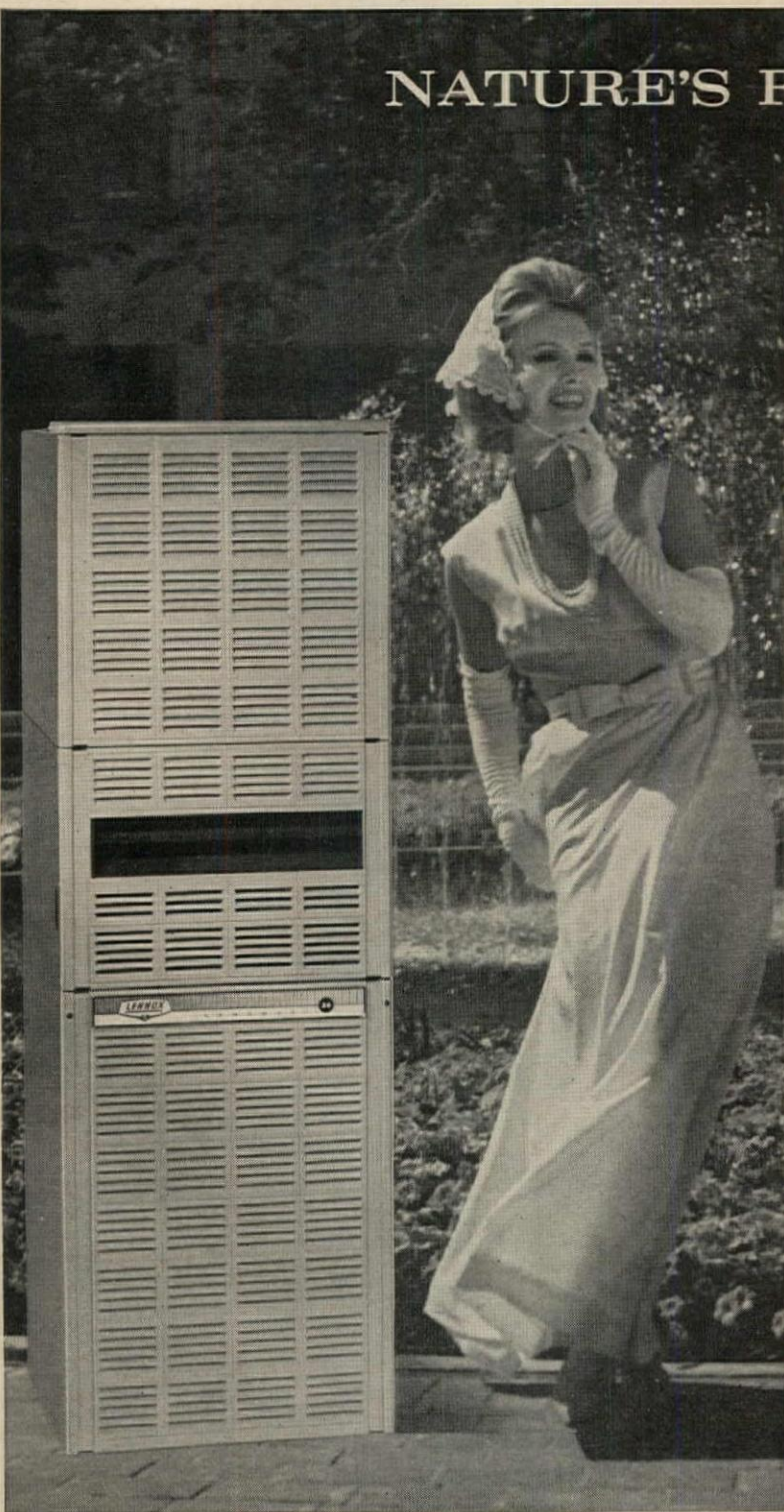
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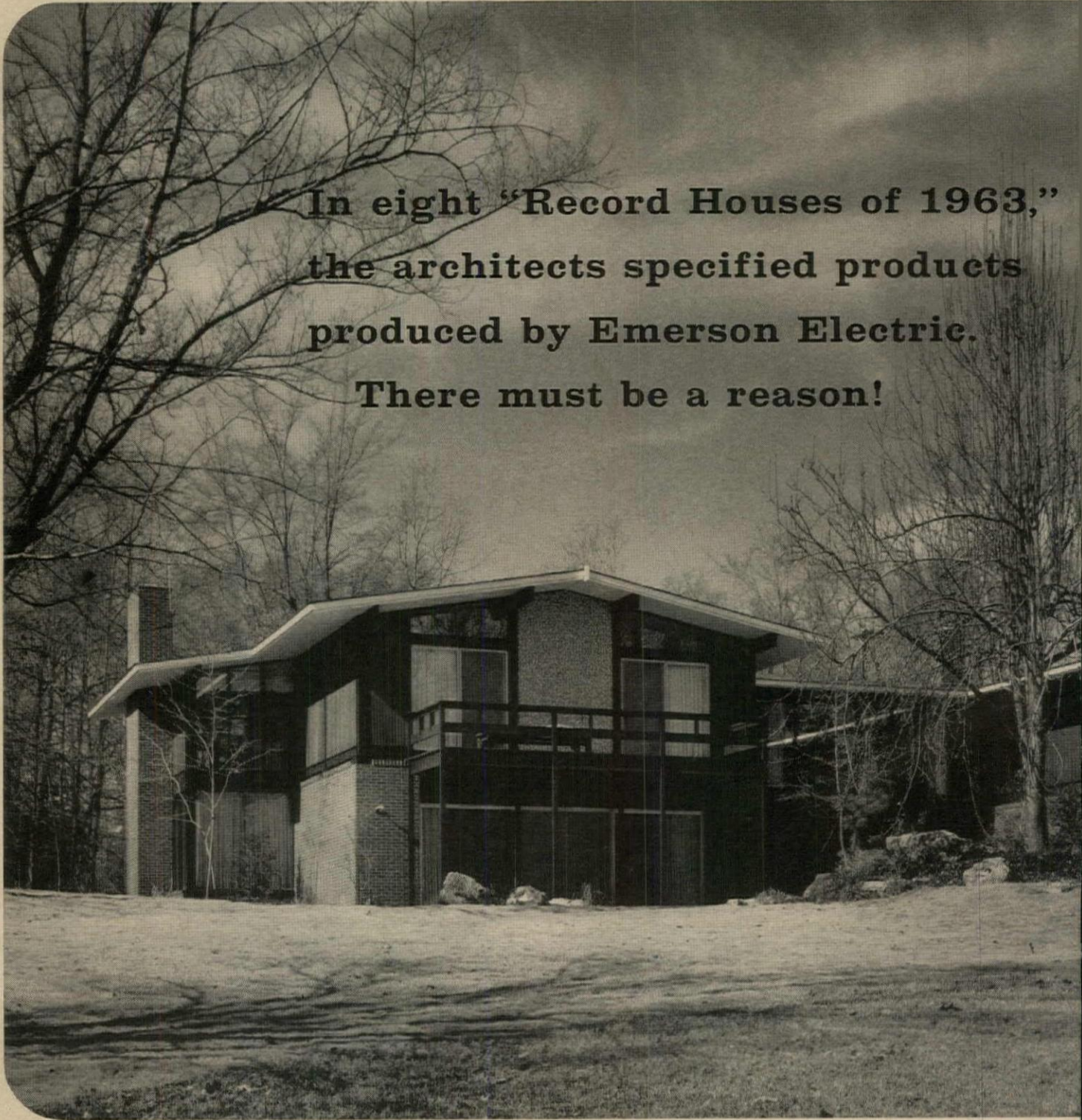
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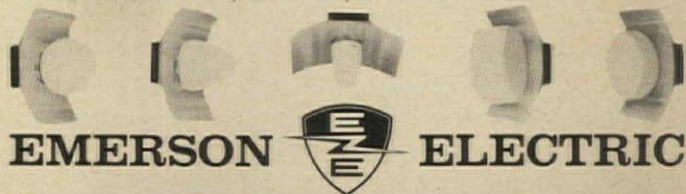
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Architect: Tasso Katselas, Pittsburgh, Pa.

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# KITCHEN PLANNING

A leading kitchen designer discusses some basic planning principles

By George T. Warren, Manager, Kitchen-Laundry Design, General Electric Company

Ten years ago, with the advent of color in appliances, a new profession was born—that of the kitchen designer. The kitchen designer has become a specialist in the use and treatment of space which is allotted to the preparation and sometimes the eating of meals.

The following ideas and comments are not to be interpreted as a series of hard and fast rules from which there are no deviations, but as a framework which has by trial and error proven as reliable guide posts.

In over 35 years in the architectural profession, the last 20 of which have been in kitchen planning, I have, through working with other designers, listening to and reading from the work of allied fields, naturally been exposed to every kind of kitchen requirement and feel there is definitely a need for professional co-operation in this field.

While it is possible, in terms of function, to separate the actual acts of cooking and eating, in terms of house planning they must be considered as a unified sequence of operations. The problem which faces the person trying to choose between the various cooking-dining combinations is an extremely delicate one. To choose an arrangement which does not express dependence on service is forever to shut the door on this possibility for display. Most upper middle class families, whether they have servants or not, cannot get over the idea that eating in the kitchen is "common." Nevertheless, the trend is away from complete separation. There are several potent reasons for this shift. The change from a servanted to a servantless society, increased emphasis on child care, gourmandism, high building costs, nostalgia for things past, and a gradual acceptance of the fact that cooking is intermixed with a variety of other functions all force the contemporary family towards new cooking-dining relationships. Because our living patterns are undergoing a gradual evolution, the average house suffers from the lack of a clear attitude on the subject. The old formal relationship is too expensive in first cost, too onerous a work pattern, yet it cannot be easily abandoned because of its Sunday, dress-up feeling. As a result, most current homes exhibit various compromises between the two extremes.

Because the field of kitchen planning has come to play such an important part in the planning of new homes, it is obvious that the kitchen designers must follow where the architect leads.

Since the architect, planning a new home for a client,

must know as much as possible about the living habits of the client, it follows that the very first step toward a new kitchen has nothing to do with either plans or equipment. It has to do with the family, what they like and why. To take this step you will have to sort out your ideas honestly, for there are so many good points of view on kitchens today that you must first define types and then stay true to them during the planning. At this point it is not the kitchen you're considering, but the over-all preferences of the family—those definite likes and dislikes which are now being called the "socio-psychological" factors of kitchen planning.

"Family-centered living," the new term for an old pattern, is the first idea to be explored. It fits so many families that open kitchens and family rooms are definitely the trend today. However, for many nice, congenial households these are certainly not the answer. If the client prefers to work with no time out for small talk and family affairs, don't be misled by the pictures of happy fam-

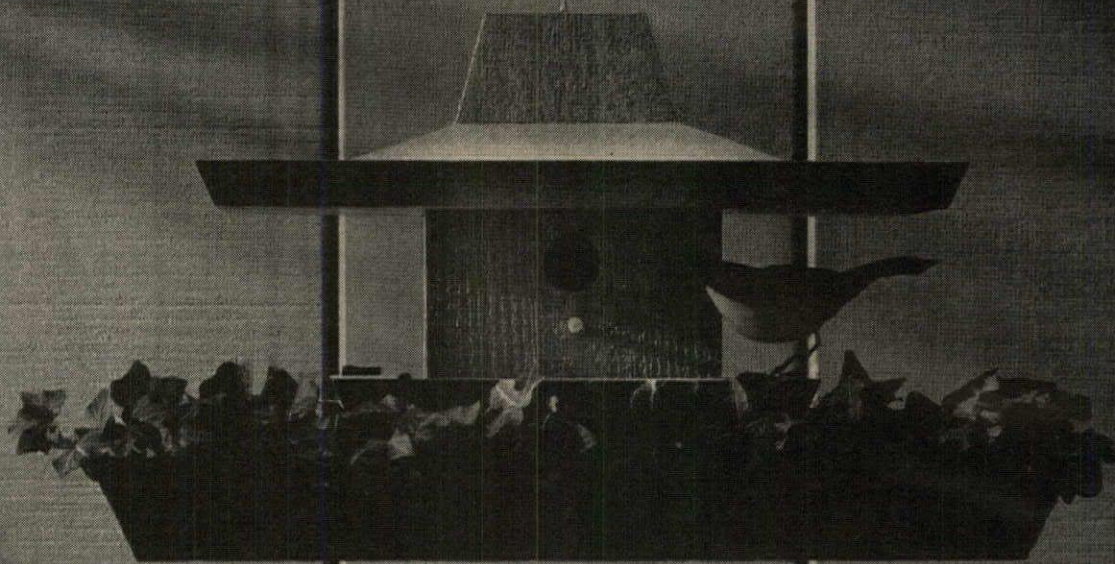
*continued on page 27*



—Drawn for the RECORD by Alan Dunn

"You just can't talk to such people—I design her a synclastic shell in a space-matter continuum notable for the topological way it stated space in continuous relatedness and what do you think she wants?—closet space!"





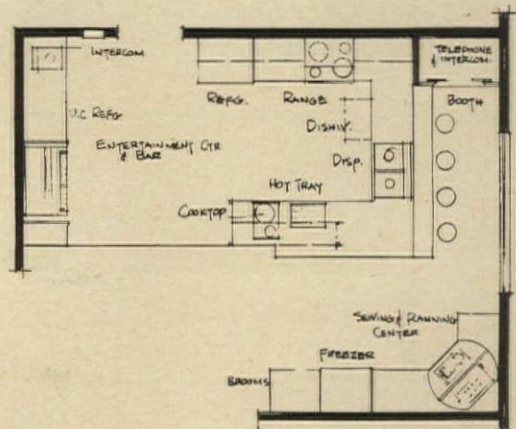
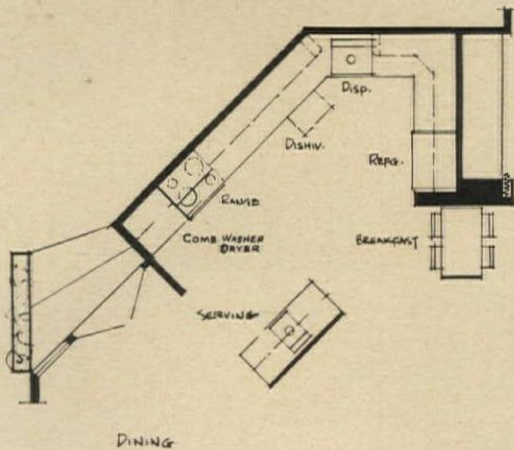
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An open-plan kitchen, fairly generous in size, and keyed to the general decor of the house for informal entertaining: an example of the "epicures" kitchen cited by the author

A large kitchen for a bustling family. Around the efficient U-shaped kitchen are snack bar, cook top and small refrigerator for the teen agers plus a sewing and planning center

ily groups lounging in the kitchen—it's not for them. If the children are not of an age or type to follow around, if the husband feels that the kitchen is not his department, and their friends aren't given to the informal kaffee klatsch, why should you waste living space in the kitchen? A comfortable workroom is all they need.

Next consider how they feel about being "in style." For most of us there is real satisfaction in conforming to fashion and meeting the approval of the "up-to-date," but to others this is just a bad case of keeping up with the Joneses. If they are style conscious encourage them to admit it and go all out for the latest in equipment and decoration. They won't regret the loss of familiar features half as much as they would mind showing off a new kitchen that isn't quite the last word. If, on the other hand, they truly don't care what the neighbors say, go ahead with the things you know they like—an open sink, rag rugs or a table in the middle of the room.

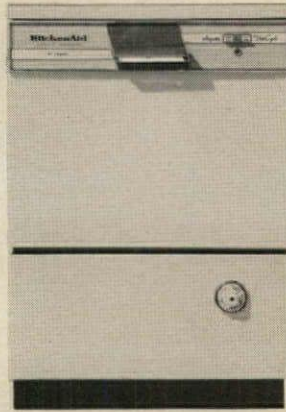
The use of automatic equipment is usually taken for granted in planning a new kitchen, but it should, nevertheless, be questioned at the start. For most women the answer will be "yes," for the new appliances really do offer a whole new way of life. But there are otherwise intelligent women who are so baffled by even a foolproof

mechanical device that their frustration outweighs all the advantages of automatic controls. If you know your client would rather do things by hand than set the switches of an appliance to do it for her, then pass up the clock controlled ranges, the automatic washers and all the other wonders, and put the money in the things that give you pleasure. But before you turn your back on this new freedom, go and see automatic appliances in action, ask all the questions, and take the time to be sure that your attitude is honest and not just a notion that you like the old way best.

Physical convenience is the next variable to be weighed. Any physical handicap will, of course, put it at the top of the list, but it is also a "must" for many women who just don't like to bend, stoop, and reach while they are working. If the client is an orderly craftsman-type and keeps every tool in place and close at hand, if she is the kind to set herself a task and then better the time-schedule, your kitchen should be planned primarily for convenience. All the specialized storage devices—cabinets with revolving shelves, sliding trays, racks and bins, a comfortable sit-down work space, pass-through cabinets with sliding doors, excellent lighting, and easily cleaned surfaces are

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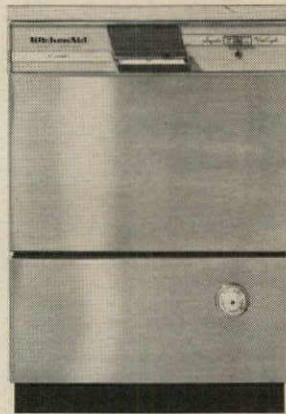




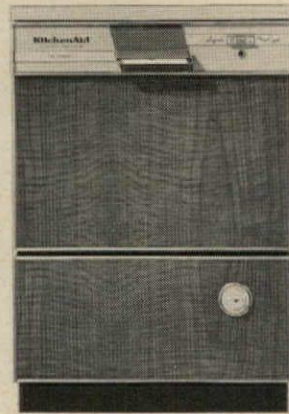
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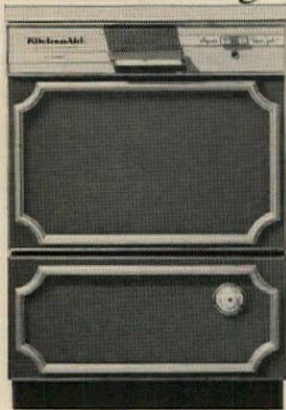
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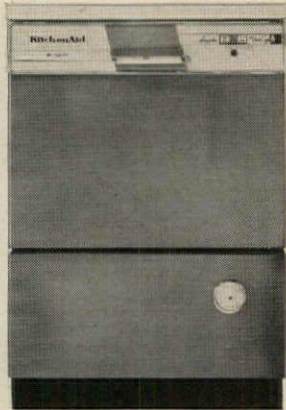
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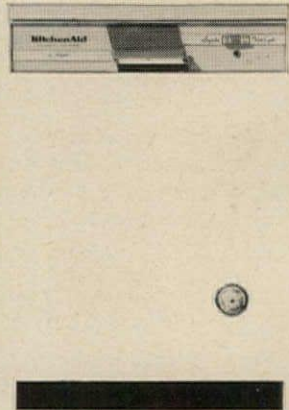
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*In ARCHITECTURAL RECORD's selections for its annual Awards of Excellence for House Design, which go to the architects and owners of the houses presented here, we have sought to reflect this range of style and creativity, as well as show a range of size, cost, geography and structure. We trust that these 20 fine houses will, each in its own way, help inspire better designed and planned houses everywhere. The nation's press continues to help us in the effort to promote good architecture, and again we wish to express our sincere appreciation. Record Houses will again be available to the public in a bookstore edition.*

*The issue will also be distributed again to the nation's 20,000 foremost builders to accelerate the healthy trend toward greater architect-builder collaboration on tract housing. Five of this year's awards go to well-designed development houses, including one at the remarkable price of \$5,995.*

*We have purposely omitted from our selections some houses which, however interesting for the moment, seemed to have little more value than their unique whimsey. A good house should remain good throughout its lifetime. We believe the 20 shown here have this quality.*

Herbert L. Smith Jr.



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MORLEY BAER PHOTOS







## RHYTHM AND SYMMETRY IN A STEEL-FRAMED HOUSE

This extremely elegant and well-detailed house is a good example of fulfilling both rigid esthetic principles and the owners' utilitarian needs. The basic concept is that of a raised, lightly-framed and carefully balanced pavilion, surrounding a central court or atrium. Craig Ellwood adds that: "The structure is elevated above grade to gain a better view down the canyon to the sea. The water-worn charcoal rock podium (or base), which surrounds the structure, flows in under the house and through the atrium." This flow of space is equally apparent in the interior living spaces, as can be seen in the photo of the family room (*left*). In commenting on this handling of space, Ellwood notes that: "Also remarkable is the fact that only two interior partitions touch the exterior wall. The enclosed space therefore 'reads' as a total, and walls 'read' as free-standing planes or volumes within this total." This search for architectural clarity is further emphasized by sharp contrasts in color and texture of the exposed structure and the enclosing wall panels and partitions. The trim steel frame is painted white, exterior walls are charcoal-colored ceramic-faced brick, and interior walls are walnut paneling and white plaster.

Interiors were designed along with the architecture, giving the house unusual unity. Furniture that was not designed by Ellwood was selected from among the familiar and compatible pieces by Mies, Breuer, Eames, Wegner, Saarinen and Laverne.



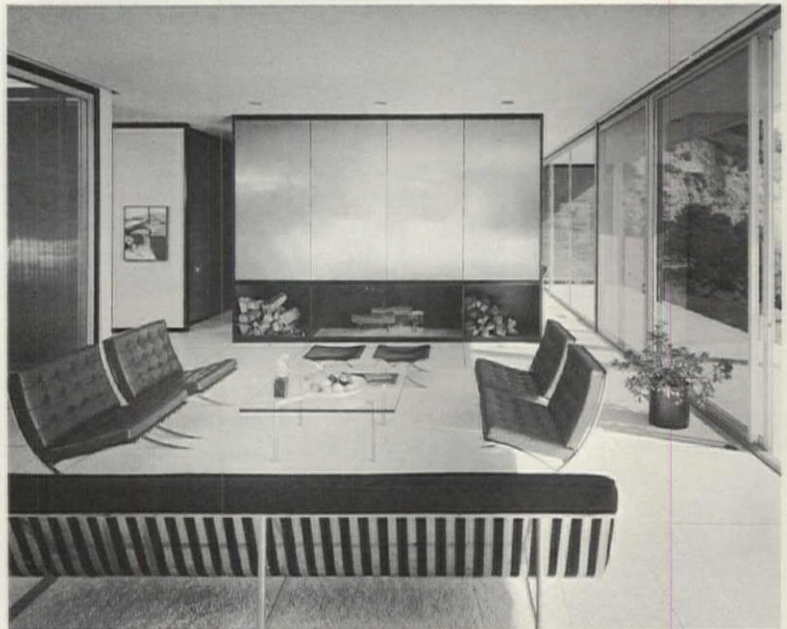
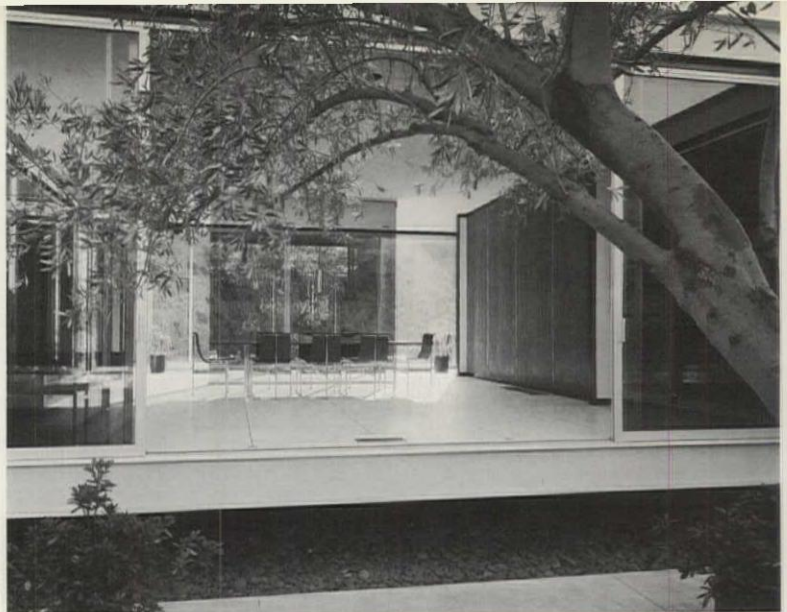
SERENITY AND SPACIOUSNESS  
PERVADE THE ENTIRE HOUSE

The Rosen house acquires an enormous sense of spaciousness by the use of glass walls, in all major living areas, opening both on the central court and on the surrounding grounds. Narrow decks flank the outside of each glass wall to extend the floor plane and emphasize the indoor-outdoor relationship.

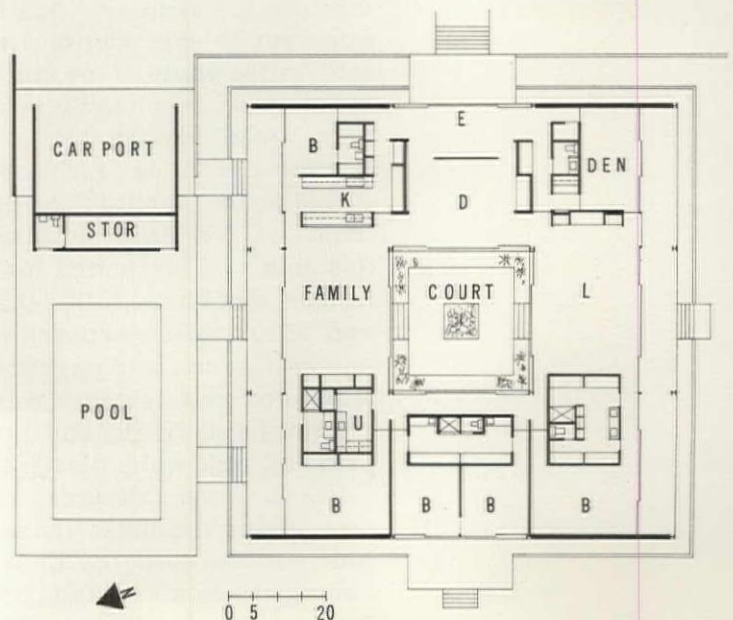
As can be noted in the plan (below right), the house is a large one, with five bedrooms and six baths, or partial baths. All the main rooms are quite open, and placed in the center of their respective sides of the house; more private areas are placed in each corner and along one side in such a way that they offer little obstruction to the continuity of space (across-page top). Utilities are banked between living and private areas to help reduce noise transmission.

The window walls are made of gray plate glass, with sliding screen units inside, to assure an unbroken "mirroring" of sky and trees in the dark glass. Similar glass is used as a screen between the entry and the formal dining room.

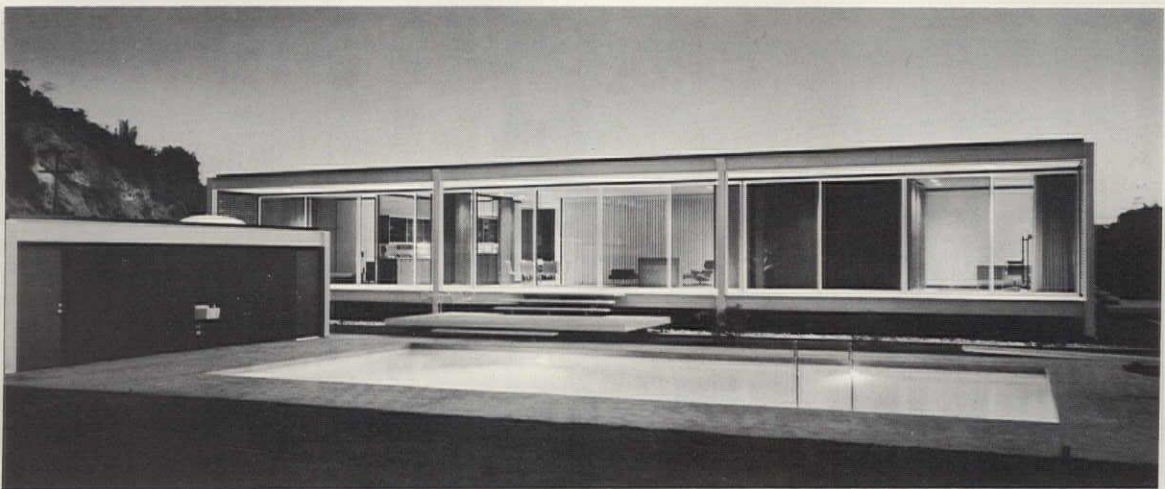
Whereas the materials used in the house itself are relatively neutral in color, the furnishings are mainly of bright stainless steel, chrome and polished leather, with brilliant accents in fabrics, carpets, paintings and sculpture. As the focal point of the living room (right center), the fireplace wall is also surfaced with stainless steel. Ceilings throughout are of acoustical plaster to reduce sound reverberation from the harder interior surfaces. The lighting fixtures are recessed in the ceilings, and have rimless apertures to make them as inconspicuous as possible. Most of the heating registers and electrical outlets are recessed in the floors.



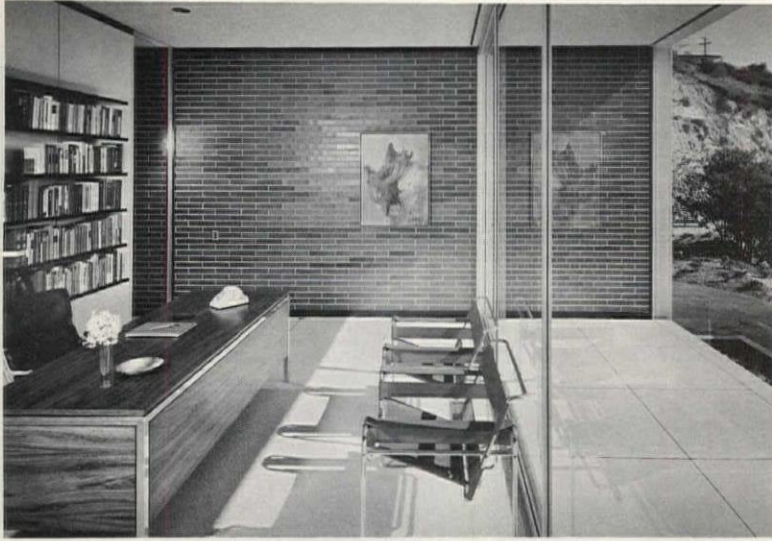
MORLEY BAER PHOTOS











MORLEY BAER PHOTOS

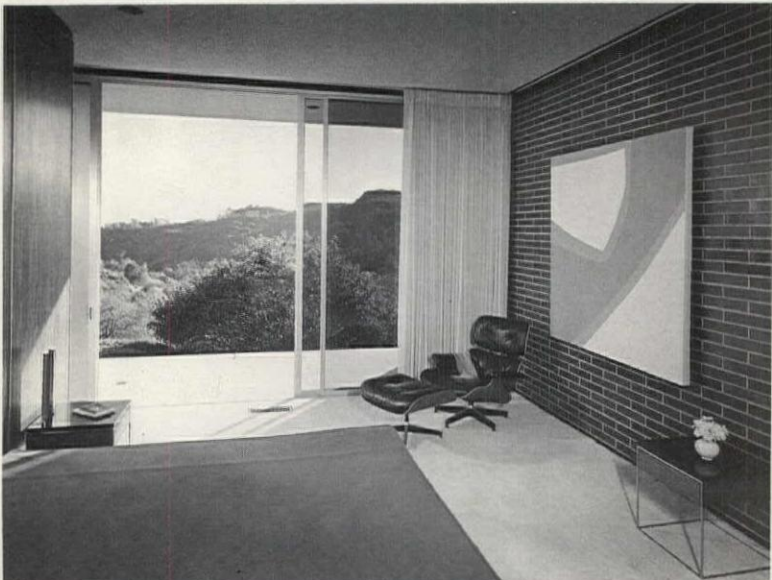
THE STRUCTURE IS BASED  
ON MODULAR PRECISION



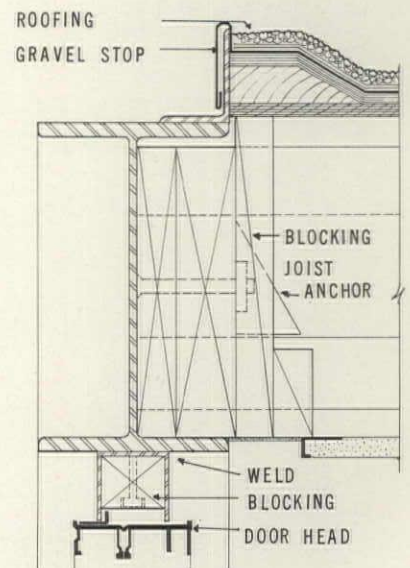
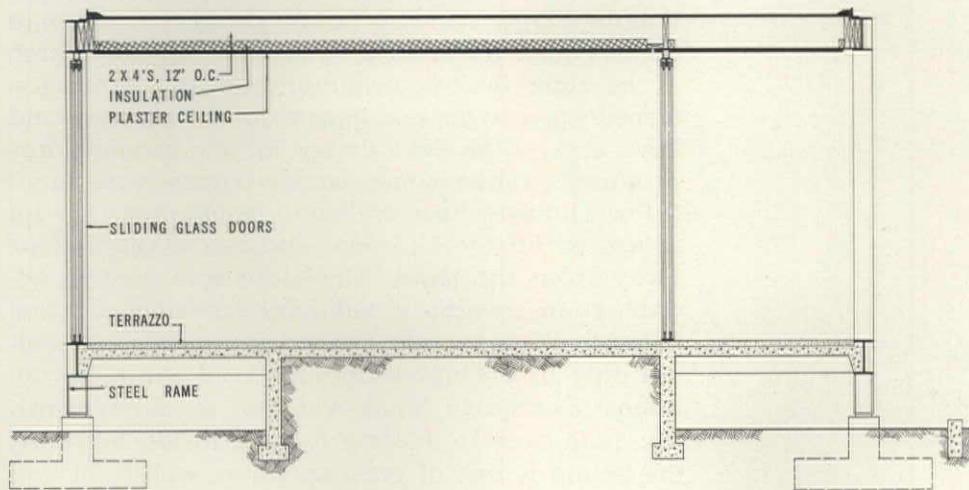
The structure of the Rosen house is nine equal steel-framed bays, with the center bay forming the open court. Both plan and construction are based on a modular grid of 3 feet 4 inches: each bay is eight modules square (26 feet 8 inches) and the ceiling height is three modules (10 feet). The wide-flange shapes of the steel frame are used to great advantage to form very simple, yet highly ornamental details, as can be seen in the drawings of the section and cornice (*across-page bottom*) and in the photos of the exterior.

The same care has been given the design and installation of cabinets and equipment. In the kitchen (*left center*), the lower cabinets are fronted with oiled walnut, the upper ones with gray glass. Counters are plastic laminate. Square, plastic skylights are used to add daylight to all interior utility spaces.

Special equipment provided in the house includes: built-in telephone and television outlets throughout the house; an intercom system to all rooms and to the pool area; dimmers for the lighting; and a built-in hi-fi and radio system. The kitchen equipment is all built-in, including mixer, slicer, blender and food warmer. A sprinkler system is installed for all planted areas around the house. Outdoor terraces and steps are a similar terrazzo to the inside floors.











## CONTEMPORARY TOWN HOUSE USES VAULTED ROOFS

When Urban Renewal Administration Commissioner William Slayton and his family planned to return to the city after living in a suburban home, a search of the older, built-up neighborhoods of Washington turned up a bypassed, vacant lot in the Cleveland Park area. I. M. Pei's design for the property has produced a handsome, contemporary version of a town house with a walled-in front court. The lot measures 50 by 135 feet, and has a slight slope away from the street. This slope was used to advantage in creating a split-level scheme well suited to family life in the city. Great privacy was achieved, not only by the high wall of the front court, but by almost completely blank walls on the sides—which are quite close to existing houses. Inside, however, the feeling is one of great openness, with front and back walls of glass. The structure is brick bearing wall, topped by a triple, poured concrete vault. The interiors are brick and plaster.



ARCHITECTS: I. M. PEI & ASSOCIATES

*Residence for Mr. and Mrs. William M. Slayton*

*Washington, D. C.*

Project Manager: *Kellogg Wong*

Engineers: *Severud-Elstad-Krueger Associates*

Landscape Architect: *Ray V. Murphy*

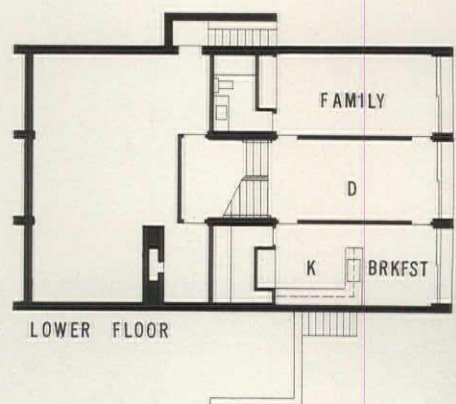
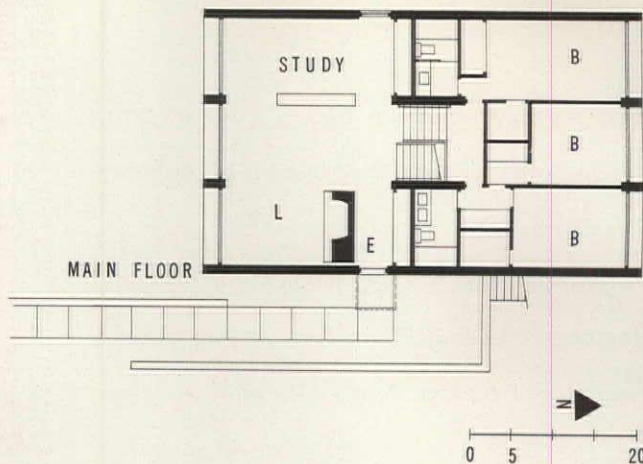
JOSEPH W. MOLITOR PHOTOS





FOUR LEVELS, HIGH CEILINGS AND  
OUTDOOR AREAS ADD SPACIOUSNESS

The Slayton house gains a great sense of space and variety by good zoning and its split-level scheme. At the front, the house appears to be a single, high-ceilinged story. The main living areas and adjoining walled-in garden are on this side. Other rooms, each one bay wide, form a two-story section at the rear (*below right*). A "service spine" is a buffer between.



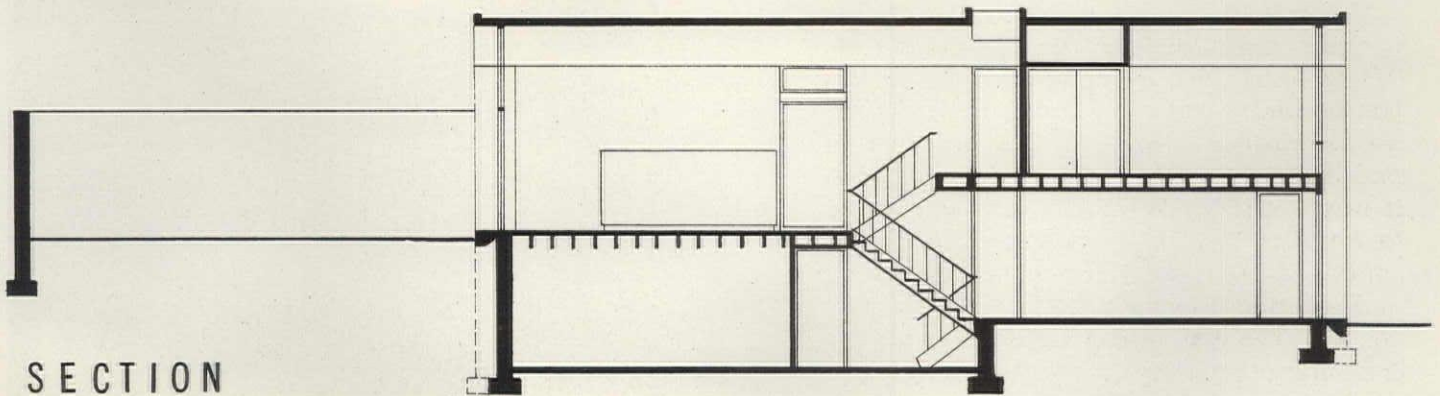
The spatial quality of the vaulted rooms is quite impressive. Mr. Slayton comments: "I remember clearly the day — when it was just becoming twilight — that I drove by the house when the forms for the vaulted roof had been removed. I walked through what is now the glass doors into this space, and for the first time realized what I. M. Pei had conceived. It was a tremendously moving and emotional experience; I shall never forget it." The vault over the stair is further dramatized by a skylight (*across-page top*).







JOSEPH W. MOLITOR PHOTOS



SECTION



ARCHITECT: STANLEY SALZMAN  
OF EDELMAN AND SALZMAN

*Private Residence in New York State*

Consulting Engineer: *Harry M. Sadler Jr.*

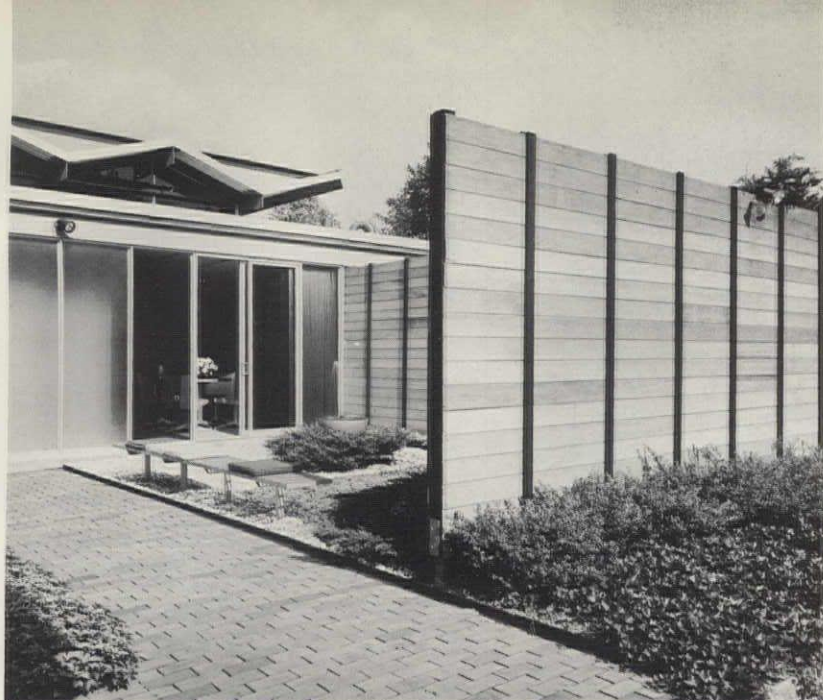
Consulting Landscape Architect: *Ann Leonard*

Cabinetwork: *Novello Craftsmen*

## ADAPTABLE HOUSE DRAMATIZES USE OF STEEL







© EZRA STOLLER ASSOCIATES PHOTOS, *courtesy of House and Garden*

This handsome and comfortably functional house is an extremely interesting study in the use of steel for residential construction. Not only the frame is made of steel, but also roofs, ceilings and most wall surfaces inside and out.

The house was planned for a couple with three sons, aged 7, 12 and 14. Their program called for a one floor scheme which would clearly zone separate areas for the adults and for the children—with a flexible arrangement of space to accommodate large or small scale entertaining. The site is a suburban one of half an acre, relatively barren, with a slight slope to the south and east.

Stanley Salzman developed a plan in three parts: a children's unit, an adult unit and a service unit. The children's unit has three bedrooms opening on a large playroom at one side of the house; the maid's room is located in this unit for supervision. The adult unit includes the master bedroom and dressing room, the living room, a music area and a bar. In the center of the house is a service unit containing dining room and serving area, kitchen and breakfast rooms, the laundry, the service entrance and a stair to a small cellar for the heating plant and storage.

The plan is entirely based on a 2-foot, 8-inch-square module. The living room, the dining-serving area and the playroom are each 20 feet, 8 inches square, and can open completely into each other to make a space 62 feet long. These three rooms are expressed on the exterior by the high folded plate roof. Folding partitions separate the areas when smaller spaces or more privacy are desired. All the utility spaces are banked at the front of the house, along with the carport and walled-in courts for the main entrance and the family or service entry. In contrast to this closed privacy, the back of the house is largely glass walled.





© EZRA STOLLER ASSOCIATES PHOTOS

THE THREE ZONES OF THIS HOUSE ARE WELL RELATED TO SERVE ALL TYPES OF FAMILY OCCASIONS



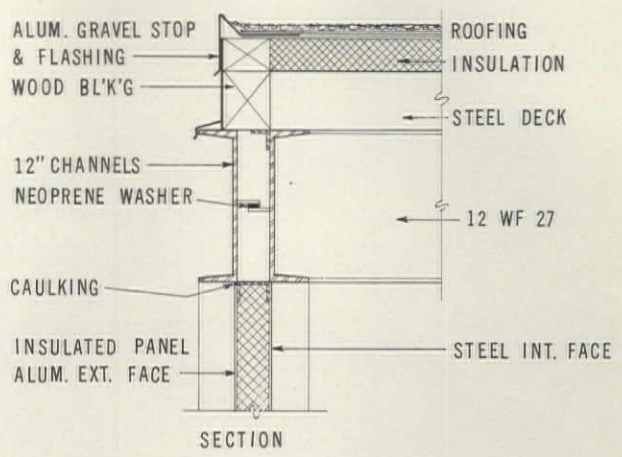
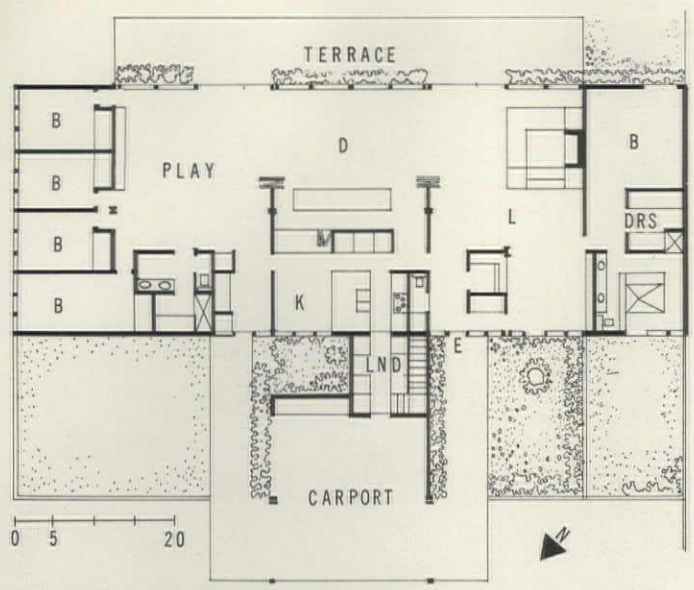
In each of the three major rooms forming the centers of the zones of the house, Salzman has provided a space which is pleasant and well proportioned in itself—yet which form a dramatically big room when opened together. These areas are illustrated on this page: the adult living room (*right and top left*), the kitchen-breakfast room (*left center*) and the children's play room (*bottom left*).

The structure of the house uses an exposed steel frame, and the architect has paid especial attention to the isolation of interior and exterior sections of the steel to reduce heat loss or transmission through the metal. Plastic washers between members, as can be seen in the detail (*across-page*), are the main device used for this purpose.

The high roof is made of two double cantilevered trusses, decked with steel. The decking carries through the diagonal chords of the trusses to create the folded plate form. The decking also cantilevers in two directions to provide overhangs over the glass areas of the walls.

All wall panels and doors fit the 2-foot, 8-inch module. Exterior panels are insulated steel frames, generally faced with furniture steel; in a few places the facings are etched and sandblasted aluminum. Interiors also have steel walls, with other finishes glued on in some rooms (such as walnut plywood in the living room). All the steel is painted. The steel decking forming the roof is left exposed as the finished ceiling, except where luminous ceilings are used in the utility areas, and in the master bedroom which has an acoustical ceiling. Floors are terrazzo, ceramic tile or hardwood on steel decking. Heating is by a dual hot water radiant and convactor system.









The developer required a low-cost house which would appeal to a wide variety of buyers including low-income families, young married couples, and people looking for a vacation or retirement home or rental investment. The quality of the design was felt to be important if the house was to hold its market once the low-income group had been satisfied.

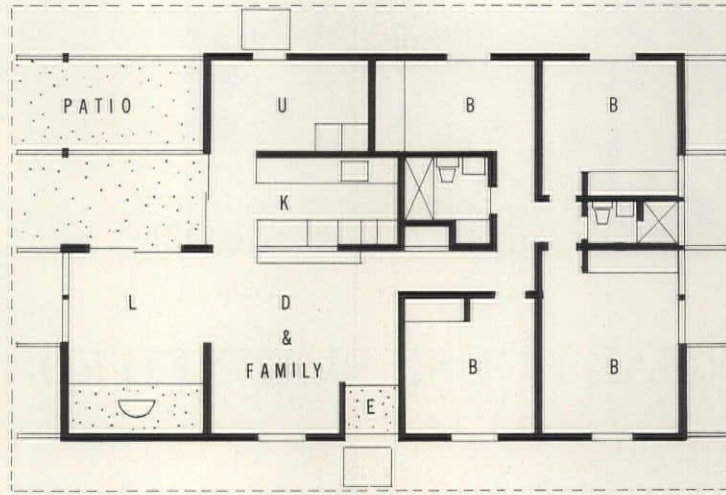
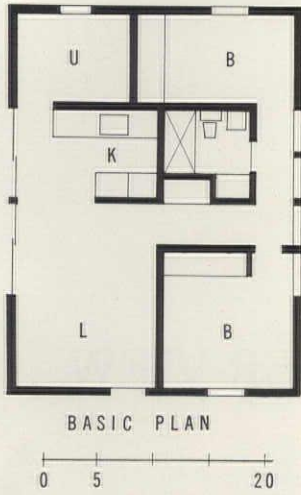
Various factors contributed towards the remarkably low cost. The house makes use of prefabricated components, and materials were selected which needed a minimum of on-site finishing, thus considerably reducing labor costs. Pre-planning specified standard extensions and alterations to the basic plan and, with a few exceptions such as floor coverings, materials and finishes are the same for each house. As the architect points out, this means that the building crew can move from one house to the next "without having to look at a plan, or think, or chance an error. This cannot fail to reduce costs."

Although the standard house is only 800 square feet, open planning gives a very spacious living

area. The roof of tongued and grooved hemlock is left exposed on the inside, giving maximum height to the rooms. Simplicity of design and the glass wall in the living area, planned in relation to an open court beyond, also add to the impression of spaciousness. The basic plan (*across-page left*) provides a living room with a dining area, kitchen, bathroom, two bedrooms and a multi-purpose utility room. The arrangement of bathroom and hall makes it possible for two bedrooms to be added without structural change. By adding a standard 4-foot panel on each side of the house, the living room, kitchen and utility room can be enlarged to the depth of the overhang. These standard additions and extensions are shown on the plan (*across-page right*). The house is of post and beam construction on concrete slab. Exterior walls are of prefabricated panels of pre-sealed redwood. Electric cable heating, vinyl working surfaces and aluminum sliding doors are included in the basic cost of \$5,995, exclusive of land.



# ATTRACTIVE DEVELOPMENT HOUSE FOR \$5,995



ARCHITECT: MARY LUND DAVIS

*Development House*

*for the Ron Mitchell Corporation*

*Tacoma, Washington*

Contractor: *Ron Mitchell Corporation*





## A FORMAL HOUSE PLANNED FOR A RIVER VIEW

This elegant and formally balanced house was designed for a sloping, heavily wooded site overlooking the Potomac River near Washington, D.C. The lot was a "forgotten" one in an area developed in the mid-thirties. To make the most of the location, the house was designed so that all but two rooms face the river view. Use of the hill site permitted the opening of the basement area to a terrace on the river side, and the development of four bedrooms for children and maid on the lower level. The portion that is set into the hillside is devoted to laundry, storage and baths.

The main living rooms are on the upper level, with dining room, living room and study forming a connected suite ranging the deck at the back. The kitchen-breakfast room and the master bedroom flank the entry at the front, and each have a walled-in court with views of the river.

The dining room and study can be shut off from the living room by large floor-to-ceiling pocket doors. As the study connects with the powder room, it can double as a guest room when needed.

The large kitchen doubles as a sort of family room, with the dining end fitted with built-in storage for games, children's art supplies and the like. The common wall between the kitchen and dining room is surfaced in oiled walnut paneling, which conceals three closets for china and serving equipment.

The structure of the house has brick bearing walls, which are left exposed inside and out. The architect states that "its color is best described, as well as its texture, as the outside surface of Camembert cheese." All other interior walls are plaster, as are the ceilings. Major rooms have floors of walnut stained oak; the entry hall floor, as well as exterior paving, is bluestone.

ARCHITECT: HUGH NEWELL JACOBSEN

*Residence for Mr. and Mrs. Robert Shorb*

*Bethesda, Maryland*

Engineer: *Carl Hansen*

Contractor: *Fishman Construction Company*



ROBERT C. LAUTMAN PHOTOS





SIMPLICITY AND WARMTH  
PERVADE THIS CLASSIC HOUSE



Much of the "decoration" in the Shorb house is derived from the contrasting planes of the simply handled surfacing materials. All were chosen for their durability and easy maintenance, as well as for the visual interest. To further continue the simplicity of the over-all effect, all lighting in the house is recessed in the ceilings. The furniture and accessories are kept to a minimum, and form a pleasant blend of traditional and soft-lined contemporary—as can be seen in the photos of the dining room (*above*) and the living room (*across-page*).

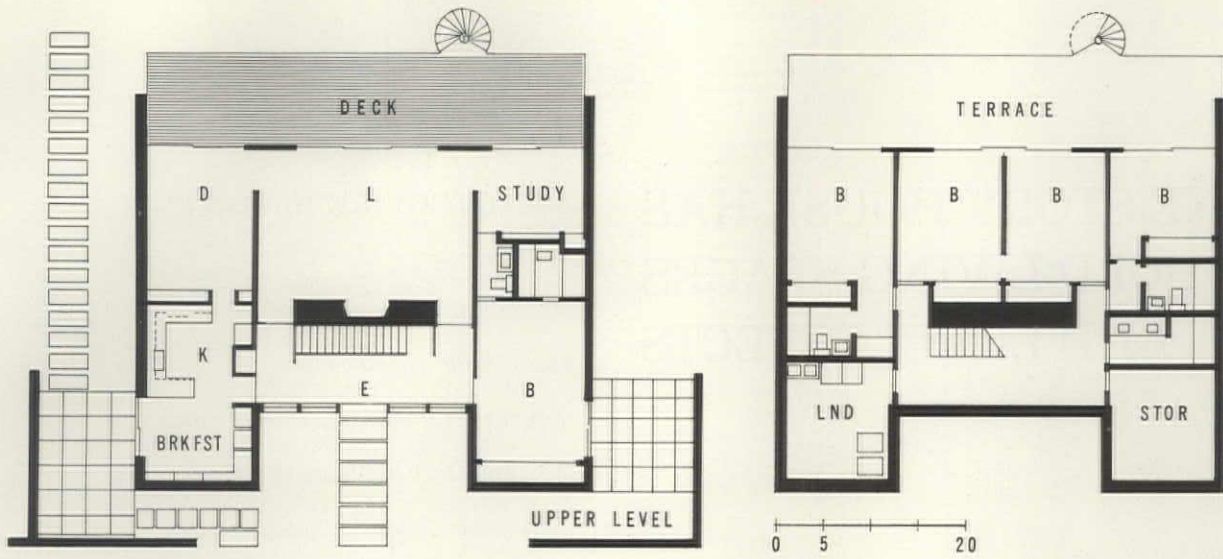
The three Shorb children use the downstairs hall as a gallery for their art work, which is fastened to the framed acoustical paneling ranging the wall (*right*). The floors on this level are surfaced with beige asphalt tile. Baths and tub recesses are finished with ceramic tile.

With the exception of the front entry glazing, which is set in wood frames, all sash are sliding aluminum floor-to-ceiling glass doors.

The house is heated by a forced warm air, gas-fired system and centrally air conditioned by electricity. The cost of the house, drive and landscaping, not including fees and land, was \$50,000.

ROBERT C. LAUTMAN PHOTOS







# ONE-STORY HOUSE HAS BOLD LIVING SPACES AND LIGHT EFFECTS

ARCHITECT: RICHARD MEIER

*Residence for*

*Mr. and Mrs. Jerome Meier*

*Essex Fells, New Jersey*

Structural Consultant: *William Atlas*

Mechanical Consultants: *Wald and Zigas*

Contractor: *John W. Ogden*

Interior Designer: *Elaine Lustig-Cohen*







JOSEPH W. MOLITOR PHOTOS

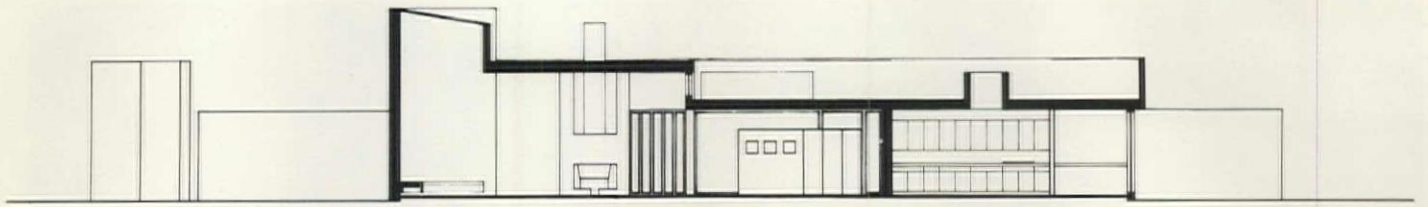
Situated on a quiet residential street in Essex Fells, the Meier residence amply fulfills the owners' wish for a house "which would be at once comfortable and exciting to live in."

Describing some of the ways in which this sense of excitement was achieved, the architect says "the progression of spaces, both exterior and interior, force different and surprising vistas. While the roof parapet is itself sharply rectangular, the masonry walls curve or extend past the natural corners of the structure, giving unexpected views as one walks around it." Several courtyards and a roof garden with trees are incorporated in the scheme, and provide an interesting variety of living spaces. Two cylindrical brick turrets, rising to a height of 20 feet give the house an over-all stature comparable with that of large traditional houses in the neighborhood. Not only do these turrets give character

to the exterior, but inside the house one of them creates an unusual seating corner, while the other houses an outdoor sculpture, which is visible from the living room (*left*).

"The ways in which light enters the various spaces and affects them," says Richard Meier, "are a primary source of interest in the house. Clerestories in the living room reveal the tops of tree branches; domed skylights in bathroom and kitchen work space provide overhead illumination varied by the use of color in the rectangular wells opening up to them. The cylindrical seating space in the living room is covered by a graded skylight and is lighted artificially from outside at night." An unusual effect is created by the glimpses through the skylights of the trees and shrubs in the roof garden, which will be developed during the year. The outdoor spiral staircase, shown on the plan, will also be added.





JOSEPH W. MOLITOR PHOTOS

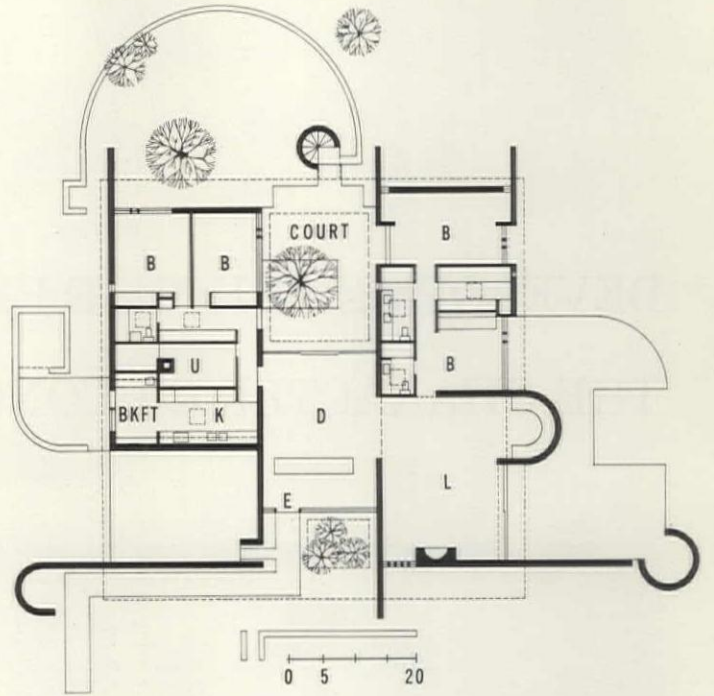
The H-shaped plan was in part determined by the location of a giant oak tree which Mr. and Mrs. Meier were anxious to retain. A partly enclosed court was formed around this tree; this court also makes a pleasant extension of the living area for entertaining. The south wing of the house includes a master bedroom, bath, dressing room, guest lavatory, study and living room. The courtyard and dining area effectively separate this wing from the maid's and guest bedrooms, kitchen, garage and storage accommodation on the other side of the house.

The kitchen (*above*) is lined on two sides by metal cabinets and plastic working surfaces. A marble table is a feature of the dining area (*right*). The arrangement of clerestories, skylights and glass walls can be seen in the cross-section (*above*).

The structure is a combination of brick or wood-stud walls on concrete block foundation. The wood parapet and joists support the tar and gravel built-up roof, which has wood deck terraces in the seating areas. The approximate cost of the house, which is fully air conditioned, was \$68,500.



GIANT OAK TREE BECOMES INTEGRAL PART OF SCHEME





DEVELOPMENT HOUSE EXPRESSES  
THE CHARACTER OF CONCRETE





BLACK-BAKER PHOTOS



ARCHITECT: MARK HAMPTON

*Development house for Sunstate Builders, Inc.*

*Tampa, Florida*

Associate on Job: *Herbert T. Lawton*

Structural Engineer: *Randolph C. Jackson III*

Contractor: *Sunstate Builders, Inc.*

Landscape Architect: *Jack Holmes*

Interior Designers: *Paul T. Ward, Inc.*

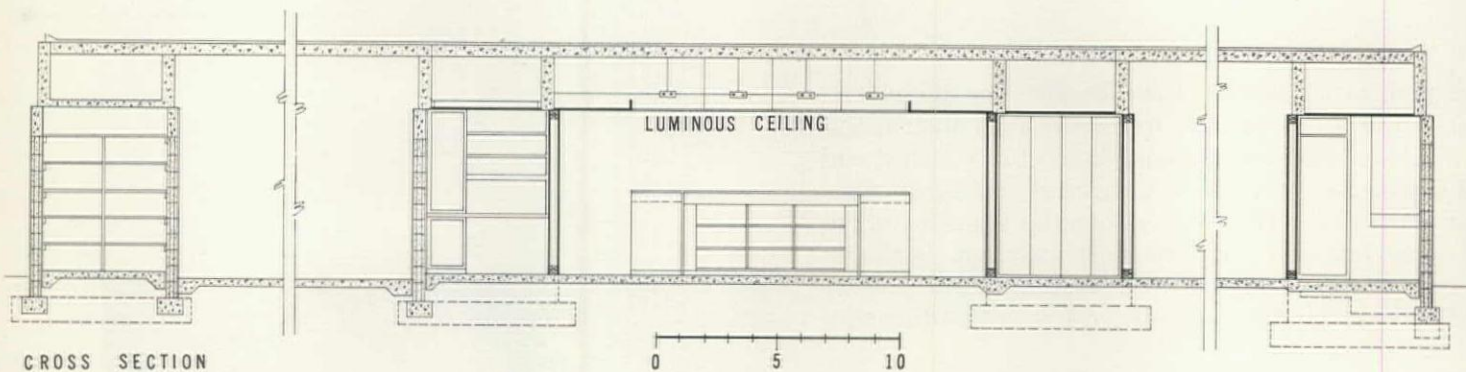
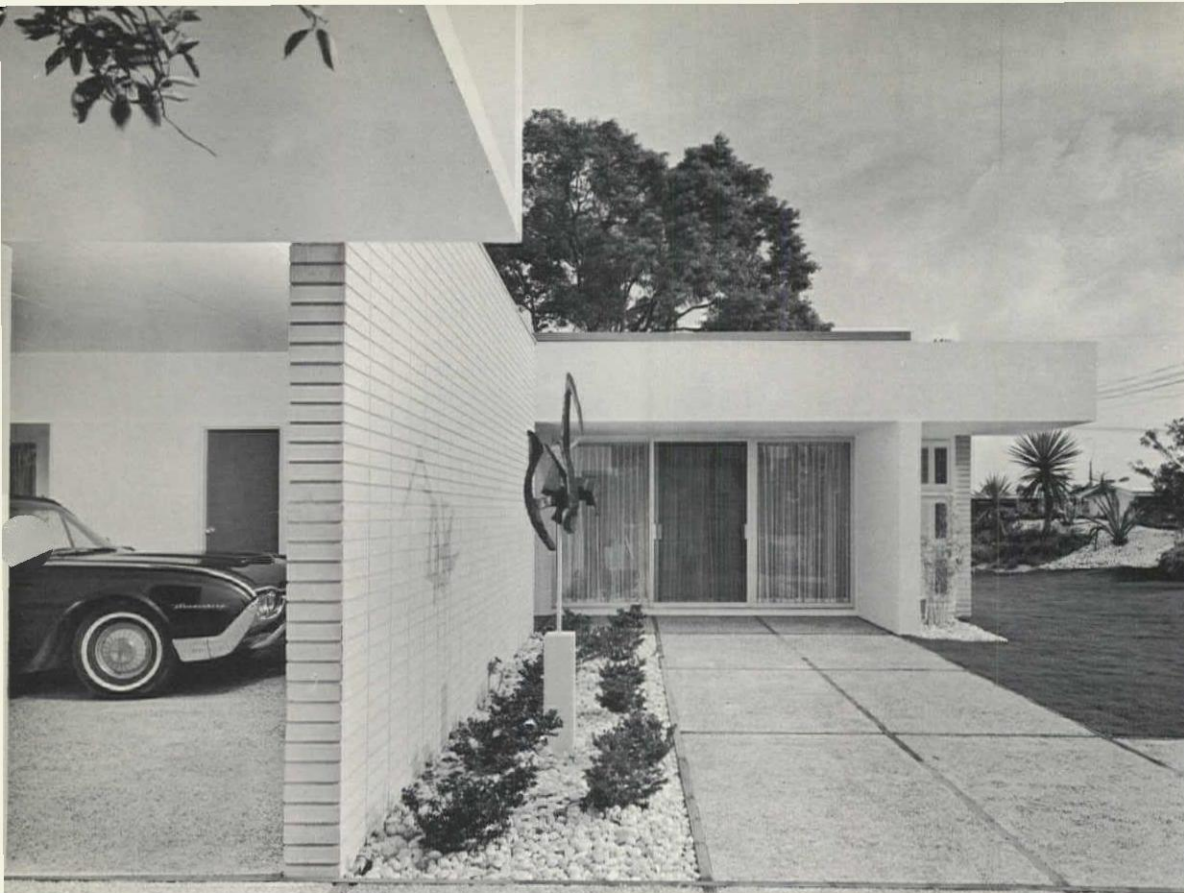
The program specified the extensive use of concrete block and cast concrete bricks in the construction of this three-bedroom house, the cost of which could not exceed \$25,000. By his sensitive handling of his materials, Mark Hampton evolved a solution which achieves just the right balance between strength and elegance, giving expression to both the durable and esthetic qualities of concrete as a building material.

The most unusual feature of the structure is the use of inverted, channel-shaped beams which are made of precast, prestressed concrete. These beams span between the concrete block columns and furnish support for the 4-inch-thick, 4-foot-wide concrete roof "planks." They also form convenient utility and duct chases. Inside the house, they create low ceilings in areas of the bedrooms, closets and bathrooms "adding a dimension to the feeling of space in the house. Their lowness by contrast with the high areas accentuates the difference between the two." Exterior walls of stuccoed concrete block or cast brick give a pleasant variation in texture and form an uncluttered background for the sculpture by Ernest Cox. Landscaping around the house takes advantage of existing trees and the lake view; rolling mounds ensure privacy for the terrace areas.

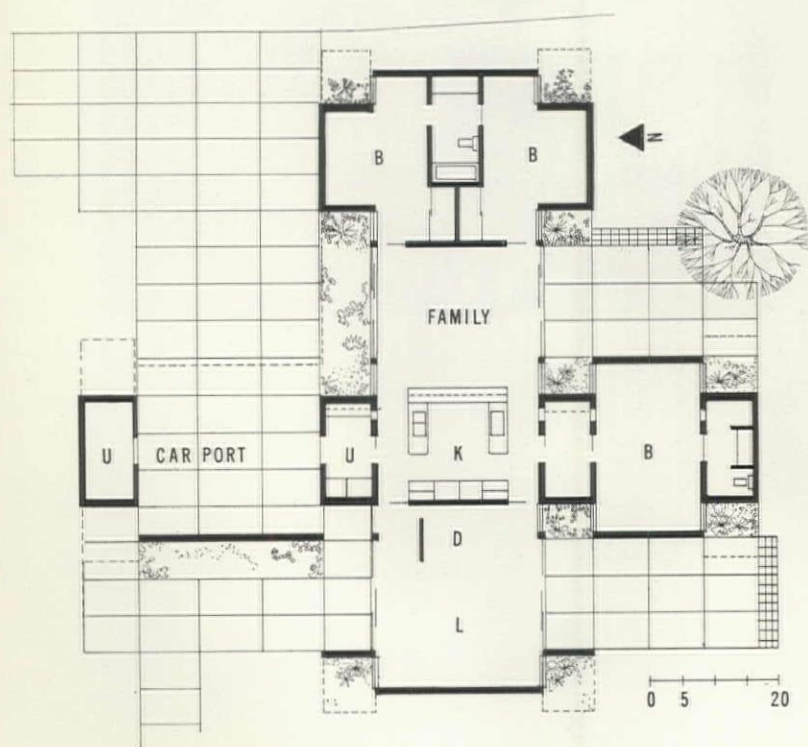
The zoning of the plan combines large living spaces with maximum privacy and quiet in the sleeping areas. The children's bedrooms and the master bedroom are well separated both from each other and from the entertaining areas. The kitchen is placed in a central position to enable the mother to supervise the children's activities from this point.







CROSS SECTION



The sidewalks, terraces and driveways of the house at Tampa are of concrete slab with exposed aggregate. The photo (*above*) shows how well these outdoor concrete areas relate to the structure of the house.

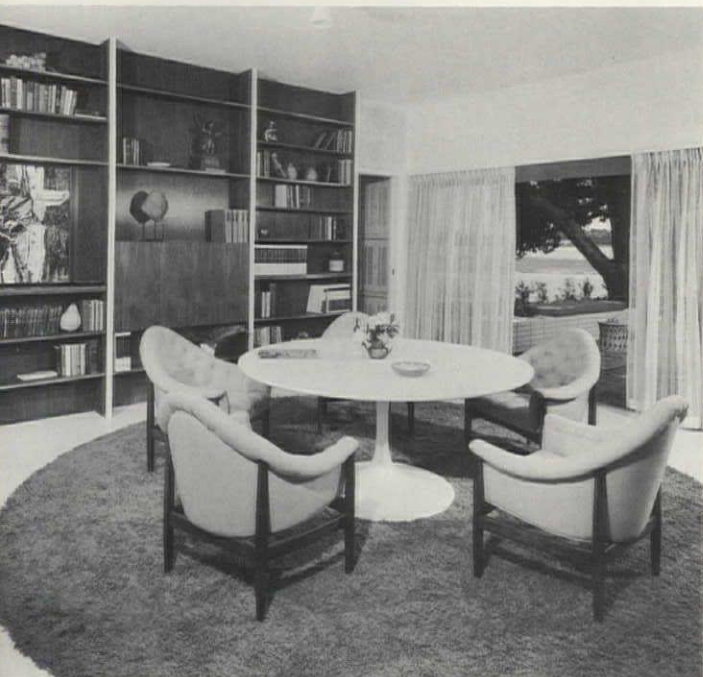
Spatial variety inside the house can be seen in the photos (*across-page*). The master bedroom (*top left*) shows how the low ceiling in the closet area, formed by the inverted channel beam, emphasises the height of the rest of the room. An effective setting for Harrison Covington's painting is provided by the long concrete brick wall in the living room (*top right*). The family room (*right*) has been furnished as a library and has a free standing bookcase with aluminum standards. The kitchen features a laminated plastic counter and cabinets and a luminous ceiling, which is also shown in the cross section.

Close co-operation between architect and builder was an important factor in keeping the cost to \$23,100.



IMAGINATIVE USE OF SPACE AND GOOD ZONING  
GIVE VARIETY TO INTERIOR

BLACK-BAKER PHOTOS





# EXPANSIVE RANCH HOUSE FORMS ITS OWN OASIS







KARL RIEK PHOTOS

This big, comfortable house for a rancher is located in the flat plain of the Sacramento Valley, and creates its own views and sheltered gardens in the open country. In addition to the central "living court" about which the entire house revolves, every room in the house looks into its own private walled-in garden. Wide overhangs and trellises provide added shade and seclusion.

The house was planned for a family of five: the parents, a boy aged 16, and two girls aged 14 and 6. Bedrooms are ranged along two sides of the center court. Living areas were designed to accommodate large scale entertaining at home, from dinner parties for 14, to cocktail parties for more than 100. Two large living rooms are provided, in addition to the outdoor areas. The formal entrance to the house (*left*) is placed near the corner of the house between the living spaces.

A second entrance to the house is placed on the opposite side of the house, by the carport, for direct access to the ranch office. Materials used in this entry were selected for durability and easy maintenance.

The center court (*above*) with a swimming pool and ample space for lounging and entertaining has proved a favorite feature of the house: Sacramento has very hot summers, cold winters and is always windy.

In keeping with its site, the house has a very quiet and casual design. Major emphasis is given to the black-stained post and beam structure, accented by the peaked roofs providing higher ceilings over the major rooms. Exterior walls — and many of the interior ones — are natural or white-painted adobe. Other interior walls are charcoal-stained mahogany or white-painted gypsum board. Most floors are terrazzo, with carpet or vinyl used in some areas. Ceilings are white-stained wood in major rooms, gypsum board in baths and kitchen. Air conditioning is provided throughout. The total result of the house is one of space, comfort and livability.

ARCHITECTS:

CAMPBELL & WONG & ASSOCIATES

*Residence for Mr. and Mrs. Wilmarth*

*Cobusa, California*

Mechanical Engineers: *Yanow & Bauer*

Contractor: *Alec Dambacher*

Landscape Architects: *Eckbo, Dean, Austin & Williams*

Interior Designer: *Peter Rocchia*



EACH ROOM HAS AN OUTDOOR COUNTERPART



The Wilmarth house is well zoned for privacy and quiet, and for simultaneous activities of different age groups. The kitchen is a big one (*below left*), and located for convenient service to both indoor and outdoor living and dining areas. Laundry facilities are in a separate utility room near the children's bedrooms and the back entrance.

To contrast with the black-stained Douglas fir and redwood frame of the house, the roofs are surfaced with white asbestos shingles or built-up tar and white gravel. Most of the fenestration is floor-to-ceiling sliding sash, providing direct access to the adjoining courts.

The master bedroom suite provides a large dressing room, and a bath with a sunken tub and a court for sun baths (*below*). It is flanked by a private terrace well apart from the rest of the house.

The interior furnishings of the house reflect the quietly sophisticated structure. A number of periods and styles are mingled in restrained and comfortable groupings, as can be noted in the photo of the living room (*right*). Spatial interest is added by ceilings following the lines of the peaked roofs.

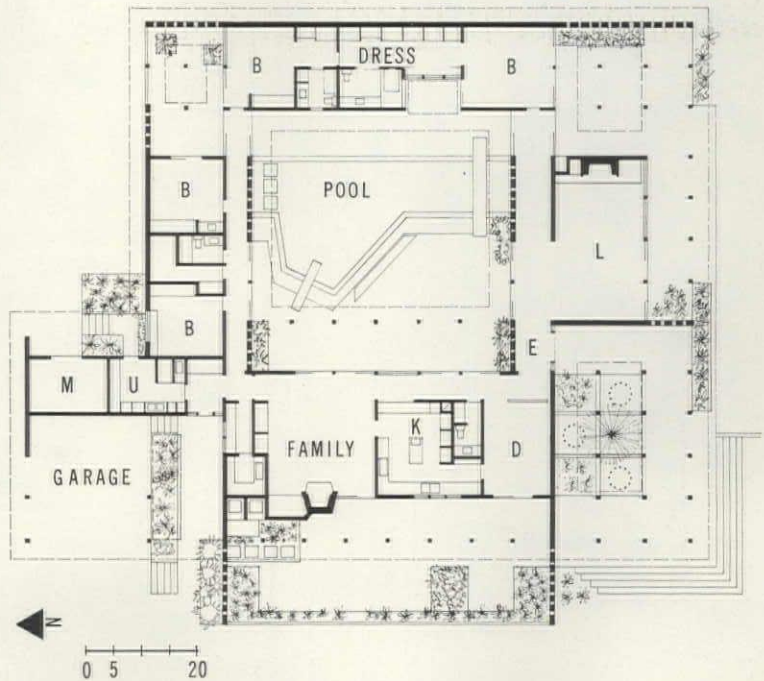
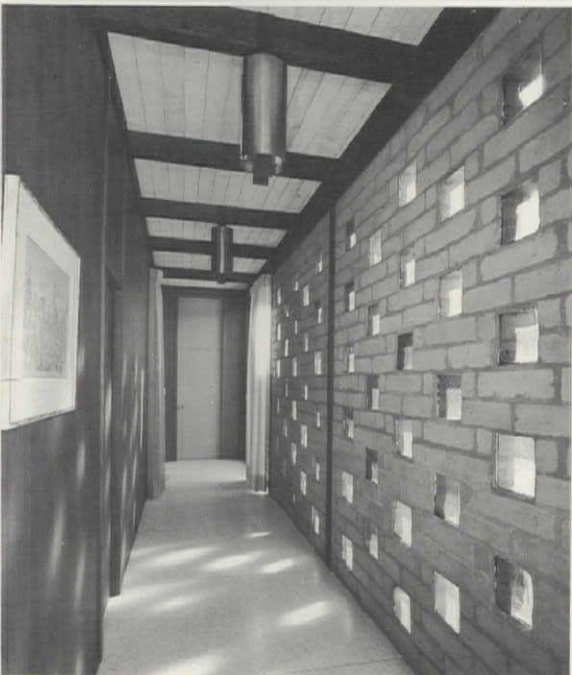
The heating-cooling system of the house uses a gas-fired boiler in a mechanical room by the carport. Heated water is sent to three zones within the house to a heat exchanger, where air is passed over heated coils and delivered through ducts to the required areas. A water chiller provides summer cooling through the same system.







KARL RIEK PHOTOS





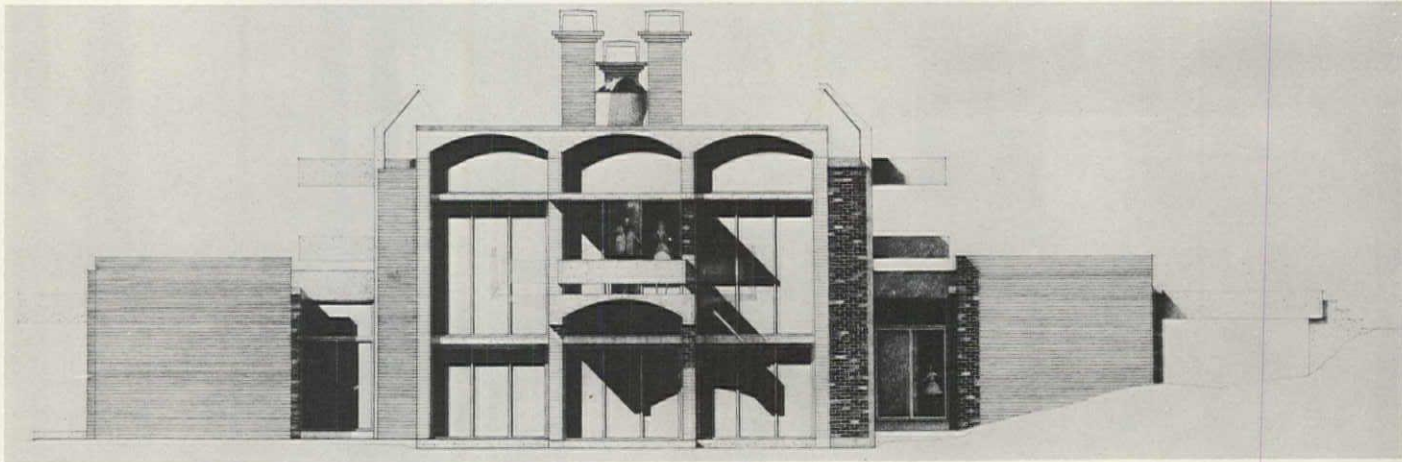
ARCHITECT: TASSO KATSELAS

*Residence for Mr. and Mrs. Tasso Katselas*

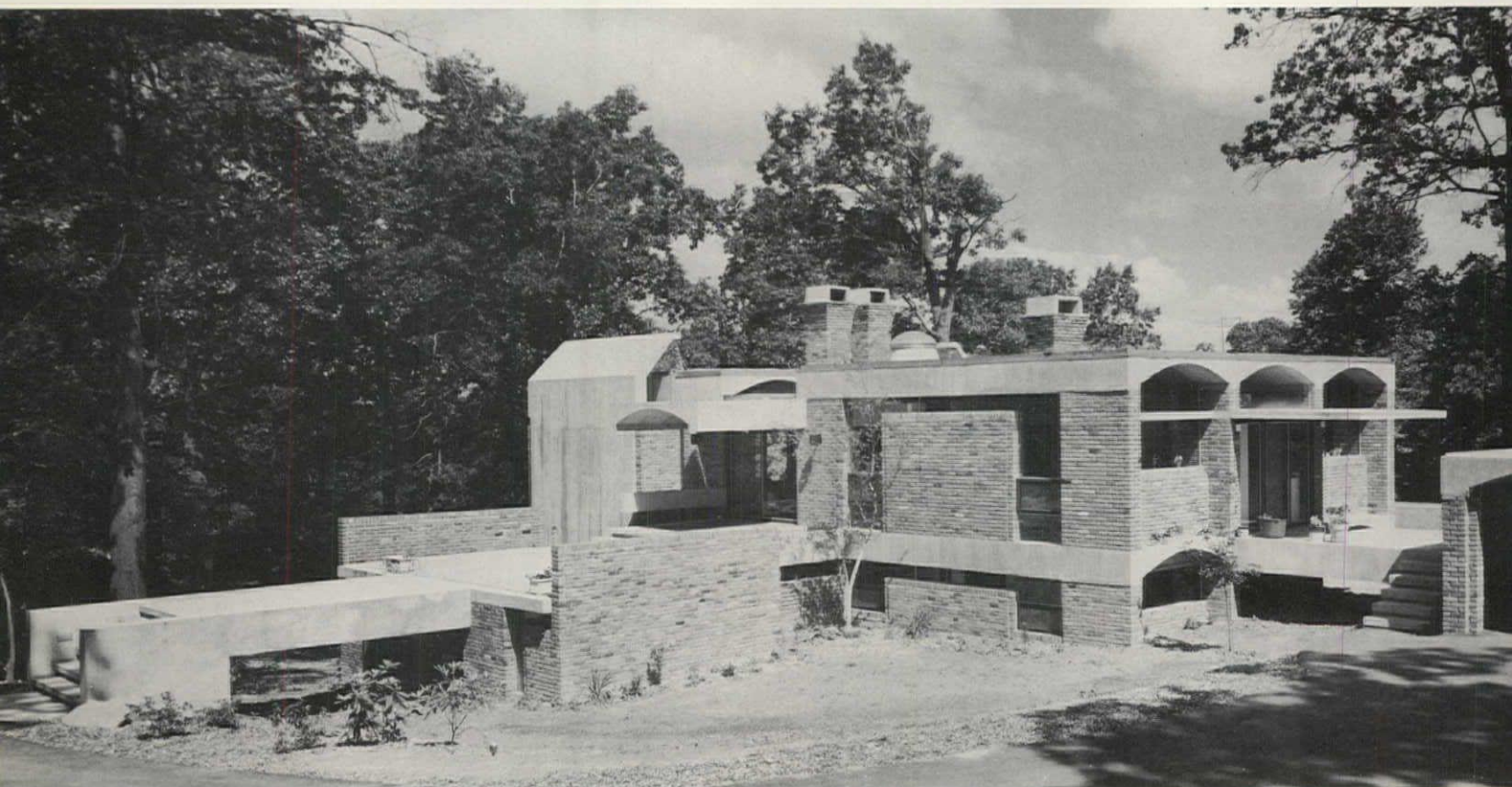
*Pittsburgh, Pennsylvania*

Structural Engineers: *R. M. Gensert Associates*

Contractor: *Thomas J. Plakidas*



MARC NEUHOF PHOTOS, courtesy of The American Home







## A BOLD EXPRESSION IN BRICK AND CONCRETE

Possibly the most intricately sculptural of the houses for 1964, this design exhibits a very striking interplay of room areas and structural materials. In designing the house for his own family, Tasso Katselas states that he outlined their four major requirements as: "(1) a space worth living in; (2) a space answering diverse human needs, ranging from unrestrained expression to complete privacy; (3) a spatial order bold enough to accept the clutter and confusion of life, yet intimate enough to lend meaning to the smallest personal act; and (4) a space upon a slope, among giant oak trees, able to turn inward from nature's anger, able to pour outward toward nature's joys."

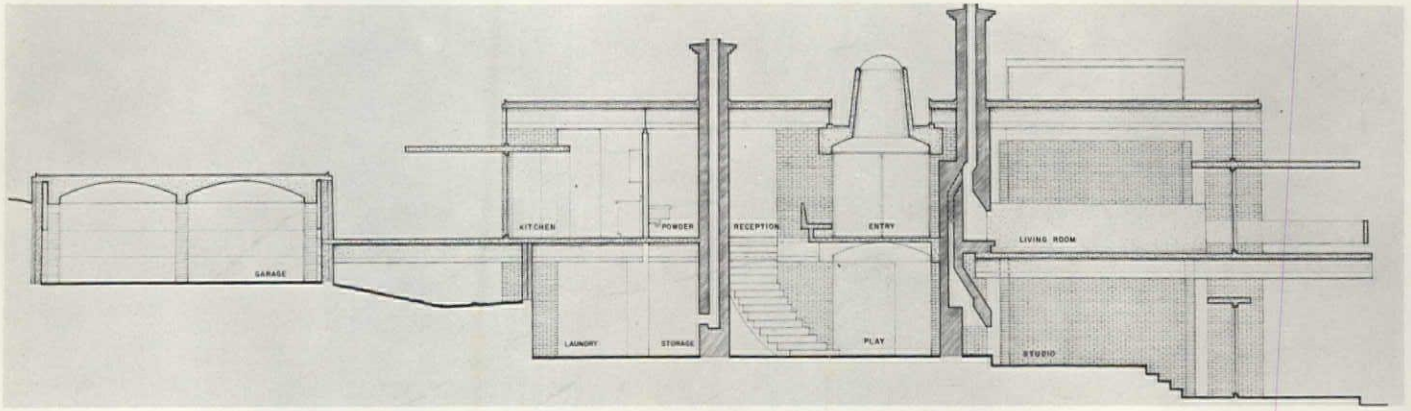
This rather unusual, yet admittedly comprehensive program, seems to have been well fulfilled. The house consistently holds one's interest, inside and out—cantilevers, balconies, domes, vaults, skylights, all combine to offer a considerable variety of spaces, "bold and intimate." And the strong exterior forms seem comfortably at home on the wooded, irregular site.

The plan ramps down with the fall of the land, as can be seen in the photo of the entrance facade (*above*) and the sketch (*across-page top*). All living and service areas are contained in the big central block of the house, with bedrooms and garages forming subsidiary wings on three sides. The roofs of each of the smaller wings are developed as sun decks, or, as over the children's bedrooms—an entrance terrace.

The most dramatic of the interior spaces is the two-story room devoted to living area and studio or family room. The living area is essentially a balcony jutting through the big room, and continuing to the outside as a cantilevered deck. Masonry "arms" provide clerestory lighting at each side of the room to balance the daylight from the window wall at the end. One enters the house on the upper level gallery, where one is immediately faced with the vista of this projection of the living area into the tree tops. Family and entertaining spaces form a fairly open plan, with rooms for study, work and sleep, well closed-off for privacy and quiet.



ROOM HEIGHTS VARY WITH THE SLOPE OF THE LAND



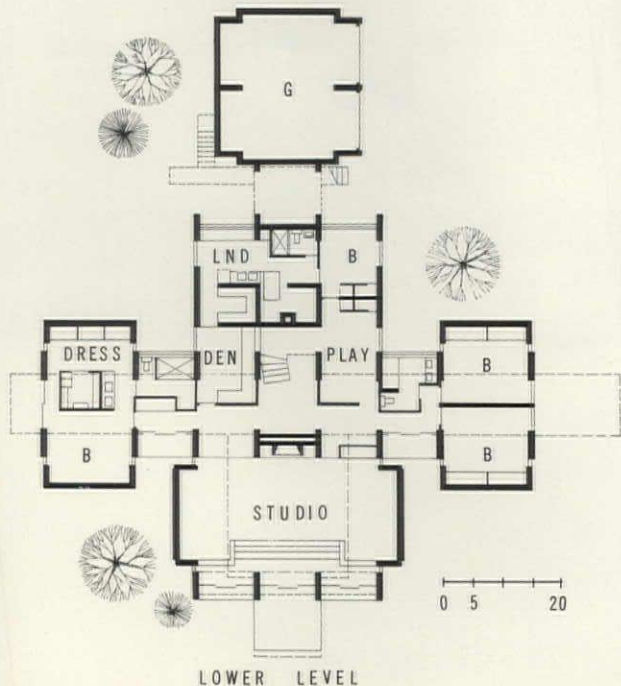
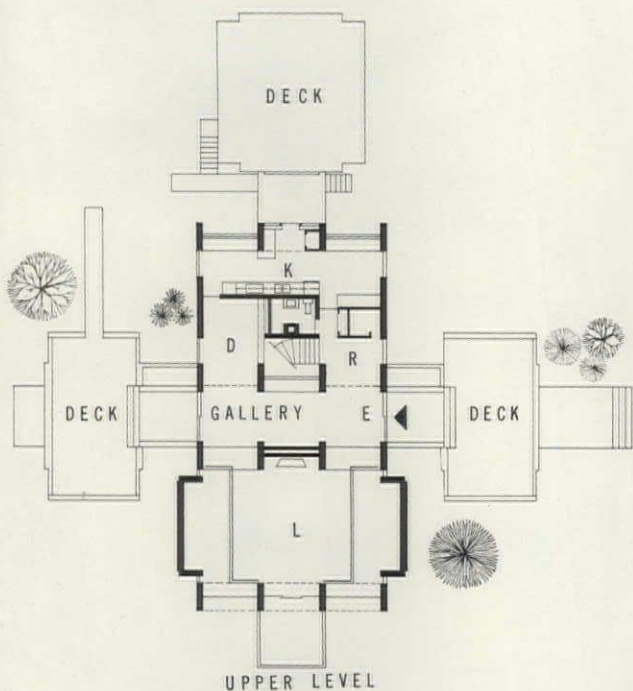
MARC NEUHOF PHOTOS, courtesy of The American Home





The sectional drawing of the Katselas house (left) shows how the ceiling heights of the lower level are increased as the land falls from the garage wing to the tall studio. The brick and concrete structural materials are used as exposed interior finishes; construction is basically a series of solid brick piers, which support a series of poured-in-place arched beam slabs. Thus the concrete floor, ceiling and beam supports are accomplished in one process. One set of forms was used, spanning 9-feet in the short direction, 30-feet in the long direction. Cavity brick walls and

glass were used as fill-in material between the piers. The glazing is installed in recesses poured into the concrete frame. The interior photos shown here include different views of the large living area (color photo) and (below center), the dining area (below bottom), and the entrance gallery (directly below). As can be seen on the plan, all these spaces open to each other for an enormous sense of spaciousness. The cost of the house, excluding lot, landscape and furniture was about \$90,000. The heating is by a hot water, radiant panel system.





WARREN REYNOLDS





BOB JACOBSON



## RECEDING WALLS GIVE PRIVACY TO RESTRICTED SITE

ARCHITECTS: BLISS AND CAMPBELL

*Residence for Mrs. John S. Dalrymple*

*Minneapolis, Minnesota*

Structural Engineers: *Meyer & Borgman*

Mechanical Engineers: *Frey & Bergsten*

Contractor: *Joe Peterson Construction Company*

Landscape Architect: *Edmund Phelps*

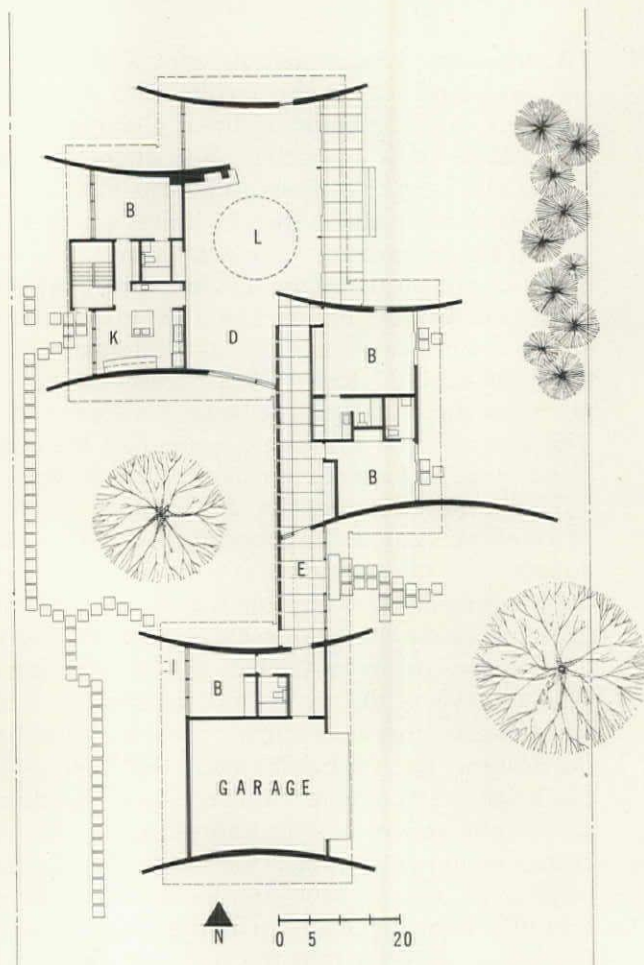
Interior Designer: *Anna Campbell Bliss*

"A one-story scheme with privacy and spatial interest" was evolved by the architects to suit the rather unusual requirements of their client and to take advantage of a restricted, but attractive site in a residential part of Minneapolis. The client, a woman active in social and cultural affairs, wanted a house which would provide her with a creative environment in which to begin a new pattern of life. The long, narrow lot between two existing houses presented certain problems, but also interesting possibilities, in that it sloped steeply downwards to the northern end, with a northeast view over the town. Ten magnificent elm trees, typical of the neighborhood, were to be incorporated in the scheme.

The architects describe the solution as "a series of receding 'garden' walls defining spaces, creating courts and giving privacy from the street." These quiet courtyards, accessible from the various rooms, give the house an air of seclusion which is not easy to achieve on a restricted site of this kind. The gentle curve of the walls has the effect of softening what might otherwise appear to be a rather broken-up design. The timber-framed roof is supported on the brick walls and a concrete slab foundation. In the photo (*above*) it is interesting to see how the small windows between the beams make the roof appear to rest lightly on the walls. Although essentially contemporary in design and construction, the house fits well into the background of a traditional neighborhood and has itself something of the elegance of a past age.



WARREN REYNOLDS PHOTOS



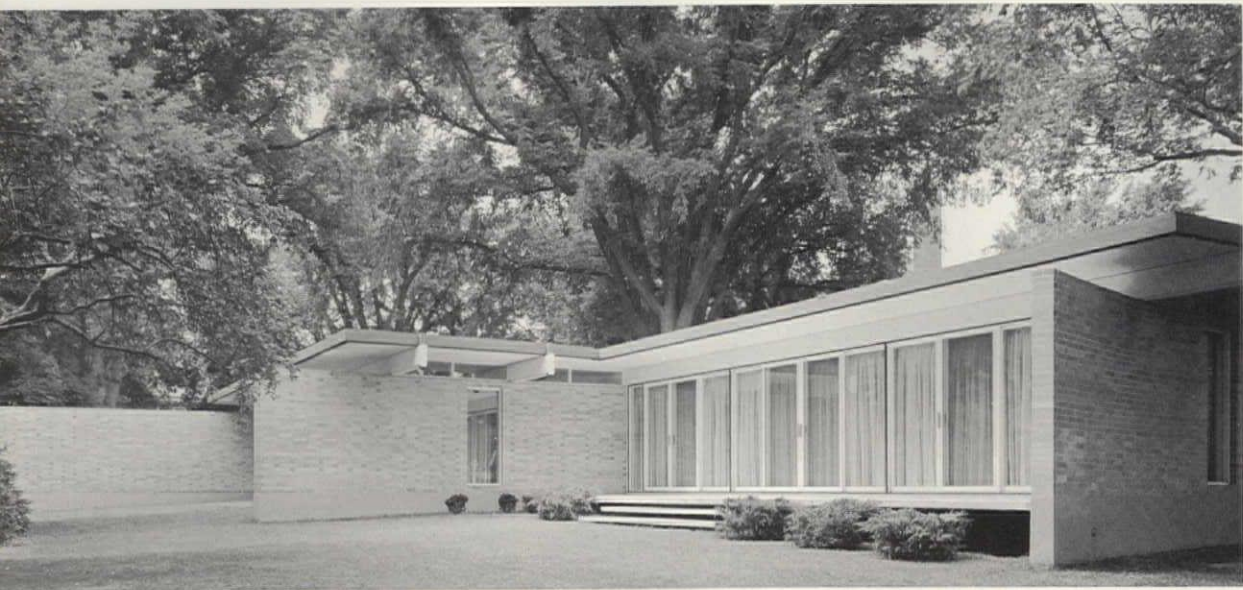
Mrs. Dalrymple's requirements are reflected in the careful zoning of the plan (*below left*). The living area which is large enough to accommodate 40 to 50 people for social or cultural gatherings, is separate from the main bedroom suite, which is again some distance from the garage. The living room opens fully to the northeast to take advantage of the view over the town. Glass doors lead directly from this room onto the lawn (*across-page right*). Accommodation is provided for a maid and a chauffeur, conveniently placed in relation to their work areas. The gray-flecked brick walls are left exposed inside the house. This is particularly successful in the living area, as it adds warmth and intimacy to the room. A large domed skylight lets sunlight into the room and provides an interesting central focus. The entrance hall (*below*) was designed in the form of a small art gallery, with one wall of stained white oak stripping making a suitable background for the owner's pictures. Some period furniture has been incorporated in the scheme and can be seen to full advantage in a contemporary setting in the dining area (*left*).

Floors in kitchen and bathroom are covered with rubber or ceramic tiles; marble counters are provided in the bathroom and both rooms are equipped with ventilating fans. The house is heated by a gas-fired warm air system. The cost of the house works out to approximately \$23.40 per square foot.

BOB JACOBSON







CAREFUL ZONING ACHIEVES UNUSUAL VARIETY IN ONE-STORY SCHEME





ALEXANDRE GEORGES PHOTOS





ARCHITECT: FRITZ WOEHLE

*Residence for Mr. and Mrs. Fritz Woehle*

*Birmingham, Alabama*

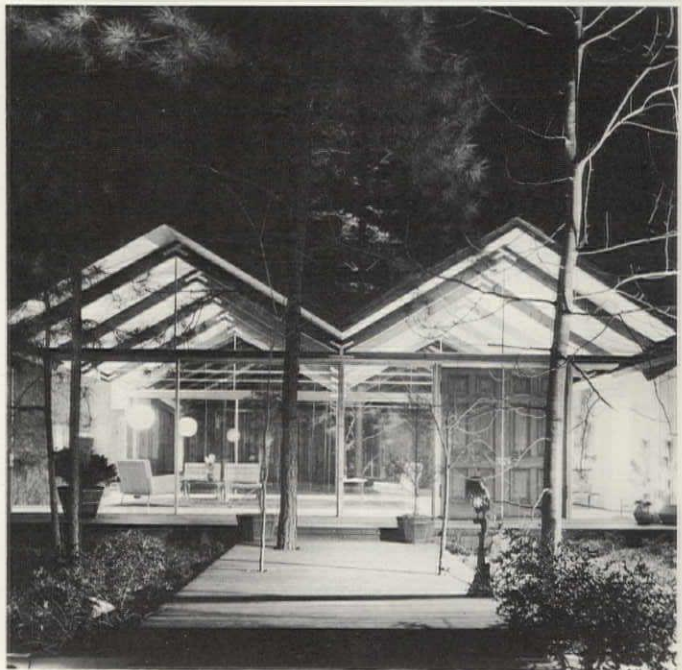
Contractor: *W.S. Cleage Construction Company*

## SOPHISTICATED RUSTICITY FOR COUNTRY HOUSE

Set in the midst of pinewoods, this family house was designed to make the most of its surroundings, and to establish a close relationship between the indoor and outdoor world. Describing how this was achieved, Fritz Woehle says "the floor plan is very formal and symmetrical but the glass walls allow the eye to wander out of the formal plan into a natural woods setting, giving a rustic feeling to the interiors." A number of small courts and patios have been created around the wings of the house giving variety to the view. Floors and walls are mainly white to give a clear crisp effect to the interior and to reflect the sunlight and shadows from outside.

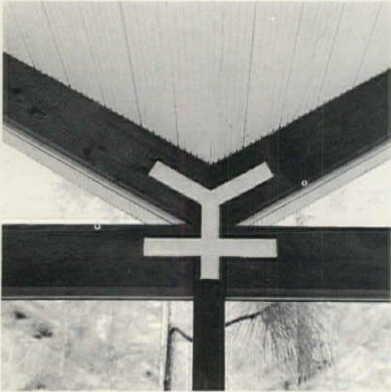
The main approach is through a small court leading directly to the glassed-in pavilion which forms the main living area. The dining room and library look out on wooden verandas.

In spite of the large areas of glass, the use of a solid timber front door and the sturdy redwood construction give the house a feeling of permanence and stability.

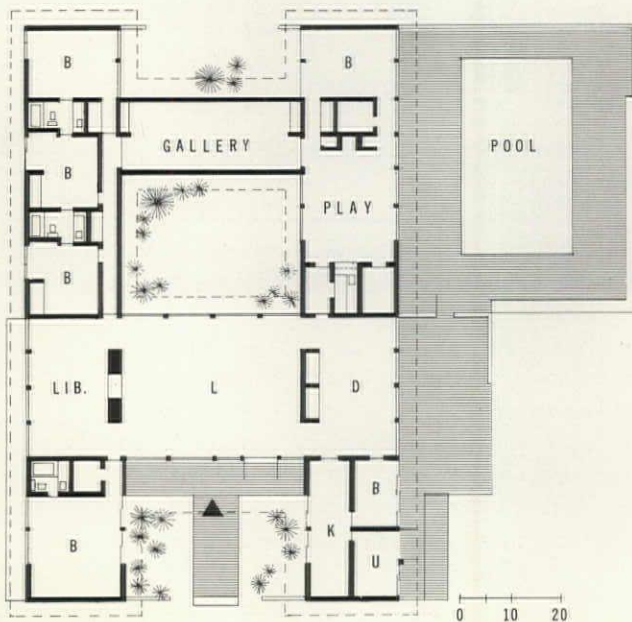




ALEXANDRE GEORGES PHOTOS



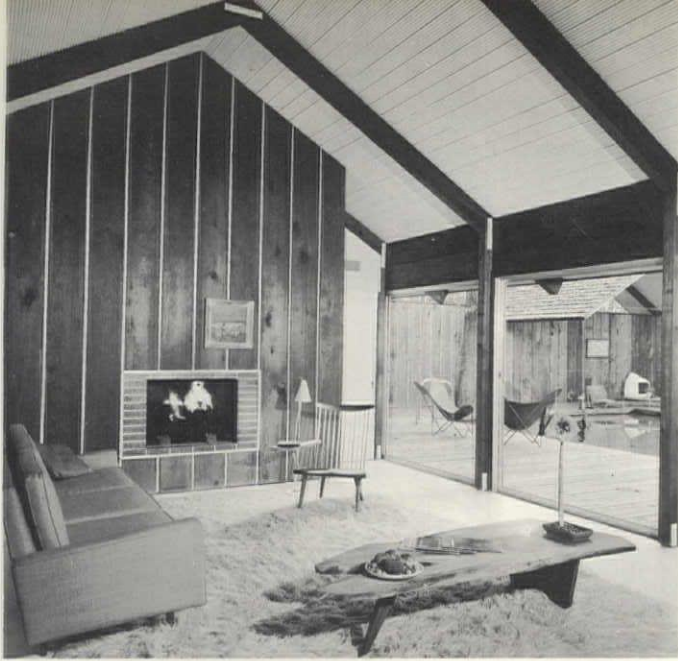
UNIQUE FRAMING SYSTEM CLEARS BIG ROOM AREAS



Fritz Woehle designed the house in three separate stages to accommodate the needs of his growing family. The result is a delightful, rambling residence, giving ample scope for the individual members of the family. The plan (left) shows the three large living areas grouped around the central courtyard and the careful separation of the bedroom suites of the children, guests and parents.

The house is of redwood post and beam construction with redwood walls and a reinforced concrete foundation. The gabled roof is supported with exposed tie rods to give the maximum clear space in all rooms. A typical gable connection is shown (top left). The photo (above) shows how the house fits in with the surrounding pinewoods.





A wooden deck running along one side of the house extends the living areas and encourages outdoor activities. The photo (*top left*) shows the play area with a glass wall leading out to the pool beyond. Working surfaces in the kitchen (*above left*) line the window wall and form an efficient galley type arrangement. Gypsum board interior walls and white pine ceilings form an effective contrast to the structural frame as can be seen in the dining area (*above right*) and the main bedroom (*left*). The gallery connecting the main bedroom and play area with the children's bedrooms is lighted by glass in the four gables. The house was built in three stages with the total cost about \$70,000, excluding lot, furniture and landscaping.



## FOUR LINKED PAVILIONS FORM BUILDER HOUSE

ERNEST BRAUN PHOTOS



The idea of using connected units or pavilions to achieve better separation of activities for privacy and quiet has been very successfully applied here for the "pilot house" of a new development. Such a concept also offers some interesting possibilities in varying any repetition of the house to suit individual buyer's needs, and in the development of a neighborhood: one or many units could be arranged in limitless combinations.

In the house as shown here, a dual problem had to be solved. It was to serve as a prototype for one of six villages of a new town development, put on display for a year, then sold. Thus it had to handle the circulation of large numbers of people, as well as be a practical residence for a family with teen-age children. The Western regional magazine, *Sunset*, wrote the program, and the editors acted as the "clients." The areas of all the units were to be limited to 2,000 square feet.

The architect states that he "adopted a plan zoned into four nearly identical pavilions: living, parents, children and service. These pavilions are connected

with glazed galleries affording changing views into the several different gardens. Floor levels following natural grade change within the galleries, create a ceiling height higher in the living area than in the other pavilions. Partitions are kept low in the living pavilion, with the space reaching up to the central skylight typical of each building."

As can be noted in the photographs shown here of the entrance (*across-page top right*), courtyard (*right*) and back terrace (*above*), great stress is placed on outdoor living. The climate of the area is hot in summer, mild in winter. Each pavilion is cooled or heated with its own separately controlled heat pump. Tall windows in all rooms give direct access to the outdoor areas; major windows face north to a pleasant view. For sun control, the skylights topping the hipped roof of each pavilion are fitted with electrically operated shades.

The house has a very comfortable and informal quality and uses familiar, natural-finished and easy-to-keep materials, which give scope for individual tastes in interior decoration.





ARCHITECT: HENRIK BULL

*Development House for Eldorado Hills West, Inc.  
El Dorado Hills, California*

Contractor: *Murchison Construction Company*

Landscape Architects: *Eckbo, Dean and Williams*

Interior Designer: *Virginia Anawalt*





As can be noted in the plan, Henrik Bull has made each pavilion a fairly self-contained living unit. The master bedroom suite includes a sitting area with fireplace suitable for adult entertaining; a folding partition can close off the sleeping area from view. As can be seen in the photograph, the master bath faces out into its own secluded garden. The pavilion for the children includes a play area and a folding partition between the two bedrooms. Opened up, all three areas form a big living space.

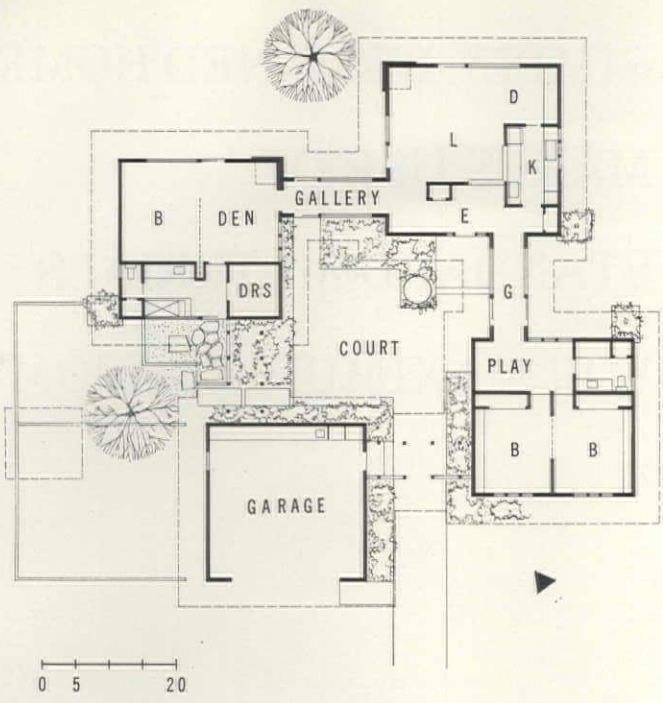
The service pavilion includes laundry, workshop and storage area, as well as car storage. As mentioned before, the floor level ramps down in the connecting links of the house, following the natural contours. The ceiling height is lowest in the garage, highest in the living pavilion — reaching 15 feet at the center skylight. Partitions are kept low for spaciousness.



The structure is made up of conventional wood studs and joists. All the units are similar in size and materials, and have symmetrical four-way hipped roofs surfaced with cedar shingles. Exterior walls are finished with re-sawn redwood plywood, with solid redwood trim and battens. The chimneys are made of sand mold brick.

Interior walls are gypsum board with natural redwood trim and some redwood paneling. Floors are quarry tile. For added quiet, the ceilings are surfaced with sprayed acoustical plaster. The house was built with as much economy as was consistent with the use of the best quality materials. The approximate cost of the pilot house was \$60,000, exclusive of lot and landscaping.





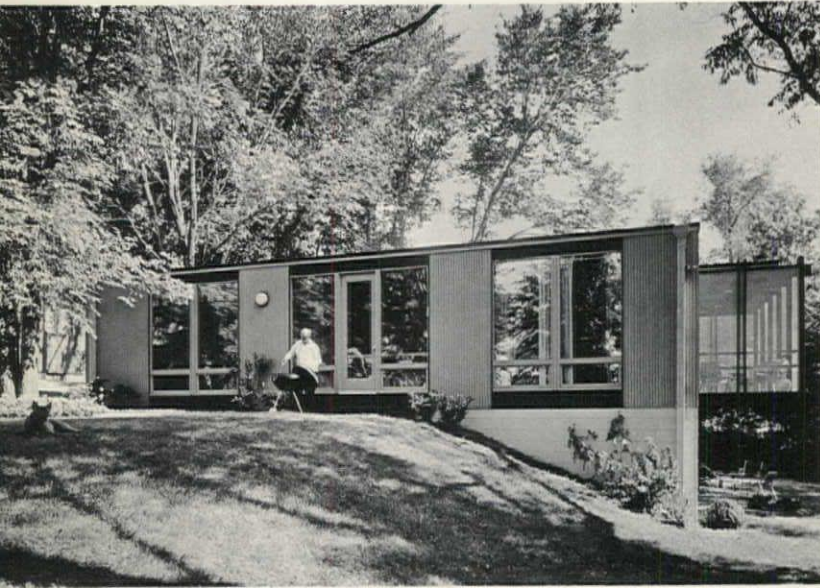
NEARLY IDENTICAL PAVILIONS ADAPT  
EASILY TO FORM SELF-CONTAINED  
UNITS FOR DIFFERENT LIVING  
PATTERNS AND USES

ERNEST BRAUN PHOTOS





# SIMPLY DESIGNED HOME MAKES USE OF STANDARD MATERIALS FOR MAXIMUM ECONOMY

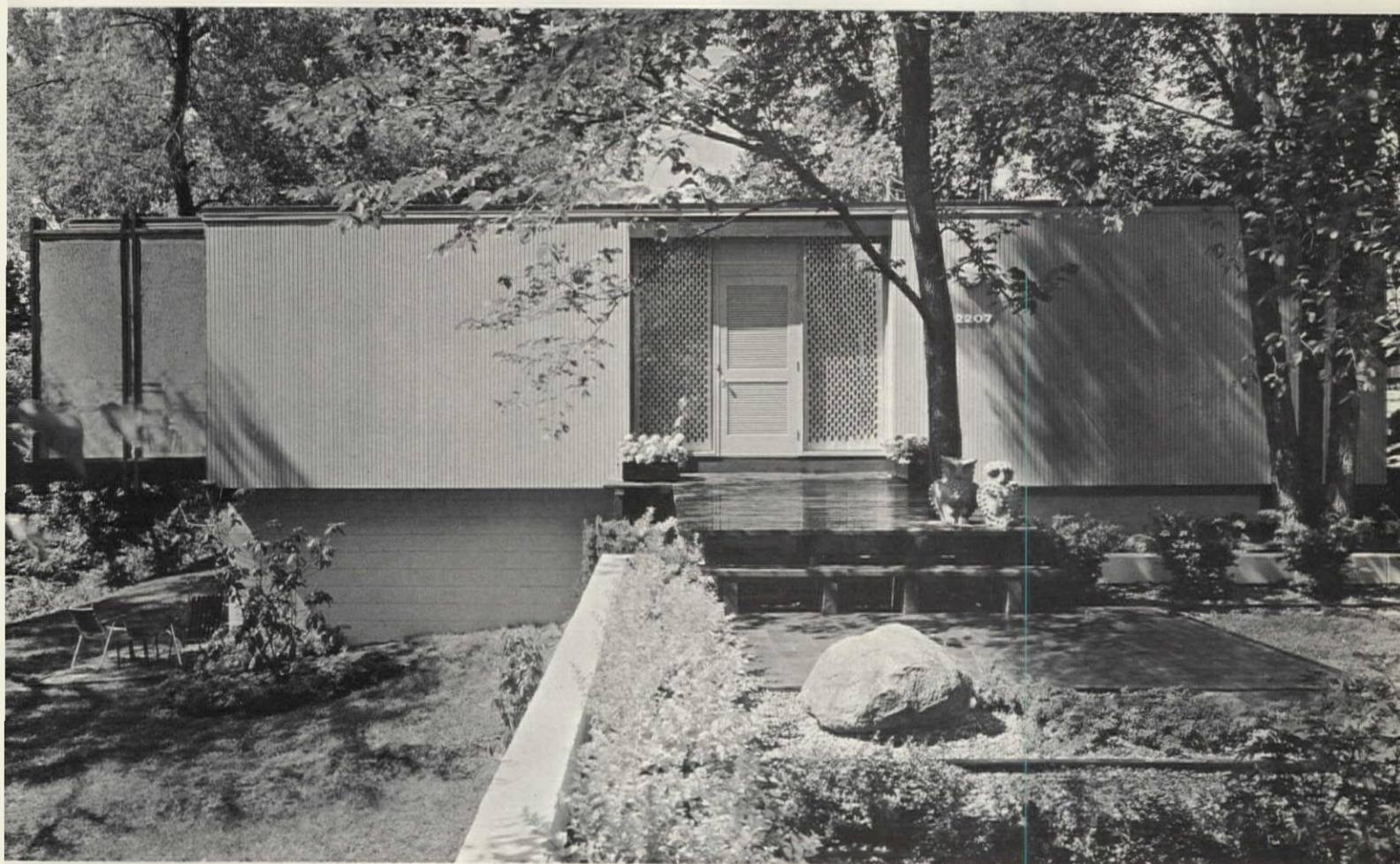


Planned within the limits of a strict budget, this house was designed by the architect as a "first home" for himself, his wife and child—with planned expansion space for later additions to the family. As associate building editor of *Better Homes and Gardens*, Frank Glass needed adequate working space and a pleasant environment for entertaining. The result is a simple, compact two-level dwelling which fits well into the sloping site and uses stock materials to their best advantage.

As the house faces a fairly busy residential street, the front elevation has been left completely closed. Large glass areas on the west and north side of the house provide good light and give a feeling of additional space. The main entrance is separated from the parking area by a wooden bridge (*right*). Frank Glass says that this was done "in order to make the structure 'hang' among the tree limbs."

Although the total floor area of the house is only 1,500 square feet, clear-cut zoning gives considerable privacy to individual members of the family. Stairs connect the children's bedrooms on the upper level directly to the family room below and the play area outside. The kitchen, stair, bathroom and hall separate the entertaining area from the bedrooms. The well-placed entrance foyer, unusual in a house of this size, frees the living areas of general circulation. The cantilevered screened balcony on the west side of the house is shaded by overhanging trees, making a pleasant extension to the living room.



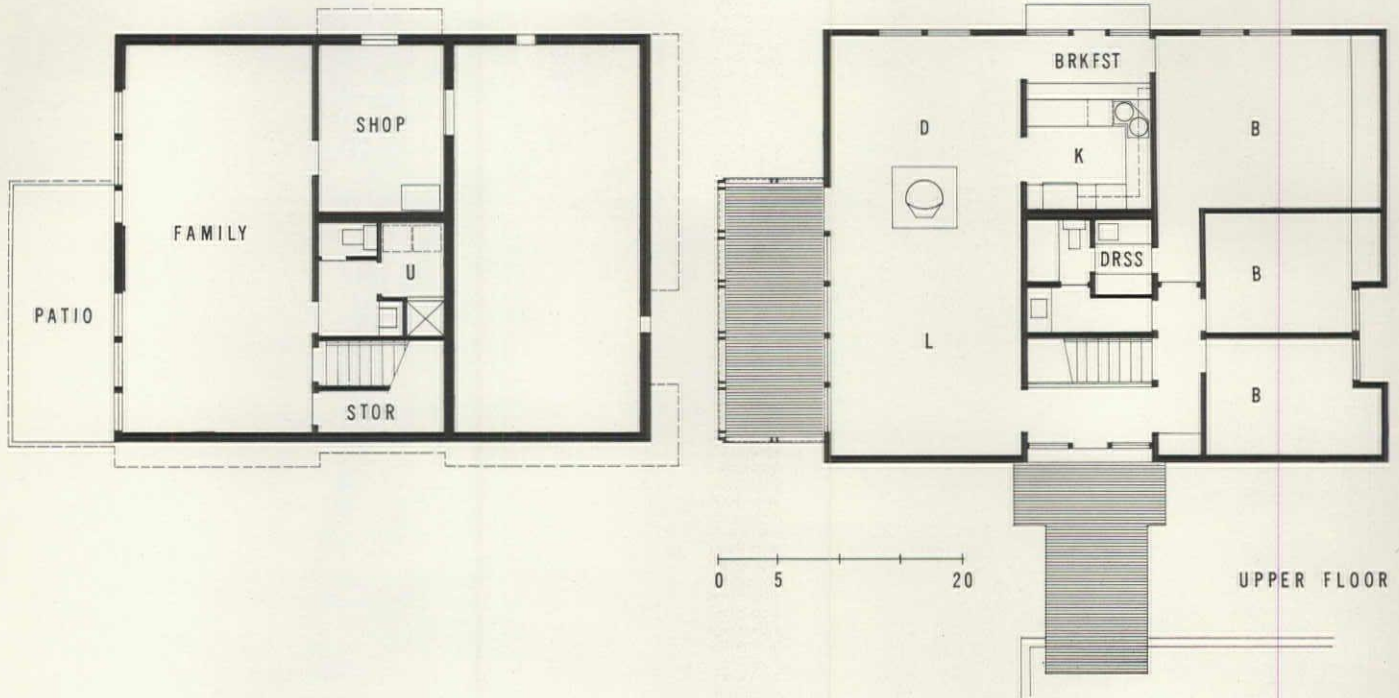


BILL HEDRICH, HEDRICH-BLESSING PHOTOS, courtesy of Better Homes and Gardens

ARCHITECT: FRANK R. GLASS  
*Residence for Mr. and Mrs. Frank R. Glass*  
*Des Moines, Iowa*  
Contractor: *Fritz Gookin*



GOOD STRUCTURAL DETAILS GIVE WELL-ORDERED INTERIORS AND EXTERIORS



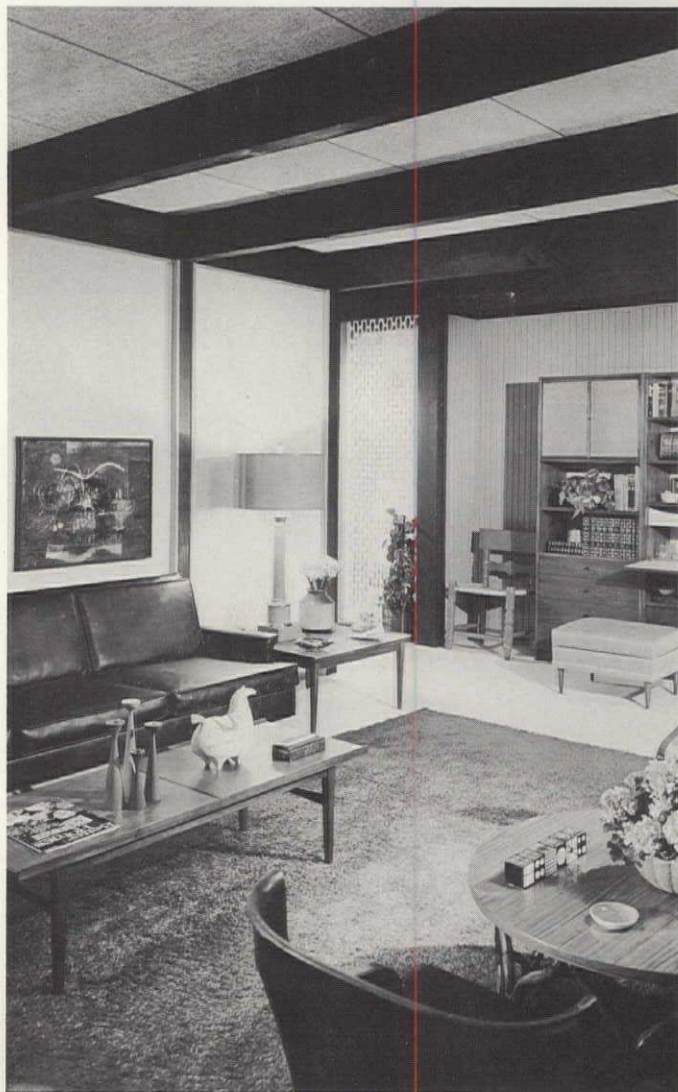




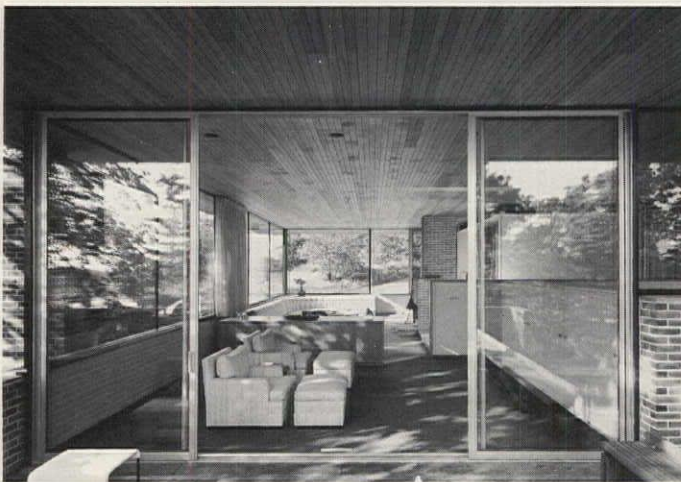
BILL HEDRICH, HEDRICH-BLESSING PHOTOS.

The Des Moines house is of post and beam construction on a concrete block foundation. Basement walls are of concrete block, painted where they are exposed. Plywood or glass panels in standard sizes were used for the rest of the exterior walls. Describing the exterior of the house, Frank Glass says: "The contrast of textures and the planned, rather formal balance of the exterior was achieved with stock materials. These materials, which required little cutting, were applied with careful detailing in pleasing proportions to give the house order." Exposed insulating deck is used for ceilings and floors and provides a base for the tar and gravel built-up roof. The photographs show how, inside the house, the dark posts supporting the ceiling beams form an effective contrast to the light-colored gypsum board wall panels.

The dining area (*left*) is separated from the living room (*right*) by a prefabricated fireplace, which rotates on its base to serve either end of the over-all room. A breakfast bar in the kitchen saves space and provides a convenient base for serving food to the dining room. The house is heated by a forced air system. The approximate cost was \$23,500.







ARCHITECT: ULRICH FRANZEN

Associate In Charge: *Robert L. Thorson*

Job Captain: *Samuel E. Nylan*

*Residence for Mr. and Mrs. Malcolm K. Fleschner*

*Westport, Connecticut*

Structural Engineer: *Vladimir Busch*

Contractor: *Ernest R. Rau*

The design for this handsome house bears an unusually close relationship to its site: a small, wooded and rocky outcropping overlooking Long Island Sound. The plan is divided into a series of levels, with the lower ones fitted into the terrain and designed with heavy masonry walls for a sense of shelter. This area generally contains service areas and guest bedrooms. The upper, and main, level rests lightly above this in a series of "penthouse gardens and levels" to take full advantage of the views.

On the evolution of the design, Ulrich Franzen comments: "The owners initially intended to build a weekend house with easy commuting to New York, and ready access to an anchorage in the Sound. The program called for a single master bedroom, and a couple of small and unobtrusive bedrooms for their grown children when they visit — plus the general requirements of all houses in the country. Somewhere along the line, we all fell more and more in love with the site and proposed designs — and the outcome was a year-round 'weekend house' where nature is to be viewed and enjoyed."

The plan is essentially a compact square, surrounded by a series of retaining walls and terraces, which extend out pinwheel fashion into the landscape. The entrance to the house was planned with a great sense of drama. The approach drive to the building is from a lower level, away from the water, and the view is not apparent. From this angle, the sculptural forms of the house itself are dominant; it is not until one begins climbing an interior ramp to the upper level that the marine view can be seen through the deeply shaded glass walls.

The house has a concrete block frame, surfaced with brick; piers carry up past the glassed-in upper level, to lightly support the roof on steel pins (*above left*). The roof itself is framed with steel open-web joists, topped with built-up roofing, and finished beneath with hemlock boarding. All interior partitions are painted gypsum board; floors in living areas are carpeted.

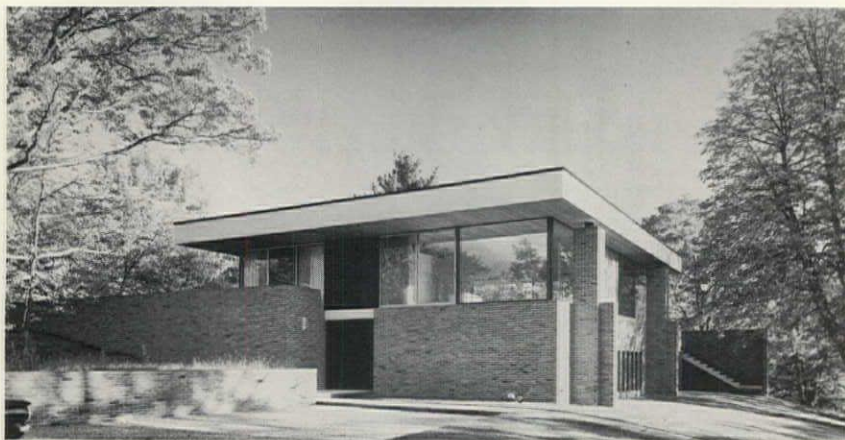


# A MULTI-LEVEL HOUSE FOR A ROCKY HILLTOP

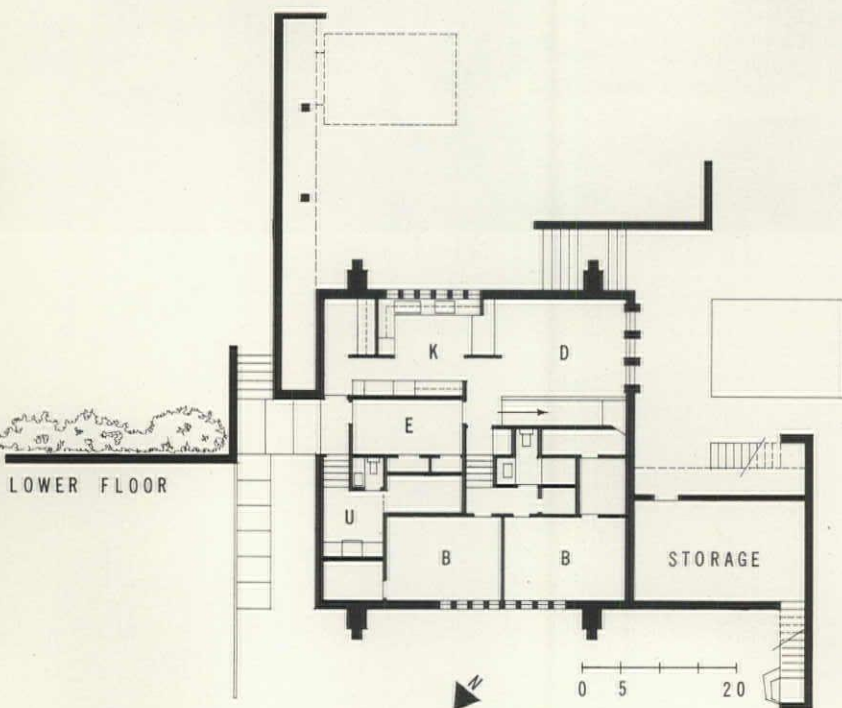
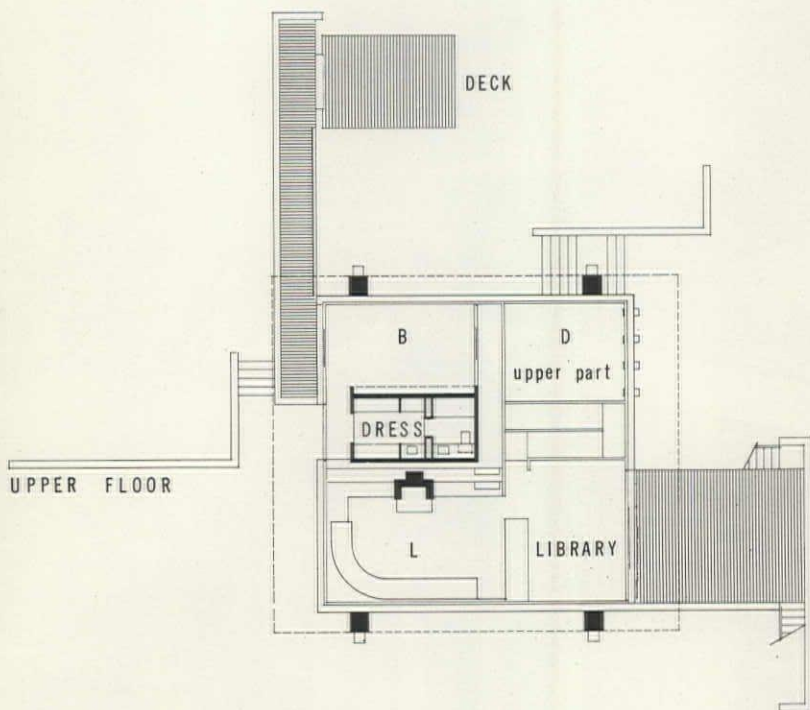


© EZRA STOLLER ASSOCIATES PHOTOS





THE INTERIORS OF THIS HOUSE  
CONTAIN MANY SPATIAL SURPRISES

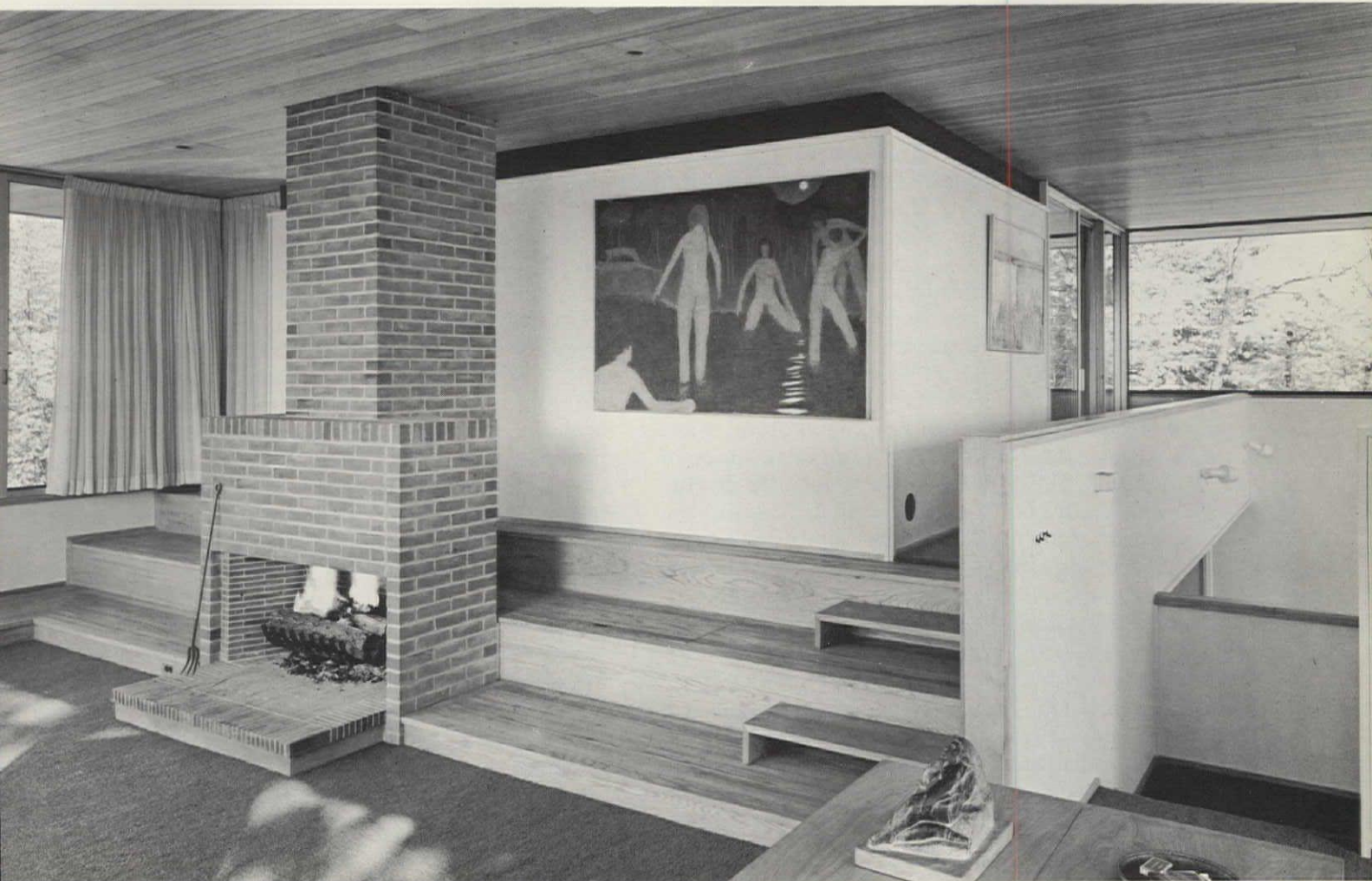
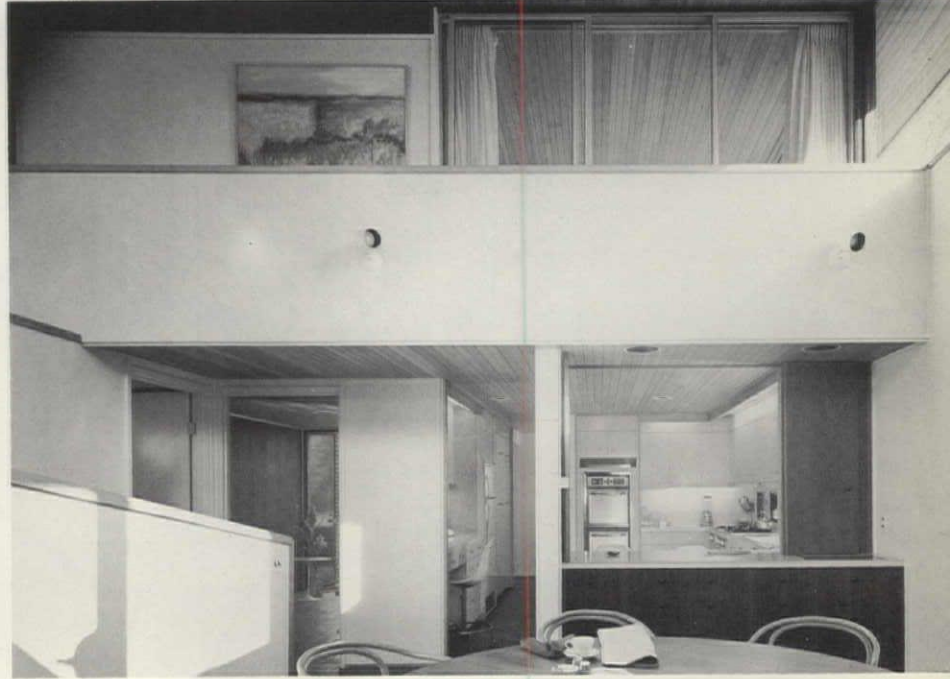


In addition to the surprise treatment of the view, as noted on the previous page, Ulrich Franzen has handled the interior spaces of the house in a somewhat unorthodox, yet very interesting manner. While the house appears from the front facade (*above left*) to be a simple two-story structure, the house actually has five levels. A utility level lies a few steps below the entry level which contains the kitchen and dining spaces; above this, guest bedrooms, living areas, and the master bedroom suite are each placed on successively higher levels connected by a ramp. The dining area (*above right*) is a tall space the full height of the building, which opens on the library and the master bedroom balcony. In the living room, steps up to the master bedroom are extended to form seating to flank the fireplace (*right*). These differences in heights and levels, together with the extension of spaces outdoors to decks and terraces, combine to give a great deal of variety and spaciousness to a moderate-sized house.

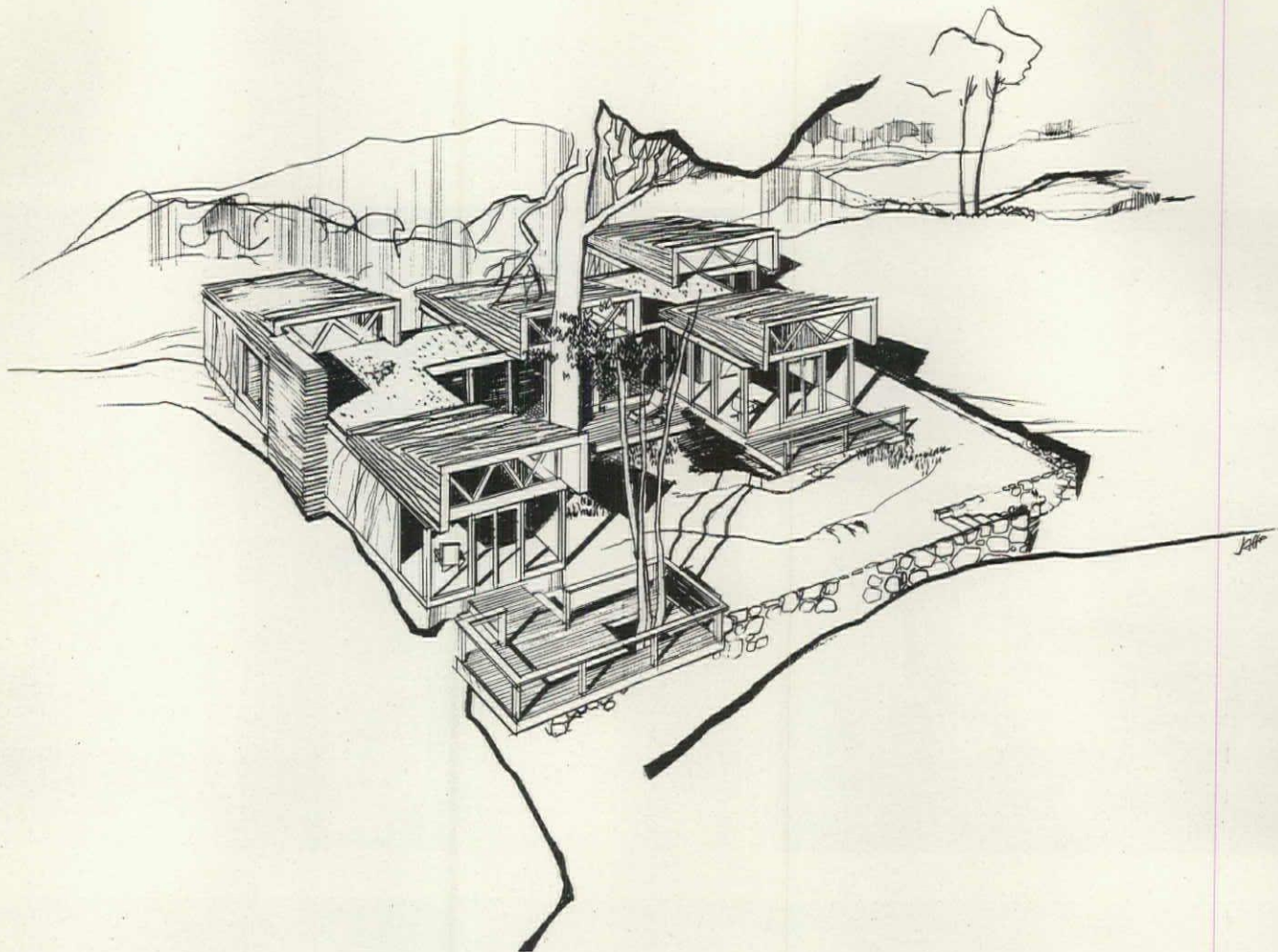
The interiors are finished in a very simple manner, with a minimum of furniture, to increase the air of spaciousness. Ample seating is provided in the living area by a long, curving built-in sofa and the step "seats." Service rooms, below grade areas, kitchen and baths have floors of vinyl tile, quarry tile or ceramic tile. The interior bath and dressing room on the top level are daylighted by plastic, domed skylights. The house has a warm air furnace and air conditioning. The big windows of the upper levels have double glazing for insulation, and all sliding sash is fitted with sliding glass fiber screens.



© EZRA STOLLER ASSOCIATES PHOTOS







The strong, individual expression of this house grew out of the desire to give maximum space, and a design focus, to each of the five required living areas—and to minimize service areas. The site is an attractive one, with trees, rocks and edges on an irregular lake shore. The house, as developed, provides a pleasant, yet informal order which seems very suitable to its natural setting.

On the over-all concept, Robert Sobel states: "Spatially, the house builds its volumes out of two interlocking elements—a spine of low space placed across the slope links the high volumes of the pavilions. The spine is always recalled by the horizontal band running continuously around the house, inside and out. All service spaces are fashioned out of the low spine to leave the interiors of the pavilions perfectly clear." In addition to its mental appeal, such a concept has its practical side for the fairly limited budget of the house: interior space could be placed where it was needed most; identical size and detailing for each pavilion simplified construction; and pavilions could be more economically placed with regard to existing rocks and trees. As can be seen from comparing the photo (*right*) with the sketch of the house (*above*), a terraced platform with stone retaining walls will

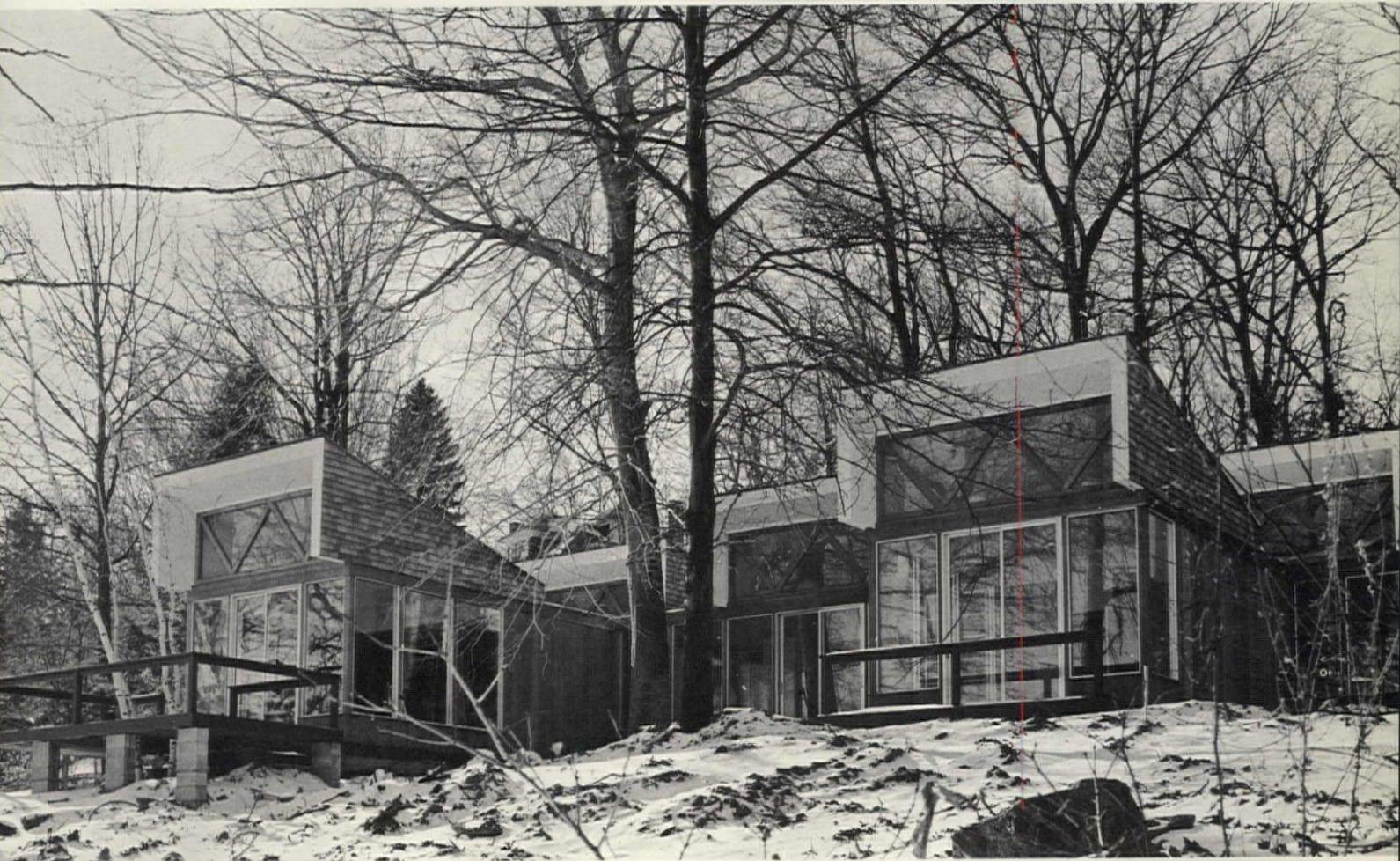
be constructed to unify the entire complex of house and decks, as well as provide level outdoor living space.

Norman Jaffe describes the program as a fairly typical one: "The owners, a couple in their early 40's with a young child, wanted a small, informal house with easy access to site, privacy within and a variety of lake views. The pivot of the plan is the family room—the owners wanted some of the spirit of the old-fashioned kitchen and as much openness as possible. As developed, the major circulation of the house is through the center of this room."

With this room as the hub, the plan forms a two-part, bi-nuclear scheme, which can be used in two ways, depending on the needs of the family. For the present, the pavilions to the north are bedrooms, and the family room, living room and den comprise a shared "active" zone. In the future, the living room and den can become the parents' suite, balanced by the family room and bedrooms across the court for the younger member or members of the household. Additional pavilions could also be linked to the original house if the need arises.

The exterior materials used in the house are bleached redwood and cedar, which will be allowed to weather naturally to blend with the site.





## FIVE PAVILIONS LINKED BY A SERVICE SPINE

DESIGNER: ROBERT SOBEL

ARCHITECT: NORMAN JAFFE

*House for Mr. George Berkowitz*

*Lake Mahopac, New York*

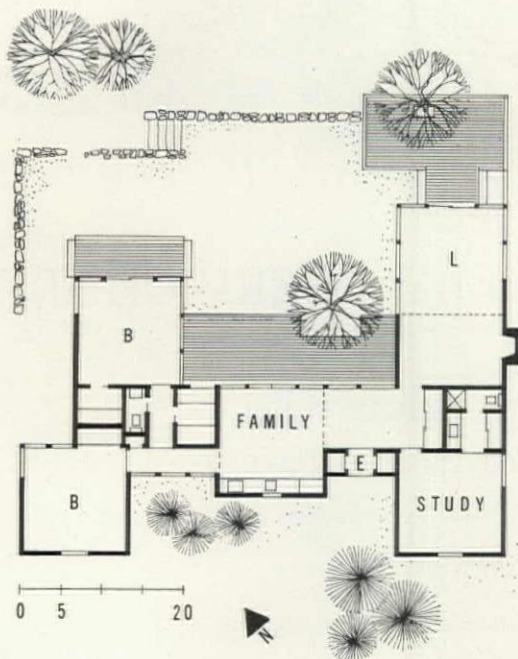
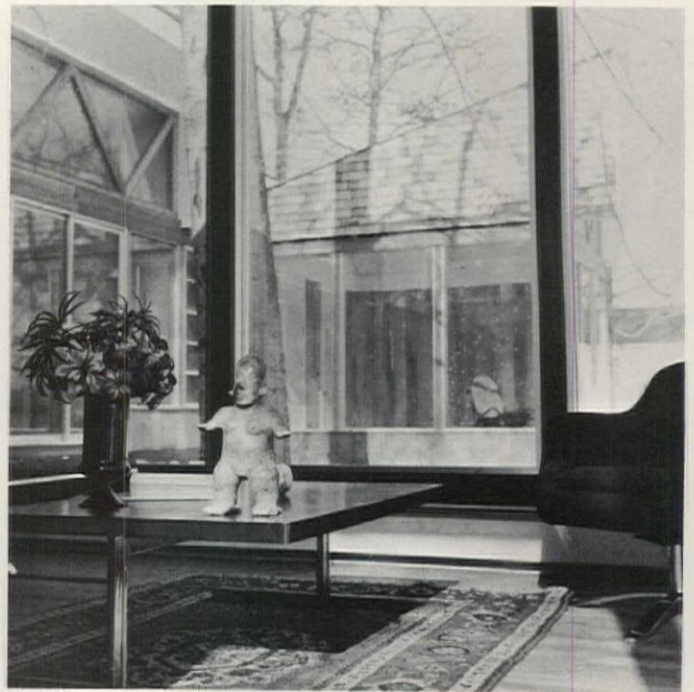
Contractor: *Edwin and Allen Page*  
*of Page Brothers*

Interior Designer: *Nicos Zographos*





RICHARD WATHERWAX



The Berkowitz house tilts the shed roofs of its five pavilions toward the wooded lake views, as can be readily seen in the photos of the living room (*above and right*), and of a corner of the study (*above left*). The front of the house is kept low in scale and enclosed for privacy. Norman Jaffe states: "We made no ceremony of the entrance on the uphill side, which is generally closed except for a few small windows to keep the light even."

A cross section sketch of the family room (*across-page top*) shows the effect of the interplay of low and high ceilinged spaces. This room combines the functions of kitchen, dining area, study or play room, and circulation hall. The low-ceilinged service areas include all baths, storage spaces and additional hallways.

The structure of the house is wood frame on cement block foundations, with redwood siding as noted and cedar shakes on the roofs. The redwood is finished with two coats of bleaching oil. All doors and decks are painted a dull red-brown to match the hue of the redwood.

Interiors are finished in painted gypsum board, with the exception of ceramic tile used in the baths. Floors which form heavy traffic areas are surfaced with quarry tile; all other floors are oak. All window sash and gutters are aluminum.

The heating system is divided into three zones and uses a hot water, oil-fired plant. The approximate cost of the house, excluding lot, landscape and furnishings was \$34,000.



UNUSUAL VARIETY IN INTERIOR  
SPACES AND OUTSIDE VIEWS  
IS PROVIDED FOR A SMALL HOUSE



PAT FINELLI





ARCHITECT: CLAUDE OAKLAND

*Development House for Eichler Homes, Inc.*

*Orange, California*

Contractor: *Eichler Homes, Inc.*

Landscape Architects: *Jones & Peterson*

Interior Designer: *Gordon Brofft*

## AN ATRIUM EXPANDS BUILDER HOUSE LIVING AREA

The sense of space in the living areas of this attractive development house is greatly increased by the adroit use of a glassed-in, central atrium or court between the living and multi-purpose rooms. As the photo (*right*) clearly shows, the three areas form one big visual area, though they are functionally separate: the use of draperies could separate them completely if desired. The architect explains that "the plan came out of a desire to have an atrium which would not be used as an entrance, to afford

privacy, and to avoid the necessity of a door release across a front court from the entrance." The builder adds, "for the last three years, the atrium plan has been so popular that we would have a hard time selling something which had no atrium."

The house has four bedrooms, with the children's rooms zoned apart from the rest of the house. The approximate cost, excluding lot, landscaping and furnishings was \$21,950. Simple details and close cooperation with building crews helped reduce costs.

LELAND Y. LEE PHOTOS











LELAND Y. LEE PHOTOS

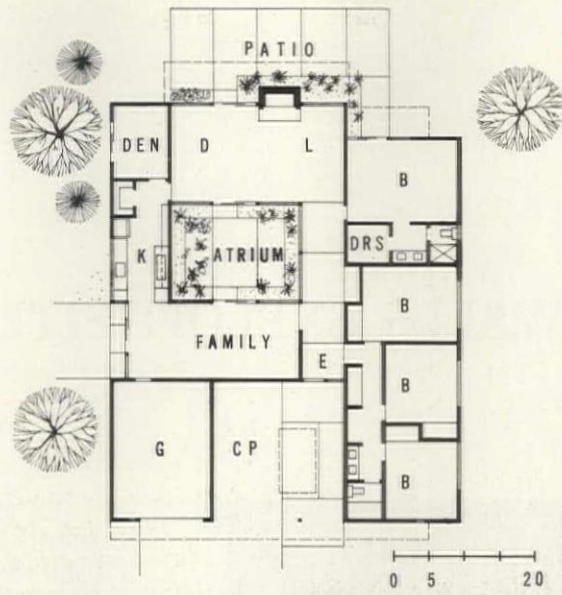
## FUNCTIONAL SIMPLICITY PROVIDES A BETTER AND MORE LIVABLE HOUSE AT MODERATE COST

Claude Oakland, the architect of this development house, states that: "We try to design the costs out, and this becomes possible because we work so closely with the people in the field. It would be costly for another builder to build one of these houses, because he would be unfamiliar with it, but in our case, the field people come up to our office and we talk about details. Sometimes we have two ways of detailing something, and after talking with them we know which will be possible, or expensive—and we choose the one that will do the job as we want it, but in a less costly way. This is particularly true in our detailing of roof framing, doors and glass setting. We have made these as simple as possible, and the simple detail is better looking."

When queried on how to keep prices down, the builder commented: "Well, costs have gone up a lot from the early days of Eichler houses. Land costs more—a lot more; houses are bigger and have more amenities; the cost of doing business is going up. But the radical moves in cutting costs were made long ago... we have continuity in our operation, use the same crews, have the same organization. Organization is the key to cutting operational costs and building costs. Details can be, and are, refined; and this is part of it. But there's a point beyond which this doesn't do a lot... what remains now in that line is to do factory-built houses. But prefabrication never attacks the fundamental factors in a house."

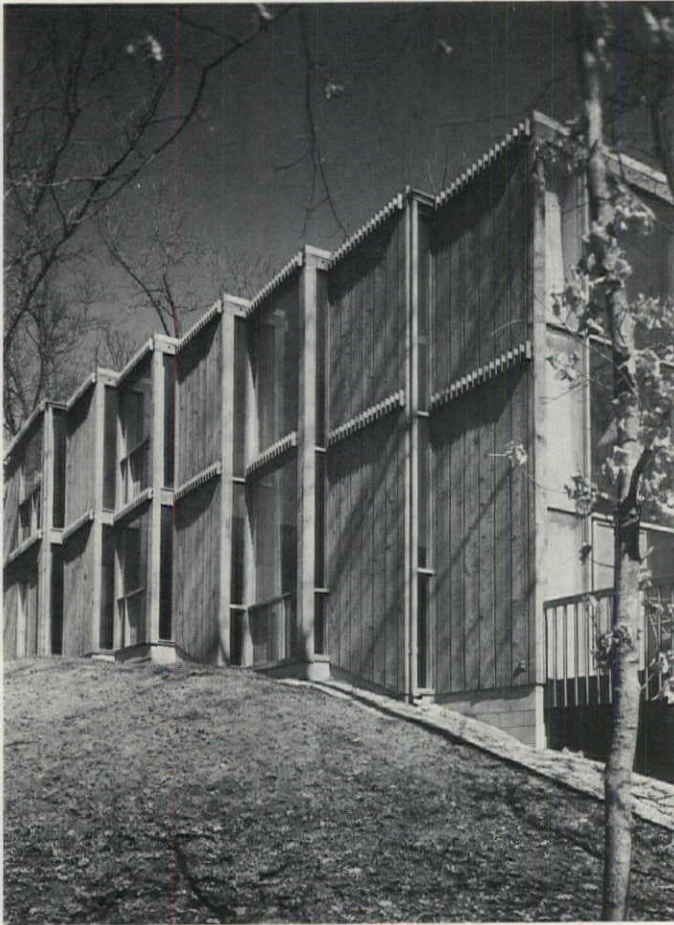
The "fundamental factors" in this example include carefully integrated—and well designed—plan, structure and appearance. All rooms are well related. The three children's bedrooms are close to the main entrance, and to the multi-purpose family room. Bath, dual wash basin, laundry and linen storage range the corridor connecting the three rooms. An adult area is at the back of the house, and includes the master bedroom, living room, den or hobby room, and an outside terrace. The kitchen is placed for convenience to all major rooms and to the garage. A covered area for an extra car flanks the entrance walk, forming a little court when not in use. The post and beam structural frame is Douglas fir and redwood; exteriors are stained plywood; interiors have gypsum board walls, asphalt tile floors and redwood ceilings.







## STAGGERED WALLS EXPLOIT SITE IRREGULARITIES

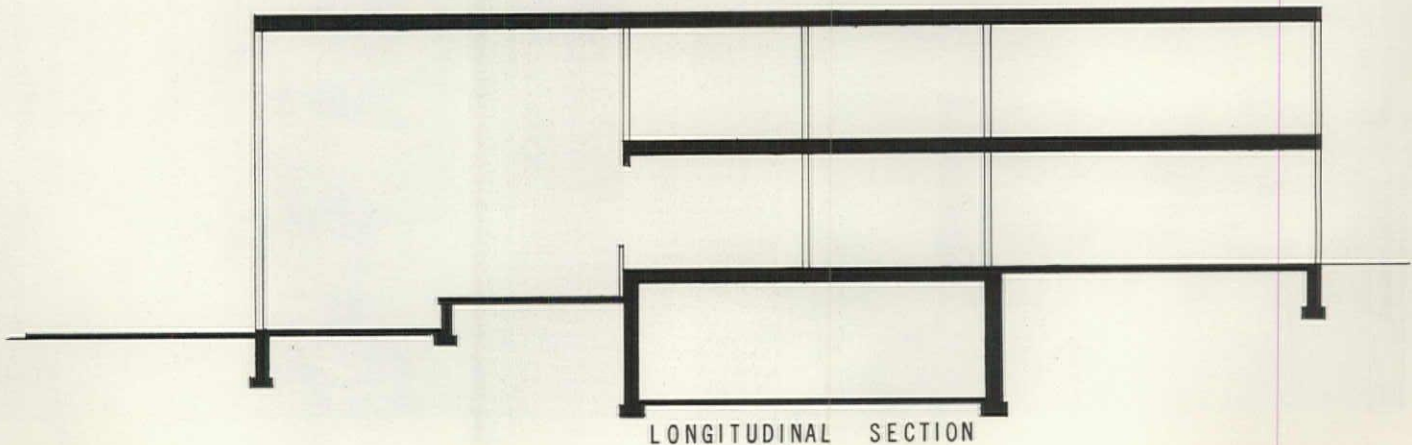


A series of staggered walls, which step down with the contour of the site, was evolved by the architect as a solution to the problems of a thickly wooded, sloping site on the edge of St. Louis. The clients required a roomy, family residence with large, interesting living spaces, giving good views over a nearby lagoon. As many as possible of the existing trees were left undisturbed.

The photo (*left*) shows how the sturdy, cedar wood house fits naturally into the surrounding woodlands. Careful detailing in a kind of dog-tooth pattern, reminiscent of the details in some of James Stageberg's brick buildings, relieves the plain wood elevation and creates a horizontal line, which reduces the apparent height of the structure.

The wonderful light and open effect of the interior forms a dramatic contrast to the rather closed-in appearance of the exterior of the house. This effect seems all the more surprising in view of the fact that the narrow glass inset walls, which give the additional light, are barely noticeable from outside.

The plan places the living rooms and garage on the ground floor, with the five bedrooms above all but the living room. This room (*right*) is on two levels and penetrates the full second floor of the house; at its lower level it has a height of 22 feet. Light colored interior finishes give the rooms an air of uncluttered sophistication, which again forms a contrast to the natural, woody exterior.







MAC MIZUKI PHOTOS

ARCHITECT: JAMES EDGAR STAGEBERG

*Residence for Mr. and Mrs. John Cosby*

*Chesterfield, Missouri*

Structural Engineers: *Meyer and Borgman*

Contractor: *Reinhardt Company*

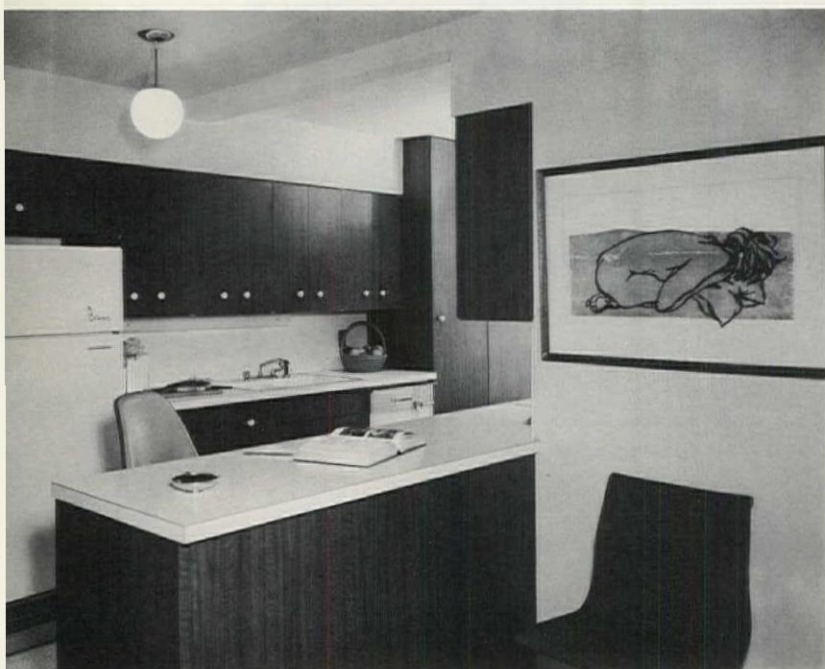


The dining room (*bottom right*) and the kitchen of the Cosby residence overlook the living area from a higher level. This arrangement of rooms enables the mother to supervise her children's activities while she is working, and also gives an attractive view over the living room to the woods and lagoon beyond. A pleasantly private wood deck (*across-page*) leading off the living room gives an additional feeling of spaciousness inside the house.

The photo of the entrance hall (*right*) demonstrates clearly the way in which the glass inset walls seem to open the house to the view. This photo also shows the interesting effect created by the variation in floor level.

The kitchen (*below*) is compactly arranged with cabinets lining one wall and a plastic topped counter on the other side. The range and appliances are electric; vinyl floor coverings are used. The bathroom floor and surfaces are of ceramic tiles.

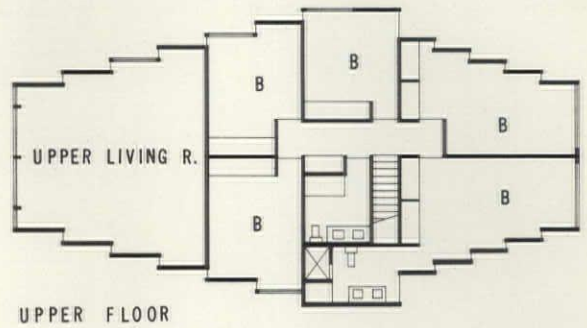
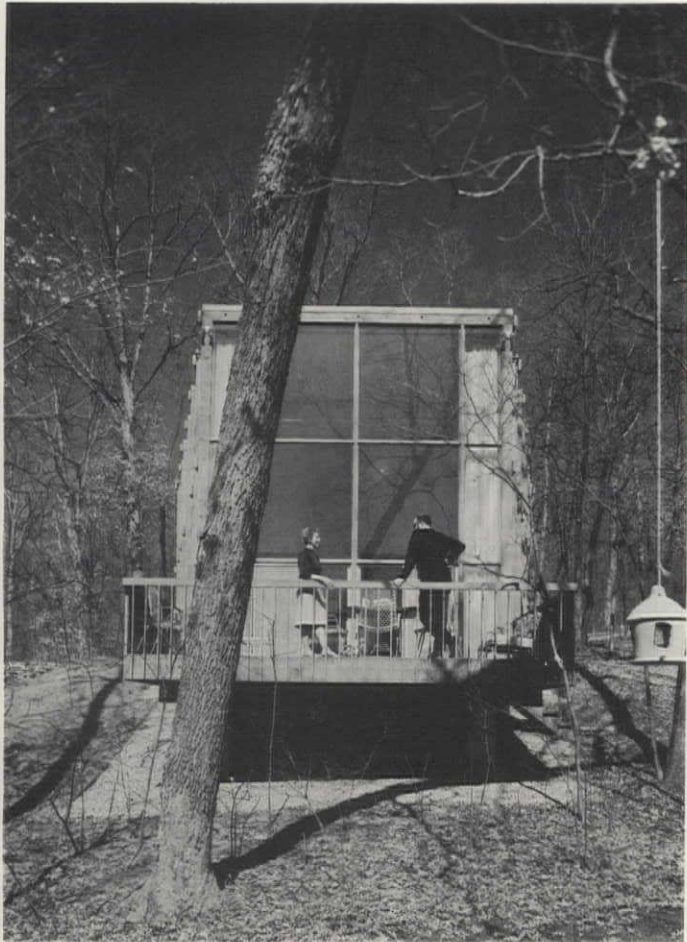
Structure of the house is wood frame with stained, rough-sawn cedar walls, and a pitch and gravel roof. Interior walls and ceilings are of plasterboard. Each floor is zoned separately to have its own forced air heating and air-conditioning unit.



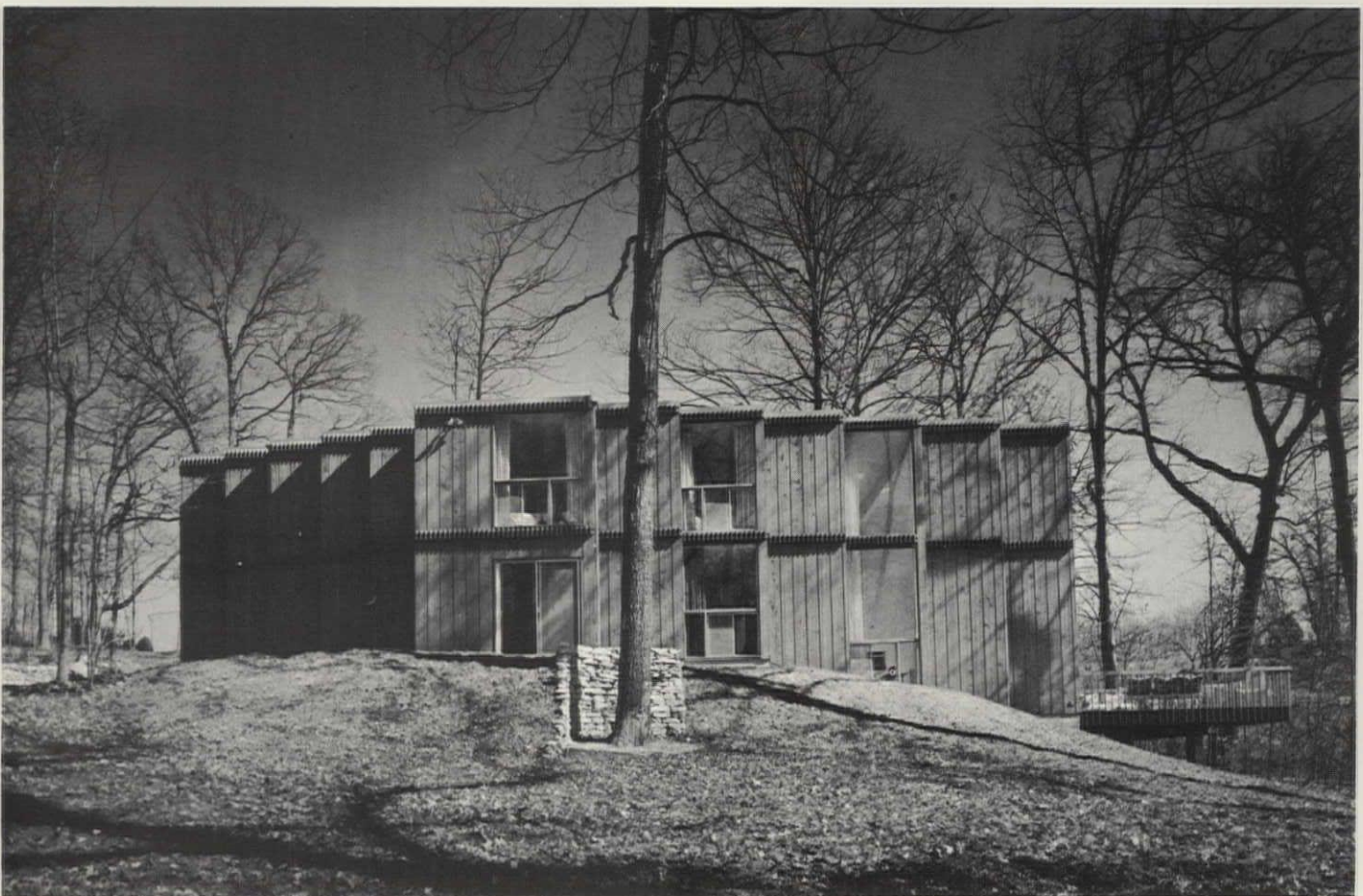
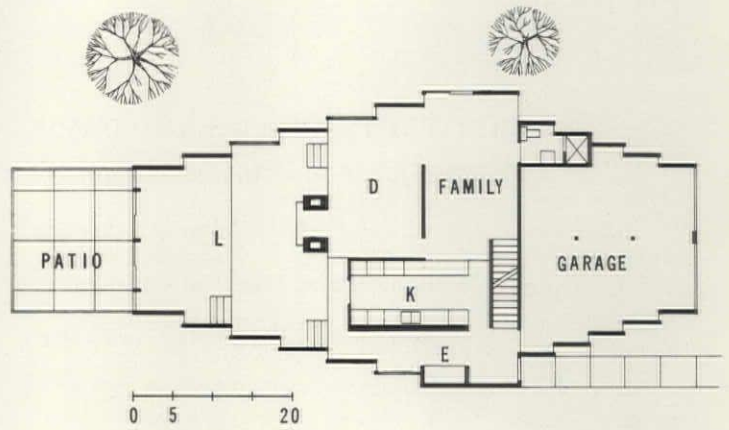
MAC MIZUKI PHOTOS







UPPER FLOOR





# PATIOS AND PAVILIONS ARE COMBINED FOR A WALLED-IN CITY HOUSE FOR A LARGE FAMILY

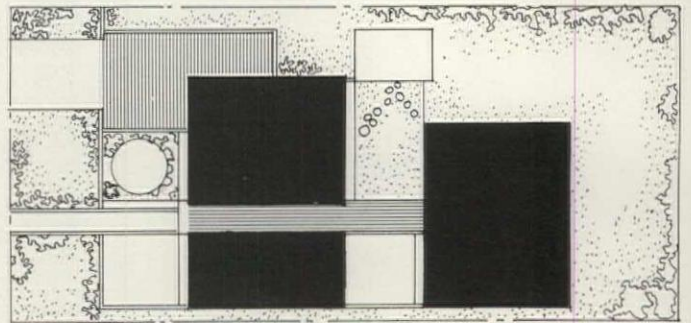
ARCHITECTS: CURTIS AND DAVIS

*Residence for Mr. and Mrs. N. C. Curtis Jr.*

*New Orleans, Louisiana*

Mechanical and Electrical Consultants:

*Zervigon-Goldstein Associates, Inc.*



FRANK LOTZ MILLER PHOTOS



A separated pavilion plan, elegantly executed with an arched steel frame, is used here to provide ample indoor and outdoor living space on a small city lot for a family of nine. As can be noted on the plot plan (*above*), the house is divided into three living units, linked by a lower ceilinged corridor. The two pavilions at the front are very open in plan, and work together to provide the facilities used by the family together: living rooms, dining and family rooms, and kitchen. All the main areas in this portion of the house have glass walls opening on adjoining private courts.

The rear unit is on two levels, with the lower level depressed slightly to reduce the apparent height of this wing, and to allow the glass corridor to become the intermediate landing of the stair. This unit contains seven bedrooms and four baths, and was planned to be opposite in feeling to the front pavilion, and provide "snug, introspective" privacy for all the family members.

The lot is in a typical residential neighborhood of New Orleans, and is surrounded by immense live oak trees. Walls surround the house and courts to give an amazing feeling of openness and isolation in a built-up section of town. Butt-jointed glass clerestory windows in major rooms add further to this effect, as does the light structure and the predominant use of white finishes as a background to the lively form and color of the furnishings.







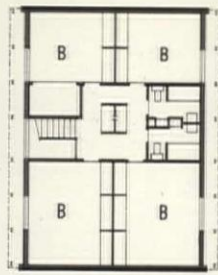
A VARIETY OF OUTLOOKS AND SPACES  
ARE PROVIDED ON A SMALL LOT



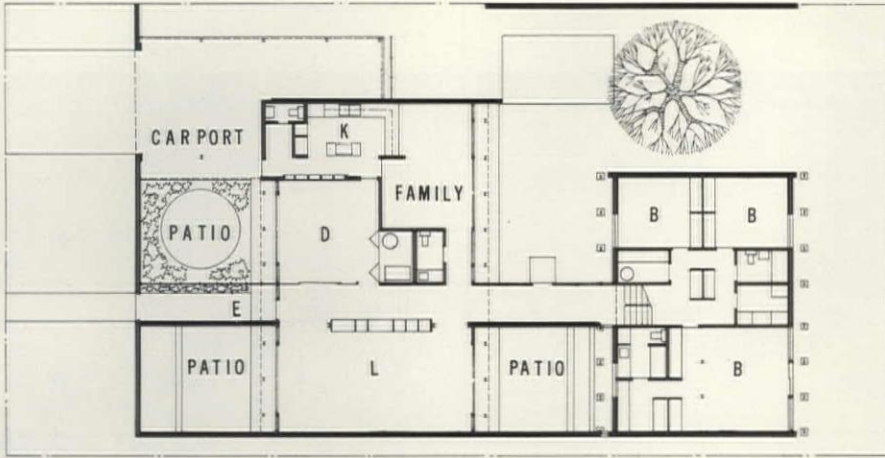
The Curtis house is given great privacy from the street by a white-painted brick wall, relieved by a handsome wrought iron entrance gate (*above*). Within, each of the major rooms is increased in apparent size by the glass walls opening onto different courts, as can be readily seen in the plans and photos shown here. The living room is planned to work closely with the areas for dining and family rooms for large gatherings; shoji screens close off the dining room when desired.

The structure of the house is steel frame, with exterior (and some interior) walls of white-painted stucco and brick. Interior partitions are plasterboard on wood studs, surfaced with vinyl wall covering. Floors in the front pavilions are white terrazzo, and those in the bedroom wing are vinyl or carpet. The sliding glass doors are set in sliding aluminum sash; solid doors are surfaced with laminated plastic. All of these materials considerably reduce upkeep and maintenance. The entire house has thermostatically-controlled, year-round air conditioning.





UPPER FLOOR



LOWER FLOOR

FRANK LOTZ MILLER PHOTOS







BILL HEDRICH, HEDRICH-BLESSING PHOTOS



# LAKESIDE HOUSE COMBINES TRADITIONAL ATMOSPHERE WITH CONTEMPORARY DESIGN

This gracious, well-proportioned house on the shores of Lake Michigan was designed to accommodate a family of six, as well as a maid. A three-level scheme was adopted to take advantage of the slope in the site, and to leave as much open space as possible beside the lake.

An existing brick garden-wall on the north property line was used to enclose a play yard and service court, as well as to screen the view from a public street to the north. The east elevation opens totally in glass to the lake. Bedrooms and living areas on the first and second floors lead on to wood-deck verandas to give maximum enjoyment of the magnificent view over the lake.

The most striking feature of the structure is the copper-sheathed folding plate roof. The architect says that this roof, "with its extremities dipping towards the ground, was used to give interest and a sense of shelter to the second floor bedrooms and entry, as well as to decrease the apparent height of the building."

With its high, white gables, and well-landscaped surroundings, including the old garden wall, the house has the unselfconscious charm of a traditional building which has been established on its site for a number of years. In reality it is a highly sophisticated structure in which the advantages of modern materials and contemporary planning methods are fully exploited.

The main floor of the house includes a large central living-dining area, flanked on the north side by the kitchen, family room and maid's bedroom, and on the south by the study and master bedroom suite. There are four bedrooms, bathroom and storage space on the upper floor. The lower level has a large play area opening on to a terrace beneath the wooden veranda of the first floor. Additional storage and utility space is also provided at this level. The stone masonry walls, which enclose the ground floor, are extended to form a carport on the left of the entry court. Good parking and turning space is provided outside the garage.



ARCHITECTS: BINKLEY ASSOCIATES

*Residence for Dr. and Mrs. Paul Sternberg*

*Glencoe, Illinois*

Engineer: *Bernard Hemmeter*

Contractor: *Beverly Smith*

Interior Design: *Sheldon Gordon*





HOUSE IS ZONED INTO FOUR AREAS  
FOR LIVABILITY AND COMFORT

The main entry court to the Sternberg residence is defined and made private by a wooden screen, which is formed of vertical railroad ties (*left*). The entrance hall (*below left*) overlooks this court, in which shrubs have been planted; a small concrete pool flanks one of the granite walls.

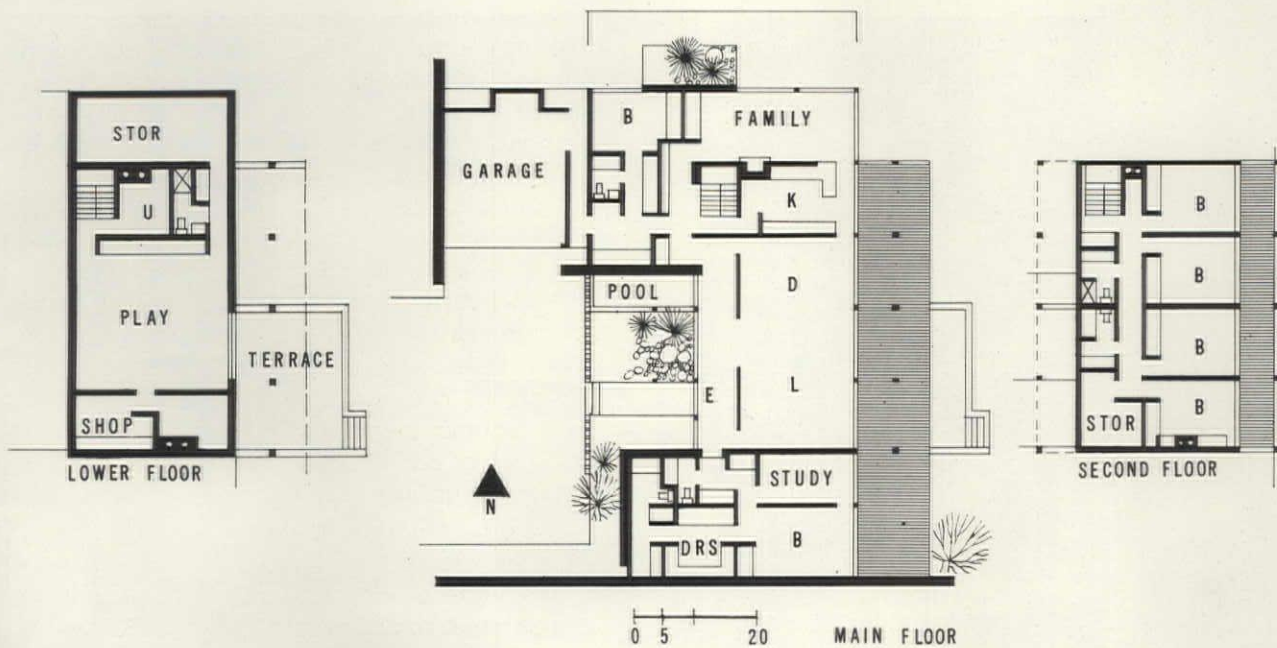
The family room (*below*) and the living room (*across-page*) are both furnished in contemporary style. The interior of the house is, however, designed to be a suitable background for period as well as modern furniture. The Barcelona chairs in the living room, and the period chairs in the entrance hall look equally at home in their setting.



Interior walls are of exposed granite, dry-wall or walnut paneling. Walnut is also used for the entrance door and for the kitchen cabinets. Floors in the living areas are blue stone or oak. The main living area is carpeted. Vinyl or ceramic tiles are used for kitchen and bathroom floors. Ceilings are laminated drywall, with the exception of the bathroom, which is cement plaster. The structure of the house consists of load bearing walls and a laminated wood frame on a reinforced concrete foundation. The roof is of rafter construction surfaced with sheet copper and standing seams. Exterior walls are of cement stucco or granite boulder with the split face exposed.

The house is zoned into four separate areas, each of which has its own hot air furnace and electric air-conditioning unit. All ducts are of sheet metal. The approximate cost of the building was \$100,000, excluding lot, landscaping and furnishings.







An unusual degree of warmth and comfort are incorporated in the neatly balanced design of this production house. Natural-finished woods, accented by some brick and stone, are used with very nice effect. William Berkes, a graduate of the Harvard School of Design and partner of Deck House, Inc., states that: "Considering the rugged climate in New England, a structure must above all be durable. Wood has traditionally been the basic material of home construction in this area—wood seems to balance perfectly the functional and esthetic appeals. The liberal use of exposed wood construction via 3-inch cedar decking for the floor and roof systems, coupled with post and beam construction, is reminiscent of the 'contemporary' homes built by the early colonists for their time, and which still grace our countryside. Glass areas, so desirable for today's indoor-outdoor living, have also been used liberally, yet related to function as well as design for maximum livability."

Pleasant living space in the house has been, in effect, doubled by the use of a partially raised basement and a gently sloping site. Thus the lower "basement" area provides a family room and a bedroom at the back with full window walls, and a bedroom and a storage room at the front with waist-high windows.

The entrance of the house is at mid-level between the two floors giving quick access to either the children's areas below, or the adult areas on the top level. The house could easily be converted into two separate apartments if desired.



## RAISED BASEMENT ADDS SPACE TO NEAT DEVELOPMENT HOUSE







LISANTI, INC. PHOTOS, *courtesy of Better Homes & Gardens*

DESIGNER: WILLIAM J. BERKES

*Development House for Deck House, Inc.*

*Wayland, Massachusetts*

Contractor: *Deck House, Inc.*

Interior Designers: *Design Research*



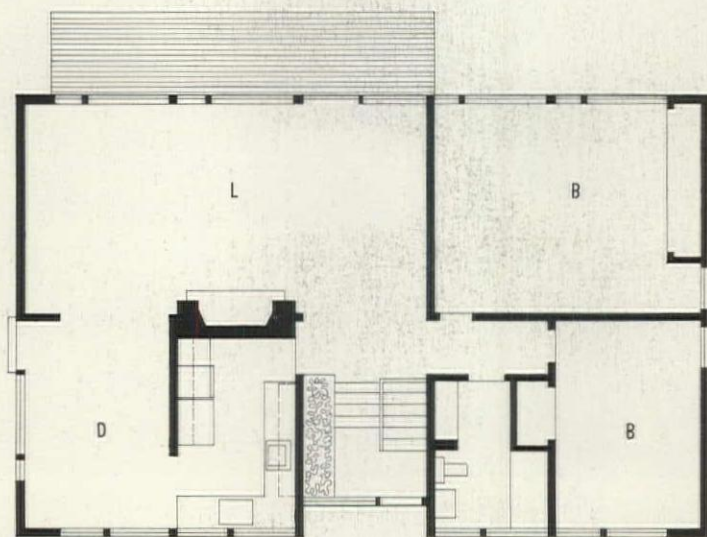


LARGE LIVING AREAS ARE ON BOTH LEVELS OF THE HOUSE

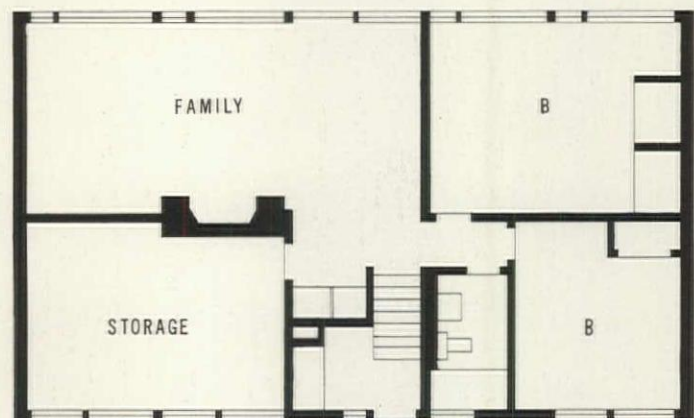
The plan of this development house works quite well for a typical family, and offers the possibility of allocating some of the spaces for other uses. Thus, if fewer bedrooms were required, the living area could be enlarged to extend across the entire back of the house and the upper front bedroom used as a study. Or, a similar arrangement could be accomplished with the family room and bedroom on the lower floor.

The structure incorporated a number of woods: red cedar for the exterior and roof decking, white fir for the frame, ash for doors and mahogany for some of the millwork. Interior walls are surfaced with plasterboard, finished with paint or grasscloth. Floors are strip oak on the upper level, asphalt tile on the lower one. The wood deck roof is left exposed as finished ceiling on the top floor.

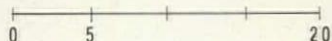
The heating system uses an oil-fired furnace, with circulating forced hot water and baseboard radiation. The cost of the basic model shown was \$26,500.



UPPER LEVEL



LOWER LEVEL



LISANTI, INC. PHOTOS



# DESIGNERS OF THE RECORD HOUSES OF 1964

Houses designed by the following firms and individuals appear on pages noted

## BINKLEY ASSOCIATES 120

18 East Pearson Street  
Chicago 11, Illinois  
Roy Binkley, A.I.A.



## 96 FRANK R. GLASS

1716 Locust  
Des Moines, Iowa  
Frank R. Glass, A.I.A.



## BLISS & CAMPBELL 84

27 University Street  
Salt Lake City, Utah  
Anna Campbell Bliss, A.I.A.  
Robert Lewis Bliss, A.I.A.



## 72 MARK HAMPTON

Stovall Professional Building  
Tampa 2, Florida  
Mark Hampton, A.I.A.



## HENRIK BULL 92

515 Pacific Avenue  
San Francisco, California  
Henrik Bull, A.I.A.



## 64 HUGH NEWELL JACOBSEN

2735 P Street Northwest  
Washington 7, D.C.  
Hugh Newell Jacobsen, A.I.A.



## CAMPBELL & WONG & ASSOCIATES 76

737 Beach Street by Aquatic Park  
San Francisco 9, California  
John Carden Campbell  
Worley K. Wong, F.A.I.A.



## 80 TASSO KATSELAS

5471 Coral Street  
Pittsburgh, Pennsylvania  
Tasso Katselas



## CURTIS AND DAVIS 116

2475 Canal Street  
New Orleans 50, Louisiana  
Nathaniel C. Curtis, A.I.A.  
Arthur Q. Davis, A.I.A.



## 68 RICHARD MEIER

1141 Park Avenue  
New York 28, New York  
Richard Meier



## MARY LUND DAVIS 62

3801 Alameda Avenue  
Tacoma 66, Washington  
Mary Lund Davis



## 108 CLAUDE OAKLAND

111 New Montgomery Street  
San Francisco, California  
Claude Oakland, A.I.A.



## DECK HOUSE INC. 124

P.O. Box 306  
Wayland, Massachusetts  
William J. Berkes



## 54 I. M. PEI & ASSOCIATES

385 Madison Avenue  
New York 17, New York  
I.M. Pei, A.I.A.



## EDELMAN AND SALZMAN 58

117 West 12th Street  
New York 11, New York  
Stanley Salzman, A.I.A.



## 104 ROBERT SOBEL & NORMAN JAFFE

Robert Sobel  
George Nelson and Co. Inc.  
25 East 22nd Street, New York, N.Y.  
Norman Jaffe, A.I.A.  
311 East 37th Street, New York 22



## CRAIG ELLWOOD ASSOCIATES 48

8322 Beverly Boulevard  
Los Angeles 48, California  
Craig Ellwood



## 112 JAMES EDGAR STAGEBERG

1409 Willow Street  
Minneapolis, Minnesota  
James Edgar Stageberg, A.I.A.



## ULRICH FRANZEN 100

41 East 57th Street  
New York, New York, 10022  
Ulrich Franzen, A.I.A.



## 88 FRITZ WOEHLE

924 South 18th Street  
Birmingham 5, Alabama  
Fritz Woehle, A.I.A.





# COST OF RECORD HOUSES NEAR YOU

In using Record Houses our readers have asked: "If I build a house like so and so built in \_\_\_\_\_ city what would it cost here?"

We again put this question to Myron L. Matthews, manager-editor of the Dow Building Cost Calculator and Valuation Guide, a service of the F. W. Dodge Company, a division of McGraw-Hill, Inc. He did some research and presented us with the answers for those Record Houses for which cost data was available, as though they were to be duplicated in 14 selected cities located in represen-

tative geographic areas of the United States. The figure for each listed city would be applicable within a 25 mile radius of it.

In an effort of this kind it must be recognized that the estimates in the tabulations following can only be approximate within 5 to 8 per cent one way or the other, and maybe more if unusual conditions prevail in one locale or another. However, over a period of 38 years the Dow Calculator has established a good record, and we believe that their figures will work out well for the purposes intended.

If you are impressed by certain Record Houses look up their local estimated approximate cost for a location nearest to you. If the Dow figure for such a location is attractive, consult an architect to see what he can do for you.

Incidentally, the figures given here do not include land, landscaping, unusual foundation conditions due to topography or soil, furnishings or the architect's design and supervision fees, but cover the costs of the construction of the house itself and the basic equipment.

## RECORD HOUSES 1964 COMPARATIVE BUILDING COSTS\* FOR SELECTED CITIES

Prepared by Dow Building Calculator and Valuation Guide,

a service of F. W. Dodge Company, a division of McGraw-Hill, Inc.

NAME OF HOUSE	WHERE BUILT	PAGE NUMBER	CONSTRUCTION COST*	COST TO BUILD IN											
Sternberg House, Glencoe, Ill. (120)	House in El Dorado Hills, Calif. (92)	House in Tacoma, Wash. (62)	Glass House, Des Moines, Iowa (96)	House in Tampa, Fla. (72)	Shorb House, Bethesda, Md. (64)	Berkowitz House, Lake Mahopac, N.Y. (104)	Katselas House, Pittsburgh, Pa. (80)	Meier House, Essex Fells, N.J. (68)	House in Orange, Calif. (108)	Woehle House, Birmingham, Ala. (88)	House in Wayland, Mass. (124)	Slayton House in Washington, D.C. (54)			
			\$100,000	\$60,000	\$5,995	\$23,500	\$23,100	\$50,000	\$34,000	\$90,000	\$68,500	\$21,950	\$70,000	\$26,500	\$46,000
ATLANTA, GA.	81,600	50,500	5,100	17,300	21,100	43,600	27,500	70,500	53,800	18,200	67,200	22,600	40,000		
BALTIMORE, MD.	90,600	56,100	5,665	19,200	23,500	48,500	30,600	78,400	59,800	20,200	74,700	25,100	44,500		
BOSTON, MASS.	95,900	59,300	5,995	20,400	24,800	51,300	32,300	82,900	63,200	21,400	79,000	26,600	47,100		
CHICAGO, ILL.	100,000	61,900	6,245	21,200	25,900	53,400	33,700	86,400	65,900	22,300	82,300	27,700	49,100		
CLEVELAND, OHIO	104,800	64,900	6,550	22,200	27,100	56,000	35,300	90,600	69,100	23,400	86,300	29,000	51,400		
DALLAS, TEX.	88,100	54,500	5,505	18,700	22,800	47,100	29,700	76,200	58,100	19,600	72,600	24,400	43,300		
DENVER, COLO.	94,700	58,600	5,920	20,100	24,500	50,600	31,900	81,900	62,500	21,100	78,000	26,200	46,500		
KANSAS CITY, MO.	94,300	58,400	5,890	20,000	24,400	50,400	31,800	81,500	62,200	21,000	77,700	26,100	46,300		
LOS ANGELES, CALIF.	95,000	58,800	5,935	20,200	24,600	50,800	32,000	82,100	62,600	21,200	78,200	26,300	46,600		
MIAMI, FLA.	95,900	59,300	5,995	20,400	24,800	51,300	32,300	82,900	63,200	21,400	79,000	26,600	47,100		
NEW YORK, N.Y.	112,900	69,900	7,055	24,000	29,200	60,300	38,000	97,600	74,500	25,200	93,000	31,300	55,400		
PITTSBURGH, PA.	104,200	64,500	6,510	22,100	27,000	55,700	35,100	90,100	68,700	23,200	85,800	28,900	51,100		
SAN FRANCISCO, CALIF.	97,200	60,200	6,075	20,600	25,100	52,000	32,800	84,000	64,100	21,700	80,100	26,900	47,700		
SEATTLE, WASH.	95,900	59,400	5,995	20,400	24,900	51,300	32,400	82,900	63,300	21,400	79,000	26,600	47,100		

\*Omits land, landscaping, special foundations, architectural design and supervision fees

The Dow Building Cost Calculator and Valuation Guide is used widely throughout the United States and Canada. Its objective is to show the replacement costs for more than 650 building types with counterparts almost everywhere. The costs are revised and supplemented at intervals keeping them in balance with changing prices for build-

ing materials and wage rates for building trades craftsmen. Dow building costs data is generally recognized by courts as authoritative and is used by real estate tax assessors, fire insurance valuation engineers, real estate appraisers, mortgage loan officers in financial institutions, architects, builders and a broad list of governmental agencies—Federal, state, county and municipal



# New Products for the House



300

## MINIATURE FOUNTAIN FOR THE HOME

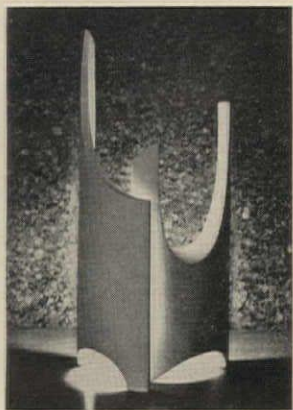
Designed for use with indoor and outdoor floral arrangements, the *Madeira Fountain* is made of copper and has an electric motor pump which is guaranteed for life. *The Madeira Company, 8950 Given Rd., Cincinnati, Ohio*

CIRCLE 300 ON INQUIRY CARD

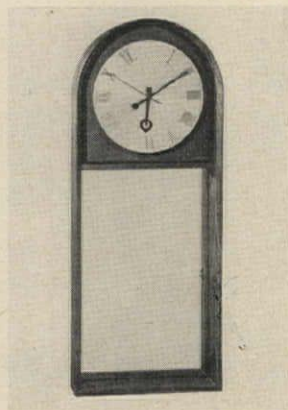
## LIGHTING IN CAST STONE

Four unconventional designs for lighting equipment in cast stone have been created by Ilse Hofman and Abraham Schenk. The *Cathedral* model shown in the photo is made up of two white stone shells which form a free standing semi-cylindrical light shield. *Sculptural Lighting Inc., 2755 Palisade Ave., Riverdale, N.Y.*

CIRCLE 301 ON INQUIRY CARD



301



302

## CLOCK AND MIRROR COMBINATION

As a result of collaboration with the industrial design firm of Arthur Umanoff Associates, a correlated group of mirrors and clocks has been introduced by this company in its Meridian Accessories Division. The illustration shows a 30-in.-high clock in oiled walnut with a mirror of  $\frac{1}{4}$ -in. polished plate glass. *Howard Miller Clock Company, Zeeland, Mich.*

CIRCLE 302 ON INQUIRY CARD



303

## OVEN THAT CLEANS ITSELF

A self-cleaning oven, the result of many years research, has now been fitted to four of the company's standard electric ranges. The all electric cleaning process uses a heat of about 800 degrees to burn off grease and food particles. *General Electric, Appliance Park, Louisville, Ky.*

CIRCLE 303 ON INQUIRY CARD

more products on page 134

For more information . . . . circle the key numbers of the products on which you want more information (see number below each product item) on the Inquiry Card, pages 163-164





A vacation hideaway in the Bahamas uses wood converging beams and rough-sawn ceiling to work wonders in its very livable, triangular living room. Note the complementing wood built-ins designed by The Richard Plumer Company, Miami, for this Frazer Hog Cay cottage.



For envied retreats on secluded sites  
 Use WOOD . . . and your imagination



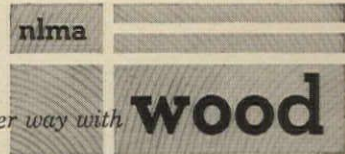
Sturdy and heavy and virtually set in stone, a magnificent door demonstrates wood's natural compatibility with other materials. See the warm results of lighting on wood in the Frazer Hog Cay house.

UNICOM MANUALS 1 & 2: "Design Principles" (122 pages) and "Fabrication of Components" (248 pages), graphically detailing the UNICOM method of house construction, are available at nominal cost to those associated with or supplying the home building industry. For free booklet describing UNICOM, write to: UNICOM, National Lumber Manufacturers Association, 1619 Massachusetts Avenue, N.W., Washington, D.C. 20036.

Take a holiday from everyday homes . . . with a seasonal house or weekend cottage of wood. The economies of wood allow infinite flexibility in your design, definitive structures for their purpose. Wood beams, siding, flooring, and roofing are on familiar grounds anywhere . . . weather every climate beautifully, welcome other materials warmly.

The many grains, tones, and textures of wood create patterns that never tire, always relax. Sound control for rest, insulating ability to help keep temperatures up or down for comfort . . . these, too, are wood's inherent virtues. Wood makes perfect resort places that endure for generations of vacations. For more information on designing with wood, write:

**NATIONAL LUMBER MANUFACTURERS ASSOCIATION**  
 Wood Information Center, 1619 Massachusetts Ave., N.W., Washington 6, D.C.



Spectacular exposure on every side makes the Frazer Hog Cay cottage sure of its site. Wood decking, railing, and unique roof supports show wood's way to resist occasional high wind storms, yet maintain a serene retreat from the busyness of daily living. Architect: Peter Jefferson.

For more data, circle 25 on Inquiry Card



# How Haft·Gaines features kitchens that help close sales



Bert Haft (l.) and Jack Gaines, whose Imperial Point development near Ft. Lauderdale, Florida, features homes from \$19,000 to \$40,000 with "the best of everything."

**Q.** Mr. Gaines, how do you use construction features to make sales?

**A.** We invite prospects to go through our group of model homes and pick the construction features they like. It makes for excitement and personal involvement.

**Q.** Why do you install General Electric appliances?

**A.** Well, in anything we use, we look for something that's really new and different, that will get talked about. G-E products really get the ladies interested.

**Q.** What's new about the products that G.E. offers?

**A.** The P-7 oven on the Americana® range is the real hot one. Some folks come just to see this oven that cleans itself electrically. I never realized how much a woman hates to clean a dirty oven.

**Q.** We see the new Americana refrigerator, too.

**A.** Yes, and it's a beauty. This countertop refrigerator is a real eye-stopper. Gets an awful lot of good comment.

**Q.** You include the G-E built-in dishwasher?

**A.** Yes, we believe it's the most advanced dishwasher in the field. But even if it was just second or third best we'd probably still use it, so we could offer G.E. for all appliances.

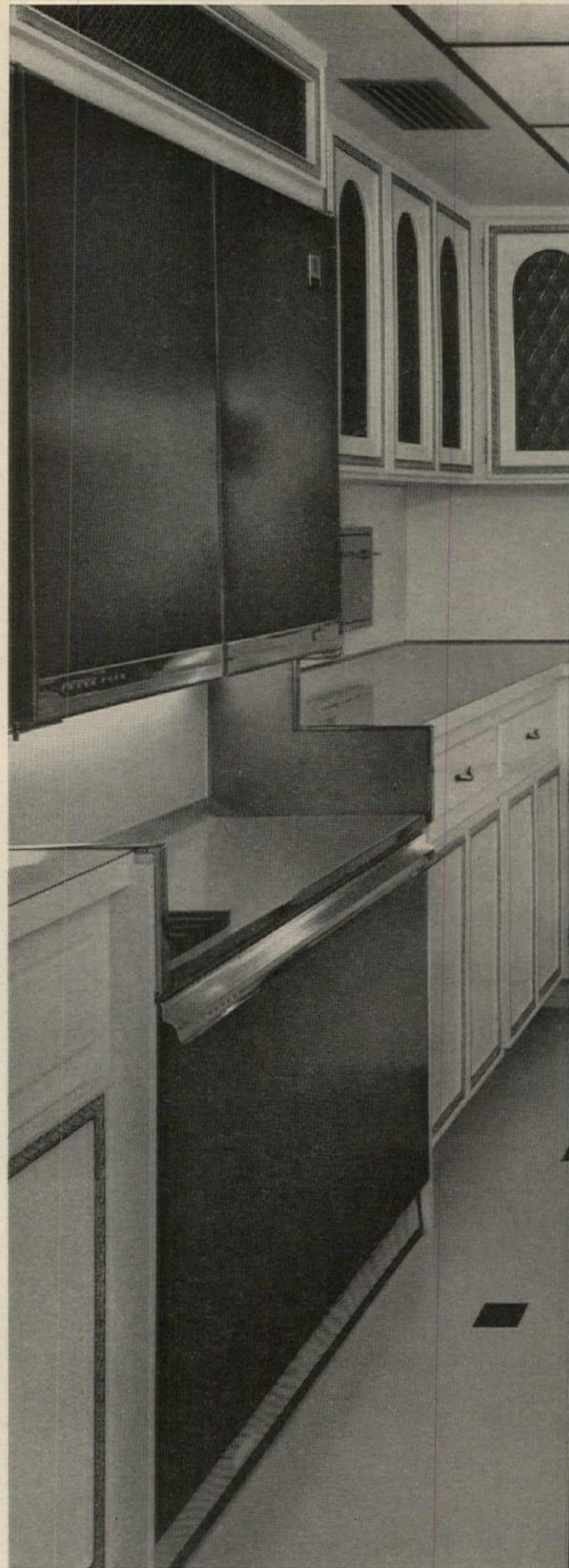
**Q.** Why do you like to include all G-E kitchen appliances?

**A.** Well, our prospects have confidence in G.E. to make top appliances and give good service—and with the one line, they'll have one-source service. And we can be sure of styling and colors that match.

But there's another thing. The G-E line is styled so we can be flexible in our designs. We can build kitchens that are different and attractive, real sales-clinchers. I doubt there's a time when these kitchens don't contribute to sales. And I've seen just one feature—like that P-7 oven—clinch a sale. And, of course, you know G.E. helps by advertising. The lady comes in knowing the name. That helps a lot.

**Q.** You don't mind being quoted to other builders?

**A.** No, they're welcome to the same selling help from General Electric that we get—they still can't build *better* kitchens than we do. Anyway, we'll find an edge somewhere else. We have sales-clinchers everywhere. Let me show you the living room . . .



AMERICANA REFRIGERATOR with illuminated countertop, cutting board. Fresh food stored above, behind wide-swinging French doors; frozen food below.

**GENERAL**  **ELECTRIC**

For more data, circle 26 on Inquiry Card





THE AMERICANA RANGE with the revolutionary P-7 oven that cleans itself electrically, rotisserie, built-in 2-level exhaust, Sensi-Temp® cooktop unit.

BUILT-IN DISHWASHER loads from front, leaves counter free, washes table settings for 15.\* (All deluxe appliances available in variety of matching colors)

\*PER MA STANDARDS



## Product Reports

continued from page 129

### DOMES SKYLIGHTS FOR HOUSING MARKET

A new line of standard geometric skylighting domes has recently been developed for the housing market. In response to a growing demand by architects, the company is now producing custom-designed extruded aluminum and glass domes with standard



skylight economies. These self-supporting domes can be specified in two basic one-slope geometric design patterns, and are available in 6- to 30-ft diameters. All domes carry a three

year guarantee against defects in design, materials and workmanship, as well as against leakage. *Super Sky Products, Inc., Box 113-H, Thiensville, Wis.*

CIRCLE 304 ON INQUIRY CARD

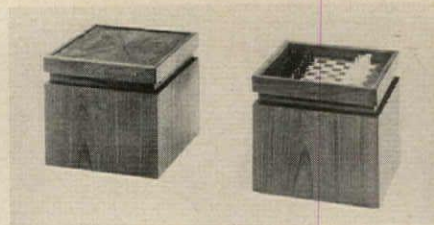
### NEW DESIGNS IN VINYL FLOORING

Two new designs have been added to the range of sheet vinyl flooring. *Caradel Vinyl Cordon*, available in white and beige, features a plain background and a scroll inset inlay, simulating brass. *Paventi Vinyl Corlon* has large scale vinyl aggregates which are designed to give the appearance of Italian carrara marble. Four light colors, with neutral accents can be obtained. Both new lines are manufactured in 6-ft widths and are equipped with moisture resistant backing. *Armstrong Cork Company, Lancaster, Pa.*

CIRCLE 305 ON INQUIRY CARD

### GAME TABLE

This small, square table has a walnut top which can be removed to reveal a chess-board, recessed sufficiently to provide room for the standing pieces



when the top is in place. The table is 18 in. square and 15½ in. high. *Brown-Saltman, 5657 Wilshire Blvd., Los Angeles 36, Calif.*

CIRCLE 306 ON INQUIRY CARD

### WOOD FRONTED STEEL CABINETS

Fifteen different wood finishes in a choice of contemporary, traditional or provincial styling are available in the *Century* line of steel cabinets. Mounted on ultra-durable steel, the wood exteriors are of ¾-in. three-ply construction with solid basswood cores to prevent warping or splitting. All finishes are sealed, baked and lacquered before the molding and hardware is applied. *Geneva Industries, Inc., Geneva, Ill.*

CIRCLE 307 ON INQUIRY CARD

more products on page 137

# Now PresTeel Spiral Stairways for Houses

## INTERIOR AND EXTERIOR TYPES



### SAVES SPACE—CUTS COSTS

More and more architects are now specifying Woodbridge PresTeel spiral stairways for houses. They require floor area only the size of an average clothes closet. Optional features of these graceful PresTeel stairs are a choice of wood treads and 7 gaily colored plastic handrails.

A stairway for an average enclosed stair well 4'-0" in diameter by 8'-0" high will cost from \$275 to \$325. Send us your plans or specifications and we'll be happy to send you a quotation by return mail.

Also available: New "Econ-Spiral" Stairway—write for bulletin.



**WOODBIDGE ORNAMENTAL IRON CO.**  
2715 N. Clybourn Ave. Chicago 14, Ill.

For more data, circle 27 on Inquiry Card

For more data, circle 28 on Inquiry



## Product Reports

continued from page 134

### BATHROOM CEILING HEATER

Easily installed on any standard 3¼- or 4-in. ceiling outlet box, this surface-mounted heater features a 1,250-watt armor-shielded element, thermal protection against overheating, and a double-duty fan that cools the unit as it helps diffuse heat throughout the room. The Model 150 heater is 14½ in. in diameter and carries a one year guarantee. *Broan Manufacturing Company, Inc., Hartford, Wis.*

CIRCLE 308 ON INQUIRY CARD

### FOUR TYPES OF VENTILATING HOOD

Designed for against-the-wall, pass-through, peninsula and island installations, these ventilating hoods are finished in either antique copper or pewter and are available in standard lengths of 36, 42 and 48 in. Custom lengths to 96 in. are available to order. The unit is particularly suitable for ventilating indoor barbecues because of the extremely high air discharge developed by dual centrifugal blowers, powered by a ⅓ hp engine.



A rheostat control allows an infinite number of speeds to accommodate every ventilating requirement. *Trade-Wind Division, Robbins & Myers, Inc., 7755 Paramount Place, Pico Rivera, Calif.*

CIRCLE 309 ON INQUIRY CARD

### CONTROL CENTER FOR REFRIGERATORS

A built-in operational control center is now being offered as standard equipment with the *Victory Line* commercial refrigerators and freezers. This conveniently placed panel operates five separate control elements; it gives the alert if excessive temperatures are reached, eliminates moisture around exterior door openings, checks the product zone temperature, maintains the power supply

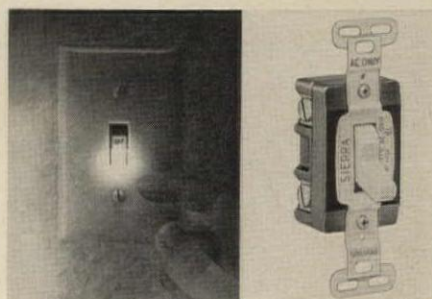
and flashes a warning light for failure of the power source. *Victory Metal Manufacturing Corp., Plymouth Meeting, Pa.*

CIRCLE 310 ON INQUIRY CARD

### ILLUMINATED LIGHT SWITCHES

These switches, which light up when in the "off" position making them easy to locate in the dark, are particularly suitable for use in hallways, garages, warehouses and similar buildings. They are available in a range of four colors, ivory, gray, beige and white and in 15- and 20-amp ratings. *Sierra Electric Corp., 15100 S. Figueroa St., Box 85, Gardena, Calif.*

CIRCLE 311 ON INQUIRY CARD



more products on page 140

## tub-master®

PATENTED  
sliding-folding tub shower door

### America's outstanding tub/shower enclosure

At last here's a product that answers all the objections to old-fashioned tub/shower enclosures. Look at these advantages.

- **tub-master** is safe. Its Styron® panels are shatter-proof and have high impact resistance.
- **tub-master** is beautiful. Available in 8 decorator colors plus black and white.
- **tub-master** is convenient. Rigid by-pass doors are easily unlatched and folded out of the way for bathing or easy cleaning.
- **tub-master** is easily installed. Entire installation takes only minutes. Unit plumbs itself to uneven tubs or walls.

For more information write **tub-master Dealer/distributor** inquiries invited.



TUB-MASTER CORPORATION • 409 VIRGINIA DRIVE • ORLANDO, FLORIDA • 32803

For more data, circle 29 on Inquiry Card



## BRIGHT SPOT

Filuma doors blend with all building materials — any architectural design . . . plan a gay, bright garage in your next home with the Frantz Filuma fiberglass/aluminum garage door. Translucent fiberglass panels (white, tan, green or coral) brighten every corner of the garage with natural light . . . adds extra living space. Never needs paint . . . just hose it off to keep it new. Light in weight, too. Special zinc-plated hardware won't rust. Protected under Patent Nos. 194094, 3104699. Available nationally through lumber dealers. Send for color brochure.

## FRANTZ MANUFACTURING COMPANY

Department 7 • Sterling, Illinois

The Nation's Foremost Manufacturer of Fiberglass/Aluminum Garage Doors.

For more data, circle 30 on Inquiry Card





# This is Open World

**L·O·F makes special kinds of glass to help solve special house-design problems. Your L·O·F Distributor knows glass and how to use it. Try him. Or call your nearest Libbey·Owens·Ford District Office. Both are listed under "Glass" in the Yellow Pages.**

**(Top photos) To reduce sun glare and heat,** *Parallel-O-Grey*® plate glass was used in this Houston residence of Architect Harry Turner. It excludes approximately 50% of visible daylight and 40% of solar heat. L·O·F also makes *Parallel-O-Bronze*® and blue-green Heat Absorbing plate glass for glare and solar heat control. And for homes without this problem, there's clear, twin-ground *Parallel-O-Plate*® glass.

**(Lower left) To assure year-round comfort,** *Thermopane*® insulating glass was used in the Minneapolis residence of Architect Newton Griffith. *Thermopane* reduces heat loss through windows

and window walls about one-half as compared to single glazing—cuts heating and air-conditioning costs. *Thermopane* can be supplied with tinted glass as the outer pane for glare and solar heat reduction.

**(Lower right) To decorate and share light** between adjacent areas, use L·O·F Rough Plate Glass. Its shimmering surface adds texture and interest, provides partial privacy yet permits light to pass through freely. Ideal for homes as well as offices. Architects: Skidmore, Owings & Merrill.

**For safety's sake** use sliding patio doors made with *Tuf-flex*® 200

Safety Plate Glass. This glass is heat-strengthened . . . is 20% thinner (therefore lighter weight) than regular ¼" plate glass, yet meets all FHA and VA safety standards. *Thermopane* insulating glass units made from *Tuf-flex* 200 will fit sliding-door frames formerly restricted to the use of ⅝" insulated glazing made from sheet glass.

**To make rooms appear larger,** use large mirrors and sliding wardrobe mirror doors made with *Parallel-O-Plate* glass—twin ground and polished for truest reflection.



**Libbey·Owens·Ford Glass Company TOLEDO, OHIO**

For more data, circle 31 on Inquiry Card





# Living

Glass makes it possible.  
L·O·F makes it practical.





## Product Reports

continued from page 137



### BUILT-IN PANEL PHONE

Although it can be installed anywhere in the house, the space saving features of this telephone make it especially suitable for kitchens or family rooms. A disappearing cord that unwinds and retracts automatically as the instrument is used is introduced for the first time. The panel is available in anodized aluminum or copper finishes. *Bell Telephone System, American Telephone and Telegraph Company, 195 Broadway, New York 7, N.Y.*

CIRCLE 312 ON INQUIRY CARD

### SELF-VENTILATING ELECTRIC OVENS

Complete built-in ventilation of all cooking zones is an important feature of the eight new electric *Range-Ovens* now on the market. All models are in one piece and can be slid or dropped into standard cabinets. *Nu-Tone Inc., Madison and Red Bank Roads, Cincinnati 27, Ohio*

CIRCLE 313 ON INQUIRY CARD



### MODULAR FURNITURE

This 9-ft room divider is one of more than 60 modular assemblies manufactured by the company for residential or commercial use. The *Coordinates* range of drawers, doors,



shelves and interior fittings are available in 3 and 9 ft widths, and in walnut or Northern maple in natural wood and color finishes. Legs and extrusions are of anodized aluminum. *Mutschler Brothers Company, Merchandise Mart, Chicago, Ill.*

CIRCLE 314 ON INQUIRY CARD

more products on page 144

# Quarry Tile of Special Shapes

The unique beauty of Ludowici special shapes shale flooring tile is now practical for your most budget minded client. Because of greatly increased demand, price reductions have been made on all special shape styles. No difference in quality or texture.

You can now afford the world's most beautiful flooring tile.

Provence, Valencia and Renaissance patterns available in brushed or smooth, in red or fire flashed colors.

For complete information and the name of your nearest distributor write:

**FLOORING TILE DIVISION—Dept. R. H.**

✳ **LUDOWICI-CELADON CO.** • 75 East Wacker Drive, Chicago 1, Illinois  
Manufacturers of quarry tile, the nation's largest producer of roofing tile and NAILON Facing Brick

**WEST COAST REPRESENTATIVES:** International Pipe & Ceramics Corp., Los Angeles

**HAWAII REPRESENTATIVES:** Lewers & Cooke, Ltd., Honolulu

VALENCIA



PROVENCE



RENAISSANCE



For more data, circle 32 on Inquiry Card



ISN'T IT ABOUT TIME



FOR

# NEW bathroom design?



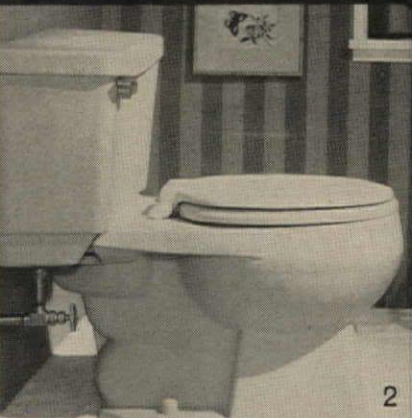
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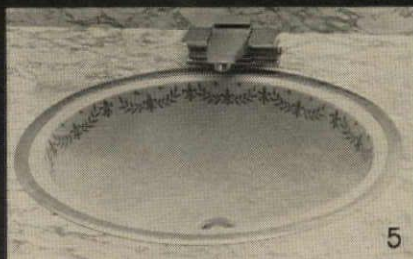
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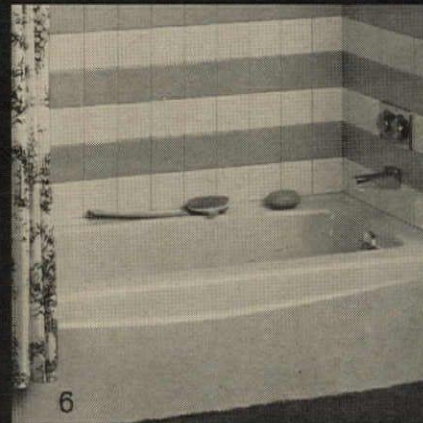
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2



5



6

Universal-Rundle thought so . . . and they chose Sundberg-Ferar, Inc. (1962 winner of the American Institute of Architects Industrial Design Medal) to design their new Galaxie line, a skillful welding of utilitarian function, beauty of materials and sculptural simplicity • You'll agree that U/R Galaxie engineering is incomparably advanced, too. Consider that their sleek Met-L-Pak® faucets are guaranteed never-to-drip for life. And the Uni-Tilt® flush valves in Galaxie water closets shut off every time. Eliminates annoying handle jiggling and running water nuisance • You can count on U/R for handsome designs and long-range economy. It'll make good design and business sense to know the facts on U/R vitreous china, enamel cast iron and fiberglass fixtures, and chrome brass fittings before specifying another residential or commercial plumbing job. *Full Color Brochure? Write:*

- 1. ULTRA-SILENT!** *Polaris low tank profile. One piece. Stunning!*
- 2. YEARS AHEAD!** *Venus appears like one piece—costs far less!*
- 3. SHELL-SHAPED!** *Apollo lavatory for single or multiple installation with sleek sculptured styling akin to today's architecture.*
- 4. EXCITING FLAIR!** *Saturn vitreous china counter top lavatory.*
- 5. FLEUR-DE-LIS PATTERNED!** *Rhea lavatory's overflow concealed at front.*
- 6. SWEEPING LINES!** *Full width Neptune tub is spacious, yet economical. Apron seat, large reclining area. Built-in soap dish.*

**All fixtures are available in white and distinctive coordinating pastel colors.**



**UNIVERSAL-RUNDLE CORPORATION, NEW CASTLE, PA.**

*The World's Finest Bathroom Fixtures*

For more data, circle 33 on Inquiry Card

**UNIVERSAL-RUNDLE CORPORATION, NEW CASTLE, PA.**

*We want to see what's new. Please send full color architectural brochure on U/R plumbing fixtures.*

NAME \_\_\_\_\_

FIRM \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_

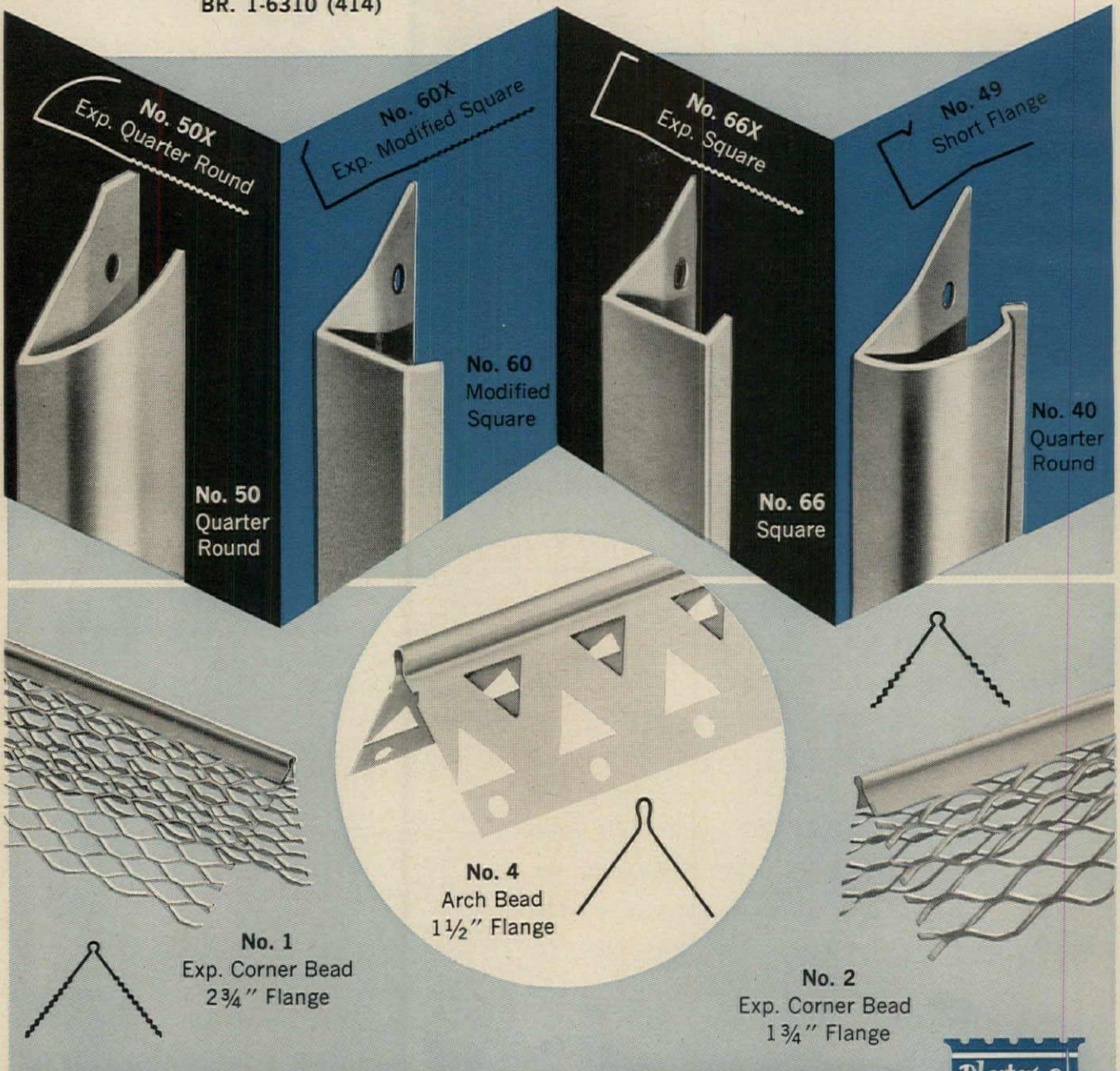


# THE NATION'S LARGEST SUPPLIER OF PLASTER GROUNDS

**CASINGS**  
INCORPORATED

2408 N. Farwell Ave. Milwaukee, Wis. 53211  
BR. 1-6310 (414)

CASING BEADS  
CORNER BEADS  
BASE SCREEDS



**WRITE FOR CATALOG OF COMPLETE LINE**

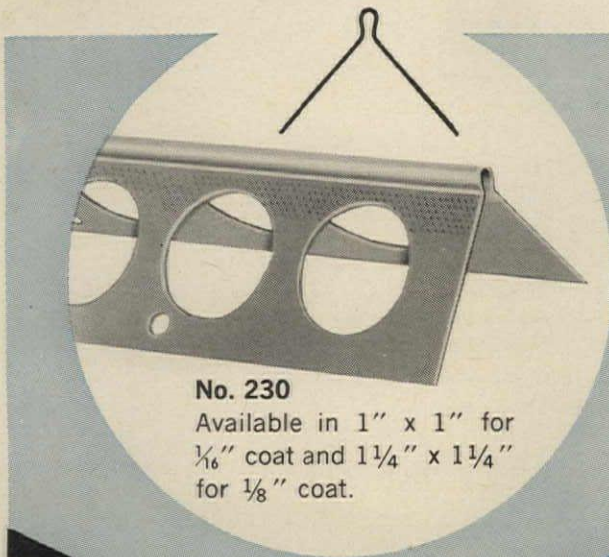




# IF WE DON'T STOCK IT ... ASK US TO MAKE IT!

## CASINGS INCORPORATED

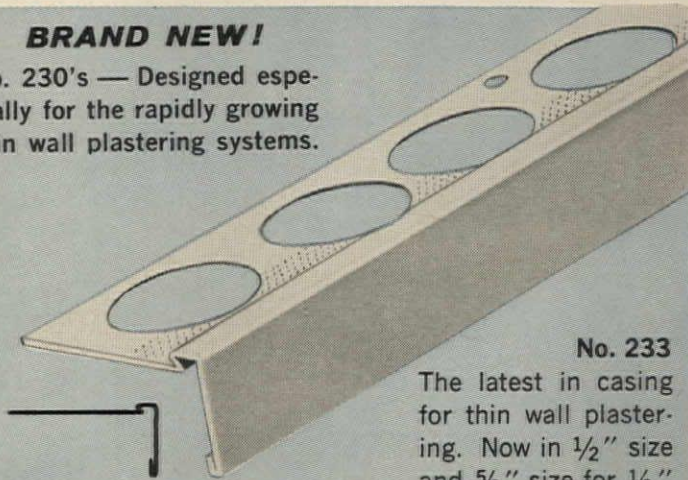
2408 N. Farwell Ave. Milwaukee, Wis. 53211  
BR. 1-6310 (414)



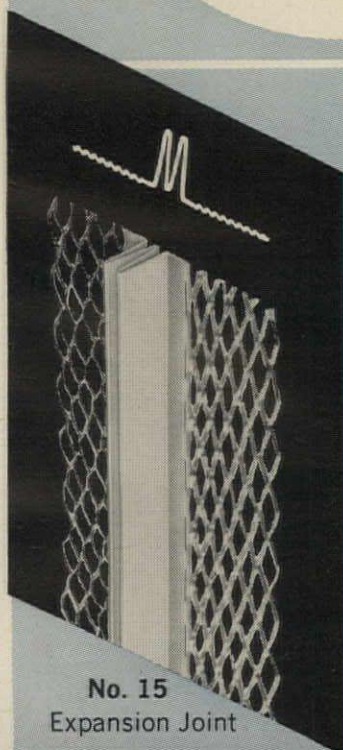
**No. 230**  
Available in 1" x 1" for  
 $\frac{1}{16}$ " coat and 1 $\frac{1}{4}$ " x 1 $\frac{1}{4}$ "  
for  $\frac{1}{8}$ " coat.

### BRAND NEW!

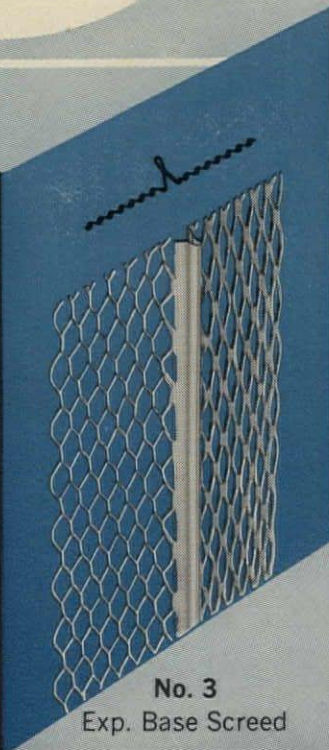
No. 230's — Designed especially for the rapidly growing thin wall plastering systems.



**No. 233**  
The latest in casing for thin wall plastering. Now in  $\frac{1}{2}$ " size and  $\frac{5}{8}$ " size for  $\frac{1}{8}$ " coat.



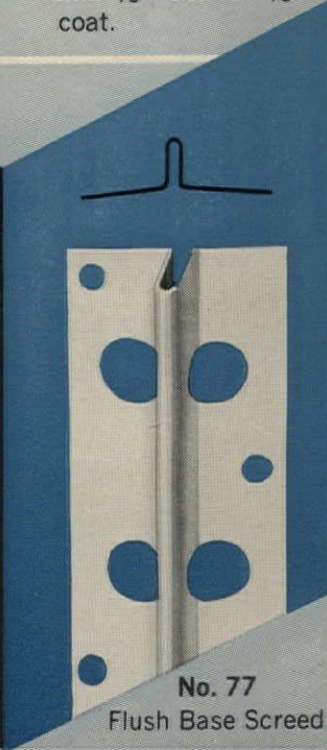
**No. 15**  
Expansion Joint



**No. 3**  
Exp. Base Screed



**No. 14**  
Stucco Divider



**No. 77**  
Flush Base Screed

## IMMEDIATE SHIPMENTS—COAST TO COAST WAREHOUSES

For more data, circle 34 on Inquiry Card



## Product Reports

continued from page 140

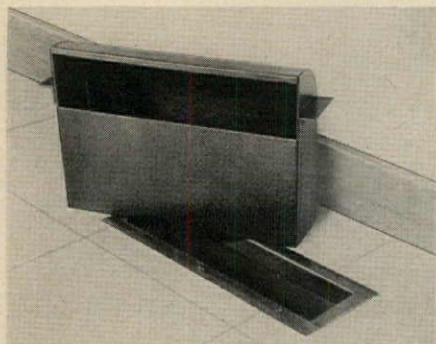
### DECORATED LAVATORIES

Vitreous china lavatories and one-piece water closets are now available with decorative designs fired into the china under the original glaze. The company claims that these under-glaze designs are as permanent as the glaze itself and will never fade or wear off. *Case Manufacturing, 1010 W. Pine St., Robinson, Ill.*

CIRCLE 315 ON INQUIRY CARD

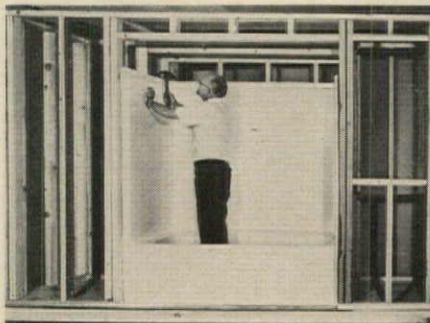
### KITCHEN CLEANING AID

The *Sweepclean* unit consists of a frame and a container which is easily installed between 16 in. center floor



joists in kitchens and family rooms. It is said to hold two to three weeks sweepings and can be lifted out for periodic emptying. Made of 20 gauge steel with a copper tone finish, its dimensions are 12 in. long, 27/8 in. wide and 6 in. deep. *Ultran, Bloomington, Minn.*

CIRCLE 316 ON INQUIRY CARD



### GLASS FIBER BATH AND SHOWER UNITS

One-piece shower and bath units made of specially formulated glass fiber reinforced polyester resin can be put into a building at the framing stage. The bath unit combines a 5-ft tub with a 72-in.-high back and sides splash wall. The shower unit is made in three widths: 36 in., 48 in. and 54 in. Features of the new material are

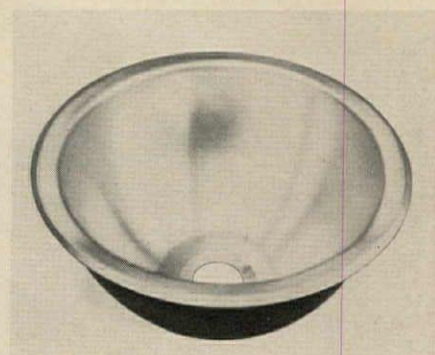
a non-skid surface, high resistance to stains and abrasion from household cleansers, and the possibility of repair after installation. *Universal-Rundle Corp., Box 960, New Castle, Pa.*

CIRCLE 317 ON INQUIRY CARD

### STAINLESS STEEL SINK

A round stainless steel sink which can be built in to almost any type of working surface has been added to this company's existing range. The unit is self-rimmed with smooth seamless construction. Heavy undercoating offers maximum sound deadening. *Polar Ware Company, Sheboygan, Wis.*

CIRCLE 318 ON INQUIRY CARD



more products on page 146



Deck House in Wayland, Mass.; Cabot's Weathering Stains on Exterior Siding. Designed by William Berkes, Wayland, Mass.

**35%** of the Award-Winning Architects  
for the 1964 "RECORD HOUSES"  
specified **Cabot's STAINS**

35% in 1964 . . . and this is only part of the story. In the past 10 years, Cabot's Paints or Stains were used on 68 out of 195 "Record Houses," a remarkable 35% overall. This record speaks for itself.

The following architects specified Cabot's for 1964 "Record Houses":

WILLIAM BERKES	Wayland, Mass.	HENRIK BULL	San Francisco, Cal.	CLAUDE OAKLAND	San Francisco, Cal.
CAMPBELL & WONG & ASSOCIATES	San Francisco, Cal.	ULRICH FRANZEN	New York, N.Y.	JAMES E. STAGEBERG	Minneapolis, Minn.
		NORMAN JAFFE	New York, N.Y.		

Send for color cards and information on Cabot's Stains.

**SAMUEL CABOT INC.** 529 S. Terminal Trust Bldg., Boston 10, Mass.

For more data, circle 36 on Inquiry Card

For more data, circle 37 on Inquiry Card






## This distinctive oak floor SELLS style-minded buyers

People who know what's smart really go for Bruce Fireside Plank Floors. Use this exciting floor in one room of a model home and listen to the compliments on its dramatic dark finish, random-width planks. Like all Bruce Prefinished Floors, Fireside Plank has the famous Bruce baked-in factory finish that saves you time and money, gives your home buyers long-lasting beauty underfoot. See Sweet's Files or write for catalogs.

E. L. BRUCE CO., MEMPHIS, TENN.—WORLD'S LARGEST IN HARDWOOD FLOORS

**BRUCE**  
**Fireside Plank**  
**Floors** 

*Prefinished by modern Bruce methods for beauty, durability, economy*



# MOSLEY

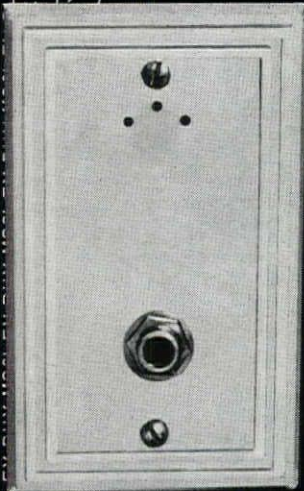
The Finishing

Touch

That

SELLS

HOMES



A packaged unit, complete with hardware designed by Mosley electronic specialists for perfect - TV/FM distribution.

The DS-1PK TV/FM & Audio wall outlets give each home a factory - engineered, built - in system that connects one rooftop antenna with two to eight rooms (have four TV sets operating simultaneously or move one around) and at the same time, use the antenna wiring to carry one Audio or Hi-Fi signal between two or more outlets.

Write today for our detailed brochure. You'll want this low cost extra feature in your New Homes!

Please send me, FREE of charge and obligation, literature on the DS-1PK Form No. DS-1 (3)

Name \_\_\_\_\_

Address \_\_\_\_\_

City & State \_\_\_\_\_

**MOSLEY ELECTRONICS, Inc.**

6410 N LINDBERGH BLVD., BRIDGETON, MISSOURI, 63044

For more data, circle 38 on Inquiry Card

## Product Reports

continued from page 144

### TOUCH-BUTTON COFFEE BREWER

Planned for home or office installation, this *Imperial Coffee Maid* machine brews an individual cup of coffee from fresh grounds, pours it into the cup and automatically cleans itself in 18 seconds. Especially suitable

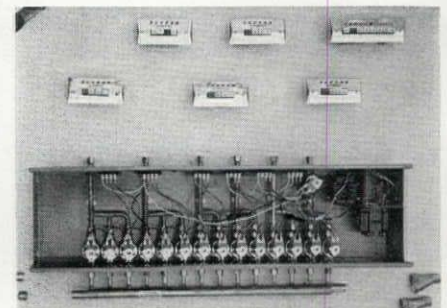


as a built-in unit in new homes, the *Coffee Maid* is also designed as a wall-hung or countertop appliance for existing kitchens. The unit carries a one-year guarantee on all parts. *Imperial Coffee Maid Corp., 3425 W. Dempster St., Skokie, Ill.*

CIRCLE 319 ON INQUIRY CARD

### PUSH BUTTON WATER SYSTEM

Introduced during the past year in selected markets, the *Ultraflo* water system automatically distributes variations of water temperature and flows to any fixture in the house at the touch of a button. The pressure



or flow can be pre-selected and will remain constant. The system claims a considerable reduction in the amount of water wasted. *The Tappan Company, Mansfield, Ohio*

CIRCLE 320 ON INQUIRY CARD

more products on page 149

For more data, circle 39 on Inquiry Card



# New Literature for Home-Planning

Literature about products for the house available from manufacturers through reader inquiry service

## TERMITE CONTROL

An eight-page booklet giving information on the habits of termites and precautions which can be taken against them has been issued by the Building Research Council of the University of Illinois. This booklet lists three methods of prevention: termite shields, soil treatment and wood preservatives, and explains how these may be applied. The booklet, index no. F25, can be obtained for 15 cents. *Small Homes Council-Building Research Council, Mumford House, University of Illinois, Urbana, Ill.*

CIRCLE 400 ON INQUIRY CARD

## BATHROOM PRODUCTS

Child-protective cabinets, which are equipped with latches designed to prevent access by children under six years, have been developed by The Grote Manufacturing Co. These, and a wide range of other products for the bathroom, are fully described in a 24-page catalog. *The Grote Manufacturing Company, Madison, Ind.*

CIRCLE 401 ON INQUIRY CARD

## WINDOW SHADE HANDBOOK

(A.I.A. 35-P-5) This booklet illustrates the most usual window types, and the shades and methods of installation best suited to them. A chapter is included on the care of window shades after they are hung. 25 cents. *Window Shade Manufacturers Association, 341 Madison Avenue, New York 17, N.Y.*

CIRCLE 402 ON INQUIRY CARD

## AIR CONDITIONER BULLETIN

A new bulletin, no. 763, gives details of this company's line of room air-conditioning units now available. The cooling, heating, filtering and dehumidifying operations of the fan-coil *Airditioners* are described. Performance ratings and specifications are included. *Modine Manufacturing Company, Racine, Wis.*

CIRCLE 403 ON INQUIRY CARD

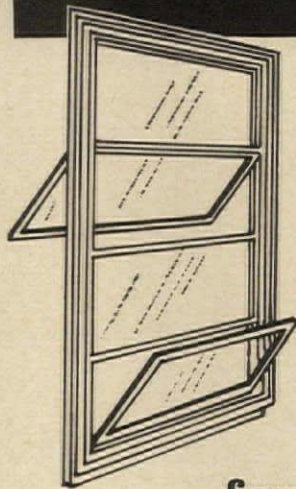
## PACKAGED SEWAGE TREATMENT

Bulletin 141 gives details of the *Rapid Bloc* package plant, which provides complete liquid sewage treatment and aerobic digestion of solids, and can treat up to 75,000 gal in single units, and up to 150,000 in multiple units. *Chicago Pump Hydrodynamics Division, 622 Diversey Parkway, Chicago 14, Ill.*

CIRCLE 404 ON INQUIRY CARD  
more literature on page 158

For more information circle the key numbers of the literature you want (see number below each literature item) on the Inquiry Card, pages 163-164

Architectural Aluminum  
Manufacturers Association  
announces . . .



## PROJECTED WINDOW SPECIFICATION for monumental buildings!

### ARCHITECTS • SPECIFIERS • BUILDERS

The new P-A3 Specification for *quality* aluminum monumental projected windows has just been adopted by Architectural Aluminum Manufacturers Association. P-A3 calls for massive 2-inch depth of frame and ventilators, minimum 3/4-inch glazing leg depth, and new wall thickness construction and hardware requirements.

*Nine exacting tests are included in P-A3:* Air infiltration, water resistance, uniform load, torsion load on project out ventilator, horizontal and vertical concentrated load on latch rail, torsion and vertical concentrated load on horizontal frame rail, balance arm load tests.

The Aluminum Window booklet also covers 17 other monumental, commercial and residential window types and classes you need to know about.

YOUR FREE COPY OF THE P-A3 SPECIFICATION IS WAITING . . . phone or write today!



AND BE SURE you always get *quality* by insisting on the AAMA, Inc., "Quality Certified" label (above) on all prime aluminum windows and sliding glass doors. FHA requires the Q-C label (or equivalent) for the structures it insures. This label assures you that products so tagged meet *rigid* AAMA specifications. Products are inspected at least three times yearly at the factory by an independent certifying agency. Tested-certified products of over 132 manufacturers eligible to use the Q-C label are listed in the AAMA, Inc. Directory of Certified Products, issued bi-monthly.

For window or sliding glass door specifications, or Directory, write or call.

ask about  
Aluminum!

ARCHITECTURAL ALUMINUM  
MANUFACTURERS ASSOCIATION  
35 East Wacker Drive, Chicago, Illinois 60601

For more data, circle 46 on Inquiry Card



# ***YORK Air Conditioning gives these homes a better climate for living!***

When you specify air conditioning for a single home—or for an entire tract—you can depend on York for the right equipment. There are versatile York systems for any style of home, contemporary or traditional . . . systems that may be incorporated with any type of heating.

*Application flexibility.* York whole-house air conditioning systems include remote systems, with condensing unit located on a slab

or on the roof, with furnace or duct coils. Single package systems are also available, with flush outdoors or roof-top installation. A complete comfort package may include a York cooling system and a matched Borg-Warner oil or gas-fired furnace.

*Mail the coupon to York* for complete specification data on whole-house air conditioning systems designed to meet a wide variety of application requirements.







**Builder Frank Robino** offers York Central Air Conditioning in these homes at Heritage Park near Wilmington, Delaware. Both the Holiday House (left) and the Crestwood House (right) were designed by John A. Falini, Architect.



**Builder Fred Peek** specified York Central Air Conditioning for these fine homes in Richardson, Texas. Architect is David M. Sweeney.

**YORK** CORPORATION  
 Subsidiary of Borg-Warner Corp.  
 YORK, PENNSYLVANIA



THE QUALITY NAME IN AIR CONDITIONING AND REFRIGERATION

**WANT MORE FACTS?**

YORK CORPORATION AR-54  
 York, Pennsylvania

Please send specification data on  
 York Central Air Conditioning.

Name \_\_\_\_\_  
 Company Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ Zone \_\_\_\_\_  
 State \_\_\_\_\_

For more data, circle 47 on Inquiry Card



LOOK INTO  
THE *Complete* LINE...

# WAGNER Garage DOORS



## BEAUTI - DOOR

Standard and special designs in sectional overhead type residential doors for quick factory drop shipment. Makers of the fabulous Redwood Beauti-door.



## WOOD

All standard types of sectional overhead wood doors available in extension spring or torsion spring galvanized hardware.



## STEEL

Sturdy sectional and one-piece steel overhead type doors available in residential and commercial sizes. Galvanized steel and factory painted.



## FIBERGLASS

Colorful translucent Panels, Aluminum frame—Easy, quiet operation—Four colors available in wide range of sizes.

Wagner offers a complete line of Wood, Steel, and Fiberglass-Aluminum doors for Residential, Commercial, and Industrial service, including Automatic electronic Doorman operators. Write for complete information including Architectural Specification File Number AR-64



**WAGNER MANUFACTURING COMPANY**  
CEDAR FALLS, IOWA, U.S.A.

For more data, circle 48 on Inquiry Card

## New Literature

continued from page 155

### ILLUSTRATED LIGHTING CATALOG

This pocket-sized catalog, no. 107½ illustrates 678 lighting fixtures, designed for every room in the house, as well as outdoors. Details are given of 71 new items which are being introduced for the first time. *Progress Manufacturing Company, Inc., Philadelphia, Pa., 19134*

CIRCLE 405 ON INQUIRY CARD

### DOUBLE-HUNG WINDOWS

The *Pella* wood double-hung window, featuring a pivoting sash which allows the outside of the glass to be cleaned from inside the house, is fully described and illustrated in a new six-page brochure. *Rolscreen Company, Pella, Iowa*

CIRCLE 406 ON INQUIRY CARD

### DOORS AND ROOM DIVIDERS

A new, fully mirrored *K-Door* with a bi-folding action, designed primarily for closet openings, is featured in a six-page color catalog. Complete architectural specification data is included for this and other doors and room dividers. *Kennatrack Division of Ecko Products Company, 2814 West Peterson Ave., Chicago, Ill.*

CIRCLE 407 ON INQUIRY CARD

### PORTABLE PLANTERS

The use of isophthalic resins reinforced with chopped glass fiber filaments, for the manufacture of lightweight architectural planters, is demonstrated in this illustrated catalog. *Architectural Fiberglass* shows an attractive range of planters in various geometric and sculptural shapes, up to 8 feet in diameter. *Architectural Pottery, 2020 South Robertson Blvd., Los Angeles, Calif.*

CIRCLE 408 ON INQUIRY CARD

### STEREO EQUIPMENT

This fully illustrated catalog contains specifications, and detailed information about the *Copley* and *Exeter* series of stereo consoles, in addition to line drawings and explanations of interior features. *H. H. Scott, Inc., Dept. P., 111 Powdermill Rd., Maynard, Mass.*

CIRCLE 409 ON INQUIRY CARD

### BATHROOM AND KITCHEN VENTILATORS

(A.I.A. 30-D-1) An eight-page catalog showing the complete *Trade-Wind* line of kitchen and bathroom ventilators, bathroom ceiling heaters and automatic electric can openers is now available. Photos, description and specifications of all items are included. *Trade-Wind Division, Robbins & Myers, Inc., 7755 Paramount Place, Pico Rivera, Calif.*

CIRCLE 410 ON INQUIRY CARD

### COMPREHENSIVE HOME APPLIANCE LINE

Colored leaflets illustrating this company's range of refrigerators, freezers, ranges, dishwashers and automatic dryers have been released. Each leaflet contains photographs and full specifications of the model. *Whirlpool Corp., Benton Harbor, Mich.*

CIRCLE 411 ON INQUIRY CARD  
more literature on page 161





## This year—expect people to ask for Kohler colors

Here's Sunrise Yellow—one of the clear, beautiful Kohler colors. It's one of the illustrations in a series of Kohler advertisements appearing in consumer magazines this year. All designed to make people aware of Kohler fixtures in color—their beauty, their versatility, their traditional Kohler quality.

Your prospective clients and customers are learning about the color and the durability of Kohler fixtures and fittings in the magazines they read most for homemaking ideas. And we suggest to them that they discuss Kohler and color with their architect, plumbing contractor and builder.

## KOHLER OF KOHLER

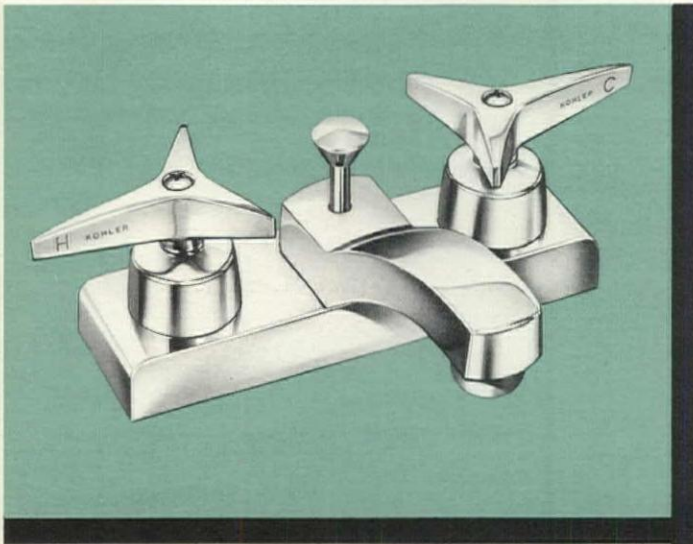
Kohler Co., Established 1873, Kohler, Wisconsin

ENAMELED IRON AND VITREOUS CHINA PLUMBING FIXTURES • ALL-BRASS FITTINGS • ELECTRIC PLANTS • AIR-COOLED ENGINES • PRECISION CONTROLS



# Kohler for new ideas

and quality that's more than 90 years old!



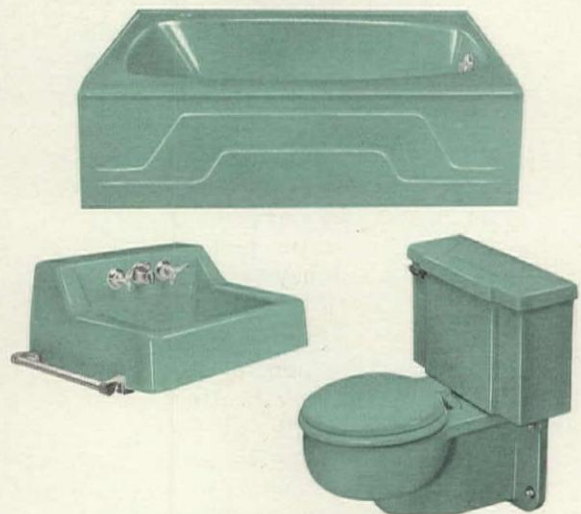
## The Triton—new beauty in All-Brass fittings.

A tasteful blending of convenience and design that appeals to style-minded homeowners. Adds jewel-like beauty to lavatories, bathtubs and sinks.

Lines are elegant, graceful and sweeping—Triton handles are easy to grip—and turn—even with wet or soapy hands.

## Kohler color is part of Kohler quality.

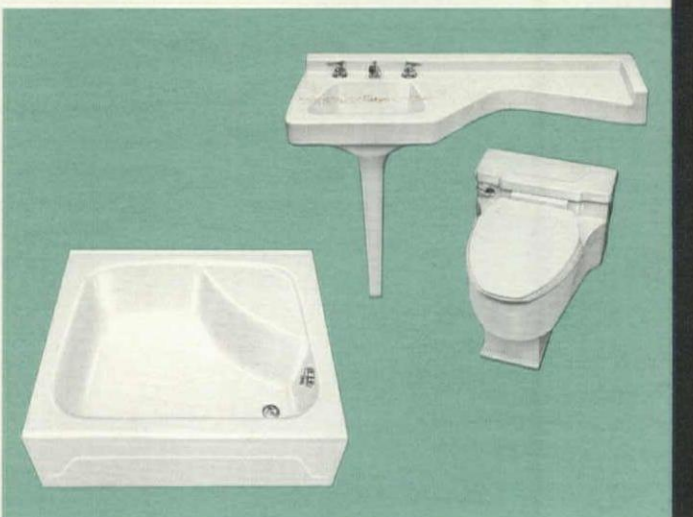
Pictured at right: the off-the-floor Cayuga water closet acclaimed by housewives who like easy housekeeping; the cast-iron Dynametric "people shaped" bathtub; and the new, cleanly designed Hampton lavatory. Bathtub and lavatory are enameled cast iron, the Cayuga is vitreous china, yet in all six Kohler colors and white these units will always color match. Kohler quality control extends to Kohler color. Scientific and constant colorimeter testing at Kohler ensures high color fidelity in all Kohler fixtures.



## Kohler designs to put luxury in small spaces.

Where bathrooms are designed to economize space, comfort and luxury need not be lacking. New Bradford tub built for recessed installation measures 48 x 42 inches, yet offers large bathing and showering space plus a comfortable seat. Pairing the handsome Champlain closet with the unique Legend lavatory makes the most of limited space—low one-piece water closet provides a handy vanity seat.

For complete details on the full Kohler line write Kohler Co., Kohler, Wisconsin.



# KOHLER OF KOHLER

Kohler Co., Established 1873, Kohler, Wisconsin

ENAMELED IRON AND VITREOUS CHINA PLUMBING FIXTURES • ALL-BRASS FITTINGS • ELECTRIC PLANTS • AIR-COOLED ENGINES • PRECISION CONTROLS



# Millions of reasons why an architect should care about electronic air cleaning

There may be 100 to 500 million reasons in every cubic foot of city air. They're the tiny particles of dust, pollen, smoke, soot, grease and industrial wastes that can make a home dirty, unpleasant—even unhealthy to live in. And, no matter how beautifully it is conceived, the true test of the home you design is the degree of living comfort it ultimately affords your client.

**Clean air is as important** as temperature, humidity, and air motion. It is now a controllable factor, practical in today's modern home. As air pollution becomes a bigger problem, clean air becomes a valuable commodity. Now you can get it for your clients by the houseful when you specify a Honeywell Electronic Air Cleaner. Two-stage electrostatic precipitation, the principal used in both the Honeywell "whole-house" and portable units is today's most suitable method available for high-efficiency, residential air cleaning.

**The compact "whole-house" central unit** fits in the return air duct of any forced air heating or cooling system, and removes up to 95%\* of all airborne dust, pollen and other particles passing through it. It can trap particles as small as .03 microns by actual test. (Tobacco smoke particles fall in this class.)

By comparison, ordinary furnace filters, as you may know, are only about 5% to 8%\* efficient. Generally, they can only catch particles that measure 5 microns or larger. They miss most of the great quantity of particles less than 5 microns that do much of the real soiling damage . . . cause the bulk of the real work.

**As you know, your clients care** a great deal about the appearance of their home. And, they care about a clean, fresh, comfortable indoor climate. They know that airborne particles, such as soot, smoke, dust, pollen, etc. cause discomfort, dusting, dulled mirrors, dingy curtains, windows and glassware, and "ghosts" behind pictures.

**They'll notice the difference.** They'll breathe air that's purer. Mirrors and windows will stay cleaner, longer. So will walls and furnishings. They'll save on cleaning bills. And they'll thank you for it.

**Can be included with the mortgage** on a new home for as little as \$1.50 per month. Or, in an existing home on a 3 year FHA Title I plan, it costs as little as \$14.38 a month, installed.

**Look into it.** Why not find out more about the benefits of residential use of the same type of air filtering system that has been used for years in hospitals and commercial buildings. Just clip and mail the coupon for our special architect's brochure on electronic air cleaning: A PLAN FOR THE SELF-CLEANING HOME (AIA file no. 30-D-3.) You'll receive complete information and specifications on both the "whole-house" and portable unit. Get *all* the facts on air cleaning. You'll be better prepared to give your clients advice on this newest crowning touch to their custom home—Honeywell Electronic Air Cleaning.

**FIRST IN CONTROL**



\*As measured by the National Bureau of Standards Dust Spot Method.



**Handsome panel** in living area shows cleaner efficiency. Signals when unit needs cleaning.



**Easily installed** in the duct work of new or established homes with forced air systems.

## Honeywell



**MAIL TO:**  
Honeywell, Dept. RH5-81  
Minneapolis, Minnesota 55408

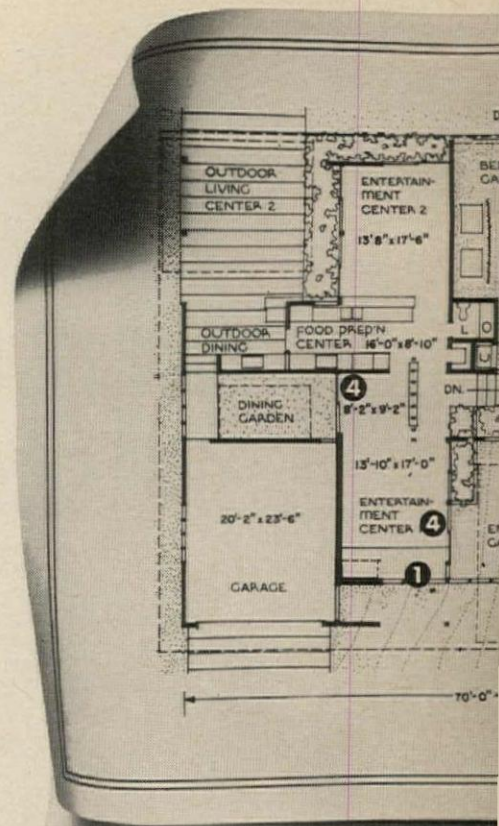
Send me your folder, PLAN FOR THE SELF-CLEANING HOME

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_





For quality products  
Specify the glass that



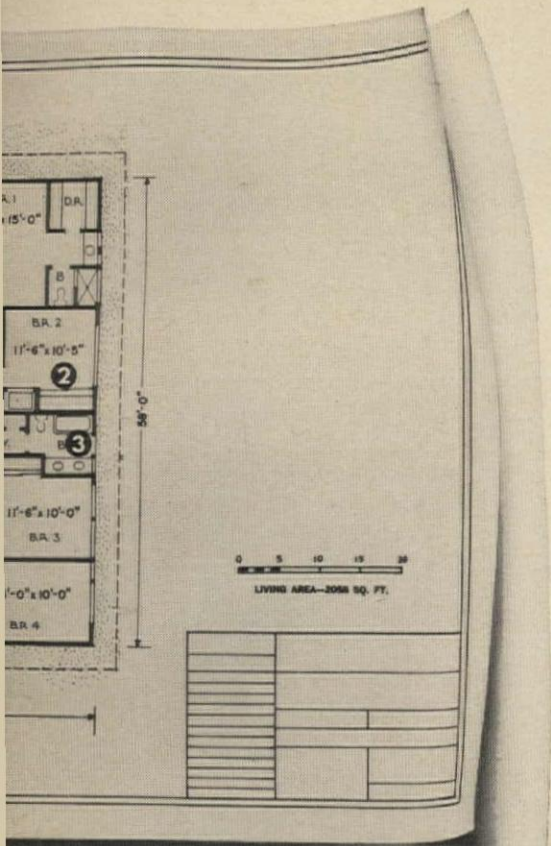
**1** Specify extra comfort and value—with **TWINDOW® Insulating Glass**. TWINDOW fills the “holes” left in your insulating pattern by conventional single-glazed windows. When you specify TWINDOW you cut heat loss by up to 50% . . . reduce fogging, frosting and downdrafts . . . cut heating and air conditioning costs—yet still let in all the light and beauty of outdoors. TWINDOW combines prime window and storm sash in one unit. No need to put up storm sash and take it down. And there are only two surfaces to wash instead of four. TWINDOW is available in more than 250 standard sizes. For large window areas, specify Metal Edge TWINDOW. For smaller areas, Glass Edge TWINDOW is the only electrically fused all-glass insulating window pane.



**2** Specify light, beauty—and practicality for bedrooms—with **GLIDE-A-MIRROR® Wardrobe Doors**. Full-length and wide these gliding mirrored by-pass doors make a room seem twice size. They double the light too. Made of PPG HIGH FIDELITY Plate Glass Mirrors in slim, strong aluminum framing, **GLIDE-A-MIRROR Wardrobe Doors** can be installed after all other w

PPG makes the glass th





match quality design ...  
**makes the difference**

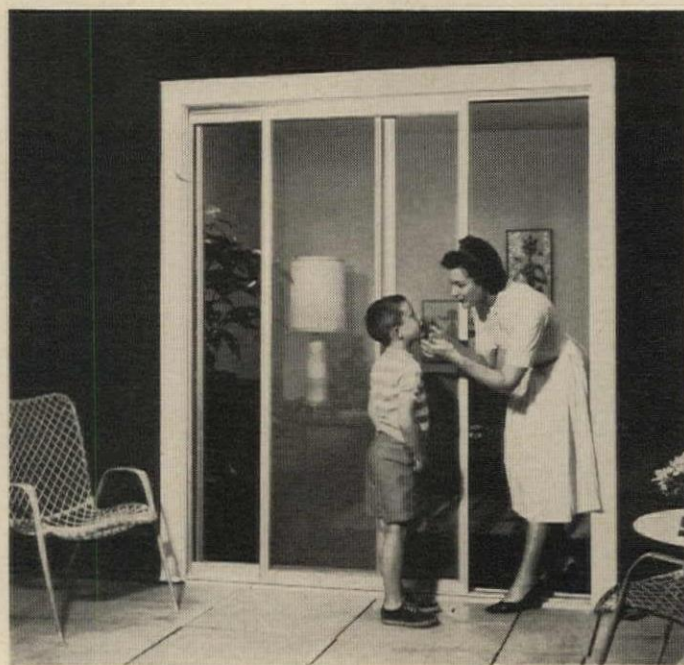


**3** Specify a bright, modern bath — with **HIGH FIDELITY® Plate Glass Mirrors**. Mirrors made from win-ground Pittsburgh Plate Glass give distortion free reflection and superior clarity. They make a small bath look more spacious, make a large bath truly luxurious. Specify this quality product in your homes.

For complete information about PPG products, call your local PPG Architectural Representative or consult Sweet's Architectural File. Pittsburgh Plate Glass Company, 632 Fort Duquesne Boulevard, Pittsburgh, Pennsylvania 15222.



makes the difference



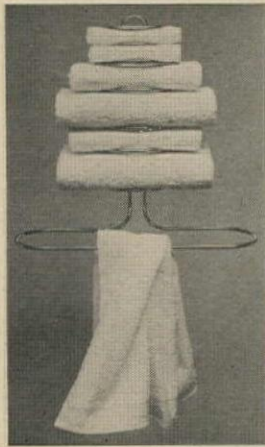
**4** Specify beauty and safety—with **GATEWAY® II Sliding Glass Doors**. Weatherproof, reasonably priced, with features that include an exclusive safety threshold . . . smart slim stiles . . . choice of two and three panel units . . . a reversible frame that makes possible inside slider, outside screen or outside slider, inside screen. The glass can be new **HERCULITE® K Tempered Safety Sheet Glass** which withstands far greater impact than regular glass, greatly reduces personal danger from breaking or shattering glass. New  $\frac{3}{16}$ " **HERCULITE K** for single glazing, or **HERCULITE K Safety TWINOW Insulating Glass** is a low cost way to assure safety in sliding glass doors.

Floor plan courtesy Westinghouse Electric Corporation.

For more data, circle 52 on Inquiry Card



## SAVE UP TO 50% ON TOWEL COSTS

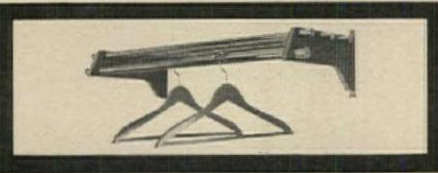


### Best design for motels

PLAZA® Towel Holders pay their way by saving space and cutting laundry costs up to 50%. Smart contemporary chrome design keeps wet and dry towels apart for savings. New PLAZA Executive Coat and Hat Rack in rich walnut, mahogany, or birch with chrome bar is now available. Write for prices and catalog on new motel items.

® PLAZA is a Registered Trademark.

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2,990,066 and  
DES. 184-595  
and D-194,528



**PLAZA TOWEL  
HOLDER CO.**  
2016 N. BROADWAY / WICHITA, KANSAS

See Sweet's Catalog Page 26 DPL.

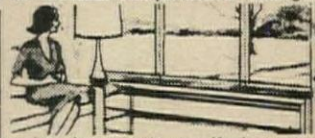
For more data, circle 53 on Inquiry Card

## HOT WATER HEAT WITHOUT PLUMBING

Miraculous heating industry break-through maintains water at exact temperature needed to compensate for outdoor temperature changes.

### New Concept in Electric Heat Discovered!

Unit itself consists of a copper tube in which an electrical heating element warms a special permanently sealed-in water and antifreeze solution. When water is heated, it automatically circulates through the copper tube. At exact moment desired room temperature is reached, automatic thermostat cuts off the current—but hot water circulating through length of unit continues to release heat without cost, while maintaining comfortable warmth.



water temperatures that cannot burn particles of lint and dust in the air which dirty furnishings while using up much needed oxygen and causing dryness with irritation to nose, throat and lung membranes.

**MOST COMFORTABLE, AND ECONOMICAL.** Does away with up and down over heating and chilling by maintaining water at all times at precisely the temperature needed to balance heat loss to changing outdoor weather conditions for nearest floor to ceiling temperature uniformity. Savings up to 30% on heating costs of homes, apartments, etc. Costs of 6c to 15c per sq. ft. per year depending upon local rates and climatic conditions. Over 100,000 installations—past 12 years throughout nation, Alaska, Canada. Send today for free brochure, 2000 unit Millington Homes, 1700 unit Jefferson Barracks, and other interesting projects. Also send plans for factory engineered recommendations of installation and operating costs.



Each unit is a complete self-contained permanently sealed heating system in itself . . . no water to add or remove ever. Baseboard models designed in slender casings only 3¼" deep x 9½" high, in lengths up to 9 ft. for every heating requirement. Recessed into floor models for down to floor windows and sliding doors. 240, 208 or 110 volt as required. Heater required simply slips on brackets beneath the window in each room, where heat is needed and is connected to electrical circuit with a thermostat on the wall.

There is a softness about the warmth that International Hot Water Electric Heat gives. It has a luxurious, natural feel which you sense immediately upon entering a room. It can't use up the room's oxygen and cause dryness. **CLEANEST, HEALTHIEST, SAFEST . . .** Provides safe low hot

Send for Free Brochure No. AR568

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

International, Hot Water Heat Div.  
3800 Park Ave., St. Louis Mo. 63110

For more data, circle 64 on Inquiry Card

## New Literature

continued from page 161

### HARDBOARD SIDINGS

(A.I.A. 19-D-2) This 20-page specifications book illustrates and describes the company's range of hardboard sidings for exterior use. General construction data and application details are given for each product, including quantities needed for covering specific square foot areas. *Masonite Corporation, 29 North Wacker Drive, Chicago, Ill.*

CIRCLE 420 ON INQUIRY CARD

### FLUSH DOORS

(A.I.A. 19-E-1) Five prefinishing options, plus pre-sizing and machining, are features of several new lines of flush doors recently introduced for residential, commercial and institutional applications. These new lines are described and illustrated in a 14-page catalog, no. 64. *Mohawk Flush Doors, Inc., South Bend, Ind.*

CIRCLE 421 ON INQUIRY CARD

### WATER CLOSETS

Six color photographs show the range of colors in which Kohler closets are available. This booklet also gives details of closets which are especially suitable for disabled people. *Kohler Co., Kohler, Wis.*

CIRCLE 422 ON INQUIRY CARD

### MIRRORS IN INTERIOR DESIGN

The use of mirrors to add light, space and visual excitement to room settings is illustrated in this 16-page pamphlet. Colored photographs of mirrors in living rooms, dining rooms, bedrooms, kitchens and baths in a number of private homes are used to demonstrate the role of mirrors in interior decoration. 10 cents. *American Saint Gobain, P.O. Box 1929, Kingsport, Tenn.*

CIRCLE 423 ON INQUIRY CARD

### BACKGROUND MUSIC

Well printed on excellent paper, this catalog gives a most interesting presentation of amplifiers, receivers and components for the background music industry. Full architect's specifications are included where necessary. *Dynatronics, Inc., Commercial Products Division, Box 2566, Orlando, Fla.*

CIRCLE 424 ON INQUIRY CARD

### ALUMINUM GUTTERING

A new line of heavy-duty aluminum rain carrying equipment is featured in this four-page leaflet. Available in stock lengths of 10, 16 and 20 in., the new Hastings gutter has a white baked vinyl enamel finish, and the inside is coated with a form of resin which is said to be highly resistant to moisture and corrosive elements. *Hastings Aluminum Products, Inc., Hastings, Mich.*

CIRCLE 425 ON INQUIRY CARD

### WALL DESK

The *Wall Secretary*, which can be built in to any room in the house, is described and illustrated in a two-page leaflet. *Modern-Aire Ventilating Inc., 1973 Lankershim Blvd., North Hollywood, Calif.*

CIRCLE 426 ON INQUIRY CARD



# AA WIRE PRODUCTS COMPANY

## NEW COMPLETE GUIDE FOR MASONRY REINFORCING AND TIES

This 1964 catalog entitled "Masonry Reinforcing Bond and Ties For All Masonry Walls" features the entire AA Wire flush welded products line, including the new AA-LOK, and clear, simple diagrams of application.

In addition, catalog features flexible anchorage, adjustable and nail-on ties for masonry veneer, with complete information on sizes, finishes and packaging for all products. Send for your free copy.

**EXCLUSIVE AA WIRE PRODUCTS FOR CREATIVE OPPORTUNITIES**

### AA-LOK®

A brand new product from AA Wire Products Company, AA-LOK has been developed to meet the increased structural requirements of modern masonry construction. It features X brace ties, flush-welded at center and spaced 24 inches on center, thus substantially increasing resistance to shear. Three parallel reinforcing wires control shrinkage and cracking and provide bond and reinforcement against external and internal loads and pressures.

### CAVITY-LOK® REINFORCING TIES

Designed for maximum strength in all types of masonry construction, **Cavity-Lok** is used extensively in areas where moisture penetration and/or strong winds are prevalent. The four parallel reinforcing wires control shrinkage cracking as well as provide 4-way reinforcing against external and internal loads and pressures.

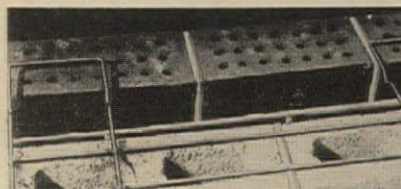
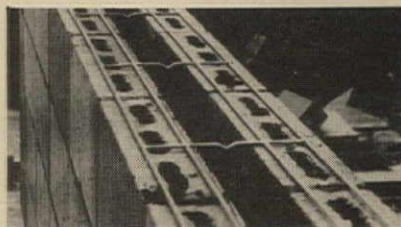
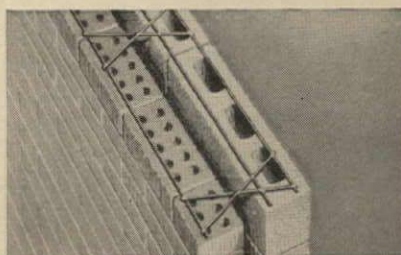
### ECONO-LOK® REINFORCING TIES

The B.O.C.A. (Building Officials Conference of America) Approved Wire Reinforcing Bond System for Faced Masonry Walls, Masonry Curtain Walls, and Veneer Masonry Walls . . . Eliminates Masonry Header; Provides Continuous Bond; Saves on Labor; Saves on Material; Reinforces Backup; Assures Proper Installation.

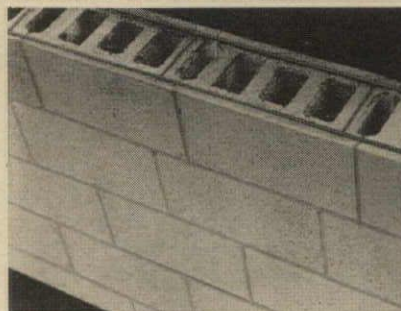
### BLOK-LOK® and THIN-JOINT WALL REINFORCEMENT

Thin-Joint for 1/4" mortar joint.  
 Standard Blok-Lok for 3/8" mortar joint.  
 F.S. Standard Blok-Lok for 3/8" mortar joint.  
 Heavy Duty Blok-Lok for Heavy mortar joint.

**Blok-Lok** cross ties are spaced 16" O.C. to leave core of hollow masonry open to electrical conduit and mechanical pipe trades. Four sided knurling and flush weld assures maximum strength and bond. Controls cracks.



Also available with moisture grip as Econo Cavity-Lok® for cavity walls.



**BLOK-LOK plants in Chicago, Illinois, Dallas, Texas and Toronto, Canada**



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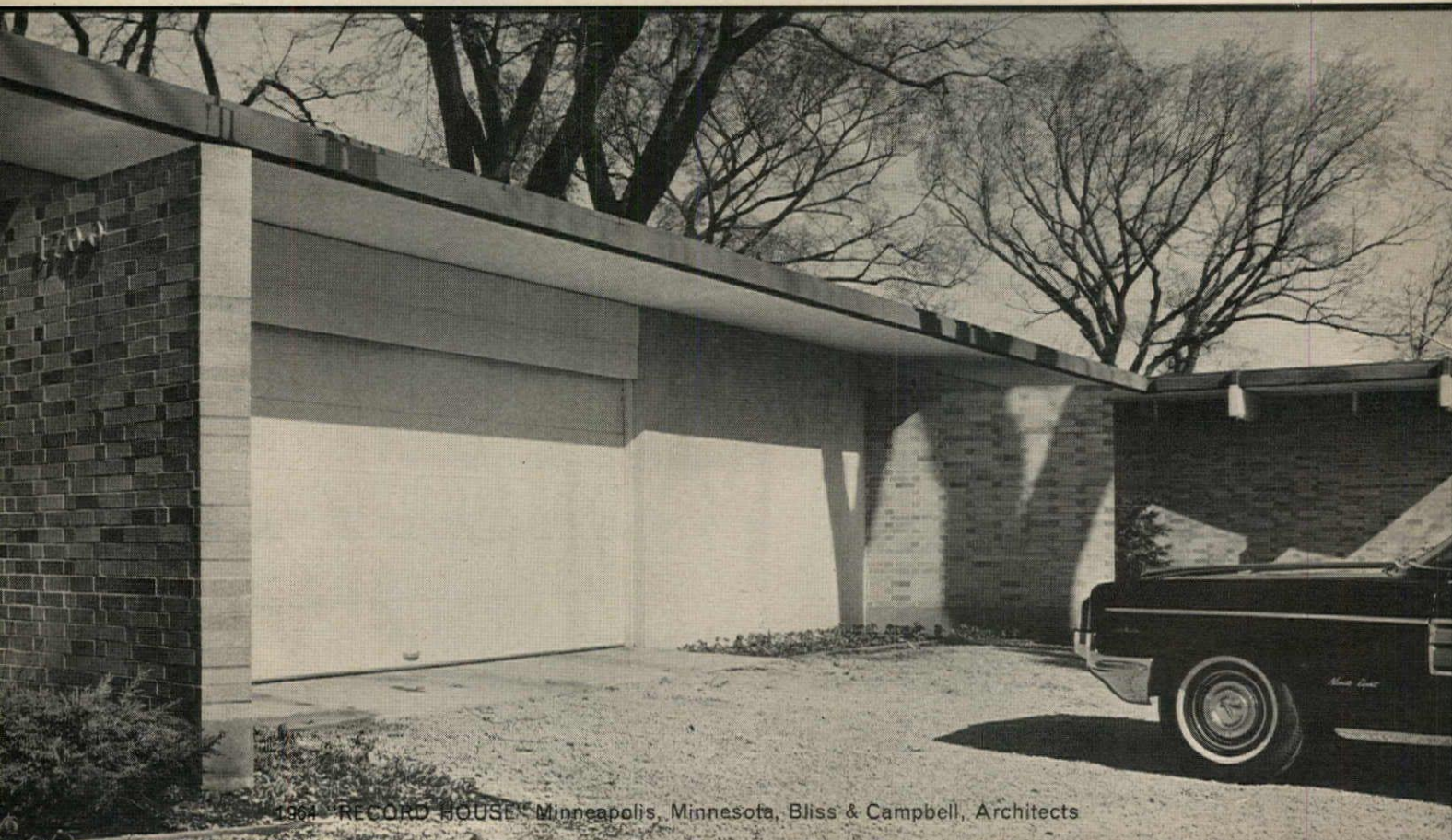
**AA WIRE PRODUCTS COMPANY**  
**714 E. 61st Street • Chicago 37, Illinois • telephone Midway 3-8203**

For more data, circle 54 on Inquiry Card





You would assume the quality of this "RECORD HOUSE" starts right at the door...





**W**HY is it you see Barcol Overdoors on so many trend-setting, award-winning homes? It's obvious. Barcol makes the tightest-sealing, finest-quality, best-looking garage door to appeal to discriminating architects, builders and homeowners, alike.

Manual or pushbutton controlled, Barcol Overdoors are designed to perform functions far beyond opening and closing . . . such as sealing out dust, dirt, wind and weather elements . . . reducing heating and air conditioning bills . . . maintaining quiet, rattle-free operation . . . providing efficient, long-term service.

And Barcol has the facts and figures to prove it! These Overdoors are backed by documented performance standards that assure positive proof of superiority in quality and performance. That's why you can specify Barcol with complete confidence; and homeowners appreciate its many benefits year after year.

Your Barcol dealer is a door specialist who will work with you from the preliminary planning stage through installation and complete customer satisfaction. Contact him.

#### COMPLETE "QUALITY-HOME" MERCHANDISING PROGRAM

Consisting of signs, displays, literature and personalized product stickers, this Barcol plan starts selling *right at the door*. It combines all major components of the home under ONE dramatic QUALITY theme.



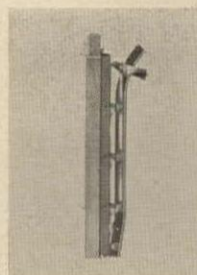
... and it does ... with **BARCOL**

#### BARCOL OVERDOORS FEATURE EXCLUSIVE "CAM-ACTION"

Cam-Action makes Barcol the tightest-sealing overhead-type door on the market. Proven to seal 20 times tighter than conventional doors. Rooms above and adjacent to the garage are easier to heat and keep clean.

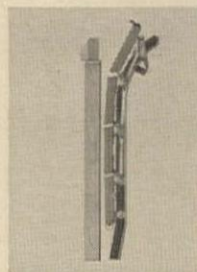
#### *Automatic* DOOR OPERATION FOR REAL HOMEOWNER APPEAL

New in screw-thread drive design, compact size, quiet, safe operation, trouble free performance, the Barcol Model F Operator is also new in low, low price.



#### CLOSED

Cam-Action holds door tightly against jamb stops. Positive seal eliminates air or dust leakage.



#### OPENING & CLOSING

Cam-Action keeps door away from jamb to maintain 1/4" free-running clearance. No binding during door movement.

#### DEALER INSTALLED

Your dealer assumes full responsibility for installing and servicing Barcol Overdoors. Specially trained technicians provide a fast, workmanlike installation.



See Barcol Insert,  
Sweet's Architectural File



**BARCOL**

**BARCOL OVERDOOR COMPANY**

SHEFFIELD, ILLINOIS

Subsidiary Barber-Colman Company, Rockford, Illinois

For more data, circle 55 on Inquiry Card





The only cost that matters is cost installed



**FRIGIDAIRE GOES TO THE FAIR!** See glamorous Frigidaire appliances at the New York World's Fair . . . in the General Motors Futurama Building and in the Formica World's Fair House!

\*SERVICE MARK

BUILD IN SATISFACTION.





Model RBH-530

**That's why this stunning Frigidaire Compact 30 Drop-In Range puts you a jump ahead of competition!**

**You bet it's a beautiful range**—with a spacious, 6-pie oven in just 30" of counter space! But "instant installation" is what makes the Compact 30 a standout to the builder. It's what lets you offer your customers the Frigidaire product performance and beauty they know and want... at such low cost!

The Compact 30 Range is shipped as a complete, self-contained unit, with 48" metallic electrical supply cable attached. No panels, no control switches to put on or take off. After

counter opening has been made just make electrical connection, drop in place, tighten four thumb screws, and installation is complete... *in minutes!* Adjustable end caps, wide side trim, and 7/16" overlap at top hide "cutouts" that may be slightly out of line.

Installation speed is a quality feature of all Frigidaire Built-Ins... a feature that'll pay off for you *and* your customers! Frigidaire Division, General Motors Corporation, Dayton, Ohio.

*The Compact 30 is available in 4 rich colors, white, and brushed chrome.*

..B U I L D I N

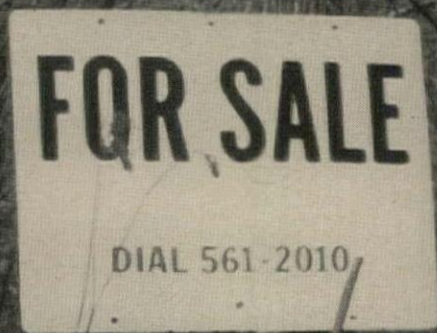


**FRIGIDAIRE**

RANGES • WALL OVENS • COOKING TOPS • DISHWASHERS • DISPOSERS

For more data, circle 56 on Inquiry Card





## **Builders: this is one of the few products you won't**

Everything else—from foundation to chimney—is just an arm's length away the minute you need it. Take flooring, for example. Twenty-five different flooring manufacturers keep their catalogs right at your fingertips...in Sweet's. Door manufacturers: 23. Windows: 17. Heating systems: 18. And that's only a sample.

All together, your Sweet's Light Construction Catalog File contains catalogs—all conveniently bound, indexed and up-to-date—in 203 product categories. Purpose: to make your job easier and save you time





## **find in your Sweet's Light Construction Catalog File.**

—whether you're comparing products, or reviewing details with a prospective home buyer. We call this "instant availability." Your colleagues call it a builder's best friend.

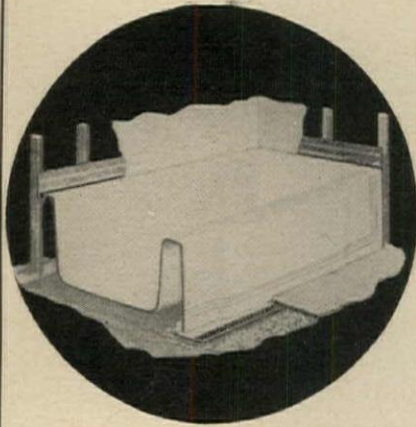
Conclusion: the next time you need information about home building products, reach for Sweet's.

SWEET'S CATALOG SERVICE. F W. DODGE COMPANY, 330 WEST 42ND STREET, NEW YORK, NEW YORK 10036  
DIVISION OF MCGRAW-HILL COMPANY



# Prevent Bathtub SAGGING

with



## LUCKE BATHTUB HANGERS

*Essential—but  
often overlooked*

Make certain that every bathtub installed in your projects is insured against settling and subsequent water seepage. Lucke tub hangers distribute the weight of the tub evenly on all joists and a special flange insures a perfect water seal when bonded with Lucke Leak Proof Filler. This mastic compound is guaranteed to maintain its elasticity during extreme temperatures.

Used in quality houses, motels, hospitals and institutions for over 20 years.

### WILLIAM B. LUCKE, INC.

514 Popular Drive, Wilmette, Illinois

Please send me without obligation, a folder illustrating and describing how Lucke Leak-proof Bathtub Hangers may be used with various type and size bathtubs.

NAME .....

- Engineer       Architect  
 Plumber         Builder

Street .....

City ..... Zone .....

State .....

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## PHOTOGRAPHERS OF RECORD HOUSES OF 1964

Photographs of the houses by the following photographers appear in articles on pages noted

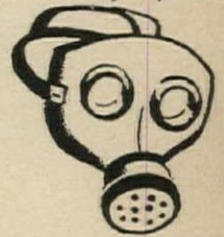
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BLACK-BAKER Dupont Plaza Hotel Miami, Florida	72
ERNEST BRAUN Box 127 San Anselmo, California	92
PAT FINELLI 194 Third Avenue New York, New York	104
ALEXANDRE GEORGES 94 South Mountain Road New City, New York	88
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MARC NEUHOF 207 East 43rd Street New York 17, New York	80
CHARLES R. PEARSON 5024 Ivanhoe Place N.E. Seattle 5, Washington	62
WARREN REYNOLDS 614 East Grant Street Minneapolis 4, Minnesota	84
KARL RIEK 45 Ecker Street San Francisco, California	76
EZRA STOLLER ASSOCIATES Kirby Lane North Rye, New York	58, 100
RICHARD WATHERWAX 29 Cornelia Street New York, New York	104

## how to sweeten a furnace



Your furnace shows a shocking lack of discrimination. It heats anything you give it through the return air ducts. Many smart furnace and air conditioner users slip an inexpensive activated charcoal filter into the system behind the dust filter. It adsorbs all odors as sweet as you please.

## how to smell no evil



Some people wear gas masks (containing activated charcoal). Others breathe air freshened with activated charcoal air purifiers. They (the people) work better, more safely. You save money by recirculating warmed or cooled air instead of blowing it away. Suggest you ask your plant or consulting engineers about it.

## how to save the day



Evil days befall when contaminated air robs your employees of efficiency or your neighbors of neighborliness. This has a way of turning balance sheet ink from black to red. Whether you save your air and dump the contaminant—or dump your air and save the contaminant, an activated charcoal system will save the day. It's doing it now in many plants.

## activated charcoal



Activated charcoal acts as a molecular sponge, purifies air, gases, liquids—recovers solvents—removes odors and impurities. Write for Literature Group 63-2L Barnebey-Cheney, Columbus, Ohio 43219

# Barnebey Cheney

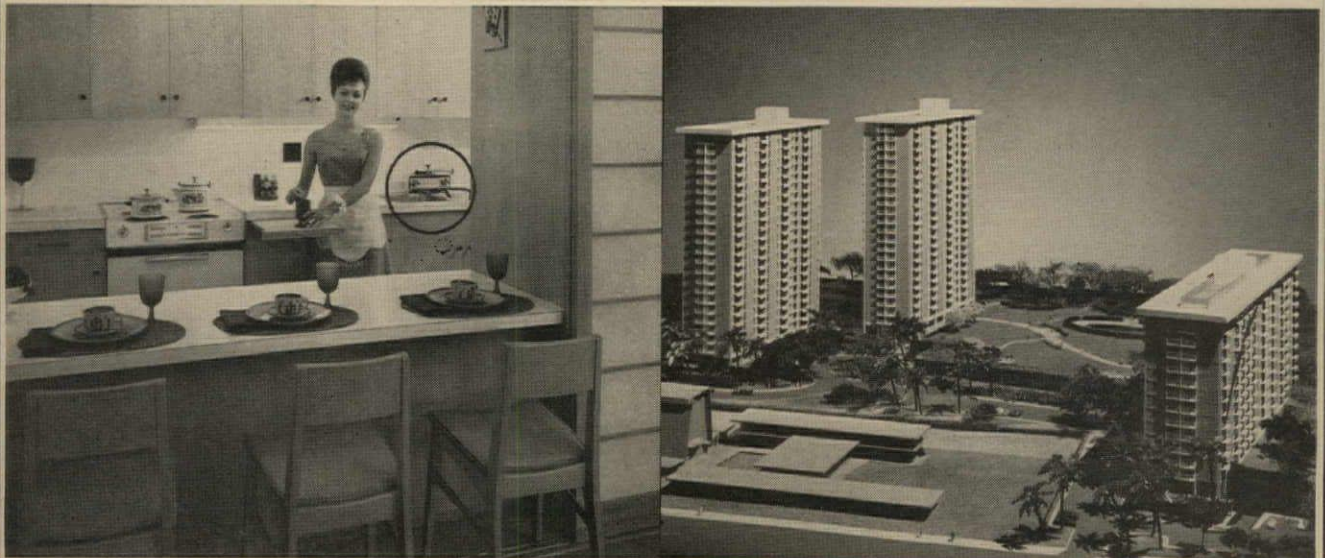
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## DISHMASTER GOES HAWAIIAN



FITS ANY SINK



Dishmaster is easy to install, washes dishes faster and cleaner, and does not require cabinet space. Features like these help make Dishmaster the world's most popular dishwasher!

There's a Dishmaster featured in each of the luxurious 587 units of the Queen Emma Apartments in Honolulu, and with good reason! . . . Dishmaster makes each apartment a more desirable rental property.

### QUEEN EMMA APARTMENTS DESIGNED BY MINORU YAMASAKI FEATURE THE NEW DISHMASTER IMPERIAL

Dishmaster and the Queen Emma Apartments go together! Practical, economical and beautiful, the new Dishmaster Imperial is a convenient, always appreciated appliance. Find out how the Dishmaster Imperial will help sell your houses, apartments or townhouses. Write to either address. Your inquiry will receive immediate attention.

## DISHMASTER CORPORATION

2605 Woodward Avenue, Bloomfield Hills, Michigan—FE 4-3587, LI 2-5558

2208 S. Grand, Los Angeles, California—RI 7-7486

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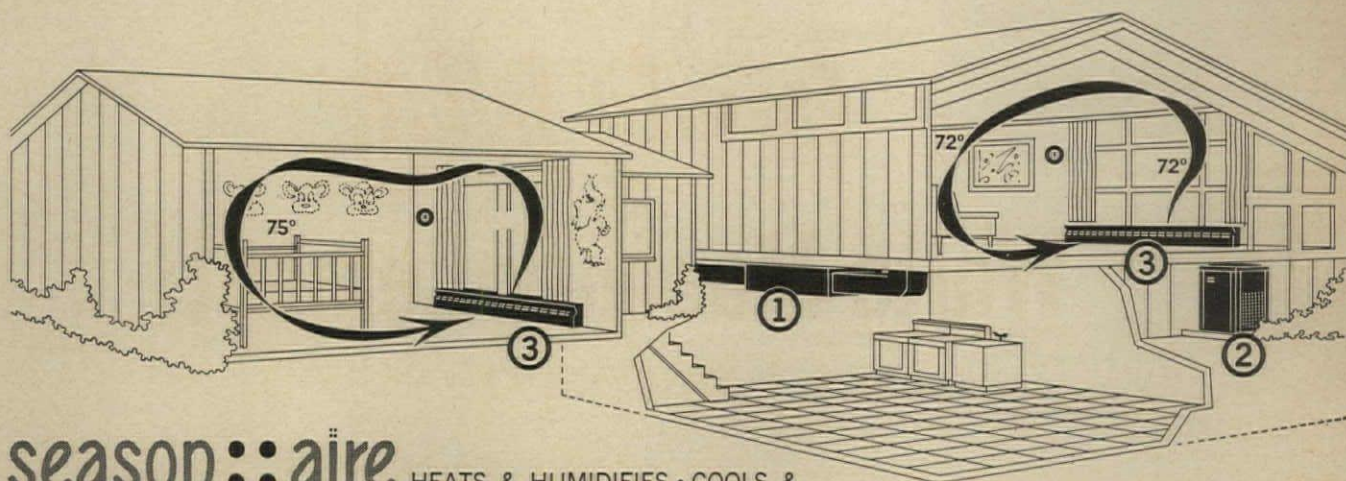
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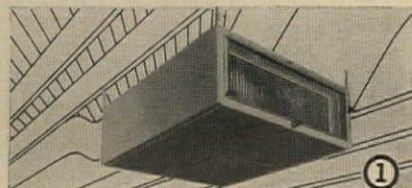
# a brand new kind of comfort conditioning from Chromalox®



**season::aire** HEATS & HUMIDIFIES • COOLS &  
DEHUMIDIFIES • FILTERS • CIRCULATES • VENTILATES • DEODORIZES

All-electric Season-Aire is the complete comfort conditioning package. It's the first and only year-round system with room-by-room comfort control. And it's maintenance-free! Read on to see why this system belongs in homes you design:

**1. Season-Aire Central Unit** mounts quickly and easily with only four lag bolts in basement, crawl space or utility room. This fully-accessible unit provides continuous low-velocity air circulation. Air is tempered and humidified, dehumidified and cooled, deodorized and electrostatically filtered. (Germicidal lamp is optional.) All fittings, hangers and isolators are part of the package. No unusual ductwork is necessary. It's a fully pre-wired component that you can install in minutes.

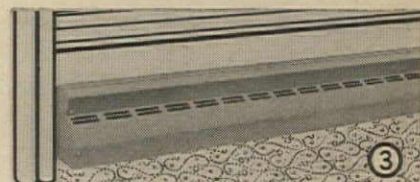


**2. Season-Aire Water Chiller** installs outdoors. This air-cooled unit features an integral pump which circulates chilling solution to the Central Unit through insulated plastic pipe or copper tubing —eliminating



expensive refrigerant tubing and field charging. Contains overheat, temperature and pressure switches —and no solenoids. It's fully winterized. Vertical air discharge assures low sound level.

**3. Season-Aire Baseboard** or floor drop-in units distribute conditioned, draft-free air that's controlled room-by-room for perfect comfort summer and winter in nursery, bedrooms, family room—every room! Season-Aire provides the special ad-



vantages of a perimeter system. Only the outside wall is heated or cooled . . . conditioned even-tempered air moves gently throughout the entire room.

Add up the reasons why you can profit with Season-Aire. It costs little to operate (even more economical than an electric furnace). It's quick and easy to install. It's virtually maintenance-free. Find out all you need to know. Call your nearest Chromalox representative or write today for the useful Bulletin R20101.



WR-78A



**CHROMALOX electric HEATING/COOLING**  
Edwin L. Wiegand Company, 7741 THOMAS BOULEVARD, PITTSBURGH, PA. 15208

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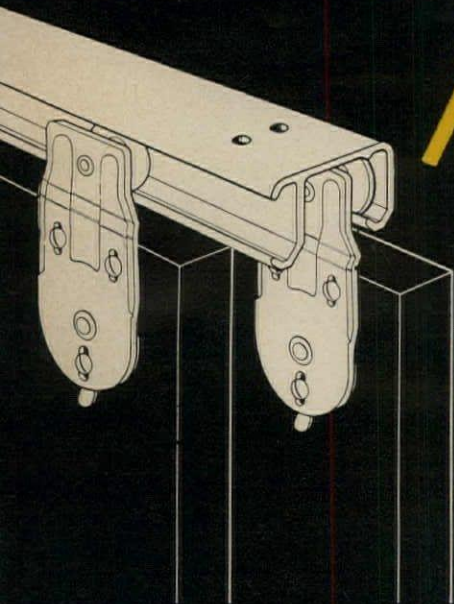


# NEW! Adjustable Sliding Door

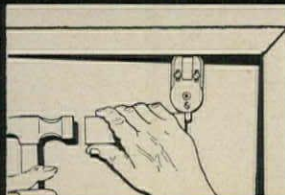


## HARDWARE

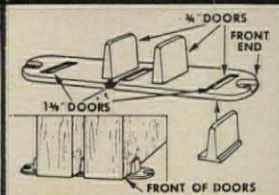
Easier to Install! Easier to sell!



**OT-400** The same OT-400 hangers may be used on either  $\frac{3}{4}$ " or  $1\frac{3}{8}$ " doors just by reversing their positions. Simplifies ordering for you! Be sure to sell customers on new, easy adjustment feature! All M-D Sliding Door Hardware comes packaged in complete sets.

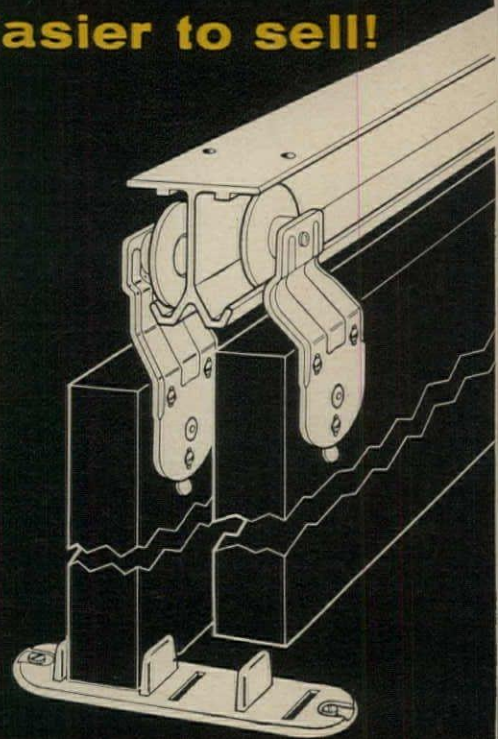


**ADJUSTABLE HANGERS**  
straighten doors after they are hung on track. Tap adjustment arm of hanger to right or left to raise or lower doors.



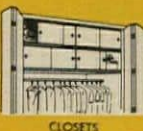
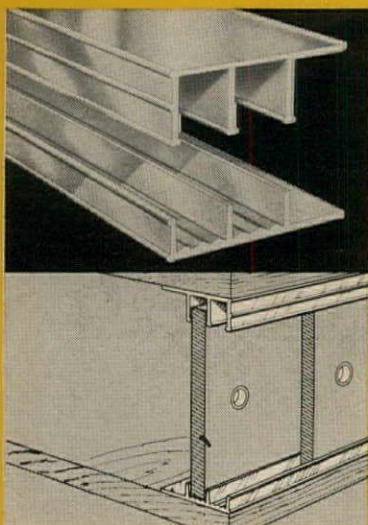
**ADJUSTABLE GUIDES**  
have plastic inserts adjustable for  $\frac{3}{4}$ " and  $1\frac{3}{8}$ " doors. Installation is faster since plate requires only 2 screws.

**OT-200** New, faster adjustment feature is only one of many that gets customer's attention and approval! Extra sturdy aluminum track provides positive protection against wheels jumping the track! Hangers are heavy gauge, cadmium-plated steel. Lifetime plastic wheels have built-in lubrication.



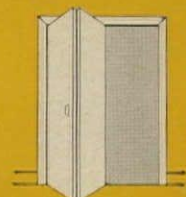
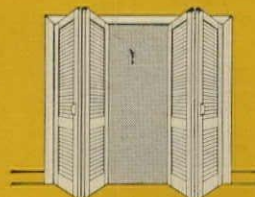
## Aluma-Slide SLIDING DOOR TRACK

Your customers can use Aluma-Slide on any size cabinet . . . with any panel material. Comes in decorative Alacrome, Anodized Albras, Anodized Albright or Anodized Satin. Sets available for  $\frac{1}{8}$ ",  $\frac{1}{4}$ ",  $\frac{3}{8}$ ",  $\frac{1}{2}$ " or  $\frac{3}{4}$ " sliding panels of glass, plywood, hardboard, etc. Packaged sets ready to use.



## FOLDING DOOR HARDWARE

Show customers how easily doors open and close! For closets, wardrobes, dens, bars, room dividers, etc. Ideal for 2 or 4-panel full or half-size interior doors of any thickness. Gives full access to closets, yet saves floor and wall space. Installs quickly! Completely packaged sets for all standard openings.



**MACKLANBURG-DUNCAN CO.**  
BOX 1197 • OKLAHOMA CITY, OKLA.

**BUILDERS:** M-D products are sold nationally by leading Hardware, Lumber and Building Supply Dealers.

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